

Aug. 6, 1929.

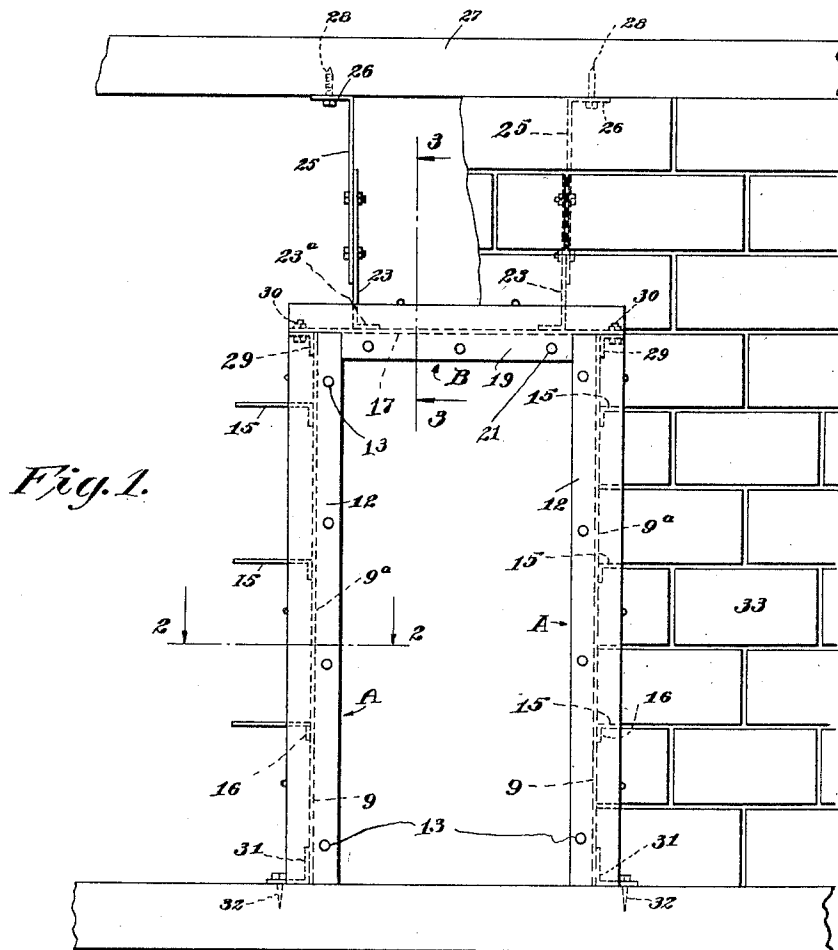
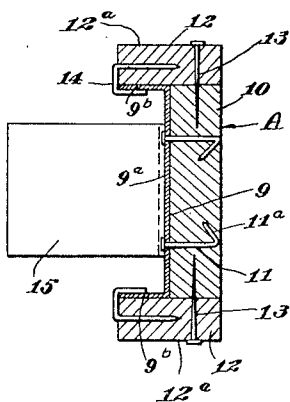
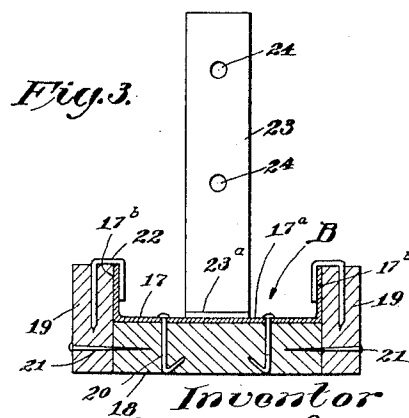
B. LEVY

1,723,281

KNOCKDOWN DOOR FRAME

Filed Aug. 25, 1927

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

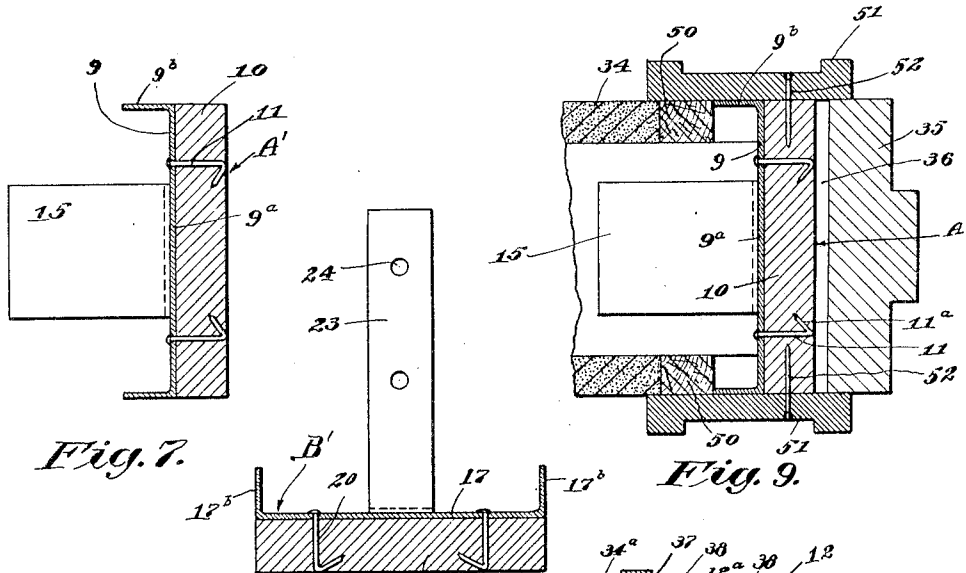


Fig. 7.

Fig. 9.

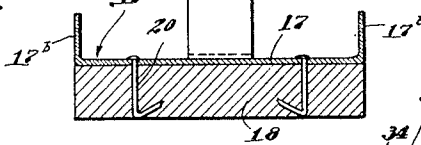


Fig. 8.

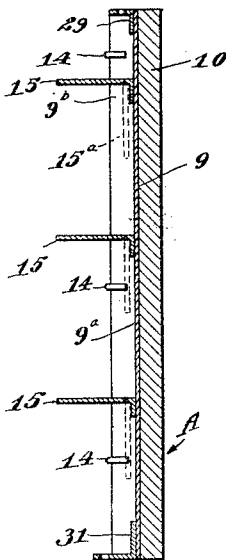


Fig. 5.

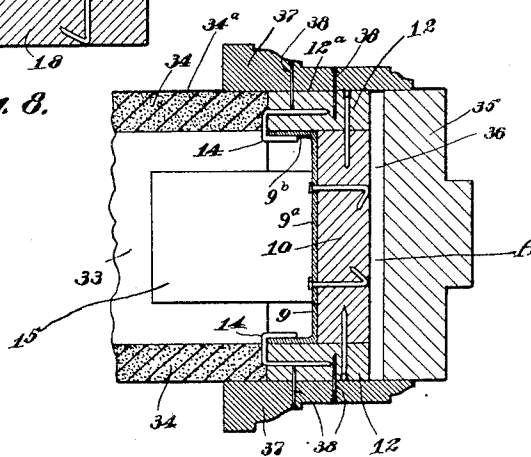


Fig. 4.

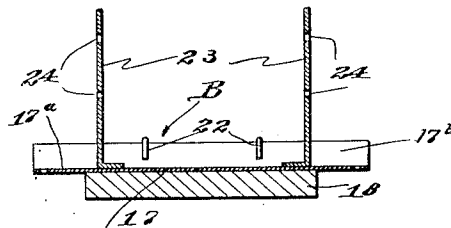


Fig. 6.

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UNITED STATES PATENT OFFICE.

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KNOCKDOWN DOOR FRAME.

Application filed August 25, 1927. Serial No. 215,464.

This invention relates to improvements in the construction of supporting frames for doorways or windows, or the like, an object of the invention being to provide a knock-down door frame comprising separate units or sections adapted to be readily and quickly assembled and so constructed as to enable the casing or trim, and the jamb or wood framing of the doorway to be more readily applied and secured in place.

A further object is to provide an improved metal door frame comprising separate members or bucks which are capable of being relatively cheaply manufactured in standard units and shipped in knock-down condition, and in which the frame units may be readily and easily assembled with a minimum of labor, each unit providing a rigid channel truss having a nailing strip permanently secured thereto and so constructed as to permit the door casing or trim to be nailed in position without requiring the pre-location of nailing points.

Other objects of this invention will appear in the following description and appended claims, reference being had to the accompanying drawings forming a part of this specification wherein like reference characters designate corresponding parts in the several views.

Fig. 1 is a fragmentary front elevation, illustrating the door frame units of this invention assembled in position in the wall of a building.

Fig. 2 is a section of one of the upright frame members taken substantially on line 2-2 of Fig. 1.

Fig. 3 is a section of the header member taken substantially on line 3-3 of Fig. 1.

Fig. 4 is a fragmentary horizontal section similar to Fig. 2 but illustrating the completed wall.

Fig. 5 is a detail view in section, of one of the upright door frame units.

Fig. 6 is a detail view in section, of the header unit.

Fig. 7 is a horizontal section, similar to Fig. 2, but illustrating a somewhat modified form of the invention.

Fig. 8 is a vertical section, similar to Fig. 3, but illustrating the modified form of the invention.

Fig. 9 is a horizontal section illustrating the completed wall where the construction of Fig. 7 is used.

Before explaining in detail the present invention, and the method or mode of operation embodied therein, it is to be understood that the invention is not limited in its application to the details of construction and arrangement of parts illustrated in the accompanying drawings, since the invention is capable of other embodiments and of being practised or carried out in various ways. Also it is to be understood that the phraseology or terminology employed herein is for the purpose of description and not of limitation, and it is not intended to limit the invention beyond the terms of the several claims hereto appended or the requirements of the prior art.

Referring to the drawings, it will be seen that the improved knock-down door or window frame of the present invention comprises in its preferred form, herein shown and described, three separate units or bucks which may be readily assembled by the workmen on the job to provide the assembled supporting frame for the doorway. Each frame member is constructed as a unit, so that in their manufacture the door frame units may be made up in standard sizes in accordance with the requirements of the different jobs, shipped in knock-down condition, and at the job it is merely necessary for the carpenters or workmen to set up the units, which can be accomplished in a relatively short time. Each frame member preferably comprises a channel truss member provided with an exterior nailing surface permanently fastened thereto, and in the preferred form of the invention illustrated in Figs. 1 to 4 inclusive, the wood surface embraces the exterior surface of the channel on all three sides thereby providing an exterior nailing surface embracing the channel. This improved construction, in which each frame member comprises a structural channel having an exterior wood nailing strip permanently attached to the channel, provides a nailing surface from top to bottom, which enables the wood door casing or framing strips, as well as the jamb or trim, to be applied and nailed in place at any point along the channel without any pre-location of the nailing points.

Each door frame, in accordance with the present preferred construction, comprises when assembled, as shown in Fig. 1, a pair of upright frame members A and an upper

horizontal frame member herein termed the header member B, (see Figures 5 and 6). The frame member or unit A comprises a structural steel channel 9 having a central web 9^a and parallel flanges 9^b at right angles thereto. Secured to the back or exterior surface of the central web 9^a of the channel is a wood nailing strip 10, this strip having substantially the same width as the web 9^a and extending preferably the full length thereof as shown in Figs. 1 and 5. The wood strip 10 is permanently fixed to the channel by means of a series of nails 11 which pass through holes in the web 9^a and are clinched, as shown at 11^a, in the wood of the strip 10. Mounted against the outer face of each flange 9^b of the channel is a wood strip 12, this strip overlapping the edge of the wood strip 10, as shown in Fig. 2, and having a width corresponding to the width of the flange 9^b plus the thickness of the wood strip 10. The strips 12 are secured to the backing strip 10 by means of nails 13, and are also secured to the flanges 9^b of the channel by means of nails 14 which are driven into the strips and clinched over the flanges.

Each of the upright frame members or bucks is also provided with laterally projecting anchors adapted to project into the wall between the tile or terra cotta blocks, which construction assists in supporting the wall and providing an anchoring means within the wall for the assembled door frame. In the present instance, each wall anchor comprises a flat metal plate 15. The inner end of the anchor plate is inturned, as shown at 16 in Figs. 1 and 4, and spot welded to the inner surface of the central web of the channel. The channel 9 may be provided with any suitable number of anchors 15, and these are preferably formed from sheet steel of such gage or thickness as to permit the projecting portion of the anchor to be bent downwardly within the channel, as shown in dotted lines at 15^a in Fig. 5, thereby facilitating the nesting of the frame units for the purposes of shipment.

As illustrated in Figs. 1, 3 and 6, one of the three frame units which are adapted to be assembled to form the completed structure, comprises a header member B. This member, as in the case of the upright frame members A, comprises a horizontal structural steel channel 17 having upwardly extending flanges 17^b and a relatively broad central web 17^a. In like manner, the channel is embraced by means of wood nailing strips 18 and 19, the strip 18 being secured by means of clinched nails 20 to the outer face of the web 17^a, and the strips 19 being secured in position against the outer faces of the flanges 17^b by means of nails 21 extending into the wood strip 18 and clinched nails 22. The header member also preferably comprises a plurality of ceiling anchors. Each of these anchors, as illustrated in Figs. 1, 3 and 6, comprise a metal plate 23 having its lower end 23^a bent at right angles and spot welded to the inner face of the web 17^a. The vertical portion of the anchor member 23 is of suitable length and may be provided with holes or apertures 24, and secured to the member 23 is an adjustable member 25 comprising a plate having a series of holes or slots permitting it to be adjustably connected to the member 23 and having an inturned upper end 26 which may be fastened to the flooring member 27 of the ceiling by means of a screw 28 or, if desired, it may be wedged in position. It will be understood that the ceiling anchor, therefore, preferably comprises a pair of members 23 and 25 which may be adjustably connected together in overlapping relation so as to accommodate variations in the distance between the header member B and the flooring thereabove.

As illustrated in Fig. 6, it will be noted that the wood strip 18 for the header member is of less length than the channel 17 so as to fit between the wood nailing strips 10 on the upright channels 9. The header member and the upright frame members are so constructed that the channel 17 will overlie the upper ends of the channels 9, as shown in Fig. 1, while the wood strip 18 will provide a relatively close fit between the nailing strips 10 on the upright channels. Each of the latter are provided at their upper ends with angle iron brackets 29, through the medium of which the header may be rigidly secured to the frame members A by means of bolts and nuts 30. Secured to the lower end of each channel member 9 is a knee bracket 31 by means of which the channel may be secured to the floor through the medium of nails or screws 32.

After the frame units or bucks have been assembled, the wall which may be composed of tile or terra cotta blocks, is then completed. As shown in Fig. 4, the tile blocks 33 may be laid so as to abut against the inner edges of the flanges 9^b and the anchor members 15 are bent up so as to project between a pair of superimposed tile blocks. The plaster 34 is applied so that the plaster line 34^a extends flush with the outer face 12^a of the nailing strips 12. The wooden door jamb or framing 35 is then placed in position and a wedging space 36 is usually provided to permit the proper adjustment of the jamb so that the door can be hung properly. The wooden framing 35 is readily secured in position by the workmen by nailing it to the nailing strips 10 and 12. No pre-location of the nailing points is necessary, since the nailing surface 10 extends the full length of the channel and on the ex-

terior face thereof. Thereafter the wood casing or trim 37 is applied, and it will be seen that the nailing surfaces 10 and 12 enable the trim or casing to be nailed to the frame member A, as indicated at 38, at various points along the length of the frame member and without any pre-location of the nailing points.

From the foregoing it will be observed that this improved construction enables the metal framework for the door to be readily and quickly assembled, and also enables the wood door jamb and casing portions to be quickly applied in position without requiring any special construction on the job or any pre-location of nailing points.

In a modified construction illustrated in Figs. 7 to 9 inclusive, the upright frame member A' also comprises a steel channel 9 as in the case of the frame member A, and anchors 15, this construction being substantially the same. In this instance, the channel is provided with a single wood nailing strip 10 secured to the outer face of the central web 9^a of the channel by means of clinched nails 11. The wood nailing strips 12 are omitted in this instance, otherwise the construction is identical with the frame member A, above described. The construction of the header member B', illustrated in Fig. 8, is substantially the same as the header B, above described, with the exception that the side nailing strips 19 of the latter are omitted. Fig. 9 illustrates the completed wall construction. In this instance the tile blocks may be laid so as to extend within the channel 9 against the central web 9^a thereof, the anchors 15 being disposed between superimposed tile blocks. Interposed between the plaster 34 and the inner edges of the flanges 9^b of the channel is a vertically extending wood strip 50, the plaster line extending flush with the outer faces of the wood strips 50 and the flanges 9^b. The door jamb 35 is nailed at any desired point along its length to the nailing strip 10, and the wood trim or casing 51 is nailed to the strip 10 as indicated at 52 at any desired point along its length. The trimming also may be nailed to the interposed wood strip 50.

What I claim is:

1. A knockdown door frame comprising three ready built frame members constructed to permit ready assembly to form a standard door frame, and including in combination a pair of upright door jamb bucks and a header buck each comprising as a pre-formed shipping unit a channel bar and a

wood nailing strip fixed to the outer face of the central web of each channel bar and being exposed to provide nailing surfaces at three sides of the channel bars at various points in the major portion of the length thereof, and means presented by the bucks for predetermining their positions during assembly of the door frame.

2. A knockdown door frame comprising a plurality of ready built frame members constructed to permit ready assembly to form a standard door frame, and including an upright door jamb buck and a header buck each comprising as a pre-formed shipping unit a channel bar and a wood nailing portion fixed to the outer face of the central web of the channel and being exposed to provide nailing surfaces at three sides of the channel at various points in the length thereof for the direct attachment of door jamb and trim parts, said bucks having the adjacent ends of the wood nailing portions constructed to abut in overlapping relation thereby to predetermine the location of the bucks during assembly of the door frame, and means for connecting the adjacent ends of the channel members together.

3. A knockdown door frame comprising three ready built door bucks constructed to permit shipment in knockdown form and ready assembly to form the uprights and header of a standard door frame, each buck comprising as a unit a structural channel bar and a wood nailing portion fixed to the outer face thereof to prevent separation from the channel bar during shipment, the wood nailing portions being exposed to provide nailing surfaces at three sides of the channels, the wood nailing portion carried by the header buck being shorter than the channel bar to form abutments at opposite ends for the upright bucks to predetermine their location in assembling the door frame.

4. A knockdown door frame comprising a plurality of ready built bucks constructed to permit assembly to form a standard door frame, each comprising as a pre-formed shipping unit a channel bar having a wood nailing strip permanently fixed to the outer face of the central web of the channel and being exposed to provide nailing surfaces at the channel, and bendable metallic wall anchors secured to the inner face of the channel bar, said anchors adapted to be normally housed within the channel during shipment and adapted to be bent outwardly into anchoring position.

In testimony whereof I affix my signature.
BARNETT LEVY.