

BRICKWORK

the back of the stretching face ; the return stretching course in each case butts against the heading course.

When drawing these details (usually to a scale of 1-in. to 1-ft.) the student should set out the outline of the quoin and, commencing with the heading course, fill in the three bricks numbered 1, 2 and 3 followed by the remaining bricks ; if number 3 brick is placed in correct position according to either (3) or (4) above and if (5) is complied with, little difficulty will be experienced in completing each course, as the details are in accordance with those of English bond shown in Fig. 3.

*Square Quoins in Double Flemish Bond.*—Details of these are shown at D, E and F, Fig. 6. Note :

1. In the 1 and 1½-brick quoins the continuous course is that which contains the queen closer ; also the butt courses are similar to E and F, Fig. 4, commencing with units which are similar to those shown within the broken lines in Fig. 4.

2. Number 3 brick in the 1 and 1½-brick quoins is a stretcher which projects 6¾-in., and in the 2-brick quoin it is a header which projects 2¼-in. as in the English bonded 2-brick quoin.

3. The half bat at the internal angle of the 2-brick quoin is necessary to avoid a long continuous vertical joint and to form the continuous transverse joint which bounds the characteristic 6-brick unit enclosed within the broken lines.

PIERS

Piers (also known as *pillars* or *columns*) of brickwork are adopted either to support concentrated loads such as are transmitted by arches, floor beams and roofs, or to strengthen walls. Such piers may be isolated (or detached) or they may be attached to walls.

*DETACHED PIERS.*—Such may be either square, rectangular, circular or polygonal on plan. A plan of a portion of a building in which piers are employed is shown at A, Fig. 7, and a detached pier is shown at C. Such a building may be an arcade or loggia, or it may be considered as a portion of a factory, although modern buildings of the latter type usually have pillars of mild steel or reinforced concrete. Maximum strength is obtained if pillars are constructed with sound dense bricks built in English bond and in cement mortar.

*English Bonded Detached Piers* (see plans J, K and L and the corresponding elevations D, E and F, Fig. 7).—It is only necessary to show one course of each pier, as in every case the arrangement of the bricks in each course is the same.

Thus the 9-in. pier has every alternate course constructed as shown at J with similar intermediate courses at right angles (see elevation D) ; the 13½-in. pier has alternate courses as shown at K with similar adjacent courses having the stretcher face of two three-quarter bats at the front over the three headers (see E) ; each course in the 18-in. pier is as shown at L, but every alternate course is turned to the side (see elevation F).

The only continuous vertical joints are those shown by thick lines at K. A stone *pad* or *template* as shown in each elevation is usually provided at the top of a pier to ensure a firm bed for a beam or roof truss and to distribute the load

