

The latter evidently has a more irregular appearance than common English bond would have, and yet such irregularities occur in almost all dwelling houses where Flemish bond is attempted throughout; and wherever they do occur, it is of course in those parts which most attract the eye, and where, if ornament be studied at all, it is of the most importance—I mean in the narrow piers between windows, and pilasters, and recesses.

The matters discussed in this article again lead us to our former conclusion—that English bond is the best species of bond that can be used in brickwork.

Of Horizontal Projections, and of Offsets not connected with the Foundation in Brick Walls.

It is very common in brick buildings to have the walls of the basement or cellar story thicker than those of the ground floor, and to diminish partly by an external offset; and, as the former part of the building is usually concealed from view, being below the level of the ground or street, this offset being set off two or three feet above that level, assumes the form of a plinth to the face of the wall.

This offset is seldom more than a quarter of a brick in width, and in this case, an equal offset must be set off inside on the same level. In very large buildings, it may be half a brick, and then it is not necessary that there should be any internal offset opposite.

It is also common in brick buildings, to have the walls of one or more of the upper stories thinner by half a brick, than those immediately below them. In this case, the offsets where such changes are effected are always set off internally, and are concealed from view by the floors, of which they support the wall-plates, which particulars will afterwards be explained.

There is another arrangement not so common in modern buildings, which consists in having two or three salient or projecting courses of brickwork in the face of a building, over the tops of the windows, between the several stories, and nearly opposite to the level of the floors.

These are sometimes called *string courses*, and they usually project from a quarter to half a brick beyond the face of the wall. If the latter dimension be used, both of the salient courses, if there be only two, should consist entirely of headers. If there be more than two, the lower and upper course only should be thus laid.

This arrangement may be seen above every story of the infantry barracks at this station.

Fig. 155 represents in section a portion of a two-brick wall, having three string courses of the above description.

Sometimes brickwork is made to project gradually, by gaining from one to one and a-half, and not exceeding two inches in each course, and the courses thus built are called *gathering courses*.

Fig. 156 represents this arrangement, which is supposed

Fig. 153.

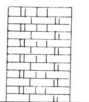


Fig. 154.

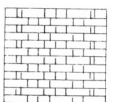
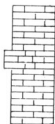


Fig. 155.



to take place on two opposite sides of a party wall two bricks thick.

In common buildings this arrangement may be used with much propriety for supporting the wall plates of floors, as will afterwards be described.

External projections of the same kind may be seen in almost all cities built with bricks. There is a specimen of this arrangement in the gate of Chatham Dockyard, and also in the upper part of Gillingham Tower.

Of Brick Arches.

It is unnecessary to define an arch, but the student should know all the technical terms commonly used relating to arches, such as the *piers* and *abutments*, which support them; also the *span* and *rise* of an arch, the *length* of an arch, the *spring* of an arch; the *skewbacks*, when it does not spring from an horizontal plane; the *haunches*, or lower segments on each side, as distinguished from what common bricklayers call the *scheme* part, or upper segment of an arch; the *intrados*, or whole interior or lower surface; the *extrados* or whole exterior or upper surface; the *crown*, or summit of an arch; the *voussoirs*, or arch stones, and the *key*.

He should also know the common terms by which arches are distinguished, in reference to the curves by which they may be formed, such as *straight* arches, to which the term *suffit* applies, instead of *intrados*; *semicircular* arches, *segment* arches, or smaller portions of a circle, commonly called *scheme* arches by bricklayers; *elliptical* arches, *parabolic* arches, *gothic* arches, &c., &c.

The arches used in buildings of any importance are of two kinds, external and internal.

The former are always executed with great care, and in an ornamental manner; the latter are done roughly, being afterwards concealed from view by the inside finishing of rooms.

Of External or Camber Brick Arches, as applied to Doors and Windows of Buildings.

Outside arches are of two kinds, straight arches and semicircular, or segments of a circle.

Elliptic arches are also sometimes used, and other forms, of which specimens may occasionally be met with, but which I shall not notice, as they are not considered in good taste, according to the fashion of the present day.

Straight arches are perfectly horizontal above, and have the same appearance below, to an inexperienced eye. This, however, is not the case, for they have always a small rise of about half-an-inch in three or four feet, so that their lower outline is an arc of a circle, like that of a segment arch, but the joints always radiate to some point much nearer than the centre of the said arc.

The bricks used in arches always show their thickness in the face of the wall, which thickness being from two and a-half to two and three-

Fig. 156.

