

CHAPTER TWO

JOINERY

Syllabus.—Doors, including fanlights, semicircular headed, glazed and flush. Windows, including semicircular headed boxed frame with sliding sashes, boxed frame with three lights, and metal. Stairs; terms; types; essential requirements; step proportions; construction and detailing of straight flight, dog-leg and open well¹ stairs; open and solid balustrades; winders; special steps. Manufacture, characteristics and uses of plywood, laminboards, blockboards, battenboards and composite boards.

DOORS

PANELLED and other types of doors are described on pp. 86-107, Vol. I, and students should re-examine the details of the joints between the members of frames and doors before studying the types described below, *i.e.*, (a) doors with fanlights, (b) semicircular headed doors, (c) glazed doors and (d) flush doors.

(a) DOORS WITH FANLIGHTS OR TRANSOME LIGHTS (see Figs. 21 and 22).—The former shows at A, B and C a two-panelled door with a glazed upper portion, called a *fanlight* or *transome light*. The essential object of a fanlight is to provide lighting to an outer lobby, hall, etc., and occasionally it is required to serve as a means of ventilation. The horizontal member separating the door and fanlight is called a *transome*, each end of which is double tenoned to the frame. This fanlight is fixed, the seven pieces of glass being secured between small hardwood outer beads (tongued and grooved to the head, transome and posts of the frame), small inner beads (screwed to the frame) and two narrow curved glazing bars to which two curved glazing beads are subsequently screwed (see details at K, L and M). The glass is bedded in putty before the inner beads are fixed in order to exclude water.

The curved glazing bars and beads are bent in the following manner: The pieces to be bent are first placed in a steam chest or oven where the wood is softened and rendered pliable by the action of steam. This softening process takes approximately three-quarters of an hour per inch thickness of wood. Immediately each piece is removed from the chest, it is curved over a stout wood templet, shaped as required, and a second shaped templet or *caul* is placed over it. All three are tightly clamped together and left until the piece has dried out. As the pieces are apt to spring back slightly after being bent, it is advisable to allow for this and use lengths of timber a little thicker than the finished thickness; the pieces, after being bent, are then worked to the required section.²

¹ Consideration of the open well type of stairs is often deferred until the third year of the course.

² The following publications of the Forest Products Research Laboratory give much valuable information upon wood bending: "The Practice of Wood Bending," "Methods of Bending Wood by Hand" and "Machinery and Equipment used for Bending Wood."

The transome is weathered, grooved, throated and rebated (see M). The door has two equal $\frac{3}{4}$ -in. panels, bolection moulded on the external side and chamfered stuck moulded on the other (see M, N and P). There are, of course, many alternative finishes to panels. Thus, stuck mouldings on both sides are shown at M, Fig. 22, and at O in the same figure a planted mould is shown on one side and a stuck mould on the other; further finishes may be selected from those shown in Figs. 48, 50, 52, etc., Vol. I.

It will be observed that a wood architrave is not required when the frame projects slightly beyond the face of the plaster (see K). As shown, the frame must be grooved to receive the plaster, otherwise shrinkage gaps will occur. Two further examples are shown at K and P, Fig. 22.

In order to prevent the access of water at the floor level, a hardwood threshold is securely screwed to the floor. Any water blown in is caught by the groove and escapes through two bore-holes, indicated by broken lines. The weather board throws water, streaming down the door, clear of the threshold (see p. 98, Vol. I). Alternative details are shown at M and R, Fig. 22, and J, Fig. 24. Small triangular blocks are sometimes placed at intervals between weather boards which are thin and have a relatively big projection (see M, Fig. 22, and J, Fig. 24). The hardwood threshold shown at R, Fig. 22, somewhat resembles a window sill detail; it is most effective but costly.

The stonework of this entrance is detailed at A, Fig. 39, Vol. II.

Small scale sections showing various types of fanlights are shown at A, B and C, Fig. 22.

That at A, like the fanlight in Fig. 21, is fixed, the glass being received in a sash (see details at K and L). The front edge of the transome has a narrow raised panel flush with the posts of the frame.

It is seldom that a fanlight is required to open, but if it is, the sash may be either bottom-hung (as shown at B), top-hung (as shown at C) or pivoted (as illustrated in Fig. 62, Vol. I).

Details of the former type are shown at N and O. The bottom rail of the