

M A N U A L  
O F  
B O O K M E N D I N G   A N D   B O O K B I N D I N G

STATEWIDE LIBRARY PROJECT

4.5. W O R K   P R O J E C T S   A D M I N I S T R A T I O N

in

K E N T U C K Y

PROFESSIONAL AND SERVICE DIVISION

E. Fullerton, Director

Prepared by

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State Supervisor

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Project Supervisor  
in charge of Bookmending

Z  
271.3  
.R45  
U550  
1930

GAYLAMOUNT  
PAMPHLET BINDER  
~  
Manufactured by  
GAYLORD BROS. Inc.  
Syracuse, N. Y.  
Stockton, Calif.

Manual of Bookmending  
and Bookbinding

U. S. Work Projects Administration. Ky.

kg 025.7 Un3

United States. Work Projects  
Manual of bookmending and boo  
Z271.3.R45 U550 1930

PROJECT INVENTORY FORM

To be used for a record of materials on hand and as an order form for DISTRICT \_\_\_\_\_ supplies needed.

DATE \_\_\_\_\_

COUNTY \_\_\_\_\_

No. of book repair workers \_\_\_\_\_

LOCATION \_\_\_\_\_

M - F

MINIMUM EQUIPMENT AND SUPPLIES NEEDED TO OPERATE PROJECT FOR BOOKBINDING.

EQUIPMENT NON-EXPENDABLE

SUPPLIES EXPENDABLE

|    |                                 |      |    |    |                             |        |     |
|----|---------------------------------|------|----|----|-----------------------------|--------|-----|
| 1  | Awls,                           | Ea.  | 1  | 1  | Bands, Head                 | Yds    | 20  |
| 2  | Boards, Creasing, (10")         | Ea.  |    | 2  | Binder, Double Stitched     | Roll   |     |
| 3  | Boards, Creasing, (12")         | Ea.  | 25 | 3  | Board, Binders, #40         | Shts.  | 20  |
| 4  | Bones, Folding, (Blunt)         | Ea.  | 3  | 4  | Board, Fiber.               | Shts   |     |
| 5  | Bones, Folding, (Pointed)       | Ea.  | 1  | 5  | Book Edge Color, ( ) Gal.   | Qz.    | 1/2 |
| 6  | Book Repair Press               | Ea.  |    | 6  | Cards, Book, #212-D         | M      | 1   |
| 7  | Brushes, (1" Wide) 1/2" thick   | Ea.  | 2  | 7  | Cards, Borrowers, #245-D    | M      | 1/2 |
| 8  | Brushes, (2" Wide) 1/2" thick   | Ea.  | 2  | 8  | Cards, Catalog, #228-3      | M      | 1   |
| 9  | Buffers, (Round)                | Ea.  |    | 9  | Cards, File, 3 x 5"         | M      |     |
| 10 | Buffers, (Square)               | Ea.  |    | 10 | Cards, Magazine, #224       | M      | 1/2 |
| 11 | Card Tray, 11" long             | Ea.  |    | 11 | Cloth, Book, 36" wide       | Yds.   | 30  |
| 12 | Clamp, Sewing, 13"              | Ea.  | 1  | 12 | Cloth, Stay, 36" wide       | Yds.   | 15  |
| 13 | Date Stamp, (Library)           | Ea.  | 1  | 13 | Cloth, Super, (Fine)        | Yds.   |     |
| 14 | Extinguisher, Fire.             | Ea.  | 1  | 14 | Date Due Slips,             | M      |     |
| 15 | Fountain, Drinking,             | Ea.  | 1  | 15 | End Sheets,                 | Pkg.   |     |
| 16 | Gauge, Casing,                  | Ea.  |    | 16 | Erasers,                    | Doz.   | 2   |
| 17 | Glue Pot, Electric,             | Ea.  | 1  | 17 | First Aid Supplies,         | Set    | 1   |
| 18 | Hammer, (Backing)               | Ea.  | 1  | 18 | Glue, Flexible              | Lbs.   | 20  |
| 19 | Hand Drill with points          | Ea.  |    | 19 | Glue, Ground,               | Lbs.   |     |
| 20 | Knife, Bookbinders, #0          | Ea.  | 1  | 20 | Ink, Drawing, (Black)       | Bot.   | 4   |
| 21 | Knife, Linoleum                 | Ea.  | 1  | 21 | Ink, Stamp Pad,             | Bot.   |     |
| 22 | Library Stamp, W.P.A.           | Ea.  | 1  | 22 | Ink, Writing,               | Bot.   |     |
| 23 | Manual, Bookbinding             | Ea.  | 3  | 23 | Paper, Lining,              | Bolt   | 2   |
| 24 | Manual, Library                 | Ea.  | 2  | 24 | Paper, Margin, 3/4" wide    | Pkg.   | 6   |
| 25 | Metal, (Square 8 x 8")          | Ea.  | 1  | 25 | Paper, Mimeograph Bond.     | Rms.   | 1/2 |
| 26 | Needles, (Blunt)                | Pkg. | 1  | 26 | Paper, Red Never Break,     | Shts.  | 6   |
| 27 | Paper Cutter, (Size )           | Ea.  |    | 27 | Paper, Sand, # 0 Fine       | Shts.  | 6   |
| 28 | Pens, Lettering, (A-B-C-D) Sets |      | 2  | 28 | Paper, Sand, #1 1/2 Coarse  | Shts.  | 6   |
| 29 | Rulers, 15" Only,               | Ea.  | 3  | 29 | Paper, Wax, 6 x 9"          | Shts.  | 50  |
| 30 | Sewing Machine, W.P.A.          | Ea.  | 1  | 30 | Paste, Dry,                 | Lbs.   | 2   |
| 31 | Shears, (Bookbinders)           | Ea.  | 1  | 31 | Paste, Library (Cans)       | Qts.   |     |
| 32 | Shears, (Plain)                 | Ea.  | 2  | 32 | Pockets, Book               | M.     | 1   |
| 33 | Snips, (Size)                   | Ea.  | 1  | 33 | Re-Casing Leather           | Roll   |     |
| 34 | Speed Ball Text Book            | Ea.  | 1  | 34 | Shellac,                    | Qts.   |     |
| 35 | Square, (Size ) 12x18"          | Ea.  | 1  | 35 | Tape, Adhesive, Transparent | Ea.    |     |
| 36 | Stamp Pads,                     | Ea.  | 1  | 36 | Thread, #30 white,          | Spools | 6   |
| 37 | Stylus, Electric                | Ea.  |    | 37 | Thread, Bookbinders,        | Skeins | 3   |
| 38 | Tru.Vue. & Case,                | Ea.  |    | 38 | Tissue, Mending,            | Shts.  | 12  |
| 39 | Tru.Vue, Films                  | Ea.  |    | 39 | Wax, Paste form,            | Lbs.   | 1   |

of ea color

or 2 lb.

Attach cuts of book cloth here,

(over) Attach cuts of lining paper here,

86940-A-1

ADDITIONAL EQUIPMENT NON-EXPENDABLE

ADDITIONAL SUPPLIES - EXPENDABLE

|    |  |    |  |
|----|--|----|--|
| 40 |  | 40 |  |
| 41 |  | 41 |  |
| 42 |  | 42 |  |
| 43 |  | 43 |  |
| 44 |  | 44 |  |
| 45 |  | 45 |  |
| 46 |  | 46 |  |
| 47 |  | 47 |  |
| 48 |  | 48 |  |

EQUIPMENT AND SUPPLIES OWNED BY SPONSORS

|   |  |   |  |
|---|--|---|--|
| 1 |  | 1 |  |
| 2 |  | 2 |  |
| 3 |  | 3 |  |
| 4 |  | 4 |  |
| 5 |  | 5 |  |

EQUIPMENT AND SUPPLIES NEEDED BY PROJECT

|    |  |    |  |
|----|--|----|--|
| 1  |  | 1  |  |
| 2  |  | 2  |  |
| 3  |  | 3  |  |
| 4  |  | 4  |  |
| 5  |  | 5  |  |
| 6  |  | 6  |  |
| 7  |  | 7  |  |
| 8  |  | 8  |  |
| 9  |  | 9  |  |
| 10 |  | 10 |  |
| 11 |  | 11 |  |
| 12 |  | 12 |  |
| 13 |  | 13 |  |
| 14 |  | 14 |  |
| 15 |  | 15 |  |
| 16 |  | 16 |  |

To be prepared in original and one copy. Original to be submitted with monthly Library Report each month.

PROJECT SUPERVISOR, or person making this report.

Copy to be retained in project file.

NDABLE

EQUIPMENT TO BE FURNISHED BY SPONSOR.

of hard fiber board.

Use;

For cutting boards, paper bindings, and posters

FOR BOOK CLEANERS

1 Table 8 Ft. long, 36" wide, and 30" high.

2 Doz. erasers,   
 Projects are using binder board for cutting boards  
 which is very costly.

Binders board can not be purchased in bundle lots.

Cost per sheet .03

40 Sheets to each bundle 36" x 30"

Weight per adl. 40'

FOR BOOKBINDING

1 Table 10 Ft. long, 36" wide, and 36" high, with shelves under same for bookbinding supplies.

1 Board for tool rack 10" wide 6 Ft. long to be mounted on wall in front of work bench.

1 Bench for creasing boards, size of lumber 2" thick 13" wide to be cut in the following lengths,

2 Pcs. 36" long.

3 Pcs. 10" long.

Note; 1 36" piece for top of bench  
3 10" pieces for legs of bench.  
Extra 36" piece used over creasing boards to receive weights.

4 Concrete blocks for weights,

1 Emery Stone,

1 Yard stick must be hard wood.

2 Pr. shears plain, ( for book menders)

2 Brushes, 2" wide not over 1/2" thick for glue.

1 Pkg. of # 0 Fine sand paper, about 6 sheets

1 Pkg. of # 1 1/2 Coarse sand paper, about 6 sheets

Sanding Blocks.

1 size 9" long 1 3/4" wide 3/4" thick, to be covered with #0 fine sand paper.

1 size 9" long 1 3/4" wide 3/4" thick, to be covered with #1 1/2 coarse sand paper

1 size 9" long round 3/4" to 1" thick cover with # 0 fine sand paper

1 size 9" long round 3/4" to 1" thick cover with # 1 1/2 coarse sand paper

334164

erson

80940

EQUIPMENT TO BE FURNISHED BY SPONSOR

FOR BOOK CLEANERS

Table 8 Ft. long, 36" wide, and 30" high.

Box, drawers,

FOR BOOKBINDING

Table 10 Ft. long, 36" wide, and 36" high, with shelves under

boards for tool rack 10" wide & 3 Ft. long to be mounted on wall in front of work bench.

Bench for dressing boards, to be cut in the following lengths, size of lumber 2" thick 1 1/2" wide

3 Pcs. 36" long.  
3 Pcs. 10" long.

Note: 1 36" piece for top of bench  
3 10" pieces for legs of bench.  
Extra 36" piece used over dressing boards to receive weights.

Concrete blocks for weights,

1 Bag of #1 Coarse sand paper, about 6 sheets  
1 Bag of #0 fine sand paper, about 6 sheets  
2 Brushes, 2" wide not over 1" thick for gins.  
2 Air shears plain (for book makers)  
1 Hard stick must be hard wood.  
1 Emery stone.

Sanding Blocks.

1 size 9" long 1 1/2" wide 1/2" thick, to be covered with #0 fine sand paper.  
1 size 9" long 1 1/2" wide 1/2" thick, to be covered with #1/2 coarse sand paper.  
1 size 9" long round 1" to 1 1/2" thick cover with #0 fine sand paper.  
1 size 9" long round 1" to 1 1/2" thick cover with #1/2 coarse sand paper.

To be prepared in original and one



Each project should collect from local merchants used signs of hard fiber board.

Use; For cutting boards and backs for paper bindings, and posters

Many of the projects are using binders board for cutting boards and posters which is very costly to W.P.A.

Binders board can not be purchased in 1 bundle lots,  
Cost per sheet .08  
40 Sheets to each bundle , size of sheets 20" x 30"  
Weight per bdl. 40#.

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PREFACE

The object of this Manual is to illustrate the best methods of mending and binding a book. Although modern machinery has changed the former methods of bookbinding, it has not altered materially the methods by which books are properly bound.

This Manual shall cover both the library style and the machine style, and the latter pages will be confined to special methods of bookbinding. It is not practical to attempt to confine binding to one particular style - taste and ultimate cost are rightly and properly the deciding factors. These two factors determine the methods and materials which are to be used, and the amount and form of decoration, such as fancy lettering and drawings upon the covers.

In the case of the amateur student, practical instruction with proper equipment and supplies from a professional bookbinder is absolutely essential.

In this Manual, only approved methods which are practical for W.P.A. Library Projects are given.

EQUIPMENT DESIRED FOR BOOKMENDING AND BINDING

SHEARS, Bookbinder's-10"

SNIPS, Combination Drop Forged steel 10"

SEWING CLAMP 13" long

RULERS, 15" long flat

LETTERING PENS, with set of six points - Style A

ROUNDING AND BACKING HAMMER Cast iron Face 1-5/8"

GLUE POT, ELECTRIC 1 pt. size for 110-120 volts, 60 cycles, AC only

BRUSHES, for Glue and Paste Sizes  $\frac{1}{4}$ " wide  $\frac{1}{2}$ " long  
 $\frac{2}{2}$ " wide 2" long  
 $\frac{1}{2}$ " wide  $\frac{1}{2}$ " long

BONE FOLDERS, Size 1" x 8" - Blunt and Pointed

AWL, Bookbinder's

HAND DRILL with points

KNIVES, Bookbinder's, stock cutting No-0 blade, 5/8" x  $3\frac{1}{2}$ "

CREASING BOARDS  $\frac{3}{4}$ " x 6" x 12" - to be made. See pages 42, 43

NEEDLES, No. 2/0 Blunt

SQUARE, 18" x 12" - Face marked  $\frac{1}{16}$ - $\frac{1}{4}$ " - Rustproof metal

SEWING MACHINE - Same as used by WPA Sewing Projects

BOOK CLAMPS, Used for sanding, - to be made. See page 44.

PRESS, BOOK REPAIR, with press boards 7" x 12"

TABLES: 1 Binding table 4' x 10' x 30" high  
1 Lettering table 4' x 5' x  $27\frac{1}{2}$ " high  
1 Stock cutting table 4' x 8' x 30" high  
40 ft. shelving  $\frac{1}{2}$ " x 10" wide

Note: The above can be made or smaller tables placed together.

BOOK PATTERNS - To be made. See page 22.

PAPER CUTTERS Size 12" blade. Bed  $12\frac{1}{2}$ " square, or larger.

SUPPLIES  
APPROVED FOR BOOKMENDING AND BINDING

BOOK CLOTH, Spot Pruf Laquer Impregnated  
36" wide in rolls of 60 yards

STAY CLOTH, Heavy White 36" wide

PAPER, White or Colors sheets 17" x 22" - 24~~7~~ Mimeograph Bond

PAPER, LINING, Printed color-Brown, Green, Blue  
20" wide 90 yards length - used for end sheets

PAPER, LINING and End Sheet Paper - White 25 x 38 - 80#

MARGIN PAPER Packages of 60 strips 3/4" wide by 8" long

WAX PAPER Packages of 50 sheets size 6" x 9"

SAND PAPER Sheets 8-3/4" x 10 $\frac{1}{2}$ " - 24 shts. to package  
#0-Fine and #1 $\frac{1}{2}$  Coarse

BINDER'S BOARD - #40 sheets 20" x 30" - 40 shts. to Bundle

MENDING TISSUE - White size of sheets 20 $\frac{1}{2}$ " x 24 $\frac{1}{2}$ " - 1 doz. to pkg.

PAPER, Red, Never Break - shts. size 26 x 40 No. 0-12

LINEN THREAD - Spools of 100 yds. #22 - 2 cord

ERASERS - Soft, Size 1" x 2"

DRY PASTE, or Regular wall paper paste

FLEXIBLE GLUE

CEMENT, Tabbings, Padding and Bookbinding compound

HEAD BANDS in 144 yard rolls Colors: Green and Gold  
Red and Gold

INK, DRAWING - waterproof, Black only

## THE PARTS OF A BOOK

Books follow a fairly constant pattern in their make-up. Few books have all the parts described below, but many of them will be present in an ordinary volume.

The Title Page may contain: the title of the book; the author's name, and sometimes other information about him, such as academic degrees, position held, and record of previous publications; statement of edition, if any; place of publication; publisher and date of publication. On the back, or verso, of the title page, will be found the copyright date or dates, which will indicate when the work was first published and also subsequent revisions in, or additions to, the text.

The Dedication is not now so common as it once was; when included, it sometimes contains information of value.

The Preface is the author's bow to the reader; in it he introduces himself and acknowledges such assistance as he may have obtained from others.

The Introduction provides the author with an opportunity to explain the purpose and scope of his work.

The Table of Contents lists the topics treated in a book in the order in which they are discussed.

The List of Illustrations tabulates in the order of their appearance the pictures, maps, etc., which accompany the text. It is particularly important in the case of plates, which sometimes cannot appear contiguous to the part of the text which they are intended to illustrate.

The Text is the main part of the book.

The Appendix contains material which the author has thought best not to incorporate in the text, but which supports or throws light upon it.

The Index is an alphabetic list of the topics, persons, places, etc., mentioned in the book with references to the pages on which each is mentioned.

HOW A BOOK IS MADE

Cover or Case

Fig. 1

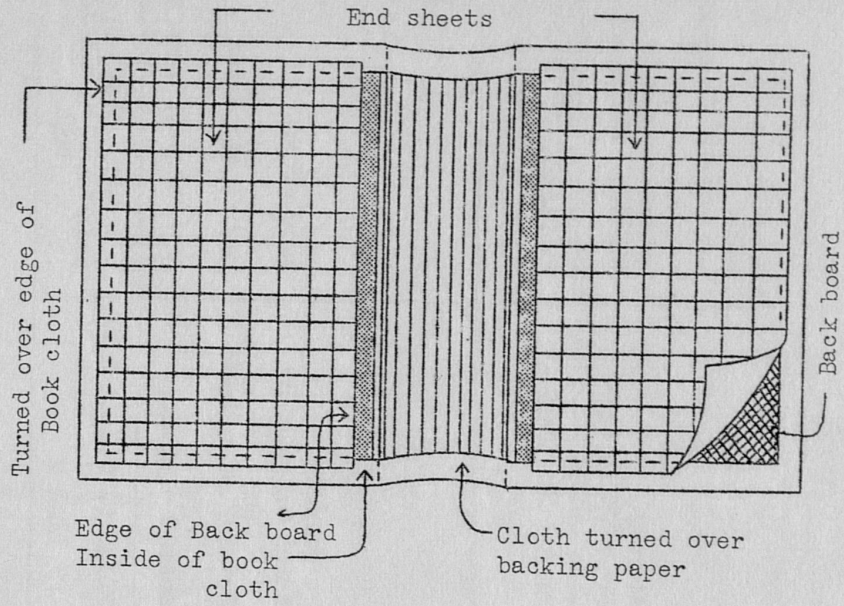
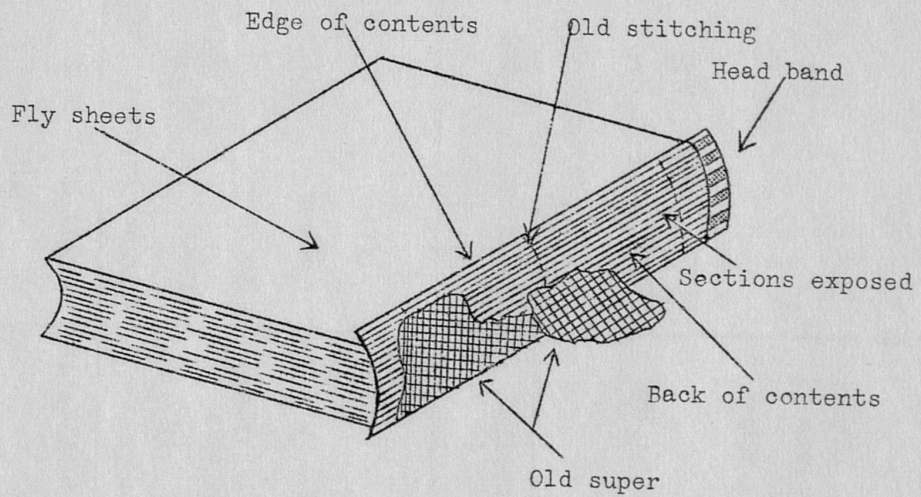


Fig. 2





UNIT PROCEDURE OF BOOK MENDING AND BINDING

| UNIT 1<br>RECEIVING AND RECORDING  | UNIT 2<br>JUDGING A BOOK  | UNIT 3<br>MENDING OF CONTENTS  | UNIT 4<br>REMOVING CONTENTS<br>FROM CASE                          |
|--|---|--|---|
| Listing of books<br>received for repair<br><br>Numbering of each<br>book to be repaired  | Disposition:<br><br>Mend<br><br>Re-bind<br><br>Discard                                | Removing of marks<br><br>Repairing torn pages<br><br>Marking of sections<br>for sewing | Cut contents from case<br><br>Remove old super<br><br>Sand smooth |
| UNIT 5<br>ROUNDING AND BACKING   | UNIT 6<br>SEWING OF SECTIONS  | UNIT 7<br>SANDING OF EDGES   | UNIT 8<br>APPLYING HEAD BANDS                                     |
| Round Back<br><br>Cut Binder<br><br>Glue Back<br><br>Apply binder or super<br><br>Apply cloth to back if<br>book is to be sewn | Locate center of section<br><br>Sew loose sections<br><br>Place in clamp and<br>round | Place book in clamp<br>and sand  | Cut and apply head<br>bands<br><br>Cut and apply backing<br>paper |

UNIT PROCEDURE  
1-8

21940-9

|   |   |   |   |
|---|---|---|---|
| UNIT 9<br>CUTTING OF BACK BOARDS                              | UNIT 10<br>CUTTING OF COVER   | UNIT 11<br>RULING OF COVERS   | UNIT 12<br>GLUEING OF BACK BOARDS   |
| Measure book and cut back boards<br>Number back boards        | Cut cover from roll into stock strips<br>Cut cover into book size               | Select cover for book<br>Fit cover, mark and rule<br>Separate contents and cover                            | Thin out glue<br>Glue back boards to cover and press                      |
| UNIT 13<br>NOTCHING OF CORNERS                                | UNIT 14<br>GLUEING OF EDGES   | UNIT 15<br>MATCHING   | UNIT 16<br>PREPARING CONTENTS FOR BINDING                                 |
| Notch and prepare corners for turning over                    | Glue and fold over edges of cover<br>Pressing of backs                          | Match contents to backs<br>Cut and apply backing paper to cover   | Rule for glue line and set in contents<br>Creasing for hinge              |
| UNIT 17<br>PRESSING AND CREASING                              | UNIT 18<br>APPLYING END SHEETS  | UNIT 19<br>APPLYING FLY SHEETS  | UNIT 20<br>REMOVING BOOKS FROM PRESS                                      |
| Placing of books between creasing boards<br>Pressing of books | Cutting of end sheets to book size<br>Pasting of end sheets<br>Pressing of book | Cutting of fly sheets to book size<br>Ruling of fly sheets<br>Glueing and fitting of fly sheets<br>Pressing | Hinging of books<br>Lettering<br>Checking<br>Pressing and drying of books |

UNIT PROCEDURE  
9-20

-7-

## UNIT 1. RECEIVING AND RECORDING

Under receiving and recording, all books received for mending and binding should be listed by title, name of author, date received, date finished or discarded. See Form, Page No. 9. Each book should be numbered beginning at one and upward, using pencil and placing the number at the top center of the title page of each book. Purpose of numbering. Each book is numbered at the beginning of the first unit operation in order that the various parts of the book can be matched at a later stage of binding.

## UNIT 2. JUDGING A BOOK

Books needing repair fall into three classes: they may be either repaired, rebound or discarded.

1. When to repair: Repair a book only when the case is in good condition and considered serviceable. Repairing consists of mending torn pages, removing pencil and ink marks, tipping in loose pages with flexible glue or paste.
2. When to rebind: Rebind books with weakened sewing and broken backs. Consider value of book and cost to replace or rebind. Books of permanent value should be rebound as soon as the sewing begins to break or give way, also when the backs are loose and torn. The contents may be in very good condition and should not be destroyed although the back may be completely torn away.
3. When to discard: Discard books that are very dirty, ragged and with missing pages and books that are in such a condition that binding will not justify. It is possible at times to rebuild a book that has missing pages from another discarded book of the same title.

The shelves of the mending room should be labeled for each class of book needing repairs as follows:

1. Page mending and cleaning
2. Sewing
3. Rounding and backing
4. Sanding
5. Head bands
6. Backs
7. Covers
8. Measuring and ruling
9. Binding
10. Lettering
11. Re-casing only
12. Back repair only

By grouping the books according to these classes, each step of the bookmending process may be followed according to this Manual.

UNIT 1

Form to be used for Receiving and Recording

| RECEIVING AND RECORDING |               |                  |             |
|-------------------------|---------------|------------------|-------------|
| Book No.                | TITLE         | AUTHOR           | DISPOSITION |
| 1                       | Barren Ground | Ellen Glasgow    | Re-bind     |
| 2                       | Napoleon      | Emil Ludwig      | Re-case     |
| 3                       | Cinderella    | Leonard Weisgard | Discard     |
| 4                       | Snow Water    | Dorothy Gardiner | Re-bind     |
| etc.                    |               |                  |             |
| Date Received           |               | 11-10-39         | Re-bound 2  |
| Date Completed          |               | 11-15-39         | Re-cased 1  |
| Total Books Received    |               | 4                | Discarded 1 |

### UNIT 3. MENDING OF CONTENTS

In Unit 3, Mending of Contents, the following supplies and equipment will be used:

1. Mending tissue
2. Margin paper
3. Paste
4. Bone folder
5. Shears
6. Paste brush
7. Ruler

Work to be done in Unit 3.

1. Remove all pencil and ink marks.
2. Clean dirty pages with erasers or art gum.
3. Repair all torn pages using mending tissue and paste.
4. Repair ragged margins with margin paper or white mimeograph bond.
5. Study Figures 1 and 2 before starting to repair pages.
6. Mark with strip of paper or waste book cloth all signatures or sections that need sewing.
7. Place all books that are to be sewn on the separate shelf, labeled "for sewing".

### UNIT 4. REMOVING CONTENTS FROM CASE

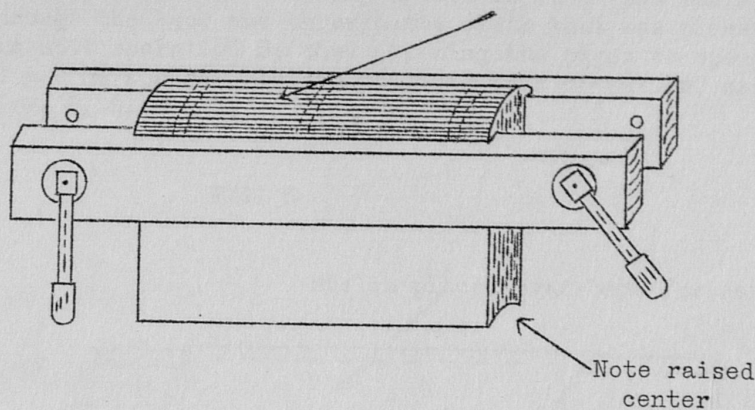
To remove contents from case, use a sharp knife. Cut the super as shown in Fig. 2. After case is removed, use knife to remove super and hard glue from back of contents, being very careful not to cut the stitches on the back of the contents. If back of contents is rough, sand smooth with No. 1 sand paper.

### UNIT 5. ROUNDING AND BACKING

The method of rounding and backing as outlined in this Manual is somewhat different from rounding and backing a new book. The reasons for rounding and backing are rather interesting. If a book was given a flat back, it would cave in after being used, with the result that the pages would start to come forward and out of position on the foreedge. A book should always be slightly round to avoid this. Rounding and backing are very important operations which require a great amount of skill. Rounding helps to form a groove which is to receive the back boards. To round the back of a book that at one time was rounded, place book in clamp with back extending about one eighth of an inch from the top edge of the clamp and with the fingers, force the center up, thus forming a round back. Tighten clamp slowly so as to be sure that the book is in a straight position in the clamp as in Fig. 3.

ROUNDING AND BACKING

FIG. 3 The back rounded



When book is straight, tighten clamp as tightly as possible without wrinkling or forcing book out of shape. Great care must be exercised to avoid getting a twist on the book, and if the book should move downward or out of position, it must be taken out and rectified. If a book is backed on the twist, the cutting will go wrong; in fact everything will go wrong. When backing, the round part or face of the hammer should be used at first and used lightly, commencing slightly to one side of the center and following two or three sections down the length of the back. The other side should be treated in the same way etc., going from one side of the center to the other, using the hammer by circular motion. The object is to fan out, as it were, the sections on each side of the center. After the back is properly rounded, cut binder one eighth of an inch shorter than the contents. Glue back of book while it is in the clamp. Apply binder to back of contents as shown in Fig. 4.

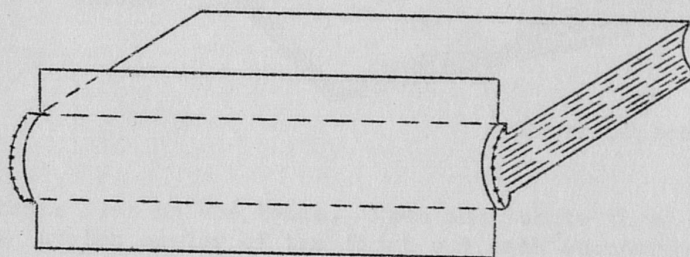


FIG. 4

Divide binder the same distance from each end of the back and rub down with folding bone. If the book requires sewing, cut a piece of muslin one eighth of an inch longer and wider than the back of the contents. Glue over binder and apply same to binder. Remove book from clamp and place on shelf or table in a straight position. Place the next book on top of first, alternating each book. Place weight on top of the books, allowing to dry six hours before sewing or sanding.

### UNIT 6. SEWING OF SECTIONS

The proper method of sewing a book is to re-sew the section through the back and through the cloth that was placed on the back in unit operation 5; thus allowing the pages to open freely and yet be secure. Before starting this operation, carefully examine Figs. 5, 6, and 7.

FIG. 5

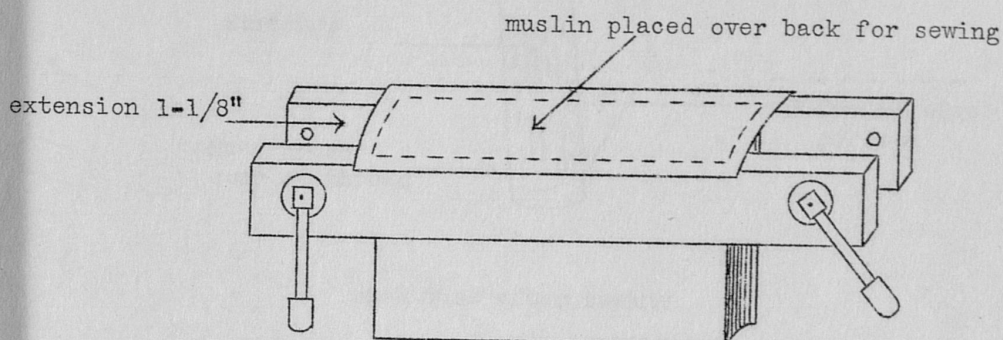
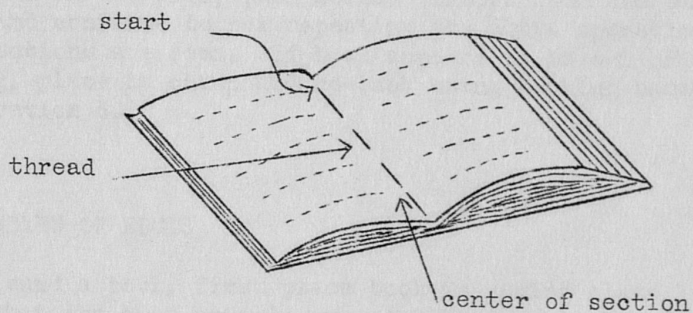
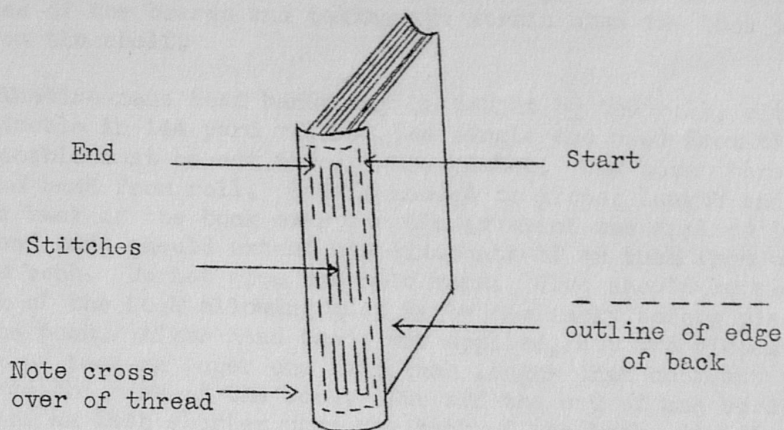


FIG. 6



Lay contents flat on the table. Open and locate first signature or section. At the center of the first and each succeeding section, there will be one continuous sheet which will show full and complete stitches across the section. Begin to sew at the head of the contents, starting from the inside and back again, thus making a loop. Tie threads together at the first complete loop and continue to sew, making stitches one and one fourth inches apart until within three fourths of an inch has been sewn from the tail of the book.

FIG. 7



Back view after sewing

At this point, run needle outward through the back of the book, locating next section. Punch hole with the awl from the inside to meet thread on the back, push needle through from the back to the inside and continue to sew repeating the above operation until all loose sections are sewn. If book appears to be out of shape after sewing, place in clamp and re-back using backing hammer as in unit operation 5.

#### UNIT 7. SANDING OF EDGES

To sand a book, first place book in sewing clamp in such a position that the edge extends one eighth of an inch. Be sure the book is straight and in the proper shape. Never sand a book before rounding and backing. Fasten one half of a sheet of No. 1 $\frac{1}{2}$  coarse sand paper to a block of wood - sand paper can be fastened to block by the use of thumb tacks or glue. After edges have been sanded smooth, finish with No. 0 fine sand paper.



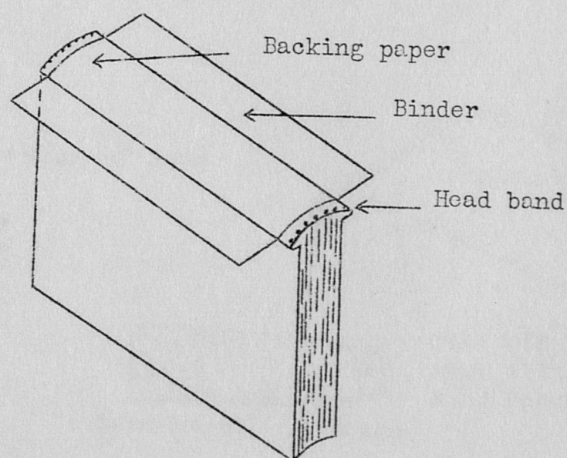
### UNIT 8. APPLYING HEAD BANDS

The object of the head band is to protect or strengthen the top and bottom of the back by bringing it up to the same level as the edges of the boards and taking the strain when the book is removed from the shelf.

Machine-made head bands may be bought by the roll, either single or double in 144 yard rolls. The single are used from the roll, the double must be cut through the center. Cut about three feet of head band from roll. Cut as needed to proper length and glue to the back of the book over the binder which was applied in Unit 5. Head band should extend one sixteenth of an inch from the edge of the book. Do not glue the head band. Glue should be placed on the back of the book allowing glue to become tacky before placing head band to book. After head bands are applied, cut two pieces of never break or backing paper one half inch longer than book and the same width as the back of the book. Cut off the end of one strip one fourth of an inch shorter than the back of the book, dividing one eighth of an inch from each end. Rub down with folding bone. Remove from sewing clamp and insert remaining strip of backing paper in center of book. This strip will be used in Unit 15.

Place book on shelf labeled "for back boards". Be sure that books are in proper shape, as book will retain the same shape after the glue becomes hard, taking about four hours. Study drawing - Fig. 8 below.

FIG. 8



### UNIT 9 CUTTING OF BACK BOARDS

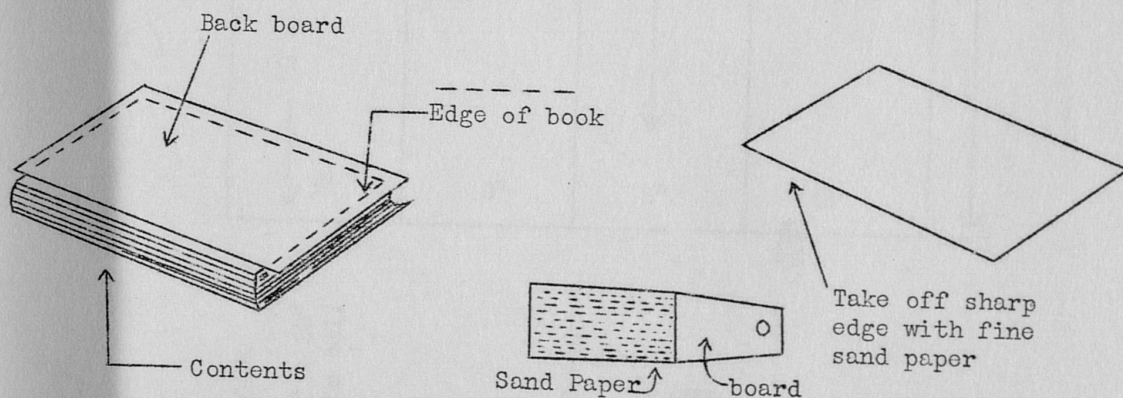
The measurement and cutting of back boards is one of the most important operations. Back boards may be cut from binders board or any hard fiber board similar to it. Study Plans A and B for ruling and cutting of binders board. However, after becoming familiar with the use of binders board, the plan most suitable for the size of books to be bound can be used.

Binders board may be cut with regular tin snips very easily. Before cutting, rule large sheet of board using metal square. First, square two sides and trim off uneven edges. Make the first cut A to A; second B to B; third C to C as shown in Fig. 12, Plan A. Cut about three sheets of board by this method before cutting to book size, then the board may be cut on the ruled cross lines into book size. A book back should be at least  $\frac{1}{8}$ " larger on the two ends and one side than the size of contents. On most books,  $\frac{1}{8}$ " is enough to allow for hinging, however much depends upon the depth of the groove. When marking the  $5" \times 8\frac{1}{2}"$  pieces for cutting down to the individual book size, lay board in its place on the book. Mark first, the length with pencil, square it with straight side of board, trim off, place board on book. Mark and cut width in the same way. See Fig. 9 below. Remove sharp edge using fine sand paper. See Fig. 11. A piece  $4" \times 2"$  glued to a piece of binders board may be used. See Fig. 10 below.

FIG. 9

FIG. 10

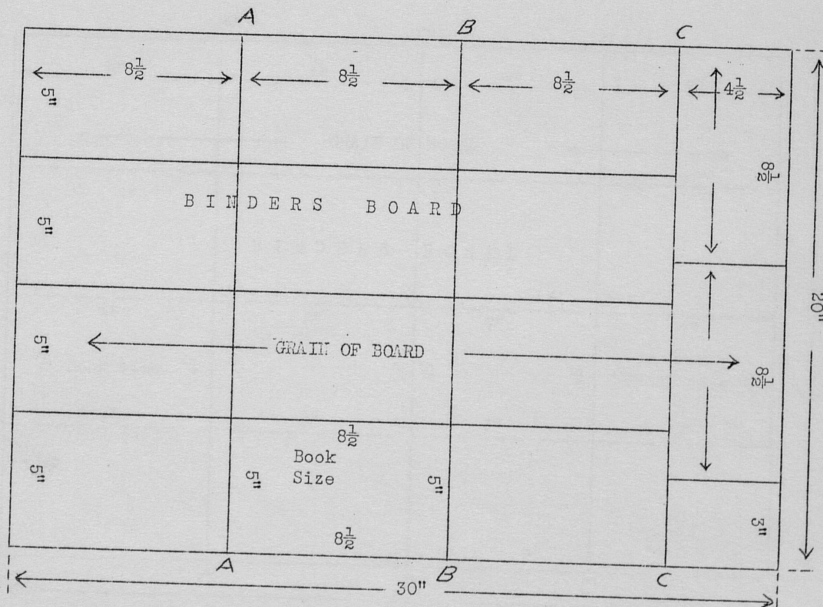
FIG. 11



BINDERS BOARD  
 #40  
 sheets 20" x 30"  
 40 shts. to bdl.

6  
 books to the sheet.

15 pieces  
 12-  $8\frac{1}{2}$ " x 5"  
 2-  $8\frac{1}{2}$ " x  $4\frac{1}{2}$ "  
 1-  $4\frac{1}{2}$ " x 3"



MEASURING BACK BOARDS

PLAN A  
 Unit 9

FIG. 12

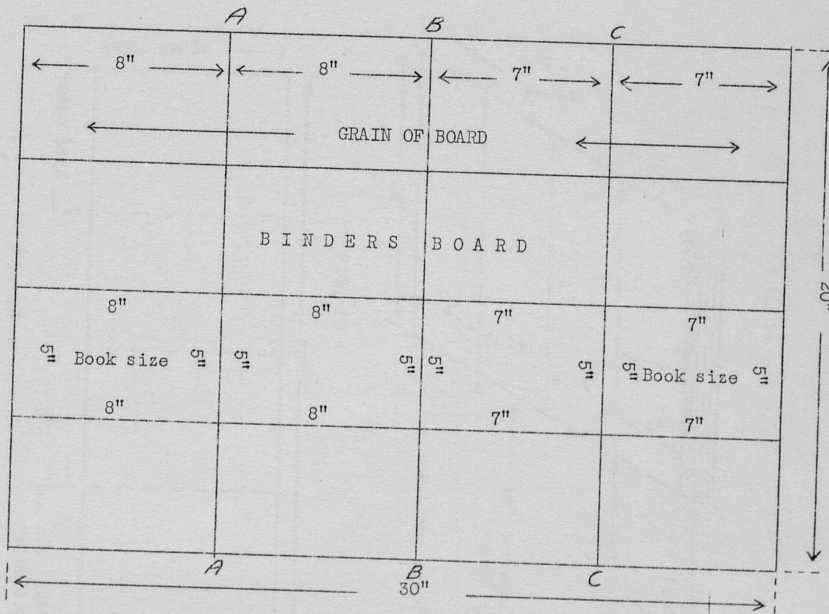
BINDERS BOARD  
 #40  
 sheets 20" x 30"  
 40 sheets to bdl.

8  
 books to the sheet

16 pieces

8 - 5 x 7"  
 8 - 5 x 8"

320 complete books  
 to the bundle



Unit 9

PLAN B

MEASURING BACK BOARDS

FIG. 13

UNIT 10. CUTTING OF COVER

Book cover should be cut from the roll into strips of the following sizes: 12", 13", 14", 15" and 17" for larger books. When cutting strip, first square edge of book cloth at the beginning of the roll, unroll about five yards of cloth, measure from the squared edge. Draw a straight line, using yard stick. Cut along ruled line as in Figs. 14 and 15.

FIG. 14

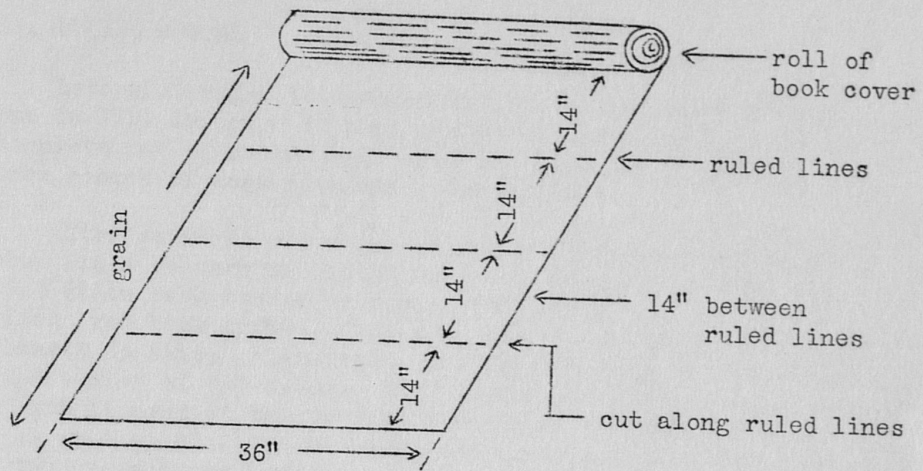


FIG. 15

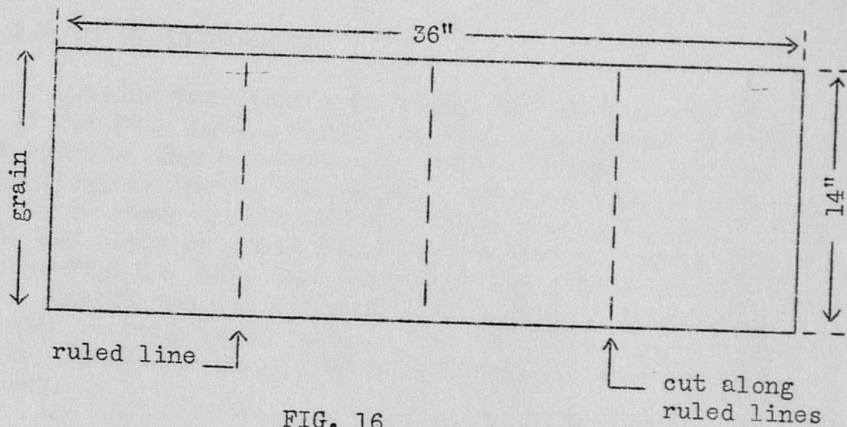
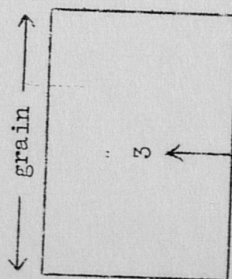


FIG. 16



After cover is selected, place book number in the center on the inside of cover

Before cutting cloth, study Plan A, Fig. 17, page 20, and Plan B, Fig. 18, page 21. Book cloth comes in two standard widths, 36" and 38". Other sizes are considered special sizes. After cloth is cut into strips 36" long, rule and cut into book size strip as shown in Plans A and B. Select the proper size cover by folding cover around book. There should be at least 3/4" extension from the back boards on all sides. After cover is selected, place book number in the center of the inside of the book cover as shown in Fig. 16, page 16. Fold cover around book and place on shelf labeled "for measuring and ruling."

#### UNIT 11. RULING COVERS

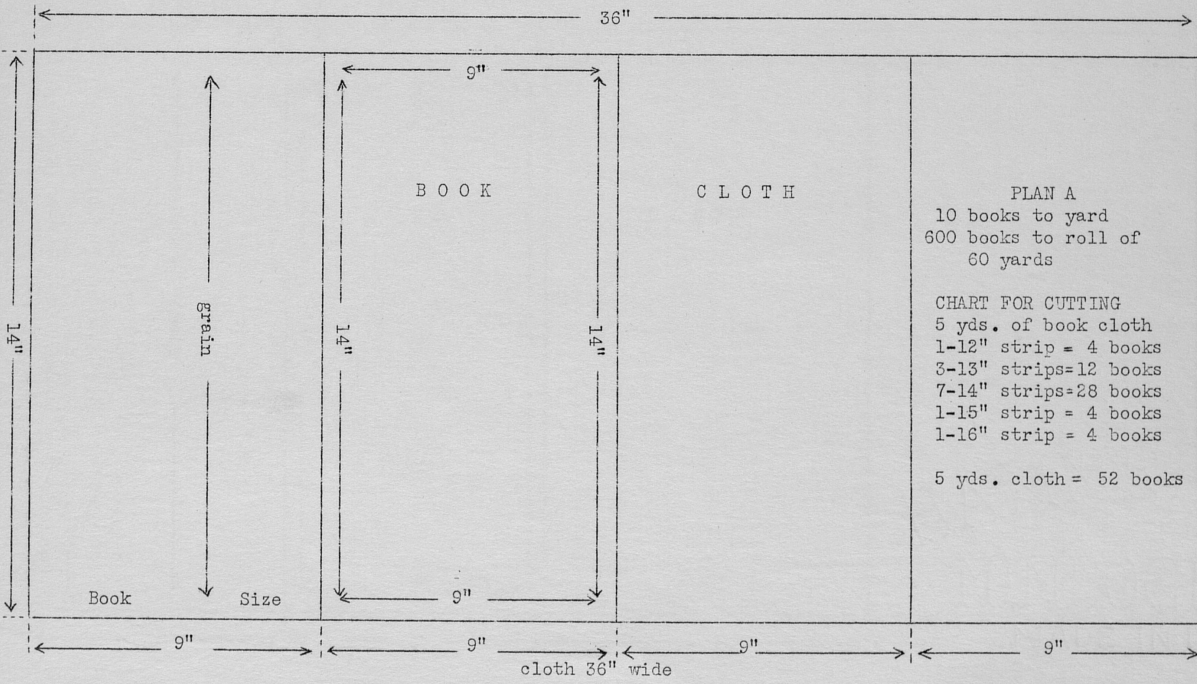
Before starting to measure and rule, make book pattern as shown in Fig. 19, page 22 from red never break backing paper. Make complete set of seven which will fit most any size book. Cut three pieces of each size and glue together.

After patterns are made, select pattern the same width as book. Place pattern in center of cover as shown in Fig. 20, page 23. Place back boards on book, dividing boards one eighth of an inch from back groove, Fig. 21. Hold book firmly. Do not allow boards to slip. Place back of book over book pattern which is in the center of the cover. Fold cover around book firmly and crease with fingers at the two top corners at the edge of back boards as in Fig. 22. Remove book from cover and mark with soft pencil two creased top corners. Rule cover as shown in Fig. 23, page 24.

#### UNIT 12. GLUEING OF BACK BOARDS

For glueing back boards to cover, the glue should be thinned. If the glue is too thick, it will prevent the cover from being smooth. Lay the cover flat with the outside of the cover facing downward or to the table, having the unruled side or bottom of the cover next to worker. Glue the smooth side of back boards and place on ruled lines on the cover. Press down lightly. See Fig. 24, page 25. Turn over and rub in using a damp cloth. Smooth out and rub down all edges with folding bone. Alternate when placing in a stack. Place weight on top of stack and allow to dry four hours. (Note: For weights, wrap bricks in newspaper).

PLAN A



PLAN A  
10 books to yard  
600 books to roll of  
60 yards

CHART FOR CUTTING  
5 yds. of book cloth  
1-12" strip = 4 books  
3-13" strips=12 books  
7-14" strips=28 books  
1-15" strip = 4 books  
1-16" strip = 4 books

5 yds. cloth = 52 books

FIG. 17  
CHART FOR CUTTING BOOK CLOTH

UNIT 10  
Plan A

UNIT 10  
PLAN B

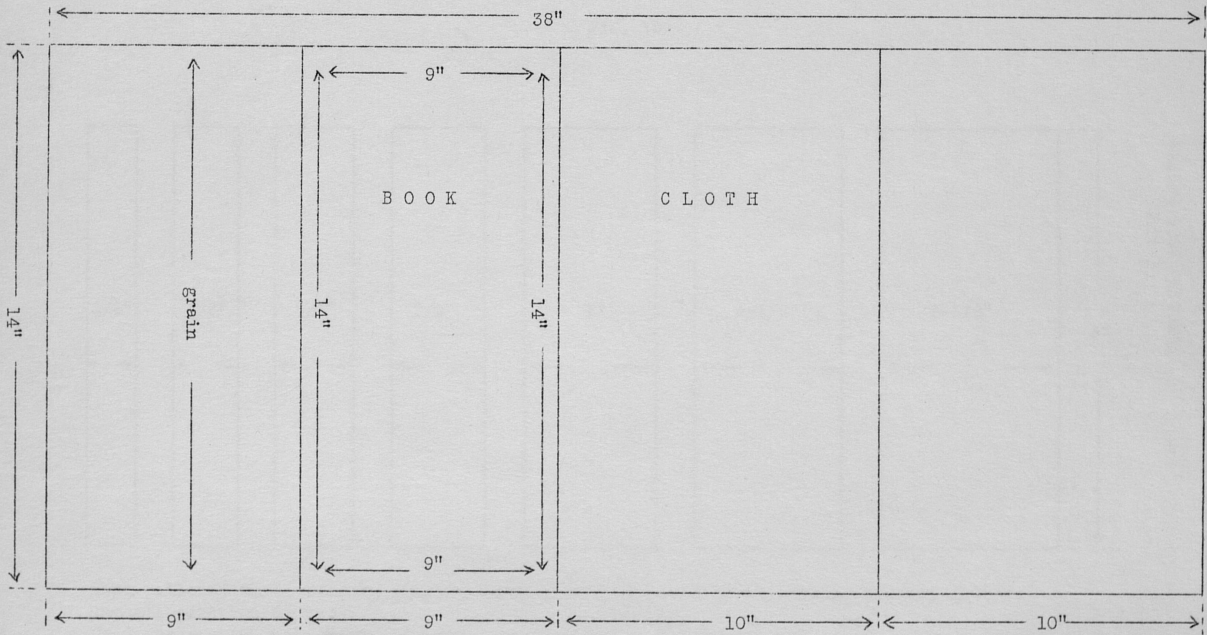


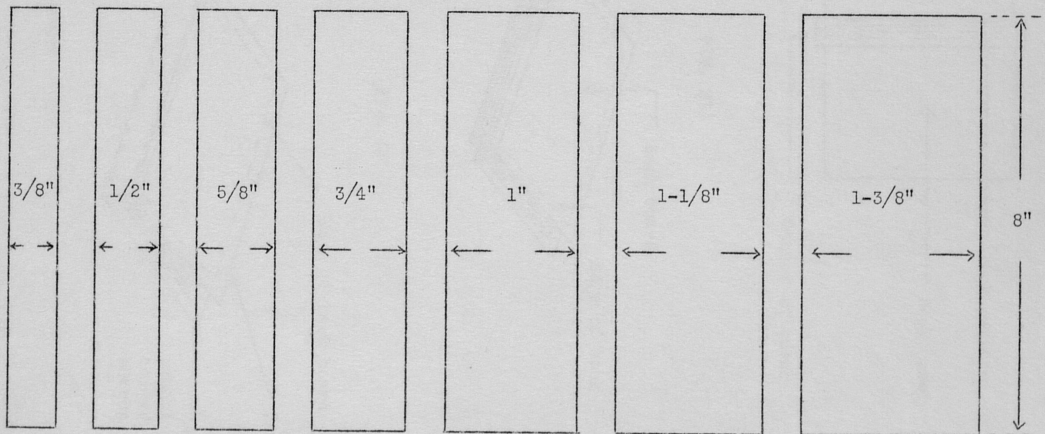
FIG. 18  
CHART FOR CUTTING CLOTH

UNIT 10  
PLAN B



BOOK PATTERNS

FIG. 19



MAKING BOOK PATTERNS  
Unit 11

FIG. 19

Book patterns to be made by gluing three pieces of never break backing paper together.  
Cut all patterns 8" long.  
Used for marking and ruling of book covers.  
See instructions - Unit 11.

FIG. 20

MEASURING AND RULING COVERS

UNIT 11

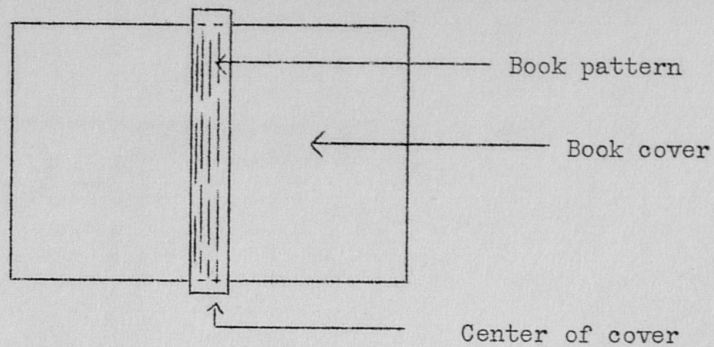


FIG. 21

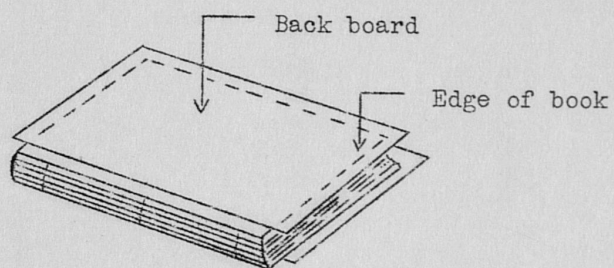
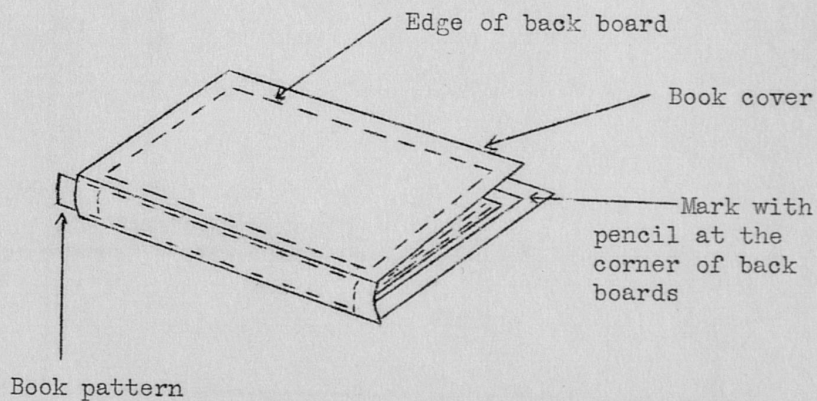


FIG. 22



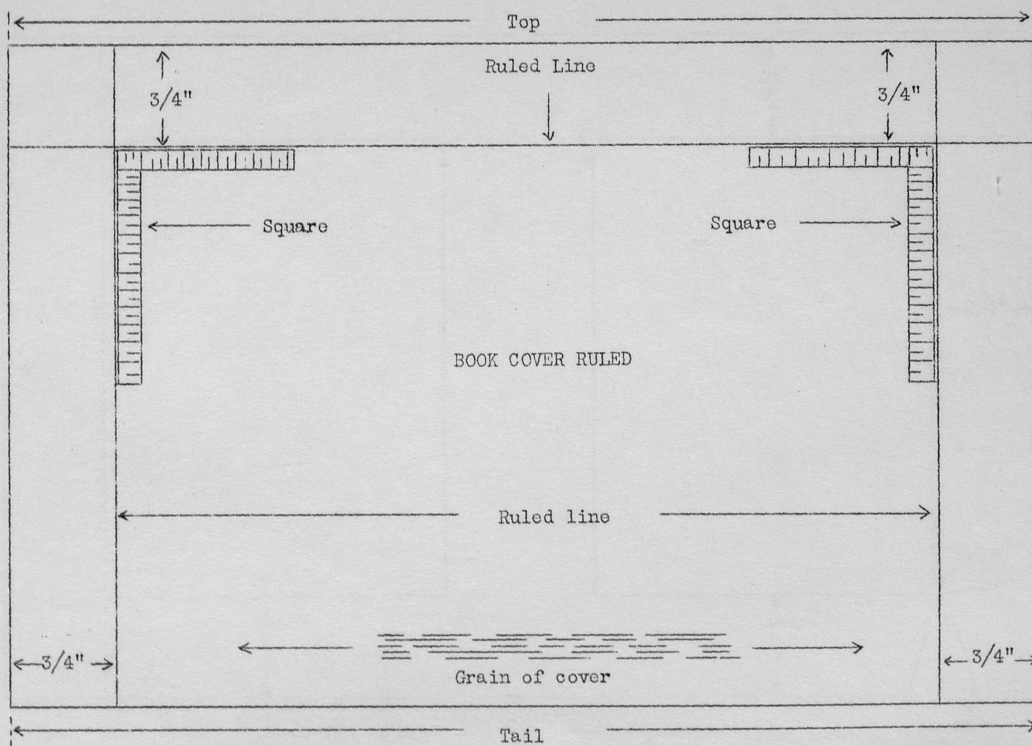
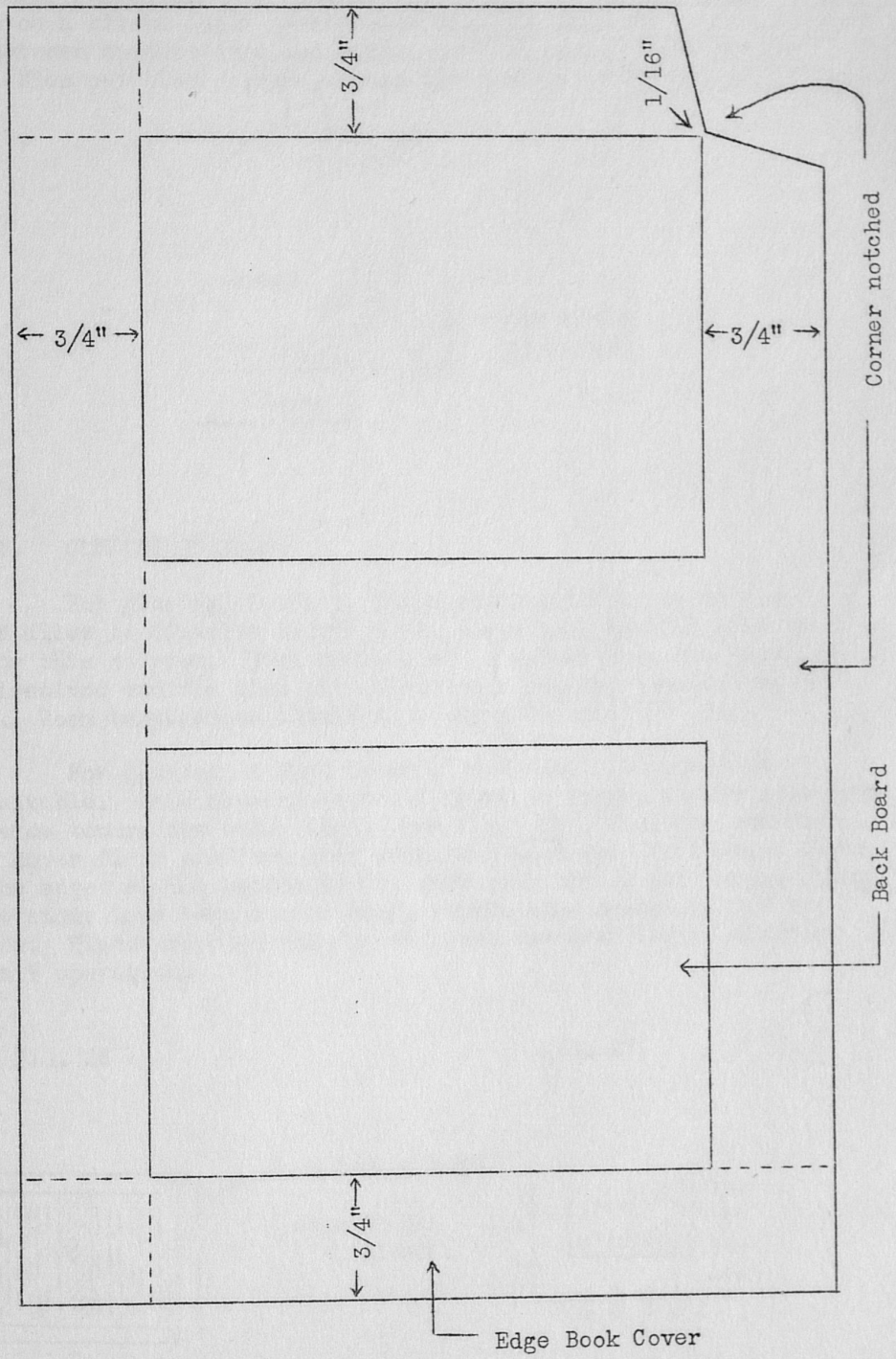


FIG. 23  
 RULING THE COVER  
 UNIT 11

GLUEING OF BACK BOARDS

UNIT 12

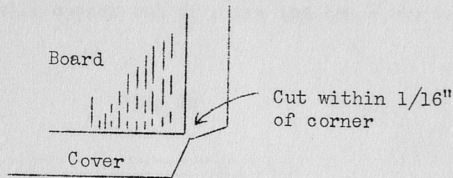
TOP



UNIT 13. NOTCHING OF CORNERS

After backs have been allowed to dry under weight for at least four hours, separate and place in another stack with the back boards facing upward. With a sharp pair of shears, notch corners on a slight angle as shown in Fig. 24, Page 25. Allow 1/16" between notched edge and corner of back board. See Fig. 25 below. When notching corners, notch the entire lot at the same time.

FIG. 25



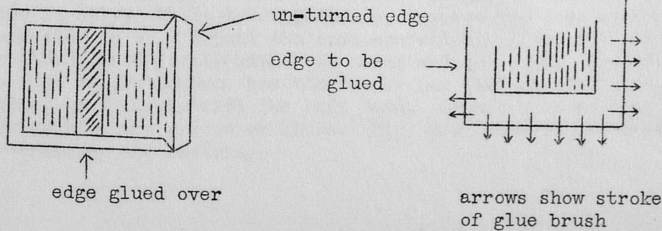
UNIT 14. GLUEING OF EDGES

For glueing of edges, first add flexible glue to glue pot and allow to dissolve before using, as a much heavier glue is used for this purpose. Best results are obtained when the glue is well dissolved and the glue pot maintains a working temperature of 155° F. Room temperature should be between 65° and 70° F.

For glueing, a flat brush 2" wide and 1/4" thick is most suitable. When glueing edges of cloth or board, always glue from the inside toward the outer edge. See Fig. 27. Glue the two sides of the cover first and turn over with folding bone. Pull edges tight over the edges of the boards or the book will have a soft edge. When all the sides have been turned over, repeat same operation for the two ends. Place under weight for at least one hour before starting next unit operation.

FIG. 26

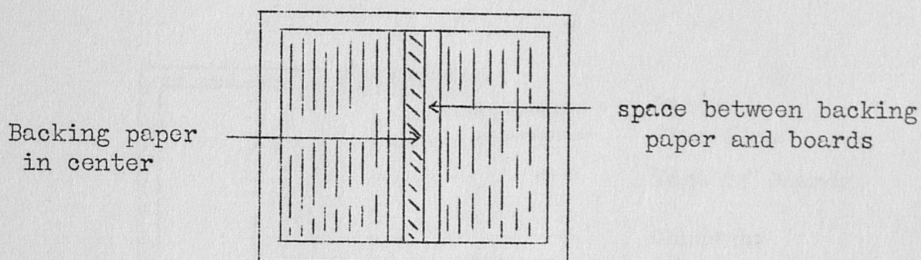
FIG. 27



UNIT 15 MATCHING

At this point, refer back to Unit 1 - Receiving and Recording and numbering of each book to be repaired. This number should appear on the inside of the back boards and on the title page of each book. Match cover and contents of the same number. Remove the strip of backing paper from the center of the contents which was placed there in Unit operation 8. Cut to the same length as the back of the cover, touch lightly with the glue brush so as to prevent strip from moving out of place. Slip each end of the backing paper under the two folds at the head and tail of the cover as shown in Fig. 28. Allow the same space on each side of the strip or the book will appear out of shape and the cover will not fit properly.

FIG. 28



UNIT 16 PREPARING CONTENTS FOR BINDING

Starting with cover folded around contents, open and draw a straight line  $1-\frac{1}{4}$ " from the inside edge of the board on each side. See Fig. 29, Page 28. Pull cover firmly around the book, dividing so as to have the same extension on all sides. Jog down so as to stretch cover, examining margin on both sides to be sure the same space for hinging is on each side. While holding in place firmly with both hands, lay book on the table directly in front of worker with the back facing the left and the foreedge to the right. Open carefully so the contents do not move. Glue the space from the ruled line to the edge of the back boards within  $\frac{1}{4}$ " of the head and tail of the cover. See Fig. 30, Page 28. With the right hand, press down on the contents, thus preventing same from moving. With the left hand, draw the book over contents firmly. Press down near the groove over the glued space lightly. While holding firmly, reverse the book so the unglued side is up. Repeat the same operation. After both sides are glued, hold firmly with both hands and jog down. Examine to see that all extensions are the same. Lay flat on the table, holding book firmly with the left hand. Crease with folding bone, thus forming the groove or hinge. Fig. 31. Book is now ready for pressing and creasing.

Placing of Contents in Case

FIG. 29

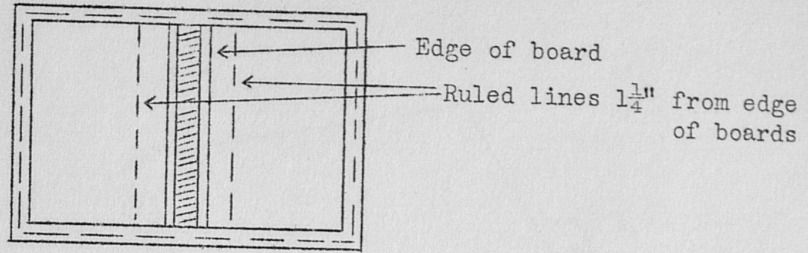


FIG. 30

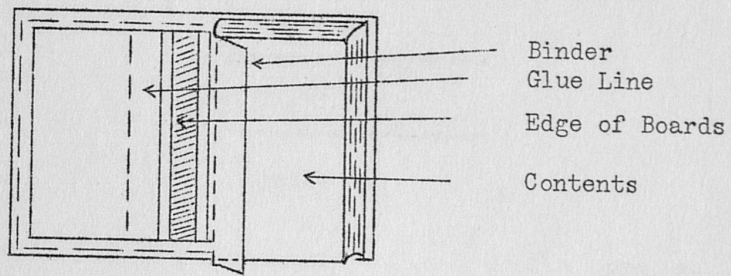
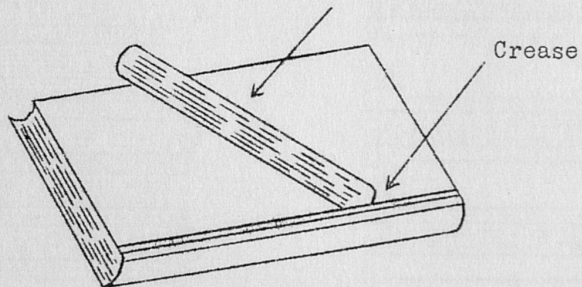


FIG. 31

Creasing or forming groove for hinge  
Folding Bone



BOOK READY FOR  
PRESSING AND CREASING

FIG. 32

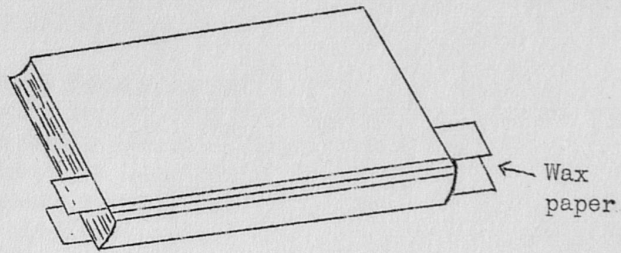


FIG. 33

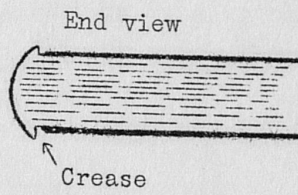


FIG. 34

End view

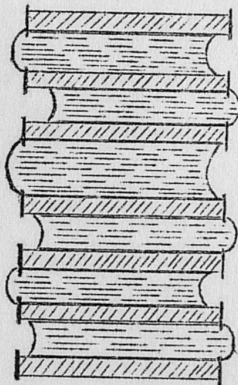
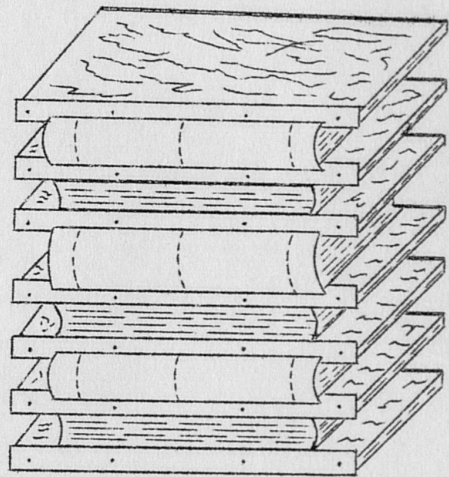


FIG. 35

Side view



Books in press



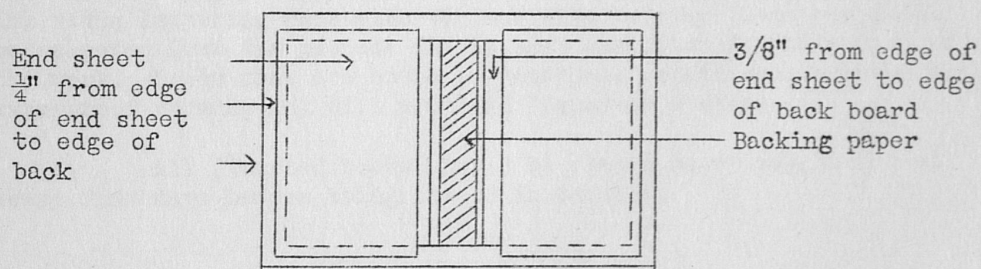
Pressing and creasing are very important operations. When placing book between creasing boards, make sure that the metal edge of the creasing board rests directly in the groove formed with the bone folder and each and every book is in a straight position before pressure of the press is applied or weights, if used. Study carefully Figs. 33, 34 and 35, before attempting this operation.

## UNIT 18 APPLYING END SHEETS

Remove book from creasing boards. As books are of various sizes, it will be necessary to measure and cut end sheets separately for each book. To make this part of the work much easier, cut from the bolt into two sizes 5" x 8" and 5 $\frac{1}{4}$ " x 8 $\frac{1}{2}$ " (about 100 of each size), then select the nearest book size from the two stock sizes. End sheets should be cut 1/16" less than the size of the contents and 3/8" from the inside edge of the back boards. See Fig. 36.

For pasting, use dry paste or regular wall paper paste. Always paste at least six end sheets at a time, thus allowing the paste to soak the paper. Fold in the center after pasting and place in one stack. When all six are pasted, turn the stack over, open and apply to the book the first end sheet pasted. If water-proof paper is used, rub down using a damp cloth. Force out all surplus paste with folding bone. Remove all paste from right side of end sheet to prevent sticking to contents. Wax paper may be used between end sheet and contents. Place on the table in stack alternating each book. Place weights on each stack and let dry for twelve hours. (Note: Bricks wrapped in paper will serve this purpose.)

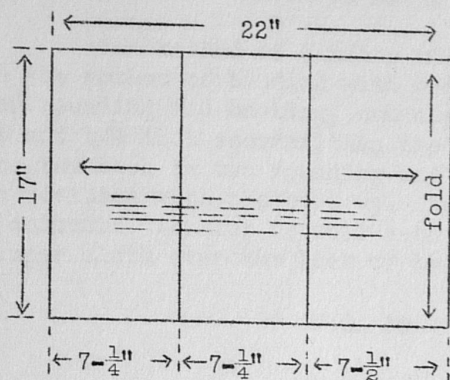
FIG. 36



## UNIT 19 APPLYING FLY SHEETS

After books have been allowed to dry under weight for at least twelve hours, remove wax paper and hinge the books. To hinge, open one side of the book at a time and with folding bone held in the right hand, and holding the back firmly with the left, run folding bone along edge of back boards, thus flattening the stay cloth to form a soft, flexible hinge.

FIG. 37



Sheet of paper 17" x 22" for fly sheets.

Cut across the grain into strips.

Each strip will make 2 fly sheets for one book of average size.

Fly sheets are the two double white sheets on the front and back of the contents of a book. Fly sheets may be attached in unit operation 8, but until workers become more skilled, it is advisable to apply fly sheets after all other operations have been completed.

Always cut the paper so the grain will run the width of the book, as paper will break after any great amount of service if folded across the grain. For example, see Fig. 37. The fly sheet should be the same size as the first page of the contents. Cut sheet the length measured from the head to tail of the contents. Fold sheet in the center, allowing 1/8" to 1/4" for trimming on the foreedge. Draw a line with the rule 3/8" from the edge of the folded side which is used as a glue line. Glue and place on contents. Rub down with folding bone. Trim off foreedge side. Close book.

#### UNIT 20 REMOVING BOOKS FROM PRESS

Books should be lettered with black waterproof drawing ink using lettering pens with various size points. Some one should be selected from the project who is best qualified for this part of the work. Books that are bound in waterproof cloth and lettered with waterproof drawing ink will not need laquer or shellac.

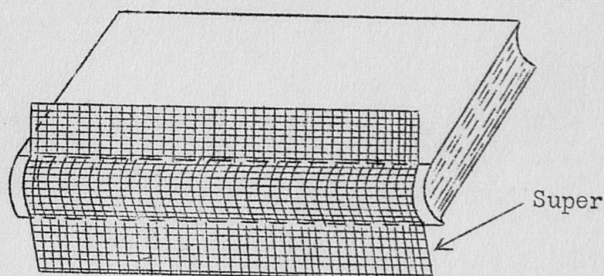
All finished books should be placed under weight for at least four days before being placed in service.

SUPPLEMENT I

BINDING BY THE SUPER AND STAY CLOTH METHOD

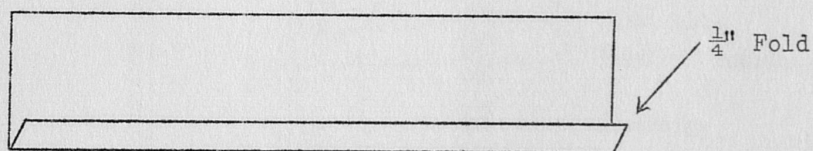
The method of binding with the use of super is different than the method of binding with overlap double stitched binder. After rounding and backing, cut a piece of super cloth  $4\frac{1}{2}$  inches wide and  $\frac{1}{4}$  inch shorter than the length of the back of the book. Place the book in the rounding and backing clamp in a straight and even position with the back up. Apply flexible glue to the back of the contents, working it well into the stitching. Place the strip of super cloth over the back of the contents as in Fig. 38.

FIG. 38



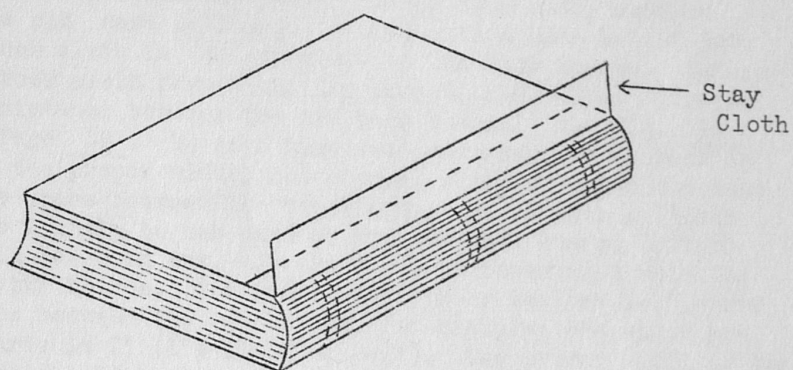
After super has been allowed to dry for at least four hours, cut from stay cloth two strips 2" wide. Each strip should be the same length as the first page of the contents. With the use of the folding bone, fold over the edge of one side  $\frac{1}{4}$  inch as in Fig. 39 below.

FIG. 39



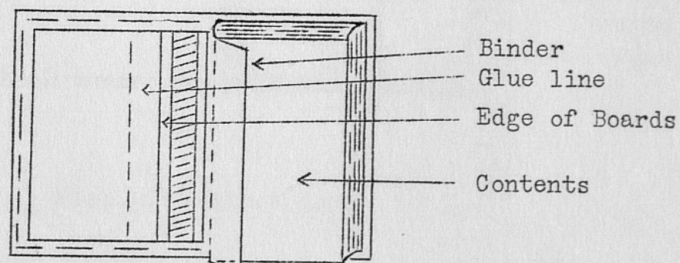
Apply flexible glue to the folded edge and place glued side down to the first page of the contents in a straight line with the raised edge of the back, as in Fig. 40.

FIG. 40



Rule the inside of the back and set contents into the back, using the same method as in Unit 16, except allowing to dry for fifteen minutes before glueing stay cloth. Open the back half way and smooth down stay cloth with the folding bone. Crease and place the book between creasing boards, using the same method as in Unit 17.

FIG. 40a



SUPPLEMENT II

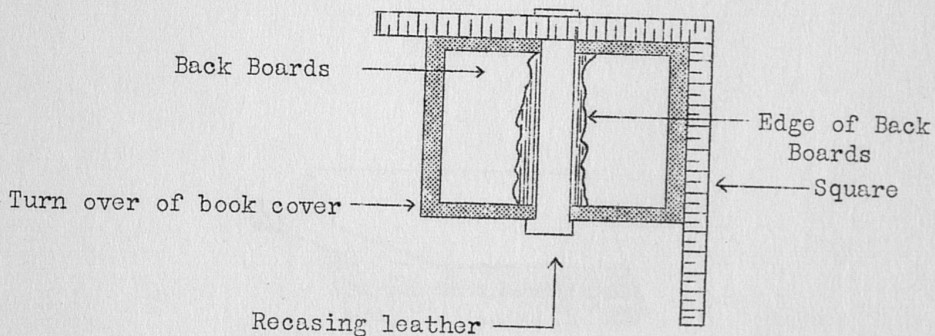
RECASING DAMAGED OR TORN BACK

Recasing: When a book is to be recased, the back is removed from the contents by the same method as when rebinding. Open the book and with the fingers pull loose the fly sheets, thus exposing the hinge and super. With a sharp knife, cut super close to the contents. Avoid cutting the thread on the back of the book.

After contents have been removed from case, examine carefully the old case or book. It will make a much better job if the old book cloth is cut off close to the back boards. Before cutting old book cloth from book, lay flat on the table. Stretch and measure distance between the two back boards. See Fig. 45 at letter A Page 36. To save time and measuring, while book is stretched to the proper width, cut a small strip of paper the same length as the space between the two boards. Stick with a little glue or paste lightly to one part of the old back board. After recasing strip has been cut, use the strip of paper as a rule for dividing the two boards. Cut recasing cloth or leather  $1\frac{1}{4}$ " wider than the space between the two boards, for example: the space between the boards is 1" ( $1" + 1" + \frac{1}{4}" = 2\frac{1}{4}"$ ). The proper width of the recasing cloth should be two inches longer than back boards. Lay the recasing cloth flat on the table with the wrong side up. Lay the two back boards over same using rule to measure or the strip of paper that was cut for this purpose and glued lightly to the back board. Avoid tearing as this must serve as a pattern. This part of the work can be made much easier with the use of a metal square. See Fig. 41 below:

FIG. 41

Applying recasing cloth to back



After placing boards in the above position, be sure that the same measurement is at the top and bottom of the boards. Hold firmly and rule a straight line along the edge of the two boards. Lay aside the boards and glue recasing leather from the ruled line to the edge of recasing leather, placing one end of glued recasing leather under square one inch. Place board on ruled line using square as a guide. Press down firmly. Turn over and rub down glued edge. Glue the two ends which extend one inch at top and bottom. Turn over and rub down, using folding bone and a damp cloth if you are using a waterproof material. Operation shown in Fig. 42, 43 and 44.

Do not use old end sheets. These should be torn off and the boards made smooth to receive new end sheets. Place contents in sewing clamp and prepare same as in Unit 5. The same method is used for setting in a recased book as a new binding except in the ruling and use of book patterns. The case should be the proper size to receive the contents. Place between creasing boards and press same as a complete new binding job.

FIG. 42

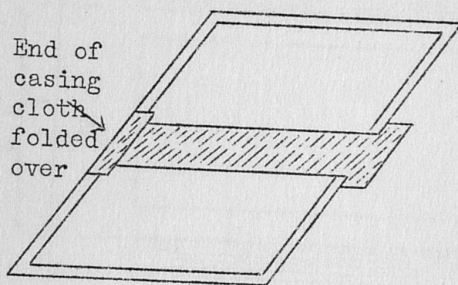


FIG. 43

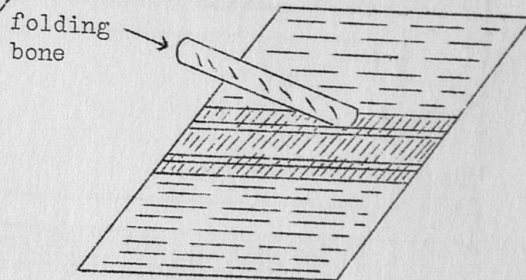
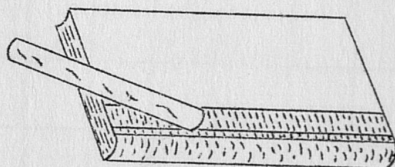
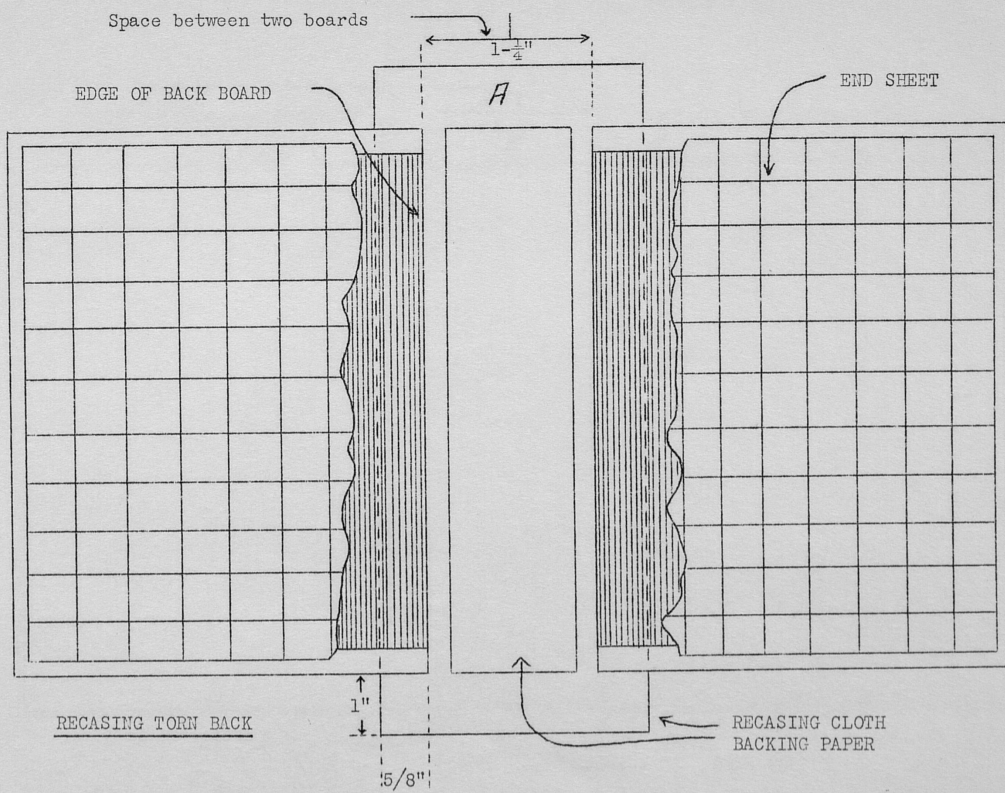


FIG. 44

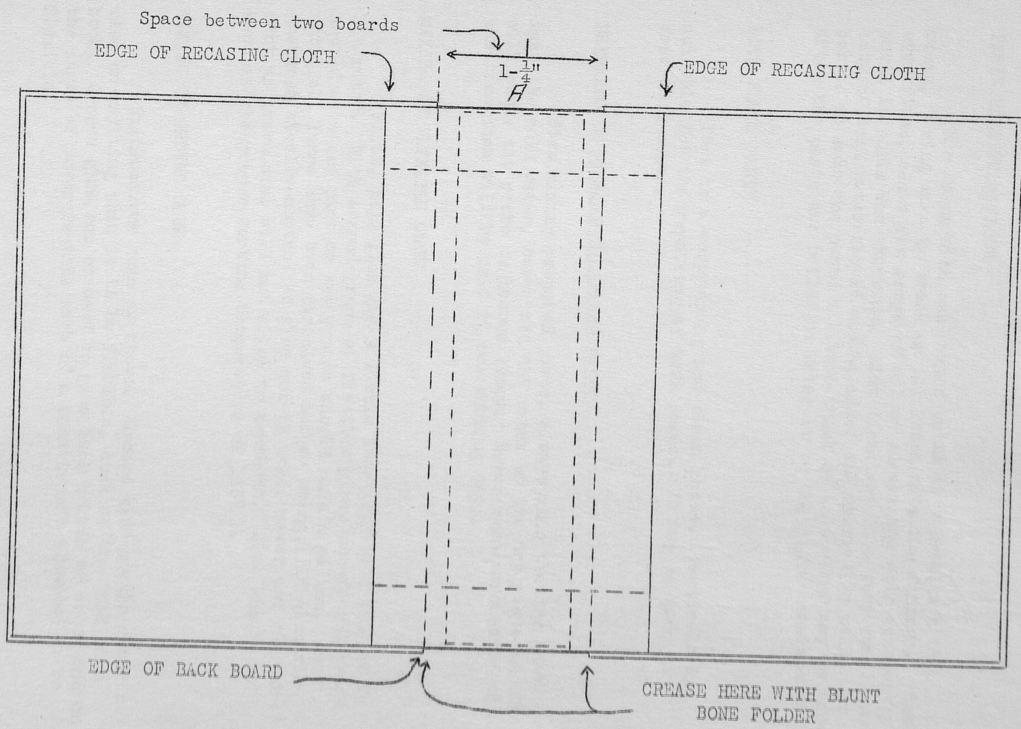




INSIDE VIEW OF RECASING

SUPPLEMENT II

FIG. 45



BACK VIEW OF RECASING

FIG. 46

SUPPLEMENT II



SUPPLEMENT III

MIXING OF PASTES AND GLUES

PASTE MADE FROM FLOUR

Mix flour with cold water until it resembles a thin cream, taking care to break up all lumps with the fingers. Place over flame, add a few drops of oil of cloves and stir constantly until it boils and thickens. Alum dissolved in a very small quantity of cold water should now be added and stirred in well. It is better to make the paste a little thick as cold water may be added after the paste has boiled to bring it to the right consistency.

RICE FLOUR PASTE

This is a very strong and clean paste. Particularly suitable for the repairing of torn pages. It may be made as described above.

PREPARED OR REGULAR WALLPAPER PASTE

When mixing prepared paste, always stir the dry paste into the cold water, never add the water to the dry paste as this will cause the paste to become lumpy. Never make more paste at one time than will be used in two working days.

MIXING OF FLEXIBLE GLUE

First, fill glue pot a little less than half full with hot water. With a good grade of flexible glue, one-fourth pound should make one pint or two pounds should make a gallon. Heat until all lumps have been dissolved before using. If electric thermostatically-controlled glue pot is used, never cut off current as thermostat will not allow to overheat. Glue should be kept at the proper working temperature of 155° F.

MIXING OF GROUND GLUE

Instructions same as above. Ground glue should never be used on anything that is to be flexible, such as the back of a book. Ground glue can be used to glue back boards to cover and on the edges of cover as this part of a book is not intended to be flexible.

SUPPLEMENT IV

INSTRUCTIONS FOR MAKING OVERLAP DOUBLE STITCHED BINDER

Overlap double stitched binder is made for use on books which have an extra wide space between the back edge of the book and the back boards and groove that forms the hinge of a book. Similar to double stitched binder except for extra wide outside strip which is glued to the back board, thus holding the book in the case. The purpose of making overlap double stitched binder from stay cloth is that stay cloth is much heavier and more durable for binding and can be made at a much lower cost than ready-made binders.

Stay cloth is put up in rolls of thirty yards to the roll and thirty-six inches wide. Before starting to cut stay cloth for binder, study diagram and chart on Pages 40 & 41.

When cutting stay cloth, sort the books to be bound into groups of the same thickness. Measure same and refer to chart for the proper size to cut stay cloth. When cutting stay cloth for binders, cut the inside strips first, Fig. 47 Page 40, cutting each strip the entire width of the stay cloth which is thirty-six inches wide. First, rule, using straight edge yard stick. One or more yards can be ruled at the same time, then cut along the ruled line using long sharp shears. Repeat same operation for cutting outside strip of binder. Fig. 48 Page 40.

After the inside and outside strips are cut, rule for sewing as shown in Fig. 47, Page 40. Glue center of outside strip by stippling lightly with glue brush. The purpose of gluing is to hold the two strips together while sewing. After sewing, cut from long strip to the proper size of each book as needed. All binders should be sewn by machine, using white heavy thread Number 30. After binders are cut to the proper size of the book, fold over inside strip using folding bone.

SUPPLEMENT IV  
INSTRUCTIONS FOR MAKING  
OVERLAP DOUBLE STITCHED BINDER FROM STAY CLOTH  
FIG. 47

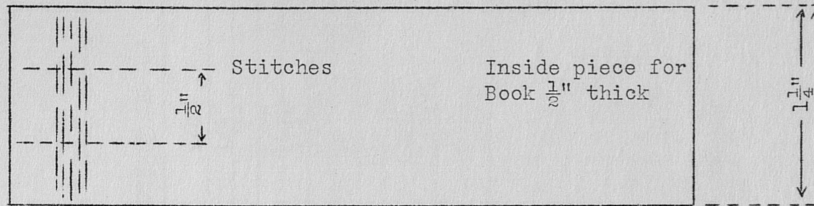


FIG. 48

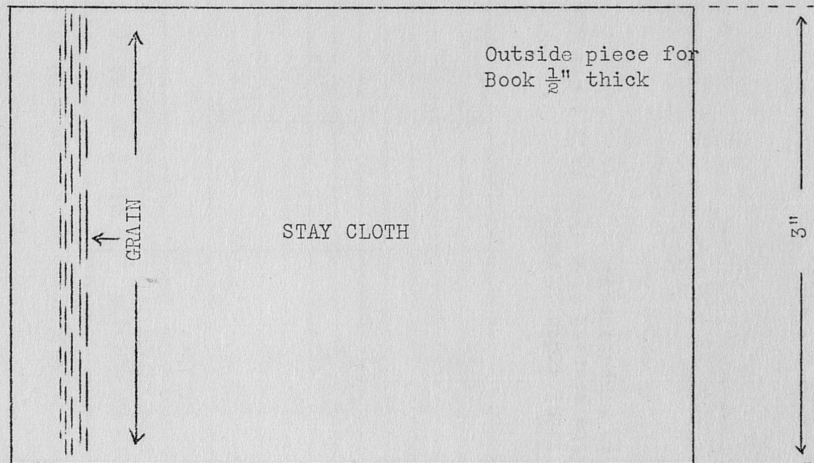


FIG. 49

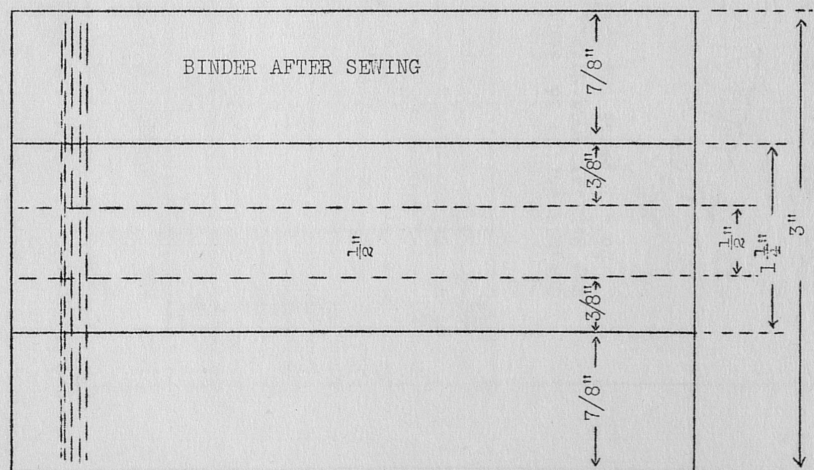


CHART FOR MAKING OVERLAP DOUBLE STITCHED BINDER FROM STAY CLOTH

| PLAN NO. | THICKNESS OF BOOK | WIDTH OF OUTSIDE STAY CLOTH | WIDTH OF INSIDE STAY CLOTH | WIDTH OF SEWING |
|----------|-------------------|-----------------------------|----------------------------|-----------------|
| 1        | 1/8"              | 2-5/8"                      | 7/8"                       | 1/8"            |
| 2        | 1/4"              | 2-3/4"                      | 1"                         | 1/4"            |
| 3        | 1/2"              | 3"                          | 1-1/4"                     | 1/2"            |
| 4        | 5/8"              | 3-1/8"                      | 1-3/8"                     | 5/8"            |
| 5        | 3/4"              | 3-1/4"                      | 1-1/2"                     | 3/4"            |
| 6        | 7/8"              | 3-3/8"                      | 1-5/8"                     | 7/8"            |
| 7        | 1"                | 3-1/2"                      | 1-3/4"                     | 1"              |
| 8        | 1-1/4"            | 3-3/4"                      | 2-1/4"                     | 1-1/2"          |
| 9        | 1-1/2"            | 4"                          | 2-1/4"                     | 1-1/2"          |
| 10       | 1-3/4"            | 4-1/4"                      | 2-1/2"                     | 1-3/4"          |
| 11       | 2"                | 4-1/2"                      | 2-3/4"                     | 2"              |
| 12       | 2-1/4"            | 4-3/4"                      | 3"                         | 2-1/4"          |

Cut all strips 36" long or the total width of roll.  
 For SPECIAL BOOK SIZES, select the nearest size from this chart and add  
 to all parts the difference in measurement.

NOTE: All Stay Cloth comes in rolls 36" wide.

Chart for making overlap double stitched binder  
 from stay cloth

SUPPLEMENT IV

SUPPLEMENT V

Instructions for making  
PRESSING AND CREASING BOARDS

Pressing and Creasing boards are used to press and to make the crease upon which a book is hinged. This is a special type of creasing board most suitable for binding methods outlined in this Manual.

Description of Boards:

This board is made from Number 1 smooth pine or cypress lumber. Boards must be  $\frac{3}{4}$ " thick and at least six inches wide. Lumber may be bought in lengths of 6, 8, or 12 feet. This length is not so important as this lumber is to be cut into twelve inch lengths. See Fig. 50, page 43.

Metal Edges:

These are to be attached after the boards have been cut the proper length. Metal should be 22 ga. galvanized iron, cut into strips 12" long and  $\frac{15}{16}$ " wide with four holes punched or drilled in each to receive #6- $\frac{3}{4}$ " round head wood screw. Holes should be drilled in the following order: starting left to right, first hole is to be  $\frac{1}{2}$ " from end of the metal; space from first to second hole  $3\frac{1}{2}$ "; from second to third hole, 4"; from third to fourth hole,  $3\frac{1}{2}$ ", which, also like the first, is  $\frac{1}{2}$ " from the edge of the metal. See Fig. 51, page 43.

Assembling:

Metal edges are fastened to boards with #6- $\frac{3}{4}$ " round head wood screw. Boards should be placed in a clamp. Mark with one piece of metal which can be used as a pattern. Holes should be drilled in the edge of the boards using a drill slightly smaller than the wood screw which they are to receive. It is very important that the metal is straight and extends equally on each side of the board. For use, see Fig. 53, page 43.

Material to make 100 creasing boards:

Lumber: 100 linear feet #1 smooth finished pine  $\frac{3}{4}$ " thick and 6" wide. May be in lengths of 6, 8, or 12 feet.

Galvanized iron: 200 strips of 22 ga., each 12" long and  $\frac{15}{16}$ " wide, drilled with four holes in each to receive #6- $\frac{3}{4}$ " wood screw.

Round head wood screws: 6 gross #6- $\frac{3}{4}$ " (nickel or brass)

FIG. 50

PRESSING AND CREASING BOARDS

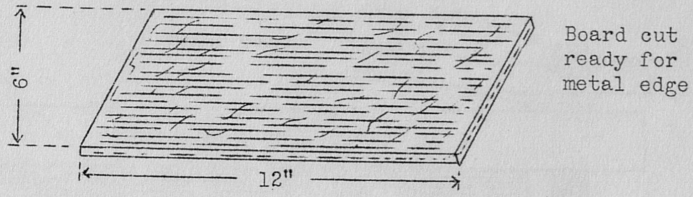


FIG. 51

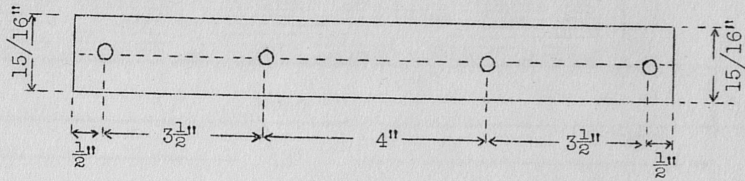


FIG. 52

End view

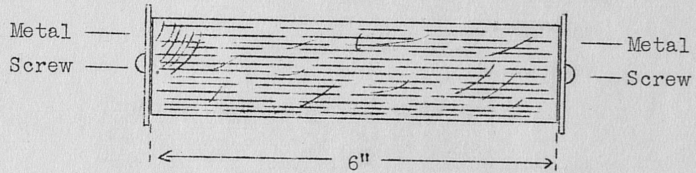
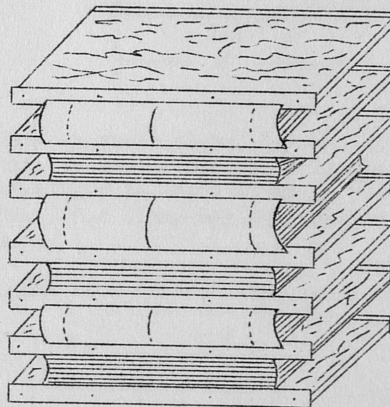


FIG. 53

Position of books between creasing boards



CONSTRUCTION AND USE OF  
BOOK REPAIR CLAMP

FIG. 54

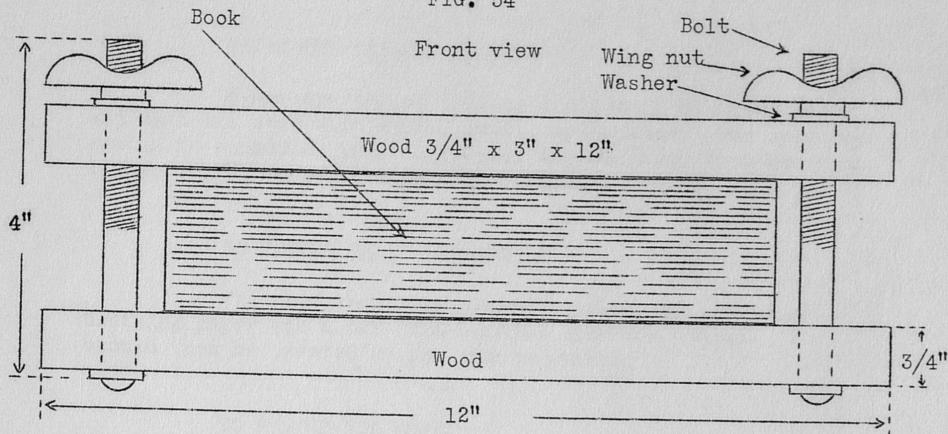
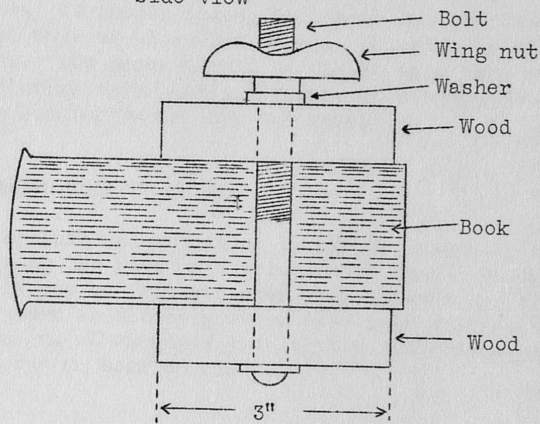


FIG. 55  
Side view



The book repair clamp as shown above, is used for books that require a longer time to dry or for books that are badly out of shape. It is necessary to leave books in clamp over night or for several days. This clamp may also be used for sanding the edges of books.

This clamp can be made at a cost of nine cents for material.

SUPPLEMENT VII

TO REMOVE GREASE STAINS

Place the soiled page on a sheet of blotting paper and wash all over with ether, petrol or benzine. The operation should be conducted in a current of air and away from the open light; all three being highly inflammable.

TO REMOVE HEAVY FAT STAINS

The page should be placed between two sheets of blotting paper and a hot iron applied over the stains. It should then be treated as for grease stains.

TO REMOVE FOX MARKS

These are brown spots appearing chiefly at the beginning and end of a book. To remove these, the paper must be bleached. There are several ways of bleaching paper. Chlorine is widely used, with good results. The paper should be placed in a bath of warm water and the chlorine water added a little at a time. When bleached, wash well in running water, dry and size.

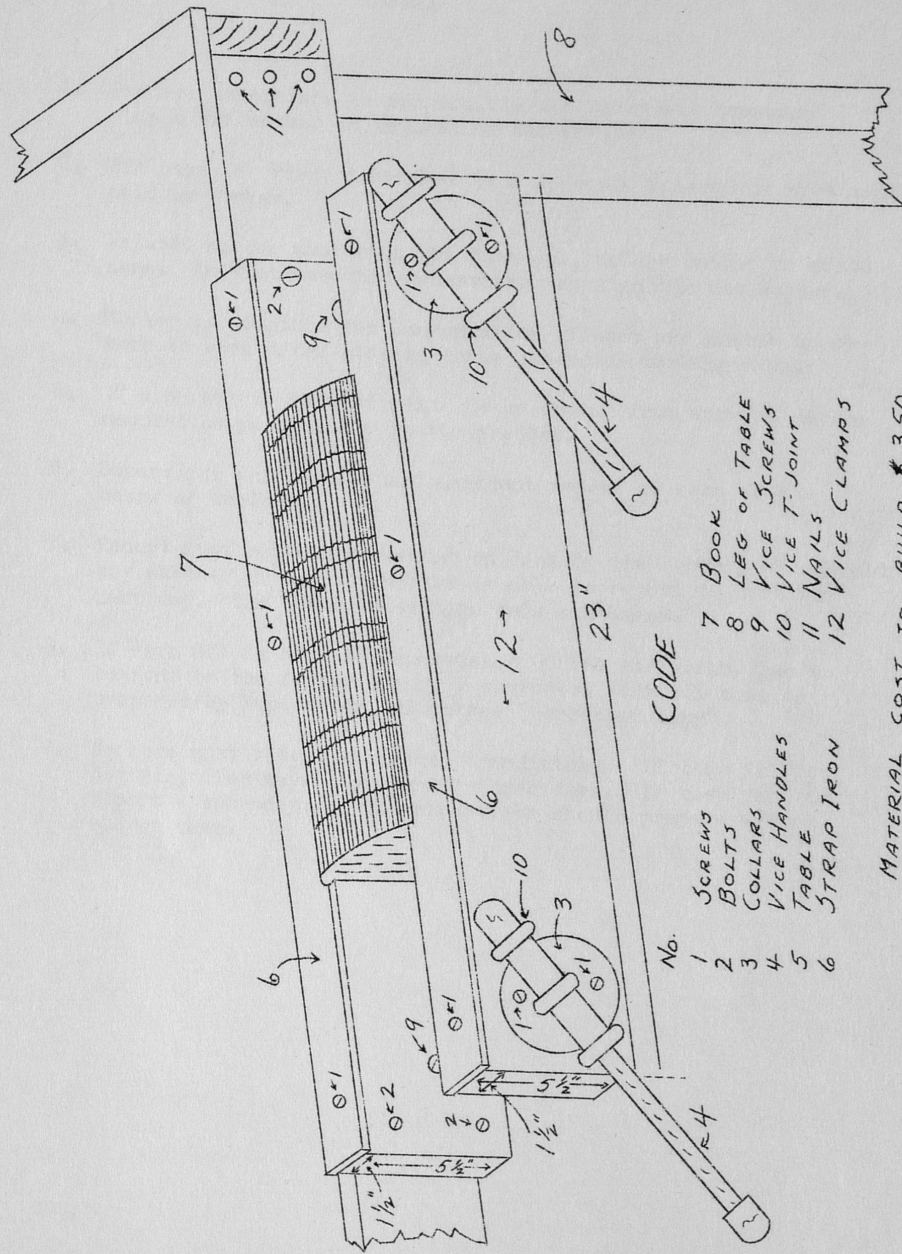
RESTORING WRITTEN MATTER

Writing ink rendered faint by age or immersion may be restored by steeping the page in a solution of tannic acid. Wash dry, and size. It may be restored even when effaced by chlorine. To do this, the paper should be given a wash over with a solution of sulphide ammonium. When clear and legible, let the paper remain in running water for an hour or so.



HEAVY DUTY ROUNDING AND BACKING CLAMP

FIG. 56



- |     |        |       |         |              |              |            |      |              |             |              |       |             |
|-----|--------|-------|---------|--------------|--------------|------------|------|--------------|-------------|--------------|-------|-------------|
| No. | 1      | 2     | 3       | 4            | 5            | 6          | 7    | 8            | 9           | 10           | 11    | 12          |
|     | SCREWS | BOLTS | COLLARS | VICE HANDLES | TABLE JOINTS | STRAP IRON | BOOK | LEG OF TABLE | VICE SCREWS | VICE T-JOINT | NAILS | VICE CLAMPS |

CODE

MATERIAL COST TO BUILD \$ 3.50

SUPPLEMENT VIII

SAFETY

1. Project supervisor is responsible for first-aid treatment when a WPA worker is injured on the project.
2. WPA pays for first treatment by a doctor. Subsequent treatments paid by worker.
3. Injured worker must sign own Form 351, unless unable to write name. In that case the supervisor may sign for the worker.
4. Worker is eligible for compensation if hurt and unable to return to work after missing three scheduled working days.
5. If a worker is injured going to or coming from work it may be counted as an accident on the project.
6. Supervisor should make out accident report as soon as she hears of accident.
7. Report must contain statement on back by the doctor, who should say whether or not the worker is able to report to work the next day. The doctor must sign this statement.
8. If Form 351 is sent to Supervising Office and worker has to be sent to the doctor later, a corrected Form 351 must be prepared by Supervisor and marked "corrected copy".
9. Workers must report accidents immediately. If they fail to do this, they may be suspended three days. If they fail to report a second time, the supervisor should prepare a Form 403 on them.

GLOSSARY

Terms used in Mending and Binding of Books

- ALTERNATING:** To reverse every other book when books are to dry or be pressed.
- ASTERISK:** A starred page. Symbol used to indicate that a corrected page has been supplied in the place of an incorrect one.
- BACKING:** The operation necessary to form grooves for the reception of the back boards.
- BACKING CLAMP:** Two pieces of metal made adjustable by two screws. Used for sewing, backing or sanding of a book.
- BACKING HAMMER:** Used for rounding back of book. Similar to a shoemakers hammer or riveting hammer.
- BANDNIPPERS:** Flat, broad-nosed pincers used when covering a book with leather or other material which requires stretching.
- BAND STICK:** A tapering piece of hard, smooth wood used across the back of a book when covering - usually about 4" long and 3" wide.
- BEAD:** The pattern formed at the bottom of a headband by the twisting of the silks.
- BEVELLED BOARDS:** To bevel or sand one side of a back board so as to form a high hinge; sometimes called skiving.
- BINDING:** To attach cover or case to contents.
- BITES:** Piece torn from the edge of a page leaving an uneven edge.
- BLEED:** A book is said to bleed when the print has been sanded into or cut.
- BLOCKING:** Method used to trim the cover of a book. Usually a straight line made with drawing ink one-half inch or more from each edge of the cover.
- BOARDS:** There are several kinds; pressing, creasing, backing and cutting. Refers also to the binders board or mill board used for the sides of the book.

- BONE FOLDER:** A flat piece of bone 1" x 8" pointed or blunt - used in folding, creasing and numerous other operations.
- BROKEN OVER:** Fly sheets or end papers folded back at the paste-line in order that they may turn easily and lie flat.
- CAPPING UP:** Covering of the edges with a paper cap or envelope to avoid soiling.
- CASED BOOK:** A book is cased when the cover and contents are made independent of each other. The book after sewing, backing, etc. is placed in the case by pasting or gluing down the end sheets.
- COLLATING:** Inspection of the signatures to insure sequence.
- CREASE:** To form a crease with a bone folder at the back or hinge of a book.
- CUTTING OF CORNERS:** To notch the corners of the cover after the two back boards are glued on in order to make proper fold or turn-over.
- CROPPED:** Undue cutting down of a book's margin.
- DECKLE EDGE:** The rough, uneven edge of a hand-made or mould-made sheet of paper. It is now imitated on machine-made paper.
- DRILL:** To drill holes through a book to receive the sewing thread.
- DRUMMING ON:** Term applied to a method of placing silk ends in a book.
- DUODECIMO:** A section composed of twelve leaves or twenty-four pages.
- END SHEETS:** The papers placed at each end of a book for the purposes of protection and appearance.
- FEATHER EDGE:** The finely skived or torn edge of a page.
- FLEXIBLE BACK:** A book sewn from each signature or section through the book.
- FLUSH:** Even with another object.
- FOLD:** To turn over or double a sheet of paper.
- FOLIO:** A sheet folded once. Two leaves or four pages.

- FOREEDGE:** Front edge of page.
- FORWARDING:** The stages or units through which a book passes up to the finishing.
- FOXED:** A book is foxed when brown spots or patches appear in a book, due to some chemical action taking place in the paper.
- GATHERING:** The collecting of folded sheets to make up a volume.
- GROOVES:** The shoulders created in backing a book. The grooves thus formed receive the boards of the book.
- HEAD:** Top of a book.
- HEAD BAND:** The beaded colored cloth used at the head and tail of a book to trim and strengthen it.
- HINGE:** To form creases with a folding bone at the edge of the backing boards.
- IMPERFECTIONS:** Damaged or imperfect sheets.
- INSET:** That portion of the sheet which is detached and inserted in the center of the folded portion.
- INSIDE MARGIN:** The space between the print and the back of the book. Outside margin, space between print and outer edge of page.
- JOGGING:** To hold book loosely and let it drop to the table by its own weight for the purpose of evening pages and sections.
- LINING UP:** The lining of the back of the contents and cover with backing paper.
- MENDING:** To mend and repair contents only, such as removing pencil and ink marks, repairing torn and loose pages and re-sewing contents. Binding involves complete new backs.
- OCTAVO:** A section having eight leaves or sixteen pages.
- OPENING UP:** The opening of the book after binding. It is particularly necessary for re-bound books.
- OVERCASTING:** A method of sewing a number of single or damaged leaves together by sewing in a slanting position through the back of the contents and over the back edge.

- PAGE: One side of a leaf.
- PASTING UP: Pasting several end sheets at one time and allowing them to soak before applying them to the backs.
- PASTE PAPER: Newspapers, magazines or other paper used to glue and paste upon. To be discarded after using.
- PRESS: To place in a press or under weights.
- QUARTO: A section composed of four leaves or eight pages.
- QUIRE: Twenty-four sheets of paper.
- RAGGED: Uneven or torn.
- REAM: Twenty quire or 480 sheets. Note: A printers ream consists of 516 sheets.
- RE-SEW: To sew over a book in which the thread is broken.
- RULING: Mark the cover the proper size for the contents. Draw a straight line across the cover  $3/4$ " from the top edge. Use this line to square and rule two other lines which agree with pattern markings.
- RUB DOWN: To smooth out glued or pasted surface with a damp or dry cloth.
- RUMPLED PAGES: Pages that are wrinkled or out of shape.
- SHEET: The full size of the paper when printed.
- SIGNATURE: The letter or figure placed at the foot of the first page of every sheet. Note: When a sheet is folded, it is referred to as a section or signature, and is usually about eight printed pages.
- SMOOTH OUT: To rub out air bubbles on cover with folding bone after board has been placed on a glued surface.
- SORTING: To sort into various classes books to be mended and bound.
- SQUARING: To square ruled lines on back boards with an angle square.
- STAY CLOTH: A heavy white durable cloth used for making overlap double-stitched binder and book stays.
- STIPPLE: To apply glue by brushing with a downward motion, touching surface to be glued in various places.

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- TACKY: "Tacky" refers to the stickiness of the glue after it has been applied.
- TAIL: The bottom of a book.
- TIP IN: To glue in a single page that has been torn from a section, by gluing it to the next solid page.
- TRIMMING OUT: The cleaning away of all loose super and end sheets from the back boards when a book is to be re-cased in the original back.
- UNCUT: A book is said to be uncut when its edges have not been cut all around with a plough or guillotine cutter.
- WRINKLED: The wrinkling of the back margin due to careless or improper backing.

Faint, illegible text, possibly bleed-through from the reverse side of the page.

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PROJECT INVENTORY AND SUPPLY ORDER FORM

To be used for keeping record of materials on hand and as order form for DISTRICT \_\_\_\_\_ supplies needed. DATE \_\_\_\_\_

COUNTY \_\_\_\_\_

LOCATION \_\_\_\_\_

No. Book repair workers M F \_\_\_\_\_

EQUIPMENT

SUPPLIES

|     |                       |     |                             |
|-----|-----------------------|-----|-----------------------------|
| 1.  | Shears, (Bookbinders) | 1.  | Book Cloth (C.S.57-36) yds. |
| 2.  | Shears, (Tin)         |     | color                       |
| 3.  | Square - size         | 2.  | Stay cloth yds.             |
| 4.  | Clamp (Sewing 13")    | 3.  | Paper, white Rms.           |
| 5.  | Rulers (15" flat)     | 4.  | Paper, lining Bolt          |
| 6.  | Pen - lettering style | 5.  | Red never break shts.       |
| 7.  | Hammer (Backing)      | 6.  | Board, binders shts.        |
| 8.  | Glue Pot (electric)   | 7.  | Tissue, mending shts.       |
| 9.  | Bones, folding: Blunt | 8.  | Thread (Book) yds.          |
|     | Pointed               | 9.  | Thread (Machine) yds.       |
| 10. | Hand drill            | 10. | Erasers doz.                |
| 11. | Book repair press     | 11. | Paste, dry lb.              |
| 12. | Awls                  | 12. | Paste, library lb.          |
| 13. | Needles Pkgs.         | 13. | Glue, flexible lb.          |
| 14. | Brushes, Paste        | 14. | Glue, ground lb.            |
|     | Size ( ) Glue         | 15. | Head bands yds.             |
| 15. | Boards, creasing      | 16. | Book edge color lb.         |
| 16. | Boards, press         | 17. | Ink, lettering bot.         |
| 17. | Lettering text book   | 18. | Book shellac qt.            |
| 18. | Book knife            | 19. | Book lacquer qt.            |
| 19. | Sewing Machine        | 20. | Lacquer thinner qt.         |
| 20. | Paper Cutter          | 21. | Super yds.                  |
| 21. | Casing guage          | 22. | Paper, wax pkg.             |
| 22. | Linoleum knife        | 23. | Sand paper (Fine) pkg.      |
| 23. |                       |     | (Coarse) pkg.               |
| 24. |                       | 24. |                             |
|     |                       |     |                             |
|     |                       |     |                             |
|     |                       |     |                             |
|     |                       |     |                             |

Project Supervisor

IN RE: THE ESTATE OF [Name], deceased.  
[Name], Executor.

| No. | Description     | Amount |
|-----|-----------------|--------|
| 1.  | Balance forward |        |
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Total

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