

part of the work of bookbinding was performed by men, but now the folding and sewing are usually done by women. If the book is to be bound by any of the dozen or more of "flat-opening" methods, the manner of the sewing will vary according to the process; but, in the ordinary book, the sheets are sewn with linen cord or thread on strips of strong tape or vellum. The strength and durability of a book depend on the sewing more than on any other one thing that enters into the making, and the greatest care must be exercised that only the best materials are used, and that every sheet is securely fastened. The strips to which the sections are sewn are the hinges upon which they open, and which unite the book to its cover. The end papers, which are made separately, are sewn in with the book, for they are important elements in its strength and wearing qualities.

MARBLING

The book is now trimmed and the edges colored or marbled. Every blank book of any size should be marbled, for, next to gilding—which, of course, is never applied to a blank book—no finishing for book edges is so generally satisfactory. Marbling is done by dipping the edges of the book into a liquid size of gum tragacanth, upon the surface of which colors have been thrown and formed into a design. As each design will stand but one dipping a new one must be made for each edge.

ROUNDING.

The next process through which the book must pass is that of gluing and rounding. The sections of the book are glued along the back to unite them to one another and prevent them from working loose. The back is then rounded with a hammer to give it shape and to hold the spring-back which is afterwards added. The book is again placed in the press to set, in order to retain the shape now finally given it. Although apparently trifling, these are all important details. The first requirement of all blank-books is strength; appearance comes afterwards. Cheap thread, inferior glue, imperfect rounding, neglect or carelessness in any one of a score of little things may destroy the finest product of a bookbinder's skill.

BOARDS AND BACK.

The book is now lined along the back with stout canvas and bands of leather drawn over the edges, forming, with the outside sheet of the book, which is folded back, to about three inches in width, what is known as the "lugs," to which the sides are secured. The boards for the sides are now added. The thickness of the boards depends altogether on the size and weight of the book, and must be of the best quality of millboard so as not to warp or break. The spring back which encircles the back of the book, and to which the leather covering is pasted, must be of the best tarboard. This back is intended to assist in throwing open the book at any place so as to leave a surface flat enough to allow writing close into the crease, and is made to grip the edges of the book snugly. The boards forming the sides are split at the edges nearest the back and the "lugs" inserted to make the hinge and fasten the book to its cover. The raised hub-bands on the back are made by fastening strips of strawboard across the back forming it into panels. On ordinary bindings the panels are five in number, with the lower one a trifle longer than the others. This rule, however, may be varied to suit the style of binding.

THE LEATHER COVERING.

The book is now ready for the outer covering. The finest

blank-books are bound in full calf with Russia bands, but without hubs, or in full Russia with hubs. Cheaper styles are half calf, half Russia, or half sheep, all having cloth sides, or full canvas with Russia bands. Care must be exercised that the leather is cut along the grain in order that it will stretch well. After being cut to the required size and the edges pared, it is dampened to soften it and make it stretch, pasted on the inside and drawn tightly over the back and sides of the book and fastened. It is first stretched well over the back, rubbed in at the sides of the hubs so that they will stand out as though cut from leather, pressed in at the hinges to allow free play to the sides, turned in at the head and tail and smoothed well over all. Slight rods of wood or thick cords are fitted into the joints of the hinges and the book put into the press for a short time. When again taken out the Russia bands, or cloth sides if a half bound book, or other details are added. The end papers are then glued down and it is placed in the press to set. The book should now remain undisturbed for several days to dry and season.

LETTERING AND FINISHING.

A blank-book when first removed from the press is hard and unyielding. The first duty of the finisher is to "ease" and soften the back to allow it to open freely. He then makes and puts on the titles and any other ornamentation that he may see fit. The upper title, in the second panel from the head, usually indicates the name or character of the book, and the lower one, in the fourth panel, the name or initials of the owner. Blank-books should have as little gold finishing as possible, and the lettering should be brief and readable. An ornamental roll in black ink on a calf binding, or in gold on a Russia binding, is usually run around the edge and a line or two put on the hubs and bands on the back.

LOOSE COVER.

The loose canvas, basil or moleskin cover is added after the book is made. All well-bound books should be fitted with a loose cover in order to preserve the binding. The cost is comparatively trifling, and when the book is put away for reference and the cover removed, the binding remains clean and perfect. In many cases the loose cover is intended to be permanent, and the titles are put on it rather than on the book within. These covers are often made with protecting leather bands and corners to give them strength and durability.

FLAT OPENING BINDING.

Inventive minds have been engaged for many years in trying to devise some process of sewing or binding that will permit blank-books to open perfectly flat. Several methods have been found that in some measure seemed to meet the requirements, but only at the sacrifice of much of the strength and rigidity of the book. To preserve these and at the same time secure the necessary freedom of opening was the difficulty. This at last has been overcome, and the largest blank-books are now bound by Messrs. Warwick Bros. & Rutter by a process that not only ensures a satisfactory flat opening, but at the same time adds strength and firmness to the binding. Although the invention is covered by patent, its use adds but an insignificant amount to the cost of the book.

HOW TO OPEN A BLANK-BOOK.

A newly-made blank-book should be handled with care. The sewing, gluing and lining are likely to make it firm and