July 16, 1957 S. SKLAR 2,799,370

KNOCK-DOWN DOOR BUCK CONSTRUCTION

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Fig. 1.

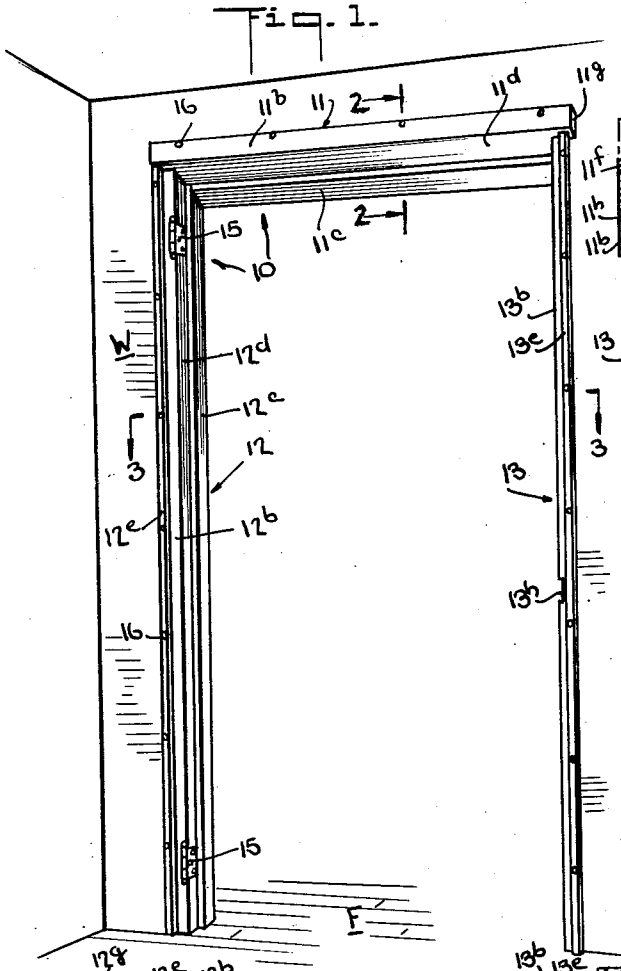


Fig. 2.

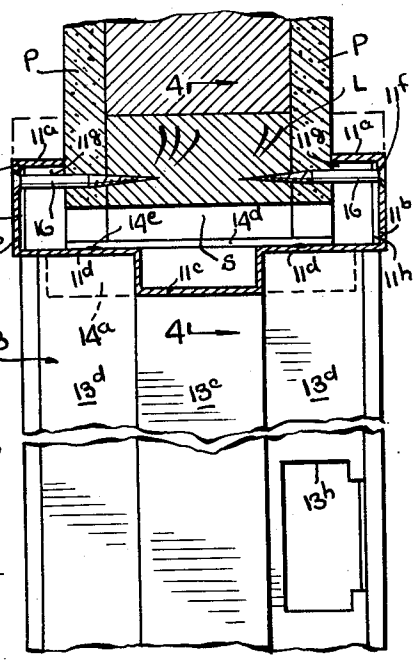


Fig. 3.

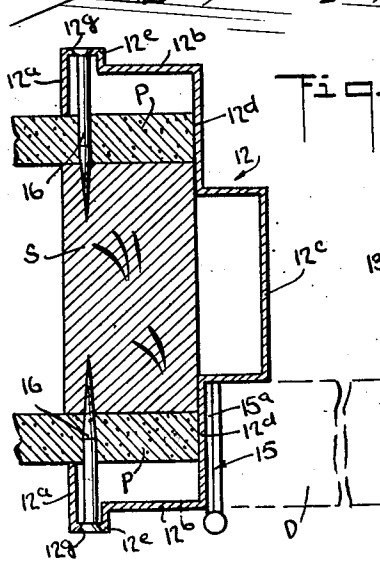
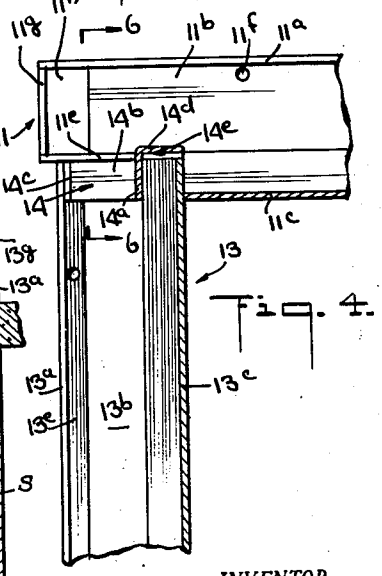


Fig. 4.



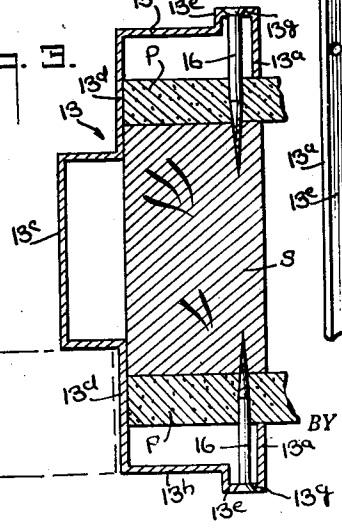


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Fig. 5.

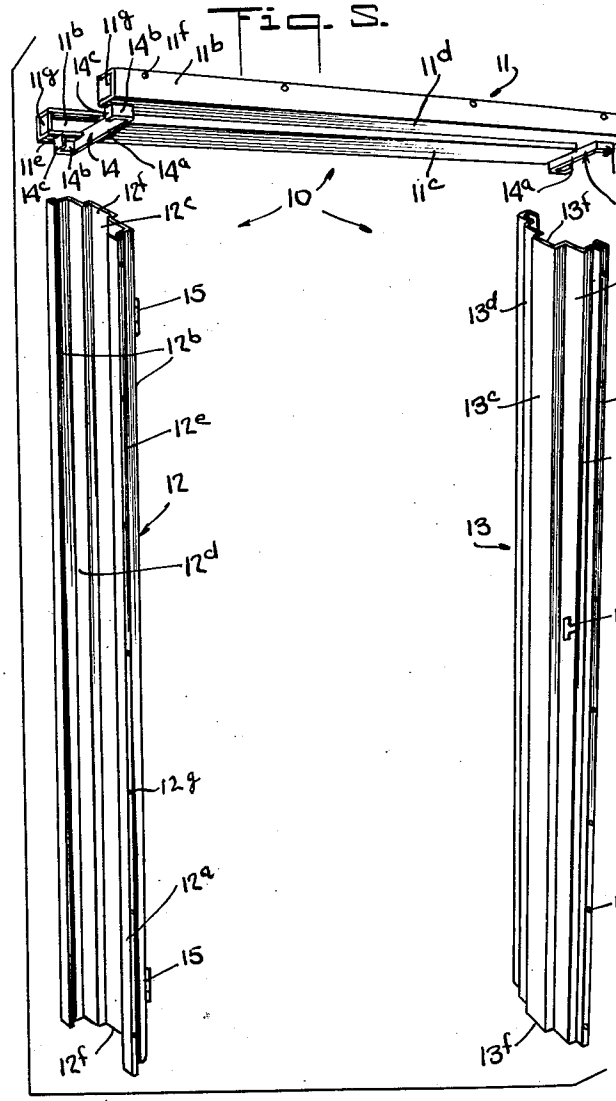


Fig. 7.

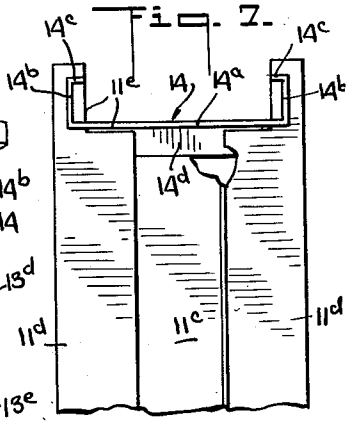


Fig. 8.

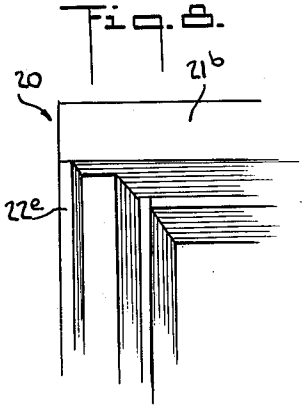


Fig. 9.

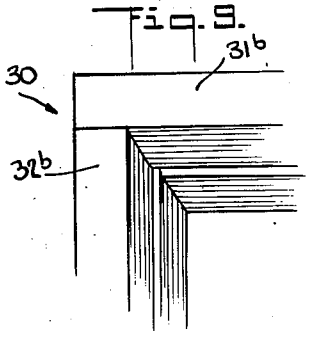
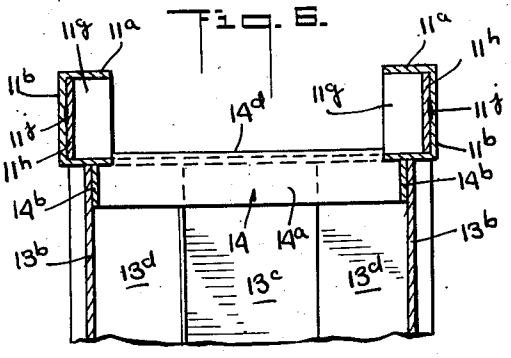


Fig. 6.



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2,799,370

KNOCK-DOWN DOOR BUCK CONSTRUCTION

Samuel Sklar, Corona, N. Y.

Application July 30, 1956, Serial No. 600,816

4 Claims. (Cl. 189—46)

This invention relates to door frames, bucks and the like and more particularly is directed to preformed knock-down door frames or bucks as used in fireproof and fire resistant portal constructions.

Among the objects of the invention is to generally improve door buck constructions of the character described which shall be capable of conforming to requirements of the fire underwriters for fireproof and fire resistant portal construction, which shall comprise three preformed parts which require relatively unskilled labor for assembly and installation, which preformed parts shall require a minimum of shipping space and be adaptable for use in hanging the door in any of four desired positions, namely, for the door to open inwardly or outwardly and for the door to be hinged to open from the right or left, which door buck shall permit installation on the framed doorway after the plaster or plasterboard is in place and finished, which shall be provided with a flange for contacting the plaster or plasterboard as a finished joint therewith, which shall be rugged in construction and practical to a high degree in use.

Other objects of the invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists of features of construction, combination of elements and arrangement of parts which will be exemplified in the construction hereinafter disclosed, the scope of the application of which will be indicated in the claims following.

In the accompanying drawing in which various illustrative embodiments of the invention are shown:

Fig. 1 is a perspective view of a portion of a wall having a doorway therein in which is installed a three-piece buck embodying the invention.

Fig. 2 is an enlarged sectional view taken on line 2—2 in Fig. 1 showing details of the head piece fitted over the plaster finish on both sides of the wall and secured to the horizontal lintel of the doorway, the head piece being shown in broken lines in a raised position to permit assembly with the jambs.

Fig. 3 is an enlarged sectional view taken on line 3—3 in Fig. 1 showing the jambs fitted over the plaster finish on both sides of the wall and secured to the vertical studs of the doorway.

Fig. 4 is a vertical sectional view taken on line 4—4 in Fig. 2 showing details of the interfitting connection between the head piece and jamb.

Fig. 5 is an exploded view in perspective of the head piece and jambs of the buck embodying the invention shown installed in Fig. 1.

Fig. 6 is a sectional view taken on line 6—6 in Fig. 4 showing the interior of a jamb and head piece and details of the interfitting connection.

Fig. 7 is a bottom plan view of an end of the head piece showing the male component of the jamb interfitting connection, and

Figs. 8 and 9 are perspective views of corners between the head pieces and one of the jambs showing two modified designs embodying the invention.

Referring in detail to the drawing, **10** denotes a knock-down three-piece door buck or frame constructed to embody the invention seen in Figs. 1 and 5 to include a head piece **11** for extending horizontally across the top of the doorway and interfitting on one end with a vertically extending hinge-post jamb **12** and on the opposite end with a bolt socket carrying jamb **13**.

Head piece **11**, as shown in Figs. 2, 5 and 6, may be formed of sheet metal as a channel-shaped member having opposite side walls **11***b* each formed with an inwardly bent longitudinally extending flange **11***a* forming a top finished ledge for the installed buck **10**. The bottom of head piece **11** is formed with a centrally extending depressed portion U-shaped in cross section forming a horizontal door stop portion **11***c* which divides the bottom into two equal horizontal door framing portions **11***d*. In order to serve the intended purpose, head piece **11** has the bottom thereof formed with opposite end cut-outs **11***e* centrally aligned with respect to door stop portion **11***c*, the latter terminating a spaced distance therefrom, as is clear from Figs. 4 and 5. A suitable interfitting connection component may be provided to extend downwardly from the bottom of head piece **11** at opposite ends thereof in the region of cut-outs **11***e* for joining with vertically extending jambs **12** and **13**.

As is clear from Figs. 6 and 7, such interfitting connection components may each comprise a sleeve-like flange **14** which may be substantially rectangular in shape formed with a transverse section **14***a* extending down from the transverse edge of cut-out **11***e* and short longitudinal side sections **14***b* extending from the opposite ends of section **14***a*, each section **14***b* having an inturned flange **14***c*. Sleeve-like flanges **14** may be attached in position in any suitable manner, such as, by a horizontal ledge **14***d* integrally formed to extend at right angles to transverse section **14***a* which may be spot welded as at **14***e* to the interior surface of door framing portions **11***d*.

Closure pieces **11***g* are provided at the four corners of head piece **11** closing the channel formed by flanges **11***a*, side walls **11***b* and door framing portions **11***d*. As shown in Fig. 6, each closure piece **11***g* may be L-shaped having an anchoring portion **11***h* extending in abutment to side wall **11***b* and being welded thereto at **11***j*.

Jambs **12** and **13** are likewise formed of sheet metal as channel-shaped members which may be identical in cross section having opposite side walls **12***b* and **13***b* extending at right angles to the jamb portions thereof, the latter having centrally extending door stop portions **12***c* and **13***c* projecting therefrom dividing the jamb portions into two equal vertical door framing portions **12***d* and **13***d*, respectively, which align with horizontal framing portions **11***d* of head piece **11** when in assembly as shown in Figs. 1 and 2. The edges of side walls **12***b* and **13***b* opposite framing portions **12***d* and **13***d* have inwardly bent flanges **12***a* and **13***a*, respectively, which, if desired, may extend from a raised border **12***e* and **13***e* forming a decorative molding for the vertical door trim.

Jambs **12** and **13** have open opposite ends **12***f* and **13***f*, respectively, for selectively slipping over sleeve-like flanges **14** to form said interfitting connection with the opposite ends of head piece **11**.

The opposite ends **12***f* and **13***f* of jambs **12** and **13**, respectively, are squared off, that is, have edges extending at right angles with respect to the longitudinal axes of the jambs for standing flat on flooring F and also for fitting either sleeve-like flanges **14** permitting each jamb **12** and **13** to be assembled with head piece **11** in any of four selected positions. Thus, by providing hinge-post jamb **12** with a pair of hinges **15** each suitably mounted as by welding hinge member **15***a* thereof to but one of the vertical door framing portions **12***d* at preferably equal distances from each opposite jamb end **12***f* and by also

providing a suitable cut-out opening **13***h* for a bolt socket plate in but one of the vertical door framing portions **13***d* of jamb **13** located preferably midway between opposite jamb ends **13***f*, as is clear from Figs. 1 and 5, buck **10** may be installed to hang door D in any of four said possible positions. For example, with jambs **12** and **13** installed as shown in Figs. 1, 2 and 3, door D will mount in a first position to open inwardly from the right being hinged on the left. By installing jambs **12** and **13** upside down with respect to the position illustrated in Fig. 1, door D will mount in a second position being hinged on the same side for swinging outwardly. By interchanging jambs **12** and **13**, door D will mount in a third position to open inwardly but be hinged on the right and by both interchanging and turning jambs **12** and **13** upside down, door D will mount in a fourth position being hinged on the right to open outwardly.

Holes **11***f* may be provided and suitably spaced apart along the upper edge of head piece side walls **11***b* to receive fastening screws **16** and similar holes **12***g* and **13***g* suitably spaced along raised borders **12***e* and **13***e* are provided for jambs **12** and **13**, respectively. Holes **11***f*, **12***g* and **13***g* may be formed to countersink the conical heads of fastening screws **16**, as is clear from Figs. 2 and 3.

The utility of the invention will now be apparent. A doorway is framed in a wall W with vertical studs S and lintel L in the well understood manner to predetermined dimensions corresponding to the size of buck **10** to be used. Wall W may then be finished on both sides with plaster or plasterboard P extending substantially to the edge of the framed doorway, the over-all thickness of the wall W including the finished plaster P on opposite sides thereof also being predetermined to permit clearance of inturned flanges **11***a* of head piece **11** and inwardly bent flanges **12***a* and **13***a* of jambs **12** and **13**, respectively, as is clear from Figs. 2 and 3.

Buck **10**, delivered on the job in kocked-down condition, is then simultaneously installed and assembled with a minimum of labor and skill by first holding head piece **11** in position up against lintel L, as indicated in broken lines in Fig. 3. Jambs **12** and **13** are then vertically positioned with the interior sides of door framing portions **12***d* and **13***d* against studs S and in proper alignment with sleeve-like flanges **14**, the length of jambs **12** and **13** allowing the top ends thereof to just clear the bottom edges of flanges **14** when jambs **12** and **13** rest on the flooring F. The interfitting of the parts is then accomplished by lowering head piece **11** into the full line position shown in Fig. 2, flanges **14** sliding into engagement with jamb open ends **12***f* and **13***f*. Buck **10** in assembly is now secured to studs S and lintel L by means of suitable wood screws **16** inserted through holes **11***f*, **12***g* and **13***g* to a countersunk position for a smooth finish.

Whereas any suitable dimensions may be used in practicing the invention, satisfactory results are obtained by utilizing a head piece **11** having side walls **11***b* of approximately one and one-half inches in height and flanges **14** of approximately one-half inch width.

As is clear from Figs. 4, 6 and 7, when sleeve-like flanges **14** are telescopingly engaged with said jamb ends **12***f* and **13***f*, transverse sections **14***a*, which are sized to extend between opposite side walls **12***b* and **13***b*, abut vertical framing portions **12***d* and **13***d*, while the short longitudinal side sections **14***b* abut side walls **12***b* and **13***b* with inturned flanges **14***c* abutting inwardly bent flanges **12***a* and **13***a*, flange **14** forming a neat sliding fit for easy assembly and for retaining jambs **12** and **13** in proper perpendicular relation with respect to head piece **11** against lateral displacement.

Tightening of screws **16** will bring the inner edges of inturned flanges **11***a* of head piece **11** and of inwardly bent flanges **12***a* and **13***a* of jambs **12** and **13**, respectively, into contact with the finished wall surface closing the clearance space therebetween and forming a neat butt joint ready for painting.

Instead of providing hinges **15** attached to hinge-post jamb **12**, one of the door framing portions **12***d* may have spaced apart cut-outs (not shown) positioned therealong to receive hinges after buck **10** is installed in the doorway. Such hinges may then be secured directly to the underlying stud S as is well known in the art.

Where desired, a saddle (not shown) may be installed to extend between the jamb ends **12***f* and **13***f* resting on flooring F in the well known manner.

Buck **10** may also be installed prior to the completion and installation of flooring F in which case slightly longer jambs **12** and **13** are used and installed to rest on the underflooring. Buck **10** may be made in several standardized sizes to satisfy various building requirements.

Modifications in the form of buck **10** may be accomplished within the scope of the invention to serve decorative requirements whereby the head piece and jambs form flush corners instead of the overhanging bold lintel corners of buck **10** shown in Fig. 1. For example, Fig. 8 shows a modified buck **20** formed with head piece side wall **21***b* and jamb raised border **22***e* in flush edge and surface relation while Fig. 9 shows another modified buck **30** in which the raised border of the jamb is omitted and jamb side wall **32***b* forms a flush edge and surface joint with head piece side wall **31***b*. Bucks **20** and **30** are in all other respects similar to buck **10**.

It is thus seen that there is provided a knockdown door buck construction of the character described in which the several objects of this invention are achieved and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention and as various changes might be made in the embodiments above set forth, it is to be understood that all matters herein set forth or shown in the accompanying drawings are to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A three-piece preformed door buck of the character described comprising a channel-shaped head piece including a bottom formed with a central longitudinally extending depression forming a horizontal door stop dividing the bottom into symmetrical door framing portions, opposite ends of the head piece having substantially rectangular cut-outs aligned with each other and centralized with respect to said depression, a pair of transverse flanges extending from the bottom at right angles to the plane thereof, hinge-post and bolt socket carrying channel-shaped jambs of identical cross-sectional configuration having opposite open ends squared off for selectively standing flat on a supporting flooring surface and telescopingly engaging said flanges to permit assembly for supporting a door in any of four positions, said head piece depression extending between said transverse flanges and terminating on each end thereof a spaced distance from one of the flanges to permit extension of said open ends of the jamb members over the flanges in telescoping relation to contact the door framing portions of the bottom.

2. The door buck defined in claim 1 in which said transverse flanges are each formed with a horizontal ledge overlying and secured to the head piece bottom.

3. A three-piece metal preformed door buck construction for installing in a framed out doorway of a building wall finished on both sides thereof with wall forming material, comprising a channel-shaped head piece having opposite side walls upturned from a bottom portion thereof for extending over an edge of said finished wall bordering said doorway, said bottom portion having a central longitudinally extending depression forming a horizontal door stop dividing the bottom into symmetrical door framing portions, a pair of channel-shaped jambs having jamb portions thereof formed with projecting door stop portions dividing the jambs into symmetrical door framing portions and opposite side walls for extending

over an edge of said finished wall bordering said doorway, flanges inwardly bent toward each other extending from said head piece and jamb opposite side walls for contacting opposite finished sides of said building wall, said head piece having a pair of transverse flanges extending at right angles to the plane of the channel positioned adjacent opposite ends thereof, said jambs being identical in cross section and having opposite open ends squared off for selectively standing flat on a supporting flooring surface and telescopingly engaging said transverse flanges to permit assembly for supporting a door in any of four positions, said head piece depression extending between said transverse flanges and terminating on each end thereof a spaced distance from one of the flanges to permit extension of said squared off open ends of the jamb members over said transverse flanges in said telescoping relation to contact the door framing portions of the bottom, and means extending through said head piece and

jamb side walls adjacent said inwardly bent flanges for securing the head piece and jambs to the doorway with said flanges in contact with said wall forming material.

4. The door buck defined in claim 3 in which said transverse flanges are each formed at opposite ends thereof with short longitudinally extending side sections contacting portions of the interior surfaces of the opposite jamb side walls adjacent said squared off ends in forming said telescoping engagement.

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