



LIS/1/CT/02
UNIT: 4
INDEXING PROCESS

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BINDING PROCESS

Binding, and for that matter re-binding of a library book poses certain constant problems, which the librarian has to tackle satisfactorily. The problems arise because of the varied nature of the reading materials, their physical structure, condition, and, also the nature, extent and intensity of their use.

Added to these, is the perennial financial problem, which most of our libraries suffer from. This problem often severely restricts the binding activity in a library, especially because of the rising cost of binding materials and labour.

All these problems make it imperative for the librarian to take discreet and judicious decisions as to whether a particular volume is to be bound or rebound at all or not; if so, what kind of binding - full, half or quarter leather, cloth or rexine or simple paper, binding should be technically appropriate and economically feasible.

Some of the criteria, among others, for deciding whether a particular volume should be bound or not, are:

- 📖 The intrinsic value of its content: present and anticipated;
- 📖 Existing physical condition of the volume;
- 📖 What kind of readers will use it, in what way, and how frequently;
- 📖 Can the volume be replaced easily now or in near future, and if so;
- 📖 Whether it would be cheaper to buy a new copy than to rebind the old one.

Each piece of material has to be weighed in terms of the above criteria. The basic guiding principle should be to get the maximum value of the money spent in binding/rebinding. On taking the appropriate decisions in this respect, the volume concerned is passed on to the binder with appropriate instructions for the required type of binding.

BINDING PROCESS

Library binding process proceeds according to the following steps:

Preparation of Material for Binding

- i) **Folding:** As has been stated in the earlier Unit, in machine binding the sheets of the printed pages are folded by the folding machine in signatures (Sections) of 16 pages, which is very common, or of 8, 12 and 32 depending on the measurement of the broad sheet used in printing and on the desired format of the book. In the process of hand binding of a freshly printed book, folding is done by hand. In rebinding of an already folded bound volume, which has to be done by hand only, the process of folding actually means refolding if the original folding of certain pages had not been done correctly. This is necessary to avoid flaws in the rebound volume.
- ii) **Gathering:** The signatures (sections) of the folded or refolded sheets, as the case may be, are gathered together to ensure that one section below the other is in correct sequence. In the case all superfluous pages, such as advertisements etc., are to be discarded, and all wire-stitching, if any, removed at this stage before gathering.
- iii) **Collation:** To prepare a volume for binding it is important that it is collated properly to ensure correct sequence of pagination, and that no page is either defective or missing. Collation of journal volumes demands additional care because the pagination of issues of a volume of some journals run in issue-wise separate sequences. In the case of a journal volume it is, therefore, important, not only to be sure that none of the pages are damaged, missing or mutilated, but also to ensure that all the issues of the volume are intact and arranged in correct sequence. It is also important to ensure that each volume has the title page and the index, the former to be included in the beginning of the volume, and the latter at the end. For those journals which do not publish volume-wise index, the contents of each issue are to be collected, arranged, sequentially and included in the volume.

iv) **Repairing**: If any defect is noticed in the collation process, it has to be rectified. The process of repairing may involve:

Flattening of wrinkles: This can be achieved by moistening the wrinkled page with a wet sponge and flattening with a moderately heated iron.

Guarding: This is to strengthen the folds or the edges of the damaged leaves by pasting thin tissue paper or linen strips. This should, however, be done very judiciously because excessive guarding will produce a much swollen spine, which in turn will produce a Sizing, weak binding, susceptible to damage in handling.

washing, mending: If the surface of paper of an old volume for rebinding appears to be of weak; woolly texture, it should be given a sizing; if there are stains, the paper should be washed in an appropriate chemical solution; and if certain leaves are torn, these should be mended. There are prescribed archival techniques to take care of such jobs. Except for routine mending; all such jobs involving precious volumes should be got undertaken Under the supervision of a qualified Archivist.

Sewing

After proper collation and necessary repairing, the collected signatures are then placed on a 'sewing frame' with sheets of end-papers on the top and the bottom. The back of the collected sections are then marked by pencil lines to guide as to the location of each band. This process is called "marking up". Instead of simple 'marking up' process, sometimes 'saw-in' method is adopted. In this process saw-cuts are made on the back to accommodate the bands, the sewing thread and its knots. This method is generally avoided now-a-days because saw-cuts weaken the back to an extent, and what is more important, saw-cut stitching hampers opening of the volume right up to the back.

Forwarding: Cutting and Trimming

When all the signatures are sewn, as above, the cords are cut, so that short lengths extend at each side. These are to be used to attach the boards later. These short lengths of cord extending at each side are called 'slips'. The volume is then placed on a machine called, a Laying or Cutting Press. Keeping the volume properly clamped and under pressure, its edges are neatly trimmed.

Rounding and Backing

After trimming of the edges, the volume is clamped in such a way that the spine projects over the edge of the press. It is then rounded and backed to give the spine a smooth round shape. This 'backing process' is to create a groove on both sides of the back of the volume. The depth of these grooves should be just enough to accommodate the thickness of the covering boards, to be used. This rounding and backing processes are meant to control swelling of the spine of the volume caused by the stitching process.

Burnishing, Gilding, Colouring of Edges

In the earlier days, these processes were applied at this stage, to give a pleasant look to the bound volume.

Burnishing: Edges of the volume were dipped in prepared colours, mixed with gum. After the excess gum was wiped off, the edges were burnished. This process gave a pleasant look to the edges.

Gilding: The edges of the volume were sized heavily with a preparation of albumen on which thin sheets of gold-leaf were applied. When dry, it was burnished to give a bright golden look to the edges of the volume.

Coloured edges: Aniline colours mixed with alcohol was applied to the edges of the volume under pressure. When dry, the coloured edges were burnished. Today, these processes of decorating the edges of the volume are applied very rarely and only in very special cases.

Fixing Head-bands

While pulling out a volume from the shelf, the user does so by applying hill figures at the top edge of the spine of the volume. This gradually reduced the strength of the top-edge of the spine. It starts sagging and may eventually crack. To protect the volume against this kind of damage to the binding, headbands are affixed at the top- and bottom of the spine. These are generally made of strong cotton, or coloured silk cords. Such, head band's were very ornamental in the past, but now-a-days these are not as decorative as before.

Cutting and Attaching Boards, Gluing

Two pieces of board of selected quality, one for each side of the volume, are now cut to size. The size of the pieces should be such that there are projected ends at the head (top), foot (bottom), and fore edge. The pieces of board so cut are called 'squared'. The board-pieces are now laid on the book and are marked with pencil according to the positions where the slips (vertically set cords fixed to the spine: see 'sewing') are to be inserted. Pair of holes is made by the binder's bodkin for the purpose, at appropriate locations so that the slip-ends can be inserted (laced) through them. The free ends of the inserted slips are then cut to appropriate short lengths and hammered, so that these are riveted into the board. If, instead of cord, tapes are used, it becomes necessary to use split boards. The tape ends are inserted into the layers of the split board, which in turn are glued together, with the tape ends embedded in between the two layers.

Gluing up:. After attaching the boards, the back along with the boards is screwed up on the laying press and hot, but not very thick, glue is applied to the spine in such a way that the glue reaches every section uniformly.

Covering

After the boards have been fixed to the volume and its spine glued and dried, the boards are covered wholly or partially by leather, cloth, rexine, leather-like plastic or paper, whichever is selected as per requirement. If the back is fully covered along with full, $\frac{1}{2}$ or $\frac{1}{4}$ of the cardboard, the binding, depending on the covering material used, is known as Quarter, half and full' leather, cloth, rexine (etc.) bound volume. Even in case of volumes other than full-leather binding (having $\frac{1}{2}$ or $\frac{1}{4}$ leather binding) the corners of the cardboard are given leather covering for better protection of the corners, which are susceptible to damage.

If the covering material is not attached directly to the spine we have a bound volume with a hollow back. Otherwise we have the volume with flexible back. Flexible back is better, because it will make the pages of the two halves of the open volume to lie flat.

Finishing: Lettering and Ornamentation

This is the last step, where the end-papers are pasted on to the cardboards and thereafter the bound book is put -under some pressure so that a smooth and curve less binding is ensured.

Finishing also involves lettering and decoration with decoration design of the bound volume. In gold-lettering (see 11.6 of Unit 11) lettering done by using gold leaf, for silver lettering, silver or palladium fill is used. The binder's metal type are set up in a pallet or a stick; the types are heated; the heated type stick is passed on the spine the front-board on which gold, silver or palladium foil is placed, If any design tooling is wanted, design is drawn on paper and it is subjected .to tooling.

Now-a-days there is another method of lettering by inscribing individual letters by an electric stylus. In this process, the leather is smoothened by a heated polishing iron on its surface and the surface cleaned before lettering.

STANDARDS FOR LIBRARY BINDING

The standards for library binding have two aspects:

- i) Quality of materials used; and
- ii) The workmanship

There are a number of prescribed standards covering various aspects of binding. Some of these standards are:

- a) *American Standards*: Durable hardcover binding for books; prepared by the American National Standards Institute (ANSI) and National Information Standards Organisation (NISO). This set of Standards (ANSI/NISO Z39.78-2000) incorporates those prescribed earlier by the Joint Committee of the American Library Association and the Library Binding Institute. ANSI/NISO Z39.78-2000 by National Information Standards Organisation and the Library Binding Institute.
- b) *British Standards*: Created by the British Standards Institute (BSI), 1980 with amendment (2002). These Standards take note of the various recommendations made in Brown's Manual of Library Economy and other standard British books on Library binding.
- c) *Indian Standards*: Code of practice for reinforced binding of library books and periodicals IS 3050 (1965) with amendment of February 1968. This incorporates the recommendations made by S.R. Ranganathan in his "Social Bibliography or Physical Bibliography for Librarians". This was further reaffirmed in 2003.

Standards for Library Binding

- ✓ Assembling
- ✓ Reinforcing
- ✓ Affixing Pockets, End-papers and Tapes
- ✓ Sewing.
- ✓ Boards
- ✓ Forwarding
- ✓ Covering and Fixing Headband
- ✓ Finishing
- ✓ Styles and Colour

Reference:-

1.<http://egyankosh.ac.in>

Thanks