

effectively. Detached pillars to which gates are hung are often finished with a coping as illustrated in Fig. 17.

Double Flemish Bonded Detached Piers (see G, H, M and N, Fig. 7).—In the $1\frac{1}{2}$ -brick pier (which is the smallest that can be constructed in this bond) continuous vertical joints are produced, as indicated by thick black lines at N; owing to the small size of this pier the true face appearance of Flemish bond is not presented in the elevation at H (as the headers are not centrally over the stretchers), but the pier is nevertheless considered to be in Flemish bond as in each course there is a header adjacent to a stretcher. The short continuous vertical joints shown in the plan M of the 2-brick pier can be avoided if bevelled closers (see broken lines) are used as an alternative.

Piers may be formed with rounded arrises by using bullnose bricks; thus double bullnose bricks (see Q, Fig. 2) may be used in the construction of pier J and single bullnose bricks for the remaining piers.

ATTACHED PIERS OR PILASTERS.—Such are shown at B in the key plan at A, Fig. 7, and some alternative details are given at O to S inclusive. The stability of walls is increased by the use of these piers at intervals, and like those of the detached type they may be used as supports for concentrated loads.

Examples in English bond are shown at O, P and Q. Rounded arrises may be obtained by using bullnose bricks (see Q). The width of a pier is usually a multiple of $4\frac{1}{2}$ -in. and the projection may be either $4\frac{1}{2}$ -in. (as at O and P), 9-in. (as at Q) or upwards.

The piers and adjacent walling shown at R and S are in double Flemish bond; the $4\frac{1}{2}$ -in. projection may be increased as required.

A gate pier of the attached type is shown at A, Fig. 17.

BUTTRESSES are piers which are provided to resist thrusts from roof trusses or to strengthen boundary walls, etc. Examples of buttress cappings are illustrated in Fig. 11.

The brick and concrete foundations for piers are referred to on p. 17.

JAMBS

Jambs are the vertical sides of openings which are formed in walls to receive doors, windows, fireplaces, etc. There are three forms of jambs, *i.e.*, (a) square or plain, (b) rebated or recessed and (c) rebated and splayed.¹

(a) *Square Jambs*.—Examples of square jambs are shown in Figs. 44, 46, 51, 52, 54, 56, 58 and 59 in connection with door and window openings. The stopped end details in Figs. 3 and 4 show the construction of the brickwork.

A frequent cause of dampness in buildings is due to door and window frames being fixed in openings with square jambs on account of the pointing becoming defective and allowing wind and rain to enter.

(b) *Rebated Jambs* (see Fig. 8).—These details are shown in both English and double Flemish bond. The plans and sketch C show that a rebated jamb con-

sists of (1) an outer *reveal* or face, (2) a recess and (3) an inner reveal.¹ Window and external door openings are best provided with rebated jambs for the reasons stated below, and applications of these are illustrated in Figs. 45, 50, 57 and 62.

As is implied, the outer reveal is that portion of the jamb which is seen from the outside; it may be $4\frac{1}{2}$ -in. (see D, M, G, etc., Fig. 8), or it may be 9-in. wide (see Q and R). The recess varies in depth from $2\frac{1}{4}$ -in. or less—suitable for external doors (see Fig. 50) and casement windows (see Fig. 57)—to $4\frac{1}{2}$ -in.—suitable for windows of the boxed frame type illustrated in Fig. 60. A $2\frac{1}{4}$ -in. recess is shown at D and that at K is $4\frac{1}{2}$ -in. deep.

The object of the recess will be appreciated on reference to F, Fig. 8, which indicates by broken lines the relative position of a window frame; the protection afforded by the outer "nib" of brickwork assists effectively in preventing the access of rain into a building between the frame and adjoining brickwork; the bedding and pointing of the frame (described on p. 87) affords an additional protection.

Rebated jambs having $4\frac{1}{2}$ -in. outer reveals and $2\frac{1}{4}$ -in. recesses in 1, $1\frac{1}{2}$ and 2-brick walls built in English bond are detailed at D, E and F, Fig. 8; these are plans of the alternate courses T and U shown at A. The corresponding courses in double Flemish bond are shown at G, H and J. Jambs with $4\frac{1}{2}$ -in. recesses are shown in English bond at K, L and M, and in double Flemish bond at N, O and P. Examples of rebated jambs in both English and Flemish bonds having 9-in. outer reveals and $2\frac{1}{4}$ -in. recesses are detailed at Q, and with $4\frac{1}{2}$ -in. recesses at R. These details may be associated with the window Z shown at A, Fig. 3, and which is shown in the alternative elevations A and B, Fig. 8; the former indicates 3-in. thick bricks built in English bond and B shows 2-in. thick bricks built in Flemish bond.

Excepting at Q and R, the joints of the brickwork above and below the window opening are indicated by broken lines. Consideration should be given to the size of the bricks to be used and the desired thickness of joints when deciding upon the sizes of door and window openings. The width of an opening should be a multiple of 1 brick for English bond, and for double Flemish bond the width should be a multiple of 1 brick up to 18-in. thick and a multiple of $1\frac{1}{2}$ brick afterwards, in order to maintain vertical perpend and the normal face appearance of the bond above and below the opening. Thus, for English bond the size of the opening may be 9-in., 1-ft. 6-in., 2-ft. 3-in., 3-ft., etc., plus the combined thickness of the vertical joints; for thick walls built in double Flemish bond the width may be 1-ft. 6-in., 2-ft. $7\frac{1}{2}$ -in., 3-ft. 9-in., etc., plus vertical joints; it will be noted that in Fig. 8 the width of the window opening is 2-ft. 3-in. and 2-ft. $7\frac{1}{2}$ -in. for the English bond and Flemish bond respectively. The figured dimensions on working drawings should include the thickness of the joints, although the thickness has not been shown in the given examples in order to facilitate draughtsmanship. The height of openings must also conform with the brick courses; if this is disregarded an unsatisfactory appearance usually results (see p. 21).

A careful study of the details shows that either king, queen or bevelled closers or half, three-quarter or bevelled bats are employed in order to prevent continuous vertical joints and to obtain the correct face appearance; note that

¹ Rebated and splayed jambs are detailed in Chapter One, Vol. II.

¹ Sometimes frames are fixed in *reverse* rebated jambs (see C, Fig. 57).