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 [21] Appl. No. **753,455**
 [22] Filed **Aug. 19, 1968**
 [45] Patented **Mar. 23, 1971**
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[54] **ADJUSTABLE DOORFRAME**
4 Claims, 4 Drawing Figs.

[52] U.S. Cl. **52/212,**
 49/505, 52/217, 52/656

[51] Int. Cl. **E06b 1/22**

[50] Field of Search **52/211,**
 212, 213, 217, 656; 49/505

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ABSTRACT: An adjustable doorframe with concealed adjusting and securing means can be used to finish walls of different thicknesses. The doorframe comprises two elongated portions which are arranged to be transversely telescoping with respect to one another and adjustable by means of a bolt and bolt locking means which prevent separation of the two elongated portions after factory assembly. Two vertical doorframes and a horizontal header connected along beveled ends complete the full doorframe assembly in actual installations.

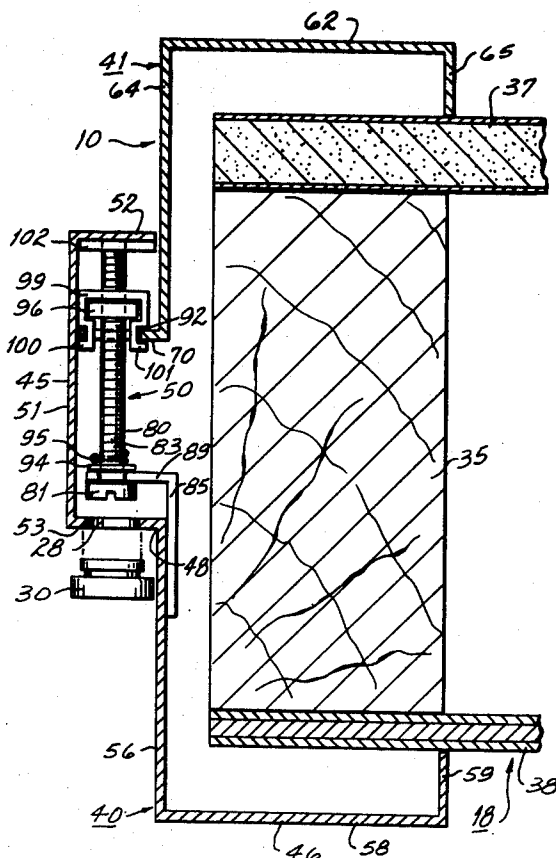


Fig. 1

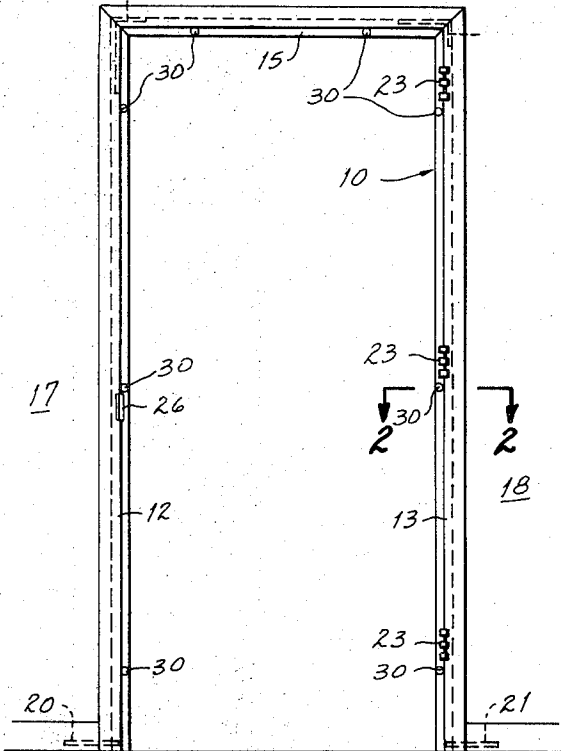


Fig. 2

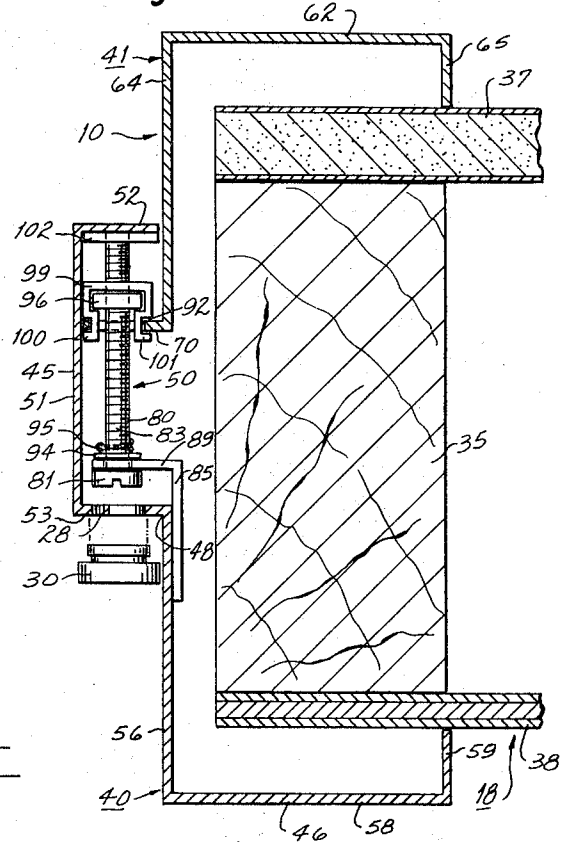


Fig. 3

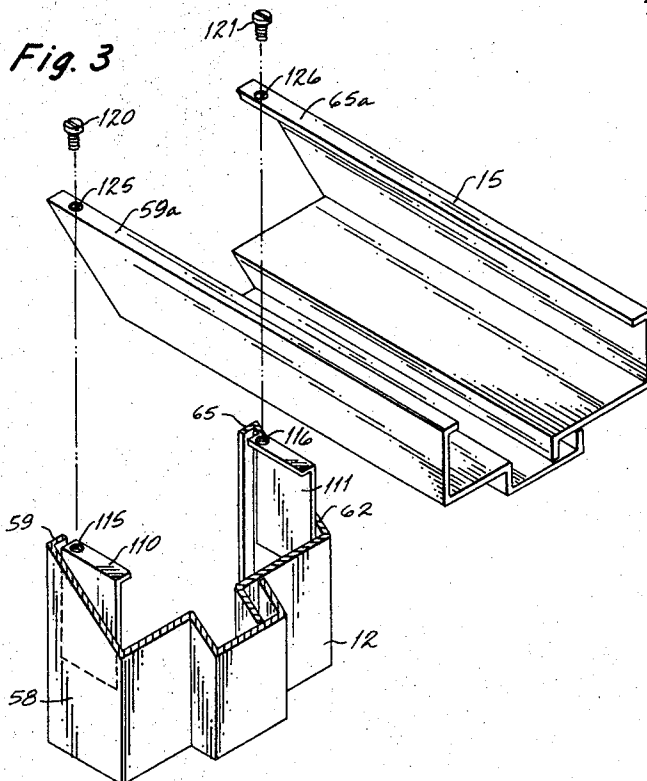
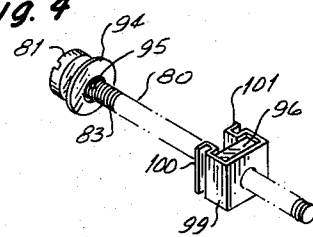


Fig. 4



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ADJUSTABLE DOORFRAME

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention is used in the construction of buildings, both residential and commercial, to enable quick and easy placement of doorframes, irrespective of variations in wall thickness.

2. Description of the Prior Art

Heretofore, the conventional doorframe has been of two general types—wooden and metallic. The wood doorframe is generally installed by a carpenter who cuts and fits the various widths and lengths of lumber on the job. This method is too costly and time consuming for commercial work and is usually found only in residential construction or in custom installations.

In the broader area of commercial buildings, metallic doorframes have almost entirely replaced the wooden doorframes. Fire regulations for new structures often limit the use of wood or combustible materials. In addition, preformed metal door frames are readily available. However, the current preformed metal doorframes are not adjustable and the manufacturer and installer must have a large inventory of sizes and throat dimensions available because the current construction trend is toward walls of varying thicknesses. "Throat dimension" is a term used by door frame artisans to indicate the distance between the outer parallel planes of the doorframe.

The current emphasis on fire proofing and soundproofing of buildings has resulted in a myriad of wall thicknesses. While in the past a rather conventional wall comprised a 4 inch framing member with 1/2-inch wallboard on each side, today there are many thicknesses of wallboard, sound-insulation board and plaster coatings to afford various degrees of fire resistance and soundproofing. An additional problem is apparent in that while the doorframe is of preset dimensions, manufacturing tolerances in the framing members and the thickness of the wall board make a close fit between the doorframe and outer wall almost impossible.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a novel doorframe which is adjustable so that walls of different thicknesses can be easily accommodated.

Another object of the invention is to provide a novel doorframe which has the same appearance as current standard doorframes.

It is a further object of the invention to provide a novel doorframe in which the fastening elements are concealed.

In summary the present invention is directed toward a novel adjustable doorframe which has the same appearance as current standard doorframes but which can accommodate walls of various thicknesses. The adjustable doorframe comprises two parts having an adjustable fastening means connecting the two complementary parts together. The configuration of the two parts is such as to conceal the adjusting means, while yet permitting ready access thereto.

Other objects and advantages will be apparent from a consideration of the specification taken with the accompanying drawing in which like numerals represent like elements and in which:

FIG. 1 is a side elevational view of the doorframe of the present invention;

FIG. 2 is a cross-sectional view of the doorframe of FIG. 1 taken along lines 2-2 thereof;

FIG. 3 is an exploded perspective view of an upper corner of the doorframe; and

FIG. 4 is a detailed view of a portion of the fastening means shown in FIG. 2.

With reference to FIG. 1 there is shown a doorframe, having two spaced upright stiles 12 and 13 connected by a header 15 at their upper ends. As installed, the two upright stiles 12 and 13 and the header 15 enclose the edges of an opening in walls 17 and 18 (shown in dashed lines in FIG. 1). Foot anchors 20

and 21 are connected to the lower inside area of the stiles 12 and 13 respectively and are fastened to the wall construction in a conventional manner.

As shown in this view, the hinges 23 for the support of the door (not shown) are along the right-hand stile 13, while the lock-bolt receptacle 26 is shown on the left-hand stile 12.

Rubber or elastomeric plugs 30 which serve to conceal access holes 28 (shown in FIG. 2) and to act as bumpers for the door are inserted into the holes. The holes serve as access ports to manipulate the adjusting means which permits varying the throat dimension of the stiles and header.

Reference may now be had to FIG. 2 for a more detailed view of the doorframe of the invention and the manner in which it operates. The wall section 18 comprises a framing member 35 to which wall panels 37 and 38 are secured by adhesives, nails or the like. Panels 37 and 38 are here shown to be of different thicknesses to illustrate the versatility of the invention. Wide variations in the thicknesses of these panels can be accommodated.

Doorframe 10 generally comprises first and second elongated portions 40 and 41 respectively which are telescopically moveable transversely with respect to each other and adjustably fixable by means of a number of spaced adjustable fastening means 50. As shown in FIG. 1, there are three such adjustable fastening means in each vertical stile 12 and 13 and two in header 15. Certain irregularities in the walls 17 and 18 are rendered unobjectionable or minimized because the fastening means are individually adjustable.

Elongated portion 40 comprises in cross section a pair of U-shaped sections 45 and 46 integrally joined along a common edge 48. U-shaped section 45 has an elongated base web 51 with spaced parallel flanges 52 and 53, integral therewith, extending equidistantly outwardly therefrom. U-shaped section 46 serves to fix adjustable fastening means 50 in operative position and to conceal it from view. Flange 53 has a hole 28 drilled therein in alignment with adjustable fastening means 50 so that the latter can be manipulated by insertion of a tool such as a screw driver therein.

As previously explained a rubber bumper 30 is inserted in hole 28 to serve as a doorstop.

U-shaped section 46 has a web portion 58 with two spaced parallel flanges 56 and 59 extending therefrom. Flange 56 is integrally connected along a common edge 48 to U-shaped section 45 and extends at a right angle to flange 53. The length of flange 56, as shown, is selected to be about that of the thickness of a conventional door so that when the door is closed its face is flush with and parallel to web portion 58 of U-shaped section 46. Web portion 58 lies in a plane parallel to that of the outer face of wall 18 and is spaced therefrom by flange 59. As can be seen flange 59 is much shorter than flange 56 and abuts the outer face of wall 18.

The second elongated portion 41 comprises a web portion 62 having flanges 64 and 65 integrally connected thereto along spaced edges. Flange 64 extends parallel to the face of framing member 35 and is approximately coplanar with flange 56 of portion 40. The other flange 65 which is approximately coplanar with flange 59 of portion 40 abuts the outer face of panel 37 of wall 18 along its free edge.

A flange 70 is integrally connected to the free edge of flange 64 and lies at a 90° angle with respect thereto in a plane parallel to that of flange 52 of elongated portion 45. Flange 70 and a portion of flange 64 are effectively concealed by web 51 and flange 52 of elongated portion 45 with a slight clearance between the free edge of flange 52 and the face of flange 64.

It is thus seen that the two elongated portions 40 and 41 can be telescoped laterally of each other with a U-shaped section 45 riding over and concealing a portion of flange 64 of elongated portion 41.

Adjustable fastening means 50 is provided to connect the two elongated portions 40 and 41 together and provide for telescoping movement of the two parts. The adjustable fastening means 50 comprises a bolt 80 having an integral slotted head 81 of greater diameter than threaded shaft 83. Shaft 83

may be threaded throughout its length. A bracket member 85 is welded or otherwise fastened to the interior portion of flange 56 and extends with one flange 89 parallel to and spaced from flange 53. Flange 89 of bracket 85 is drilled to receive bolt 80 with its slotted head facing opening 28 and its shaft 83 extending through an opening 92 cut through flange 70 of elongated portion 41. A washer 94 is slipped over bolt 80 and held in place against the face of flange 81 opposite head 81 by a locking pin 95. A nut 96 is threaded on shaft 83 and a bolt-locking spring clip 99 surrounds nut 96. Spring clip 99 is tightly held in opening 92 of flange 70 by the engagement therewith of U-shaped wing members 100 and 101. To further secure the bolt 80 in proper alignment, a support plate 102 is secured to the interior face of flange 52 and is drilled to receive the remote end of bolt 80.

Reference may be had to FIG. 3 which shows the manner of aligning and securing a stile 12 with the header 15. To simplify this illustration, the adjustable fastening means has not been shown. It will be seen that stile 12 and header 15 are mitered, preferably, with complimentary 45° angles. Bracket members 110 and 111 are welded to the inside of flanges 58 and 62 of stile 12 and extend upwardly to form a plane with the upper edge of flanges 59 and 65. Holes 115 and 116 are tapped or drilled into brackets 110 and 111 to receive screws 120 and 121 inserted through holes 125 and 126 of flanges 59a and 65a of header 15.

Prior to shipment, the first and second elongated portions 40 and 41 of stiles 12 and 13 and header 15 are assembled with adjustable fastening means holding them together. Header 15 is put in place at the top of the opening in walls 17 and 18 and stiles 12 and 13 are put in place at each side of the wall opening. Foot anchors 20 and 21 may be fixed in place through removal of a bottom molding. Adjustable fastening means 50 are then tightened to conform the stiles and header to the opening. After a tight fit, plugs 30 are inserted in each hole. Screws 120 and 121 are put in place to hold the header and stiles together.

Obviously the height of stiles 12 and 13 can be cut to proper length on the job site.

In summary the present invention is directed to a novel doorframe which can be partially preassembled and then adjustably fixed on the job to conform to wall irregularities and thicknesses. The telescoping elongated portions are held in place by an adjustable fastening means which is concealed by the configuration of at least one of the portions.

While one embodiment has been herein shown and described other changes and modifications will occur to those skilled in the art and it is intended to cover such changes and modifications within the scope of the appended claims.

I claim:

1. A nonseparable doorframe, adjustable through a wide range of throat dimensions for frictional engagement with the outer facings of an untrimmed wall opening, comprising first and second elongated portions arranged to be transversely telescoping along their lengths with respect to each other and an adjustable fastening means connected to said first and second portions, said fastening means being structured so as to prevent total separation of said two elongated portions;

said first elongated portion comprising a pair of U-shaped sections integrally joined along a common edge;

a first one of said U-shaped sections having a flange extending toward and adapted to frictionally engage one of said facings;

the other one of said U-shaped sections having a base web and a pair of parallel flanges, each of said parallel flanges extending outwardly from said base web toward said second elongated portion;

a first one of said flanges forming a stop surface for receiving the forward sidewall of a door and having an access aperture therethrough;

the other one of said flanges terminating in close proximity to a part of said second elongated portion;

an apertured support plate secured to an inner face of said other of said pair of flanges and being adapted to support a rotatable remote end of an elongated threaded bolt;

a bracket member secured to said first elongated portion; said bracket member having a flange extending parallel to and intermediate said pair of parallel flanges and having an aperture therein to receive and support an adjustable fastening means;

said second elongated portion having at least one flange extending parallel to said flange of said bracket and lying between said bracket flange and said second flange;

said second elongated portion further having a second flange extending toward and adapt to frictionally engage the other facing of said untrimmed wall;

said one flange of said second elongated portion having internally threaded means adapted to surroundingly grasp an elongated threaded bolt;

said access aperture of said first flange, said aperture of said bracket flange, said internally threaded means and said aperture of said support plate all being in alignment;

an elongated threaded bolt extending through said bracket flange in nonthreaded engagement therewith and being connected to said threaded means of said second elongated portion to adjustably secure said two elongated portions in telescoping relationship with respect to each other;

said elongated bolt further entering said apertured support plate to be supported thereby;

locking means connected to said bolt and cooperating with said bracket flange to prevent axial movement of and removal of said bolt from said bracket flange;

said bracket flange and said apertured support plate being adapted to permit rotational adjustment of said fastening means while acting as stop means to prevent separation of said second elongated portion from said bolt; and

said first one of U-shaped sections being positioned to overlap and conceal said bracket member, said fastening means, said support plate and part of said second elongated member.

2. A nonseparable doorframe as recited in claim 1 in which an elastomeric bumper means is inserted into said access aperture of said first flange.

3. A nonseparable doorframe as recited in claim 1 in which said doorframe comprises a plurality of said adjustable fastening means spaced at intervals along the length of said elongated portions.

4. A nonseparable doorframe as recited in claim 1 in which at least one end of said elongated portions is beveled to receive a complementary bevel on an adjoining end of abutting elongated portions.

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