A. J. ELLIS.

DOOR FRAME.

APPLICATION FILED APR. 20, 1911.

1,034,601.

Patented Aug. 6, 1912.

Fig. 6.

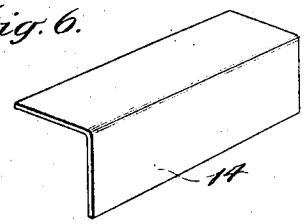


Fig. 1.

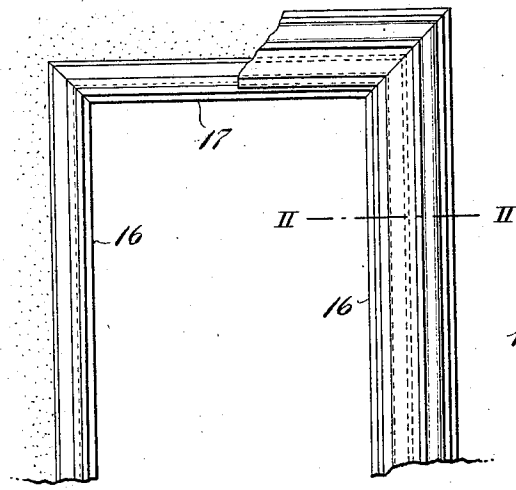


Fig. 3.

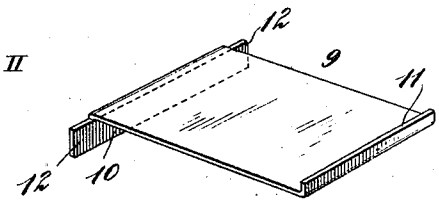


Fig. 2.

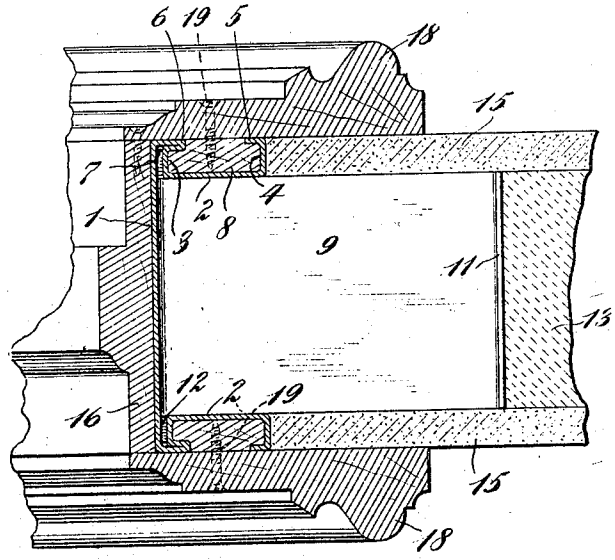
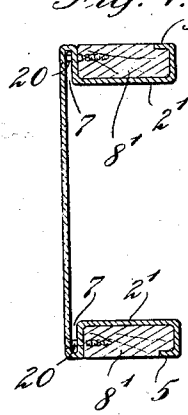


Fig. 4.



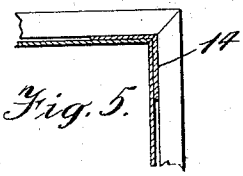


Fig. 5.

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UNITED STATES PATENT OFFICE.

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DOOR-FRAME.

1,034,601. Specification of Letters Patent. Patented Aug. 6, 1912.

Application filed April 20, 1911. Serial No. 622,217.

To all whom it may concern:

Be it known that I, ALFRED J. ELLIS, a citizen of the United States, residing at Woodcliff-on-Hudson, township of North Bergen, county of Hudson, and State of New Jersey, have invented certain new and useful Improvements in Door-Frames, of which the following is a full, clear, and exact description.

This invention relates to sheet metal bucks for door frames and the like, and has for its object the simplification of such structures while providing a construction having maximum strength and rigidity.

It particularly relates to a novel form of metal buck in which wood strips or the like are interlocked or otherwise fastened to the metal parts of the buck to facilitate the application of the jambs, bead and molding of a door frame to said buck, especially when the latter parts are also of wood.

A further object of my invention is to provide novel anchoring means whereby the metal buck sections may be firmly locked in position in brick work or the like, the anchoring elements being adjustable longitudinally of the buck sections and being secured thereto without the use of bolts, rivets or the like.

These and other objects of my invention will be hereinafter set forth and more particularly pointed out in the appended claims.

Referring to the drawings which form a part hereof and in which like reference characters designate like parts throughout the several views: Figure 1 is a fragmentary elevation of a door frame constructed in accordance with the principles of my invention, the left hand side of the molding thereof being broken away to expose a portion of the buck. Fig. 2 is a section of one leg of said frame taken on line II—II of Fig. 1; the section being viewed from below. Fig. 3 is a perspective detail of one of the anchors. Fig. 4 is a section of a modified form of buck section. Fig. 5 is a vertical section of a corner of the buck showing one means of securing the abutting buck sections together. Fig. 6 is a perspective view of the locking angle plate which constitutes the means referred to in Fig. 5.

Referring to the drawings, and more particularly to Fig. 2, the frame or buck section therein shown is substantially U-shaped in cross section and consists of a strip of sheet metal the edges of which are preferably folded and flanged longitudinally thereof, symmetrically with respect to the median line of the body 1 of said buck section. Two principal recessed flanges 2 extend rearwardly from the body upon either side thereof and preferably substantially at right angles to said body.

The walls 3 and 4 of the recesses in these flanges are virtually undercut since the metal forming the wall 4 is bent over to form a lip 5 while a corresponding lip 6 is provided upon the opposite wall 3 by bending and folding the sheet metal in the manner shown. The wall 3 while parallel to the body 1 is preferably spaced therefrom a determined distance to form a groove 7, the purpose of which will be hereinafter referred to.

The recesses in the flanges 2 are adapted for the reception of strips 8 of perforable material such as wood, the exposed face of each of these strips being preferably rabbeted along either edge thereof to receive the lips 5 and 6, so that the said face is substantially flush with the outer flanks or sides of the lips. Adjustable anchors, broadly designated 9, and shown in perspective in Fig. 3, are formed by blanking out of sheet metal strips of suitable size and shape, and flanging over opposite edges of said strips as at 10 and 11; the flanges so formed preferably extending in opposite directions. The strip is further so formed as to provide lugs, or tongues, 12 which are adapted to be received into the grooves 7 above referred to, the said tongues being actually extensions of the flange 10.

The anchors, of which any desired number may be used, may be inserted into position in their respective buck sections, and thereby interlocked therewith either before the latter have been alined with the wall 13 to be built therearound or during the course of the erection of such wall. If the wall be of brick, concrete blocks, or the like, it is evident that the height of the line of separation between successive courses above the floor or ground will vary somewhat owing to differences in the thickness of the layers of mortar. Herein the novel construction employed is of special value since the anchors, by reason of their tongue and groove connection with the buck members, may be

slipped up or down, or longitudinally of the buck sections to the exact position needed, and when embedded in the brick work will anchor the buck sections very firmly in position.

Various means for aiding the locking engagement of the anchors with the mortar may be employed but I prefer to provide simply the flange 11 upon each anchor, which, together with the features thereof above described, reduces the cost of these devices to a minimum.

The buck sections may be held in position by the wall itself alone, but I prefer to fasten the abutting ends of said sections together and any suitable means may be used for this purpose. I have shown one such means which is of the simplest and most inexpensive description but which admirably serves the purpose in question.

Referring to Fig. 6, the respective sides of the angle plate or clip 14 therein shown are adapted to enter the grooves 7 of two adjoining buck sections, as shown in Fig. 5, which effectually holds these sections against lateral displacement with respect to each other; and when the wall has been built around the buck all parts of it are very rigidly secured together and in place.

Assuming that the buck has been positioned and the brick work, or the like, erected therearound, the plaster 15 is then applied to the wall and thereafter the jamb sections 16 and head 17 are assembled in place in the buck. Finally the wood moldings 18 are secured to the strips of perforable material in the buck sections by suitable means such as the screws 19, and the jamb sections and head may further be secured to the moldings in corresponding fashion.

In Figs. 4 I have shown a slight modification of the buck in which but one lip, *i. e.*, 5 is provided on each of the respective recessed flanges 2′; lips 6 being omitted and the wood strips 8′ being held in position on one side by means of screws 20, or the like. Grooves 7 are provided however, and are adapted to receive lugs 12 of the anchors just as in the preferred construction. In both forms of the device, however, it will be noted that the buck sections are substantially U-shaped in cross-section and that, further, the recessed flanges which form the sides of the U are themselves U-shaped, the recesses therein opening outwardly normal to the general planes of said flanges.

Having described my invention, I claim:

1. In combination, a door buck formed in sections, some of said sections comprising sheet metal strips having recessed flanges outwardly projecting from the bodies of said strips, the flange recesses opening outwardly and normal to the general planes of their respective flanges, and strips of perforable material disposed in said recesses.

2. In combination, a door buck formed in sections, some of said sections comprising sheet metal strips having recessed flanges outwardly projecting from the bodies of said strips, the flange recesses opening outwardly and normal to the general planes of their respective flanges, and strips of perforable material disposed in said recesses, said recessed flanges having retaining lips at the outer edges thereof adapted to engage said strips of perforable material.

3. In a device of the class described, a flanged sheet metal buck member substantially U-shaped in cross section, a flange which forms one side of the U being integrally united to the body of the member and being recessed and substantially U-shaped in cross section, the walls of said recess which form the sides of the U being in substantial parallelism with the body of the buck member.

4. In a device of the class described, a flanged sheet metal buck member substantially U-shaped in cross-section, a flange which forms one side of the U being integrally united to the body of the member and being recessed and substantially U-shaped in cross-section, the walls of said recess which form the sides of the U being in substantial parallelism with the body of the buck member, and perforable material adapted to be received into said recess.

5. In a device of the class described, a flanged sheet metal buck member substantially U-shaped in cross-section, a flange which forms one side of the U being integrally united to the body of the member and being recessed and substantially U-shaped in cross-section, the walls of said recess which form the sides of the U being in substantial parallelism with the body of the buck member, perforable material adapted to be received into said recess, and means for retaining said material in position in said recess.

6. In a device of the class described, a flanged sheet metal buck member substantially U-shaped in cross-section, a flange which forms one side of the U being integrally united to the body of the member and being recessed and substantially U-shaped in cross-section, the walls of said recess which form the sides of the U being in substantial parallelism with the body of the buck member, at least one of the walls of said recess being under-cut, and perforable material disposed in said recess, said undercut wall aiding in retaining said material in position.

7. In combination, a sheet metal frame member bent to form recessed flanges on either side thereof, each of said flanges being substantially U-shaped in cross section, the sides of the U being substantially in parallelism with the body of said member and

the side of the U adjacent said body being spaced therefrom to form a groove, the said grooves of the respective flanges opening in opposite directions, and an anchoring device having parts adapted to enter said grooves.

8. In a door frame, a flanged sheet metal buck, said flanges being recessed and said recesses opening laterally with respect to the general plane of the door frame, perforable material disposed in said recesses, molding and jamb sections, and means for securing some of said sections to said perforable material.

9. In a door frame, a sheet metal buck comprising upright and horizontal portions and an anchoring device having a slidable connection with one of said portions and adapted for movement longitudinally of said portion along a portion of the length thereof, said device further having wall engaging parts adapted for insertion between successive courses of brick in a wall.

10. In a sheet metal frame for doors and like structures, folded sheet metal buck sections angularly disposed with respect to each other, said sections having grooves adjacent the sides thereof, and separate clips having portions adapted to enter said grooves, said clips holding said sections together against separate lateral displacement out of the general plane of the door frame.

11. In combination, a sheet metal buck member for a door or like structure, having flanges outwardly projecting therefrom when said member is in its normal position in a wall and a recess between said flanges, the recess opening outwardly with respect to said wall, and perforable material disposed in said recess.

In witness whereof, I subscribe my signature, in the presence of two witnesses.

ALFRED J. ELLIS.

Witnesses:

WALDO M. CHAPIN,

JAMES DE ANTONIO.