March 24, 1970 W. O. JOHNSON 3,501,866

REPLACEMENT DOOR AND FRAME UNIT

Filed Oct. 18, 1968 2 Sheets-Sheet 1

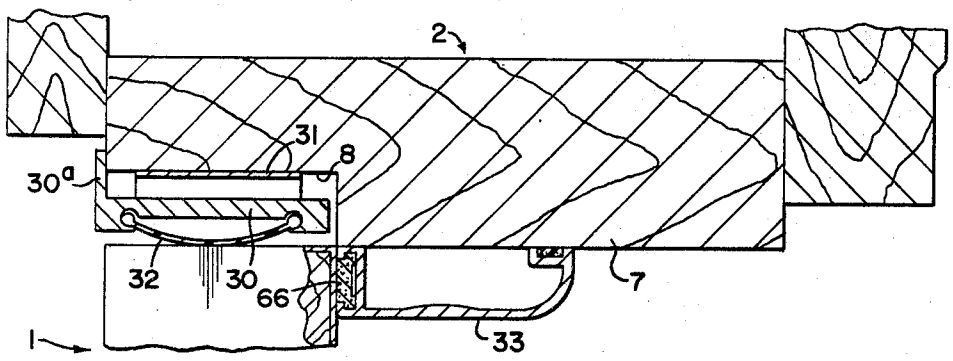
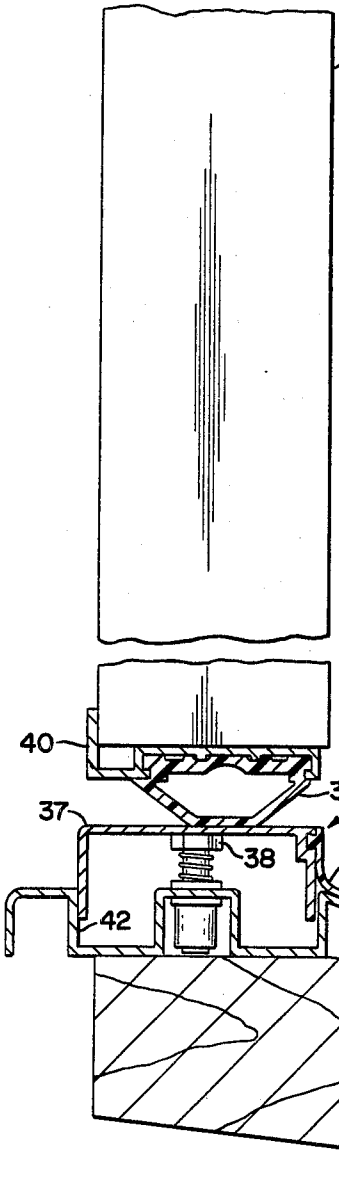


FIG. 1



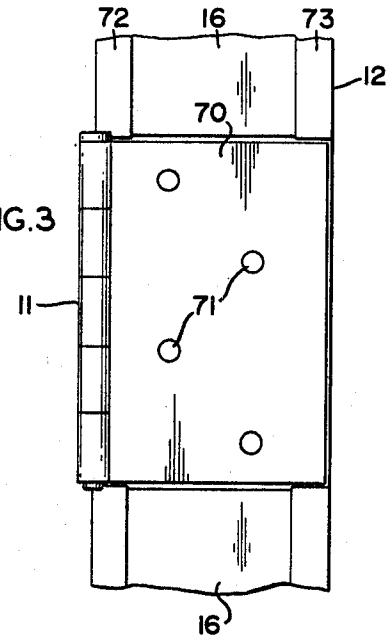


FIG. 3

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REPLACEMENT DOOR AND FRAME UNIT

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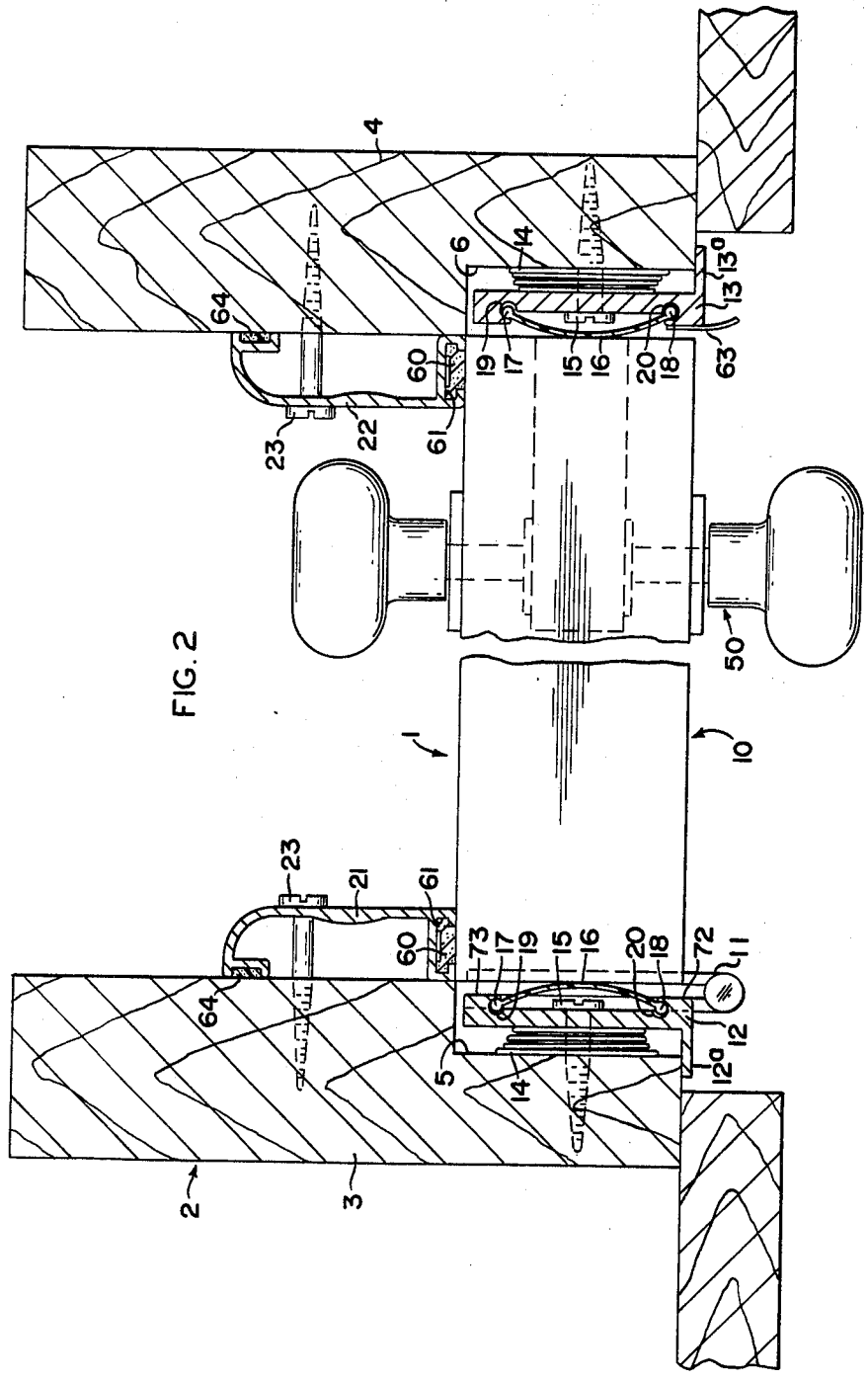


FIG. 2

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3,501,866

REPLACEMENT DOOR AND FRAME UNIT

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U.S. Cl. 49—380 4 Claims

ABSTRACT OF THE DISCLOSURE

The replacement door and frame unit includes a pair of side jamb strips to be positioned in rabbets formed in the side jambs of the door frame and usually resiliently positioned to be urged laterally inwardly of the door frame. Resilient sealing means are carried on the laterally inner face of the side jamb strips and a door is hingedly secured to one of such strips for extending therebetween.

The present invention relates to a replacement door and frame unit of the type that can be positioned in an existing door frame of conventional construction after the original door has been removed therefrom.

Frequently it is desired to improve present old building units and to replace the doors provided in such old buildings. Usually this has required some appreciable carpentry work wherein a door must be cut to special size and then is must be adapted specifically to the shape of a door frame which may have warped in use or which may have settled on one side thereof or which may have become out of square for any of a number of reasons.

The general object of the present invention is to provide a new and improved precut and preformed replacement door and frame unit that is adapted to be attached to an existing door frame with a minimum of assembly and installation work. Another object of the invention is to provide a replacement door and frame unit which can be attached to an existing door frame and fit therein, even though the original door frame has become slightly out of square in service and to provide a complete door and hinge and door locking means as one unit that can be readily assembled into and adapted to the size of an existing door frame which has had the original door removed therefrom.

Other objects and advantages of the invention will be made more apparent as the specification proceeds.

In general, the present invention relates to a preformed door which is initially hingedly secured to one of a pair of side jamb strips that are adapted to be positioned in rabbets formed in the original side jambs of a door frame. Preferably these side jamb strips are resiliently positioned and are urged laterally inwardly of the door jamb and resilient sealing means are carried on the laterally inner faces of the side jamb strips for contact with the door positioned in the replacement unit. The door replacement unit also may comprise a new threshold strip and a top header strip to be attached to the original door frame.

Attention now is particularly directed to the drawings, wherein:

FIG. 1 is a fragmentary broken away vertical section of a replacement door and frame unit of the invention shown in assembled, operative position;

FIG. 2 is a fragmentary horizontal section taken through the replacement door unit and associated door frame of the structure shown in FIG. 1; and

FIG. 3 is a fragmentary elevation of a portion of the assembly of a door hinge.

When referring to corresponding members shown in the drawings and referred to in the specification, corresponding numerals are used to facilitate comparison therebetween.

Attention now particularly is directed to the details of the structure shown in the drawings, and a door frame indicated as a whole by the numeral **1** is shown and a replacement door and frame unit is provided for attachment to the door frame indicated as a whole by the numeral **2**.

FIG. 2 of the drawings shows that a pair of side jambs **3** and **4** are provided in the door frame **1** and that each of these side jambs has its outermost end on the laterally inner surface thereof provided with a rabbeted section or rabbet **5** and **6**, respectively. Normally, the door frame **1** includes a threshold **6***a* and a top or header strip **7**. The header strip **7** has a rabbet **8** formed in the lower outer corner thereof as is conventional in most door frames for receiving the original door attached in the door frame **1** to be positioned in the rabbeted portions **4**, **5** and **8** provided in the door frame.

This new replacement door and frame unit **2** includes a door **10** which may be of any suitable construction and usually is made of metal or a metal clad wooden door. It is secured, as by a plurality of vertically extending hinges **11**, to a side jamb strip **12** that is positioned in the rabbet portion **4** of the side jamb **3**. A similar or equivalent side jamb strip **13** is provided in the opposite side jamb **4** likewise adapted to be received within the rabbeted section **6** provided therein. Preferably in positioning the side jamb strips in or on the side jambs **3** and **4**, some type of a resilient back-up means is provided intermediate the side jamb strip and the associated portion of the side jamb. Thus, in this instance, elongated leaf springs or a plurality of coil springs **14** are positioned behind the side jamb strips **12** and **13** at vertically spaced portions thereof, and then attachment means, such as screws **15**, extend through the individual side jamb strips, and the springs **14** to engage adjacent portions of the side jambs, whereby loosening or tightening the springs **14** will adjust the side jamb strips to receive the door **10** and position it in desired relationship to the remainder of the door and frame unit **2**. Initially, the side jamb strips can be cut to proper length at their lower ends if originally made of greater than the door frame opening height, but a preformed beveled top corner joint need not be varied.

To aid in obtaining a sealed joint or connection between the side jamb strips and the door **10**, preferably vertically extending, resilient plastic sealing strips **16** are carried by each of the side jamb strips **12** and **13**. Preferably these strips **16** have enlarged or beaded vertically extending edges **17** and **18** which are positioned under or in undercut grooves or recesses **19** and **20** formed in each of the side jamb strips and extending the height thereof adjacent the lateral margins thereof whereby the strips **16** are adapted to be compressed slightly and inserted or be threaded into the grooves **19** and **20** to take the convex shape on their laterally outer surfaces as indicated in FIG. 2. The strips **16** may be made from a vinyl resin or other suitable material and naturally will protrude some from the adjacent faces of the side jamb strips and be in resilient engagement with opposed lateral margins of the door **10**.

To provide a finished appearance for the replacement door and frame unit **2** of the invention, preferably a pair

of vertically extending stops **21** and **22** each of which has an edge portion substantially parallel to the plane of the door **10** are so secured to the side jambs **3** and **4** as to have edges positioned immediately adjacent the door **10** to abut thereagainst when closed. Usually flexible magnetic sealing strips **60** of conventional composition are positioned in engagement with contoured recesses **61** formed in the stops **21** and **22** to engage the door. These stop strips **21** and **22** are secured in place in any conventional manner, as by screws **23**.

Preferably a top liner strip **30** is also provided in the replacement unit and such top strip is adapted to be secured to and be positioned in the rabbet **8** formed in the header **7**. In this instance, a plurality of elongate flat leaf springs **31** are positioned intermediate to the top strip **30** between it and the adjacent portion of the header **7**. However, it will be realized that any resilient means can be used to position the top strip **30** in adjustable relation to the adjacent header **7**. Again, the top strip **31** positions a resilient sealing strip **32** therein in the same manner as the strips **16** are positioned and a top stop **33** with a magnetic strip **66** therein likewise is preferably secured to the header **7** immediately adjacent the top edge of the door **10**.

In the bottom portion of the door and frame unit **2**, preferably an adjustable threshold unit **35** is provided. This unit **35** includes a bottom plate **36** which is suitably attached to the threshold **6***a* and telescopically receives a bottom or cover strip **37** in telescopic relation whereby an attachment screw or screws **38** can secure this cover strip **37** to the bottom plate and be adjusted or forced vertically downwardly into the bottom unit **36** by the screws **38** to compensate for any possible irregularities in the threshold **6***a* or its relationship to the remainder of the door frame. The door **10** also carries a resilient plastic bottom sealing strip **39** which is in preferably telescoped engagement with a bottom plate **40** positioned on the lower edge of the door **10** whereby the sealing strip **39** extends resiliently downwardly and will be in flexible or compressed engagement with the cover strip **37** when the door is closed. Usually such strip **37** has a little flexible plastic sealing strip **41** in telescopic engagement therewith and flexibly extending over the margins of the strip **37** and a channel portion **42** of the bottom unit **36** in which the top strip **37** is resiliently positioned to aid in providing a good seal between these two relatively movable members.

While not completely shown in the accompanying drawings, it is another feature of the invention that the door **10** will have a suitable latch and/or lock means **50** suitably attached thereto or the door **10** is made to receive the lock means when the unit **2** of the invention is made and which latch or lock member is adapted to engage with a suitable keeper means or strike plate **63**. Such strike plate is provided on a portion of the side jamb strip **13** where the cover strip **16** is removed and the flanges of the strips are removed, usually, as at the hinge areas so that no adjustment of the lock means is required by the person assembling the door and replacement unit in the door frame **1**.

It should be noted that each of the side jamb strips **12** and **13** have edge flanges **12***a* and **13***a* thereon which are adapted to be in telescopic engagement with an adjacent edge portion of the side jambs **3** and **4** and with the stop strip **30** likewise having an edge flange **30***a* whereby adjustment in position of these members may be made without exposing any of the rabbeted portions of such sections of the door frame **1**. It also should be noted that the resilient sealing strips **16** and similar means used in the door are positioned over the heads of the screws **15** used to position these members in the door frame whereby a neat attractive finished overall appearance is provided. The resilient strips **16** are readily removable from association with the remaining portions of the door and frame unit **2** so that the side jamb strips can be readily adjusted in position, if desired. Resilient sealing strips **64** with an adhesive surface layer thereon are carried by the stops **21** and **22**, as shown. A similar resilient strip is normally carried by the stop strip **33**.

The hinges **11** normally are riveted as at **71** to the side jamb strip **12** at locations where the vertically extending overhanging edge flanges **72** and **73** thereof are removed. Then screws can be used to attach the hinges and side jamb strip to the side jamb **3** through the remaining holes in the hinge plates. But the hinges are preassembled to the side jamb strip and/or to the door **10**.

From the foregoing, it is believed that a novel and improved replacement door unit has been provided. This replacement unit can be provided complete and with sufficient adjustment being provided in the side jamb strips **12** and **13** and in the positioning of the top strip **30** whereby the replacement unit will readily adjust to and cover the portions of the door frame **1** in a neat manner for effective mounting of the door and frame unit **2**. The various side jamb strips **12** and **13**, stops **21** and **22** and other parts of the replacement door frame preferably are made from a metal such as aluminum by extrusion thereof to the contour or section desired. The frame components can be preassembled or be assembled on the job, as desired, and be installed rapidly and easily by relatively unskilled workers. But, an improved appearance sealed door unit is provided. Thus, it is believed that the objects of the invention have been achieved.

While one complete embodiment of the invention has been disclosed herein, it will be appreciated that modification of this particular embodiment of the invention may be resorted to without departing from the scope of the invention as defined in the appended claims.

What is claimed is:

1. An adjustable replacement door and frame unit for attachment to the side jambs of a door frame defining an opening, which side jambs have rabbets formed in opposed outer edges thereof comprising

a pair of side jamb strips to be positioned in said rabbets formed in said side jambs and adapted to receive vertically spaced screw means to attach them to said side jambs,

spring means to be positioned between said side jamb strips and a surface of the rabbeted portions of said side jambs,

a resilient sealing strip carried on the laterally inner face of each of said side jamb strips and protruding therefrom,

said sealing strips being removable and being adapted to cover the heads of said screw means when said strips and screw means are operatively positioned, and

a door hingedly secured to one of said side jamb strips and extending between said side jamb strips whereby the door and frame unit can be secured to a door frame and be adjusted in lateral position therein.

2. A replacement door and frame unit as in claim **1** where said side jamb strips are laterally adjustable and have edge flanges lying in a plane parallel to said door for adjustably covering and engaging a surface of said side jambs.

3. A replacement door and frame unit as in claim **1** where said laterally inner faces of said side jamb strips have opposed overhanging vertically extending edge flanges thereon with such flanges being interrupted at spaced vertical portions on one of said side jamb strips, said sealing strips have marginal edges thereof engaged under said flanges, and hinge means are secured to said one of said side jamb strips at the interrupted portions of said flanges to engage said door to secure said door to said one of said side jamb strips.

4. A replacement door frame unit as in claim **1** wherein a vertically adjustable threshold unit is provided, and a resilient seal is secured to and extends downwardly from the bottom of the door and is adapted to engage with said

adjustable threshold unit, said seal comprising a downwardly converging trapezoidal in section resilient plastic bottom sealing strip which is operatively affixed to the bottom surface of the door.

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