THE EVOLUTION OF A CRAFT:
POST-BYZANTINE BOOKBINDING BETWEEN THE LATE FIFTEENTH AND THE EARLY EIGHTEENTH CENTURY FROM THE LIBRARIES OF THE IVIRON MONASTERY IN MOUNT ATHOS/ GREECE AND THE ST. CATHERINE'S MONASTERY IN SINAI/ EGYPT.

Volumes I, II, III

Georgios Boudalis

Volume I

Text

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University of the Arts London

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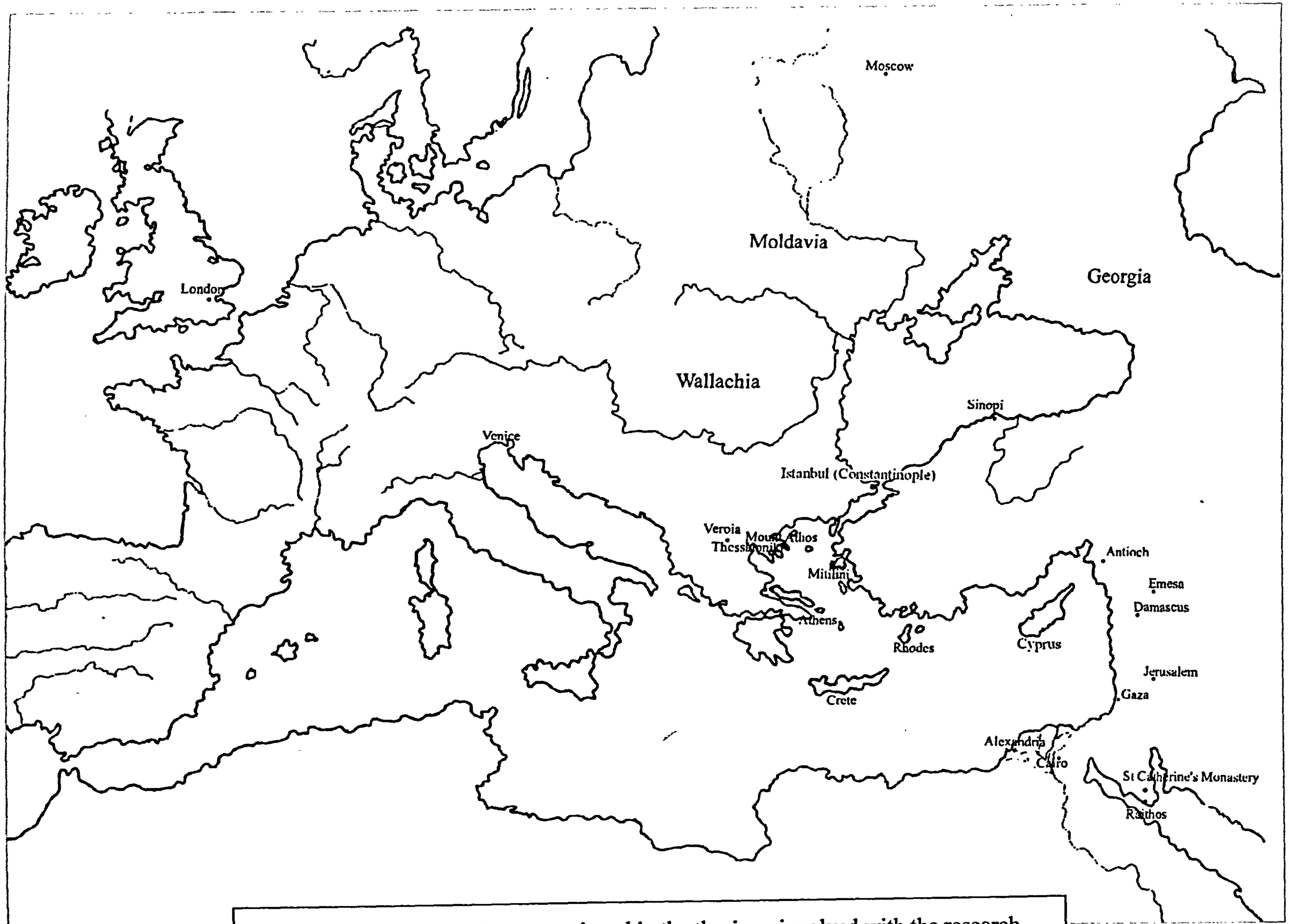
ABSTRACT

The thesis investigates the ways through which the Greek-style bookbinding was gradually supplanted by European bookbinding, a process which occurred between the late fifteenth century, after the fall of the Byzantine Empire, and the early eighteenth century. The Greek-style bookbinding is a distinctive typological binding structure confined in the milieu of the Byzantine and post-Byzantine civilization.

The research is based on two major monastic libraries, those of the Iviron monastery in Mount Athos/Greece and of the St. Catherine's monastery in Sinai/Egypt. The primary material of the research consists of a detailed survey of 419 bookbindings dated between the late fifteenth and the early eighteenth century. To collect and store the collected data a survey methodology had to be devised and a computer database appositely built. Through the analysis of the collected data twelve major bookbinding ateliers are identified and described in full detail, representing both monastic communities, providing the most extensive body of information on bindings of the Greek-Orthodox Christian monastic communities so far. It is through the description of these ateliers that the various influences, both from the West and the East, under which the aforementioned evolution occurred, are identified, considered, and interpreted. A statistical analysis is provided at the end of the thesis using tables and graphics in the effort to illustrate the major changes in time and space of the most significant bookbinding features, both technical and decorative.

Except providing a full photographic survey of the bookbindings described in the examination of twelve different bookbinding ateliers, graphic representations of many technical and decorative features, and a complete indexed list of all the 593 decorative motifs recorded, the thesis also tries to explore, whenever possible, how these bookbindings reflect the social, religious and commercial life of the time.

Since there is only little, isolated and dispersed, information published, and practically no systematic research on this specific subject and for the specific period considered here, the thesis aims to contribute in filling in a gap as well as providing a methodology for further research in the subject.



Map showing the major places mentioned in the thesis or involved with the research

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LIST OF TABLES

A list of the tables containing all the data of the bindings considered in the thesis is provided in Appendix 2 in volume III.

LIST OF ABBREVIATIONS.

A list of the acronymic abbreviations used in the main text of the thesis but mostly in the data tables is given in Appendix 1 in volume III.

PREFACE AND ACKNOWLEDGMENTS

The present study was undertaken in November 1988 with a studentship from the London Institute, now the University of the Arts London. Until 2002, when accreditation was granted to the LINST, the research was registered to the Open University. The Camberwell College of Art is well known for its long history on the teaching of crafts in general and especially on bookbinding and book conservation. Nevertheless the reason behind the studentship which made possible this research lies in the St Catherine's Library Project, which was undertaken jointly by the St Catherine's Foundation and the Camberwell College of Arts in 1998. From the very beginning the scope of the project was to help the Sinai monastic community to cope with the preservation of its library, one of the most important libraries in the world, by providing the necessary expertise and founding. The project from its constitution was supervised by Dr Nicholas Pickwoad who correctly insisted on an empathetic approach to the material, putting as a priority the survey of all the bound manuscripts preserved in the library from a book archaeologist's point of view at the same time as making a detailed record of the condition and the preservation of every single manuscript.

The director of study, Dr. Nicholas Pickwoad acted as a very measured supervisor, with plenty of patience and positive help. Together we have visited the monastery many times, building little by little the trust and acceptance of the fathers, a task which in times proved difficult for all the parties involved. Patricia E. Easterling, Regius Professor of Greek in Newnham College in Cambridge, acted as the second supervisor of the thesis offering valuable help mostly in the field of palaeography. Both my supervisors were kind enough as to cope with my poor English, especially in the beginning. For their help, support, and for the offer of their knowledge I express my deepest gratitude.

I am also indebted to the London Institute and the research support office in Camberwell, especially Professor Oriana Baddeley for providing help in financial matters. The St. Catherine's Foundations has also been helpful especially in the beginning, facilitating the contact with the fathers of the monastery.

This research would not have been possible without the acceptance and help from the fathers of both monasteries, the Iviron monastery on Mount Athos, and the St Catherine's monastery in Sinai. Hospitality in the monasteries is supposed to be offered unconditionally to people visiting them but this does not diminish my gratitude for having received first hand their hospitality and generosity. Special thanks need to be

given to the librarians, father Theologos in the Iviron monastery, and father Simeon in the St. Catherine's monastery for their assistance and the unconditioned offer of their knowledge of the library, also father Daniel of St. Catherine's monastery for spending much of his valuable time with me in the two libraries and father Gregorios who kindly offered to translate some of the notes on the Arabic manuscripts. I also feel I need to apologise to all of them for disturbing their peace and at times putting more stress to their already busy schedule.

Many thanks also go the my friends Christopher Harvey, Nicholas Bonovas, and Kostantinos Blatanis, Erica Kokozoglou, Andromachi Katsiamani, Electra Karagiannidou, Giota Mandi, Vasiliki Georgopoulou, and Katerina Talarou for providing help in various practical matters especially in the final stages of this effort. Special thanks to Maria Georgaki for helping me throughout the research in all various ways.

Finally I would like to express my thanks to Dr Ioannis Tavlakis, director of the 10th Ephorate of Byzantine Antiquities, charged with the care and study of the heritage of the Mount Athos monastic community, because it was for his kind consideration that the offer of the studentship behind this research was put into my attention.

NOTE TO THE READER.

The era between the fall of Constantinople to the Ottomans in 1453 and the nineteenth century is generally designated as post-Byzantine. It is used as a general term to designate the culture of Christian-Orthodox populations living under the rule of the Ottomans, Venetian or other Latin forces, in areas of Eastern Europe, the Balkans and the Eastern Mediterranean, mostly parts of the former Byzantine Empire or its network of influences. These populations to a great extent continued the Byzantine tradition in most fields of living though with strong influences both from the European West and the Ottoman East.

The first scholar who referred to the binding technique of the post-Byzantine era was Linos Politis (Πολίτης 1961, pp. 47-48) who due to his extensive knowledge of the manuscript production in Greek areas was able to correctly identify the basic lines of evolution and development and mention some of its features. The term post-Byzantine bookbinding is specifically mentioned by Guy Petherbridge (1991, p. 364), evidently with a chronological meaning, without any further definition. In the present research the term as related to bookbindings is used in order to identify bookbinding structures which have been produced in areas and in periods which conform to the aforementioned historic definition, therefore can be considered as the descendants of the Greek-style bindings. Though there are no available data published for the periods before the tenth century, it is apparent that this type of binding has been the standard form of the book used in the Byzantine territories, with a few deviations from the rule such as the Armenian bindings (Szirmai 1999, p.87). There is no intention of implying any typological meaning to the term post-Byzantine bookbindings, except that it refers to binding structures that can present a great variation, or hybridisation, depending on the specific time and place they have been produced, and reflecting the various influences aforementioned. Therefore they can vary from *genuine* Greek-style bindings to *genuine* Western European style bindings, or *genuine* Islamic bindings, with variations in between. The higher the hybridisation of a binding structure the more difficult it is to classify it. Nevertheless for the scope of this research and with only three exceptions it was possible to conventionally identify thirteen different types of binding structures on the basis of their basic technical features without trying to relate them to geographical or cultural provenance. There are only three exceptions, the Greek-style bindings, the Islamic bindings and the Greek-Islamic

bindings, the two former presenting some major features which have remained virtually unchanged for centuries. These terms with the rest of the binding types as well as the plethora of the technical terms related to all the technical and decorative features of the bindings are explained in the description of the survey form in Appendix 4. In the beginning of this section three line drawings are provided in order to give a schematic representation of the various parts of the Greek-style bindings.

The main text of the thesis is based on the description of 128 bindings which were classified in 12 binding ateliers. The description of the various ateliers follows a chronological order from the late fifteenth century to the first half of the eighteenth century and is divided between the two monasteries, the St. Catherine's monastery in Sinai is considered first and the Iviron monastery in mount Athos second. The description follows a conventional order, starting from a description of the various palaeographical and scribal information of the manuscripts and proceeding to the various technical details, usually conforming to the session of the different procedures which a binder would follow in order to turn a number of gatherings into a functional book. The description of the various ateliers consists of a synthesis of all the details which are given in the analytical tables in Appendix 3. The scribal, dedicatory and binding notes are translated into English and the original, Greek text is given in the footnotes, transcribed without the original accent but otherwise following the original grammar. In these notes the epithet *kir*, *kirios*, *kiriou*, is very often found which can be translated as lord, therefore implying a higher status for a person. This word and its variations have been transliterated but not translated in the various notes.

The dating system used by the Byzantines takes as a start the year 5508 B.C. which represents the *Year of the Creation of the World* (AM =*Anno Mundi*), and using the letters of the Greek alphabet. Considering that for the Byzantines the start of a year was the first of September, normally in order to correspond a specific Byzantine year to our dating system (starting with the year 1 AD=*Anno Domini*)we have to subtract the year 5508 (when dealing with the months January to August) or 5509 (when dealing with the period from September to December), from the year given according to the Byzantine system. This dating system is often supplemented by a repeating fifteen-year circle called *indiction*, an inheritance from the Romans, used as a further indication of the time (Πολίτης 1961, p 20-25). In the translated version of the notes the dating is given in the western dating system, while the date according to the Byzantine dating system is given in the original, Greek, version of the notes.

Various Greek terms are not translated in the text; these are written in italics and are all explained in the glossary in Appendix 8. The names of the scribes and binders are written in bold as well as the catalogue numbers of the manuscripts in order to avoid confusion with the dates since they are often written side by side. For the transliteration of Greek names into English the simple, phonetical, forms has been adopted, often diverging from their conventional form. For example the various forms of 'i' (υ, ι, η, οι, ει,) are all transliterated with the letter 'i' .

The various technical details are codified and these codifications, usually acronymic, are extensively used both in the main text and the data tables. A list of all these terms is given in Appendix 1.

A photographic survey of all the 128 bindings considered in the main text is provided in volume II, each binding is represented by a varying number of photographs confined in one page per binding; in the text these are referred to as photos. A number of auxiliary photographs, line drawings, tables, and graphics were also included in the main text of the thesis; these are referred to as figures.

Two parts of the present research have been published before its submission. The first, considers the methodology of the research and was published in the Colloque international «La reliure médiévale», held in Paris between 22 and 24 May 2003 and organised by the Institut de France. It deals with the two different methodological approaches used for the survey of the bindings in the two libraries and comments upon their advantages and disadvantages, as they are given in section 4.2. The second refers to the eight Theoclitos bindings which have been considered together with 20 more bindings, nine from the Iviron library and 11 from the Sinai in order to define the Islamic influence mostly in the bindings made in the Athos community in the first half of the seventeenth century. This was published in the second volume of the periodical '*Βιβλιοαμφιάστης*' published in December 2004.

The drawings were made by the writer with the exception of those in figures 23e, 29b, c, 41a-e, 51a-g, 59, and 82a-e which were made with great skill by Theodoros Zontanos, graphic designer. The scale of the decorative patterns reproduced in each group of bindings is 35% of the original. That of other features usually varies.

The thesis is divided in five parts distributed in three volumes: Volume I (Parts 1to 4) contains the main text of the thesis, Volume II (Part 5) contains the photographs, and Volume III contains the appendices.

PART 1

INTRODUCTION.

1.1. BOOKBINDING AND THE BOOK ARCHAEOLOGY: AN OVERVIEW OF THE RESEARCH DONE SO FAR ON THE BOOKBINDINGS OF THE BYZANTINE AND POST-BYZANTINE ERA.

"Sewing may be done by several methods: one which the artisan employs for swiftness and speed, in which the needle pierces the quire in only two places, and another done with two or three stitches. Still another type is current with the Byzantines, but I am unable to describe it" (Bosch et al. 1981, p. 45).

This remark written by Ibn Bādīs, in Kairouan (Tunisia) around the year 1025 in his work "Book of the staff of the scribes and implements of the discerning [...] and details of bookbinding" is one of the earliest, if not the earliest reference to the bindings of the Byzantines as a distinct typological entity. It is important because it makes clear that the Byzantines had or it was thought to have, a peculiar way to bind their books, apparently so peculiar as to create problems to someone familiar with bookbinding techniques to describe it. In various Italian documents of the renaissance the same clear distinction is made to Greek-style bindings as something quite different from the usual, Western, form of the book (Hoffmann 1942, p. 346, Szirmai 1999, p. 84). Though the study of the Greek texts, and the various aspects of the writing and reading of books in Byzantium represent a huge field of research with a long history (only indicatively: 'Byzantine books and bookman' 1975, Mioni 1977, Reynolds and Wilson 1982, 'Το βιβλίο στις ...' 1982, Hunger 1989), the study of the bookbinding is a fairly recent research subject. It was not until 1914 that the Greek-style bindings are mentioned specifically in the context of the history of bookbinding by the conservator Paul Adam who later on, in 1923-24 dedicated an article in the subject. A few scholars after him dedicated a limited number of articles on the features, both technical and decorative of Greek-style bindings (Klepikov 1961, Irigoin 1978, De Matons 1984, 1991, De Matons et al. 1988-89, 1990-1991, 1991, Sonderkamp 1991, Hoffmann 1992, Houlis 1993) most prominent of all for her pioneering work Berth van Regemorter (Regemorter 1953, 1954, 1967). At the same time some attention was also paid in the so called 'alla Greca' bindings, that is, Greek-style bindings made mostly in Italy and France during the fifteenth and sixteenth centuries, in the context of a fashion to bind Greek texts with Greek-style bindings (Regemorter, 1954, De

Marinis, 1960, Schunke 1964, Hobson 1979, 1989, Laffite and le Bars 1999). It was not until 1988 that the first systematic, wide-scale research took place in the Greek manuscript collections of the Vatican (Federici and Houlis 1988), of which the results were compromised by the random provenance of the bindings and the wide time span in which they were made. A detailed survey of about 160 bindings from the St. John Theologos monastery in Patmos, undertaken in the 80's by Guy Petherbridge and John Sharp still remains unpublished though some information was presented by Petherbridge in 1983 (Petherbridge 1991) in a important paper, referring mostly to the methodological approach of the survey of similar structures. Some information about the bindings of Greek manuscripts of the Byzantine and post-Byzantine era, mostly as far as their decoration is concerned, can be occasionally found in articles on palaeography and codicology and mostly related to the consideration of groups of manuscripts of common origin (Wittek 1953, Πολίτης 1961, 1979, Irigoin 1961-62, 1968, Gamillscheg 1981, Irigoin 1982, Prato and Sonderkamp 1985, Harlfinger 2000). Some of these scholars, but others as well, have dedicated brief articles specifically on bookbindings but again omitting almost all technical details and never going beyond the decoration (Willoughby 1939, 1940, Astruc 1982, Hoffmann 1982, 1985, Cataldi 1986, Αθανασιάδης 1994, Velmans 2001). The research of professor Basilios Atsalos on the terms related with the bookbinding as these are found in notes on the books represent an important body of information (1976, 1977). The great majority of this anyway limited research refers to the Greek-style bindings either of the Byzantine and the post-Byzantine period with almost a complete neglect to what followed their gradual decline from the late sixteenth century. Only in a handful of articles there is a note or a mention to the post-Byzantine bindings (Willoughby 1939, Πολίτης 1961, Prato and Sonderkamp 1985, Petherbridge 1991). It is therefore obvious that there is still much to be established and discovered mostly as far as the distribution in time and place of the various technical and decorative features are concerned. The only safe way to do this is to have as many systematic research as possible on specific and precisely identified groups of bookbindings.

A sign of change toward the importance of bookbinding in the history of book is evident by the fact that most of the important catalogues that are nowadays published will often provide some information on bookbinding and sometimes also some photographs (Weitzman and Galavaris, 1990, Harlfinger et al. 1983, Σωτηρούδης 1998, Μαραβά and Τουφεξή 1978, 1985). In this context the St Catherine's Library

project in Sinai represents a landmark and will inevitably trigger an income of new information and knowledge. It is hopped that a similar survey will at some point take place in the libraries of the Athos monastic community.

The same rise of interest towards the study of the bookbinding is evident in Greece in the last years. The publication of a specialized periodical called *Βιβλιοαμφιάστης*, a Byzantine term meaning the one who dresses the books, of which the second volume was published in 2004, offered the possibility for an array of articles to be written and various subjects investigated, dealing mostly with the post-Byzantine and later, mostly nineteenth-century bookbindings from Greece. In the year 2000 the Hellenic Society for Bookbinding was founded with the aim to study specifically the development of the Greek bookbinding throughout its history. In 2005 a major exhibition which is planed in the Byzantine and Christian Museum of Athens, together with an international congress dedicated to the Byzantine and post-Byzantine bookbindings will certainly further contribute to its study (www.eie.gr/ibe/programmata/bookbinding).

It is nowadays accepted between scholars of the various fields of the history of the book and other related disciplines that the study of the book in its textual, material, structural and decorative integrity can provide useful and important evidence about its use, circulation and appreciation (see for example Canart 1990-1991). The present thesis is hoped to provide similar evidence.

In 1999 a book was published under the title The Archaeology of Medieval Bookbinding (Szirmai 1999) which probably represents a landmark for the wider appreciation and understanding of the field of book archaeology and its importance for the study of the book. In this book a short but dense chapter is dedicated to the Greek-style bindings making use of all the available but widely dispersed bibliography. This book is extensively referred to in this thesis and this is partly because firstly it provides a reliable and well-documented source of otherwise not easily accessible bibliography and secondly because it gives a concise history of the developments of the major bookbinding typological entities, for most of which the knowledge of the writer is fairly limited.

1.1. THE AIM AND THE METHODOLOGY OF THE RESEARCH

Since the beginning the research was divided into four distinct parts:

1. Establish the aim of the research and its methodologies. Also establish the criteria for the selection of the material upon which it is based.
2. Collect the data through *in situ* observation and survey of the bindings
3. Process and analyse the collected data as to be able to identify individual groups of bindings and describe them.
4. Analyse statistically the collected data and draw conclusions.

From personal observation during time spent working on the conservation of manuscript books in the Athos monasteries, it became apparent that from the sixteenth century onward the typology of the Greek-style binding went through progressive structural and stylistic changes until it was eventually supplanted by Western European binding practices both in technique and decoration. These changes were to an extent accelerated and guided by the fact that the Byzantine empire, after which these bindings are also named, was conquered by the Ottomans in 1453. For the following two centuries the binding production of the conquered territories has been borrowing elements from different binding traditions like the Islamic and the Western European. It was through such observations and the questions it generated that the aim of the research was defined:

> **To establish the binding tradition of Greek-Orthodox areas during the post Byzantine era by establishing its evolution and manifestations through the sixteenth to the eighteenth century.**

The initial aim of the research was to include also bindings of the eighteenth century but at the end, only one atelier of that century has been fully considered, the 'New Library atelier' in the St. Catherine's monastery. This is partly because of the limitations in the number of words imposed by the regulations for a thesis submission but also because of the fact that apparently by the beginning of the eighteenth century all major changes had already taken place and were well established. Therefore bindings of the eighteenth and apparently nineteenth century present a great

consistency in most of their features, and could hardly be distinguished on technical terms by contemporary Western European structures.

It is well known to all those with even a passing acquaintance with the Orthodox East, that monasteries retained their importance as holders and promoters of the written and oral tradition long after the Middle Ages. Precisely for this reason every research project relating to any aspect of the books in the Greek-Orthodox Byzantine and post-Byzantine territory of the pre-industrial era, either printed books or manuscripts, inevitably needs to consider the big monastic libraries still surviving *in situ* in most of the Greek-Orthodox Christian monasteries.

The place or location limits set for this research were initially decided in order to accomplish a research in the Sinai Library, as part of the St. Catherine's Foundation project for the preservation of the library. For various reasons, mentioned below, it was thought that at least one more library should be included in this research, and this was the Iviron monastery library in Mount Athos, Greece. The reasons for such a choice are both subjective (acquaintance with the collection of the library and the monks) and objective (the importance of the library and its infrastructures).

Conducting the research in two libraries instead of one, has the following advantages:

1. Results from the two libraries could be compared to see where they converge and where they diverge. In this way general tendencies could be traced, as opposed to local ones. Furthermore, the reasons for the convergence or divergence could hopefully be traced and general conclusions could also possibly be drawn concerning the way external influences in the binding production of Greek-Orthodox areas were absorbed and interpreted in different areas, under different cultural, and geographical conditions.
2. Since monastic libraries are still today part of full-functioning religious communities, doing research in two libraries instead of one has the advantage of flexibility in practical matters: when, temporarily, research in one library cannot be done for various reasons, the other library might be accessible, and when infrastructures in one library are not satisfying, those of the other library might be able to fill the gap.
3. Differences such as the ones mentioned above, in infrastructures and accessibility, would give a chance to work under different conditions and find out to what extent they can affect the final result. In this sense the most

productive way to approach bindings in the Greek-Orthodox monasteries as a research subject could be established.

It is important to stress that at the present state of the research in this specific field and in the time limits defined, with very little published so far, the collections of the two monasteries could be understood only as the general research fields through which bookbinding ateliers could be identified not necessarily strictly connected with the two monasteries. Therefore, any binding made from the sixteenth to the eighteenth century in a Greek speaking Christian-Orthodox area, which could be proved as belonging to a consistent group of bindings, and could more or less be precisely defined in time and place was thought of importance in order to establish their basic typological ground.

For a series of reasons, it was decided to limit the research only in the bindings found on the manuscript codices and not on those on the printed books. This is because, firstly, for both libraries it is true that there is a relatively good documentation on the manuscripts, while there is almost none on the printed book. Secondly, the total number of books to be included in the research had to be rather confined in order to make the research possible within the given time and funding limits. Last but not least, including bindings of printed books in such a relatively confined research would affect the homogeneity of the 'population' examined, and the methodology of the research. It was thought that the relation between the *width* and the *depth* of the research should be somehow harmonic, and including printed books would probably effect the *width* of the research at the expense of its *depth*.

The total number of bindings to be surveyed was generally agreed in consultancy with the director of studies, Dr. N. Pickwoad, at around two hundred per library mostly for reasons of time limits. This was thought to be an appropriate number of bindings in order to be able to draw conclusions.

What has been mentioned above constituted the basic research guidelines. In practice, establishing a functioning and productive methodology proved to be a question of examining the characteristics of each library, its infrastructures and its history, therefore a different methodological approach for each of them had to be devised and followed.

1.2.1. Research conditions in the Iviron monastery Library.

Research in this library was conditioned and characterized by the following:

1. The library houses a very important and extensive collection of Greek manuscripts. In its present state it houses 2,120 manuscripts ranging from the tenth to the twentieth century.

2. The holdings of the library have been subject to paleographical research more than once, resulting in a basic ground of published material, related almost exclusively to its manuscript collections. Except for these individual, rather short, publications, there is also the Lambros catalogue published in Cambridge in 1895 (Λάμπρος 1895) describing briefly 1386 of the 2120 manuscripts of the library, as well as the first out of a ten volumes catalogue published by Sotiroudis in 1989 (Σωτηρούδης 1998), describing, by modern codicological means, the first 100 manuscripts of the library.

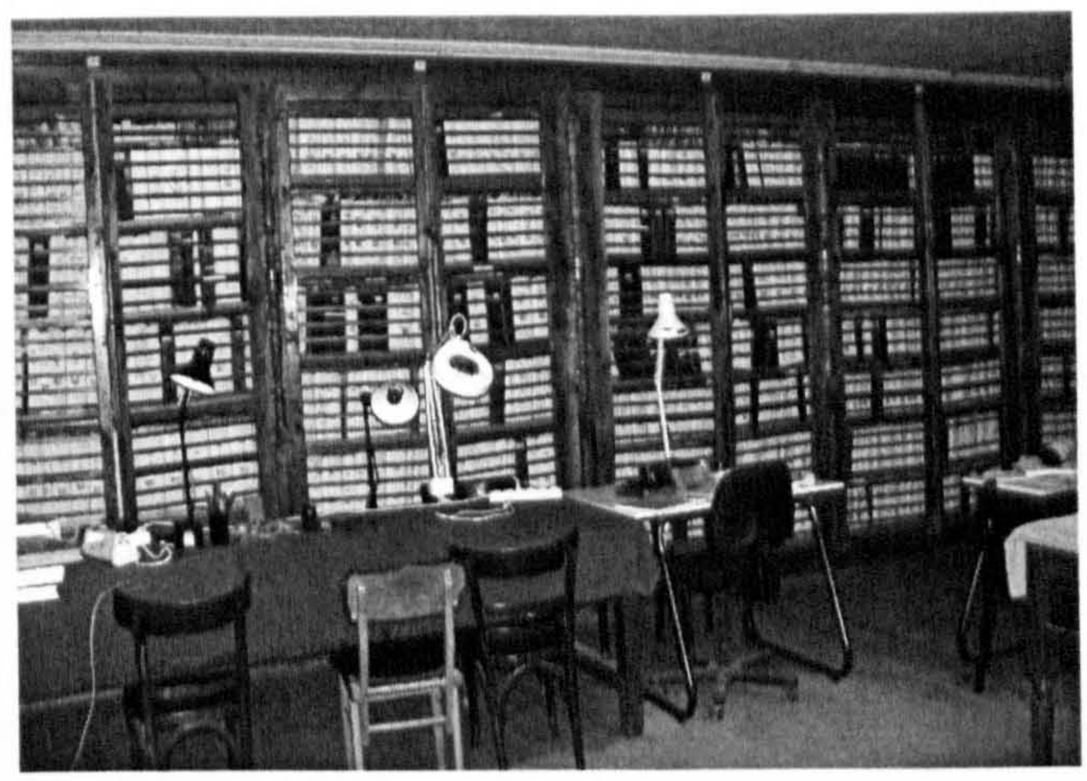

Figure 1. The study area and a view of the Iviron monastery library.

3. All the manuscript books in the library are kept inside protective cotton textile 'bags' that make effective overall visual inspection of the bindings impossible. To see the manuscripts and therefore the bindings, they have to be pulled out of these bags, which in some cases is difficult and dangerous for the safety of the manuscript.
4. Most significantly, the librarian has a very good and extensive personal knowledge of the manuscript collection of the library. He has recorded almost all the written notes on the manuscripts described in Lambros (in this catalogue only very few of them are published), and he has created an extensive and informed software database of the collection. It is through such a database that any possible search and sort of the manuscripts can be

made. The librarian is also in possession of all the relevant publications concerning the collections and the persons connected with it, as well as of reference bibliography, which he willingly offered to me.

5. Having visited the monastery a few years ago and having worked on the conservation of some of its manuscripts with a group of book conservators a remedial acquaintance with the people, the place and the collection was founded. Permission to have access in the manuscripts collections was granted to me readily.
6. Visits to the monastery had to be planned some time before their realization in consultation with the librarian. These visits were in part
7.

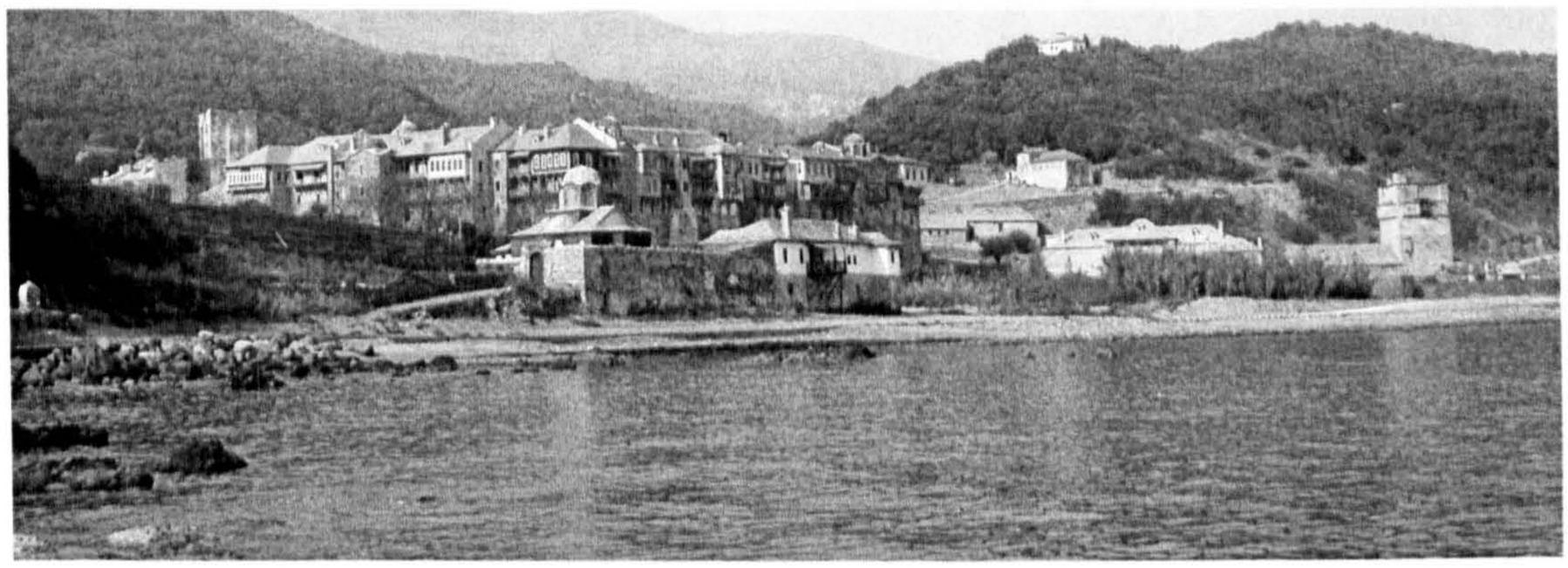

Figure 2. View of the Iviron monastery from the sea.

conditioned by his precarious health condition. Work in the library can be done only in the presence of the librarian and the timetable of work should not interfere with his monastic duties. Usually work never exceeded eight hours a day at the most, divided usually into two or three sessions, morning, afternoon and eventually early evening.

7. Access to the monastery is made through Thessaloniki / Greece to Ouranoupolis and from there with a boat that in two hours leads to Daphni – the official port of the Mount Athos community. From there the monastery can be reached either by taxi or bus in about one hour. The living conditions are good. Electrical supply is turned off at 10 p.m. and restarts at 7 a.m.

1.2.2. Research conditions in the St Catherine's monastery library.

Research in the library was conditioned and characterized by the following:

1. The library is considered extremely important for the number and importance of its manuscripts, housing today more than 3,300 manuscripts in eleven different languages dated between the fifth and the twentieth century.
2. Considering its importance and extension, the collections of the library have been subject to a limited amount of paleographical research. It is important to note that there is no complete, published, catalogue of the manuscripts, but only rather small catalogues dealing with particular groups of manuscripts. The Kamil catalogue, the only complete printed catalogue of the collection, contains only the very basic information for the manuscripts. The handwritten catalogue, meant for internal use and apparently containing the most updated information on the manuscripts, has not been made available to me.
3. Books, either manuscripts or printed, are put on shelves with no kind of protective covers, except in some very few cases. This means that overall visual inspection of the bindings is possible throughout the collection.

Figure 3a. A view of the books on the shelves in the library of St. Catherine's monastery

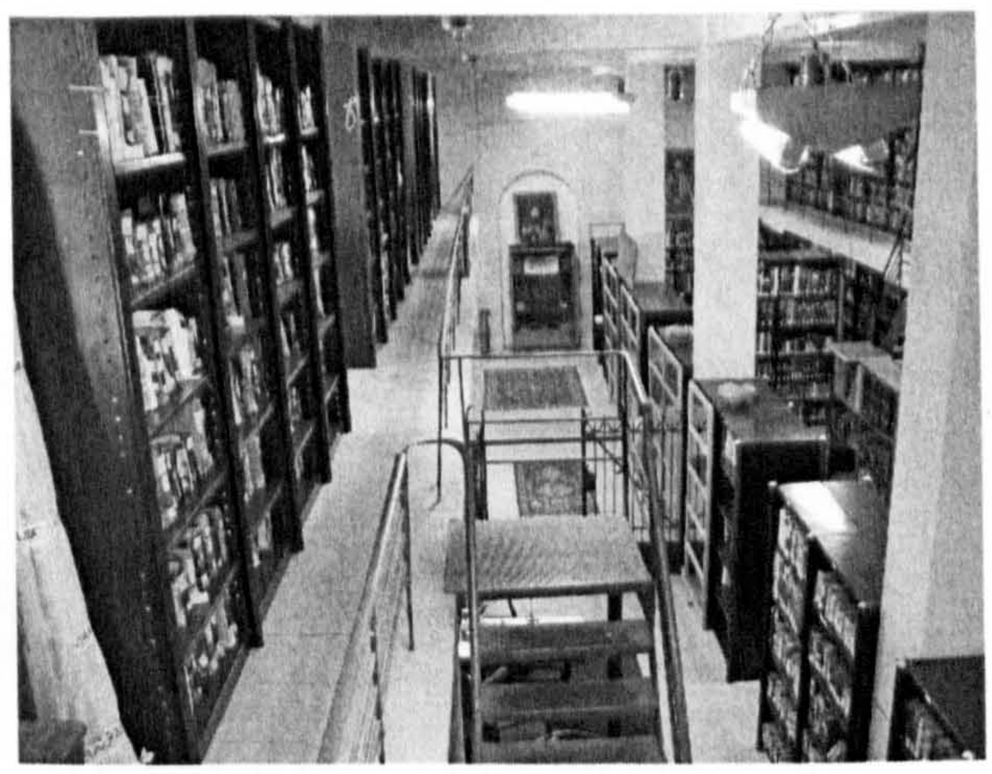

Figure 3b. A view of the library from the upper floor where the manuscripts are housed. The bookcases in the lower floor house the printed books collection.

4. Work in the library can be done only in the presence of the librarian, and usually one or two other monks. Time spent in the library was divided in two or three sessions and usually could not exceed six working hours a day. The librarian could be of help only to a limited extent due to his heavy schedule in the monastery and his often trips to Greece. No computer database of the collection is available.
5. There was no previous acquaintance with the people and the place before the proposal for the research. To secure relatively free access in the library and permission to do the research, approval from the Holy Sinaxis of the monastery had to be granted. Gaining such approval proved to be a prolonged process as it was granted to me about a year after my initial request. Thus, the three first visits during that first year, were dedicated to the measuring of manuscripts of the library and the compilation of a simple survey form, a process implied by the project for the preservation of the library.
6. The research at the Sinai library was from the beginning connected and considered as part of the project for the conservation of the library of the monastery which is sponsored and promoted by the Saint Catherine's Foundation, London.
7. Visits to the monastery had to be planned some time before in consultation with the librarian and his considerably heavy schedule.
8. Access to the monastery is made either through Cairo by bus (seven hours) or through Sharm-el Sheikh by taxi (two and a half hours).

Points 1, 2, 3, and 4 have been particularly important for the research and to a great extent conditioned the way in which this had to be done and the methodologies to follow which had to adapt in the characteristics of each one of the two libraries.

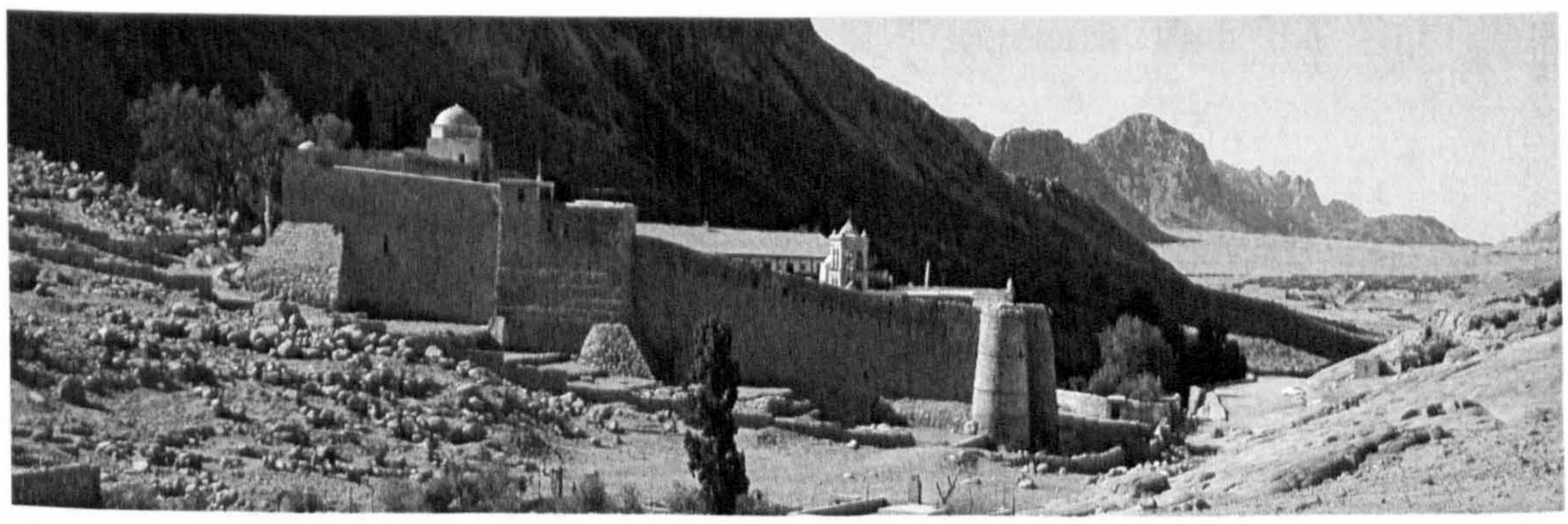

Figure 4. View of the St. Catherine's monastery seen from the East.

1.2.3. Data collecting at the Iviron library. Criteria and methodology.

The presence of printed catalogues and the librarian's computer database meant that information was available and easy to access and use. Therefore bindings were firstly selected according to the first criterion:

Criterion A. **Survey all the bindings of the manuscripts written in the monastery, or by monks that lived in the monastery for some period, from the beginning of the sixteenth century to the beginning of the eighteenth, still preserved in the library.**

From the tables published by the librarian in the Sotiroudis catalogue (Θεολόγος, 1998, pp. 253-254), such manuscripts fulfilling the above criteria were found to be 162, of which only 155 have been recorded[1]. Some of them had scribal or dedication notes specifying the place and date of their production, while others were attributed to specific scribes on paleographical ground. For this group of manuscripts two basic assumptions are made, that if they were written in the monastery and have been kept there ever since, they must have been also bound or rebound there or nearby, and that the bindings, unless clearly not the original ones, would be more or less contemporary to the texts. These assumptions make it possible to an extent to date the bindings in relation to the texts they contain.

At a later point of the initial research, when a few homogeneous groups of bindings were identified, a second criterion was established in order to examine more bindings:

Criterion B: include **manuscripts which bear a note of possession from a monk of the monastery between the sixteenth and the eighteenth centuries.**

This was made on the assumption that since such manuscripts certainly belonged to the monastery from an early date (between the sixteenth and the eighteenth centuriy)

[1] There are more manuscripts with a scribal note indicating that they were written in the Iviron monastery before the sixteenth century and some of them would most probably be rebound in the period between the sixteenth and the eighteenth century but they have not been surveyed because of the general agreement to limit the number of bindings recorded in each library to 200.

and have been kept there ever since, they could also be bound or rebound in the monastery or nearby, thus further expanding the basic research material. A quick inspection of all these manuscripts (101 with dedicatory or ownership note from the sixteenth century, and 240 from the seventeenth century) resulted in 98 more manuscripts to be included in the research. This was on the basis of similarities with the bindings already surveyed according to the Criterion A. Ultimately, of these 98 bindings only 20 have been recorded, while 18 more which fulfilled both Criterion A and B have been recorded during the first selection according to Criterion A.

The criteria mentioned above were not followed strictly, so that 30 more bindings which were put into my attention by chance could also be included because they were found to be important for the better comprehension of those selected according to the aforementioned criteria. At the same time a number of manuscripts, though fulfilling one of the two criteria, were not recorded at all since they often proved to be rebound in the nineteenth or twentieth century and therefore were of very limited value for the aim of this research. Thus, ultimately the final number of recorded bindings rose to 205. It is obvious that such selective categorization of the manuscripts would not have been possible without the librarian's extensive, personal, knowledge of the library holdings and the use of his well informed database.

1.2.4. Data collecting at the St Catherine's library. Criteria and methodology.

The research at the Sinai library was also limited to manuscript books written between the late fifteenth and the eighteenth century. Though a basic ground of documentation on the manuscript collections of the library already exists, this is rather fragmentary and incomplete. The manuscript production of the monastery must have been extensive, but no systematic research has yet been made in this direction so far. This means that it is not possible at present, to have an overall view of the manuscript production in the monastery in the way possible for the Iviron library, and therefore the criteria for the selection of the manuscripts, and thus of the bindings to be recorded, could not be as precisely defined as for the Iviron part of the research.

The limits of accessibility to the material of the library and the infrastructures at the Sinai monastery library as they have been described above meant that a different way of approaching and dealing with the material had to be devised.

The time spent during the process of measuring the manuscripts as part of the St. Catherine's project while waiting for the permission to do the research, resulted in a kind of visual inspection of the whole collection. Such inspection meant that a couple of homogeneous groups of bindings were generally recognized actually before research permission was granted and data collecting was started. These were further supported by the find of fifteen binder's notes during the measuring process, and through a bibliographical research based mostly upon the former librarian's short history of the library (Ντιγμπασάνη, 1993) and a few other publications (Clark 1952, Harlfinger et al. 1983, Galavaris 1986, Weitzman and Galavaris 1990). Such a bibliographical overview offered some extra examples of bindings fulfilling the conditions of time and location. Therefore, apart from the criteria set for the time limit (late fifteenth to eighteenth century) no other strict condition was established for the selection of bindings to be included in the research. Bindings bearing a binder's note, noticed by the writer during the measuring process and some bindings and binder notes published in the aforementioned catalogues were the foundation of the research. This limited core group of bindings acted as a reference for selecting other bindings by visual observation, largely on the basis of their decorative similarity.

Manuscripts known to have been written in the monastery were also included, and to this end the available bibliography was the source of such information. Initially, in the case of the Sinai library the set time limits (late fifteenth to eighteenth century) were not strict. This was because otherwise the initial group of manuscripts would have been too limited, and secondly because it seems quite sensible to suppose that older manuscripts that were written in the Sinai and kept there since would have been rebound there at a later date, possibly in the period between the sixteenth and the eighteenth century.

It is clear that for the Sinai part of the research criteria are rather vague and not precisely specified. Initially this was thought to be a serious disadvantage for the research, but as it evolved it was thought of being interesting to follow this *loose* methodology and compare its results with those of the research at the Iviron monastery, which was based upon rather strictly specified criteria. This would probably let us know of what is the most productive way to approach the Greek-style bindings as a research subject. This comparison between the two approaches and their evaluation is made at the end of the thesis (section 4.2.). On a practical basis the criteria for the Sinai part of the research resulted in a brief inspection and evaluation

of almost twice as many bindings as those ultimately included in the database, made mostly during short periods of time spent on the upper floor of the library by pulling out of the shelves manuscript which for some reason attracted the writer's attention. For all these bindings a short handwritten record was made with their main features so that at a second stage of the research they could be traced back and properly surveyed if proved to be of some value. It should be considered that the survey of bindings had to be done in a small room adjacent to the library and manuscripts had to be asked and brought to the writer by one of the fathers. Therefore the selection had to be well considered as much as possible as to avoid having the fathers going up and down the steep, narrow ladder to the upper floor all the time and unnecessarily handling the bindings, some of which are in really deplorable conditions. The final number of manuscripts surveyed rose to 214.

1.2.5. The method of data collecting.

Once the criteria and methodology were established, data collecting was a matter of designing a data collecting and storing device and spending time surveying bindings in the two monastic libraries. Data collecting was made through the use of a software database, designed to collect and store all the necessary information of the bindings and the manuscripts surveyed. Such a database offers the best possibilities for comprehensive and easy access to all information, its classification and 'filtering' in all possible ways (see fold-out figure in Appendix 4). To this end the Microsoft Access software was used and a complete and detailed user's manual. It is important to note that familiarization with the software was not an easy process and father Theologos, the librarian of the Iviron library proved to be a very helpful person in setting up the computer technology for the requirements of the research.

The process of data collecting consisted of the following:

- Data inputting in the database. Each binding surveyed is represented by a record with a unique catalogue number (record number).
- At an early stage of the research colour slides of the bindings examined were taken using Kodakchrom EPY 64T slides, but thanks to the St. Catherine's Foundation project in the library, a digital camera has been bought and kindly

made available to me for the needs of the research until its submission. A Nikon Coolpix 990 has been used and a software for archiving and viewing digital images supplied with it. It is needless to say that digital images are infinitely more easy to use than slides and proved to be of great help.

- Rubbings of the outer face of the right and left boards of the bindings were made so that a true dimensional reference to the actual bindings could be possible, and an accurate record of the tools used for the decoration be available. Rubbings are also numbered and recorded on the unique computerized record of each binding. Eventually, scanning these rubbings, a list was made of all the tools used in the bindings surveyed (see Appendix 5). These rubbings were also used for making the line drawings of the decorative patterns of the bindings of the 12 ateliers, which are considered in the main text of the thesis. Drawing of technical details and other characteristics of the bindings that were difficult or impossible to record by other means were also made during the examination of each binding. Such graphic records were either used merely as a pictorial reference for a better understanding of structures, or as a tool for understanding, designating and describing technical and other features, until then unknown to the writer.
- Though at an early stage of the research it was thought that thread and possibly leather samples could be collected whenever possible, in order to proceed to identification of materials through analytical methods, such thought was soon abandoned in order to avoid provoking any further damage to the bindings.

1.2.6. Process and statistical analysis of the collected data.

The data collected through the above mentioned processes invariably produced an extensive and chaotic amount of information. To be usable, this data had to be further divided into smaller, more concise groups. Considering that classification is always to some extent a conventional way to sort out the world around, the criteria upon which the formation of the various groups was based varied. In some cases bindings were grouped together because of clear evidence that they were produced by one or more

persons in the context of a 'workshop', i.e. at the same place, in the same time using common technical and decorative features. Such groups were the so called 'narrow' groups. In other cases, in the so called 'wide' groups, bindings were grouped together because they presented more or less common features and a common provenance from an area rather than a place (for example Crete), but were not consistent enough as to be considered the product of a specific workshop but rather of more workshops sharing generally common technical and decorative techniques and features, more or less at the same time. The aim of the research was to identify as many 'narrow' groups as possible but indeed 'wide' groups proved to be an invaluable source of information.

Once groups were formed the main features of the bindings were sorted in tables and it is on these tables that the consideration of all the binding ateliers included in the thesis was based. Of the 419 bindings fully surveyed and recorded in the database only 128 were ultimately considered in full detail in the main text of the thesis, divided in twelve groups, ten 'narrow' groups and two 'wide' ones. The limitations in the number of words of the final thesis resulted in the inclusion in the main text of the thesis only of the most significant and important groups and the consequent exclusion of some other groups of bindings which were considered to be of secondary importance for the aim of this research.

At the final stage a statistical analysis of some of the main features of the bindings was thought of being able to cast light on the major changes occurred in this process of evolution of the post-Byzantine bindings (see section 4.1).

1.2. THE HISTORY OF THE IVIRON MONASTERY LIBRARY

Though monks and hermits lived in the Athos peninsula at least since the ninth century (Οικονομίδης pp. 4-9, Καδάς 1984, pp. 9-21), the monastic community of mount Athos, or *Agio Oros* (Holy Mountain) was formally founded in 972 with the constitution of the first *tipicon* which is still valid. Today there are 20 big monasteries, among which the Iviron monastery, as well as an unspecified number of *skites*, *kathismata, kellia, kalives* and hermitages.

The Iviron (or Georgian) monastery was the second coenobitic monastery to be founded in the Athos peninsula in the years 978-980 just a few years after the

foundation of the Megisti Lavra, the first and biggest ever since monastery of the Athonite community. A brotherhood of Georgian monks under the guidance of John Tornikios, the later St. John Iviritis, occupied an older small monastery, which with imperial support they restored, organized and expanded. Until the beginning of the eleventh century the monastery was known as the Klimentos monastery, and it is only after that period that it was gradually called the Iviron monastery, i.e. the monastery of the Georgians. It has always been high up in the hierarchy of the monastic community of the Athos peninsula and today occupies the third position after the Megisti Lavra and the Vatopedi monasteries[2].

There is evidence that a scriptorium was active in the monastery during the eleventh and twelfth centuries, dedicated to the translation and dissemination of Greek texts in the Georgian language. The first liturgical Georgian Manuscripts – still preserved in the library – were brought from Georgia, and were copied there in the scriptorium of the Otsca monastery in the years 977-978[3].

We know only of one scribe, named Theophanes, who copied Greek texts during those first centuries, and two of his codices are still preserved in the library (I. 46 and I. 275). Judging from what remains of his work – 15 manuscripts in all – he was mainly occupied with the copy of biblical and paterical texts between the years 1004 – 1023.

In the fourteenth century with a verdict by the Patriarch St. Kallistos I, the Greeks gained control of the monastery and from that time on all the services were recited in Greek. There is no evidence about an active scriptorium during the following centuries. After the capture of Thessaloniki by the Ottomans in 1430 the monks of the Athos monastic community offered their submission to the new rulers and as a result they were granted recognition of all the monastic properties and therefore a relative independence. Nevertheless the end of the Byzantine empire meant that monks had to seek financial support elsewhere and they did found it in the Gospodars of Moldavia and Wallachia, the rulers of Georgia and the Tsars of Russia (Μαμαλάκης 1971 pp. 261-283, Καδάς 1984, pp. 14-15). In 1669, the Iviron monastery was given the

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[2] Only the first five monasteries of the hierarchy have the right to elect the chairman of the *Hiera Epistasia*, or Holy Superintendence, which has the executive power of the community.

[3] In the Hermitage museum in St. Petersburg there is preserved a detached binding - which originally belonged probably to one of the manuscripts that were transported in Russia in the seventeenth century – with the characteristic decoration of Georgian manuscripts, quite similar to those still preserved in the St Catherine's monastery library and dated in the same period, i.e. the tenth century. It is published in *Muzeum Knigi*, exhibition catalogue, St. Peteresbourg 2002, pp. 68-69.

monastery of St. Nicholas in the centre of Moscow as a recognition by the Tsar Alexei Michalovich for a copy of the icon of the Virgin *Portaitisa* which is said to have miraculously cured his ill daughter. This icon remained very popular for the Russian people ever after (Καδάς 1984, pp. 52-53, Μαμαλάκης 1971 p. 272).

In the first decades of the sixteenth century a scriptorium was founded by monk Dionisios, apparently complete with a bookbinding atelier. This atelier, named the 'Iviron scriptorium atelier' is examined in section 3.1.2. Between the third quarter of the sixteenth and the first quarter of the eighteenth century a number of monks of the monastery were actively copying manuscripts on a personal basis, among others Laurentios, *hieromonk* Theoclitos, the abbot Gabriel from Athens, Avesalom, Cosmas Macedon, Cosmas Mavroudis (the later Metropolitan of Kitio and Dirachio), Iosiph from Sinopi, *proigoumenos* Neophitos Christopulos, *hieromonk* Akakios from Galatista, and Agapios from Veroia. Manuscripts were often also commissioned to professional scribes active both inside the Athos community and outside it like Loukas Bozaou, monk Seraphim, priest Ginos, Mathaios Mireon, Daniel, monk Kirillos, Antonios Ksiropotaminos, Anthimos from Ioannina. The production of manuscripts continued at irregular intervals up until the twentieth century with scribes like monk Dionisios, Cosmas from Samos, Christophoros Prodromitis, Ounoufrios Kountouroglou, *hieromonk* Ignatios, monk Damaskinos, monk Michael Thireos, and monk Gerasimos Naxios.

There is evidence of occasional travellers who visited the monastery and mention it in their writings. In a number of instances these visits to the monastery were combined with the acquisition, more or less legitimate, of manuscripts, a practice that has deprived the monastery from some important codices. In 1654 for sake of the good relations that the monastery tried to establish with the Tsar and the Patriarch of Moscow, 158 manuscripts and five printed books were ceded to their emissary[4]. In 1660 archimandrite Dionisios, abbot of the St. Nicholas *metochion* of the monastery in Moscow, took five more manuscripts and nine printed books. In 1726, Pope Benedict XIII sent a group of emissaries who managed to be ceded 15 manuscripts from the library. In 1753-1759, Eugenios Voulgaris, the founder of the Athoniada school in Karies, Mount Athos, took from the library of the monastery many of the

[4] Of those manuscripts, 150 are today preserved in the Synodic Library of the Moscow Historical Museum, six are in Dresden, one in Leipzig and one in St. Petersburg. (Θεολόγος, p. 244, note 24).

books necessary for the function of the school, books which were never given back (Θεολόγος 1998, p. 250) .

In 1801 the English traveller J. D. Carlyle, professor of Arabic in Cambridge, together with Dr. P. Hunt, passed from the monastery, and though they were able to get into the library they did not find anything worth taking. They just mentioned that the manuscripts were improperly kept, with respect to the printed books which were stored and preserved properly inside book cases with glass doors (Angelou, p. 46). Robert Curzon in 1837, mentions 2000 paper and 1000 parchment manuscripts well preserved in the library, even though such a number seems to be improbable (Curzon, 1916, pp. 368-372, and Θεολόγος 1998, p. 249). Minas Minoides, erudite and diplomat of the French Ministry of Foreign Affairs, visited the monastery in 1844, made a catalogue of the manuscripts preserved in the library and took away an unknown number of them (Θεολόγος 1998, pp. 250). In 1869 I. M. Raptarchis visited the monastery and recorded that the library had 2000 manuscripts, of which 100 were Georgian and some Coptic. He found the library to be the best and richest among the libraries of the Athos peninsula, though neglected (Ραπτάρχης 1869, pp. 206-207).

The first evidence that we have about the place where the books were kept dates in the beginning of the eighteenth century. In 1701 Ioannis Komninos, mentions that *«...many, expensive and useful books, either old and new... are kept in bookcases in three sumptuous places...»* (Κομνηνός, pp. 80-81), while in 1721, Neophitos Mavromatis, former Metropolitan of Arta, gathered all the books of the monastery, added his own, and put them in an appositely built room in the *catichoumena*, above the *katholicon* narthex.

In 1800, the library was moved from the eastern to the western part of the today's *skevophilakion*, and at that occasion a lot of the manuscripts that were worn out or were of no use or interest, were left in the *exonarthex*, so that fathers could take them for their personal use. Father Neophitos from Ioannina, a scribe himself, did left a lot of notes on the books, dealing with the content and the credibility of the texts, but also did numbered, grouped and some times took further care for their repair as a note in his hand states:

«D*amaged (leaves) were put back in order by proigoumenos Neophitos tipicarios, June 1807»*[5].

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[5] I. 1447, f. 17 v. *«Εβάλθησαν τα χαλασμένα κ' ανορθώθησαν παρά του προηγουμένου Νεοφύτου τυπικάριου κυρ Νεκταρίου 1807 εν μηνί Ιουνίω».*

There is still preserved today in the library a catalogue of the books, both printed and manuscripts, dated 1723, which is considered to be the oldest surviving library catalogue in the Athos monastic community. In this catalogue only 115 manuscript books are listed, but according to the present librarian the number is too small and should be considered as an inaccurate counting, since apparently a lot of books were still preserved in other places of the monastery or outside it, such as the *katholicon*, the *tipikario,* the various chapels, *metochia*, *kathismata* etc. (Θεολόγος, p. 246). Of those 115 manuscripts mentioned in that catalogue 23 are today missing from the library (Θεολόγος, p. 247). A second catalogue probably of the year 1729, listing unpublished texts found in the Athos libraries, mentions 21 manuscripts at the Iviron library, of which ten are today missing (Σαθά, 1872, pp. 269-284).

In 1895 professor Spiridon Lambros (1851-1919), together with his students, came in the monastery and made a catalogue of 1368 manuscripts of the library, though at that time there were still manuscripts preserved in places other than the library. Of those manuscripts, not published by Lambros, 39 were published by Sophronios Efstratiadis in 1925 and 18 were published in 1975 in a four volume corpus of the illuminated manuscripts of the Athos monasteries. In 1998 the first of a series of ten volumes catalogue has been published by the monastery, in which the first 100 manuscripts are catalogued with a detailed and modern paleographical and codicological description by P. Sotiroudis. The essay written in this catalogue by the present librarian monk Theologos Iviritis, provides an excellent and most useful account of the history of the library, together with four precious tables where manuscripts are categorized according to date and subject, writing support, the presence of scribal and other notes etc.

Since the early 1990 the *Sinodia* of the monastery has been changed and consequently the *tipicon*. This resulted to the changing of the monastery from *idiorithmic* to a *coenobitic*. The present librarian of the monastery was part of this new *sinodia*, and it is mostly due to his personal work and interest, as well as the abbot's, archimandrite Vasilios Gondikakis, own expressed interest, that the library is today a very welcoming place for scholars and researchers. In its present state the library houses 2120 manuscript books, among which some 100 Georgian, the biggest collection outside Georgia (Άτσαλος 1997, p. 584), and about 21.000 printed books among which quite a few incunabula and early printed books. As it is normal for a monastic library most of the texts are religious though secular texts are found as well

(Θεολόγος 1998, p. 253, table 1). Of particular importance is the collection of music manuscripts comprising 478 codices. This collection of the music manuscripts is catalogued in the third volume of the Stathis catalogue on the music manuscripts of mount Athos (Στάθης 1993). The library is today occasionally open to pilgrims though except the few books on display in glass cases all other books are covered with white cotton bags and therefore one can hardly get a feeling that makes justice to its importance and extension. In a newly restored wing of the monastery a spacious room has been appositely constructed in order for the books, both printed and manuscripts, to be moved and stored more appropriately.

1.4. THE HISTORY OF THE ST. CATHERINE'S MONASTERY LIBRARY

According to tradition, Mount Sinai, also known as Jebel Musa (meaning the mount of Moses), or mount Horeb (mount of God), was the place where Moses received the Ten Commandments. Due to this and other identifications with what is written in the Old Testament the place has been one of the main centres of monasticism probably as early as the third century (Encyclopedia of Monasticism, p. 902).

The monastery of St. Catherine was built by Emperor Justinian I, sometime between the years 548 and 565, around the place where the burning bush was found and where a church was built as early as 330 by St. Helen, the mother of Emperor Constantine the Great. The church, the *katholicon*, which is still today the centre of the monastery was built by the architect Stephanos from the nearby city of Aqaba and was protected by impressive defensive walls, which still survive today, and military troops provided by the Emperor. The monastery was originally dedicated to the Transfiguration of Christ and it was only sometime between the eighth and the ninth century that it was dedicated to St. Catherine of Alexandria whose body, according to tradition, was transported by angels in the Sinai. Since its construction by the Emperor Justinian I, the monastery was endowed with various gifts, among them a certain number of liturgical books, necessary for the monastic life and the services. The codex Sinaiticus, one the most venerable treasures of the monastery is supposed to be part of that regal donation. The monastery managed to survive the advent of Islam in the seventh century and a series of troubled periods ever after thanks to an *Ahdname*

supposedly granted by the prophet Mohamed himself but also thanks to the persistence and diplomacy of its monks. The mosque built around the year 1106, and still preserved today aside the bell tower of the *katholicon* should probably be considered as such a diplomatic gesture. Thanks to the good relations that the monastery had always had with the highest strata, either it was the Byzantine emperors, the Popes, the Doges, the Tsars, or the rulers of Wallachia the monastery had always been granted favorable taxation, special benefits and permits for the movement of goods, as well as gifts which essentially never ceded to be sent or brought to it.

Throughout its long history the monastic community of the monastery has always been multilingual, since Arabs, Georgians, Syrians, etc, all seem to have had a more or less lasting presence in it, especially in the early centuries except of course the Greeks, which apparently have always been the prevailing linguistic group. This is perfectly proved by the presence of religious texts in all these languages, sometimes written together in the same codex, as it is often the case with manuscripts of the Arabic collection where the Greek and Arabic texts are found side by side.

The evidence of copying activity covers almost the whole history of the monastery though with considerable fluctuations and lacunae (Galavaris, 2000, pp. 443-444, Ντιγκμπασάνη, pp. 17-18, Clark, 1960, pp. 518-519). Furthermore the lack of up to date systematic research of the whole collection does not permit any sound, clear image to be gained on this issue, though it seems that copying was mostly done on a personal basis and was often related with the presence and the guidance of a bishop such as Arsenios in the thirteenth century (Γαλάβαρης 1994). The area of the Sinai itself has been the place where some important texts were originally written by writers such as *hosios* Nilos (fourth century), John Moschus with his *Spiritual Meadow* (in Mount Sinai between around 584 to 594), Theodoros of Raithos (fifth to sixth century ca.), Anastasios Sinaitis (seventh century), Abba Hesychius (eight to ninth century ca.), Philotheus of Sinai (ninth to tenth century ca.), etc. By far the most important and influential of these hermit or monk writers was St. John Climacus, abbot of the monastery himself sometime in the seventh century, who wrote the *Ladder of Paradise*, *'...an unsystematic presentation of vices and virtues, in scenes and more often in direct indoctrinations and definition'*. (ODB, vol. 2, p. 1060). There are 30 copies of this text still preserved in the library today, written in various periods (Ντιγκμπασάνη, p. 17).

Manuscripts written in the monastery and preserved there ever since probably represent a small portion of the holdings of the library. Most of the books have entered the monastery at some later date in a series of ways. First of all, mostly for their often highest artistic value, are the gifts from the Byzantine emperors and other rulers which have enriched the library with some outstanding manuscripts (Ντιγκμπασάνη, pp. 11, 12). Except these luxurious gifts, there are many more books, either manuscripts or printed, that have entered the library as donations by clergymen, patriarchs, metropolitans, abbots etc. The same is true for most of the archbishops of the monastery. Many of them took care to collect and bring books back in the monastery, among others the archbishop Ioannikios I from Peloponnese (in service between 1671-1702), the archbishop Nikephoros Marthales (in service between 1728-1747) etc.

Except the high clergymen a lot of the books that are found today in the library became part of its collections as donations or bequests by monks, which may have been part of the monastery brotherhood or not, but even by laymen. A number of books must have also been brought to the monastery from its various *metochia*, or from hermitages around it. It is known for example that between the eighth and the thirteenth century more than 1700 hermitages were destroyed in various riots by the Arabs (Clark 1953, p. 26, see also Dahari, 2000) and part of their books must have ended to the monastery (Ντιγκμπασάνη. p. 35).

Except the incomes the library must have also suffered great losses if one considers its turbulent history as well as the various travellers and scholars who have deprived the monastery of some of its most valuable items, despite the curses against theft which scribes very often wrote on the books. Among them one distinguishes the German professor Tischendorf (1815-1874) and the Russian archbishop Uspenskij (1804-1885): the first deprived the monastery of the codex Sinaiticus in 1843 and 1859, while the second apart from taking away an unspecified number of manuscript codices and fragments, cut out with scissors many miniatures from Illuminated parchment codices. Nevertheless visitors and their accounts often give us important, though at times contradicting and dubious, information about the monastery and its book collections. Since the first recorded visit of a pilgrim, Egeria, a French noble woman around the years 383-384, many more have followed. It was only after the first half of the nineteenth century that apart from the pilgrims and travellers, scholars began to visit the monastery in order to explore its book and other collections.

A true library, having books at least elementary catalogued and stored decently in a special place, did not exist in the monastery until rather late in the eighteenth century. Nikephoros Marthales who was archbishop of the monastery between 1728 and 1747, built a separate building which he called Library in 1734. In its entrance there was the inscription:

«This library was built under the diligence / and presence of the holy and / respectable archbishop of Sinai Mount/ Nikephoros, with the work of Sinaitic monk, / architect Philotheos and Simeon. / Who reads this, remember him. 1734».[6]

Until that date, books were housed apparently in three distinct places, in the *katholicon,* in the *mesi*, and in the inner side of the walls of the monastery.
Originally books were kept in the *katholicon*, as they were necessary for the services, and because this is where traditionally all donations, either of books or icons, were placed. It is indeed rather common to find scribal notes where the scribe suggests, that the manuscript he has copied should be kept in the *katholicon* :

«Me, monk Dionisios Famelitis, dedicate this liturgy/ in the Sinai mount, in the katholicon, whoever wants to take it away / let be unchurched 1666» (f. 80v. S. Gr. 1055).

Later on, and according to various notes on books, we are informed that books were kept also in the mesi (*μέση* in Greek meaning half), which was, and still is, a special place inside the monastery where, among other things, food is stored. Many of the valuable items of the monastery were also kept there. Some notes on books do give a proof of that:

«In the same year (1734) 24th of May, we let out father Gera/ simo oikonomos for the Saint Mathiou.../ ...we gave him from the mesi, according to the will / of the archbishop, one yellow stichari .../ ...and one Gospel...» (f. 367v. S. Gr. 2197A).

«In the same day (1776, 15th of April) migrated also Pachomios from Rhodes for the Patmian / school to study, we gave him from the mesi six / books for his lessons, Lucian, Herodianous, Xenophon, encyclopedia / first volume of encyclopedia and an old and big horologion / and when he comes back they should belong again in the mesi» (f. 452 r. S. Gr. 2197A).

There is evidence that at the same time, rooms found on the external, Justinian wall were used to store books[7]. This was probably for safety as well as space saving

[6] The inscription, written in Greek, was first published by M. H. L. Rabino, *"Le Monastere de Sainte Catherine (Mont-Sinai), Souvenirs Epigraphiques des Ancienes palerins"*, Le Caire 1935. (see section 2.3.1.)

reasons. It is probable that during the time of Archbishop Cosmas (1702-1707), in order to record the manuscript and printed books he moved them in a safe place on the Justinian walls. In 1712 the orientalist Michael Eneman, visited the monastery and was guided by the fathers to the place where books were kept. According to his writings, he was led to a place along the walls and very close to the *katholicon*. There he found a lot of manuscripts as well as printed books, in various languages, though badly stored, *«...stacked one over the other»* (Ντιγκμπασάνη, p.36) while some of the books were kept in a double closet inside the church.

According to the former librarian of the monastery, father Demetrios (Ντιγκμπασάνη, p.37) all these three places were used at the same time, to store books. In the nineteenth century the books were moved again from the Marthales library to *«...a double room next to the Panagia Chapel»* (Weitzman and Galavaris 1990, pp. 4). It was only in 1950 that a new library was built, in the new wing on the southwestern wall of the monastery, with funds from the Greeks of the diaspora. A year latter all the books, both printed and manuscripts have been transferred definitively in the upper floor of this new building, occupying a spacious two level room, where the printed books are placed in the lower level and the manuscripts in the upper one. It was Gregorios Maniatopoulos, archbishop of the monastery between the years 1969 and 1973, who formally separated the library from the *skevophilakio*, so that this could be considered as a *diakonima* on its own right.

Travellers visiting the monastery often complained about the situation in which books were stored and preserved and we should probably consider this to be not far away from reality if one gives a closer look at the condition of many of the books today. Nevertheless this is only part of the story since evidence from the books themselves does offer enough information to support the opposite view as well. There are plenty of codices in the library with clear signs of repair, some of them quite extensive and laborious as the note on **S. 764** testifies:

"The present penticostarion was very much damaged and was bound in Raithos and it was tried by other brothers but none has finished it, and the person who did what you see he has the labour which God knew, and let anyone who removes it from the monastery of the holy Theotokos in Raithos be removed from the dispensation of the Son of God to whom she gave birth." (see section 2.2.4.1.)

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[7] According to Γ. Σωτηρίου (1958, vol. 2. p. 1): *«...the monastery is surrounded by a strong, oblong castle-like wall, the «teichocastron», as it is called in the Sinaitic documents, reinforced by towers...Its dimensions vary, having a length between 75-80 m. height as much as 25 m. and width between 2 and 3 meters...».*

Similar notes, rather numerous around the middle of the seventeenth and in the first half of the eighteenth century indicate a rather systematic effort to repair and tide up the books and the library and are considered in the various sections of this thesis (see sections 2..2.2, 2.2.4., 2.3.2.). It is also true that many codices in the library today are in deplorable conditions and have hardly had any repair treatment at all. Nevertheless from the point of view of book archaeology this is a unique advantage since it permits early bookbinding structures, often in pristine undisturbed state, to be seen and examined.

The effort to catalogue the collections of the library goes as back as 1704 and is due to archbishop Cosmas (1702 - 1708). More attempts were made after him but it was not until 1886 that V. Garthausen published the first printed catalogue describing very briefly 1223 codices of the Greek manuscripts collection. Efforts continued after him and so far there have been published three general catalogues by K. W. Clark (1952), B. Bayer (1968), and M. Kamil (1970) and ten catalogues of limited and specific groups of manuscripts (Ντιγκμπασάνη, pp. 55-72). The two most recent of them are the one published in 1983 by D. Harlfinger et alt. considering only 34 Greek manuscripts with dated colophons between the ninth and the twelfth century and the other published by K. Weitzaman and G. Galavaris in 1990 considering the illuminated manuscripts of the same period. Both catalogues provide a lot of codicological information and pay a considerable attention on the bookbinding structures. In 1985, 1988, 1995, 1998 (Νικολόπουλος 1998), the catalogues of the Arabic, Slavonic Syriac and Greek New Finds were published respectively and it is hoped that the catalogue on the incunabula and the early printed books will be soon published as well[8].

In 1996 The St. Catherine's Foundation was founded in London with the aim to help raise the necessary money to refurbish the library building and provide any necessary help for the preservation of its collections. Dr. Nicholas Pickwoad has planed, organized and supervised the project. Today (July 2004) the Assessment Project of the whole manuscript collection of the library, the first step for any further action, is towards the end and it is certain that it will provide an outstanding amount of data on book archaeology and trigger much further research in the future.

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[8] Professor A. Skarveli is working in the last years in order to prepare the catalogue of the early printed books..

The library today houses about 3300 manuscripts of which 2319 Greek, 601 Arabic, 266 Syriac, 86 Georgian, 43 Slavonic, 6 Ethiopic, 1 Armenian, 1 Latin, 1 Persian and 1 Polish. Furthermore there are 1072 Arabic documents and 670 Turkish[9], while the extension of the Greek archive – certainly the most extensive of all the others- is still to be established. In 1975 after the discovery of the 'New Finds' a great number of fragments but also complete codices have been added to this main collection, some of them of exceptional importance (Δαμιανός 1998). Among them there are 11 leaves and a number of fragments from the Codex Sinaiticus which is today divided between London, Leipzig and St. Petersburg.

Today the library is visited by a varying number of tourists and travellers who are briefly told the history of the collection by the fathers of the monastery, while scholars are often accepted for short periods in order to work in the library. A number of the most important codices are on display both in the library and the new museum.

[9] These data are those provided by the M. Kamil catalogue published in 1970. It is very difficult to define precisely the number of the books in the library especially if one considers also the New Finds among which there is an unspecified number of complete or almost complete bound codices.

MISSING

PAGES

NOT

AVAILABLE

PART 2

BINDINGS FROM THE ST. CATHERINE'S MONASTERY IN SINAI

CHAPTER 1.

CRETE, THE MIDDLE EAST AND SINAI IN THE FIFTEENTH AND SIXTEENTH CENTURIES.

2.1.1. Historical Outline.

The year 1453 A.D. is a landmark in the history of the Greek-Orthodox communities both in the context of the Byzantine empire and outside it. That year the Ottomans conquered Constantinople, putting an end to one of the longest-lasting empires in history, the Byzantine, and at the same time giving a conventional start to what we call the post-Byzantine period, which is actually the period with which the present research deals.

Crete, which was under Venetian domination from 1212 A.D. until 1669 A.D. when it fell to the Ottomans, was destined to play a leading role in the period after the fall of the Byzantine empire, in the dissemination of Greek learning and art in Europe and at the same time in the dissemination of western learning and art in the Greek-Orthodox east.

Since the middle ages Sinai retained close relations with the island where it had various estates. In August 1217 Pope Honorius, at the request from the Sinai Fathers, agreed to take those estates under his protection with all the rest of the holdings of the monastery in Egypt, the Sinai peninsula, Palestine, Syria, Cyprus and Constantinople. The same favourable treatment was granted to the Sinai monastery and its holdings by the Doges of Venice, starting with Doge Pietro Ziani in 1212, who recognized the right of the Sinai monks to export tax-free goods from the island and to make free use of their properties there. In the island's capital, Candia - today's Heraklion- the church of Saint Catherine was founded sometime in the second half of the thirteenth century as part of the *metochion* of the monastery in that city. This church became an important religious settlement for the orthodox population of the island and apparently in the same complex a school was also founded in which El Greco was thought to have had his early training as a painter (Φραγκούλη, 1988).

In 1517 the Ottomans under Sultan Selim occupied Egypt, but they proved favourably disposed towards the monastery and its possessions in Cairo and elsewhere, releasing a new *Ahdname* in accordance with the older one supposedly given by prophet Mohamed

himself (Άμαντος 1953, pp. 26-27). In the second half of the sixteenth century there is evidence of monks who travelled in Europe and others who visited the monastery[10], while in the same period the monastery received financial support from the Austrian king Maximilian and the Archduke Karl, from Pope Innocent VII , from the Gospodars of Wallachia and the Tsars of Russia (Άμαντος 1953, pp. 34 – 52).

Returning to Crete, it is important to stress that in the years after the fall of Constantinople most of the scholars and educated persons that escaped the captured city moved either toward the west (Venice with its prosperous Greek community was the most popular destination) or Crete, under Venetian occupation at the time, bringing with them manuscripts containing among other, classical literature and philosophy, 'fertilizing' in a way the western renaissance which was just maturing (Reynolds and Wilson, 1975, Geanakoplos 1962, Pecere 1991, Manoussakas and Staikos, 1987, De Gregorio 1993).

Crete was an important intellectual center already before the fall of Constantinople, but it is only after this event that it assumed a leading role in the dissemination of Greek learning. Many scholars settled there and made a living teaching Greek and copying manuscripts destined for the markets of the west, first of all Venice (J. Irigoin, 'Quelques particularites...', 1968, D. Holton 1991, Cortesi and Maltese, 1992, Hutterell, in The New Cambridge Medieval History, vol. VII, ch. 31, 1998).

Among the most prolific and well-known of these copyists and scholars was Michael Apostolis and a group of people around him, including his son Aristoboulos Apostolis, who staffed a very productive and important scriptorium mostly dedicated to the copying of classical texts. The founder, Michael Apostolis, born in 1420, was actually one of the Greek scholars who escaped Constantinople and found refuge in Crete, apparently in 1454/5, where he lived and worked until circa 1480, with trips to Constantinople, Italy and Cyprus in between (Gamillscheg and Harlfinger 1981, p. 149, and ODB, volume 1, pp. 140-141). His scriptorium, which among others supplied manuscripts to cardinal Bessarion, is documented in the second half of the fifteenth century (Wittek 1953, pp. 290-297, Geanakoplos 1958, pp. 157-162, Πατρινέλη 1961,

[10] The Russian pilgrim Basel Posniakov visited the monastery between the years 1558 – 1561. In the same period the German traveller St. Gerlach visited the monastery and noticed that there were as many as 200 Greek speaking monks living in it (Άμαντος, 1953, pp. 48, 50-51)

pp. 68-70). In this or other scriptoria of the time manuscripts were ordered or just bought by monks in order to be offered to the monastery in Sinai.

The area of the Middle East has been one of the most productive places in terms of history and culture since the Greeks, the Romans, the Byzantines, the Arabs, the Jews, the Persians, the Ottomans, the Mongols, the Crusaders, to mention only some, have all played a role in the ever changing history of the area. One for the major reasons for this is the fact that all three major monotheistic religions of the Mediterranean, the Christians, the Muslims and the Jews, with the various ramifications and heresies, have given a major roll for their beliefs in cities like Jerusalem, Antioch, Gaza and areas like Palestine. As a matter of fact mostly for the Jews, but also for the Christians, Jerusalem is the spiritual center of their religion and one of the three major sacred places for the Muslims, while Antioch is the place where Christians were firstly called so, named after Jesus Christ. Syria and Palestine were the first places where monasticisms spread as soon as the fourth century, soon after it firstly appeared in the Egyptian desert. Furthermore three of the five Patriarchates are settled in this area, in Antioch, Alexandria and Jerusalem. A good proof of the importance and the intense religious life and thinking is the fact that a whole series of heresies and deviations from the main belief have appeared in this area, like the Nestorians, the Melchite, the Jacobite, the Maronite etc.

The contact between the two antagonistic religions and cultures, that of the Islamic Arabs and that of the Byzantine Christians was a succession of battles, raids, pacts, diplomacy, commerce, paid taxes and tacit coexistence. Despite all these the two cultures managed to survive and influence each other. As one perhaps would expect, Muslims were converted into Christians and Christians were converted into Muslims, sometimes by force. The interconnections between these two cultures can be traced in various fields of art, and a thirteenth-century icon from Antioch is a good proof of this (figure 6), Most significantly for the purpose of this research, such interconnections, can be traced and interpreted also in the field of book production. The relationships between the courts, the Byzantine and those of the various Islamic Dynasties, full of luxurious object exchanges and diplomatic assignments of scholars and artists (Soucek, pp. 403-411, Codoñer 1996) are just part of the history, and do not fully reflect the conditions under which the Christian populations,

among them monastic settlements, lived throughout the Islamic territories. In Sinai for example which managed to escape destruction, a mosque had to be built inside the monastery around the year 1106, supposedly in order to escape an attack from Muslim

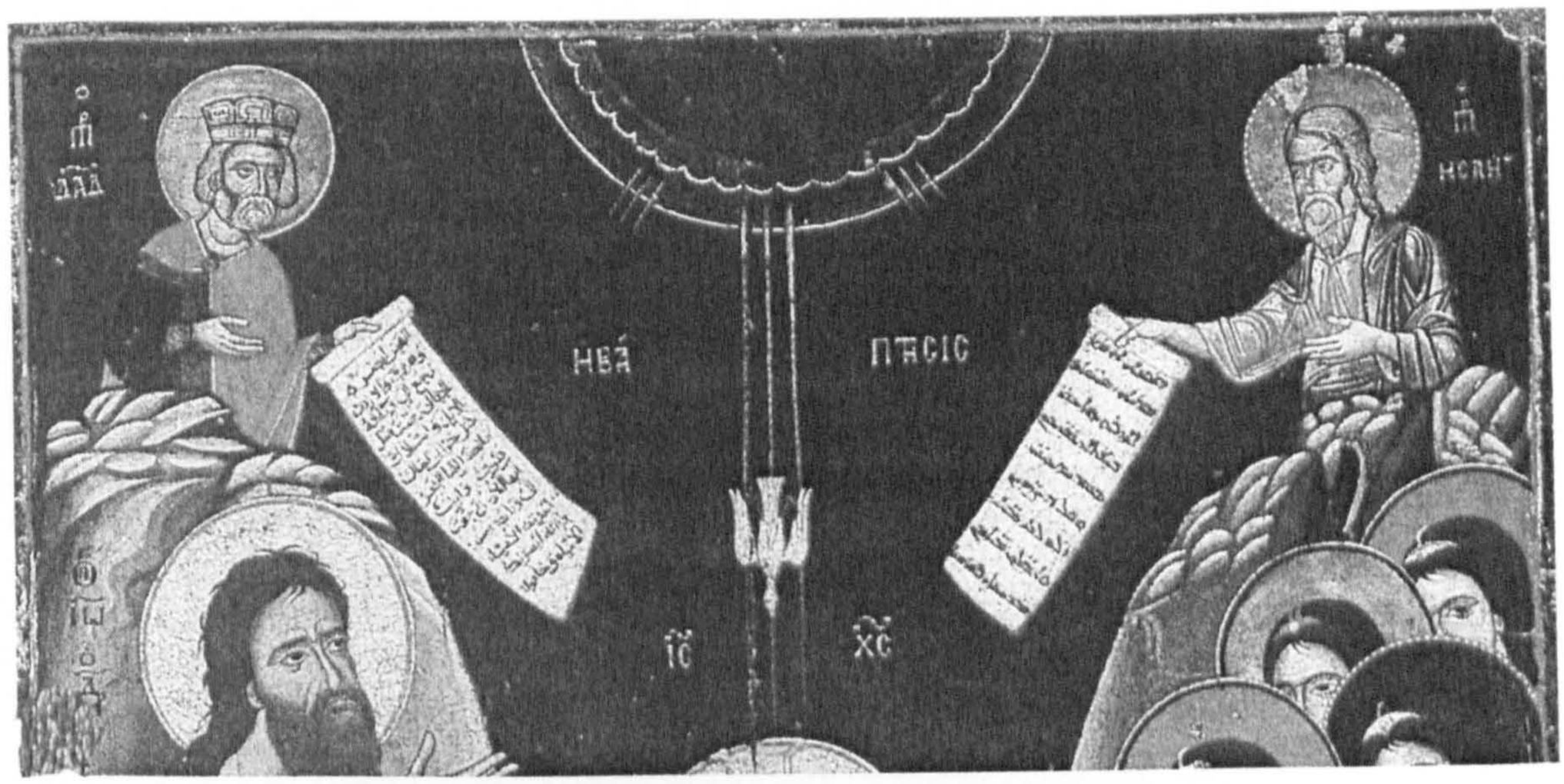

Figure 6. Detail of a thirteenth-century Melchitic, two sided icon with the Baptism of Crist from Kaftoun in Syria. Letters in the background are written in Greek, those on the scroll on the left in Arabic and those on the scroll on the right in Syriac. After *The splendour of Christian Orient*, Exibibition catalogue, Frankfurt 2002.

armies. As would be expected at least The Book, i.e. the Koran must have existed in that mosque and this is a fact that we will consider also in the next chapter of the thesis. The various influences which arose from such an interconnection between the two religions on the specific field of book illumination have been excellently exposed by Galavaris (1986, 1994), but their impact on the external form of the book has never been investigated and this will be one of the issues we will examine in section 2.1.3. of this chapter. The St Catherine's monastery was and still is subdued to the Patriarchate of Jerusalem and the connections have always been quite close in all administrative and practical levels. The same is true for all the other areas of the Middle East where Christian populations were living, especially in Syria and Palestine, where the Sinai had also various estates, but also for the various monastic communities of the area (Άμαντος, 1953). In the following three sections of this chapter we will examine three groups of bindings, all of them apparently made between the late fifteenth and the sixteenth century, either in Crete, Antioch or some unidentified area of the Middle East.

2.1.2 CRETAN BINDINGS OF THE FIFTEENTH & SIXTEENTH CENTURIES.

This group comprises nine bindings that were made between the fifteenth and the early sixteenth century in Crete, four of them were most probably made in the Michael Apostolis atelier between the years 1464 -1479.

2.1.2.1. *Text-blocks, scribes and donors (table 1)*

Eight of the manuscripts contain ecclesiastical texts, four of them theological and four liturgical while there is also one manuscript with a classics text, Apollonios Rhodios '*Argonautica*' copied by Aristoboulos Apostolis, a text known to have been copied by him several times (Wittek 1953, p. 294 and note 74). Formats of the text-blocks vary between 4to (four volumes), 8vo (four volumes), and one 16mo.

As can be seen in table 1 scribal and other notes make it possible to date precisely one of the text-blocks in the year 1429 (**S. 968**), five of them between the years 1464 and 1491 (**S. 1343, S. 1234, S. 2101, S.A. 80, S. 1194** in chronological order), and one in 1520 (**S. 663**). All these seven manuscripts are in their original binding.

In **S. 968** we read the following notes:

f. 483v. *"The present euchologion was finished by the hand of me, ignorant humble and sinful* ***Bartholomaios priest named Rhosos*** *at the expense and with the support of our most holly father Moses deacon and oikonomos of the venerable monastery of glorious martyr Saint Catherine in the Island of Crete, and the readers pray for us to the Lord. In the year 1426 A.D. on the 15th of August"* [11].

f. 484 r. *"This euchologion was made for the big church of the holy prophet Moses and of the glorious martyr saint Catherine at the expense and the labour of the passed away unforgettable servant of God,* ***Moses hierodeacon****, once oikonomos in the island of Crete. And may whoever takes it away from the holy monastery have the curses of the seven synods and the condemnation of the holy Moses. This was*

[11] f. 483v. *«Ετελειώθη το παρόν ευχολόγιον δια χειρός καμού του αμαθούς ταπεινού και αμαρτωλού βαρθολομαίου τάχα και ιερέως το επικλήν ρόσου δια συνδρομής και εξόδου του πανοσιωτάτου πατρός ημών μωυσέως διακόνου και οικονόμου της σεβασμίας μονής της αγίας ενδόξου μεγαλομάρτυρος αικατερίνης εν τη νήσω κρήτη και οι εντυγχάνοντες εύχεσθαι ημών δια τον κύριον. Εν έτει εξακισχιλιοστώ σαμ λδ' (6934 A.M. =1426 A.D.) μηνί αυγούστω ιε'»..*

written with the wish of the most saintly bishop Savas in 1429 A.D. on the 8th of March or in the year from the beginning of the world 6037 A.M."[12].

In **S. 1343** we read the following note:

f. 337r. *"This holy and sacred Gospel was bought by **Athanasios oikonomos** of the monastery of Saint Catherine from Crete, and may whoever would wish to steal it from the holy mount Sinai have the curses of the 318 God-bearing Fathers of the Nicea synod and of the holy bishop of the monastery kiriou Ioakim and of his successors, in the year 1464 A.D. on the 23rd of the month of July"* [13].

In **S. 1234** we read the following notes:

f. 450r. *"This Stichirarion was dedicated by the passed away most venerable **Ioannikios hieromonk** and spiritual Father. Dedicated it to the holy and God-visited mount Sinai and may whoever steals it or cuts this leaf and takes it away from the monastery have the curses of the 310 God-bearing fathers and may be judged with Judas Iscariot"*[14].

f. 450v. *"The present book was finished by the hand of me **Ioannis priest of Plousmandyanos (?)** and **protopapas of Candia** of Crete [...] in the year 1469 AD 3rd indiction in Venice. Those consulting this book pray to the Lord for me and ..."*[15]

In **S. 2101** we read the following note:

f. 569r. *"The present book was finished in the April of 1478 written by the hand of **Mathaios humble hieromonk the so called Trapezountios**, God bless he who gave an end to the book"*[16].

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[12] f. 484r *(right pastedown). «Τούτον το ευχολόγιον εγίνετον δια την μεγάλην εκκλησίαν του αγίου προφήτου μωυσέως και της αγίας ενδόξου μεγαλομάρτυρος αικατερίνης δια εξόδου και κόπου του έν μακαρία τη μνήμη γεναμένου αειμνήστου δούλου του θεού μωυσέως ιεροδιακόνου ποτέ οικονόμου εν τη νήσω κρήτης. Όστις δε υστερήσει αυτό της αγίας μονής να έχει την άραν των επτά συνόδων και του αγίου μωυσέως κατάδικον. Εγράφη με το θέλημαν του επισκόπου αγιωτάτου σάβα εις χιλίους τετρακοσίους είκοσι ενέα μηνί μαρτίω η' έτους δε αρχής κόσμου εξακισχιλιωστώ τριακοστώ ευδόμω».*

[13] f. 337 r. *«Το θείον και ιερόν ευαγγέλιον ωνίσατο ο κύριος οικονόμος αθανάσιος της μονής της αγίας Αικατερίνης εκ κρίτης, όστις δε βουληθήναι κλαπέναι αυτό από του αγίου όρους σινά έχει τας άρας των τριακόσίων δέκα και οκτώ θεοφόρων πατέρων της έν νικαία και του αγίου επισκόπου της μονής του κυρίου Ιωακείμ και των αυτού αναδόχων, εν έτει ϛsabioβ' (6972 AM=1464 AD) εν μηνί ιουλίω κγ'».*

[14] f. 450: *«ετούτο το στιχιράριον αφιαίρωσε ο εν μακαρία τη μνήμι ο οσιώτατος Ιωαννίκιος ιερομόναχός και πνευματικού πατρός. Αφιαίρωσεν αυτώ είς το άγιον και θεοβάδιστον όρος το Σίνεον και ήτις το κλέψι ει κόψι το φίλον ετούτο, και ξενόσιτο από το άγιον μοναστήρι να έχει τας άρας τον τι' και θεοφόρον πατ'ερων και να κρίνετε με τον ιούδα τον σκηρώτην».*

[15] f. 450: *«Ετελειώθη η παρούσα βίβλος δια χειρός εμού ιωάννου ιερέος του πλουσμανδυανού (?) και προτόπαπα χάνδακος κρήτης έτι γενήν και άρχοντος των εκκλησιών έτι το από του κυρίου ημών Ιησού»* (this note is not published in Benesevic). *χριστού αυξθ' (1469 AD) ινδικτιόνος γ' εν βενετίαις. Όσοι ούν της βίβλου εντεύξησθε εύχεσθε προς κύριον υπέρ ημών και των ....»*

[16] f. 569 : *«Ετελεώθη το παρόν βιβλίον κατά μήνα απρίλιον του ϛsab πϛ' (6986 AM=1478 AD) έτους γραφέν χειρί ματθαίου του ευτελούς ιερομονάχου του κατά κόσμον τραπεζούντιου τέλος τώ δόντι τέρμα της βίβλου θεώ χάρις».*

S. A. 80 was written in 1479 as clearly stated in the Kamil catalogue thought it was not possible to actually read the scribal note because written in Arabic.

In **S. 1194** we read the following note:

f. 182r. *"**Aristoboulos Apostolis hierodeacon** with the grace of God wrote this book also of Apollonius in Crete, not however without pay, for like my father I, too, am at the mercy of the most pernicious beast of poverty, 1491 AD on the 4th of December"* [17].

Another manuscript with the same subject written by the same scribe is now in Brussels (Galavaris 2000, pp. 445-446).

In **S. 663,** written probably in the monastery (Galavaris 2000, p. 446) we read the following note:

f. 320v. *"The present book was written at the expense and with the support of the most venerable monk Nikodemos in the year 1520 AD on the 25th of March"* [18].

The seven manuscripts just mentioned above allow us to define the period in which the bindings considered here were made. Nevertheless there are two more manuscripts examined here that were written at an earlier date and bound or rebound in the same milieu, in all probability at the same time as the manuscripts mentioned above. Of these two manuscripts **S. 375** (Weitzmann and Galavaris, 1990 pp. 21-23) was written in the year 892/893 as the following note states:

*f. 436r. "This book belonged to our father **Nicholas** who is in Rikoudi [...] in the year 893 AD in the reign of the most pious (?) Leo the Isaurian and the patriarchate of the Ecumenical* (Patriarch) *Sergios [...]"*[19].

f. 4v. *"In the year 1597 AD on the 29th of November I, **Gerasimos hieromonk** came from the economeion of Crete and brought this book and I dedicate it to our holy monastery of Sinai and may*

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[17] f. 182 *«Αριστόβουλος Αποστόλης ιεροδιάκονος θεία χάριτι και ταύτην την του απολλωνίου βίβλον εν κρήτη εξέγραψα ούκ άνευ μέντοι μισθού υπό γάρ του εξολεστάτου θηρός της πενίας και αυτός ώσπερ ο πάτηρ μου στραγγεύομαι αυθα' (1491 AD) μηνός δεκεμβρίου δ'».*

[18] f. 320 v. *«Εγράφη το παρόν βιβλίον δια εξόδου και συνδρομής του οσιωττάτου εν μοναχοίς κυρ νικοδήμου εν έτη ζκη΄(7028 AM=1520 AD) εν μηνί μαρτίου εις τας κε'».*

[19] f. 436r: *«αυτή η βίβλος έστην του εν αγίοις π(ατ)ρ(ό)ς ημών νικολάου του εν ρικούδι* [...] *έτους ϛυα' (6401 AM= 893 AD) βασιλεύοντ(ος) του (ευσεβε?)στάτου λέον(τος) ισαύρου και αρχιερατέβοντος οικουμενικού* (πατριάρχου) *κυρού σεργίου ου και τους οίκους(?) επίησ(εν)».*

whoever steals it or cuts a leaf be excommunicated by the 318 God-bearing holy Fathers and unforgiven by God pantocrator and may his place be with those who decreed the crucifixion of the Son of God." [20].

The last volume, **S. 165** was written in the first half of the fifteenth century in Crete (Galavaris 2000, p. 45) by the scribe Ioannis Rhossos:

Last text leaf: *"The gift of God and the work of Io[annis] called Rhossos "*[21].

Seven manuscripts are in their original bindings, while **S. 1343** and **S. 375** are rebound. All nine bindings considered here are Greek-style bindings.

2.1.2.2. *Endleaves (table 2)*

There are 18 endleaf units to be considered. Twelve of them consist of separate gatherings sewn in the two ends of the text-block and of these ten follow the arrangement [1]3 or 3[1], one follows the arrangement 7 [1], and in one case there are only six flyleaves and no pastedowns. Five units consist of integral endleaves, following five different arrangements, [1] +, +[1], + 1 [1], + 2, + 2 [1]. One unit is missing.
Only in four of the manuscripts the left and right endleaf units are consistent in their arrangement, consisting in separate blank gatherings sewn in the two ends of the text-block (**S. 165, S. 663, S. 1194, S. 1234**), in all the other volumes the left and right endleaf units follow different arrangements. The case of **S. 165**, still in its original binding, is of interest because paper endleaves have been used with a fifteenth-century parchment text-block.

2.1.2.3. *Sewing (table 3)*

All the volumes are sewn with unsupported sewing, but the exact type could not be established in none of them due to accessibility limits. According to Canart (Canart et

[20] f. 4v: *«ετους ζρς' (7106 AM = 1597 AD) νοεμβρίω μηνί κ' ήλθα εγώ ο γεράσιμος ιερομόναχος εκ το οικονομίον της κρήτης και ήφερα το παρόν βιβλίον και το αφιερώνω είς το άγιον ημών μοναστήριον το σιναίον και όστις το ξενώση ή κόψη το φίλον να είναι αφορισμένος παρά των τιη' θεοφόρων αγίων πατέρων και ασυγχώρητος παρά θεού παντοκράτορος και η μερίς αυτού μετά των ειπόντων άρον σταύρωσον τον υιόν του θεού».*
[21] *«Θεού το δώρον και ιω[άνν]ου πόνος ρόσου το επίκλειον τάχα και θήτου».*

al.1992, pp. 763-764): *"Du point de vue technique, les manuscrits crétoises, tout comme les manuscrits reliés à Constantinople, ont été cousus en deux blocs"* but this could not be established for none of the volumes considered here. Five of the volumes are sewn on five sewing stations and four volumes on four (figure 7).

Three out of the four 4to volumes are sewn on five stations, the exception being **S. A. 80**. Five volumes have their sewing stations arranged on the spines of the text-blocks according to pattern B1, whilst patterns A, B2, B5, D are all represented by one volume. In all volumes the sewing stations are marked by V shape cuts. Sewing thread is a medium to thin linen or hemp, mostly of medium twist and multiple S ply. In two volumes a Z ply sewing thread has been used and these are the two volumes (**S. 1343** and **S. A. 80**) which (as will be seen later on) were probably not made in Crete but in Sinai itself.

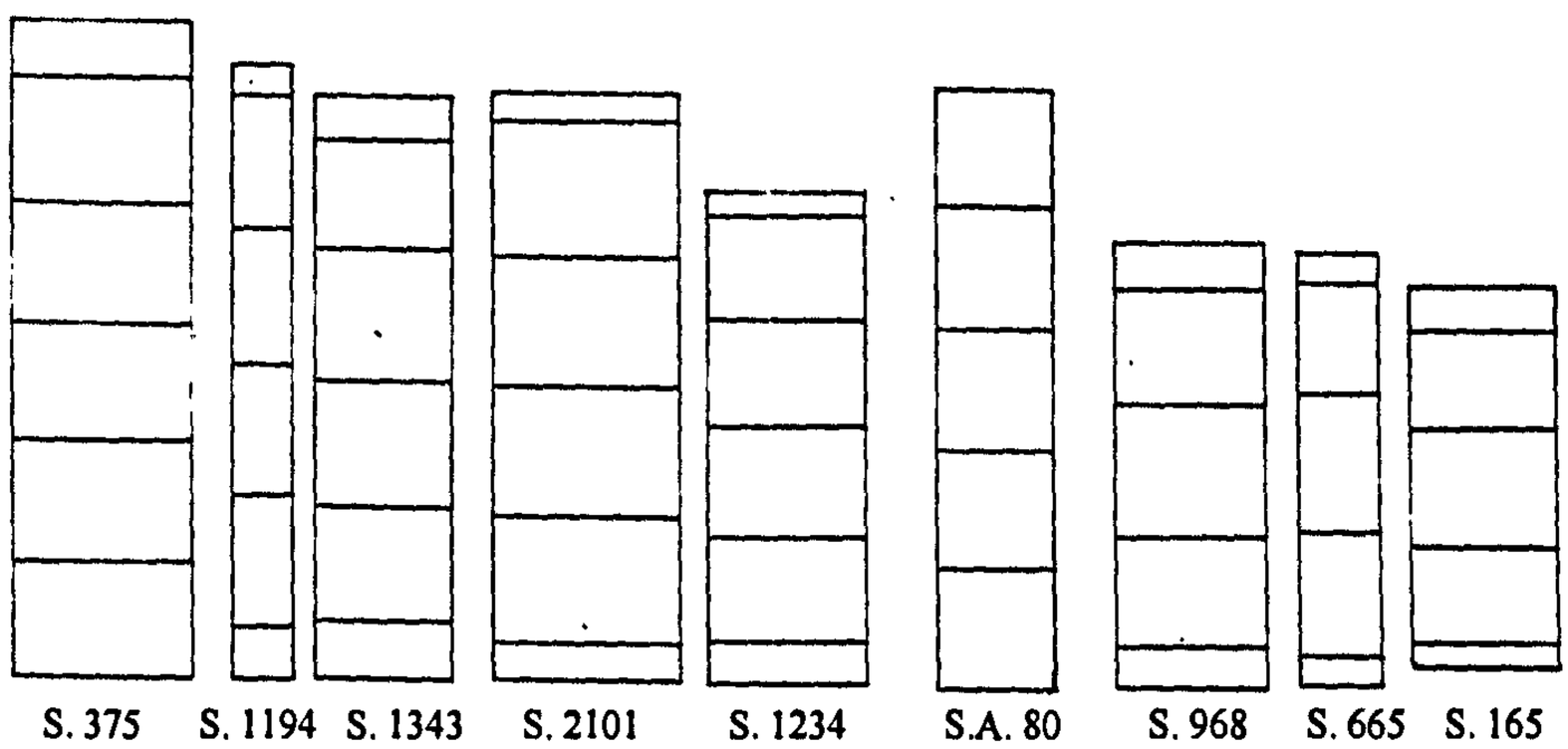

Figure 7. Line drawing showing the spines of the nine text-blocks and the arrangement of the sewing stations along them. From left to right text-blocks sewn on five and four sewing stations.

2.1.2.4. *Boards and board attachment (table 4)*

All manuscripts are bound in wooden boards cut flush with the text-blocks. On the basis of visual observation it seems that beech wood was used in two volumes (**S. 165, S. 968**), oak in **S. A. 80** and pine in **S. 1343**. The grain is always parallel to the spine of the text-block. The thickness of the boards is between eight and 14 millimeters. Their spine edges are shaped according either to the SET 3 or SET 4 patterns, both very similar except the degree of beveling and the point where such beveling starts on the boards thickness. In **S. A. 80** the spine edges are shaped according to the SET 7 pattern. The spine joints of the text-blocks form an angle with the spine edge of boards which varies

considerably and ranges between slight and 120° degrees. All but one volume have grooves in their board edges, in seven of them of the BG1 type and in two of the BG 2 type, both very similar, differing only in the width of the groove as this is evident above the pasted leather cover.

The attachment systems present great consistency and are mostly of the I Uns/3 type. In three volumes no clear sign of the attachment system due to the presence of the pastedowns indicate probably that the same system has also been used, consisting of a small or tiny portion of the attachment thread left in the inner face while the Z pattern is probably recessed in the outer face of the boards. The I Uns/1 attachment system has been used in only one volume, **S. 663**, which is actually the latest binding of those considered here. In three volumes the thread used for the board attachment was found to be the same as the one used for the sewing of the text-blocks, while in the other volumes this feature could not be detected.

There is no evidence of board spine edge recesses for the accommodation of the attachment thread in any of the volumes. Only in **S. 663**, board recesses have been used in the context of the I Uns/1 attachment system, leaving the Z pattern exposed on the inner face of the boards.

2.1.2.5. ***Spines and spine lining (table 5)***

All text-blocks have rounded spines, in three of them only slightly. In all volumes a canvas-like spine lining of medium thickness and natural colour is pasted all along the spine of the text-block and extends onto the outside of the boards, though the percentage of the boards covered by such extensions was possible to establish only in three volumes and found to be 35%, 55% and 100%.

2.1.2.6. ***Endbands and Markers (table 6, 7, 8)***

All but one volume have compound endbands consisting of a primary sewing of the Greek double core type and a secondary weaving which is here designated 'Cretan'. The exception is **S. 375** which has a simple Greek Double Core endband. Cores are most probably made of cord (though they could not be seen clearly in any of the volumes) which extends onto the boards for a distance of between 25 and 40 millimetres covering a

percentage of the board width between 12.2% and 26.2%. Apparently they are anchored with the use of EAS 2 anchoring system, though this can not be observed in some volumes but it can be indirectly deduced by the fact that endbands are pushed towards the outside of the boards.

Endband primary sewing in all volumes is made according to the standard procedure of Greek Double Core endbands. It is worked mostly with a linen thread of medium thickness, of varying twist and mostly S ply, which in four volumes was found to be the same as the one used for the sewing of the text-block. Anchorage on the text-block is made through the change-over sewing stations of every gathering.

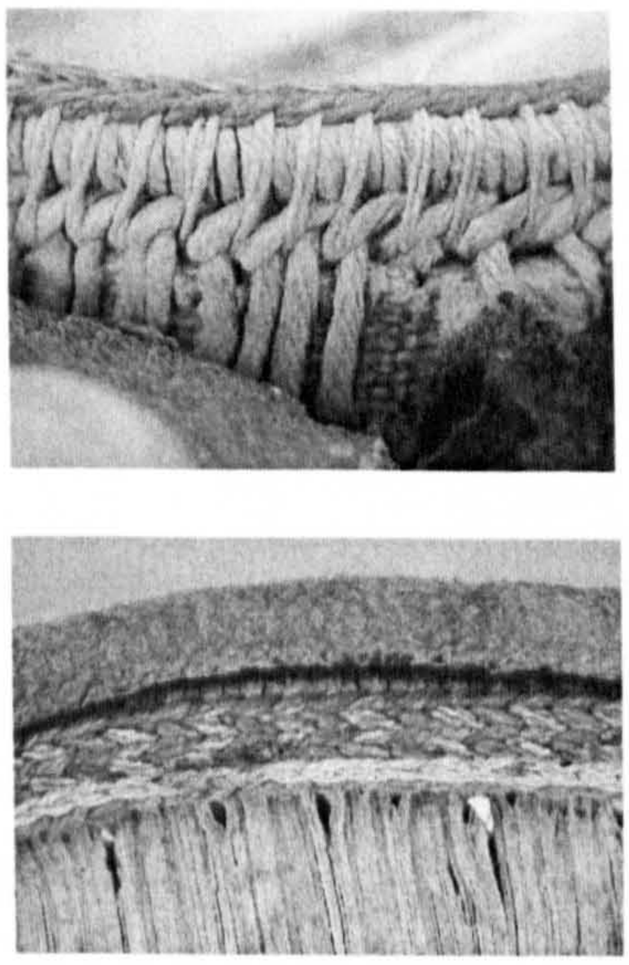

Figure 8. Detail of the headband in S. 1234, Top photo showing the back and bottom showing the front

Endband secondary weaving consists of two distinct stages: first, warps are made with a hemp or linen thread, usually thinner than the thread used for the endband primary sewing, wrapped around it. Above these the decorative weaving is made by pulling up one (three volumes) or mostly two (four volumes) warps at a time (figure 8) and using coloured silk threads as weft. The silk threads used are mostly of medium thickness, medium twist, S ply, silk threads.

In six of the eight volumes with this type of secondary weaving the colours of the threads used for the weaving are green, red and white, and they follow the same pattern with a red and green zigzag motif covering all the front surface of the endband divided horizontally, close to the base, by a band of white thread weaving (figure 8). **S. 968** and **S. 165** follow a slightly different pattern since there is still the zigzag two-colour pattern (though with different colours), but there is no band of white thread dividing the decorated front surface of the endband.

Markers are present only in one of the volumes (**S. 968**) where only thread vestiges remain behind the headband.

2.1.2.7. *Cover (table 9)*

Eight volumes are covered with a leather of medium thickness, probably of goat on the basis of visual observation, and colours are various hues of brown, with red-brown found in four volumes. One volume (**S. A. 80**) is covered in red silk velvet.

The turn-ins follow three main patterns, T-ins 3 found in four volumes, T-ins 5 found in three volumes, T-ins 2 found in two volumes and T-ins 1 found in one single volume in combination with T-ins 2. The width of the turn-ins varies both among the nine volumes and among the two boards of the same volume.

Corner mitre follows mostly the pattern Co 1 which is found in six volumes, whilst the patterns Co 7 and Co 13 are found in one volume each, combined with the pattern Co 1.

2.1.2.8. *Decoration (table 10, 11a, 11b)*

Seven volumes are decorated with blind tooling, the remaining two have no kind of tooled decoration (figures 9-11). In three volumes the decoration between the left and right board differs.

There are four main decoration patterns, Dec 2 is used in four volumes, Dec 1 is used in three volumes, and the patterns Dec 6V and Dec 10 are used in one binding each. All the patterns have two (ab) or three (abc) frames. Only in **S. 375** the spine is decorated according probably to the pattern SD4/B though the bad state of preservation prevents any definitive conclusion to this end. In two volumes the board edges are decorated in the area of the endbands according to the pattern BED 10.

There are as many as 36 tools (creasers and fillets included) used in these nine bindings; none of the tools is used in more than four volumes while 23 out of the 36 tools are used in no more than one single volume. The number of tools used to decorate one single binding varies between seven and ten, whilst there are two bindings with no tooled decoration. There are only three, very simple, relief tools (MuF/a13, MuF/a62, MuF/a66), 26 intaglio tools, three tools with concentric rings, one creaser and an unspecified number of fillets. Round tools with concentric rings are one of the most

commonly used small tools in the decoration of Greek-style bindings, though their identification and distinction of one from the other is often quite difficult. This is because firstly the number of rings is not of much help since their number is very limited, usually two or three, and only very rarely four, and secondly because the diameter of the pressed tools usually varies, according to how strongly the tool was pressed on the leather; light press will result in wider impressions than strongly pressed tools. In Federici and Houlis (1988) there are as many as 53 different tools of this type reproduced, while in the present research as many as 22 have been recorded. The use of similar tools can be traced back in early leather work from Egypt but it is also found on Coptic bindings such as for example those of the Pierpont Morgan Library (Needham 1979, catalogue num 1, 3) dated in the fifth and ninth century and those of the Edfu collection, dated in the tenth-eleventh centuries, in the British Library (Lindsay 2001, pp. 31-51).

The double-headed eagle motif, a long-lived motif in Byzantine art, often embodying royal and religious symbolism (Σπυριδάκη1962, ODB, volume 1, p. 669), is also a commonly found motif in the decoration of Greek-style bindings; Federici and Houlis (1988), reproduce as many as 34 different tools with this motif, while in the present research 11 different tools have been recorded (see also Regemorter 1967, and Αθανασιάδης 1994). The same is true for the fleur-de-lis motif, which has a long history in the decoration both of Greek-style and western bindings since the Middle Ages; in Regemorter (1967), there are catalogued 13 different versions of this motif, while in Federici and Houlis (1988), as many as 44 different versions. In the present research 40 different tools with this motif have been recorded.

The motif of the dragon, often used in icon painting of the sixteenth and seventeenth centuries in Crete (Τσαπαρλή 1980), is also quite commonly found on the Cretan bindings of the sixteenth century. The rest of the tools are oblong tools with floral motifs, quite commonly found in Greek-style bindings, where they are impressed consecutively on the leather cover in order to form decorative frames. The 'm' or 'ω' tool as well as 15 more of the tools recorded amongst the bindings considered here have been previously recorded on other published Cretan bindings; these are:MuF/c38, MuF/d20, MuF/d27, MuF/d28, MuF/d29, MuF/d31, MuF/d32, MuF/d33, MuF/e2, MuF/e35, MuA/b4, MuA/c7, MuA/c8, MuG/b11, MuG/c11. (Federici and Houlis 1988, Regemorter 1967,

Irigoin 1961-62, Irigoin 1968, Hoffman 1982, Weitzman and Galavaris 1990). The use of a creaser (C1) with three lines in three volumes is based on the fact that in all three volumes these three lines seem to follow the same inclinations and keep a constant distance among them, something which leads us to suppose that these were pressed and skidded at a single sequence and not at three, as would be the case if three different impressions of the same fillet were used instead. If this is the case this is the first time the use of a creaser or creaser-like tool is recorded in Greek-style bindings. As it will become evident in the following chapters and sections the use of creasers, or similar tools, must have been quite common.

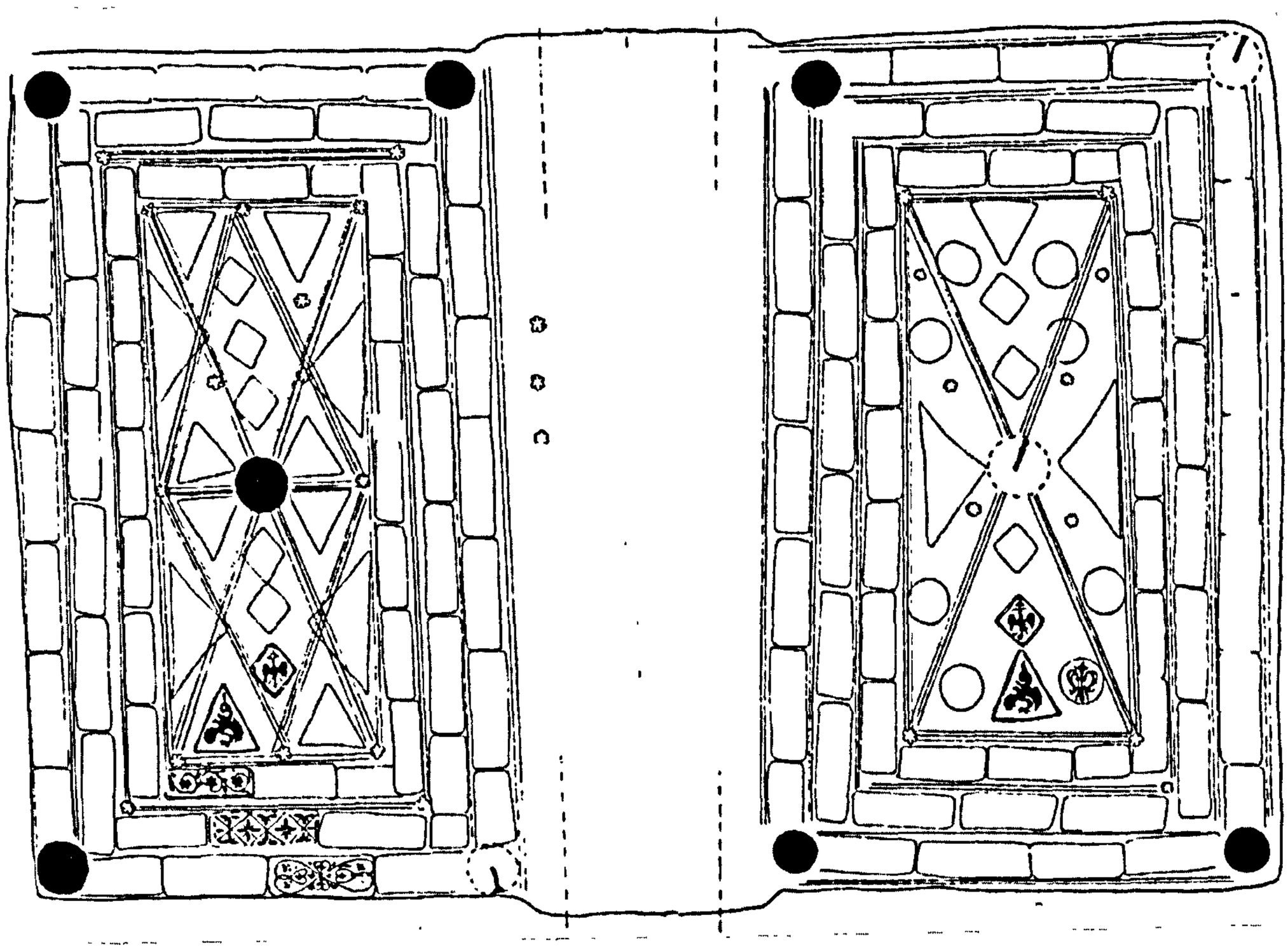

Figure 9. Line drawing of S. 375.

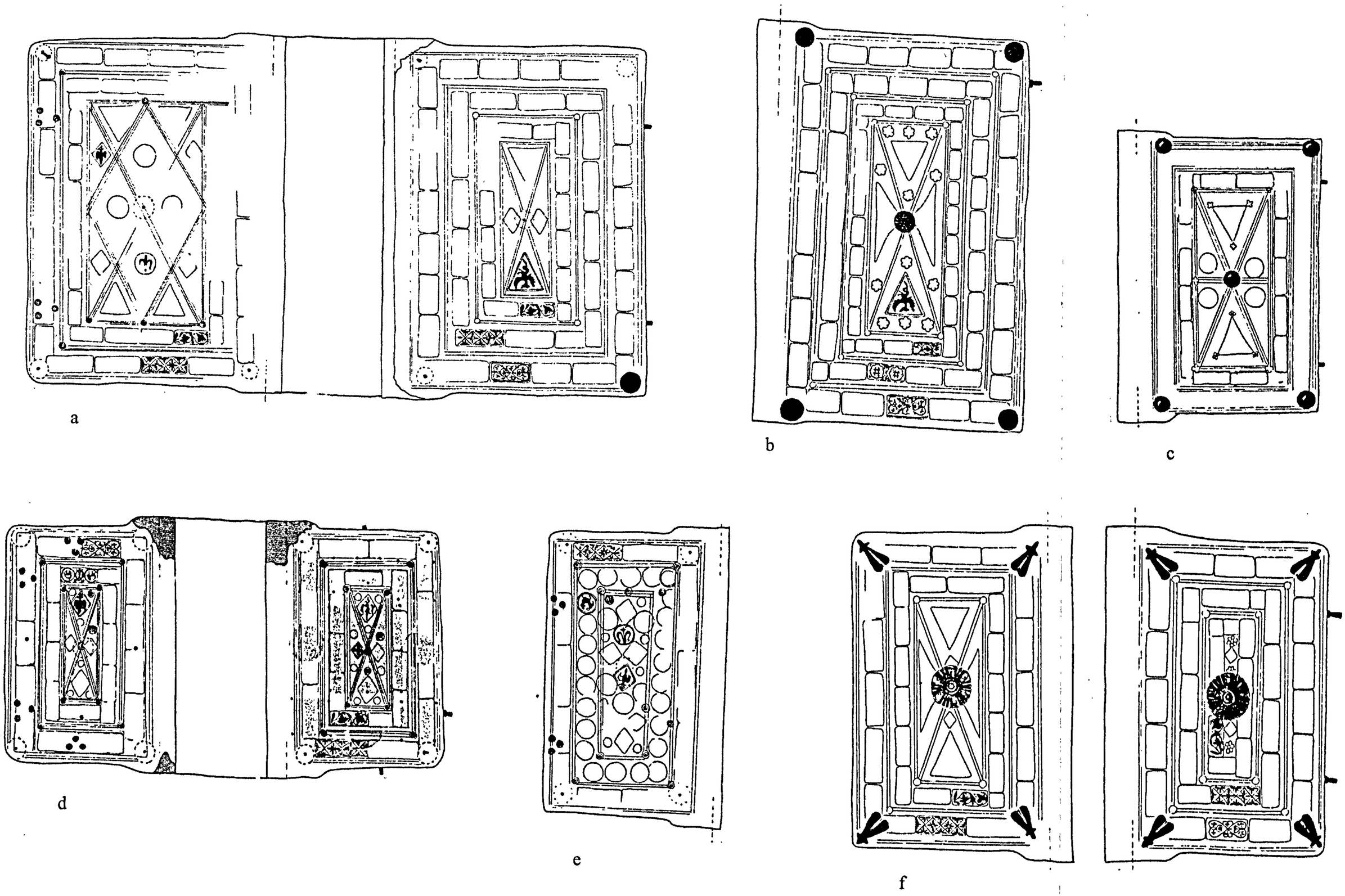

Figure 10 Line drawings of the decoration of S. 2101 (a), the left board of S. 1194 (b) and S. 663 (c), S. 165 (d), the right board of S. 968 (e), S. 1234 (f).

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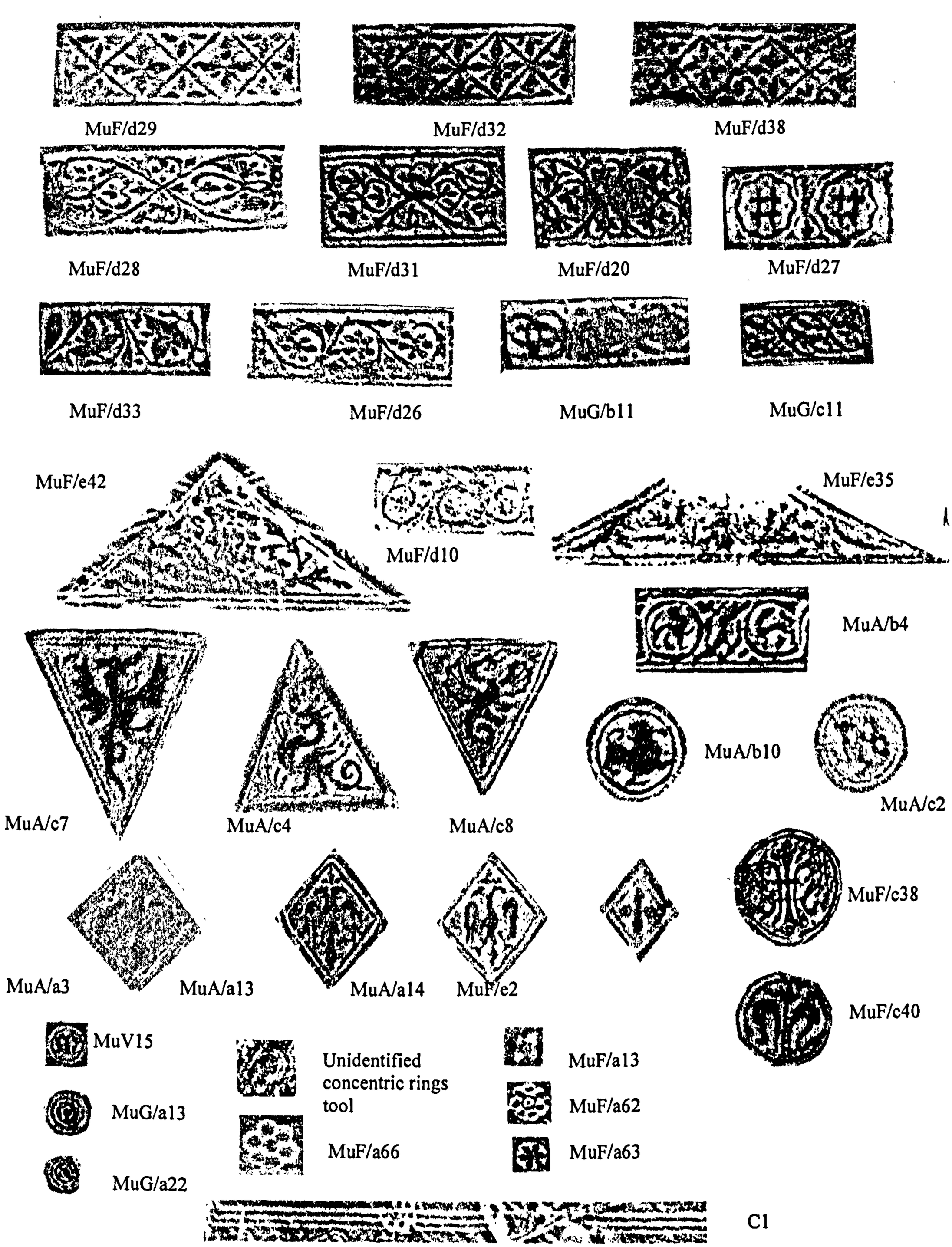
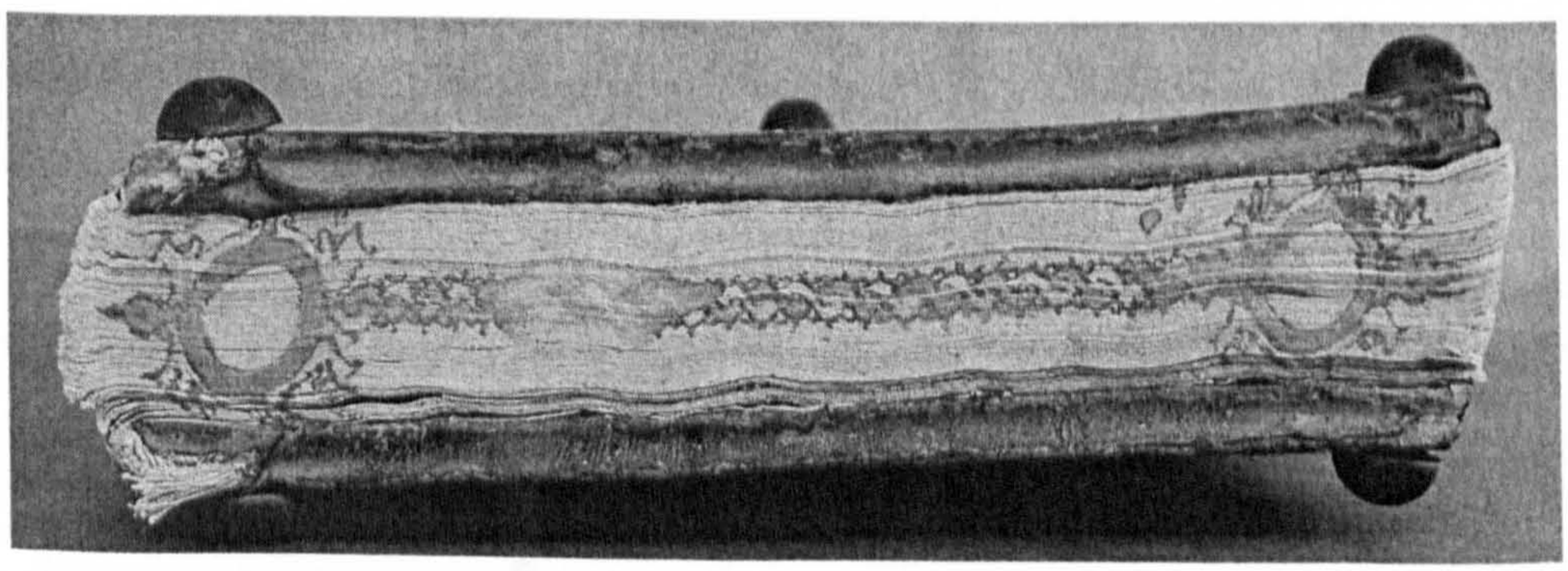


Figure 11. Rubbings of all the tools used in the nine Cretan bindings.

2.1.2.9. Text-block edges trimming and decoration (table 14)

Thought all the text-blocks have been trimmed there is no evidence as to the tools or the method used. In seven of the nine volumes the edges of the text-blocks are decorated; in six of them the decoration consists of drawn and painted motifs, while in the seventh (**S. A. 80**) edges are gilt and gauffered, a type of edge decoration totally unknown in this area in the period we are dealing with, which in all probability should be considered as a latter embellishment.

Drawn and painted decoration of the text-block edges consists of a number (usually two or three) of ring motifs, with four pin-like extensions protruding from their perimeter, connected between them with rope-like bands. Rings and part of the rope-like bands are painted, red, the rest of the motifs are just drawn in brown. The quality of the brown colour used is very similar to the inks used for the writing and it is thus sensible to suppose that the usual, writing inks were used for these decorations. This type of decoration is found certainly in five of the six volumes, in one of them badly faded (**S, 165**). This kind of decoration is typically found on manuscripts written, and presumably bound, in Crete in the fifteenth century, and there are various examples published (Di Febo et al. 1989, Federici and Houlis 1988, Hoffmann 1983, p. 109 and note 65 with previous bibliography). It is not clear what these motifs represent, though the fact that the ring motifs resemble somehow the fastening rings and the rope-like bands the actual straps of the fastenings might offer a conjectural source of inspiration for these decorations.



2.1.2.10. ***Metal fittings (table 12).***

Bosses. All volumes had bosses in both boards except **S. 1343** in which only bas-relief plaques were originally nailed on the left board instead. Surviving bosses are of the b*oullai* type in all the bindings except **S. 1234** which has one big round central boss and four corner bosses of the *amigdalia* type. In five volumes five bosses have been originally nailed in each board, but four (**S. 1343**, **S.A. 80**) and eight (**S. 165**) are also found .

Figure 12. Decoration of the head edge of S. 1194

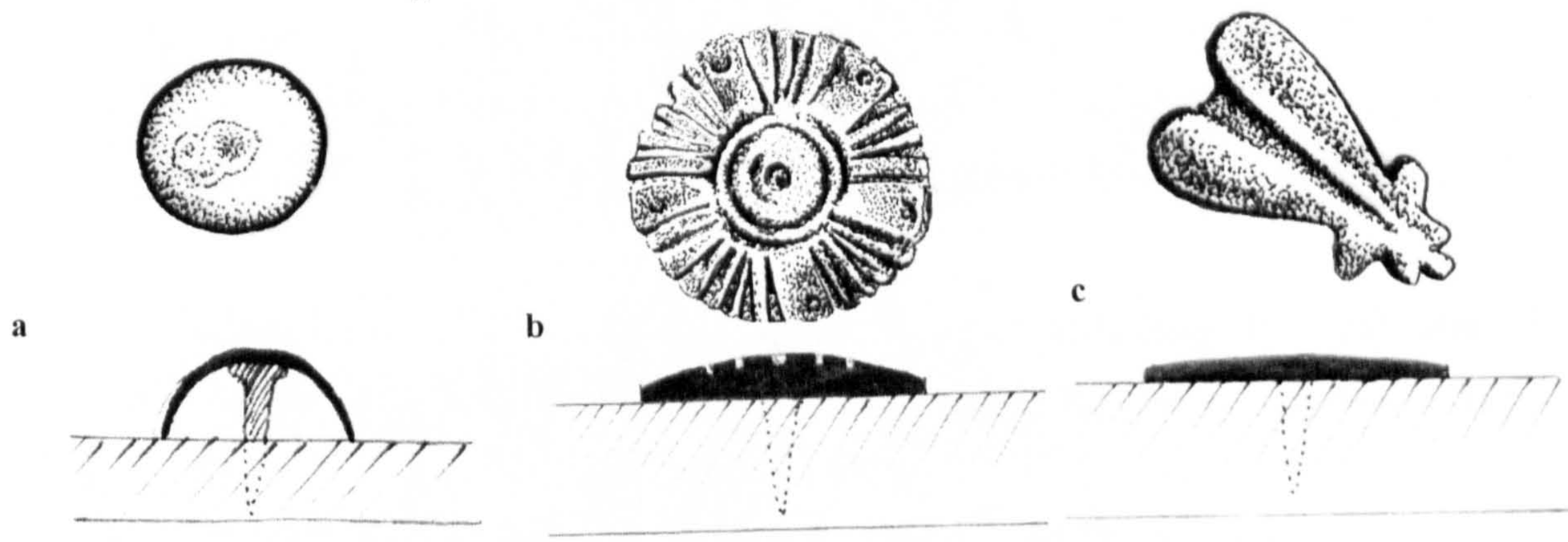


Figure 13. Three different types of bosses found in S. 375, S. 663, S. 1194, S. 2101, S.A. 80 (a), and in S. 1234 (b, c).

Metal plaques. Two volumes had decorative metal plaques, nailed on the left boards and now missing; in **S. 165** they were attached after the binding had been decorated (bosses are also present in this binding), but it is difficult to tell the same for **S. 1343** which has no tooled decoration. In **S. 1343** they certainly represented the Crucifixion probably with the four Evangelists in the four corners as it is clear from the marks left on the leather cover. Both these volumes with the metal plaques contain the Four Gospels and as research suggests, such metal embellishments with the crucifixion were often used in Gospel and lectionaries manuscripts since at least the ninth century [22].

[22] In the article of B. Atsalos, 1977, there are various notes from manuscripts concerning the terms used to describe the various decorative elements of bound volumes. In a total of 54 notes on manuscripts dated from 1059 to the 16th c. (there is no date given either for the manuscript or the note itself for the last of the 54 notes, for which just "note postérieure" in mentioned) 27 do mention the presence among other embellishment, of metal crosses and occasionally the Evangelists and the Virgin Mary. Of these, 23 are Gospel and Lectionary manuscripts, while there are two *Euchologia*, one *Psalterion* and one *Taktikon* . It thus seems that adorning Gospel books with a metal cross, the crucifixion and the Evangelists was a well established custom. See also Velmans 2001.

The metal used could only tentatively be identified as some kind of copper alloy.

2.1.2.11. ***Fastenings (table 13)***

All nine volumes originally had fastenings, in seven of them following the 0-2-0 ← arrangement, in one the 1-2-1← arrangement (**S. 165**) and in one volume (**S. A. 80**) the arrangement 0-2-0 with unclear direction since all parts are missing and fastening holes are found identical on both boards.

In seven volumes fastenings are of the Three Edged Leather Interlaced Straps type; the exact variation could be firmly established only in one volumes, **S. 663**, as of the standard type. The leather used is the same as the one used for the cover in two volumes, and different than that of the cover in three volumes. The straps of **S. 165** are exceptional since they are two-colour, consisting of brown and white tanned (?) leather.

In **S. 1343** straps are of the Three Edged Silk Braided Straps type, consisting of braided red and pink silk threads which form the straps, though it is unclear if these are the original ones or later replacements[23].

Two sets of three nail holes on each board of **S.A. 80** indicate that some kind of fastening was nailed on them but nothing more can be said since all evidence is missing. Rings are preserved only in one volume, whilst pins are preserved in six out of the eight volumes. Of the surviving examples in all but one volume they are compound cast metal pins; in the one exception they are simple filed metal pins.

The arrangement of the anchorage holes follows the pattern AH 4 in al nine volumes, in two of them in the 'long distance' variation. The ends of the straps follow the form UfaP in six volumes and the form TfaP in one volume. The anchorage of the fastenings follows three different types, TB in six volumes, TBTP in two volumes, and TBP in one volume. The arrangement of the turn-ins and fastenings is mostly of the F & T 2 type (five volumes), but the types F & T 1, F & T 3, and F & T 8 are also found in one volume each.

[23] Similar fastenings have been recorded in later Sinaitic ateliers. See S. A. 76 in section 2.1.4.12 (the Klimis bindings and S. 408 in section 2.2.2.12. (the Giglio bindings). Such fastenings to my knowledge have never been recorded before, and the same is true for the two-colour leather braided fastenings found on S. 165.

2.1.2.12. *Conclusions.*

We are dealing with four distinct subgroups of bindings which are nevertheless closely connected by their various features as well as the dates at which they were made.

1. **S. 165** and **S. 968** are probably the earliest, original, bindings of those considered here, the latter was certainly bound in Crete since it was written there in 1429 AD and still preserves its original binding. These two bindings have very similar endbands, both having a secondary weaving of the Cretan type, though with no white band dividing their front surface, as in the rest of the bindings examined here. These bindings also have in common the 'm' or 'ω' tool. Irigoin (1961-62) includes this small tool in those that are supposedly found on bindings from the Apostolis atelier, but these two bindings would appear to be made before the foundation of his scriptorium.
2. Four bindings (**S. 375, S. 1194, S. 1234, S. 2101**) could probably be ascribed to the Apostolis atelier, or another atelier closely connected with it, on the evidence of the scribal note in **S. 1194** and the consistency in some technical (such as the number and the arrangement of the sewing stations, the endbands decorative weaving) but mostly decorative features of this binding with the other three.
3. The bindings of **S.A. 80** and **S. 1343** are probably both made in the Sinai, or some other place of the near Middle East with an Arabic-Christian population. They were both sewn with a Z ply thread unlike the other volumes, and they are left totally undecorated, though the use of textile in **S. 1343** would explain the absence of tooled decoration. The similarity of the endbands of these two bindings with those of the Apostolis atelier might lead us to suppose that such bindings were the product of a binder brought from Crete, or that the endbands were the exact copies of Cretan endbands seen in the Sinai or elsewhere on books bound in Crete. (such as **S. 375, S. 968** etc.), though the execution and materials of such probable Sinaitic endbands are so close to the genuine Cretan ones that we should otherwise suppose that they were made by people who were trained in a proper binding atelier in Crete or elsewhere though staffed with Cretan binders.

As we will see in the next section, this is most probable since there are bindings of Arabic-Christian books that were written and circulated in the near Middle East, the Sinai monastery included, that have exactly the same type of endbands.

The arrangement of the sewing supports is also clearly different in **S. A. 80** and this is another piece of evidence suggesting that this volume was sewn and probably bound in a different atelier and place than the rest of the bindings. The use of the textile might be explained as a way to give some kind of aesthetic embellishment to the volume without using any blind tools which apparently for some reason were not accessible to whoever bound these two volumes, though the, now missing, metal fittings on the left board of **S. 1343** might partly explain such absence of tooled decoration. The gilt and gauffered edges in **S.A. 80** are puzzling and so far unique for Sinaitic bindings of the fifteenth-sixteenth and even the seventeenth centuries and hard to explain. This means that we have either to accept that such decoration was made on the bound volume without rebinding it and destroying the Cretan endband (help to clarify this could be provided by traces of gold left on the endbands but the edges are badly preserved as well as the endbands themselves), or that the decoration was actually made later in the context of a rebinding and that someone was able to sew a Cretan endband in perfect coherence with the original fifteenth-century ones, something that to me seems improbable and does not result from data concerning the later (sixteenth-seventeenth century) Cretan and Sinaitic bindings. The braided silk fastenings of **S. 1343**, though extremely rare, seem to indicate also a Sinaitic provenance for the binding, since there are two more bindings with similar fastenings that are connected with the monastery[24].

4. The binding of **S. 663** is the latest of the dated bindings of this group and actually presents some differences from the rest of the bindings in the decoration and the board attachment system, though it still seems to be related with genuine Cretan bindings.

The decoration of Cretan bindings is similar to, and probably derives from the Constantinopolitan bindings of the fifteenth century. As Canart puts it (Canart et al. 1998,

[24] See note 23.

p. 763) : *"la double parente des décors (type de plans, motifs, iconographique des fers) et de la technique de fabrication montre que les livres apportes de Constantinople en Crète y furent 'copies' a tous les sens du terme, qu'il s' agisse des textes ou de la 'matérialité codicologique' des reliures".* There are a few published examples of Constantinopolitan binding (Regemorter 1967, Buchthal and Belting 1978, Hoffman 1985, Federici and Houlis 1988, Houlis 1999) which seem to conform with this statement.

Looking at these bindings, there are three features that immediately strike the observer and make attribution to Crete possible at first glance: first the decoration of the covers with the large number of tools and their characteristic motifs such as the dragons, secondly the endbands (EAS systems included) with the characteristic decorative weaving technique and mostly the colour pattern, with the green and red zigzag divided toward the base by a band of white weaving, and third the decoration of the edges. Such common features make it feasible to attribute to the Cretan ateliers other bindings that offer no other indication of geographical origin (such as scribal or ownership notes) to the Cretan ateliers, or other ateliers closely connected with them. The binding production of these ateliers has been studied by other scholars, amongst whom is D. G. de Matons (1991, pp. 426-427) who has given a summarized overview of 140 bindings to be attributed to the Cretan ateliers from circa 1460 AD to the last decades of the sixteenth century, tentatively distinguishing five different ateliers or phases of the same atelier, active within this time span. Unfortunately no photographs or drawings of tools and other features have been reproduced. Nevertheless similar Cretan bindings can often be identified in various paleography and philology articles such as those mentioned in section 2.1.1. It seems indeed that the large number of manuscripts copied in Crete in this period and exported in Western Europe make such bindings quite numerous as well as easily recognizable, given also the fact that the manuscripts they contain and the period in which they were written are rather well studied topics of paleography.

In this chapter we have somehow established a schematic –due to limited available data - typology of the Cretan bindings of the fifteenth and early sixteenth centuries and we are

considering a possible interconnection of Cretan and Sinaitic bindings of this period. This might be accounted for on the assumption either that bindings were made in Sinai by binders brought from Crete or that Sinaitic monks were trained in Crete and then on their return to the monastery would practise bookbinding in accordance with the Cretan typology. It is also possible that such bindings were also made in some other place of the near Middle East where Arabic-speaking Christians were found and this will be further considered in the next section of this first chapter.

2.1.3. THE ANTIOCH BINDINGS.

This group comprises nine bindings considered together due to the fact that they present various common features, both technical and decorative. They are conventionally named after Antioch, which as will be seen further on was most probably the place where at least one of the nine bindings considered here was made (**S. 334**). Though it is not possible to date these bindings precisely they were certainly made sometime between the late fifteenth and the middle of the sixteenth century as will be discussed further on .

2.1.3.1. *Text-blocks, scribes and donors (table 15)*

Four out of the nine manuscripts are written in Greek, four are written in Arabic and one is written partly in Greek and partly in Arabic (**S. A. 170**), a particularity encountered in more manuscripts preserved in the library, some of them most probably written in the Sinai, reflecting the multilingual character of its monastic community (Galavaris 1984, 1994). All manuscripts contain ecclesiastical texts, four of them liturgical and five of them theological. All Arabic text-blocks and part of a Greek one are written on eastern polished paper, two are written on western polished paper, one on unpolished western paper and one volume is written partly on parchment and partly on western paper. Formats vary between 4to (four volumes), 8vo (four volumes) and one 16mo.

As can be seen in table 15, the text-blocks were written between the ninth and the sixteenth century. The precisely dated manuscripts are all Arabic and were written between the years 1258 and 1333 AD. There are scribal and other notes only in the Arabic volumes. These notes were translated during the survey of the bindings and only their translation has been recorded[25].

In **S.A. 89** we read the following note:

[25] The help of Father Gregorios, a monk of Jordanian origin, was crucial at this point, since without his help, none of the notes on the Arabic volumes could have been recorded. I would like to thank him once more for his invaluable help and the time he spent with me in the library.

f.163r. *"the manuscript was written by a monk"* though giving no name. There is also a note saying that a certain **Klimis** *"... took care of the papers"*.

f.193v. *"the manuscript was read by the Metropolitan of Bethlehem **Ioakim Bassam**"*.

In **S.A. 334** we read the following note:

f. 184r. *"the manuscript was written by **Arsenios** in 1321 AD (6829 AM) for the katholicon of the monastery during the service of **archbishop Germanos**"*.

Scribal notes are also present in two more of the Arabic manuscripts though giving no precise date.

In **S.A. 340** we read the following note.

f. 323v. *"the manuscript was written in the monastery* (of St. Catherine in Sinai) *by **Ephraim** from **Tripoli** for the church of the fourty martyrs"*.

f. 352r. *"the manuscript was seen by **Pau,l oikonomos** of the monaster,y in the house of **Moses in Gaza** and its leaves were detached and dispersed"*.

In **S.A. 409** we read the following notes:

f. 194v. *"the manuscript was read by a priest in Santnaia* (Syria) *when **archbishop** of the St. Catherine's monastery was **Eugenios**[26]"*.

f. 195r.: *"the book contains a speech by **archbishop Germanos of Constantinople**[27] which has been translated into Arabic by the deacon **Ioannis tou Douka from Antioch**"*.

All manuscripts are rebound except **S. 806** and **S. 975**, and all bindings are Greek-style bindings. There is no binder's note in any of the bindings considered here maybe with the exception of **S. A. 89** if we accept that Klimis who *"...took care of the papers"* was also responsible for the rebinding. The same name appears in a rebinding note in the Giglio atelier though certainly these are two different persons[28].

The issue of dating the bindings is rather problematic as neither of the text-blocks with an original binding is precisely dated. Nevertheless on the evidence of the endleaves

[26] His service lasted between the years 1575-1583 («Σιναϊτικόν Ημερολόγιον...», 1977,p. 41).
[27] This is most probably Germanos II, patriarch of Constantinople between 4 Jan. 1223 and June 1240 (ODB, volume 2, p. 847).
[28] See section 2.2.2.

watermarks it is possible to date four of the bindings (**S. 30, S. 806, S. 1991, S.A. 334**) to the late fifteenth – early sixteenth century and on the similarities of these bindings with the remaining six it is also possible to date these latter to the same period. The note on f. 194v. of **S.A. 409** referring to Archbishop Eugenios (1575-1583 AD) can not be of much help in dating the binding since this could be written on the already bound text-block. Moreover, as will be seen later on, the endbands and tools used are quite similar to fifteenth and sixteenth-century Cretan bindings thus contributing some extra hints for the dating of the bindings.

2.1.3.2 *Text-blocks repair (table 16).*

All but one volume present spine-fold repairs. The exception is **S. 806** which is in its original binding, while **S. 975** though originally bound in the present text composition presents some overcasting in the last gathering. In the rest of the volumes three types of repair are found:

a. Strips of paper, plain or manuscript waste, pasted either locally (**S.30, S.A. 89, S.A. 334, S.A. 340, S.A. 409**) or all along (**S. 1991,**) in the spine-folds of some gatherings.
b. Running stitch in the parchment gatherings of **S. 30.**
c. Overcasting in the paper gatherings of **S. 30, S. 975, S.A. 89** and **S.A. 170.**
d. Missing parts of the text were written on paper and inserted in the correct position prior to the rebinding of **S. 30.**

2.1.3.3. *Endleaves (table 17, 18)*

Not even two of the volumes share the same endleaf arrangement. Compound endleaves are found only in three volumes, whilst in five volumes there are only flyleaves. Endleaves are integral to the outermost gatherings of the text-blocks in three left and three right units and separate in five left and four right units. The same endleaf arrangement in both ends of the text-block is found in only four volumes. In two volumes there are no endleaves in one of the two ends of the text-block and one endleaf unit

arrangement is unclear. The right endleaf unit of **S. 975** is of interest since it consists of two single leaves which were hooked around the last gatherings of the text-block and sewn with it, thus following the arrangement \\1[1].

2.1.3.4. *Sewing (table 19)*

All volumes are sewn with unsupported sewing on three, four, and five sewing stations, each represented by three examples. Three of the volumes have their sewing stations arranged in the spine of the text-blocks according to the pattern B1, two of them according to the pattern B4B6, whilst the patterns B2, B6 and AB1 are found in one volume each. None of the patterns is related exclusively to a specific number of sewing stations except the pattern B4B6 which is found in volumes sewn on five stations (fig. 17). In all volumes the sewing stations are marked by V shape cuts except one single volume where single knife cuts are to be found. The sewing threads used are either of hemp or linen, except **S. A. 170** where a waxed cotton is probably used. The sewing thread of **S.A. 334** is also waxed. In all cases the thread is of medium thickness and mostly of medium twist, though loose and tight twist have been recorded in three and one volumes respectively. All the threads are S ply except the waxed cotton thread in **S.A. 170** which is Z ply.

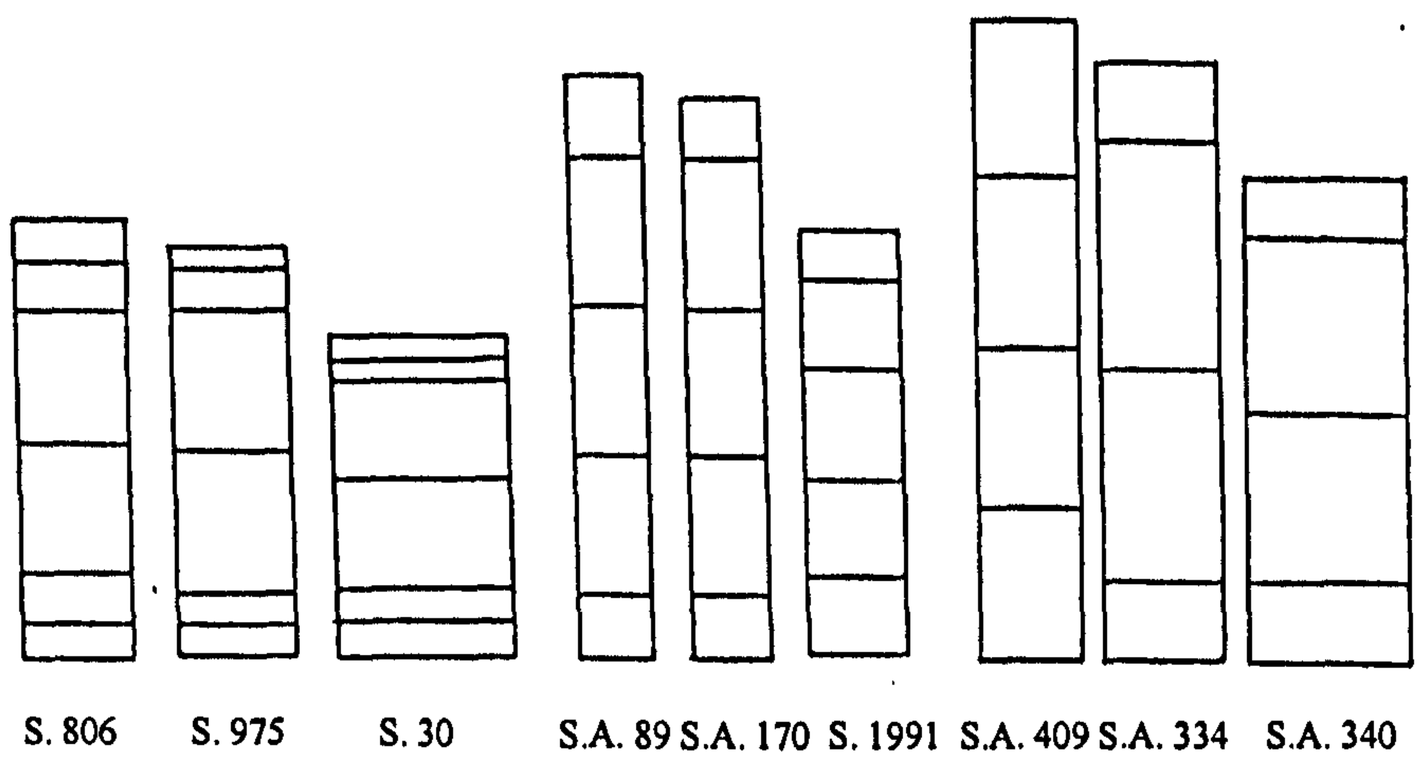


Figure 14.Line drawing showing the spines of the nine text-blocks and the arrangement of the sewing stations along them. From left to right , text-blocks sewn on five, four and three stations.

2.1.3.5. *Boards and board attachment (table 20)*

All manuscripts are bound in wooden boards cut flush with the text-blocks. Wood species were tentatively identified on the basis of visual observation only as beech in **S. 1991,** and **S. A. 340,** oak in **S. 806,** and acacia in **S. A. 334** and the right board of **S. A. 409.** In all volumes the right and left boards are made of the same wood with the grain parallel to the spine. One single exception is represented by **S.A. 409** where the left and right boards differ both in wood species as well as the orientation of the grain. The thickness of the boards is between eight and 14 millimeters, 10 millimeters being the most common. The spine edges of the boards are shaped mostly according to the pattern SET 3, but the pattern SET 4 is also found in three cases. The text-blocks form angles along the joints with the boards, which vary between 160° and 45° degrees, with the latter most common, found in four volumes. Grooves in the board edges are found only in **S. 975** where a BG 2 type of groove is found only in the head and tail edges and **S. A. 170** where also a BG 2 type of groove is running all around the three edges of the boards.

The attachment systems used are mostly variations of the I Ins/3 type (seven volumes) whilst in two volumes two variations of the I Uns/1 type attachment system have been used (plus the original attachment system of **S. A. 89** which is still discernible through marks on the boards). In the I Uns/3 attachment system, the variation C is found in four volumes, and the variation B is found in three volumes. In the I Uns/1 attachment system, it was possible to distinguish two variations, C (**S. 975**) and D (**S. A. 334**), while it remains unclear what the variation of this attachment system originally used in **S. A. 89** was.

In six volumes the thread used for the board attachment was found to be the same as the one used for the sewing of the text-blocks, in the other volumes this could not be established.

Board spine edge recesses for the accommodation of the attachment thread were detected in just one volume (**S. A. 170**) and they were found to be of the SER1 type, whilst board recesses for the attachment thread were found to be just traced in the case of **S. 30** and chiseled in the case of **S. 975** and **S. A. 170.**

2.1.3.6 *Spines and spine lining (table 21)*

All the text-blocks have rounded spines, in three of them slightly and in one heavily, in all of them lined except one volume where such feature could not be detected due to limited access. There are three different arrangements of the spine lining:

a. The first, which is the most common, consists of a single piece of canvas-like textile of medium thickness and natural colour, pasted on the spine of the text-block, extending and pasted onto the outside of the boards covering a portion of their width between 30% (three volumes), 50% (one volume) and 100% (one volume), whilst the width of the spine lining could not be established for two volumes.

b. The second arrangement is represented by **S. A. 170**, consisting of rectangular strips of paper pasted between the sewing stations extending and pasted onto the outside of the boards, though it is unclear how much of their width they cover. Above them and all along the spine is pasted a canvas-like textile of medium thickness and natural colour, also extending and pasted onto the outside of the boards, covering probably half of their width. This type of spine lining is unique so far among the post-Byzantine bindings surveyed for this research.

c. The third arrangement consists of two consecutive textile spine linings, the first (lower) made of a textile similar to that considered in 'a' above, and the second (upper) made of a dyed blue cotton textile of similar weave. Both extend onto the boards and are pasted on the outside covering almost one third of their width. Multiple textile spine linings are quite often found on bindings of the Arabic collection of the Sinai library[29].

[29] Examples of spine linings with three layers have also been recorded in this part of the collection. Blue textile spine lining has been recorded in 22 of the bindings, in both libraries, surveyed for this research. In all cases it is a plain, canvas-like, rather thick, cotton textile.

2.1.3.7. *Endbands (table 22, 23, 24)*

Five of the volumes have simple Greek Double Core Endbands, the other four have compound endbands consisting of a primary sewing of the Greek double core type and a secondary weaving of the Cretan type. In all volumes the endband cores are made of cord of medium thickness and extend onto the boards for a length between 20 and 50 millimeters representing a percentage between 13.7% and 26.6% of the width of the boards. They are anchored to the board edges through the EAS 2 (six volumes) or EAS 3 (three volumes) anchoring system.

The **Primary endband sewing** is worked with a linen or hemp thread of a thickness which varies between thin and thick, mostly of medium twist and 2S ply, though in one volume a tight twist, 3Z ply thread has been used (**S.A. 89**). In five volumes the endband primary sewing thread was found to be the same as the thread used for the sewing of the text-blocks, anchored on them through the change-over sewing stations (five volumes), another hole outside it (two volumes), or inside it (one volume), while in one volume this could not be detected (**S. 30**).

In all four volumes with compound endbands the **endband secondary weaving** is of the Cretan type on single, or double, warps above a primary sewing of the Greek double core type. The warps are made either with the same thread used for the primary endband sewing (**S. 806, S. 1991**), or with a different thinner thread, in the case of **S.A. 89** with a thin off-white silk thread, and in **S. A. 170** with a thin blue thread which is difficult to identify if made of silk or cotton, though it is of a type encountered quite often in the bindings in the Sinai library and is distinguished by the fact that the dyeing is not uniform but rather patchy. The weaving is done by pulling up one (**S. 806**) or two warps at a time (**S. 1991, S.A. 89, S.A. 170**), with a clear predominance of the latter.

The endband secondary weaving in these bindings follows two different patterns made with the same technique. The first is the one seen in the Cretan bindings of the fifteenth-sixteenth centuries and consists of woven red and green silk thread bands alternating vertically and covering all the front surface of the endband which is divided horizontally

close to the lower edge by a band of white thread[30]. This pattern is represented by two examples, **S. 806** and **S. 1991**. The second pattern consists of horizontally alternating colour bands which cover the whole of the front surface of the endbands. In the case of **S.A. 89** the sequence of colours from bottom to top is red, green, white and blue, whilst in the case of **S.A. 170** the first three single-colour bands (from bottom to top, green, red, and white) are crowned by a band of alternating blue and pink weaving (photo 87). The threads used are always of thin silk, mostly of medium twist and 2S ply except the case of **S.A. 89** where they are 2Z ply.

2.1.3.8. *Markers (table 25)*

Three different kind of markers have been recorded plus one uncertain case:

1. **Leaf tab markers:** They are found in three volumes (**S. 1991, S.A. 89, S.A. 409**). In **S. 1991** there are many light green leather tabs still attached on the fore-edge of the text-block leaves folded and pasted on both sides. It is unclear if they were attached to the text-block originally or at a later date. In **S.A. 89** there are three leather tab markers folded and pasted on both sides of the leaves, and 18 blue textile (similar to the one used for the spine lining) markers folded and pasted in the same way though limited to the first initial part of the text-block. Markers of this latter type are also to be found in **S. 409**.
2. **Board tab markers:** On **S. A. 89** leather vestiges on the inner face of both boards indicate that originally there have been leather board tab markers protruding from the fore edge. These markers were part of the original structure which were abandoned when the binding was given a new cover. Though similar vestiges are recorded in early binding structures (see Szirmai 1999, figure 3.4.) they have been either neglected or vaguely interpreted as *lifting tabs*, as Petersen called them (Szirmai 43). Their identification as bookmarks was made possible due to the pristine conditions of many of the St Catherine's monastery library bindings and

[30] Secondary endband weaving of this pattern is found in the bindings of S. 1194, S. 1234, S. 1343, S. 2101 discussed in section 2.1.2.

the interpretation of extant evidence as well as a research on Byzantine paintings in various media (Figure 15, 16). From available data, it seems that this type of bookmarks was used mostly in Arabic and Syriac bound manuscripts but their presence in Greek manuscripts is also attested, though less frequently and notably on early ones, probably not later than the thirteenth century[31].

Figure 15. St Mark the Evangelist. Full page miniature in f. 69v. of Four Gospels, codex 118 of the national Library in Athens. Middle of the thirteenth century.

3. **String markers**:
   a. **Simple** string markers. In **S. 1991** a multi-coloured string made of the same threads as the ones used for the endband secondary weaving is laced under the headband and somehow fastened at the back, probably by a knot. This is certainly a marker attached during the rebinding of the volume. In **S. A. 170** a simple string, most probably a later addition, is laced through the headband and it is knotted around it.

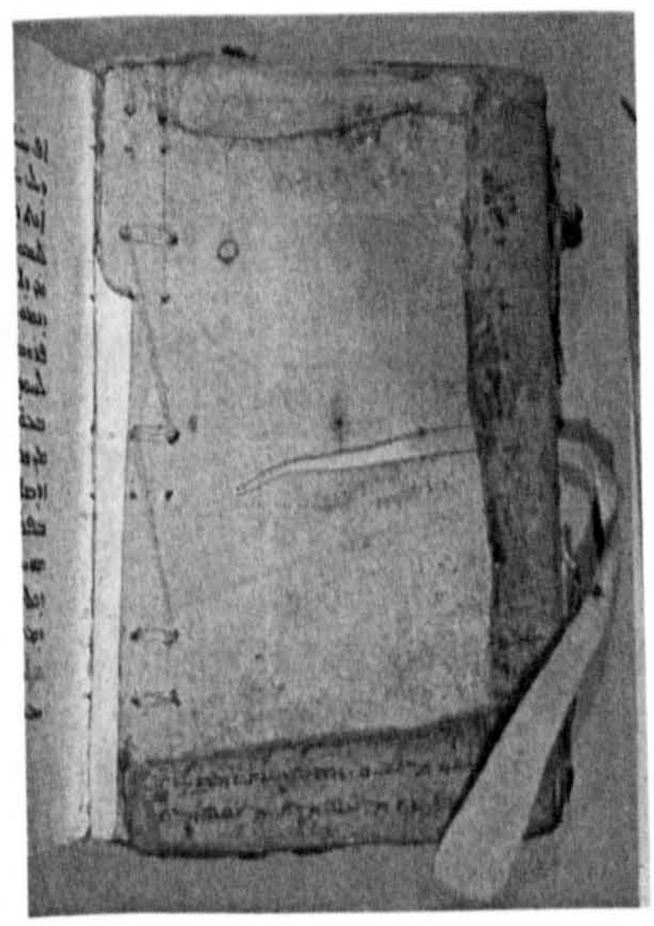


Figure 16. The right board of Sinai Syriac codex 85 with a board tab marker still intact.

   b. **Compound** string markers (**S. 806**), consisting of a simple, plaited loop, made of off-white silk, the same as the one used for the endband secondary weaving, to which a secondary marker is knotted, though only vestiges of it survive.

[31] A full examination of the evidence and their interpretation is under preparation and will be published as an independent article.

4. **Unclear.** Some thread vestiges in the headband of **S. 30** indicate the presence of a marker, though its construction is impossible to define in its present state of preservation.

2.1.3.9. ***Cover (table 26)***

All volumes are covered with a leather of medium thickness. On the basis of visual observation and considering also the way the surface has been worn it seems probable that goat leather was used on six volumes and sheep on three. Colours are various hues of brown, from light brown to red brown. The leather in **S. 1991** is quite distinctive on account of its polished surface.

The turn-ins follow mostly the pattern T-ins 3 (seven volumes), whilst the patterns T-ins 2, T-ins 5 and T-ins 1 are found in three, two and one volume respectively. Their width varies in most of the cases, but it can be described as wide in three volumes and medium in one. Corner mitre follows mostly the pattern Co 1(six volumes), but the patterns Co 6 and Co 7 are found in two and one volumes respectively. In three volumes the corner mitre varies. In **S.A. 170** there are edge tongue extensions of the leather cover extending from the head and tail edges towards the fore edge and pasted above the turn-ins in order to offer a better covering of this 'weak' point.

2.1.3.10 ***Decoration (table 27, 28)***

All the volumes are decorated with blind tooling which in some cases covers almost all the available space. Six of the volumes have different decorative patterns on the left and right board (figures 20-22). The pattern Dec 1, by far the most common, is found in seven left boards, and on just one right board, with a varying number of frames from one to as many as three. The pattern Dec 3a is found in three boards (two of them right boards and one left), the pattern Dec 4a is found on one right board, the Dec 2a on two right boards and the Dec 10aI on one left board. Spine decoration is found certainly in four volumes, and is unclear in one volume since the spine part of the cover is missing; there is no decoration in the spine of four volumes. The pattern SD 7/B is found in two volumes,

and in the other two volumes the decoration is classified as 'other'. The edges of the boards are decorated in four of the nine bindings; the pattern BD 5 is found in three of them where all three edges of the boards are blind tooled and the BD 10 in two, with **S.A. 89** combining both. **S.1991** has a feature so far unique of blind tooling, which consists of many impressions of a small concentric ring tool (MuG/a19) on the exposed board edges alongside the endband cores (photo 71).

There are 32 different tools found in these nine bindings (figure 19), 20 of them are used in no more than one single volume. The number of tools used to decorate one single binding varies between four and 14. There are only three relief tools (MuF/ a68, MuF/ a69 and MuF/e25), 22 intaglio tools, three tools with concentric rings, two creasers and apparently no fillets. Among the usual floral and animal tools, of which we have seen similar in the previous section 2.1.2.8, there are some outstanding tools which need to be considered more in detail. Firstly, the two relief tools with quadrilobe floral motifs are very similar to those found on Coptic bindings of the tenth and early eleventh centuries from the Edfu region in Egypt and now preserved in the British Library (Lindsay 2001, pp. 31-51), though similar tools have been recorded before on Greek-style bindings (Regemorter, 1967, p. 162, fig 37). Similar tools are also found quite often among the bindings of the Georgian manuscripts of the St. Catherine's monastery, of which at least one is dated in the tenth century (S.Georgian 46), which except being very close to the Coptic bindings as far as structure and decoration are concerned, can with some possibility be attributed to the monastery itself or its premises. Quite outstanding are the two square tools with the representations of the Ascension, i.e. the ascent of Christ to Heaven 40 days after the Resurrection (MuV18), and the Pentecost (MuV17). With the help of a fragment from the revetment of an icon shown in figure 17 we can identify the five figures of the Ascension tool as the Virgin in the middle, two angels in both sides and two apostles, probably Peter on the right and Paul on the left. The Pentecost tool, though not very clear repeats the usual iconography of this event (figure 18) which goes back to the period after iconoclasm and through the

Figure 17. The Ascension, One of a series of seven fragments from the metal revetment of an icon. Georgia twelfth century, 17 x 14 cm.. After "Sinai, Byzantium, Russia", 2000, p. 119.

Palaiologan era to the Cretan art of the fifteenth – sixteenth centuries (ODB, volume 3, pp. 1626- 1627).

These two tools are the only tools recorded and published so far in the context of Greek-style bindings which represent religious events. Since both representations were usually part of a wider circle of scenes, called the *Dodekaorto,* we could suppose that there might have been more of them, probably ten, depicting the remaining major feasts of the iconographical circle[32]. Another possible explanation would be to consider these tools as isolated examples connected with a church or a monastic community dedicated to one of the two feasts, where the bindings could have been possibly made and decorated.

Figure 18. The Pentecost.. Icon from a *Dodekaorto* of the Cretan school, dated 1546, 54 x 39 cm. Stavronikita monastery, Mount Athos. Published in 'Treasures of Mount Athos..." 1997, p.140.

Three more tools need further consideration; the knot tool MuG/b3 is probably an import from Italy, where similar tools have been used since the middle of the fifteenth century as a direct influence from the Islamic bookbinding decoration (Hobson 1989, pp. 33-60, Hoffman 1982, Needham, 1979, pp. 99-101). To a similar route of influence we should attribute the use of the S-shape tool (MuV11), similar examples of which are found on Arabic and Persian bindings since the tenth century, used repeatedly to form frames ('De Carthage a Kairouan', 1983, pp. 232-238, 'L' Art du livre Arab', 2001, pp. 142-151, Needham 1979, p. 16), and in a similar way on Italian bindings since the fifteenth century (Hobson 1989, pp. 18-20, and 36-59). Similar tools have also been recorded before on Greek-style bindings (Federici and Houlis 1982 p. 58, and Regemorter 1967, tool number 33). The rest of the tools are not uncommon though we should stress the close similarities with the tools recorded on the Cretan bindings we have considered in the previous section , most interesting the dragon and the fleur-de-lis tools,

[32] The *dodekaorto* is an iconographical cycle illustrating the twelve major feasts of the Orthodox Church, comprising six fixed feasts (Annunciation, Nativity, Epiphany, Hypapante, Transfiguration, Dormition) and six mobile (Lazarus Saturday, Palm Sunday, Good Friday, Easter, Ascension, Pentecost). This circle has dominated Byzantine art in all media from the eleventh century onward, very often used in the icons of the higher epistyle of the iconostasis in Byzantine and post-Byzantine churches. See also ODB, volume, 2, pp. 368-369.

as well as the triangular tools with the beheaded eagle, this last one mostly as far as the shape of the tool is concerned rather than the motif itself.

Figure 19. Rubbings of all the tools used in the nine Antioch bindings.

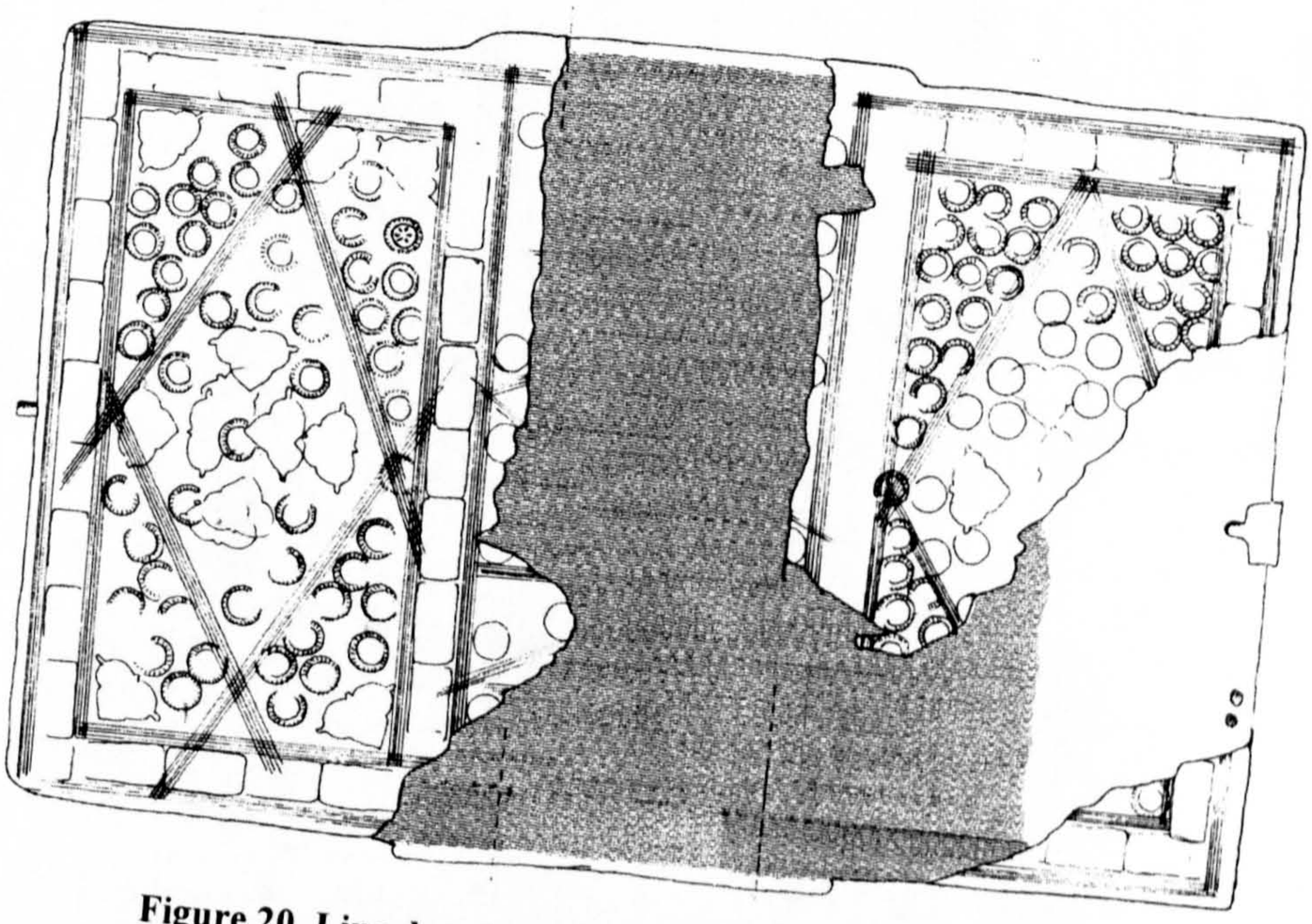


Figure 20. Line drawing of the decoration of S.A. 340

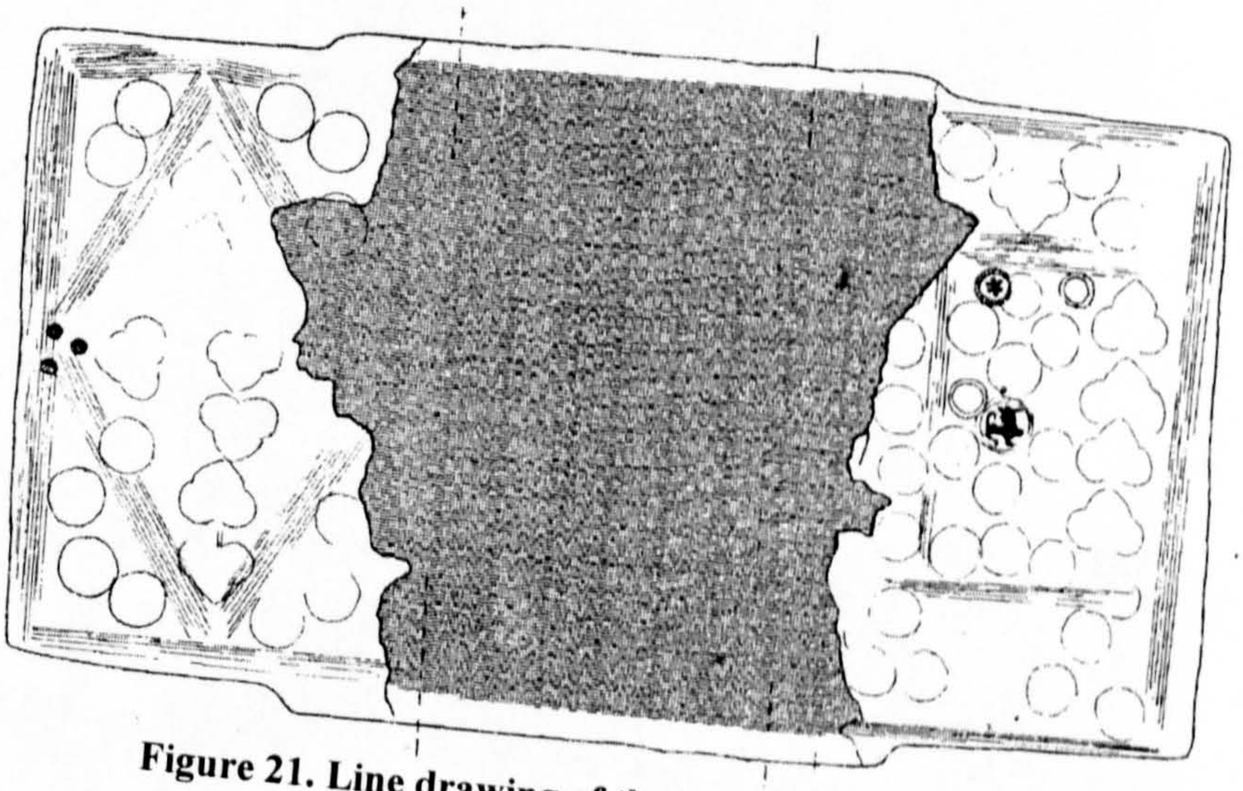


Figure 21. Line drawing of the decoration of S. 30

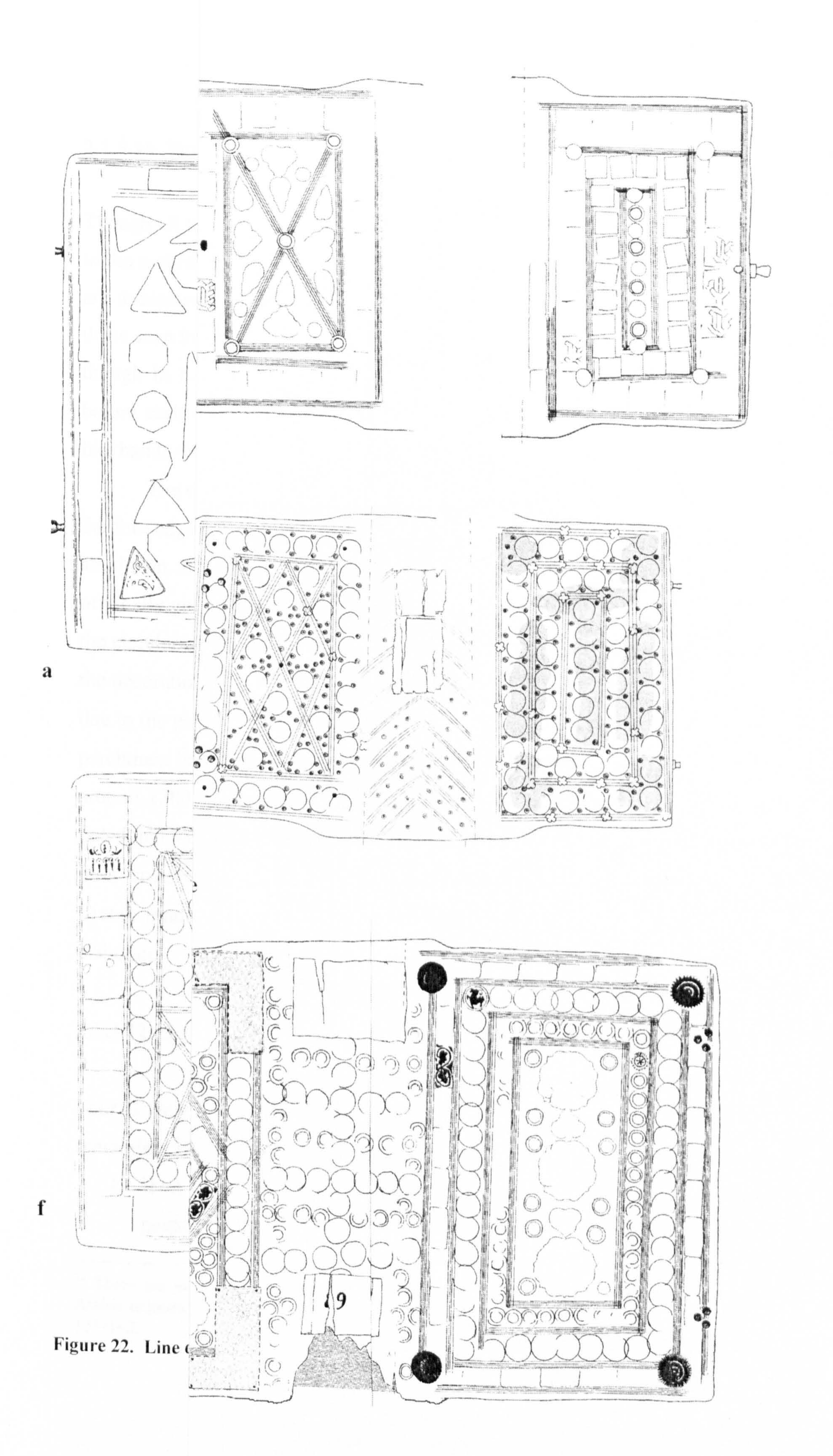


Figure 22. Line

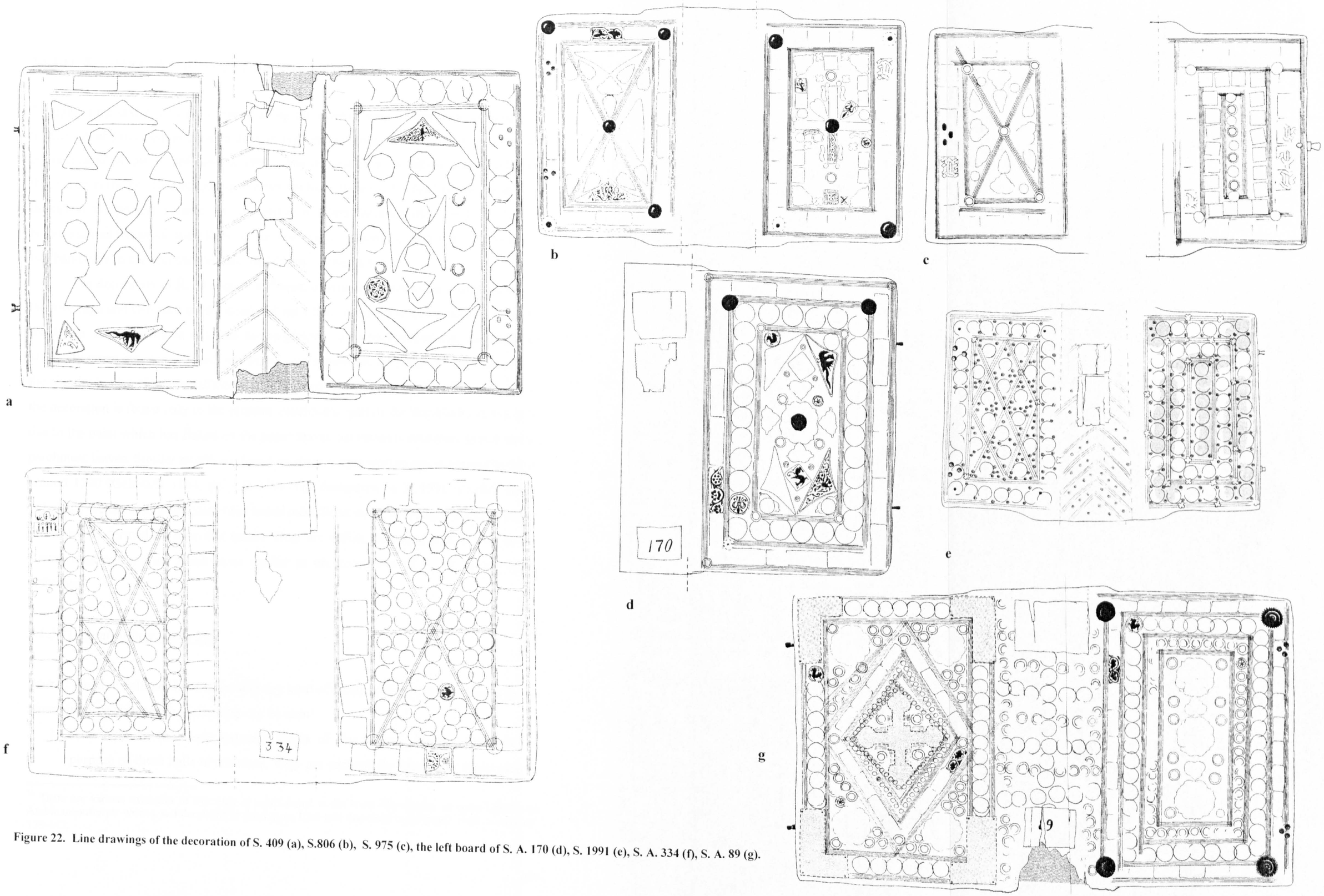


Figure 22. Line drawings of the decoration of S. 409 (a), S.806 (b), S. 975 (c), the left board of S. A. 170 (d), S. 1991 (e), S. A. 334 (f), S. A. 89 (g).

2.1.3.11. *Text-block edges trimming and decoration (table 31)*

Though all the text-blocks are trimmed along the external edges, there is no evidence as to the tools and the method used. In three of the nine volumes the edges of the text-blocks are decorated (**S. 30, S. 806,** and **S. 1991**). The decoration of **S. 806** is quite similar to those seen in the previous chapter on Cretan bindings from the Michael Apostolis atelier, though in the present volume the decoration is richer incorporating motifs not seen before such as the small quadrilobe, cross-like motif, placed on both sides of the rope-like bands which connect the rounded medallions[33] (photos 55).

The decoration of **S. 30** is quite different, consisting of three round medallions on the fore edge and two each on the head and tail edges, inside to which schematic flowers are drawn. Lines are drawn in a dark brown pigment, on a background that was possibly originally green but is now faded, whilst the spaces between the petals of the flowers and the circular border of the medallions are painted red. Though it appears at first glance that the decoration is found only in the original, parchment, part of the text-block, this is only due to the paint which has flaked on the paper leaves but remains relatively sound on the parchment leaves. Similar motifs are found on manuscripts written and decorated in Sinai around 1300 (Galavaris 1984, pp. 133-139). The decoration of **S. 1991** is rather badly faded, but we can still distinguish two round medallions in the fore edge, placed between three crosses formed by rope-like bands. They are unlike the round motifs seen in the Cretan bindings and are much more similar to the decoration of **S. 30**, though more elaborate.

2.1.3.12 *Metal fittings (table 29).*

Four of the nine volumes have never had any kind of metal fitting on their boards. On the remaining five volumes the following can be seen:

1. **Iron nails in the three external edges of the boards (S. 30).** The original purpose of these nails is not clear. They are particularly frequently found among

[33] There are various examples of this type of motif found in the book illumination of some Greek and Arabic manuscripts written and decorated in Sinai circa 1300 and discussed in Galavaris 1984, mostly pp. 139-142.

the Arabic volumes of the Sinai library, and in many cases have vestiges of leather between the nail heads and the board leather cover[34]. Though it is possible to relate these nails with the attachment of now missing flaps (Szirmai 1999, p. 52-53 with previous bibliography) it seems more probable that these were used in order to attach an extra leather cover, now missing, above the original one without pasting it. It is also probable that such 'secondary' cover had a flap in the fore edge which would act as a kind of protective wall. In this volume, oblong vestiges of leather are also still present underneath the head of some of the nails, sometimes the same vestige of leather been held in place by more than one nail.

2. **Bosses** (**S. 806**, **S.A. 170** and partly **S.A. 89**). There are four different types of boss evident in these three bindings. In the case of **S. 806** they consist of a sheet metal 'cup' with a nail attached. This is indicated by the crumpled boss in the upper left corner of the left board, as well as by the nails still surviving on the boards though without the sheet metal 'cups'. The same kind of boss is present on the right board of **S.A. 170**.

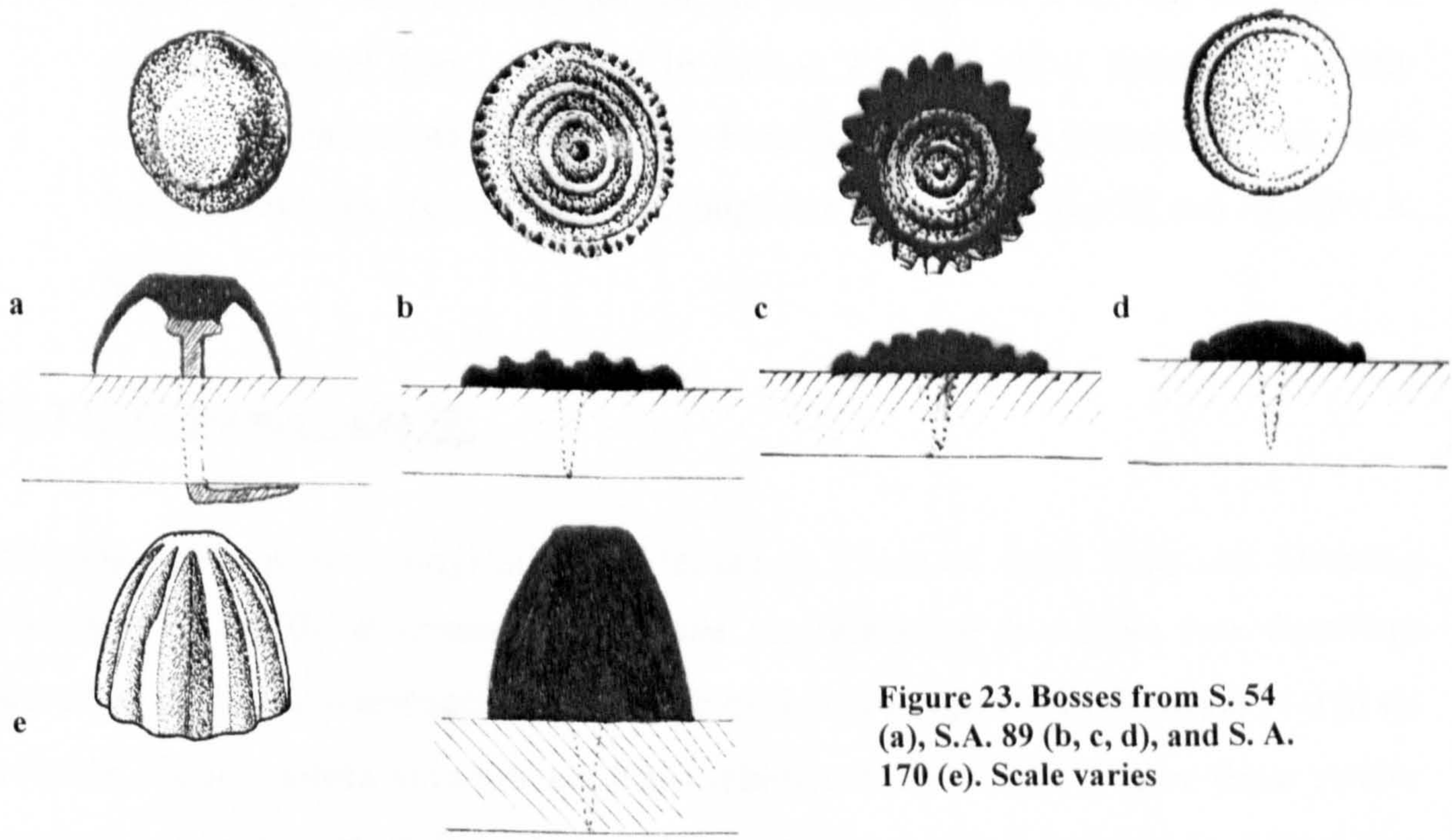


Figure 23. Bosses from S. 54 (a), S.A. 89 (b, c, d), and S. A. 170 (e). Scale varies

[34] See for example S. 670, non-original binding of a liturgical manuscript written in the monastery in 1292.

Two more types of bosses can be seen on **S. A. 89,** which are made of solid metal and are almost flat. They are either left undecorated with just a shallow groove running all around or can have indented edges and concentric circles. The other type of boss is the one found on **S.A. 170** which is distinctly dome –shaped with deep ribs converging at the top and forming indentations at a considerable height on the base. Metal in all cases could be tentatively described as copper alloy.

3. **Metal plaques (S.1991, S.A. 89).** In both volumes metal plaques were nailed to the 'front' board., either this is represented by the right **(S.A. 89)** or the left board **(S. 1991)**. The metal plaques do not survive in either of the volumes but their shape can be deduced from the marks left on the leather. Thus in the case of **S. 1991** there were originally seven different fittings representing the crucifixion, the Virgin Mary and St. John and possibly two angels on the two upper corners and two metal fittings of the Γ shape (*gamatia*) in the bottom corners. In **S.A. 89** there were five metal fittings, four *gamatia* in the four corners and a cross in the middle. In the case of **S. 1991,** metal fittings were probably added at a later date since the blind tooled decoration covers the whole surface while in **S. A. 89** the metal fittings were certainly part of the original lay-out since the decoration is designed around them. As noted in section 2.1.2.10. metal fittings are usually found on manuscripts containing the Four Gospels which is the case here since both manuscripts contain this text, though one is written in Arabic and the other in Greek.

2.1.3.13 *Fastenings (table 30)*

All nine volumes have originally had fastenings. Four of them have one fastening according to the 0-1-0 arrangement while the remaining five have two fastenings according to the 0-2-0 arrangement. Fastenings follow a right to left direction (←) in six volumes (all four Greek volumes and two Arabic) and left to right (→) in three Arabic volumes. In the case of **S.A. 334,** which now has one fastening, it is evident that originally there have been two fastenings of the 0-2-0 arrangement, and in **S. A. 89** which now has two fastenings there were originally four fastenings arranged according to the

1-2-1 arrangement. Surviving evidence suggests that in eight of the volumes fastenings are of the Three Edged Leather Interlaced Strap type, whilst in the case of **S.A. 340** there is a single leather fastening, a later replacement, since the original fastening was anchored to the board through one set of two holes. Only in two volumes the leather used is the same as the one used for the cover, in three it is different and in four volumes nothing can be said on this subject since all evidence is missing.

The anchorage holes are arranged according to the AH 4 pattern except in the case of **S. A. 340** where the AH 2 pattern is found. Anchorage is mostly of the TBT type (seven volumes) and secondly of the TBTP (two volumes). The arrangement of the fastenings and the turn-ins is mostly of the F & T 1 type except in the case of **S.A. 334** where it is of the F & T 8 type, while in **S.30** the pastedowns do not allow seeing this feature. The form of the straps ends vary considerably, though the Ufi type is found in four volumes. While fastening rings survive in none of the volumes, pegs are still present in six of them, in one volume simple and in the remaining five compound, either cast or filed. In **S. 975** the pins are further secured with nails traversing the board from the outer to the inner face and presumably also through the nailed edge of the peg as it is evident form similar examples (Szirmai, 1999, p. 82, figure 6.15).

Vestiges of the previous (original?) fastenings still survive in three volumes, **S.A 89, S.A. 170, S.A. 334**, either as leather and adhesive vestiges left pasted on the boards (**S.A. 89**) or as stain marks left on the paper of the text-blocks.

2.1.3.14 *Conclusions*

As we have seen at the beginning of the chapter only two of the nine volumes have their original bindings, and neither of the two offers any written evidence for precisely dating the text-blocks and thus the bindings. Nevertheless watermarks on the endleaves of four bindings (**S. 30, S. 806, S. 1991, S. A. 334**) seem to support a date in the late fifteenth or sixteenth century. This is further supported by a note found in another Arabic volume preserved in the library S. A. 397 (see below) which has a binding clearly made in the same workshop as **S. A. 409**, saying that the book was read by a certain monk Ioannis when he was in the patriarch in Alexandreta (Antioch) in 1558 AD. This date conforms

well with the general dating of the bindings, and it is most probable that the book was in its present binding when read by Ioannis, and was thus bound before 1558 AD. Technical and decorative features, such as the endbands, relate some of these bindings with the Cretan ones seen in the previous section and which as we have seen can be dated to the late fifteenth and sixteenth century. Given the fact that five of the nine volumes contain text-blocks written in Arabic it is sensible to suppose that at least these five books were written, used and thus bound in some area with a Christian Arabic-speaking population, for example some place in the near Middle East, where Christian populations were to be found all through the Byzantine era and well after that until today. In the notes in the Arabic volumes cities such as Gaza, Antioch, Tripoli and Bethlehem are mentioned. However some of the volumes do offer some more precise evidence.

S. A. 409 contains a speech by the archbishop Germanos of Constantinople which was translated by a certain Ioannis tou Douka from Antioch. This statement connects the volume with Antioch but there is other evidence that makes it possible to attribute also its binding to the same city or area and this is the similarity of

Figure 24. The left board of S.A. 397.

Figure 25. The left board of S.A. 398.

the decoration (but also of other features such as the attachment system of the boards with the text-block and the quality of the leather) with two more bindings, those of S.

A. 397 and S. A. 398[35] (figures 24, 25). In the former there is a note in f. 270r saying that the manuscript was written in 1333 AD by a certain Simeon Basam of Joseph from Santaia (a town close to Damascus) and in the same leaf by another hand the note by the monk Ioannis who read the volume as mentioned above. In the latter volume (S. A. 398) a note in f. 312v says that it was written in 1258 AD by Zouan of Demetrios of Ioanni of Chamsa in Antioch for the monastery, and that he took care of the gatherings and the leaves. At the end there is the name of a certain Abbas Thomas from the monastery of *Panagia Arsaia*, west of Antioch. Considering the above we can rather safely attribute the binding of **S. A. 409** to the area of Antioch, since all three very similar manuscripts make reference to the same city as the place of copying of the manuscript (S. A. 398), the place of origin of the scribe (**S.A. 409**) or as the place where the manuscript was found at a later date (S.A. 397). The note in this last manuscript is also valuable for offering a 'terminus post quem' 1558 AD for the binding of the book. It is on account of the provenance of this binding that this group of bindings is conventionally named after Antioch, clearly with no intention of attributing all the bindings in this town. Besides two more manuscripts offer different indications as to where they may have been bound. Two notes in f. 323v and f. 352r of **S. A. 340** say that the manuscript was written for the monastery of Sinai in the thirteenth century for the church of the Forty Martyrs but it was seen in Gaza in the house of a certain Moses by the *oikonomos* of the St Catherine's monastery named Paul, and that its leaves were dispersed and detached. It is thus clear that the book was seen in Gaza prior to its present binding and therefore it is probable that it was bound there. **S.A. 334** was also written in the monastery though it is unclear if it was bound in the monastery or in some other place.

On the basis of various similarities it is possible also tentatively to attribute the rest of the bindings to the same broad geographical area, i.e. the near Middle East, in places where Christian-Arabs were present without excluding the monastery itself. Such common features are mostly those related to the decoration of the volumes and secondly to technical features. Evidence suggests that these bindings are unlikely to have

[35] These two bindings were noticed during one of the visits for the assessment project after the research was finished and thus they were not surveyed in the same detailed way as the rest of the binding. Nevertheless the basic features were recorded and a photographic record of them was also made. Both manuscripts are *menea*.

originated from one workshop only but can be thought as the product of several workshops which were somehow related. Most suggestive of all is the use of common tools in most of these bindings, mostly MuF/a71, MuF/e256 and the creaser C2, which are used in seven, six, and seven bindings respectively. In most of the volumes the tools are used to decorate their covers in much the same way, with the entire surface of the boards covered in blind tooling. In some volumes the spines are also heavily decorated (**S.A. 89** and probably **S.A. 340**, though in the latter there are only a few traces of the spine decoration) as well as the board edges (**S. 1991, S.A. 89, S.A. 340**) and the headcaps (**S. 1991**). The decoration of the board edges is a feature otherwise unknown at this time and not recorded before, though there are later examples as we will see in the next sections. It is also worth noticing the similarity in the spine decoration of **S. 1991** and **S. A. 409**, as well as the similar way in which the big triangular tools are placed in the corners and in the center of the decorative panels of the boards.

Four bindings (**S. 806, S.1991, S. A. 89** and **S. A. 170**) are distinguished by their richly decorated endbands. In all four volumes, the endbands have a decorative weaving of the type seen in the Cretan bindings of the fifteenth and sixteenth century. Those of **S. 806** and **S. 1991** are particularly close to the Cretan ones both in the pattern and colours used. The former of these two bindings is also of a higher standard of manufacture, having a much more careful and balanced decoration, as well as painted decoration in the text-block edges, similar to the Cretan bindings seen before, though some typical Sinaitic motifs such as the rope-like crosses are also present. The endbands of these four bindings as well as some of the tools used, point directly to a Cretan influence. The triangular eagle and dragon tools (MuA/a10, MuA/a11, Mua/c6 , Mua/c9), as well as the bull tools (Mua/b7, MuA/b13, MuA/b15) are particularly close to those seen in the Cretan bindings while the knotwork tool, MuG/b3 is of western origin and might have arrived in the area through Crete, a major trading center with the west. The same Cretan influence we can see in the decorative patterns of most of the nine bindings examined here. For example the division of the central panel in four triangular compartments by the diagonals, seen for example in **S. 806, S. 975**, and the placement of the big triangular tools in the center pointing inwards (**S. 806, S.A. 409**) is clearly seen in Cretan bindings described previously such as S. 1194 and S. 1234. Concentric frames such as those seen in **S.A. 170**

and **S. A. 89, S. A. 975** are also very similar to those of Cretan bindings such as **S. 1234,** and **S. 968** seen before. This last Cretan binding is decorated heavily with various tools covering all the available space on its boards, in a very similar way to **S.A. 170, S.A. 89** and **S. 1991** considered here.

The fact that three of the nine volumes are sewn on three sewing stations, quite significantly all three are rather large ones (two 4tos and one 8vo), and all three are written in Arabic further supports the theory that these bindings were bound under the close influence of Islamic bookbinding. This is because firstly it is known that in Greek-style bindings three sewing stations are occasionally used but mostly in small format volumes and probably more often from the sixteenth century onward (Federici and Houlis 1988, pp. 105-113 and Szirmai 1999, pp. 64-66), and secondly that in Islamic bindings the number of sewing stations has always been quite limited, usually two, but after three despite the format of the text-block (Bosch et al. 1981, p. 46 and Szirmai 1999, pp. 54-55). The arrangement of the sewing stations according to pattern B6 is also of interest; it is found in three volumes (**S. 30, S. 806, S. 975**), all three of which contain Greek text-blocks and at least the last two have similar decoration and endbands. As it becomes evident from previous research (Szirmai 1999, pp. 64-66) such pattern is found more often in later Greek-style bindings from the fifteenth century onward. Therefore, three bindings could be considered to have been made in the same place, thus forming one small subgroup. Another subgroup could be formed by the two Arabic volumes, **S.A. 89** and **S.A. 170**, for they are clearly distinguished by their rich decoration, the large number of tools used and their decorated endbands.

One feature in which four of the bindings considered here contrast with the Cretan ones is the use of a single fastening in the fore edge (though in the case of **S. A. 340** there were originally two of them), something that has not been encountered on the Cretan bindings seen so far.

We are thus dealing with a group of nine bindings of which smaller subgroups can be distinguished. Technical, decorative and written evidence connect these bindings with Crete, Antioch, Gaza, and the Sinai monastery itself, making firm attribution to any of them quite problematic, except perhaps in the case of **S. A 409.** Notes on **S. A. 334** and **S. A. 340** display very clearly the movement of books not only from outside to the

monastery but also from the monastery to other places and back. It is sensible to suppose that this movement would also result in books written in the monastery, being bound, or rebound elsewhere before being brought back. These pieces of evidence support the idea that the bindings could have been produced in different workshops in various places which nevertheless where closely connected, or that they could have been the work of monk binders who would, when on their travel, be able to bind books when the need arose. This supposition would explain the presence of clearly Cretan endbands in otherwise clearly non Cretan bindings as those of **S. A. 170** and **S. A. 89**. It is known after all that under Venetian occupation Crete was a major base for intense commercial activities in the Eastern Mediterranean, and it is also through this trade that Crete must have had close connections certainly not only with the monastery but also with other Christian populations of the East such as those in Syria, Lebanon, Palestine and Antioch (ODB 1991, volume 1, pp. 545-547, with previous bibliography).

It is also interesting that Arabic-speaking populations, raised up in Islamic areas and according to the Islamic way of life, would adopt for their books not the typical Islamic bindings but rather the Greek-style one, a remark made before by J. Sonderkamp (1991, p. 439). In other words it would appear of interest that religion was more powerful than the language and the cultural environment in determining the appearance of religious books, and that Christians therefore used Christian-looking books whether they were written in Greek or Arabic. It is also an interesting example of conservatism in isolated minority communities. It is known that there was a quite marked skepticism and suspicion toward the books of the other, rival religions, not only as to content but also and most significantly as to form and structure. As Bosch et al. put it (1981, p.5):

> *Muslim, Christians, and Jews alike were reluctant to have their sacred books bound by anyone other than someone of the same faith, for they feared that the unbeliever might incorporate in the boards of the books some profane material, or that in cutting the margins he might profane the mass of waste paper in some way.*

This is also clearly illustrated by the example of a *Tezkere* (official certificate) of the Turkish authorities of Egypt dated 1604 and preserved in the archive of the monastery, in which it is mentioned that monks from the monastery asked for the release of a document that could protect them from Muslims who objected to them because of an old

Koran manuscript that was given for repair and rebinding in a bookshop in Cairo, asserting that integration of lost phrases and rebinding would not be done properly (Χιδίρογλου 1980, p. 368). It is probably relevant that apparently the period between the fourteenth and the sixteenth centuries was a rather sinister period for the Christian population in the Middle East due to restrictions from the Muslim authorities (Agnes-Mariam de la Croix 2002, p. 42).

As we will see later on this conservatism in adopting any of the features of Islamic binding in the area of Sinai and Palestine, at a time and a geographic area where Islamic bookbindings were difficult not to be noticed, is clearly evident in Sinai but not, for example, in Mount Athos.

2.1.4. THE KLIMIS BINDINGS

The present group comprises five very similar and distinctive bindings, which probably originate from Crete or the near Middle East and were made around the second half of the sixteenth century. These bindings are named after a blind tooled stamp bearing the name "Klimis *hieromonk*" which appears on the cover of two of these bindings. This name tool has been interpreted in the past as an indication of the binder's name (Weitzman and Galavaris 1990, pp. 170-174.), though there probably not enough evidence to support such a conjecture .

2.1.4.1 *Text-blocks & scribes (table 32).*

Four of the text-blocks are written in Greek and one is written in Arabic. They contain either theological (three volumes), or liturgical (two volumes) texts. Two of the manuscripts are written on parchment, two on western polished paper and one, the Arabic volume, is written on eastern polished paper. Formats vary between 4to (three volumes) and 8vo (two volumes).

None of the text-blocks is precisely dated but they can generally be dated according on paleographical ground, according to the catalogues, between the tenth and the sixteenth centuries. There are no scribal notes, but only a possession note in the last leaf of **S. 604,** which gives no indication as to when it was written:

> *"This Meneon belongs to the Holy mount Sinai and may whoever takes it away from the choros of the katholicon have the anger of God and of all the saints"*,

All but one manuscripts (**S. 1793**) have been rebound, and all bindings are Greek-style bindings.

2.1.4.2 *Endleaves (table 33).*

There are watermarks in the papers used as endleaves in three volumes:

1. In **S. 216** the watermarks are 'Anchor within circle' very close to Briquet 567 and 568 dated in 1588 and 1597 AD respectively. There is also a countermark "Vb" which is missing in Briquet.
2. In **S. 420** the watermarks are 'Anchor within circle and crowning star' similar to Briquet 513 (dated mid sixteenth century) except that there is no countermark as in Briquet.
3. In **S. A. 76** the watermarks are 'Bull head' same as Briquet 15378 dated in 1523 AD and 'Anchor within circle and crowning star' same as Briquet 522 dated in 1566 AD.

It is thus possible on the basis of the endleaves watermarks, to date the bindings examined here to the second half of the sixteenth century. The arrangement of the endleaf units present a great consistency. Seven out of ten units consist of separate blank gatherings of a variable number of leaves of which the outermost ones at both ends of the text-block are used as pastedowns. The remaining three units are integral with the text-blocks and have been used in two left endleaf units and one right. In two of these units the endleaves consist of two text-block leaves left blank, the outermost used as a pastedown.

The endleaf units of **S. 420** are quite interesting and as yet unique. Following the arrangement '[\1]1,1' and '1,1[1/]', they consist of a bifolio of blank paper around which a blank parchment leaf is hooked with its stub pasted to the inner face of the boards under the pastedowns and the full parchment leaf used as flyleaf adjacent to the text-block. This is an arrangement so far unknown in Greek-style bindings but similar arrangements using both paper and parchment for extra strength of the flange in the hinge area are well represented in Gothic and limp velum bindings in Europe from the fourteenth till the sixteenth century (Szirmai 1999, fig. 9.2. and 10.25).

2.1.4.3 *Sewing (table 34).*

All the text-blocks are sewn with unsupported sewing using mostly hemp or linen threads of varying thickness and twist, and Z ply. In all volumes the sewing stations are marked

with V shape cuts, except one volume where such a feature could not be observed due to the tightness of the sewing structure.

The number of sewing stations varies considerably and even though all five volumes are similar in format (4to or 8vo), three, four, five, and six sewing stations are used, the latter in two volumes (figure 26). The sewing stations are arranged in the spines of the text-blocks according to three different patterns: the pattern B1 is found in three volumes (in one of them combined with pattern B2), while in two volumes (both sewn on six stations) the pattern C4 is found in one of them combined with the pattern B7. The latter is quite different to the rest and very close to the pattern B6 which was found in three of the Antioch bindings discussed in the previous section (S. 30, S. 806, and S. 975).

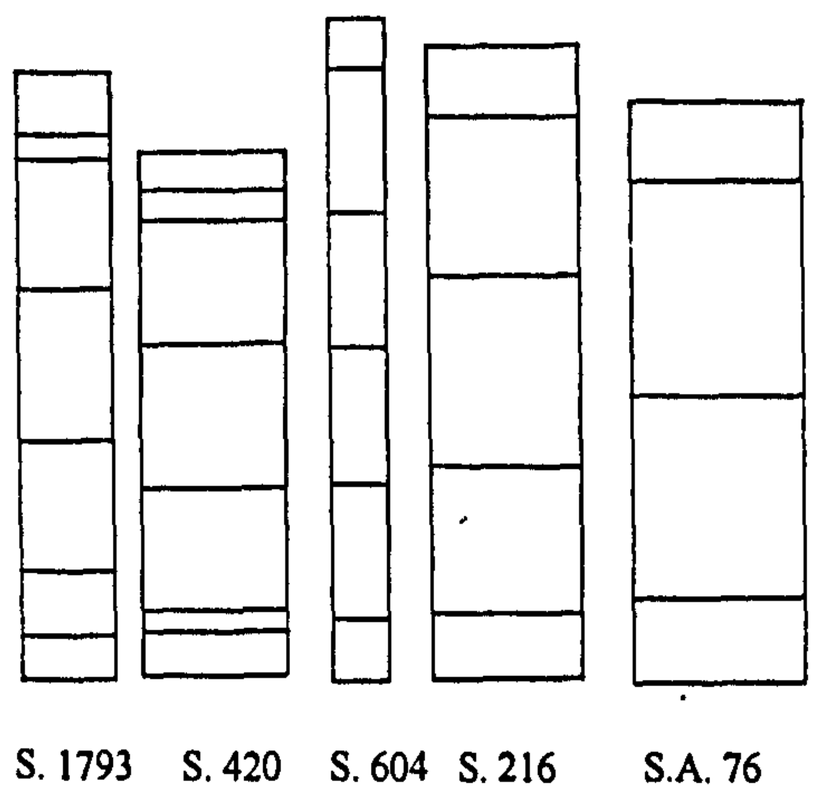


Figure 26. Line drawing showing the spines of the five text-blocks and the arrangement of the sewing stations along them. From left to right text-blocks sewn on six, five and four sewing stations.

2.1.4.4. *Boards and board attachment (table 35).*

All the volumes are bound in wooden boards, probably hardwood, though it was not possible to identify the exact species. The boards are cut flush to the text-block, the grain is parallel to the spine, and the thickness varies between nine and 12 millimetres. All boards have a BG1 type of groove running all around the three external edges, while their spine edge is shaped according to the pattern SET 3. The spine joints of the text-blocks form mostly just a slight angle. However, in two volumes angles of 90° and 120° are found.

The attachment system between the boards and the text-blocks varies considerably. In one volume (S. 604) the system could not be established due to accessibility limits. Of

the remaining four volumes two follow an I Uns/3c attachment system, one volume follows an I Uns/1 attachment system and one volume follows probably an improvised attachment system similar to the I Uns/5 though the pastedowns obscure the details. There is no evidence of recesses for the accommodation of the attachment thread, nor was it possible to establish the quality of the attachment thread used.

2.1.4.5 *Spines and spine lining (table 36)*

All the volumes have more or less rounded spines. All have a lining either of canvas (four volumes) or other plain textile (one volume) mostly of medium thickness pasted all along the spine, extending onto both boards and pasted on their outside, covering 15% and 35% of their width in two volumes (**S. 604, S. 1793** respectively) while for the remaining three such a feature could not be detected.

2.1.4.6. *Endbands (table 37, 38, 39, 40.)*

All volumes have compound endbands, consisting of a primary sewing of the Greek Double Core (four volumes) or Greek Single Core (one volume) type and a secondary weaving of the Cretan type. In all volumes the endband cores consist of cord lengths of medium thickness which extend onto the boards for a distance that varies between 25 to 40 millimetres representing a percentage between 12.6 % and 21% of the width of the boards. They are all anchored on them with the EAS 2 anchoring system.

In four volumes the **endband primary sewing** is worked with various threads: in **S. 216** a faded blue cotton thread is used, in **S. 604** a compound thread consisting of one yellow and one black silk thread twisted together, while in the other three volumes white cotton or natural-colour linen or hemp has been used. Above this primary sewing, warps are worked with silk or cotton (**S.216**) threads though with the unusual difference of having been tied-down to the text-block rather than simply wrapped around the primary sewing as we have seen in the endbands of the Cretan bindings of the fifteenth and sixteenth century and those of the Antioch atelier in the previous sections.

The **endband secondary weaving** is of the Cretan type, woven in all volumes with similar thread-and-colour patterns by pulling up one warp at a time. It is made with two or three colours of silk thread with very pale hues, pink used in all of them, yellow in three, light green in two, and cyan in just one volume.

2.1.4.7. Markers (table 40).

Markers are found in three of the volumes (in a fourth volume, **S. 1793**, there are only vestiges left). In two volumes there are simple string markers consisting of two simple (**S. A. 76**) or two plaited compound strings (**S. 216**) laced underneath the headband. The way they are fastened in the back could be seen only in **S. 216** in which case they are sewn in the spine lining with a plain thread. In the last of the three volumes (**S. 420**) they are most probably later additions consisting of a black silk ribbon sewn on the endband and a blue cotton thread which is knotted on the ribbon according to system KiM.

2.1.4.8. *Cover (table 41).*

All five volumes are covered in full leather of similar quality, a fine grain goat leather with a polished surface. Colours are various hues of brown, red-brown and yellow-brown. The turn-ins follow mostly the patterns T-ins 2 and T-ins 3 and their width varies from narrow to medium.
Corners mitre varies in two volumes, while the remaining three follow the pattern Co 1.

2.1.4.9. *Decoration (table 42, 43).*

All five volumes are decorated with blind tooling. In three volumes different decorative patterns have been used for each of the two board (figure 28).
There are three different decorative patterns used, Dec1, Dec2 and Dec3 mostly in the variations abc, consisting of three concentric panels, except **S. 216** where metal fittings all around make it difficult to see the whole pattern. One more pattern, classified as other, consists in three concentric frames around a central panel inside which two lozenges are

accommodated vertically. This pattern reveals a marked west European influence as we will discuss later. The number of tools used in one single binding varies between six and 13, and the total number of tools found in these bindings is 17, including one roll which is used in three bindings and a creaser found in all five bindings. The decoration is very fine and the designs result in very low relief impressions on the leather. Two factors probably have contributed to this effect: the quality of the leather which has a compact and polished surface and the fact that tools were most probably pressed very delicately and possibly cold.

There are two rather clearly distinct groups of tools used in these bindings. The first group consists of five delicate relief tools (MuF/a16, MuF/a17, MuF/b10, MuF/c33 and MuV3), and the second group consists of 11 intaglio tools, including a roll. The latter are clearly of traditional Byzantine provenance, except the roll, which both as a piece of equipment and design is unknown in Greek-style bindings of the Byzantine era. One of the most characteristic tools, the dragon tool (MuA/c3), is used in four of the five bindings and is the same as the one seen in a binding of the Antioch atelier (S. A. 340). The tools that feature in all five bindings are the two small intaglio tools, MuF/a16 and MuF/b10, this latter one clearly of European provenance, since many Italian and French bindings of the fifteenth and sixteenth century use very similar tools and quite interestingly in similar ways (Hobson 1989, fig. 52, 62, 88. 129, 142, 146, 147, 151., 156, Needham 1979, catalogue numbers 42, 47, 52, 54, 56 etc.). Quite outstanding is the tool with the name "*Κλήμης ιερο[μον]αχ[ος]*" (Klimis *hieromonk*) written in ligature on it. The use of a stamp with a name to indicate possession and authenticate something was well established since the ancient times and very common in the Byzantine period (ODB, vol. 3, pp. 1859-1860), but this is the only example of a similar tool used on a bookbinding recorded so far in the context of Greek-style bindings, except for the well known examples of a stamp with the monogram of the Palaiologoi royal family (figure 27c) found on the bindings of some books which apparently were part of their holdings (Hoffmann 1985, Irigoin 1982). The way and the place the tool is pressed on the cover indicates that it was perceived as an integral part of the decoration and not pressed on the leather at some later date. Though we can make various suppositions about the identification of this Klimis, it seems more probable that this indicates the person who

commissioned the manuscripts or their rebinding and wanted in this way to indicate his property. If this name would indicate the binder, or even the 'bookseller', then we should try to give an answer to the question why he didn't tooled his name in all five bindings, among which **S. 604** which has probably the finest executed decoration of all the other volumes. From available data such a question cannot be answered convincingly, though it cannot be excluded that the presence or not of the tool could indicate a binding made by Klimis himself or an apprentice. Unfortunately we lack any evidence which could cast more light in this issue about the person who wrote, sold, bought or donated these manuscripts. Two more tools need further consideration; these are the floral tool MuF/d11 which is probably of Italian provenance (Hobson 1989, fig 72) similar to a tool used by the 'De Sabio' binder, active in Venice around the year 1535 (N. Pickwoad, personal communication), and the roll which is the earliest example of a similar tool recorded in the context of the present research. The motif of this roll, though only partly recognizable, seems to be of Islamic inspiration, of the so called arabesque patterns, very much in fashion in Italy since the end of the fifteenth century (Thornton 1998, p. 30, Hobson, 1989, fig. 93, etc). This roll is certainly an import from Europe, most probably Italy, where rolls are known to have been used since the second half of the fifteenth century (Szirmai 299, p. 243 with previous bibliography). Also of Italian provenance seems to be the small MuV3 tool, since similar ones are found in Italian bindings of the sixteenth century like the one reproduced in figure 27a. The way in which the first group of small intaglio tools are used is also an interesting proof of west European influence. The floral tool MuF/b10 except being clearly of Italian provenance is used much in the same way as in various Italian and French bindings of the fifteenth and the sixteenth century of which two example are given in figure 27a,b. Quite interestingly the frames are not necessarily decorated with repeated impressions as we have seen so far in the bindings of the previous ateliers but rather outlined with blind tooled creasers and decorated with symmetrically arranged small tools (figure 28). The decorative pattern in figure 27b of a Grolier binding presents some very interesting similarities with the bindings examined here. European influences can be detected also in the use of the decorative pattern which is seen on the left boards of the volumes **S. 420** and **S. 604** (figure 28), and is here classified as 'other', which seems to be inspired by sixteenth-

century Italian examples like the bindings reproduced in figure 27a. This particular decorative pattern, with the central panel accommodating two lozenges, is so far unknown, from the available bibliography, in Greek-style bindings of the Byzantine and early post-Byzantine tradition and could be considered as copying similar European examples like the one shown here. It is interesting to stress that no small tool with concentric rings, a standard feature in all Greek-style decorated bindings considered so far (see section 2.1.2.8.), has been used. All five volumes have their spines decorated according to two variations of the pattern SD/B4 where lines are tooled in blind with the creaser.

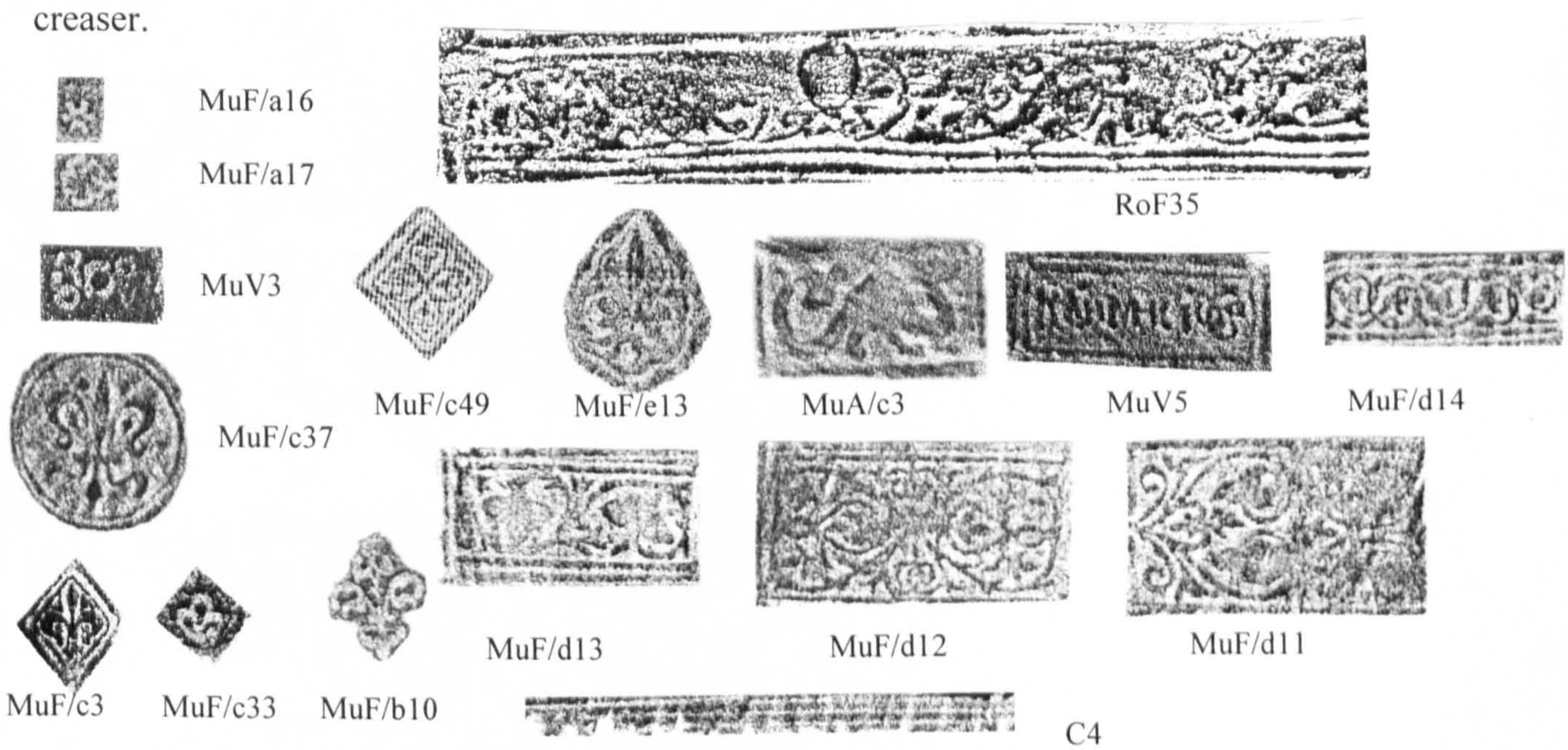


Figure 26A The tools used in the five Klimis bindings.

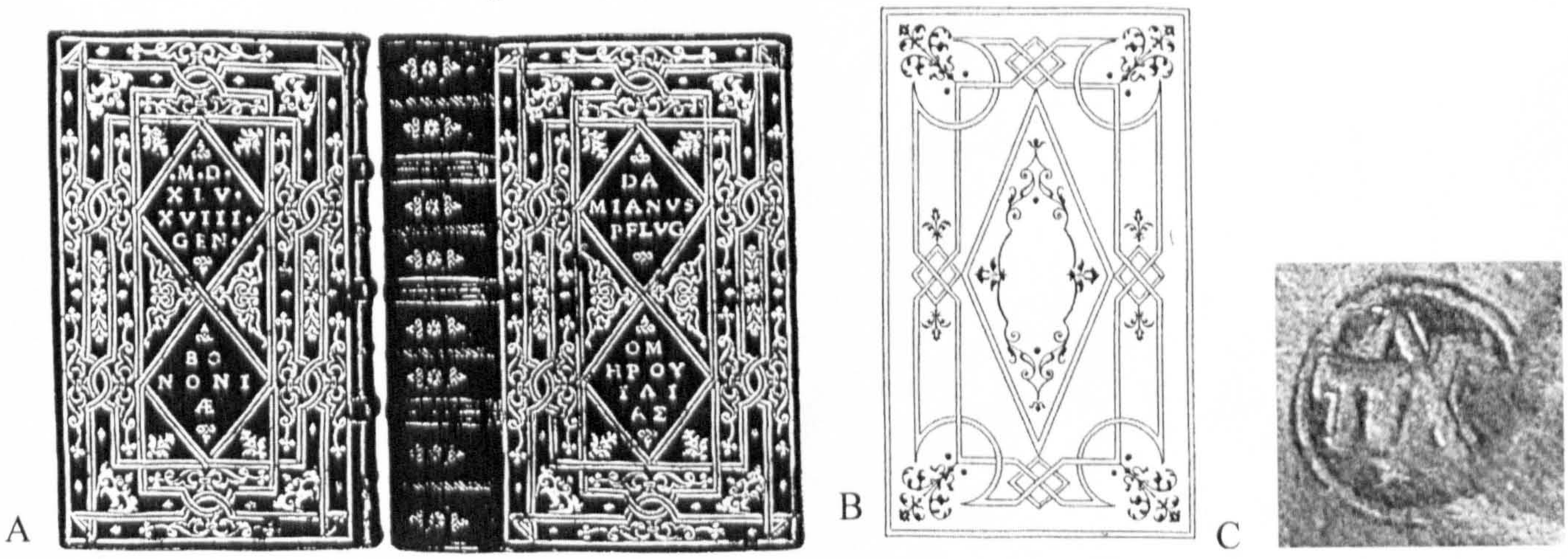
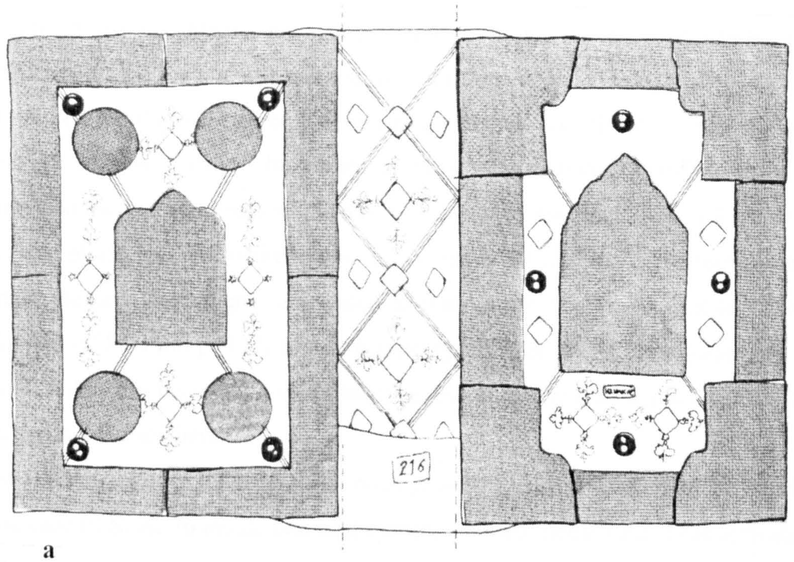
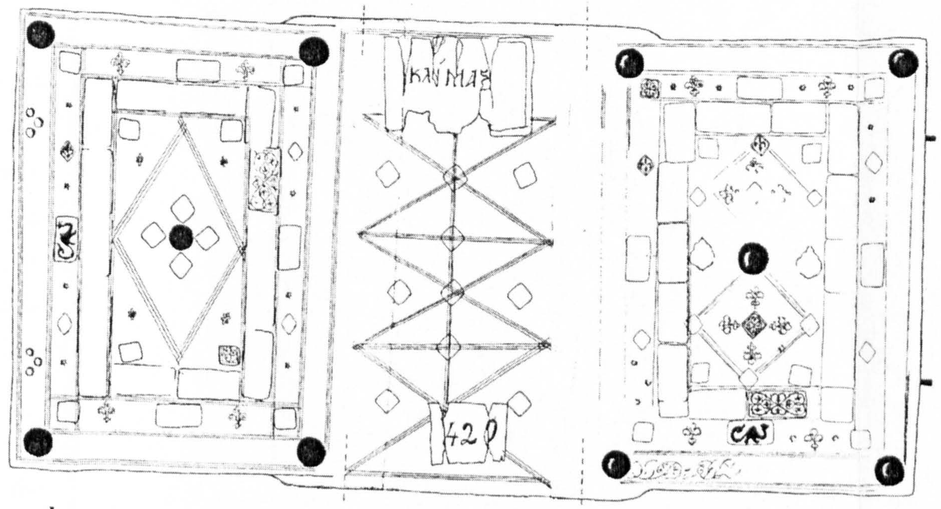


Figure 27. A. Bolognese binding dated 1545 (after P. Needham, 1979, catalogue number 52). B. decorative pattern from a Crolier binding (after 'Fers a Dorer', 1984, p.33). Binding tool with the monogram of the Palaiologoi royal family from cod. Topkapi Sarai, 2, Homer's Iliad, thirteenth c.



a



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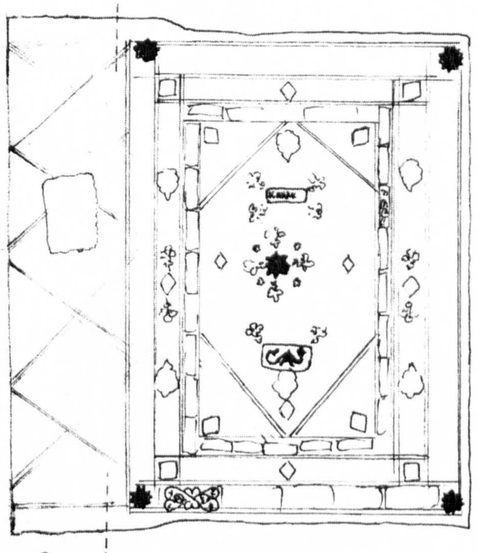
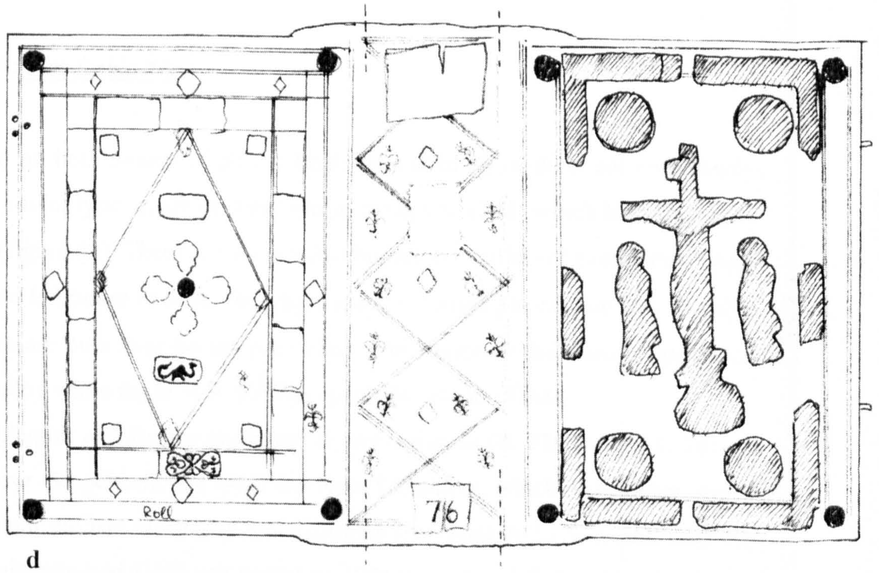


c



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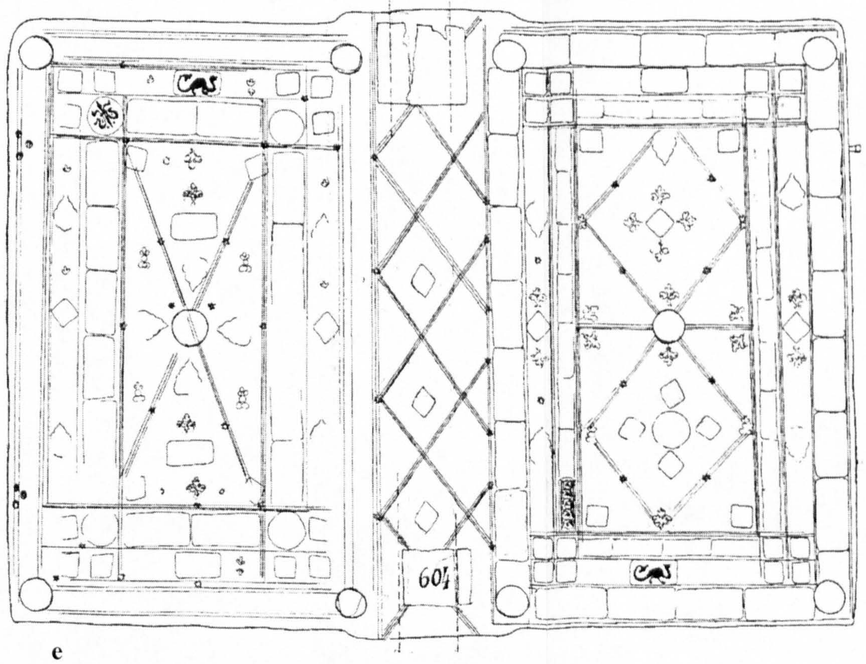

e

Figure 28. Line drawings of the decoration of S. 216 (a), S. 420 (b), S. 1793 (c), S.A. 76 (d), and S. 604.

2.1.4.10. *Text-block edges trimming and decoration (table 12)*

Though all the text-blocks have been trimmed along the external edges there is no evidence as to the tools or the method used. In three of the five volumes there are drawn and painted motifs in the three external edges on the text-blocks. The motifs consist of round medallions inside which various floral or cross-shaped motifs are drawn and painted, connected with rope-like bands. Colours used are black, red, and green in two of them and black, red, and white in one. Such motifs are similar to the decoration of **S. 30**, seen in the previous chapter as related to manuscript decoration and are attributed by Galavaris (1984-1986 p. 132) to the monastery of Sinai, though the possibility cannot be excluded that the decoration was drawn in the monastery on a book that was brought already bound elsewhere.

In two of the volumes the title of the book is written on the head edge of text-blocks, and in the case of **S. A. 76** inside one of the round painted medallions. This indicates that the books were stored horizontally with the head-edge facing the viewer and not the spine as we might suggest according to our modern perception of books, where the title and the shelf mark are written on the spine of the volumes.

2.1.4.11. *Metal fittings (table 44)*

Bosses are found on both boards of all the bindings and in all of them are very similar and plain of the *boulai* type, made of sheet metal, except **S. 1793** which has solid metal indented bosses (figure 29). There are always five bosses in each board except those three boards (**S. 216** and left board of **S. A. 76**) where metal repoussé plaques are also found, in which cases there are only four bosses per board. The bosses of the *boulai* type are all made of copper alloy while those of **S. 1793** are probably made of lead.

Metal repoussé plaques and frames are found in two volumes (**S. 216** and **S. A. 76**) one containing the Four Gospels and the other the New Testament, which as has been shown before, may explain the use of similar metal fittings (see section 2.1.3.10.and note 22). According to Weitzman and Galavaris (1990, p. 172) these metal fittings are dated circa 1700 and therefore were nailed at a later date, in which occasion the bosses, perfectly

coherent with the other bosses of the bindings considered here, were also probably nailed on the boards. They may also be the original ones which were taken off the boards and re-nailed in the present position as not to interfere with, but at the same time protect the metal frames and plaques from attrition or pressure.

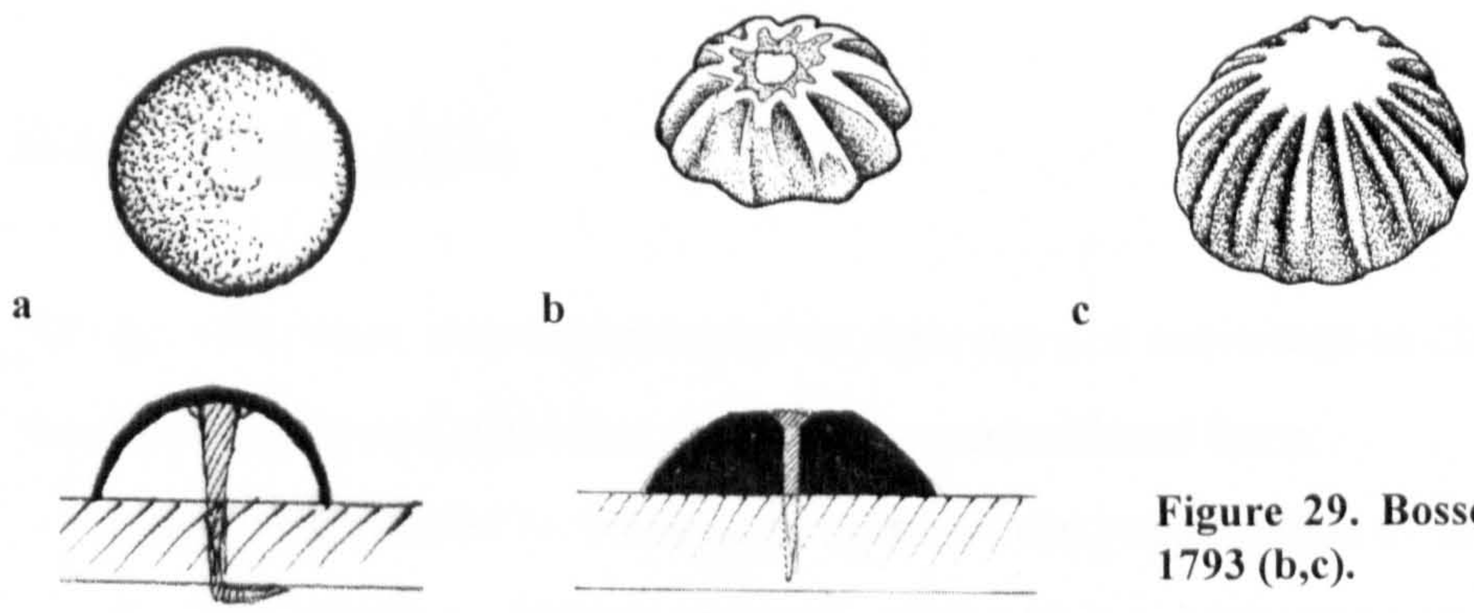

Figure 29. Bosses from S. 604 (a) and S. 1793 (b,c).

2.1.4.12. ***Fastenings (table 11)***

All five volumes have fastenings arranged according to the pattern 0-2-0 ← . Three of them have Three Edge Leather Interlaced strap fastenings, **S.A. 76** has silk braided straps, and **S. 216** had some kind of red velvet straps (now almost completely missing), nailed between the metal fittings and the cover, most probably an addition of the time when these metal fittings were nailed on the binding, as said above, most probably at a later date.

In all three volumes with interlaced fastening the straps are made of leather which can be either the same as the one used for the cover or different. Those of **S. A. 76** are made using red silk and metal threads and their ends are knotted in the inner face of the right board and are not pasted. There is no hint that could lead us to consider such fastenings as the original ones or later replacements, though a similar example has been seen in S. 1343 considered in the chapter on Cretan bindings. Rings are preserved only in **S.A. 76** and are made of cast metal. Pins are preserved in three volumes and are compound, either

only cast or cast and filed. The arrangement of the anchorage holes follows the pattern AH 4. The anchorage of the fastenings is made through the system TBTP and TBP (two examples each) while in **S. 216** they are nailed in an unclear way under the metal fittings and the boards cover. The ends form in all interlaced and braided strap fastenings is of the UFaP and the arrangement of the fastenings and the turn-ins varies, though the pattern F&T 1 is found in two volumes.

2.1.4.13. *Conclusions.*

As we have seen above paleographic data are not sufficient to clarify the provenance of the text-blocks and therefore the bindings considered here.

It would be useful to summarize some of the peculiarities of these bindings.

1. The sewing stations pattern presents no homogeneity even among the two bindings with the name Klimis tooled on their covers. This raises questions because the consistency in the decoration and the endbands seems to indicate a well established binding decoration practice and technique, which is somehow incompatible with using two distinct sewing patterns in the same atelier with no evident other reason such as the different formats. This might lead us to speculate over a possible collaboration of two or more people dividing the labour of binding the same book, as will be discussed later on. Nevertheless, the particular sewing pattern C4, found in two volumes, is very close to the pattern B6 which we considered before in three Greek volumes of the Antioch atelier. It is also worth noticing the great variation in the number of sewing stations used even in books that have the same format and similar number of leaves, for example **S. 216** and **S. 1793.**
2. The endbands are all very similar one to the other, having a secondary weaving of the Cretan type but clearly differing in pattern and colour from those of the Cretan bindings of the fifteenth and sixteenth centuries seen before, maybe due to the fact that the threads used are significantly thinner. Another interesting feature is the fact that the warps are tied-down in the text-block and not just wrapped around the endband primary sewing as we have seen in the two previous ateliers.

3. The use of two clearly distinct groups of tools, the one probably of Italian sixteenth-century origin, among which the first roll recorded so far, and the other of the typical Byzantine tradition, offer an interesting example of how European influences in decoration reached the Christian Eastern Mediterranean and how they were gradually incorporated, in the Byzantine bookbinding decoration tradition. Such tools could have been brought from Europe, through the intense commercial activities between Crete and Venice, or even by a monk traveling abroad, as it is known to be happening at the time (Άμαντος 1953). The similarity in the decorative patterns of these bindings with those made in Italy and France in the sixteenth century further emphasizes this influence.

The use of the roll is another clear evidence of such western influences. It is not clear at all the place where these bindings were made. Nevertheless available evidence point to a place which could be somehow open to the commerce and influence from the west. To this end the case of **S. A. 76** might be of help, since the language in which it is written might offer some extra hints. There are four options for the attribution of this binding and consecutively of the other four:

A. A binder, probably a monk, made the binding in the monastery. The decoration of the edges might reinforce this conjecture according to what Galavaris says in his article on Arabic manuscripts written in Sinai (1984-1986), though as said above, it cannot be excluded that the decoration was made in the monastery on a volume that arrived already bound elsewhere.
B. The binding was made in another place in the Arabic-speaking near Middle East, where Arabic-speaking Christians were living connected with the monastery through a *metochion* or other supervised institution.
C. The binding was made by a binder who travelled from Crete, in the monastery or in a presumed other area of the near Middle East for whatever reason, bringing with him his tools and binding manuscripts in situ. This could be an example of an itinerant 'leather artist' travelling and offering his services in different binderies, much in the way we know this was happening in western Europe from the fifteenth century (Szirmai 1999, pp. 242, 243).

D. The binding was made in Crete, meaning that the book passed at some point from the island, a possibility which can not be excluded though it seems rather improbable, given the Arabic language in which it is written and which should lead us to confine its circulation in the Arabic-speaking areas of the near Middle East including the monastery. The fact that at least one tool, the characteristic dragon tool, was found also on another Arabic volume, that of S. A. 340 (see section 2.1.3.10.) further supports this theory.

From the four options cited above the last one seems the least probable. It is therefore probably sensible to suppose that the binding of **S.A. 170** and therefore of all the other four bindings, were made either in the monastery or in some other place of the Arabic near Middle East. Paleographical information, which might be able to cast some light on this matter, is not available at the moment. No matter where they were made the bindings are probably the product of more than one binder collaborating and sharing labour. This would explain the great variation in the sewing stations number and the two different, quite distinct sewing stations patterns used, but probably also the great consistency in the sewing of the endbands if we accept that the sewing of the text-blocks was made by more than one binders but that of the endbands by the same one. Nevertheless the great consistency in the decorative patterns, the tools used, and the way they were arranged and tooled on the bindings might be explained by attributing this part of the whole process to one single person. Another possible explanation would be to consider all four bindings the product of one single person with a great sense of experimentation and innovation, due to which he might have experimented with various sewing patterns. The innovative decorative patterns which seem to follow closely the developments in the decoration of the bindings in Europe are a good proof of such *curious* binder. The tool with the name *Klimis hieromonk*, as said above should not be considered as a trademark of the binder but rather as a declaration of property of the person who commissioned the bindings.

MISSING

PAGES

NOT

AVAILABLE

CHAPTER 2

SINAI AND CRETE IN THE SEVENTEENTH CENTURY.

2.2.1. Historical outline

As far as the goals of this research are concerned the seventeenth century in the monastery of St. Catherine in Sinai is dominated by the figure of Ioasaph Rhodios (i.e from the island of Rhodes), who was elected archbishop of the monastery in 1617 after the death of his predecessor Laurentios, who served between the years 1592 and 1617 AD. According to various documents (Ἀμαντος 1928, pp. 1-8) he remained archbishop until his death on the fifth of May 1660. He is connected closely with two important affairs, the closing of the monastery to the Bedouins and the controversy with the Patriarch of Alexandria concerning the *metochion* of the monastery in Cairo. Nevertheless he was also probably responsible for the intense rebinding and possibly copying activity that is recorded in the monastery during the period of his service as we will consider in section two of this chapter.

As can be understood from various documents, whenever relations with the indigenous tribes inhabiting the lands around the monastery were for whatever reason bad, the monastery would close its doors to the outside and would stop giving the tribes any food and clothing as was the usual custom[36]. Apparently Ioasaph had to deal with such an event as soon as he was ordained and twice later on in 1633 because of the murder of the gatekeeper of the monastery by the indigenous Arabs, and again in 1656 (Ἀμαντος 1928, pp. 6-7) These closures would last for long periods and there is evidence that the monks would sometimes abandon the monastery and go to the *metochion* in Raithos (El Tor) on the Red Sea coast. It is probably to such a closure of the monastery that Ioasaph is referring to in the rebinding note in his hand in **S. 448** of the year 1637 considered in section two of this chapter.

[36] Notes about the closing of the monastery are recorded in Greek sources only after the year 1600, but apparently this was a strategy established well before. For example there is evidence of a similar event in 1479. See, Ἀμαντος 1953, p. 33.

The second matter which occupied Ioasaph and almost cost him the title of archbishop was the controversy with the Patriarch of Alexandria over the *metochion* of the monastery in Cairo. Since the Turks conquered Egypt in 1517, the archbishop and some of the monks needed to spend time in Cairo in order to be able to deal with various administrative and supply matters, thus they needed to have a church in which to practice the liturgies. That was considered to be against the interests of the Alexandria Patriarchate and thus a controversy, destined to last for many years to come, started from the years of Ioasaph's predecessor Laurentios. Ioasaph himself was excommunicated by the Ecumenical Patriarchate of Constantinople for a few years for this reason. He did not give up his claims and tension apparently caused the seizure and sack of the *metochion* by the Arabs in 1653 (Άμαντος 1928, pp. 38-44). It is in this *metochion* that twenty years earlier, in 1633, Sophronios from Cyprus rebound **S. 356**, as we will see below. Apart from important internal matters, Ioasaph was also able to establish good relations with the Popes and with the kings of Spain, Philip III, and of France, Louis XIII (Άμαντος 1953, p. 54). Such relations resulted in various donations as well as protection for the monastery and its representatives. In 1669 Crete was conquered by the Turks, and though some of its holdings in the island were confiscated it seems that the monastery continued to have close relations with the island and its properties there (Άμαντος 1953, pp. 46-47, 58).

The successor of archbishop Ioasaph was Ioannikios I from Mitylene who was elected archbishop in 1671 and remained so until 1702. He was a copyist himself already before his being ordained as archbishop. During that period while he was *oikonomos* of the *metochion* of the monastery in Messina in south Italy he collected a lot of printed books which he donated to the St. Catherine's monastery after his return.

As we have discussed in section 1.5. on the history of the library during this period the books of the monastery, whether printed or manuscript, were kept mostly either in the *katholicon*, or the *mesi*. It is only in the eighteenth century that efforts were made to catalogue and store the books in a proper building, a library.

2.2.2. THE SINAI GIGLIO ATELIER

This is the first group of bindings that can be safely assigned to the Sinai monastery itself. It is named after the Italian word for the common fleur-de-lis motif which 25 out of the 26 bindings considered here have in common as a focal part of their blind-tooled decoration. In the end of this section a short note will be provided on four bindings which apparently were made in the *metochion* of the monastery in Cairo since they are related with the bindings of the Giglio atelier though at the same time they also present some major differences.

2.2.2.1. *Text-blocks, scribes, donors and binders (tables 47, 48).*

Twenty of the manuscripts are written in Greek while the remaining six are written in Arabic, and contain either theological (14 volumes) or liturgical (12 volumes) texts. Seven of the manuscripts considered here are written on parchment and the remaining 19 on various western papers, in eight cases polished, among them all six Arabic manuscripts. Formats are mostly 8vo (16 manuscripts), followed by 4to (seven manuscripts), and 16mo (three manuscripts). The manuscript are dated between the tenth and the first half of the seventeenth century. Twelve of them are precisely dated between the years 1004 and 1655, seven of them, still in their original binding, were written between the years 1622 and 1655.

Nine of the manuscripts bear a scribal note. A certain **Leo[...]** wrote **S. 448** in 1004, **Nikodemos** and priest **Petros S. 605** in the fifteenth-sixteenth centuries, Priest **Nicholaos** and **Paraskevas S. 585** in 1453, **Markos Pavlopoulos S. 27** in 1452, and **Manuel Trapezountios** wrote **S. 573** in the same year. Hieromonk **Iosiph** wrote **S. 1976** in 1655:

f. 375r. *"The present belongs to me, humble **hieromonk Iosiph** of Sinai who in Crete....and I wrote it in the holiest and profitvirikotato* (?) *mount Sinai. And if anyone* [...] *and cut the leaf. 1655 AD May"*[37].

[37] *«Το παρόν υπάρχη εμού του ταπεινού Ιωσήφ ιερομονάχου σιναίτου του εν κρήτη...και έγραψα αυτώ εν τω αγιωτάτω και προφητ/βυρικοτάτο (;) όροι τω σινά. Και ήτις μου [...] ή κόψη το φύλο. 1655 μαίω».*

In the same volume on f. 390r. there is a note in the same hand: *"1655, 26 of May Iosiph".*

By far the most prolific identified scribe connected to this atelier is **Simeon Basam** a deacon from Emesa / Syria. Four out of the six Arabic manuscripts bear a scribal note, though unclear if in his hand, while another manuscript written by him, **S. A. 351** will be discussed in the note on the Cairo *metochion* bindings in section 2.2.2.13. All the scribal notes in these manuscripts are written in Arabic except the one in **S. A. 61** written by archbishop Ioasaph which states:

> f. 109 v." *The **hierodeacon Simeon** from the city of Emesa and also from Sinai wrote the present Psalterion and dedicated it on mount Sinai. May whoever wants to take it away from the monastery be a stranger to the dispensation of Christ and excommunicated and cursed and unforgivable and not released after death, 1641AD in the month of February*
> *Ioasaph of Mount Sinai"*[38]

These five manuscripts indicate that Simeon Basam was active at least between the years 1622 and 1641, copying mostly Christian theological texts written in Arabic and meant to be used by Arabic-speaking monks of the monastery. There is also an Arabic volume in the library which according to a note was dedicated to the monastery by Simeon *hierodeacon*[39]. It is not known how many manuscripts in his hand are still preserved in the library, a question that could only be answered by a systematic paleographic research through the entire collection.

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[38] *«Το παρόν ψαλτήρι(ον) έγραψεν ο εν ιεροδιακόνοις κυρ συμεών ο εξ εμέσης πόλε(ως).ο κ(αι) σιναίτ(ης) και αφιέρωσεν εν τω σινά όρει, ο δε βουλόμ(εν)ος απαλοτριόσαι της μονής, αλλότριος έστω της του Χ(ριστο)ύ μήρας κ(αι) έστω αφορισμ(έν)ος και καταραμ(έν)ος κ(αι) ασυγχώριτος κ(αι) μ(ετά) θάνατον άλυτος ζρμθ' (7149AM =1641 AD) εν μηνί φεβρ(ουαρ)ί(ω)*
Ο Συναίου Όρους Ιωάσαφ».

[39] This is manuscript S.A. 3 which has an Islamic binding, and a note by Ioasaph saying that the manuscript was dedicated to the monastery by Simeon *hierodeacon*. This could be a manuscript dedicated by Simeon Basam when he came into the monastery sometime during the service of Ioasaph and probably not later than 1622 when two Arabic volumes were written and bound by him (S. A. 337 and S. A. 565). There is also a note in another manuscript, S.A. 67, saying that the manuscript was written in 1537 by Ioakim Basam in Gaza. The same name appears in S. A. 89 where a note informs us that the manuscript was read by Ioakim Basam Metropolitan of Bethlehem. It is not known what relationship, if any, connects these two persons with the same surname, though according to Professor Sebastian Brock (personal communication) this surname is rather common in Syria, so the possibility of namesakes is not to be excluded. About Emesa see, ODB, volume 1, p. 690.

This restricted number of identified scribes contrasts with the seven names of binders connected with this atelier who have left notes of their work on the manuscripts they bound (table 48):

Klimis *hieromonk*:

In **S. 448**, written in 1004 and rebound in the Giglio atelier, there is the following note in the hand of archbishop Ioasaph:

f. 341r. *"The present paterikon was brought from Raithos by **Klimis** the Cretan and he rebound it because it was very damaged in the year 1637AD and the binding was finished in the month of January and when the monastery closes and they want to take it*(to Raithos ?) *to read it, they are permitted to do so Ioasaph of Mount Sinai"*[40].

In **S. 605** written in the fifteenth-sixteenth century by Nikodemos and priest Petros and rebound in the 'Giglio' atelier, we read:

Left endleaf : *"The present book was bound by the hand of **hieromonk Klimis** in the year 1639 AD"*[41]

Sophronios *hieromonk* from Cyprus.

In **S. 763**, written in the sixteenth century and rebound in the Giglio atelier, we read:

f. 293r. *"The present Penticostarion was rebound by **Sophronios hieromonk** the Cypriot with much labour because it was very worn-out and it is of the Chor*(iv?) *in the year 1636 AD in the month of July"*[42]

There is also another rebinding note in his hand of the year 1633 on S. 356 which will be discussed in the note on the bindings of the Cairo metochion.

Simeon *hierodeacon* (Basam?)

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40 *«Το παρόν πατερικ(όν) ήφερεν ο εν ιερομονάχ(οις) κύρ Κλήμης ο κρητός από την ραιθού κ(αι) το εμεταστάχωσε ότι ήτον πολλ(ά) χαλαιμένον επί έτους ζρμε'(7145 AM = 1637 AD) και ετελιόθη το στάχωμ(α) ιαννου(α)ρ(ίω) μηνί κ(αι) ωσάν σφαλήση το μοναστήρι και θέλουν να το πάρουν εκεί διά να διαβάζουν συγχωρημένον να το πάρουν*

Ο σινά όρους Ιωάσαφ».

41 *«Το παρόν βιβλίον εσταχώθη υπο χειρός κλήμεντος ιερομονάχου έν έτη ζρμζ'(7147 AM= 1639 AD)»*

42 *«Το παρόν πεντηκοστάριον εμετασταχώθη υπο σωφρονίου ιερομονάχου του κυπρέου με κόπον πολλήν ότι ευρίσκετον διεφθαρμένον πάνυ και είναι του χωρ(ίβ?) επί έτους ζρμδ' (7144 AM = 1636 AD) κατά μήνα ιούλιον».* Choriv is the Arabic name for Sinai.

In **S. 1048** written in the sixteenth-seventeenth century and rebound in the Giglio atelier, there is the following note in the hand of archbishop Ioasaph:

Right pastedown *"The present holy liturgy was rebound by the most blessed **hierodeacon Simeon** in the year 1637 AD in the month of July in the holy mount Sinai"* [43].

In **S. 1171** written in the sixteenth century by an unknown scribe there is the following note also in the hand of archbishop Ioasaph:

f. 413r. *"The present holy and sacred Gospel was rebound by **Simeon hierodeacon** in the holy mount Sinai in the year 1632 AD in the month of April"* [44].

The same name together with that of another monk named Ionas appears in a rebinding note on a printed book certainly bound in the same atelier.[45]

Anastasios *hieromonk*

In **S. 573** and **S. 585** written in 1452 and 1453 respectively there is the same note:

Left endleaf *"The present Menaion was bound by me **Anastasios hieromonk** in the year 1627 AD in the month of January"*[46].

A similar note is found on the right endleaf of **S. 361** dated in 1632.

Anastasios *hieromonk* and monk Makarios

In **S. 804** written in the fifteenth century and rebound in the Giglio atelier, we read:

Right endleaf v. *"The present book was bound in 1627-28 AD by the hand of Anastasios hieromonk and monk Makarios 1628"*[47]

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[43] *«Η παρούσα Θεία λειτουργία εμετασταχόθη υπο του οσιωτάτου ιεροδιακόνου κυρ συμεών υπό έτους ζ.ρ.μ.ε.' (7145 AM = 1637 AD) κατά μήνα ιούλλιο εν τω σιναίω αγίω όρει».*

[44] *«Το παρόν θείον και ιερόν ευαγγέλιον εμετασταχώθι υπό συμεών ιεροδιακόνου εν τω σιναίω αγίω όρει επί έτους ζρμ' (7140 AM= 1632 AD) κατά μήνα απρίλλιον».*

[45] This is 'Θεοφυλάκτου ερμηνεία είς τα δ'Ευαγγέλια', date and place of printing unknown, shelve mark 4283/2966a. In the end there is the following note: *«Εσταχώθει τω παρόν βηβλήον παρεμού ιωνά ιερομονάχου και συμεών ιεροδιακόνου ζρλε' (7135 AM = 1627 AD».* The book is an 8vo bound according to the Projecting Pasteboard typology. It is sewn on three sewing supports with a blue and white silk thread, it has endbands of the 'Embroidered Front Bead and Crowning Core' type. Pasteboards are made of Arabic paper manuscript waste and it has two pairs of leather ties fastenings

[46] *«Εσταχώθη το παρόν μηναίο εξ εμού αναστασίου ιερομονάχου επί αίτους ζρλε' (7135 AM =1627AD) ιαννουαρίου».*

[47] *«Το παρόν βηβήλων εσταχωθί ζρλε' (7153 AM = 1627-28 AD) ηπό χηρός αναστασίου ιερομωνάχου και μακαρίου (;) μωναχού αχκη' (1628 AD)».*

It is reasonable to suppose that Anastasios is the same person as the binder of **S. 361, S. 573** and **S. 585** mentioned above.

Gerasimos *hieromonk*.

In **S. 408**, written in 1371 and rebound in the Giglio atelier, we read the following note in the hand of archbishop Ioasaph :

f. 13v. " *The present was rebound by **Gerasimos hieromonk** since it was very damaged and dispersed and with great effort we put it back together and completed it in the year 1632AD in the month of July*"[48]

Gerasimos *hierodeacon* .

This is most probably the same person as the one mentioned just above. Apparently when he signed S. 500 he was a *hierodeacon* who was both tonsured and ordained priest two months later when he bound **S. 408** in which he signs as *hieromonk* . In **S. 500** we read:

Right endleaf v. :"*The present November* [*menaion*] *was rebound by **Gerassimos hierodeacon** in mount Sinai in the year 1632AD in the month of May*"[49]

In **S. 448** , **S. 408**, **S.A. 61** and **S.A. 351**, the notes are followed by the signature of archbishop Ioasaph. In another manuscript still preserved in the library, S. 2215 we read the following note:

f. 52v. :"*After kir Laurentios I was elected, me least of the bishops Ioasaph unworthy to be called bishop. There are 23 years since I have been ordained and I am on the 24th, I come from the island of Rhodes and my father was from Macedonia by descent*"[50]

As we have just seen above Ioasaph did himself write at least some of the rebinding notes found in the manuscripts considered here. These notes reveal an interest in the preservation of old and damaged manuscripts and prove that Ioasaph took care of the

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[48] *«Το παρόν εμετασταχώθη υπο γερασίμου ιερομονάχου πάνυ φθαρτόν και διασκορπισμένον ετύγχανε ον, και μετά μεγάλου κόπου εσυνάψαμεν και αρτιώσαμεν επί έτους ζρμ' (7140 AM =1632 AD) κατά μήνα ιούνιον».*

[49] *«Ο παρόν νοέμβριος εμετασταχώθη υπό γερασίμου ιεροδιακόνου εν τω σιναίω όρει έτει ζρμ' (7140 AM = 1632 AD) κατά μήνα μάιον».*

[50] *«Μετά τον κύρ Λαυρέντιον εχειροτονήθην εγώ ελάχιστος των επισκόπων Ιωάσαφ ου ουκ ειμί άξιος κληθήναι μαί επίσκοπον αφού έλαβον την χειροτονίαν επέρασαν χρόνοι κγ' και περιπατώ είς τους κδ' κατάγομαι εκ νήσου ρόδου ο δε εμός πατήρ μακεδώνας το γαίνος».* This note together with other notes concerning Ioasaph is published in Άμαντος 1928, pp. 4-8

library holdings[51]. It could indeed be supposed that it was under his supervision and at his suggestion that such repair and rebinding works were undertaken. The rebinding note in **S. 408** is relevant to this end since Ioasaph is actually referring to 'we' instead of 'he', which means that he was also personally involved in some way in the repair of the manuscript together with *hieromonk* Gerasimos.

What follows is an examination of the main features of these bindings as a whole. At the end an effort will be made in order to distinguish the craftsmanship of one binder, Simeon Basam.

Eight of the 26 manuscripts are in their original binding while for the remaining 17 the present binding is not the original, but a rebinding. Twenty two of the 26 bindings considered here are Greek-style bindings, two are projecting pasteboard unsupported bindings, one is flush pasteboard unsupported binding, and there is just one Greek-Islamic binding with a fore-edge flap.

2.2.2.2. *Text-block repairs (table 49)*

Thirteen (13) out of the 18 text-blocks that were rebound in the Giglio atelier present some kind of repair to the spine-folds of the gatherings or to the leaves of the text-block. Eleven out of these 13 manuscripts also bear a note mentioning the binder who is presumably also to be considered responsible for the repair. Four of the rebound manuscripts present no sign of repair. There is only one originally bound volume (**S. A. 270**) which presents some kind of repair and that is a paper strip pasted between the left pastedown and the text-block, evidently meant as a reinforcement, but it cannot be said at what point it was pasted to the book. Spine-fold repairs usually consist of pasting rectangular strips of paper locally or all-along mostly to the outside of the gatherings. The number of gatherings where such repairs have been carried out varies, presumably reflecting the state of preservation of the manuscript prior to rebinding. In two volumes, **S. 1048** and **S. 408**, bound by Simeon Basam and Gerasimos *hieromonk* respectively, the spine-folds of all the text-block gatherings were cut away thus turning them into

[51] According to the ex-librarian father Demetrios, there are a lot of manuscripts in the library with his signature and usually a short possession note with the usual curses against whoever should take the books away from the library. See Ντιγμπασάνη 1993, p. 22.

singletons. Such single leaves were repaired by pasting strips of paper in order to turn them back into bifolia and sew them as usual. This type of repair indicates seriously damaged books for which repair was a rather difficult and time-consuming job, as Gerasimos clearly mentions in his note. In **S. 361, S. 408,** and **S. 804** bound respectively by Anastasios *hieromonk*, Gerasimos *hieromonk*, and Anastasios and Makarios respectively, missing or probably very badly damaged leaves of the text were newly written on western paper and sewn together with the rest of the text-block, a practice we have seen before in **S. 30** of the Antioch atelier.

In **S. 763,** bound by Sophronios *hieromonk* from Cyprus, parts of the text that were covered by the paper used to repair the torn and missing parts were newly written on it.

In **S. 520,** an eleventh-century manuscript, missing parts of some parchment leaves were repaired with strips of paper, though some sewn tears in the parchment probably belong to an earlier repair. Some of the gatherings in this volume are also overcast along the spine-folds and this can also be seen in a limited scale in **S. 448** which is also written on parchment.

2.2.2.3. *Endleaves (table 50)*

The endleaves of the bindings considered here follow one of the four distinct arrangements described below:

Separate endleaves –25 units.

- **Compound & Sewn**-21 units

  Four units follow the general arrangement [1] 1 and 1[1] for the left and right endleaves respectively. They are shared equally by two volumes, **S. 361** and **S. 500.** The left endleaf unit of the latter volume actually consists of two different bifolia sewn separately in the beginning of the text-block following the arrangement [1]1,2. The outermost one consists of a parchment document bearing the signature of Ioasaph and the date 1627 and its first half was originally used as a pastedown but is now detached. The second bifolium is used as flyleaves. Thirteen out of the 21 endleaf units consist of a blank four-leaves gatherings sewn with the text-block and

following the general arrangement [1]3 (seven units) and 3[1] (six units). Two units follow the general arrangement [1] 5. They occur exclusively as left endleaf units. Two units follow the general arrangement 7 [1] and they occur exclusively as right endleaf units.

- **Compound & Pasted** - four units.

  Four endleaf units follow the general arrangement [1] 1 and 1[1], consisting of simple bifolia connected with the text-block only by means of their outermost leaves that are used as pastedowns and by no kind of sewing. They are found in the two bindings made by Klimis in 1637 and 1639 (**S. 448** and **S. 605** respectively).

Separate endleaf gatherings, both sewn and pasted are mostly used mainly in the rebinding than in the first binding of manuscripts (19 to six units respectively)

Integral endleaves – 23 units.

This kind of endleaf arrangement which uses leaves of the text-block left blank at both of its ends, occurs almost equally in rebound text-blocks (eight examples) and those on their first bindings (nine examples).

- **Compound endleaves** (pastedown & flyleaves)-12 units.

  The commonest arrangement is [1] 1 + and +1 [1], each represented by three examples. Two units follow the arrangement [1] 2 + and one unit the arrangement +2 [1], one unit follows the arrangement [1] 3 + and one unit the arrangement + 4[1]. They are exactly divided between originally bound volumes and rebound ones.

- **Pastedown only**-seven units.

  Six out of the seven units are used as left and right endleaves of three volumes (**S. 520, S. A. 270, S. A. 325**). The first of these volumes is rebound while for the other two the present is their first binding. The seventh unit is found in the right end of **S. 408**. which is actually a rebound volume. It cannot be established if these pastedowns are original or if they were originally flyleaves that at some point were pasted on the boards.

- **Flyleaves only-** four units divided in two volumes (**S. 46** and **S. 61**), both rebound.

No endleaves.

There is only one out of the 26 manuscripts that has no endleaves, this is **S. 175**, an eleventh or twelfth-century rebound parchment manuscript.

Unclear – two units

There are two endleaf units whose arrangement is unclear. In the case of the left endleaf unit of **S. 763** there is a doublure and a single fly leaf that is probably hooked around the first text gathering, while the right endleaf unit of **S. 27** probably consists of a separate blank gathering sewn to the end of the text-block.

The use of the same basic arrangement for both left and right endleaves is found in 20 out of the 26 bound volumes, in 11 of them consistency is also found in the number of endleaves in both ends of the text-block. In three volumes the left and right endleaves differ in their arrangement (each having one of the two units made up of a separately sewn gathering while the other is integral to the text-block).

2.2.2.4. *Sewing (table 51, 52)*

Nine of the text-blocks are sewn on three sewing stations, twelve on four sewing stations, and five on five stations. All the text-blocks considered here are sewn with unsupported sewing. In general, as can be seen in figure 30 a,b,c, the number of the sewing stations used reflects the format of the text-block – the bigger the volume the greater the number of sewing stations. The thickness of the text-block does not seem to affect the number of the sewing stations.

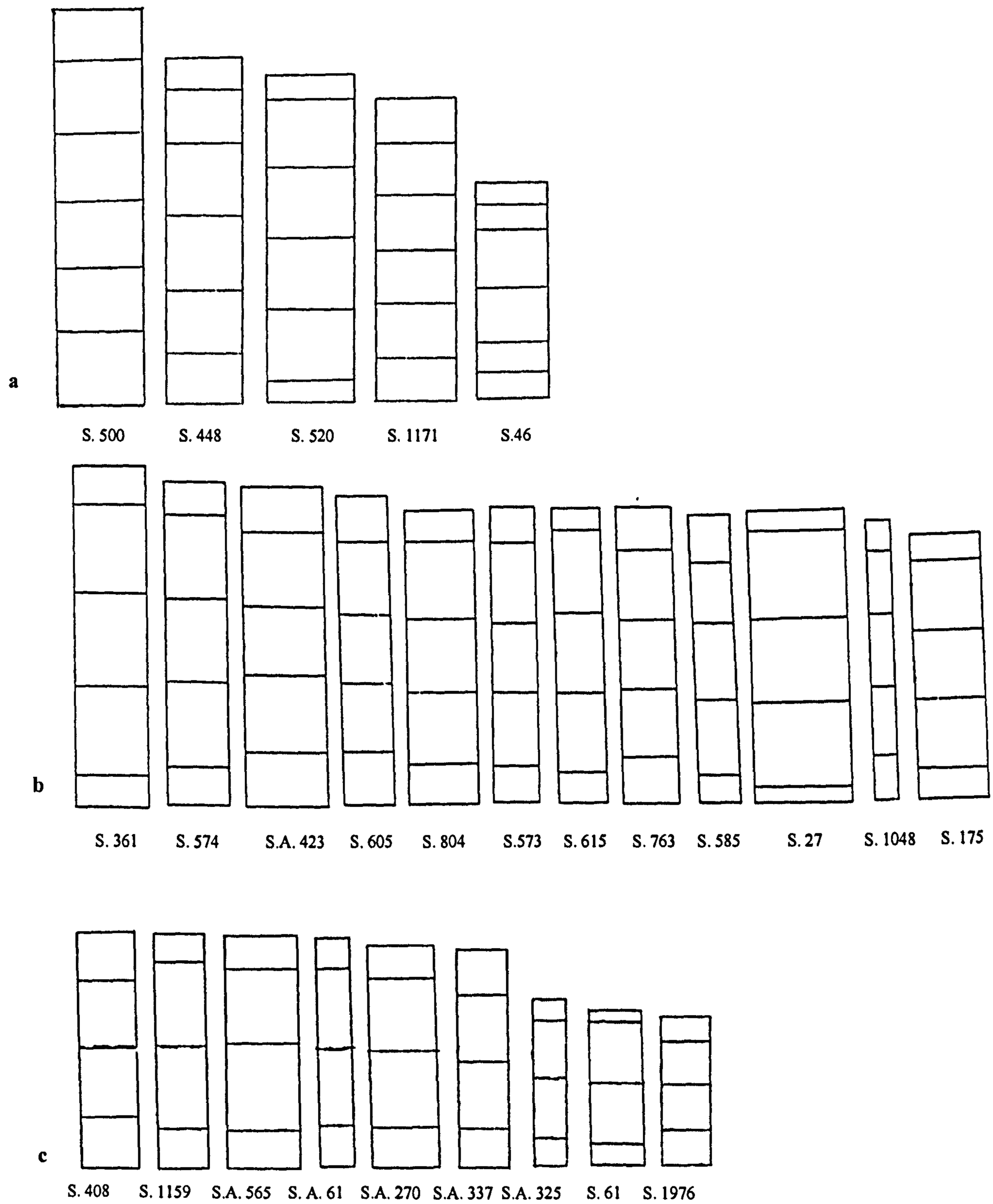

Figure 30. Line drawing showing the spines of the five text-blocks sewn on five sewing stations (a), the 12 text-blocks sewn on four sewing stations (b), the nine text-blocks sewn on three sewing stations (c) and the arrangement of the sewing stations along them.

The sewing stations are arranged on the spines of the text-blocks according to four classified patterns and one (**S. 573**) non classified ('other'):

The pattern B1 is used in 21 of the volumes and is found either on text-blocks sewn on three, four or five sewing stations. No constant proportional relation connecting the outermost panels with the central ones is evident, though in fifteen volumes the outermost panel at the tail is bigger – even if just by a few millimetres – from the corresponding panel at the head. The patterns B4 and B4B6 are found in two volumes only (**S. 46, S. 448**), which are both sewn on five stations as in the other volumes we have seen with this or similar patterns in the bindings of the Antioch (S. 30, S. 806, S. 975) and the Klimis (S. 420, S.1793)) ateliers. The pattern A is found in one volume (**S. 500**), sewn on five stations, though not in its *pure* form, since the bottom outermost panel is almost equal to the panels between the stations, but the panel at the head is clearly smaller. The pattern B2 is found in one volume (**S. 1048**) sewn on four stations.

In 21 volumes the sewing stations are marked by V shape cuts to accommodate the sewing thread and the chains formed in the spine by the sewing process. Both the main sewing stations and the change-over stations are consistent in this feature. In three out of these 21 volumes V shape cuts are particularly small compared to the rest, where the V shape cuts have an average width of three to five millimetres. In four of the remaining five volumes, the sewing stations have no nicks but just needle holes; three of these volumes are written in Arabic. In just one volume (**S. 585**) it was not possible to establish this feature due to limited visual access.

The sewing threads used are either hemp (14 volumes), linen (five volumes), silk (five volumes), or cotton (two volumes). Four of the five volumes sewn with silk threads are written in Arabic. The thickness of the threads varies between thin (four examples), and thick (three examples), but is mostly medium (19 examples). The twist varies between loose (nine examples), tight (three examples), or medium (14 volumes). In 16 volumes the thread is S ply and in the remaining ten Z ply. In five volumes the sewing thread used has been waxed (four of them are hemp and one cotton).

The exact type of sewing could be established in only two volumes, that is **S. 520** and **S. 1048.** In the first of these two volumes the sewing was found to be of the double sequence type. It is not possible to say how many of the other twenty five volumes are sewn in this way but it may at least be assumed that bound volumes with the same board attachment system as **S. 520** (see below) use the same technique. By contrast, the sewing of **S.1048** is executed in a single sequence, from the first to the last gathering, as is shown in figure 31, There is nothing unusual in this sewing procedure except the way in which the sewing begins by passing the thread in and out of the sewing stations of the first gathering, leaving a small loop of the thread (figure 31a), through which the sewing thread of the second gathering is anchored (figure 31b). Once the second gathering is sewn, the thread is tied off to the loose end of the thread left at the first station of the first gathering before continuing on into the third gathering (figure 31c).

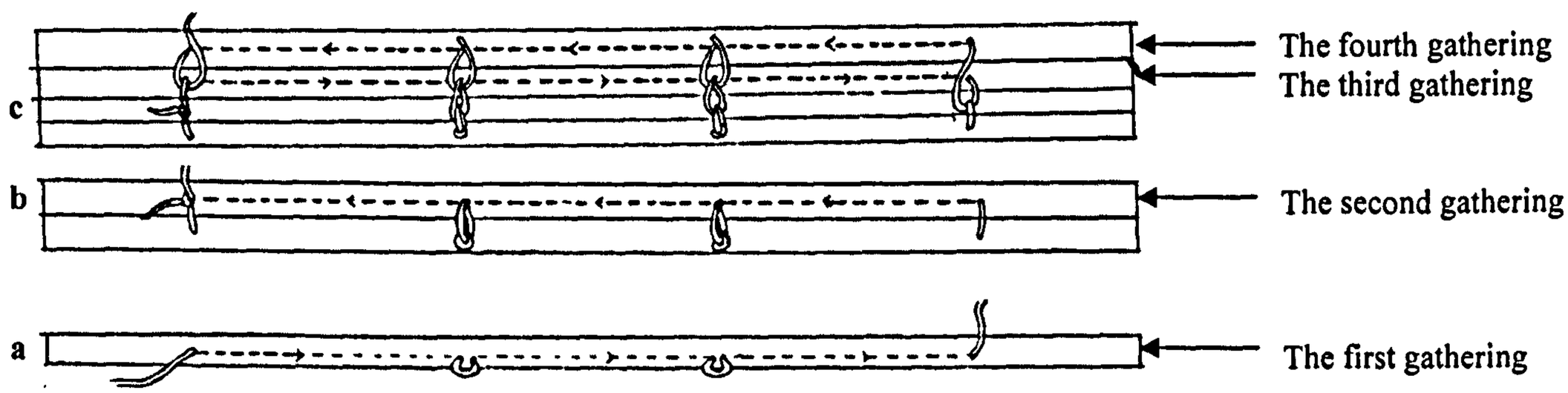

Figure 31. Line drawing showing the sewing process of S. 1048.

2.2.2.5. *Boards and board attachment (table 52)*

Of the 26 bound volumes considered here only four have pasteboards, while the other 22 are all bound in wooden boards. All but two volumes have their boards cut flush with the text-blocks they contain, the two exceptions being bound in pasteboards. It is interesting to notice that three of the four pasteboard bindings belong to Arabic manuscripts while the fourth was bound by the Syriac monk Simeon Basam who as we will see later on was probably trained in the Islamic binding technique in which pasteboards were exclusively used from as early as the twelfth-thirteenth century (Szirmai 1999, p. 53), or even earlier (Bosch et al. 1981, p. 56).

The wood species could be identified in only six volumes, since all the rest have their boards covered. Therefore according to visual observation it seems probable that beech wood was used in three volumes (right board of **S. 175, S. 500, S. 573**), oak was used in two volumes (left board of **S. 175, S. A. 423**), pine was used in **S. 1976**, and probably chestnut in **S. 61**. Apparently in all volumes the grain of the wooden boards runs parallel to the spine. In **S. A. 325** the material used to make the pasteboards was identified as consisting of Arabic paper manuscript waste. The thickness of the boards clearly differs between those made of wood and those made of pasteboard. The latter have a thickness of between three and four millimetres, while wooden boards present a clearly larger variation in their thickness, ranging from seven to 15 millimetres.

As can be seen in table 52, the thickness of the boards is clearly related to the format of the text-blocks but only secondly to their thickness. For example 4tos are all bound with the thickest wooden boards and 16mos with the thinnest ones. On the other hand the thickest volumes are not necessarily bound with the thickest boards. The spine edges of the boards are shaped differently according to the material from which they are made. Those with pasteboards have no beveling but are just cut straight according to the SET 1 pattern (four volumes). Wooden boards instead have their spine edges beveled according to the pattern SET 2 (two volumes), SET 3 (ten volumes), SET 4 (eight volumes), SET 6 (two volumes) and SET 7 (two volumes). Its interesting that in **S. A. 61** the spine edge of the right and left boards are beveled in different ways (SET 6 and SET 2 respectively). The spine joints of the text-blocks are mostly angled at a 120° (15 volumes) and mostly in relation to a SET 3 or SET 4 shaping of the boards spine edge. Available data are too meager to allow patterns to be traced concerning the formation of wider and narrower angles of 90°(three volumes) and 45° (two volumes). None of the pasteboard volumes has angled spine joints even though at least one of them **(S. A. 325)** has a clearly rounded spine.

Not surprisingly, none of the pasteboard volumes has any kind of groove in its board edges, while of the volumes with wooden boards only seven have some kind of groove. In five of them a BG 2 type of groove is used, in two volumes running only along the head and tail edges of the boards, while the fore edge of the boards is left plain. In the remaining two volumes board edge grooves are of the BG 1 and BG 3 type. The case of

S. 408 is particularly interesting in the shaping of its board edges. As already said the head and tail edges of the boards have a BG 2 type of groove, while the fore edge of both boards is beveled between the fastenings toward the outer face. The same type of beveled edge is found in a sixteenth - century Venetian binding belonging to the monastery library, thus giving us some hint as to what the model for such an innovation might have been[52] (see figure 89 in section 3.2.2.11.).

The attachment between the text-blocks and the boards is achieved by means of three different systems.

- **Attachment of unsupported sewn text-blocks with I Uns attachment system.**

  Eighteen out of the 26 volumes considered here have their boards attached to the text-blocks with attachment systems of the I Uns type.

  By far the most commonly found attachment system of this type in this group of bindings is I Uns/1mostly in the variations B and C (13 volumes, three of which, **S. 361, S. 578, S. 804** bound by Anastasios *hieromonk*), followed by I Uns/3 attachment system in three variations (four volumes), I Uns/13 (two volumes) and I Uns/8 (one volume and part of a second one). The system I Uns/4 is probably used in two volumes.

  In three out of these 18 volumes (**S. 27, S. 408** and **S. 500**), the left and right boards are attached to the text-blocks using different attachment systems, and quite significantly two of them signed by the same monk Gerasimos (figure 32a).

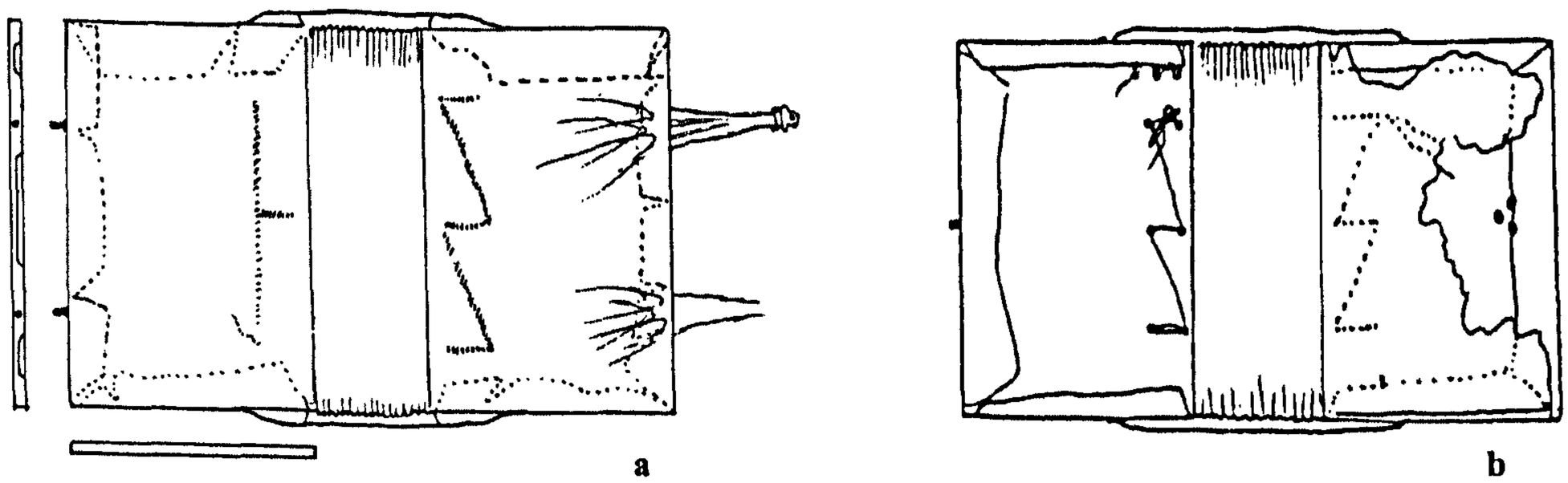

Figure 32. Line drawing showing the board attachment of S. 408 with the profile of the left board (a), and that of S. 1976 (b). Scale varies.

[52] The binding belongs to S. 117, a Greek Psalter written and bound in Venice in 1544. Unfortunately it cannot be said when this manuscript entered the library of the monastery.

Board spine edge recesses for the accommodation of the attachment thread in the spine edge of the boards were noticed only in three volumes following either the SER 1 or SER 3 pattern (**S. 46** , **S. 520** and **S. 61** respectively). Of the remaining volumes, six never had such recesses, while in the remaining nine their presence or not could not be established due to limited visual access. On the other hand, board recesses were noticed only in **S. 520**, 12 volumes have never had such recesses, while in five volumes their presence or not could not be established due to limited visual access. The attachment system I Uns/8, found in both boards of **S. 1159** and in part of both boards of **S.A. 423** is essentially a variation of the I Uns/1 system with the difference that the thread runs the length of the boards twice thus forming an X pattern instead of a Z pattern on the inner face (figure 34). In the case of this last mentioned Arabic volume the use of this attachment system in only one of the three segments between the attachment stations in each board could be possibly interpreted as an attempt by the binder to reinforce the beginning or the end of the attachment process in each board by passing the thread twice through the same attachment passages. The same attachment system has been recorded in five more Arabic volumes preserved in the library, either in both boards (S.A. 72, S.A. 86), in one board (S. A. 63) or in part of one board (S.A. 18, S.A. 38), like in **S.A. 423.**

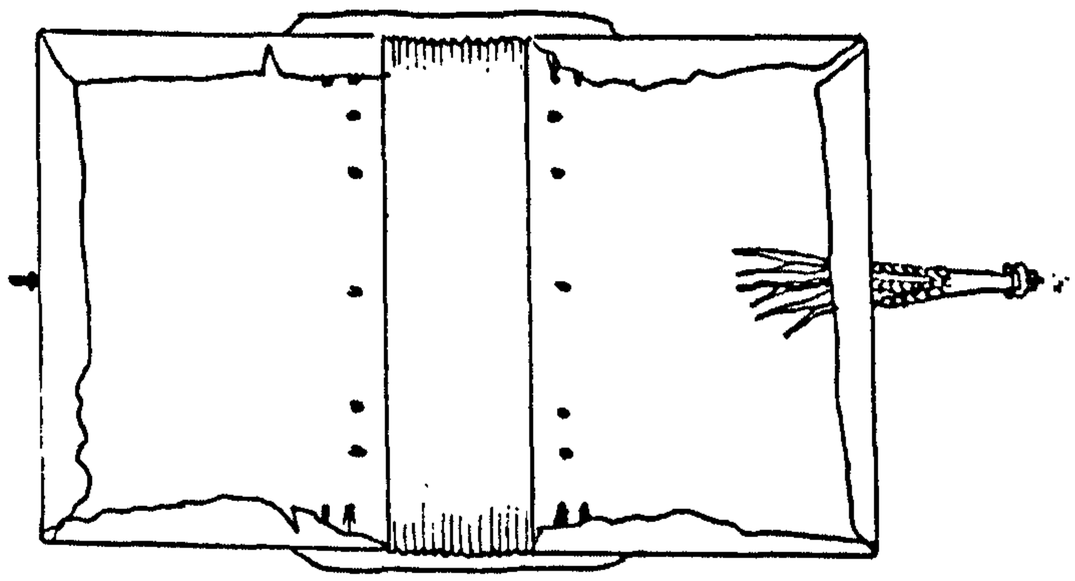

Figure 33. Line drawing showing the board attachment of S. 46.

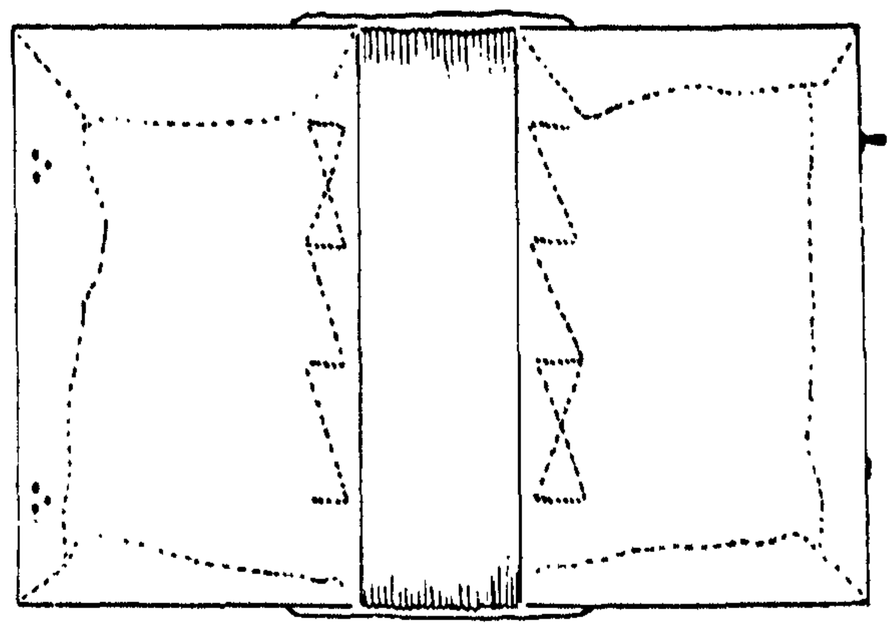

Figure 34. Line drawing showing the board attachment of S.A. 423.

The attachment system I Uns/13 found only in the left board of **S. 408** and **S. 27** (in both cases combined with I Uns/1 attachment system in the right boards) is a unique system not encountered anywhere else so far (figure 33a). All that could be said is that it is actually a variation of I Uns/7 and I Uns/9 systems, representing a combination of both. In these volumes the thread on the outer face of the board must be somehow recessed since there is no evidence of it. The attachment thread is apparently the same as the sewing thread in six volumes, while in the remaining 12 this could not be established.

- **Attachment of unsupported sewn text-blocks with II Uns/B1 attachment system.**

This attachment system between the boards and the text-blocks consists of connecting them firstly by means of the spine lining extensions pasted on the inner face of the boards and secondly through the pastedowns which are pasted above the turn-ins. It is thus clear that in this case the boards were attached to the text-block after the spine lining and not before it as in the case of attachment systems of the I Uns type. This is a typical attachment system used in Islamic bindings where the use of the thinner and lighter pasteboards made it feasible to have a simpler and lighter attachment system. It is perhaps significant that three out of the four volumes presenting this type of attachment system contain Arabic manuscripts while the fourth, a Greek volume, was bound by the Syriac monk, Simeon Basam.

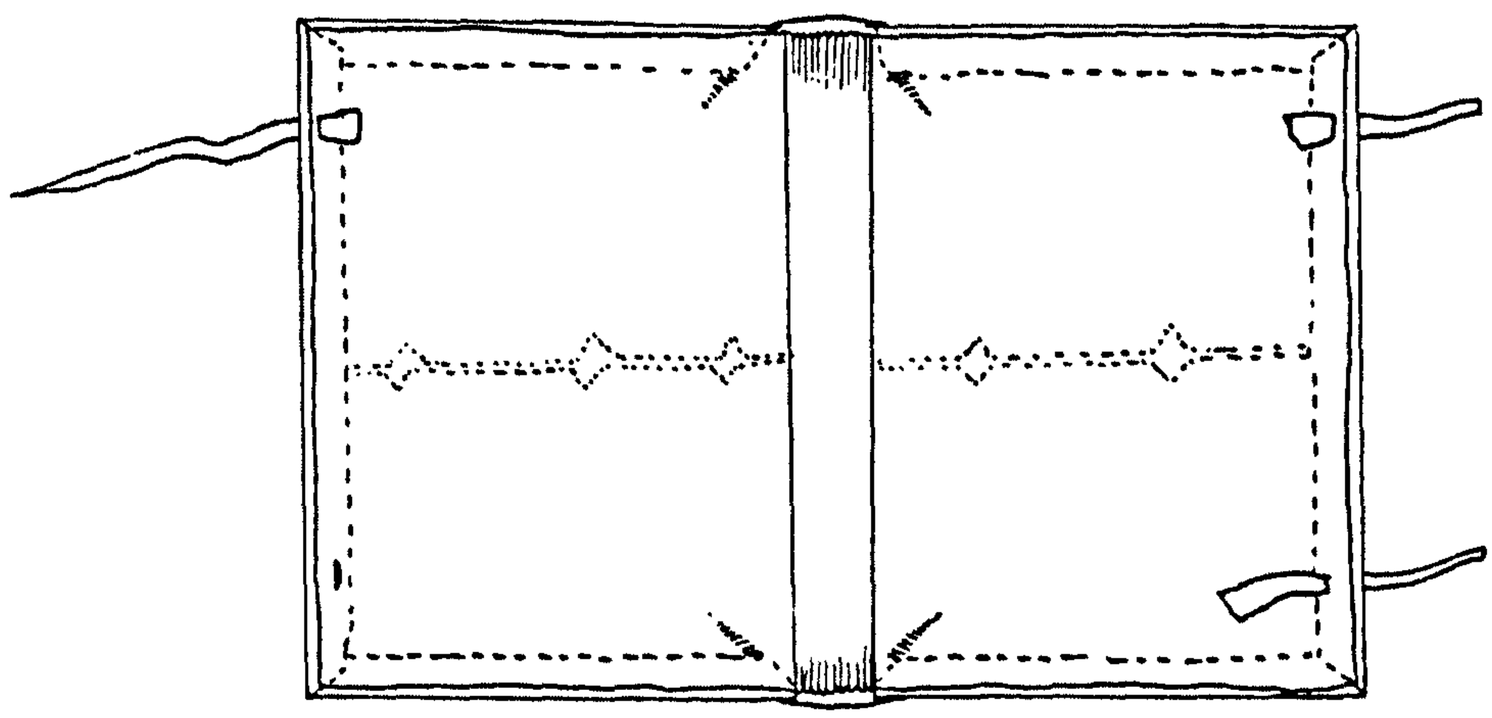

Figure 35. Line drawing showing the inner face of the boards of S. 1048. The broken lines indicate the outline of the paper manuscript wastes used for the make-up of the boards evident underneath the pastedowns. The hatched lines in the head and tail indicate the endband cores laced through the pasteboards.

- **Not Visible**

There are two volumes (**S. 448** and **S. 763**) where the attachment system could not be established at all, due to limited visual access.

2.2.2.6. *Spines and spine lining (table 53)*

Twenty three out of the 26 volumes have their spines rounded, two of them heavily rounded, two slightly rounded, and the remaining three volumes have their spines left flat. All volumes bound in wooden boards have a more or less accentuated spine rounding, while of the four pasteboard volumes three have flat spines and the fourth has a clearly rounded spine.

In one volume (**S. A. 61**) a spine lining could not be detected due to limited visual access to the structure of the volume. Of the remaining 25 volumes, 18 have their spines lined with plain hemp canvas mostly of medium thickness, though thin and thick have also been recorded. In one volume (**S. 46**) the spine is lined with a canvas-like off-white textile probably made of cotton, and in another (**S. 61**) with a fine red textile of uncertain weave. **S. A. 337**, is another exception, where the spine lining consists of leather, same as the one used for the cover of the binding, pasted all-along the spine, with its extensions pasted to the inner face of the boards. The boards of this volume are attached through a II Uns attachment system as described above, and this is the only volume bound with an Islamic binding with a fore-edge flap. In five volumes the material of the spine lining could not be established with certainty or could not be seen at all.

The spine linings extend onto the boards covering from 20% up to its whole width, with 30%-35% being the most common value (nine volumes). In nine volumes, this feature could not be detected. It could be tentatively supposed that this is due to the fact that the spine lining covers the whole width of the boards, thus not creating any level difference on the cover which is the usual means by which the width of the lining extensions can be detected, but there is no other indication to support such a conjecture. In the hope that a standard format of spine lining could have been used and therefore would be able to be identified, the width of the spine linings of all the bindings has been analyzed though providing no significant results to this end.

2.2.2.7. *Endbands (tables 54, 55, 56)*

All 26 volumes have endbands at both the head and tail edges. There are seven different types of endband used by binders in this atelier plus one uncertain case which cannot be identified due to bad preservation. Six of them are compound endbands, while the seventh is a simple Greek double core endband. They are examined below in order of frequency of use.

- **Embroidered, Front Bead and Crowning Core/ compound endband** (15 endb ands in eight volumes).

This is used both as headband and tailband on seven volumes while on one volume (**S. 500**) it is found only at the head edge. Four of these eight volumes are bound in pasteboards.

This endband consists of two cores, a primary sewing and a secondary sewing. The first core consists either of cord (in five Greek-style bindings) or leather (in all four volumes bound in pasteboards),of a thickness between medium (six volumes) and thick (one volume). The second core consists of thin (six volumes) or extra thin thread (two volumes). In six out of the eight volumes the endbands project onto the boards for a distance between 31 and 35 millimetres representing very different proportions of the width of the boards (from 13% to 30,4%). In the four volumes where the first core is made of leather, this core either does not extend at all onto the boards (one volume), or it extends for a few millimetres only (one volume), while in two of the four volumes this feature could not be detected. Those endband cores extending onto the boards are anchored there by means of five different ways. The cord cores are anchored by means of the EAS 1, EAS 2 or EAS 3 anchoring system, while the leather cores are anchored to the boards by means either of the EAS 6 or EAS 8 anchoring systems.

The primary sewing could be identified only in two cases (**S. 61** and **S. 500**) and it was found to be Wound Plain on First Core and Wound Back Bead on First Core respectively. In all other six volumes such features could not be established. The primary sewing is made either with thin linen (seven volumes) or medium thickness

hemp (one volume) threads. In all cases the thread is of natural colour, mostly of medium twist and either S (six volumes) or Z ply (two volumes). In one volume the thread was found to be the same as the one used for the sewing of the text-block. The tie-downs are placed in the centre-folds of the gatherings. In three volumes it was possible to establish that the primary sewing tie-downs are found in each gathering of the text-block, but for the remaining volumes this could not be detected. In six volumes, the tie-downs pass through the change-over stations while in the remaining two volumes the primary sewing thread passes through a different hole outside the change-over stations.

The endband secondary sewing is worked with thin to medium thickness silk threads (represented by four volumes each). Only in one volume (**S. 763**) what is apparently a cotton thread was also used, though in combination with silk. The twist of the threads varies between tight (two volumes), medium (three volumes) and loose (three volumes), and they are either S (three volumes), Z (four volumes) or I (one volume) ply. Six of the volumes have two-colour secondary sewing and two volumes have three-colour secondary sewing. There are four volumes where this is red and white, two volumes where it is red and green and two volumes where it is red, yellow and light green or cyan. In most of the endbands the secondary sewing was worked from left to right.

- **Two-core Chevron and Crowning Core/ compound endband** (7 endbands in four volumes).

This type of compound endband is found on four out of the 26 volumes examined here, all bound according to the Greek-style technique. It is used consistently at both the head and tail edges of three volumes and as a tailband only in the case of **S. 500.** It consists of two cores, a primary sewing and a secondary sewing. The first core consists of a medium (three volumes) or thick cord (one volume), while the second core is made either of thread (four volumes) or cord (two volumes). The thickness of the second core is either thin (three volumes) or medium (one volumes). The endband cores always project onto the boards for a distance between 11 and 40 millimetres (representing a percentage between 5, 8 % and 28.5% of the total width

of the boards) and are anchored there by means of three different systems, EAS 2, EAS 3, and also probably through EAS 1 as well.

The exact type of the endband primary sewing could be established in just two cases and it was found to be of the Wound Back Bead on First Core in **S. 408** and Wound Front Bead on First Core in **S. 500**. The thread used is either hemp (three volumes), linen (one volumes), or silk (one volume) mostly of medium thickness (four volumes), but thin thread is also used in two volumes. In all cases the threads are S ply with varying twist. The tie-downs are placed exclusively in the centre-folds of the gatherings. In two volumes it was possible to establish that the primary sewing was tied-down in each gathering of the text-block. In three volumes, the tie-downs pass through the change-over stations, while in just one volume they use another passing hole outside the change-over stations. In one volume (**S. 408**) the primary sewing thread is apparently identical with the one used in the sewing of the text-block.

The endband secondary sewing is made with thin to medium thickness silk threads. The twist is either loose (three volumes) or tight (one volume), and they are either Z ply (three volumes), S ply (two volumes), or I ply (one volume). The number of colours used varies between two (one volume), and four (three volumes).

The similarity both in material, colour and pattern of the four-colour endbands found in three volumes (tailband of **S. 500**, and both endbands of **S. 573**,and **S. 585**) is so striking that they should probably be attributed to the same binder.

- **Three-core Chevron & Crowning Core/ compound endband** (14 endbands in seven volumes)

This type of compound endband is consistently used at both the head and tail edges of seven out of the 26 volumes examined here, all bound according to the Greek-style technique. It consists of three cores, a primary sewing and a secondary sewing. The first and second cores are made of medium thickness cord (six volumes) or various lengths of the same thread as the one used for the primary endband sewing (**S. 46**), while the third core is made of thin thread. In all seven volumes the endbands extend onto the boards for a length varying between 25 and 40 millimetres

(representing a percentage between 13,5 % and 29, 6% of the total width of the boards). It is interesting to stress that in three of the volumes the extension of the endbands onto the boards is identical (between 39 and 40 mm) even though the formats differ (two are 4tos and the third is an 8vo), while the same happens in other two volumes, both of the same format, where the extensions of the cores onto the boards are 25 millimetres representing the same percentage of the boards width covered. The endbands are anchored onto the boards by means of the EAS 3 (three volumes) or the EAS 1 (two volumes) anchoring systems (plus one uncertain case). The exact type of the primary sewing could be established with certainty in just one volume (**S.A. 423**) where it was found to be of the Wound Plain on First Core type. In four volumes the primary sewing thread is made with medium thickness linen thread of varying twist and S ply (in two cases probably waxed), while in one volume an off-white cotton thread of medium thickness, tight twist and multiple S ply was used and in another volume a thin silk thread of tight twist and 2 2S ply. In five volumes the tie-downs were found to be anchored in the centre-fold of each gathering always using the change over stations.

In five volumes the endband secondary sewing is made with silk threads of medium thickness, varying twist and 2Z ply, coloured blue, green , red and yellow, while in two volumes it is made with thin silk threads, of medium to tight twist, and 2S ply, coloured green, white, and pink . The number of colours used is four (four volumes), three (two volumes) or just one (one volume). The similarity in material, colour and pattern in five of these endbands is so evident that they could tentatively be attributed to the same binder, possibly Simeon *hierodeacon* (Basam?) whose name we find in the end of **S. 1171** as the person who bound it in 1632. All these endbands are sewn from left to right and the pattern is quite characteristic consisting of alternating colours where wide bands of a single colour are divided by a narrow one (consisting in no more than two windings of the thread) which is usually yellow. The same striking similarity between them but at the same time quite different from the five previous ones, present the endbands of **S. 46** and **S. 615**, made with different threads and sewn from right to left, both features contributing to quite a distinct appearance. The endbands of these two volumes are so close to those we will see in section

2.2.3.7. in the bindings of the Elusive binder that they should probably be attributed to him (figure 61). The exact embroidery procedure of these endbands is described in « Les Tranchefiles Brodées » (1989, p.60) and designated *Tranchefile Grecque*.

- **Embroidered, Front Bead / compound endband** (six endbands in three volumes)

This type of compound endband is found in three volumes, all bound according to the Greek-style technique. It consists of one core, a primary sewing and a secondary sewing and it actually represents a simpler version of the Embroidered, Front Bead and Crowning Core endband discussed earlier. In all three volumes the cores consist of lengths of thick cord which extend onto the boards for a distance between 32 and 38 mm (representing a percentage between 11,8% and 20,5% of the total board width) and are anchored to them either by means of EAS 2 or EAS 3 anchoring system (one volume each plus one uncertain case).

In two of the three volumes the endband primary sewing was found to be of the Wound Plain on First Core, in the third it was not possible to establish. The thread used is either linen (two volumes), or cotton (one volume), and in one volume it is same as the one used for the sewing of the text-block. Their twist varies and they are either Z (two volumes) or S (one volume) ply. The colour of the threads is always natural and the thickness varies between thin, medium or thick, each represented by one volume. It was not possible to see whether the tie-downs were anchored in every gathering of the text-block but they apparently pass through the change-over stations. The endband secondary sewing is made with thin or medium thickness silk threads of tight or loose twist and S or Z ply. In all three volumes the secondary sewing is two-colour, in two of them green and red and in the third cyan and white.

In all endbands the secondary sewing is worked form left to right.

- **Greek Double Core /compound endband** (two endbands in one volume).

This endband found in **S. 361,** is an unusual compound endband consisting of a primary sewing, the type of which could not be identified and a secondary sewing which appears to be of the Greek double core type. Its peculiarity consists in the fact

that the Greek endband is used quite uniquely as a secondary, and not primary sewing, thus it is not anchored to the boards or through the text-block.

The cores are not visible but they still follow the general pattern of a thick first core and a thinner second one. The fact that blue silk threads are visible through the secondary sewing might indicate that the first core consists of multiple lengths of blue silk thread. The endbands extend onto the boards for 27 millimetres (representing 11.6 % of their width). As noted above, the primary sewing is of an unspecified type made with medium thickness hemp thread of unclear ply and twist anchored in the centre-fold of an unidentified number of gatherings using the change-over stations.

The endband secondary sewing is made with medium thickness silk threads of loose twist and Z ply. The three colours used , red, yellow and blue , alternate in bands of varying width .

- **Greek Double Core / simple endband** (two endbands in one volume)

This type of simple endband is found in **S. 520** bound according to the Greek-style technique. It consists of two cores and a primary sewing. The cores are both made of thick cord, while the sewing is made according to the typical process for this type of endband with the same thread as the one used for the sewing of the text-block, a hemp thread of medium thickness and medium twist, and 2S ply. It is not clear how many tie-downs there are but as far as the ones seen are concerned they are placed in the centre-fold of the gatherings and anchored to them through a separate hole outside the change-over stations. The cores extend onto the boards for 45 millimetres representing 19.5 % of the total board width and are anchored on them by means of the EAS 2 anchoring system. The sewing is worked form left to right.

- **Islamic / compound endband** (two endbands on one volume)

This endband is found only on **S. A. 337** which is bound according to the Islamic with fore-edge flap binding technique. It consists, as is usual for such bindings and endbands, of a thin leather core lying flat on the head and tail edges of the text-block, above which the primary sewing is worked, consisting of warps and a

secondary weaving. The warps are made with natural colour linen thread of medium thickness, medium twist, S ply. The tie-downs are placed in the centre-fold of a unspecified number of gatherings, and are anchored through the change-over stations. The secondary weaving is worked with a thin silk thread of tight twist S ply, and red and white colours, the same as the one used in other volumes from this atelier **(S. A. 61, S. 1048, S. 61)**

- **Uncertain** (two endbands in one volume)

This is the case of the endbands of **S. 1976** where only vestiges remain on the bound volume. Considering the surviving evidence it seems that they are of the Embroidered, Front Bead and Crowning Core type. They consist of two cores, the first one being a thin leather core and the second an extra thin thread. The primary sewing is made with a thin off-white linen thread of medium twist S ply, used double. They are anchored in the centre-fold of each gathering through the change-over stations. The endbands extend onto the boards for 30 millimetres (representing 30.5% of the total width of the boards) and are anchored on them by means of the EAS 3 anchoring system. The secondary sewing, as far as it can be established in its present state of preservation, is made with thin red and white (?) silk threads.

Before finishing the paragraph on endbands it would be useful to summarize the types of primary sewing found as part of the compound endbands seen in the bindings of this atelier. It was possible to establish the type of the primary endbands in only nine volumes. From the data above emerges that in six volumes a primary sewing of the Wound Plain on First Core type has been used, in three volumes as part of an Embroidered Front Bead endband, in two volumes as part of an Embroidered Front Bead and Crowning Core and in one of them as part of a Three-core, Chevron and Crowning Core endband. In two volumes a primary sewing of the Wound Back Bead on First Core type has been used, in one volume as part of a Two-core Chevron and Crowning Core, and an Embroidered Front Bead and Crowning Core. Finally in one volume a Wound Front Bead on First Core type of primary sewing has been found as part of a Two-core, Chevron and Crowning Core. It is thus possible to have the same type of primary sewing

combined with different types of secondary sewing. A nice example is **S. 500** which not only has different types of secondary sewing at head and tail (Embroidered Front Bead and Crowning Core, two-colour, at the head, and Two-core Chevron and Crowning Core, four-colour, at the tail) but also different types of primary sewing, (Wound Back Bead on First Core at the headband, and Wound Front Bead on First Core at the tailband).

2.2.2.8. *Markers (table 57)*

Only eight out of the 26 volumes considered here never had any marker while in all other 18 volumes compound markers are to be found. Only ten of the 18 volumes still preserve both primary and secondary markers, in two of the volumes (**S. 325, S. 1171**) secondary markers are probably a later addition. There appears to be no constant relation between the use of different types of primary and secondary markers and for this reason they are treated separately. What follows is a consideration of primary and secondary markers in the order of frequency of use:

Primary markers.

- Simple kinked open loop. (**S. 408, S. 605, S. 1048, S. 1159, S. 1171, S.A. 61**). They are either one-colour (two volume) or two-colour (four volumes) using always threads which are the same as the ones used for the endband secondary sewing twisted together as to form the characteristic kink of the loop. They are laced through the base of the headbands and fastened at the back though the exact nature of fastening could not be established in any of them [system LtH(f)].
- Simple open loop (**S. 61, S. 573, S. 585, S.A. 325**). They are one-colour (two volumes) or two-colour (two volumes), and are made either with the same threads as the ones used for the endband secondary sewing (three volumes) or with different ones (one volume). They are fastened on the headband according to system LtH(f).
- Compound closed loop F and E. (**S. 46, S. 175, S. 361, S. 615**). They all consist of a cord core covered with a single-colour silk thread that can be

either just wrapped around the core (three volumes) or feather stitched around it (one volume). Two of them are made with pink silk and the other two with green silk, which in one case is the same as the one used for the endband secondary sewing. They are fastened on the headband according to system LtH(f).

- Simple closed loop. **(S. 747)**. It is made of 1 white and 1 red silk threads, same as the one used for the endband secondary sewing, loosely twisted together, fastened on the headband according to system LtH(f).
- Simple kinked closed loop. **(S. 763)**. It is made of white and red silk threads, same as the one used for the endband secondary sewing, twisted together as to produce the typical kinked loop. It is fastened on the headband according to system LtH(f).
- Unidentified . The primary markers of two volumes cannot be identified on account of their bad state of preservation. One is certainly of the closed loop type **(S. A. 423)** while the other is of the open loop type **(S. A. 565)**.

Secondary markers.

As already said secondary markers survive only in ten of the 18 volumes. In seven volumes they consist of one single string and in three volumes of two strings.

- One string secondary markers: they can be made of one-colour **(S. 46, S. 61, S.1171, S. A. 325)**, two-colour **(S. 361, S. 408, S. 763, S. 1048)**, or three-colour **(S. 615)** silk threads twisted together (in seven volumes), or a plaited string in the case of **S. 1048** and **S. 1171**. In five volumes the same threads as the ones used for the endband secondary embroidery have been used. They are fastened to the primary markers by means of five different systems, KiM, KiE, L, S, and Pla.
- Two strings secondary markers **(S. 605)**: they consist of one red and one orange silk thread strings fastened to the primary marker through the system KiM.

2.2.2.9. *Cover and Decoration (tables 58, 59, 60).*

All 26 volumes are bound in full leather of medium thickness. It seems that the most commonly used leather is goat but sheep seems also to have been used. Colours are black (four volumes), brown (four volumes), yellow-brown (15 volumes), light brown, red-brown and red represented by one volume each.

The turn-ins follow three main patterns, T-ins 3 is the most common (19 volumes of which two are in combination with pattern T-ins 1), followed by T-ins 2 (three volumes), T-ins 5 (three volumes), and T-ins 6 (one volume). The width of the turn-ins mostly varies (eight volumes), while of the remaining volumes medium width is the most common (nine volumes), followed by wide (six volumes) and narrow (three volumes). Corner mitre presents a great variation with 11 different mitre patterns recorded. The most common is Co2 found in ten volumes, followed by Co 1 in six volumes. Differences in the pattern of the corner mitre, even on boards of the same volume seem to be the rule rather than the exception. In three volumes (**S. 61** ,**S. 573**, and **S.A. 61**) there are edge tongue extensions of the leather at both corners of the fore edge of the boards which extend on the head and tail edges of the boards and are pasted above the cover. The yellow-brown leather that is the most common among the bindings of this atelier is apparently the same as the one used in other Sinaitic bindings of the seventeenth century as well as in two Cretan bindings of circa 1620 which we will consider below.

All 26 volumes have blind tooled decoration. Despite the great number of bindings considered there are basically only two different decorative patterns used. In 16 volumes the decoration follows the pattern Dec 1 (mostly with a single decorative frame), eight volumes follow the pattern Dec 2 (mostly with a single decorative frame), while the patterns, Dec3a, Dec11a, and another one classified as 'other' are all found in one volume each (figures 36-38). The spines are mostly undecorated (18 volumes plus two volumes where this could not be established). Of the remaining six volumes with decorated spines, five follow the pattern SD2/B, and one the pattern SD5/B.The board edges are decorated in just two volumes (**S. 46** and **S. 500**), in the former a floral roll (RoF10) tooled in blind runs all around the three edges (pattern BED 6), in the latter a

rectangular tool (MuA/b4) is repeatedly blind tooled all around the edges (pattern BED 5).

All but seven volumes are decorated with multi-use single tools that are used either as free-standing tools or repeatedly as to form continuous motifs. The remaining seven volumes have their covers decorated with a combination of rolls and multi-use single tools. Most of the volumes are decorated with a limited number of tools, two (five volumes), three (15 volumes), four (four volumes), and five (two volumes). There are three relief single tools and three relief rolls, five intaglio tools, three creasers and a fillet (figure 40). The most commonly used tool, found in all but one volumes, is clearly MuF/c1, the typical fleur-de-lis motif after which this group is conventionally named. It is followed closely by MuV4, found in 23 volumes, and the MuG/b3 tool with the characteristic knot motif. The small MuV3 tool has been seen before in the Klimis bindings, while MuG/b3 and a similar to the MuV4 in the Antioch bindings. Of particular interest is the tool CeR4 (S. 500) representing the 'Virgin and child', or *'Vrefokratousa'* as it is known in Greek not encountered in any other binding so far. This fact raises questions as to its original function. It may be that this was originally used as a stamp of a type common in the Byzantine but mostly in the post-Byzantine era in much the same way as stamps are used today to authenticate and legalize documents, though in such cases the stamps always bear some inscription around the perimeter[53]. It is also interesting that the impression of this tool is painted in shell gold. Five of the tools seen here (MuF/c1, MuV4, MuA/b4, MuG/b3, RoF43) are also used in the decoration of two Cretan bindings of circa 1620 preserved in the library[54] (figure 39). These two bindings offer some evidence as to the provenance of at least some of the tools and the decorative patterns, which are particularly close to those used in the Giglio bindings.

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[53] For such stamps of the post-Byzantine era see "Θησαυροί του Αγίου Όρους", 1997, p. 579. Catalogue number 17.6 is particularly close to the tool examined here.

[54] These are the bindings of S. 72 and S. 74, both manuscripts are Psalters. The former bears the following note: f. 197r. *"The present (book) was finished in the year 1620 in the month of February in the island of Crete by the hand of humble Ieremias Sinaitis and those reading it pray for me in the name of Lord"* Given the fact that both bindings are almost identical and that both are the original bindings of the manuscripts they could be dated around the year 1620 and attributed to some binding atelier in the Island of Crete.

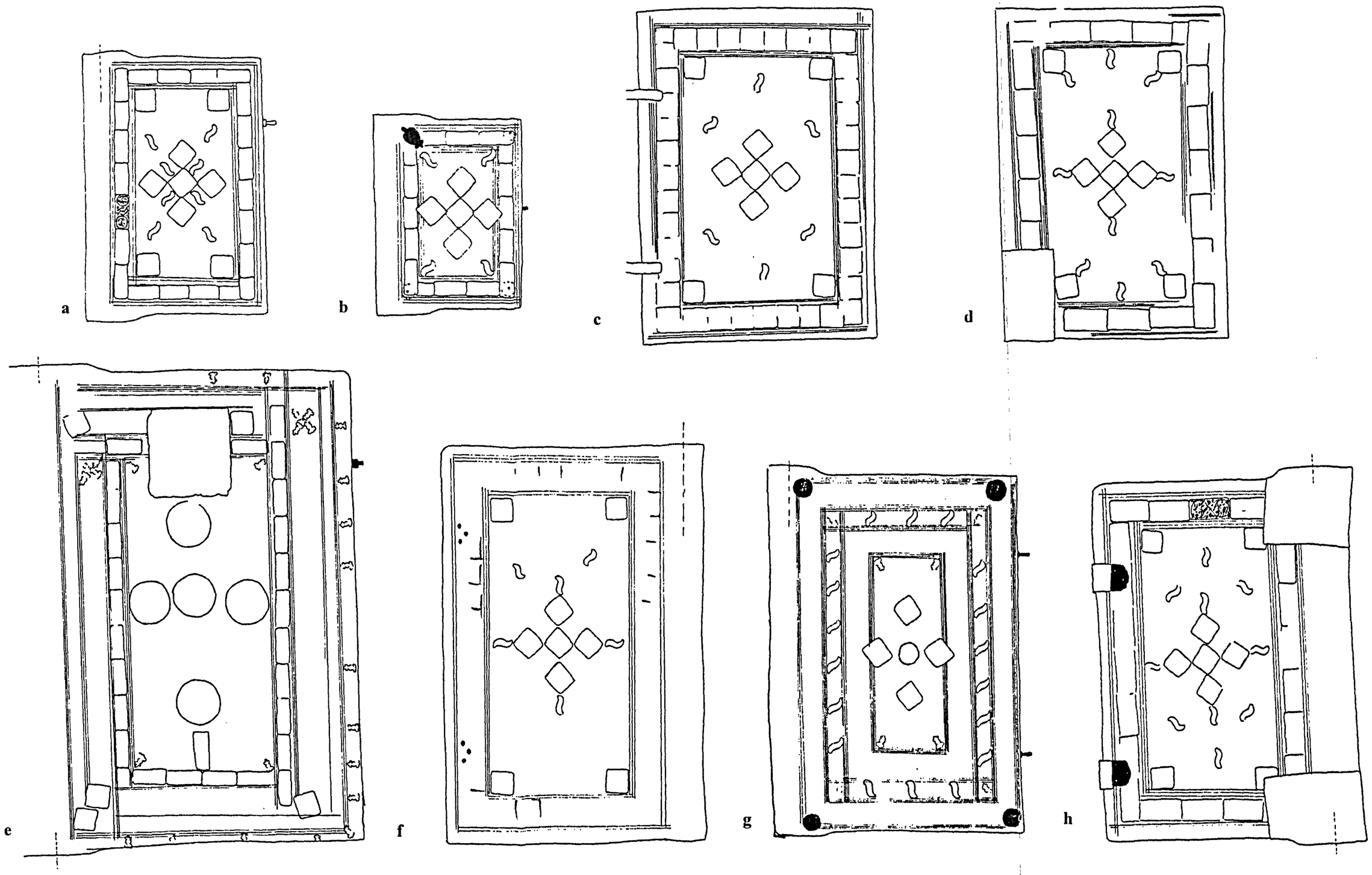


Figure 36. Line drawings of the decoration of the right board of S. 1159 (a), S. 61 (b), the right board of S. 1048 (c), the left board of S. 763 (d), S. 500 (e), the right board of S. 573 (f), the left board of S. 615 (g), the right board of S. 1171 (h).

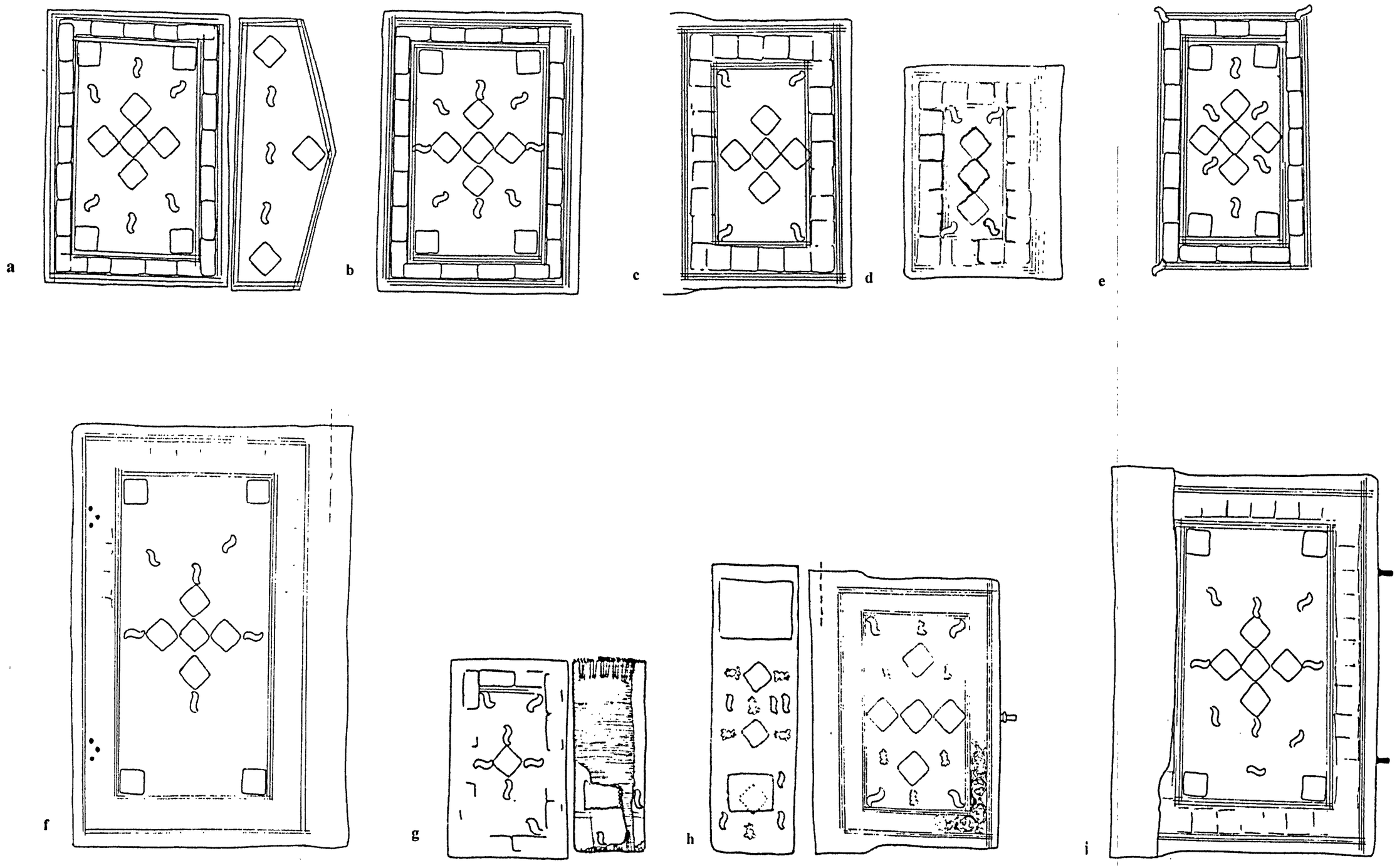


Figure 37. Line drawings of the decoration of the left board of S. A. 337 (a), the right board of S. A. 270 (b), the left board of S. A. 61 (c), the right board of S.A. 325 (d), the right board of S. A. 565 (e), the right board of S.A. 423 (f), the right board and the spine of S. 1976 (g), the left board and the spine of S. 46 (h), and the left board of S. 573 (i).

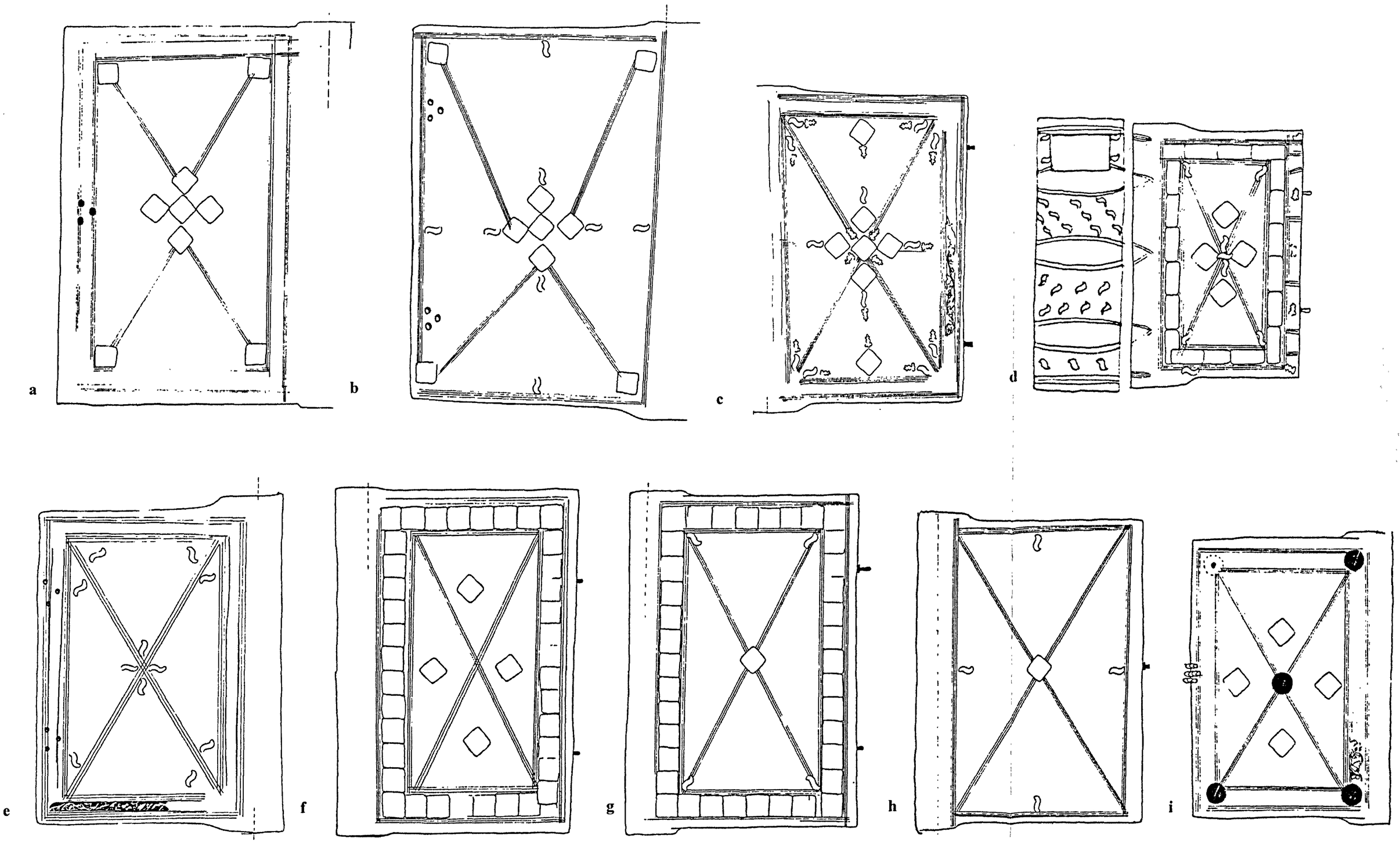


Figure 38. Line drawings of the decoration of the right board of S. 448 (a), S. 361 (b), the left board of S. 27 (c), the left board of S. 408 (d), the right board of S. 585 (e), the left board of S. 747 (f), S. 609 (g), S. 804 (h), and the right board of S. 175 (i).

Figure 39. The left board S. 72 (left) and S. 74 (right).

MuA/b4

MuF/d4

RoF43

MuG/b3

RoF10

MuV3

MuF/c1

RoF37

C5

C6

CeR4

MuV4

Figure 40. The 13 tools used for the decoration of the Giglio bindings.

2.2.2.10. *Text-block edges trimming and decoration (table 62)*

All the text-blocks must have been trimmed after sewing since their edges present no serious unevenness. Trimming marks are evident only in one volume, **S. 361**, in all three external edges of the text-block. These marks are due to uneven trimming and from their shape it can be understood that the knife cutting edge must have been somehow rounded and probably rather small since the marks, mostly in the head indicate that trimming was not executed in one go cutting the whole width but rather in more small-scale attempts. The text-block edges are decorated in five volumes. In three of them they have been completely painted with colour, the same hue of light green in **S. 573** and **S. 585** and red in **S. 27**. In the remaining two volumes there are drawn and painted motifs: in **S. 500** a floral motif is drawn and partly painted with olive green and red only in the head edge, incorporating a rounded medallion where the title «Νοέμβριος» (November) is written referring to the content of the book which is a *meneon* of this month. In **S. 1159** a partly visible interlaced band is running along the three external edges of the text-block, only partly painted with the same olive green as in **S. 500**. In **S. 27** a small area of the text-block underneath the endbands left unpainted indicates that such decoration was made after the sewing of the endbands and the same is true for **S. 585** where moreover green colour found on the leather cover indicates that such colour was placed on the text-block after the binding of the volume was completed.

2.2.2.11. *Metal fittings (table 61).*

On just seven out of the 26 volumes there are, or there have been once, metal fittings on the boards, in six of them only bosses while on the seventh (a Four-Gospels manuscript) there is also an engraved metal cross nailed to the middle of the left board[55]. The bosses are solid and indented, while bosses of the *amigdalia* type are found on **S. 61** and **S. 175.** On three of the volumes there are four bosses on each board, while on the remaining four

[55] See section 2.1.2.10. about the custom of adorning Four-Gospels manuscripts with, usually cross-shaped, metal fittings.

there are five on each board (the metal cross included). The shapes vary even between bosses of the same board.

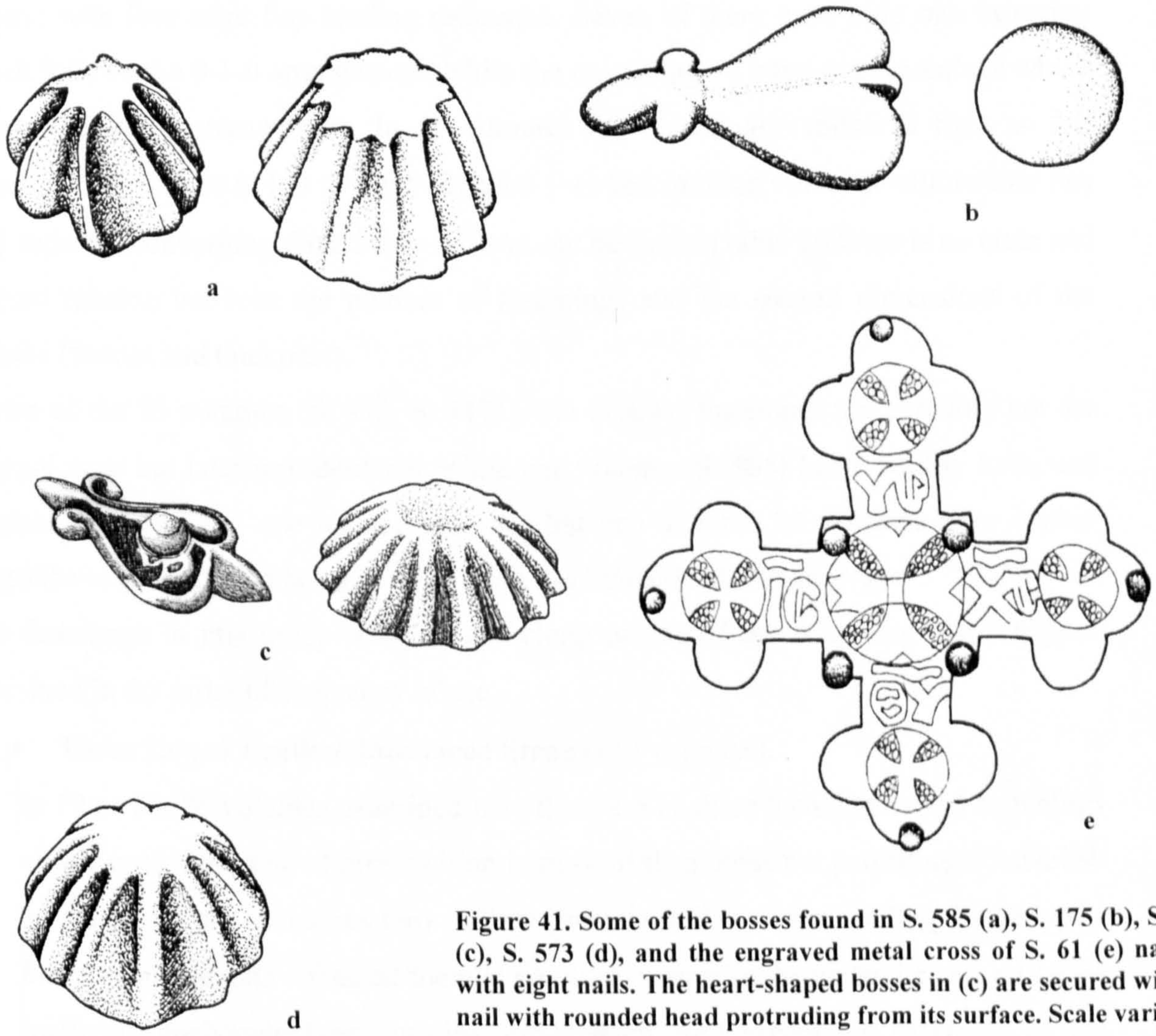


Figure 41. Some of the bosses found in S. 585 (a), S. 175 (b), S. 61 (c), S. 573 (d), and the engraved metal cross of S. 61 (e) nailed with eight nails. The heart-shaped bosses in (c) are secured with a nail with rounded head protruding from its surface. Scale varies.

Though no analytical examination was carried out in order to identify the metal used it seems reasonable to suppose that they are made of different alloys of lead and copper. All of them are nailed to the boards, though their ends can be seen flattened in two volumes, in one of them (**S. 61**) above the turn-ins and in the other (**S. 615**) above the pastedowns. It is not clear at all if the metal cross in **S. 175** was original to the binding or added later in order to embellish it.

2.2.2.12. *Fastenings (table 63)*

All the volumes examined here have fastenings except the one bound according to the Islamic with fore edge flap binding technique. Seven of them have only one fastening which follows the 0-1-0 arrangement, while the remaining 18 have two fastenings which follow the 0-2-0 arrangement. In 14 volumes the fastenings follow a right to left direction (←), in one a left to right direction (→) and in three volumes with leather ties they follow a converging direction (→←).As can be seen in table 16 there is no clear and evident relation between the number of fastenings and the overall dimensions of the volume (format and thickness).

In two of the 25 volumes (**S. 573, S. 1171**), the existing fastenings are certainly not the original ones but later replacements, while one volume (**S. 585**) has probably both, one original fastening and one replacement. All but one of these 25 volumes have leather straps the only exception being **S. 408** which has braided silk thread straps.

The fastenings in this group of bindings belong to one of the following distinct types examined in the order of frequency of use.

- **Three Edged Leather Interlaced Straps** (19 volumes).

In 19 of the 26 volumes examined here there are or there have been once fastenings of this type. The state of preservation in most of them does not permit us to establish which of the two variations they follow (the standard type and the long hinge type). From available data collected there is no other distinction between the two variation (material, anchorage type, turn-ins arrangement etc.) except the extension of the leather hinge between the stirrup ring and the interlaced part of the strap. For this reason they are considered together as variations of the same fastening type. It can be suggested that this variation represents a simplification of the standard type.

Of those volumes which still preserve their straps only one was found to have interlaced straps of the standard type, six were found to have interlaced straps of the long hinge type, nine certainly had interlaced strap fastenings but it has not been possible to establish the exact variation, while in six volumes there is no trace of the leather used for the fastenings which are thus included here but with a question mark (in table 63) indicating that they might belong to a different variation such as the one

that will be described further on, where instead of leather, braided silk thread straps have been used. In two of these later seven volumes (**S. 573**, and **S. 1171**), the presumed original interlaced straps were replaced at a later date by fastenings of a different kind (see below).

In six volumes there is one single fastening per volume and in 13 volumes there are two fastenings per volume. Eleven are made with the same leather as the one used for the cover and three with a different one (plus five volumes where this could not be established since there is nothing left of them). The arrangement of the anchorage holes always follows the AH 4 pattern. The shape of the ends of the straps varies greatly, with eight variations recorded. Of these by far the most common is the UuP (six volumes) where the ends evidently are left untrimmed underneath the pastedowns. The anchorage of the straps follows three different types, TBT (nine volumes), TBTP (six volumes), and TB (four volumes), while the turn-ins and fastenings arrangement is mostly of the F&T1type (eight volumes), followed by F&T6 (five volumes), F&T2 (four volumes), and F&T8 (one volume).

In 12 of the 21 volumes the stirrup rings are missing while pins are preserved in all of them. In 15 volumes the pins are compound and in the remaining four simple. In 13 volumes they are cast and filed, in three only cast and in other three only filed (all of them simple pins). The metal used could be only tentatively be described as copper alloy.

- **Leather ties** (three volumes).

Two of the three volumes which have leather ties fastenings contain Arabic manuscripts and the third contains a Greek one. In all three volumes there are two pairs of ties per volume and in one volume they are made with the same leather used for its cover. The arrangement of the anchorage holes follows in all cases the AH 5 pattern while the shapes of the ends of the straps follow either the TfaP (two volumes) or the TbPpPC pattern (one volume). The anchorage of the fastenings is in all cases of the TBTP type while the arrangement of turn-ins and fastenings is either of the F&T1 (two volumes) or F&T2 (one volume) type. There are no metal components in these fastenings.

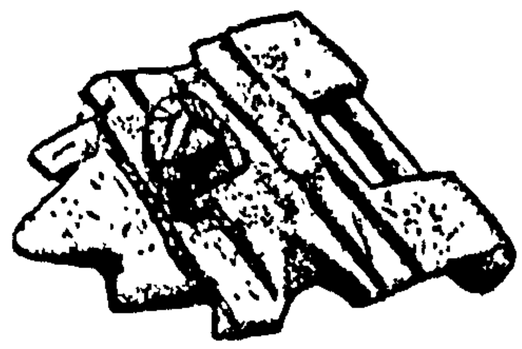
- **Three Edged Silk Braided Straps (S. 408).**

This is basically the same type of fastenings as the one seen in the two bindings from the Cretan and the Klimis atelier (**S. 1343** and **S.A. 76** respectively). The silk threads used for these fastenings are the same as the ones used for the endband secondary sewing of **S. 605, S. 804** and **S. 448**. The anchorage holes follow the standard AH4 arrangement, the ends of the strap follow the UfaP pattern, the anchorage is of the TBTP type and the turn-ins and fastenings follow the arrangement F&T1. Both pins and stirrup rings are preserved and they are made of an unidentified copper alloy.

- **Two Edged Leather Interlaced Straps (S. 573).**

These fastenings are clearly due to a later replacement of the original three edged fastenings as the three anchorage holes (following the pattern AH4) prove. They are made of a different leather from that of the cover, their ends follow the pattern UbPpPC, while the anchorage type and the arrangement of the turn-ins and fastenings is the same as that of the original fastenings (TBTP and F&T1 respectively).

- **Hook and Catch-Plate fastening (S. 1171).**These fastenings are clearly a later replacement of the original three edged interlaced strap fastenings, as the anchorage holes prove. What remains of these, later, fastenings is just the catch-plate and vestiges of the leather straps. They are made of a different leather from the one used for the cover of the volume. They are nailed on the boards with a single nail (anchorage of the NuC1 type), the ends of the straps follow the pattern bCB.



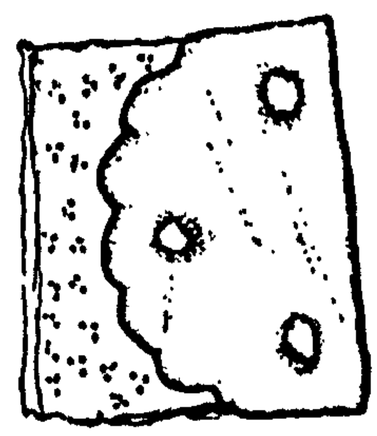


Figure 42. The catch plate and the strap anchoring plate

2.2.2.13. A NOTE ON THE BINDINGS FROM THE CAIRO METOCHION

There are four bindings which are contemporary to those of the Giglio atelier and were in all probability made in the metochion of the monastery in Cairo. They present some very interesting features, therefore need to be briefly mentioned here though their full technical and other details are given separately from those of the Giglio bindings, in the tables 64-79. These are the bindings of **S. 356, S. 574, S. 2002,** and **S.A. 351,** the first two conforming to the Greek-style technique and the two latter to the Projecting Pasteboards with Supports technique. The Arabic volume was written in 1635 or 1641 by the same Simeon Basam from Emesa that we have seen before in the Giglio atelier[56]. Of particular interest is **S. 356** on the left endleaf of which we find the following note:

Right endleaf: "In 1633 AD in the month of May, the present Hexaemeros was rebound by Sophronios hierodeacon from Cyprus in the metochion of Egypt (Cairo)*"*[57]

It is due to this note and other similarities that these bindings have in common that all four can be attributed to the *metochion* in Cairo. Furthermore two of the bindings, those of **S.A. 351** and **S. 2002** can be attributed to the same binder, Simeon Basam on the basis of a series of common features[58]. Apart from all the other technical and decorative features of these bindings what is of particular interest is that both bindings attributed to Simeon Basam are sewn on supports, **S. 2002** on three single twisted parchment strips and **S.A. 351** on three flat leather thongs. It is also of interest that in both these volumes the sewing stations are arranged along the spine of the text-blocks according to the pattern B6 (figure 43) which was seen before in three bindings from the Antioch atelier, and which is also very close to the pattern C4 seen in two of the Klimis bindings. It is

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[56] Notes are written in Arabic in the end of the text-block. One of them bears the signature of archbishop Ioasaph. One of the notes gives the date 1635 and the other one the date 1641.

[57] *«Τω ζρμα΄ (7141AM = 1633 AD) κατά μήνα μάιο ο παρόν εξαήμερος εμετασταχώθι υπο σωφονίου ιερομοδ(ιακόνου) του κυπρέου εν μετοχίω της αιγύπτου».*

[58] The common features include the use of leather thongs for the first core of the endbands (as in four of the Simeon bindings seen in the Giglio atelier), the use of Embroidered Front Bead and Crowning Core endbands (as in four out of the ten bindings by Simeon seen in the Giglio atelier), the use of the EAS 8 endband anchoring system (S.A. 351) or none at all (S. 2002), two technical features which have been seen exclusively on three bindings by Simeon in the Giglio atelier (S. A. 325, S. 1048 and S. A. 337). The use of pasteboards, which in the previous chapter we saw used exclusively by Simeon on four of the volumes bound by him (S. 1048, S.A. 270, S,A, 325, S.A. 337), and the use of a II Uns/2A attachment system between the text-block and the boards in S. 2002 , a feature that was seen only in three Arabic volumes bound by Simeon in the 'Giglio' atelier.

worth stressing that this arrangement is particularly adequate for supported sewing since the supports (which are the means by which the text-block is attached to the boards) are more or less evenly disposed along the spine, while the change-over stations are moved toward the head and tail edges, therefore providing better stability.

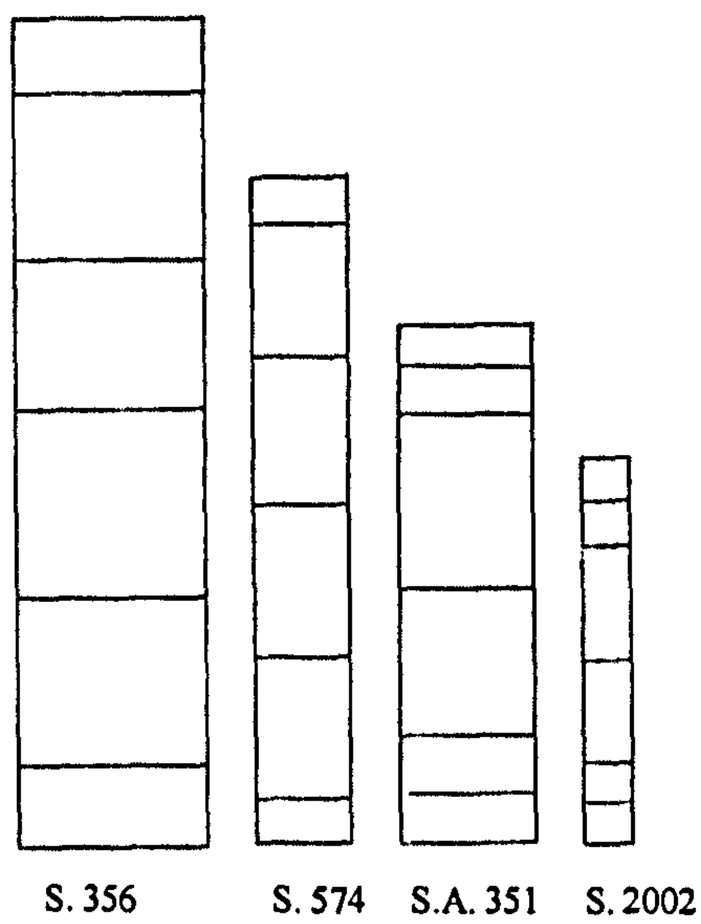


Figure 43. Line drawing showing the spines of the four text-blocks and the arrangement of the sewing stations along them. All text-blocks are sewn on five stations.

Since, as said before (see section 2.1.3.1.4.), this arrangement is found in latter Greek-style structures and is very similar to the sewing stations arrangement patterns seen in European supported bindings from the eighth century onward (see for example fig. 7. 13 and fig. 8.3. in Szirmai, 1999, p. 145), it could be suggested that this is an influence from Europe. The fact that it is also found in two of the Klimis binding, which present a rather marked western influence further supports this idea. In **S.A. 351** the attachment between the text-block and the pasteboards is made by means of the system Sup 4, in which the supports are laced through the boards from the outer face and pasted to their inner face (figure 44).

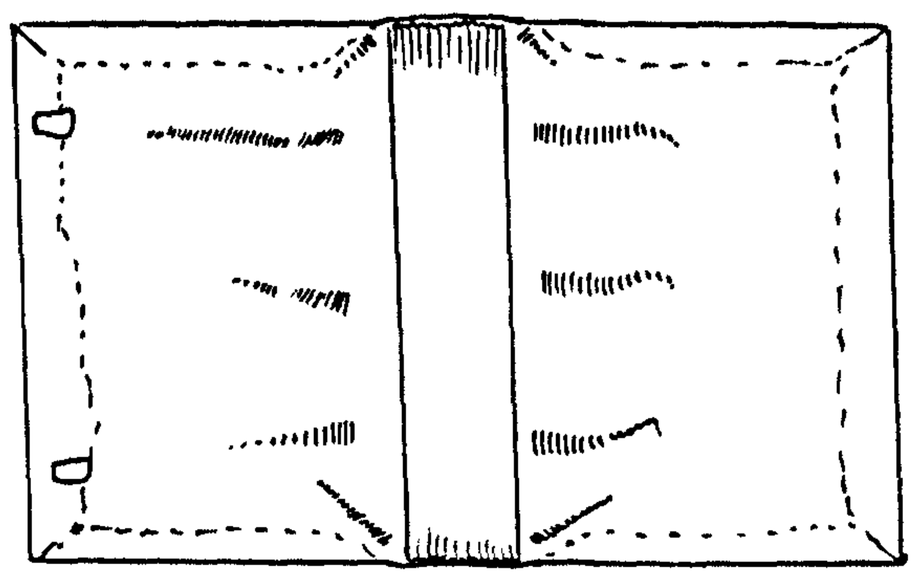


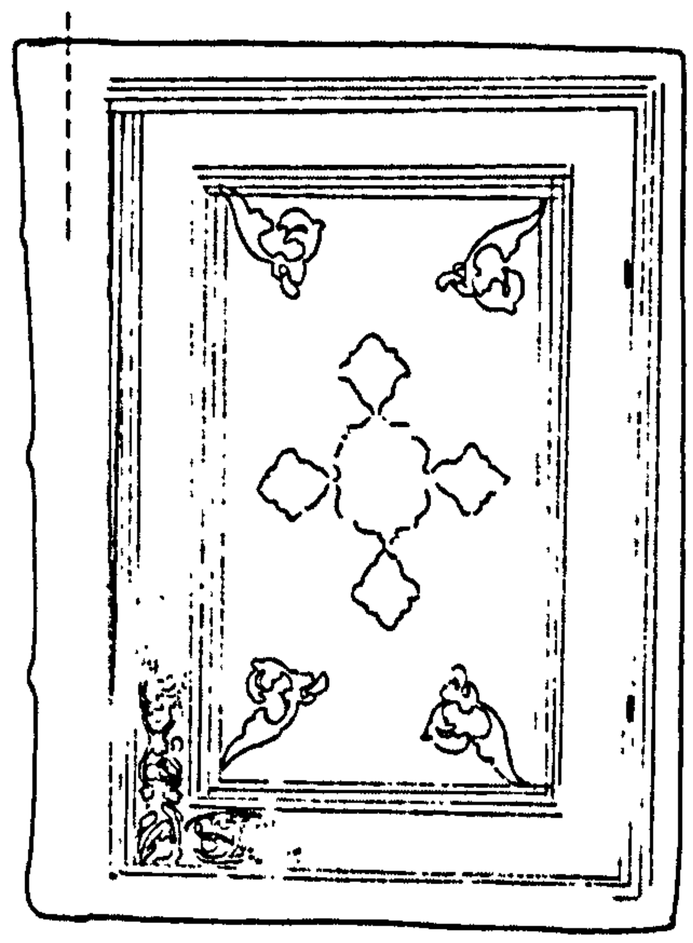
Figure 44. Line drawing showing the inner face of the boards of S.A. 351.

In **S. 2002** instead, the attachment is made by means of a totally different system, that is II Uns/A1, by pasting the spine lining in the outer face of the boards and the pastedown in the inner face, therefore not using the sewing supports which are as a matter of fact cut just at the edge of the spine of the text-block. This peculiar technique could be interpreted as an attempt by the binder (presumably Simeon Basam) to master a newly imported technique of sewing a text-block on sewing supports, therefore offering a rare example of how innovations in bookbinding were assimilated in the Sinai area. The same technique is also probably used in a printed book of the library, S. 4283/2966a, which according to a note written in it was bound in 1627 by *hieromonk* **Ionas** and *hierodeacon* **Simeon** (Basam?) in the context of the Giglio atelier, though the limited visual access to the binding structure does not permit us to be completely positive (see note 45 in section 2.2.2.1.).

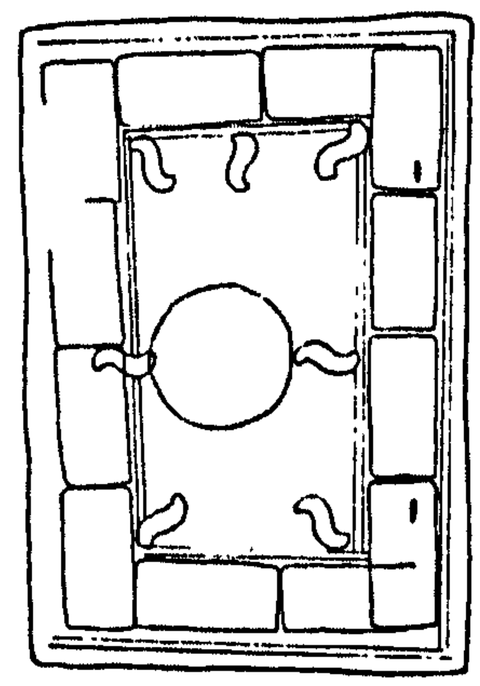
The fact that the binding of **S.A. 351** is decorated in a very similar way and with the same tools (which are unlike any of those seen in the Giglio atelier bindings) as the **Sophronios** binding (**S. 356**) which was certainly made in Cairo leads to two options:

a. The bindings were made by **Simeon Basam** in Cairo.
b. The tools used by **Sophronios** to decorate the binding of **S. 356** in Cairo were at some point transferred to the monastery and used by Simeon.

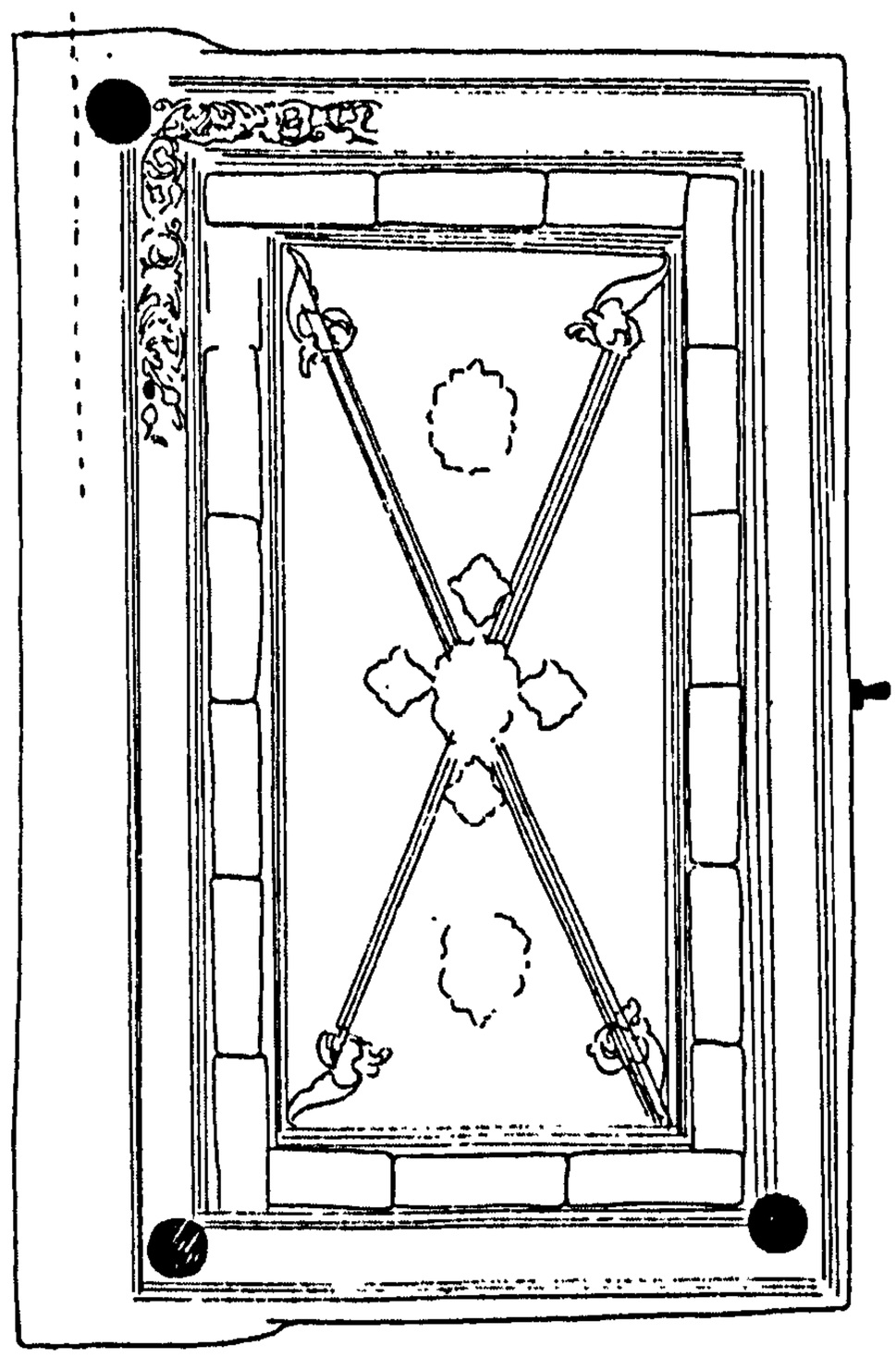
There is no sound evidence to support one or the other option except the fact that the consistency in the number of sewing stations for four volumes of four different formats might be explained as an indication that these four bindings were actually made in the same place or in the same context. Another indication which reinforces the first of the two options is the fact that the tools MuF/e16 and MuF/e17 (figure 46) were not found on any of the 26 bindings of the Giglio atelier or any other binding amongst those surveyed in the context of the present research. Whichever option is correct, the clearly Western European provenance of some of these tools (such as MuF/e16 and MuF/e17), as well as the use of sewing supports for the first time in bindings made in the Sinai area, offer further examples of the influence of contemporary European bindings in this isolated monastic community.



a



b



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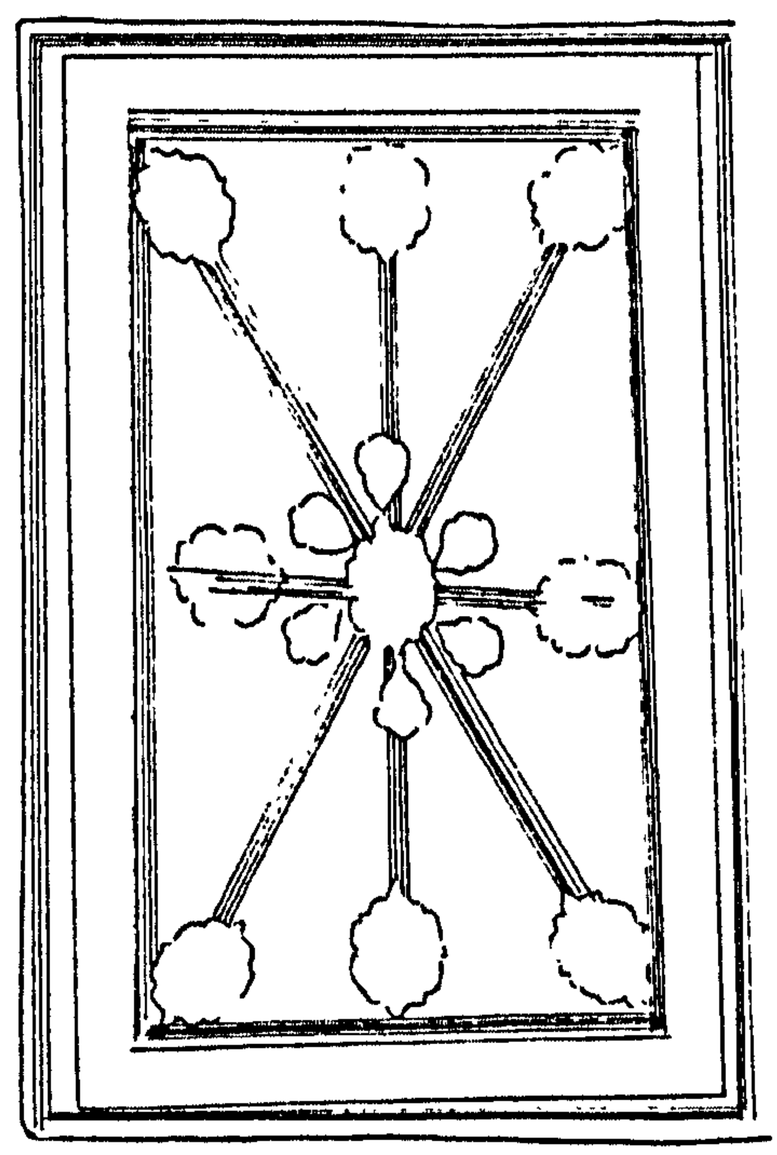

d

Figure 45. Line drawings showing the decoration of the left board of S.A. 351 (a), S. 2002 (b), S. 356 (c), and the right board of S. 574 (d).

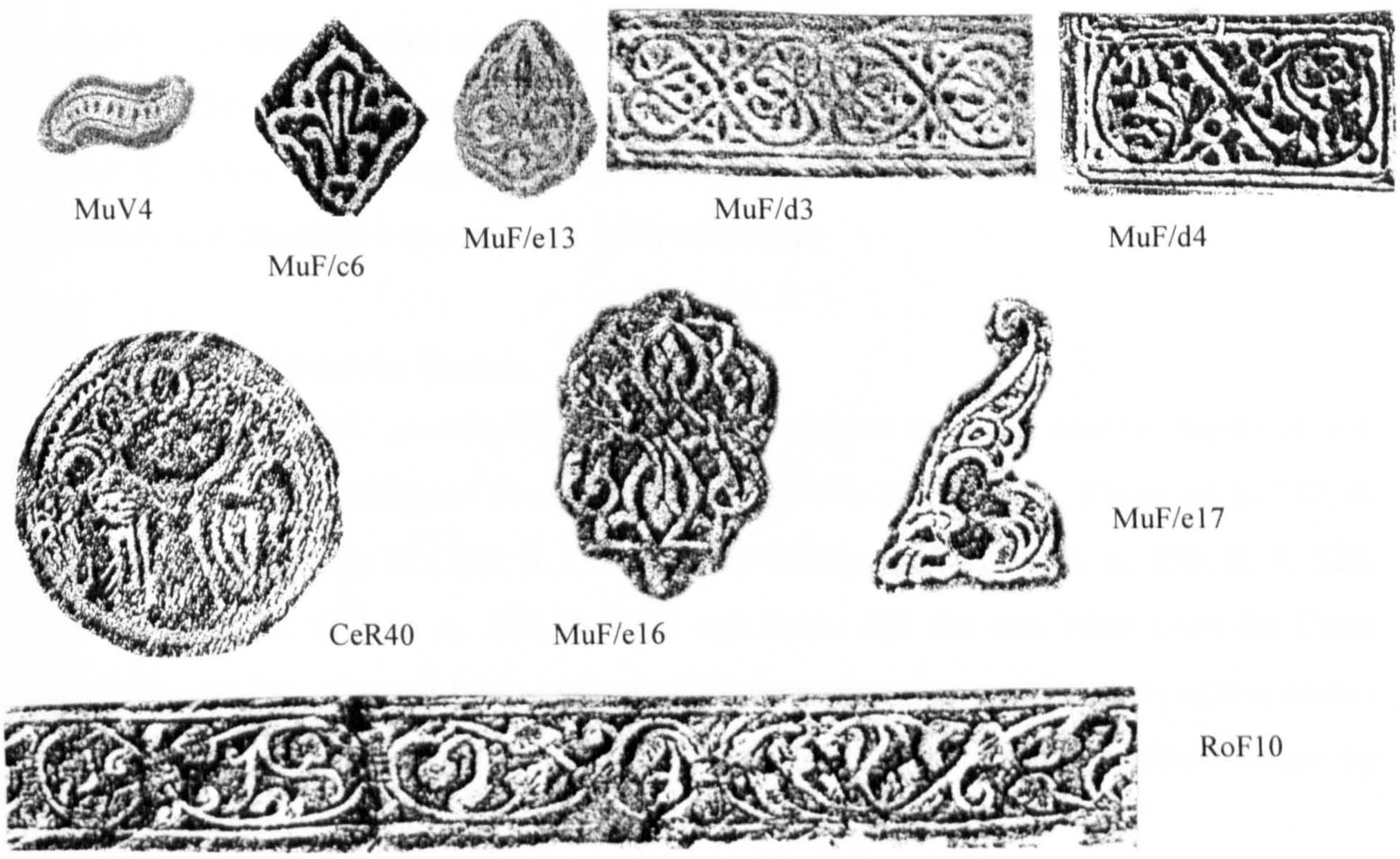

Figure 46. The tools used in the four bindings of the Cairo *metochion*.

2.2.2.14.*Conclusions.*

Before concluding the examination of the Giglio bindings a few more things should be said. Due to the rebinding notes we are able to know the names of seven monk binders working in the Giglio atelier, five of them working individually, and the remaining two, Anastasios *hieromonk* and monk Makarios working apparently together as their note on **S. 804** testifies. The name of still another binder, *hieromonk* Ionas, was found in the rebinding note of a printed book certainly bound in the Giglio atelier as said above (note 45).Two of the binders who worked alone have left two signed binding each, that is, **S. 763** and **S. 356** (which will be considered in the next section) bound by Sophronios *hieromonk* from Cyprus and **S. 448** and **S. 605** bound by Klimis. Simeon Basam has left two signed bindings (**S. 1048**, **S. 1171**) and Gerasimos *hieromonk* and Gerasimos *hierodeacon* have left one signed bound volume each. Though some of the rebinding

notes were written by archbishop Ioasaph himself (**S. 408, S. 448**), as well as some of the scribal notes (**S.A. 61** and **S.A. 351** both text-blocks written by Simeon Basam), this is probably not true for the rest of the rebinding notes found among the manuscripts considered here judging on paleographical evidence. At this point it would be worth trying to attribute more bindings to Simeon Basam based on the comparison of various technical and decorative features and other evidence.

The bindings of Simeon Basam.

According to the data considered earlier in this chapter there are twelve bindings that could be attributed to Simeon Basam, including the two signed ones. These are **S. 747, S. 1048** (signed binding), **S. 1159, S. 1171** (signed binding), **S. A. 61, S. A. 270, S. A. 325, S. A. 337, , S.A. 423, S. A. 565, S. 2002** and **S. A. 351** the two latter from the Cairo metochion atelier. The attribution was initially made by comparing features of the Arabic manuscripts written by Simeon with **S. 1048** and **S. 1171**, which were certainly bound by him.

Simeon's production seems to be limited between the years 1622 and 1641, but further research would probably extend this period. Five out of six Arabic manuscripts considered in this atelier and one Arabic volume of the Cairo *metochion* bindings, have a note in his hand mentioning him as the scribe of the texts. All the Greek manuscripts which are supposed to have been bound by Simeon Basam were actually written earlier and rebound in the Giglio atelier except **S. 1159** which was originally bound for the first time.

As already said, Simeon Basam was Syrian and one of his earliest bindings, that of **S. A. 337**, is an Islamic binding with a fore-edge flap, presenting all the typical technical features of this particular type of binding. Even the decoration, which apparently repeats a common pattern of the Giglio bindings, is not far from the typical Islamic arrangement of tools, with a motif in the centre of the covers, small corner pieces in the central panels, a decorative frame all around it and a pointed oval (in this case lozenge) tool placed in the central angle of the fore-edge flap. This is the only such binding from his hand that we have, so it might be reasonable to suppose that he came to the monastery from Syria, already trained as a binder according to the Islamic tradition, but that he soon gave it up

for the Greek-style technique. There is also evidence, that he actually donated to the monastery an Arabic manuscript with a typical Islamic binding though there is no evidence as to whether it was written and/or bound by him or not (see note 39). He nevertheless seems to have retained some of the features of the Islamic technique which can be found sporadically in his *oeuvre.* Such features are quite distinctly the predominance of three sewing stations, the use of needle holes instead of V shape cuts and, quite characteristically, the use of silk threads, either simple or compound, for the sewing of the text-blocks, all features which are known to be of Islamic provenance (Bosch et al. pp. 45-48, Raby and Tanindi 1993, pp. 215-216). In addition, the fact that in five out of the six manuscripts bound in pasteboards (four of the Giglio atelier and two of the Cairo *metochion* atelier) the attachment between the boards and the text-block is made through an attachment system of the II Uns type, which is the typical Islamic system for attaching the boards to the text-blocks (see Appendix 4) further supports this attribution. This attachment system has been used even in the case of **S.A. 351** where the text-block has been sewn on supports.

It is also significant that no Islamic endband is found in any other volume from this atelier except in the Islamic binding with the fore-edge flap of **S. 337**. Nevertheless, Simeon Basam apparently continued to use leather straps for the first core of his Embroidered, Front Bead and Crowning Core endbands (three out of four volumes presumably bound by him with this type of endbands in the context of the Giglio atelier and the two of the Cairo *metochion* bindings). As already seen earlier in this section there are five volumes bound by him presenting the most decorative endbands of the Three-Core Chevron and Crowning Core type. All but two of the volumes have compound markers consisting either of an open or closed loop (primary marker), and a single string (secondary marker) knotted on it. Most of these secondary markers are now missing but there is an interesting exception, that of **S. 1048**, where it consists of one white and one red silk thread, the same as the one used for the primary marker and the endbands, twisted together and ending in a tassel made of red silk and silver-around-silk thin metal thread. The boards are either made of wood or pasteboard depending on the type of binding used for each text-block. As mentioned before, Greek-style bindings all have wooden boards while pasteboards are used for the pasteboard bindings. In two cases the

pasteboards were found to have been made of Arabic paper manuscript waste (**S. A. 325** and **S. A. 351**). Depending on the type of binding, the systems used to attach the text-blocks to the boards are either variations of the I Uns, the II Uns, or the Sup system in one single volume of the Cairo *metochion* bindings. The attachment system I Uns/8 has been used exclusively in two of his Greek-style bindings and as said above it was also recorded in the bindings of five more Arabic manuscripts in the library (see section 2.2.2.5.), thus reinforcing the connection of the bindings considered here with an Arabic-speaking binder, presumably Simeon Basam. It is also interesting that in the spine lining he fully adopted the Greek-style technique whereby spine lining consists of textile with extensions pasted to the outer face of boards, while in his only Islamic binding he pasted the leather spine lining extensions to the inner face of boards according to the typical Islamic technique.

The endleaves are quite consistent in their arrangement and number of leaves. The left endleaves follow the general arrangement [1]3 when consisting of independent blank gatherings, or [1] 1+ and [1]+ when consisting in parts of the original text-block. The right endleaves follow similar arrangements but present a bigger variation in the number of leaves. In three out of the twelve volumes the right and left endleaves follow different arrangements.

The decoration of the leather covers is restricted to three tools per binding, with MuF/c1 and MuV4 used in all ten bindings. MuA/b4, is found in five bindings, three of which are actually of the earliest dated ones[59]. This tool is not found on later bindings and is replaced by MuG/b3, the typical knotwork tool probably of European-Cretan origin (see section 2.2.2.9. and figure 36). The number of tools and the tools themselves used in the two Cairo metochion bindings are altogether different from those of the bindings made in the context of the Giglio atelier but this is probably explained by the fact that they were made in Cairo using a different set of tools. The spine is decorated in two of the twelve bindings presumably made by him (**S. 1159, S. 747**). Altogether, if we

[59] This tool is found in eight bindings considered in this atelier. With the exception of the ones proposed here as being made by Simeon Basam, it is also found in S. 61 dated in the first half of the seventeenth c, S. 408 and S. 500 both dated to 1632 , S.520 dated to the first half of the seventeenth c. and S. 1976, probably dated to 1655 on account of a note (see table 47) though the note might actually be a later possession note. None of this disproves the theory that this tool is probably an indication of an early phase of production of the Giglio atelier.

accept these attributions, Simeon Basam seems to have been an extremely versatile, adaptive, and curious binder since he has bound manuscripts according to various distinct techniques, the Greek-style one, the Projecting Pasteboards with Supports (of clearly western provenance), and the Islamic with a fore-edge flap. Furthermore two hybrid binding structures, the Flush Pasteboards Unsupported and the Projecting Pasteboards Unsupported, are also probably the product of his activity. Apparently he is the first recorded, and probably one of the first, binders in a Greek-Orthodox post-Byzantine context to have used sewing supports.

Unfortunately not much can be said about the technical and other features of the bindings made by other binders since the data are too limited to permit any safe outline to be drawn. As we have seen above in the occasion of the binder *hieromonk* Ionas, bindings of the Giglio atelier were found also on printed books in the library, but this needs to be further investigated[60].

Concluding we will try to summarize some of the major features of the Giglio atelier:

1. In this atelier we find for the first time different types of bindings used simultaneously as well as some hybrid binding structures which combine features from distinct binding traditions, the Byzantine, the European, and the Islamic. Greek-style bindings seem to be still the rule, but another type of bindings is introduced, conventionally designated 'pasteboard' bindings, which is quite different from the Greek-style one and close both to the western and the Islamic traditions according to the variation. The distinctive features of the pasteboard bindings are the attachment system used, which follows either the system II Uns (where the attachment between the text-block and the boards is made through the spine lining extensions and the pastedowns only), or the system Sup (where the attachment is made by means of the sewing supports which are laced through the boards), the use of endbands with their first cores made of leather straps extending toward and pasted to the boards according to the EAS 6 and EAS 8 anchoring

[60] Some printed books bound in the context of the Giglio atelier were indicated to me by Dr. Nicholas Pickwoad during the survey for the preservation needs of the printed books of the library. They include the following books: 24/310 (Venice 1535), 49903/3275, 4889/3268, 4893/3271, 4896/3272, 5481/3627a (Venice 1587), 6089/4198 (Venice 1596).

systems, the use of leather ties for the fastenings and the occasional presence of squares. The fact that four of these bindings are found on Arabic and Greek volumes (one of them bound with an Islamic bindings with fore-edge flap), all presumably bound by Simeon Basam, as well as the printed book that he bound together with *hieromonk* Ionas, is significant since it gives us a clue as to what the provenance of these technical developments at least in the context of the Giglio atelier might have been. Books bound in pasteboards would of course also have been well known in the library at the time through the printed books imported from Europe, but it appears evident that monk binders used to the Byzantine bookbinding technique were still attached to books bound in wooden boards, which considering the scarcity of wood in Sinai is an interesting proof of their conservatism[61].

2 Bosses are used only in five of the 25 bindings, always on Greek-style bindings, generally dated in the first half of the seventeenth century. The mainly protective role of bosses, used in order to prevent abrasion of the leather cover as the volume was lying flat on the shelves or on work tables, their total absence in all other bindings, the introduction of another type of pasteboard bindings with endbands which do not protrude from the boards, could all be considered as indications that the way books were stored was changing in the first half of the seventeenth century, adopting the vertical position instead of the horizontal one which had been traditionally used. Similar changes were taking place all over Europe in the same time (Szirmai 1999, pp. 268-271) and travelling fathers would have the chance to see this in many European countries. The accumulation of printed books probably would also have contributed to this change since they would gradually require more space which could be more easily earned through vertical storage, a change that would also facilitate their use. Apparently bosses do not occur in later bindings made at the monastery or its premises. The decoration in the head-edge of the text-block of **S. 500** with the title written on it is one more, isolated, example to those seen in the Klimis bindings, of the horizontal storage of

[61] According to Dr. Nicholas Pickwoad (personal communication) there are eighteenth century Greek-style bindings in the printed books collection of the library.

books which would probably be stored horizontally, presumably with the head edge facing the viewer.

3 The case of Simeon Basam gives us the opportunity to follow the evolution and change of a binder's technique in order to conform to a different binding tradition than the one on which he was originally trained. His example reveals that influences in the development of binding technique in Sinai could be direct through the presence there of trained and working binders and not only indirect through bound books that were reaching the monastery more or less continuously throughout its long history. Most significantly, it shows that influences in the binding techniques were not free of religious and other implications as we have also stressed in the Antioch atelier chapter. It is interesting to attest that in a monastery placed in the middle of the Islamic world with a very strong and prominent tradition in the book arts, and having a binder trained in this tradition who was binding books for years, there is an almost total absence of the typical Islamic endbands, but not of other less visible structural elements such as the sewing of the text-blocks and the methods used for attaching them onto the boards. The same impression is expressed by Sonderkamp (1991, p. 439) when saying that *'It seems that the Islamic bookbinding could not be established in Sinai where the Byzantine tradition was used instead'*. The case of Simeon Basam is also relevant for another reason: the fact that six Arabic manuscripts were originally bound in the monastery means that there was a community, the extent of which is unknown, of Arabic-speaking fathers, among them certainly Simeon Basam himself, who needed to have ecclesiastical books written in Arabic.

4 Influences from Europe are evident in various fields. Some of the tools, such as the rolls, the knotwork tool and the small relief tools MuV3 and MuV4, are clearly of Italian provenance and apparently reached the monastery though Crete since we have seen similar ones in the Klimis and other Italian bindings of the sixteenth and early seventeenth century. However in contrast with the previous three groups of bindings we have seen in chapter 1, these Sinaitic bindings are decorated with a significantly smaller number of tools. Endbands are also an interesting field of speculation as far as such European and Cretan influences are concerned. Most of

the compound endbands seen in the bindings of this atelier have not been seen before in the fifteenth and sixteenth-century bindings though their provenance is still to be established. It is nevertheless striking the fact that though Cretan endbands were found in almost all those bindings seen earlier and in the two Cretan bindings of circa 1620, which to some extent are closely related with the bindings considered in this section (see section 2.2.2.9.), no such endband has been encountered among the 26 Giglio bindings and the four of the Cairo *metochion.*

5 Various monks were able to restore and bind manuscripts. It is worth stressing that all the binding notes seen in this section are actually rebinding notes and there is no single note mentioning anything about the person who has made the original binding of a manuscript. It is also relevant that rebound manuscripts with a note by the binder have some kind of repair, either in the spine-folds, the text-block, or both. Thus it can be tentatively supposed that by mentioning the binder whoever wrote the notes was actually referring to the person who also repaired the text-block, a task that could some times be rather difficult and time-consuming, as the notes in **S. 408** and **S. 763** testify. The binding of a newly written text-block might have been a routine, self-evident procedure that was not considered worth mentioning, possibly made by the same person who would also have written the text-block.

6 There are only two notes in this group of bindings displaying for the first time in the context of Orthodox monasteries that the repair and rebinding of old and damaged manuscripts could be the result not only of personal labour but also of some collaboration. There are three notes providing evidence to this end: the case of Anastasios and Makarios (**S. 804**), where it is not clear who was doing what in the repair and rebinding of the old manuscript, the case of Gerasimos and archbishop Ioasaph (**S. 408**), where it can be understood from the note that Gerasimos was responsible for the binding, while Ioasaph collaborated in the laborious work of the repair of the text-block, and the case of *hierodeacons* Ionas and Simeon (Basam?) on the printed book 4283/2966a (see note 45). This practice was probably more common than the three isolated notes imply, given that some

of the older manuscripts would have required extensive repair work, and that as far as we know apparently there was no monk charged exclusively with such a task, collaboration would be the solution for the easier and faster accomplishment of this work. In this context the endbands of **S. 500**, differing between the headband and tailband, both in the primary and the secondary sewing could be interpreted as the outcome of two different monk binders working on the same book. In addition the same hypothesis of more than one person working on the same book has also been made for the Klimis bindings. As said above (section 2.2.2.7.) the collaboration of the Elusive binder, which we will consider in the next section, in the endbands of two bindings (**S. 46** and **S. 615**) is also possible.

In eight out of the eleven manuscripts with a rebinding note except the year the month in which the rebinding was made is also mentioned. From this results that two of them were rebound in January, one in April, two in May, one in June and two in July. Though data are still too meager to allow any safe conclusion it could be supposed that rebinding was a kind of organized collective work inserted in the working schedule of the monastery and confined in some months of the year. April to June of the year 1632 could be such a rebinding session in the monastery since half of the eight exactly dated bindings were actually rebound in this period.

7 The fact that Ioasaph occupied himself with some repair work but mostly with recording the date of the rebinding of manuscripts and the names of the persons responsible for the work not only demonstrates his care for the books preserved in the monastery but also reveals his esteem of such work and of those who carried it out.

2.2.3. THE ELUSIVE ATELIER

The present group comprises the bindings of nine manuscripts, all very similar in their decorative and technical features. Similarities are so marked that these bindings should be considered as the product of the same anonymous binder, who, as will be discussed at the end of this section was probably trained in the craft in the Balkans area around the third quarter of the seventeenth century.

2.2.3.1.*Text-blocks, scribes and donors (table 80)*

All manuscripts are written in Greek between the fifteenth century and 1667 and they all contain liturgical texts. Three of them are precisely dated in 1660, 1666 and 1667. They are all written on western paper, in eight of them this paper is burnished. Formats are mostly 4to (five manuscripts), followed by 8vo (three manuscripts) and there is also one 24to. Four of the manuscripts bear a note by the scribe; **S. 678** and **S. 2062** were both written by the same scribe **Mathaios, S. 1963** was written by **Gregorios,** and **S. 1110** by **patriarch Ioakim.**

In **S. 678** we read the following note:

f. 211r: "*...Mathaios having written it, wretched and blameworthy, culpable, so that for him and all the brothers the Saints may make intercenions always. At the expense of Daniel hierodeacon. And him who fears God not take it away. 1666 AD on the 14th of August*"[62] .

In **S. 2062** we read:

f. 232 v. "*It has been finished , and let us glorify God* (for that): (it is) *the labour of me Mathaios unworthy and those who use it will pray for them* (selves?) *and for me the useless one. Parthenios Gounaris paid for it and may he use it as he wishes, in the year 1660 ADon the 16th of March*"[63].

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[62] *«...γράψαντος ματθαίου τληπαθούς και επιλυπτικού όπως είς αυτόν και είς άπαντας τους αδελφούς πάντοτε οι άγιοι ποιούντες τας πρεσβείας. Δια δαπάνης δανιήλ ιεροδιακόνου και ο φοβούμενος τον θεόν μη ξενώσας αυτώ αχξστ' (1666 AD)μηνί αυγούστω ιδ'».*

[63] *«Πέρας είληφε και τω θεώ δόξαν δώμεν εμού πόνος ματθαίου και αναξίου οι συνάπτοντες δεήσεις ποιήσουσιν υπέρ αυτών και εμού του αχρίου η δαπάνη πέφυκε παρθενίου του γούναρι και ποιήσοι ως βούλεται έτους αχξ' (1660 AD) μαρτίου ιστ'»*

The same scribe Mathaios is also responsible for the copying of five more manuscripts which will be considered in the next section 2.2.4.1.(the Raithos atelier)[64].

In **S. 1963** we read:

f. 222r. *"The gift of God and the labour of **Gregorios**, was written in the year 1667 AD and those reading it pray for me since I am very unworthy and useless among all"*

f.222v. *"The present nomikon belongs to me **Gregorios hieromonk** from Cyprus"*

In the same folio in another hand : *"From* (the books) *of **hieromonk Benediktos the Cretan**, 1677 AD on the 4th of March in the Island of Simi"*[65]

In **S. 1110** we read:

f. 253 r. *"The present typikon was dedicated on the holy mount Sinai and whoever takes it away from this monastery should have the curses of the holy fathers, or if he cuts out these letters or charges someone else to cut them should also have the same punishment. In the year 1523 AD on the 24th of May and in the day of the Pentecost me the writer Ioakim, **patriarch Ioakim**"*[66].

There is also a dedicatory note in **S. 808** where we read:

f 198 v. *"On the 1st of the month of July in the year 1550 AD I **Germanos**, useless one and oikonomos of Crete, dedicated the present book, i.e. the paraklitiki in the holy and sacred royal monastery of the great church of the Holy and God-visited mount Sinai..."*[67].

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[64] In Πολίτης and Πολίτη 1994, p. 550 the scribe is mentioned as Mathaios *hieromonk* Sinaitis and there are 17 manuscripts ascribed to him, written between 1648 and 1669.

[65] *«Δώρο θεού και γρηγορίου πόνος εγραύθη το παρόν επί ετούς 1667 και οι αναγινώσκοντες εύχεσθαι υπέρ ημών ότι υπάρχω πολλά ευτελής και αχρίος παρά πάντων»*
-«Το παρόν νομικόν υπάρχει εμού γρηγορίου ιερομονάχου του κυπραίω»
-«Εκ των του βενεδίκτου ιερομονάχου του κρητός 1677 εν τη νήσω σήμη μαρτίου 4»

[66] *«Επροσιλόθη το παρόν τιπικόν εν τω αγίω όρι σινά και εί τιης το στερίσι εκ της αυτής μονής να έχει τας άρας των αγίων πατέρων ή κόψη ετούτα τα γράματα ή βάνι άλον και κόψιτω να έχει και αυτός ομοίως τα επιτίμια. Έτι ζλα' (7031AM = 1523 AD) εν μηνί μαίω κδ' ανήμεραν την πεντικοστή ο γράψας Ιωακείμ πατριάρχης Ιωακείμ».*It is unclear who this Patriarch is.

[67] *«Έτους ζνη (7058 AM = 1550 AD) μηνί ιουλίου εις την πρώτην επροσίλωσα εγώ γερμανός αχ[ρίος] και οικονόμος της κρίτης το παρόν βιβλίον ήγουν την παρακκλητικήν εις την θείαν και ιεράν βασιλικήν μονή της μεγάλης εκκλησίας του αγίου και θεοβαδίστου όρους σινά....»*

There is no binder's note in any of the volumes considered here, though the fact that for three of the precisely dated manuscripts (**S. 678, S. 1963, S. 2062**) the present is their original binding makes it feasible to date these three and consequently the rest of the bindings around the years 1660-1667. All nine volumes are bound according to the Greek-style technique except **S. 678** which was resewn at a later date on sewing supports though preserving unchanged the rest of its components.

2.2.3.2. *Text-block repairs (table 81).*

All six rebound volumes present repairs to the text-block. Common features and methods indicate that these repairs were done by the same person or at least in the same context. In three volumes (**S. 619, S. 629, S. 634**) some of the outermost leaves of the text-blocks are repaired by trimming the damaged edges of the leaves all around and then framing them with new western paper strips.

In two volumes (**S. 808, S. 1110**), most of the text-block leaves were cut away along the spine edge, thus turning them into single leaves which were then turned back into bifolia by pasting paper strips all along their spine edge and that of their conjugate. We have seen such a repair technique in S. 1048 and S. 408 bound by *hieromonk* Simeon Bassam and Gerasimos *hieromonk* respectively in the Giglio atelier. As we have seen on that occasion this was a difficult and time-consuming job, and both this type of spine-fold repair and the framing of damaged leaves demonstrate the time and effort that the binder had put into the repair and rebinding of damaged volumes.

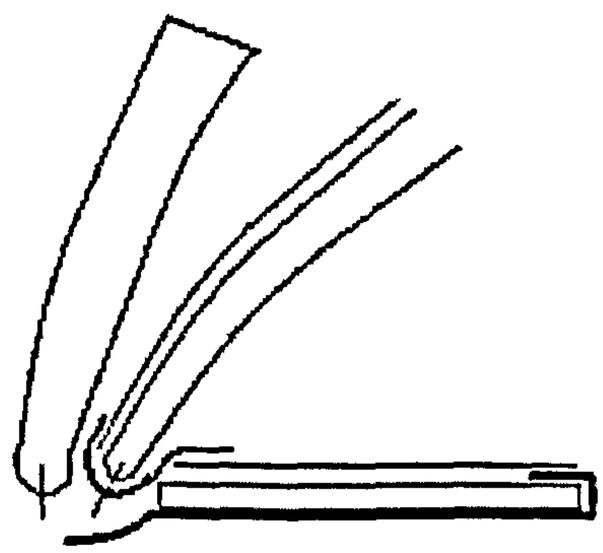
The case of **S. 1110** is interesting since the scribal note is written on one of the left blank flyleaves, which are original to the text-block, and which were trimmed and then repaired along the spine by pasting paper strips which partly obscure the edge of the note. Considering that the book was dedicated to the monastery as early as 1523 (see section 2.2.3.1.) such a repair would possibly date from the time of the rebinding and therefore be considered as work done at the monastery. However as demonstrated in the Antioch atelier the case of books travelling outside the monastery and back should not be excluded.

2.2.3.3. *Endleaves (table 82)*

Endleaf arrangement within the bindings considered here presents a great variation. Seven units (five of them left endleaf units) consist of separate blank gatherings of a varying number of leaves (two, four, six, eight) sewn with the text-block (in the case of left unit of **S. 634** just tipped) of which the outermost leaf is used as a pastedown (in **S. 808** the two outermost leaves of each unit are used as pastedowns, pasted above the turn-ins) and the remaining as flyleaves.

Three endleaf units are integral (two of them used as right endleaf units), consisting of two or three text-block leaves left blank of which the outermost ones are used as pastedowns.

Five endleaf units present quite uncommon arrangements which are partly due to the repair of the trimmed spine-folds of the text-block leaves in order to turn them back into bifolia. Probably the only clear example of such arrangement is represented by the right endleaf unit of **S. 629** (figure 47). In this case the last text leaf is repaired all along the spine edge with a paper strip which is hooked around a blank bifolium (used as flyleaves) and sewn with the rest of the text-block. The rest of the repair paper strip is pasted above a doublure covering the inner face of the right board. A similar arrangement is probably used in both endleaf units of **S. 619** and **S. 1110**, though it was not possible to record in conclusive detail. The fact that both these volumes have endleaves made of a different kind of paper than the one used for the text-block, as well as the fact that they present repairs all along the spine-fold of many text leaves seems to suggest a similar endleaf arrangement where the narrow strip pasted on the doublure is probably a strip of paper used for the spine-fold repair of some text leaf and the flyleaves are also probably the added conjugate leaves of text-block singletons. The endleaf arrangement was not possible to establish at all for three units, which are thus recorded as unclear.



2.2.3.4. *Sewing (tables 83, 84)*

Figure 47. Line drawing showing the arrangement of the right endleaf unit of S. 629

All text-blocks are sewn with unsupported sewing with the exception of **S. 678** which has been resewn at a later date on four sewing supports though without destroying the original unsupported structure. In none of the volumes it was possible to reconstruct the exact type of sewing used due to limited visual access. The number of the sewing stations varies between three (one volume), four (one volume), five (five volumes) and six (two volumes, one of them represented by the later sewing structure of **S. 678**). Generally speaking the number of sewing stations corresponds to the format of the volumes (more sewing stations for bigger volumes). The most striking exception of **S. 678** (an 8o sewn on six stations) is due to the later resewing.

There are three different patterns of the sewing stations arrangement used among the nine volumes, though in five of them they do not conform precisely to the classification, therefore are marked with a question mark in the table 83. The pattern B1 is found in five volumes variably sewn on three, four, five and six sewing stations, and the pattern B3 in three volumes sewn exclusively on five sewing stations (figure 48). The pattern B4B6 is found in **S. 678** and corresponds to the later sewing phase of the volume when this was resewn on four cord supports probably in order to reattach the boards to the text-block since the original unsupported sewing structure is still preserved underneath. On that occasion the endband extensions on the boards were cut off and the volume was rebacked. This pattern has been sporadically used in all the binding groups seen so far except the Cretan bindings of the fifteenth and sixteenth century but as we will see later on was exclusively used in the New Library atelier around the year 1733. Therefore it could be suggested that the resewing was made in the context of that atelier.

The sewing stations are marked with V shape cuts except the case of **S. 629** where there are only single knife cuts and the case of **S. 808** in which such stations are probably marked with needle holes.

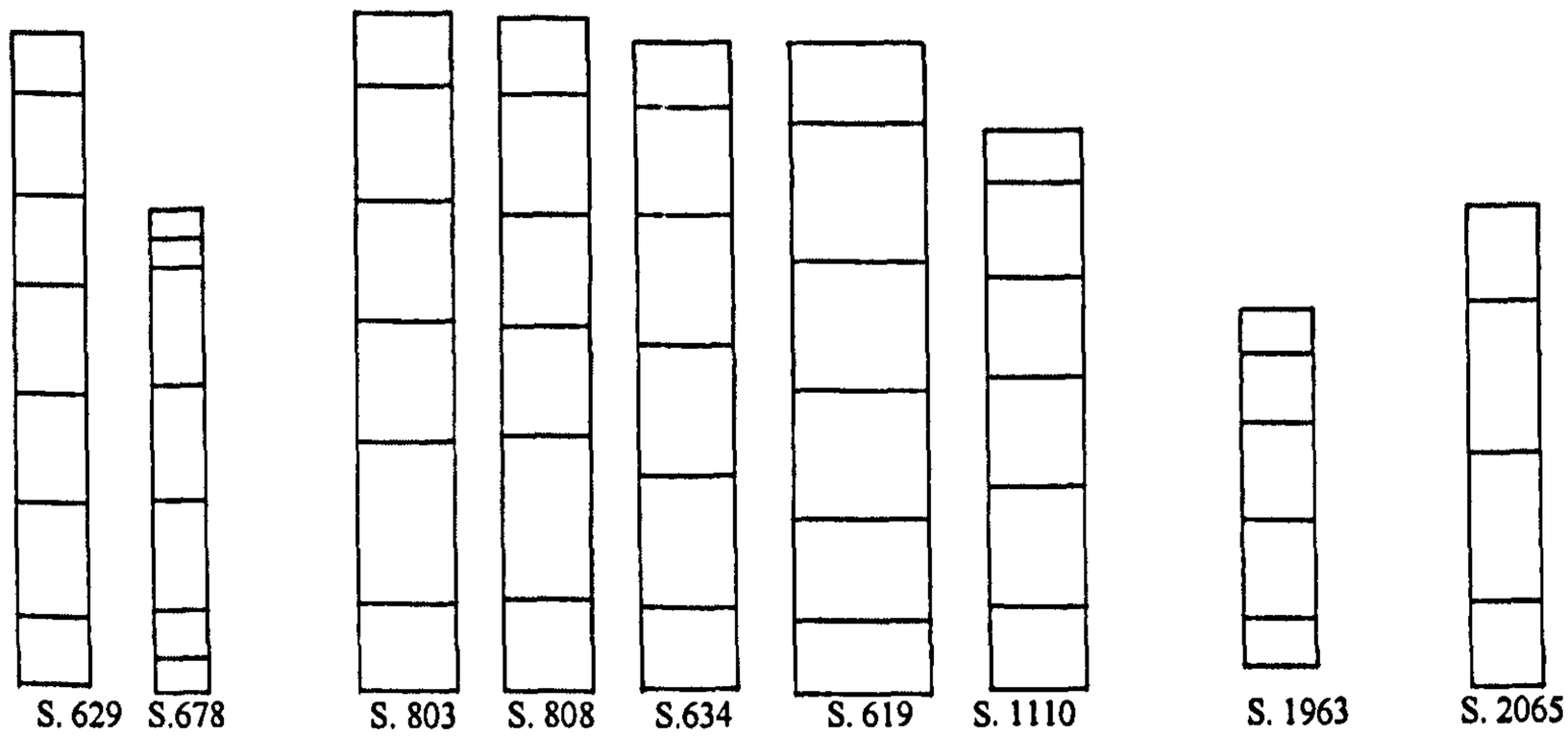


Figure 48. From left to right: line drawing showing the spines and the arrangement of the sewing stations along them of the two text-blocks sewn on six sewing stations, the five text-blocks sewn on five sewing stations, the one text-block sewn on four sewing stations and the one text-blocks sewn on three sewing stations.

The sewing thread is either linen or hemp mostly of varying twist Z ply, except in the case of **S. 678** where above the original unsupported sewing is clearly visible a cotton tight twist 2 2S ply cotton thread used for the latter supported sewing phase. In two volumes (**S. 629** and **S. 634**) the sewing thread is waxed.

2.2.3.5. *Boards and board attachment (table 85)*

All twelve volumes are bound in wooden boards of unidentified species with their grain running parallel to the spine, varying in thickness between seven and 12 millimeters and cut flush with the text-blocks. Generally speaking the thickness of the boards reflects the format and thickness of the bound volumes since the thickest and largest text-blocks are all bound with the thickest boards.

All boards have a BG 3 type of groove in all three external edges, whilst most of them have their spine edge shaped according to the SET 3 pattern with a rather slight beveling. In at least three of the volumes such beveling is even less pronounced, thus the spine edges shape follows the pattern SET 7. The spine joints of the text-blocks form mostly a

90° angle but angles of 45° and 120° have also been recorded. The attachment between the text-blocks and the boards is achieved by means of the attachment system I Uns / 10 in all but one volume; the exception is **S. 678** in which due to the later resewing phase on supports, the attachment system Sup 7 is used instead.

2.2.3.6. *Spines and spine lining (table 86)*

The spines of the text-blocks are variably rounded in all nine volumes. All but the volume resewn on supports have canvas spine linings of varying thickness pasted all along the spine with extensions on both sides which are pasted to the outside of the boards, covering a portion of their width which was not possible to identify.

2.2.3.7. *Endbands (table 87, 88, 89)*

In all volumes compound endbands are found of the Three-Core Chevron and Crowning Core type, sewn with the same threads and following the same pattern. Though the endband structure is not visually evident in all nine volumes, it can be seen in **S. 1963** and **S. 2062** and given that the endbands in all volumes are made with the same material, pattern and technique, we can try to describe their construction:

1. The first core consists of lengths of cord (in the case of **S. 678** probably a wool cord has been used) which extend onto the boards for a distance between ten and 30 millimeters (representing 10.5% to 16.2% of their total width). They are fastened on the boards by means of the EAS 2 anchoring system. On this first core the endband primary sewing is worked, and as it is possible to see in **S. 1963** and **S. 2062** it is some kind of simple wound around core endband sewn with fine linen thread which is tied-down in the centre-fold of every gathering, passing either through the holes of the outermost sewing stations or through different holes outside them.
2. The second core consists of multiple lengths of the same thread as the one used for the primary sewing, which fit around the primary endband and are fastened on it by means of the secondary sewing.

3. The third core is thin, consisting of a fine silk thread which in five of the nine volumes is red. This core is also fastened by means of the secondary sewing creating a very delicate crowning core on top of the chevron pattern. The secondary sewing is worked with thin silk threads of medium or tight twist and 2S ply. Four colours are used, white, black, cyan and pink, used in two combinations, black and white (four volumes) and cyan, pink and white (five volumes). All the endbands are worked from right to left.

The same type of endband has been used in seven Giglio bindings, of which the endbands are clearly divided into two groups, those of the first group attributed to Simeon Basam (represented by five bindings) and those of the second group attributed to the Elusive binder (S. 46, S. 615) on the basis of the striking similarity and the fact that those made presumably by Simeon Basam are worked from left to right unlike those made by the Elusive binder which are worked from right to left.

2.2.3.8. *Markers (table 90)*

Eight out of the nine volumes have compound markers.

Primary markers.

They consist always of simple kinked closed loops, their number varies between one (two volumes), two (five volumes), and three (one volume) per volume. They are always made of a compound string consisting of silk threads twisted together, same as those used for the sewing of the secondary sewing of the endbands, of two or three different colours, according to the number of colours used for the endband. Therefore, black and white silk threads are used in the three volumes with those colours in their endband secondary sewing, and cyan, pink, white in the others. They are laced through the base of the headbands and are fastened at the back, although it is not visually obvious how (system LtH(f)).

Secondary markers.

They are still preserved in five volumes. In these it can be established that they consist of three-colours strings knotted on the primary markers by means of system KiM. The

secondary markers are certainly the original ones in **S. 678**, since they are made with the same threads as the ones used for the endband secondary sewing. In the other volumes, the threads used for the secondary markers and for the secondary sewing of the endbands are different and this might indicate that these markers are later replacements.

2.2.3.9. *Cover (table 91)*

All nine volumes are covered in full tanned leather, always of the same quality, a medium thickness goat skin with fine polished grain, yellow-brown in eight cases and reddish-brown in just one (**S. 2062**).

The turn-ins are always narrow with one single exception (**S. 803** where they have a medium width), and they always follow the pattern T-ins 1 combined with the pattern T-ins 2 except one volume (**S. 1110**) where the pattern T-ins 2 is probably combined with the pattern T-ins 3.

The corner mitre varies, the most commonly used pattern is Co 16 followed by Co 7 and Co 1, either consistent in all four corners of the same volume or combined between them.

2.2.3.10. *Decoration (table 92, 93)*

All volumes are decorated with blind tooled multi-use single tools. There are thirteen different tools used in total (figure 49), and the number of different tools used in one single binding varies between seven and 11, eight and nine being the most common number.

All the volumes are decorated with similar patterns, in three of them different in each of the two boards. In all the volumes the decorative pattern Dec 13 has been used either on its own or combined with other patterns such as the Dec 2, Dec 3, Dec 10, and Dec 1 (figure 50). The spine is left undecorated on all nine volumes. The decorative patterns consist of a number of frames, usually two or three, around a central panel. It is characteristic that the number of frames differs between the four sides of the boards, thus one, two or three decorative bands are used in the left and right side and two, three or four in the top and bottom side, i.e. always one more. The only exception to this rule is **S.**

629 where one band is used in the left and right sides and three bands in the top and bottom. This pattern gives to the decoration a distinctly vertical symmetry. It is worth noticing that such pattern is typical of German bindings of the sixteenth and seventeenth centuries (see for example Gunter (ed) 2002, catalogue numbers 26, 27, 28, and Szirmai 1999, figure 9.64).

The edges of all the boards are decorated in exactly the same way according to the patterns BD 2 and BD 10. This last decorative pattern can be seen in all volumes with the exception of **S. 678** where the leather rebacking covers the boards in the areas where the endbands are anchored on the boards.

Five of the tools used are relief tools (including the fillets) and the remaining eight are intaglio tools. Some of these tools are not uncommon among Greek-style bindings such as MuF/d6, MuG/b10 and off course the typical concentric rings tool.

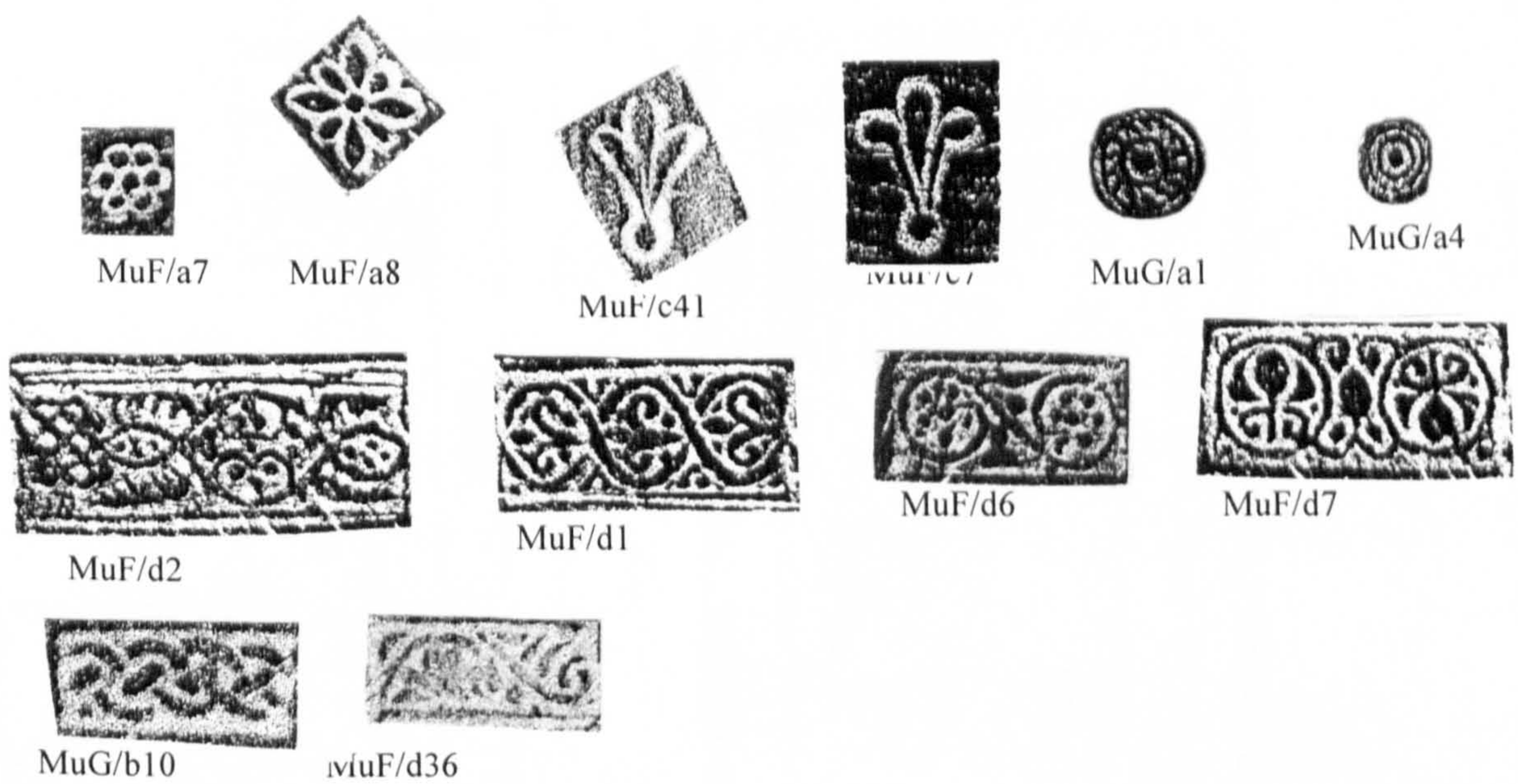


Figure 49. The tools used in the decoration of the nine bindings of the Elusive atelier.

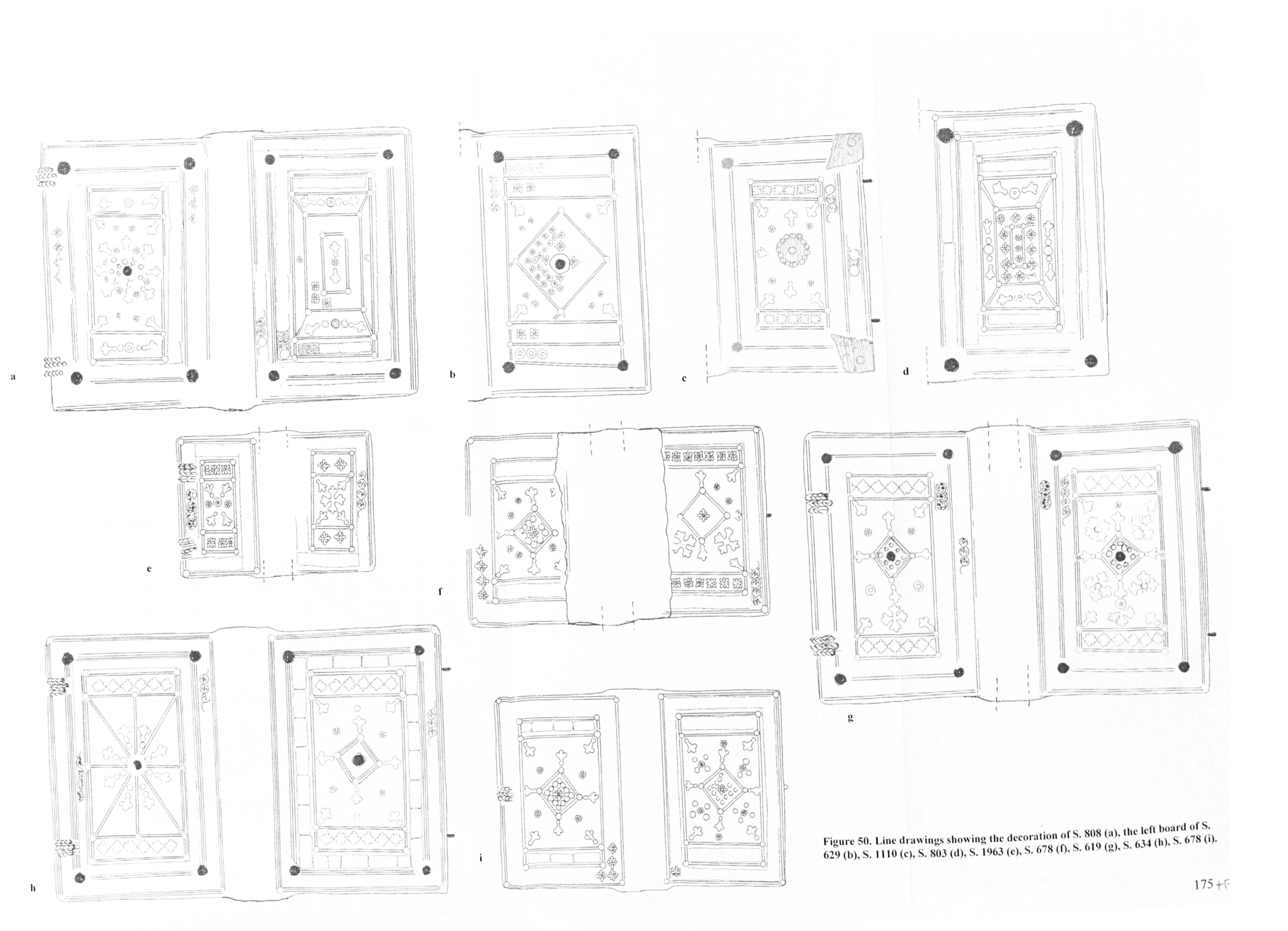


Figure 50. Line drawings showing the decoration of S. 808 (a), the left board of S. 629 (b), S. 1110 (c), S. 803 (d), S. 1963 (e), S. 678 (f), S. 619 (g), S. 634 (h), S. 678 (i).

2.2.3.11. *Text-block edges trimming and decoration (table 94)*

All the text-blocks have their edges trimmed though there is no evidence as to the tools or the method used. In consistency with the other common features, eight of the nine text-blocks have decorated edges. Four of these eight text-blocks are decorated with painted plaitwork motifs running all along the three free edges, drawn in red (three volumes) or black (one volume) ink and partly painted in red or green. The volumes **S. 619, S. 629,** and **S. 634** have a floral stem motif running all along the three free edges of the text-block, drawn in black and painted in red, green, and in addition, on two volumes ochre. **S. 1110** is unique in that it is the only volume, recorded so far, that has a text-block edge decoration of a religious figural depiction. This is a representation of the *Deisis*[68] extending in all three free edges with Christ dominating the centre of the fore edge, the Virgin Mary on the left, St. John the Evangelist on the right and other unidentified saints in both sides. Such decoration can not apparently be explained by the content of the text-block (*Tipikon*), though the use of the unusual and imported metal fittings on the same volume (see below) point to the production of a binding of uncommon luxury.

2.2.3.12. *Metal fittings (table 95)*

Six out of the nine volumes have bosses of the *boulai* type (figure 51). In five of them there are five bosses on each board divided between the four corners and the centre, except the left board of **S. 808** and both boards of **S. 803** which have four bosses. All bosses are nailed to the boards, their ends are always underneath the pastedowns. They are mostly made of sheet metal except in **S. 634 and S. 808,** in which some of them are made of solid metal.

The case of **S. 1110** is outstanding since both external corners of both boards are given decorated, embossed metal covers, while there is also a similar round decorative boss nailed in the centre of each board (figure 51 f, g). Such decorative metal corners were commonly used in Northern Europe, but also in Central Europe and Italy, in the late

[68] Literally means entreaty. Indicates the representation of Virgin Mary and St. John the Baptist standing on either side of Christ with their hands extended toward him in a gesture of pray and intercession (see ODB vol. 1, pp. 599-560).

fifteenth and early sixteenth centuries[69] and are also seen in the binding of the famous Cosmas Indicopleustis manuscript still preserved in the monastery[70], as well as a few more bindings probably made at the monastery[71]. On the basis of visual observation only, all of the bosses appear to be made with similar copper alloys.

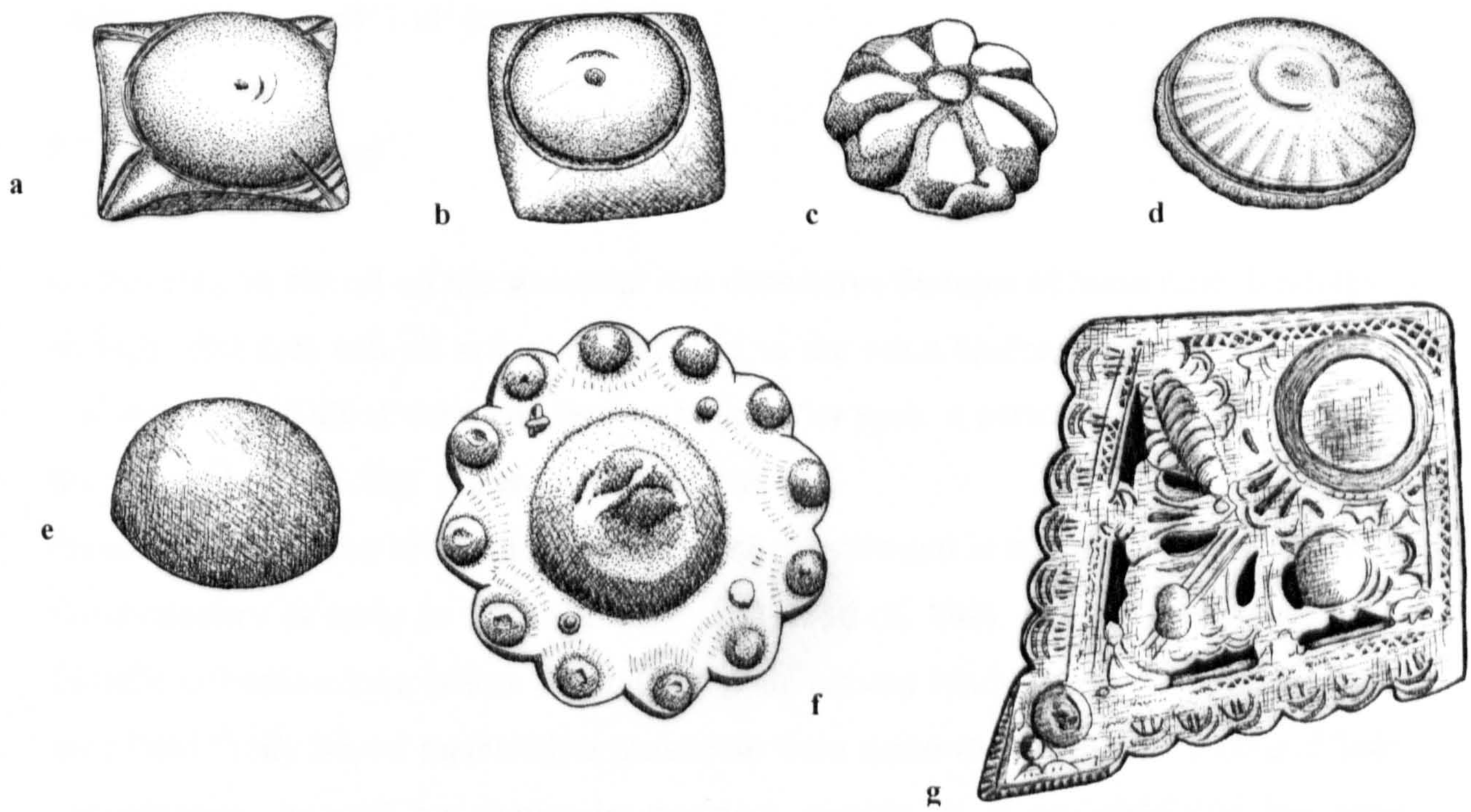


Figure 51. The solid metal bosses of S. 634 (a, b, c), S. 808 (d), the sheet metal boss of S. 619 (e), the central boss and one of the four metal fitting nailed at the corners of the boards of S. 1110 made of embossed sheet metal (f, g). The scale varies.

2.2.3.13. *Fastenings (table 96)*

All nine volumes have three edged leather interlaced strap fastenings. Three of the bound volumes have one fastening (0-1-0), while the remaining six have two (0-2-0). All of them follow a right to left direction (←).

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[69] The present corner pieces particularly similar with fig. c. in Szirmai 1999, p. 266, book bound in Germany in the late fifteenth century, fig. 33 in Marks 1998, p. 33, a Netherlands binding of 1500.

[70] This is codex S. 1186, parchment manuscript written in the early eleventh century. See Christopher Clarkson's report on the preservation of the codex submitted to the St. Catherine's Foundation.

[71] See for example S. 788, a fifteenth -century *paraklitiki* probably bound in the monastery but not included in the text since it represents an isolated example.

Seven out of the nine volumes have fastenings made with the same leather as that used for their cover. Fastenings anchorage is mostly of the TB type though TBP and TBTP is also found in two and one volumes respectively. As a consequence of the fact that the turn-ins are narrow, the fastenings and the turn-ins are arranged according to the pattern F & T 6, and the ends of the straps follow either the pattern TbPpPC (five volumes), TuP (three volumes), and UuP (one volume).

2.2.3.14. *Conclusions*

Consistency in almost all the structural and decorative features of these nine bindings is so high that they can all safely be ascribed to the same binder. Also the high level of craftsmanship in all of them can lead us to consider such a person as properly trained in the craft of bookbinding rather than as an amateur.

As we have seen, two of the manuscripts that were rebound in this atelier were donated to the monastery as early as 1523 (**S. 1110**) and 1550 (**S. 808**), and were thus part of the Sinaitic collection long before the date of their present binding, which, compared with dated and firstly bound manuscripts must date from somewhere between 1660 and 1666. Nevertheless, as will be shown in the next section, it is probable that the same, anonymous, binder has bound at least two manuscripts in the Raithos atelier, though decorating them without using the characteristic tools we have seen here, but the typical tools of that atelier. His technique is so characteristic in some of its features, such as the endbands, that on this basis, as we said before, we could also attribute to him at least the endbands of two bindings of the Giglio atelier, those of **S. 46** and **S. 615**.

It is therefore sensible to consider the nine bindings described here as made in some place close or related to the monastery, for example a *metochion* or the cell of a monk. We could tentatively suggest that these bindings were made by someone trained in the binding craft in some place outside the monastery and its milieu, and then, with the tools and materials, moved to a location close to it where he was able to practise his craft in rather high standards. It is also relevant that so far no trace of any of his tools was found in any other Sinaitic binding before or after, which means that these tools were most

probably owned and used by an individual and not by the monastery or other institution and that their fate was probably dictated by the owner.

This idea of a binder trained away from the Sinai is further supported by the striking similarity of the nine bindings considered here with another one preserved at the Iviron monastery **(I. 304)** which apart from being very similar as far as the decoration is concerned, (figure 52) presents also the same attachment system. This very characteristic attachment system (I Uns/10) probably originates in the Balkans area (Szirmai 1999, pp. 71, 72, fig. 6.8) and as a matter of fact there are various manuscripts in the Iviron monastery library where this attachment system is used[72]. The Iviron manuscript was written in 1622 in Tornovo (Bulgaria) and since it remains in its first, original, binding we can suppose that it was also bound there. This is a clue that could lead us to attribute the binder's training , whoever he was, to a Balkan milieu, the Athos peninsula included. The strong Germanic influence in the decorative patterns used and the bosses in **S. 1110** could thus be explained on the basis of geographic proximity, though as far as the latter are concerned they could as well be considered as an import from Italy where similar metal fittings were widely used (Szirmai 1999, p. 267). It could also be suggested that these bindings were made by an itinerant binder who would come to the monastery or a nearby *metochion* for a limited period to repair and bind books and then leave, taking with him all of his tools. This is a possibility which we have considered previously in the context of the Klimis bindings. As explained above, the various features of these bindings seem to exclude a Cretan provenance of the binder but point rather to a Balkan one. It is interesting to note that contrary to the decoration style used in Crete but also in the Sinai since the late sixteenth century, where rolls and small delicate relief tools were normally used, no roll is used in the present group of bindings and no small tool which could be

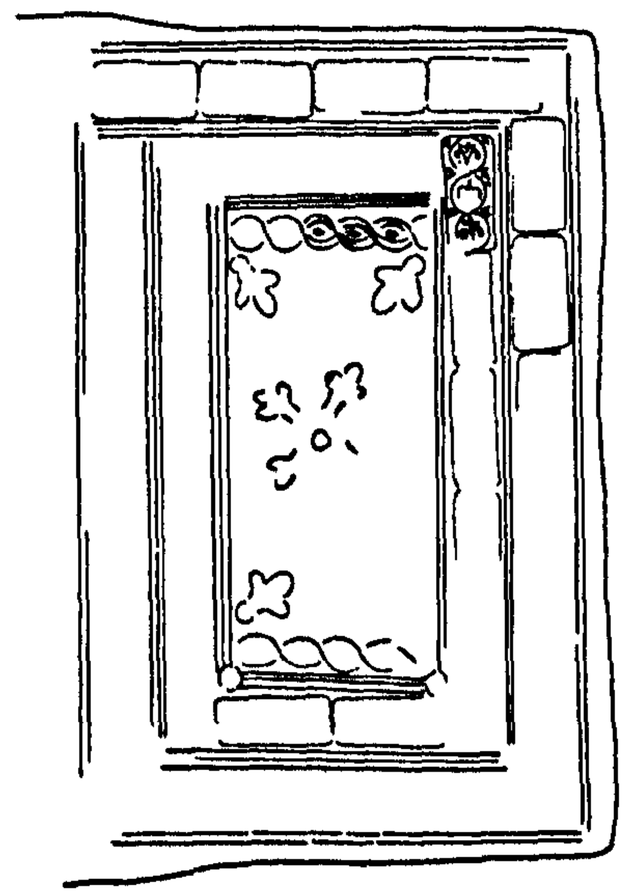

Figure 52. Line drawing of the decoration of the left board of I. 304.

[72] See the Papaneophitos bindings and the Cosmas Macedon bindings in sections 3.2.3. and 3.2.4.

related to the tools used in Europe at that time. It is also relevant that the bindings considered here are the only ones of those considered in part 2 in which we still find the use of the small concentric-rings tools, a feature quite common and typical of the Greek-style bindings of the sixteenth and previous centuries. The number of the decorative frames on the covers is also unusually high.

The scribe Mathaios, responsible for the copying of two of the manuscripts bound by the Elusive binder, is also responsible for the copying of five more manuscripts that were bound in the 'Raithos' atelier as we will see in the next section. The fact that Mathaios was apparently working under commission leads us to speculate on the possibility that the Elusive binder worked under commision too. **S. 1110** with its uncommonly rich text-block edge decoration and the use of uncommon, heavy, possibly expensive and imported bosses, could be easier to explain as the outcome of a more generous private commission. Also the fact that **S. 433** and **S. 426**, both written by Mathaios and bound in the Raithos atelier (see next section), have a note in the hand of Ioasaph dedicating them to the monastery is probably enough evidence that Mathaios was not living in the monastery, though he was part of the monastery brotherhood, since he is called '*Sinaitis*' (see note 64), i.e. part of the Sinai monastic brotherhood, which included monks living in *metochia* of the monastery often far away from the mother institution (Ἀμαντος 1953, pp. 99-100), or hermitages where monks from the monastery would choose to retreat. It would then appear sensible to suggest that the Elusive binder might have been also living in a place close by the monastery or in some of its *metochia*.

Most of the technical and decorative features of these bindings, such as the endbands, the unsupported sewing, the board edge grooves, the decoration of the text-block edges, the decorative patterns and the tools used, as well as the consistency of all these features in all nine bindings, support the idea that the present binder and his oeuvre represent one of the latest examples of the proper Greek-style binding technique, practiced at a high standard. From the research done so far and for the above reasons, this binder and his work should probably be considered as an exception for his time.

2.2.4. THE RAITHOS ATELIER.

The present group comprises the bindings of 13 manuscripts all probably made in the *metochion* of the St. Catherine's monastery on the Red Sea, in Raithos (El-Tor). As will be discussed below they should probably be considered as the production of more than one binders working in the metochion between the years 1652 and 1689 AD.

2.2.4.1. *Text-block, scribes, donors and binders (table 97,98)*

All the manuscripts are written in Greek between the fourteenth and the seventeenth centuries, eight of them precisely dated between 1652 and 1689, and contain either theological (seven volumes),or liturgical (six volumes) texts. Ten manuscripts are written on western polished paper (all of them in their original binding) , two manuscripts are written on western paper and one manuscript is written on parchment and paper (all three rebound). Formats are mostly 8vo (nine manuscripts), followed by 4to (two manuscripts), while 16mo and 24to are represented by one manuscript each.

Eight out of 13 manuscripts bear a scribal note. Five of them are written by ***hieromonk* Mathaios (S. 76, S. 426, S. 433, S. 1814, S. 2056)**[73].

At the end of **S. 76** we read:

"[Written] *by **Mathaios** wretched and blameworthy, with the collaboration of God the present* (book) *was finished in the year 1654 AD, on the 7th of March*"[74].

In **S. 426** we read:

f. 169r. "[The present] *was written by me sinful **Mathaios** hieromonk at the expense of kir Malachias. It was finished with the collaboration of God in the year 1653 AD on the 31 of October*"[75]

[73] About the scribe see Πολίτης and Πολίτη 1994, p. 550. Attribution of Ms. S. 1814 is based on these scholars since there is no indication of the scribe in the scribal notes. See also section 2.2.3.1.

[74] *«Ματθαίου τληπαθούς και επιλυπτικού θεού συνεργεία πέρας έλαβεν το παρόν επί έτους αχνδ' (1654) ζρξβ' (7162 AM = 1654 AD) μαρτίου ζ'»*

[75] *«Εγράφη ύπ εμού αμαρτωλού ματθαίου ιερομονάχου αναλώμαση κύρ μαλαχία πέρας είληφεν θεού συνεργεία επί έτι αχνγ' (1653 AD). ζρξα' (7161AM = 1653 AD) μηνί οκτωβρίου λα'».*

On the verso of the same leaf there is a note, in the hand of archbishop Ioasaph, saying that the book was dedicated to the big church (the katholicon) of the monastery by **Mathaios** and **Malachias.**

In **S. 433** we read:

f. 286v. *"The present was finished with the consent of God on the 28th of October in the year 1652 AD by me sinful **Mathaios hieromonk** and at the expense of the **monk Malachias** and those who use it pray for us"*[76].

Just below this note there is another one in the hand of archbishop Ioasaph of an almost identical content as in the previous manuscript.

In of **S. 1814** we read:

f. 174r. *"in the Sinaitic monastery of Raithos and to fathers who are found from time to time practicing retreat. Here are the twelve springs of water and seventy palms. 1660 AD on the 2[...] of June".*[77]

In **S. 2056** we read :

Right flyleaf :*"Glory to God, 1660 AD on the 22 of April, by wise **hieromonks Ioannikios Mathaios** wrote this, sinful and worthless, so that both Sinaitai may pray for him and let it [the book] not be taken away from Sinai".*[78]

In **S. 1996** written by **Gerasimos *hieromonk***[79] we read:

f. 56 r."*This liturgy was written by me **Gerasimos hieromonk** from Cyprus and I dedicated it to the church of holy Theotokos in Raithos, and whoever should take it away may be alienated from the share of Christ and may the holy Theotokos be adverse to him in the day of judgment 1657 AD on the 5th of June".*[80]

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[76] *«Ετελειώθη το παρόν θεού ευδοκία εν μηνί οκτωβρίου κη' επί έτους ζρξ' (7160 AM= 1652 AD) υπ εμού αμαρτωλού ματθαίου ιερομονάχου και δια δαπάνης μαλαχίου μοναχού και οι συνάπτωντες εύχεσθαι υπέρ ημών».*

[77] *«Εν τη Ραιθώ μονή των Σιναιτών και πατέρων βρίσκονται κατά καιρόν ασκούντων. Ένθα αι πηγαί δώδεκα των υδάτων και φοινίκων στέλεγχοι επτάκις δέκα πάντων. Επτακισχιλιοστώ εκατοστώ εξικοστώ 'ογδόω (7168AM = 1660 AD) μηνί ιουνίω κ[...]'».*

[78] *«Τω θεώ δόξα τέλος αχξ' απριλλίου κβ' δια ιερομονάχων σοφού Ιωαννικίου Ματθαίος έγραψεν αμαρτωλός και αχρείος όπως εύχεται υπέρ αυτού αμφότεροι συναίται και μη ξενωθείη από σινά».*

[79] About the scribe see Πολίτης and Πολίτη, 1994, p. 384. There are three manuscripts ascribed to him written between 1654 and 1659.

[80] *«Αυτή η λειτουργία εγράφθη υπ εμού γερασίμου ιερομονάχου του κυπρέου και την αφιέρωσα εις την εκκλησίαν της ραιθώ της υπεραγίας θεοτόκου και ο ξενώσας αυτήν αλλότριος έστω της μερίδος χριστού και την υπεραγίαν θεοτόκον να έχει αντίδικον εν ημέρα κρίσεως αχνζ' (1658 AD) ιουνίου ε'».*

In **S. 1856** written by **Leontios *hieromonk***[81] we read:

f. 245 v: *"In the year of our saviour 1662 AD on the 12th of March at the 3rd hour the strength was not that of the ink or the paper or the hand or the pen; the strength is God's , the creator of all things, it is the labour of me, useless and unworthy, named* ***Leontios*** *vile of the* ***hieromonks****. If there are errors grant me forgiveness because I am ignorant and this is my first writing. Like strangers....written in Raithos".* [82]

The same scribe Leontios has repaired and rebound **S. 764** and written **S. 931** in 1664 (see below). Among these manuscripts, as in the Giglio atelier, we find notes commemorating the repair and rebinding of manuscripts. There are three such notes on three rebound manuscripts, two of them mentioning the name of the persons who are responsible for this work.

In **S. 764** we find the following rebinding note written by **Leontios *hieromonk*** though his name appears written partly in cryptogram (see Mioni, p. 112) :

f. 200 v. *"The present penticostarion was very much damaged and was bound in Raithos and it was tried by other brothers but none has finished it, and the person who did what you see he has the labour which God knew, and let anyone who removes it from the monastery of the holy Theotokos in Raithos be removed from the dispensation of the Son of God to whom she gave birth. Leontios hieoromonk"*[83]

In **S. 2140**, rebound by **Nikephoros**, we read :

f. 21 r. *".Remember* [me] *brothers whoever are officiating inside the venerable bush* [i.e. the chapel of the Burning Bush inside the monastery of St. Catherine's] *and pray for me who bound this liturgy so that rescued from disaster I may find salvation. The name* [i.e. to pray for] *is* ***Nikephoros hieromonk*** *and* ***Ignatios monk*** *for the initiative was his, in the year of our Saviour 1689 AD, March 15"*[84]

In **S. 931**, rebound by **Akakios** we read:

f. 164 r. *"The present was bound by [...]* ***.Akakios from Ioannina*** *by descent, God will pardon him. The above was written by me* ***Leontios*** *unworthy and sinful and [...] 1664 AD July 16...."*.[85]

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[81] About the scribe see Πολίτης and Πολίτη, 1994, pp. 534- 535. There are 18 manuscripts ascribed to him written between 1660 and 1699.

[82] *«Κατά έτος το σωτήριον αχξβ' (1662 AD) μηνί μαρτίου ιβ' ημέρα δ' ώρα γ' ουκ ίσχυσεν μέλανος ουδέ χαρτίου μηδέ χείρ ουδέ του καλάμου εισχής θεού ο κτίστης των απάντων κόπος εμού αχρίου αναξίου ο κληθής λεόντιος ευτελής των ιερομονάχων . Οι σφαλμάτων πέφυκεν συγνώμην παρέχεταί μοι. Αμαθής γαρ ων και πρώτον μου γραμμένων. Ώσπερ ξένη....εγράφη εν ραιθού».*

[83] *«Το παρόν πεντηκοστάριον είτον πολλά χαλασμένον και ενσταχώθη εν ραϊθού και εδοκημάστει και υπό ετέρον αδελφών αλλά ουδής το ετελίωσε, και ο ποιήσ(ας) ών ορ(ας) αυτός έχει (και) τον κόπον ών ο θεός είδεν και ο αλλοτριώσε εκ της μονής τας υπεραγίας Θεοτόκου της εν ραϊθού έστω αλλότριος της μερίδας του εξ αυτής τεχθέντος υιού του Θεο. οελνψβλς ιε λξλνθυλσ». I am gratefull to my examiner Dr.* Charalambos Dendrinos for pointing out to me the cryptogram of the *hieromonk's* name.

[84] *«Μέμνησθε τοίνυν αδελφοί όσοι ιερουργείτε ένδον της βάτου της σεπτής και δέησιν ποιήτε υπέρ εμού του δέσαντος αυτήν την λειτουργίαν όπως ρυσθείς εκ των δεινών ευρήσω σωτηρίαν. Νικηφόρου το όνομα και ιερομονάχου και ιγνατίου μοναχού η αιτία γαρ ήν αυτού σωτήριον έτος 1689 AD μαρτίου 15».*

[85] *«Το παρόν εστάχωσε ο εν ιεροδιακόνοις ε[...] ακάκιος ο εκ των Ιωαννίνων έλκων το γένος Θεος συγχωρήσι του το άνωθεν εγράψα εγώ λεόντιος ευτελής και αμαρτωλός και [...] 1664 AD Ιουλίου 16...»*

In the front pastedown of **S. 2056** there is an obscure note which nevertheless clearly states that the manuscript was bound by Leontios, possibly the same as the one who has written **S. 1856.**

Apart from the rebinding note in **S. 764** clearly stating that the manuscript was rebound in Raithos by possibly by **Leontios *hieromonk*** with the collaboration of the Elusive binder (see the conclusions at the end, reference to the same place is also made in notes of three more manuscripts: **S. 1814, S. 1856** (written in Raithos) and **S. 1996** (dedicated in the church of Raithos). The similarities between the bindings of these four manuscripts are so evident that all four should in all probability be considered as having been made in Raithos. The remaining ten bindings are more tentatively ascribed to the same atelier, due mostly to the similarities of their decorative and structural features. Given the two dated bindings of **S. 931** and **S. 2140** and assuming that the bindings of six precisely dated manuscripts are the original ones we can prescribe the activity of the Raithos atelier between the years 1652 and 1689.

Six of the thirteen bindings are Greek-style bindings, one is a Greek-style binding on supports, three are Flush Pasteboard bindings, both with supported and unsupported sewing, one is an Islamic binding with flap and the last one (**S. 1856**) is a rather peculiar combination of materials and techniques that could tentatively be designated as Projecting Wooden Board, with sewing supports and interlaced leather fastenings.

2.2.4.2. *Text-block repairs (table 99)*

All three rebound volumes present evidence of text-block repair. In all of them there are spine-fold repairs made either with new or manuscript waste paper cuttings (**S. 764, S. 1768**) or parchment cuttings (**S. 931**). For unclear reasons similar repairs are also found in two manuscripts which were originally bound in the Raithos atelier (**S. 76** and **S. 88**).

On the first text gathering of **S. 1768** we encounter the same kind of repair as in the Giglio and the Elusive atelier, where the presumably damaged bifolia were cut into single leaves which were then joined together again by strips of paper pasted to their spine edges. Pasted strips of paper, either blank or manuscript waste are also used to repair damaged leaf edges in all three rebound volumes.

2.2.4.3. *Endleaves (table 100)*

Endleaves of the bindings considered here can be either separate or integral and follow one of the four distinct arrangements described below:

Separate blank gatherings –15 units.

- **Compound and sewn** - 14 units.

  All fourteen units consist of separate blank gatherings sewn at the beginning (eight units) or at the end (five units) of the text-block . Though they are almost exactly divided between left and right endleaves units they are not necessarily found in the same volumes (table 100).

  Eleven out of the fourteen units follow the arrangement [1]3 and 3[1]. In three volumes they are consistently used in both endleaf units (**S. 433, S. 1768, S. 2140**), while in two of these volumes (**S. 433** and **S. 2140**) they were used as right endleaf units though there are text-block leaves left blank that could be used both as flyleaves or pastedowns, or both. Two units (**S. 1856** and **S. 764**) follow the arrangement [1] 5 and 5[1]. One unit follows the arrangement [2] 2 consisting of a four-leaf blank gathering sewn at the beginning of the text-block of **S. 1996**, of which the first two leaves are used as pastedowns, pasted one under and one above the turn-ins.

- **Compound and pasted** – 1 unit.

  The right endleaf unit of **S. 1814** follows the arrangement 1[1] consisting of a simple bifolio connected with the text-block only by means of the outermost leaf which is used as a pastedown above the turn-ins. It is interesting to note that the blank bifolio was added even though the last two leaves of the text-block are left blank, and they could be easily have been used for the same purpose.

In all three rebound volumes found in this atelier all endleaf units consist of separate gatherings. Nevertheless the same arrangement is also used extensively in originally bound volumes.

Integral blank leaves – 11 units.

- **Compound** - 7 units.

  The arrangements +2[1] and +1 [2] are represented by two endleaf units each. In the latter arrangement one of the pastedowns is pasted underneath the turn-ins and the other above them. The arrangements [1]1+ and +1[1] are found in one volume (**S. 710**), whilst one unit follows the arrangement [1] 5 + .

- **Pastedown only** - 4 units.

  Three of the four units follow the arrangement [1]+ , the fourth follows the arrangement +[1] in accordance with a similar arrangement in the left unit.

Concordance in the arrangement (but not in the number of leaves, where things apparently follow no common pattern) between the left and the right endleaves is found in eight out of the thirteen bound volumes. In five of them, separate endleaves have been used and in the remaining three volumes integral ones.

2.2.4.4. *Sewing (tables 101, 102).*

Seven of the thirteen text-blocks are sewn with supported sewing and the remaining six with unsupported. The number of sewing stations varies between three and six. Apparently there is no strict correlation between the number of the sewing stations and the format and thickness of the text-blocks. Thus we find one 4to sewn on three sewing stations (**S. 426**) and one 8vo sewn on six stations (**S. 1856**). Five out of the seven volumes sewn on supports are sewn on five stations, and the remaining two on three and six stations each. Of the six volumes sewn with unsupported sewing, three are sewn on three sewing stations, two are sewn on five, and one on four sewing stations.

The arrangement of the sewing stations follows one of the patterns mentioned below:

- The pattern B1 is used in seven volumes, six of them sewn with unsupported sewing and one with supported. The number of sewing stations varies between three, four and five, four sewing stations represented by just one volume (**S. 1768**), while three and five are represented by three volumes each.
- The pattern AB1 is used in two volumes both sewn on three supports, though one of them (**S. 2140**) has two unsupported change over stations (meaning five sewing stations altogether), whilst in the other one (**S. 88** see below) there are no unsupported change over stations.
- The pattern B6 is used in three volumes, all of them are sewn on supports, two of them on five sewing stations and one on six.
- The pattern C3 is used in one single volume (**S. 1814**), sewn on three supports (five sewing stations).

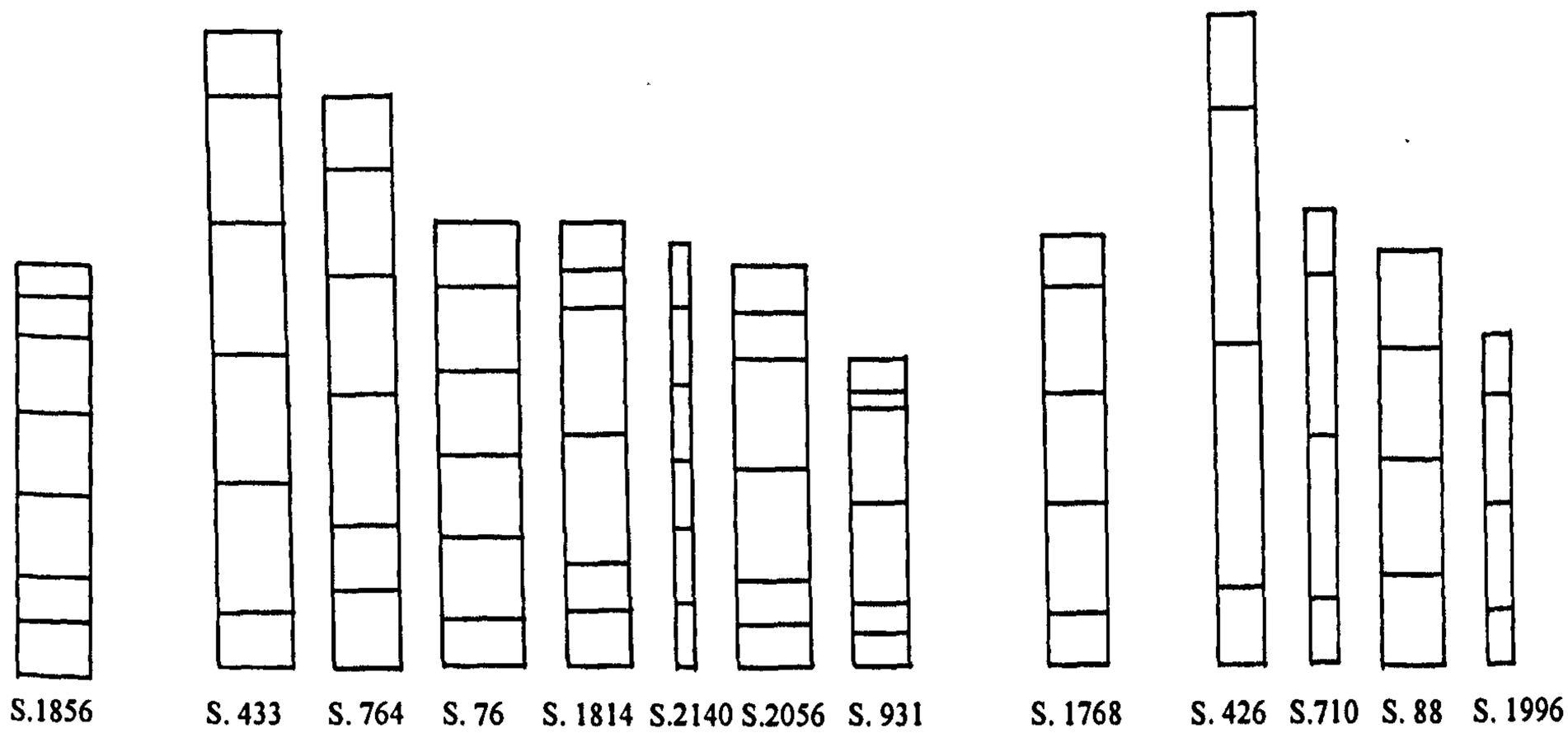


Figure 53. From left to right: line drawing showing the spines and the arrangement of the sewing stations along them of the one text-block sewn on six sewing stations, the seven text-blocks sewn on five sewing stations, the one text-block sewn on four sewing stations and the four text-blocks sewn on three sewing stations.

In all 13 volumes the sewing stations are marked either with needle holes or with V shape cuts consistently found both in the main sewing stations and the change-over stations. There is no evident connection between the type of sewing and the use of one or the other type of pass-through for the sewing thread. In six of the seven volumes sewn on supports, these consist of flat leather thongs, mostly of medium thickness, which are not recessed but remain clearly visible on the spines of the volumes. On four of these six volumes the leather thongs are split. The type of leather used and its similarity with the leather of the cover could not be established except in one volume

where they were found to consist of black leather (**S. 76**), in contrast to the leather used for its cover which is brown. The seventh volume with sewing supports (**S. 2140**) is sewn on three medium thickness, cord supports. In all but one volume the supports are used in the main sewing stations, while change-over stations, as usual, are unsupported. In the unique case of **S. 88**, the text-block is sewn on three sewing stations, all of them supported (change-over stations included), with three split leather thongs laying flat on the spine. This text-block is an 8vo and it is not clear why the binder did not use separate, unsupported, change over stations since there is enough space left in the outermost panels of the spine to accommodate them. According to Dr. Nicholas Pickwoad (personal communication) this is a typical technical feature almost exclusively confined in Germany.

The sewing thread used is mostly linen or hemp (waxed in **S. 88**) while in one uncertain case a cotton thread was probably used. The thread thickness is between medium and thin, of varying twist and either S or Z ply. Only in one volume (**S. 1856**) was it possible to get a more direct view of the sewing process. It appears therefore that in this volume the leather thongs are split only across the spine of the text-block and the sewing probably is made according to the 'single straight sewing' pattern (Szirmai 1999, fig. 8.5b).

2.2.4.5. *Boards and board attachment (table 103)*

Nine of the volumes considered here are bound in wooden boards, the remaining four in pasteboards. The material of the boards is not necessarily connected to the type of sewing, since we find both supported and unsupported sewn text-blocks bound in wooden boards (five and four volumes respectively). The same is true for pasteboards since two of the four volumes bound in pasteboards are sewn with supported sewing and the other two with unsupported.

In 12 of the 13 volumes the boards are cut flush with the text-block, while in **S. 1856** they are projecting therefore forming squares around the text-block. Furthermore in this volume the boards are beveled toward the interior at the head and tail edges. The boards material, either wood or pasteboards, could be identified only in one volume (**S. 1856**) in which acacia or chestnut wood is used. Only two of the wooden board volumes have some kind of groove in their edges (**S. 426, S. 764**). Both are of the BG

5 type, in **S. 426** running all around the three free edges whilst in **S. 764** they are found only in the fore edge, with the head and tail edges left flat.

The spine edges of the boards are shaped differently according to the material from which they are made. The pasteboards have no beveling but are cut straight according to the SET 1 pattern. Conversely, wooden boards have their spine edges beveled according to the SET 3 (seven volumes) or SET 4 (two volumes) patterns.

There is a clear difference of the thickness between the wooden boards and the pasteboards. The latter have an average thickness of three millimeters, while the former are clearly thicker, between six to 10 millimeters. As can be seen in table 103, board thickness seems to be related to the format of the text-block, since the two 4o volumes are bound with the thickest boards, while the unique 24o volume is bound with the thinnest ones. Pasteboards are apparently used for thinner text-blocks, since all four pasteboard bindings actually contain the thinnest of all the text-blocks considered here.

The attachment between the text-blocks and the boards is achieved by means of three different systems:

- **Attachment of unsupported sewn text-blocks with attachment system of I Uns type** (four volumes). Only in one of the four volumes where the I Uns/1 attachment system has been used it was possible to establish the exact variation, and this is **S. 433** where the I Uns/1B attachment system is used. Due to limited visual access there is no information available for the attachment thread used.

- **Attachment of unsupported sewn text-blocks with attachment system of the II Uns type (S. 1996).** As discussed earlier in the Giglio bindings this is a typical attachment system found in Islamic bindings. Therefore it is not surprising that the only volume in this group presenting this attachment system is indeed bound according to the structural principles of an Islamic binding with flap. The precise attachment system in this volume is of the II Uns/B2 type in which the attachment between the boards and the text-block consists of pasting the spine lining extensions to the outer face of the

pasteboards and the pastedowns to the inner face, one under the turn-ins and the other above them.

- **Attachment of text-blocks sewn on supports** (seven volumes). All the text-blocks sewn on supports follow similar attachment systems. Those sewn on leather thongs follow either the Sup 9 (four volumes), Sup 4 (two volumes), or Sup 5 (one volume) attachment systems, differing essentially in the times that the leather thongs pass through the boards, and as a consequence, in the face of the board where their ends rest. The only volume with its text-block sewn on cord cores follows the Sup 5 attachment system which is actually a variation of the Sup 9 where the supports are pasted to the outside of the boards after being frayed out.

Contrary to what we have seen, in the bindings of the Cairo *metochion*, where both supported sewn text-blocks were bound in pasteboards, here there is a predominance of wooden boards over that of pasteboards for supported sewn text-blocks (five to two volumes respectively).

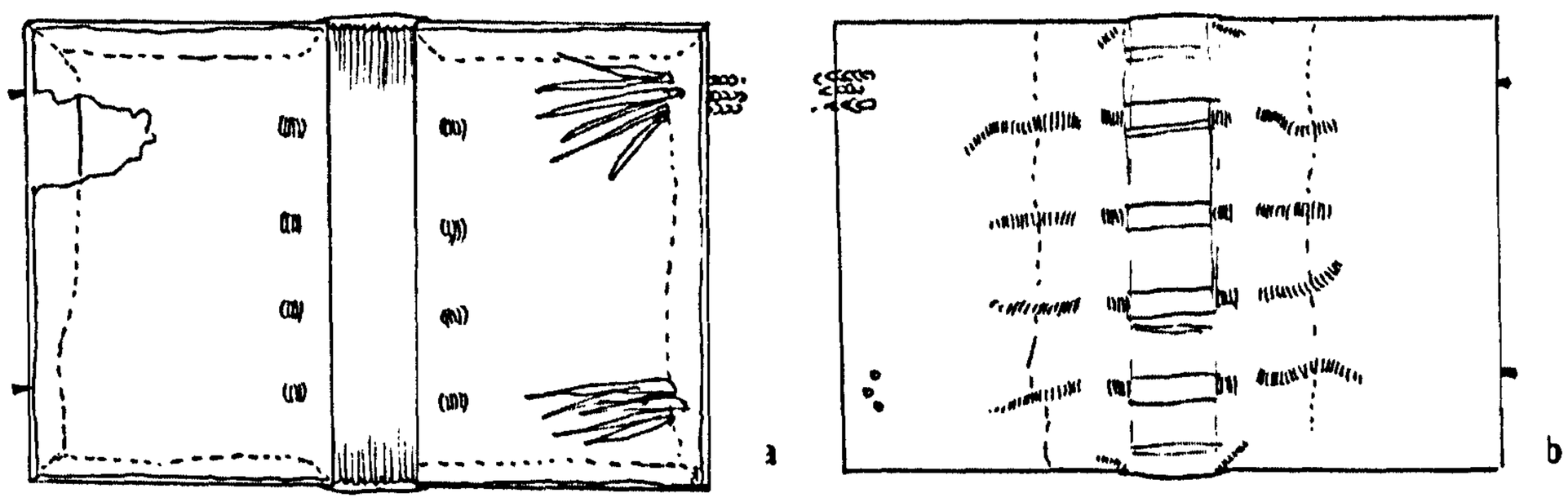
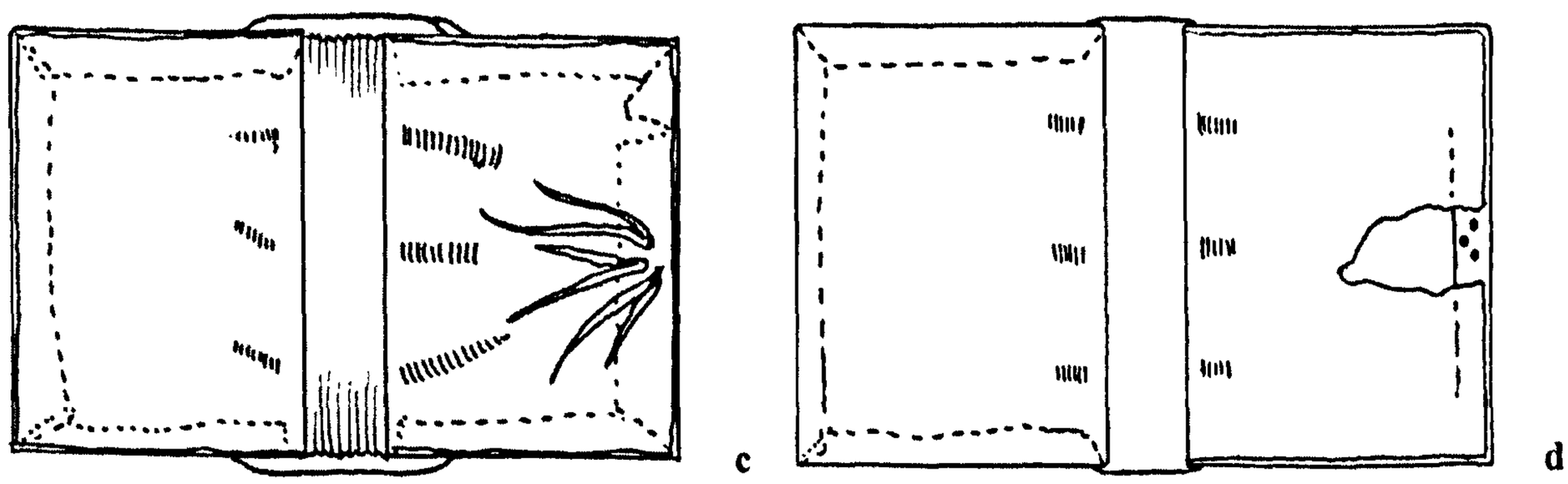


Figure 54. Line drawings showing the inner face (a) and the outer face (b) of the boards of S. 1856 and the inner face (c) and outside of the boards of S. 931. The dotted lines in the inner face indicate the turn-ins and those in the outer face indicate the extension of the spine lining. Hatched areas indicate the sewing supports.



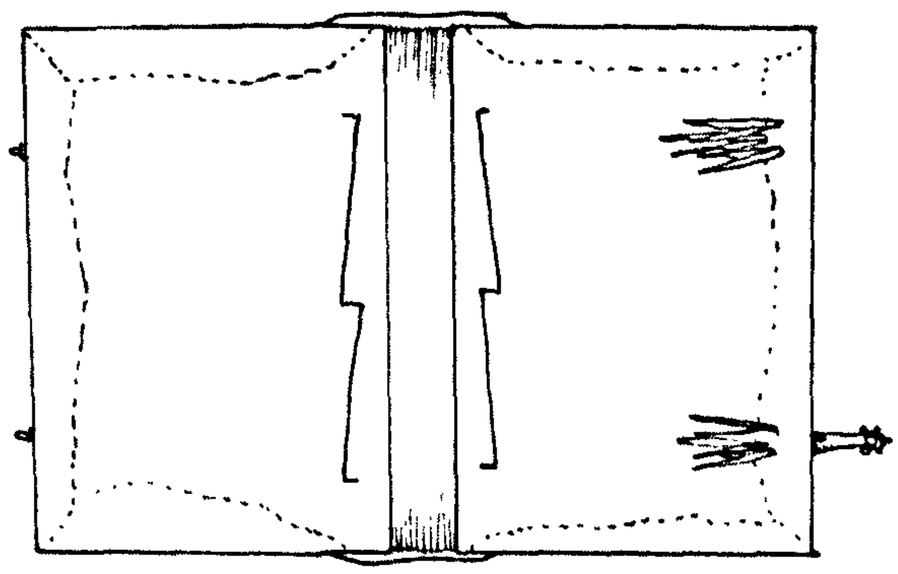


Figure 55. Line drawings showing the inner face of the boards of S. 426.

c

The spine joints of the text-blocks are angled variably from a slight to 100° though most commonly form an angle of 45°.

2.2.4.6. *Spines and spine lining (table 104)*

As can be seen in table 104, in seven volumes the spines are rounded, (four volumes with unsupported sewing structures and three volumes with supported ones), two present a slight spine rounding, and four volumes have their spines left flat, all of them containing rather thin text-blocks bound in pasteboards, including among them the Islamic binding with the fore edge flap (**S. 1996**). All thirteen bound volumes have a spine lining covering all of the text-block spine. In ten cases the spine lining is made of a similar, if not identical, canvas-like textile of natural colour. In two volumes a fine, blue-colour textile of unspecified weave has been used, and in the case of **S. 88** a thick canvas-like textile, also of unspecified weave.

Spine lining extensions onto the boards could be detected in only seven of the thirteen volumes and it was found to extend onto the boards covering a variable portion of their width between 20% and 50%. In all cases spine linings are pasted to the outside of the boards, while apparently, in the case of **S. 710,** the spine lining is limited only to the spine of the text-block and does not extend onto the boards at all.

2.2.4.7. *Endbands (tables 105, 106, 107).*

All 13 volumes considered here have endbands at both the head and tail edges in 12 of them compound, and in one volume simple. There are three different types of endband found amongst these bindings:

- **Two-Core Chevron and Crowning Core** (six volumes)

This type of compound endband consists of two cores, a primary sewing and a secondary sewing. The first core generally consists of a medium to thick cord, with the exception of **S. 88** where it consists of a medium thickness leather thong. The second core is mostly a thin thread, in one case identified as the same hemp thread as that used for the sewing. The endband cores project onto the boards at the head and tail edges for a distance between 11 and 40 millimeters (corresponding to a percentage of the total boards width of between 7, 9% and 20%). They are probably anchored to the board edges but in three of the six volumes this feature is completely obscured. Of the remaining volumes the EAS 1 anchoring system has been used in two volumes, and EAS 8 in one. In **S. 433** there are probably extra accommodation grooves where the anchoring thread is recessed and this might be a possible explanation as to why in three volumes there is no visible evidence of the anchoring system.

In three out of the six volumes, where this type of endband is found, the endband primary sewing is of the Wound Plain on First Core type, and this is probably true for two more volumes. The primary sewing thread is mostly linen (four volumes) or hemp (two volumes), of a medium (four volumes) to thin (two volumes) thickness. In two volumes the thread used is the same as the one used in the sewing of the corresponding text-blocks, while in two cases the thread was found to be waxed. In four volumes the primary sewing threads are of a Z ply, in one of S ply, and in one the ply could not be identified. The twist of the threads varies between tight, medium and loose. The tie-downs are placed exclusively in the center-folds of the gatherings. It was not possible to establish in any of the volumes considered here the number of the tie-downs, but it was possible to establish that in five of the six volumes, they pass through the change-over stations, while in one volume they pass through a different hole placed outside them.

The endband secondary sewing is made with thin silk threads, mostly of tight twist and 2S ply. The colours used vary not only amongst the different bindings but also within individual volumes. For example in **S. 764** the headband and the tailband are different, the first being white and pink the second being white, pink and cyan. In the remaining five volumes endbands are either three-colour (three volumes), four-colour (one volume), or five-colour (one volume). It is worth noticing that the threads and colours of the endband secondary sewing in **S. 433** are exactly the same as the endbands in S. 46 and S. 615 of the Giglio atelier (previously proposed as made by the Elusive binder), while those of **S. 76** and **S. 764** are exactly the same as those seen in the bindings of the Elusive atelier.

- **Embroidered Front Bead and Crowning Core** (two volumes).

This type of compound endband is found in two volumes. It consists of two cores, a primary sewing and a secondary sewing. In one volume the first core consists of a thin cord, in the other it is a thick wool thread, whilst the second core consists in both volumes of thin thread. The endband cores extend onto the boards for a few millimeters in **S. 2140** and 25 mm in **S. 1768** and are anchored there by means of EAS 3 anchoring system for the latter, while for the former this feature could not be seen clearly, though it seems probable that an EAS 1 anchoring system has been used.

The endband primary sewing apparently consists of a plain Wound on the First Core endband even though such a feature could only be established with certainty in one of the two bound volumes. In both cases, the primary sewing is made with the same thin linen thread as the one used in the sewing of the corresponding text-block (**S. 1768**) or a thin cotton thread (**S. 2140**). In both cases the threads are Z ply though of different construction and twist. The tie-downs are found in the center-fold of all the gatherings and pass through the change-over stations holes. The secondary sewing is made with cotton thread in the case of **S. 2140** and silk and wool in the case of **S. 1768**. Both volumes have two-colour endbands, red and white in **S. 1768** and blue and white in **S. 2140**.

- **Cretan on One Core** (three volumes)

This type of compound endband is a simpler variation of the endbands that we have seen in various bindings of the fifteenth and sixteenth century, the later examples represented by the two Cretan bindings of circa 1620 (see section 2.2.2.9.).

In all three examples the cores are single, made of cord in one volume and of leather in the other two. Where leather cores are used they extend onto the boards for a few millimeters and are anchored there by means of the EAS 1 or EAS 8 anchoring systems. Conversely the cord cores extend onto the boards for a distance of 19 millimeters (representing 17.4% of the total width of the boards) and are anchored there by means of the EAS 1 anchoring system.

The primary sewing in all examples is of the Wound Plain on Core type , made with thin linen thread, of medium or tight twist and Z (two volumes) or S (one volume) ply. In two of the volumes the thread used for the primary sewing is the same as the one used for the sewing of the text-block. The tie-downs are found in the centre-fold, and usually in every gathering, passing through the change-over sewing station. Above the primary sewing the warps are worked with either the same thread as the one used for the primary sewing, or with a different one (in the case of **S. 1814** a compound black and white silk (?) thread), just wrapped around the primary sewing with no tie-downs.

The endband secondary weaving is of the Cretan type in two of the volumes, while in the third one it is completely missing though the warps are still preserved. They are two-colour in both cases, green and pink in **S. 931** and cyan and white in **S. 1814**.

- **Simple Wound on One Core (S. 710).**

This is a simple endband consisting of a medium size leather core projecting onto the boards for 30 millimeters (19.7% of the total board width) and anchored there probably by means of the EAS 8 anchoring system, though the overback obscures any firm conclusion to this end. The sewing is made with a thick hemp thread of loose twist and 2S ply, which is anchored in the center-fold of every gathering, though it is unclear if it passes through the change-over sewing stations or uses another hole.

2.2.4.8. *Markers (table 108)*

Seven out of the thirteen volumes originally had compound markers. Of what still remains the following can be said:

Primary markers. In the four volumes where the state of preservation permits firm conclusions to be made they are of the Compound Closed Loop F type . They consist of a core made either of cord (one volume), twisted leather (one volume), or two lengths of thread (the same as the one used for the sewing of the text-block) , around which a single coloured silk thread, green, cyan, or yellow, is wrapped. They are laced through the lower edge of the headbands but it is not possible to establish the exact way in which they are fastened at the back, though in two volumes it was possible to confirm that they also pass through the spine lining. In just one volume the primary marker is probably attached by means of the LtH(d) system.

Secondary markers are still preserved in four volumes. In two volumes they consist of strings of yellow silk or black cotton knotted on the primary markers by means of system KiE and Pli. In one volume the secondary markers consist of one silk string and one silk ribbon, knotted on the primary marker by means of system KiM and KiE. In the last of the four volumes, what remains of the secondary marker is just a mass of linen threads knotted on the primary marker in a way which was not possible to identify.

2.2.4.9. *Cover, decoration and metal fittings (tables 109, 110,111)*

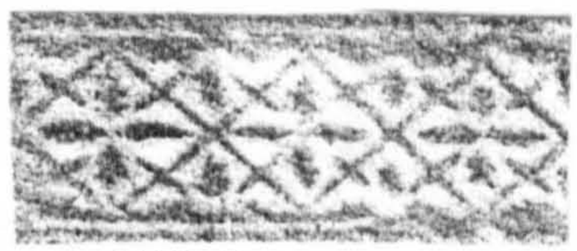
All 13 volumes are bound in full tanned leather, probably goat in all of them, of medium thickness in 12 and thin in **S. 88.** Colours are mostly the usual yellow-brown seen also in the Giglio atelier (six volumes), various hues of brown (five volumes), and red and black in one volume each. The turn-ins follow three main patterns: T-ins 3 is the most common (nine volumes), followed by T-ins 2 (four volumes) and T-ins 1 (one volume). Their width mostly varies, though medium and narrow are also

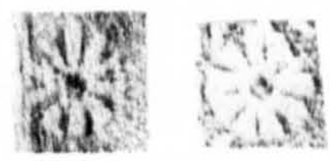
recorded. The corner mitre also varies considerably, but apparently the patterns Co 2 and Co 3 are mostly used.

The yellow-brown leather used on the five bindings dated between 1653 and 1689 is apparently of the same quality as the one used in the bindings of the Giglio atelier dated between 1627 and 1639. Such regular use of the same leather over such a long period indicates probably the presence of a well established supplier from whom the monastery would have been buying the necessary leather.

Only three of the 13 bindings considered here present different decorative patterns between the two boards. The most common decorative pattern used in seven bindings, is Dec 2 with one, two , or three decorative frames, followed by the pattern Dec 3 (in five volumes) with one, or two frames, and the pattern Dec 1 (in three volumes) with two or four frames, and Dec 11 with one frame. The spines are decorated in six volumes, following mostly the SD2/B decorative pattern (five volumes), and the SD1/B in one volume. All 13 volumes are tooled in blind using small single tools and rolls in three of them. There are four multi-use single tools, two relief and two intaglio tools, three rolls, all of them different, and a fillet It is noticeable that seven of the bindings are decorated with just one tool, MuA/b5, while all three rolls and two of the four single tools are found in just one binding each. The MuF/d25 tool is very close to some of the tools seen in the Cretan bindings in section 2.1.2.8.

MuA/b5


MuF/d25


MuF/a60

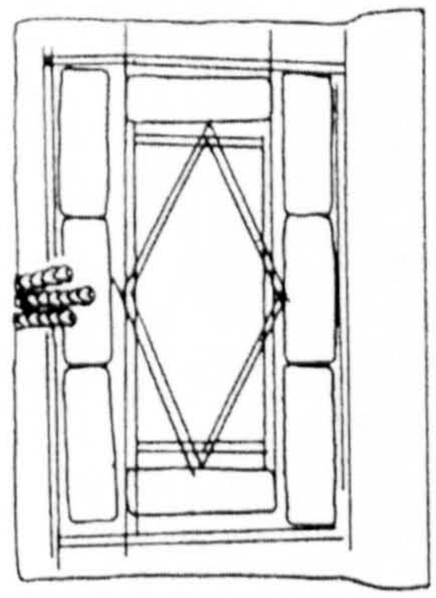
MuF/a59

RoF40

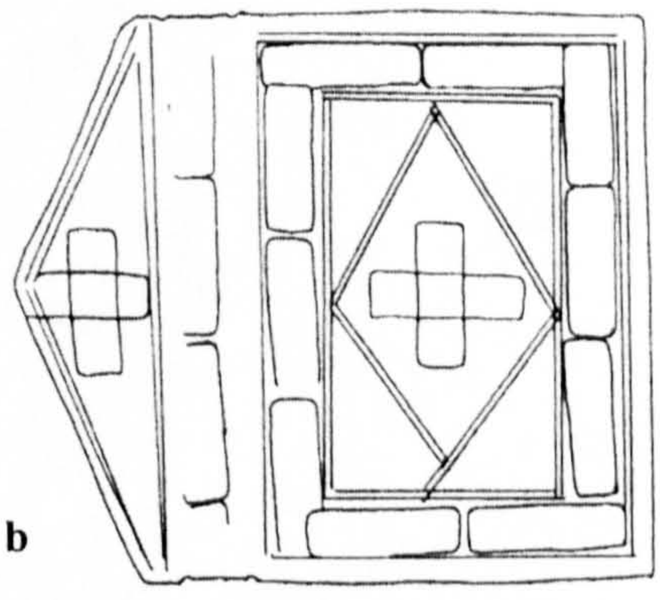
RoF41

RoF43

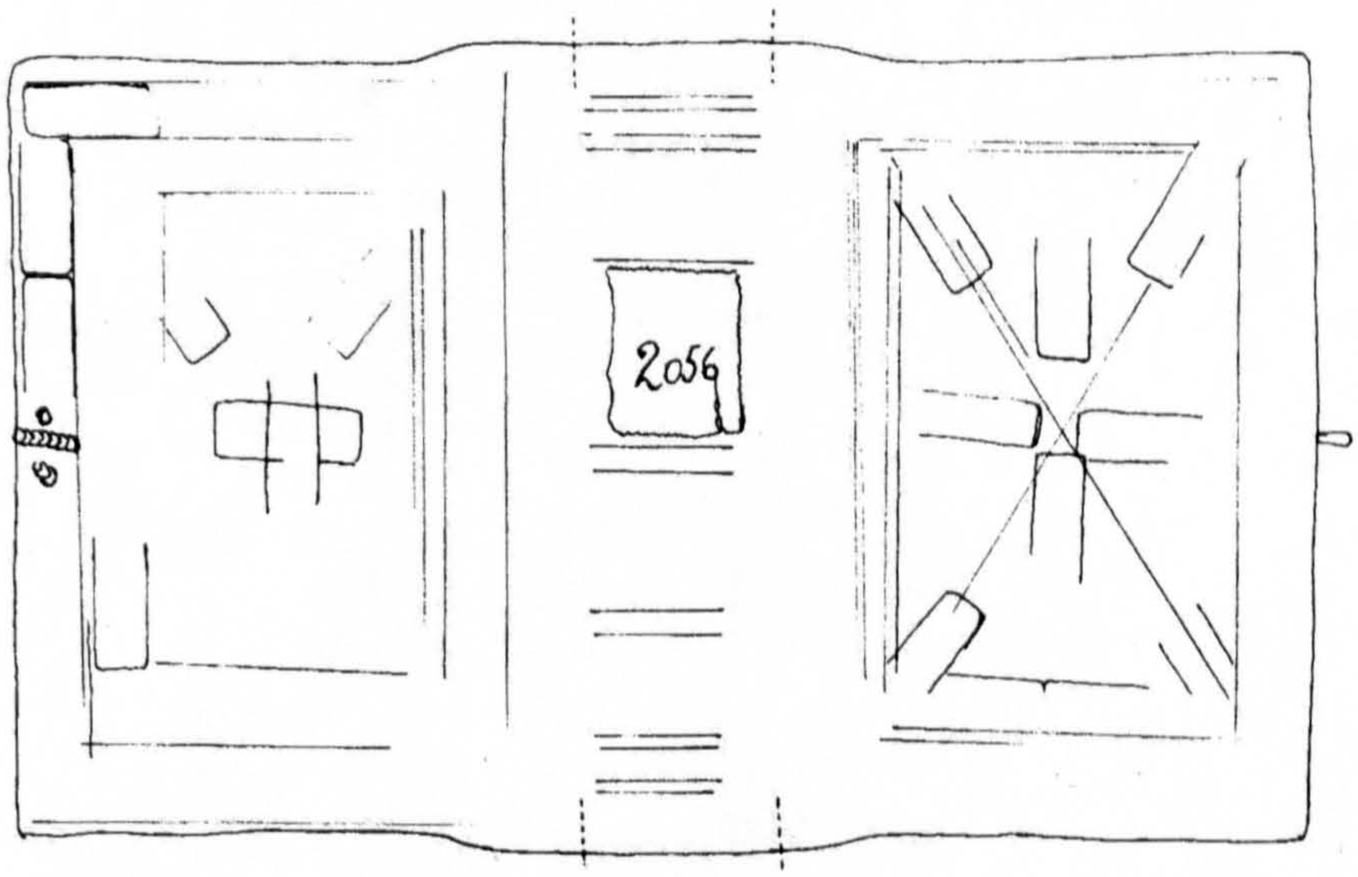
Figure 56. The seven tools used in the bindings of the Raithos atelier.



a



b



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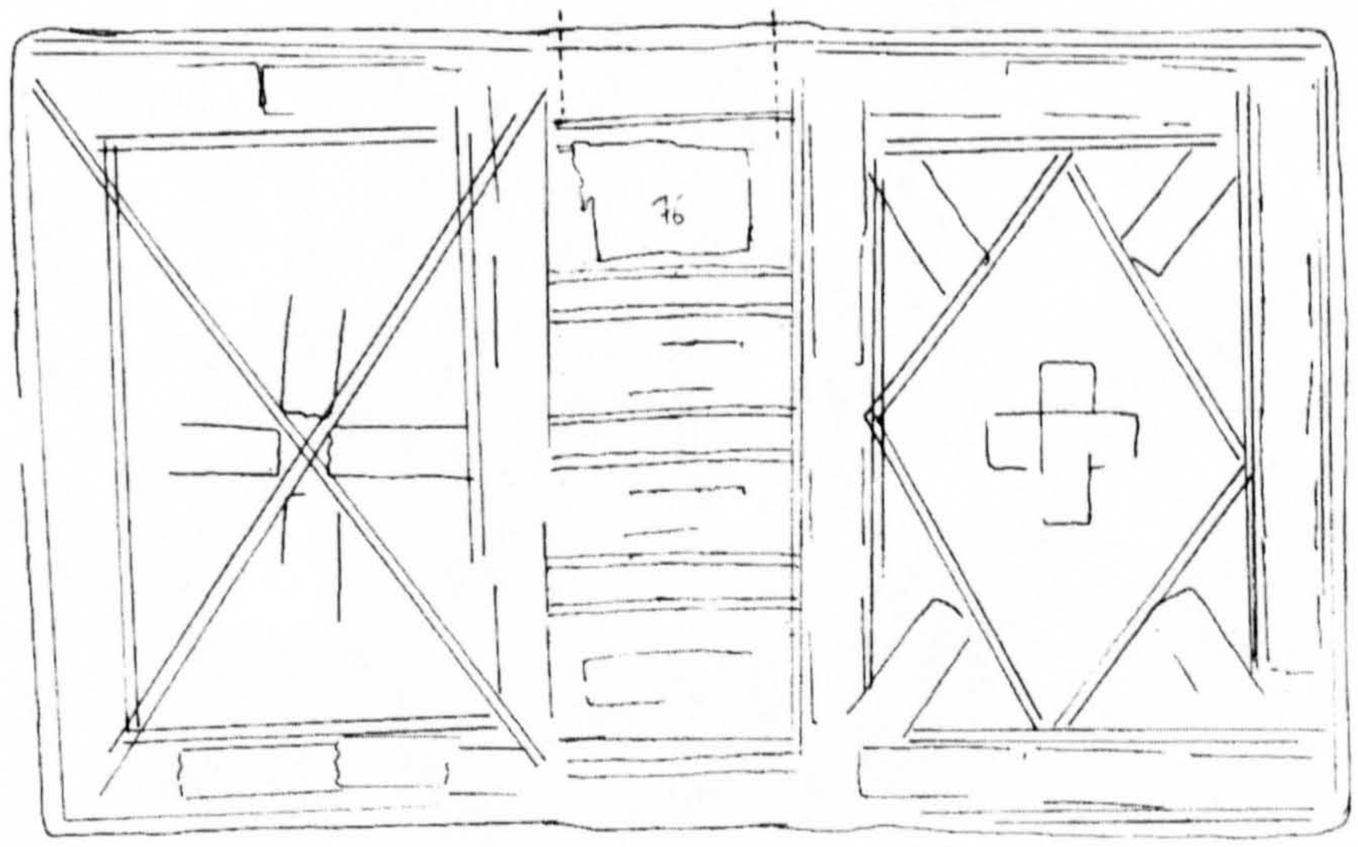
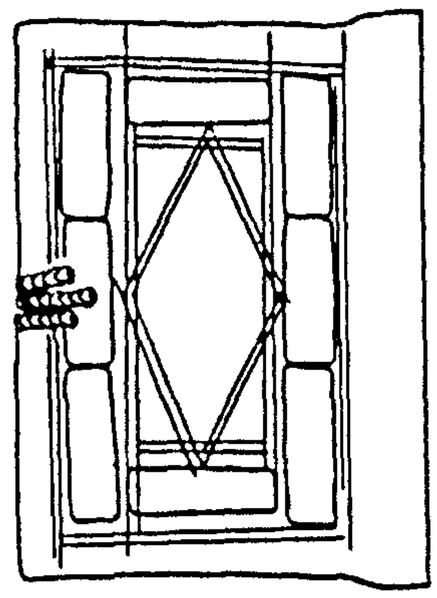
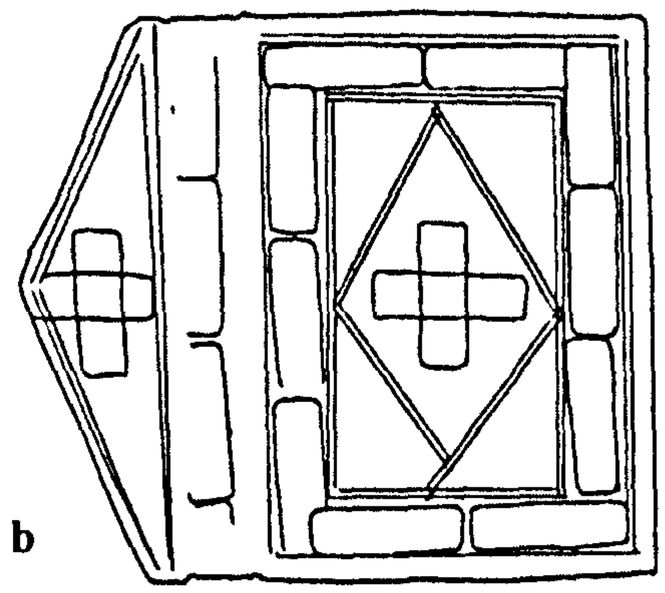


d

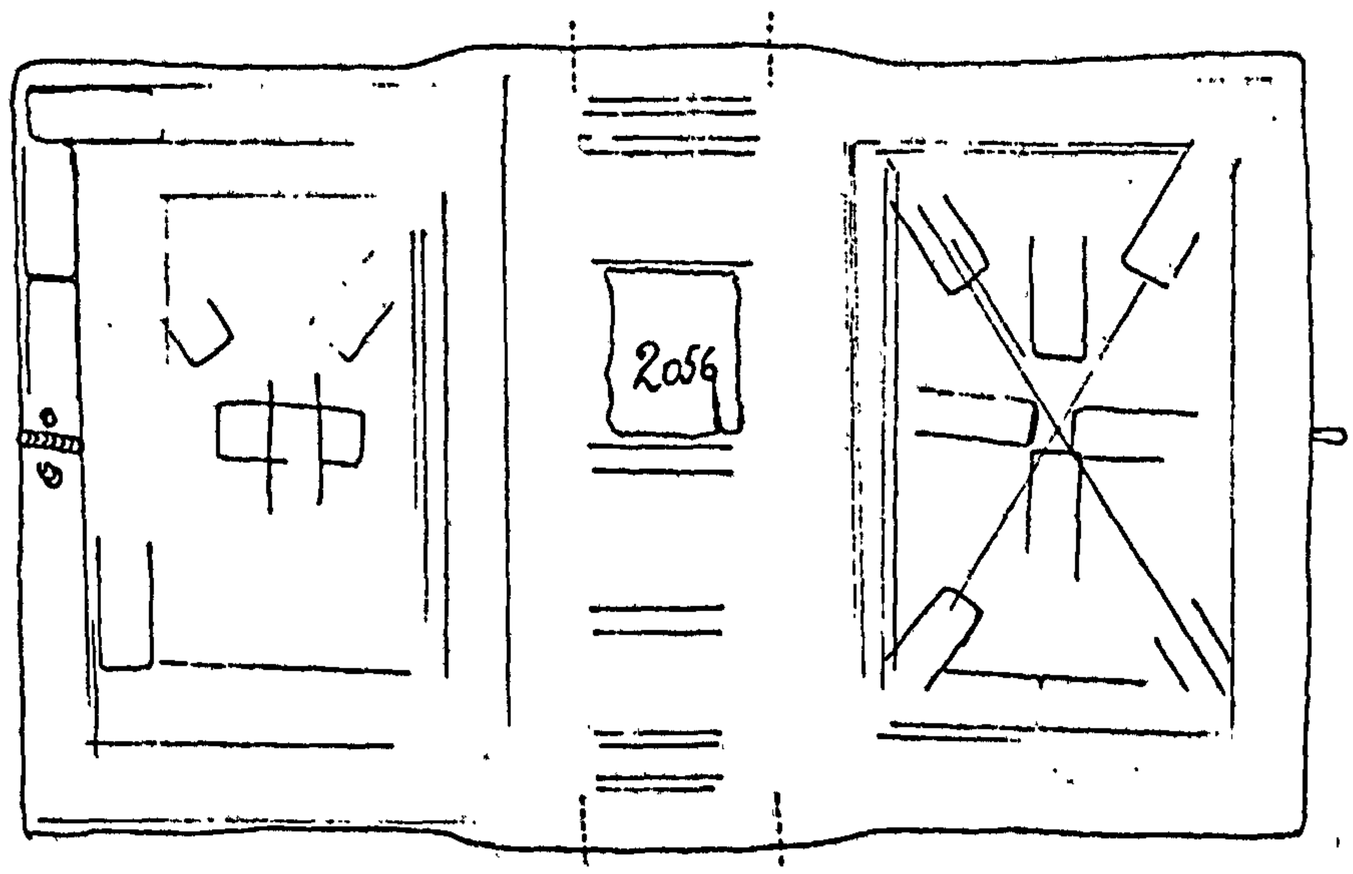
Figure 57. Line drawings showing the decoration of the right board of S. 931 (a), the right board and the fore edge flap of S. 1966 (b), S. 2056 (c), S. 76 (d).



a



b



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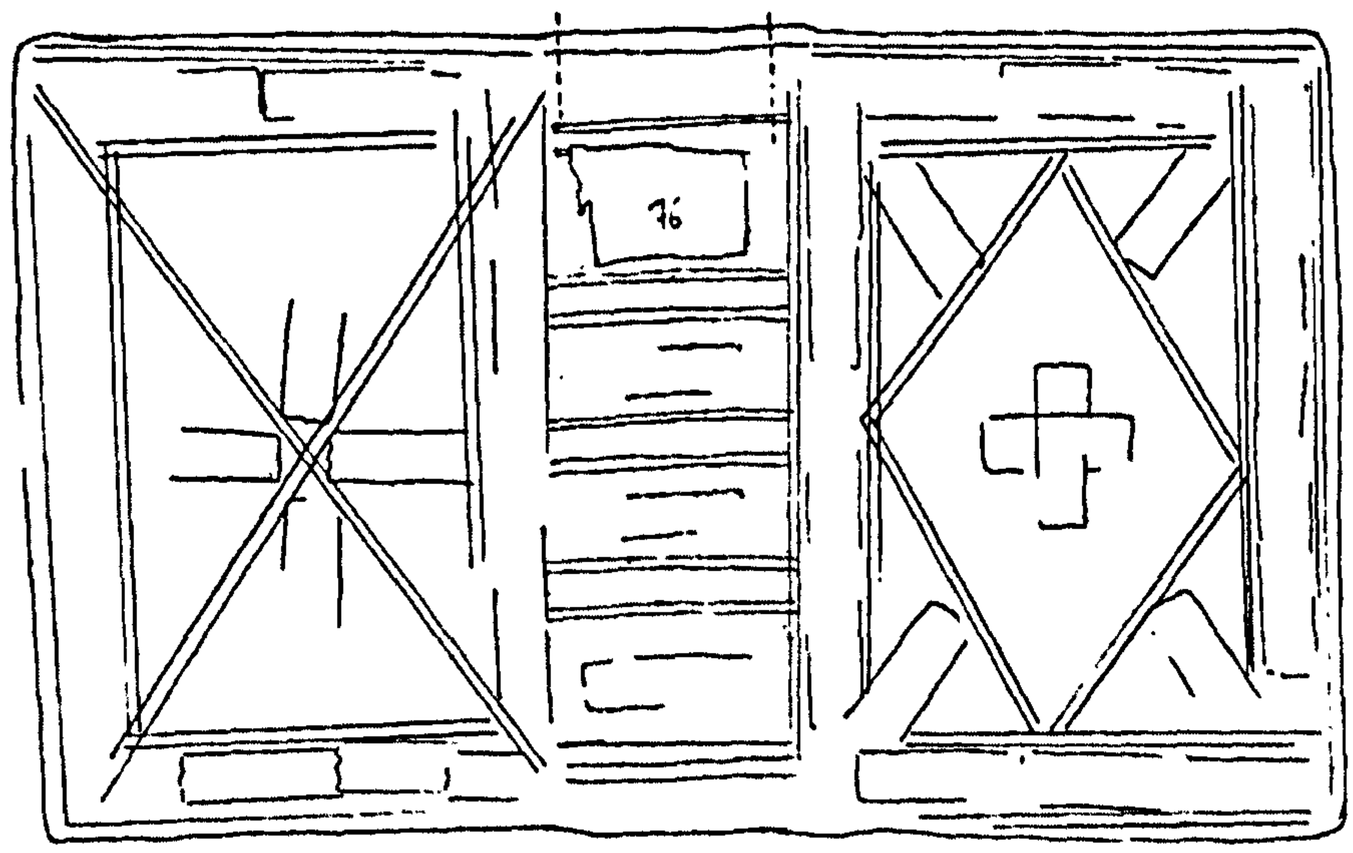

d

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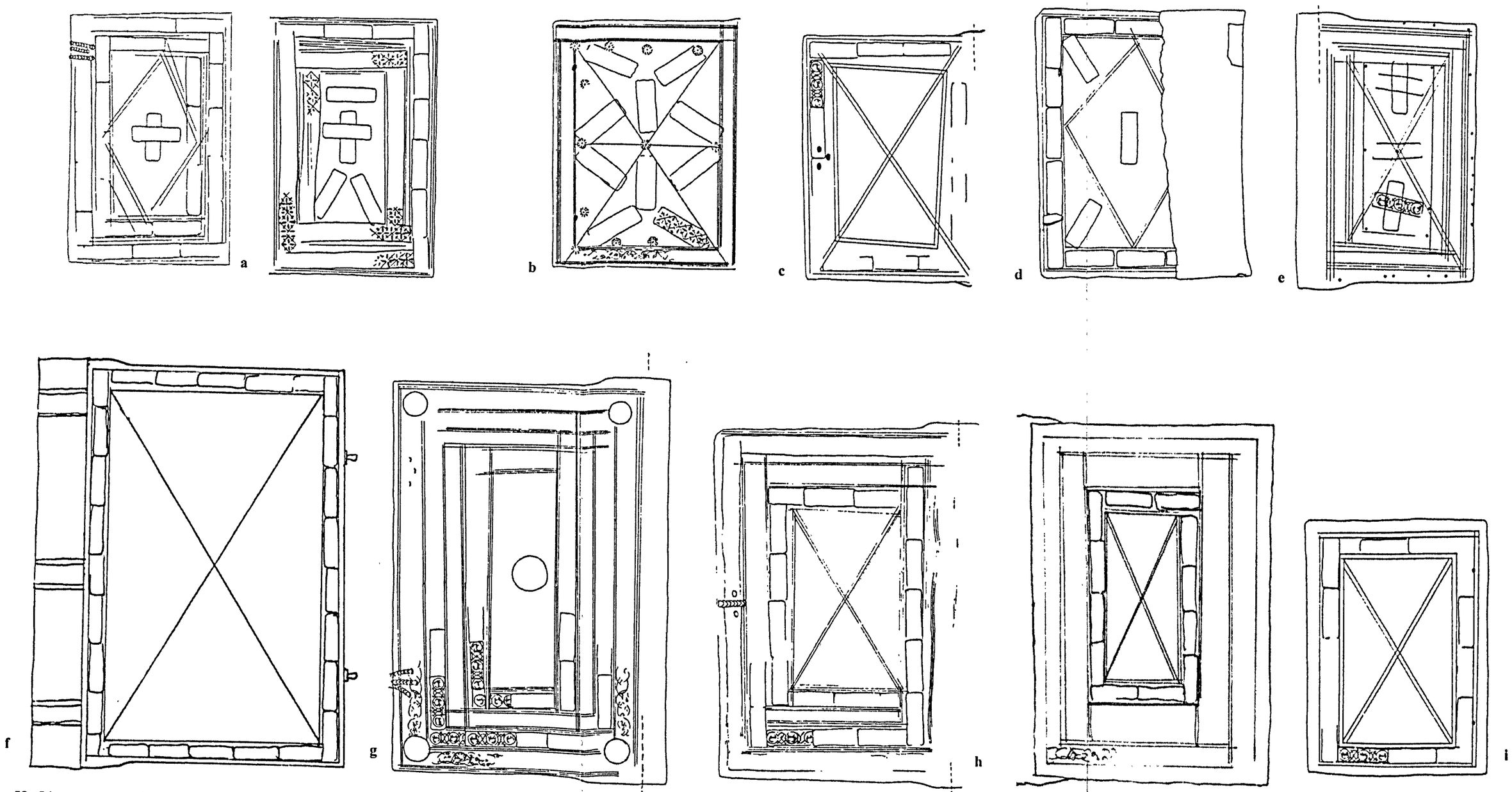

Figure 58. Line drawings of the decoration of S. 1856 (a), the right board of S. 2140 (b), the right board of S. 88 (c) and S. 710 (d), the left board of 1768 (e) and S. 426 (f), the right board of S. 433 (g), S. 764 (h), and the left board of S. 1814 (i).

2.2.4.10. *Metal fittings*

Metal bosses of the *boullai* type are found only on **S. 433**, five on each board placed in the corners and in the centre and made of sheet metal. The metal used is probably an unidentified copper alloy and the nails used to fasten them to the boards are evident above the pastedowns.

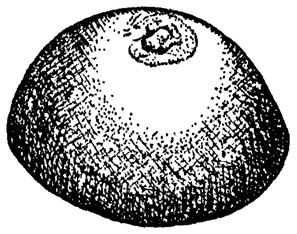

Figure 59. One of the bosses of S. 433 made of sheet metal.

2.2.4.11. *Text-block edges trimming and decoration (table 112)*

Though all the text-blocks have been trimmed there is no evidence as to the tools or the method used. The edges of the text-blocks are decorated on four of the 13 bindings. On two of them (**S. 76, S. 426**) the edges are painted with a solid green colour, now flaking, of the same hue and quality as in S. 520 and S. 605 seen in the Giglio atelier. On both volumes considered here, vestiges of colour left on the leather cover in the area of the endbands indicate that the colour was applied to the edges after the binding was finished (photo 323, 331).

In **S. 433** the head and fore edges are decorated with complex stylized floral motifs drawn in red, while on the tail edge there are three medallions containing inscriptions, probably connected with the title of the book. These inscriptions are hardly legible today, except the first one to the left, where the word «παλαιός» (old) is written.

In **S. 1856** all three edges of the text-block are also decorated with floral motifs drawn in black and red, quite different and less stylized than those of the binding of **S. 433**.

2.2.4.12. *Fastenings (table 113)*

All but one binding have some kind of fastenings, half of them have one single fastening and the others have two fastenings each. As can be seen in table 113, single

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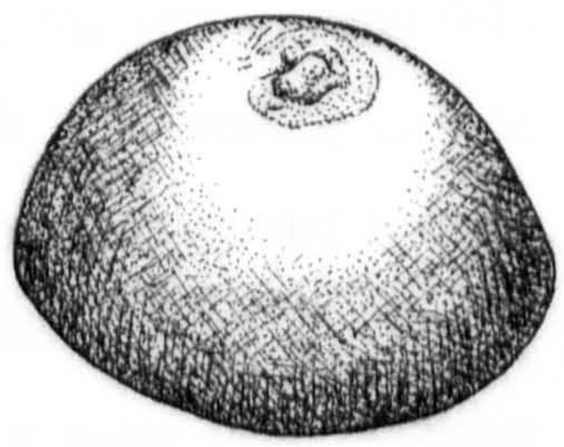

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Though all the text-blocks have been trimmed there is no evidence as to the tools or the method used. The edges of the text-blocks are decorated on four of the 13 bindings. On two of them (**S. 76**, **S. 426**) the edges are painted with a solid green colour, now flaking, of the same hue and quality as in S. 520 and S. 605 seen in the Giglio atelier. On both volumes considered here, vestiges of colour left on the leather cover in the area of the endbands indicate that the colour was applied to the edges after the binding was finished (photo 323, 331).

In **S. 433** the head and fore edges are decorated with complex stylized floral motifs drawn in red, while on the tail edge there are three medallions containing inscriptions, probably connected with the title of the book. These inscriptions are hardly legible today, except the first one to the left, where the word «παλαιός» (old) is written.

In **S. 1856** all three edges of the text-block are also decorated with floral motifs drawn in black and red, quite different and less stylized than those of the binding of **S. 433**.

2.2.4.12. *Fastenings (table 113)*

All but one binding have some kind of fastenings, half of them have one single fastening and the others have two fastenings each. As can be seen in table 113, single

fastening volumes are of a smaller format, though it is also clear that the text-block thickness does not necessarily influence the use or not of fastenings and their number. The Fastenings of these bindings belong to one of the types mentioned below:

- **Three Edged Leather Interlaced Straps.**

  They are found on eight volumes, on five of them following the arrangement 0-1-0← and on the remaining three the arrangement 0-2-0←. It is interesting to note that these fastenings, which are typical of Greek-style bindings, are found here on two a-typical Greek-style bindings: **S. 88** which is a flush pasteboard binding with supports and raised endbands and **S. 1856** which is a projecting wooden boards binding with supports.

  In three of the eight volumes the fastenings follow the long hinge variation, in one the standard form, and in four volumes the precise form cannot be established due to their state of preservation. In all cases the leather used is the same as the one used for the cover of the volume, with the exception of **S. 88** where the fastenings are completely missing and **S. 433** where one fastening is made with the same leather and the other with a different one, though they are apparently contemporary (figure 60).

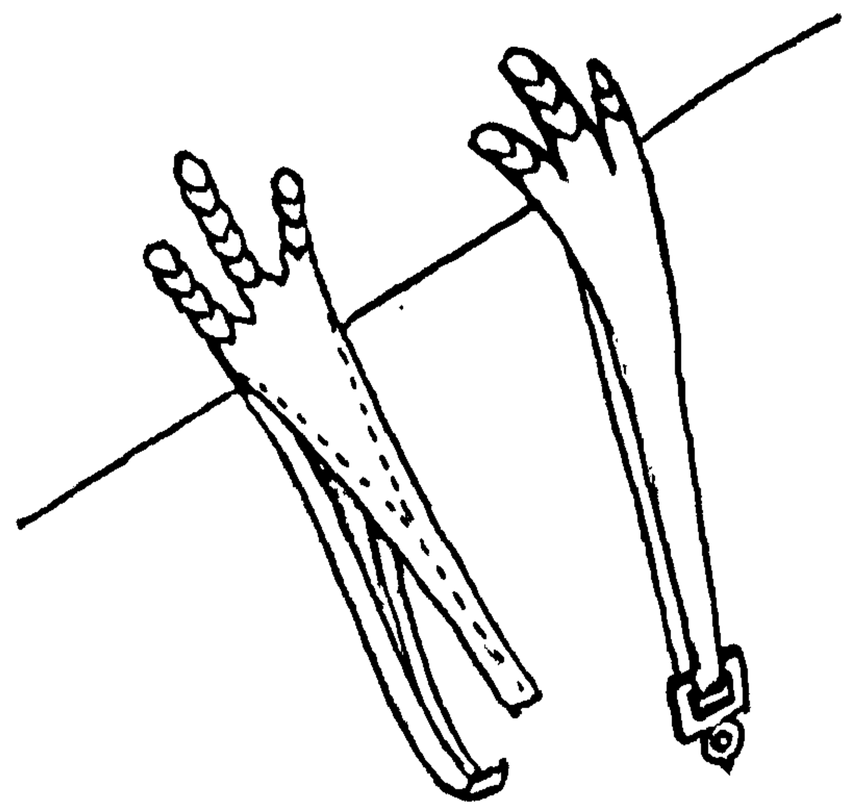


Figure 60. Line drawing showing the fastenings of S. 433,

  The anchorage of the fastenings is of the TBTP (four volumes) or TBT (three volumes) type. The anchorage holes always follows the AH 4 arrangement, while in six volumes the fastenings are anchored to the boards according to the pattern F & T 1, on one volume according to the pattern F & T 8 and on the last one according to the pattern F & T 2. There are four variations of the form of the strap ends: the most commonly found being the UfaP, which is used on four volumes, while UuP and TbPpPC forms (where strap ends lie over the pastedowns but are covered with pieces of pasted paper, a feature seen already in the Giglio atelier bindings) are also used on one volume each.

- **Leather ties.**

In **S. 710** thin leather ties were used, and the same was probably true for **S. 1814** though they are now completely missing. The anchorage of the fastenings is of the TBTP type, the anchorage holes follow the arrangement AH 1 and AH 5, and the turn-ins the arrangement F&T 1. The ties ends follow either the arrangement TbPpPC or UfaP.

- **Silk Ties.**

  In the case of **S. 2140** green and white silk ribbons were used, anchored through a TBT anchorage. The anchorage holes are arranged according to the AH 1 pattern, the turn-ins are arranged according to the F&T 6 pattern and the ends of the ribbons follow the arrangement TpaP.

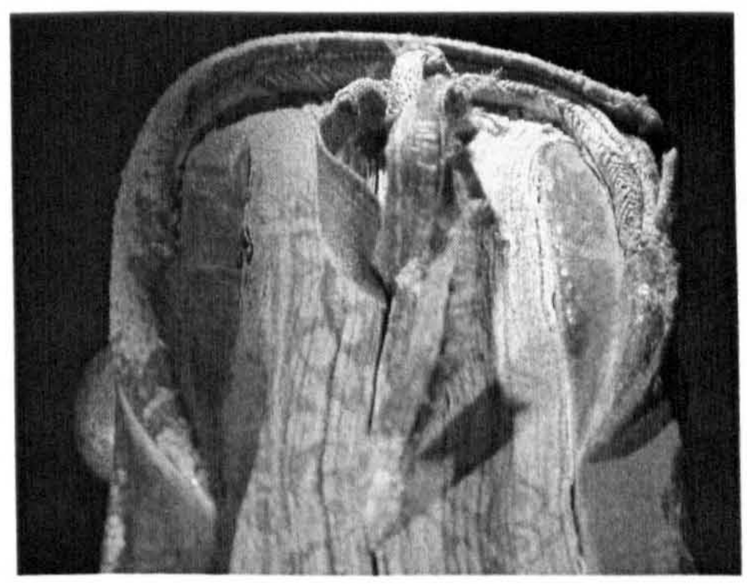
- **Metal Hook and Catch Loop.**

  In the case of the small Islamic with fore edge flap binding (**S. 1996**) an improvised type of hook fastening, tentatively designated Hook and Catch Loop, has been used in order to secure the flap to the left board.

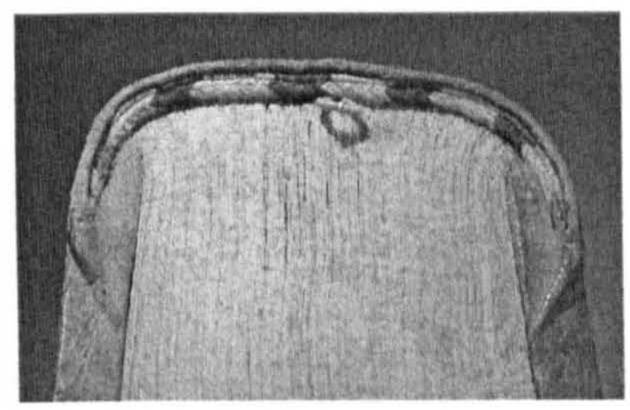
2.2.4.13. *Conclusions.*

Eight out of the 13 bindings considered in this atelier can be precisely dated, either from scribal or binder notes, to between the years 1652 and 1689. In four of the manuscripts reference is made to the *metochion* of the monastery in Raithos either as the place of copying (**S. 1996, S. 1814, S. 1856**) or the place of binding of the manuscripts (**S. 764**). It is therefore sensible to ascribe this atelier to the milieu of this *metochion.* Raithos is still today closely connected with the monastery mostly due to its proximity but also because there still exists a rather flourishing community of Arab-speaking Orthodox Christians. Interestingly in **S. 426**, written in 1653, we find the signature of archbishop Ioasaph, well known from the Giglio atelier, while in the note written in **S. 2140** the binder asks the monks of the St. Catherine's monastery to remember him during the services in the chapel of the Burning Bush. Therefore it seems logical to suppose that these bindings and probably also the manuscripts were originally made in Raithos and brought to the monastery at some later date. The style of endbands in **S. 433** is quite puzzling since they are identical with those in two bindings of the Giglio atelier (**S. 46, S. 615**). The same is also true for the endbands of **S. 76** and **S. 764**, which are identical with those seen in the Elusive bindings. Such

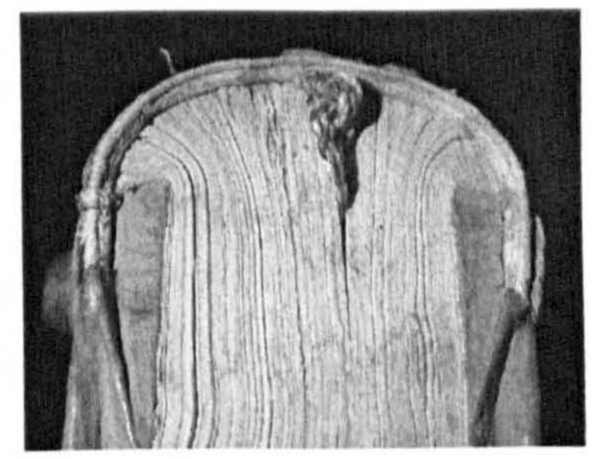
evidence leads to the supposition that either the St. Catherine's monastery and the Raithos metochion shared common materials and techniques or that the same binder/s were working in both places.



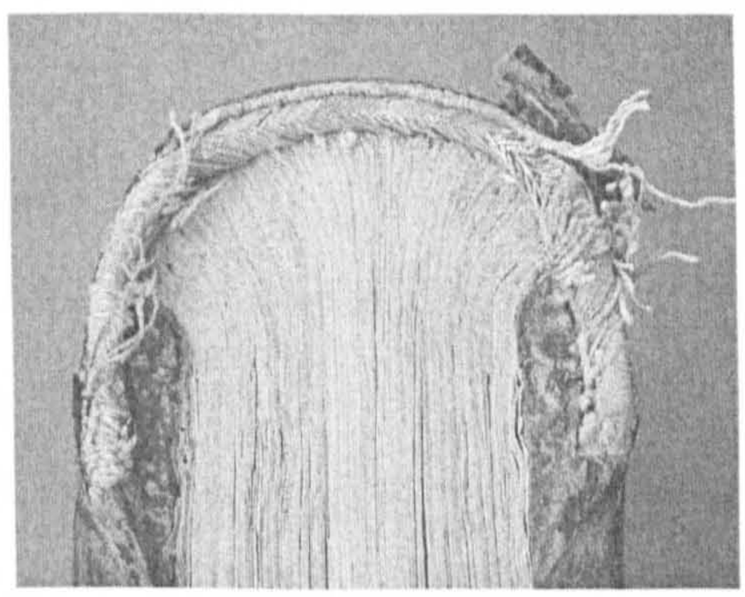
a



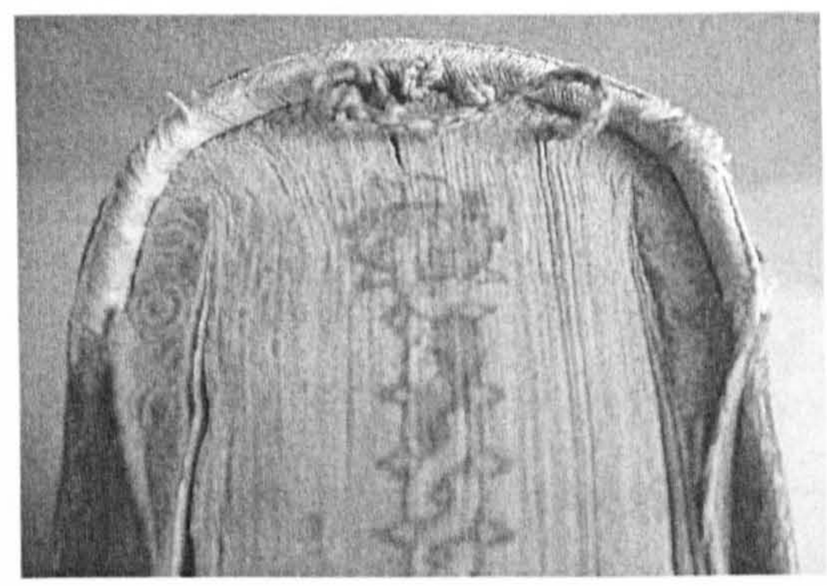
b



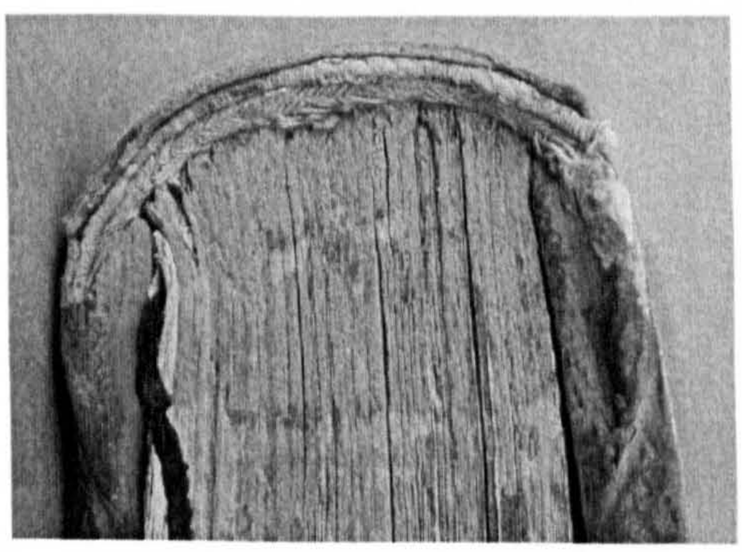
c



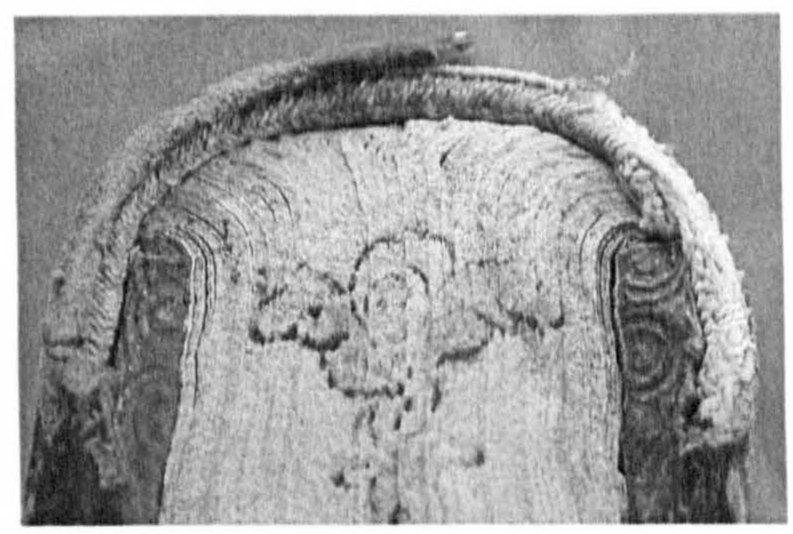
d



e



f



g

Figure 61. Photos of the endband of S. 433 (a), S. 46 (b), S. 615 (c), S. 76 (d), S. 803 (e), S. 764 (f) and S. 1963 (g). The endbands of b, c belong to bindings of the Giglio atelier, and those of e and g to bindings of the elusive atelier.

As a matter of fact the binding of **S. 764** and probably that of **S. 433** could with some safety be attributed to the Elusive binder himself. The rather heavy decoration and the exceptionally round-shaped endband extensions onto the boards put these bindings

within another level or standard of work, being much more refined and well made than the rest of the bindings considered here. On f. 200v. of **S. 764** we find a note saying that the manuscript was very much damaged and that many monks tried to repair it but none succeeded before the present one, who is not named. We can envisage that for such a difficult case the monks of the Raithos metochion would have asked for the help of an expert binder, like the Elusive binder, who would have come to the monastery with the necessary materials (like the silk threads, certainly, but probably also the bosses), though without his decoration tools in order to bind the repaired manuscript. Indeed the unusually high number of decorative frames around the central panel (three in **S. 764** and four in **S. 433**) is also another evidence of a collaboration of the Elusive binder since no binding other than those associated with his production have been found with so many frames around the central panel amongst the seventeenth-century bindings surveyed for this research.

Of the bindings considered here and on the basis principally of similarities in the decoration, at least one more subgroup of bindings can be formed. This comprises the bindings of **S. 1856, S. 1966, S. 931, S. 2140** and **S. 1768**. The last of these bindings has no indication of date but on the basis of the other four can be dated to the second half of the seventeenth century. Two of these bindings were signed by the monks Akakios from Ioannina (**S. 931**) and Nikephoros (**S. 2140**). All the bindings are pretty close as far as their decoration is concerned except the one signed by Nikephoros which nevertheless reveals a close relation to the others in the way the rectangular floral tools have been arranged on the boards surface in a characteristic cross-like way which strongly simulates the way the oblong animal tool has been used, for example in **S. 1768, S. 1856,** and **S. 1966**. However, no matter how similar the decorative features are, there is a great variation in certain technical or structural ones such as the endbands (three different types of endband in five bindings) and the number of the sewing stations (**S. 1996** sewn on three stations, **S. 1768** sewn on four stations, **S. 2140** and **S. 931** sewn on five stations and **S. 1856** sewn on six stations) which could not be explained by the format of the volumes alone. Moreover, while three of the five volumes are sewn on supports the remaining two are unsupported. The later are Greek-style bindings, but within these five bindings one Islamic binding with flap, one Flush Pasteboards with Supports and one Projecting Pasteboards with Supports binding are found. The use of supports also at the change-over sewing

stations in **S. 88** is an interesting piece of evidence, both because points to a Germanic influence and because it is also found in a binding (**S. 1701**) from the New Library atelier which will be considered in the next section. In this subgroup of bindings we find the use of flat split-leather sewing supports quite unique so far for Sinaitic bindings. This feature as well as the decoration clearly differentiates these bindings from those of the Giglio and the New Library ateliers and could thus be considered as a reliable evidence for the attribution of bindings to this atelier.

From the ateliers described so far this one presents the highest hybridization as far as the technical features are concerned. The case of **S. 88** is quite significant to this end since it combines Greek-style features (interlaced strap fastenings, raised endbands which extend to and are fastened onto the boards, canvas spine lining all along the spine of the text-block extending onto the outer face of boards) with pasteboards and split leather sewing supports laced through the boards in a way typical for contemporary European bindings sewn on supports. Nevertheless the similarities in various technical and decorative features indicate the production of a specific binding atelier where at least two binders were experimenting with traditional and new binding techniques.

CHAPTER 3.

THE EIGHTEENTH CENTURY IN SINAI.

2.3.1. Historical Outline.

The eighteenth century represents a period of intense activity in the St. Catherine's monastery; various buildings were constructed, various artists worked in the monastery and the number of *metochia* that the monastery owned abroad arose as well as the number of the monks. For this reason the eighteenth century has been called the Golden Age in the history of the monastery (Ντιγκμπασάνη 1993, p. 37).

The first recorded person who thought of surveying and listing the books preserved in the monastery was Cosmas the so called 'Byzantios', who has been archbishop of the monastery between the years 1702 and 1708. As early as 1704 he attempted to compile the first recorded catalogue "... *of the books that were found, which are in use by us, collected from various places for this reason and which are listed in alphabetic order*" (Άμαντος 1953, p. 55). This catalogue of which parts are still preserved in the library lists a number of books that are now missing from the library.

The next important person related with the books of the monastery is the archbishop Nikephoros Marthales who is considered to be one of the most prominent and educated persons in the history of the monastery during the eighteenth century. He was born around the year 1680 in Heraklio of Crete and he died in 1748 in the *metochion* of St. Mathew in the same city, after having being abbot of the monastery for nineteen years between 1728 and 1747 (Άμαντος 1928, pp. 71-83, Ντιγκμπασάνη 1993, pp. 24-27, 38-39).

Apparently he has been copying and possibly binding manuscripts since the beginning of the eighteenth century as a note in his hand in **S. 1464** indicates (see below). He was abbot of various *metochia* of the monastery, like the one in Heraklio of Crete in1697, the *metochion* in Rimniki in Wallachia in 1703, and the *metochion* of St. John Prodromos in Constantinople altogether for ten years, between 1717 and 1731. It was actually in this latter *metochion* that one of the manuscripts considered here (**S. 2137**) was written in 1719 by Ionnikios *Mitylineos* (i.e. from the island of Mitylene) the later abbot of the St. Catherine's' monastery.

As the former librarian of the monastery father Demetrios says in his essay on the history of the library (Ντιγκμπασάνη,1993), Nikephoros was constantly concerned together with his monastic and other duties with collecting both manuscripts and printed books, especially on music. While still an abbot of the metochion in Constantinople he also sponsored the printing of a *proskinitarion* of the monastery in 1727 (Άμαντος 1928, p. 82).

During his service as an abbot in the St. Catherine's monastery he undertook various restoration and building works of which the most important of all was probably the construction of a separate building to be used as a library. There is an important note in his hand giving us the following information:

> *"...Seeing the books dispersed, some in closets, others in windows and cells, we felt for them and through the Sinaxis ordered librarian the most educated teacher and protosynkelos, kir Isaias, who with much labour and knowledge gathered all the books wherever they where found and catalogued them and put them in the right position, as can be seen now in the library, which was built with much care by monk chatzes Philotheos with the old craftsman Simeon and all the present brothers..."*[86]

In the entrance of the library the following epigraph was written :

> *"The present library was built with the care /*
> *and presence of the most blessed and /*
> *reverent archbishop of the Mount Sinai /*
> *kiriou Nikephorou, with the labour of architect Philotheos /*
> *monk of Sinai and Simeon. /*
> *and those who read it remember them. 1734 AD"*[87].

According to father Demetrios (Ντιγκμπασάνη 1993, p. 39) this library was close to the abbot's cell, as to facilitate the supervision of the whole process of transportation, ordering and cataloguing of the books. In an engraving, by a Sinaitic monk named *hierodeacon* Gennadios, printed in the metochion of the monastery in Constantinople in 1813, representing the ground plan of the monastery, among other rooms the place

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[86] *«Βλέποντες δε τα ευρισκόμενα βιβλία κατασκορπισμένα άλλα εις τουλάπια, άλλα εις θυρίδας και κελλία εσυμπονέσαμεν και βάλλοντες είς την σύναξιν επιστάτην των βιβλίων τον λογιώτατον άγιον διδάσκαλον και πρωτοσύγκελον κύρ Ησαίαν, όστις μετά πολλού κόπου και σπουδής εσύναξε πάντοθεν τα βιβλία και έγραψεν αυτά και είς στάσιν πρέπουσαν έβαλεν, ως φαίνονται τανύν εις την βιβλιοθήκην, ην ετεκτόνησεν ο κύρ Χατζής Φιλόθεος μοναχός μετά πολλής επιμελείας μετά του μαίστορος γέροντος κυρ Συμεών και πάντων των παρευρεθέντων αδελφών...». Published in* Παντελάκη, 1939, p. 108. Note also reproduced in Ντιγκμπασάνη, 1993, p. 39. Unfortunately it is not recorded in which book this note is found.

[87] *«Ανεγέρθη η βιβλιοθήκη αύτη επιμελεία / και παραστάσει του πανιερωτάτου και / θεοσεβεστάτου αρχιεπισκόπου Σιναίου Όρους / κυρίου Νικηφόρου, εργασίας τέκτονος Φιλοθεόυ / μοναχού σιναίτου και Συμεώνος. / Οι δε αναγιγνώσκοντες, μέμνησθε τούτων. αψλδ'(1734 AD)».* The epigraph, which is carved in wood was first published in Rabino, 1935, p. 86.

of a library is recorded which is actually close to the archbishop's apartments (figure 62). We could probably safely identify this library building as the one built by Marthales in 1734 since there is no evidence of another library building between that year and 1813 and also because there would probably be no reason to build still another library in the span of less than a century.

In this new building all the books, apparently dispersed in various locations inside the monastery, were moved and in this occasion one of the educated fathers of the monastery, *protosyngkelos* Isaiah, was appointed by the archbishop Marthales to survey and list the books, both printed and manuscripts. It is probably in that occasion that a number of damaged books or old manuscripts that fell in disuse were moved in the small room on the north wall where they were discovered in 1975 and called 'The New Finds' ever since (Δαμιανός, 1998, pp. 18-20). Indeed as we will discuss below, in the occasion of the new library at least some repair and rebinding of the manuscripts took place. During the transportation of the books in the new library and their survey by Isaiah, important manuscripts and printed books were found to be missing, something that resulted in more strict control to visitors. As a matter of fact, a European pilgrim, R. Pococke , was able to enter the library in 1739 but was not able to read any manuscript book (Ντιγκμπασάνη 1993, p. 39). It is from this period onward that the book collections of the monastery started to attract people in search of valuable, old manuscripts which in some cases they were able to isolate and take out of the monastery. Similar initiatives for cataloguing and ordering the books were to be repeated with the initiative of various archbishops in the centuries to come (Ντιγκμπασάνη 1993, pp. 55-72).

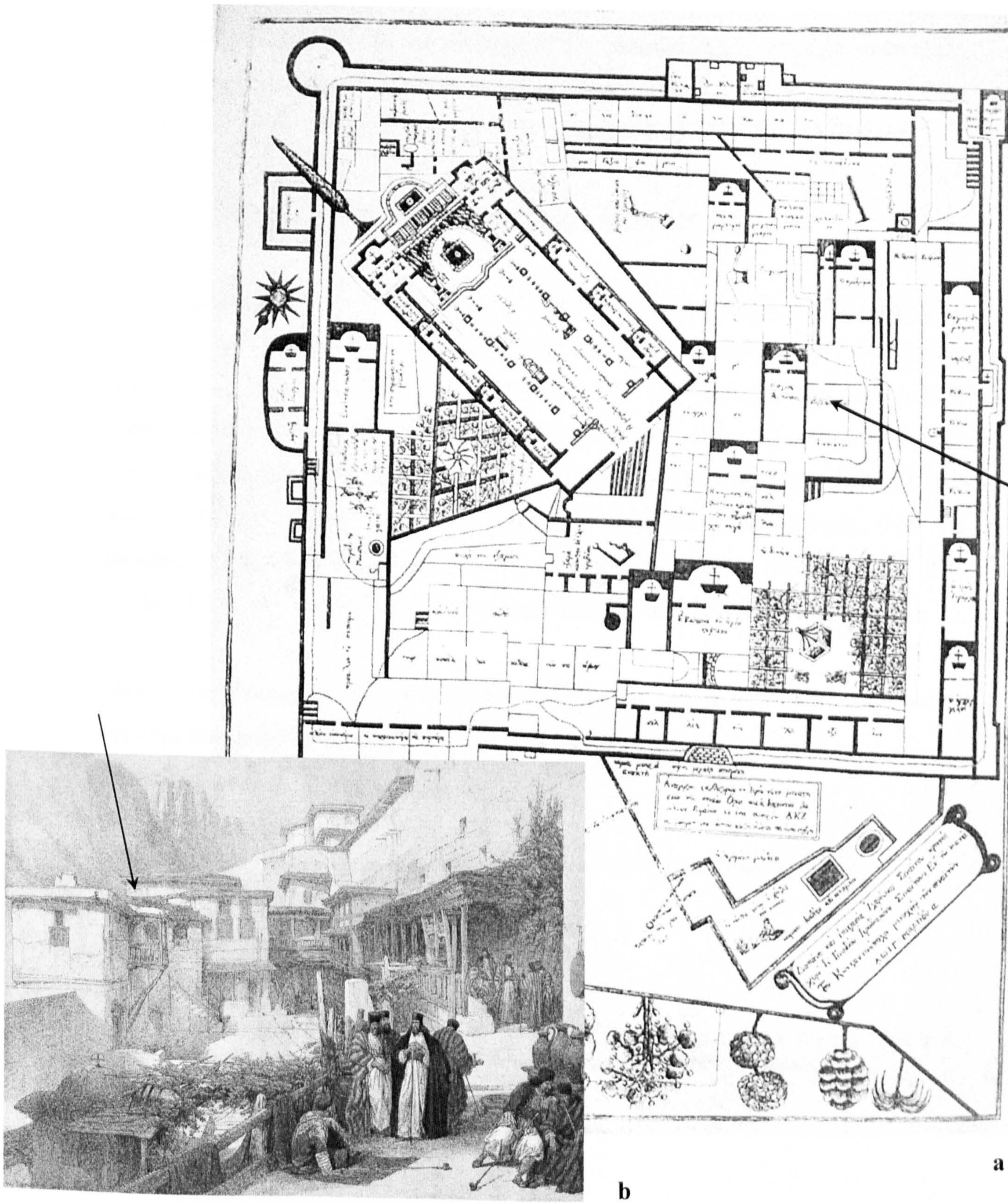

Figure 62. Plan of the monastery (a) as depicted in a print of 1813 engraved by *hierodeacon* Gennadios in Constantinople. The arrow shows the place of the library (after Papastratou 1986, vol. 2. p. 357). The print by D. Roberts from around the year 1839 (b) shows a view of the southwestern wall, where the new wing of the monastery is found today and the Marthales library building indicated with an arrow (after Bourbon 1988, p. 11).

2.3.2. THE NEW LIBRARY ATELIER.

The present group comprises the bindings of 14 manuscripts all probably made at the St. Catherine's monastery in Sinai, some of them apparently in the occasion of the building of the new library in the year 1734 by archbishop Nikephoros Marthales.

2.3.2.1.*Text-blocks, scribes, donors and binders (table 114, 115)*

Twelve manuscripts are written in Greek and two are written in Arabic. They are dated between the fourteenth and the first half of the eighteenth century, six of them precisely dated between the years 1323 and 1711. They contain either theological (eight volumes), music (three volumes), liturgical (one volumes), or various other texts (a philosophy text and a copy of the Cosmas Indicopleustis history). All manuscripts are written on western paper (in four of them polished), with the exception of **S. 1464** which contains a part written on eastern paper in 1323. The formats are mostly 8vo (12 manuscripts) and there are also one 24to and one 16mo.

Four of the manuscripts bear a note by the scribe but only in two of them the actual name of the scribe is recorded.

In **S. 1464** we read the following notes:

f. 270 v. *"The present book was finished in the year 1323 AD indiction 6th"*[88]

In **S. 1966** we read the following note:

f. 24 r. *"The present was finished by the hand of archpriest in the year 1711AD during the service of the most holy, the most blessed and the most music cultivated kir **Athanasios**"*[89]

In **S. 2029** we read the following note:

f. 241v. *"The labour of sinful **hieromonk Philotheos** and those who read it may be in good health with the God. Years after the incarnation 1628 AD on the 1st of August"* [90]

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[88] *«Επληρώθη η δέλτος αύτη επί έτους στωλα' (6831AM = 1323 AD) ινδ. στ'»*

[89] *«Ετελειόθη το παρόν δια χειρός αρχ[ιερέως?] επί έτους 1711 αρχηερατούντος του μακαριοτάτου θει οτάτου τε και μουσικωλογιωτάτου κυρίου κυρίου αθανασίου».*

In **S. 2137** containing two different text-blocks we read the following note:

f. 108 v. *"Was written in the patriarchate of Constantinople in the year 1672 AD in the month January"*[91]

f. 65 r. *" Was written in Constantinople in the metochion of St. John in the year 1719 AD, on the 13th of February by the hand of* ***Ioannikios of Mitilene and Sinai****"*[92]

On the basis of close personal observation it was possible to establish that **S. 1889** and **S. 1890** were also most probably written by the same scribe on the same paper.
There are three binders recorded thanks to their notes written on four rebound manuscripts (plus the binding of a printed book that will be considered in the end of the section). These are :

Nikephoros Marthalis.

In **S. 1464** we read the following note:

f. 270 v. *"The present Stecherarion belongs to me, hieromonk Nikephoros Marthalis from Crete, and I bound it with much labour in the year 1700 AD"*[93].

Unfortunately this note does not refer to the present binding of the manuscript but rather to the previous one. Nevertheless it is of interest since it proves that Marthalis was able to bind books, something that is also attested by the former librarian of the monastery father Demetrios (Ντιγκμπασάνη 1993, p. 26) based in a number of rebinding notes in his hand of which the source unfortunately is not specified. Nevertheless the following note offers some evidence that he may have been involved in the bindings made in the monastery in 1733.

Iaonnikios Rhodios.

In **S. 403** we read the following note:

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[90] *«Αμαρτωλού .φιλοθέου ιερομονάχου πόνος οι δε αναγινώσκοντες έρρωσθε εν κυρίω. έτι απο της ενσάρκου οικονομίας αχκη' (1628 AD) αυγούστου α''»*

[91] *«Γέγραπται εν τω πατριαρχείω της κωνσταντινουπόλεως έν έτει αχοβ' (1672 AD) μηνί ιανουαρίου ...»*

[92] *«Εγράφη εν κωνσταντινουπόλει εν τω μετοχίω του αγίου ιωάννου κατά το αψιθ' (1719 AD) φεβρουαρίου ιγ' δια χειρός ιωαννικίου μιτυληναίου και σιναίτου»*

[93] *«Το παρόν στηχιράριον υπάρχη εμού νικηφόρου ιερομονάχου κρητός του μαρθάλη και μετά πολλού κόπου εσυνέδεσα αυτώ κατά τω αψ'(1700 AD) έτος».*

Left flyleaf. *"The present book was rebound in the year 1733 AD with the help and supervision of the holiest archbishop of mount Sinai, kir **Nikephoros**, with the diligence and labour of **hieromonk Ioannikios from Rhodes** and may the Lord give them the reward of their effort"*[94].

The same note is also found in **S. 1701.**

Monk Raphael.

In **S. A. 339** we read the following note:

f. 3r. *"The present was bound by **monk Raphael** and it belongs to the holy monastery of Sinai and no one dares to take it away or he will be irreversibly unchurhed"*[95].

With the exception of Nikephoros Marthalis, whose binding unfortunately is not preserved, we are not in position to know any more biographical details for the two binders mentioned above.

One of the manuscripts is probably bound in this atelier for the third time (**S. 1464**), eight manuscripts are probably bound for the second time, among which the two signed bindings by Ioannikios Rhodios and the one by monk Raphael, and five are bound probably for the first time, one of them, **S. 2137** dated in 1719. Considering the above we could confine the period of activity of this atelier at least between the years 1719 and 1733.

Fourteen bindings are projecting pasteboard bindings with supports, and the remaining two are flush pasteboard bindings with supports.

2.3.2.2. ***Text-block repairs (table 116)***

All but two rebound volumes have spine-fold repairs made with new paper strips pasted all along or locally in the spine-folds of the gatherings. These paper strips are always pasted in the outside of the gatherings, except one single volume, **S. 403,** where they are pasted in the inside of the central bifolio of a few gatherings.

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[94] *«Μετασταχώθη η παρούσα βίβλος επι έτους αψλγ' (1733 AD) δια συνδρομής και επιστασίας του πανιερωτάτου αρχιεπισκόπου Σινά όρους κυρίου νικιφόρου, επιμελεία και κόπω Ιωαννικίου Ιερομονάχου ροδίου ο δε κύριος δώη αυτοίς τον μισθόν της προθυμίας».*

[95] *«Μετεσταχώθη το παρόν υπό ραφαήλ μοναχού και υπάρχει του αγίου μοναστηρίου σινά , και ουδής τολμήσει αποξενώσει αυτό εν βάρος αλύτου αφορισμού»*

In **S. 1464**, containing the oldest text-block of this group, written in 1323, there are three different phases of spine-fold repairs. The first two consist of paper and parchment strips pasted locally in the spine-folds of some gatherings, while the later, which could be ascribed either to the 1700 rebinding by Nikephoros Marthalis or the later, New Library binding, consists of strips of unused paper pasted above them. In **S. 1889** there are single leaves which were joined back with their conjugates by pasting paper strips to their spine edges.

Text-block repair was found in only three volumes, in all three cases they are of limited extent and consist of unused paper cuttings pasted above the damaged areas and in some cases in the edges of the leaves of the text-block. The text-block of **S. 1461** has been rather excessively trimmed resulting in some of the marginal notes of the text been cut off.

2.3.2.3. *Endleaves (table 117)*

The endleaves of the bindings considered here follow one of the four distinct arrangements described below.

Separate endleaves –16 units.

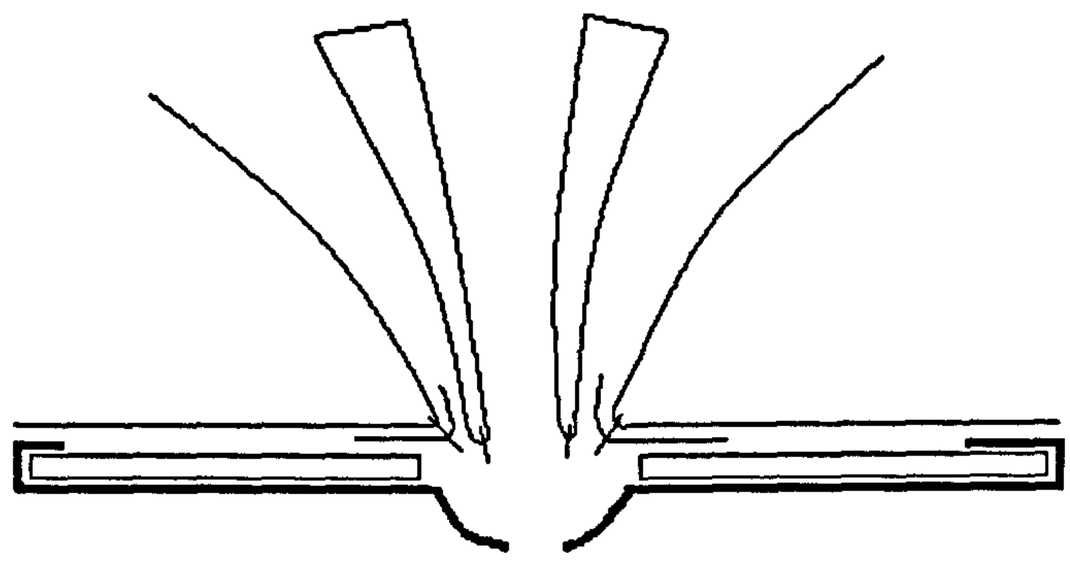
Four units follow the arrangement [1]1 and two the arrangement 1[1]. Three units follow the arrangement [1]3 and two units the arrangement 3[1]. Two units of the same volume (**S. 1889**) follow the arrangement [1]7 and 7[1], and one unit the arrangement 5[1]. The endleaf units of **S. 1701** are of particular interest following the arrangement [1/3,1]1f/ and \f1[1,1/3] as shown in figure 63a. This endleaf arrangement is known from European bindings of the fourteenth-sixteenth centuries where normally parchment instead of paper was mostly used (Blaser 1994, p. 2, figure 2, Pickwoad 1994 p. 75, fig 7.1. Szirmai 1999, pp. 178-179, fig 9.2 [g]).

Integral endleaves – nine units.

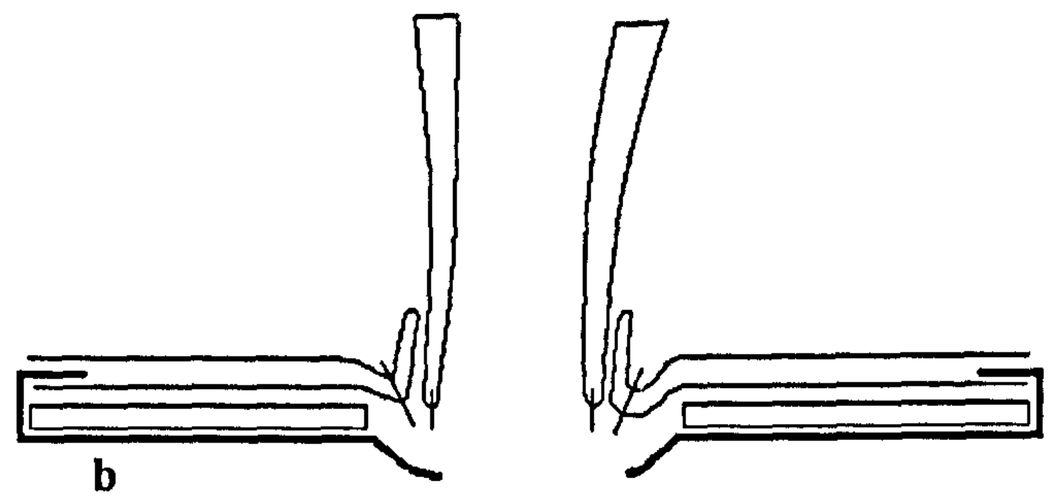
- **Compound** - four units. Two units follow the arrangement [1]2+ and +2[1]. One unit follows the arrangement [1]1+ and one the arrangement [1]3+.
- **Pastedown only**-five units.

  This arrangement is found almost exclusively at the right endleaf units. Two follow the arrangement +[1], one the arrangement +\p[1] in which one single leaf is hooked around the last text gathering and the stub is pasted on it. The case of **S. 1461** is of interest since its endleaf units follow the arrangement [2]f Λ + and +Λf [2] as shown in figure 63b.

  Though the technique of using a bifolio hooked around the outermost gatherings is known to be used in European bindings since at least the sixteenth century (Pickwoad 1994, p. 75, fig. 7.3. and 1995, p. 236, Blaser 1994, p. 4, figure 7), the idea of using both leaves as pastedowns, one under and the other above the turn-ins is probably an adaptation which is particularly noticeable in the bindings of the Iviron monastery in the turn of the seventeenth century (see the Theoclitos bindings, in section 3.2.2.). The arrangement +\p[1] is also represented in European bindings of the fourteenth-sixteenth centuries, though using a parchment leaf instead of paper (Szirmai 1999, p. 179, fig. 9.2 [r]).



a



b

Figure 63. The endleaf arrangement of S. 1701 (a) and S. 1461 (b).

Unclear – three units.

These are the right endleaf units of **S. 1464** and **S. 1819** in which it was not possible to establish their arrangement due to their bad state of preservation. The arrangement of the left endleaf unit of **S.A. 676** could not be established because it is now missing.

Concordance in the arrangement of the endleaves between the left and the right units is found in six volumes and in two volumes they follow the same arrangement but differ in the number of leaves. In the remaining eight volumes the units follow different arrangements between the left and the right units.

2.3.2.4. *Sewing (tables 118,119).*

All fourteen volumes considered here were sewn on supports. The number of sewing stations varies between four (five volumes), five (six volumes), six (two volumes) and seven (one volume).

Generally speaking the number of sewing stations reflects the format of the text-blocks, since the two bigger volumes are sewn on six stations, with an outstanding exception, that of **S. 2029**, which whereas been a small 8vo it is sewn on seven stations.

The arrangement of the sewing stations in the spine of the text-blocks follows the same principle in all but one volume. Therefore, independently from their total number the two outermost supported sewing stations and the two change-over stations are markedly moved towards the head and tail edges according to the patterns B4, B6, and C3 which are almost used in all the text-blocks either in their pure form or in combinations (figure 64). It should be stressed that the classification is based on strict arithmetic relations of the two outermost panels at the head and tail edges (see Appendix 4) therefore producing results which at first sight might appear less homogeneous than they really are. We have seen some isolated examples of the use of these patterns in the Antioch bindings (three volumes), the Klimis bindings (two volumes), the Giglio bindings (one volume), the Cairo bindings (three volumes), and the Raithos bindings (three volumes), and we have related this arrangement of the sewing stations with a possible influence from supported sewing structures (see section 2.2.2.13.). The pattern B1 is used in only one volume (**S. 1701**).

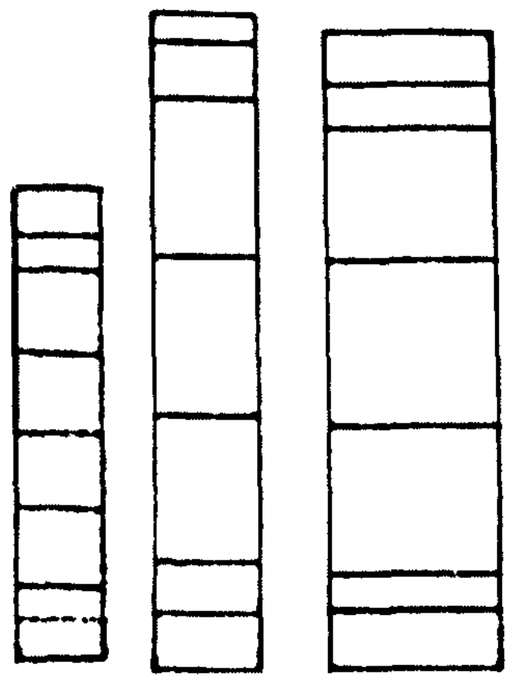
In all volumes the sewing stations, both the main ones and the change-over stations, are marked with needle holes except **S.A. 339** in which tiny V shape cuts are found instead.

As said above all the text-blocks are sewn on supports varying in number between two and five. In 12 of them medium (11 volumes) or thick (one volume) cord supports have been used. In two volumes leather thongs have been used instead, and in **S. 2029** a most unusual combination of cord and leather thongs. As a matter of fact in the second and the fifth sewing stations of this volume the cord lengths are somehow fastened next to the leather thongs without been incorporated to the sewing and it is only these two cord lengths that are used to attach the text-block to the boards since all five leather thong supports are cut flush to the spine. A possible explanation would be to consider the sewing of the text-block on leather thongs as an earlier sewing phase which was preserved in the rebinding of the volume and presumably because the extensions of the leather thong supports were cut at the spine the cord lengths were somehow attached on the spine of the text-block and used in order to attach the text-block to the boards. In none of the three volumes sewn on supports was it possible to establish the quality and the type of the leather used and its relation to the leather used for the cover. In all volumes the sewing supports are raised, therefore clearly evident in the spine.

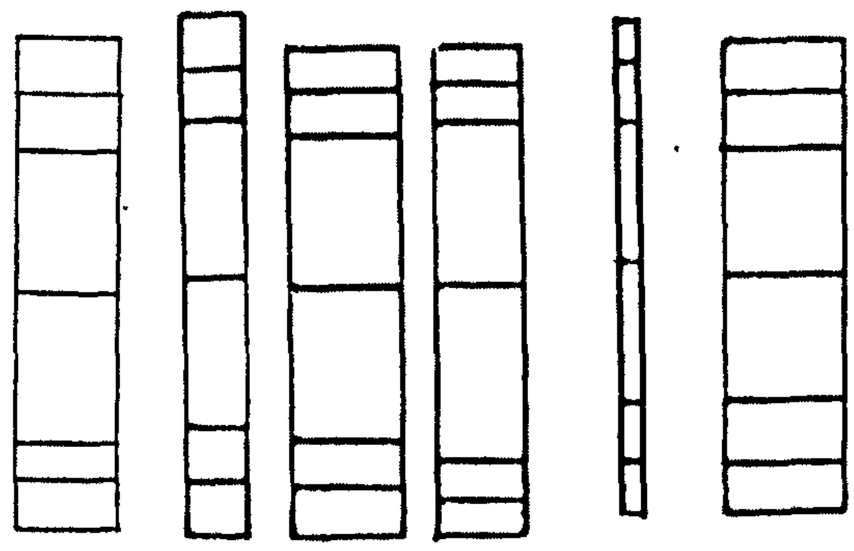
The sewing thread used is either hemp (nine volumes) or linen (five volumes) of a thickness between extra thin (one volume), thin (eight volumes) and medium (five volumes). The twist of the threads is either medium (six volumes), or loose (eight volumes) and the ply is mostly S (12 volumes), and Z in only two volumes.

It was not possible to establish any further details about the actual sewing process except the fact that in **S. A. 676** each sewing station is marked by two needle holes, one used for the exit of the thread and the other for its entrance into the centre-fold of the gathering.

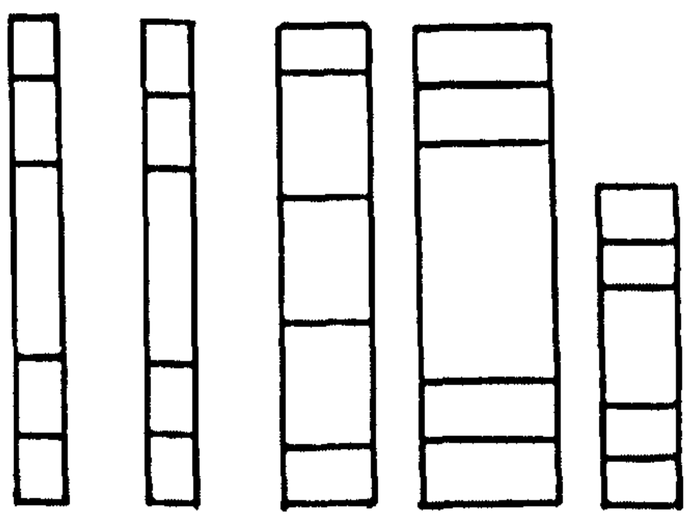
In the case of **S. 1890** there is an unused sewing hole in the middle of every gathering which might be due to a preliminary sewing.



S. 2029 S. 403 S. 1464



S. 1676 S. 2137 S.1819 S.A..339 S. 1996 S. 1889



S. 1890 S.A. 676 S. 1701 S. 1370 S. 1461

Figure 64. Line drawing showing the spines and the arrangement of the sewing stations along them of the 14 bindings considered here. Clockwise from top left, the one text-block sewn on seven stations, the two text-blocks sewn on six sewing stations, the six text-blocks sewn on five sewing stations, and the five text-blocks sewn on four sewing stations.

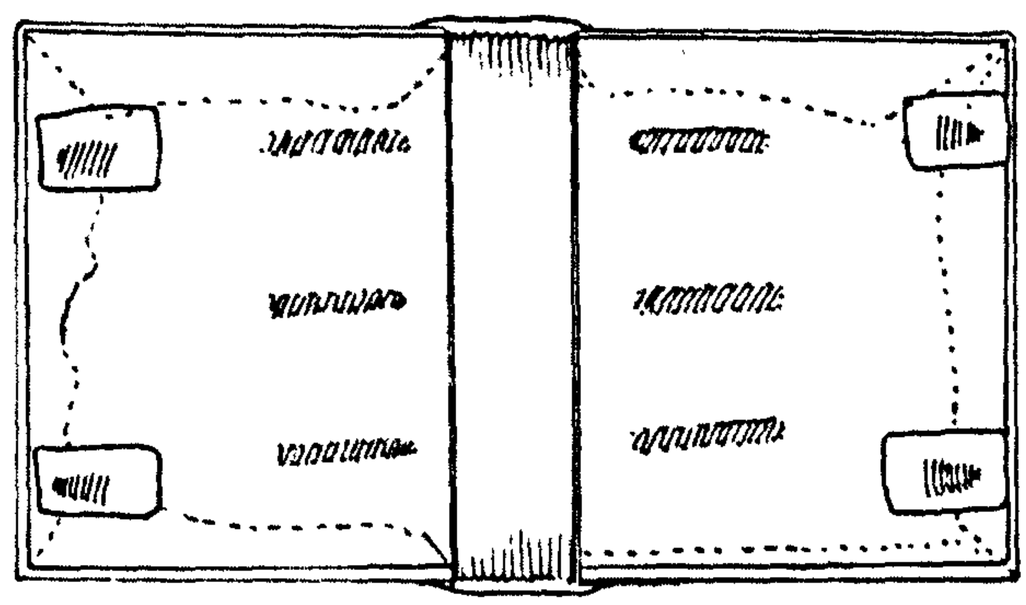
2.3.2.5. *Boards and board attachment (table 120).*

All 14 volumes considered here are bound in pasteboards. Only in the case of **S. 1966** it was possible to establish that they consist of western paper manuscript wastes.
The boards project from the text-blocks in 12 volumes, in three of them only in the head and tail edges, and are cut flush with it in the remaining two. The thickness varies between three and five millimeters, while their spine edge is always shaped according to the pattern SET 1. Only in one volume the text-block is slightly angled in the joints with the boards.

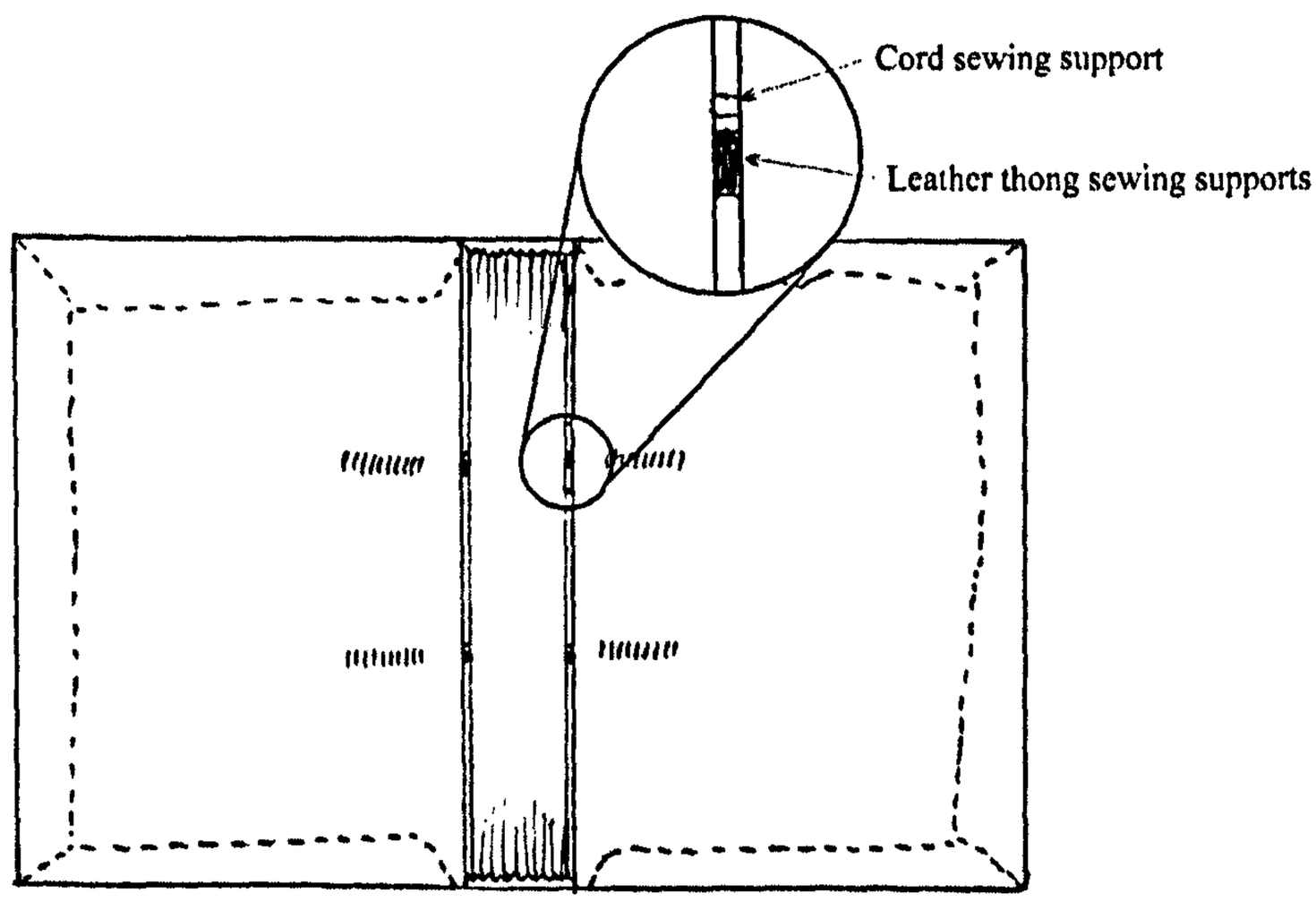
The attachment between the text-blocks and the boards is achieved by means of three different attachment systems.

- **Attachment with system Sup. 4** (two volumes).

In this system the sewing supports are laced through the boards from the outer face towards the inner face where they are pasted without being frayed out. This attachment system is found in **S. 2029** in which case, as said above, only the two cord supports are laced through the boards with their ends clearly evident under the pastedowns (figure 65b).



a



b

Figure 65. Line drawings showing the inner face of S. 1819 (a) and S. 2029 (b) where the attachment system Sup 4 is used.

- **Attachment with system Sup. 5** (six volumes).

  In this system the sewing supports are laced through the pasteboards in the same way as the one described just above with the difference that once in the inner face of the boards they are laced through them once more, exiting in the outside where their ends are pasted, probably after been frayed out. In two volumes the use of this attachment system is probable but not definitive.

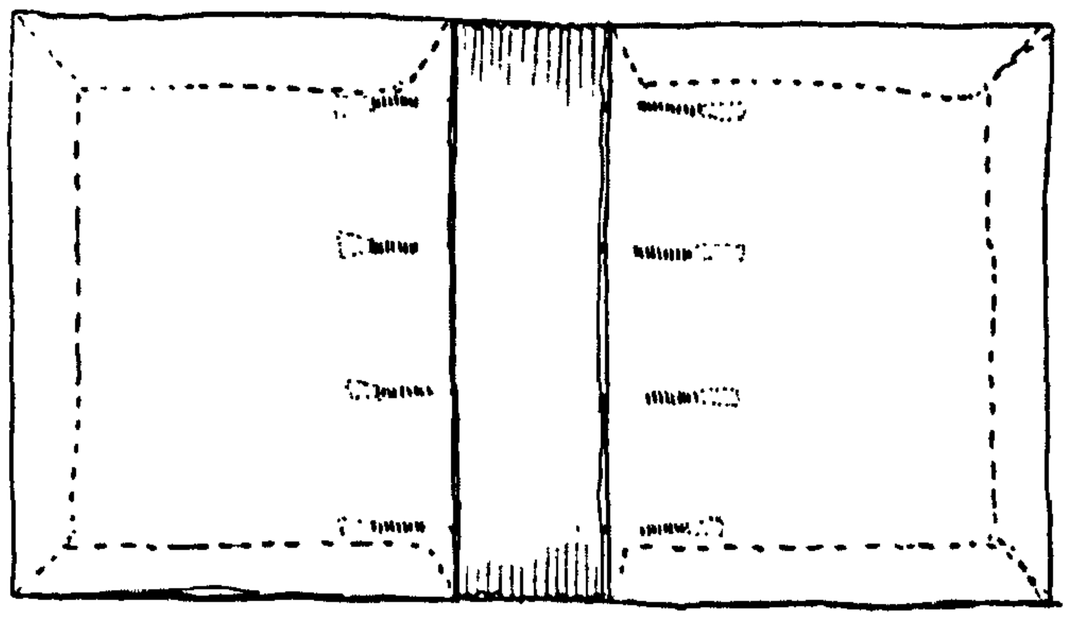


Figure 66. Line drawing showing the inner face of S. 1464 where the attachment system Sup 5 is used. The dotted lines adjacent to the sewing supports indicate the ends of the supports which rest in the outer face of the boards.

- **Attachment with system Sup. 7** (two volume).

In this attachment system the supports are not laced through the boards, but the ends of the cord are frayed out all through the length of their extensions and are pasted in the inner faces of the boards without any lacing. In one of the two volumes the use of this attachment system is probable but not definitive

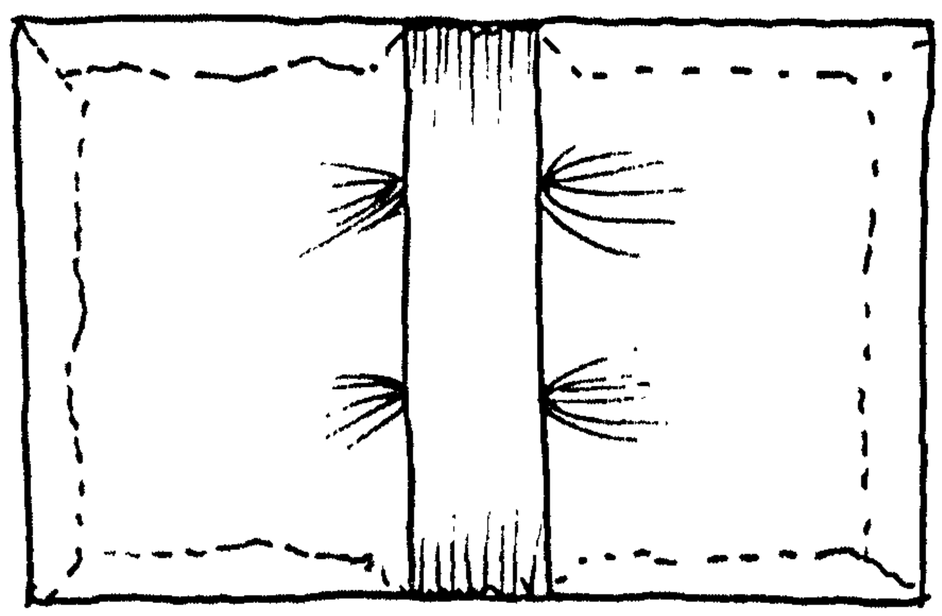


Figure 67. Line drawing showing the inner face of S. 1461 where the attachment system Sup 7 is used.

- **Unclear** (three volumes).

It was not possible to establish exactly the attachment system used in the two Arabic volumes considered here but it seems that one of the systems Sup 3, Sup 4, or Sup 5 has been used. The case of **S. 1889,** is intriguing since the text-block is sewn on three supports of which only the outermost ones correspond to board attachment stations. Additionally, all the sewing supports are apparently cut flush with the spine of the text-block and the attachment between this and the boards is made through a separate thread that is laced through the boards and the sewing supports in an unclear way (figure 68).This could also be the case of an attempt to make a new binding for a previously

bound manuscript, supposedly damaged, without destroying the sewing of the text-block.

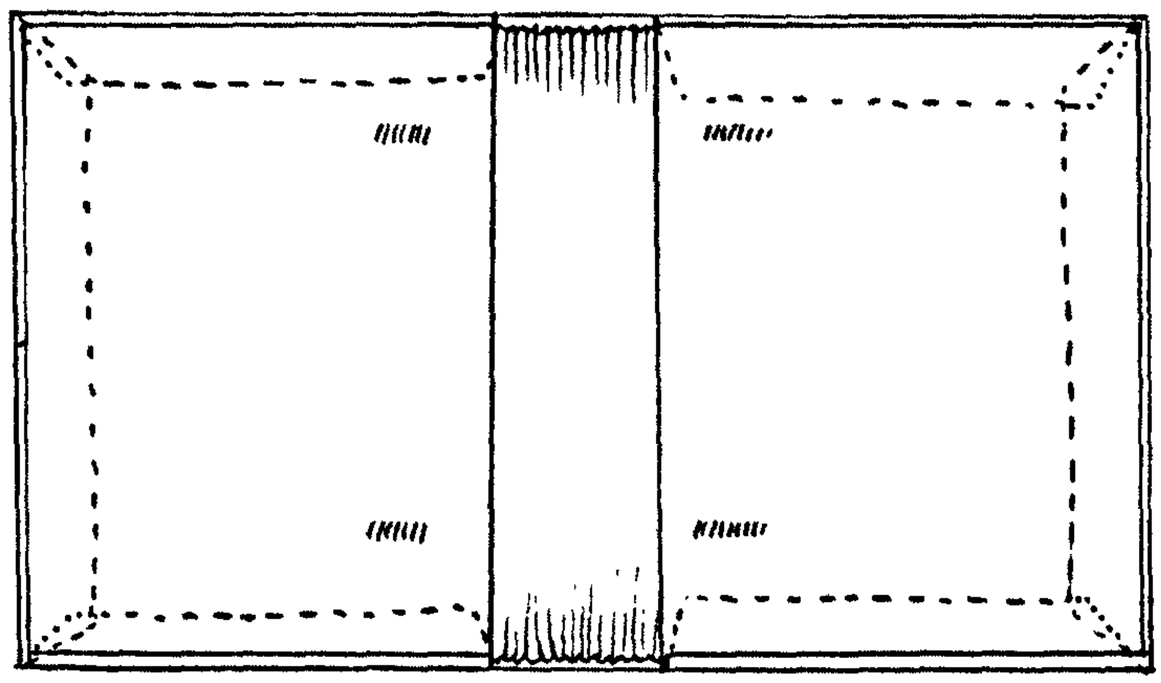


Figure 68. Line drawing showing the inner face of S. 1889. hatched areas indicate the presence of thread underneath the pastedowns, used for the attachment of the boards.

- **Not visible (S. 403, S. 1889).**

2.3.2.6. *Spines and spine lining (table 121).*

In eight volumes the spine of the text-blocks is flat, and in six is variably rounded, between slight (three volumes), average (two volumes), and heavy rounding (one volume). All 14 volumes have a spine lining all along the spine of the text-blocks. In 11 of them a natural-colour canvas-like textile has been used, mostly of medium thickness (seven volumes), but thin and thick are also represented (two volumes each). In two volumes a thick blue textile is used and in one volume a medium thickness red one.

In all volumes the spine lining extends onto the boards and is pasted on the outside. The percentage of the board covered could be established only in five volumes and was found to be between 20% and 65%.

In two volumes (**S. 1464** and **S. A. 339**), due to some adhesive residues it was possible to establish through visual observation that some kind of animal glue was probably used.

2.3.2.7. Endbands (tables, 122, 123,124)

All 14 volumes considered here have endbands in both their head and tail edges, in 13 of them compound endbands and in one volume simple ones. There are four different types of endbands used in this atelier, three of them compound and one found both as a simple and as a compound endband.

Compound endbands

- **Embroidered, Front Bead and Crowning Core** (ten volumes).

  This type of compound endband is found in ten volumes. It consists of two cores, a primary sewing and a secondary sewing. In all cases the first core consists of cord of a thickness between medium (seven volumes) and thick (three volumes), while the second core consists either of thin thread (eight volumes) or medium cord (two volumes).

  The primary sewing could be established with certainty only in **S. A. 339** and it was found to be worked according to the Wound Plain on First Core technique. This is probably also used in four more volumes (indicated with a question mark in table 123) and in the remaining five volumes the type of primary sewing could not be established at all.

  In six volumes the sewing of the primary endband is made with thin linen thread which in three volumes it was found to be the same as the one used for the sewing. It is either of medium (four volumes) or loose (two volumes) twist and S (five volumes) or Z ply (one volume). In four volumes medium (three volumes) or thin (one volume) hemp thread is used, in two of the volumes the same as the one used for the sewing of the corresponding text-blocks. It is a loose (three volumes) or medium (one volume) twist, and S ply thread.

  The tie-downs are found in the centre-fold of the gatherings, in six volumes in every gathering, in one volume not in every gathering and in three volumes this feature could not be established. They are anchored on the text-blocks always through the change-over stations.

  The endband secondary sewing is made with medium thickness silk threads of loose twist and either I (seven volumes) or S (one volumes) ply though in two volumes this could not be established. In all volumes the secondary sewing is

two-colour and is worked from left to right in three volumes and from right to left in the remaining seven volumes. In all volumes the endband cores project onto the boards and are anchored there by means of EAS 9 (eight volumes) or EAS 13 (one volume) anchoring systems, though in one volume the exact system used could not be established. The distance of projection varies between five and 18 millimeters representing a small portion of the total width of the boards between 2,9% and 11,7%.

- **Chevron and Crowning Core** (two volumes).

  This type of compound endband is found in two volumes. It consists of three cores, a primary and a secondary sewing. Apparently all three cores consist of the same, medium thickness cord. The type of primary sewing could not be established in either of the two volumes though in **S. 1819** it seems probable that it is of the Wound Plain on First Core type. The thread used for the primary sewing could be established only in the latter volume and it is a thin, bleached linen thread of tight twist and Z ply, which is anchored in the centre-fold of an unspecified number of gatherings using not the change-over stations but the outermost main sewing stations instead.

  The secondary sewing is made with medium thickness silk threads of loose twist and S ply, in **S. 1676** blue and red, and in **S. 1819** green and red. In both volumes the resulting pattern is quite characteristic, with wide, single-colour alternating panels. The secondary sewing is worked from right to left.

  The endband cores project onto the boards for a very small distance between 10 and 13 millimeters representing 5,8% and 8% of the total width of the boards and are anchored there probably by means of EAS 9 anchoring system.

- **Wound plain above primary endband** (one volume).

  In the case of **S. 1966** the endbands consist of a primary sewing of the Wound plain of first core type on a single, medium thickness cord core. The primary sewing is worked with a fine linen thread that is identical with the one used for the sewing of the text-block. The endband secondary sewing is worked with a faded blue cotton (?) thread which is just wrapped around the primary endband. .

The endband cores extend onto the boards for nine millimeters, representing 8% of the total width of the boards and are anchored there by means of the EAS 3 anchoring system.

Simple endbands are found in just one volume (**S. 1461**). They are of the Embroidered front bead and crowning core type. They consist of two medium thickness cord cores which extend onto the boards for a 12 millimeters, representing 13% of the total width of the boards and are anchored there by means of the EAS 9 anchoring system. The endband is worked with red and yellow thin silk threads, of loose twist and I ply. Apparently, there are no tie-downs but the endband is sewn on the spine lining instead.

2.3.2.8. *Markers (table 125)*

Markers are found only in five of the 14 volumes considered here, in all of them compound string markers. The primary markers consist either of open or closed loops (four and one volumes respectively), normally one in each volume except **S. 1464** where there are as many as five. The loops can be either simple (four volumes) or compound (one volume). All simple loops, either open or closed, are made with the same silk threads that were used for the secondary sewing of the endbands and are fastened on the endbands by means of the system LtH(f), except in **S. 1464** where they are probably fastened by means of the system LtH(a). The only compound open loop consists of a cord core which is covered with a feather stitch made with green silk thread, the same as the one used for the endband secondary sewing. It is fastened on the headband by means of the system LtH(f). Secondary markers are preserved only in **S.A. 339** in which case they consists of an off-white linen thread fastened on the primary marker by means of the system KiM. Vestiges of a secondary marker also survive in **S. 1461** but nothing more can be established except that it was probably made with a yellow silk thread.

2.3.2.9. *Cover and decoration (tables 126, 127, 128)*

All 14 volumes are bound in leather of various colours; the usual brown-yellow (nine volumes) seen also in the Giglio and the Raithos bindings, brown, (one volume), red-brown (two volumes), black and ochre (one volume each). Judging from the appearance of the leather and the characteristics of its surface it could be suggested that the cover of **S. 403** is made of tawed sheep skin, while of the remaining volumes, ten are probably covered in goat tanned leather, three probably in sheep tanned leather. In all volumes the leather used is of medium thickness and consists of one single piece, except that of **S.A. 676** which is made at least of three different pieces of the same leather sewn together as seen in figure 71. The first half of the volume with the board and one of the presumed three pieces of leather is now missing. The turn-ins follow two main pattern: T-ins 3 (eight volumes), T-ins 2 (six volumes), and T-ins 1 found in one single volume in combination with the pattern T-ins 3. The width of the turn-ins does not seem to follow any consistent pattern except that medium width is found in nine volumes. The corner mitre also varies considerably, only in two volumes all four corners follow the same pattern, in four volumes there are at least three different patterns and in the remaining volumes there are two different patterns.

All 14 volumes are decorated with blind tooling, following the same decorative pattern in both boards. In 12 volumes the pattern Dec 1 is used in nine of them with a single frame (variation a), while the patterns Dec 2 is found in one volume and still another volume is decorated with a pattern classified as other. In four volumes there is no decoration in the spine, while of the remaining ten volumes eight are decorated according to the pattern SD2/B, and two according to the pattern SD1/B.

The most striking feature of the decoration of these bindings is the extensive use of centerpieces in ten of the fourteen bindings of this group and the very limited number of small single tools. There are 14 tools altogether used divided between four multi-use single tools, seven centerpieces, two rolls and one fillet. Three of these tools, all three centerpieces, are intaglio tools and 13 are relief tools. The number of tools used to decorate one single binding varies between two and five, four tools per binding is the commonest used in seven volumes. Seven of the tools are used in one single binding, and only one tool is used in as many as eight bindings.

The decoration is limited to the basic, often relying only on the centerpieces alone. Most of them are of obvious European provenance and some of them quite imposing

and impressive. Similar tools are known from bindings made in Greek-speaking Orthodox areas such as Rhodes, and Cyprus (Αθανασιάδης 1994) and will be seen again in section 3.2.4. in the Cosmas Macedon bindings. Of particular interest are the two religious tools one representing the 'Descent into hell' of Christ, which is an iconographic type of the Resurrection in use in the Orthodox church with an illegible inscription at the bottom[96], and the other representing a view of the mount Sinai with the St. Catherine's monastery in the middle and three mountains in the background, the one on the right representing the St. Catherine's mountain, the one on the middle the Moses Mountain and the one on the left the mountain of St. Epistimi[97]. With the help of other similar representations (see 'Sinai, Byzantium, Russia....', 2000, figure S.20) the two figures in either side of the monastery, can be identified with St. Catherine to the right and Moses before the burning bush to the left. All around the following inscription is found:

ΑΓ(ΙΟΝ) ΚΕ(sic) ΘΕΟΒΑ(ΔΙΣΤΟΝ) ΟΡΟΣ ΤΟΥ ΣΙΝΑ 169(6?) ΤΟ ΑΓΙΟΝ ΜΟΝΑΣΤΗΡΙ ....ΕΝ ΕΤΙ ΧΡΙΣΤΟΥ ...

(The Holy mountain where God walked, Sinai 169(6?) The Holy Monastery....In the year from the birth of Christ...).

The fact that no other binding has been found with this impressive tool is probably an indication that its primary purpose was not to be used as a binding decorative tool but was probably a commemorative medallion which was exceptionally used for this purpose. The impression seems to be contemporary with the rest of the decoration.
The decorative pattern of **S.A. 676** is of interest because it is clearly inspired from the decoration of Islamic bindings with a central mandorla motif which in our example is achieved by using repetitive impressions of one single tool. The fact that the text-block is written in Arabic further supports this relation with the Islamic tradition of bookbinding.

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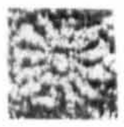
[96] The same subject can often be found in the decoration of bindings from the fourteenth century onward, usually on the back board with the crucifixion on the front board. See Τσελίκας 1998, p. 6, Μπαλλιάν, 1998, p. 9.

[97] This conventional view of the monastery and its surrounding is much older and used either in painting and engravings since the sixteenth century. See for example Dominicos Theotocopoulos' painting with a very similar view painted by the artist probably in his early staying in Venice and now preserved in Heraclion/Crete as well as an engraving by Giovanni Battista Fontana of the year 1569. Both are reproduced in Χατζηνικολάου (ed), 1995, pp. 294-301, with an extensive bibliography.

MuF/a54



MuF/a55

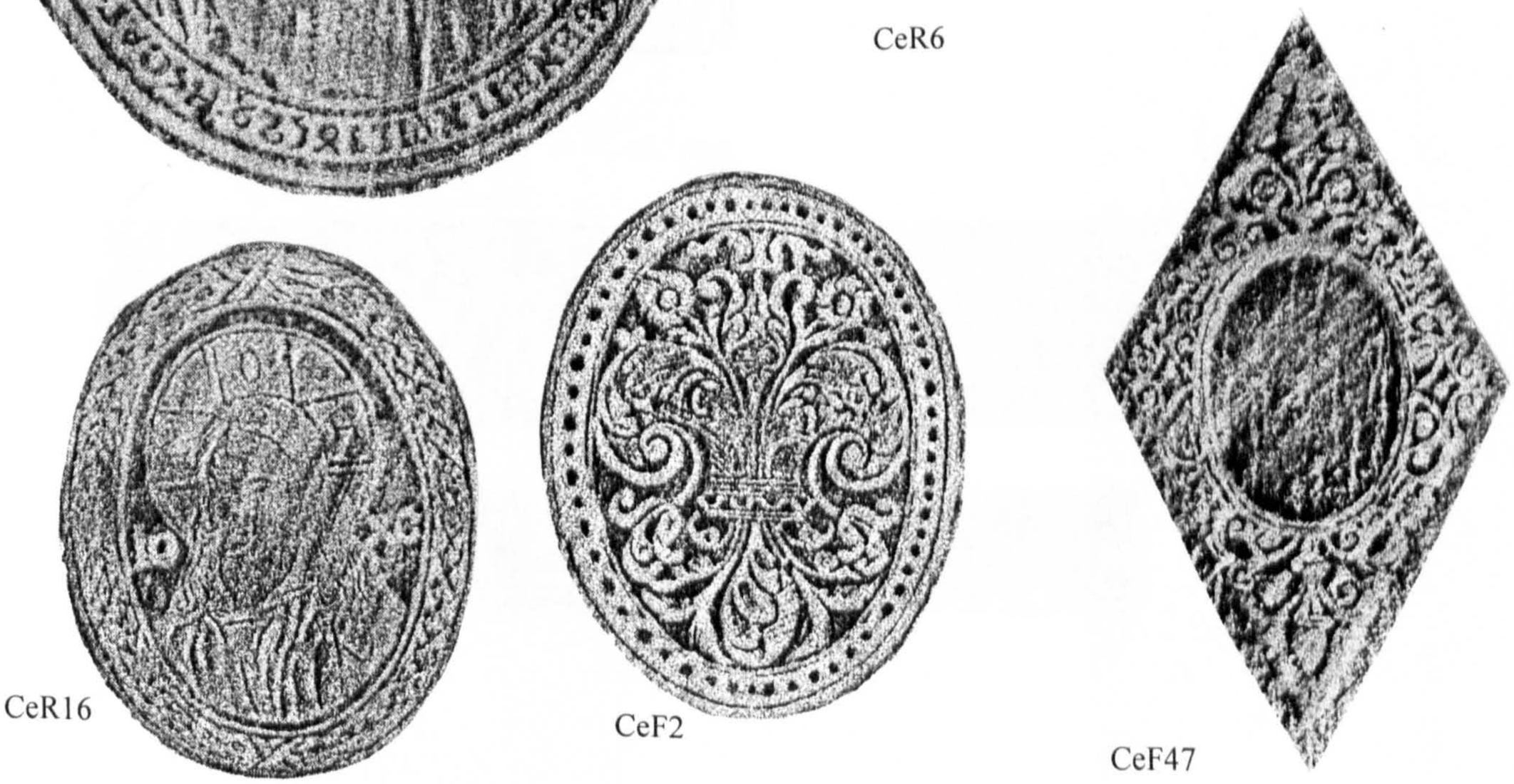
MuV1

MuF/b8

CeR6

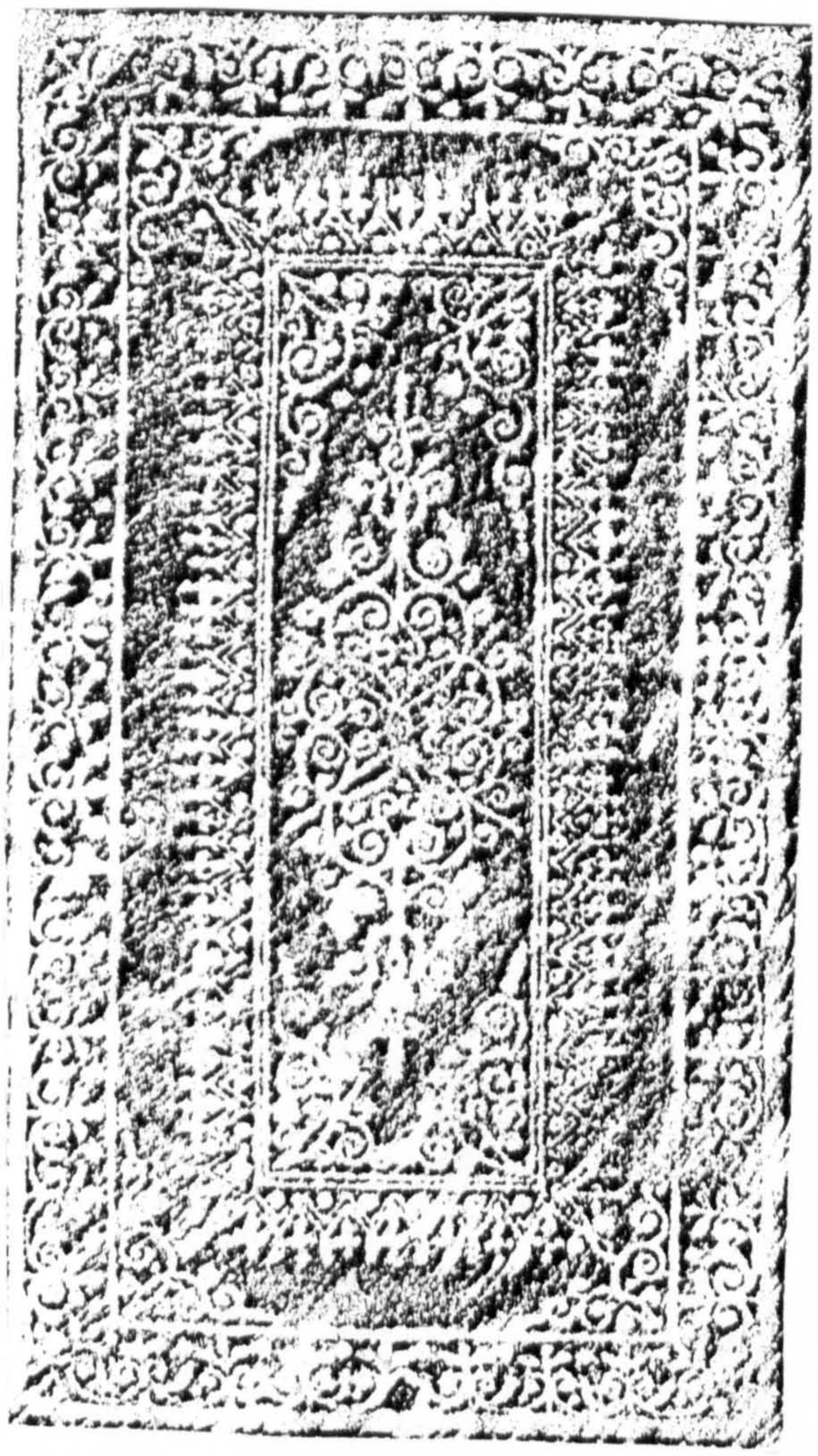
CeR16

CeF2



CeF47

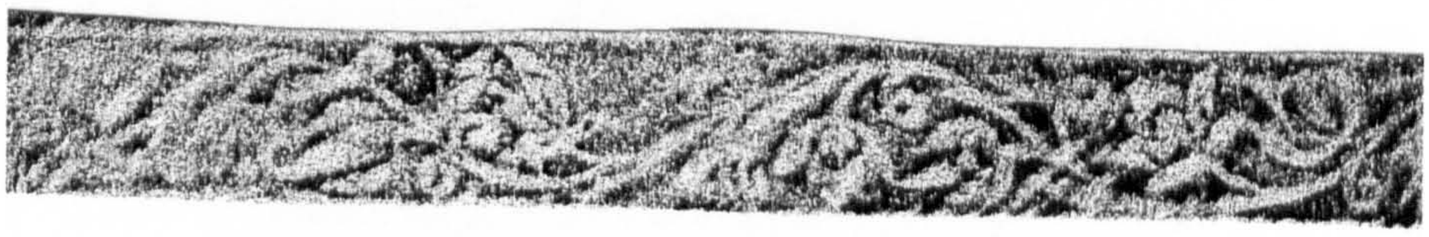
Figure 69. Nine of the 13 tools used for the decoration of the 16 bindings of the New Library atelier.



CeF42

CeF57

RoF7



RoF42

Figure 70. Four of the 13 tools used for the decoration of the 16 bindings of the New Library atelier.

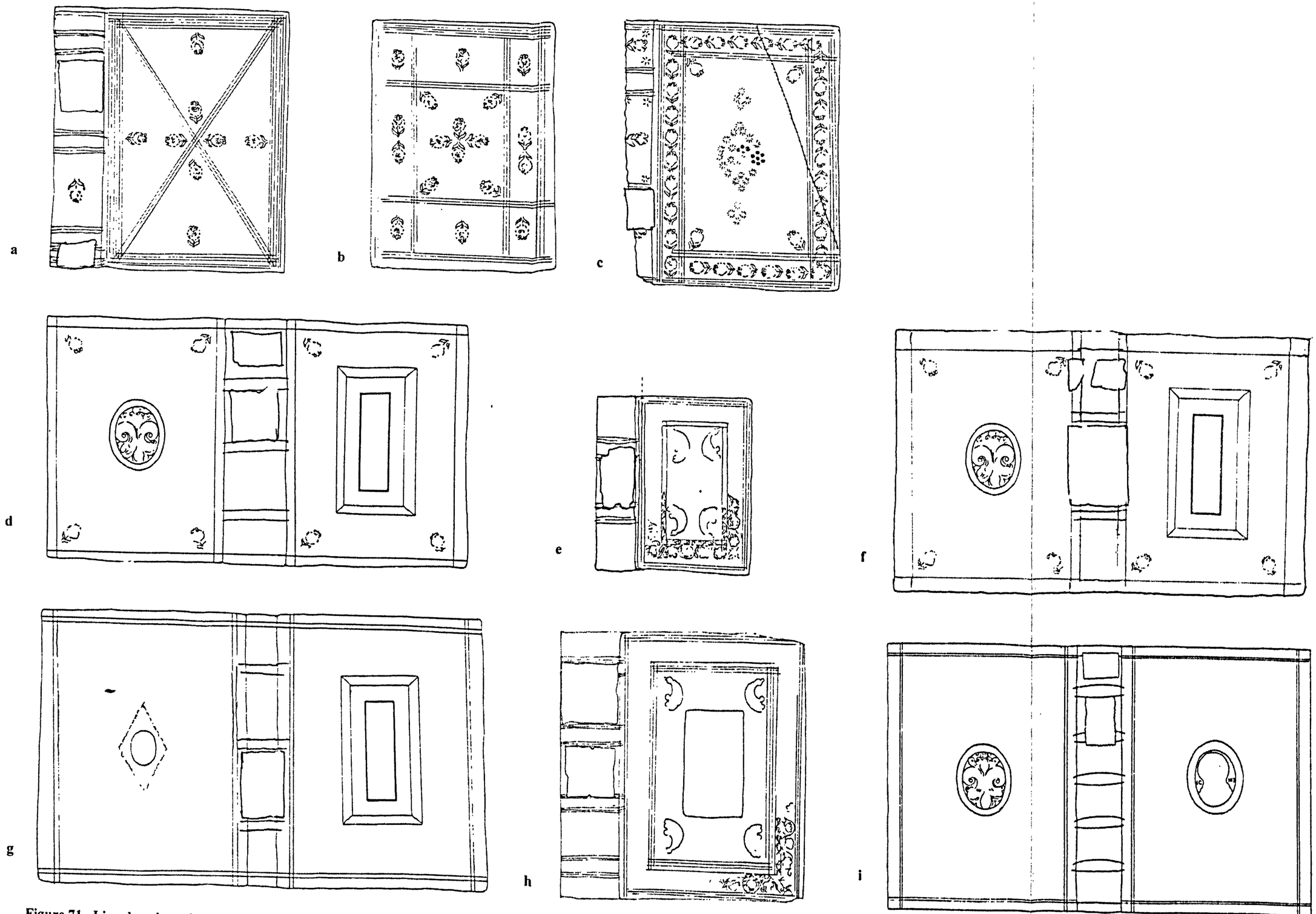


Figure 71. Line drawings showing the decoration of the left board of S.A. 339 (a), S.1966 (b), and S. A. 676 (c), both boards of S. 1889 (d), the left board of S. 1461 (e), both boards of S. 1890 (f) and S. 2137 (g), the left board of S. 1701 (h), and both boards of S. 2029 (i).

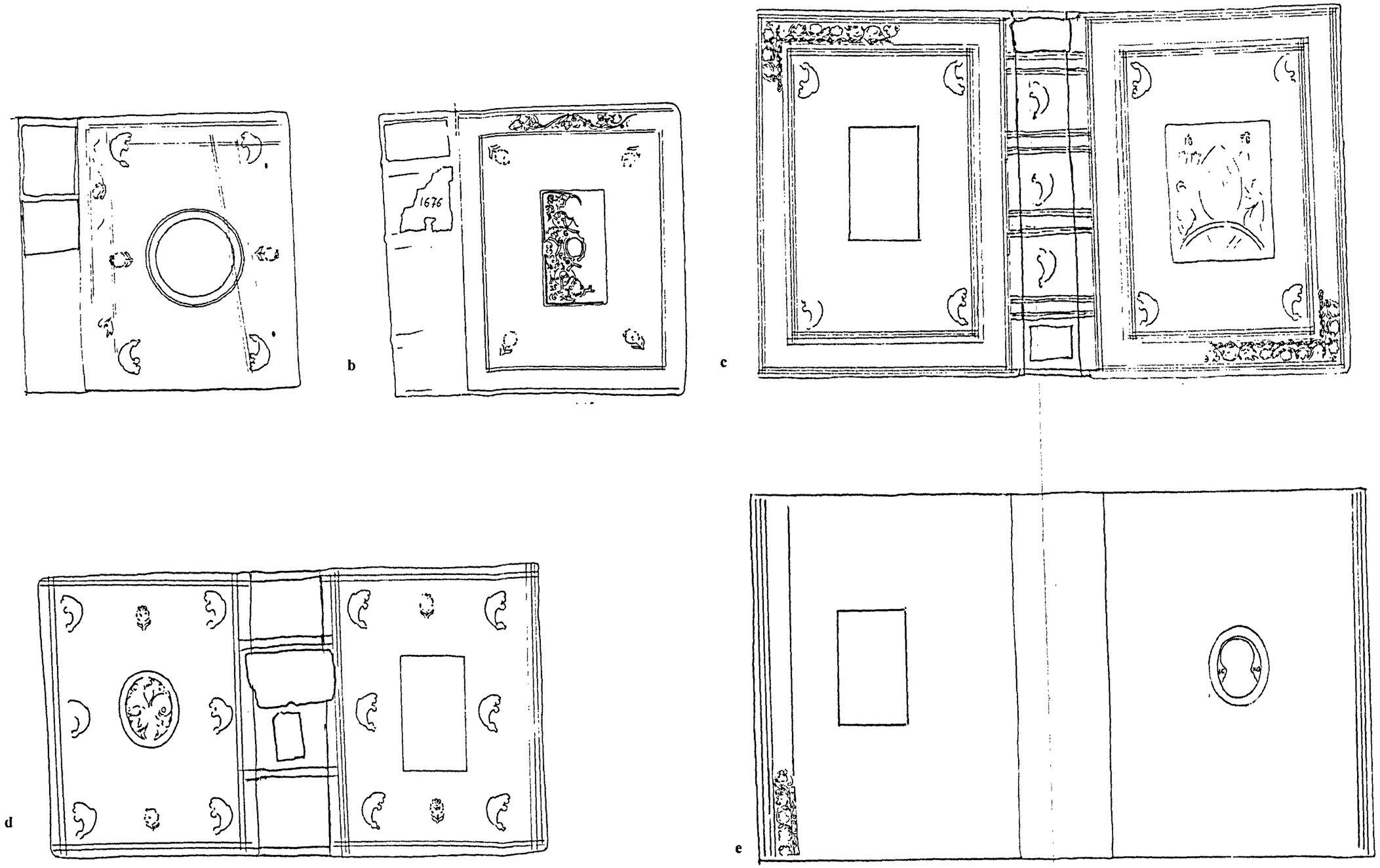


Figure 72. Line drawings showing the decoration of the left board of S. 1819 (a) and S. 1676 (b), both boards of S. 403 (c), S. 1370 (d), and S. 1464 (e).

Two of the 14 bindings considered here are exactly dated in 1733, both bound by Ioannikios Rhodios (**S. 403** and **S. 1701)** while two volumes could be dated on the basis of the date in which the text-blocks they contain have been written, and supposing that they were bound soon after. These are **S. 1966** written in 1711 and **S. 2137** written in 1719.

Considering that the decoration of **S. 1966** is quite similar with that of **S.A. 339**, and **S.A. 676**, and at the same time quite different from that of the other volumes we could consider these three bindings as the earliest of those considered here, probably made around 1719 by monk Raphael who has signed one of them (**S.A. 339**). One of the two tools which are used in the decoration of the Raphael bindings is also used in five more bindings which nevertheless are decorated in an altogether different way.

Ioannikios from Rhodes has signed two of the bindings considered here (**S. 1701** and **S. 403**) in the same year 1733, a year before the New Library building was finished. Another signed binding, virtually identical with that of **S. 403** is found on a printed book of the library, a copy of Varinou Lexicon printed by Zacharias Calierghis in 1523[98]. The fact that all these three bindings bear exactly the same note by Ioannikios and are all dated in 1733 could be related with the construction of the new library in 1734 under the supervision of archbishop Marthales . As a matter of fact as already seen in the beginning of this chapter, in that occasion books were gathered from all over the monastery, catalogued and placed in the right order and position, and we could suppose that at least some of them repaired.

Another sub-group of bindings could probably be formed, including **S. 1464, S. 1889, S. 1890, S. 2029**, and **S. 2137**. The latter volume bears a note stating that the manuscript was written in Constantinople in the *metochion* of St. John in the year 1719 by the later abbot of the St Catherine's monastery Ioannikios Mitylineos (in service between 1721-1728) and apparently was bound there together with an older text, written in the Patriarchate of Constantinople in the year 1672. As already said above (section 2.3.2.1.) by personal observation it was possible to confirm that this manuscript as well as **S. 1889** and **S, 1890** were written at least partly on the same paper and apparently by the same scribe and could thus be assigned to a

[98] This printed book, S. 3135/2274δ, was kindly pointed to my attention by A. Skarveli who is working on a catalogue of the printed books of the library. For reasons of methodology the data of this book have not been considered in the account of this atelier. Nevertheless all its features either structural and decorative do not present any significant divergence from what has already been mentioned about these bindings, with the exception that the volume has two leather strap fastenings probably due to its big format (4o [310 X 213] 544 pages).

Constantinopolitan origin as well. **S. 1464** was bound by Nikephoros Marthales himself in 1700, as his note states but given that it was rebound at a later date and that this later binding is extremely similar to that of the manuscript written by Ioannikios Mitylineos in 1719 (**S. 2137**) in a time when Marthales was in the metochion in Constantinople, we could suggest that this binding was also made in Constantinople. Combining the above facts we could attribute at least four of these five bindings (**S. 1464, S. 1889, S. 1890, S. 2137**) in the production of a binding atelier connected or even belonging to the metochion of the monastery in Constantinople, since it is known that Nikephoros was abbot of this metochion for ten years from 1721 until 1731, something that could explain **S. 1464**, belonging to him from earlier years, being rebound there. The painted, gauffered, and gilded decoration in the text-block edges of **S. 2029** could therefore quite convincingly be attributed to this Constantinopolitan atelier since, as said above, represents a unique example, both for the gold used, the tool itself and the technique which to my impression was never used in Sinai.

The binding of **S. 1370** is an interesting one since it combines tools found in both sub-groups the Ioannikios and the Constantinopolitan. This binding presents the use of the typical center-pieces we have seen in the Constantinopolitan sub-group together with the very characteristic tool of the pouring-water- jar found in the Ioannikios bindings. The spine decoration and the endbands seem to offer some help to this end. As can be seen by the drawings in figures 71, 72, Ioannikios used to mark the cover on either side of the sewing supports with three blind tooled fillets in each side, much like Raphael did in his three bindings, while in the Constantinopolitan bindings such fillets are always blind but are single.

We could then suppose that at least some of the tools used by Ioannikios in the bindings made in the occasion of the new library were brought in the monastery from Constantinople, I would dare to imagine, by Marthales himself or someone of his attendance when he reached the monastery in order to take charge of his new chair, or even Ioannikios Mytilineos about ten years earlier. As we have speculated on the account of the note in **S. 403**, it is possible that Marthales was personally involved in the bindings made in the monastery supposedly in the occasions of the New Library. Further research in the library which could identify more similar bindings would probably be able to cast more light to this end. The case of **S. 2029** and **S. 1889** in which the sewing supports are cut flush to the spine and the attachment with the

boards is made through additional sewing supports is a possible evidence that in order to renovate the appearance of the books in the occasion of the new library a new cover was made for some of them. The fact that the sewing structure of these volumes is retained indicates that there was probably no serious structural reason for this renovation. It could also be suggested that these two volumes were originally bound by Simeon Basam, given that they were written in 1572 (**S. 1889**) and 1628 (**S. 2029**), therefore could fit to the recorded activity period of Simeon Basam (see section 2.2.2.14.), and that one of the first supported bindings recorded in the Sinai, S. 2002 bound by him in the metochion in Cairo, has the sewing supports cut flush to the text-block. In the same context it is relevant that still another volume presents a similar construction to that of **S. 1882** and **S. 2029**, and that is S. 678 considered in the Elusive bindings. As said in section 2.2.3. this volume was rebacked and resewn on four supports without destroying the original unsupported sewing using a pattern very similar with those used in the bindings of the New Library atelier and a board attachment system which also relies on the lacing through the boards of the added sewing supports. Therefore the rebacking of this volume could also be attributed to the New Library atelier and is significant because it indicates still another type of repair in the context of the New Library.

It seems then plausible to suppose that we have at least two binders working in the monastery Raphael around 1711, and Ioannikios around 1733, the latter probably in order to restore and rebind books in the occasion of the new library, both using common structural features but each having his own decoration style, quite distinct one from the other. It is also suggested the presence of bindings made in Constantinople and the possible import of tools from there which were used in the bindings made by Ioannikios in the monastery.

PART 3

BINDINGS FROM THE IVIRON MONASTERY LIBRARY IN MOUNT ATHOS

CHAPTER 1

THE IVIRON MONASTERY IN THE SIXTEENTH CENTURY

3.1. Historical outline

The sixteenth century is a period of intense intellectual activity for the Iviron monastery. After the copying activities of the Georgian monks between the tenth and the twelfth century this is the first organised and productive scriptorium in the history of the monastery. It was founded by **Dionisios** who settled in the monastery in 1504 and became a *hieromonk* soon after. He was a person closely connected to all matters of the monastery. He travelled twice in Georgia to raise money, as it was usual in that time, and became twice abbot of the monastery during the years 1506/7-1513/14 and again during 1519/20-1526/27. After his reassignment as abbot (*Igoumenos*), he became *proigoumenos* and *skevophilakas* for four years (1522/23 – 1521/22). He is last recorded in a note of the year 1539. He wrote at least 13 manuscripts, of which six are still preserved in the monastery. In one of his manuscripts **(I. 392)** is preserved a list of the texts he copied, listing nine manuscripts, of which four can be still found in the library today. Evidence from his handwriting and his mistakes indicate that he was not a professional scribe but that he was rather copying various texts that could be of interest or necessary for the monastic life. The small format of some of his manuscripts suggests that they were for informal, personal use (Χρυσοχοΐδης 2000, pp. 526-532).

Other scribes also worked in the scriptorium under his supervision. The best known is **monk Theodosios**, Dionisio's *hypotactic*, also known as ***hosios* Theophilos** *mirovlitis*. He copied mainly liturgical texts, living in the monastery between the years 1511-1522 and produced 31 codices of which 18 are still preserved in the library of the monastery. He was born sometime between the years 1460-70 and was a monk in Athos already by 1506. He is known to have been on pilgrimage to Alexandria, the Holy land and the Sinai for three years, between 1508 and 1510. Interestingly his signature, written both in Greek and Arabic, is found on a manuscript which at the time was part of the Sinai monastery library and now preserved in the library of the Orthodox Patriarchate in Alexandria (Χρυσοχοΐδης 2000, p. 535 and plate 11). He

entered the brotherhood of the Iviron monastery in 1511. Until 1517 he is known as Theodosios, signing under this name six manuscripts still preserved, and dated between 1512/13-1516. In 1517 or in the beginning of 1518 he became a monk and was renamed **Theophilos**. He left the monastery in 1523 due to some internal problems, with which he seems to have been personally involved, but continued to copy and dedicate manuscripts to the library. He died, probably in 1548, in a *keli* between the Iviron and the Pantokratoros monastery, at the age of between eighty and ninety years old and, according to his biography, he was sanctified. He is actually known today as ***hosios***, his death date – the eighth of July- is a feast for the church. In a note written by him on the last manuscript he copied in the monastery before leaving (**I. 581**), he mentions 31 different codices copied by him and various other texts. According to Chrisochoides (Χρυσοχοΐδης 2000, p. 533) the total number of manuscripts identified as being in his hand could be as many as 70 making him one of the most productive and experienced scribes of the sixteenth century in the Orthodox Christian East.

In the years between 1535-1540 **Pahomios Rousanos,** a noted Theologian and missionary, copied at the monastery ten manuscripts of which seven are still preserved in the library. **Theodoros Ariologas,** a contemporary of Pahomios Rousanos left the monastery five volumes containing various *menaia*, written by him between the years 1536-1537, but latest research seems to suggest that he did not belong to the community of the monastery and therefore to its scriptorium. Another scribe active in the scriptorium in the same period is **monk Neophytos** who left four liturgical manuscripts to the library written between the years 1538-1544. At the same period **monk Theophanis Eleavoulkos,** former teacher at the academy of the Patriarchate in Constantinople also left in the library two manuscripts in his hand –though apparently not written within the scriptorium of the monastery- as well as his own, personal, library. During this period other monks, whose names are not recorded, copied manuscripts, but their production seems to be limited to copying only elements of manuscripts that were in the most part written by some of the aforementioned scribes.

In the second half of the century **Laurentios** is known to have copied at the monastery liturgical manuscripts, while **Theoclitos *hieromonk*** was copying liturgical and *paterical* texts, 11 of which are still preserved in the library and will be considered in section 3.2.2.

The second half of the sixteenth century has been a difficult period for the whole Athonite monastic community. This was due to the confiscation of the properties of the monasteries and the new imposed taxes (Μαμαλάκης 1971, pp. 252-259). As a consequence most of the monasteries faced serious financial problems and looked for help to the Christian Orthodox communities of the Balkans, Russia and Georgia. Around the fourth quarter of the century a number of donations from the rulers of Wallachia, Moldavia and Georgia reached the Athonite monasteries and at the same time various 'expeditions' for raising money were organized by the monasteries in the various Orthodox areas , often providing considerable amounts of money. In a similar money-raising expedition in Georgia, the monks of the Iviron monastery managed to be donated twelve thousand golden coins by the ruler of Georgia Alexander VI, a sum which, except permitting them to pay for all their debts, enabled them to repair the *katholicon* and the cells of the monks. In the end of the sixteenth century the Iviron monastery had as many as 300 monks (Μαμαλάκης 1971, p. 259).

3.1.2. The bindings of the Iviron scriptorium.

There are today 46 manuscripts preserved in the Iviron monastery library identified as the outcome of the copying activities of the afore-mentioned scribes in the context of the Iviron scriptorium (Χρυσοχοΐδης 2000, Θεολόγος 1998, pp. 241,242). For the purpose of this research all these manuscripts were surveyed though only 14 of them still preserve their original binding, therefore this chapter is based on the consideration of these 14 bindings plus three more bindings from manuscripts which were written earlier and were rebound in the context of the Iviron scriptorium.

3.1.2.1. *Text-blocks, scribes and binders (tables 130,131).*

Fourteen (14) of the 17 text-blocks were written in the first half of the sixteenth century (11 of them dated precisely between the years 1512 and 1544), while of the remaining three manuscripts, one was written in 1007 (**I. 46**), one in the thirteenth (**I. 258**) and the last one in the fourteenth century (**I. 42**). All of them are written on western paper, except **I. 1588** and part of **I. 42**, which are written on parchment, and **I. 1588** written on eastern paper. The formats vary between folio (three manuscripts), 4to (two manuscripts), 8vo (nine manuscripts) and 16mo (three manuscripts).

Five of the manuscripts contain theological texts, nine contain liturgical texts, two contain both liturgical and theological texts and one manuscript contains various documents about the Athos monastic community.

All 14 manuscripts which were written in the first half of the sixteenth century have scribal and other notes through which the names of six scribes are recorded: monk **Dionisios** himself (also recorded as *proigoumenos,* represented with two manuscripts), ***hosios*** **Theophilos** (six manuscripts), **Pahomios Rousanos** (one manuscript), **Theodoros Ariologas** (one manuscript), **Neophitos** ***hieromonk*** (three manuscripts), and a certain **Nikephoros** (part of one manuscript)[99]

Monk **Theophanis** who copied **I. 46**, is actually a scribe of the eleventh century who lived in the monastery and is thought to be the only scribe who copied manuscripts in

[99] Scribal notes are not given here since they are not relevant to the aims of this research. Nevertheless most of them are published in Χρυσοχοΐδης 2000 where a detailed record of the activity and the production of the scriptorium is found.

Greek in a period when the monastery was inhabited by Georgian monks (Θεολόγος 1998, p. 240). This manuscript written in 1007 was rebound in the Iviron monastery in the first half of sixteenth century.

Unfortunately the binding activity in the context of this scriptorium is not as well documented and information is limited. The earliest record is of 1518 and comes from **I. 809**, written by ***hosios* Theophilos,** though the manuscript does not have its original binding anymore. On f. 491v. there is a long note which amongst other things says:

> *"...I beg and say to all of them who will come across this book not to impudently dare to cut it in order to brake it down and separate it, or the Tetraevaghelion, or the psalter, or the Thicaras, or some other acolouthy or other story, even for a single leaf but to remain as it was written and bound by me, all in one piece. And if the binding wears, it should be rebound entire and complete as it is now..."*[100]

This is a clear evidence that ***hosios* Theophilos** was able to bind books himself, something which will become relevant in the conclusions of this chapter.

Of the bindings considered here only two offer some evidence of their binders, **I. 42** and **I. 837.**On the right pastedown of **I. 42** we read :

> *"The present holy and blessed book was repaired by me sinful and unworthy* ***Ioakim*** *hieromonk and pneumatikos, and was donated to the respectful and holy royal monastery of Iviron ...in the year 1525 AD on the 20th of May"*[101].

The same name appears in two more manuscripts, one of which is now part of the collections of the Synodic library in Moscow (catalogue number 21), transferred from the Iviron monastery to Moscow in 1655. It bears a note by the same **Ioakim** dated in that same year commemorating the repair of the manuscript. The second one is a manuscript now in the Protato library in Karies / Mount Athos (Protato 40, figure 75), which bears a note in his hand, dated 1525, identifying himself as the *anakainistis,* literally the renovator, of the manuscript. According to Chrysochoides (Χρυσοχοΐδης 1999, pp. 70-76), **Ioakim** was living in Karies and ***hosios* Theophilos** who wrote the

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[100] *«...Παρακαλώ δε και λέγω πάσι τοίς εντυγχάνουσι το παρόν βιβλίον, ίνα μη τις αναιδώς τολμήσει κατάτεμείν αυτό. Λέγω δή, ίνα χαλάσει αυτό και χωρήσει, ή το τετραευάγγελον ή το ψαλτήριον ή τον θηκαράν ή άλλην όλως τινά ακολουθίαν ή υπόθεσιν μέχρι και ενός φύλλου άλλ' ούτως ως εγράφη και εσταχώθη υπ' εμού, ούτος μενέτω, όπου αν τύχη αδιάσπαστον· ει δε το στάχωμα φθαρεί, πάλιν σταχωθήτω σώον και ανελιπές ως υπάρχει...».*

[101] *« Ανεκαινίσθη η θεία και ιερά βίβλος εξεμού αμαρτολού και ευτελούς Ιωακείμ ιερομονάχου τάχα και π(νευμα)τικού και ανετέθη της σεβασμίας και ιεράς βασιλεικής μονής των Ιβήρων...Έτους ζλγ' (7033AM = 1525 AD) ινδ. Γ' έν μηνή μαίω κ' ».*

last leaf of the repaired codex, was also living there at the time. So this manuscript was most probably bound in Karies and not in the monastery itself.

The second evidence comes from the left pastedown of **I. 837** where on a rather faint and partly legible note we read:

> *"Take care binder not to put.../ make beautiful and cut it... "*[102] .

As will be discussed at the end, this note was probably written by one of the scribes who collaborated in writing the text-block and was addressed to ***hosios* Theophilos** who was responsible for writing six leaves (ff. 80-82v. and 327-329v.). As was stated above, ***hosios* Theophilos** was living outside the monastery after 1523 but kept writing and dedicating manuscripts to the Iviron monastery.

Still further evidence comes from two more manuscripts; one is also in the Synodic library of Moscow (catalogue number 352). On this manuscript there is a note by a certain monk of the monastery called **Malachias** saying that the manuscript was repaired by him on the 15th of July 1531 (Χρυσοχοΐδης 1999, p.76). However, neither of these manuscripts, preserved in Moscow, was surveyed, making this evidence of limited value to the research. In **I. 519**, written by ***hosios Theophilos*** in 1541/2 there are two notes commemorating the rebinding of the same manuscript which unfortunately is today found as a sewn text-block without binding:

> f. 272r: *"may the remembrance be eternal of him who bound the present book of the respectful, holy and royal monastery of the Iviron in the year 1541 AD* ***Gregorios****"*[103]

On the same folio under the above note:

> *"the present book of the respectfull and royal monastery of Iviron was rebound for the third time in the year 1600 AD in the month of July from the metropolitan who was unfairly expelled by Mathaios klinovitis and by the punishments of Athanasios from Veroia who has been Patrarch"*[104].

It is unclear why the book was bound three times in the span of 60 years.

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[102] *«Βλέπε ο σταχοτά μη θέσης/ καλώπισε τ(ο) βιβλίον και κόψης αυτόν....».*

[103] *«αιωνία η μνήμη του σταχόσαντος το παρόν βιβλίον της σεβασμίας θείας βασιλικής των ιβήρων μονής επ έτους ζξα' (7601 AM = 1541 AD) Γρηγόριος».*

[104] *«το παρόν βιβλιον της σεβασμίας θείας και βασιλικής μονής των ιβήρων εξανασταχώθη γον (τρίτο) εν έτει ζρη (7108 AM = 1600 AD) κατά μήνα Ιούλιον υπό μητροπολίτου αδίκως διωγμένου παρα ματ(θαίος?)...κλινοβήτου κ(αι) παρά κανόνας πατριαρχεύσαντος βεροίας αθανασίου και γιραλέου»*

I. 581 bears a note in the left pastedown stating that the manuscript was "*repaired as it is evident*" on September 1801, though this refers to some minor repairs done in a later rebinding of the text-block around the beginning of the eighteenth century. What is left of the Iviron scriptorium binding are some structural features of the sewing and the boards, which will be discussed later.

On account of these notes and considering the precisely dated manuscripts the bindings considered here can be dated between the years 1512/13 and 1544. Fourteen of the bindings are the original ones and three are the result of rebinding. Fourteen of the bindings are Greek-style bindings, two rather uncommon bindings are described as Flush Pasteboard, Unsupported bindings, and there is one volume which was rebound in the seventeenth century (**I. 581**) and has a binding of the Flush Wooden Boards with Supports type.

3.1.2.2. *Text-block repairs (table 132)*

Six of the text-blocks considered here present some minor repairs, either to the spine-folds of the gatherings, the text leaves, or both. It is intriguing that some of these manuscripts have spine-fold repairs though the current binding is in all probability their first one. In **I. 42**, a small part of the text-block missing at the end was written on paper and sewn in with the rest of the text-block.

3.1.2.3. *Endleaves (table 133)*

The endleaf arrangement presents no evidence of consistency. Four out of the 17 volumes have no endleaves at all. The arrangement of eight endleaf units (belonging to five volumes) is not clear. Of the remaining 17 units (belonging to nine volumes) only three consist of compound endleaves (having both fly leaves and pastedowns), two of them integral and one separate. Fourteen units consist of multiple flyleaves (except the right endleaf unit of **I. 593**, where there is one single pastedown) which vary between one (five units), two (three units), three (one unit), four (two units), and eight (one unit). Ten of them are integral and the remaining four are separate.

3.1.2.4. *Sewing and Board attachment (tables 134,135).*

All the manuscripts considered here are sewn with unsupported sewing except **I. 581**, which was resewn on supports in the early nineteenth century, though the Iviron scriptorium sewing phase is still discernible.

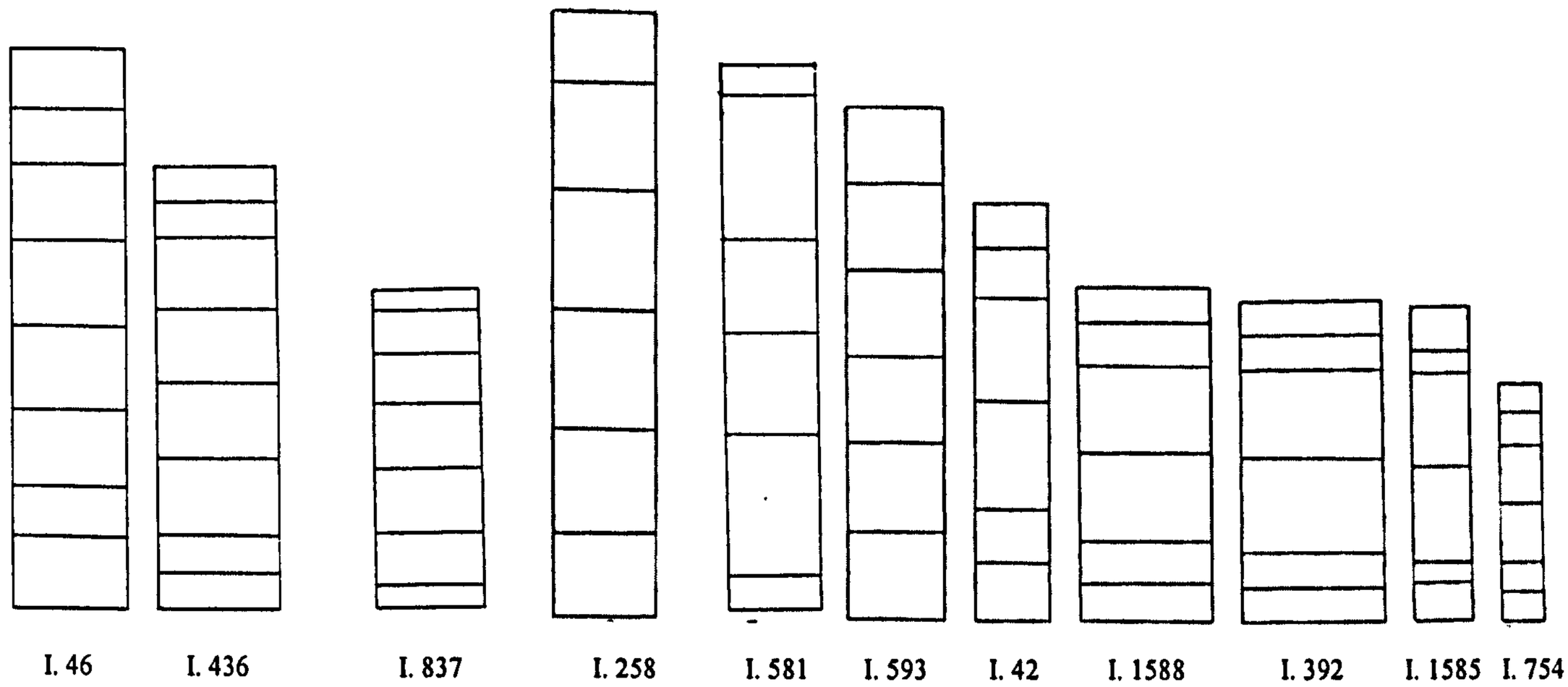
Four manuscripts are sewn on three sewing stations, two on four, eight on five, one on six and two on seven (figure 73).

There is a clear predominance of odd numbers in the distribution of sewing stations: out of the 17 bound volumes only three are sewn on an even number of stations, that is two volumes sewn on four stations and one sewn on six.

There is no strict relation between the number of sewing stations used and the dimensions of the volumes though there is a tendency to sew the biggest volumes on more sewing stations.

There are as many as eight different patterns of the arrangement of the sewing stations among these 17 bindings:

- The pattern B1 is the commonest, used in six volumes sewn either on three (four examples) or four stations (two examples).
- The pattern B6 is used in three volumes sewn either on five (two examples) or seven stations (one example).
- The pattern B4 is used in two volumes both sewn on five stations.
- The pattern C3 is used in two volumes both sewn on five stations, in one of them in combination with the pattern B5.
- The patterns A, B2, B3, C4 are used in one volume each sewn either on five, six or seven stations.



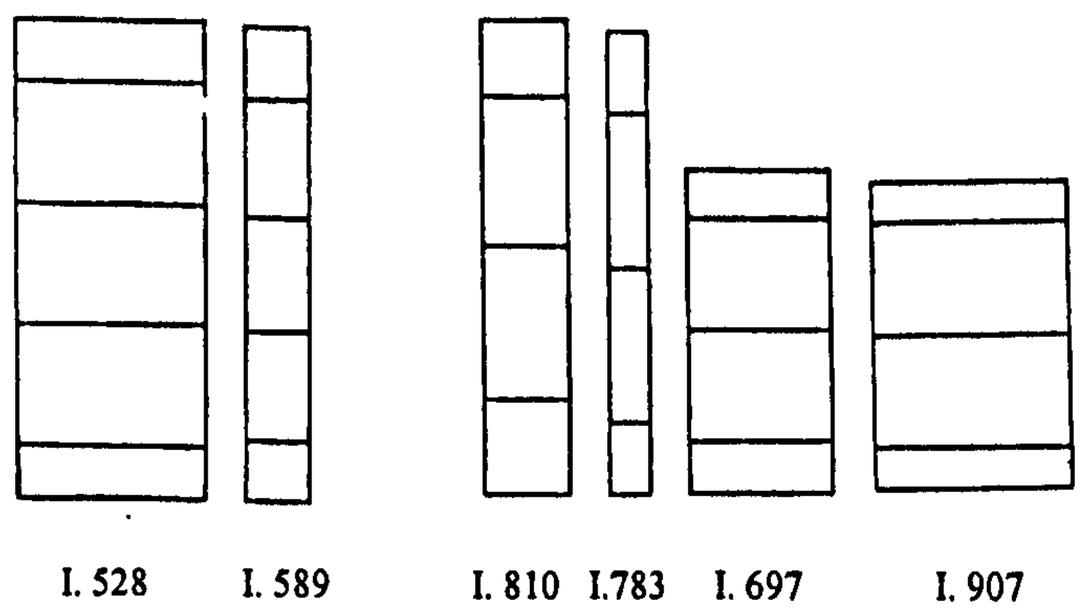


Figure 73. Line drawing showing the spines of the text-blocks and the arrangement of the sewing stations along them. Clock-wise from top text-blocks sewn seven, six, five, four, and three sewing stations.

The sewing stations are marked by V shape cuts for the accommodation of the chains that are formed in the spine by the sewing process. In three volumes these cuts are particularly wide without any obvious reason such as the thickness of the sewing thread. The main sewing stations and the change-over stations are invariably marked with these V shape cuts with only one exception **(I. 436)**, where the change-over stations are marked with single knife cuts instead of V shape cuts. Most of the text-blocks are sewn with a hemp thread of medium thickness and the majority of medium twist, either S (ten examples) or Z ply (six examples). In one volume **(I. 392)** the thread used has been waxed rather heavily. **I. 697** and **I. 1588** are sewn according to the double sequence procedure. The exact type of chain stitch could be established

only in two volumes, **I. 810** and **I. 1588**. In the former it is of the two step type and in the latter of the one step. As we will see further on the exact type of chain stitch used in these volumes might be related to the specific board attachment system used.
The board attachment is an interesting feature of these bindings and apparently at least four different systems were used, or variations of the same.

'Iviron scriptorium' attachment system.

The conjectural identification and use of this attachment system is based on the following observations:

1. In seven of the bindings, wooden wedges and a kind of resin can be seen in the recesses in the inner face of the boards where the attachment thread is laced through the boards.
2. The left board of **I. 907** is partly destroyed due to insect infestation just along the spine edge. The damage has not affected the hinging loops, but instead offers the possibility of getting a clear view of the construction. There are two loops at each attachment station apparently secured with resin and a wooden wedge as well as a thread going from attachment station to attachment station (not related to some missing gathering), wrapped around the attachment thread in the hinges. Evidence of the Z pattern on the outer face of the boards was obscured.
3. The sewing structure of **I. 810**, which has lost both boards but offers a clear insight into the sewing procedure. The chain stitch is of the so called two steps chain stitch type and has preserved two loops of thread in the main sewing stations at the left end of the text-block, whilst at the other end the hinging loops are completely missing. As can be seen in figure 74b the loops at the left end of the text-block result from the sewing of the first two gatherings, which allows it to be identified as the two step type.

Putting all these evidence together and after the preparation of some models, an attachment system which has not been described before is proposed as the most probable procedure which could satisfy observations two and three, whilst observation 1 seems to indicate an auxiliary procedure which we will discuss later.

As can be seen from the drawing in figure 74, the conjectural reconstruction of the sewing structure and the board attachment starts by passing the thread through one of the attachment holes of the right board of the text-block (in the surviving examples no evidence has been found for this conjectural starting point, though this might be due to the fact that in none of the examples do we have free access to the boards). It enters the outermost sewing station, proceeds to the second one, exits, passes through the first attachment hole, exits through the second, re-enters the first gathering, proceeds to the third sewing station, exits, is then laced through the board as in the previous station. Re-entering the gathering, it proceeds to the outermost sewing station, is laced through the board as in the previous stations. The thread then continues by entering the second gathering and is laced at each attachment station as in the previous gathering and at the opposite, outermost sewing station. It then re-enters the third gathering after having been laced to the board as well. From the third gathering onward the sewing is made as usual by passing the sewing thread under the thread of the corresponding station of the previous gathering. In this way the resulting chain-stitch is necessarily of the two step type (as in the case of **I. 810**). When the last gathering is sewn, and in order to create a similar attachment to the left board of the text-block (shown in the right of figure 74), after linking to the outermost sewing station of the penultimate gathering, the thread climbs and is laced through the attachment holes of the left board, drops down, passes under the thread between the penultimate and the last gathering and proceeds to the second sewing station leaving a thread exposed on the spine of the text-block. In a similar way, when the thread exits the board from the last attachment station, and in order to reinforce this attachment, it goes back in the opposite direction, is wrapped around each hinging loop adjacent to the last gathering and is laced once more through the attachment holes of the board. In this way a thread linking all the hinging loops and a tight loop around each of them will be visible between the board and the last gathering, much in the same way as it can be seen on the left board of **I. 907** but not in **I. 810** where the loss of the left board will have also removed these secondary links between the sewing stations without seriously damaging the sewing structure of the text-block, except in the tail outermost sewing station which is broken at the first quires.

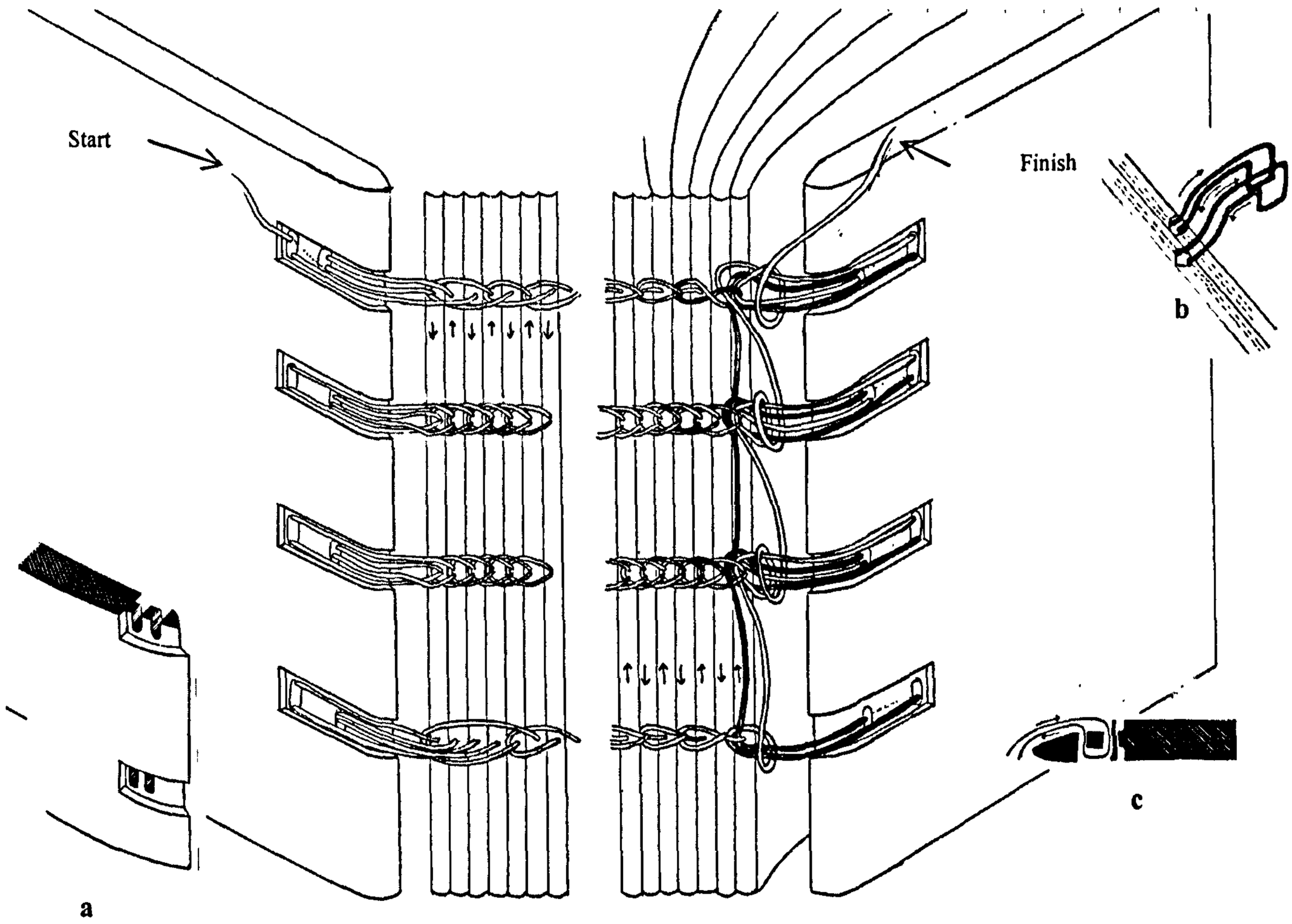


Figure 74. Schematic representation of the Iviron attachment system. The red colour is used to facilitate following the route of the thread; (a) shows a cross-section of the board, (b) the passage of the attachment thread and (c) the conjectural use of the wooden peg in order to secure the thread and seal the attachment holes.

The resin on the attachment grooves on the inner face of the boards could be intended as a mean to seal the supposedly wide attachment holes and recesses, and the wooden wedges to seal the attachment hole so that the resin would not pass through and escape. As can be seen from the figure 74c such sealing of the attachment hole is superfluous at the attachment hole adjacent to the spine edge, since the thread itself would probably block the resin from passing through.

On the basis of presence or not of resin and wooden wedges at the attachment stations, visible in the inner face of the boards, the same attachment system could tentatively be attributed also to volumes **I. 392, I. 436, I. 528, I. 593, I. 1589**. On **I. 593** there are wooden wedges but no resin whilst in **I. 1589** there is neither resin nor wedges, though both bindings are so similar in all other respects (including the

unusual Armenian endbands and the fact that they were both written, and presumably bound, in the same year 1538, a few months apart) that it is possible that they were the work of the same binder. This evidence could reinforce the conjecture that the wooden wedges and the resin were not an indispensable technical feature but probably a simple way to seal the presumably wide attachment holes and make more stable the attachment.

Instead of using the second gathering to reinforce the hinging loops at the beginning of the sewing of the text-block, the sewing thread could run twice along the first gathering, in which case the chain stitch type would result in an one step chain stitch type. This is partly what happens in **I. 1588**. This text-block is sewn according to the double sequence procedure. What is intriguing in this case is that there seem to be thin cord supports in the outermost sewing stations, which are slightly reddish, therefore, distinguishable from the sewing thread itself. Closer examination could not provide a definite answer in this instance[105]. For the rest of the volumes, the method by which the boards were attached to the text-block remains a matter of conjecture with to many clues missing and to little still preserved. In all eight volumes where the Iviron scriptorium attachment system may have been used, there are board spine edge recesses for the accommodation of the attachment thread of the SER 4 type.

I Uns/1A , I Uns/3A, and I Uns/3B attachment systems.

The case of **I. 754** and **I. 783** present still another system of board attachment, though similar to those already mentioned. Unlike the volumes considered above, in both these volumes a typical Z pattern is found on both boards, made with the same thread as the one used for the sewing, in **I. 754** on the outer face of the left board and the inner face of the right board, in **I. 783** on the outer face of both boards. The left board of **I. 783** is the only board offering further evidence as to the specific system of attachment. Here the attachment between the boards and the text-block was apparently not made in one single session as in the Iviron attachment system by starting the sewing from one board, proceeding to the text-block and ending to the

[105] It would be very tempting to relate the presumed use of supports with the Armenian bindings which though closely related to the Greek-style ones made use of supports (see Szirmai 1999, pp. 87-90). The use of Armenian endbands in two of the bindings considered here makes such a connection seem even more plausible. Nevertheless the fact that it cannot at the moment be positively confirmed that what is seen in I. 1588 are actually sewing supports does not permit us to further elaborate on this conjecture.

other board, but in successive ones, this is by first preparing with a thread the Z pattern on the boards and then attaching the text-block to them with bridling as described before (Federici and Houlis, 1988, p. 26, fig. 16). Free threads connecting the hinging loops between the left board and the text-block could be understood as a way to reinforce the attachment between the text-block and the pasteboard by providing extra bridling loops using the same thread and moving from attachment station to attachment station and back. This is possibly the same system used in volume **I. 46** since there are many recessed loose thread lengths which are not related to a similar number of thread lengths in the hinging loops, evident between the spine edge of the boards and the text-block.

I Uns/4B and I Uns/4C attachment systems.

In **I. 837** evidence indicate that the I Uns/4B attachment system has been used, though it is not possible to have a clear view of all the details. As is evident from a small tear in the cover and the spine lining that in this case too the board spine edge recesses are of the SER 4 type.

In the case of **I. 258**, the total absence of evidence on the inner face of boards indicates that the I Uns/4C attachment system has probably been used, though there is no direct evidence to support such a conjecture.

3.1.2.5. *Boards (table 135).*

In four out of the 17 volumes considered here both the boards are presently missing. Of the remaining 13 volumes, one is bound in pasteboards, one in laminated boards and 11 in wooden boards. In five volumes it was possible to observe the inner face of the boards and therefore be able to draw some conclusions about the wood species used. In **I. 258** and **I. 593** chestnut wood has most probably been used, while in **I. 46, I. 436, I. 907** either oak or beech wood. All three species are quite common in the Athos peninsula. Pasteboards and laminated boards are used in the two smallest volumes while wooden boards are used for all the others. The use of pasteboards and laminated boards at such an early date in the context of Post-Byzantine bindings will be discussed in the end of this chapter. They are made of eastern paper manuscript waste in **I. 783** and a combination of leather (no discernible evidence that this was part of the cover of a binding), paper manuscript waste and parchment pasted

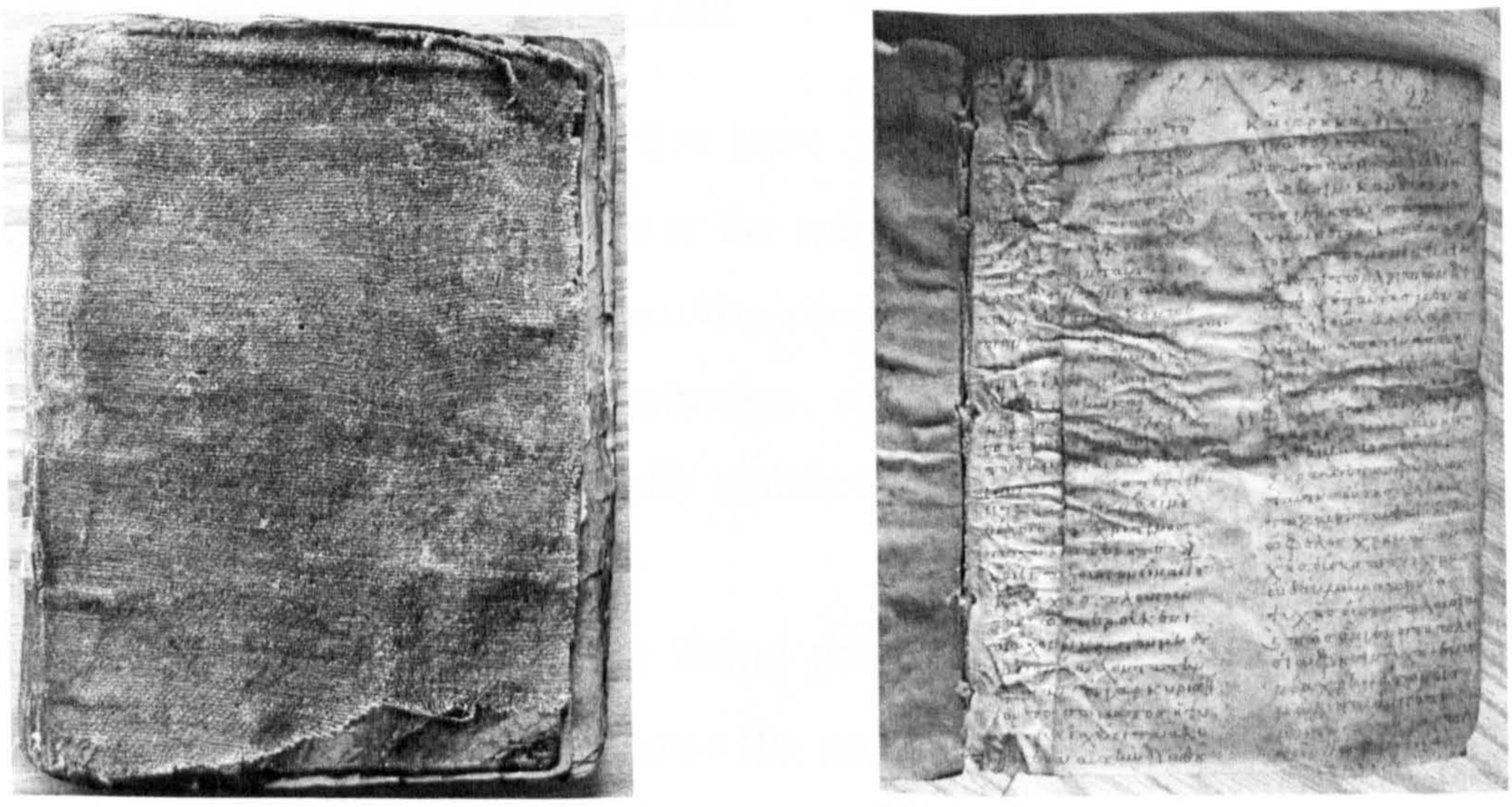


Figure 75. The outer face of the left board (left) and the inner face of the right board (right) of the codex Protato 40.

one on top of the other in **I. 754.** In both volumes the spine lining extends onto the outer face of boards, covering their whole width, resulting in the case of **I. 754** in a fairly stiff board. The same board construction is also used in the Protato 40 manuscript bound by **Ioakim** and in that case a simple undecorated rather thick piece of leather is used (figure 75).

The thickness of the boards varies between eight and 17 millimetres for the wooden boards and between three and five millimetres for the pasteboards and the laminated boards. In all the volumes the boards are cut flush with the text-blocks and their free edges are cut straight, except in the case of **I. 46**, which has the thickest boards of all the volumes considered here. In this case the free edges of both boards have been beveled towards the outer face, probably in order to disguise their thickness and facilitate handling. Nine out of the 11 volumes with wooden boards have a groove of the BG 2 type running all around the three free edges of the boards.

In the volumes bound in pasteboards and laminated boards, the spine edge of the boards is shaped according to the SET 1 pattern. In nine of the 11 wooden board volumes, the spine edge is shaped according to the SET 4 pattern, whilst on the remaining two, SET 3 and SET 8 patterns are used. The spine joints are mostly lightly angled, though no angle is found in six volumes, 45° in one volume, and 120° in two.

3.1.2.6. *Spines and spine lining (table 136)*

Five of the volumes have flat spines, five have a slightly rounded spine, four have a well rounded spine, and on three volumes the spine is concave. Since two of the latter are now missing their boards this concavity could be attributed to tight sewing and possibly also to the use of a strong adhesive, which might have made opening the volumes difficult and thus have gradually resulted in the breakdown of the attachment between the boards.

Sixteen volumes have a textile spine lining pasted all-along the spine of the text-blocks (**I. 581** is not considered here since the present spine lining does not belong to the Iviron scriptorium phase but to a latter rebinding). The lining extends toward the boards and is pasted on the outer face, covering mostly a third or a quarter of the board width, whilst on the two pasteboard bindings it covers the whole width of the boards. The extension of the spine lining onto the boards could not be detected in six volumes. In the case of **I. 810** what is visible today is probably the remains of a lining which originally would have covered the whole spine but for some reason was torn and preserved only at the head and tail spine areas due to the endband tie-downs, which keep it securely fastened. In 15 volumes the spine lining consists of plain canvas, in one volume a blue cotton canvas-like textile (**I. 754**) and in one volume (**I. 810**) three layers of a natural-colour textile woven in a way similar to the 'diagrammatic construction of the warp-float face of a 4/1 twill' as described by Emery (p. 108). The thickness of the spine lining is mostly medium (nine examples) but otherwise thin (seven examples).

In three volumes (**I. 436, I. 528, I. 581**) the adhesive used to adhere the spine lining to the boards and presumably also to the text-block spine, was identified as animal glue on the basis of visual observation.

3.1.2.7. *Endbands (tables 137, 138, 139).*

All 17 volumes retain their endbands either intact or partly missing. The only exception is **I. 581**, which was rebound at the beginning of the nineteenth century though using the original boards from which some evidence of the original endband construction is discernable. Nine of the volumes have compound endbands and the remaining seven have simple endbands.

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Simple endbands.

- **Greek Double-Core** (six volumes).

In six out of the seven volumes the endbands are sewn according to the standard Greek double-core technique. Five of them are sewn on two cord cores of medium size (in **I. 46** the second core is thicker than the first one), while in **I. 810** two narrow but thick leather strips have been used instead. The cores project onto the boards for between 25 and 60 millimetres (corresponding to a percentage of between 12,3% and 38,5% of the width of the boards) and are anchored there by means of the EAS 2 anchoring system. The thread used for the sewing of the endbands is mostly hemp, though linen and probably cotton have also been recorded in one volume each. In three volumes the endband thread was found to be the same as the one used for the sewing of the text-block. The thickness of the thread varies between medium (two volumes), thin (one volume) , and thick (two volumes). The thread ply is 2Z in three volumes, 2S in two volumes and ?Z in one, and the twist varies between loose and tight. In four volumes the tie-downs are found in every gathering (in the remaining two volumes this feature could not be established), always in the centre-fold passing through either the outermost sewing station (three volumes) or a different passing hole outside them (three volumes).

- **Greek Single-Core** (one volume).

This endband is found in **I. 697** which is now missing both boards. It is sewn on a single, medium thickness cord core which presumably originally extended onto the boards and was attached there, though both features can not be established in detail since the boards are missing. The thread used is the same as the one used for the sewing of the text-block (medium thickness, medium twist, 2S ply, natural hemp), tied down in the centre-fold of every gathering using a passing hole outside the outermost sewing stations.

- **Embroidered Front Bead** (one volume).

This simple endband is found on **I. 783** which is bound in pasteboards with a fore edge flap extending from the left board. It is sewn on a single medium thickness cord core which extends for just a few millimetres on the boards where it is anchored through the EAS 3 anchoring system. It is sewn with medium thickness, medium twist, Z ply, red and white silk threads, which are tied-down in the centre-folds in an unidentified number of gatherings passing through holes outside the change-over stations.

Compound endbands.

Nine volumes have compound endbands of five different types.

- **Greek Double-Core above Feather Stitch** (two volumes).

This compound endband consists of two distinct phases, a preliminary sewing and a primary sewing and has not been described before. Firstly the top and bottom edge of the spine of the sewn text-block with the attached wooden boards are worked with a simple stitching, or feather stitch (Emery 1994, p. 242, fig. 370), which runs all around the spine, starting on one of the boards, from a distance equal to 21.75%-25% of its width, anchored there through an EAS 2 anchoring system, proceeding across the spine edge of the text-block and terminating on the opposite board (figure 76). On the present examples, this preliminary sewing is made with thin hemp or linen thread of medium to tight twist, S ply. On one volume the thread is tied-down in the centre-fold of the gatherings (it is unclear in the other), using either the outermost sewing stations (**I. 392, I. 436**) or another passing hole outside them (**I. 436**). There is a strong resemblance between this preliminary endband sewing and those encountered in late Coptic codices (Szirmai 1999, pp. 39-40 and fig. 3.6, 3.7). In **I. 392**, above this preliminary sewing, a proper Greek double-core (**I. 392**) endband is sewn, differing from the typical ones only in that the sewing thread is anchored on the feather stitch rather than being tied-down on

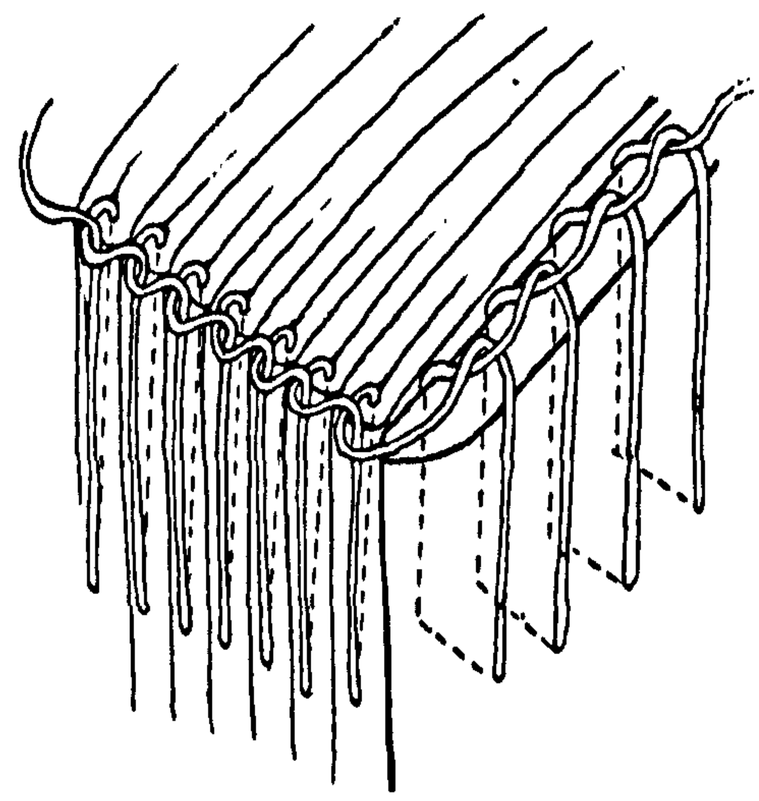

Figure 76. Line drawing showing the preliminary sewing of the endband.

the text-block as it is usual. In **I. 436** there is nothing left of the primary endband, though it could be supposed that, a Greek double-core, primary endband would also have been sewn to the feather stitch.

- **Chevron and Crowning Core** (two volumes)

This compound endband consists of three cores, a primary sewing and a secondary sewing. The first core consists of a medium thickness cord extending onto the boards. The distance of the extension onto the boards and the anchoring system could be established only in **I. 837** and were found to be 45 millimetres (equating to 23.5% of the width of the boards), and EAS 2 respectively. The primary sewing is made by wrapping the thread around the first core, either covering it completely (**I. 1588**) or not (**I. 837**), in the latter case giving the impression of warps. The thread used is either thin, loose twist, S ply hemp (**I. 837**) or thin, tight twist, 2S ply linen (**I. 1588**). This secondary sewing is made using two extra cord cores, the first one being medium and the second thin, both extending onto the boards. The threads used are thin, medium twist, S ply or thin, tight twist, 3S ply threads, of yellow, red (**I. 1588**) and blue (**I. 837**) colours. It is interesting to notice the way the yellow silk thread has deteriorated in **I. 1588** possibly due to some inherent acidic factors of the dye.

- **Armenian Two-Core** (one volume)

This endband found in **I. 528** consists of two cores, a primary sewing and a secondary sewing. The first core consists of a thick cord, extending onto the boards for a distance of 45 millimetres (equating to 23.5% of the width of the board) anchored there through the EAS 2 anchoring system. The primary sewing consists of warps sewn on the first core with a medium thickness hemp thread of loose twist and 2S ply, the same as the one used for the sewing of the text-block. The tie-downs are placed in the centre-fold of an unidentified number of gatherings using a separate passing hole outside the outermost sewing stations. The endband secondary sewing is made with thin, medium twist, 2S ply, green, red and yellow silk threads as well as silver-around-silk threads. The process consists of weaving the first row of alternating colours according to the Islamic endband technique starting from the right board, using just the warps of the

primary sewing and alternating colours so as to form wide one-colour sections. Once this first row ends at the left board the same process is repeated in the opposite direction, though with the significant difference that the threads are wrapped around the second core before going under the warps. Similar endbands, using the same technique are described in 'Les tranchefiles brodées' as found on fifteenth- and sixteenth-century Armenian manuscripts (model No. 29, pp. 84-85).

- **Armenian Five-Core** (one volume)

The compound endband in **I. 1589** consists of five cores, a primary sewing and a secondary sewing. The first core consists of a thick cord extending onto the boards for a distance of 55 millimetres (equating to 21.7% of its total width) which is anchored there through an EAS 2 anchoring system. The primary sewing consists of warps sewn on the first core with a medium thickness hemp thread of loose twist and 2s ply, the same as the one used for the sewing of the text-block. The tie-downs are placed in the centre-fold of an unidentified number of gatherings using the outermost sewing stations. The endband secondary sewing is made with the same silk threads as those used in the Armenian two-core endband described just above (green, red, yellow, thin, medium twist 2S ply, and the same silver-around-silk thread). The technique is the same with the exception that the first woven row is only yellow while the other four are three-colour (green, red and silver) and that there are four supported woven rows rather than one. This endband is clearly made by the same person who also worked its simpler version found on **I. 528.** I was able to witness the presence of many endbands of this type in the Georgian, Syriac but also Greek manuscripts of the St. Catherine's monastery library collection during one of the assessment sessions of the St. Catherine's Library project. Most of them were badly preserved though it is exactly for this reason that their construction is now perfectly visible.

- **Cretan on Single Warps** (one volume)

The compound endband in **I. 42** consists of two cores, a primary sewing and a secondary sewing. Both cores consist of medium thickness cord extending onto the boards for a distance of 25 millimetres (equating to 12,3% of the width of the

boards) anchored there through the EAS 2 anchoring system. The primary sewing consist of a Greek double-core endband sewn according to the typical technique with a medium thickness, loose twist 2Z ply hemp thread (S.a.S.). The tie-downs are placed in the centre-fold of an unidentified number of gatherings using the outermost sewing stations. The warps are worked above this primary sewing with a thin, loose twist, 2Z ply red silk thread, the same as those used for the sewing of the secondary endband, which is just wrapped around the endband primary sewing. The decorative weaving is made with thin silk threads of the same quality as the one used for the warps. In the headband only red silk has been used, whilst in the tailband blue, red and yellow.

- **Unclear** (one volume).

In the case of **I. 754** only the primary sewing of a presumably compound endband still remains. This consists of warps sewn on the first core (a thick cord extending onto the pasteboards for a distance of 14 millimetres equating to 12% of the width of the boards), anchored there through the EAS 3 anchoring system. The thread used for the warps is a medium thickness, tight twist 2S ply linen, tied-down in the centre-fold of every gathering using a separate hole outside the outermost sewing stations.

3.1.2.8. *Markers (table 140).*

Ten out of the 17 volumes have markers, in five of them simple, in four compound and in one volume unclear.

Simple markers (five volumes).

- **String markers** (one volume).

In **I. 837** a natural-colour linen thread is laced through the headband and fastened according to the system FH(e).

- **Leaf tab markers** (five volumes).

In all five volumes leaf tab markers consist of brown (three volumes) or red (two volumes) leather cuttings pasted on the fore edge of leaves according to system FpbsL.

- **Board tab-markers** (one volume). This kind of tab marker has been seen before in a binding of the Antioch atelier (S. A. 89) and as stressed on that occasion it is a feature so far obscure which seems to be found in early binding structures. They are found on both boards of **I. 837,** together with leaf tab markers and a single simple string marker. They are made of the same brown leather as the cover and are fastened through the system ItSp.

Compound markers (four volumes).

In two of the four volumes the primary markers consist of one simple open loop made of natural-colour linen or hemp threads, in one of them fastened to the headband through system LtH(d) (**I. 697**) and in the other according to the system LtH(f) (**I. 258**). In **I. 1589** there are two primary markers consisting of two open loops made of the same yellow silk used for the secondary sewing of the endbands. In **I. 392** there are three open loops resulting from an alternating lacing of hemp thread through the front and back of the endband [system LtH(a)].

Secondary markers are still preserved in two volumes whilst in another two only few vestiges survive. In the former they consist either of a compound, natural-colour linen thread attached probably through system KiE (**I. 392**), or a natural-colour hemp thread attached through system KiM.

3.1.2.9. *Cover and decoration (table 141, 142, 143).*

Though four of the volumes are now missing both their boards and one volume was rebound in the early eighteenth century, it is most probable that all 17 volumes were originally bound in full leather of medium thickness, and various hues of black and brown. The quality and preservation of the leather covers vary greatly and do not permit any safe identification of the animal source of the hides, thought goat is the most likely.

The turn-ins of the leather cover follow mostly the pattern T-ins 3 (seven volumes) and secondly the pattern T-ins 2 (four volumes), while the patterns T-ins 1 and T-ins 5 are used on one volume each. They are mostly wide but varying width is also commonly found. The corner mitre varies, the most commonly used pattern being the Co 13 (seven volumes) related mostly to turn-ins of the T-ins 3 type, followed by the

Co 1(two volumes), while the Co 4, Co 5, Co 7, and Co 15 are all found once, mostly in combinations of more than one of them. Mixed mitre is found in two volumes.

It is very interesting and tempting to note the similarity of the leather cover of **I. 783,** with its fore edge flap extending from the left board, with the Nag Hammadi codices (figure 78) but also with a fragment from the Sinai New Finds dated 1464 and still preserving part of its bindings (figure 79). The similarity and the fact that the now missing leather strap, could probably not be utilized in any other manner than that preserved on the Nag Hammadi codices, might offer an indication as to a possible connection between the Iviron binding and similar bindings made in Egypt and probably seen by ***hosios* Theophilos** himself, during his pilgrimage in Alexandria, Sinai and the Holy Land, as we will discuss in the end of the chapter. All 17 volumes are decorated with blind tooling. In ten volumes the decoration pattern of the two boards is the same, in two it is different, and in five volumes this cannot be established since either the boards are missing (four volumes) or the volume was rebound (**I. 581**). Nevertheless, even those volumes, which are now missing their boards, must have been originally decorated since evidence of such decoration is found on the leather cover still preserved on the spines.

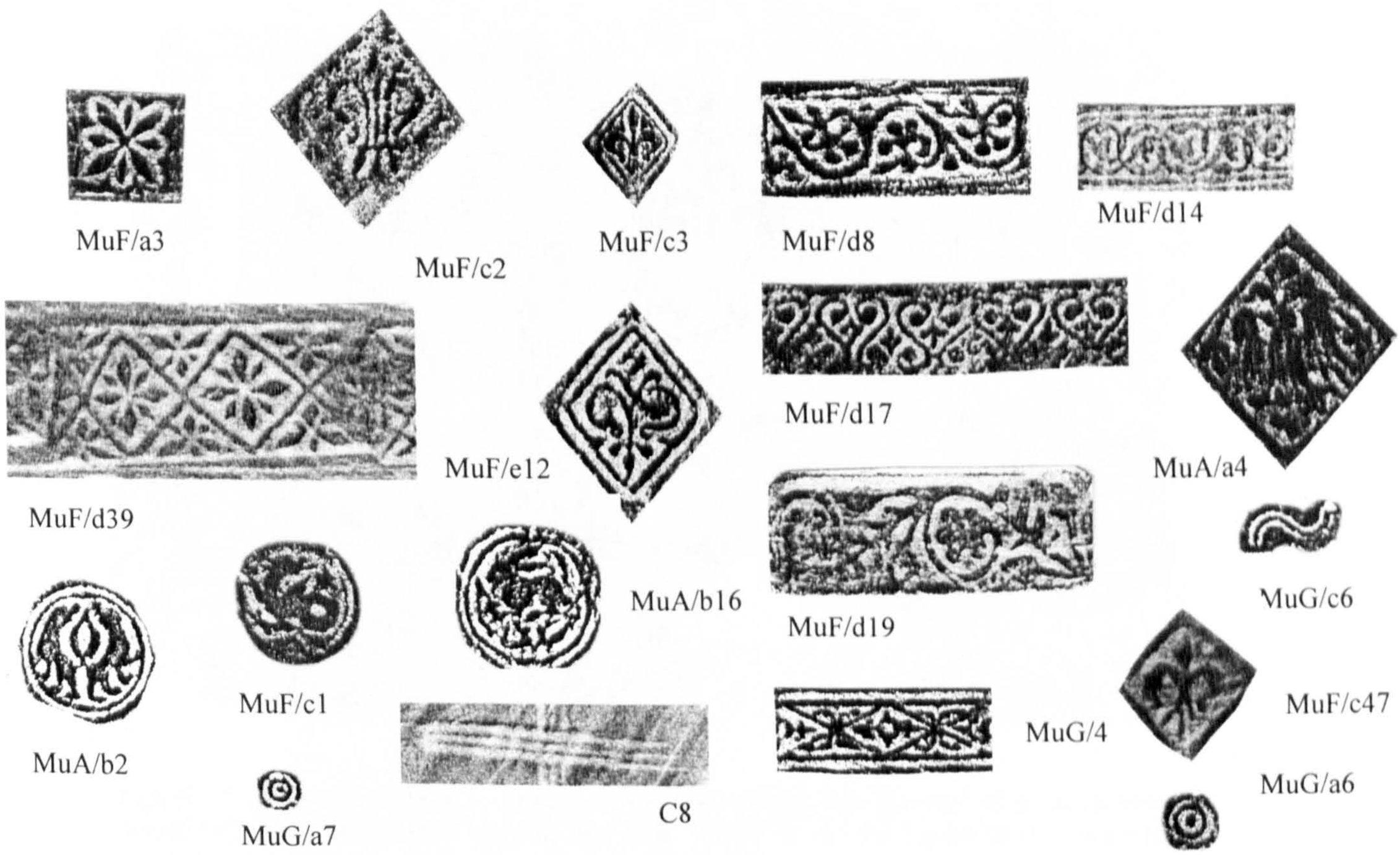

Figure 77. The 19 tools used in the bindings of the Iviron scriptorium atelier.

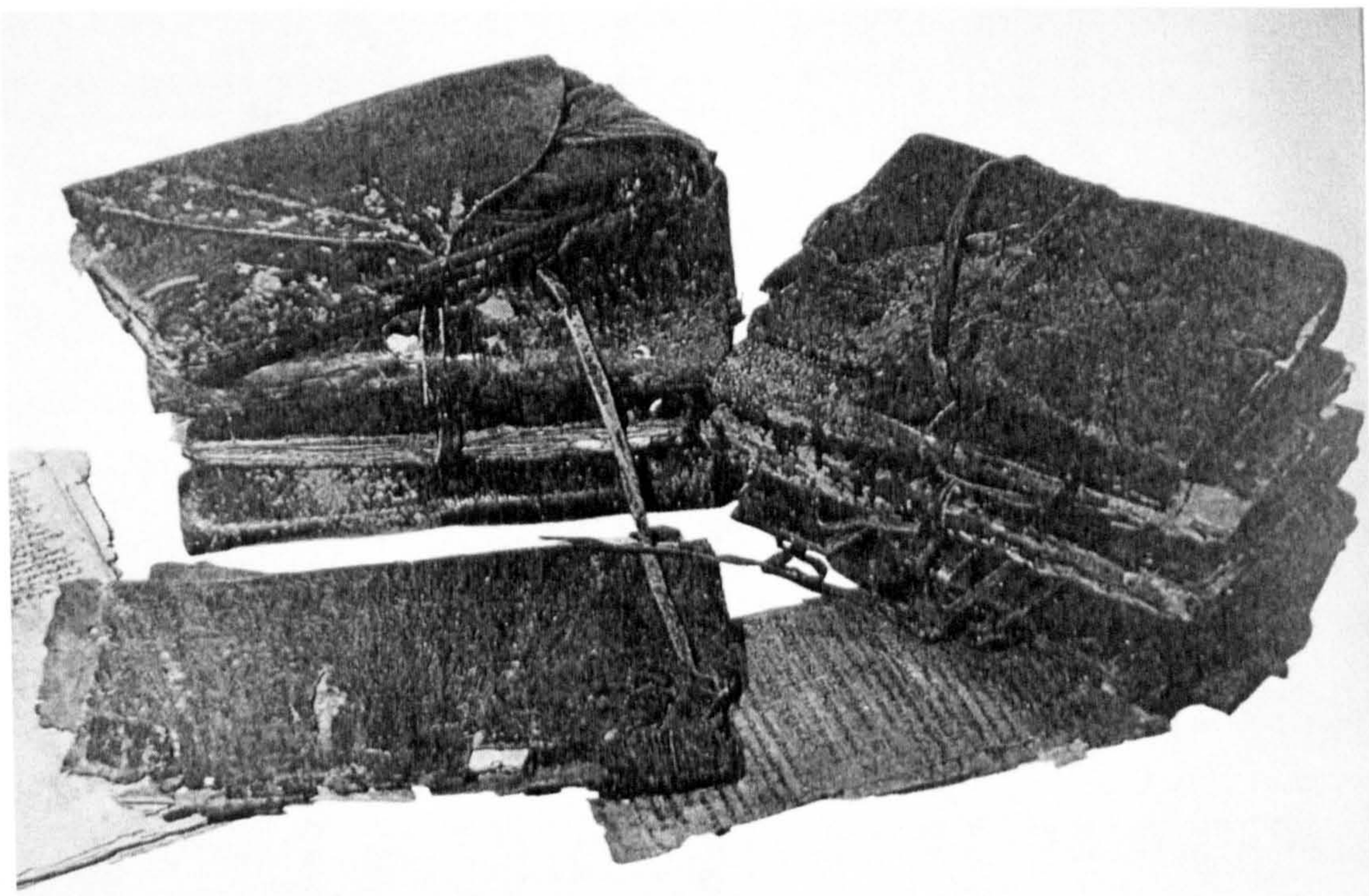

Figure 78. The codices found in Nag Hammadi in 1945 (after Szirmai 1999).

Figure 79. Fragment from a paper codex containing the Liturgy of p*roigiasmenon* dated 1464 and discovered among the New Finds in the St Catherine's monastery. (after Νικολόπουλους 1998).

The decorative patterns used present a great consistency since all but one (left board of **I. 837**) are variations of the same basic principle of dividing the board surface by dragging the vertical and diagonals of the central panel. This main panel can be further embellished with one (six volumes), or two (two volumes) tooled frames. The decoration pattern Dec 6 is the most commonly used (nine volumes), either without any decorative frame (two volumes), with one frame (two volumes), or two frames. The pattern Dec 7 is found in three volumes (in two of them in slight variations), without any frame, or with one and two frames. The patterns Dec 4, Dec 5, found in one volume each are always variations on the same aforementioned principle, while Dec 12a and Dec13abc are found in one volume each, the latter pattern has been seen previously in the bindings of the Elusive atelier and in that occasion related to an influence from Northern Europe.

The spines are certainly undecorated in seven of the 17 volumes. On the remaining ten volumes the spines are either decorated (eight volumes) or this cannot be positively confirmed either because of the bad state of preservation of the leather cover on this part of the bindings (**I. 258**), or because of a later rebinding (**I. 581**). Four of the decorated spines follow the pattern SD4/B and just one follows the pattern SD3/B. The board edges are decorated on two volumes only, according to the BD 10 pattern.

All the volumes are decorated with single multi-use tools used either as free-standing tools or combined as to form frames. There are 19 tools used altogether, two of them relief tools, 12 intaglio tools, two concentric rings tools, and a creaser. The number of tools used in one single binding varies between six (three volumes), seven (two volumes), eight (three volumes), nine (one volume), eleven (two volumes), and twelve (one volumes), while the two tools that are recorded in **I. 1585** refer only to the spine since the boards are now missing. All the tools used are typical of the Greek-style bindings as far as the subject and the pattern are concerned and similar tools have been recorded both in the present and other published research (Federici and Houlis 1988, Αθανασιάδης 1994).

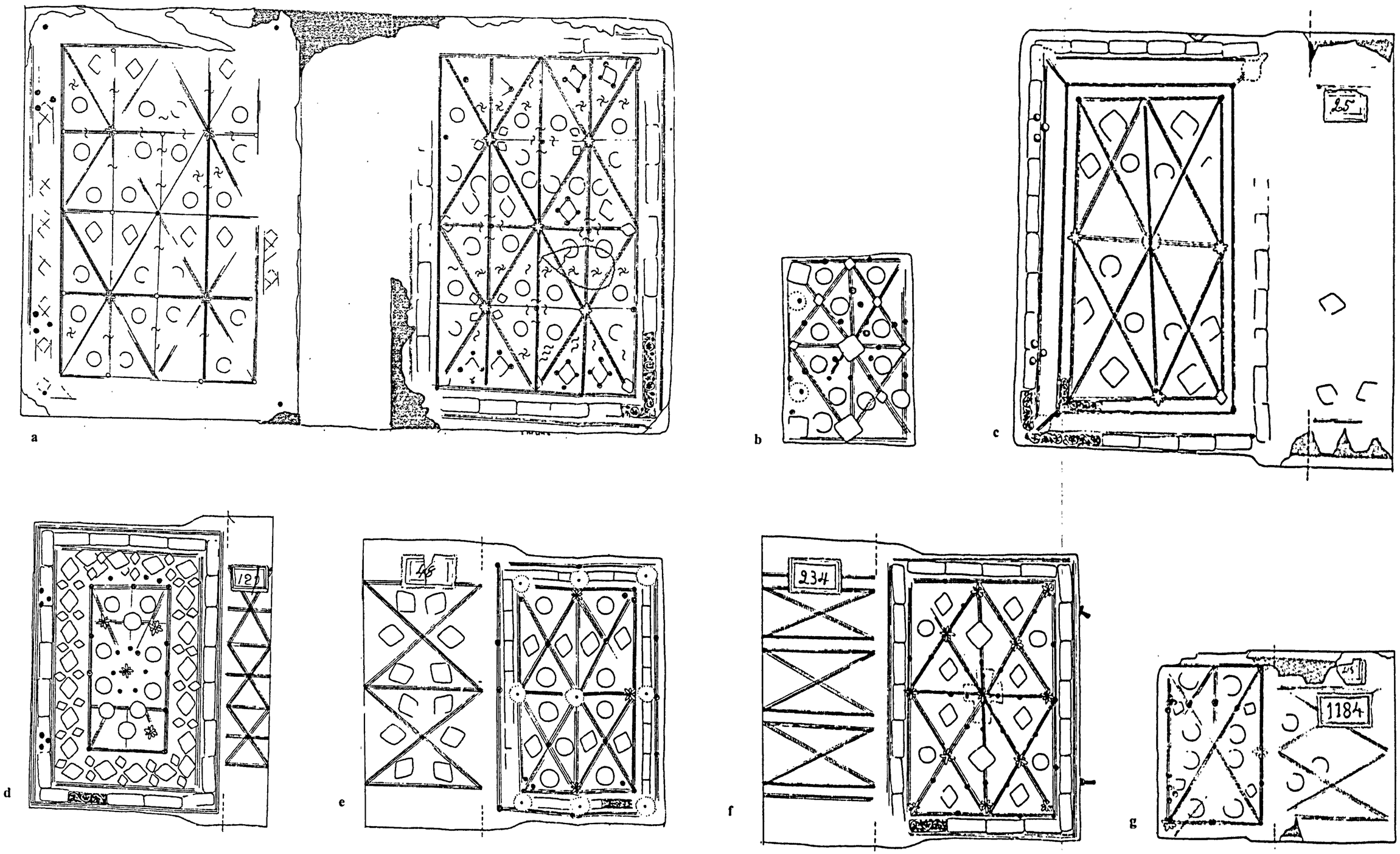

Figure 80. Line drawings showing the decoration of I. 258 (a), the right board of I. 754 (b), I. 593 (c), I. 1589 (d), the left board of I. 392 (e), I. 528 (f), and the right board of I. 907.

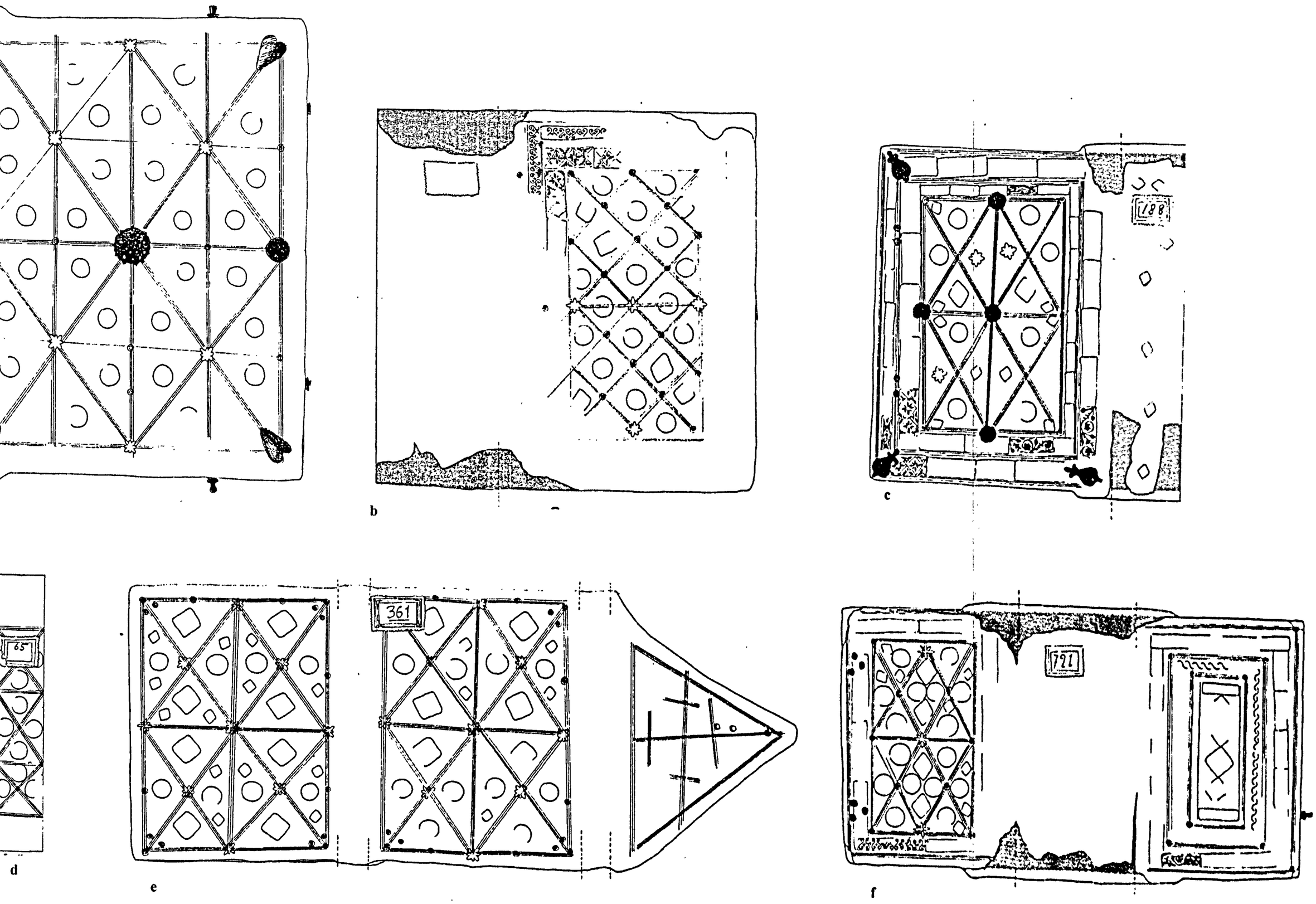

Figure 81. Line drawings showing the decoration of the left board of I. 46 (a), I. 436 (b), the right board of I. 42 (c), the spine of I. 1585 (d), I. 783and (e), I. 837 (f).

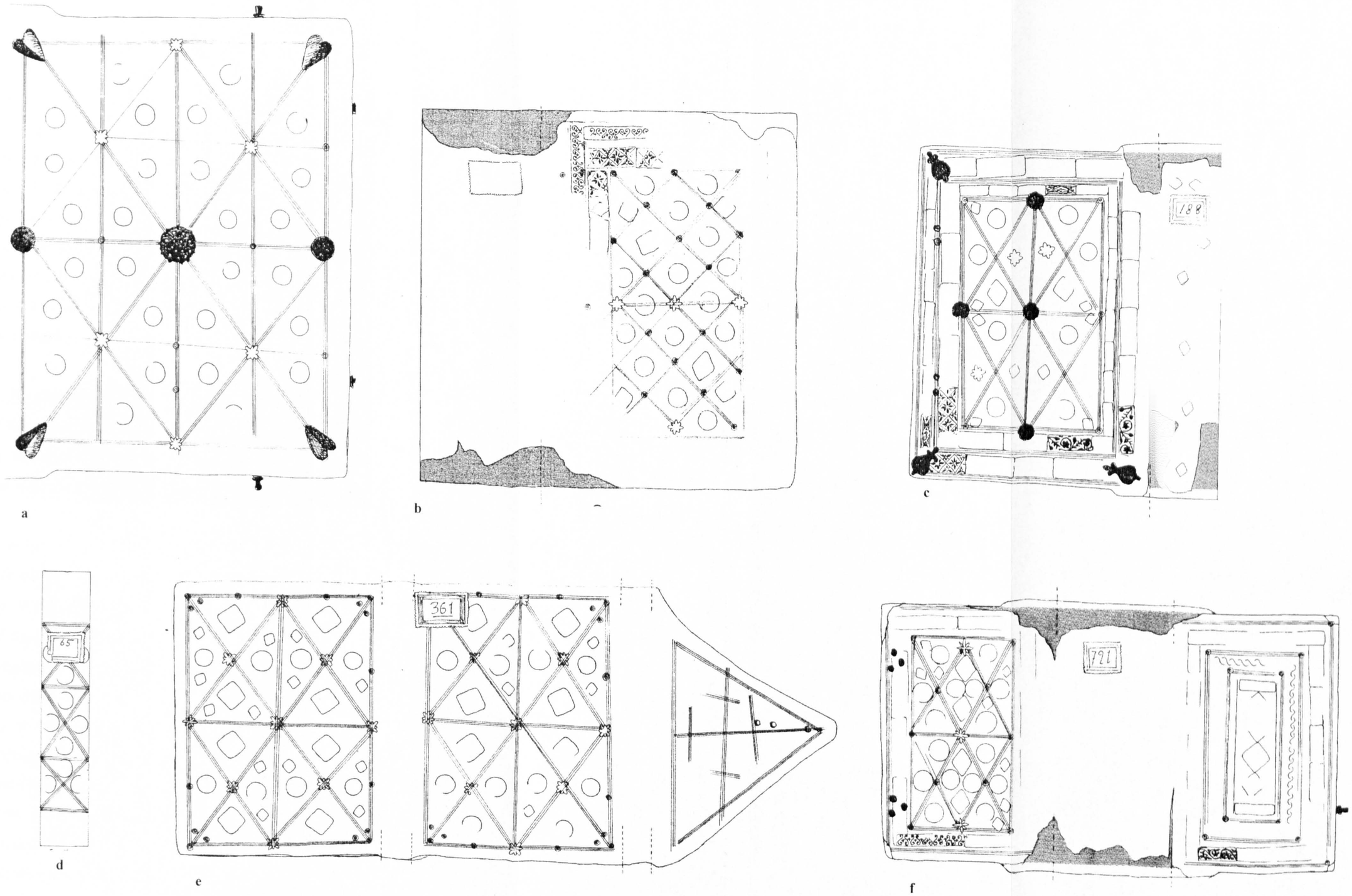

Figure 81. Line drawings showing the decoration of the left board of I. 46 (a), I. 436 (b), the right board of I. 42 (c), the spine of I. 1585 (d), I. 783and (e), I. 837 (f).

The tooling was done probably using gentle heat. This is evident in the case of **I. 258.** in which a hole in the cover of the left board was repaired by sewing on another piece of leather of the same quality before the execution of decoration, leaving the thread of the repair quite exposed on the surface. In the tooling process both the creaser and some tools where impressed just on the thread, leaving a sharp impression but at the same time producing no discolouration of the thread. The case of **I. 783** is of interest because the leather of the cover is burned in the areas where dwelling time has been overestimated. This exception was probably due to the fact that the boards of this manuscript are pasteboards and therefore could not stand the intense, high pressure during gentle heat tooling without damaging the text-block and the pasteboards. Therefore, heat might be understood as an effort by the binder to have a better impression by applying less pressure. The outcome, nevertheless, shows that the undertaking was not very successful, since the tooling is not defined enough and the leather is burned.

3.1.2.10. ***Text-block edges trimming and decoration.***

None of the volumes presents signs which might indicate the method and/or the tools used for the trimming of the text-blocks. On one volume (I. 42) the edges are decorated with round medallions with rope-like bands in between, which are very similar to those seen on the Cretan bindings. They are drawn with brown and red ink and they must belong to the first binding of the parchment text-block (written in the fourteenth century) since the decoration is found only on the parchment leaves. On the head edge of this volume, due to the loss of part of the original text-block, a small part of one of the two medallions is missing and there was apparently an attempt to fill in the missing part on the newly written paper leaves with red colour (photo 424).

The letters ΔICIOC are written on the head edges of two volumes (**I. 697** and **I. 392**) obviously an abbreviation of the name ΔΙΟΝΥΣΙΟΣ, the scribe who copied both manuscripts and who was, as mentioned earlier, the founder of the Iviron scriptorium. On the tail edge of these two and a third volume (**I. 837**), there are partly legible long inscriptions, which apparently refer to the titles of the texts contained. This is a clear indication that the books were stored horizontally with the head or tail edge facing the viewer, as we have also seen on the Klimis and the Giglio bindings.

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3.1.2.11. *Metal fittings (table 144).*

Six of the 13 volumes still retaining their boards originally had bosses and two had only a metal cross nailed to the left board, which in both cases now missing.

Four out of the six volumes originally had nine bosses on each board and the remaining two volumes had five, with no evident reason related to their decoration or dimensions. There are four different types of boss found, two of them of the *boullai* type and two *amigdalia* as seen in figure 82. All the surviving examples are made of solid metal and were probably cast. On the basis of visual observation only, the metal used could be tentatively identified as lead in two volumes and copper alloy in three. The bosses are nailed to the boards and the nail ends are flattened either above or under the pastedowns. In the case of **I. 46** there are small leather discs placed between the leather cover turn-ins and the bosses, probably in an attempt to increase their stability.

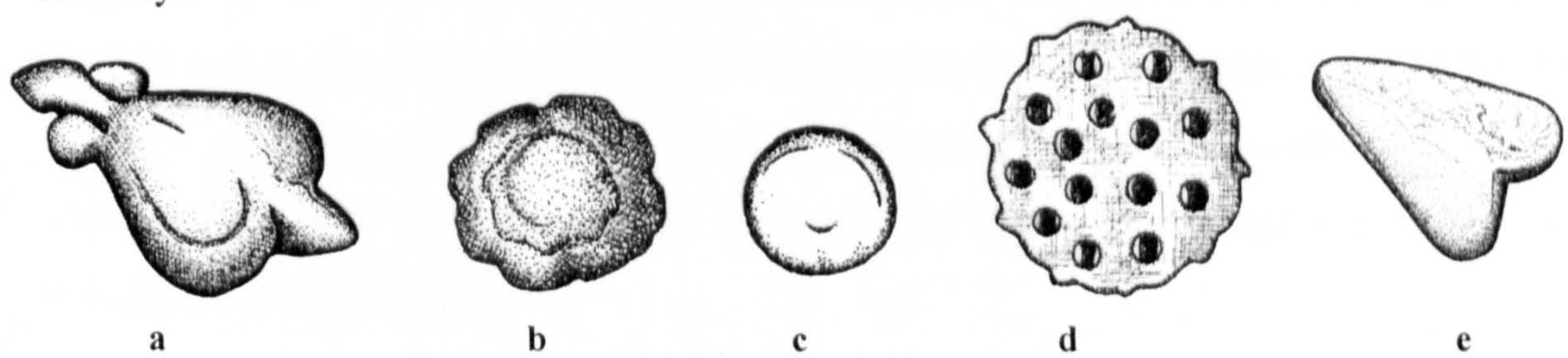

Figure 82. line drawings of the bosses of I. 42 (a), (b), and I. 46 (c), (d), (e). Scale varies.

3.1.2.12. Fastenings (table 145)

On five volumes, the boards are now missing and therefore nothing can be said about the presence of fastenings on them. All 12 remaining volumes have fastenings, on eight of them these are arranged according to the 0-2-0 pattern, on three according to the pattern 1-2-1 and on one single volume according to the pattern 0-1-0. They all follow a right to left direction (←) except the case of **I. 783** where the presumably long tie, which is now missing, extended from the left board toward the right one (→), and **I. 754** where the now missing ties followed converging direction (→←). There are four different types of fastening used on these bindings, considered below according to the order of frequency-of-use.

- **Three Edged Leather Interlaced Straps (I. 258, I. 392, I. 528, I. 1589).**

On all four volumes the leather used is the same as that used for the cover of the volume. The anchorage holes in all of them are of the AH 4 type, the anchorage is of the TBT type except one volume where it is of the TB type. The turn-ins follow the F & T 1 arrangement but also the F & T 5 in one volume, and the strap ends are shaped according to the Ufi pattern in two volumes and the Tfi , and TuP, pattern in the remaining two volumes.

- **Three Edged Leather straps (I. 837, I. 907)**

On these two volumes the ends of the fastenings present a unique, as yet, type, since each of the three thongs is single and not double as it is usual for interlaced fastenings. This fact leads us to speculate about the construction of these fastening though the fact that on both volumes there are typical metal pins on the left boards means that either there was a metal ring attached to each strap, or that the straps had a hole which would fit over the metal pin (the unusual thickness of the strap leather in **I. 837** would probably support the latter option). These two possible methods of construction which would fulfill these requirements are shown in the figure 83, though neither can be thought of as definitive.

Figure 83. Line drawing of two conjectural constructions of the fastenings in I. 837 and I. 907.

In both volumes the anchorage holes are arranged according to the pattern AH 4, the anchorage is either of the TB or TBT type and the turn-ins follow either the F & T 1 or the F & T 2 arrangement. On both volumes the ends of the fastenings follow the Ufi pattern.

- **Two Edged Leather Interlaced Straps (I. 42)**

The interlaced straps on this volume are made of the same leather as the one used for the cover. Though the metal rings are now missing, the edge pins, quite unusually, are not made of metal but of a bone-like material, which, under visual observation could

possibly be identified as antler. The anchorage holes follow the AH 2 arrangement, the anchorage is of the TBTP type, the turn-ins follow the F & T 1 arrangement, and the fastening ends follow the UfaP pattern.

- **Ties (I. 754)**

Two holes on each of the two pasteboards of this volume suggest that originally there were ties, which presumably would follow a converging direction (→←). Round marks left on the leather cover around each hole seem to suggest the use of some kind of metal fitting used to secure them though nothing more can be worked out. The anchorage holes are arranged according to the pattern AH 5, the anchorage is of the TBT type, and the turn-ins follow the arrangement F & T 1.

- **Long Tie ? (I. 783)**

This unusual binding with a fore edge flap on the left board has a series of three consecutive holes on the central extension of the flap which were most probably used for the lacing of a tie. Since there is no indication of any pin or other device to which to attach such a, now missing, tie, an acceptable option is to consider that this was originally long enough to be wrapped around the volume and secured by passing it under itself in a similar manner to that found on early single-quire codices (figure 78).

- **Unidentified Three Edged Straps (I. 46, I. 436, I. 593)**

On these three volumes there is not enough left of the fastenings to determine to which type they belonged. In **I. 46** the present fastenings are the product of a repair of the volume in 1997. In all three volumes the anchorage holes follow the AH 4 arrangement, anchorage is either of the TBT (two volumes) or TBTP type and the turn-ins follow the F & T 1 arrangement which in **I. 46** is found together with the F & T 6 arrangement.

On the six volumes where the metal pins are preserved they are always compound, made of cast metal which in one case was further filed. There is only one metal stirrup ring still preserved in **I. 1589**. The metal used in all the metal components of the fastenings is copper alloy on the basis of visual observation.

3.1.2.13. *Conclusions.*

Through the notes on the manuscripts produced in the context of the Iviron scriptorium we know of at least four people related to the *anakainisis* of manuscripts and presumably also to the rebinding. These are ***hieromonk*** **Ioakim** from Karies, a certain **Malachias** who was living in the monastery, a certain Gregorios, and ***hosios*** **Theophilos**. The fact that more than one persons are responsible for these 17 bindings is also supported from the great variation in the structural features encountered among them, combined with the consistent way in which they have been decorated. The fact that the codex Protato 40, bound by **Ioakim** probably in Karies is undecorated, is probably an indication that the tools were the property of the monastery. The fact that **I. 783** which was written and presumably bound by ***hosios*** **Theophilos** while he was living in the *kathisma* of St. Prodromos does not contradict this supposition since it is found very close to the Iviron monastery.

A number of structural and decorative features suggest a hypothesis about a possible influence of some of the bindings considered here from Middle Eastern binding structures and a possible relation of ***hosios*** **Theophilos** with these influences. ***Hosios*** **Theophilos** is known to have been for three years on pilgrimage in the Holy Land, Alexandria and the Sinai, between the years 1508 –1510, and his capacity to write at least his name in Arabic as well as the note on at least one manuscript which at the time was part of the Sinai collection, indicate that he was involved with books during his pilgrimage. ***Hosios*** **Theophilos** left the monastery around 1523 but remained (both physically and emotionally) closely affiliated to it until his death in 1548 living for periods in the nearby *kathisma* of St. Prodromos. The fact that he kept copying manuscripts and dedicating them to the monastery makes it sensible to suggest that he was also binding them since we know from his own note in **I. 809**, dated 1518, that he was capable of doing this. In this context the binding of **I. 783** written in 1542 while he was living in the aforementioned *kathisma*, with its unusual pasteboard binding with a fore edge flap and a long leather strap fastening similar to the Nag Hammadi codices and the one found in the St Catherine's monastery among the New Finds, could be understood as a binding made by him on imitation of similar bindings which he might have seen during his pilgrimage to the Middle East. Supporting this conjectural influence is the fact that similar bindings are completely unknown so far for this time in the Athos community. The use of the pasteboards and laminated

boards at this early date is on its own a very straightforward indication which will be further elaborated in the next section. Nevertheless it is interesting to note that similar laminated boards were commonly used in the bindings of printed books in western Europe in the fifteenth century and maybe earlier (Hobson, 1989, Appendix 1, Pickwoad 1994, pp. 79-80 and note 28). The Armenian endbands found on **I. 528**, and **I. 1589** could also be understood as similar influences from the Middle East area since this type of endband is very common amongst the Syriac and Georgian manuscripts still preserved in the library of the St. Catherine's monastery but their presence in the Athos community is not known due to lack of evidence. From this same point of view, the feather stitch of the endbands in **I. 392** and **I. 436** could be understood as an influence from late Coptic codices on account of the strong resemblance to the endbands found in their bindings, though the lack of further evidence does not permit any safe conclusions to be made. Although at first it appeared that the board tab markers was a feature confined to the area of the Middle East and therefore could be interpreted as a further clue of this conjectural influence it now appears that this was more widespread since its presence was certified also in two manuscript codices of the tenth and twelfth centuries from the Vlatadon monastery library in Thessaloniki, one of them certainly the product of an organized scriptorium since it is of stunning quality[106]. Nevertheless the presence of this tab markers is still of value because it is an isolated example and apparently a late example even for the Sinai area where all surviving examples recorded seem to date at least before the sixteenth century. Why ***hosios* Theophilos** used this feature only in this binding cannot be further explained, though the fact that all three different types of markers recorded in this research (board and leaf tab markers and endband string markers) are present in this volume, which was firstly bound in the context of the Iviron scriptorium atelier, is an indication that there was for some reason the need to have a variety of possibilities to mark the pages. The manuscript contains various liturgical texts and was probably destined to be used in the everyday liturgical needs of the monks.

Some of the unusual technical features of these bindings, such as the Iviron scriptorium attachment system as well as the probable use of sewing supports in **I. 1588**, cannot be further explained or elaborated at present.

[106] These are codices 8 and 9 according to the Eustratiadis catalogue (Ευστρατιάδης 1918), written in the twelfth and tenth century respectively.

MISSING

PAGES

NOT

AVAILABLE

CHAPTER 2

MOUNT ATHOS, GREEKS OF THE EASTERN EUROPE AND THE IVIRON MONASTERY IN THE SEVENTEENTH CENTURY.

3.2.1. Historical outline

During the seventeenth century donations kept reaching the Iviron monastery from the rulers of Wallachia, Moldavia, Georgia and the Tsars of Russia. This made it possible for a series of building, rebuilding, restoration, irrigation and decoration works to be accomplished, with the guidance and on the prompt of the abbot Gabriel from Athens, who appears both as an occasional scribe and a donor of manuscripts (Θεολόγος 1998, p. 243). In 1669 the monastery sent a copy of the Portaitisa icon to the Tsar Alexei Michailovic in order to help his daughter recover from a serious illness and the Tsar, in order to express his gratitude, donated to the Iviron monastery the monastery of Saint Nicholaos in Moscow, together with financial help in order for the building and renovation work to be accomplished. In 1680 with the financial support of the ruler of Wallachia Servan Katakousinos the Portaitisa chapel was build and decorated soon after. It is partly due to these close relations and the expression of gratitude from both sides that the production of luxurius copies of liturgical manuscripts was widely practiced mostly by two major scribes, Loukas the Cypriot metropolitan of Bozau, and Mathaios metropolitan of Mira (*Mireon*), both closely related with the rulers of Moldavia and Wallachia (Γαλάβαρης 2000, pp. 94-99). Around them some other scribes were active as well such as Anthimos from Ioannina, following the same decorative style of writing and illuminating the manuscripts.

Scribes are known to have copied manuscripts in the monastery in this century mostly in its second half, such as **Cosmas Macedon, Iosiph from Sinopi , Neophitos Christopoulos, *hieromonk* Akakios from Galatista** (Θεολόγος 1998, pp. 243-245). Various privileges were also granted to the monastery from the Ecumenical Patriarchs of the century and in 1678, one of them, **Dionisios IV** donated his library to the monastery (Μαμαλάκης 1971, p. 273), though around the middle of the century also a major deprivation of manuscripts from the monastery took place (see section 1.2.). By the end of the seventeenth century the monastery was in such a privileged position as to be able to lend money to other monasteries and shelter as many as 400 monks (Μαμαλάκης 1971, p. 273).

3.2.2.THE THEOCLITOS BINDINGS

This group comprises the bindings of eight manuscripts which were made in the Athos peninsula, probably the Iviron monastery itself or in Karies, around the first quarter of the seventeenth century. There is no evidence about the person or the persons who bound these eight volumes and they are conventionally named after **Theoclitos** ***hieromonk***, a well known scribe of the Iviron monastery, two of whose manuscripts feature among those considered here.

3.2.2.1. *Text-blocks and scribes (table 146).*

All the manuscripts considered here are written in Greek between the late fifteenth and the first quarter of the seventeenth century, five of them are precisely dated in 1488 (**I. 785**), 1514/5 (**I. 1500**), 1522 (**I. 1498**), 1606/7 (**I. 1552**), and 1622 (**I. 1533**). All the manuscripts are written on western paper, in five of them polished. They contain liturgical texts, mostly one of the liturgies of the Three Hierarchs (St Basel, St John Chrysostom and St. Gregorios). Seven of them are 8vo and there is also one 16mo. There are scribal notes in six of the manuscripts, though the name of the scribe is mentioned only in five of them. **I. 838** and **I. 1552** were both written by the same ***hieromonk*** **Theoclitos**, a well known scribe of the Iviron monastery.
In **I. 838** we read the following note

f. 177 v. *"It is the property of **Gabriel** and the labour of **Theoclitos**"*[107]

There have been recorded at least four different scribes under the same name Theoclitos copying manuscripts in the monastery between the years 1576 and 1762. According to the librarian (personal communication) these two manuscripts considered here were written by the earliest of them, who is known to have been copying manuscripts between the years 1576/7 and 1606/7. Nine of his manuscripts are still today in the library.

In **I. 1552** we read the following brief scribal note:

[107] *«Κτήμα γαβριήλ και θεοκλήτου πόνος».*

f. 23 r. *"The gift of God and the labour of **Theoclitos** 1606/7 AD"*[108]

Two of the manuscript were written by the same ***hosios* Theophilos,** already seen in the description of the Iviron Scriptorium bindings (section 3.1.2.).
In **I. 1498** we read the following scribal note:

f. 62 v. *"...the gift of God and the labour of **Theophilos** in the year 1522 AD in the month of September..."*[109]

I. 1500 is also attributed to ***hosios* Theophilos** on the ground of paleographical evidence (personal communication with the librarian).
In f. 31 v. there is a brief note with the date of the manuscript:

"In the year 1514/15 AD indiction third"[110]

In **I. 1503** written by **Laurentios** we find the following note:

f. 31v. *"The gift of God and the labour of **Laurentios**"*[111].

In **I. 1533** written by **Mathaios Mireon** in 1622 we read:

f. 94 v. *"This liturgy was written by the hand of sinfull **Mathaios Metropolitan of Mira** and was dedicated to the respectfull and royal monastery of the Iviron and whoever takes it away may be unforgiven. In the year 1622 AD on the 26th of December, indiction 6th"*[112]

Mathaios Mireon is a well known scribe active mostly in Wallachia but also in Moscow who seems to have been closely related to the Iviron monastery (Γαλάβαρης 2000, pp. 97-99, Gratziou 1982).
In **I. 785** written in 1488 we find a note which gives no indication of the name of the scribe:

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108 *«Θεού το δώρον και Θεοκλήτου πόνος ζριε' (7115 AM = 1606/7 AD)».*
109 *«...Θεού το δώρον και Θεοφίλου πόνος έτους ζλα (7071 AM = 1522 AD) μηνί σεπτεμβρίω...».*
110 *« έτει ζκγ' (7023 AM = 1514/5 AD) ινδικτιόνος γ'».*
111 *«Θεού το δώρον και λαυρεντίου πόνος».*
112 *«Αυτή η λειτουργεία εγράφη δια χειρός ματθαίου αμαρτωλού μητροπολίτου μυρέων και αφιερώθη εν τη σεβασμία και βασιλική μονή των ιβήρων και ο αποξενώσας ταύτην εξ αυτής ούκ ατιμώρητος έσεται εν έτει ζρλα' (7131 AM = 1622 AD) μηνί δεκεμβρίω κστ' ινδικτιώνος στ'».* For the scribe see Πολίτης and Πολίτη 1994, pp. 547-549, where as many as 50 manuscripts are attributed.

f. 245 r. "*...in the year 1488 AD, indiction 6th in the months of [...]*"[113]
f. 246 v. "*This book of Thikaras belongs to me* ***papadamaschinos*** *the gammy from Thessaloniki and I got it by donation from an Athenian monk*"[114]

None of these eight manuscripts offers any clear evidence about the person or persons who bound them, though the fact that at least four of them were certainly written by monks of the Iviron monastery (the two manuscripts written by ***hosios*** **Theophilos** and the two written by **Theoclitos** ***hieromonk***), permits us to generally attribute these bindings to the Iviron monastery itself, though it should not be excluded the possibility that these manuscripts might have been bound outside it, for example in Karies which has been always the administrative and commercial centre of the Athonite community. For five of the manuscripts the present is their first binding and for the remaining three the present is a rebinding. Considering this and the dates in which the manuscripts were written we could date the bindings between the end of the sixteenth century and the first quarter of the seventeenth century and more precisely probably between the years 1606/7 and 1622.

All eight bindings are Flush Pasteboard, Unsupported bindings, and present a marked Islamic influence as will be discussed at the end. For this marked influence they are classified as Greek-Islamic bindings (see Appendix 4).

3.2.2.2.*Text-block repairs (table 147).*

All three rebound manuscripts have repairs in the spine-fold of the gatherings and the text-block leaves. The former consist of blank (two volumes) or manuscript waste paper strips pasted locally or all along the spine-folds of a variable number of text-block bifolia. In two of these three volumes paper strips are also pasted at the edges of some damaged leaves of the text-block.

3.2.2.3.*Endleaves (table 148).*

The arrangement of the endleaves presents an uncommon consistency. All but one right endleaf units (**I. 1498**) are separate to the text-block gatherings and in all but the

[113] «*...έτους στ σαμπικοπα στ' (6996 AM = 1488 AD) ινδικτιόνος στ' κατά μήνα [...]*».
[114] «*Αυτή η βίβλος του θηκαρά υπάρχει του παπά δαμασκινού του κουτζού του εκ θεσσαλονίκης εκτήσατο δε αυτήν δωρεάν από τινός μοναχού αθηνέου*».

aforementioned exception there are at least two pastedowns, pasted one under and the other above the turn-ins.

Nine out of the 18 units follow the arrangement [2] 2 (six units) and 2 [2] (three units), the two units of one volume (**I. 1215**) follow the arrangement [2] 6 and 6 [2]. The two units of **I. 1533** follow the arrangement [3] 1 and 1 [3] where the outermost leaf is pasted under the turn-ins and the other two above them. The right endleaf unit of **I. 1503** follows the arrangement [2] consisting of a single bifolium, of which one leaf is pasted under the turn-ins and the other above them.

Two units, both of them right units are significant since they involve hooked blank leaves. They follow the arrangement \3[1,1] (**I. 838**) and \[1] (**I. 1498**) respectively. In both cases the outermost leaf is a single leaf hooked around the last text-block gathering (**I. 1498**) or the right endleaf unit (**I. 838**) and pasted on the boards, in the former one under and one above the turn-ins and in the latter just underneath them. It is also possible that what today seems to be a hooked leaf may originally have been a normal bifolium which was latter trimmed.

3.2.2.4.*Sewing (table 149).*

All manuscripts considered here are sewn with unsupported sewing on three (two volumes) or four (six volumes) stations. In all the volumes the sewing stations are arranged according to the pattern B1 though in two volumes there is a rather marked difference between the head and tail panels. In seven out of the eight volumes all the sewing station, both the main and change-over, are marked with V shape cuts which in **I. 1533** are noticeably small. Only in one volume (**I. 1503**) needle holes are used instead.

Three text-blocks are sewn with medium (two volumes) to thin (one volumes) hemp thread of varying twist and 2S (two volumes), or 4S (one volume) ply. Three text-blocks are sewn with medium (two volumes) to thin (one volume) linen thread of tight (two volumes), or loose (one volume) twist and 2S (one volume), or 2Z (two volumes) ply. The remaining two volumes (**I. 1503** and **I. 1552**) are sewn with thin, silk of varying twist, and 2Z ply, in one of them pink and in the other blue.

None of the volumes offers any evidence as to permit us establish the exact type of chain stitch used.

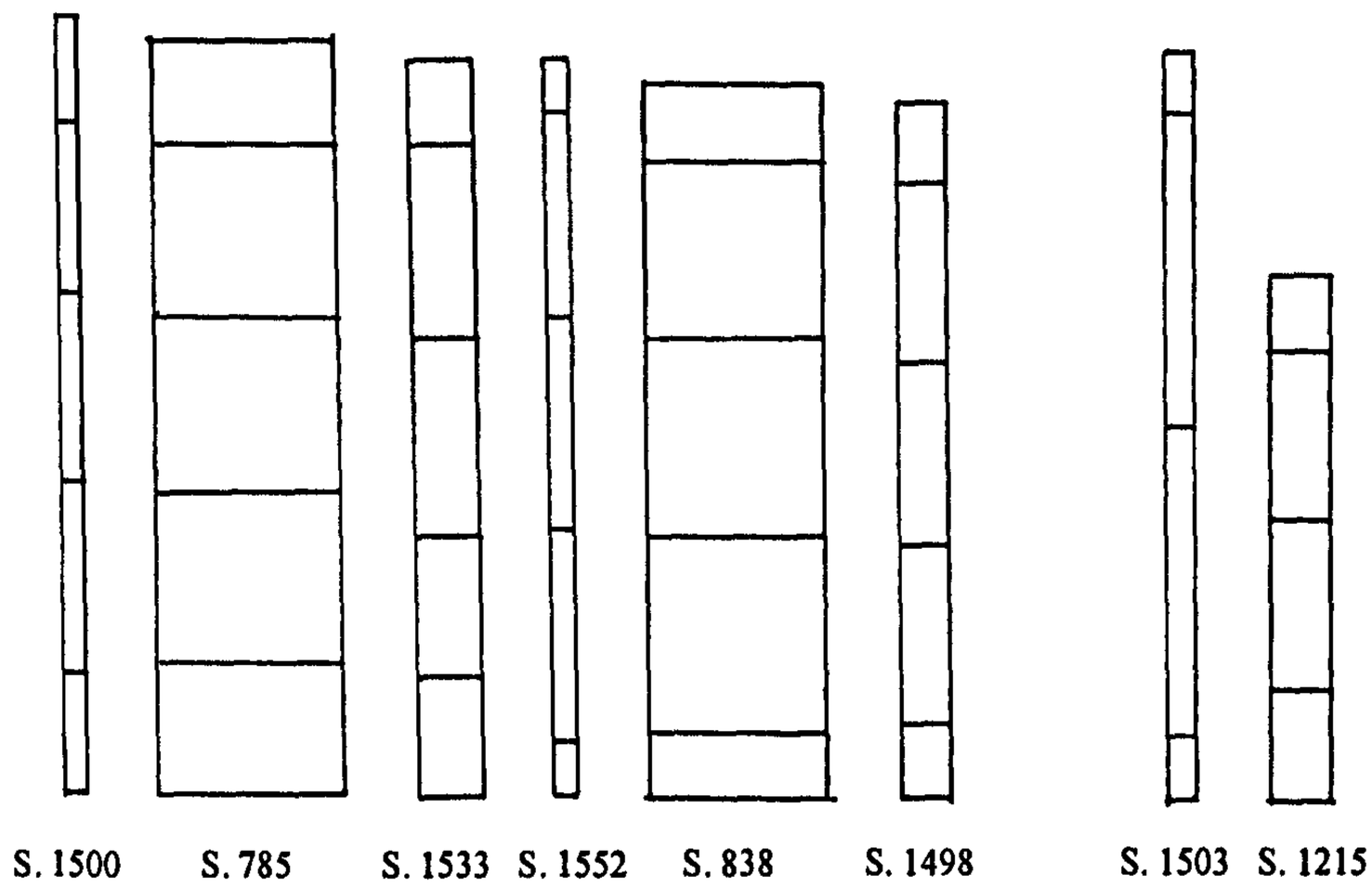

Figure 84. Line drawings showing the spines of the text-blocks and the arrangement of the sewing stations along them. From left to right text-blocks sewn on four and on three sewing stations.

3.2.2.5. *Boards and board attachment (table 150).*

All eight manuscripts considered here are bound in pasteboards cut flush with the text-blocks. In none of them was it possible to get a closer view of the boards in order to establish the exact type of material used for their construction, though it seems most probable that they are made of paper only.

The thickness of the boards is three millimetres with the exception of **I. 1215**, where they are even thinner, about two millimetres. In none of the volumes there is a joint between the boards and the text-block and the spine edge of the boards is always cut straight (pattern SET 1).

All the volumes essentially follow the same attachment system, II Uns/B2, according to which the attachment is achieved by pasting the extensions of the spine lining in the inside of the boards, under the turn-ins, and above them the first pastedown, whilst the second pastedown is pasted above the turn-ins. The attachment is slightly enhanced by pasting the small extensions of the endband leather cores on the outside of the boards. The right board of **I. 1498** presents a slight variation since there is only one pastedown pasted under the turn-ins, though this seems to be implied by the absence of a second blank flyleaf rather than been a conscious choice of the binder. Therefore this is not considered as a proper variation and as a consequence has not been given a proper codification. Another variation, II Uns./B5 is found in the right

board of **I. 1503**, following exactly the same principle, with the difference that the endleaf unit consists of a single bifolio of which one pastedown is pasted under the turn-ins and the other above them. In **I. 1533** still another variation is found, II Uns./B4, differing only in the fact that there are two pastedowns pasted above the turn-ins, though it cannot be established of this was a conscious choice of the binder or it is the result of a later intervention. In **I. 1552** the fact that it could not be established whether the spine lining extension is pasted in the outside or in the inside of the boards does not permit any firm conclusion about the exact type of attachment system used, though it is certainly either of the II Uns./A2 or of the II Uns./B2 type

3.2.2.6. *Spines and spine lining (table 151).*

All eight text-blocks have a textile spine lining pasted all along the spine of the text-blocks, extending onto the boards and pasted to the inside (seven volumes), except one volume where this could not be established (**I. 1552**). The width of the board covered could not be established with certainty in none of the volumes, though in two of them it probably covers 30% (**I. 1215**) and 50% (**I. 1533**) of its total width. In seven of the volumes the spine lining consists of a thin (four volumes) or medium thickness (three volumes) canvas, whilst in one volumes it consists of a plain, natural colour, thin textile of unspecified weave.

3.2.2.7. *Endbands (tables 152, 153, 154).*

All eight volumes have Islamic endbands woven on single, flat, mostly medium thickness, leather cores which in six volumes extend for a few millimetres on the outside of the boards and are pasted there according to the EAS 6 anchoring system. In the remaining two volumes this feature could not be established due to accessibility limits.

The endband primary sewing consists of warps, sewn with linen (six volumes), hemp (one volumes), or silk (one volume) threads, either natural colour bleached (two volumes where linen is used), or blue (one volume where silk is used). The twist of the thread is either medium (five volumes), or tight (three volumes), and the ply is 2S in all of theme except the blue silk thread in **I. 1552** which has a 2Z ply. Only in two volumes (**I. 785** and **I. 1552**) the thread of the primary endband sewing is the same as

the one used for sewing the corresponding text-block. The warps are tied-down in the centre-fold of every gathering (uncertain in one volumes and not possible to identify in another), using almost always the change-over stations (seven volumes) or another passing hole outside them.

The endband secondary sewing is made according to the standard Islamic technique, with silk and silver threads picking up two (four volumes), or one warp at a time (four volumes for three of which this is most probable but not confirmatory). The silk threads used are of medium thickness, mostly of medium twist and always of S ply (in four of them 2S ply in the remaining four uncertain). In all volumes the secondary sewing is two-colour, red and white (two volumes), red and yellow (one volume), red and silver (three volumes), and green and silver (two volumes). Due to the rather thin text-blocks the endbands appear rather thin and not fully developed.

3.2.2.8. *Markers (table 155).*

At least six volumes have or originally had string markers. In five of them, where there is enough left as to be able to establish their construction, they are compound consisting of a primary and a secondary marker. The primary markers consist of one simple, either open or closed loop fastened on the headbands through the system LtH(f) and probably LtH(c) in one volume. In **I. 785** there are three simple closed loops fastened on the headbands through the system LtH(f). They are always made of the same silk threads used for the endband secondary sewing, and are either two-colour (three volumes) or one-colour (two volumes).

The secondary markers survive in four volumes and they consist of one (two volumes), two or three strings, made of silk threads, partly the same as those used for the endband secondary sewing. They vary between one (two volumes) and two-colour (two volumes), and they are fastened on the primary markers through system KiM (one volume), L (two volumes), and probably KIE in one volume.

3.2.2.9. *Cover and Decoration (tables 156, 157, 158).*

All eight volumes are bound in full goat leather of various hues of brown and in one volume black. The turn-ins follow the patterns T-ins 1, T-ins 2 and T-ins 3, either consistently in both boards or combined, and their width varies, with the exception of

I. 838 where they are of medium width. The mitre of the corners follows mostly the pattern Co1 though the patterns Co 4 and Co 7 are also represented, the former by two volumes and the latter by one.

All volumes are decorated in blind tooling using either the same pattern in both boards (five volumes) or different ones for each of them. The most commonly found pattern is Dec 2 (six volumes), followed by Dec 3, Dec 4 (two volumes each) and Dec 1a in one single volume (**I. 1500**). With the exception of this latter volume no decorative frames are found in any of the bindings considered here. Only **I. 838** has a spine decoration probably of the SD 5?/B type.

There are nine tools used in the decoration of these eight bindings, three of them are relief tools, four are intaglio tools, and there is one concentric rings tool. The number of tools used to decorate one single binding varies between three (two volumes), four (five volumes), and six (one volume). Four of the tools are found in one single binding each, but two small tools (MuF/c12 and MuGa5) feature among all of them. There is no roll among these bindings but there is one centrepiece of evident Islamic inspiration and a tool which has been seen before in the Iviron scriptorium bindings (MuF/e12). Of interest is also the triangular animal tool which can be related to those seen in the Cretan bindings of the fifteenth and sixteenth centuries mostly as far as its shape and subject is concerned.

MuF/a2

MuF/a3

MuF/c12

MuF/e12

MuGa5

CeF32

MuV19

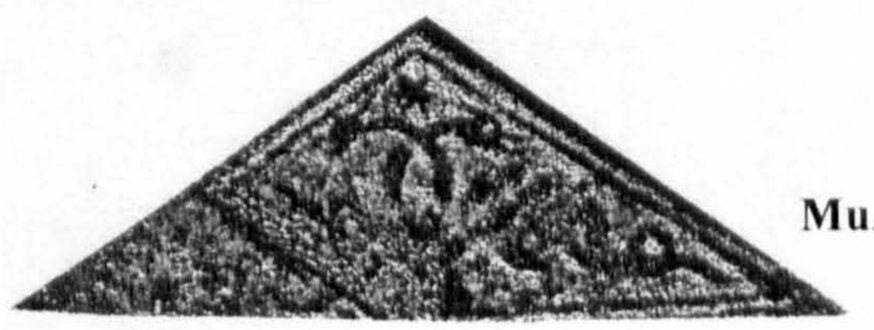
MuA/c5

Figure 85. The tools used in the decoration of the eight bindings considered here.

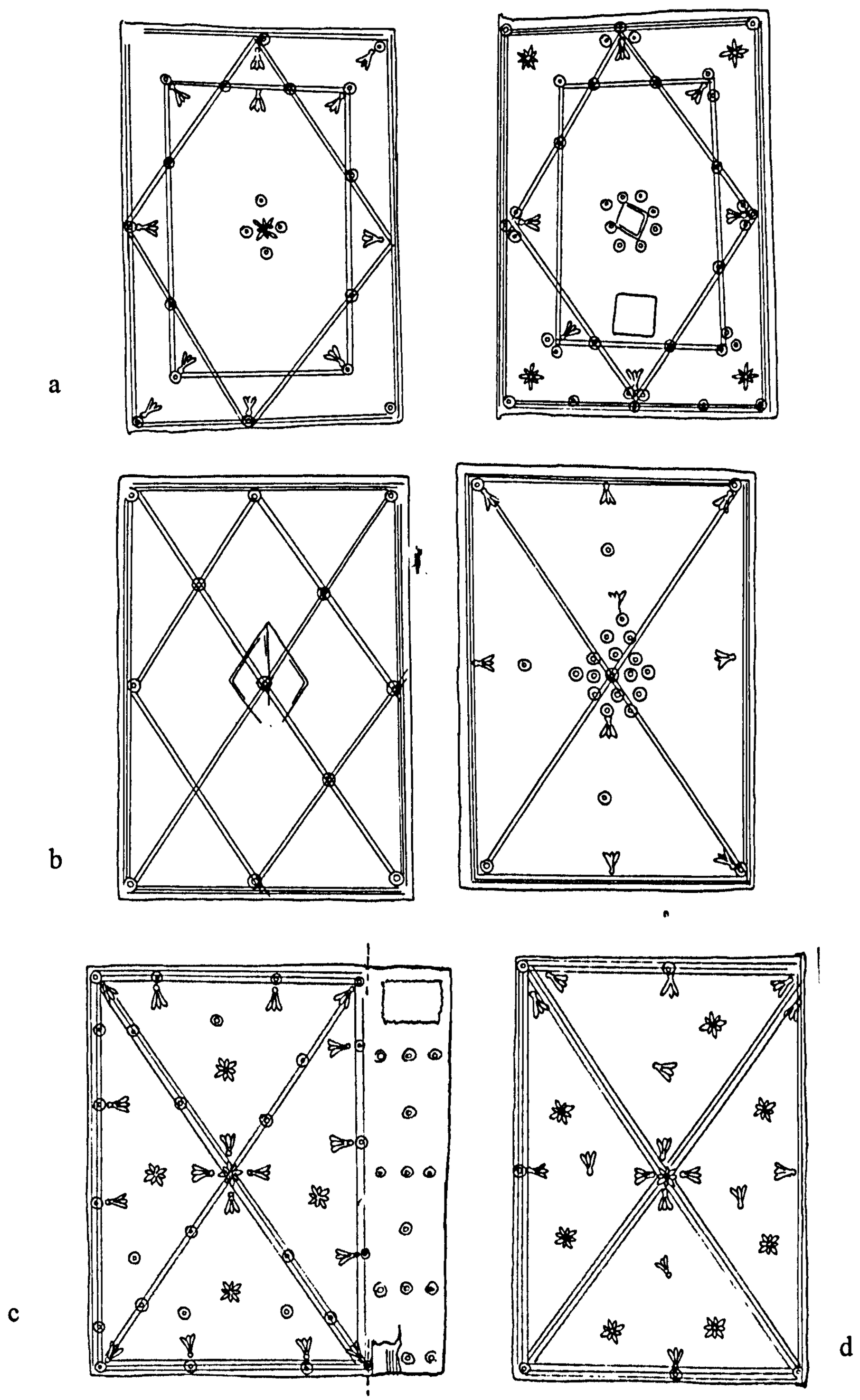

Figure 86. Line drawings showing the decoration of I. 1500 (a), I. 1498 (b), the right board and the spine of . 838 (c), and the left board of I. 785 (d).

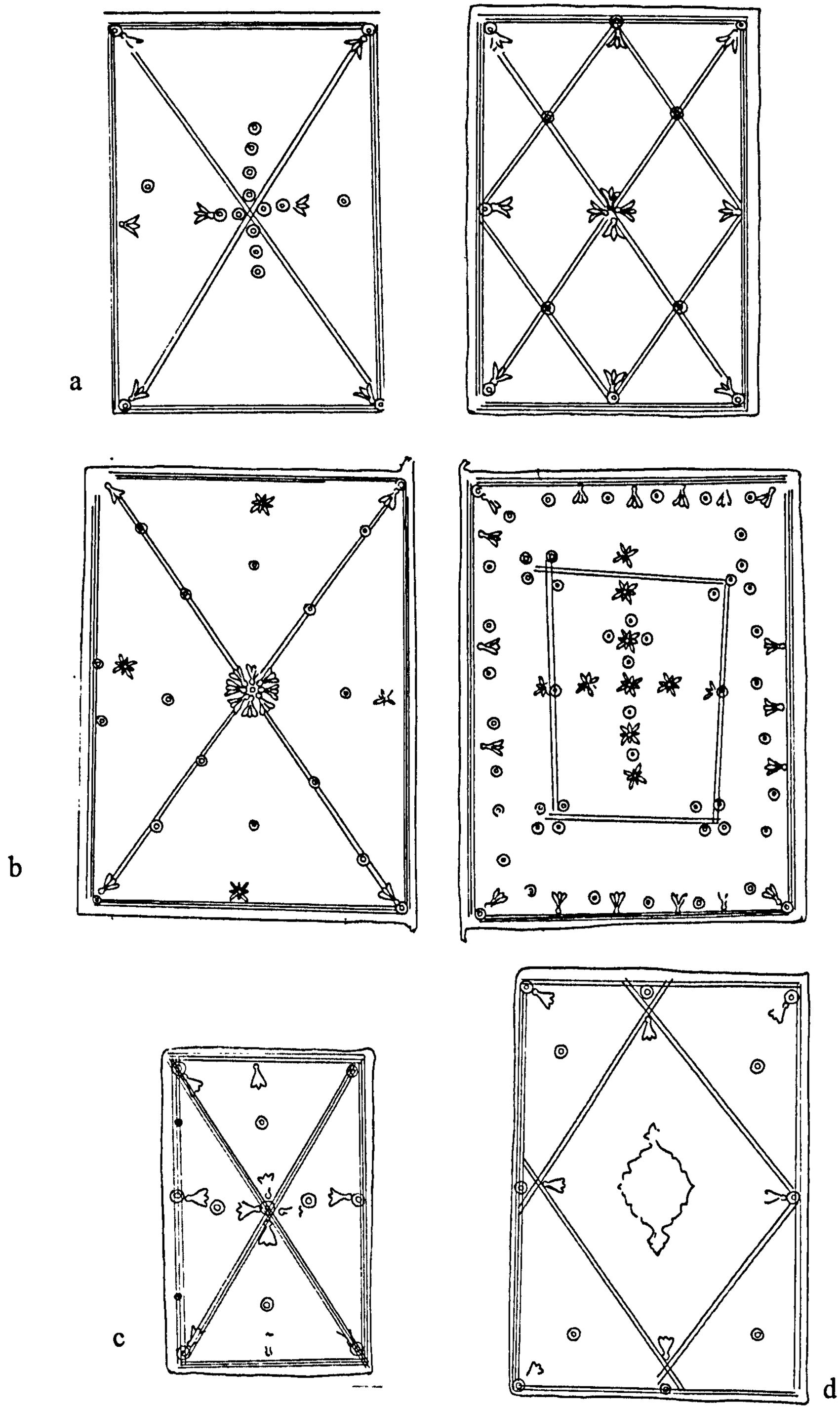

Figure 87. Line drawings showing the decoration of I. 1552 (a), I. 1503 (b), and the right board of I. 1215 (c) and I. 1533 (d).

3.2.2.10. *Fastenings (table159).*

Only the two thickest of the volumes considered here (**I. 785** and **I. 838**) have originally had fastenings, in both volumes following the arrangement 0-2-0 →←, in the former thin leather straps and in the latter thin silk ribbons. The leather straps are made of the same leather as the one used for the cover of the volume, while for the ribbons their colour cannot be established because what is left is heavily covered with glue. The anchorage holes follow the AH 5 pattern, the anchorage type is of the TBTP in both of them, the turn-ins are arranged according to the F & T 1, and the ends follow the pattern TpaP.

3.2.2.11. *Conclusions.*

All the bindings considered in this section present an uncommon consistency in most of their features and therefore could be ascribed to the same workshop if not to the same binder and probably to the Iviron monastery itself or the nearby administrative centre of Karies. The use of one tool (MuF/e12) which was seen before in the bindings of the Iviron scriptorium seems to support the first of the two options.

There are two major issues posed by these bindings, first the Islamic influence and secondly the relation between the content of the manuscripts and the structure and appearance of the binding.

As far as the first issue is concerned the Islamic influence is evident in the following:

1. The attachment between the text-blocks and the boards is achieved by using only the spine lining and the pastedowns, essentially the same attachment system used in Islamic bindings though with two significant improvements. The first is the use of two pastedowns instead of one, pasted one under and the second above the turn-ins and the second is the extension of the endband cores onto the boards where they are pasted on the outside unlike the Islamic bindings where the cores are cut flush to the text-block. These two improvements result in a better stability and durability of the binding unlike the Islamic structures which often suffer from a tendency of the text-block to separate from the cover, a phenomenon which has resulted in hundreds of

detached covers from Islamic bindings found in Museums all around the world (Haldane 1983, p.7).

2. The use of pasteboards instead of wooden boards in all the bindings considered here can be explained only partly by the small thickness of most of the volumes since among them there are also two text-blocks which are rather thick. Therefore the use of the pasteboards in these bindings can be considered as a conscious selection by the binder in order to conform to this specific type of bookbindings. This is further supported by the fact that wood was at the time, as well as in the next centuries, the standard material for the construction of the boards.
3. The endbands are made according to the Islamic technique with the cores made of leather, exactly as in the typical Islamic technique.
4. The use of a limited number of sewing stations, mostly four but also three in two volumes. This can be understood as a consequence of the small format and thickness of most of the volumes considered here but the strong Islamic influence in the attachment system of the boards and the endbands permits us to consider also this limited number of sewing supports as an influence from the Islamic binding tradition. The use of needle holes instead of the standard use of V shape nicks in **I. 1503** and of silk threads in **I. 1503** and **I. 1552** is also an indication of this conjectural influence. As we said before in the Giglio atelier (section 2.2.2.14.) similar features are common among the Islamic bindings.
5. The spine in all these text-blocks are not rounded but flat. This feature can again partly be explained by the small thickness of the text-blocks and the use of medium to thin threads for the sewing but can also, for the same reasons mentioned above, be considered as an influence from the Islamic structures where the spines of the bindings are always flat .
6. The use of one big central motif as in **I. 1533** in order to decorate the covers in a simplified way which requires less tools and impressions on the covers in order to produce an effective decorative pattern is directly related to the Islamic bindings, where this centric decorative patterns have been the rule since the fourteenth century until today. (Bosch et al. 1981, Haldane 1983). A similar influence is recorded in European bindings of the fifteenth and latter centuries at such a high level of assimilation as to make sometimes difficult to

decide if the decoration was done in Europe or in the East by a westerner or by a Muslim bookbinder (Hobson 1989, pp. 33-59). Nevertheless it would seem more reasonable to suggest that these influences reached the milieu of the Athos community from the East rather than from the west. This is for two reasons: the first is that though books from Europe would, at the time, be constantly arriving to Athos they would most probably be books with simple, probably stationer's bindings and not richly decorated examples such as the binding of S. 117, (figure 89) a Psalter written and probably bound in 1544 in Venice, which represents the exception rather than the rule. Second is the fact that the Athonite community had close relations at the time with Eastern Europe and Constantinople, from where richly decorated books were arriving as donations from the Gospodars and clergy man (figure 88. See also Γαλάβαρης 2000, pp. 93-94). A good example is the decorated binding of a Gospel from the Sinai library with a decoration of marked Islamic Influence which was donated by the Gospodar Minhea II of Wallachia to the St Catherine's monastery in 1577 (figure 90). Similar donations certainly were often in the Athos monasteries and it is probably through these that Islamic motifs reached and were incorporated in the decorative repertoire of the Athonite binders.

Figure 88. The right board of I. 1626, Containing the *Akathistos* hymn written by Mathaios Mireon and bound in Constantinople in 1645.

Figure 89. The left board of S. 117, a Psalter written and presumably bound in Venice in 1544.

Therefore, as far as the first issue is concerned these bindings do present a marked Islamic influence mostly in structural but also in decorative features.

As far as the second issue is concerned two more things need to be mentioned:

The first is that up until the fifteenth century the texts of the liturgies were often written in scrolls (Politis 1961, p. 67 and Mioni, 1997, p. 47) and used in the way this book form implies, that is by winding one side and unwinding the other one as one would proceed through the text. It is around the fifteenth century that this custom is definitively abandoned.

Figure 90. The binding of a Gospel manuscript donated to the St Catherine's monastery in 1577 by the Gospodar of Wallachia Minhea II.

Therefore it would be sensible to suggest that in this, definitive, change from the scroll to the codex the use of lighter binding structures would be much desired and more easily acceptable for reasons of custom. In the course of this research 27 bindings of various Liturgy texts were surveyed written between the sixteenth and the seventeenth century and all of them were found to be bound in similar binding structures to those seen in this section, that is bindings with pasteboards, with attachment between the boards and the text-block achieved by means of system of the II Uns systems and with Islamic endbands. The manuscript I. 783, written in 1542 by *hosios* Theophilos, which we have seen in the previous section as bound in pasteboards but using the typical attachment system of the Greek-style bindings offers some more evidence to this end since it also contains the liturgy of St. John Chrysostom. The same preference for Islamic structures and Islamic decorative patterns in the bindings of the texts of the various Liturgies is testified from another group of six bindings, all of them

containing the liturgy of St. John Chrysostom (except one which contains all the Three Liturgies) and all written by monk Seraphim from the Dionisiou monastery between 1600 and 1613[115]. As it has been stressed before (Μπουδαλής, 2004) these bindings are probably made by the scribe himself using the uncommon technique of painted decoration with motifs of obvious Islamic provenance (figure 91).

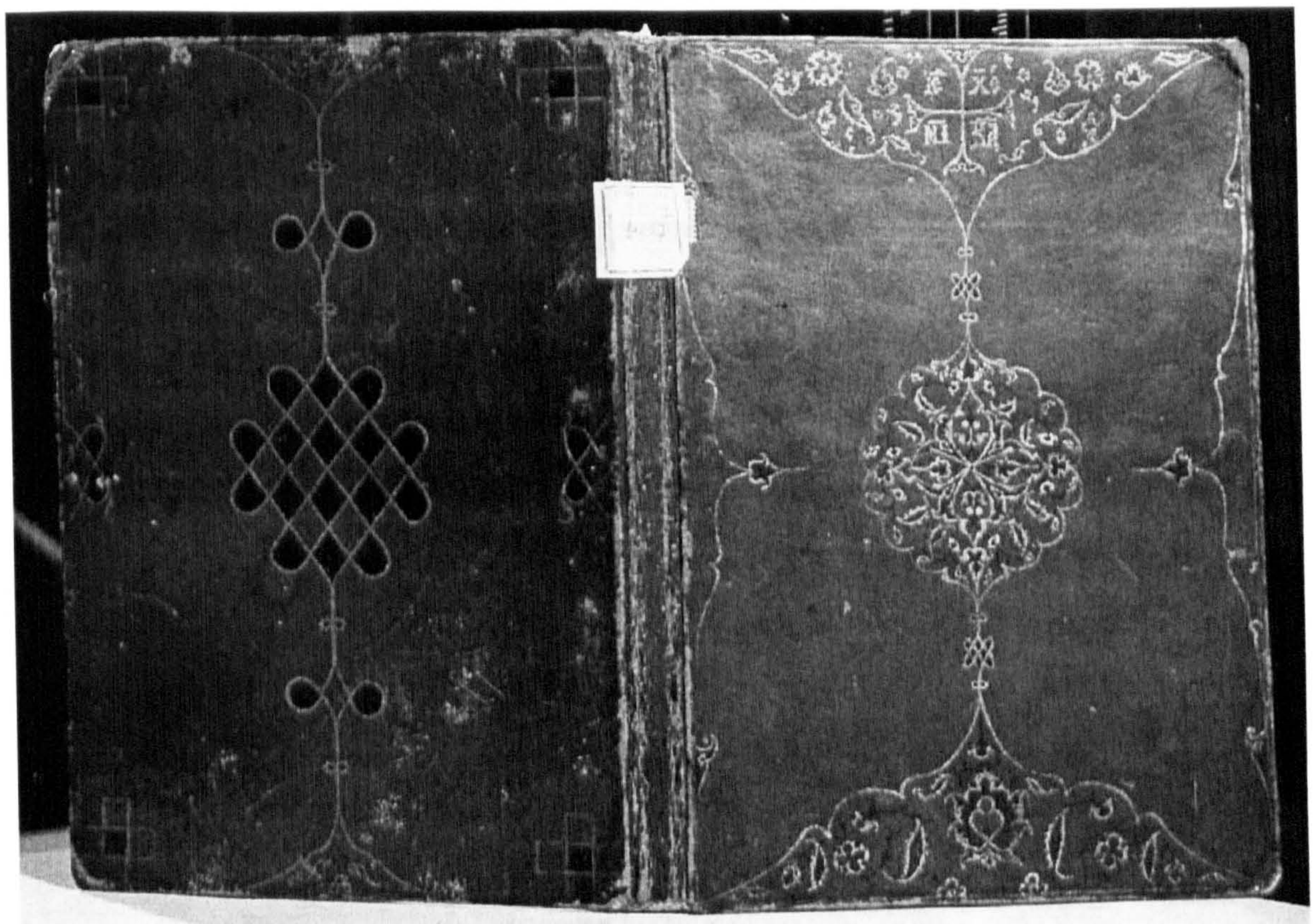

Figure 91. The decoration of I. 1529, containing the St John Chrysostom liturgy written in 1604 by monk Seraphim from the Dionisiou monastery.

These bindings contain manuscripts which are richly decorated with patterns of strong Islamic influence (Gratziou 1982, Βαρδαβάκη 1992) in accordance with the fashion of the manuscripts written by Mathaios Mireon, Loukas Bozaou and their followers like Anthimos from Ioannina, some of them actually bound in their place of production in Islamic bindings. It is known that a number of the richly decorated Liturgy manuscripts written by these scribes were donated in the various monasteries in Athos by the rulers of the various hegemonies of Eastern Europe and high rank clergyman (Γαλάβαρης 2000, pp. 93-105). For such richly decorated manuscript texts it would be sensible to suggest that the copyist, the owner, or the donor would want a

[115] These are I. 1496, I. 1508, I. 1513, I. 1519, I. 1524, I. 1529, I. 1555.

binding as well decorated which would do justice to the decoration of the manuscripts themselves. For the period we are dealing with and considering the provenance of these manuscripts the self-evident solution would be the Islamic binding with the use of gold, the delicate and intricate floral motifs and the bold arrangement of the decorative patterns.

Considering the aforementioned evidence it would seem sensible to relate the bindings of liturgical manuscripts in the first half of the seventeenth century with the use and the decorative characteristics of the texts they contain and the marked Islamic features noticed in the influence of the decorated liturgical manuscripts which reached the Athonite community both from Constantinople and the Eastern Europe.

3.2.3. THE PAPANEOPHITOS BINDINGS

This group comprises the bindings of five manuscripts, all of them bound by the same binder, named, **Papaneophitos** between the years 1642 and 1654. One more manuscript is also considered here (**I. 393**), originally bound by the same binder but rebound at a later date, probably in the end of the nineteenth century, though retaining some of the features of the earlier, Papaneophitos binding.

3.2.3.1. *Text-blocks, scribes and binder (table 160, 161).*

All five manuscripts considered here were written in Greek between 1426 and the first half of the seventeenth century, four of them precisely dated in 1426 (**I. 835**), 1654 (**I. 625**) and 1642 (**I. 393** and **I. 1642**). All the manuscripts are written on western paper, in four of them polished. Four of the manuscripts contain liturgical texts and one manuscript contains a theological text. The formats vary between 8vo (four manuscripts) and 16mo (two manuscripts).

There are scribal notes in three of the manuscripts. Two of them were written by **Simeon *hieromonk*** with the collaboration of **Papasophronios *hieromonk*.**

In **I. 473** we read the following long note:

> f. 160v. " *The present book called Theotocarion belongs to me, unworthy,* ***monk Simeon*** *chatze*[116]*, and least, and my place of origin is in the country of Macedonia, in the region of Filipi and Drama, the village named of Radolivou, and I became monk in the monastery of Prodoromos in Serres, and I took care of it (I wrote the book) when I stayed in the Stavronikita (monastery) cell, and I wrote some of it and the remaining was written by* ***Papasophronios*** *from the Stavronikita (monastery) who was from Kos, and it was bound in Karies by* ***Papaneophitos*** *who was from Argirocastro, and it was finished with the grace of God in the year 1642 AD in the month of June, 10th indiction, on Wednesday the 28nd, three o'clock, and glory to God"*[117]

An almost identical note is found on f. 317 of **I. 393.** The date is identical as in the previous note but in this manuscript the collaboration of still another monk is recorded, **Papantonios *hieromonk*** from the Ksiropotamou monastery.

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[116] 'Chatze' is a prefix that was usually given to every person after his return from a pilgrimage in the Holy Land.

[117] *«Το παρών βιβλίων ωνομαζόμενον θεωτοκάρι επάρχει εμού του ευτελούς συμεού μοναχού και χατζή ελάχειστου και ει πατρίδα μου επάρχει υ μακεδωνοία απο επαρχοίαν φιλοίπου και Δράμας απο χορίον ωνώματι ραδωλίβου και έγινα καλόγερος ω ανάξοιος εις την μονί του προδρόμου ώπου είναι είς τα σέρας και το εφρότησα ώταν εκαθούμουν είς το κελεί το σταβρονικιτοιανό και έγραψα και εγό ολίγο και το επίλιπον το έγραψεν ω παπασοφρόνοιος απο την σταβρονικίτα ώπου ύταν απο την κό και το εστάχοσε ω παπάνεώφιτος απο τες καραίς ώπου είταν απο το αργιρόκαστρο και ετελιόθι με χάρις θεού κατά το έτους ζρν'(7150 AM = 1642 AD) ινδ. Ι' εν μινεί ιούνιω εις τας κη' ειμέρα τετράδι ώρα γ' και τώ θεώ δόξα.»*

The third scribal note is found in **I. 625**, written by **Antonios *hieromonk*** from the Ksiropotamou monastery , most probably the same person as the one mentioned in the note on **I. 393**

f. 385v *"The present book was written by the hand of **Antonios hieromonk** on the expenses and prompt of **hieromonk Dionisios** from the holy and royal monastery of Iviron, and it was copied from an old parchment manuscript of the monastery in the year 1654 AD, it was finished in the month of August in Karies of mount Athos. And who reads it pray for me"*[118].

Antonios *Hieromonk*, also known as **Antonios Ksiropotaminos** is a well known scribe who apparently belonged in the brotherhood of the Ksiropotamou monastery in Athos but lived in Karies, probably in a *keli* of the monastery. The fact that there are many manuscripts in his hand still surviving indicates most probably that he was a scribe working under commission. There are today as many as 69 manuscripts in his hand dated between 1608 and 1669[119]. In the Iviron library there are in all seven manuscripts in his hand[120].

The notes on the two manuscripts written partly by **Simeon *hieromonk*** (**I. 393** and **I. 473**) clearly mention the name of the person who bound them. This is **Papaneophitos** from Argyrokastro (in today's Albania), living and apparently working as a binder in Karies. None of the other three manuscripts has any note indicating the name of the binder. Nevertheless, the fact that according to the scribal note, **I. 625** was written in Karies and that all five bindings are evidently decorated with the same tools and with similar decorative patterns permits us to consider all of them as made by the same binder, **Papaneophitos,** who was probably working as a professional binder in Karies, the administrative and commercial centre of the Athos community. As we have seen in section 3.1.2.2 in the occasion of **Ioakim,** it is known that in Karies there was a commercial community connected with the production of books comprising scribes as well as binders. **Papaneophitos** was apparently one of them active at least

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[118] *«Το παρόν βιβλίον εγράφη δια χειρός αντωνίου ιερομονάχου δια εξόδου και προτροπής διονυσίου ιερομονάχου του εκ της ιεράς και βασιλικής μονής των ιβήρων αντιγράφει δε από παλαιόν ντεβράινον βιβλίον του μοναστηρίου επί έτους ζρξβ' (7162 AM= 1654 AD)- ετελειώθει εν μηνή αύγουστω εις τας καρέας του αγίου όρους . Και όστις αναγιγνώσκει εύχεσθαι υπερ ημών»*

[119] See Πολίτης and Πολίτη 1994, pp. 360.

[120] Except the two manuscripts considered here these are : I. 712, I. 911 having a Greek-Islamic binding I. 1605 and I. 530 having bindings similar to those of the Cosmas Macedon (see section 3.2.4.) and I. 393 which was rebound in the late nineteenth century.

between 1642 and 1654, producing some fine bindings, in which he adopted some innovative elements mainly in the decoration. The same practice of commercial binders in Karies is attested as late as the twentieth century (Λέγγας 1999).

Three of the manuscripts still have their original binding while **I. 835**, written in 1426, was rebound by Papaneophitos and the same was true for **I. 393** which was rebound again in the end of the nineteenth century.

Three of the bindings follow the typical Greek-style technique, one is a Greek-Islamic binding, one is a Flush Pasteboards Unsupported Sewing binding, and one (**I. 393**) is a late nineteenth-century Projecting Pasteboard with Supports binding.

3.2.3.2. *Text-block repairs (table 162).*

Only one of the manuscript presents evidence of text-block repair. This is **I. 835** which has been extensively repaired with paper strips pasted along the spine-folds as well as in the edges of the text leaves. This repair is certainly prior to the present, late nineteenth-century, binding of the manuscript and could therefore possibly be attributed to Papaneophitos himself.

3.2.3.3. *Endleaves (table163).*

Endleaf units are rather consistent in all five volumes. They are always compound, mostly separate from the text-block and integral in one volume.

Separate endleaves (nine units in five volumes).

They are found in both the left and right end of the text-block in four volumes and in the left end of **I. 835**.

Three of them follow the arrangement [1]3 and two the arrangement 3[1]. There are no pastedowns in **I. 393**, but the fact that in each end of the text-block there are three separate flyleaves indicates probably that a similar arrangement has been originally used, the missing pastedown could probably be due to the rebinding of the text-block. In the fifth volume (**I. 1168**), the endleaves follow the units [2]4 and 4[2] where one pastedown is pasted under and the other above the turn-ins.

Integral endleaves (three units in two volumes). The arrangements [1]2+, +2[1] and +3[1] are all represented by one unit, the first two ones in the same volume.

3.2.3.4. *Sewing (table164).*

All the manuscript considered here are sewn with unsupported sewing except **I. 393** which was resewn on cord supports in the late nineteenth century, though originally must have been sewn with unsupported sewing as the rest of the manuscript. The sewing is made on four stations except **I. 625**, an 8vo which is sewn on three stations. They are arranged according to the pattern B1 in all six volumes. All of them, either main sewing stations and change-over stations, are marked with V shape cuts which in **I. 625** are noticeably small.

All the text-blocks (except **I. 393**, which preserves no thread evidence from the Papaneophitos sewing phase), are sewn with a linen thread mostly thin, always S ply and twist which varies between loose (one volume), medium (three volumes) and tight (one volume).

It is most probable that at least in one of the volumes the sewing was done as to incorporate the boards as will be discussed in the corresponding paragraph. None of the volumes offers any further evidence which could be of help in order to establish the exact type of sewing used.

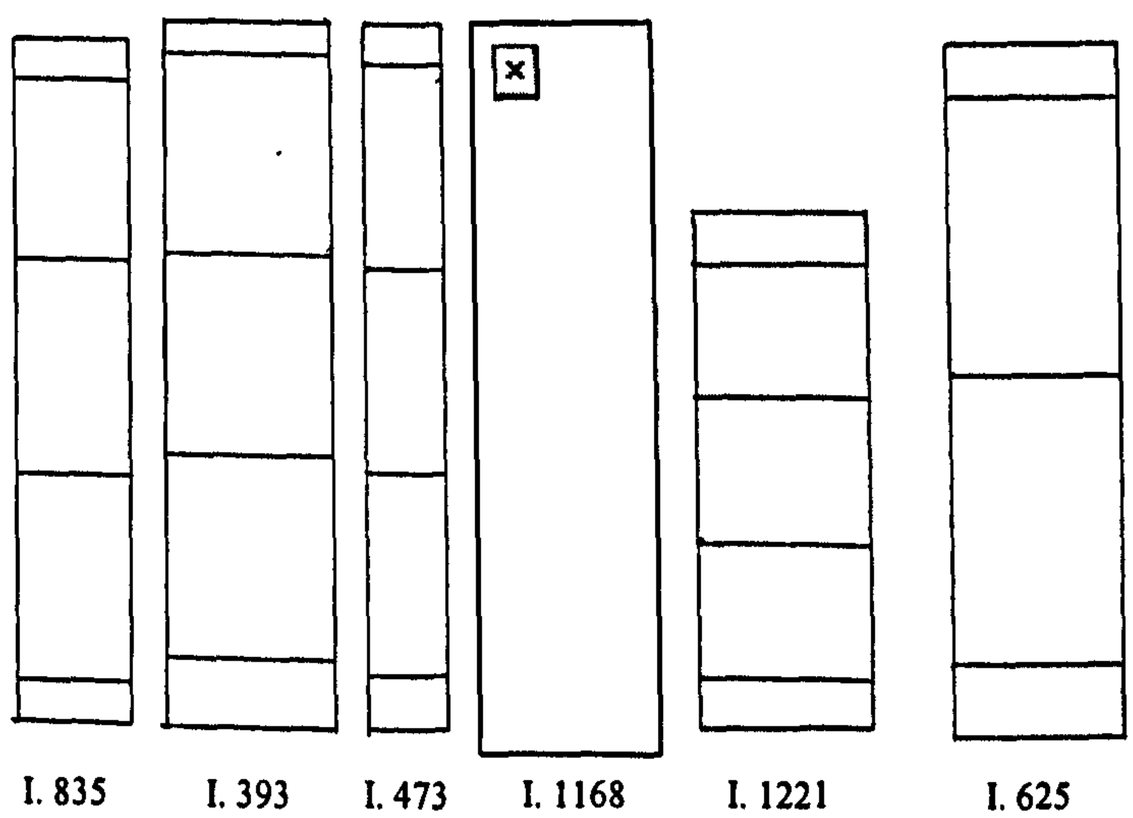


Figure 92. Line drawing showing the spines of the text-blocks and the arrangement of the sewing stations along them. From left o to right text-blocks sewn on four and on three sewing stations.

3.2.3.5. *Boards and board attachment (table 165).*

In all five manuscripts still preserving the Papaneophitos binding the boards are cut flush to the text-blocks, in three volumes they are made of wood with the grain

parallel to the spine and in two volumes made of pasteboards. None of the volumes offers visual access as to make possible the identification of the material, either wood or paper, used for the construction of the boards. The thickness of the pasteboards is between three and four millimetres and that of the wooden boards between seven and nine millimetres.

All the wooden boards have a BG 3 type of groove running in all three external edges, whilst their spine edge is shaped according to the SET 4 pattern. The pasteboards have no groove and their spine edges are cut straight, according to the SET 1 pattern. The spine joints in the text-blocks bound in wooden boards form an angle of 120°. The spines of the text-blocks are round in two volumes, slightly round in two volumes (one of them bound in pasteboards), and flat in one volume bound in pasteboards.

All three volumes bound in wooden boards follow the same attachment system I Uns/10, with the typical V shape recesses evident in the inner face of the boards under the pastedowns. As said before, in the occasions of the Elusive bindings, this attachment system is related to the Balkans (Szirmai 1999, pp. 71, 72, fig. 6.8) and is commonly found among the bindings of the seventeenth and eighteenth century in the Athos peninsula (see also the Cosmas Macedon bindings in the next section (2.3.4.). **I. 835** offers some more clues which permit to formulate a hypothesis on the process of board attachment and sewing. The two endleaf gatherings in this volume present a double sewing thread, something which contrasts to the rest of the text-blocks where in all gatherings the thread used is single. With this piece of evidence a hypothetical sewing procedure is proposed here as shown in figure 39a. According to this, the sewing starts from one board by sewing it with the first gathering, and in order to reinforce the attachment to the text-block such sewing is done twice. From then on, presumably the sewing proceeds as usual ending to the opposite board. The same result, slightly improved in stability could be achieved by using a double sequence sewing as shown in figure 93b, though no evidence to support this has been found. It should be noticed that the state of preservation of these five manuscripts, still retaining their Papaneophitos binding, is quite good preventing any further insight into the structure.

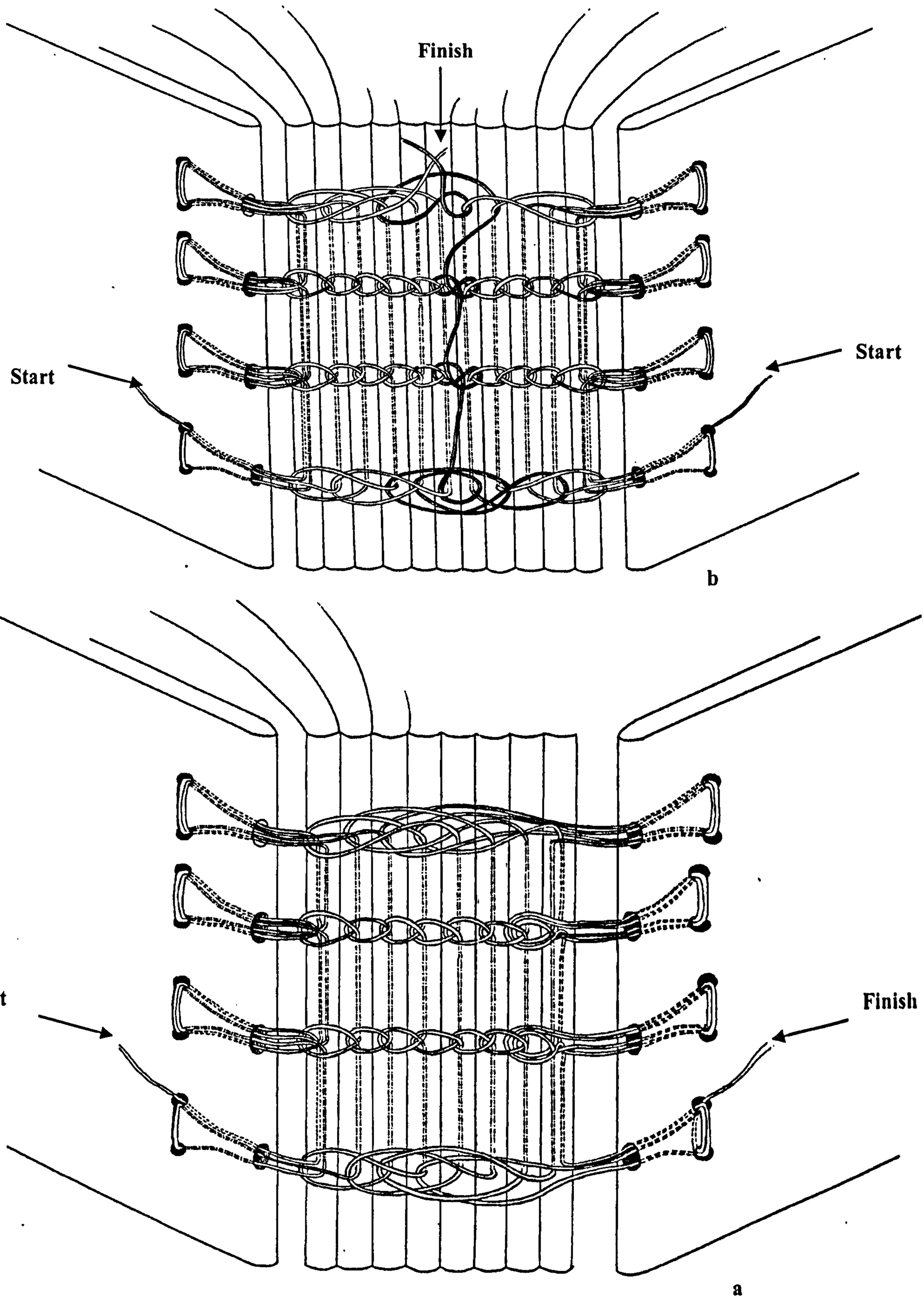


Figure 93. Drawing showing two possible ways in which the sewing of the text-blocks and the attachment of the boards might have been accomplished in I. 835. The two conjectural constructions are based on evidence from the binding itself and the preparation of models.

The two volumes bound in pasteboards use a completely different attachment system, II Uns/B1 and II Uns/B2, where the attachment between the text-block and the pasteboards is achieved by pasting the spine lining in the inner face of the boards and above this the pastedowns, either only one of them pasted above the turn-ins (variation B1) or two of them pasted one under and one above the turn-ins (variation B2).

3.2.3.6. *Spines and spine lining (table 166).*

All five text-blocks have canvas spine linings of medium thickness pasted all along the spine extending on both boards and pasted either to the outer (for the Greek-style bindings) or to the inner face (for the Flush Pasteboard and the Greek-Islamic bindings), covering a portion of the width of the boards between 20% and 60%.

3.2.3.7. *Endbands (table 167, 168, 169).*

All five bindings have compound endbands. In four of them they are of the Embroidered Front Bead and Crowning Core type and in one of the Islamic type.

Embroidered, Front Bead and Crowning Core (four volumes):

This compound endband consists of two cores, a primary sewing and a secondary sewing.

In all four volumes, the first core consists of a medium (three volumes) to thin (one volume) cord, whilst the second core consists of a thin thread (three volumes) or a medium thickness cord (one volume). In all four volumes the cores extend onto the boards for a distance between six and 20 millimetres corresponding to 6,2 % - 20% of the boards total width. The cores are anchored on the boards by means of the EAS 2 (three volumes) and possibly the EAS 3 anchoring system (one volume).

The primary sewing in all four volumes is of the Wound Plain on First Core type, made mostly with thin natural linen (three volumes) or medium thickness hemp thread (one volume), in two volumes certainly the same thread as the one used for the sewing of the text-block. The threads used are always S ply and the twist varies between medium (two volumes) and tight (two volumes). The thread is tied-down in the

centre-fold of every gathering using either the change-over sewing stations (three volumes) or another hole outside them (one volume).
The secondary sewing is made with medium thickness, S ply, medium twist silk threads. The colours are yellow and red in all four volumes, with the addition of a metal (silver?) thread in **I. 1168.**

.**Islamic** (one volume):
This compound endband consists of one core, a primary sewing and a secondary weaving. The core consists of a medium thickness leather thong which is laying flat on the head and tail edge of the text-block with its ends extending onto the pasteboards and fastened there by pasting them on the outer face (anchoring system EAS 6). On this core, the primary sewing is made, consisting of single warps tied-down in the centre-fold of every gathering using the change-over stations. It was not possible to confirm the kind of thread used (linen or cotton have been proposed on the basis of visual observation only), though it is a thin, 3S ply, tight twist thread. The secondary sewing or weaving is worked on the primary sewing (warps) with the same quality silk threads as the ones used for the endbands described just above (medium thickness, 2 sS ply, medium twist, yellow and red silk), and the standard Islamic technique, resulting in a thin endband with only two woven rows of alternating colours.

3.2.3.8. *Markers (table 170).*

All five volumes have originally had compound string markers though in one of them (**I. 1221**) the exact variation could not be established. Of the surviving examples three volumes have primary markers consisting of simple open loops made with the same threads as the ones used for the endbands secondary embroidery, in two of them just yellow silk and in one red silk and metal thread plied together. In the fourth volume there is a compound closed loop A, consisting of a cord core and yellow silk (same as that used for the endband secondary embroidery) wrapped all around (type F). Three of them are attached to the headbands through system LtH(f) and one is probably attached through system LtH(b).
Secondary markers still survive in three volumes only in two of them still attached on the primary markers. They consist of single (two volumes) or double (two volumes)

strings, in all cases simple except in **I. 473** where the single string is compound consisting of yellow and brown silk plied together. In the other volumes the secondary markers consist of natural hemp (two volumes) or cyan silk. Attachment of the secondary markers on the primary ones is made through system KIM (two volumes) and KIE (one volume).

3.2.3.9.*Cover and decoration (tables 171, 172, 173).*

All five volumes are bound in full leather either of goat (four volumes) or probably sheep (one volume). The colours are black (two volumes), deep purple (one volume) , or brown in two different hues (two volumes).
The turn-ins follow almost exclusively the pattern T-ins 1, except **I. 1221** where this is combined with the pattern T-ins 3. Their width varies between medium (three volumes) and wide (two volumes). The corner mitre consistently follows the pattern Co 1 though in four volumes combined with the patterns Co 3 (one volume), Co 5 (two volumes), or Co 14 (one volume).

All the bindings are tooled in blind using the same decorative pattern in both boards. The patterns used are the Dec1a (four volumes) and the Dec12 (one volume). The arrangement of the tools in both patterns is very similar and related to Islamic influence as we have seen in the previous section (3.2.2.). This type of decoration was extensively used in the following centuries as we have seen in the bindings of the New Library atelier in Sinai (section 2.3.2.). The spines are undecorated in all the bindings considered here but there is decoration in the board edges of the volumes bound in wooden boards, following either the pattern BED 1 (one volume) or BED 2 (two volumes).
There are 13 different tools used, among which there are three relief multi-use tools, two concentric rings tools, three centrepieces , three rolls and two creasers. The number of tools used to decorate one single binding varies between six and seven. Of particular interest are the two centrepieces representing the crucifixion and the resurrection of Christ, both are the earliest examples recorded in the present research of this type of tools which were extensively used in later bindings as we have seen in the New Library atelier and will see again in the bindings of Cosmas Macedon in the next section (3.2.4.). There are very similar tools to the ones presented here which are

known to have been used by binders in Karies as late as the second half of the twentieth century (Λέγγας 1999, pp. 24-27).

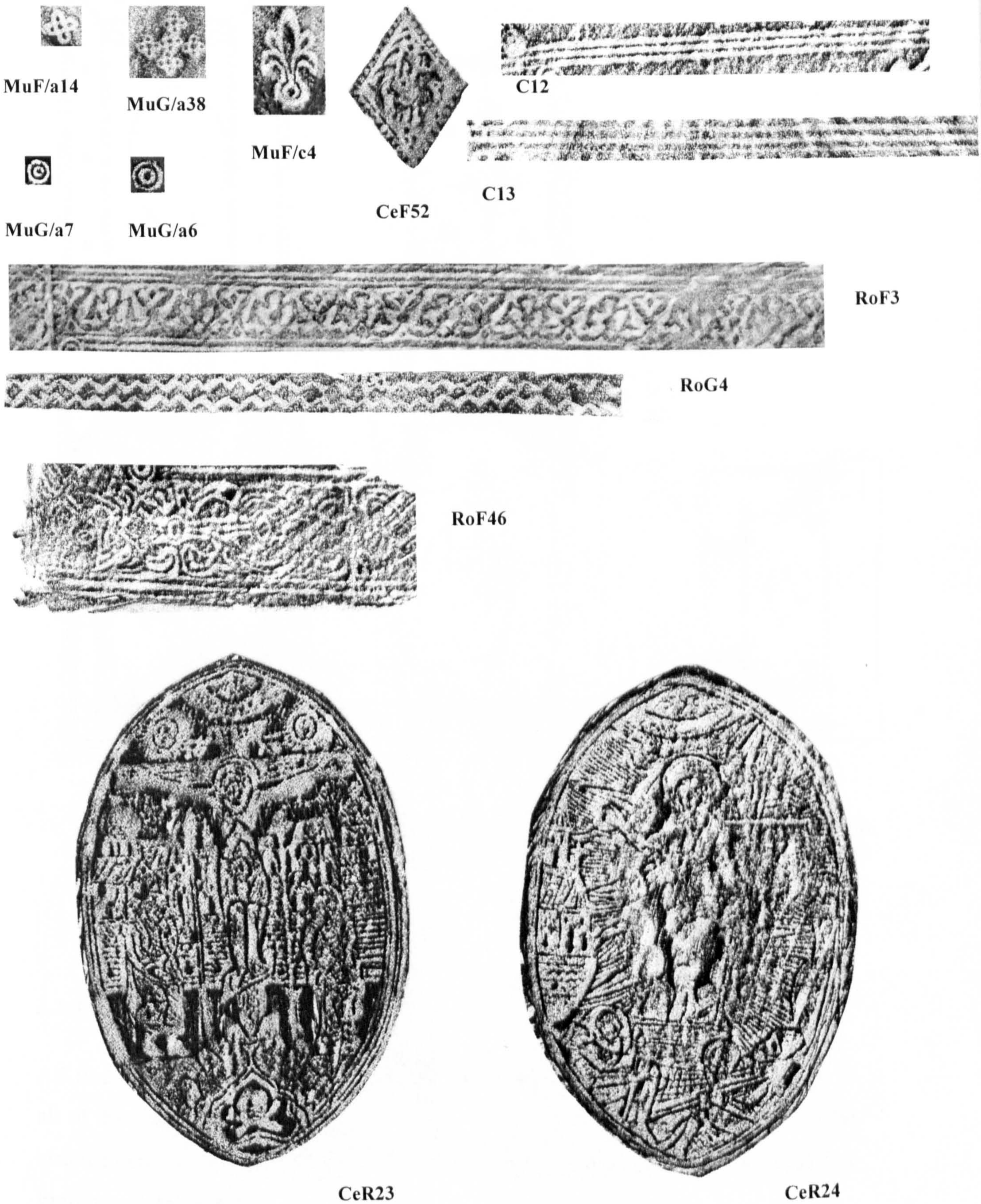


Figure 94 The 13 tools used for the decoration of the Papaneophitos' bindings.

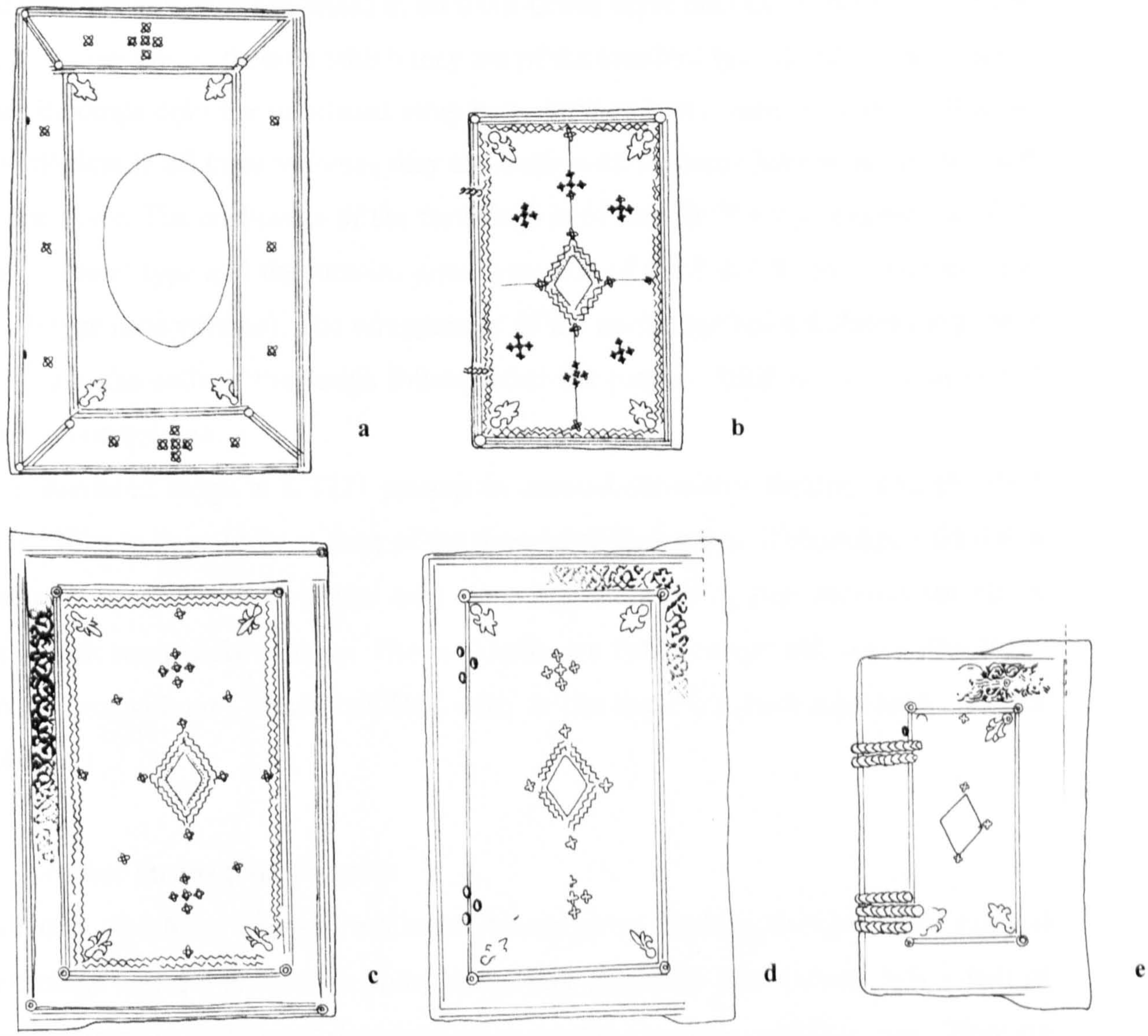


Figure 95. Line drawings showing the decoration of the left board of I. 625 (a), the right board of I. 1168 (b), the left board of I. 835 (c), the right board of I. 473 (d), and the right board of I. 1221 (e).

3.2.3.10. *Fastenings (table 174).*

All five volumes which still preserve the Papaneophitos binding have fastenings, in all of them following the arrangement 0-2-0←, except **I. 625** where they follow the arrangement 0-2-0 →← .Three different types of fastenings are found in these five bindings as described below:

- **Three Edged Leather Interlaced Straps** (three volumes).

Fastenings of this type are found in all three Greek-style bindings and survive almost intact in only one of them in which they are of the standard type (**I. 1221**). In both the other bindings only the interlaced strap ends survive in the inner face of the boards. Nevertheless in all three volumes they are made with the same leather as the one used for the cover. The anchorage of the fastenings is of the TBTP (two volumes), or TBP (one volume) type and the turn-ins arrangement is of the F &T 8 (two volumes) or F & T 6 type (one volume). The arrangement of the anchorage holes follows the pattern AH 4 and the ends of the straps follow either the pattern UfaP in two volumes and TfaP in one volume.

The interlaced straps in **I. 1221** present an unusual decorative feature, a single blind tooled fillet in the middle of each of the three interlaced straps. It cannot be said if this feature is unique to this volume only since in the remaining two volumes the straps are almost completely missing. The metal pins are either compound (two volumes) or simple (one volume), either just filed, cast, or cast and filed, each represented by one volume.

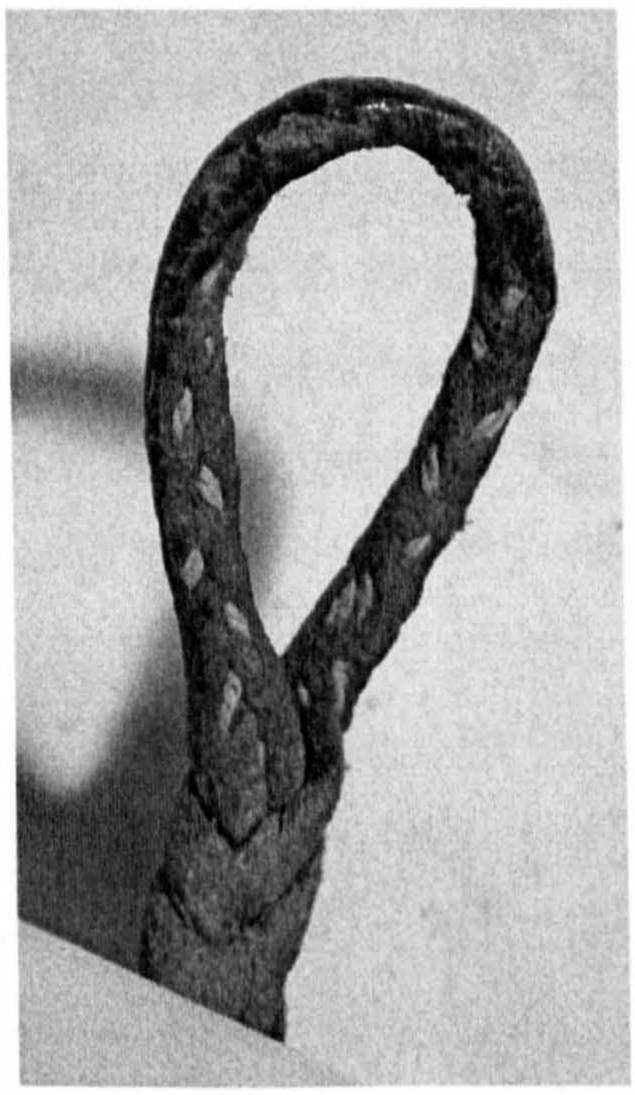
- **Leather straps** (one volume):

In **I. 625**, which has a Flush Pasteboard, Unsupported binding, vestiges of the original fastenings and the anchorage holes imply that originally this volume had a pair of leather straps in each board therefore following the arrangement 0-2-0 →←. They are made with the same leather as the one used for the cover of the volume, the anchorage is of the TBTP type, the turn-ins arrangement is of the F & T 1 type, the strap ends form is of the TpaP type and the anchorage holes are arranged according to the pattern AH 5.

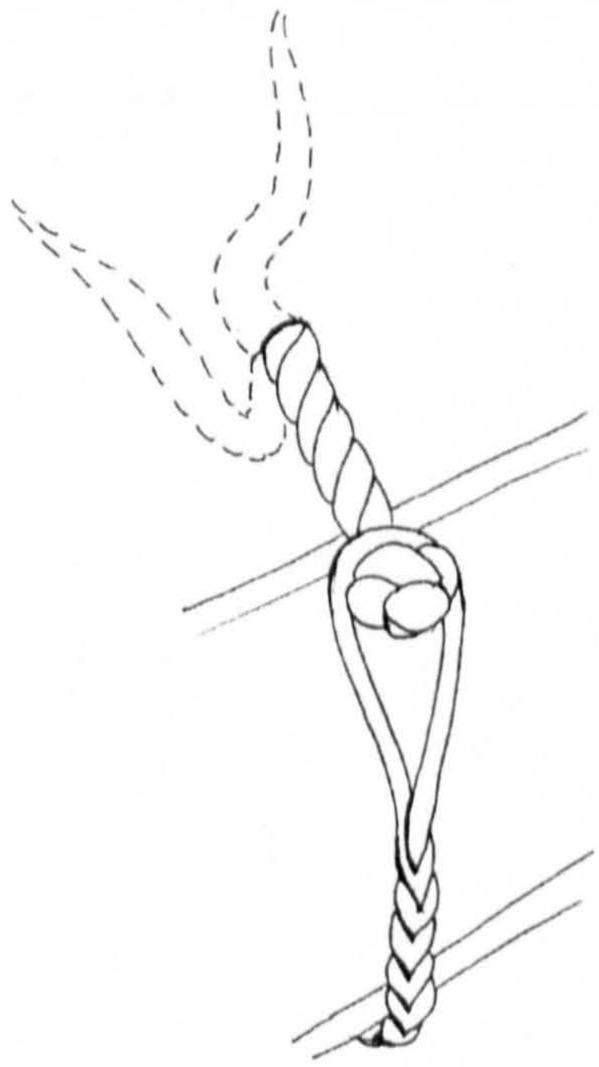
- **Two Edged Leather Turk's Head Knot and Interlaced Loop** (one volume):

In **I. 1168**, the second of the two Flush Pasteboard, Unsupported bindings, this so far Unknown type of fastening is found. It consists of two interlaced straps made with the same leather as the one used for the cover, with a loop in the edge as seen in figure 96a, laced through the right board according to TBT anchorage type, with the turn-ins arranged according to pattern F & T 1, the ends form following the pattern UuP and

the anchorage holes the pattern AH 5. The loops in these straps indicate that some kind of pin or toggle device must have been originally found on the left board, now missing. Nevertheless, the vestiges of leather still preserved in the inner face of the left board indicate that whatever was originally it must have been made with the same leather, probably a Turks-head knot. There is another binding in the Iviron library, of similar date, which has a Turk's head knot fastening on the left board[121] but since the volume is today missing part of the text-block with the right board the fastening type cannot be fully established. Nevertheless on the ground of these evidence a fastenings type as shown in figure 96b is proposed. In the interlaced loops of these fastenings the same blind-tooled line is found as in the interlaced straps of **I. 1221**.



a



b

Figure 96. The interlaced leather loop found in I. 1168 (a) and a possible reconstruction of the complete fastenings based on evidence from another volume preserved in the Iviron library (b).

3.2.3.11. *Conclusions*

According to the data exposed before, we can date the binding of **I. 835** very close to that of **I. 473**, i.e. in 1642. They share a great deal of the same technical and decorative features as the endbands which are practically identical and the decoration.

[121] This is I. 928, 16mo, containing Homilies of the Fathers and other theological texts, written in the seventeenth century. Half of the text-block with the right board is missing.

I. 625, dated in 1654, gives a clear idea of taste and technical changes that occurred at least at the binder's own production. Wooden boards were replaced by pasteboards, the attachment system changed drastically in order to take advantage of the pasteboards and became much simpler by using only the spine lining and the pastedowns instead of the rather complicated procedure seen in the **I. 835** and **I. 473**. The thickness of the boards may have effected also the endband type, that is now of the Islamic type, restricted only to the thickness of the text-block and not extending onto the boards. The sewing stations are reduced to three, something that cannot be explained by the format of the text-block since **I. 473** and **I. 835** which are of the same format and thinner are sewn on four stations and the same is true for **I. 1168** which is clearly smaller. Thus this reduction could only be explained as a conscious decision of the binder and not as an adaptation to the dimensions of the text-block.

The Decoration also changed. The most striking feature is the use of big, always blind tooled, center pieces with religious subject, clearly of western inspiration and iconography, which seems to be very common in the seventeenth and the eighteenth centuries as already mentioned in the New Library atelier (see section 2.3.2.9.).

I. 1168, seems to be a link between these three bindings. On one hand it still retains the same decoration as in **I. 835**, and **I. 473**, the same endband type as well as the same number of sewing stations, while on the other hand there are such innovations as the use of pasteboards that are connected with the text-block through the pastedowns and the spine lining. The fact of the fastenings, so far unique, does not offer any significant hint for establishing the date of the binding. Thus, according to what said so far, this small charming binding could be dated probably between the years 1642 and 1654.

3.2.4. THE COSMAS MACEDON BINDINGS

This group comprises the bindings of eight manuscripts, all of them written by the same scribe. Cosmas Macedon, between circa 1680 and 1692 and in all probability bound in Mount Athos by the same binder though his identity cannot be established at present.

3.2.4.1. *Text-blocks and scribes (table 175).*

All eight manuscripts considered here were written in Greek between circa 1680 and 1692, four of them precisely dated between 1686 and 1692. Six of the manuscripts belong to the library of the Iviron monastery and two to that of the St Catherine's monastery in Sinai. All the manuscripts are written on western polished paper, and all contain various music texts. The formats vary between six 8vo and two 16mo (two manuscripts). Cosmas Macedon is a well known scribe active at least between the years 1674 and 1697. In the present research 18 manuscripts written by him have been surveyed, 16 preserved at the Iviron library and two at the St Catherine's library in Sinai[121].
There are only short scribal notes in five manuscripts (**I. 970, I. 1048, I. 1183, S. 1469, S. 1478**)giving only the name of the scribe and the date. In **S. 1478** we read the following note:

f. 1 r. '*July 20th 1750, the present psaltiki of the holy walked by God, Mount Sinai, came from the town of the blessed priest* ***Kyrillos Limneos*** *and who takes it away and steals it may be unforgiven*'[122]

All the bindings considered here are the first bindings for the manuscripts they contain and they are classified as Projecting Wooden boards with Supports. These bindings represent a homogeneous group among the 18 manuscripts written by Cosmas and surveyed in this research. The remaining ten manuscripts which are not considered

[121]. In Πολίτης and Πολίτη 1994, pp. 510-511, there are 14 manuscripts listed as in his hand, eight of them preserved outside the Iviron monastery, the two manuscripts preserved in Sinai are not listed among them. Four of the manuscripts preserved in the Iviron monastery (**I. 970, I. 978, I. 979, I. 980**) are catalogued in the third volume of the Stathis catalogue (Στάθης, 1993, pp. 716-797). The rest will be included in the fourth catalogue, still to be published. The manuscripts surveyed and not considered here are: I. 564, I. 755, I. 993, I. 1074, I. 1141, I. 1150, I. 1174, I. 1200, I. 1226, I. 1531.

[122] *«1750 Ιουλίου 20, η παρούσα ψαλτική του αγίου Θεοβαδίστου όρους σινά ήρθεν απο την πόλην του μακαρίου παπά κυρίλλου Λιμνέου και ο ξενόσας αυτήν και κλέψας εστί ασιγχόρητος».*

here present various bindings, with the exception of two, all different and therefore could not be considered in the present research. It is nevertheless of interest that all these bindings are the first bindings of the manuscripts they contain.

3.2.4.2. *Endleaves (table176).*

There are both integral and separate endleaves, the latter are clearly the majority, while doublures of marbled paper are used in two volumes.

Separate endleaves (11 units in seven volumes).

They are found in both the left and right end of the text-block in four volumes, and in the left end in three volumes. They are always compound with one single exception , **S. 1469**, where there are only four flyleaves and a doublure. They follow the arrangements [1]3 or 3[1] (four units in two volumes), [1]5 (one unit in one volume), while the arrangements [1]1 and 1[1] are found in five units of three volumes, in four of them (divided between two volumes) they consist of a single folded leaf which is not sewn with the text-block but only tipped on the text-block and fastened trough the pastedowns.

Integral endleaves (five units in four volumes). They can be either compound or simple in which case only flyleaves are present.

Compound. They consist of a variable number of text-block leaves, two, three or ten, left bank at the end of the text-block, of which the outermost one is pasted above the turn-ins, and therefore used as a pastedown.

Simple. This is the case of **I. 970** where a single blank text-block leaf is left at both ends of the text-block, used as a flyleaf while the board is covered with a doublure of marbled paper.

In both volumes (**I. 970 , S. 1469**) where doublures are used they consist of marbled paper pasted according to the D1 type.

3.2.4.3. *Sewing (tables 177, 178).*

Though the bindings considered here are very similar in all other aspects they seem to be following both supported and unsupported sewing. For some of them it was possible to positively confirm whether they are sewn according to the one or the other technique but for others no. What makes things difficult to this end is the fact that the

same visual evidence concerning the system used for attaching the boards to the text-block is found in the inner face of the boards both in supported and unsupported sewn text-blocks as we sill discuss below. Considering this it seems that four bindings are sewn on supports (for one of them, **I. 1048**, this is not confirmative) and four are sewn with unsupported sewing (for two of them, **I. 978, S. 1478**, this is not confirmative).

The number of sewing stations varies between four (one volume), five (three volumes) and six (four volumes). The number of sewing supports varies apparently between two (one volume), three (two volumes) and six (one volume). They are probably made of medium thickness cord, always raised, though the soundness of the structures does not permit any direct view to this feature. The sewing thread used is always a thin linen thread of tight twist and 2S ply. All the sewing stations, both the main ones and the change-over, are marked either with V shape cuts (six volumes, in four of them particularly small), or needle holes (two volumes). The exact type of sewing used could not be identified in any of the volumes though as we will discuss in the next section it is probable that in those text-blocks sewn on supports a herringbone sewing is used.

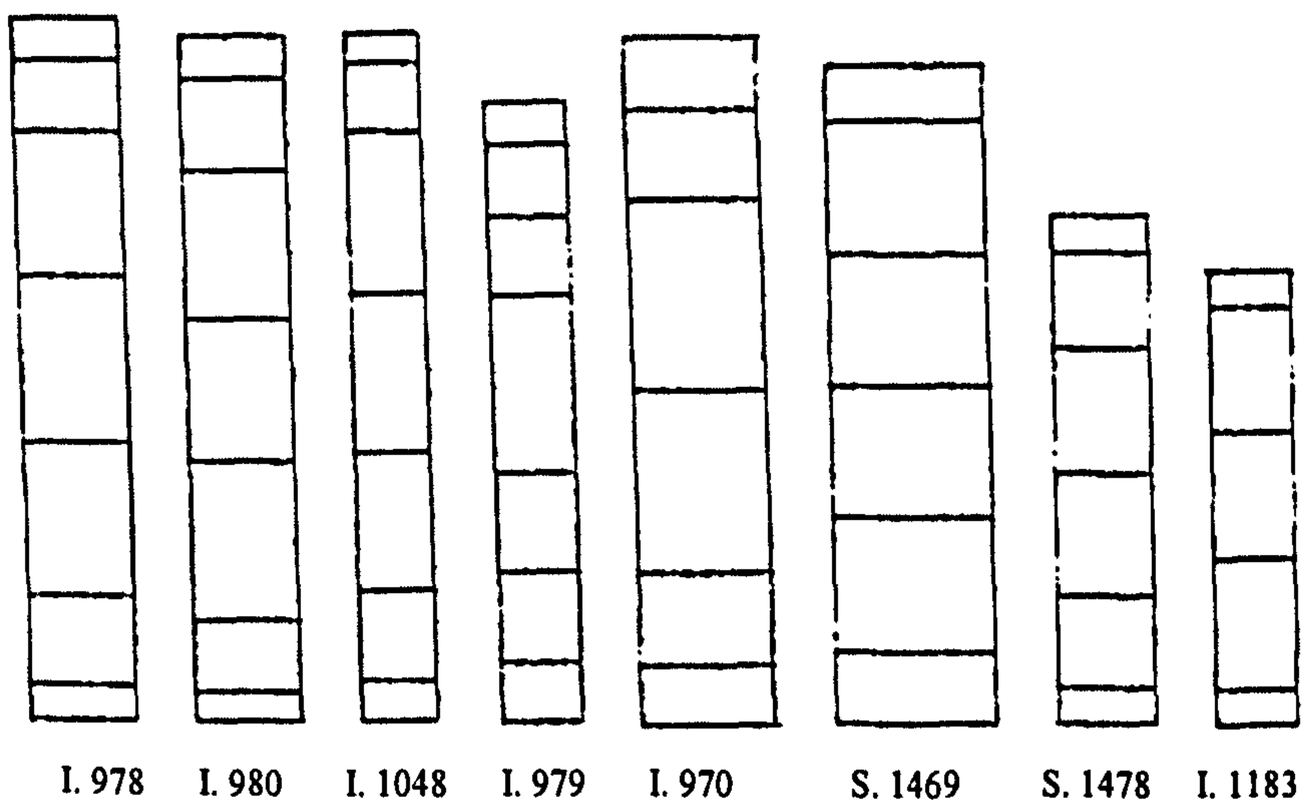


Figure 97. Line drawing showing the spines of the text-blocks and the arrangement of the sewing stations along them. From left to right text-blocks sewn on six, five and four sewing stations.

The arrangement of the sewing stations along the spines of the text-blocks follows mostly the pattern B1 (three volumes), or B4 (three volumes) while B9 and B6 are found in one volume each. There is no clear relation of any of the patterns with one or the other type of sewing and is worth noting again that having the change-over stations of a text-block supported, as in **I. 1048**, is a feature apparently related to

Germany and isolated examples have been recorded in the course of this research in the Raithos atelier (S. 88) and the New Library atelier (S. 1701).

3.2.4.4. *Boards and board attachment (table 179).*

All manuscripts are bound in wooden boards, most probably in all of them some unidentified type of hardwood. The grain is perpendicular to the spine in five of them and parallel in the other three. The boards are rather thin, in most of them only five millimetres and in the remaining between six and seven millimetres. They project from the text-blocks in all three external edges forming narrow squares between two and five millimetres. The edges of the boards are bevelled to the inside according to the pattern OS 2. On the account of other very similar and contemporary bindings from the Iviron monastery[123] it is probable that these bevelled edges are the result of thin wooden sticks of triangular section fastened on the edges of the boards, though it was not possible in any of them to identify the means by which these are fastened, by adhesive or nails (figure 98). The spine edge in all the boards is shaped according mostly to the pattern SET 2 but the pattern SET 3 is also recorded in two volumes. On the account of similar and contemporary bindings from the Iviron library it is possible that in the bindings considered here spine edge recesses of the SER 5 type for the sewing supports or the attachment thread have been used though their actual existence is surmised also by the fact that there is no evidence of the supports or the attachment thread underneath the leather cover which leads us to suppose that there are somehow recessed.

Figure 98. Cross section of a board showing the wooden stick which is fastened in the edges of the board in order to form the bevelled squares.

Though as we said before, both supported and unsupported sewing is represented in the bindings considered here the way this affects the attachment between the text-block and the boards could not be fully established because of limited access to the

[123] For example I. 267, written and bound in 1690 probably by Iosiph from Sinopi, a known scribe and apparently binder active in the Iviron monastery between 1685 and 1707. In the present research as many as 57 very similar bindings to those considered here have been recorded, 47 of them in the Iviron monastery dated between 1680 and the first half of the eighteenth century.

structures themselves and because the visual evidence discernible underneath the pastedowns can conform to both attachment systems the Sup15 and the I Uns10. Nevertheless for the text-blocks sewn on supports it seems probable that a peculiar attachment system is used which combines both the lacing of the sewing supports through the boards but also of bridling. This is based on the evidence of three similar and contemporary bindings from the Iviron library[124]. According to this conjectural attachment system the sewing begins by lacing the sewing supports to one of the two boards sewing the gatherings with herringbone sewing up until the last one. At that point apparently the sewing supports are cut flush to the text-block and in order to attach the second board a thread is used which is laced through the boards and wrapped around each sewing support (figure 99). In the two volumes where this attachment system was detected it was not possible to establish if the process of attaching the text-block to the boards was a continuation of the sewing procedure or if a different, separate length of thread was used. It should be noted the similarity of this attachment system with those used in Carolingian binding structures though in that case both boards are attached through the lacing of the sewing supports (see Szirmai, 1999, pp. 110,111 and figure 7.12)

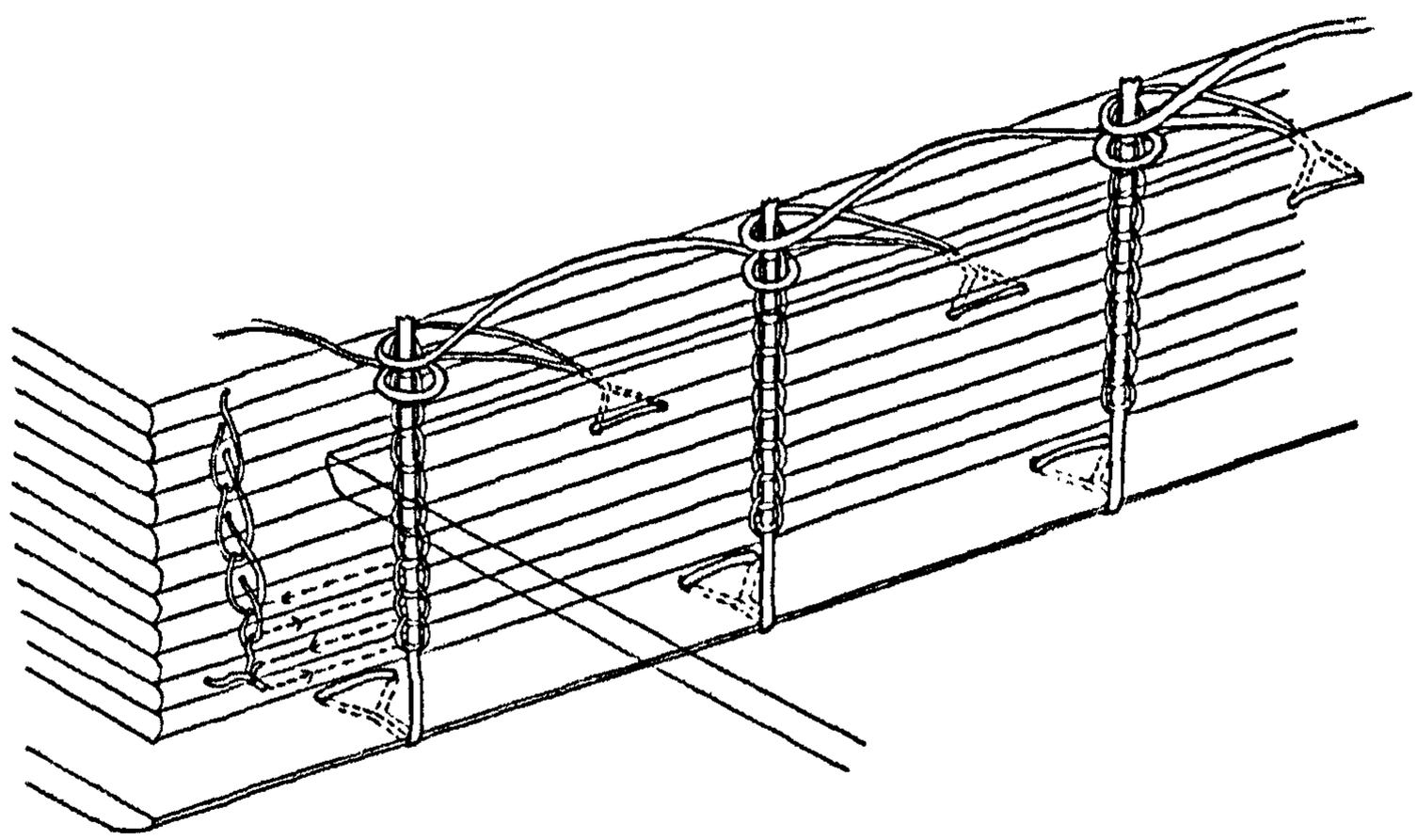


Figure 99. Drawing showing the attachment system which may have been used in the four binding sewn on sewing supports. This attachment system has been identified in two contemporary bindings from the Iviron monastery, those of Skiti Iviron 1 and 4. The representation of the way the sewing thread is anchored around the sewing supports and underneath the sewing thread of the previous gatherings is conjectural and not conforms to the herringbone sewing.

[124] These are Skiti Iviron 1, and Skiti Iviron 4, both written and possibly bound by Iosiph from Sinopi around 1692.

3.2.4.5. *Spines and spine lining (table 180).*

In all the volumes there is only a slight joint between the text-blocks and the boards. All the volumes have flat spines. Though probably all the volumes have a spine lining it was not possible to establish the exact type in three of them. Of the remaining five, four volumes have a canvas spine lining pasted all along the spine of the text-blocks. In only one volume, **I. 1183** sewn on supports the spine lining consists of rectangular pieces of canvas pasted between the sewing supports. In all the volumes the thickness of the canvas is medium and it is pasted on the outer face of the boards though it was not possible to establish how far it extends.

3.2.4.6. *Endbands (table 181, 182, 183).*

All volumes have compound endbands in both the head and tail edges. Though the kind of the endband primary sewing could not be established in one volume (**S. 1469**) in the remaining seven it is always of the Wound Plain on First Core type. In all volumes there are two cord cores, the first of medium thickness and the second thin, extending onto the boards for a distance between 10 and 23 millimetres (representing a percentage of the total width of the boards between 7.7% and 15.2%) and are anchored there by means of system EAS 9 and EAS 13 in one single volume (**S. 1473**) The primary sewing is worked with a thin linen thread, the same as the one used for the sewing of the text-blocks which is tied-down always in the centre-fold of a variable number of gatherings, passing through the change-over stations.
There are two different types of secondary sewing used, one of them, found in seven bindings not described before and conventionally designated Iviron endband.

Iviron endband .

This is a very characteristic endband found in seven of the eight bindings considered here and in many more of the 57 similar, contemporary, bindings recorded in the Iviron monastery. Though none of the endbands of the bindings considered here permitted any closer look to its structure, thanks again to the similar bindings in the library, and especially **I. 511**[125], the structure could partly be observed. This endband

[125] This is a Patericon written in the fifteenth century having a note by the binder, Iosiph from Sinopi, which can generally be dated to around the end of the seventeenth century.

is distinguished by the presence of a woven band which covers the first core above the primary sewing and which is apparently incorporated to the endband through the sewing of the second core. The primary sewing as said above is of the Wound Plain on First Core. The secondary sewing apparently consists of two distinct procedures. The first is the weaving of a band which is long enough as to cover the whole length of the endband cores and wide as to cover the first core with the primary sewing. This band is then fastened on the endband with the same thread which is wrapped around the second core as shown in figure 100. As a matter of fact in **I. 978** in the right end of the headband it is visible a silk thread which is tied around this separate woven band and the first core. The colours and the threads used are always the same, thin yellow and blue silk, of tight twist and 2Z ply, and the pattern of the woven band is also the same, strips of blue and yellow silk alternating vertically. There is only one single exception to this pattern (**S. 1419**) in which the strips are arranged horizontally. It could also be suggested that the woven band is not worked separately but that the warps are sewn together with the secondary sewing used to attach the second core and that, once this is done, the wefts could be woven *in situ* on the endband. Nevertheless the fact that in some of the similar bindings preserved in the Iviron library this woven band is now detached but otherwise sound is an indication that structurally represents a unit of its own.

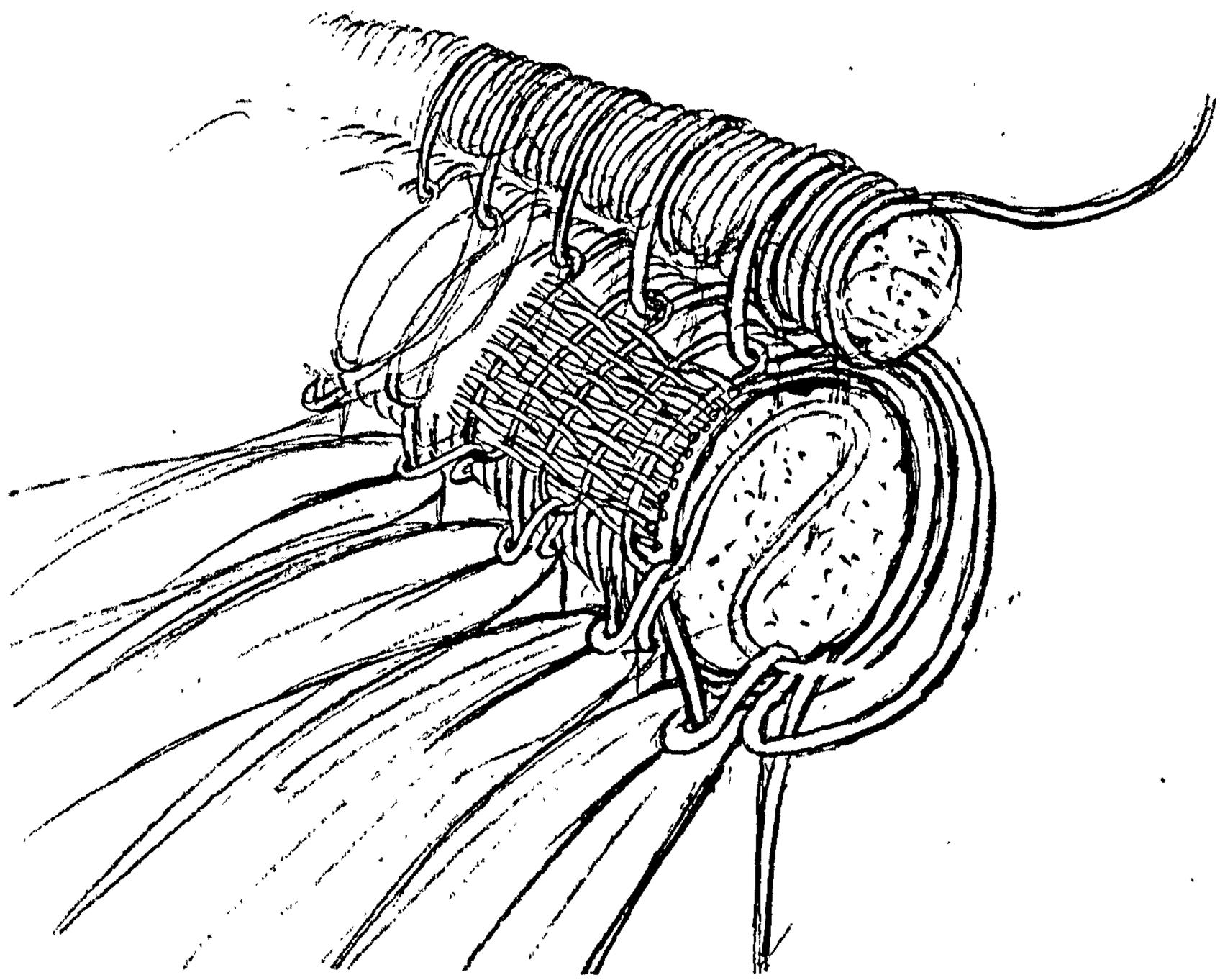


Figure 100. Drawing showing the way the separately woven band is secured on the headband as it was identified in I. 511 bound by Iosiph from Sinopi around the end of the seventeenth century.

Embroidered Front Bead and Crowning Core (I. 1183)

This type of secondary sewing is found in one single volume. Nevertheless it is sewn with exactly the same silk threads and the same colours as those used in the Iviron endbands described above. It is worked from left to right.

3.2.4.7. *Markers (table 184).*

All volumes have originally had string markers, in seven of them compound and in one single volume simple (**S. 1478**). The simple marker consists of a string made of pink and white silk threads plied together and probably fastened on the headband by means of system FH(a).

Compound markers vary in number between one and three per volume. The primary marker is always compound, consisting of a cord core which is covered by yellow silk thread, or blue in one volume, wrapped around it. They are laced through the lower edge of the headband and are somehow fastened in the spine though it was not possible to establish exactly how in any of them [system LtH(f)]. The secondary markers survive only in four volumes, in two of them consist of single colour silk strings knotted on the primary marker probably through system KiE and a combination of systems KiE and Pli. In one volume the secondary markers consist of two red silk ribbons knotted on the primary marker by means of system KiE and in the last of the four volumes it consists of a red and white silk string fastened on the primary marker by means of system KiE.

3.2.4.8. *Cover and decoration (tables 185, 186, 187).*

All eight volumes are covered in full goat leather in six of them black, in one brown and in the last one dark brown.

The turn-ins follow almost exclusively a combination of the patterns T-ins 1 and T-ins 3 except **S. 1469** where the pattern T-ins 2 is probably used. Their width varies in all of them. With one exception the corner mitre consistently follows the pattern Co 1 combined with the pattern Co 4 in five volumes and pattern Co 6 in one volume. In one single volume (**S. 1478**) the pattern Co 3 is consistently used in all four corners.

The number of tools used for the decoration of these eight bindings is outstanding. There are 37 tools altogether divided between ten centrepieces, ten cornerpieces, four rolls, ten small multi-use floral tools and one filet. The number of tools used to decorate one single binding varies between five and seven with the exceptional case of the gold tooled volume **S. 1469**, where as many as 13 different tools have been used. All the small floral tools are relief tools, as well as one of the rolls, six of the centrepieces, and six of the cornerpieces. Three rolls, four centrepieces and four cornerpieces are intaglio.

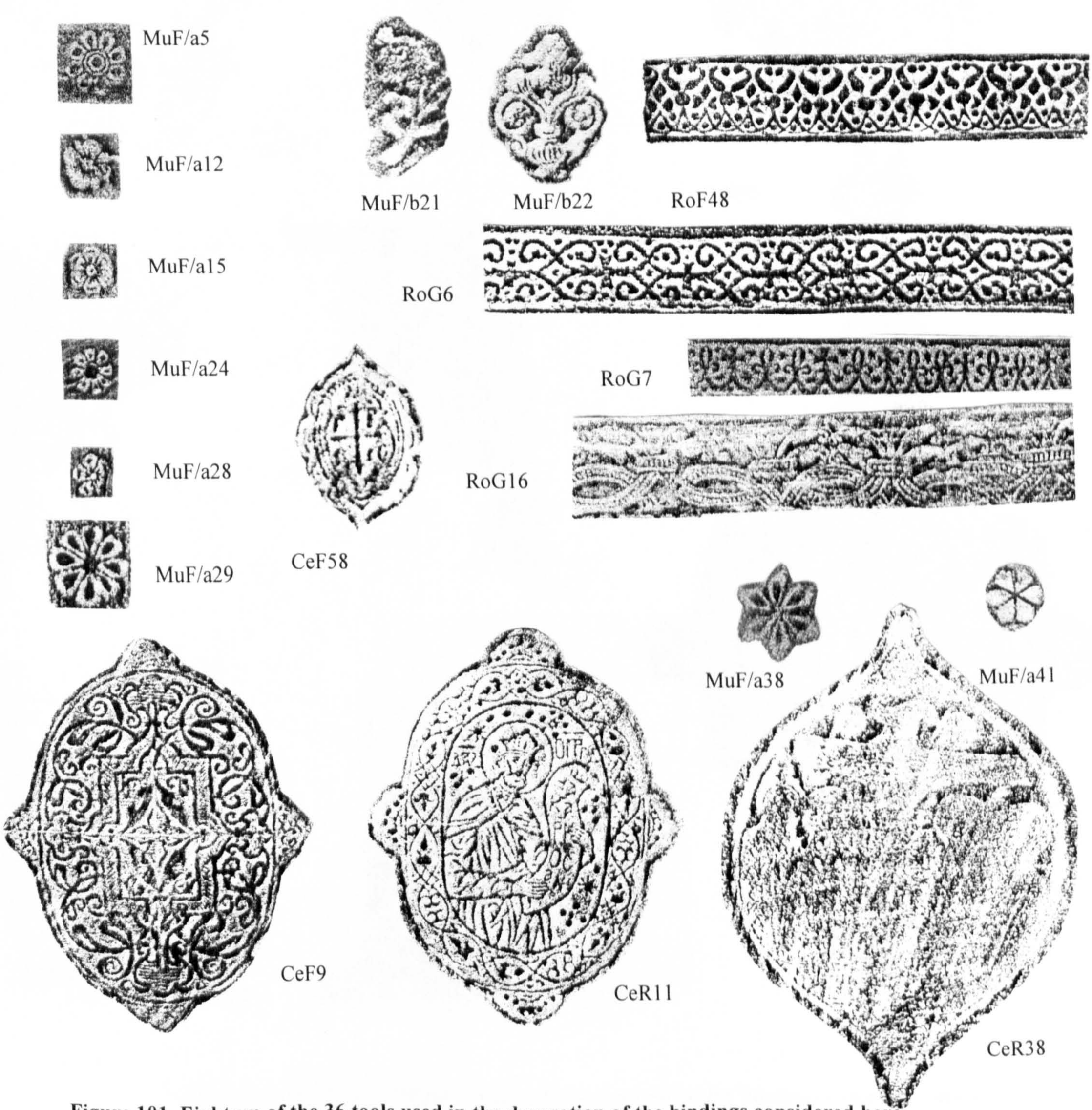
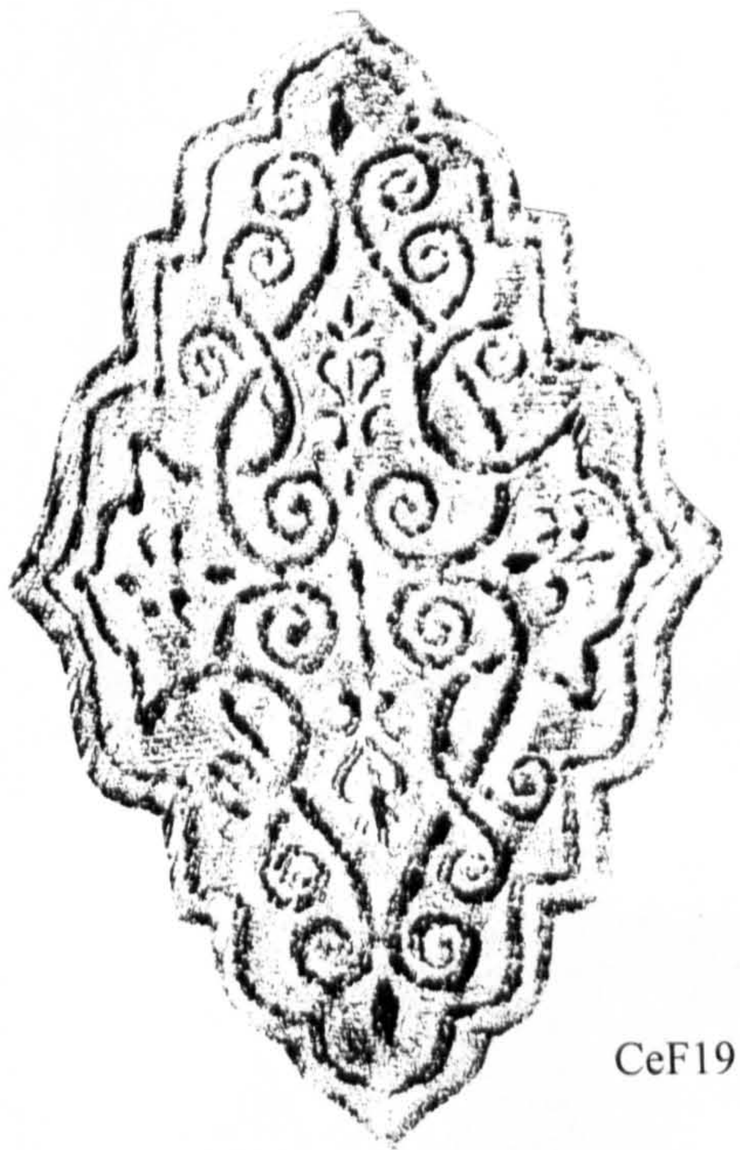
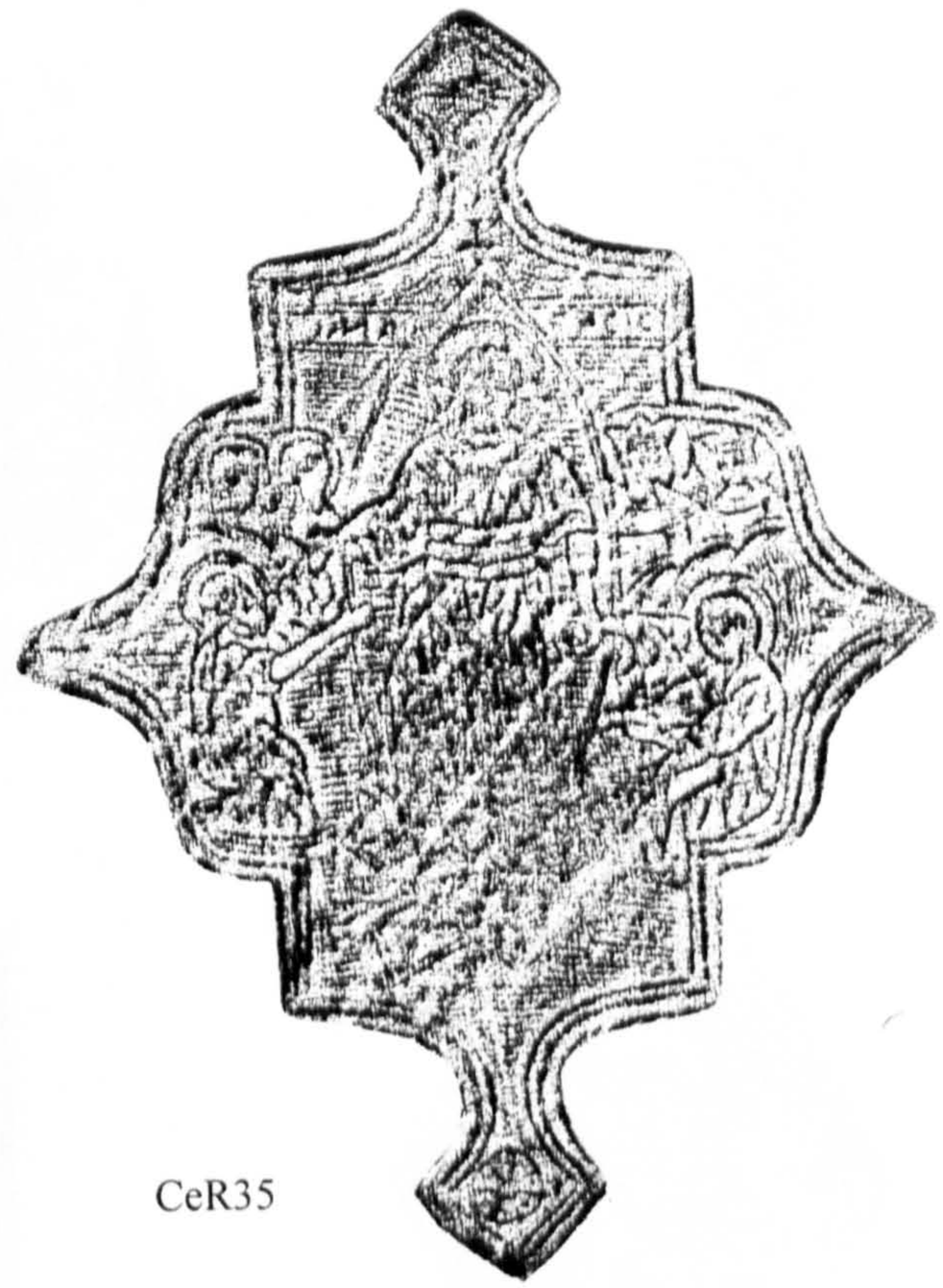


Figure 101. Eighteen of the 36 tools used in the decoration of the bindings considered here.

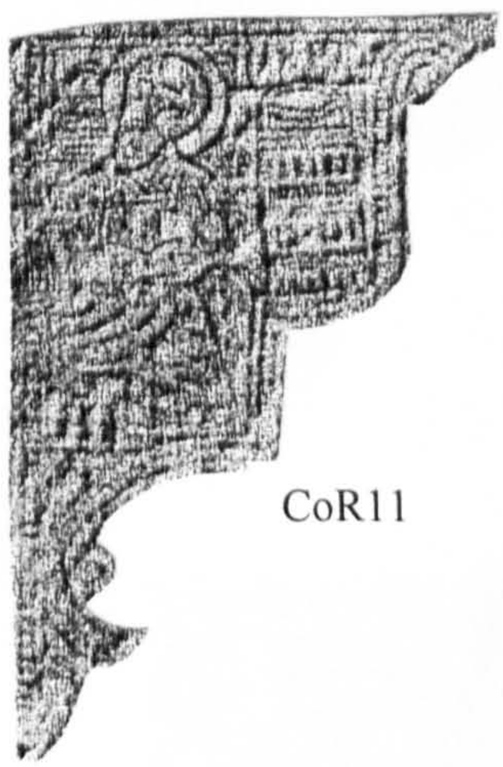


CeF19

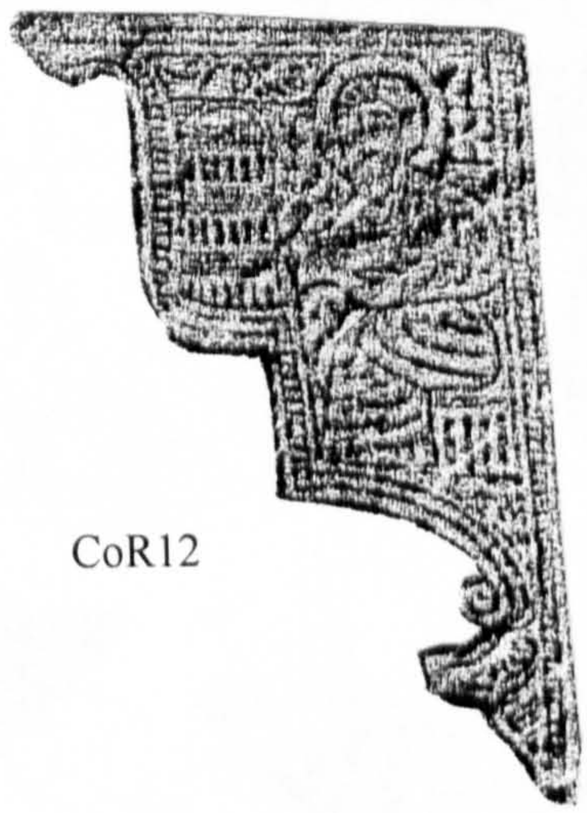
CeR29



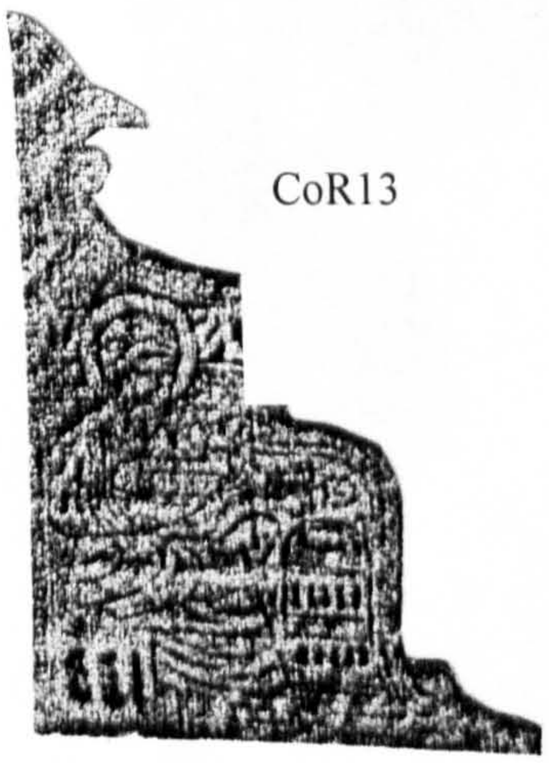
CeR35



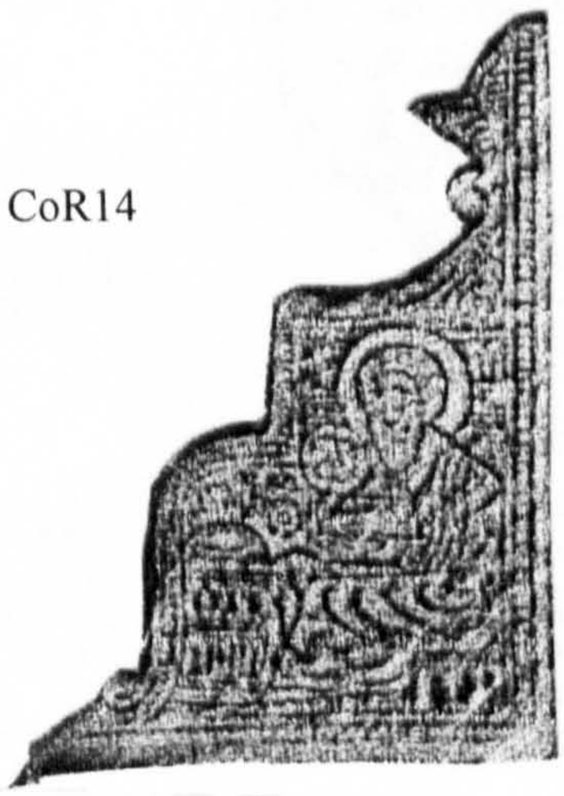
CoR11



CoR12



CoR13



CoR14

CeF5

Figure 102. Eight of the 36 tools used in the decoration of the bindings considered here.

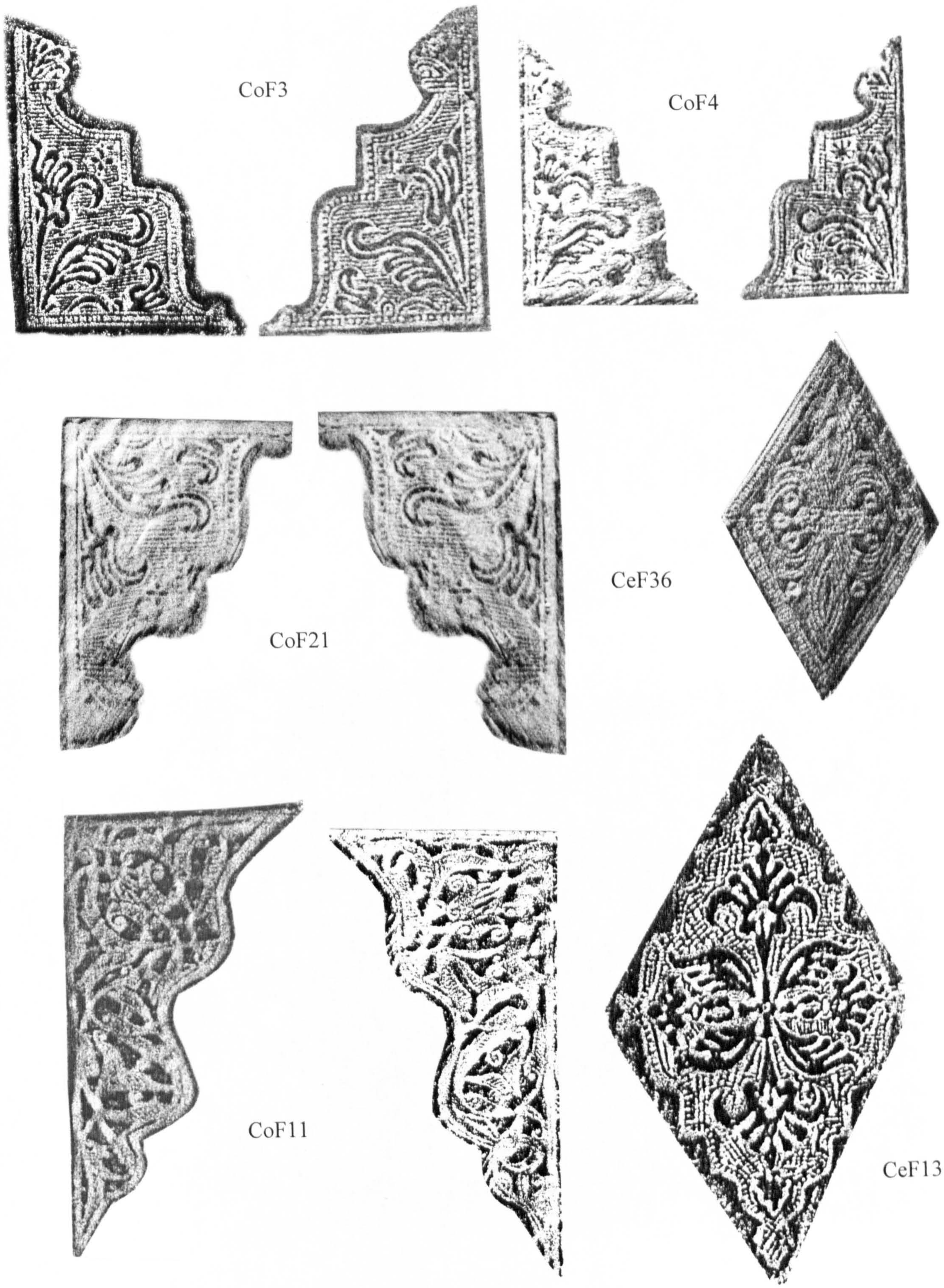
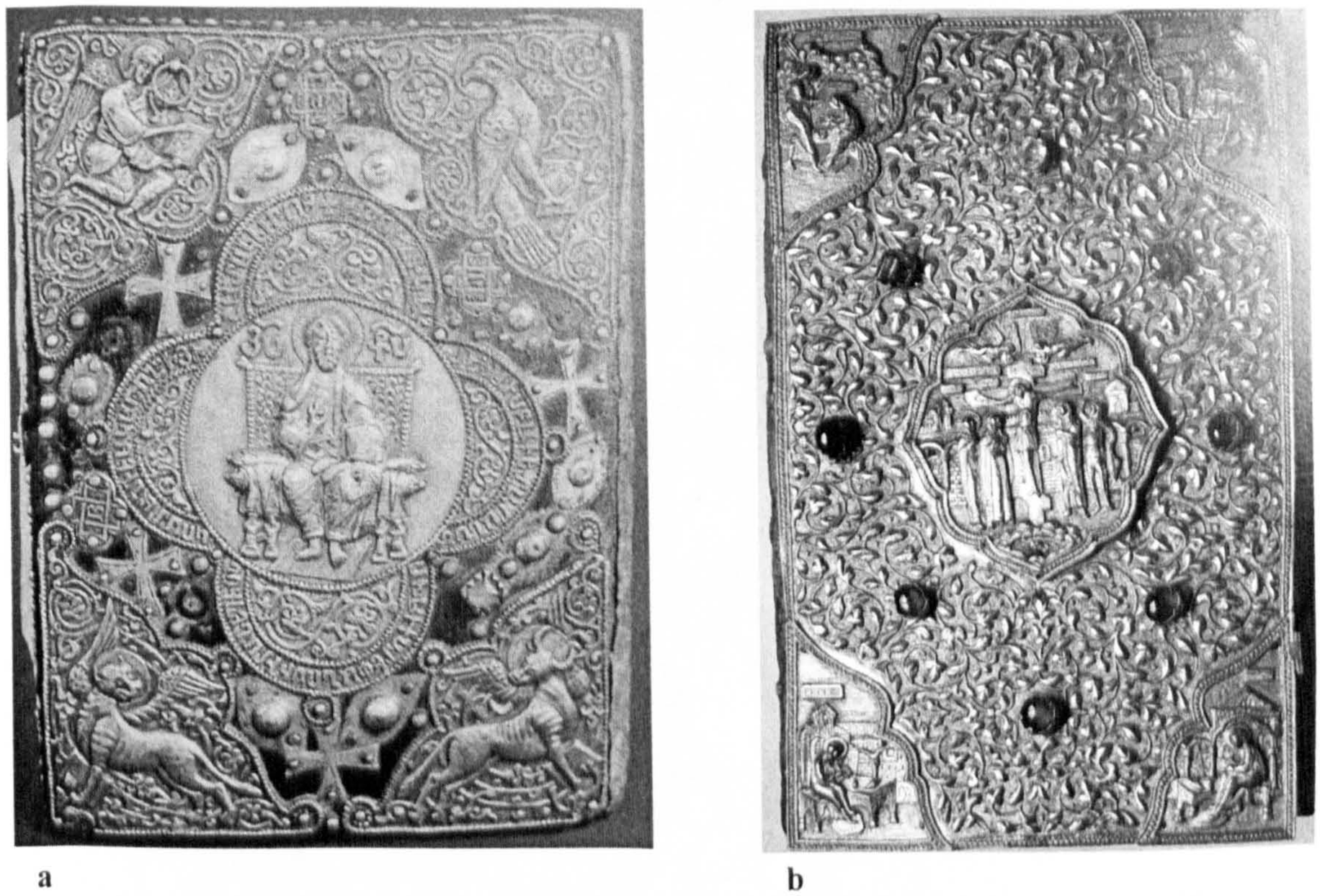


Figure 103. Ten of the 36 tools used in the decoration of the bindings considered here.



a b

Figure 104. Two examples of 'treasure' bindings repeating the decorative pattern Dec 14. Silver cover of the right board of the Gospels of Kostandin Bardzraberdtsi, Cilicia 1254, after Nersessian (ed) 2002, catalogue number 35(a), and Gilder silver cover from the revestmnet of a Lectionary, Moscow 1644, after Pitrovano 2001 (b)

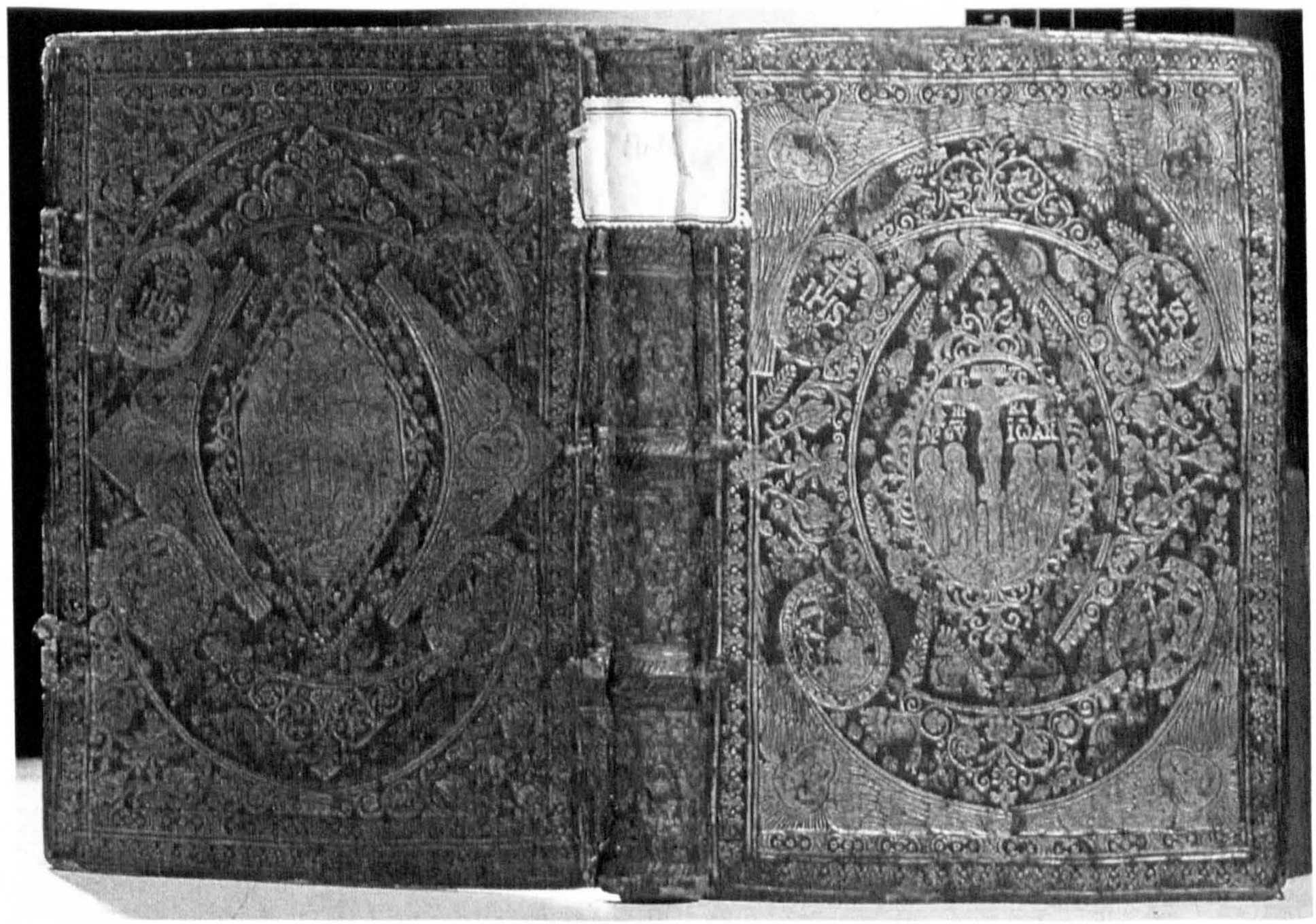


Figure 105. The binding of I. 1527 written in 1641 by Anthimos from Ioannina. The left board is gold tooled and the right board is probably silver tooled.

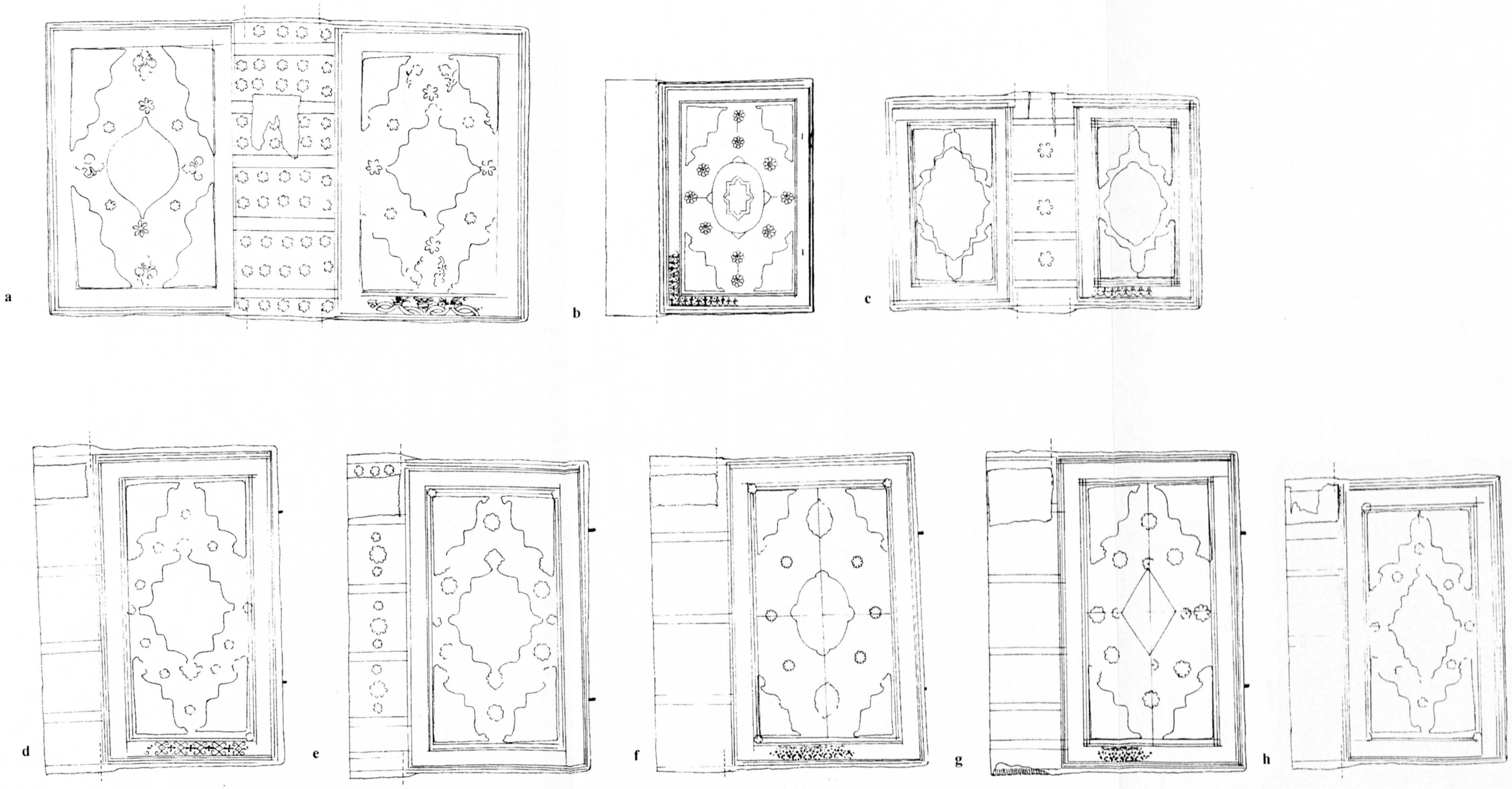


Figure 106. Line drawings showing the decoration of S. 1469 (a), S. 1478 (b), I. 1183 (c), I. 978 (d), I. 980 (e), I. 970 (f), I. 1048 (g), I. 979 (h).

All the bindings are decorated with the same decorative pattern, Dec 14a, in both boards. This is a decorative pattern which was destined to have a long lasting history in the decoration of bookbindings in Greek monasteries. Examples are recorded as late as the early twentieth century (Λέγγας 1999, pp. 24-27.) using the same kind of tools and the same arrangement of centrepieces and cornerpieces. As we have said in the occasion of the Theoclitos bindings and the Papaneophitos bindings in sections 3.2.2.11 and 3.2.3.9. respectively. Similar decorative patterns were also used in Western Europe since as early as the sixteenth century as an influence from similar decorative patterns of Islamic bindings. Nevertheless similar decorative pattern were known in the Christian populations of the East from as early as the thirteenth century (figure 104a). The fact that there are often cornerpieces with the Evangelists with their names written in Slavonic alphabets is an indication that these type of decoration was used also in the Slavic areas of the Balkans from where most probably have reached the Athos through the close relations that the monasteries, certainly among them also the Iviron, had with Russia, Wallachia and Moldavia (see section 3.2.1.). The gilded cover of a Lectionary bound in Russia in 1644 (figure 104b) and the examples seen in the previous sections on the Theoclitos and the Papaneophitos bindings further support the idea that this decorative pattern reached the Athonite community probably from Eastern Europe.

All but one binding are decorated with blind tooling. **S. 1469** is decorated exclusively with gold tooling which is an outstanding example for the rarity of the use of gold and for the extent of this use. **I. 979** is also decorated with a combination of blind and gold tooling though, judging from its appearance, some unidentified alloy may have been used instead of gold or actually an alloy of gold. These are the earliest examples of gold tooling recorded in this research which can with safety be attributed to one of the two monasteries and probably also some of the earliest examples of the use of gold tooling in the Orthodox monastic communities of the Athos and the Sinai. In order to identify the source of this innovation two bindings of manuscripts written in 1641 by Anthimos from Ioannina can be of help. Both are the first bindings of the manuscripts they contain and are heavily decorated with gold and silver tooling (figure 105). The scribe was active in Wallachia in the first half of the seventeenth century and was a follower of Mathaios Mireon. These bindings which apparently were donated to the monastery soon after their completion were certainly bound outside the Athos community and most probably in Wallachia.

of the same leather as the one used for the cover and are stapled between the cover and the boards. The catch plates are of the TnMSwB, therefore consist of a piece of metal sheet which is folded as to incorporate a metal bar on which the hook is anchored. The catch plates are stapled between the cover and the boards as well. The straps in **I. 1183** are decorated with blind tooled fillets while in **S. 1469** with gold tooled small floral tools. In **S. 1478** this feature cannot be established because the straps are missing.

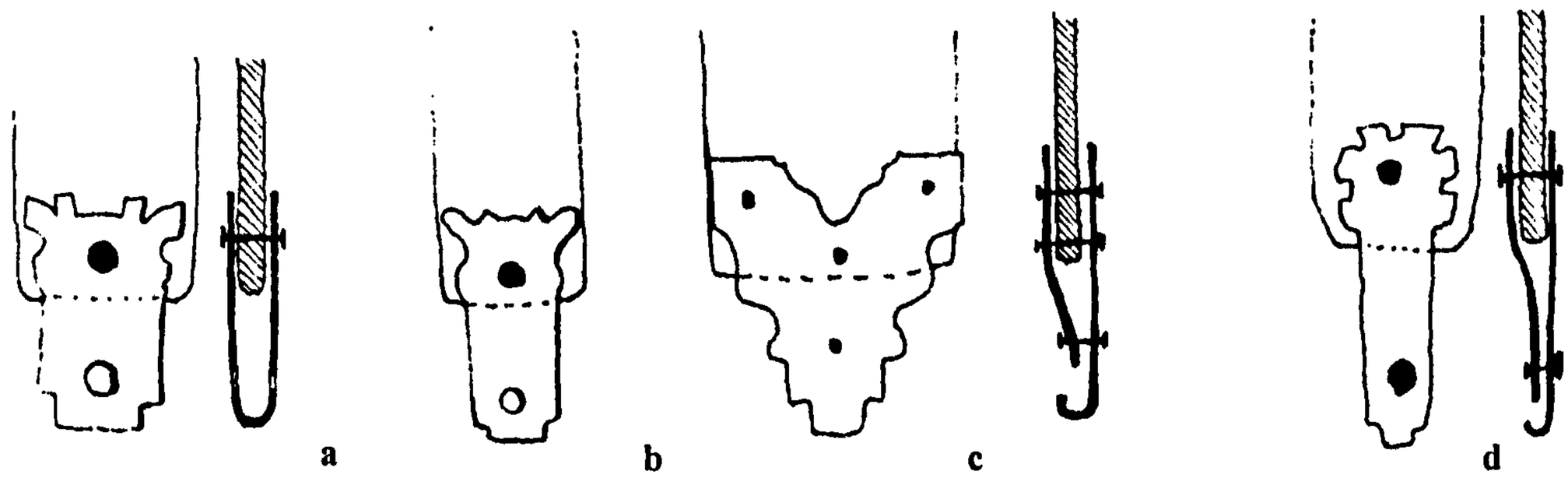


Figure 107. The fastenings of I. 1048 (a), I. 978 (b), S. 1469(c), and I. 1183(d).

3.2.4.10.*Conclusions*

The nine bindings considered here represent a trend of binding decoration widely used in the Athonite community from the second half of the seventeenth century onward. Nevertheless, this type of decoration does not seem to have been ever used in the Sinai. The contemporary bindings of the New Library atelier as we have seen in section 2.3.2. also rely to a grate extend on the use of centrepieces, though quite distinctively, cornerpieces are unknown. Technical features such as the conjectural attachment system used in those bindings sewn on supports and the unusual endbands could probably point to some unidentified source of influences, though the visual evidence of the latter in the inner face of the boards is a rather common feature of bindings of the Athos monasteries and the Balkans (see also sections 2.2.3.5. and 2.2.3.14). The most important feature of these bindings in terms of long term use, is their decoration and the tools used. Examples of very similar tools and virtually the same decorative pattern are found up until the twentieth century in many areas of

modern Greece. In figure 108 two examples are reproduced, one from the second half of the nineteenth century and the other from the mid (?) twentieth century, the later actually bound in Karies of Mount Athos, the same place where some of the binders we have seen in the previous sections were bindings books in the sixteenth and seventeenth century. Apparently, this decorative pattern was never really adopted in Sinai.

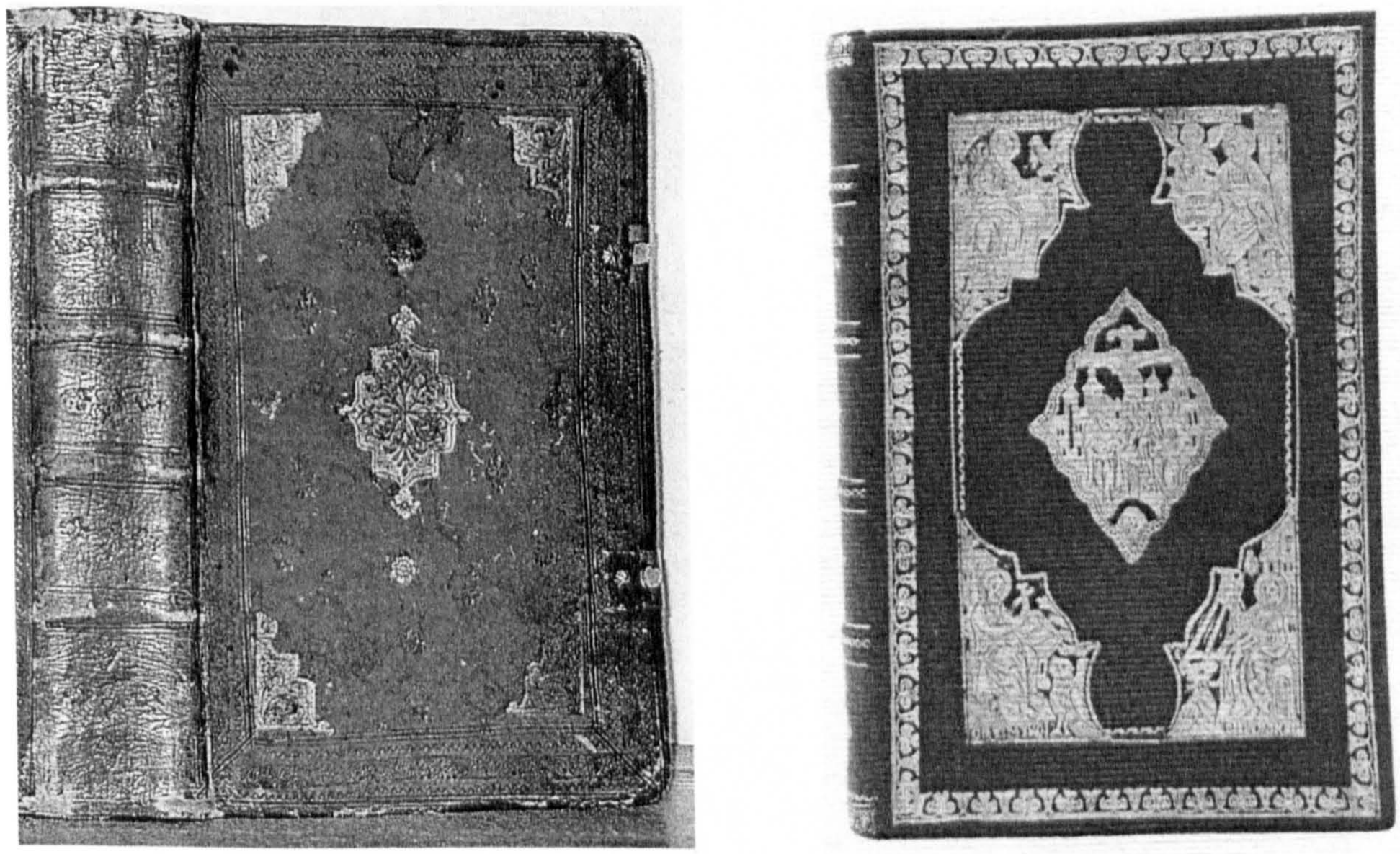


Figure 108. Two bindings repeating the same decorative pattern seen in the bindings considered here and similar tools. The binding of the '*sacred*' codex of Dousikou monastery in Trikala bound in 1856 (a) (after Λέγγας 1998, p. 86), and a binding from the mid (?) twentieth century (b) from the workshop 'Ο Άθως' active in Karies of Mount Athos between 1892 and 1992 (after Λέγγας 1999).

PART 4

CONCLUSIONS

4.1. STATISTICAL ANALYSIS OF THE DATA OF THE RESEARCH

In order to be able to draw conclusions with some validity the data collected through the research had to be statistically processed including the data from bindings which were not included in the description of the 12 ateliers considered here representing almost only a quarter of the total number of bindings surveyed (see section 1.2.6.). Further more in order to be able to follow in time the various changes which took place in the process of the gradual abandon of the Greek-style bindings and the adoption of European binding structures, the items on which the statistics would have been based had to be relatively precisely dated. Since the majority of the bindings can only be dated through the date of the text they contain and since many of the texts are generally dated in the span of a whole century, it was thought appropriate to include only those bindings which were precisely dated and those which could be dated with a relative precision to the span of a quarter or at the most of half of a century. The bindings which were precisely dated (either through binding notes or scribal notes and the axiomatic principle that a binding which is the first one of a precisely dated text-block can be dated to the same time), were found to be in total 146, divided between 75 at the Iviron monastery and 71 at the St Catherine's monastery. The bindings which were generally dated in the span of a quarter or a half of a century were found to be 51 for the Iviron and 86 for the St Catherine's monastery providing a further 137 bindings in total. Bindings which were dated in the turn between two centuries (recorded as e.g. 15th –16th c [late –early]) in the survey form are calculated in the earlier of the two centuries. The same is true for bindings which are dated in the middle of a century. The final number of bindings used for the statistical analysis are 283 of the total 419 bindings surveyed (figure 109, 110).

	Iviron	Sinai	Volumes considered in the statistical analysis
15th c. up to 1500	0	6 / 13	6 / 13
1501-1550	11 / 6	2 / 5	13 / 11
1551-1600	2 / 6	3 / 9	5 / 15
1601-1650	23 / 10	26 / 22	49 / 32
1651-1700	29 / 21	24 / 15	53 / 36
1701-1750	10 / 8	10 / 22	20 / 30
Total	75 / 51	71 / 86	146 / 137

Figure 109. The total number of bindings surveyed and their partition between the two libraries. Precisely dated bindings are recorded first and generally dated ones follow, separated with a slash.

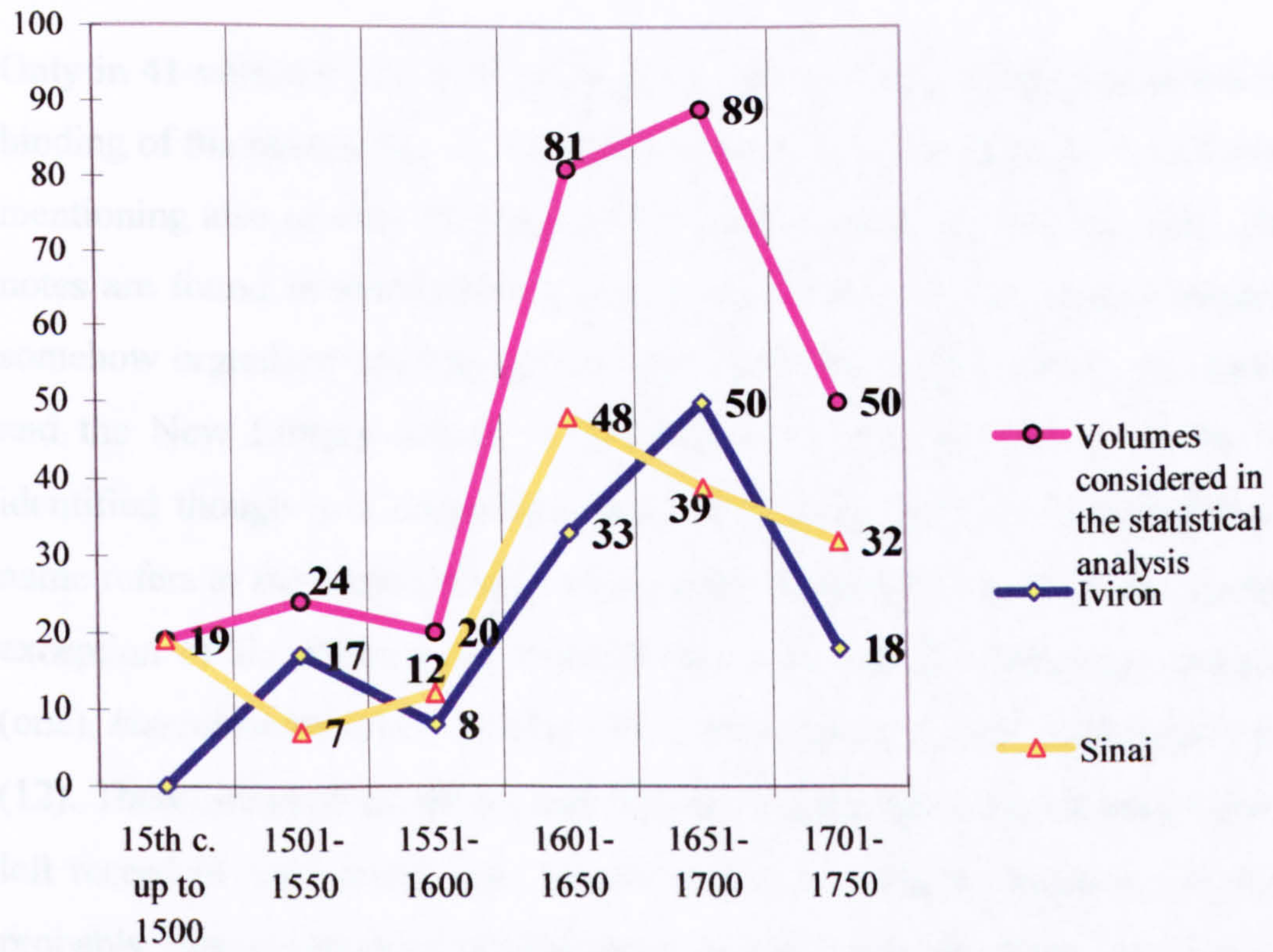


Figure 110. Graphic representation of the data of the table in figure 109.

The scope of this analysis and the consequent conclusions in the next section is to try and locate in time the major changes occurred and possibly find out how they are related to each of the two libraries representing two monastic comunities with common scope but in different geographic areas and consequently different network of influences and contacts. Therefore only the major features will be presented in the order followed in the description of the various ateliers, and whenever possible various other minor features will be presented statistically in an effort to understand the process of the change, the factors involved and the impact they had.

Small inconsistencies in the total number of volumes considered in the tables related to each technical or other features are due to the fact that certain such features are due to later repairs or interventions; for example I. 1557 still has its original binding dated 1621 but the sewing on supports was done at a later unspecified date and therefore cannot be included when considering the advance of the supported sewing in post-Byzantine bookbindings.

4.1.1. TEXT-BLOCKS, SCRIBES AND BINDERS.

Two hundred sixty three (263) of the text-blocks considered in this analysis are written on paper, 16 are written on parchment and four are written partly on paper and partly on parchment. In 163 of the 263 paper text-blocks the paper is polished.

Only in 41 volumes of the 419 surveyed there has been found a note referring to the binding of the manuscript, in 35 of them mentioning the name of the binder and in 27 mentioning also or only the precise date of the binding. Twenty eight (28) of these notes are found in manuscripts of the Sinai library and are mostly related with the somehow organized binding ateliers identified, the Giglio atelier, the Raithos atelier and the New Library atelier. From these 41 notes the names of 26 binders are identified though in a couple of cases it was not possible to establish if the same name refers to the same person or to a different person with the same name. With the exception of six of these 26 'binders' the rest identify themselves either as monks (one), *hierodeacons* (two), priests (two), Metropolitans (one), and mainly *hieromonks* (12). Therefore most of the binders we are dealing with here, at least those who have left record of their name are always part of a monastic brotherhood and therefore probably mostly amateur bookbinders though some of them may have also been practicing bookbinding on a professionals basis. The fact that among these binders there are some well known scribes (Seraphim, *hosios* Theophilos, Theoklitos), a metropolitan (Mathaios Mireon), an archbishop (Ioasaph), a well known chanter (Gregorios Aliatis), among priests and hieromonks is a proof that bookbinding was practiced by people involved with the books either as scribes or in the context of their monastic duties, such as for example reading the liturgical texts in the church. In other words bookbinding was apparently a craft exercised by people who at least would be able to read, something which for the period we are dealing with was rather the exception than the rule (Μαμαλάκης 1971 p. 356)

Of these 41 bindings with a note by the binder only eight are the original bindings of a newly written manuscript, the rest are rebindings of manuscripts written earlier. Especially in the Sinai, the distribution of the rebinding notes in specific time spans and in the context of specific ateliers leads us to suggest, first that these rebinding notes indicate an organised and somehow systematic repair of old manuscripts and second that, as we have speculated earlier (section 2.2.2.14.), they indicate that they primarily refer to the repair of the manuscript and only incidentally to the making of a new binding. This tendency to leave a note of the rebinding and the presumed repair of a manuscript is in part explained by the effort, sometimes considerable that someone had to put in the task. Furthermore of the eight original bindings with a note only five mention the name and only two of them make reference only to the binding

while in the other three the binding is considered in the context of the general scribal note.

	Volumes surveyed in the Iviron.	Signed bindings	Originally bound	Rebound	Volumes surveyed in the Sinai	Signed bindings	Originally bound	Rebound
Until 1500	0	0	0	0	19	1	1	0
1501-1550	17	2	1	1	7	0	0	0
1551-1600	8	0	0	0	12	0	0	0
1601-1650	33	2	1	1	48	12	0	12
1651-1700	50	4	2	2	39	4	1	3
1701-1750	18	1	0	1	32	7	1	6
Total	126	9	4	5	157	24	3	21

Figure 111. Table showing the number of signed bindings in each of the two libraries as represented in the 'purified' version of the database and the number of the original and not original bindings.

In addition, two of the original bindings, not mentioning the name of the binder, mention clearly the cost of the binding (see below) and therefore could be considered as a kind of receipt. This further supports the idea that the binding of a manuscript was not considered important enough as to induce the binder to let a note of his labour, unless this further involved also the sometimes difficult task of repair. There is nevertheless one single note in **S. 764**, rebound in the Raithos atelier, which seems to negate the aforementioned supposition. In this volume we find the following note which clearly states the difficulties of repairing an old damaged manuscript though not giving the name of the person who has put the labour:

> f. 200 v. *"The present Penticostarion was very much damaged and was bound in Raithos and it was tried by other brothers but none has finished it, and the person who did what you see he has the labour which God knew, and let anyone who removes it from the monastery of the holy Theotokos in Raithos be removed from the dispensation of the Son of God to whom she gave birth."*

Such laborious task would sometimes require the collaboration of more than one persons as the following notes indicate:

> f. 13v. " *The present was rebound by* ***Gerasimos hieromonk*** *since it was very damaged and dispersed and with great effort we put it back together and completed it in the year 1632 in the month of July"* **(S. 408)**
>
> Right endleaf v. *"The present book was bound in 1627-28 by the hand of* ***Anastasios hieromonk and monk Makarios*** *1628"* **(S. 804).**

Though some of the bindings, especially those not made in the context of the organized binding ateliers of the two monasteries, were made on commission and

therefore paid to the binder, there are only two notes which inform us about the cost of a binding; In the right pastedown of **I. 458**, having a Flush Pasteboard with Supports binding of the year 1652, the provenance of which could not be identified we read the following note:

*"1652 the present patericon was bound on the expense of **hieromonk Philimon** 90 aspra".*

In the front pastedown of **I. 801** written in the fifteenth century by an unknown scribe, extensively repaired in the spine-folds of the gatherings, and rebound probably in the sixteenth century in a Greek-style binding of which the provenance is also unclear we read the following note :

" the expense of the book is for the leather six aspra, for the paper ten, for the glue and [...]".

According to professor D. Harlfinger (personal communication) this note might well be of the sixteenth century but certainly does not belong to the original text-block, and therefore to the original binding.

The *aspra* (aspro in Greek meaning white), also known as *asper* in Europe, and *akce* in Turkish, were the commonest silver Ottoman coins from 1328 when they were firstly produced up until the eighteenth century (Λιάτα 1996, pp. 95-114). Their value has experienced many fluctuations and lost much of its value throughout the period of its use, though it remained one of the commonest coins of small value. It seems that around the years 1650-1657 in the East the relation of the *aspro* to the Turkish *altun* (gold coin) was 1 *altun* for 170-180 *aspra* (Λιάτα, 1996, p. 192). It was not possible to find out what 90 *aspra* could buy in 1652 as to be able to draw some conclusions about the cost of a binding of average quality, both structurally and decoratively. It nevertheless must have been a fairly small amount of money.

Among the ateliers considered in the main text of the thesis, we should probably consider two of them as running on a professional basis, the Papaneophitos, and the Elusive ones. Though there is no proof for that, the high standards of their craftsmanship, the consistency in all features, and the lack of any reference as to their being part of any monastic brotherhood are probably convincing evidence to this end.

Catalogue Number		Date of Binding	Binder
S. 1262		**1437**	**Gregorios Alliatis**
I. 0042	**IS**	**1525**	**Ioakim *hieromonk* (see g. notes)**
I. 0359		1578 (19th c.)	Theoclitos
I. 0837	**IS**	**16th c. first half**	**Unknown**
I. 0801		16th c.	Unknown
S. 1691		16th c.	Gennadios hieromonk
S. 0585	**G**	**1626**	**Anastasios *hieromonk***
S. 0573	**G**	**1627**	**Anastasios *hieromonk***
S. 0804	**G**	**1627/8**	**Anastasios & Makarios(?)**
S. 0361	**G**	**1632**	**Anastasios *hieromonk***
S. 0408	**G**	**1632**	**Gerasimos *hieromonk* & archbishop Ioasaph**
S. 1171	**G**	**1632**	**Simeon *hierodeacon***
S. 0408	**G**	**1632**	**Gerasimos *hieromonk***
S. 0500	**G**	**1632**	**Gerasimos *hierodeacon***
S. 0356	**CA**	**1633**	**Sophronios *hierodeacon* from Cyprus**
S. 0763	**G**	**1636**	**Sophronios *hieromomk* from Cyprus**
S. 0448	**G**	**1637**	**Klimis *hieromonk***
S. 1048	**G**	**1637**	**Simeon *hierodeacon***
S. 0605	**G**	**1639**	**Klimis *hieromonk***
I. 0393	PA	1642	Papaneophitos from Karies
I. 0473	**PA**	**1642**	**Papaneophitos from karies**
I. 0458		**1652**	**Unknown**
S. 0931	**R**	**1664**	**Akakios from Ioannina**
I. 1611		**1676**	**Ambrosios *hieromonk***
S. 2140	**R**	**1689**	**Nikephoros *hieromonk***
S. 1464	**NL**	**1700**	**Nikephoros Marthalis *hieromonk***
S. 0764		**17th c. (1st half)**	**Unknown**
I. 0673		**17th. c. (4th quarter)?**	**Iosif from Sinopi *hieromonk***
S. 1931		17th c.	Silvestros *hieromonk*
S. 1695		17th c.	Gerasimos *hieromonk*
I. 0511		**1700 circa**	**Iosif from Sinopi *hieromonk***
I. 0506		**1700 circa**	**Iosif from Sinopi *hieromonk***
S. 0089		**1706?**	**Old Simeon**
S. 0403	**NL**	**1733**	**Ioannikios Rodios *hieromonk***
S. 1701	**NL**	**1733**	**Ioanikios Rodios *hieromonk***
I. 0818		**18th c. (1st half)**	**Papa Agapios**
S. 1421	**NL**	**18th. c. (1st half)**	**Nikephoros from Chios**
S. 1683	**NL**	**18th. c. (1st half?)**	**Arsenios**
S. A. 0339	**NL**	**18th. c. (before 1736)**	**Monk Raphael**
I. 1110		18th c. (before 1775)	Unknown
I. 0519		1541, 1600, (18th c.)	Gregorios. Metropolitan Mathaios, Unknown

Figure 112. Table with the shelve mark of the manuscripts which have a note by the binder, the date of the binding and the name of the binder. Bold letters indicate the bindings which have been considered in the statistic analysis of this section. Capital letters on the right of the catalogue number of a manuscript indicate the atelier to which they belong (For a list of these see Appendix 6).

In the course of the research there have been identified 13 different types or variations of bindings, categorized mostly on the basis of a few major features, such as the type of sewing, the dimension of the boards in relation to the text-blocks, and the similarity to the Greek-style bindings or the Islamic ones (see Appendix 4). In the end of the research it appeared that some of these conventionally designated binding structures, such as the 'Stitched pamphlet', the 'Sewn text-block, no boards and cover', and the 'Unbound gathering within wrapper' are barely represented in the database and therefore cannot be statistically considered. On the contrary five basic types of binding structures, more or less widely used in both libraries, offer some interesting pieces of evidence which may give a general idea of the evolution of binding structures in the two areas between the late fifteenth and the early eighteenth centuries. .

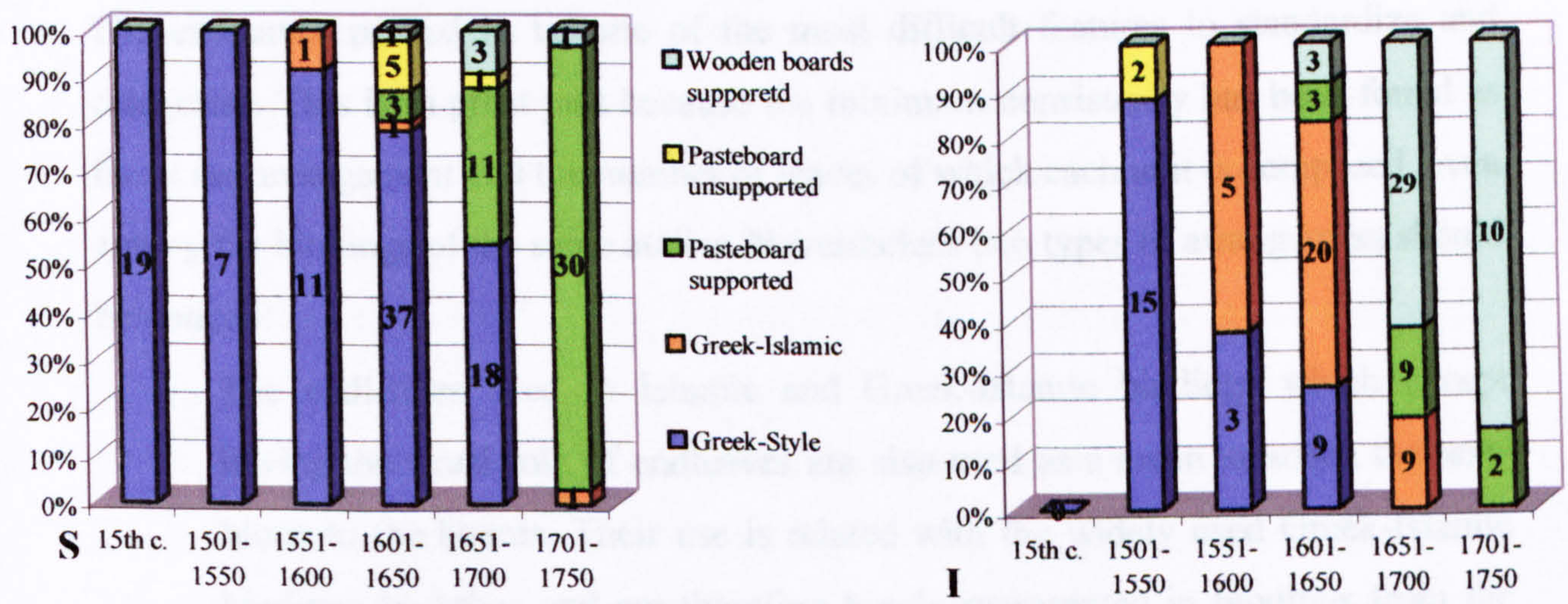


Figure 113. Graphics showing the percentages of the five major binding types recorded in the two libraries through the research .

As can be seen in the graphics of figure 113 Greek-style bindings gradually decline and are totally abandoned by the middle of the seventeenth century in the Iviron and the third quarter of the same century in the Sinai, the latest examples recorded in the context of the present research are those of the Elusive atelier. The gradual decline starts earlier in the Iviron than in the Sinai and the newly introduced structures follow a clearly different distribution in the two areas. In the Athos community the first hybrid structures to be introduced are the Greek-Islamic which are extensively used starting from the end of the sixteenth century, and gradually decline by the end of the seventeenth century. In the Sinai instead these structures were never really adopted

and the five examples recorded are distributed in the span of almost one century and a half. Instead of these hybrid structures, another one, described as Pasteboard Supported binding, was used, which was directly inspired by European bindings of the time. By the first half of the eighteenth century these bindings are exclusively used in the Sinai as we have seen in the New Library atelier. In the Athos community instead, situated in the middle of dense forests, books bound in pasteboards were never widely used. Instead Wooden Board, Supported bindings were dominant by the end of the seventeenth century. The rather highly hybridised Pasteboard, Unsupported bindings (see Apendix 4) were so rarely used in both areas that no conclusion can be drawn for their use except the fact that they represent isolated examples of experimentation.

4.1.2 ENDLEAVES

The endleaves proved to be one of the most difficult features to standardize and categorise. This is in great part because the minimum consistency has been found as far as the arrangement and the number of leaves of which each unit is composed, even among the bindings of the same atelier. Nevertheless two types of arrangement should be noticed:

1. The endleaves used in Islamic and Greek-Islamic bindings which except having the usual role of endleaves are also used as a mean to attach the text-block to the boards. Their use is related with the widely used Greek-Islamic bindings in Athos and are therefore barely represented in bindings from the Sinai library.
2. Those arrangements which involve single leaves hooked around the outermost gatherings of the text-block, either this is a proper endleaf gathering (separate endleaves) or part of the text-block (integral endlaves). These endleaves have been recorded occasionally in bindings from the first half of the seventeenth century, like those of Theoclitos, but mostly in the bindings of the New Library and it is interesting to stress their affinity with similar endleaf structures which have been used in European bindings since the fourteenth century (see section 2.3.2.3.).
3. Tipped endleaves are found in the Cosmas Macedon bindings around the end of the seventeenth century and in these bindings doublures of marbled paper are also used.

4.1.3. SEWING

One of the major if not actually the major change in the bookbinding structures of the post-Byzantine Orthodox communities was the gradual abandon of the unsupported sewing, a direct inheritance of the first codices, and its substitution by supported sewing, a change which occurred in Europe as early as the late eight century. This change is also of major importance because apparently was the first step in the process of change which only happened gradually. The use of supported sewing triggered a number of other changes as we will discuss later on. From the data of the research and as shown in the graphics in figure 114 in both libraries it appears that the first supported bindings are dated in the first half of the seventeenth century. Three examples are recorded in both libraries, those found at the Iviron monastery all belong to the manuscripts written by Anthimos from Ioannina and dated in 1638 (**I. 856**), and 1641 (**I. 1514, I. 1527**) which were certainly not bound in Athos but in all probability in Wallachia where the scribe was mainly active. One of the three bindings from the Sinai sewn on supports at the same period is also a binding of a manuscript of the same scribe dated in 1638 (**S. 69**) and two bindings which were made at the Cairo metochion of the monastery, one between 1635-39 (**S.A. 351**) by Simeon *hieromonk* (Bassam?) and the other (**S. 2002**) around the second quarter of the century as said in section 2.2.2.13. In the second half of the century in both libraries the number of text-blocks sewn on supports rises dramatically to almost half at the Sinai and actually more than half at the Iviron, while in the first half of the next, the eighteenth, century no example of unsupported sewn text-block is recorded in the Sinai and only one in the Iviron monastery, **I. 858** written in 1722 and having an unclear type of tacketed 'limp' binding, where the cover is somehow sewn together with the text-block. Therefore the data from both libraries seem to agree that the unsupported sewing was tentatively used in the second quarter of the seventeenth century, gradually established in the second half of the same century and almost exclusively used from the beginning of the eighteenth century onward.

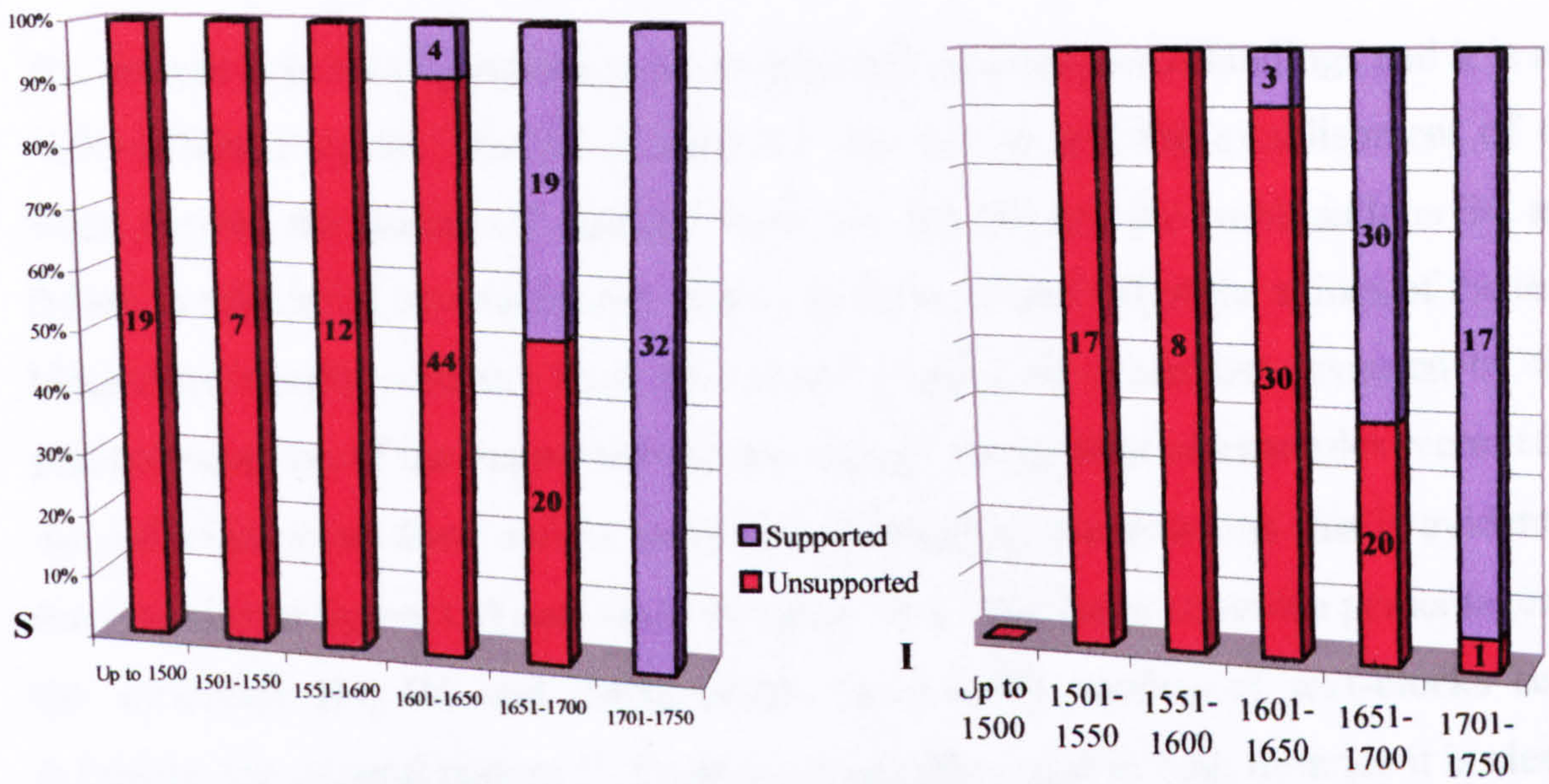


Figure 114. Graphics showing the percentages of unsupported and supported sewn text-blocks in the bindings of the two libraries of the research.

As said before (see Appendix 4) three main patterns for the arrangement of the sewing stations along the spine of the text-blocks have been identified with a number of variations for each of them according to the relations that the panels between the sewing stations have between them, and which to an extend are related to the number of the sewing stations used. In the graphics of figure 115 the percentages of these three main patterns are shown together with two major variations. From these results that the pattern B is the one most extensively used throughout the period we examine here. The pattern A is recorded in only five bindings divided between the two libraries and the pattern AB is recorded in only three bindings from the Sinai. The patterns C and BC, which as discussed previously (see section 2.1.3.14.) are found in later Greek-style bindings are recorded here in small percentages and mostly from the second half of the sixteenth century onward.

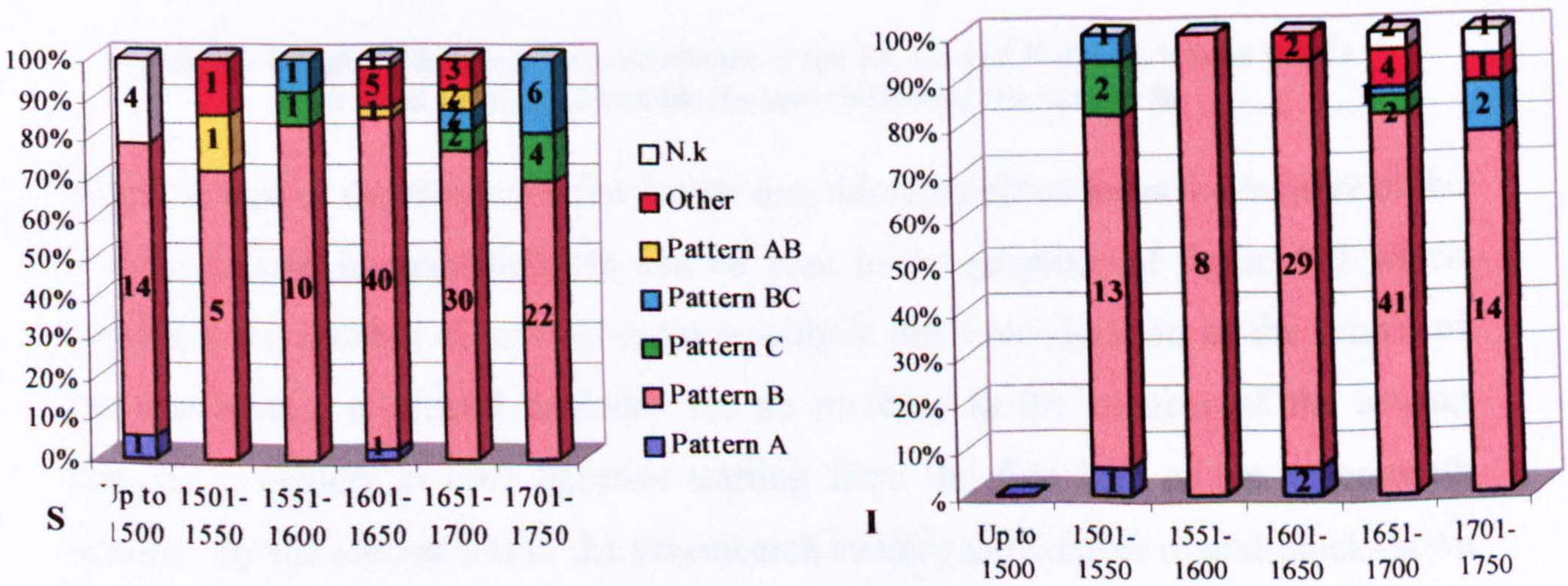


Figure 115 Graphics showing the percentages of the various sewing stations patterns in the bindings of the two libraries of the research.

The pattern B is equally recorded in unsupported and supported bindings and it is not really affected by the gradual abandon of the former and the establishment of the latter. Instead the patterns C and the variations B4, B6 and the combinations BC and B4B6, in which the two outermost panels at the head and tail of the spines of the text-blocks are clearly smaller than the central panels, are somehow favoured by this gradual adoption of the supported sewing though the number of examples recorded is not sufficient as to draw a clear image of this change. Nevertheless this is evident in the graphics in figure 115 and those in figure 116. The latter show the percentages of the variations B4, B6 and B4B6 within the overall number of text-blocks sewn following the general pattern B. From these graphics, and in both libraries it is clearly evident that these variations are more frequently used the more supported sewing is used instead of unsupported. As a matter of fact in both libraries in the first half of the eighteenth century only about 20% of the volumes sewn with pattern B use other variation s than B4, B6 and B4B6. As discussed earlier this arrangement of the sewing stations along the spine is particularly appropriate for text-blocks sewn with supported sewing due to the resulting even spacing of the supports along the spine.

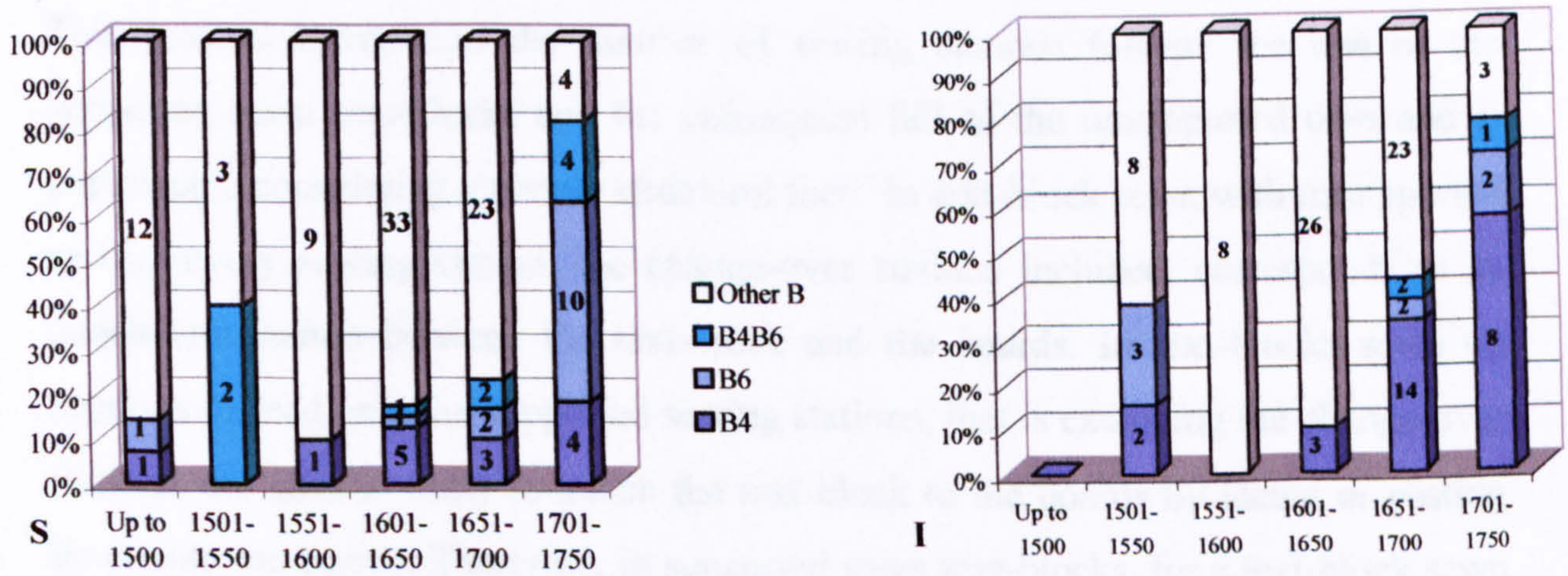


Figure 116 Graphics showing the percentages of the B4, B6 and B4B6 variations within the overall number of text-blocks sewn following the pattern B.

From the data of the research a few interesting things result as far as the number of the sewing stations is concerned. As can be seen in the graphics of figure 117 which considers the number of sewing stations without any consideration of the format of the text-blocks, a general tendency for an increase in the number of the sewing stations is evident in both libraries starting from the first half of the seventeenth century. By the second half of the seventeenth century the number of text-blocks sewn on three and four sewing supports drops dramatically and by the first half of the next

century virtually no text-block sewn on three supports is recorded in neither of the two libraries, while text-blocks sewn on four sewing stations are recorded only in the Sinai and none in the Iviron library. In the same period five and six sewing stations increase and seven stations appear in volumes other than folios. The two examples recorded in the first half of the sixteenth century in the Iviron library are indeed folios.

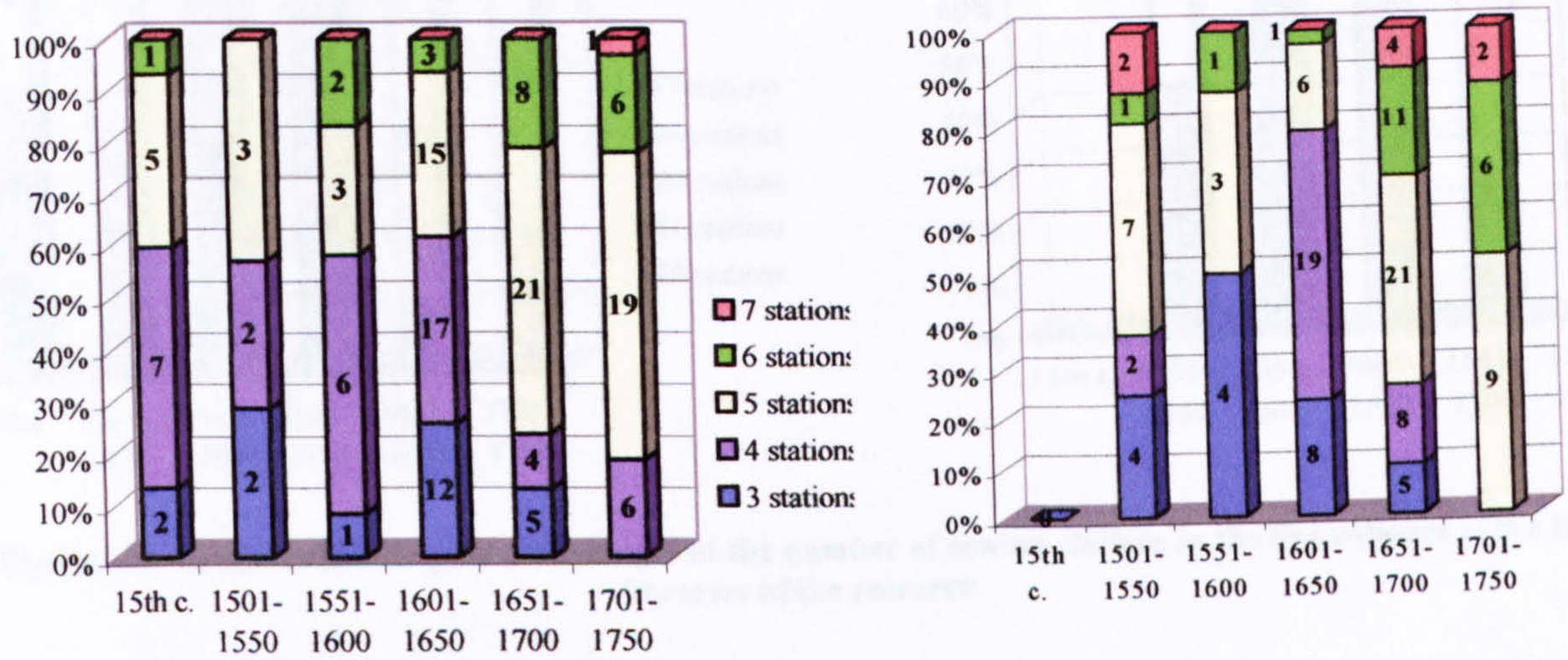


Figure 117. Graphic showing the percentages of the number of sewing stations in the bindings of the two libraries of the research.

This gradual increase in the number of sewing stations follows the rise of the supported sewn text-blocks and the consequent fall of the unsupported ones and is explainable considering a simple structural fact: In text-block sewn with unsupported sewing every sewing station, the change-over stations included, corresponds to an attachment station between the text-block and the boards. In text-blocks sewn on supports instead only the supported sewing stations, that is excluding the change-over stations, are used in order to attach the text-block to the boards by lacing or pasting them onto the boards. Therefore, in supported sewn text-blocks, for a text-block sewn on four sewing stations there will normally be only two attachment stations and for one sewn on three sewing stations there will be only one attachment station, in both cases providing structures either totally ineffective or of limited stability. The technique of using sewing supports also in the change-over stations which could solve this problem has been recorded only in three bindings one from each group, the New Library bindings, the Raithos bindings and the Cosmas Macedon bindings.

In order to verify this assumption another statistical analysis was carried out, this time considering the number of sewing stations in 8vo format volumes, that is in 157 of the 283 bindings upon which the statistical analysis is based. As can bee seen in the graphics of figure 118 the same tendency of an increase in the number of sewing

stations used is evident. And actually even more marked since all three 8vos sewn on seven sewing stations are dated in the first half of the eighteenth century.

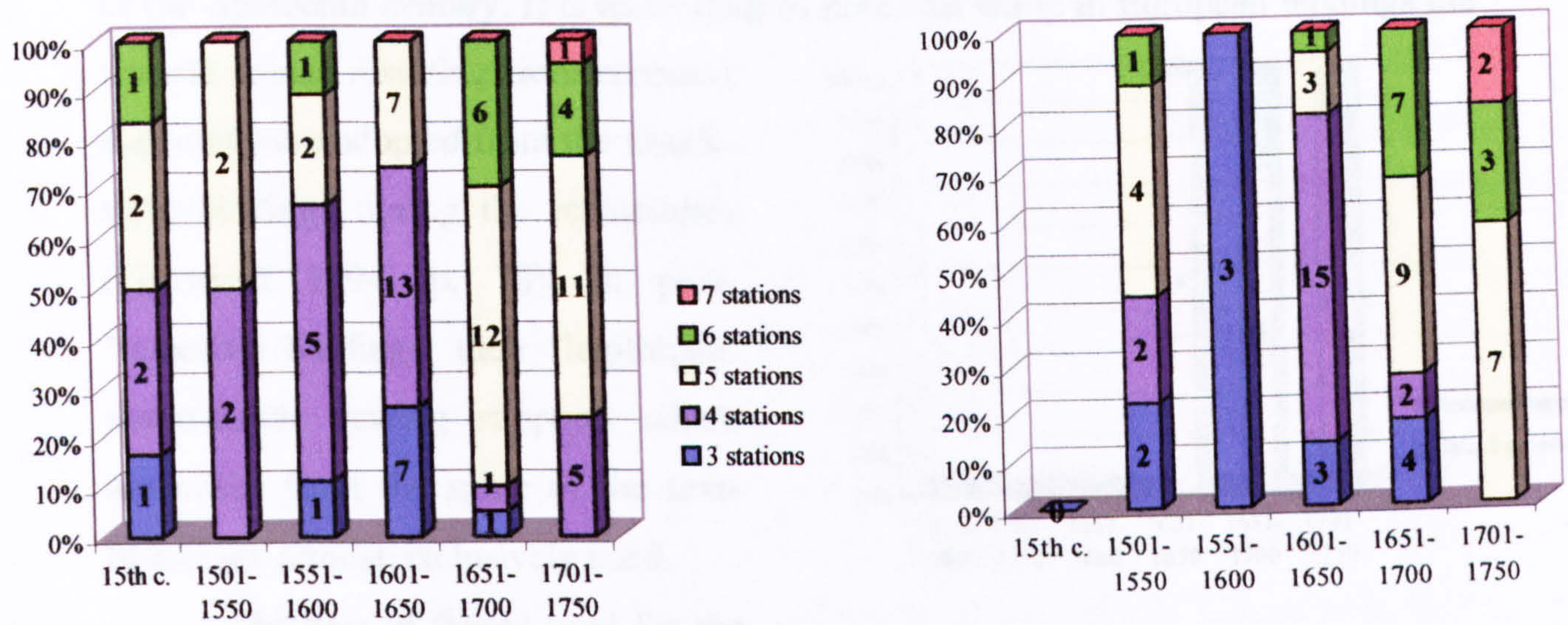


Figure 118. Graphics showing the percentages of the number of sewing stations in the 8vo volumes of the two libraries of the research.

The use of three and four sewing stations between the end of the sixteenth century and the first half of the seventeenth in the Iviron library is basically due to the rise of the Greek-Islamic bindings and their latter use follows the decline of these bindings.

The material of which the sewing supports are made is shown in the graphics of figure 119. In the Sinai, leather is gradually supplanted by cord, while a single example of a volume sewn on twisted parchment sewing supports is recorded (**S. 2002** of the Cairo *metochion* atelier). In the Iviron monastery on the other hand, cord seems to be almost exclusively used and only two volumes sewn on leather sewing supports are recorded, both having bindings of which the provenance could not be identified.

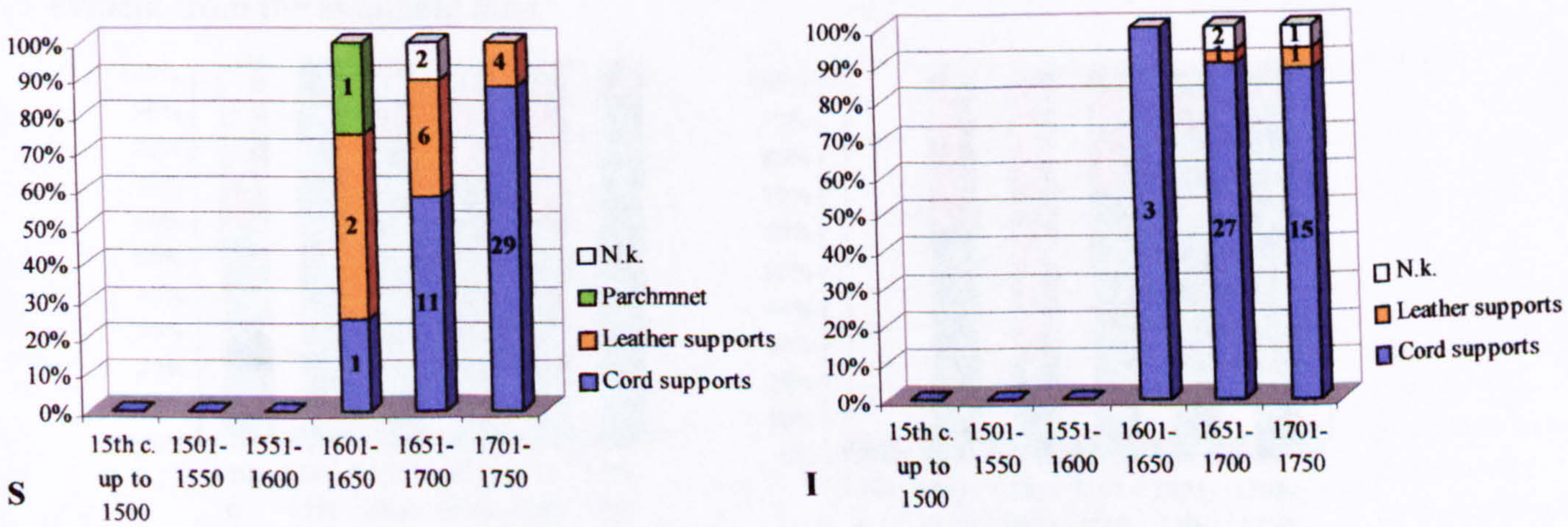


Figure 119. Graphics showing the percentages of the various materials used for the sewing supports in the two libraries of the research.

Not a single volume with recessed supports is recorded in the Sinai while in the Iviron only a few examples from the second half of the seventeenth century and the first half of the eighteenth century. It is interesting to note that while in European bindings the smooth spines resulting from recessed supports were adopted from the Greek-style bindings during the renaissance (Pickwoad 1994, p. 78), in post-Byzantine bindings, their 'legitimate' descendants, sewing supports which are raised from the spine of the text-blocks are almost exclusively used.

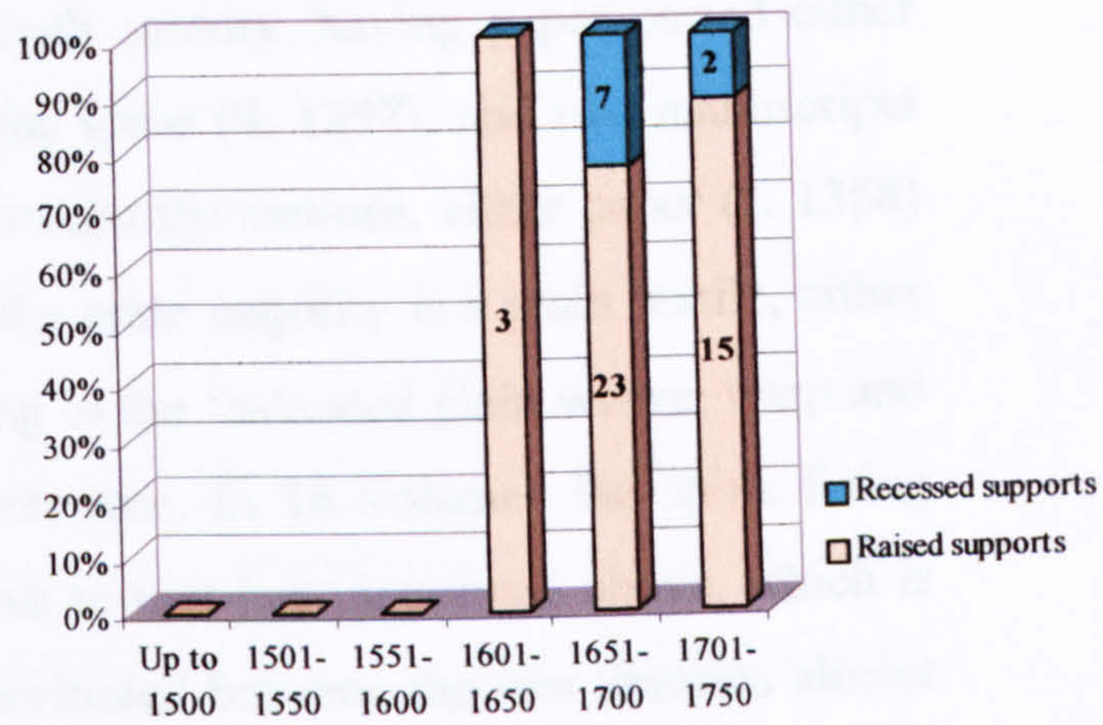


Figure 120. Graphic showing the presence of recessed and raised sewing supports in the bindings recorded in the Iviron library.

The type of thread used for the sewing of the text-blocks is either hemp of linen, and in a few cases silk, the latter used either in Islamic, Greek-Islamic or a few Giglio bindings bound probably by Simeon Basam (see section 2.2.2.1.4.). It would be probably unreliable to a great extent to statistically process the data which refer to the twist of the sewing thread and its actual make up due to the difficulties in recording them and the rather extensive lacunae in the record of these features in the database. Therefore only the final ply of the sewing threads as recorded in the bindings of the two libraries is shown in the graphics of figure 121. From these results that S ply threads are mostly used in both libraries throughout the period considered in this research. Z ply threads in some cases supersede the S ply ones but no clear long-term pattern for their use is evident from the available data.

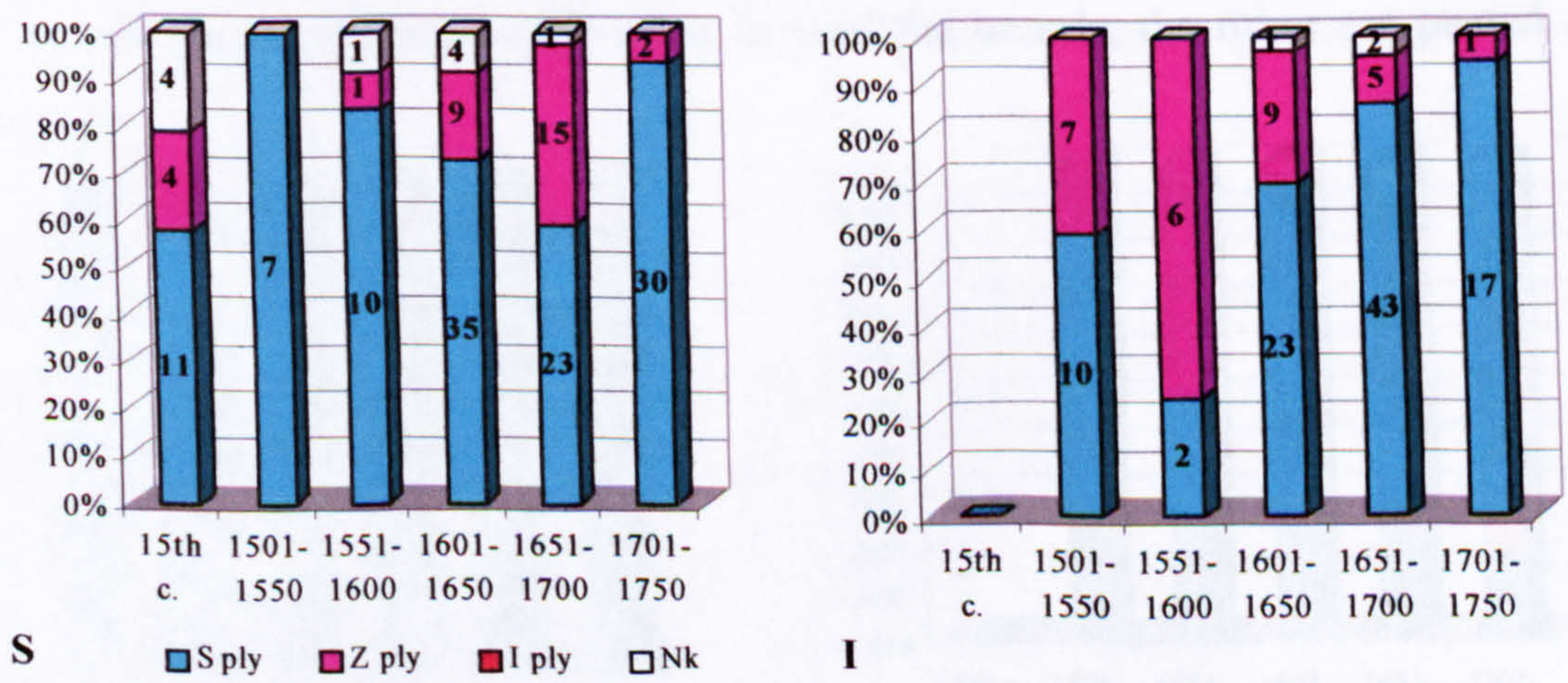


Figure 121. Graphics showing the percentages of S ply and Z ply sewing threads in the bindings of the two libraries of the research.

4.1.4. SPINE AND SPINE LINING

In all the volumes textile has been used as a spine lining with only very few exceptions such as two Islamic bindings which have a leather spine lining, two bindings of the second half of the seventeenth century, having paper pasted either between the stations (**I. 458**), or all along the spine (**S. 1297**), and two manuscripts having manuscript waste cuttings pasted between the stations, either paper (**I. 1358**) or parchment (**S. 202**). The textile used in the grate majority is a plain textile, either made of hemp or linen, and woven according to the 'balanced plain weave, warp and weft equal in size, spacing and count' technique. In 16 volumes the spine lining consists of a plain textile of the same weave to that just mentioned above, which is dyed blue, though the fact that they are distributed between the two libraries almost covering the whole time span of the research does not permit any patterns to be drawn. No pattern could be drawn also as far as the extension of the spine lining onto the boards is concerned, though it is only in one volume (**S. 710**) in which the spine lining does not apparently extends at all onto the boards but instead it is cut flush to the spine. In as many as 141 volumes the width of this extension could not be detected and it is only in eight volumes, none later than the first half of the seventeenth century, in which the spine lining covers the whole width of the boards, all eight having Greek-style bindings. The spine lining is pasted in the outer face of the boards in 255 bindings . In 16 bindings the extensions of the spine lining are pasted on the inner face of the boards, 11 of them Greek-Islamic bindings and the other five are supported bindings all originating from Athos and dated between 1674 and the early eighteenth century. In all of these five bindings the spine lining is pasted between the sewing stations and in two of the volumes it is only the outermost panel linings which are pasted on the inner face of the boards, the other are pasted on the outer face.

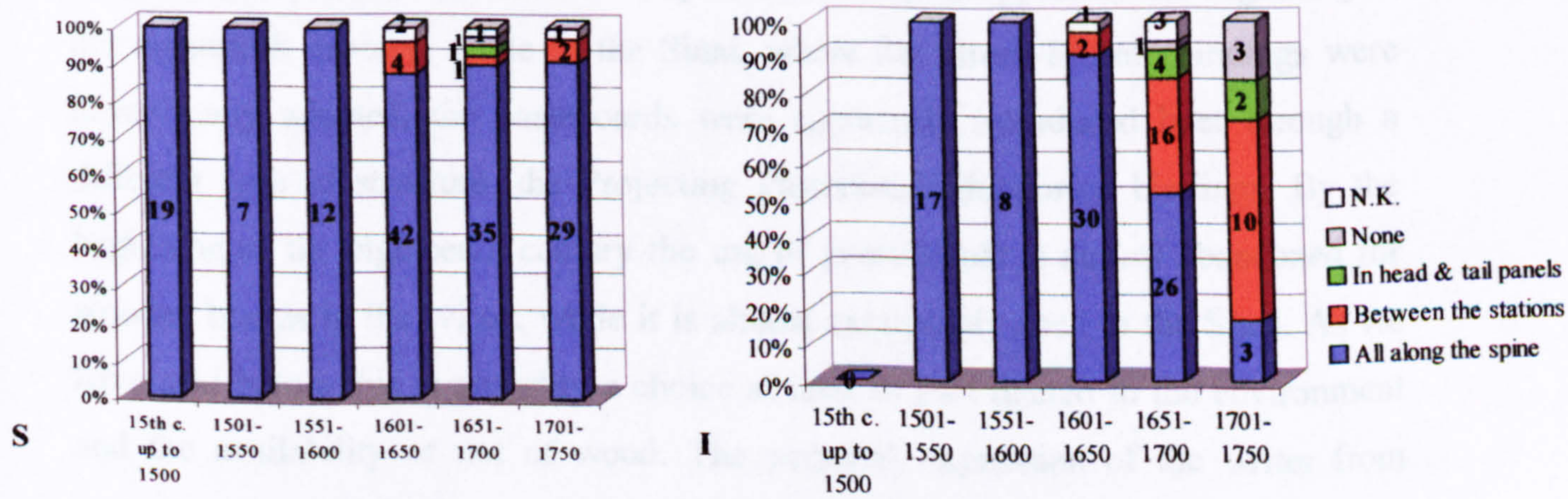


Figure 122. Graphics showing the percentages of volumes with spine lining and the various types recorded in the bindings of the two libraries of the research.

As can be seen in the graphics of figure122, in the Sinai all along spine linings are the rule even among bindings sewn on raised supports, as it is the rule by the first half of the eighteenth century. In Athos on the other hand all along spine lining begins to decline following the decline of unsupported sewing, and spine linings between the sewing station (panel lining) gradually are instead used. In the second half of the seventeenth century in the Iviron library seven out of the 26 volumes with an all along spine lining are sewn on supports but only three examples are recorded in the next first half of the eighteenth century. Though spine lining only in the head and tail panels of the spine is represented by only seven examples, it is clear that this is a kind of unknown technique in the Sinai since even the one single example recorded in the library has a binding (that of S. 1468) clearly made in the Athos, following the typology of the Cosmas Macedon bindings.

4.1.5. BOARDS AND BOARDS ATTACHMENT

As can be seen in the graphics of figure123, pasteboards appear earlier in the Iviron than in the Sinai in which wood was exclusively used for making boards up until the end of the sixteenth century. The only manuscript recorded which was bound in pasteboards in the sixteenth century in the Sinai is **S. 2111** written, and probably bound, unclear where, in 1592 by *hieromonk* Leontios. In the Iviron, instead pasteboards were occasionally used as early as the first half of the sixteenth century as we have seen in the Iviron Scriptorium bindings. This is further supported by the codex Protato 40 which was rebound in 1525 by hieromonk Ioakim in Karies (see section 3.1.2.1.). From the end of the sixteenth century things seem to follow different directions in the two areas: as we have seen above in the section 4.1.1. the prevalence of Greek-Islamic bindings, to which the use of pasteboards is directly related, are extensively used in the Iviron monastery and gradually disappear by the beginning of the eighteenth century, while in the Sinai, where the Greek-Islamic bindings were never really adopted, the pasteboards were apparently introduced later through a different type of structure, the Projecting Pasteboard, Supported bindings. By the beginning of the eighteenth century the use of pasteboards is almost abandoned for wooden boards in the Iviron, while it is almost exclusively used in the Sinai. As we have said before this is probably a choice at least in part related to the environment and the availability or not of wood. The personal impression of the writer from experience beyond the limits

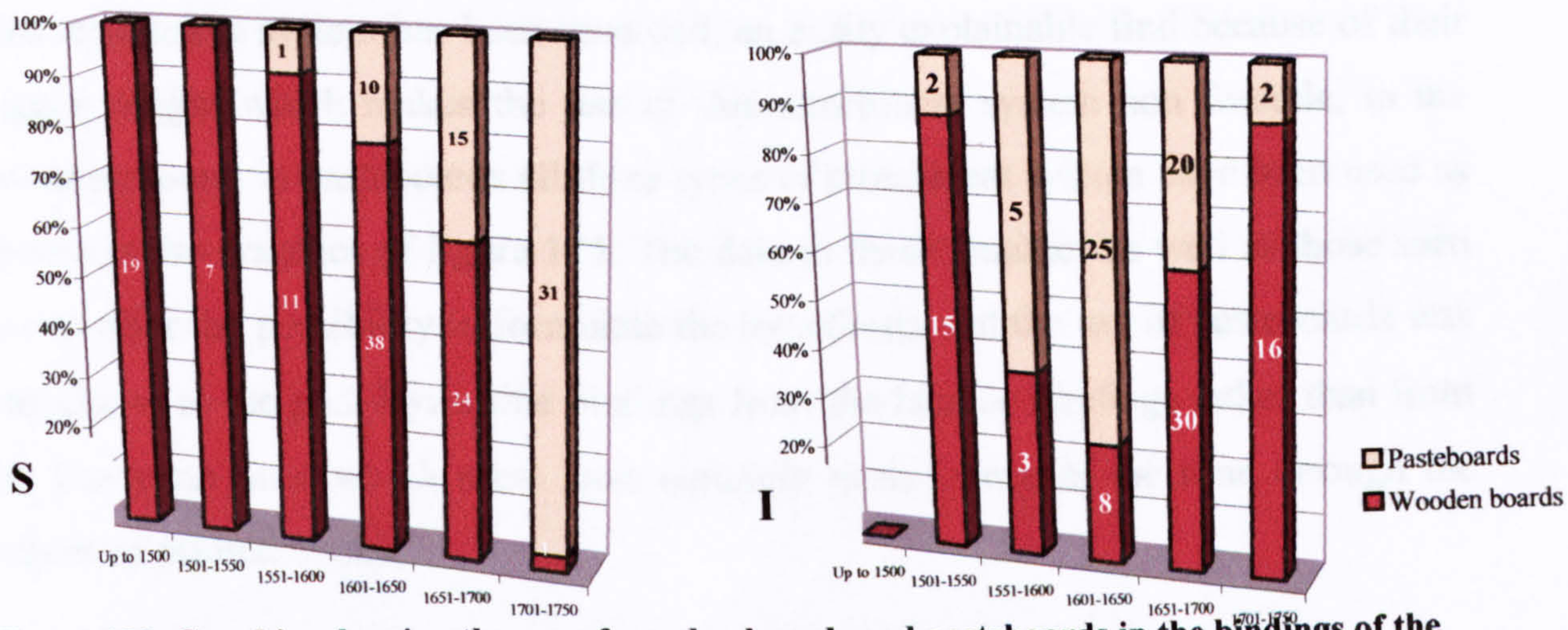


Figure 123. Graphics showing the use of wooden boards and pasteboards in the bindings of the two libraries of the research.

and the goals of the research is that in Athos wooden boards continued to be widely used at least until the nineteenth century, though pasteboards and latter on cardboards were also used. On the other hand in the Sinai it seems that pasteboards and cardboards were used exclusively ever since, though it is not possible to say to what extent the one and the other.

Another interesting feature to follow is the dimension of the boards. In this feature things seem to follow a similar route in both areas: projecting boards begin to appear only by the end of the first half of the seventeenth century and are gradually established in the bindings of both areas. Furthermore in the Iviron three examples of binding structures without any boards are recorded in the first half of the eighteenth century but these seem to be isolated examples which are probably not related to any widespread trend. As we will see further on this change had a major impact on the endbands

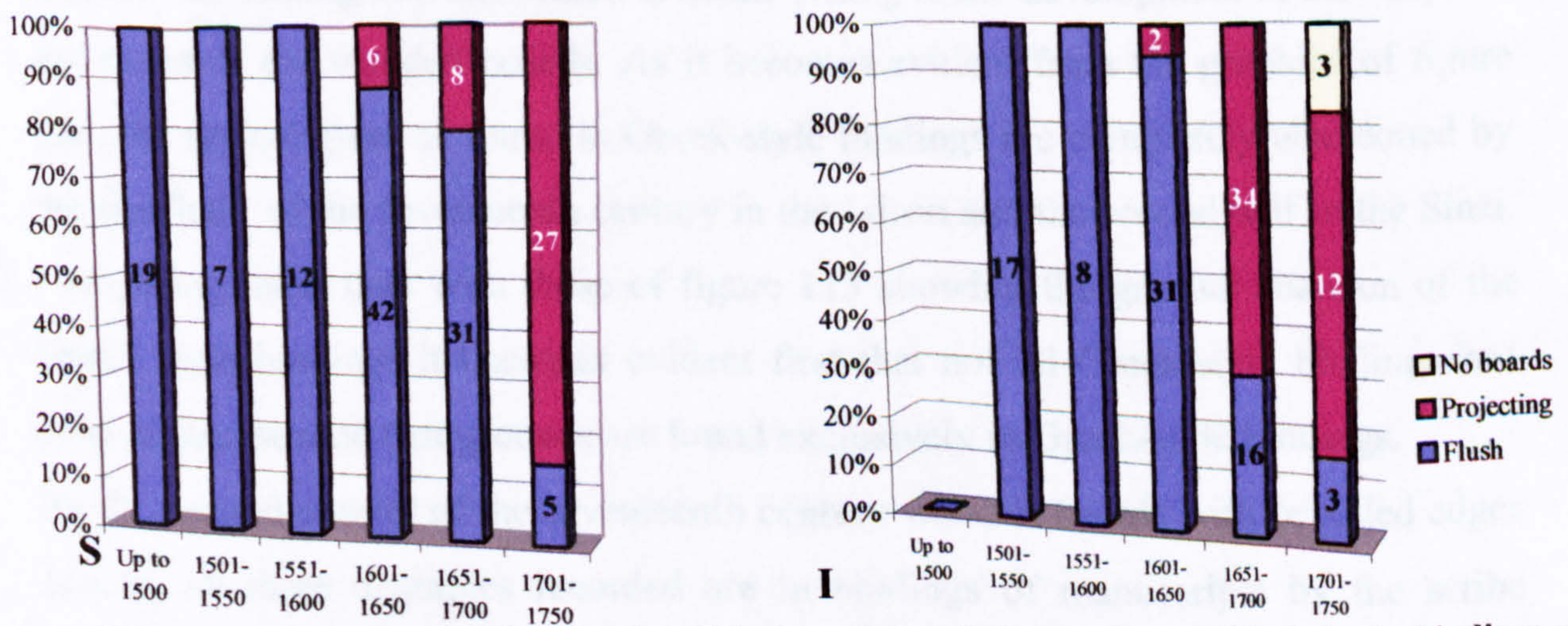


Figure 124 Graphics showing the size of the boards in relation to the text-block in the bindings of the two libraries of the research.

Though in volumes bound in wooden boards not a single example of the use of the II Uns attachment system has been recorded, an easily explainable find because of their bigger weight which makes the use of this attachment system non feasible, in the volumes bound in pasteboards all three types of attachment system have been used as shown in the graphics of figure 125. The data in these graphics as well as those seen above offer the possibility to formulate the hypothesis that the use of pasteboards was introduced to the post-Byzantine bindings from the Islamic bindings rather than from the European ones which must have certainly been known at the time through the import of printed books.

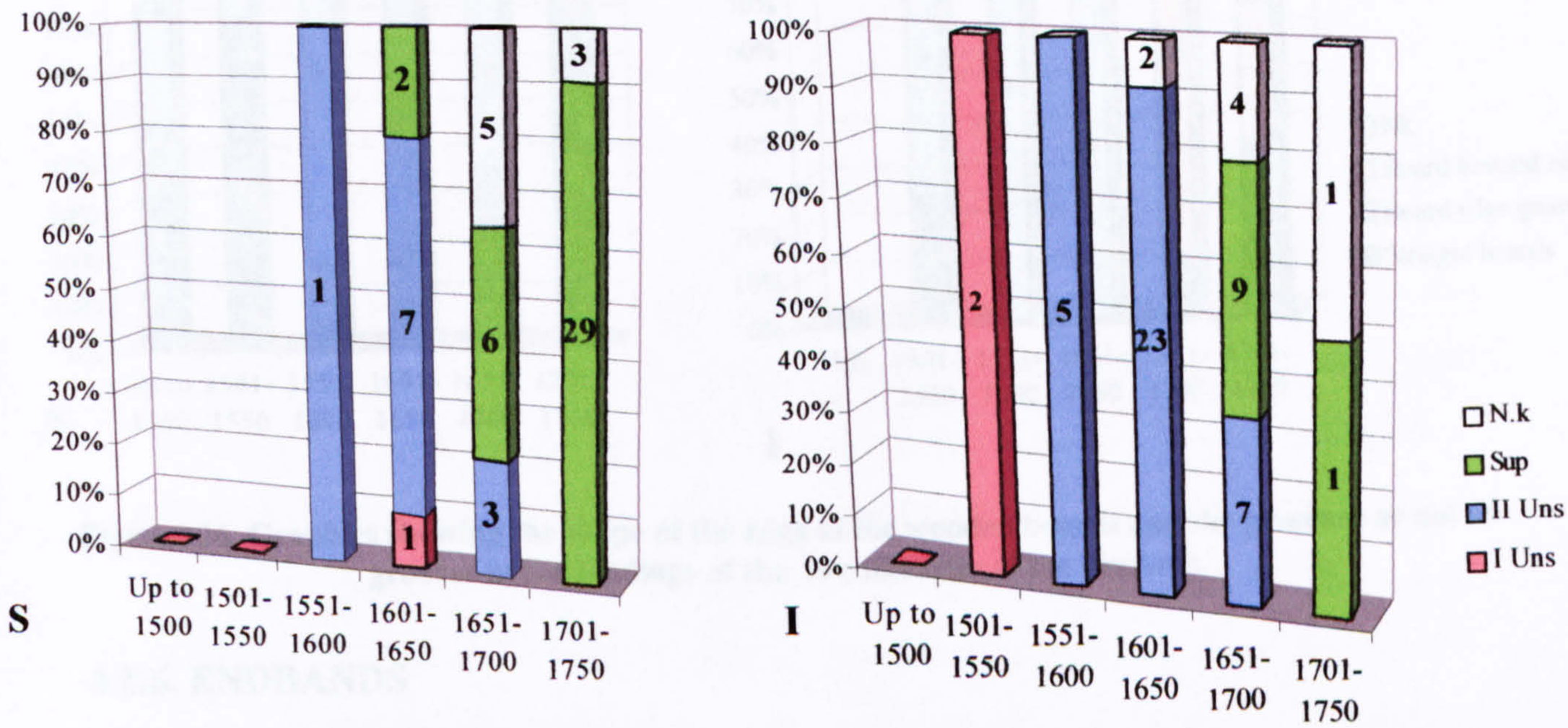


Figure 125 Graphics showing the three different attachment systems as used in manuscripts bound in pasteboards in the bindings of the two libraries of the research.

Another interesting features which is rather telling is the development in the shape of the edges of the wooden boards. As it becomes evident from the graphics of figure 126, the typical grooves found in Greek-style bindings are completely abandoned by the first half of the seventeenth century in the Iviron and the second half in the Sinai. Comparing these data with those of figure 113 showing the gradual abandon of the Greek style bindings it becomes evident first that not all Greek-style bindings had grooves and second that grooves are found exclusively in Greek-style bindings.

By the second quarter of the seventeenth century wooden boards with bevelled edges appear, all three examples recorded are in bindings of manuscripts by the scribe Anthimos from Ioannina dated in 1638 and 1641, as said before most probably bound

in Wallachia. From the second half of the century there is a clear divergence between the two areas: while in the Iviron the bevelling of the edges of wooden boards is widely used in the second half of the century and also in the first half of the eighteenth century and is related with the prevail of bindings similar to those seen in the manuscripts of Cosmas Macedon, in the Sinai there are only five examples recorded, four of which are actually imports from Athos, in some cases from the Iviron monastery itself (**S. 1469, S. 1478**).

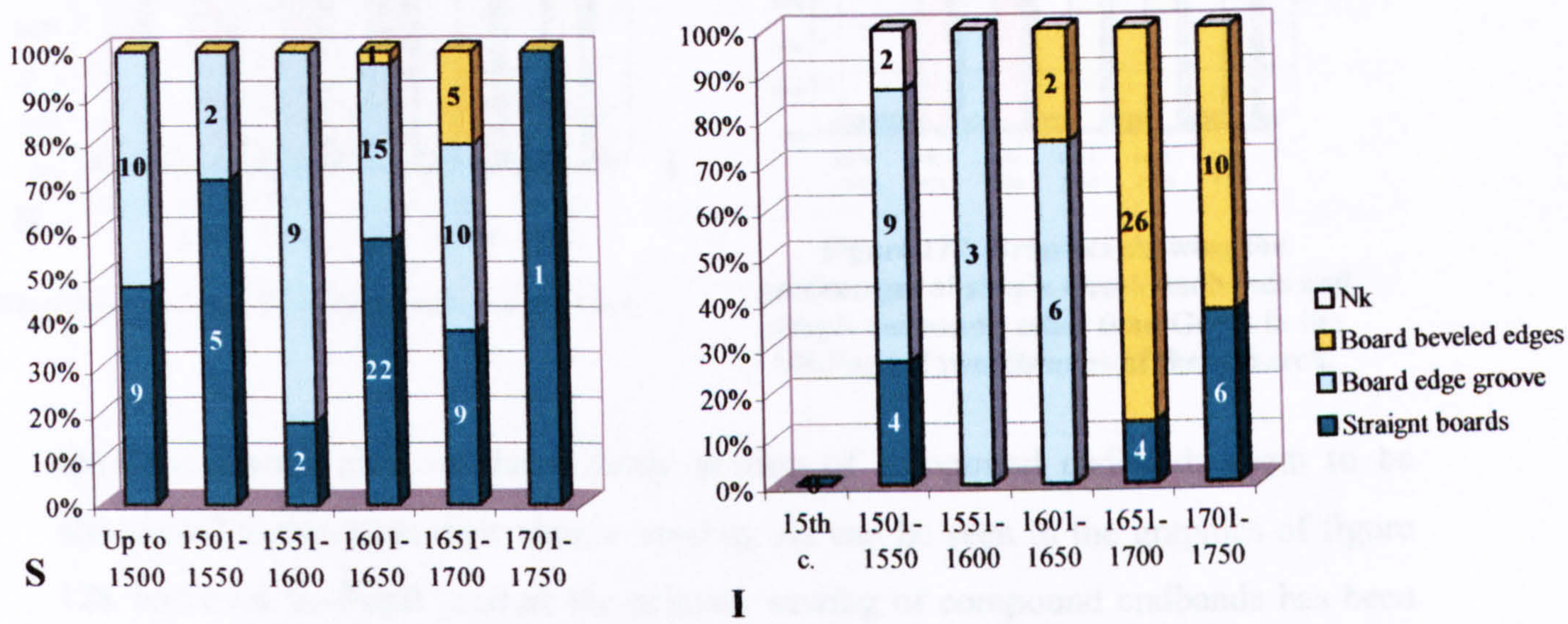


Figure 126. Graphics showing the shape of the edge of the wooden boards and the presence or not of grooves in the bindings of the two libraries of the research.

4.1.6. ENDBANDS

Greek endbands are one of the most characteristic features of Greek-style bindings. As discussed mostly in the section on Cretan bindings (2.1.2.6.) they can be found both as simple endbands or compound endbands, in which case above the typical 'Greek' sewing there are warps on which the secondary sewing, or weaving, is worked with silk threads used as wefts. In the graphics of figure 127 the percentages of simple Greek endbands in bindings of the two libraries reveal that up until the end of the sixteenth century simple endbands are all exclusively of the Greek type, while for the next centuries a divergence between the two libraries is clearly noticeable: while in the Iviron library there is not a single example of a simple Greek endband recorded later than the end of the sixteenth century in the Sinai these endbands continued to be used until probably the second half of the seventeenth century (the only example recorded in the second half of the seventeenth century is not related to

any known atelier and cannot be dated with more precision) though with a clear decreasing frequency, while none is recorded from the eighteenth century onward.

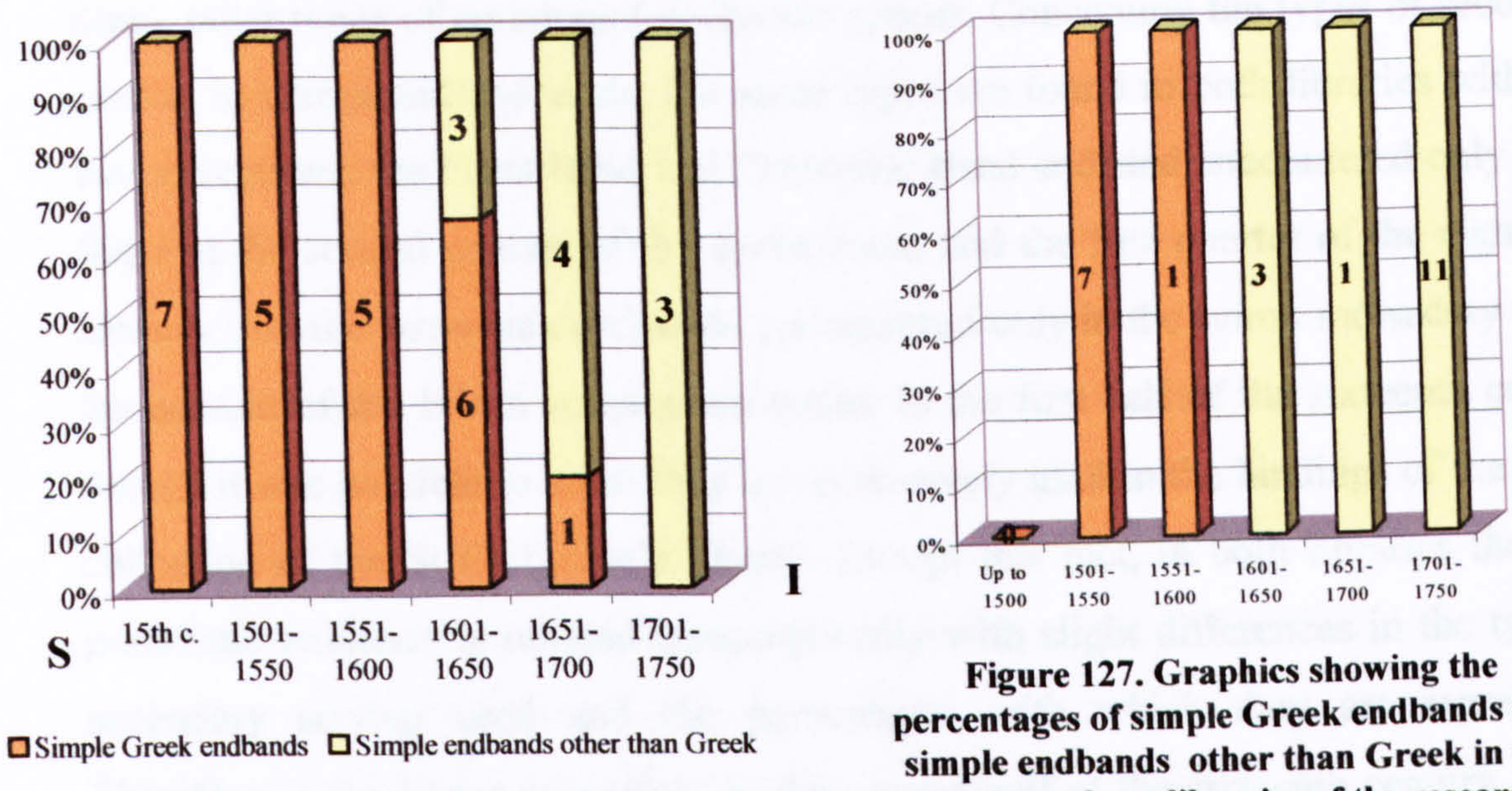


Figure 127. Graphics showing the percentages of simple Greek endbands and simple endbands other than Greek in the bindings of two libraries of the research.

Greek endbands used as the primary sewing of compound endbands seem to be abandoned earlier than their simple version. As can be seen in the graphics of figure 128 no Greek endband used as the primary sewing of compound endbands has been recorded later than the first half of the sixteenth century in which period three examples only are recorded, all made in the context of the Iviron Scriptorium atelier. In the Sinai instead and probably due to the prominent presence of the Cretan bindings, compound endbands make use exclusively of Greek-style primary endbands up until the first half of the sixteenth century, and are still found until the first quarter of the seventeenth century in two Cretan bindings of circa 1620 (**S. 72**, **S. 74**. See section 2.2.2.9.).

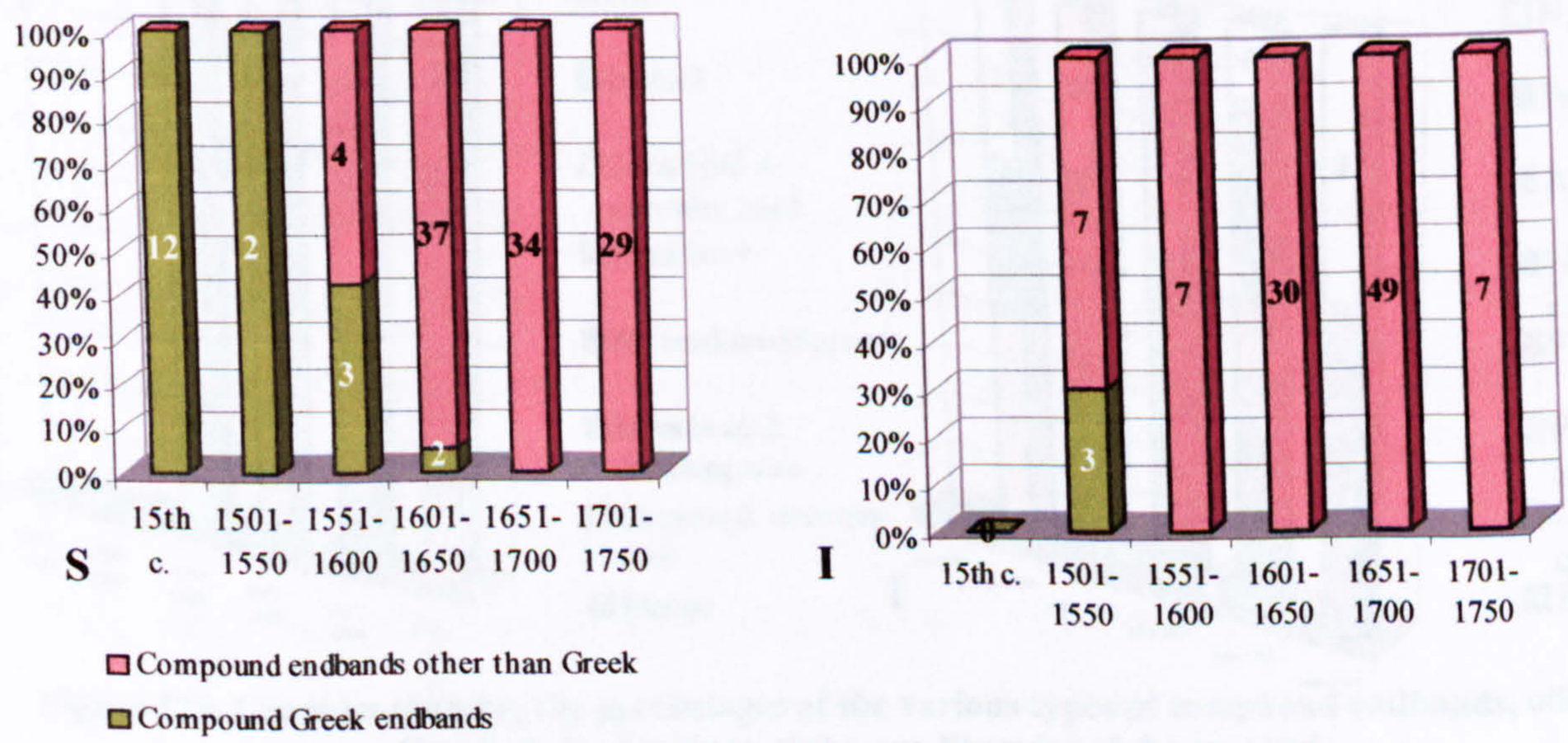


Figure 128. Graphics showing the percentages of compound Greek endbands and compound endbands other than Greek in the bindings of the two libraries of the research.

As can be seen in the graphics of figure 129 already from the first half of the sixteenth century for the Iviron and from the second half of the same century for the Sinai, other types of compound endbands appear. Concerning the types of secondary sewing in compound endbands, the same types are found in both libraries with only two exceptions: the Front Bead and Crowning Bead endband encountered only in the Sinai in the second quarter of the seventeenth and the first quarter of the eighteenth century, and the Armenian endbands encountered only in the Iviron monastery and in the context of the Iviron scriptorium atelier in the first half of the sixteenth century, though it was possible to attest they are extensively used in the bindings of the Syriac collection of the St Catherine's library. Except this fact, in both libraries the same pluralistic tendency is noticed contemporarily with slight differences in the types of secondary sewing used and the percentages with which they are represented. Therefore in the Iviron monastery in the second half of the sixteenth century Islamic endbands are predominantly used and this is also true for the first half of the seventeenth century in which period three more types of secondary sewing are recorded , the Chevron and Crowning Core (already found in two bindings of the second half of the sixteenth century), the Front Bead, and the Front Bead and Crowning Core. This predominance of the Islamic endband is related with the Greek-Islamic bindings and indeed their use follows the decline of these bindings. In the second half of the seventeenth century only six out of the 49 bindings have Islamic endband while in the remaining 43 as many as five different secondary sewing types are recorded.

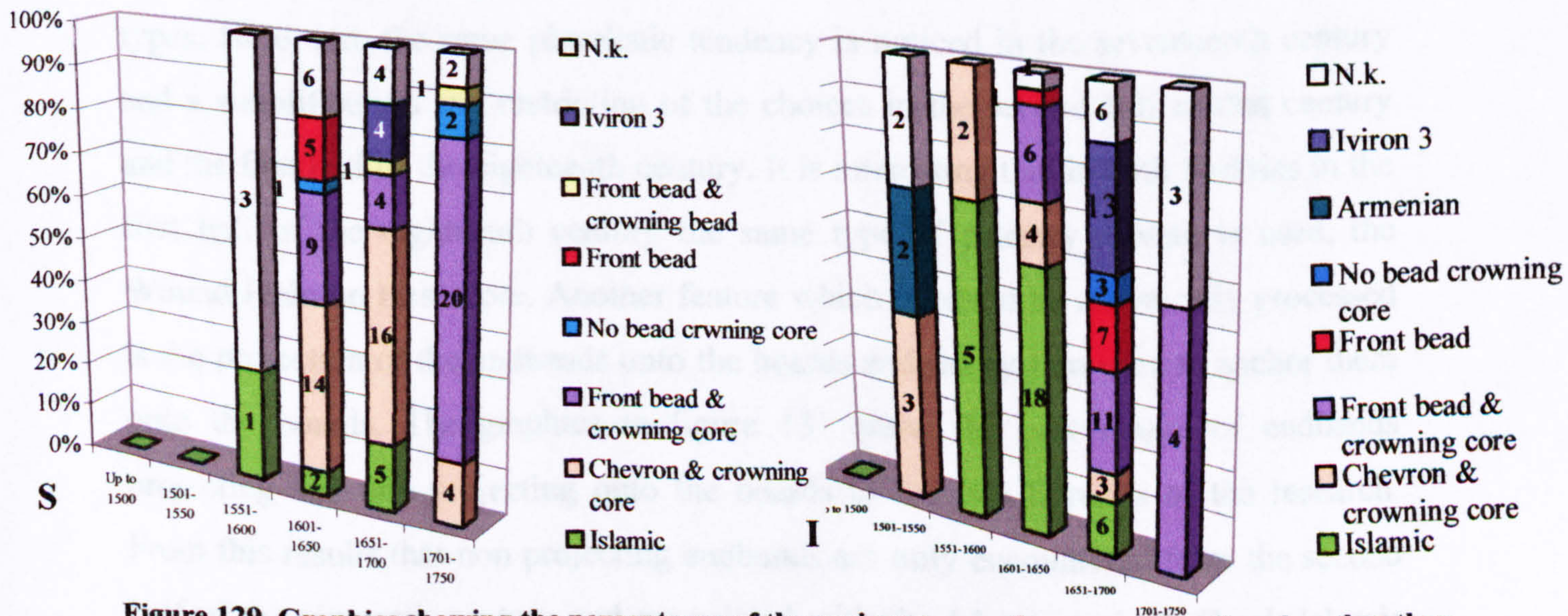


Figure 129. Graphics showing the percentages of the various types of compound endbands, other than Greek, in the bindings of the two libraries of the research.

The first half of the eighteenth century is markedly characterised by a simplification and restriction of choices: only one type of secondary sewing is used and compound endbands are less than the simple endbands for the first time in the period this research deals with.

Things at the Sinai are similar in some aspects and dissimilar in others: the same pluralistic tendency is recorded in the seventeenth century, in which period five different secondary sewing types are recorded, and though they slightly decrease in the first half of the eighteenth century no such clear change is recorded as in the Iviron. A major difference in the Sinai is that, as said before (section 2.2.2.7.), Islamic endbands are hardly represented at all by one example in the second half of the sixteenth century (**S. 2111**, a Greek-Islamic binding of the year 1594), two examples in the first half of the seventeenth century (**S. 1732**, an Islamic binding of the year 1602, and **S.A. 337**, an 'Islamic' binding of the Giglio atelier of the year 1622), and five examples of the second half of the seventeenth century (**S. 1047, S. 1047** both Islamic binding of the years 1654, 1685 respectively and **S. 1996, S. 1814. S. 931**, all three made at the Raithos atelier between the years 1657 and 1664). As can be seen in figures 127, 128, Sinai is also differing in that compound endbands were still markedly used more than simple endband even in the first half of the eighteenth century.

A rather marked difference between the two libraries is also recorded in the types of primary sewing used in compound endbands . As can be seen in the graphics of figure 130 in the Iviron only two types of primary sewing are recorded, the warps, and the Wound Plain on First Core, while in the Sinai the choice is between four different types. Here, too, the same pluralistic tendency is noticed in the seventeenth century and a simplification and restriction of the choices in the second half of that century and the first half of the eighteenth century. It is interesting that in both libraries in the first half of the eighteenth century the same type of primary sewing is used, the Wound Plain on First Core. Another feature which needs to be statistically processed is the projection of the endbands onto the boards and the system used to anchor them onto the boards. The graphics in figure 131 show the percentages of endbands projecting and non projecting onto the boards in the two libraries of the research. From this results that non projecting endbands are only encountered from the second half of the sixteenth century and are related with the Islamic and the Greek-Islamic bindings, though two of the five examples in the first half of the seventeenth century

at the Sinai were produced in the Giglio and the Cairo metochion ateliers, and four examples

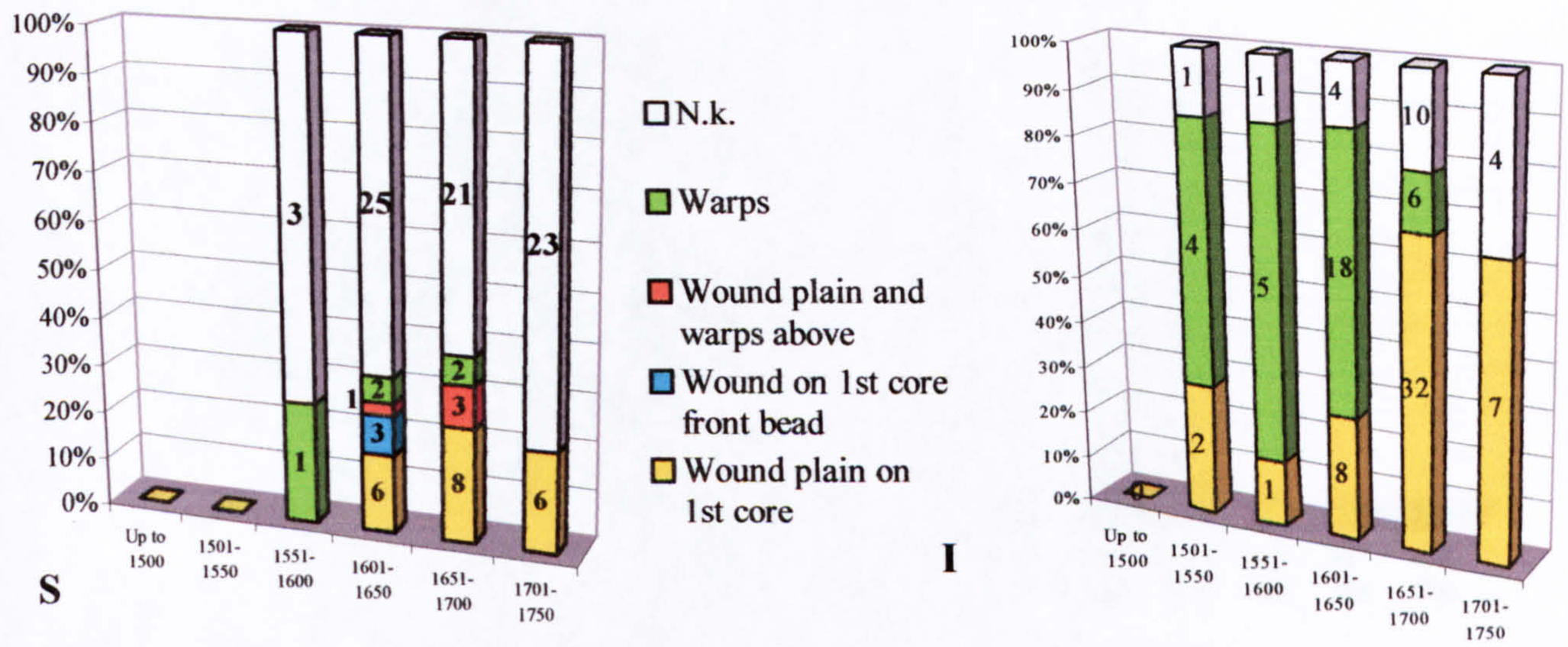


Figure 130. Graphics showing the percentages of the various types of simple endbands and primary sewing of compound endbands, other than Greek, in the bindings of the two libraries of the research.

divided between the end of the seventeenth and the beginning of the eighteenth century belong to bindings which are similar to the Cosmas Macedon ones. It is interesting that up until the first half of the eighteenth century non projecting endband represents a more or less marked minority, even more markedly in the Sinai where Greek-Islamic bindings were hardly ever produced.

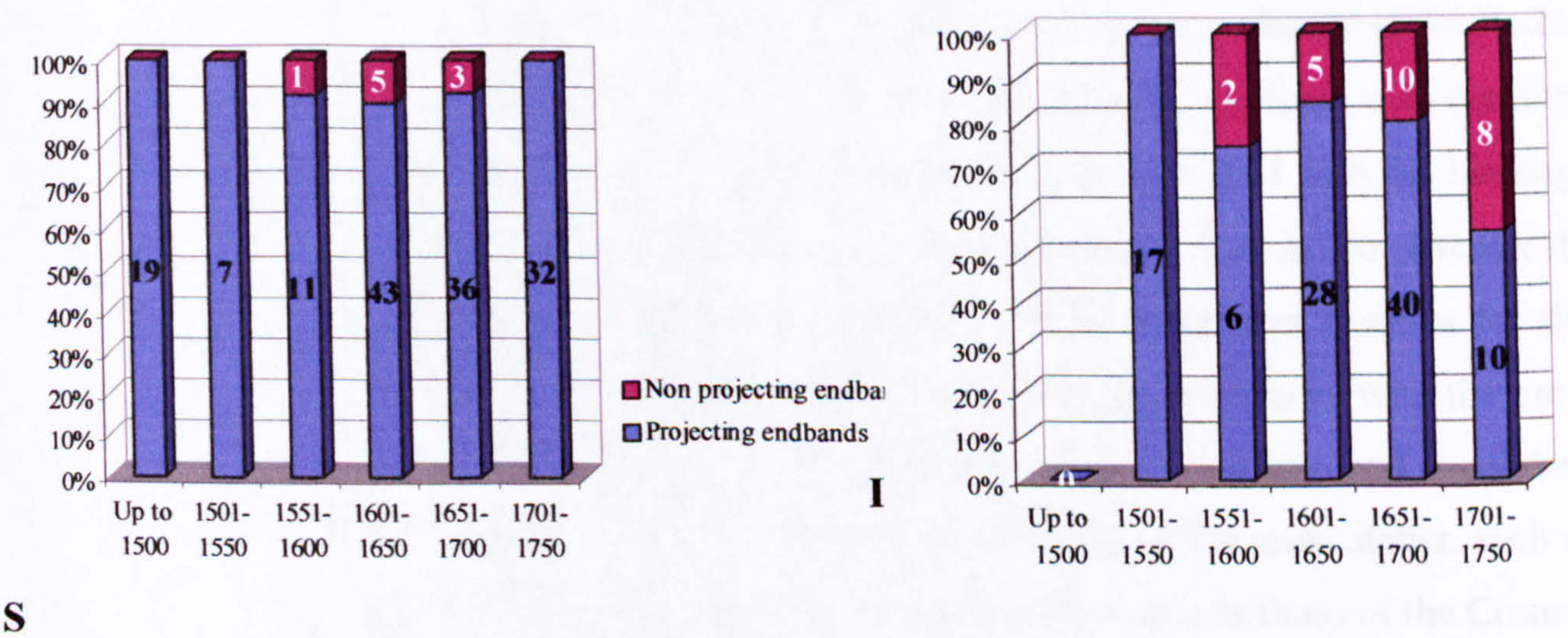


Figure 131.Graphics showing the percentages of projecting and non projecting endbands in the bindings of the two libraries.

Greek endbands, either simple or compound, are always anchored onto the boards according to two systems, EAS 2and EAS 3 and its is to be noticed that in the Iviron

library only the EAS 2 system is encountered (figure 132). For the anchorage onto the boards of all the other types of endbands ten different systems are recorded among the

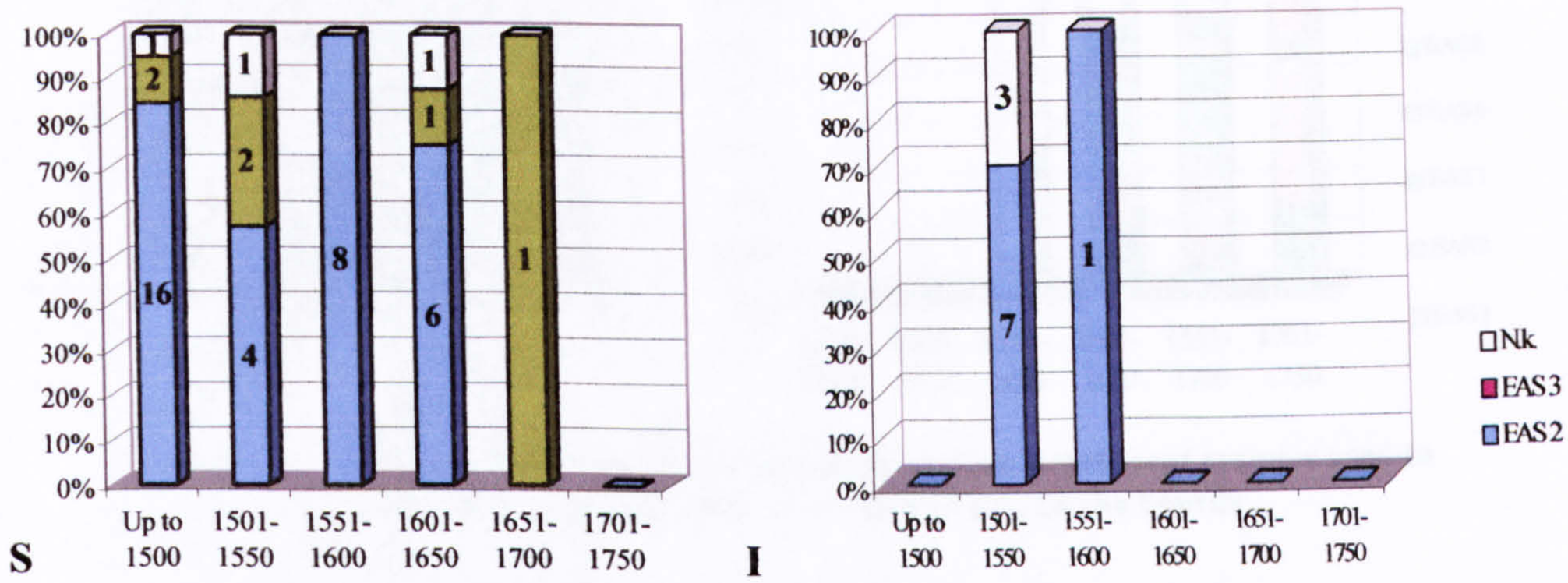


Figure 132 Graphics showing the percentages of EAS 2 and EAS 3 attachment systems in Greek endbands of the two libraries.

283 bindings upon which the statistical analysis is based. Some of these types are exclusively related to specific types of bindings, ateliers, or types of endband. For example the use of the EAS 6 system in the Iviron monastery which is exclusively related to Islamic endbands and Greek-Islamic bindings, the EAS 10, a typically French system (Pickwoad 1995, p. 231) is found in the bindings of three manuscripts by Anthimos from Ioannina which as said before were made probably in Wallachia between the years 1638 and 1641, the EAS 9 which is barely represented in bindings at the Iviron is widely used in the Sinai, almost exclusively related with the bindings of the New Library atelier. Nevertheless it is characteristic that in the seventeenth century there is a marked pluralism in the use of the attachment systems for the anchorage of the endbands onto the boards (figure 133), in accordance with the same tendency noticed above concerning the different types of primary and secondary sewing in compound endbands. Even among the bindings of the same atelier, such as the Giglio or the Raithos, or among very similar bindings such as those of the Cosmas Macedon atelier and the many similar contemporary bindings, various systems for anchoring the endbands onto the boards are used, apparently without any relation to the type of endbands sewing used. Another feature which needs to be briefly considered is the protrusion of the endbands from the head and tail edges of the bound text-block. This feature is one of the most characteristic of the Greek-style bindings and is related with boards which are cut flush to the text-block.

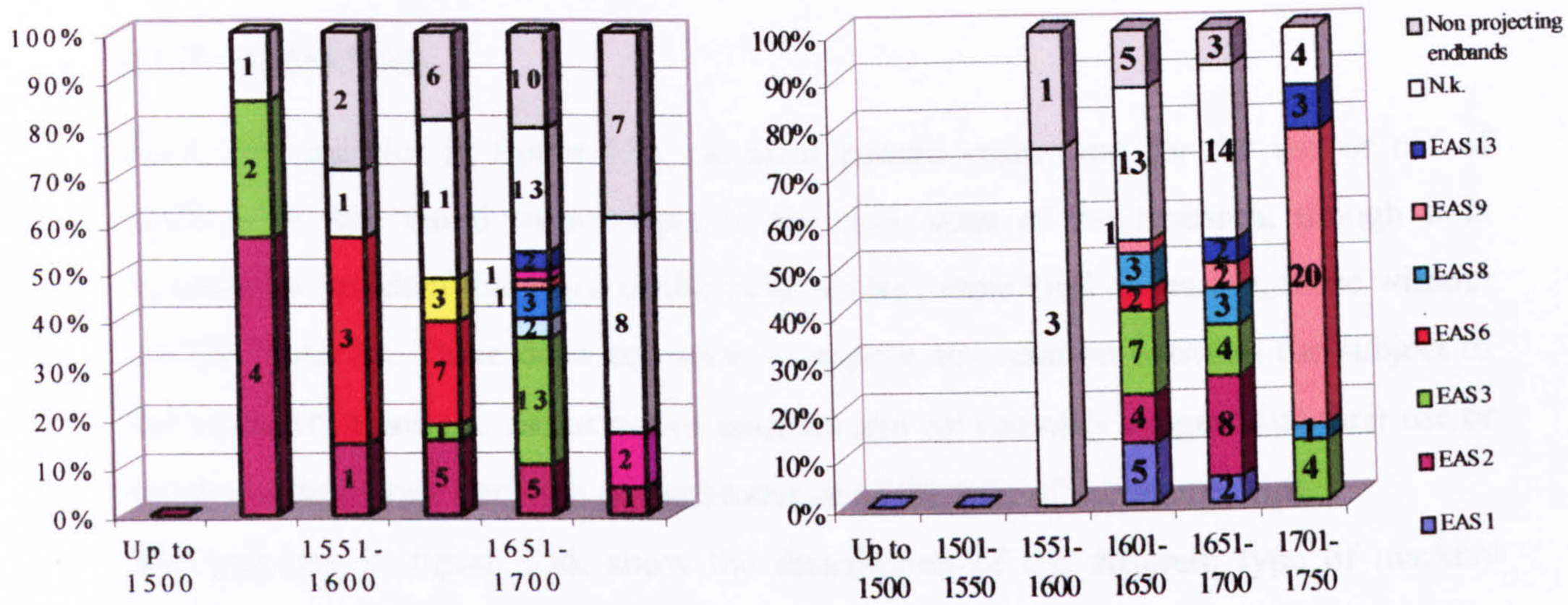


Figure 133. Graphics showing the percentages of the various attachment systems used to attach the projecting endbands, other than Greek, on the boards .

As it can be seen in the graphics of figure 134, protruding endbands are still used by the end of the seventeenth century in the Sinai and even by the first half of the eighteenth century in the Iviron. Considering that as shown in the graphics of figures 127, 128, the Greek endbands cease to be used around the middle of the seventeenth century in the Sinai and half a century earlier in the Iviron, it is evident that this typically Greek-style feature was used with different types of endbands and in binding structures other than the Greek-style ones. With only a couple of examples all the protruding endbands are found on manuscripts bound in wooden boards and are anchored onto them. Though Islamic endbands normally protrude even for a few millimetres from the boards they are not considered here because such protrusion is almost unnoticeable. .

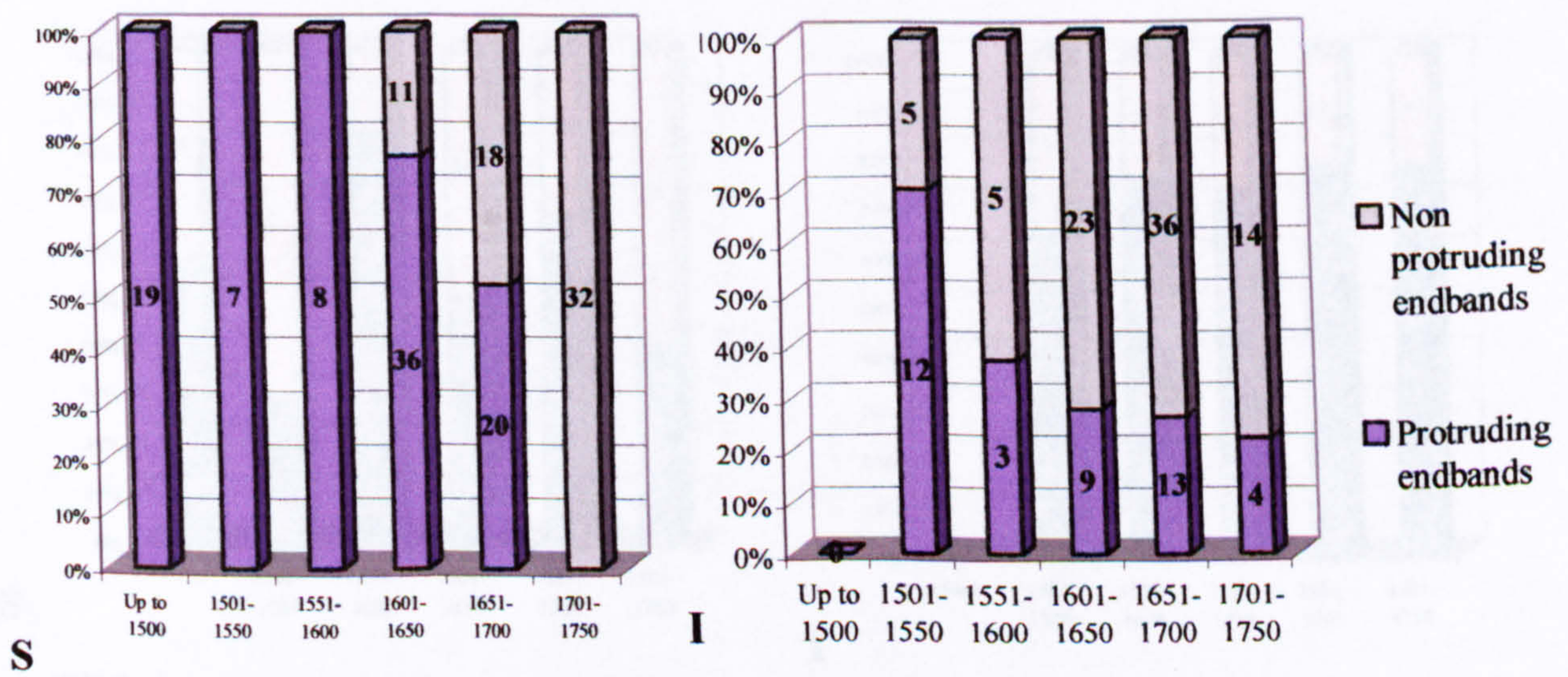


Figure 134. Graphics showing the percentages of protruding and non protruding endbands in the bindings of the two libraries of the research.

4.1.7. MARKERS

From the graphics in figure 135, no clear pattern comes out for the use or not of markers in the bound manuscripts in the time span of the research, though it is nevertheless evident that most of the volumes had some kind of marker, those without are the minority. There does not seem to appear any relation between the subject of the manuscript and the use or not of markers and we can only suggest that their use or not was a deliberate decision of the binder or of the user of the manuscript.

The graphics in figure 136, show the distribution of the different type of markers within the number of volumes with markers. From these it is evident that board and leaf tab markers are not used later than the first half of the sixteenth century. From that period on string markers either simple or compound are exclusively used with a clear predominance of the latter. The number of volumes in which N.k. is recorded had string markers as well though their state of preservation does not permit us to firmly attribute them to one or the other type. The presence of string markers as early as the fifteenth century in some cases is the result of a later addition but in some cases it is certainly an original part of the binding as it is the case of **S. 1991** of the Antioch bindings which originally had both leather leaf tab markers and a simple string marker actually made using the same silk threads as those used for the secondary sewing of the endbands. Nevertheless the exact number of the original string markers and those which are due to a later addition cannot be firmly decided. The use of the board tab markers is a feature which further needs to be investigated though as said before (See section 2.1.2.8. and 3.1.2.8.) it seems it is related with early binding structures.

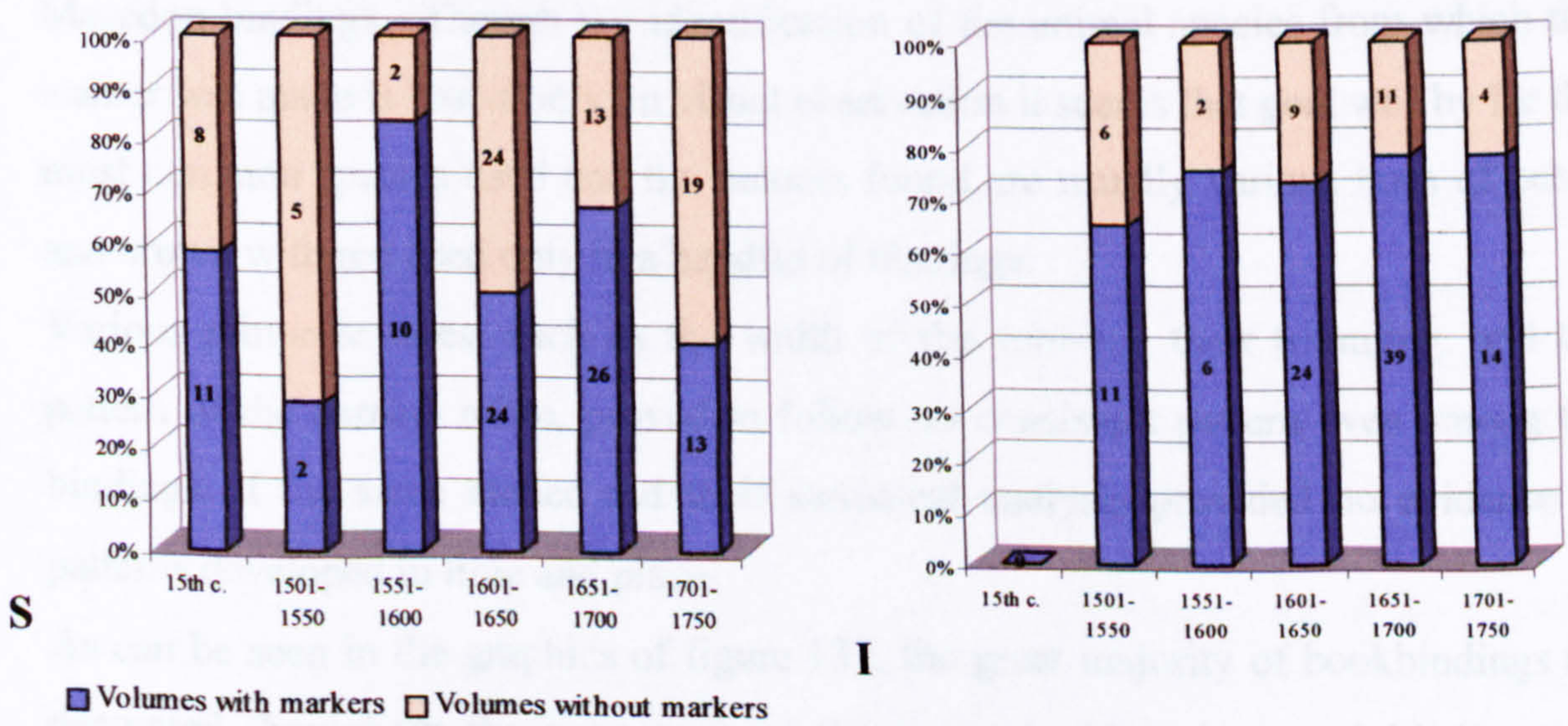


Figure 135. Graphics showing the percentage of volumes with markers and those without in the two libraries (above) The graphics below show the percentages of the different types of markers in the two libraries of the research.

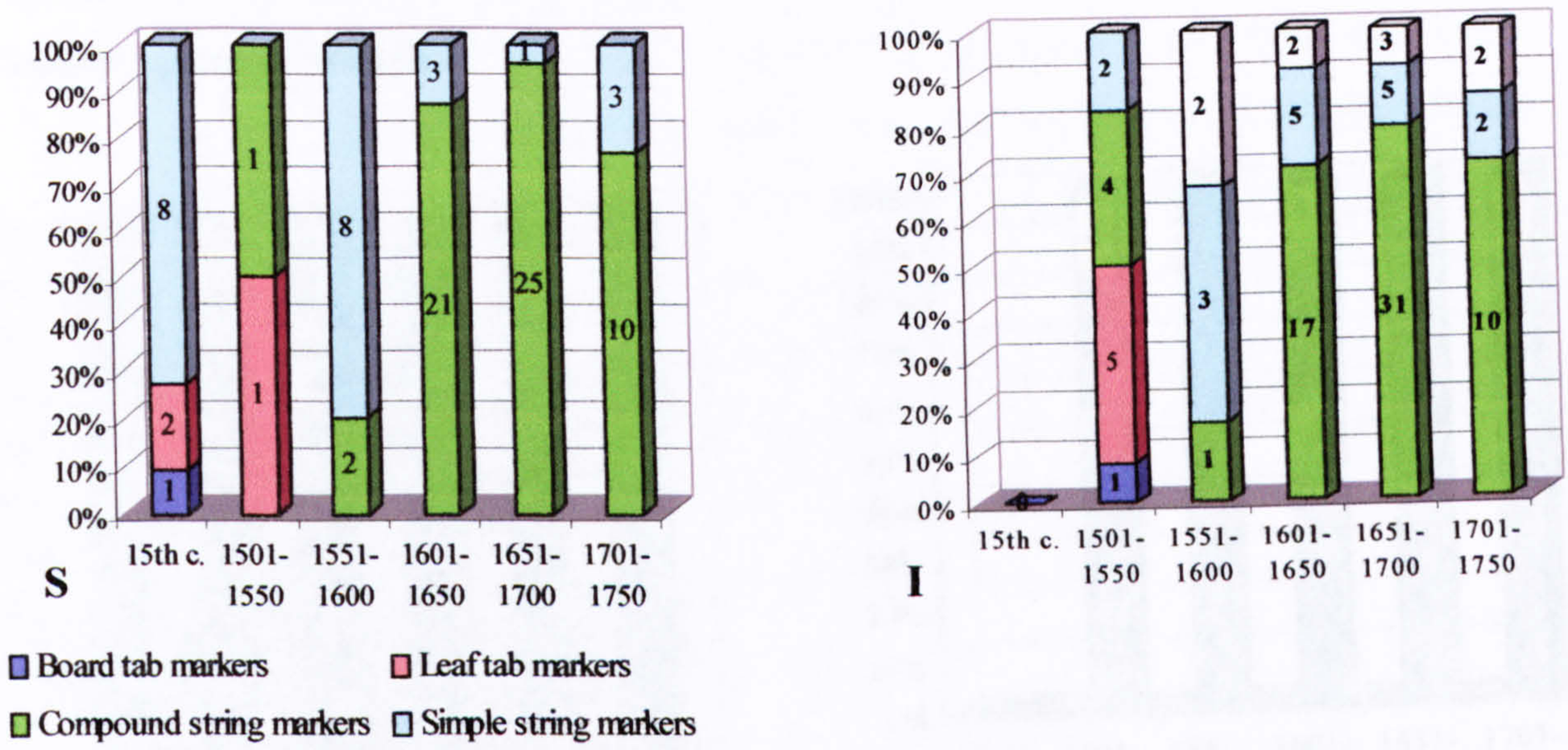


Figure 136. Graphics showing the percentages of the different types of markers recorded in the two libraries of the research.

4.1.8. COVER AND DECORATION

With the exception of four bound volumes which never had any cover the remaining 279 are divided between covered in tanned leather (270), silk textile (3 Greek-Islamic bindings of the second half of the seventeenth century and a Cretan Greek-style binding of the year 1479), tawed skin (three volumes, one of which is a Cretan binding, one is an Antioch binding and one is a New Library binding), and two volumes of the year 1690,1692 bound in parchment and very similar to the Cosmas Macedon bindings. Though the identification of the animal species from which the leather was made is based only on visual observation it seems that goat was by far the most common species used and the colours found are usually various hues of ochre and brown with red used only in a handful of bindings.

Various minor features, such as the width of the turn-ins, their trimming, and the pattern of the corners mitre, proved to follow no consistent pattern even among the bindings of the same atelier and their statistical analysis provided no evidence of patterns developed in time and place.

As can be seen in the graphics of figure 137, the great majority of bookbindings are decorated throughout the time span of the research. Non decorated bindings are occasionally found throughout and at least in four volumes this is probably only

because silk textile has been used, quite decorative on its own either because of its colour, pattern, or both.

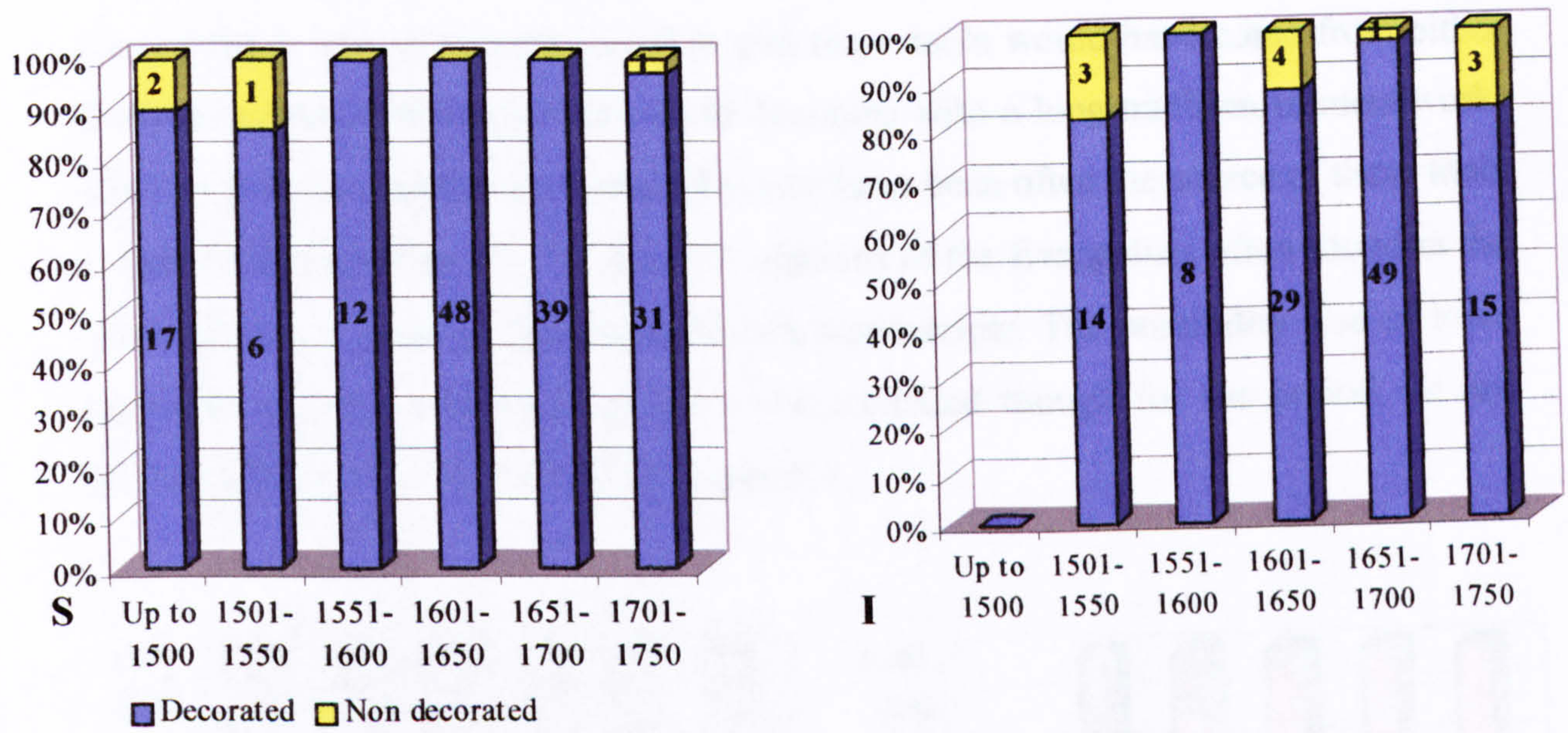


Figure 137. Graphics showing the percentages of decorated and non decorated bindings in the two libraries of the research.

Another feature which gives interesting statistic results is the frequency of bindings in which the two boards are decorated with different pattern, and of those decorated with the same pattern, where as pattern is considered the general lay-out and not the tools used (see Appendix 4). From the graphics in figure 138 results that bindings decorated with different patterns in the two boards are more often found in earlier periods and they gradually diminish to the point that by the first half of the eighteenth century in the Sinai and half a century earlier for the Iviron not a single example is recorded. This is certainly related with the gradual adoption of the type of centric decoration seen in the New Library and the Cosmas Macedon bindings, where the decoration is achieved by using a single centrepiece around which cornerpieces and rolls, often only the latter, are used. Nevertheless considering the vogue of Greek-Islamic bindings in Athos during the seventeenth century and their almost complete absence from the Sinai, as well as the tools themselves used, it would be sensible to suggest that in the former the influence came directly from the Islamic bindings arriving from Constantinople but also probably through Wallachia, while in the latter it came through the Western European bindings mostly of printed books, and possibly mainly Italian, considering the close relations that the monastery always had with this country. The use of these centric decorative patterns is not only a question of taste

but was made possible only through the availability of centrepieces and cornerpieces, and it is hard to decide which came first. Possible markets from where they could have derived are Constantinople, Venice and the urban centres of Wallachia. In the case of the Iviron, it is most probable that these tools would have come from either Constantinople or Wallachia, or maybe Ioannina with a long tradition in metalwork. The fact that the hegemonies around Danube have been often the source of these tools is further supported by the Slavonic inscriptions of the Evangelists often found in the cornerpieces of bindings containing Greek manuscripts. The possibility also of local craftsman making such tools is not to be excluded though for the period we are dealing with there is no evidence to support it.

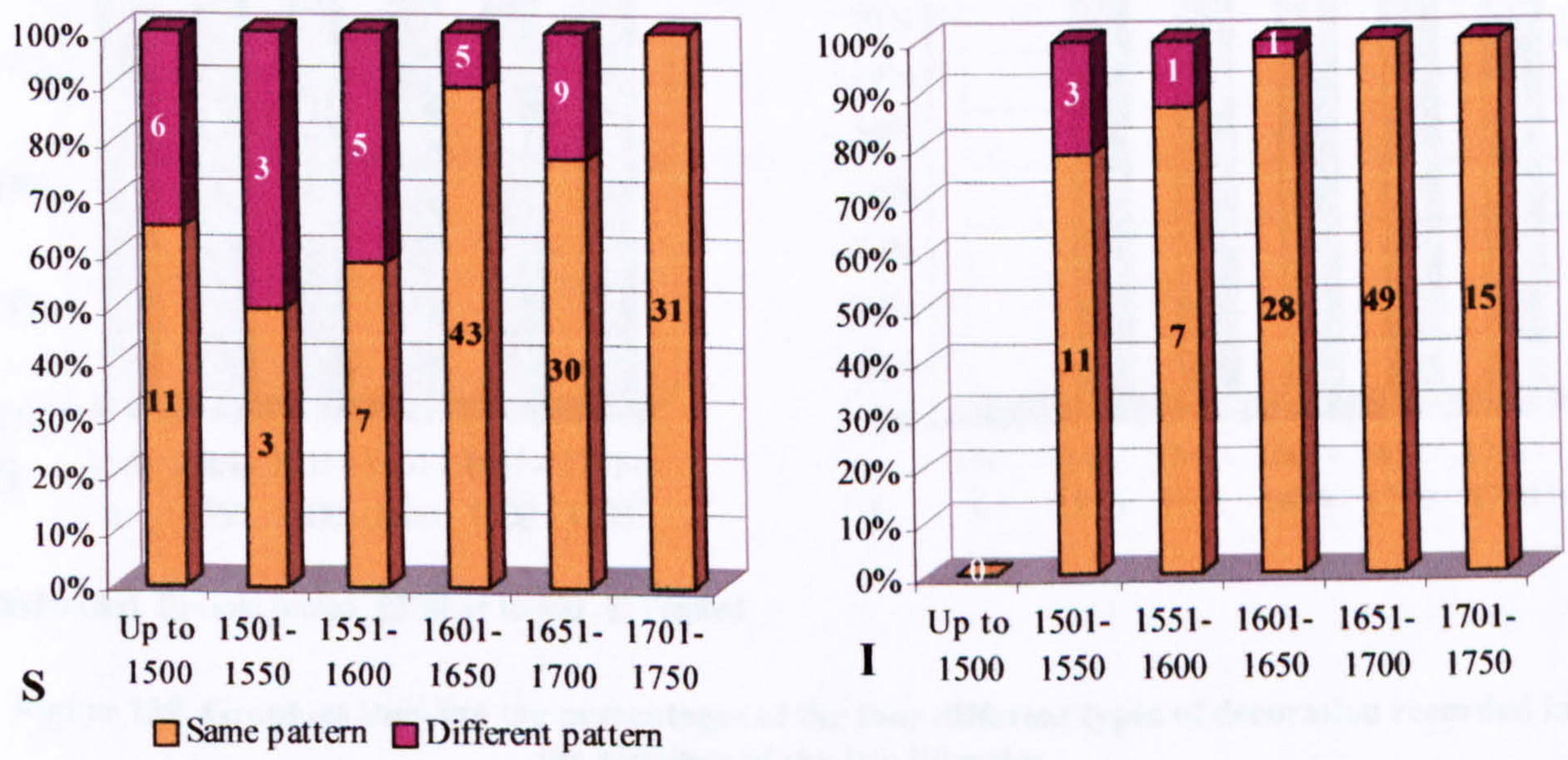


Figure 138. Graphics showing the percentages of the use of the same or a different decorative pattern within the number of decorated bindings of the two monasteries of the research.

On the other hand in the case of the Sinai the possible source of the tools must have been Venice but also Constantinople (see section 2.3.2.12.), though none of the tools used in the Sinaitic bindings is typically Islamic but all of them rather clearly European.

The type of decoration used, blind tooled or other also reveals some interesting facts. As can be seen in the graphics in figure 139 blind tooling was never really abandoned and this is probably true even for bindings later than the time limits of this research. This is probably explainable considering the fact that most of the bindings considered here were made in monasteries and destined to be used in monasteries,

therefore thought luxury often played a role this was not the primary one. Gold tooling appears only occasionally in very few bindings from the second quarter of the seventeenth century and is in part due to bindings made elsewhere, for example the bindings of the Anthimos manuscripts, or three Islamic bindings which again were most probably not made in Athos. There are probably only six bindings of the period from the first half of the seventeenth to the first half of the eighteenth century, where gold tooling is used which can with some certainty be attributed to one of the two monasteries and in two of them shell gold rather than gold leaf is most probably used.

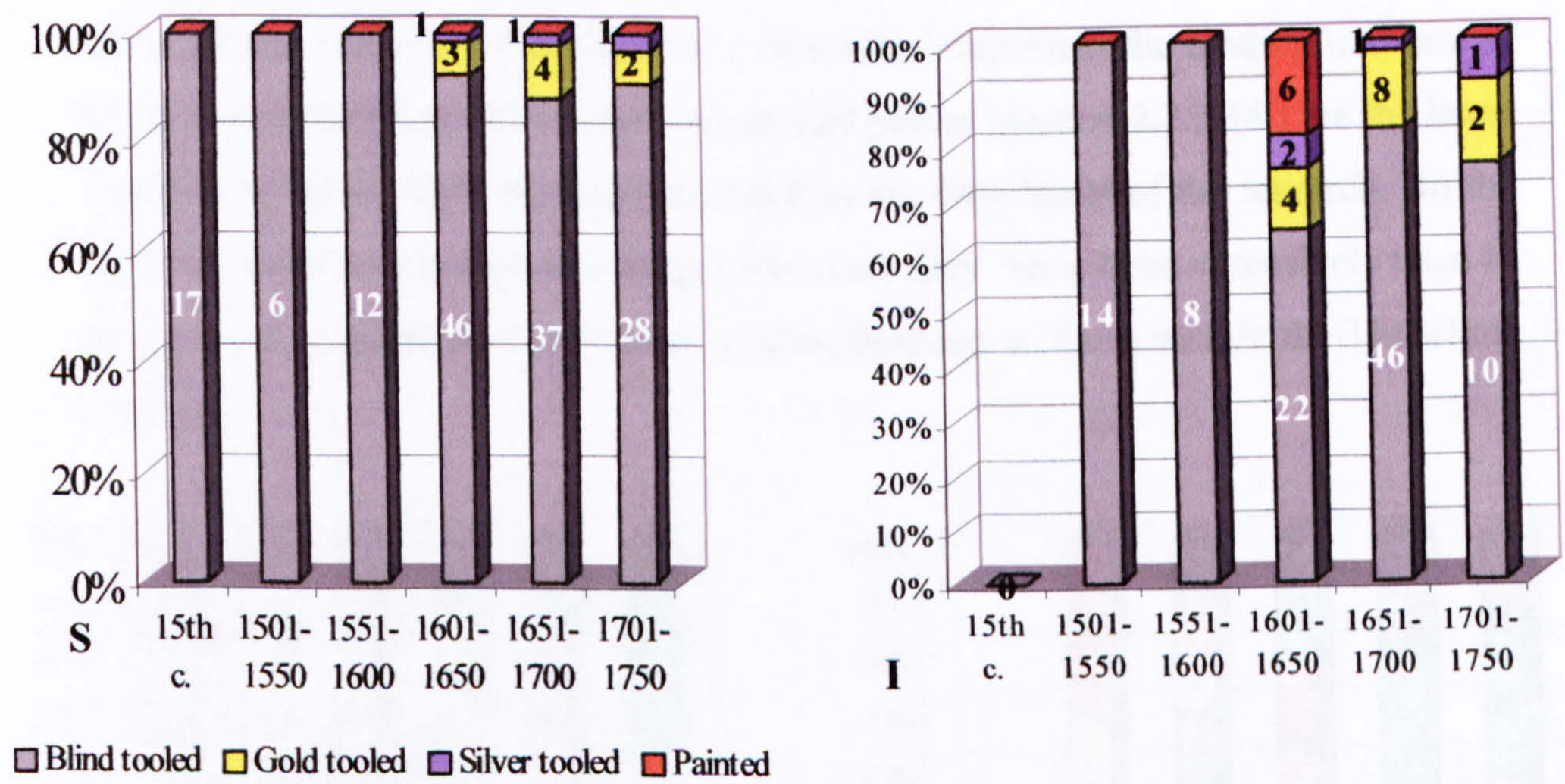


Figure 139. Graphics showing the percentages of the four different types of decoration recorded in the bindings of the two libraries.

At the same time silver tooling appears occasionally though all the bindings in which it was recorded are imported bindings made elsewhere, probably in the hegemonies around Danube or Russia, for example the bindings of the Anthimos manuscripts. Finally the isolated case of painted decoration is represented by the six bindings made by Seraphim from the Dionisiou monastery in Athos in the first quarter of the seventeenth century. It should be noticed that blind, gold, and silver tooling as well as painting are usually found combined between them.

The type of tools and the frequency of their use is shown in the graphics of figure 140. From these becomes evident that multi-use single tools are used throughout the time limits of the research and though a slight decline is evident in both libraries, first in the Iviron from the first half of the seventeenth century and in Sinai a century later, up

until the first half of the seventeenth century they are used almost in all decorated bindings . The earlier abandon of these tools in the Iviron is related to the fashion of Greek-Islamic bindings which follow a decoration pattern based on the use of centrepieces rather than small repeating impressions of the same multi-use tool. The use of creasers or creaser-like tools is apparently confined in earlier structures and gradually diminishes up to the first half of the eighteenth century when none is recorded in the Iviron library and only one in the Sinai. The same is true for the concentric rings tools which in the Sinai cease to be used by the first half of the sixteenth century with an impressive comeback in the second half of the seventeenth century in the bindings of the Elusive atelier which represent the binding tradition of the Balkans rather that of the Sinai and as said before (section 2.2.3.14.) are the latest examples of Greek-style bindings recorded in the time limits of the research. In the Iviron instead these tools had a longer life since they have been extensively used in the simple decoration of many Greek-Islamic bindings as those seen in the Theoclitos bindings.

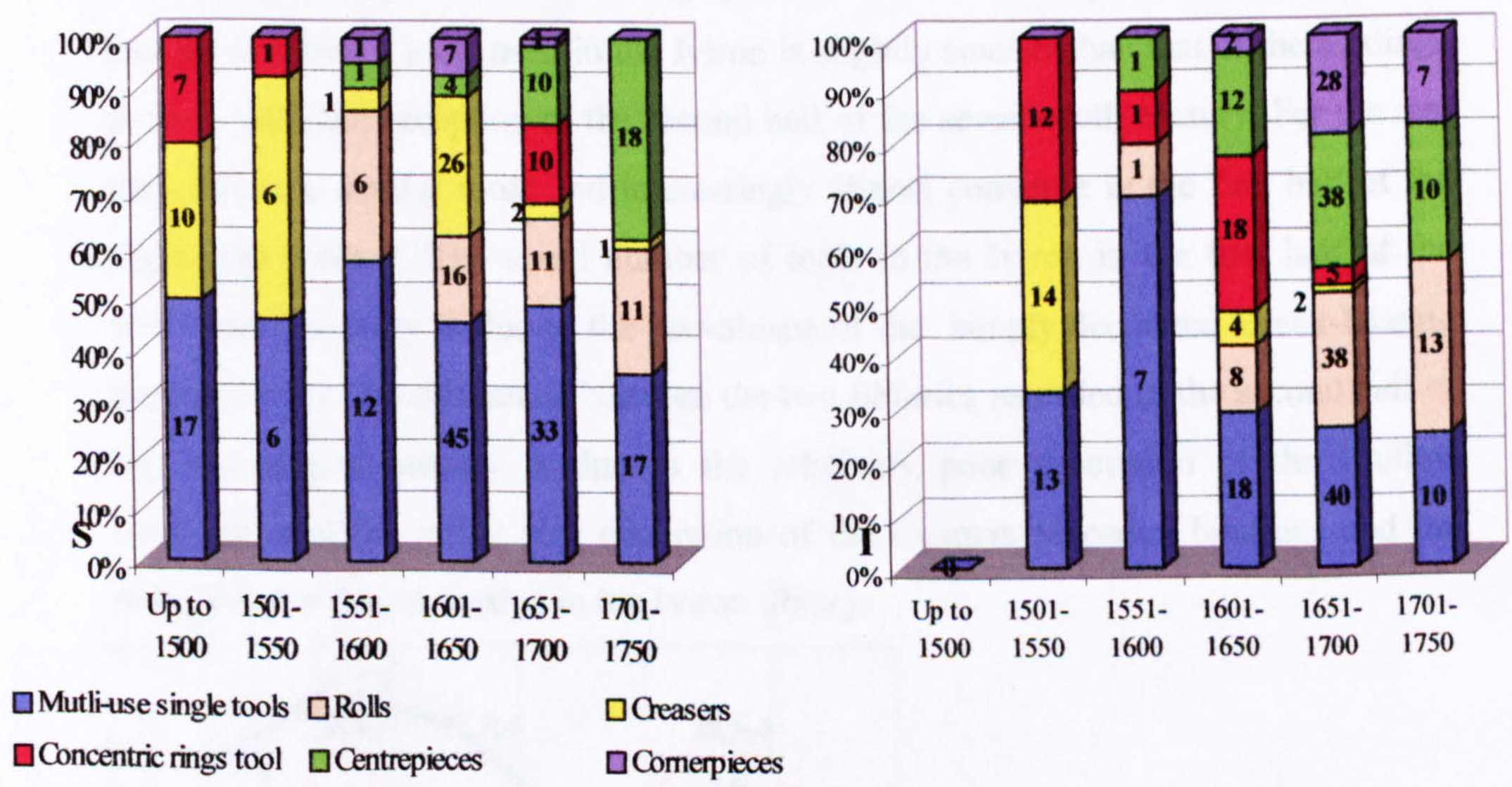


Figure140. Graphics showing the percentages of the various different tools used in the decoration of the bindings of the two libraries of the research.

The centrepieces in both libraries appear in the second half of the sixteenth century and their use increases toward the eighteenth century. The cornerpieces instead follow

a different route. In the Sinai their use is basically confined in the first half of the seventeenth century, represented by seven examples of which at least four are very similar to the Cosmas Macedon bindings and certainly were not made in the Sinai area. In the Iviron instead, cornerpieces had a longer lasting history which extends to the first half of the eighteenth century and apparently far beyond. In both libraries it becomes evident that centrepieces and cornerpieces are not equally used and this is also evident from the number of different tools of one and the other type recorded in this research: 110 centrepieces against 49 cornerpieces divided between floral and religious subject.

A similar frequency of use is evident as far as the rolls are concerned: in both libraries the first examples are recorded in the second half of the sixteenth century and their use either remains stable (Sinai) or increases until the first half of the eighteenth century (Iviron).

The graphic in figure 141 shows the average number of tools used to decorate the bindings in the two libraries. The number results by adding the number of tools of all the bindings of a period and dividing by the number of bindings. It becomes evident that the number of tools used in the Iviron is slightly smaller than that of the bindings in Sinai with the exception of the second half of the seventeenth century. For the rest they follow a similar route and interestingly almost converge in the first half of the eighteenth century. The small number of tools in the Iviron in the first half of the seventeenth century is due to the prevalence of the simply decorated Greek-Islamic bindings while the difference between the two libraries recorded in the second half of the seventeenth century is due to the relatively poor decoration of the Raithos bindings and the rather rich decoration of the Cosmas Macedon bindings and the many similar ones recorded in the Iviron library.

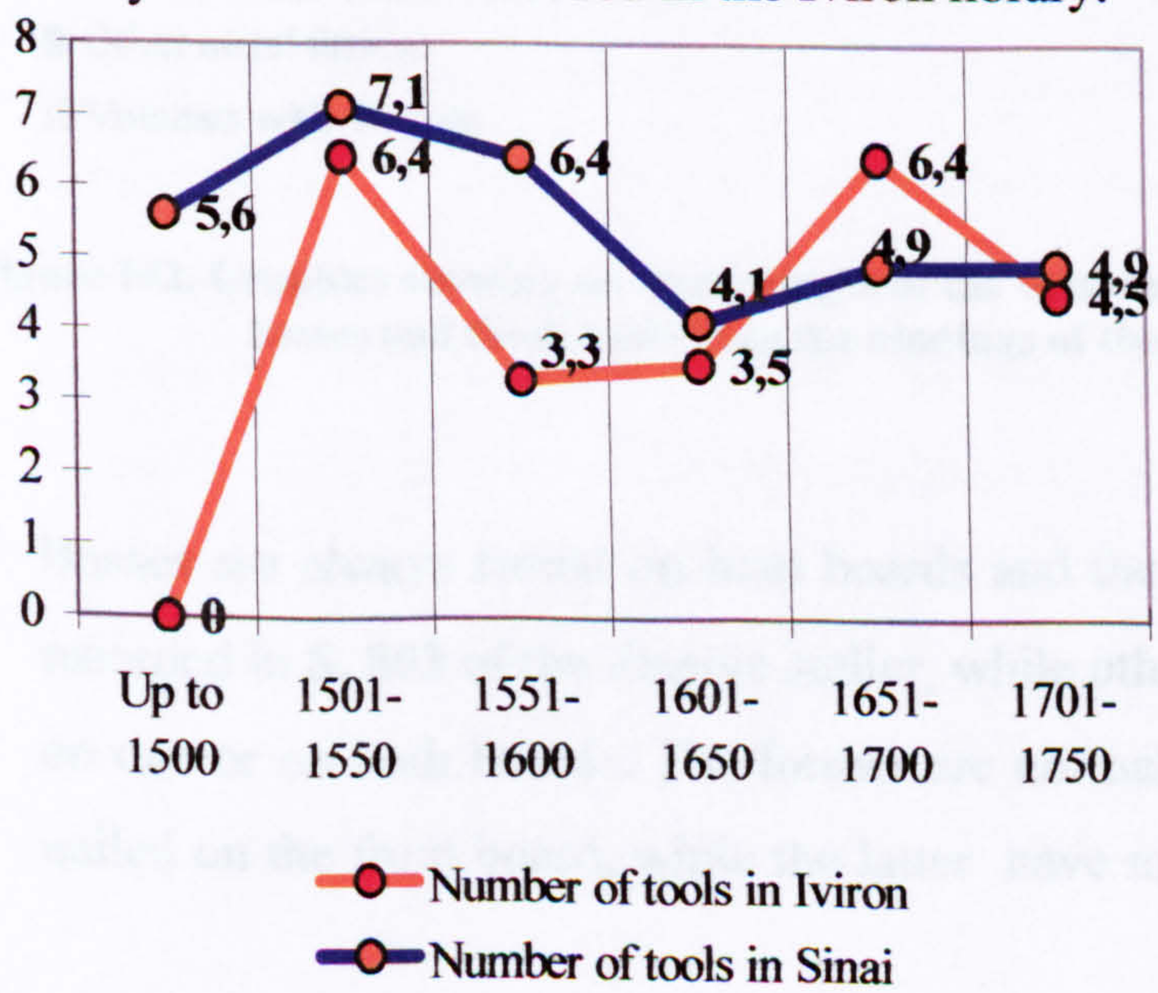


Figure 141. Graphic showing the average number of tools per binding used in the decoration of the bindings of the two libraries of the research.

4.1.9. BOSSES

All the bindings with bosses or other metal fittings nailed on the boards are bound in wooden boards with one single exception, **I. 1557** which has a Greek-Islamic bindings in which case metal corner fittings are nailed on the pasteboards. By 'other metal fitting' is indented either embossed or otherwise worked corner fittings nailed on the corners of the boards, or decorative fittings with religious representations such as the crucifixion, or simple usually representing a cross. In the Sinai all six volumes with 'other metal fittings' have bosses as well, while in the three volumes of the Iviron library no bosses are present. The single case of **S. 30** with nails placed in the edges of the wooden boards has been recorded (see section 2.1.3.11), though it seems that there are many more in the Sinai library and mostly if not exclusively in the Arabic and Syriac manuscripts.

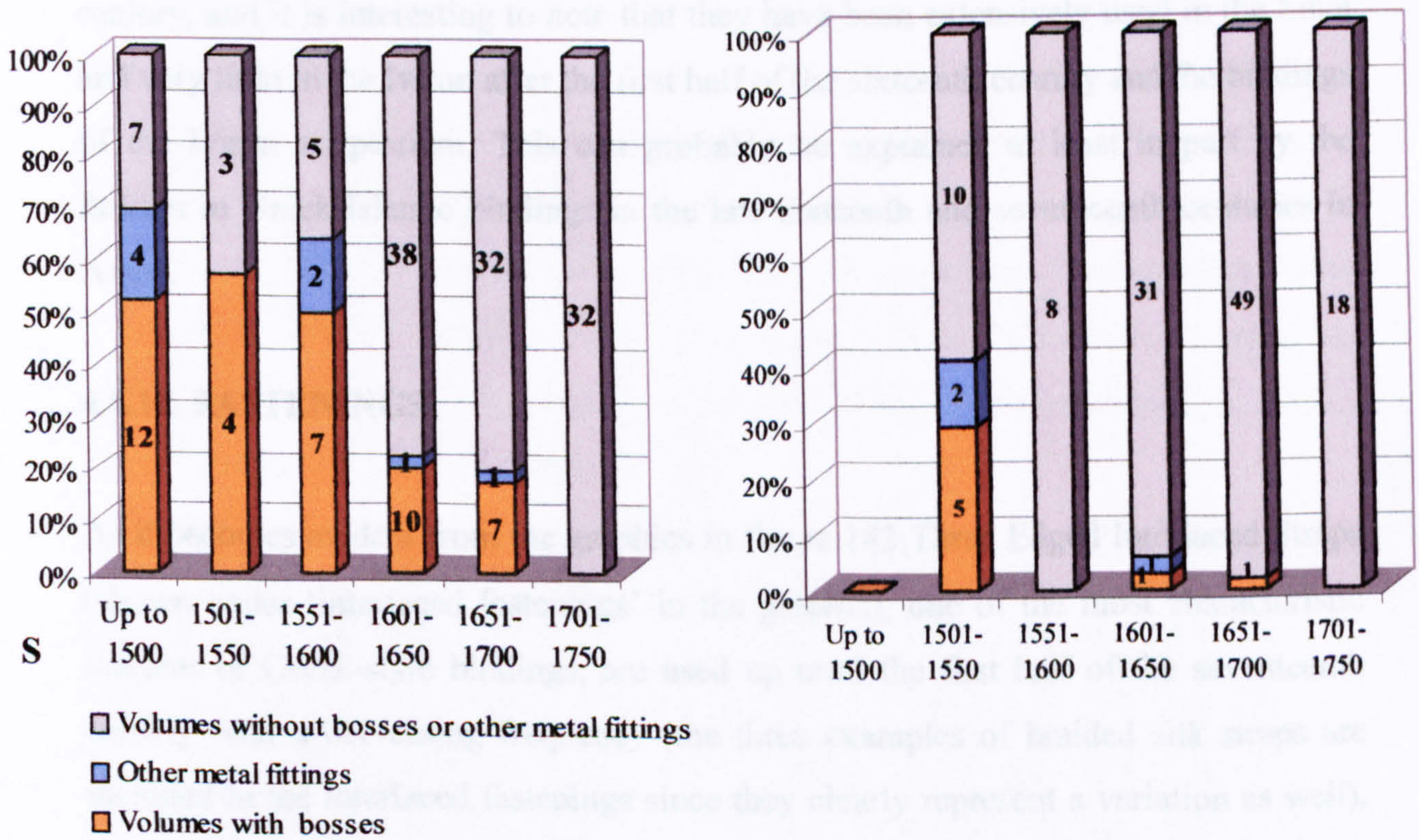


Figure 142. Graphics showing the percentages of the volumes with bosses, with metal fittings other than bosses and those without in the bindings of the two libraries of the research.

Bosses are always nailed on both boards and the same is true for the metal corners recorded in **S. 803** of the Elusive atelier, while other metal fittings can be nailed either on one or on both boards. The former are normally volumes where a single cross is nailed on the front board, while the latter have more complex and rich metal fittings

like the two examples recorded among the Cretan bindings of the first half of the fifteenth century (see section 2.1.2.9) and **S. 216** of the Klimis bindings. Nevertheless in nine out of the 11 volumes with other metal fittings a cross is nailed, normally on the front board, which can be plain or exceptionally decorated and worked. In two bindings **S. A. 76** of the Klimis bindings and **S. 1991** of the Antioch bindings, the cross-shape metal fittings are nailed on the left and the right board respectively which in both volumes represent the back board. Seven out of the 11 volumes with other metal fittings, all of them in the Sinai library, contain the Four Gospels and as said before this is probably one of the reasons for their uncommonly rich decorative embellishment (see section 2.1.2.9). Instead, the two sixteenth–century bindings from the Iviron Scriptorium, in which a cross is nailed on their front board contain liturgical texts.

No bindings with bosses are recorded later than the third quarter of the seventeenth century, and it is interesting to note that they have been extensively used in the Sinai and very little in the Iviron after the first half of the sixteenth century and the bindings of the Iviron scriptorium. This can probably be explained at least in part by the fashion in Greek-Islamic bindings in the late sixteenth and seventeenth centuries in Athos.

4.1.10. FASTENINGS

As it becomes evident from the graphics in figure 143 Three Edged Interlaced Straps (shown under 'interlaced fastenings' in the graphic), one of the most characteristic features of Greek-style bindings, are used up until the first half of the seventeenth century with a decreasing frequency (the three examples of braided silk straps are included in the interlaced fastenings since they clearly represent a variation as well). This tendency is followed by the gradual increase of the use of other types of fastenings and the use of no fastenings at all. By the first half of the eighteenth century no interlaced strap fastenings are recorded in either of the two libraries while a considerable number of bindings, almost half in the Sinai, have no fastenings at all. It is characteristic that up until the end of the sixteenth century almost all the bindings had fastenings. The number and the arrangement of interlaced leather strap fastenings is shown in the graphics in figure 144. From these results that while in the Sinai the arrangement 0-1-0 is commonly used with an increasing frequency up until the second

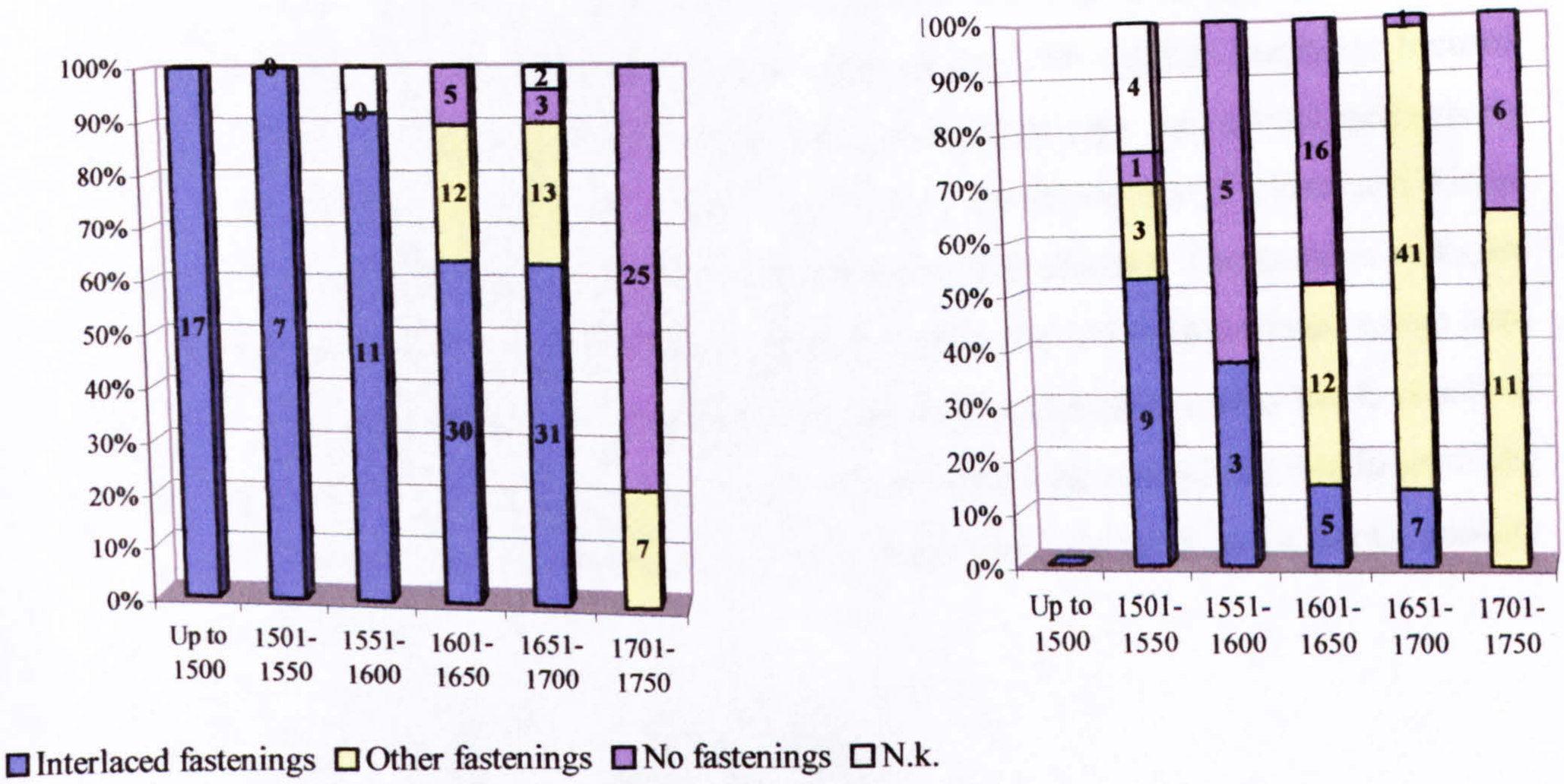


FIGURE 143.

half of the seventeenth century, probably a sign of simplification, in the Iviron no volume with this simple arrangement has been recorded. In both libraries the most extensively used arrangement is the 0-2-0, while the arrangement 1-2-1- is occasionally found in earlier periods, and though in some cases it is probably related with the big format of a volume (like in **I. 46**, a folio bound in the Iviron Scriptorium atelier) in other cases it is evidently not so (like in **S. 165**, a 16mo bound in Crete in the first half of the fifteenth century).

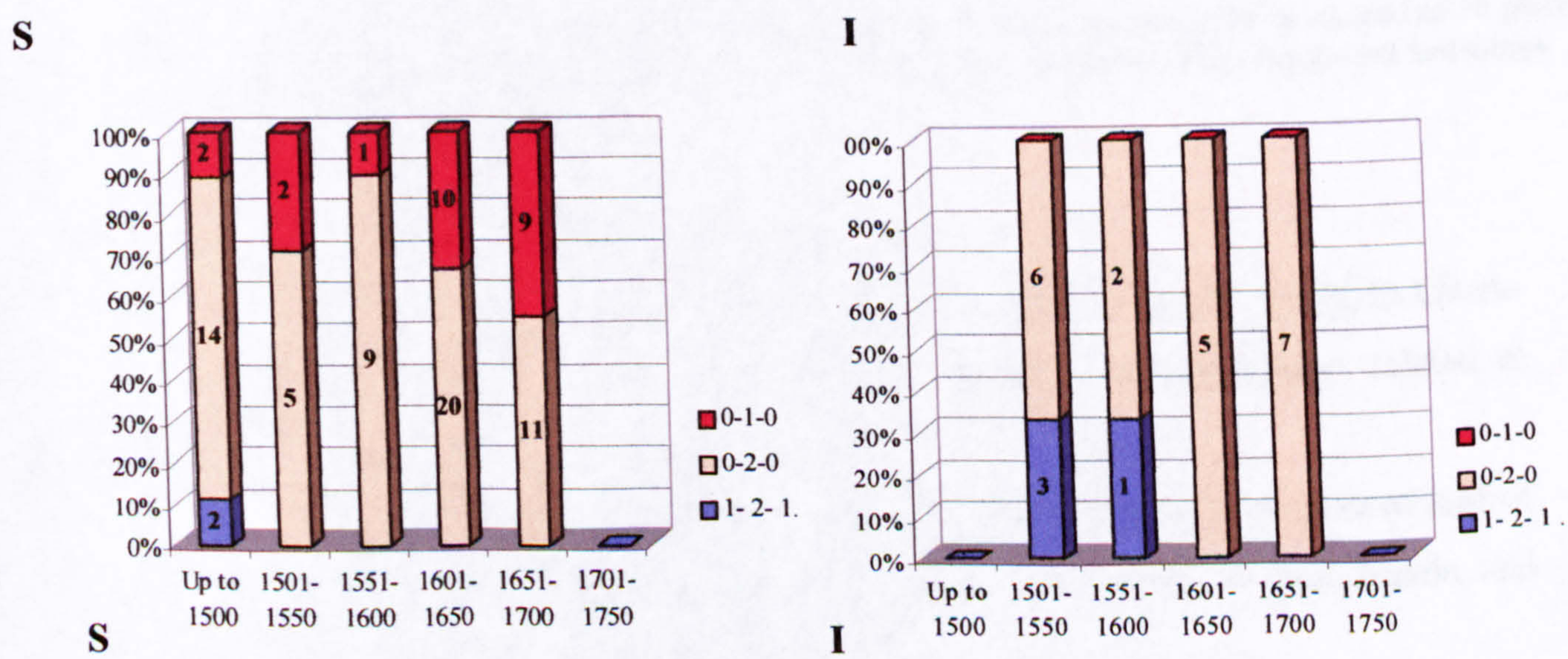


Figure 144. Graphics showing the percentages of the three different types of the arrangement of the fastenings in the bindings of the two libraries of the research.

While in the Sinai there is no clear preference for a specific alternative for the decreasing interlaced leather strap fastenings, in the Iviron things are more focused and gradually fastenings of the Hook and Catch Plate type are almost exclusively used, though another similar in appearance type, the Holed Metal Sheet and Pin in used extensively in the second half of the seventeenth century. The graphic in figure 145 shows the percentage of these fastenings within the 'other fastenings' group seen in the graphic of figure 143, and their gradual almost exclusive use by the first half of the eighteenth century. These fastenings are related to the spread that bindings of the type seen in the Cosmas Macedon atelier had from the mid seventeenth century onward in Athos.

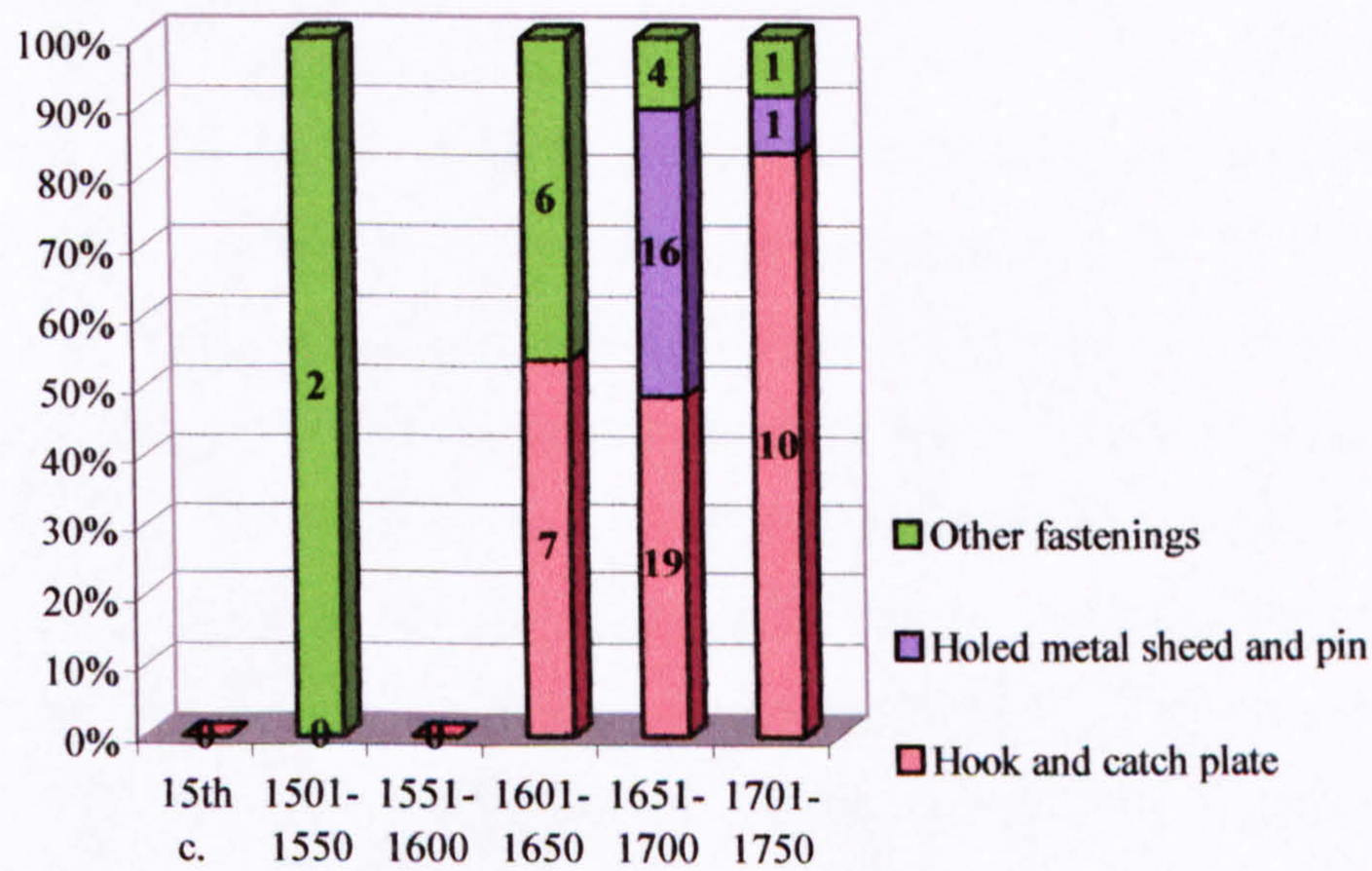


Figure 145. Graphic showing the percentages of the 'holed metal sheet and pin', the 'hook and catch plate', and other fastenings within the 66 bindings of the Iviron library with other than interlaced fastenings.

There are a few other types of fastenings encountered:

1. Simple leather straps laced through the boards, are usually found in Greek-Islamic bindings but also in the New Library bindings, always related to pasteboards.
2. Simple textile ribbon straps recorded in five bindings from the second half of the seventeenth century and again related exclusively to pasteboards and mostly to Greek-Islamic bindings.
3. Single, two or three edges leather straps without any rings but pierced as to fit on a pin. These fastenings have been occasionally recorded among the Sinai and the Iviron library bindings in the first half of the seventeenth century or

later and are related to volumes bound in wooden boards. They could be considered as a simplified, transitional version of the typical interlaced fastenings, often clearly substitutes of the original ones.

4. Some isolated examples like the two edged interlaced strap with the Turk's-head knot recorded in **I. 1168** of the Papaneophitos bindings and the metal hook fastening of **S. 1996** of the Raithos atelier.

Fastenings are generally related with the use of wooden boards, all interlaced leather fastenings are found in volumes bound in wooden boards, and the fact that two third of the volumes bound in the Iviron in the first half of the eighteenth century still have fastenings while only half in the Sinai can probably be related with the survival of wooden boards in the former and its abandon in the latter.

4.2. Conclusions

'From the end of the 17th century and especially during the 18th, the way to bind books changes. Millboard is now used for the boards instead of wood, and instead of the many small lozenge etc impressed motifs large representations are preferred, like the Crucifixion or the Annunciation in the centre and the four Evangelists or Seraphims in the corners. Many times the sewing is not recessed but is visibly raised along the spine under the cover. The bindings of this kind are also often precious and very beautiful.'

(Πολίτης 1961, p. 48)

Considering what has been said before, mainly in section 4.1. we will try to give a chronological outline of the major changes occurred in the bookbinding structures of the post-Byzantine era from the late fifteenth to the early eighteenth century based on the collections of the two libraries of the research.

As far as the bookbinding technique is concerned, the sixteenth century in the bindings from the St. Catherine's monastery represents quite literally a precise continuation of the Greek-style technique with signs of influence from the west mostly in the decoration of the bindings (the Klimis bindings). In the Iviron monastery instead the first signs of divergence are visible already from the last quarter of the century with the use of the Greek-Islamic bindings which to an extent are probably related with the fashion for decorated liturgical manuscripts of the school of Loukas Bozau and Mathaios Mireon . These bindings, with a strong Islamic influence which were widely used in the Athonite community were never really adopted in the Sinai, the few example recorded, together with a few examples of Islamic bindings on Greek manuscripts are all imports from outside as gifts and donations. Some other features such as the use of laminated boards in at least three bindings, the use of a preliminary endband sewing, the use of board tab markers, are all features which can hardly be fully appreciated because of the lack of enough evidence of bindings from the Byzantine period. As far as the laminated boards are concerned it is certain that some kind of light binding structure will have probably been used for more informal text-blocks but there is no evidence to this end so far. The board tab markers on the other hand, encountered both in the Sinai and the Iviron libraries, seem to have been a fairly widespread habit already identifiable in Coptic binding structures, from which probably derive, but again their use needs to be further investigated.

The seventeenth century proved to be, as Politis already guessed (see previous page), the turning point in the tradition of Greek-style bindings. In the course of this century Greek-style bindings are irreversibly abandoned in both areas, in the Iviron not a single example recorded in the second half of the century, in the Sinai instead some of them are still found as isolated examples in the Elusive and the Raithos ateliers, often hybridised (see for example the three Greek-style bindings with supports of the Raithos atelier, S. 76, S. 88, S. 1856), and probably dated no later than the third quarter of the century. As said above a major difference is the adoption of the Greek-Islamic bindings, which were much appreciated in Athos but clearly not so in the Sinai. A clear gradual change is evident in all major features of the bindings. In the first half supported sewing appears and is exclusively used by the beginning of the next century. The number of sewing stations used seems to be related to the type of sewing: it is clearly evident that the gradual establishment of supported sewing favoured an increase in the number of sewing stations on the basis of simple mechanical considerations. While slight differences in the material used for the sewing supports are recorded in the second half of the century between the two libraries, by the beginning of the eighteenth century cord supports are almost exclusively used in both areas. Also of interest is the fact that recessed supports where never widely used, only a few isolated examples have been recorded in the Iviron library. Spine lining is found in all the bound volumes recorded. In the first half of the century only very few examples are recorded with panel spine lining, the rule is an all along lining. In the second half a difference is evident between the two libraries which becomes even more marked in the first half of the eighteenth century: while in the Sinai all-along spine lining is still the rule in the Iviron panel spine lining is gradually established instead.

Excluding the laminated boards recorded in two bindings of the Iviron scriptorium, real pasteboards are firstly recorded around the end of the sixteenth century and are widely used in the seventeenth century in the Iviron, always related with the Greek-Islamic bindings, but they are gradually abandoned by the end of the century. In the Sinai instead pasteboards are established a bit latter though by the eighteenth century they completely supplant the wooden boards. This difference is related first to the different acceptance of the Greek-Islamic bindings and secondly to the environment itself, wood been scarce in the Sinai never really made a comeback once pasteboards were established. Board edge grooves are abandoned in the Iviron by the first half of

the century and about the third quarter in the Sinai. Projecting boards appear in both libraries by the first half of the century, the two examples recorded in the Iviron are due to imported bindings from Wallachia. By the beginning of the eighteenth century they are clearly prevailing in both libraries. They are not related to the material of the boards. The system used for the attachment between the text-blocks and the boards is related to the material of the boards and the type of binding, II Uns system was never really used in the Sinai. Greek style endbands, either simple or compound are not used latter than the end of the sixteenth century in the Iviron and not latter than the third quarter of the seventeenth in the Sinai. Simple endbands are almost completely abandoned from the first half of the century and no less than seven different types of secondary sewing have been recorded in both libraries, often used in the context of the same atelier. This pluralism is quite marked in the second half of the century in both libraries and by the first half of the next century the choice is clearly restricted. This same tendency is also evident in the Sinai in the primary sewing of the endbands but not quite so in the Iviron where basically only two different types have been recorded. The projection of the endbands onto the boards is a feature which was not easily abandoned and from the data of the research it is apparent that this was still the rule by the first half of the eighteenth century though using various anchoring systems which conform to the different material and dimensions of the boards. Protruding endbands also gradually decline, none recorded in the eighteenth century in Sinai and only a few in the Iviron. No clear change in the percentage of the volumes with markers resulted from this research. Nevertheless it is apparent that compound string markers were gradually preferred from simple string markers, tab markers were abandoned by the first half of the sixteenth century.

The decoration of the bindings was apparently a custom never really abandoned, though it is evident that using different patterns for each of the two boards is a feature of the earlier bindings which was abandoned by the end of the seventeenth century. Gold tooling is found to have been used only occasionally in both libraries and certainly after the middle of the century. Silver tooling and painted decoration are also only occasionally found, the former as an influence from Wallachia and Russia. Therefore blind tooling remained the rule throughout the period we are dealing with. Nevertheless a clear change is evident in the type of tools used for the decoration: creasers and concentric rings tools are abandoned definitively by the end of the seventeenth century, the use of centrepieces increases with time and cornerpieces are

used only in the Iviron bindings. Furthermore the number of different tools used to decorate one single binding follows, generally speaking, the same slightly decreasing tendency in both libraries.

In both libraries the use of bosses is abandoned by the third quarter of the seventeenth century and the same is true for the interlaced leather fastenings. Though from the second half of the sixteenth century onward bindings without any fastenings are increasingly found, apparently still by the eighteenth century most of the bindings still preserve some kind of fastenings in the Iviron while in the Sinai in the same period they are almost completely abandoned.

The data exposed and features such as the increase in the number of sewing stations, the preference for compound endbands and markers, the basically unchanged tendency to decorate the bindings, all indicate that we are dealing with an evolution rather than a decline of the bookbinding craft in the post-Byzantine monastic communities. Nevertheless it is apparent in most of the features described in this part of the thesis that changes in the Sinai occurred as a rule latter than in the Iviron which proved to be more open to new techniques and tendencies.

Change, the adoption of new techniques and the abandon of the old ones, proved to be a process related to two factors: the geographical position of each of the two monastic communities and the resulting relation with the outside world and second the conservatism of each one of the two communities, in part explained by its geographical position. In the Iviron it is apparent that the centres of influence are mostly the hegemonies of Wallachia, Moldavia and Russia, while in Sinai Crete and Venice, in both cases the major centres of financial income and cultural influence. In both monasteries the seventeenth century is a fertile period of experimentation and innovation. Nevertheless the isolation of the Sinai and of the Orthodox populations in the middle of the Arabic world for centuries resulted in a marked scepticism and reserve toward the form of the book. Though there are isolated examples which support the contrary it is clearly evident that in the Sinai where Islamic bindings will have been clearly known and appreciated at least for their decorative qualities, non of their features, technical and decorative has been adopted. The bindings of the Antioch ateliers and the history of Simeon Basam are eloquent examples to this, already suspected and expressed by Sonderkamp (1991, p. 439).

A few things need to be said about the effectiveness of the survey form. As it will have become evident only a part of the various features included and described in the survey form (and consequently recorded for each binding surveyed), have been actually elaborated, processed, and fully described, both in the description of the various ateliers and the statistical analysis in section 4.1. This is for the following reasons:

1. The limitation in the number of words of the final text of the thesis, which implied a selective, but yet comprehensive and representative, consideration of the data, accumulated through the research.
2. The nature of the research, which focused from the very beginning to the main features and the major changes, occurred in the period and the areas defined by its aims. Since it was not but at an advanced stage of the research that these main features and major changes became evident, it was necessary from the beginning to record all the potential change-bearer features in order to avoid missing any of them which might prove important at a latter stage.
3. Certain features proved to be inappropriate for statistical analysis because they either follow no consistency even among the work of the same atelier or even binder (for example the arrangement of the endleaves, the corner mitre, the extension of the endbands onto the boards in Greek-style bindings, the way the pastedowns were pasted on the boards etc), because they proved to present no significant variation in time and place (for example the trimming of the turn-ins, the thickness of the supports, the thickness of the spine lining, the way the title has been written on the books, the treatment of the cover in the spine area, the turn-ins cut etc), or because significant gaps were found in the information gathered (for example the use or not of preliminary sewing, the tool marks left from the trimming of the text-blocks, and the working of the wooden boards). Therefore, fro these features no clear pattern was evident, that could be related to areas, eras, or persons. Nevertheless this does not diminish their value but only impedes their statistical elaboration.
4. Certain features though potentially of value proved to require longer survey times and possibly a more experienced eye. This is particularly true for the precise number of the gatherings and their construction, the identification of the various threads and the description of their twist and ply, the weave of the spine lining, the identification of the various leathers etc.