

HEADBANDS =

Decoration or Reinforcement?

Bookbinders often get the following questions:

What are those little, colorful headbands on the top and bottom of the spine?

Do they offer strength to a binding or are their functions simply a matter of aesthetics?

What motivated bookbinders to use headbands in the first place? Are they necessary for library binding?

In order to satisfy these valid questions, one must look back at the history of bookbinding.

In the fourth to fifth centuries, as soon as the techniques of folded sheets were adapted, most of the books bound were sewn through the fold. In order to fasten the folded sections together with thread, leather and parchment strips were used. After sewing around these strips, the ends, called "thongs," were then laced through the wooden boards.

As time moved on, binders began to sew onto raised cords and soon found that if a cord or a strip of leather was used, or other materials at the head and tail, the binding would actually be reinforced. This appeared to be a more efficient method of book sewing since this technique required no kettle stitch.

Keep in mind that in earlier times, book blocks were not trimmed. Even when bookbinders started trimming, they maintained this method of sewing around the head and tail bands. A small portion of the corners in the bind fold were cut away so as not to damage the sewing by trimming off the head and tail bands. This procedure protected the functional and ornamental bands. In days gone by, bookbinders used to refer to "headbands" and "tail-bands." These days, they are called "headbands" even though they are used on the head and tail of a book block.

By the fifteenth century, few bookbinders began to tie down



Bookbinders often compete with shaping the headcaps over sewn headbands

A Hand Bookbinders Sewn-On Headbands

Some time ago, while visiting the Gutenberg Museum in Mainz, Germany, I saw a show case of hand-sewn or laced headbands. It looked as though every master bookbinder tried to outdo the other as there were more than one-hundred different styles of sewn or laced headbands. Like collecting stamps, there are people who love unusual challenges!

This was a simply fascinating experience. Single rolls covered with multiple, complimentary colors of silk threads included one, two or more smaller beads that enhanced the top or bottom of the primary headband. Rolls, flexible sticks of wood, or flat strips for special effects were used for the core. As in any trade that requires advanced skills, one could look for a variety of sewing technique examples. No doubt, there must be a huge variety of button hole stitch techniques that have similarities to sewn-on headbands.

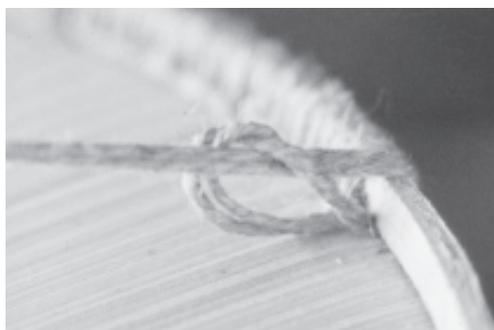
During my employment as a young bookbinding apprentice in Zurich, Switzerland, the bindery had an unusual order - 250 volumes were to be bound into parchment. My task was to sew, by hand, 500 headbands with blue and white silk thread. This turned out to be a great learning experience as it took about twenty minutes to finish a single book. Upon completion, I was trained for life!

Needless to say, there are a variety of techniques for sewing headbands. This information can be found in virtually every advanced book on hand

headbands at every section. A good indication of this is a facsimile binding of a Gutenberg Bible (1000 copies, Idion Verlag, Munich) where everything was done as close as possible to the original. Binders simply laced a thread around a strip. The strips were tied down at the first and last sewn sections and then only every 1/4 to 1/2 inches. Later, bookbinders began using colorful, silk threads which made the headbands more ornamental rather than being a functional part of a binding.

Glued-on headbands became popular in the late sixteenth and seventeenth centuries. Look through your collection and you may see some headbands made out of old shirts! Blue and white and red and white stripes were the most popular. Since commercial headbands were not available, the binder simply cut strips approx. 1 1/2 inch wide, applied glue or paste, and wrapped the strip around a cord. Glued onto the spine and cut to the appropriate width, this did the job.

When I once instructed a bookbinding class on this and pointed to one of the participant's red and white striped shirts, the student took off his shirt, shredded it, and asked me to show the class how it is done. Needless to say, this brought about quite a few good laughs and we had enough cloth for handmade headband demos for a decade!



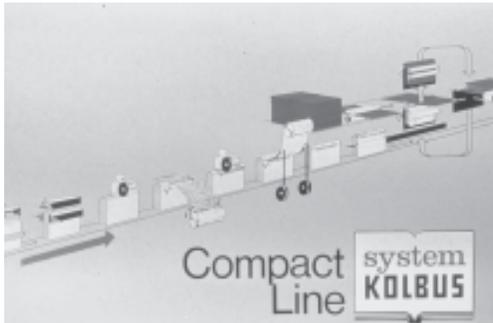
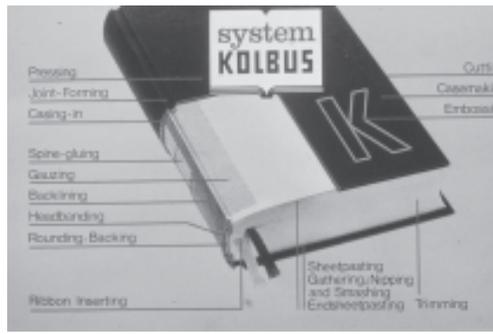
Hand sewing/lacing a Gutenberg Facsimile binding

bookbinding. Having had the task of sewing 500 headbands, I used a relatively simple technique that combined sewing and lacing using two needles and, if desired, two different colored silk threads at an appropriate length—ends tied together. One threaded needle was inserted through the center of the very first section which was often, for fancy hand bound bindings, a multiple leaf end paper construction. Using the hole of the kettle stitch, approximately 12 to 15mm from the top, the needle would be reinserted from the spine which left the ends and knot on the spine. The trimmed, often gilded book block was then placed into a finishing press. For a support or core, leather scraps varying in thickness were used. A piece of parchment was mounted onto the leather allowing for a solid, yet flexible material around which the threads could be laced. Depending on the size of the book to be bound, determined by the edges of the covers, 2, 3 or 4 mm wide strips were cut. While the first thread was attached to the first section, the strip was placed into position and the headband lacing began. A pin stuck into the book vertically held the strip in place and the two threads were then moved back and forth, crossing each other. The trick was to maintain even tension to form an even bead. Every 1/4 to 3/8 inch, the needle was moved down into the spine. This was done to tie the headband down onto the book block. When finished, the remaining core material was cut off, the headband received a small amount of PVA glue and then set in place.

As I previously stated, there are many techniques. My father, a master bookbinder, used a piece of cord covered with shirting that extended down the spine. After gluing it to the spine, he sewed every stitch going through the shirting, then brought the thread around. One advantage of this was that the core stayed in place, but this procedure took more time than lacing.

Protecting the Headcaps

I have attended many preservation workshops in the United States and Canada. During these workshops, preservation librarians repeatedly demonstrated how to extract a book



Top: Terminology of an Edition Bound Hardcover Book.

Bottom: Schematic of an Edition Hardcover Binding Line, the center showing application of headbands from rolls.

from a tightly packed book shelf. The instructions included pushing the books remaining on the shelf to the side and grabbing the book to be removed in the center. Unfortunately, this is not always done and disastrous results have taken place in rare book libraries as a result. Most often, a student/reader will use his or her index finger, place it on top of the spine and pull. If the leather is already brittle, the spine will collapse and the leather will pull down the spine. The guilty person may then move the book to another place and the rare book library is stuck with another expensive repair job.

This is why some dedicated preservation bookbinders, when rebinding or restoring a valuable book, insist on a sewn-on headband, at least on the top. A sewn-on headband offers protection against such unfortunate “spine-pull” incidents. A book published by the Library of Congress in 1982, *Bookbinding and the Conservation of Books*, describes such incidents on page 130: “When the headband is an integral part of the book, it serves the practical purpose of taking up much of the strain from the spine covering when the book is pulled from the shelf in an *usual* manner.”

Commercial Headbands

Edition bound hardcover books usually feature decorative headbands. Although not an absolute necessity, the decorative headbands add to the appearance of a book, giving it a tailored finish. These headbands serve a purpose. The back-lining materials used, such as gauze and reinforcing papers, create a slight build-up. If no headbands are used, the head and tail on the spine will show a gap of approx. 1/16 inch. Other than this, they have no function other than to enhance the aesthetics of a hard cover binding.

Commercially made headbands are purchased in large rolls which are relatively stiff cotton tapes approximately 5/8 inch wide. One side features a silk-like, decorative border, that could be white, red and gold or any other color or combinations of color. The headbands are stiff so that they can be transferred successfully by mechanical devices on a commercial lining-up machine.

These days, commercial edition bookbinding machines are capable of processing approximately sixty books a minute. After trimming three sides, rounding and backing or leaving the spine flat, the book block first receives a coat of adhesive over the entire spine. Thereafter, gauze is mounted over the spine and extended onto the end papers. This will connect the book block with the covers. If headbands are desired, a roll of a special lining paper is slit to the height of the trimmed book block. Thereafter, the head and tail headbands are mounted onto the lining paper in a continuous web. In the lining-up process, the spine, after gauze application, receives a second coat of adhesive. The web of lining paper with the headbands mounted onto the ends is cut to the appropriate width of the spine and mounted onto the book block. The decorative part of the headbands is placed on top of the trimmed edges, head and tail. After an in-line rub down, the book blocks are mounted into the hardcover cases. Joint creasing and pressing follows. The final product is a well bound book with the headband colors giving it a finished touch while hiding the usual gap that would show if no headbands were used. Unfortunately, some publishing production managers eliminate the use of headbands to save money. Worse, some elect to have a

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headband mounted only on the top, causing bookbinders many headaches since this changes the radius of the spine. The final results are often problems with casing-in, which means having uneven or crooked squares.

Library Binding and Headbands

Most library bindings have no headbands. In the past, library binders used other methods to hide the gap on the head and tail. When cases for library bound books were made by hand, a cord was inserted on the top and bottom of the inlay which is the flexible board used on the spine. This created a headcap, which hid the unfortunate gap caused by the heavy duty back lining materials. Some binders claimed that such an inserted cord reinforced their library bindings. The specified cloth, Grade F buckram, passes all spine pull tests. With the invention of case-making machines for library binding, the insertion of cords was no longer a valid

option. Automation is the key to lower prices and with some exceptions, cords are no longer used on cases made for library binding. However, there are libraries that insist on glued-on headbands. As each book is different in size and thickness, this can be a difficult, labor intensive, and therefore relatively expensive task. To “close the gap,” a major machinery supplier for library binding, Mekatronics, came forward with a new machine for headband applications that eliminated the costly operation of manually applying headbands one by one. A self-adjusting, semi-automatic machine for applying headbands to book blocks of different sizes and thickness requires no make-ready or set-up. The machine automatically measures the thickness, and mounts and cuts a headband with ultimate precision - ideal for library or on-demand binding.

To finalize our discussion and answer the question, “Do headbands reinforce

bindings”? The answer is **yes** if a headband is sewn onto the book block and **no** if a headband is glued on.

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