Oct. 31, 1944. D. H. DRAYER 2,361,828

LINTEL

Filed Jan. 23, 1942

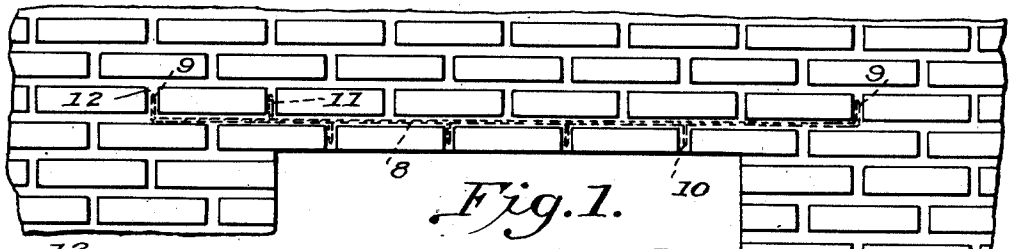


Fig. 1.

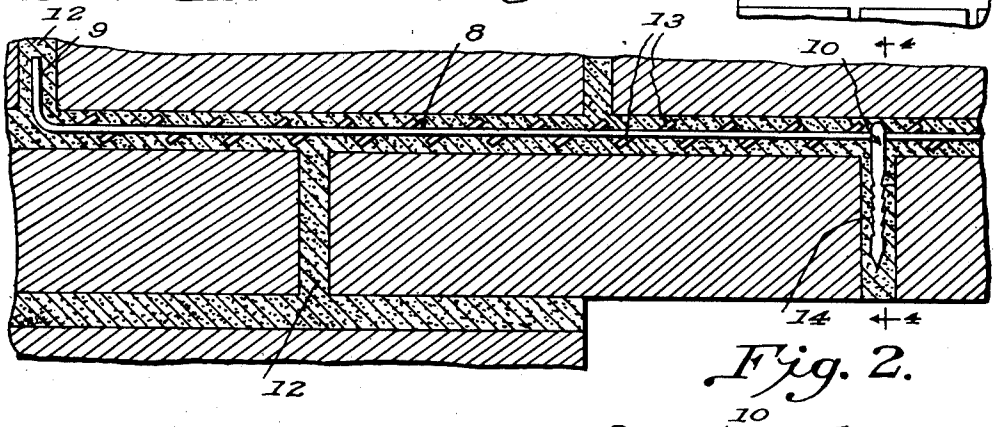


Fig. 2.

Fig. 3.

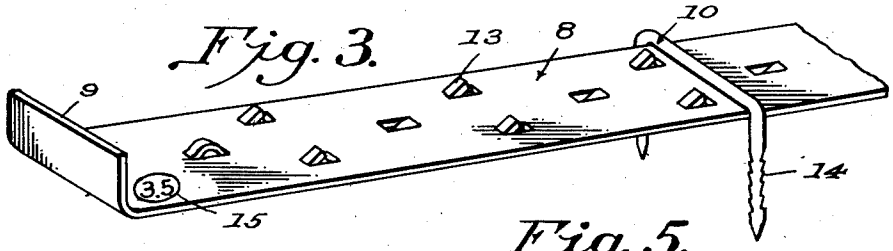
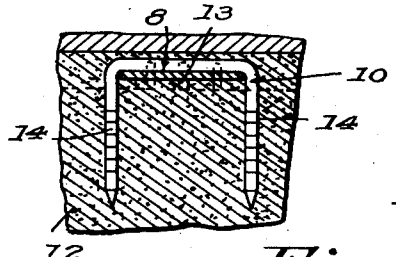
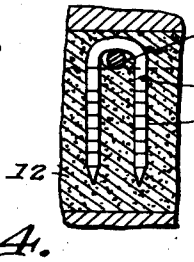


Fig. 5.





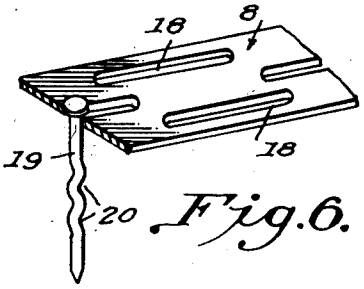


Fig. 4.

Fig. 6.

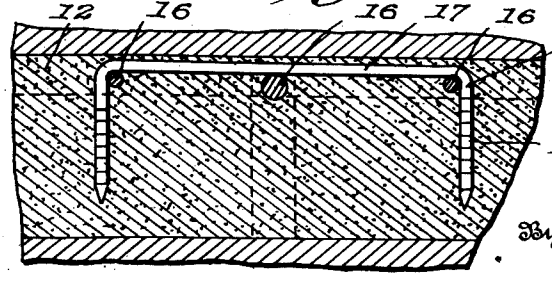


Fig. 7.

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LINTEL

Donald Hudson Drayer, Brookmont, Md.

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5 Claims. (Cl. 72—59)

The principal object of this invention is to provide lintels for horizontal arches of building openings which are light in construction, of sufficient strength to withstand the stresses placed thereupon and adapted for placement into the usual mortar joint between two horizontally disposed courses of bricks and to associate therewith suitable adjustable anchoring means for tying to or suspending therefrom the lower course of bricks. In some instances it may be desirable to direct some of the anchoring means upwardly as well as downwardly so as to form an interlock between the two adjacent brick courses and the lintel.

The usual practice of supporting masonry over an opening is to place one or more angle irons of proper weight and strength at the head of an opening under the bricks, which construction is intended to care for both the tensile and compression stresses. In this case the lintel is exposed to the elements as well as possible damage by fire. Another construction employed is the common reinforcing bars positioned in the mortar joint with no means for supporting the lower course of bricks.

The present invention has all of the desired advantages of the known art and is far superior from the standpoint of economy in the use of metal, appearance and stability and further lends itself readily to the trade for the reason that in placing my lintel in position with the associated anchors lodged in the vertical mortar joints of the bricks no part of the construction is in the way to prevent the usual application and troweling of the mortar prior to laying the next course of bricks in position.

My invention consists in the special formation of the lintel plates or bars, the associated anchoring means and arrangement of parts as herein set forth.

In the drawing:

Fig. 1 is a front elevation.

Fig. 2 is a vertical sectional view taken through the masonry construction alone with the invention shown in full lines for a clearer understanding of the details of construction.

Fig. 3 is a perspective view of my lintel with anchors in position.

Fig. 4 is a vertical cross section taken on line 4—4 of Fig. 3.

Fig. 5 is a vertical sectional view of a modified form.

Fig. 6 is a perspective view of another modification; and

Fig. 7 shows a vertical cross section similar to Fig. 5 disclosing the use of a plurality of reinforcing bars.

In the drawing illustrations of some of the embodiments of my invention are shown and similar reference characters indicate corresponding parts in all of the views. Noting Fig. 1 you will find set forth therein a masonry structure including several courses of bricks, an opening which may be for a window, a door, or like structure and a general showing of the lintel of this invention in dotted lines at 8, placed in the mortar joint between the first and second courses of bricks, directly above the head of the opening and extending for some distance beyond said opening so as to obtain a suitable support in the masonry structure. In order to firmly hold the lintel in position and to augment its resistance against the tensile stresses placed upon the same, the end portions are bent at right angles as at 9 to be embedded in some of the vertical mortar joints. Associated with the lintel are a plurality of adjustable anchoring means taking the general form of staples, nails or the like, as indicated at 10, which are placed into the mortar joint before the same has had time to set thereby preventing the destruction of the joint and the formation of any voids therein which would produce an inferior structure. It is advisable in some instances to direct certain ones of the anchors vertically, as shown at 11, in order to tie the two courses of bricks and the lintel together as a unit.

In Fig. 2 only a portion of the lintel is shown so as to enlarge the view for a better understanding of the invention. In this showing the lintel 8 takes the form of a metal plate of sufficient width and thickness to withstand the stresses placed upon it, but not one which would require increasing the size of the mortar joint. The upturned end of the lintel is clearly shown at 9 as embedded in the joint 12 and in order to more securely hold the lintel in position additional ties may be provided as indicated at 13. The tie may take any one of a number of different forms, but I am illustrating only the simpler types consisting of either prongs or loops stamped from the body of the material. The anchoring staples here shown at 10 as straddling the lintel plate and directed downwardly have their leg portions indented or provided with spurs 14 directed upwardly so as to form an interlock with the mortar and firmly unite the bricks with the lintel. The purpose of directing the spurs upwardly is to permit the staple to be inserted in the mortar joint without disturb-

ing to any great extent the arrangement of the joint and thereby prevent the formation of any pockets.

In view of the fact that the staples are not attached to the lintel but are adjustably associated therewith it is possible to place said staples in the mortar joint regardless of their occurrence due to possible variations in the sizes of bricks.

Fig. 3 clearly illustrates a portion of my lintel construction with an anchoring staple 10, shown in position, and the end 9 bent at right angles thereto with an additional feature of size indication at 15. This stamping of the size on the lintel by the manufacturer, as in the present case, is for use in connection with three foot five inch openings, and will prevent any accidental misuse of the lintel and possibly defective construction.

Fig. 4 shows how the anchor 10 straddles the lintel 8.

Fig. 5 discloses a modification wherein a reinforcing bar 16 is substituted for the lintel plate of Fig. 3. The ends of this bar 16 are bent at right angles for the same purpose as that of the lintel plate. The construction illustrated in Fig. 7 is identical with that of Fig. 5 excepting that three reinforcing bars 16 are employed and the leg connecting portions 17 of the anchoring staples 10 are elongated so as to straddle all of the bars.

Fig. 6 sets forth a further modification of my invention wherein the lintel plate 8 is provided with numerous elongated openings or slots 18 which serve the dual purpose of receiving the headed anchoring nails 19 as well as producing the proper interlock between the lintel and the mortar. It will be noted that the slots are of such length as to overlap thereby permitting the full adjustment of the anchoring nails with respect to the motrar joints. As here shown the anchoring nails are crimped or corrugated at 20 but any other design may be employed so long as a proper anchor is obtained without the destruction of the mortar joint.

While lintels are herein shown as manufactured from sheet or bar stock the same may be equally as well constructed from fabricated material and it is understood that this lintel is to be employed in connection with all types of masonry of block formation, such as brick, cement or cinder blocks.

Having fully disclosed and described my improvement in lintel constructions, what I claim as new is:

1. A lintel for masonry constructions comprising a horizontally disposed metallic member embedded in the mortar joint between two vertically spaced courses of bricks at the head of an opening and U-shaped anchoring means mounted in adjusted positions longitudinally of the metallic member and overlying the same, the anchoring means having legs extending below the metallic member and anchored in the vertical mortar joints of the lower course of bricks.

2. A lintel for masonry constructions comprising a metallic member embedded in the mortar joint between two vertically spaced courses of bricks at the head of an opening, and U-shaped anchoring means having leg portions provided with deformations overlying and partially enveloping said metallic member, said leg portions extending below said metallic member and anchored in the vertical mortar joints of the lower course of bricks.

3. A lintel for masonry constructions comprising a metallic member embedded in a mortar joint between two vertically spaced courses of bricks at the head of the opening, and U-shaped brick anchoring means resting on said metallic member with the leg portions thereof positioned outside of and extending below the edges of the metallic member and anchored in the vertical mortar joints of the lower course of bricks.

4. A lintel for masonry constructions comprising a flat metallic member embedded in a mortar joint between two vertically spaced courses of bricks at the head of an opening, and U-shaped anchoring means resting on said metallic member with the leg portions thereof positioned outside of and extending below the edges of the metallic member and extending part way only through the vertical mortar joints of the lower course of bricks, said depending portions being of irregular formation to interlock with the mortar of said joints.

5. A lintel for masonry constructions comprising a horizontally disposed metallic member embedded in the mortar joint between two vertically spaced courses of bricks at the head of an opening, and devices adjusted longitudinally with reference to said metallic member and supported thereby, each of said devices being provided with two adjacent leg portions depending therefrom both of which leg portions are interlocked with and anchored within a mortar joint of the lower course of bricks.

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