

BRICKWORK

stretcher face (9-in. by 3-in.) (see A, Fig. 2); is also applied to an exposed surface of a wall.

Frog or Kick.—A shallow sinking or indent (either rectangular, triangular or trapezoidal in section) formed on either one or both of the 9-in. by 4½-in. faces of a brick (see D and M, Fig. 2); a wire-cut brick has no frogs, a pressed brick has two frogs as a rule and a hand-made brick usually has only one frog; a frog affords a good key for the mortar (see M, Fig. 2) and therefore walls which are required to show thin bed joints should be constructed of bricks with frogs; bricks having only one frog should be laid with the frog uppermost so as to ensure it being completely filled with mortar.

Course.—A complete layer of bricks; a *heading course* consists of headers and a *stretching course* comprises stretchers (see U, Fig. 2); a *brick-on-edge course* consists of bricks placed on their 9-in. by 3-in. faces (see J and K, Fig. 17) and a *brick-on-end* or *soldier course* is composed of bricks laid on their 4½-in. by 3-in. faces (see N and O, Fig. 17).

Continuous Vertical Joints or Straight Joints.—Vertical joints which come immediately over each other in two or more consecutive courses (see B, Fig. 1); although these are sometimes unavoidable (as in Flemish bond shown in Fig. 4) they should never appear on the face of brickwork (see "English Bond" on p. 7).

Bed Joints.—Mortar joints, parallel to the beds of the bricks, and therefore horizontal in general walling; thickness varies from ⅛ to ½-in.—the ⅜-in. joints shown at U, Fig. 2, are generally adopted in first-class facing work.

Quoin.—A corner or external angle of a wall (see U, Fig. 2 and G, Fig. 6).

Stopped or Closed End.—A square termination to a wall (see Fig. 3) as distinct from a wall which is returned as shown in Fig. 6.

Perpends.—Imaginary vertical lines which include vertical joints (see broken lines at U, Fig. 2); these should be plumb or true.

Lap.—The horizontal distance which one brick projects beyond a vertical joint in the course immediately above or below it (see U, Fig. 2); it varies from approximately 2 to 4½-in.

Racking Back.—The stepped arrangement formed during the construction of a wall when one portion is built to a greater height than that adjoining (see U, Fig. 2, and p. 31). No part of a wall during its construction should rise more than 3-ft. above another if unequal settlement is to be avoided.

Toothing.—Each alternate course at the end of a wall projects in order to provide adequate bond if the wall is continued horizontally at a later date (see U, Fig. 2).

When a new wall has to be connected to an existing wall and where such provision has not been made, it is necessary to form a sinking or *indent* in each alternate course of the existing wall so that the new work may be properly tied into it; the depth of the indents should be such as to allow the new work to be bonded into the old for at least 2½-in. and the width should be equal to the thickness of the new wall. Sometimes the indents are formed three or four courses high with a similar distance between each.

Bat.—A portion of an ordinary brick with the cut made across the *width* of the brick; four different sizes are shown at E, F, G and H, Fig. 2. Applications are illustrated in the following: *Half Bat* (E) at F, Fig. 4, *Three-quarter Bat* (F) at K, Fig. 3, *Bevelled Bat* (G) at N, Fig. 8, and bevelled bat (H) at E, Fig. 8.

Closer.—A portion of an ordinary brick with the cut made *longitudinally* and usually having one uncut stretcher face; seven forms are shown at J, K, L, N, O, P and V, Fig. 2. The *Queen Closer* (J) is usually placed next to the first brick in a header course (see J, Fig. 3); sometimes the abbreviated queen closer V is used (see K, Fig. 3); the queen closer K is obtained by cutting an ordinary brick into two half bats and then splitting one into half; K is more often used than J as it is easier to cut, although (as shown at L, Fig. 3) it generally produces a 2¼-in. wide continuous vertical joint. The *King Closer* (L), formed by removing a corner and leaving half-header and half-stretcher faces, is shown bonded at D, Fig. 8. The *Bevelled Closer* (N) has one stretcher face bevelled (splayed or slanted) and is shown at E, Fig. 8. *Mitred Closers* (O and P) are only used in exceptional cases as when the ends are required to be mitred (joined at an angle), *i.e.*, quoins of certain bay windows.

The remaining bricks Q, R, S and T shown in Fig. 2 are usually moulded specially to the required shape and are called *specials* or *purpose-mades*, although, for common work or where the brickwork is to be covered with plaster, ordinary bricks may be cut by a trowel or chisel to form all but the last of these.

Bullnose (Q).—These are used for copings (see D, Fig. 17) or in such positions where rounded corners are preferred to sharp arrises (see Q, Fig. 7); a brick with only one rounded edge is known as a *Single Bullnose* and one with both edges rounded is termed a *Double Bullnose*; the radius of the quadrant curve varies from 1⅛ to 2¼-in.

Splay (R and S).—These are often used to form plinths (see P, Fig. 17); the amount of splay varies.

Dogleg or Angle (T).—These bricks are used to ensure a satisfactory bond at quoins which depart from a right angle and are to be preferred to the mitred closers O and P; the angle and lengths of faces forming the dogleg vary.

The above purpose-made bricks are only a few of many which can now be obtained. Most of the larger brick-manufacturing firms make "standard specials" which are kept in stock. Wherever possible, a selection should be made from these, as purpose-mades which differ from the standard are more costly on account of the moulds which have to be made specially and delivery may be delayed.

TYPES OF BOND.—There are many varieties of bond, and in a First Year Course it is usual to confine the instruction to Heading, Stretching, English and Flemish bonds.¹ It is sometimes considered advisable to postpone the study of Flemish bond until the following year.

¹ It is considered desirable to defer the consideration of cavity-wall construction until the second year of the Course. Details of this and other types of bond are given in Chapter One, Vol. II.