

is bored through the middle of the sash and frame. As shown at R, plates T and U are screwed to the edges of the stile and plate V is screwed to the frame. The pin is then inserted by screwing it through the threaded block on plate T. This is an effective fitting as it can be easily fixed, the sash can be readily removed when required, and it is a secure method of hanging the sash as it cannot be removed from the outside unless the bolts are withdrawn. The size of the bolts varies from 3 to 4-in. long and from  $\frac{1}{4}$  to  $\frac{3}{8}$ -in. diameter. A pair of these fittings is required per sash.

*Catches.*—A simple form is shown at S, the latch fitting being fixed in the middle of the inner face of the top rail of the sash and the striking plate being screwed to the underside of the frame to receive the end of the latch; a spring retains the latch in the fixed position until the sash is required to be opened, when the latch is released by depressing the ring.

Alternately, the sash may be secured by small barrel or flush bolts, as described for doors.

*Eyelets and Cleats.*—A simple arrangement which permits of the opening and closing of the sash consists of a length of cord which is attached at each end to brass or bronze eyelets screwed to the inside face of the top and bottom rails. The cord must be of sufficient length to belay it round a metal cleat fixed at a convenient point on the jamb. One form of eyelet is shown at N, and a cleat is shown at O. If the sash catch S is used, the top end of the cord is fastened through the hole provided for it and therefore only the eyelet at the bottom rail is required.

There are many patent devices for opening and closing pivoted sashes, one of the simplest consisting of a vertical steel rod which has a hinged arm connected near its upper end and its lower end passing through a gunmetal winding box; the arm is secured to the bottom rail of the sash. The sash is opened and closed as required by turning the handle of the winding box.

Pivoted sash windows are convenient for lighting and ventilating high rooms, as they can be conveniently opened and closed from the floor level. They are sometimes used for factories, warehouses, laundries, staircases, etc. A pivoted sash is often used as a fanlight over a door.

WINDOWS WITH HORIZONTAL SLIDING SASHES (see Fig. 63).—This type of window is fairly common, especially in certain of the northern counties. It is generally known as a *Yorkshire Light*, as such windows are a characteristic feature of many of the older stone built houses in that county. Comparatively few are now made as it is a type which has certain undesirable features, *i.e.*, an unsatisfactory appearance and a tendency for the sliding sash to jam. As shown in the elevation at A, the appearance is marred on account of the "sight lines" not being continuous, as the top and bottom rails of the sliding sash are not present in the fixed light; this causes each pair of panes in the fixed light to be of three different heights. These windows are still specified for alterations and extensions to buildings and for replacements.

The window is shown in a regular coursed rubble wall. It consists of a

fixed light and a sliding sash. Detail K shows the method adopted for permitting movement of the sash. An oak bead (or *runner*), with rounded edge, is inserted in the oak sill and extends for the full width between jambs (see C and M); a corresponding but slightly wider groove is formed on the lower edge of the bottom rail of the sash. The head of the frame is rebated throughout its length to receive the top rail of the sash (see J), and the sash is retained in position by an inner bead planted on the jambs and continued round the head and sill. A  $\frac{1}{16}$ -in. clearance should be provided all round the sash to permit of free movement. Rain and draughts are excluded by letting a bead into the jamb which engages in a groove in the stile (see L) and rebating the stiles of the fixed light and sliding sash (see M).

A barrel bolt is generally used to secure the sliding sash.

### ARCHITRAVES, SKIRTINGS, PICTURE RAILS AND ANGLE BEADS

The fixing of certain joinery work can only be completed after the walls have been plastered. Architraves, skirtings and picture rails are examples of such work.

*ARCHITRAVES.*—These are used for the concealment of the joints between the casings with their grounds and the plaster at doors and occasionally windows, and to provide an effective finish.

Casings or linings have been described on pp. 100-103 and various sections of architraves are shown at H to N, Fig. 51; architraves are also detailed in Figs. 52, 54, 64 and 65.

An architrave consists of two vertical and one horizontal members with mitred angles; they are nailed along both edges to the grounds (or plugs) and edges of the casing. Usually the feet of the architrave are continued down to the floor to which they are nailed, but in first class work they are often finished with *plinth* or *foot blocks* (see Fig. 65). These blocks are slightly thicker and wider than the architrave and higher than the skirting which is housed into them, and their shape roughly conforms with that of the architrave. A tongue is formed at the foot of the architrave and a mortice is made in the block to receive it; the tongue is glued and securely nailed or screwed to the block from the back. Plinth blocks provide a suitable finish to the architrave and skirting and serve as a protection to the moulded architrave.

The size and design of the architrave depend upon the size of the opening, the quality of the timber and the general effect desired. A 4-in. (nominal) wide architrave is usually sufficient for doors up to 3-ft. wide; for large openings the width should not exceed 6-in. if in one piece as it is liable to split when shrinking. The plain architrave shown at N, Fig. 64, would be suitable if the door has square or chamfered panels (see J and L, Fig. 48), but a more elaborate architrave would be preferred if, for instance, the panel mouldings were of the section shown at F', Fig. 48. Certain sections, such as those at L, Fig. 51, and P, Fig. 64, should be avoided unless well seasoned good quality timber (preferably hardwood) is used, otherwise unequal shrinkage will occur, resulting