Stationery and Vellum Binding.

One of the most important things for stationery binders to know, if they would be thoroughly practical men, is the proper way of making-up a book. There are many men in the trade who, when a book is given from the women, do not know whether it is then properly made up or not, and it is one of the evils of our present system of sub-divided labour that this initial branch of knowledge is either left out of the ordinary course of instruction for the forwarder or at best very imperfectly taught.

The first step, after receiving the paper from the ruler, should be to go carefully through it and take out all badly ruled or dirty sheets, to clean such as are not actually spoiled, with the eraser, and, in the case of hand-made papers, to face them—that is to turn the lighter sides towards each other that they may match when the sections are made up.

Next, look at the order and see if you have enough paper to make up according to instructions. For a two-quire foolscap, flush, you would require forty-six sheets of ruled and two sheets of blank for the ends. For the same size half-bound, forty-four sheets of ruled and four sheets of blank; the same for extra books. If an index is required, which is ruled feint only, you would have to take the amount required from the feint ruled, deducting the same amount from the paper of which the book was made, unless ordered “index right through,” when the book would be made up throughout of the same paper, without any other reductions save for the ends. It will thus be seen that the principle upon which a so-many-quire books is made, is that the number of quires include all the paper used.

If a book is ordered by pages, or folios, instead of quires, for 200 pages you must allow fifty-one sheets, the odd sheet being required for a “paste-up” to hide the page of ruling at each end. If 200 folios, allow 101 sheets, the odd sheet being required for the same purpose as above, and in both these cases no reduction is made for indexes or ends.

Again, you may have an order requiring two or more patterns of ruling in one book, when you may have to allow for a “paste-up” between each pattern; this depends upon the custom of the house. Such a method of work should be eschewed; properly, the paper should be ruled so that the pages will match at the end of each pattern without requiring a stiff leaf, for it rarely happens that such paste-ups can be made in the middle of a book without the paper cocking over, or less, caused by the damp penetrating other sheets, when, as they dry, they draw up from the back, leaving a wavy surface that is very difficult to get out.

Another case is when a book is ordered with vellum projections, or with tabs, when an extra sheet must be allowed for every two projections or tabs, unless the tabs are to be fastened to one leaf only. It is by far the best way of securing tabs to insert them between two leaves.

For indexes: for a two-letter index allow seven sheets—six and a half are actually required, as the letters J and U are invariably left out—which allows for two stiff leaves. For a one-letter index allow thirteen sheets; for two leaves to a letter, twenty-five sheets. Here again, if the paper is properly ruled there need be no stiff leaf at the end of the index, and the work is far better without it for reasons already given.

But it is in the making-up that we find the most fruitful ground for mistakes and where the nicest judgment and experience are required; in some instances we find the sections too thick, which causes the book to start, that is, the sections protrude in the foredge; or the sections are too thin, when the back becomes too round and loose. This subject deserves the most careful consideration, as it has an important bearing upon the appearance and strength of the book. In flush work, which is generally made up of thin and common paper, the sections may consist of eight sheets, or if the paper is thick, of six sheets. In common half-bound books, six sheets; half-extra or extra, six sheets of thin or five sheets of thick paper is enough. If hand-made paper is used, four sheets should be about the mark. Of course, it may be occasionally necessary to make one or two sections a sheet thicker or thinner in order to bring the book to the dimensions required by the order, but the above will be a fairly safe guide as to the number of sheets for a section in various classes of work.

To fold, lay the sheets down head towards you, fan off with the right hand, counting with the left thumb and holding the required number of sheets between the fingers of the left hand till you have got a hand-full, that is four sections; lay these down section on section, one up and the other down, till all are counted out. Then take each up separately, knock up even and fold in half. In the case of common half-bound work, add a waste sheet with a folded guard to the blanks at each end of the book, so that it may be sewn on with them.

It is necessary to know these things whether you make up your own work or not, in order that you may check it and see that the book when received from the sewers is in proper form. For the want of this knowledge, and a system of checking, many a costly book has had to be pulped to pieces again at a heavy expense—to say nothing of the irritation caused by mistakes and the delay of the order.

Guard-books are mostly made up to special orders; with skeletons of three, four, or six inch back according to the thickness required. A 50-sheet book should have three guards to a sheet, with a stiff leaf at each end if with joints, or three if with index. Some firms do not have the joints sewn on, but have a strip of calico sewn on at each end, which is glued to the boards and a lining pasted on. All stiff leaves for guard-books should be made before the sewing on. In cutting, practice differs; some cut these books before sewing, others after, but we consider it by far the best to cut them before sewing.

[To be continued.]
COPYING paper in the folio is folded in twenty-five sheets when it comes from the mill, and all that is required is to run a knife up the back and to fold in half, when the sections will be ready for sewing. If buff copying paper is used, which is just as thick again as ordinary copying paper, divide the sections into two. There are several ways of arranging the stiff leaves and ends in this class of work, but we prefer the following:—Fold a leaf of cartridge with a guard to go round the first section of the index, and a similarly folded leaf of cartridge to go round the last section of the copying paper, then add the ends or joints; this plan obviates the necessity of using an extra leaf of ruled paper in the index. There should also be a guard of calico round the first section of the copying paper which should be edged on to the last leaf of the index, to prevent breaking away. If it is desired to prevent the damp from affecting the index in the process of copying, it is best done by placing a leaf of oiled paper—similar to that used while copying letters—folded with a guard, on to the first section of the copying paper, so that it may be sewn on with the sections.

"Quarter-bound" work—which is quite distinct from "quarter-flush," having small squares and being turned in—should, with "quarter-flush work turned in," have two sheets for outsiders sewn on. "Quarter-flush" work requires no sewing on of the outsiders.

"Limp work" is best sewn without ends, the ends being pasted on afterwards, of which more anon.

In "overcast work" there is, of course, no folding; the book consists of single sheets of paper trimmed evenly at the back and glued up, when it is counted off into sections without disturbing the binding power of the glue over each section.

"Stabbed work" consists of single leaves as above, but they are not divided into sections; they are simply stabbed right through with a bodkin or stabbing machine, a stout thread, doubled, passed through the holes, and tied. If the ends are stabbed with the book, a strip of calico should be fastened along the outside of the ends to protect the paper from the cutting of the thread, or they may be edged on afterwards; else the boards, when thrown back, will cause the paper to break away.

In "extra work" there should be two strips of linen 1½ inches wide folded to form guards, one side of which is ¾ of an inch and the other 1 inch in width; the narrower part of each strip should be placed next to the insides of the first and last sections, and the wide parts outside of the same. There should also be a narrow tape pasted inside the first and last sections at least, or in more on thick books, according to size; for instance, on a twelve-quire, super-royal, banded, at least three sections at each end should be thus treated as regards the insides.

A word as to slips for sewing: we do not agree with the use of cloth or forril, as there is not sufficient strength in such materials to meet the strain put upon the class of work on which it is often unadvisably used. Rather than cloth, use buckram; tape does fairly well for light work, but stiffened webbing is undoubtedly best for work of medium thickness. For very heavy work, such as bank ledgers, etc., double webbing glued together, or slips of vellum glued to webbing should be used. Vellum seems to be generally going out of use, but in our opinion nothing adds so much to the spring of the back as vellum for slips.

Joints should not be made of cloth, although we are aware that that is often done; the brittle nature of the cloth allows the thread to cut it too easily and the work breaks away, and the better the thread used, the more is its strength wasted. Union is the best material for this purpose; it has nothing harsh in it to wear the thread, yet it is of such a strong texture that it will resist almost any ordinary strain. For all banded work rough calf is used, the smooth side on the surface, with a strip of calico or the outside of the joint; the same for extra work, on which only union is used inside. The width of the strips, whatever material is used, should be as follows:—for foolscap, 1¾ inches; demy, 1½ inches; medium to super-royal, 2 inches; imperial and atlas, 2½ inches.

In making joints always use paste for union, because glue is too brittle and cracks up. Paste is best also for calf, but there is a danger of staining the paper unless great care is taken with the pressing. Glue is commonly used in consequence, but we prefer paste; the main thing is to use as little as possible and allow it to set well before pressing. The calf must be pared about one-eighth of an inch in on the fleshy side prior to pasting. For union, you should paste off from six to twelve slips—according to experience—then turn them over and use the first pasted first. Lay it out horizontally before you, take the waste outside and lay it down on the strip of union flush with the edge on the right hand and about one-eighth of an inch beyond the half of the width; then take the plain outside and lay it down also flush with the right-hand edge of the strip, so that it will all but meet the waste, with just sufficient space between to allow of the fold without turning up the edges of the paper. Turn the joint over, union uppermost from right to left; lay the next strip on top and put the waste on as before; only this time flush with the edge to the left; then the plain sheet as before. You now have a pair of joints and may go on making more pairs by repeating the process as above, alternating from right to left and facing the joints in pairs, until you have made the number required. Then turn the pile over and commence folding; be careful to keep the fold exactly in the space between the two leaves of paper, irrespective of whether the papers are level one with another, and smooth down with a folder.
Stationery and Vellum Binding.

Having made and folded the joints as described last month, you will now turn them over again, and commence with the first pair made.

Lining is the next business, and you must cut your marble papers to the width required, which should be about one-eighth of an inch wider than the width between the edge of the union and the foreedge on the inside of the joint. If they are cut wider than this, they will when laid on, overlap the edge and stick together, when there is a liability of tearing in separating them. Besides this, the overlapping pasted edges of the paper often smear the hands, and may cause you to make a dirty job of the work, therefore, keep the extreme width within the foreedge. Paste two leaves of marble, or use a mixture of paste and glue, which does not stretch the paper so much, and dries quicker. Lay a pair of joints heads to the right, foreedges towards you; open the joint and lay one marble down on the plain paper, flush with the head, and overlapping the edge of the union about one-eighth of an inch; then lay the other leaf of marble, pasted side uppermost, so that the back edge is about one-eighth of an inch nearer towards you than the other marble paper, close the joint, holding the paper carefully to prevent it slipping, pass your hand over the closed joint to fix the paper, turn the pair over to the left and lay the marbles as before, only this time flush with the head to the left. Be particularly careful that with comb papers, the comb runs all one way. You may thus continue until you have lined, say eight pairs. Then insert a waste leaf between the linings of each joint to prevent the marble papers sticking together; some only put a strip of waste in, close up into the fold of the union, as the papers are more likely to stick together there than anywhere else, but waste leaves are best and surest. Then lay the joints, two pair back and two pair foreedge, in the press, then a millboard, then two lots more back and foreedge, and give them a good pressure for about ten minutes. Unless you adopt this plan, you will not get an even pressure on the papers because of the extra thicknesses of the union. Take out and open, removing the waste leaves, which may be used again when dry. Now for extra and calf joints you will require strips of calico about the same width as the union; for half-extra, paper will do, though some firms do not even use that. Paste enough strips for the eight pairs of joints; take the first one pasted, lay it down horizontally on the board, pasted side up, and place the back of the front joint flush with the edge of the right, on to the pasted slip, leaving about three-eighths of an inch to be drawn over the back on to the plain paper side; then lay the end joint to the left, and serve it the same. When you have the backing on the eight pairs of joints, hang them on a line, or lay them out to dry. We have given eight pairs as a moderately easy number to work, but as you gain experience you will be able to do more.

Loose indexes, which are generally stitched, require a differently made joint. Of course if the index is so thick that it has to be sewn, the above form of joint is used, but they are usually stitched; some are simply covered with a stiffened marble paper, but for those in good work, covered in basil, etc., make the joints according to the following directions. Take the same quantity of paper and union as given last month; take the waste and plain in sections of two each; lay one pasted slip of union along the inside of the inside sheet of waste equally over the fold, and another slip of union equally around the outside sheet of plain; then insert the plain in the waste, the union meeting, when the joints are ready for lining.

From this point, the work, in most large manufacturing firms, goes to the sewer, and while in the hands of the women we shall consider the making of the boards, to which considerable importance must be attached, since a great deal depends upon their make-up, and the time allowed for drying. We shall also give a table of the various thicknesses required for different classes of books.

For flush work a single board ranging from 6½ for foolscap one quire, to 8½ X for a four quire; or for deny one quire, a 7½, up to 8½ X for a four quire, will be sufficient.

With made boards, there is not much difference in the appearance of the work of one firm and another. Some use very stout leather with a thinner board, others, thin leather and a stout board, but the chief test of strength is the quality of the boards used, and the way they are put together.

For making boards good stout paste should be used. We are aware that glue is often employed, but it is a pernicious system only adopted for expedience, and with such methods we have no sympathy. Such work will not stand the strain to which it may be subjected, nor does it tend to any other benefit than cheap production, or increased profit, at the expense of a debased system of workmanship. Where only two thicknesses of boards are used, and for the smaller sizes, making is very simple: cut a strip of thin stuff one third the width of the board, lay down a thick board, put this strip across the middle and paste the board on each side of the strip, leaving one third of the board beneath the strip dry; then lift the two thin boards and put them on the pasted board; then paste the top thin one in the same manner and put on two thick ones. Of course you must be careful to lift two at a time, and alternate from thin to thick. Go on till about fifty thick and thin boards have been made, when you may put them in the press. Only put on a little pressure at first, or they may slip, but after they have stood for about an hour you may put on a good heavy pressure. The best method to pursue is to make up your boards first thing in the morning, let them lay in the press all day, take them out in the evening and stand them up on end, leaving them out to dry in the warmth of the shop all night. Now you have in these fifty boards, fifty pairs, for you can cut them through the middle, and each board will be a pair of split boards.

[To be continued.]

A notice of the firm of Macmillan & Co., with portraits of the founders, and some notes on their Bibliographical Catalogue just issued, have to stand over.
Stationery and Vellum Binding.

Resuming the question of making boards, all the larger sizes and thicker boards should be cut up before making, first for greater convenience in making, pressing, and drying, and secondly, because, with thick-made boards, there is entailed such a great strain upon the machinery used for cutting them to the size required.

In making boards already thus roughly cut, lay the thick board lengthwise before you as you would lay a book, paste over two-thirds of the surface to the right, leaving one-third on the left dry, and proceed as before, laying on alternately two thin and two thick boards till you have sufficient; the dry space on the left will form the split.

If more than two thicknesses are required, lay down the thickest first, paste all over, lay on the next thickest, paste over two-thirds, and then add the thin one. Always work in this graduated manner, keeping the thinnest board for the split and inside board, as by this means you will always secure a gentle warping tendency towards the book instead of away from it.

The following list will give you a good idea of the usual thicknesses of boards for various sized books, half extra, grey or common millboards being generally used:

<table>
<thead>
<tr>
<th>Foolscape</th>
<th>Demy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two quires</td>
<td>60. &amp; 80. X</td>
</tr>
<tr>
<td>Three</td>
<td>60. &amp; 80. X</td>
</tr>
<tr>
<td>Four</td>
<td>60. &amp; 80. X</td>
</tr>
<tr>
<td>Five</td>
<td>60. &amp; 80. X</td>
</tr>
<tr>
<td>Six</td>
<td>70. &amp; 80. X</td>
</tr>
<tr>
<td>Seven</td>
<td>70. &amp; 80. X</td>
</tr>
<tr>
<td>Eight</td>
<td>70. &amp; 80. X</td>
</tr>
<tr>
<td>Nine</td>
<td>70. &amp; 80. X</td>
</tr>
<tr>
<td>Ten</td>
<td>70. &amp; 80. X</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Medium</th>
<th>Royal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two quires</td>
<td>60. &amp; 80. X</td>
</tr>
<tr>
<td>Three</td>
<td>60. &amp; 80. X</td>
</tr>
<tr>
<td>Four</td>
<td>60. &amp; 80. X</td>
</tr>
<tr>
<td>Five</td>
<td>60. &amp; 80. X</td>
</tr>
<tr>
<td>Six</td>
<td>70. &amp; 80. X</td>
</tr>
<tr>
<td>Seven</td>
<td>70. &amp; 80. X</td>
</tr>
<tr>
<td>Eight</td>
<td>70. &amp; 80. X</td>
</tr>
<tr>
<td>Nine</td>
<td>70. &amp; 80. X</td>
</tr>
<tr>
<td>Ten</td>
<td>70. &amp; 80. X</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Super Royal</th>
<th>Imperial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two quires</td>
<td>60. &amp; 80. X</td>
</tr>
<tr>
<td>Three</td>
<td>70. &amp; 80. X</td>
</tr>
<tr>
<td>Four</td>
<td>70. &amp; 80. X</td>
</tr>
<tr>
<td>Five</td>
<td>70. &amp; 80. X</td>
</tr>
<tr>
<td>Six</td>
<td>70. &amp; 80. X</td>
</tr>
<tr>
<td>Seven</td>
<td>70. &amp; 80. X</td>
</tr>
<tr>
<td>Eight</td>
<td>70. &amp; 80. X</td>
</tr>
<tr>
<td>Nine</td>
<td>70. &amp; 80. X</td>
</tr>
<tr>
<td>Ten</td>
<td>70. &amp; 80. X</td>
</tr>
</tbody>
</table>

It may be as well here to note that two 60. boards are equal to one 80. X, and two 70. to one 80. XX, which you will find by comparing the weights and numbers in the bundles.

For extra work, only the best millboard should be used; some firms also use a slightly heavier board than given in the above list, but we think the above will give general satisfaction. Thick leather makes a considerable difference in the appearance, but has not the strength that is obtained from good boards, and if they are used they will be found quite heavy enough, though for banded work heavier may be used. Always give your boards a thorough drying before stacking them in pairs; unless they are seasoned they will go mouldy.

We have now completed the instructions as to the methods of procedure prior to receiving the work from the sewers, and shall turn our attention to flush work. The first thing is to stick on the end papers for perforated books they should be simply edged on. Fan out the folded papers until they are about a quarter of an inch apart at the back, paste the narrow part exposed, and lay on close up to the back and level with the head, smooth and press down with your hand. On books which are not perforated, one side of each paper must be pasted all over and laid upon the first and last leaves of the book, making stiff leaves; then press. It is best to use a mixture of glue and paste for sticking on ends, as it is less liable to cockle the paper of the book, and dries quicker. You are now ready for gluing up; use good hot Russian glue, thin, and free from froth—to stop frothing put a little tallow or a few drops of oil in it. Knock up the books on the backs and heads, tuck in the slips, and lay them down on your board, backs towards you, with a piece of waste board underneath to catch the drops of glue which may fall off, then gently pass the brush over the backs; do not work the brush about any more than you can help or you will froth the glue, but lay on a thin coat well between the sections. Separate the books, and turn them back and foredge, leaving the backs projecting to dry. When dry, gently tap the first and last sections in order to break down the ridge at the back without rounding the books. If they are rounded, when the books are cut, leaving a flat foredge, you will find the margins at the beginning and end smaller than in the middle, and where cash columns are concerned, the reduction of the pence column is a great drawback.

In cutting up the boards, do not imagine that because they are afterwards to be cut with the book that any size will do; they should be cut as nearly as possible to the size of the book as it stands, allowing for ½-inch less on the foredge, as the board must be placed about that distance away from the back. By allowing the boards to project you leave something easily caught in the apron or anything else, the books get shifted, and if not noticed, dry out of shape, and you make the job so much more awkward for cutting. With a mixture paste the boards; lay one pasted side up on the book and draw the slips over on to the paste, damping them, remove the board, lay the slips flat on the end-paper, turn the board over and lay it down ½-inch from the back and flush with the head; turn the book over and repeat the process. On
larger work than foolscap with a thicker board than is used on the small work, you must allow more than a 3/4-inch to open freely, say about 3/8-inch. An experienced man will thus board about twelve books, when they should be placed in a nipper while another twelve are being done, then remove the twelve in the nipper, put the others in, and build up the first twelve in the standing press. Go on till enough have been done to fill the standing press, when they should have a good pressure put on and be left in till dry; all night if possible.

The mixture of glue and paste that we have spoken of will need some little explanation, as different papers require different treatment, and we shall deal with that next month.

Foreign Notes.

FROM the list published in the Journal für Buchbinderei, we learn that there are 358 members of the Bookbinders’ Union of Berlin (employers) and 64 widows who still continue business.

Six have been established over fifty years, and there are three honorary members. Herr G. Slaby has been elected president.

A new apparatus for drying printed papers, book covers, etc., has been invented by Herr Karl Lautz of Leipzig, which should prove generally useful. It consists of pieces of fluted wood which may be attached to the joists of a building or a special rack placed within easy reach over the workmen’s heads, and so nearly together that a ball can work up and down between them without falling out. To hang up a case, push the ball up till the case passes beyond it, when, by letting go, the ball grips the case sufficiently to hold it; the heavier the case the tighter the grip. To withdraw the case, push the ball up, and the case falls. These “grippers” are made in three sizes all ready for fixing, and are very cheap.

The Illustrierte Zeitung für Buchbinderei has an article on “Album Making in France,” which, while being sarcastic towards the French, is hardly less severe upon their German neighbours. Twenty-five years ago anything and everything from any other country but Germany found a ready sale there, but now nothing is beautiful but what bears the stamp of German individuality. Of course not all the articles sold are German, but, nevertheless, the nation has shaken off the yoke that rested on it when scarcely anything could be distinctly called a German product, and they gladly took anything that other countries sent in. The album, however, was a real German invention. Offenbach and Berlin brought it into life, when it was adopted by Vienna and Paris, but the album in Paris was free from any Germanism; and was a much more costly thing than in Germany. That country never was a rich land like England and France have always been, and that fact alone was a great hindrance to the production of fine art work. With the growth of wealth the manufacture of more luxurious articles has increased, though not even yet to any large extent. The Paris art trade on the other hand had been set on a high pinnacle ever since the time of Louis XIV., and Paris governs the world. The Parisian art workers combine great grace with good taste, but their art work is going down, and it is naturally followed by the uprisings of art among other nations. Then France cannot produce so cheaply as Germany because wages are so much higher. In Paris they pay four and a half marks per day to the cover maker, and two and a half to three marks per day to the album maker; under such conditions it is not to be wondered at that even in Paris there may be seen more German albums than French, only the fanatical distaste of the French against all German articles forbids them admitting or recognising it, but those who know how to judge can easily tell which is of French and which is of German production. Often we find German products on which the French masters have put some touches to better suit their own taste. They take a German album and put upon it some clasps; but, curiously enough, the very clasps are also of German make; nevertheless, they think they have put their stamp upon it and it passes for French. In France the clasp plays a great part, yet besides Berlin, Lüdenscheid, Vienna and Prague manufacture enormous quantities for Paris. The original French album is a very different article from the German; morocco with hand gilding, especially in lace designs, is an unmistakable sign of the French book, while the German is usually of dull calf or plush, and almost covered with blocked work or gilding; clasps you may find on both, but German work shows many defects all round. The growth of the album trade has not been very great in Paris, and even in French workshops there are generally a large proportion of German workers who bring their own special adaptability for the work with them, and at least fifteen per cent. of workers of other nations. Whatever the French make, has chic, and we do not begrudge our neighbours what they have above us, but we will try to reach the same standard. It is better to struggle for an industrial palm than for the might and greatness of the state, and such ambition should not part those engaged in industry.

The so-called rice paper is not made from rice, as its name implies, but from the snow-white pith of a small tree belonging to the genus Aralia, a genus represented by the common sarsaparilla and the spikenard. The tree grows in Formosa, and so far as is known, nowhere else. The stems are transported to China, and there the rice paper is made after nightfall by native workers. The man sits at a table with his tools in front of him, consisting of a smooth stone about a foot square and a large knife or hatchet with a short wooden handle. The blade is about a foot long, two inches broad, and nearly half-an-inch thick at the back. Placing a piece of cylindrical pith on the stone, and his left hand on top, he rolls the pith backward and forward for a moment, until he gets it into the required position. Then seizing the knife with his right hand, he holds the edge of the blade close to the pith, which he keeps rolling to the left with his left hand, until nothing remains to be unraveled; for the pith has, by the application of the knife, been pared into a square white sheet of uniform thickness. All that remains to be done is to square the edges.
Stationery and Vellum Binding.

Last month we suggested that different mixtures of glue and paste are required for different jobs owing to the varying qualities of the paper. For some a cool mixture should be used, as, for instance, lining in joints, sideing flush work, or the making of stiff leaves when the paper is thin and easily stained. To make such a mixture, put some stout paste in a tub and mix it with hot water, rubbing out all the lumps, but do not make it too thin, then add about half as much hot glue as you have paste, that is, the mixture should be two-thirds of thin paste and one-third of glue. Do not mix up too much, as this should be used in a lukewarm state and not be allowed to get quite cold; if it chills it will not stick.

For very thin and flimsy papers use the mixture very thin and frothy. If it does not froth up enough by the working of the brush, a little powdered alum may be dropped in, say a couple of pinches to about three pints of mixture.

For stiff leaves where the paper is stout, or for boarding flush work, the mixture should be about half hot glue and half thin paste, mixed in the glue pot and kept hot. It must be fairly stiff or your work will not stick. If it is not thick enough, the mixture will soak into the boards or paper and it will have a dull appearance instead of being quite glossy.

After pressing boarded flush books they must be backed, and in cutting out the leather or other material, allow enough to draw over on to the boards at least three quarters of an inch on each side for books of the width of foolscap, which with the quarter of an inch allowed for the groove will make one inch of leather on the side. Pare the leather on the sides only, and paste say twelve; or for cloth and paste-grain glue should be used. Glue up the backs of an equal number, turn over the pasted backs, take the one first pasted and lay it down on the board, lay the book down on it head to the right and flush with the leather, and pull the board over, keeping the margin on the sides exactly equal. Draw on tightly, but not so tight as to draw the boards back as the leather dries. After backing the twelve turn them over, take the first drawn on, and rub the back firmly down with a folder to make it stick, then rub the grooves well down and turn each other back book and foredge. In cutting out marble papers for sides, cut as nearly to size as possible. For siding use the cool mixture, and lay down so that the paper just laps over the edge of the leather back. Rub down with the palm of the hand, which may be rubbed now and then on an oily rag; lay the books back and foreedge to dry for cutting. After cutting, it is the custom in some shops to polish down the backs if covered in roan, skiver, or basil, which gives them a nice appearance, but in most places they are only varnished.

If the sides are to be turned in, after rounding make a stiff leaf between the end papers—which we have already stated should be sewn on—and the first and last leaves of the book, with mixture, lightly laid on, and press moderately; then board and back as before. After cutting, the edges should be coloured, sprinkled or marbled; then cut out your sides, leaving a fair margin for the turn in, knock up the papers level at the back, lay a book down on the pile to see where to cut, and cut off the corners with a knife so as to allow for a neat turn in at the corners. After putting on the side, open the board, turn in the sides of the paper tightly with the thumbs, pinch in the corner on to the foredge of the board with the thumb-nail, and draw over the projecting part on to the turned-in end-pieces. When dry, mixture the ends, and press.

If the backs are also to be turned in, cut before backing; then slit up the paper upon which the board is stuck at each end and on each side, enough to allow for the turn in of the leather. Paste and draw on say twelve, turn them over and take the first book; open the boards and dab a piece of waste paper on the leather at the tail to prevent it smudging the edges, stand the book up on the tail with boards outstretched and tuck in the leather at the head; reverse the book, take the paper away and turn in the tail; lay the book down and rub well down with the folder. Mixture down.

For full-bound flush of course the cover is put on before cutting, but for full-bound flush turned in, cut first, then cover and turn in much the same as for quarter-bound flush turned in, only the leather must be pared all round, and pared off at the corners. Sometimes loose backs are required, when, after slipping up the papers connecting the boards, cut some pieces of cloth or linen about 1¼-in. wide, and long enough to go across the back and extend over the sides about one inch on either side. Paste these slips and glue up the backs of the books, then place these pieces of cloth or linen under the boards at head and tail and across the back, fastening them down on to the ends, and rub down to make them stick. Next cut some slips of paper so much wider than the back that they extend over the sides to within ½-in. of the boards to form hollows; paste the pared cover and lay it down on your board the best side farthest from you; lay the book down on it front side up, lay the hollow down with the edge just under the back and about ½-in. out from the lower board, and draw over the cover and hollow together. Draw on say six and then turn in, keeping the leather a little beyond the head and tail at the back so as to allow for contraction in drying, or if you turn in flush it will dry below the edge of the book; then tap it over at each end to prevent gaping.

[To be continued.]

"Some books are edifices to stand as they are built; some are hewn stones ready to form a part of future edifices; some are quarries from which stones are to be split for shaping and after use."—Oliver W. Holmes.
Quarter-bound work, unlike quarter flush turned-in, has small squares. To square the boards after they are cut roughly, cut one straight edge of a number at once, but not too many or the knife may run in; lay the straight edge up to the lines on the bed of the cutting machine, or take a square and mark the top board with a pencil, then cut. Having thus cut two sides square, the other two may be cut from the gauge. Of course, in large manufacturing houses where there are long runs of a given size, other appliances are used, but this is the usual method adopted.

Limp work, as advised in our article on making up, should be sewn without end papers. Two sheets of plain and two sheets of marbled will be required for each book. Fold in half, and cut both plain and marbled to the size of the book; mixture one side of the folded plain, and lay it, pasted side down, inside the first opening close up to the back; mixture one side of the folded marbled paper, and lay it on to the plain; you will thus have a made marbled paper with a plain opening, and a stiff leaf next the book. Repeat on the other side, and when you have done about a dozen books, press. Stiffeners must next be put on to the outsides instead of boards, by pasting one side and laying it on to the outside of the book, about \( \frac{3}{4} \) in. from the back. The best material for stiffeners is the off-cuts of blotting paper, and therefore use paste, but do not put much on; then press, but lightly, or the paste may come through. Glue up the backs. Books of ten folio sheets—which would be forty \( \frac{2}{4} \) sheets—and upwards should have round foreedges, and therefore must be cut before being bound; others less in thickness should be rounded before cutting. In either case, after rounding, they should be subjected to a good heavy pressure, and allowed to lie in the press as long as possible. Unless very common, the marbled edges should be burnished. Put about six ten-sheet books into a lying-press between backing boards, screw up tightly, rub a little beeswax on to the cheek of the press, and gently pass over the edges with a piece of rag, which has been rubbed on the wax; then with some pressure work the agate to and fro till a good gloss is secured. Slip the papers, cloth up, and cover with hollows as for flush turned-in, but, the stiffener being very slight as compared with boards, care must be taken not to turn in the stiffener with the cover.

Some limp books have round corners, which are cut after the book is cut, but before rounding, by means of a gouge; or a coin may be placed even with the two sides of the corner, and the paper cut round with a hand knife; in either case a piece of sand paper will finish them off nicely. On turning in the leather, when you come to the corners, they must be nicked in, not quite up to the stiffener, with the shears, to allow one piece to overlap another and so make a neat turn-in.

Vellum tucks sometimes are lined-in, sometimes not. If they are to be lined-in the marbled papers should not be folded in half, but mixed into flat, placed in the second opening, and rubbed well into the joint or fold, or they will break away when opened. A pocket must be made at the front of the book, and a cartridge stiffener placed at the other end, the pocket in front taking the place of a stiffener. To make the pocket, all that is required is to fold a sheet of cartridge—cut to size—glue one side, and lay on the outside a little in from the back, just the same as the single stiffener; press; glue up; and treat as limp work up to covering.

In cutting covers for this work allowance must be made for the tongue. The vellum must first be lined all over with pasted printing paper. Then mark off on one side, about the distance the tongue will occupy, and stiffen that space with cartridge pasted on. Next paste on a piece of calico sufficient to cover the part for the tongue, and extend beyond it, to a little farther than where the edge of the book would commence, thus making a lining between the tongue and the book to strengthen the bend over the foredge. The cover so prepared must then be laid between boards to dry flat, but not too stiff and harsh. Meanwhile, cut the gussets out of pieces of calico about two-thirds of the width of the book long, and about two inches wide; fold in a half, then open and lay flat, fold upward; take a slip of thin board about half-an-inch less than the width of the gusset, lay it down the centre, and paste the unprotected part of the gusset on either hand; fold, leaving the pasted sides out, and place the gussets in between the folded cartridge, leaving sufficient of the pasted edges to turn over on to the outside of the cartridge on one side, and the inside of the cartridge next the book on the other side.

When the vellum has dried, but is still damp enough to be workable, it must be pasted up to a line that will leave a little more than the thickness of the book between the flap and the pocket, so as to allow for the insertion of additional matter in the pocket. Lay the book, pocket down, with the foreedge up to that line, and draw over the cover. Draw on say a dozen, turn over the pile, take the first, cut off the corners on the back side, lay the book pocket-side down and nick in the cover at both head and tail up to the pocket; first, close to the foredge, and next, just far enough from the back to allow the turn-in to cover the edge of the gussets, so that the greater part of
the turn-in will be on to the inside of the gusset, and the smaller part on to the inside of the pocket. Then turn in the foredge of the back side and lay between boards to dry.

When dry, the tongue must be cut in such a shape that it widens below the slot sufficient to only pass it with a pull. The accompanying outline will give the most approved shape. Cut out a stiff pattern and lay it on the projecting portion of the cover, mark around with pencil, and cut round with the shears; the tongue should then be stitched around with a sewing machine to prevent splitting.

To make the slot, draw the tongue over on to the side and mark the distance and width required with a pencil. Open the cover, lay it on a millboard, and punch two small holes on the marks, then cut through from hole to hole with a sharp knife. The lower part of this slot should be machined to prevent splitting, and before pressing, the stitches must be tapped down with a hammer. Before pasting down, cut pieces of waste large enough to cover that part of the tongue which goes into the slot, and as you mix these down lay these pieces on the marbled paper, so that they will make a dry pocket in which the tongue may slip.

Finally, wash the covers with thin paste-water to which a little clean glaire is added. When dry, crease with a bodkin two lines right round the cover and across the flap, with another single line across the top of the tongue, just above the shoulder.

Early London Bookbindings.

When printed books were first introduced in England by William Caxton, in 1470-77 (writes Mr. Cecil Davenport in "The Queen"), they were bound in leather, usually calf or deerskin, or in parchment; but in the case of manuscripts it was comparatively seldom made use of, covers richly adorned with the most valuable and decorative materials possible being generally adopted. This order, however, on the invention and use of movable type, about A.D. 1440, was distinctly changed; the manuscripts themselves were no longer of the extreme value they had been up to this time, and as the simple printed page surely superseded the beautiful illuminated manuscript, so leather took the place of the costly enamels, carved ivory, and elaborately jewelled bindings hitherto used. It is noteworthy that the fashion of signing the bindings, which was so largely followed on the continent, at once fell into disuse in this country; our binders, if placing anything at all personal to themselves on their work, seldom using more than their initials, device, or trade mark, all of which may after all be wrongly attributed, even when the greatest trouble and research has been taken for the purpose of identification. Books, on the other hand, bound abroad, frequently bear the names in full of their binders. The earliest specimen of this kind at present known on a printed book is a copy of the Epistolæ of St. Jerome, printed at Strasburg by J. Mentelin, about 1467, and bound by "Jean Reichembach." Other beautiful bindings are signed by Andre Boule, Bayeux, Gavet, Le Fevre, and many others. The bands on to which the sections of printed matter are sewn are usually strips of leather or rolled pieces of parchment, and beechen or oaken boards were used to draw these bands into. The boards, which were also sometimes made of waste paper, pasted together, were in their turn covered, partly or entirely, with leather more or less elaborately decorated. This leather covering was doubtless intended to preserve the bands and sewing from injury by rubbing, and it is interesting to find how well this purpose has been served, the backs of the very earliest bound books being often found in a perfect state of preservation when the protective leather is still intact.

In the fifteenth century the sides of the leather bindings of printed books were decorated—if at all—either in cut or stamped work; the cut work was not used to any extent in England, but the stamp work was. The stamps were engraved on metal or wood, and were impressed upon the leather after the book was bound; sometimes they were heated and sometimes not, and the leather was stamped in either case. The designs used abroad were generally scriptural, and consisted of a large central panel enclosed in a border of some arabesque pattern, or bearing a legend or the binder's name. On large books, two or more stamps of this kind are sometimes found on the same side. Besides these more ambitious designs, sides of books were very frequently adorned with straight lines variously arranged, either left plain or enclosing impressions from small stamps of some simple pattern. The bindings that remained on books printed, and perhaps bound in Caxton's workshop, are of this last character. On foreign books of this date, especially on the half-bindings, are also often found long panels representing hunting scenes. Books bound in the fifteenth and early in the succeeding centuries, usually had clasps, and very frequently a short title is written on the foredge. The clasps are seldom found perfect, as the books being kept on their sides with foredge and its title outward, they were useful as handles, and have been in consequence almost always pulled to pieces. In some cases the printing was his own publisher and binder, and we sometimes find his device or initial inside and outside of the same book, as in the case of the little abridgment of the statutes printed by Richard Pynson in 1499. It is on early English bindings especially that large heraldic stamps occur, and as far as printed books are concerned, they may perhaps be considered the first distinctive decorations for bindings of printed books that were made and designed in this country.
Leather Tucks are usually made as cases and the tongue is turned in just the same as the rest of the cover. First cut the stiffeners and pockets to size, leaving a small margin for squares; then cut out the tonguest from pieces of cartridge, the same as the stiffeners. The books should be lined-in in the first opening, or should have a stiff leaf if not lined-in. In cutting out the covers, the leather must be cut round to the shape of the tongue, leaving enough for the turn-in, and pared as thin as possible; to make a nice job it would be well to mark round the edge of the tongue stiffener on the leather and pare out from the mark. Next cut a piece of thin board to the width required for the space between the pocket and the tongue; and a strip of board of the exact length from the foreedge of the stiffener to the foreedge of the pocket as the case lies flat and open, this is to serve as a size board for making the cases. Now paste, say two dozen tongue stiffeners, and lay down squarely on the cover; then paste a pocket and stiffener alternately, say about a dozen of each, keeping them in pairs; lay the size board along the top edge of the leather and the strip for the space close up to the tongue, and place the pocket and stiffener level with the size board, so that the foreedge of each terminates at the extremities of the board. Face the cases as you go on, board to board and leather to leather, and put them under a weight to secure them firmly. Having stuck on all the stiffeners and pockets, cut out the gussets somewhat wedge shaped, that is, the part towards the foreedge or top of pocket must be wider than that towards the back, to allow of the pocket expanding; in paring, only one edge need be pared, thus—have the gussets all turned one way, then pare the first on the right-hand side with the broad base towards you, reverse the next and pare the right-hand side with the broad base away from you, making pairs. Before sticking them in, take the cases and nick a V shaped piece out of the point of each tongue on the turn-in; in the bends of the shoulder several cuts must be made, to allow of the leather spreading round the curve; then cut in the turn-in at the top of the pockets and below, as advised for vellum tucks, and pare off the two corners on the stiffener side. Cut a piece of thin board to the shape and size of the tongue and case, as far across as the cut nearest the back, lay this on the case and paste the edges of the leather down to the cut; this will prevent the paste going further than necessary over the boards, and make a clean job. Paste, say eight or nine, and turn in neatly, especially around the tongue, down to the first cut only, drawing the leather over close, but be careful not to turn up the edges of the stiffener. Next put in the gussets: open a pocket and lay the flat leather, surface up, with the unpared edge outwards flush with the edge of the pocket, then draw over the rest of the pasted edge of the cover down to the second cut, on to the leather gusset. Turn the case round and repeat, being careful always to keep the broader part of the gusset towards the mouth of the pocket. You have thus got the cover turned in upon the flat and unfolded gussets lying inwards, and you must now throw them outward, extending beyond the case, after they have set. Next line the tongues with leather to match the cover, cut exactly to the size of the tongue and deep enough to cover the bend of the foreedge and go about a half-inch into the pocket. This must be pared all round without any chips whatever, so that it will make a complete and neat lining to the tongue and across the bend. Put on with paste, rubbing it down well in the bend to ensure sticking firmly, as there will be a good deal of wear and strain on that part; after a few have been thus lined and have set a bit, tap down all round the edges with a hammer to give a sharp and flat appearance. Next fold the gussets, not in the middle, but in the middle after allowing for a small turn-in over the side of the pocket next the book, and leave them thus folded with the pared edge projecting till you have say a dozen. Fan out these cases so that each will leave a margin for pasting the turn-in of the one beneath it on one side; paste and turn in gusset first, then the cover. After the ends have been turned in, turn in the remaining foredge.

For the bars to hold the tongue on the side, cut narrow strips of cartridge about ½ inch wide, cover with leather thinly pared and turned over, so that one edge overlaps the other just up to the edge of the underside. Crease with a single line close to the edges of the front side, and pare off the ends of the bars right through the stiffener to a suitable length. Cut the cover just beneath the shoulder of the tongue to the width required for the bar, but on the slant, that is, wider towards the foreedge than towards the back, place the bars in the cuts, glue the ends inside, and tap them down with a hammer to make them flat and neat. Crease round the cover with a single-line creaser, bearing on the heel as you go round the curves of the tongue, and turning the case with the left hand. If the creaser has a flange to it, be careful not to turn up the thin edges of the curves; as a rule creasers without flanges are used, when a sharp eye must be kept on the edges to keep the lines parallel.

This work being done in case form, the clothing will only need to be drawn over on to the sides of the books. To case up, glue—say about three at a time—the back side of the book; lay it, back towards you, on the stiffener of the case; turn over and set it so that the squares are even and true. After sticking about a dozen in thus, turn over, and glue the fronts or pocket sides, draw over the cases tightly and put them under a weight till the dozen are done, when they should be put in the press till dry.
In many shops it is customary to varnish tucks, except when calf or morocco is used, but our advice is not to varnish them. If the work is done cleanly as it should be, the surface of the leather being handled as little as possible, they will look better by far without varnish. Varnish is only a dazzle to hide imperfections, and it spoils the feel of the leather. Dispense with it by preserving the beauty of the leather.

All through this article we have spoken of paste being used; that is the general custom of thevellum binding section of the trade, but for clean work there is nothing like glue cleanly strained and not too thick; try it.

A first-rate specimen of fancy ruling, done on an ordinary ruling machine, has been sent us by Mr. J. S. North, manager of the Central Bookbinding Works, Brighton. The lining is exceptionally true, the stops admirably managed, and the arrangement of the colours tasteful and bright. A broad band of blue, apparently also done on the ruling machine, encloses the whole, the result being an attractive and excellent example of what can be accomplished with care and skill on an ordinary machine. The business circular of the company also shows a very effective ruled border, with Oxford corners, in black, red, and blue.

Her Majesty the Queen and H.R.H. the Prince of Wales have accepted specially-bound copies of Mr. J. B. Marsh's new book, "St. Paul's Cross." The book is noticeable as having been printed and bound complete at the De Montfort Press, Leicester.

In Memoriam.

Samuel Colley.

It is with deep regret that we have to record the death of Mr. Samuel Colley, of the firm of Matthew Bell, Colley & Co., of Temple Works, Cursitor-street, which occurred on the 8th June, at the comparatively early age of 46. He was interred in Abbey Park Cemetery on the 13th.

He commenced his business career with Messrs. Adlard, printers, with whom his father had for several years been associated; and about the year 1874 he joined Mr. Peck, bookbinder, of Bartholomew-close, with whom he remained about fourteen years, assisting materially in the great development which took place during that time. In March, 1889, he left Mr. Peck, and in May of the same year joined Mr. Bell as manager, with a view to a partnership, which was finally arranged to commence in July, 1891. The partnership deed was signed in September, 1891, and shortly afterwards Mr. Colley began to show symptoms which alarmed his friends, and necessitated more rest than his energy and activity had previously allowed—and gradually complications arose which ended in his death.

He was a thorough man of business, full of fire and energy, and was apparently strong and vigorous up to last year. To his employé’s he was kind and generous, but just and firm; he would allow no scamped or careless work to pass, and any one found doing such work was first cautioned, and on a second offence was summarily dismissed. He was a man of deep religious feeling, but broad and liberal in his views. A member of the Wesleyan body, he took a strong interest in all religious and social matters connected with that denomination, but he was at the same time ready to join in any good or charitable work outside his community, and he was loved and respected by all the members of the congregation with whom he worshipped. He had such a strong capacity for work that he gave himself little or no rest, working as hard on the Sunday as on the other days of the week in church work and Sunday school, of which he was for some time superintendent. He was secretary to the Missionary Society in connexion with the school, and took a great interest in the school library, to which he presented many valuable books. All who knew him feel that they have lost a faithful friend, and next to his own family, none deplores his loss more than his surviving partners.

The place of business was closed on the day of the funeral, in order that the employé’s might have the opportunity of showing their respect to his memory, and nearly all were present in the cemetery. He died as he had lived, an earnest and devout Christian, and his last words, which were almost inaudible, were:—

Nothing in my hand I bring.
Simply to Thy cross I cling.

He leaves a widow and five children to mourn his loss.
Stationery and Vellum Binding.

ORDINARY cased work, when received from the sewers, should be lined-in in the first opening, unless ordered otherwise; if not to be lined-in, a stiff leaf should be made at the first opening. For books up to two quires the foreedges are usually flat; thicker work should be rounded. For flat foreedges, after gluing-up, tap them along the joints first sufficiently to take off the sharpness, make the stiff leaves and cut all round. After cutting the foreedges of thicker books, the hammer should be applied more and more towards the centre of the back in rounding, in order to bring the whole book into shape, and not merely on the first and last sections; then the stiff leaves should be made, the books pressed and cut at the head and tail, when the edges should be marbled or coloured. Next glue-up the backs and cloth-up; cut out the boards, and if half-bound, corner them. In order to get the right size of the back, the boards of one book should be touched with glue on one edge, and fitted to the book at the proper distance from the back; paste a cover and draw on, then pull it off with the boards in position, lay in the hollow, and turn-in. The hollow should be wide enough to leave about ¾-inch on each side between it and the boards. This case will be a sample for others if you have a quantity of the same thickness, therefore cut a strip of thin board as wide as from board to board of the sample case as a gauge. In making, lay this gauge down the centre of the pasted backs and put the boards down on each side flush with the head, when, if your boards and gauge are properly squared, the case will be true, but the slightest deviation from equality of width in the gauge-board will throw your cases out of shape. While turning in the leather, be careful to keep it straight from board to board, or if anything, rather out than in, because as the leather dries, if it runs in, you will find the head out of the proper level; a sunken head looks bad, and no setting will pull it up properly, but in case work no setting should be required. Siding should be done before sticking in; and sticking in the same as for tuck work.

Common half-bound or forril work should be lined-in at the second opening, and in thick work the slips must be drawn tight before gluing-up. Then treat as above, except that stiff leaves will only be required between the ends and the ruled paper of the book. For clothings, waste leather should be used instead of linen, the thickness varying according to the weight of the book, strips being glued across the back not only at the head and tail, but also between the slips. The outside leaves should next be cut at the head and tail in the following manner:—turn up the leaf so that the edge of the head or tail is brought level with the back, and cut through the diagonal fold straight to the back at about one inch from either head or tail, and parallel with it. Turn out the loose piece made by the cutting, paste all over the outside of the leaf and the exposed part left by the cutting, also under and over the slips, turn back the cut piece so that it adheres to the inner leaf, leaving a dry space on its outside, and lay on the boards, regulating the scores as you proceed. Press down in the case of half-bound work, corner. Cut hollows (as previously explained), using waste wrappers, which should be made double for thicker work only; in this case the hollows should be left a little longer than the boards, in order to form a stiffener to make the heads. Before pasting, damp the ends of the hollows, then paste, say a dozen, and lay them in the centre of the pasted backs; then draw on, not too tightly, or, as they contract in drying, the slips will show through; turn over the dozen, rub down well into the groove, and turn in the heads and tails, when you will find that the cut made in the end leaves forms an opening between the back and the boards for the turn-in. For setting the heads you must use a piece of stout leather and thick vellum pasted together, about two inches wide, with a straight edge; this is known as a head-setter. First tie a piece of string round the book to lie in the grooves, tight enough to draw in the leather at the grooves, but not so tight as to cut or damage it; take the book by the back in your left hand, and tap the leather at the head over towards the edges, then draw up the head-setter, holding it tightly around the back flush with the boards, and work the point of your folder around the head, smoothing it down into a bevelled slope, widening as it nears the edges of the book and sharp at the outer edge. This is work that requires great experience, and many decent binders are not good head-setters; but, although a great deal depends upon the proper setting of the head, we are unable to describe by writing more than we have said. It is one of those points that requires illustrating by doing the work, and can only be learnt by practical experience, under the direction of fully qualified workmen. The points of a good shapely head are:

1. That it should be perfectly smooth without the leather being strained or bruised;
2. That it must be sharp and exactly flush with the boards; and
3. That the bevel must be equal all round.

Great care should be taken that all work should thoroughly dry; the seasoning of bound work is an important feature too often neglected in the hurry and drive when orders are wanted, but an unseasoned book put into use has not the strength of properly seasoned work. After mixturing-down, the books should be pressed for at least twelve hours; it is therefore best to arrange your work that the books are put in the press late in the day and left till the morning. When taken out, they should be stood up on end, slightly open, for several hours longer, in order to allow all damp to dry out.

Forril work should be treated in much the same manner as described in the foregoing paragraph, but the covers should first be lined with plain paper cut to the size of the cover. Paste off say about half-a-dozen, lightly, with paste not too thin but free from
THE BRITISH BOOKMAKER.

lumps; lay the paper on the covers and rub down
with your hands, stretching the paper slightly and
taking care to leave no blisters, then put them under
a board with a weight on top till nearly dry. Cover
with paste, but draw on loosely as compared with
leather, because forril contracts a great deal more,
and will warp the boards if drawn on too tightly,
besides causing the slips to show through. Care
must also be taken to keep it clean. All dirt should
be removed by an eraser when the cover is dry, and
not need water, which spoils the surface. If water
is required it should be used as sparingly and as
gently as possible. In the place of finishing, a double
line is ruled round the sides with an ordinary steel
pen, or better still, a bow pen, using blue ink on
white forril, or black on green.

[To be continued.]

A Bible Showing
Dawn of Pictorial Art.

THE "BIBLIA PAUPERUM."

Copy of the extremely rare Bible known
as the "Biblia Pauperum" has reached
London, after many risks owing to
the jealousy of the Italian Govern-
ment lest a national treasure should
slip out of the hands of the nation.
This is a picture Bible, recording in forty illustrations
the leading facts of salvation, as disclosed in the New
Testament, with subordinate engravings taken from
Old Testament history. The present possessor of the
treasure obtained it at a sale in Rome recently held,
through Olshki of Venice, for 15,800 francs (about
£632). There are thirty-six pages out of forty originally
issued, and they are mounted upon cardboard. Each
page measures 10½-inch x 7½-inch, and the paper is
extremely thin, though in excellent preservation. This
work is supposed to have been printed about 1440,
thought compiled by Bonaventura, a general of the
Franciscans, about 1260. Each page is printed from
a wooden block, and the ink is still black.

At the top and bottom of each page are the portraits
of kings, prophets, and saints, out of whose mouths
flow ribbons inscribed with Latin words; the corners
of the pages are filled in with Latin texts explanatory
of the three pictures which occupy the middle of the
page. The centre one is always a New Testament
theme, while to right and left are subjects taken from
the Old Testament. There is no pretension to
character or beauty in the figures; the perspective
is ludicrous; and the incident is often treated from
a purely local standpoint. The portrait of David
figures very frequently, and varies in character. All
the figures wear boots; some have high heels, others
have pointed toes, and in the representation of Moses
before the burning bush there is introduced a pair of
thick-soled lace boots. In very many of the pictures
there are soldiers clad in medieval armour, and
castles of an Italian type are introduced. The chariot
by which Elijah ascended into heaven resembles a
soap box mounted on small wheels, and Jonah is
represented as being swallowed by a whale with
immense teeth. All the animals introduced have
human faces, and are most quaint. As illustrating
the very dawn of pictorial art this biblia is exceedingly
valuable. This copy is of the same issue as those in
the King's Library at the British Museum and in the
Althorp collection, but there are minute differences
as compared with other copies in existence, such as
delight the heart of the bibliographer.

Mr. Andrew Tuer has written a preface for a
volume, "The Book of Delightful and Strange Designs,
being one hundred facsimile illustrations of the art of
the Japanese stencil-cutter, to which the gentle reader
is introduced by one A. W. T., who knows nothing at
all about it." The text is to be in three languages,
but Mr. Tuer knows no French for stencil-cutter.
Hence his work is at a standstill until some learned
friend can supply the proper word or phrase.

THE doings of the Kelmscott Press are of interest.
Among the books now in preparation there are :
Caxton's "Golden Legend," an edition of 500 copies
of which is to be published by Mr. Bernard Quaritch,
in three large quarto volumes; Caxton's "The
Recuyell of the Histories of Troye," of which 300
copies, in a similar form, printed in black and red,
are promised by the same publisher; "News from
Nowhere," by Mr. William Morris, and "Biblia
Innocentium," by Mr. J. W. Mackall, which are to be
issued by Messrs. Reeves & Turner; and Caxton's
"The Histroye of Reynard the Foxe," reprinted from
the edition of 1481.

The treasures of the Newcastle-on-Tyne Free
Library are many, "out-of-print" editions of Ruskin
being an especial pride to the heart of the able
librarian, Mr. W. J. Haggerton. The 75,000 vols.
comprise an excellent juvenile department, and a
new section of 4,000 ecclesiastical works, just being
catalogued. Mr. Haggerton's reminiscences of sale-
room struggles and the pursuit of defaulting borrowers
would make some excellent reading. His success in
tracking missing books has been so great that only
twenty-two have been finally lost during twelve years.

The Althorp Library is to be handed over to the
auctioneers! The finest private library in England is
to be scattered far and wide! The 110,000 volumes
of which it consists are said to have cost the second
Earl Spencer upwards of £200,000. Of early Bibles
there is a rich store, editions of the Mentz Psalter,
hundreds of Aldines, the complete "Aristotle," the
Virgil of 1501, no less than fifty-seven Caxtons—
 thirty-one of which are perfect, and three of which no
other copies are known to exist. What a chance for
our great public libraries!

The international rights of authors are likely to
form the subject of a diplomatic conference next year
in Paris. To be prepared for this the Convention of
Berne and kindred rules and regulations are to be
seriously considered beforehand by all interested
parties. An important series of meetings is to be
held in Milan during September under the auspices
of the International Literary and Artistic Association,
at which these will be one of the chief topics.
Stationery and Vellum Binding.

For copying books, in gluing-up only glue between the slips, leaving them dry, as in pressing, the book becomes very much reduced in thickness, and if the slips were glued with the rest of the back, they would bulge and crack up when being pressed. After pressing and cutting, the slips may be pulled tight and glued over when clothing-up, thus bringing them to the reduced width of the back. Books interleaved with blotting paper should be served the same way.

Guarded books, as described in making-up, will have stiff leaves made first, then they should be cut and sprinkled, or marbled, before sewing. Although some firms cut after sewing, we recommend the other plan, as they break in cutting if sewn first, and it is quite as easy to build up level to all appearances while sewing, as if cut afterwards.

When received from the sewer, glue-up and round. If they are simply common work, it is usual to stick the boards on the outside leaves and treat much the same as for quarter-bound turned-in. For a better class of book with split boards, glue down the slips to the outside leaves, tear off about two-thirds of the leaf to allow one-third to be inserted in the split boards, glue the board, insert the slips and paper, see that the squares are even, throw back the board away from the book, and give the board a sharp nip under the platen of the cutting machine.

In covering this class of work there is a special method of setting the heads to secure a neat and finished appearance, as if headbands were employed, though without them, and in turning-in the heads while drawing the leather closely over the boards, a fulness must be left at the back, generally secured by drawing the turn-in outwards again with the thumbnail. Then rub down the backs firmly to secure sticking, and, laying the boards wide open with the back of the book lying upon your bench, and the foredge held in your left-hand, with the point of the folder work the leather in towards the back, puckering it up into a little roll next the edge of the guards, with a smooth flat surface outside it and perfectly level with the boards. A very good method of obtaining a firm tight back, is, when the book is covered, to open the end board and lay the book down with the end board outspread, then rub down well into both grooves and leave the book to dry in that position, say all night. When you close it, the leather will have contracted enough to give a nice smooth tight back.

Loose back guard books will be treated the same as extra work, with the exception of stiff leaves and cutting.

Before starting on extra work, we must say a word as to the method of forwarding both extra and half-extra work. Paste the tapes required, and insert them between the first and second sections at the beginning, and the last and foregoing sections at the end of the book; this is independent of the tapes spoken of in making-up. Next, draw your slips tightly and knock up at the head and back, being careful to make the book square in shape. A great deal of care should be taken in gluing-up, and the best Russian glue should be used, but it is a good plan to boil down vellum cuttings and mix the size with the glue in equal proportions. Use this mixture as hot as possible, avoid frothing, and yet rub it well in between the sections; for this is one of the most important points in the forwarding of extra work; if the glue does not bind the sections well together, the work will go loose and fall to pieces with any little extra strain put upon it; nevertheless, the glue must not be too thick to take and crack and make the sewing brittle, but practice can alone help you to determine the precise strength desired. In cold weather you had better dry off the backs gradually before the gentle heat of a fire is enough to make them set as quickly as in summer time. When dry, have them cut on the foredge, round, and make stiff leaves; but before pressing, place a "fence," i.e., a sixpenny board put inside a folded sheet of plain paper, under the stiff leaves, then press lightly for about ten minutes and then a good heavy pressure, under which they must be left as long as possible. After cutting the ends and marking stiffeners are required for throwing off the boards; these are usually made by cutting a strip of the sixpenny board, four inches wide, and the length from slip to slip of the book; tear this strip straight down the middle, regulating the evenness with your fingers and making a feather-edge on the two pieces, which will be two inches wide each. It is not necessary that this feather-edge be perfectly straight, nor that the strips are exactly even in width, so long as they are about the size indicated. Now glue the outside leaf of the book for about a quarter of the width at the back, and about a quarter of the width along the foredge, lay one stiffener with the straight cut edge parallel with the back, but about one-eighth of an inch away from the edge of the section, glue over the stiffener and draw over the slips as tightly as possible glue over the slips, then fold the glued part of the paper at the foredge over to the half of the leaf, then the folded part over again to the edge of the section at the back, and rub well down with a folder. Repeat on the other side, but always keep the sharp cut edge of the stiffener towards the back and just within the distance occupied by the slips, so that they may be drawn over to it. For extra work you must then glue up head and tail and put on the headbands, but half-extra work does not require headbands.

For extra work, for clothing-up, use a stouter and better leather than for half-extra, and let the end clothes project beyond the headbands, to be trimmed off flush after they have set. Use good strong Russian glue, thicker than for gluing-up, and having been drawn tightly over, rub down vigorously with the folder to make them stick, especially at each side of the kettle-stitch, where it is more than ever necessary to strengthen the back; then turn the book over laying the back on your bench, and rub the headbands down on to the clothing, rocking the book to and fro to keep the shape.

Goldsmith received just £96 for the copyright of his "Vicar of Wakefield." Messrs. Sotheby have just sold a single copy of the first edition for £96.

[To be continued.]
LAST month we referred to the clothing-up of extra work, and before we leave the subject it will be as well to speak of the clothing-up of banded work, which must also be tacketed.

Before stiffening or clothing, the first section should be opened and pierced through on each side of the first, last, and centre slips with a fine bodkin, in the holes made by sewing. Tackets should then be cut to about eight inches in length. Thread the catgut through the holes made, then turn the book over and repeat the process in the last section. To tie off, lay the book back towards you, take the right hand cord, pass it over the left hand cord and under it, as if making a knot; this cord is now on your left, take it in your left hand and hold it, twisting the other cord with your right hand until it is twisted enough to cover up the width of the slip; then draw tight and fasten off. In knotting take the right hand cord, thread it under the twist upward, draw over, and tie in an ordinary knot; with the left hand cord, thread it under the twist downward, and knot, thus your knots will be made so that they resist the strain upon the twist; cut off the loose ends to about ¼-inch from each knot. Next stiffen as for extra work. Then glue-up all that part of the back within the kettlestitches, but do not go beyond, cloth-up between the slips with stout calf, and then allow the book to set till quite dry.

The reason for tacketing the first and last sections before putting on tacketing bands, is, that the tacket bands coming over the knots made in the tacket of end sections, keeps them from chafing the edges of the made backs and thus resisting the closing of the book.

As the general rule is to divide quires into sections of four sheets, or thereabouts, tacket's must be generally allowed for every sixth section; that is, tackets for each quire. Finding the required sections, pierce holes just as before described and thread the catgut through them, leaving the ends loose till all the sections have been threaded; close the book, take a piece of paper, lay it on the back and mark with pencil the position of each tacket; cut stout strips of calf about two inches wider than the slips and long enough to extend over the sides as far as the clothing; pare the edges lengthways, and pierce them with a bodkin according to the marks on the paper; then thread the gut through the holes, twist and tie off as already explained. Next glue under the loose edges of the tacket bands and the parts projecting over the sides, and rub down. Place the headbands on, glue-up over them from the kettle-stitch outwards and draw over the clothings.

In many houses there is a system of gluing the tacket bands before putting them on, and piercing right through the sections and tacket bands together, which is certainly quicker, but by no means so good a method as the older one here described. The gluing of the tacket bands all over, helps to harden the slip and make it brittle, besides causing a resistance to the opening of the back, whereas under the method here advocated, the band is quite as firmly fastened but the slip left free, giving strength without this pernicious resistance which is objectionable in every way.

We must now assume that you have made boards in stock, well seasoned, as advised in a previous article, and shall therefore take the backs into consideration.

It would be an impossible task to attempt giving directions for every size of work, as everything depends upon the materials at hand. We should advise that a special back board of the best black board be procured, but even this varies in thickness with different makers. Assuming a light 6d. board be used, for foolscap up to four quires one piece covered in brown paper will be generally sufficient; for five to seven quires, two pieces; eight to ten, three pieces, and according to the increased size of the work the thickness must be increased. Backs made of more than two pieces of board should not be covered with paper, but glued together and pressed. In taking the size for making backs, lay a piece of paper on and over the slips, because if you were to take the size by laying the paper between the slips you would find an appreciable difference of width from that over the slips, and your back would be too narrow for the wider part. How far the back should extend over the sides depends upon the size and thickness of the book; for foolscap, two quires, about ¾-inch will be sufficient, while for Atlas, sixteen quires, ¾-inch would not be too much. What must be studied is the appearance, which will enable you to determine the proportion to be allowed. When there is to be more than one piece to the back, cut the first piece to the size taken on a slip of paper, the next a little wider, the next a little wider still, and so on, so that when “turned,” the widest being outside of the arch made, the edges may be pared off smooth, making a bevelled edge. In making, good stout glue must be used; glue the smallest first and each larger piece in succession so that the exposed edges of each larger piece are kept clean and free from glue; press firmly, and leave till dry.

For “turning,” choose a roller of half the width of the made back, unless the book has very little round, when a slightly thicker roller may be used. The back must be exactly the shape of the book so that it will fit close without gaping. For the covers of rollers, brown paper may be used, but it will be found preferable to make them of calico or strong Janet, as either holds the back more firmly than paper in turning and neither are so easily destroyed. In firing the backs, move them briskly over a flame of gas, but let the heat thoroughly penetrate the boards; do not let them burn or the glue will lose its virtue; when hot enough, that is when they become pliable, place them
in the roller and give one sharp turn, then reverse them quickly and give another turn, because you will find on the first turn the glue being softened, the paper or the added strips of board will be driven on to the outer edge, and that outer edge must then be placed inside to drive the parts back again into position; the thicker the made back the greater the number of times you will need to reverse it to keep all the parts in place during turning. Having brought the back partly into shape, roll up as tightly as possible, take a cutting or backing board and roll, pressing heavily upon it, till the back is finally brought into the shape of the roller itself; it must then set, rolled up, till it gets cold. When taken out, if it is a thin back the edges may be still further rounded by laying them on the edge of a cutting board and rubbing them down with a folder; but with thick backs you will need to lay them on some iron upright edge—commonly the back gauge of a cutting machine answers the purpose—and tap them down with a hammer so that when fitted to the back the extreme edges grip the book tightly.

**Siding and Pasting Down.**

In the case of whole bound work, where the turn-in has not been pared down thin all round from the edge of the board, making a thin and equal turn-in such as is necessary for best work, the corners are sometimes turned-in without paring, and it becomes the duty of the assistant-finisher to “set” them and fill in the boards. This generally only happens on large work, such as quarto or folio full morocco bibles, where thick covers are used. To do this neatly, a sharp knife should be passed right through the overlapping edges of the leather in a diagonal direction from the outer point of the angle, with the blade slightly depressed so that a pared cut is made down to the board; the leather is then lifted and the projecting pieces beneath the turn-in removed; then paste the edges and lay them down again, making the mitred join flat and smooth with the folding stick. Next trim out the turned-in leather square, not paring it, but cutting straight down to the board and preserving the sharpness in the angle of the corners. Take cartridge paper of the thickness of the leather, and cut exactly to fit and lie into the part to be filled in; be sure that the edge next the joint is perfectly flush with the board, but rather let it project beyond the edge than be within it, because if it does not fit close up, it will leave an ugly ridge, whereas if it goes beyond, it may be easily cut off with a sharp knife when dry. Use glue for filling in if the board warps in the right direction, that is, towards the book; but should the board warp outwardly, before filling in, take sheets of thin paper and cut them to a little less than the size of the part to be filled in, paste, let them soak for a minute or two to stretch, then draw them over the board tightly and let them dry thoroughly, when, in drying, they will draw the board in the direction required; then fill in after they are dry. Of course with properly prepared and seasoned boards there is little likelihood of warping in the wrong direction, but unlined straw boards are almost sure to warp outwardly in full bound work. In any case where the boards are found to incline that way before pasting down, it is not safe to trust to the pasting down alone being sufficient to draw them back towards the book; they should be lined with thicker or thinner paper, stretched much or little, according to the nature of the board and the amount of curve to be subdued. The more the paper will stretch in pasting, the greater will be the contraction in drying; and the contraction of the paper will draw even a deal plank if properly applied.

For “pasting down,” as the term implies, paste should generally be used; with good paper nothing else gives such a satisfactory joint, but with some common papers that stretch very much there is the liability of wrinkling to be taken into consideration, and with some common surface papers the colour is very easily shifted, so that glue is generally employed. Of course we are dealing here entirely with bound work, pasted down open, and not cases which is pasted down shut, or in the press. There is very little difference in the appearance of the two joints—the one pasted and the other glued—at first, if both are executed by the same skilled hand; but the brittle nature of the glue when it has thoroughly dried adds to the friability of certain makes of paper, and causes them to crack and split in the joint when used, far more quickly than when paste is employed. We therefore recommend paste whenever and wherever it is possible for this purpose, but let it be well kneaded up with the hands into the consistency desired, and thus freed from all lumps.

Assuming a good paper that does not stretch into all sorts of shapes the moment it is dampened, the work is comparatively easy. First lay a piece of stout paper, say magazine wrapper, under the trimmed leaf and paste all over with a thin layer that will not squeeze out, being careful to draw the brush quickly off the edges so that the hairs do not soil the edges of the book, especially if they are gilt; until you acquire the knack of working the brush in an upward direction, you may find splashes on the edges which will be caused by the separation of the hairs of the brush as it passes off the edge of the paper. A little extra paste must be left along the joint while pasting the paper, then pass your finger along the joint, levelling and equalising the paste and removing any surplus that may lie in any part, and draw over the paper tightly, but without drawing the paper next the book; fix it in position, and smooth down towards the joint to allow of a little play in the joint, drawing it this way or that to avoid wrinkling, but always throwing the stretching towards the joint. Rub down flat with a folder over a piece of waste paper, and with the left-hand thumb-nail tuck the paper down closely on to the edge of the board and into the crevice between the board and the leather, then again into the crevice between the leather and the edge of the groove, and especially at the head and tail between the turn-in and the groove close up to the headbands. By these means you will make two slight depressions right along the joint with the
Stationery and Vellum Binding.

After the back is made and broken over the edges to obtain a tight grip, it should be lined with a piece of calico for ordinary work, or jute for heavy banded work, which must be fastened on the inside with stout glue. It should be of sufficient width to project over the sides on to the stiffeners about two inches beyond the width of the back, and be in length about four inches less than the length of the book, according to the size, so the length. Glue the inside of the back, lay the jute or calico in, with a projecting part on both sides of about two inches wide, rub well in to secure sticking firmly, and lay the back out to set before drawing on.

Now is the time to trim off the clothing of extra work; cut up the clothing at the edges of the stiffener at each end, with a straight cut towards the back and up to its edge, with a pair of shears, and then cut off the corners diagonally outwards at each end to the edge of the back at both head and tail; that will leave a loose hanging piece of clothing which must be lifted and cut through in a direct line with the edge of the back, so that it is cut right off. Then lay the book on its back and, with the shears, cut off the clothing flush with the headband.

Drawing on the made back is accomplished by fitting it to the book—that is to say, place the back on, take a rule and measure at head and tail on each side, until you get the back into such a position that the distances between the four points and the foredge are equal; then carefully glue the projecting parts of the lining, without shifting the back, and fasten down on to the stiffeners.

In cutting boards, no actual rule can be laid down as to size of the squares, much depends upon the discretion and taste of the binder, but the safest plan to work upon is this: cut the split edge first, then lay the split edge up to one of the lines on the bed of a cutting machine and cut one end square, then place the split edge up to the back of the book and exactly parallel with it, turn the book and board over, with a pencil draw a line on the board level with the foredge of the book, and cut the board to that line. You will thus get the square for the foredge, for by bringing the board forward from the back to make the groove, you get a square equal to the size of the groove, and the other end must be cut to the proportion of the fore edge square. The discretion of the binder is required for the size of the groove, but the square should be equal.

For boarding, glue the split, insert the stiffener, being careful to leave out the clothing at each end, see that the boards are square, and then press heavily, leaving in the press to set. Next trim off the projecting ends of the made back: lay the book on its back with one end over the edge of your bench, and for a thin back take the shears; commence to cut flush with the squares, but cut outwardly up to the centre of the back, then incline inwardly, finishing off flush with the squares on the other side; thus the centre of the back will be a little higher than the sides, and your cut will be in the form of a gentle curve. If the back is thick and cannot be cut either with the shears or a knife, then take a strip of folded paper, lay round the back from the edge of one square to the edge of the other, mark across with a pencil on the back a straight line, then draw from that the required curve, and saw off the back to the mark drawn. In this case you should also take a knife and cut off the sharp edges slightly, making a slight bevel which will make the back appear thinner and neater than if the full thickness is shown in the edge.

Paste the cover, and then, while it soaks, with a hammer tap over the edges of the back at head and tail towards the headband; damp this broken part with a wet sponge until the edges are in a stiff pulp condition all around the headband, but do not let the damp sink below it. Then draw on the cover tightly, rub down well on the sides with the hands, and smooth down with a folder along the edge of the board and in the grooves until the leather is fairly set. After thus drawing on about six covers, turn-in ends first and next the foredge, not as in common work, or letterpress bindings, but thus: your book is lying closed, foreedge towards you, with the ends turned in; with a pair of shears cut along the fold of the leather in a line with the uppermost edge of the board, lift the board and draw the cut part of the end round so that it will lie on the foredge of the board, and parallel with the outer edge of the thickness, that will make a covering for the edge, and leave a tucked-up piece of leather standing up, which must be cut off straight in a line with the foredge and flush with the inside edge of the board, leaving a narrow strip just sufficient to lay along and cover the thickness of the board at the foredge, and the square turn-in at the end; next pare off the square turn-in at the end to form a mitred corner, pare off the narrow strip, leaving only about a quarter-inch to cover the angle of the board, then turn back the foredge part of the leather on to a piece of waste board, and pare it diagonally off to match and mitre with the end in a neat corner-piece, turn in the rest of the foreedge over the little narrow pieces at the corners, and rub down heavily till the squares are flat and neat. While the books are still damp, after turning-in, put a "buckle" of rope—that is a piece of thick rope with a slip knot—into the grooves, thick enough to fit them, draw up tight, put book and rope into the press and give a gentle nip, not too hard, or you may stain the damp cover, take out quickly and proceed to set the heads.

Take off the buckle and place on a thin string around the groove close to the boards to nip in the groove sharply, stand the book on end and knock the head and tail in with a hammer, being careful not to drive over the headbands; then lay the book back down, on a block or pressing board, so that it is raised above the level of the bench, as you will want a sharp edge to lay the head or tail to, then use the tail of a hammer and gently tap the end into shape. If tight work, the handle of the shears may be used, but generally a hammer will be required. After you have moulded the ends in proper form, place a headsetter round the back and smooth round and round with a folder till a shapely head is secured. Place fences inside the boards to keep the damp from penetrating the book, and leave till the whole is perfectly dry under weights. Then mixture down and press.