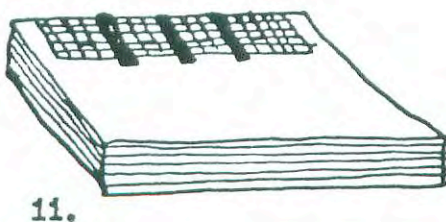
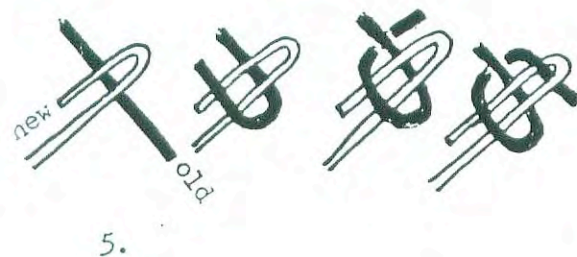
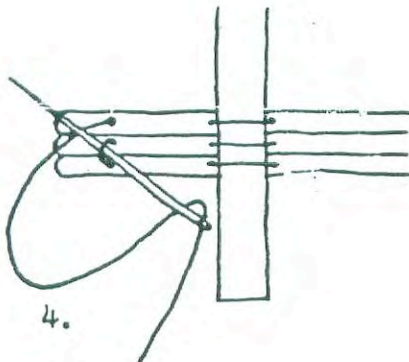
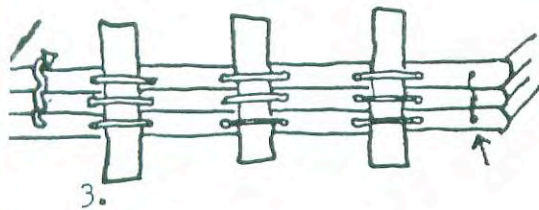
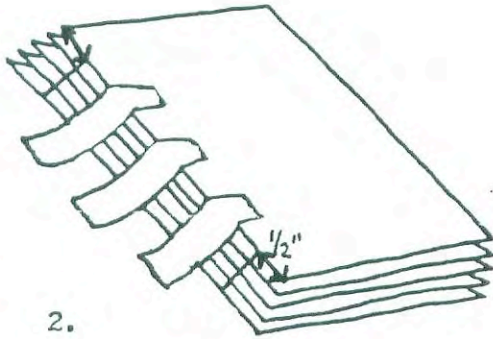
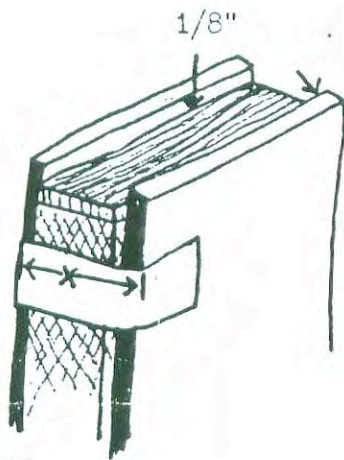


Wednesday, April 11 and Monday, April 16, 2012

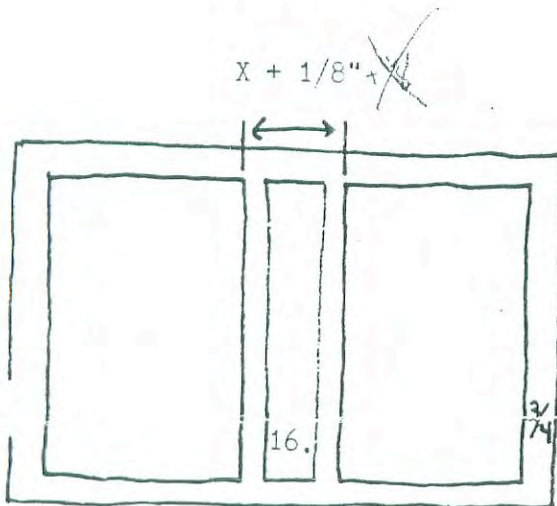
flat back case bound books



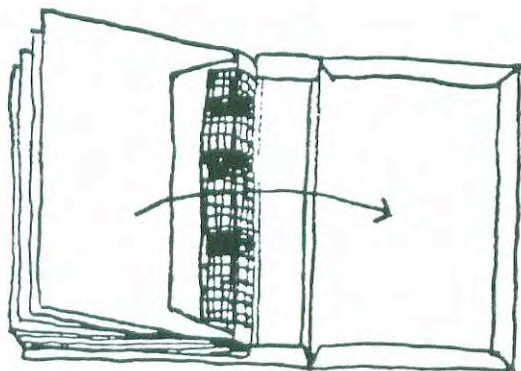
1. fold signatures and stack on eachother.
2. mark up back $\frac{1}{2}$ inch from head and tail.
cut three tapes 3 inches long, spacing each and marking them also. glue tape onto top sheet.
3. sewing sections onto tapes. poke holes through signatures where marks are. sew with single thread. start outside, sew to inside, come out and around the tapes, pull thread firmly across the pages.
4. use a kettle stitch at each end, securing one signature to the next
5. if you run out of thread, follow the illustration to add additional thread.
6. knock down the swelling of the thread with a hammer.
7. paste the first and last sections. open up each section and dot in $\frac{1}{8}$ inch of thin glue to put sections together. use pasting guard.
- * 8. paste end sheets on front and back, $\frac{1}{8}$ " also.
9. glue up back. with back of book flat, use brick to hold into place, and brush thin glue over the spine of the book. (too much glue on the back makes book difficult to open easily, back will become stiff.
10. glue headbands on head and tail. they only need to extend the width of the spine.
11. lining the back with mull. cut mull 1 inch shorter than the length of the spine, and $2\frac{1}{2}$ inches wide. brush the back thinly with glue and place the mull centered upon it. rub down well.
12. lining the back with paper. cut a piece of craft paper 1 inch shorter than the length of the spine, and the same width as the spine. paste down.
13. lightly glue down the tapes and mull to the end sheet. cut end sheet to form a flap. * paste new heavy weight end sheets under front and back flap, glue $\frac{1}{8}$ ".



15.



16.



19.

14. cut boards so that they are the same width as the book, and overlapping the head and tail by $1/8$ ".
15. place the boards on the book so that they project $1/8$ " at the head tail and foreedge. hold them firmly in place, and wrap a strip of paper around the spine of the book. mark the paper exactly level with the edge of the boards. this measurement plus $1/8$ " gives the distance apart that the boards have to be placed when making a case.
16. for the lining piece, cut a strip of brown or stiff paper the same length as the boards and equal in width to the thickness of the spine plus one board thickness.
17. cut a piece of material large enough to cover the book, plus an overlap of $3/4$ " all around. mark on the reverse side of the material the position of the boards and the lining strip.
18. paste down the boards and the lining strip onto the material using the bone folder to smooth the front surface. bring the edges over and glue down.
19. casing the book. put wax paper under the end sheet and paste the end paper. lay the end paper flat again and close down the top cover board on it carefully. lift the board slightly to see if the end paper is positioned correctly, and then press the board down firmly. do not open the book at this point or the damp paper will stretch in the joint, causing a pocket to form when the board is closed. turn the book over and paste down the other end paper.
20. put waxed paper between the end sheets and the sheets and leave in the book press until the glue is dry.

- 1 In traditional western style bookbinding (smythe sewn),
2 large sheets may be folded into "signatures" (4,8,16,32
pages) and then stitched together.
- 3 After applying the end sheets, glueing and lining the
4 back, the book is trimmed and attached to the pre-assembled
5 flat back case.
- 6 In traditional eastern style bookbinding (Japanese),
individual sheets of very light-weight paper are folded
7 and assembled (fold side opposite binding).
8 The front and back covers are made exactly the same size
9 as the pages, only slightly heavier.
Using a hard back cover for a Japanese style book may be
considered a contamination of east and west.
- 10 Pages and covers are assembled and held firmly together
by two "ball clips" (protect covers with two pieces
of chip board) until the binding is completed.

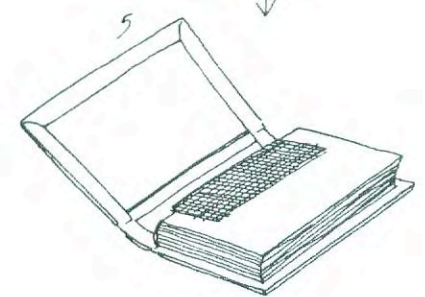
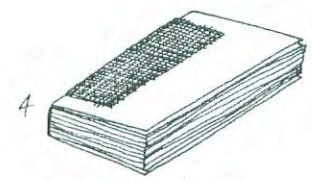
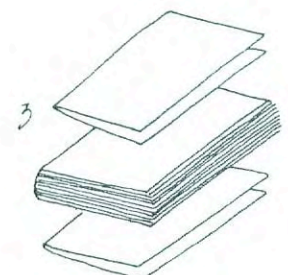
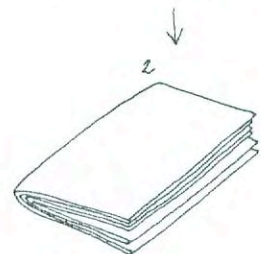
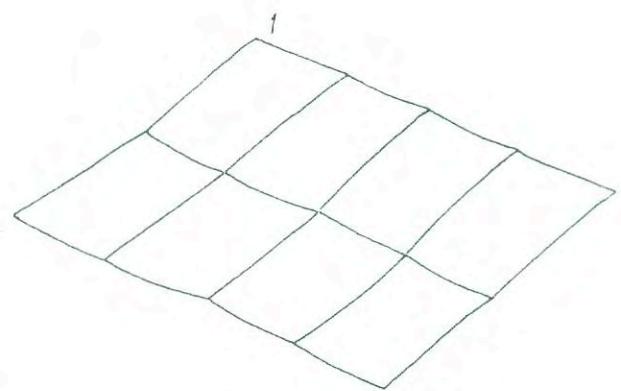
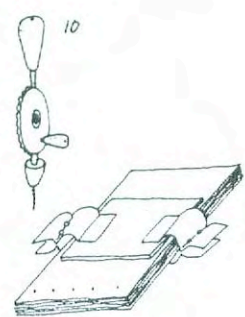
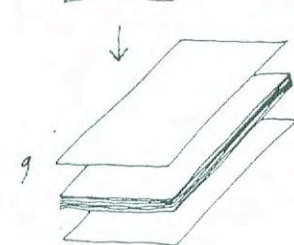
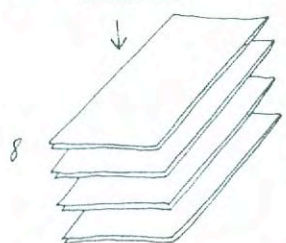
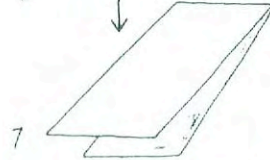
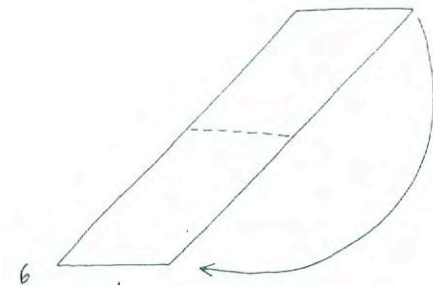
Positions for the holes are plotted on the binding side.
Important: whatever the pattern, begin with a center
hole and add sideways, yielding an odd number of holes
overall.

- 11 Drill holes with a hand drill and stitch the book
following the pattern in the illustration.
Note: always start at the center hole on the front
12 cover, bypass center hole after completing the first
half; tie a double knot at the end and trim the
13 thread leaving two inches or more hanging.

Formal-philosophical differences may be noticed
between the two styles:

West. Process is hidden, edges are protected,
the book is a "hard" object.

East. Process is manifest, sides are flush,
the book is a "soft" object.



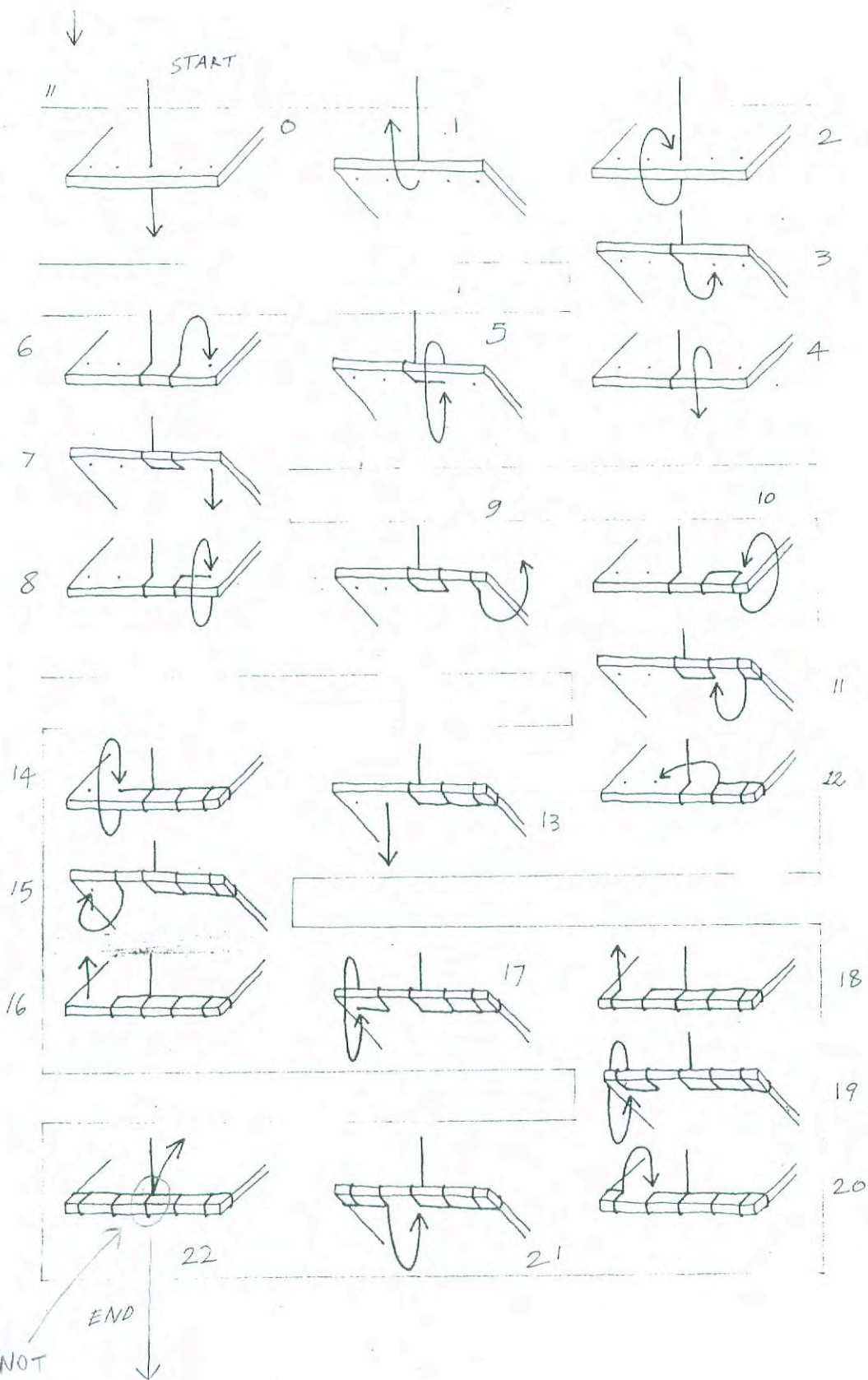
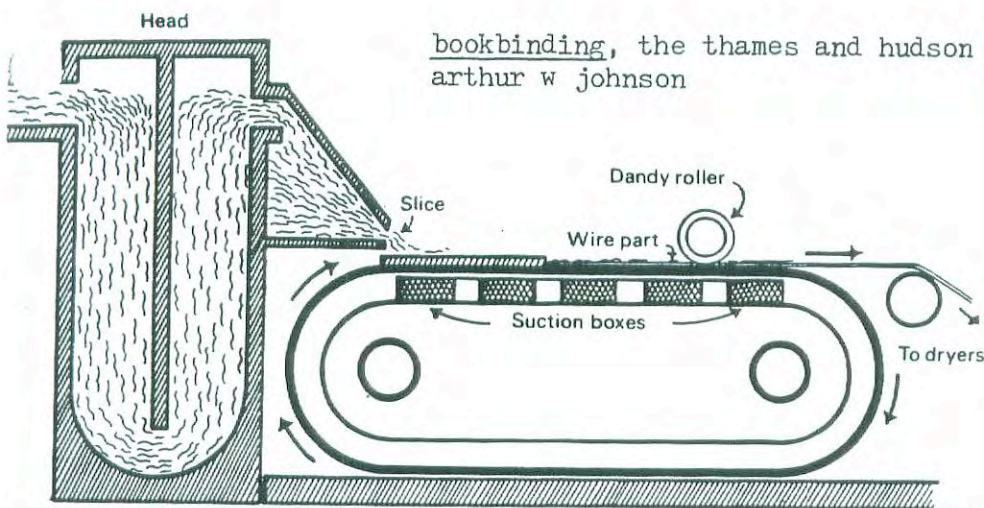


DIAGRAM
PROGRESSION



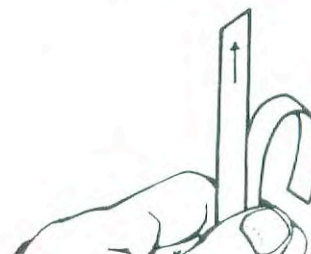


10 Paper-making machine

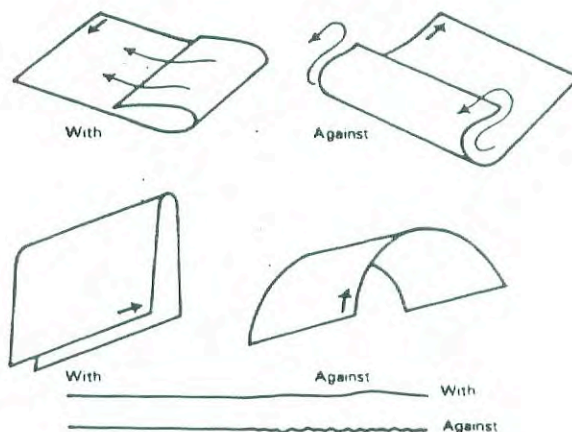
The pulp is pumped into a tank, known as the 'head', to be made into a continuous web. From the bookbinding aspect, the stage of forming the web of paper is extremely important for it is here that the 'grain' or machine direction of paper is established. Paper pulp containing 99.3 per cent water is passed from the head through the slice, which regulates the thickness of pulp falling on to the wire mesh and determines the substance of the paper. The wire moves away from the slice and shakes from side to side to felt the fibres, most of which lie in the direction in which the wire part is travelling. Handmade paper has its fibres felted in all directions; it has no grain and, when wetted, will stretch both ways. In machine-made paper the fibres tend to lie in one direction and, when wetted, the resulting stretch is eight times more at right angles to the grain than the stretch in the machine direction. As the web of paper is being formed, the water is removed by suction boxes, and the web then passes under a series of rollers. The first, the dandy roller, consolidates the surface and sometimes impresses the laid, wove and watermarks into the web of paper. Further rollers dry, size, finish, coat, wax, polish and emboss according to quality and use. Machine-made paper in a continuous piece has a tear strength weaker one way than the other and is liable to decay more rapidly if poorly sized and dried quickly. Mould-made paper is produced by machine in separate sheets and is of high quality with good fibres, often tub-sized.

The importance of grain direction in paper and board and the direction of the warp thread in cloths and mull cannot be over-emphasized. In every binding the grain and warp of all the man-made materials must run from head to tail. Materials with conflicting grains or warps will cause boards to buckle, endpapers to crease or split, paper to cockle and books to gape; sections will not fold properly. Paper folded with the grain will lie flat and crease without damage, but folded against the grain the fibres will crack and endeavour to straighten. There are many ways of establishing the grain of a piece of paper and four of these are sufficient to test most papers.

1 Cut two strips of paper approximately $80 \times 12 \text{ mm}$ ($3 \times \frac{1}{2} \text{ in.}$) from adjoining edges of a sheet and identify one of them. Hold them as illustrated above, and lick them. One will collapse into a curve and the other will remain upright. The latter has the grain running along its length, keeping it upright, and the stretch in width is negligible. The other, with the grain running across the width, has the moisture going between the fibres, increasing its length and making it limp.



11 Testing for grain direction 1



12 Testing for grain direction 2

2 Lay a sheet of paper on the bench and turn over one edge in a curve for 250 mm (10 in.). Repeat this with the other side and it will be observed that the edge that remains curved over or returns more slowly will indicate the grain direction.

3 Hold the sheet the long way and bend the middle. Repeat, holding the paper the short way. Whichever shows the smaller curve or offers less resistance is the grain direction.

4 Run the finger and thumb tightly along the extreme edges of adjoining sides for 250 mm. Against the grain will show as short wavy lines, the fibres having been stretched apart by the rubbing action. The edge with the grain will hardly change.

As most papers are sold in rectangular sheets the grain is described as 'short grain' if lying along the lesser measurement, and 'long grain' if the longer way of the sheet. Boards are tested by bending: the way that offers less resistance is the grain direction (it is important that the same distance is bent on both sides). The warp direction in material is usually parallel to the selvedge. Book cloth will tear straight and more readily down the warp.

b o o k b i n d i n g

methods

wire stitching	<u>staple</u> saddle wire stitching side wire stitching	opens flat/pamphlet not flat/magazine
mechanical binding	<u>wire</u> spiral wire-o	notebook, calendar, cookbook/ absolutely flat, inexpensive
perfect binding	<u>adhesive</u> soft cover hard cover	paperbacks, telephone book/fast textbooks
edition binding	<u>sewn</u> side sewn smythe sewn	thread passes through entire book 1/8" from gutter thread passes through gutter of each signature/ most permanent, most expensive
japanese binding	<u>hand sewn</u>	oversized, thin sheets/ single sheets folded on the outside

supplies

text papers	mohawk letterpress 80 lb. grain parallel to spine
end sheet papers	handmade paper, decorative, oriental
binding board/chip board	60 pt. 80 pt. grain parallel to spine
binding cloth	cotton canvas, linen
bone folder	
adhesive	sobo glue, pva, elvace
brush	flat 1-2"
pencil, ruler, scissors, xacto knife and blades	

→ LARGE NEWSPRINT PAD ←

to be supplied

drill, linen thread, wax, needles, cloth tapes, headbands,
mull/super, waxed paper, bowls, clips, nails, book press

the paper for covering book covers

character	individual type letters, figures and punctuation marks.
font	a complete alphabet of one style (roman or italic or bold etc) and size, in uppercase, lowercase, figures and punctuation.
family	all variants and sizes of one design of type; weight, width, roman, italic.
case	a wood tray divided into compartments in which type is kept, called the california job case.
points	standard measure for type sizes. 72 points to an inch.
picas	standard measurement of width. 6 picas to an inch.
type high	height of the metal block of type, .918 inch.
standard point size	6, 8, 10, 12, 14, 18, 24, 30, 36, 42, 48, 60, 72.
text type	14 point and smaller
display type	18 point and larger
quads	abbreviation for quadrants. large spaces (below type height) for filling out blanks. quads are usually 1-4 ems wide.
em quad	square of the type size. 12 point type is 12 point x 12 point. taken from the body of a roman letter M which is nearly square.
en quad	$\frac{1}{2}$ of an em quad.
three to the em	$\frac{1}{3}$ of an em quad.
four to the em	$\frac{1}{4}$ of an em quad.
leading	metal lead strips of spacing between lines of type. (below type height) thickness of lead measured in points. 2 point thickness, etc. length of lead measured in picas.
9/11	an example of type leading. nine on eleven. meaning 9 point type with 2 point leading.
set solid	no leading used between lines of type.
brass	a small one point spacer made of brass.
copper	$\frac{1}{2}$ of a brass, or $\frac{1}{2}$ point spacer made of copper.
composing stick	a hand held instrument to collect type. set type upside down and from left to right, with nick right side up.
galley	flat metal tray with one end open, on which type composed in a stick is transferred. also used to store type which has been set.
chase	rectangular steel frame into which type and furniture are tightly locked before printing.
furniture	wooden blocks used to fill in large spaces when locking up.
reglet	narrow wooden furniture 6 point or 12 point in thickness.
quoins	expanding wedges of metal used to exert pressure on furniture and type within a chase.
key	a tool used for tightening or slackening quoins.
block & mallet	used to lightly tap type to even height.
type wash	solvent in a can labeled <u>red</u> , used to clean the type. & general clean up.
roller wash	solvent in a can labeled <u>blue</u> , used to clean the rollers on the press.
distribution	returning type to its proper compartment in the correct case!