

## BOOKMAKING IN CHINA

By HEDDA HAMMER

**B**OOK-collecting in China is as much an esoteric hobby of the educated man of leisure as the purchase and study of old paintings and specimens of calligraphy. In the Chou dynasty the philosopher Mo Ti was constantly accompanied on his travels by five cartloads of books; and Confucius himself says that he thrice wore out the thongs binding his copy of the *Book of Changes*. Fortunately today we need not bother with Mo Ti's string of carts nor Confucius' cumbersome strips of wood tied together with rawhide.

In ancient times, notations of events and oracles were scratched with a stylus on tortoise shells or on the scapular bones of some of the larger animals. But with the introduction of the hair writing brush, entire volumes of connected argument could be written—with varnish for ink—on slips of bamboo or on wooden plaques. These slips were one to two inches wide and up to a foot in length, the characters being written from top to bottom in one or two columns. The whole was bound with thongs through holes punched at the top. This accounts for the troubles the wandering scholars had to deal with in their studies.



With the advent of the Han dynasty we find the use of silk, and later of paper, for the copying of books. These writings were kept like the present-day scrolls—long rolls which took up far less room than the older books but which were awkward when it came to rapid reference. According to the famous Japanese bibliographer Shimada Fumi, the Chinese of about the Sui and T'ang dynasties discovered that reference to books could be greatly facilitated if the long rolls were folded back and forth, much like the present ubiquitous fan, to form a flat book which could be opened anywhere at the will of the reader. This style of binding, called "whirlwind leaves," remained the common one for several centuries and is still sometimes used for Buddhist sutras. Also—typical of Confucian conservatism—the candidates for degrees under the old examination system were presented with blank examination books folded in this way.



Painters say that the life of silk is measured in decades but that of paper in centuries, for silk will rot and tear and is practically impossible to repair while paper can be patched and touched up time and again. So we find a gradual abandonment of silk in favor of paper.



Reproduction of an old manuscript scroll



Inking a block of successive title strips

Toward the end of the T'ang dynasty a new process gave a great impetus to the book trade, namely, the invention of block-printing. This process had gradually evolved from the use of carved seals in Han times, when an inked seal was pressed onto paper or silk in lieu of a signature. The next step was the method of "rubblings" or "squeezes," where a replica of a stone inscription was taken by dabbing an inked pad over a moist sheet of paper that had been laid on the inscription and gently brushed into all the hollows of the stone.

With the imperial patronage of Buddhism from Northern Wei times on, we find a rapid spread of this faith and a demand for the reproduction of pictures for the use of the faithful. Rubbings helped to answer the demand; but it was soon discovered that an even better process was to carve the picture and its accompanying text in reverse on wooden blocks, after which the block could be inked, a sheet of paper laid over it and, with a stroke of a flat brush, a black-and-white reproduction made. This last development took place toward the end of the T'ang dynasty and, of course, necessitated a radical change in

bookbinding. Although a long roll could be printed, its cumbersome length made the process awkward, to say the least.

Readers had likewise noted that with long use the whirlwind leaves tended to wear out along the folds. The result was that works were printed in separate sheets, one sheet to a block. These sheets were then folded in down the middle and placed back to back to form the "butterfly binding." When a fairly heavy paper was used, these sheets could be pasted along the front edge, leaving the back like the former whirlwind books. But with thinner paper these books had to have a cover which was pasted to the rear folds, forming a book more like modern Western ones.



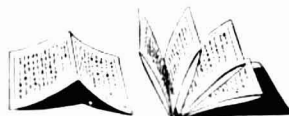
"Butterfly" leaf and binding

Even this development was not entirely satisfactory, for once the backs were pasted together there was no need for the front edges to be pasted, and hence the reader had to turn two leaves to get from page one to page two, since the sheets were printed on one side only. This problem was solved when later printers cut their blocks with a blank column down the middle.



Printing from the block of titles. Note that the characters show in reverse through the thin paper

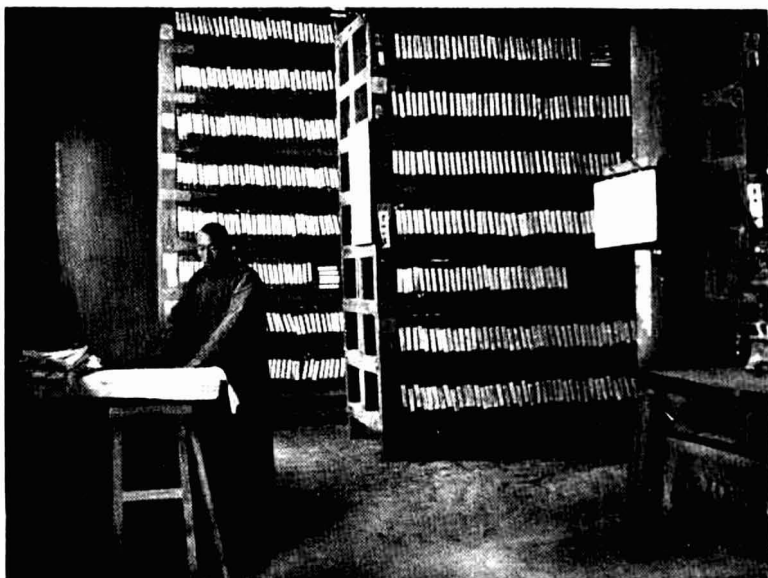
Then the printed sheets could be folded *backwards* along the middle and the whole book stitched with thread along the back, giving us the modern Chinese block-printed editions.



Modern method of binding

The blank space down the middle of the page was soon put to use and today forms an important part of the book, both because it is used for reference by the reader and because it contains valuable information for the collector. This column is called the "block's heart" and is usually divided into three parts, each separated by a black mark called "fish tail." Each block for the whole of an edition must have these fish tails in exactly the same position.

Above the first fish tail we find the title of the work, sometimes followed by the number of the particular chapter. Below we usually get the title of the particular

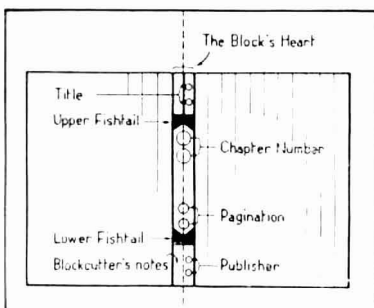


Carved blocks are stored carefully with a view to further editions

chapter, and just above the next fish tail the pagination, which starts afresh for each chapter. The space below this second fish tail is reserved for the name of the publishing house.

As a general rule, all of this printing appears half on the recto and half on the verso side of the leaf, but occasionally one finds the verso half of the block's heart reserved for the block-cutter's notation. This notation included the surname of the workman, the number of characters in the text proper and, if there is a commentary included, the number of smaller characters, for the workers were paid according to the number of characters cut and not according to the number of blocks. Since the block's heart must be regular throughout the

work, a collector can easily judge whether a work is all of one edition by simply looking at the edges of the closed book. If the black marks are regular, he can feel fairly certain that he is dealing with a single edition.

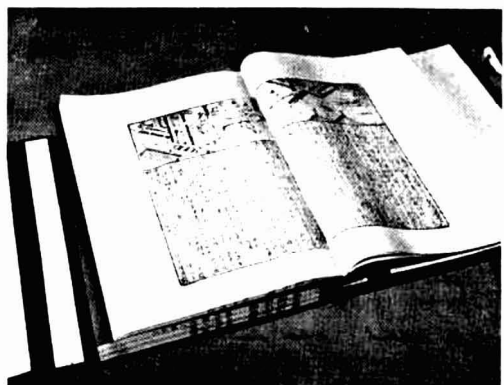


Cutting to make an even edge before stitching



Applying the paste for a butterfly edition

A Sung edition of a novel in butterfly binding



With the introduction of stitching in the early Ming dynasty, readers had still to contend with Confucius' problem—this time, however, that of the threads' wearing out. This was remedied toward the end of the dynasty by the use of "enclosed corners"—small pieces of colored silk wrapped around the corners between the last stitch and the edge of the book, top and bottom, thus taking part of the strain from the last stitches.

In connection with these enclosed corners, an interesting story is told of a famous connoisseur of paintings who was asked to judge the authenticity of an alleged early Ming painting. He was quite satisfied that the style of the brush strokes indicated an early Ming sketch of a semisylvan scene containing in the middle foreground the



Holes for stitching are punched with an awl



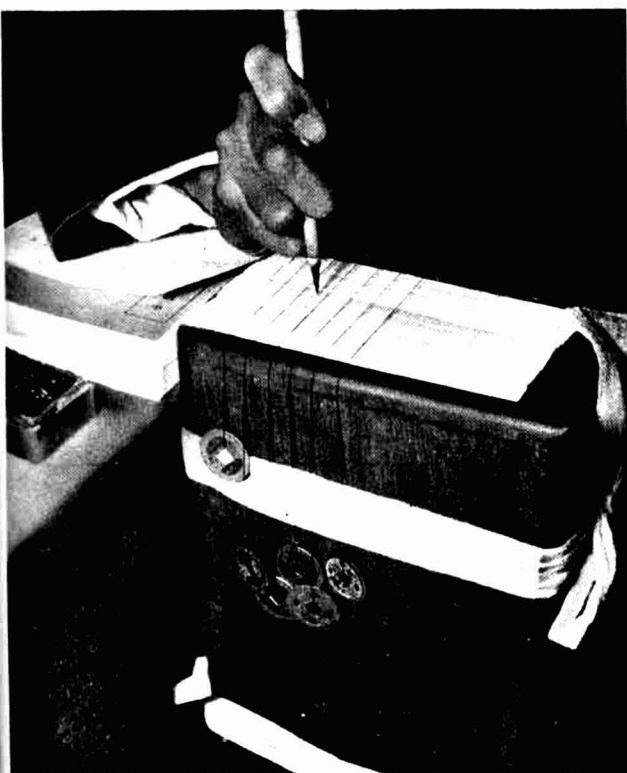
Stitching the loose sheets together

In the south it is necessary to insert at the front and back of each volume, just inside the covers, a sheet of orange-colored paper impregnated with poison in order to stop the progress of bookworms—not of the scholarly sort—which are expected to die after eating through it and before they have gone far enough to damage the text. Indeed, it is not unusual to find a book so bound that has a small wormhole in the cover and another in the bright orange sheet of medicated paper, while the text remains uninjured. But occasionally you will come

abode of a scholar-recluse; but of course it might have been done by a later artist who copied the earlier style. The latter hypothesis proved correct, for the connoisseur noticed that the second floor of the recluse's home was an open study, and that many of the books on the shelves were bound with enclosed corners. Hence the painting was obviously a much later product than at first supposed.



An assistant checks the day's run



Writing the titles on the bottoms of an edition

across such a book harboring (and feeding!) whole colonies of worms that have been unethical enough to eat their way in through the unprotected back of the book.

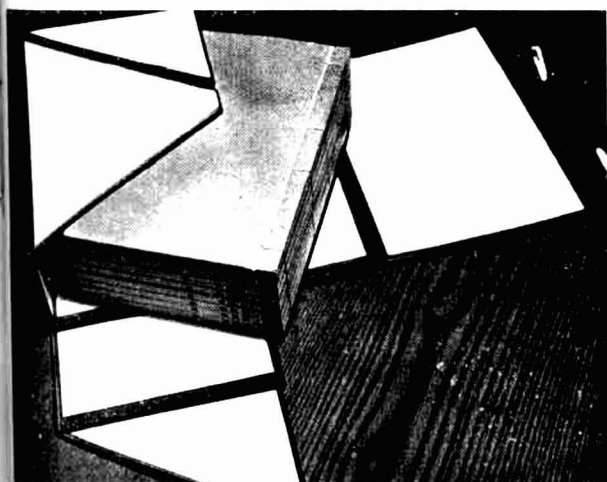
The cover itself is of heavy paper folded double or, in cheap books, of single paper faced with lighter paper. Then holes are punched for stitching with an awl. The number of stitches depends on the size of the volume, but there is no place for individual fancy in the way it is done. Consequently, the outside of Chinese books is quite uniform, with the exception of those with silk-reinforced corners as mentioned above.

Hence a Chinese scholar would find it difficult to keep track of even a modest

collection of a few hundred volumes, all of which look very much alike, with some minor variations in size and perhaps color of bindings, and none of which can be identified short of opening each volume separately. Moreover, works that normally occur in tens or even hundreds of volumes would soon be hopelessly mixed and scattered. The bookseller himself can give no help here, but he will gladly act as agent for another guild, whose workmen will first write identifying titles and even whole tables of contents along the bottom of each volume, and then make to order neat little cases of pasteboard covered with cloth that will hold five or six volumes together.



The final product. Note the characters written on the bottoms of the top and bottom cases. The middle case contains four volumes bound with enclosed corners. Number two is a board-leaf case



Of these cases, or *fao*, there are several varieties. The ordinary ones fold around the stacked volumes, leaving the top and bottom open—and these are the most practical where the books are to be piled flat one

A three-cornered case

A recital of these complicated operations and a résumé of their long evolution can only give a vague idea of the richness of culture connected with this esoteric art. Esoteric art it is, even though modern techniques and styles have invaded its field. Esoteric it will remain until the last block-print is thumbbed beyond repair.