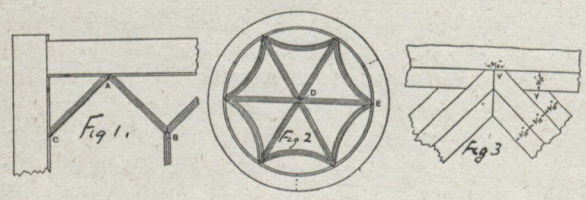
Planing and Molding

SASH WORK.

The making of "Queen Anne" sash or marginal light work, involves a few fundamental principles with which many men who work on sash are not familiar. It is the purpose of the writer to first give some examples with enlarged details of the several joints, and afterwards go more fully into the methods of procedure both in laying out the patterns on paper and in getting the work together.

The handling of marginal light work is of rather a delicate nature, as the bars are usually from ½ to 9-16-inch thick, varying as the tongue between the glass is ⅛-inch or thicker. In the figures used to illustrate this article, the



dimensions on the bars are given as 3-16 for the glass rabbets and 3-16 for the tongue of the bar. It is a fact that when the tongue is made thinner than 3-16 it is extremely difficult to brad them together in some of the joints without their splitting and spoiling the work.

It is scarcely necessary to state that these light bars must be made of a wood that will not split easily, but which may be cut smoothly across the grain. Of all the permissible woods northern white pine is the best, while certain kinds of soft cypress are a good second. It is possible to use the western or sugar pine for this purpose, but it is too apt to pull and break back a little from the cut of the knife.

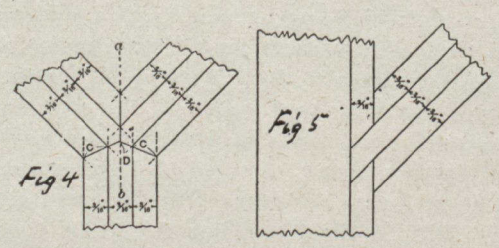
If there is any quantity of marginal light work to be done it will certainly pay to put in a sash trimmer of some kind even if one has to be improvised. The making of copes with a chisel by hand will be the means of putting out work of which the mill will be ashamed, and also consume so much time that there will be no profit left in the work.

Fig. 1 shows the corner of a marginal light sash with three different classes of joints. As these are part of the fundamentals it will stand the workman in hand to get them properly in mind or he will be unable to make a working drawing of any sash. Of course, it is not necessary to make a working drawing of very many of the cut-up sashes except they are other than rectangular, but the spaces have to be laid out on the shash itself, which involves a knowledge of all the different joints.

The detail A in Fig. 1 is enlarged at Fig. 3, and shows two bars meeting at 90 degrees with each other and at 45 with the rail of the sash. The mitre cut between the bars is a straight saw cut and is made with a fine saw in a mitre-box. This cut leaves 3-32 of a square on the end of each bar as indicated by the two being 3-16 as shown in the detail. I may say here that all the sketches used show the glass or rabbet side of the sash, as this is the side the workman takes his measures for, and has always in sight while putting his work together. Wherever the rabbets intersect and the tongue runs over the other rabbet as at YY in detail A, see Fig. 3, it will be known that the sticking is coped over the other member on the face side of the work. This is what makes the job strong, having the tongue over the rabbet on one side and the cope over the sticking on the other. When the bars are fitted in snugly and bradded properly it is no easy matter to push the bars out of a sash. The horizontal cuts on the bars shown in Fig. 3 are copes and are made on the trimmer. In order to insure a smooth cut with the trimmer the bars should be cut up into lengths slightly longer than net so as to leave a little for the trimmer to take off. Usually this should not exceed ¼-inch.

The detail B of Fig. 1 is given in Fig. 4, and is the meeting of two angle bars over a mullion. All of the cuts in this joint are saw cuts. Nevertheless it is one of the most difficult for bench men to get through their heads. The real principle of the joint is to have the tongues and rabbets member at the miters. In order to do this the miter cut must be ½ the angle between the angle bar and the mullion. To get the cut for this in the miter-box it may be necessary to draw an accurate reproduction of detail B on a large scale, and this may be done by first erecting the perpendicular AB and on each side of it draw the bars as shown, letting the lines extend indefinitely as the dotted lines in the illustration. Now on each side of the perpendicular or centre line draw the mullon, having its members the same width as those in the bars already drawn. The intersections of the slanting and perpendicular lines when connected by straight lines will give the miter cuts as shown in the figure. This is a very pretty joint and one much used in this class of work, therefore it will pay to get the cut so that it will make a perfect miter from the start. It will also act as a check on the other joints, for if it is known to be cut right and still will not come to place, there must be something wrong with the spacing, or with the trimmer, for the bars will sometimes slip at the trimmer, but a joint sawed in a good miter-box will be the same every time.

Detail C (see Fig. 5) is one of the simplest of the series and is all made on the trimmer. It will be necessary to set the trimmer for each side separately, as there is always a mate to a joint like this. It must not be overlooked either that the angle is not always 45, but may be almost anything within the limits of a man's taste, but this means only to tip the bar more or less under the trimmer.



The above points, of course, generally speaking, are all matters of common knowledge to experts in sash work, but there are many who read this article who are beginners or who have never put up such a sash as it should be finished. The radius of the rabbet line of the sash proper is the same as that of the circular bar in order to secure a regular geometrical figure for the marginal lights.

Detail D, see Fig. 6, illustrates the joints at the middle of the sash where the six bars meet around a common centre.