Nov. 5, 1940. A. H. FARIS 2,220,400

WALL UNIT FOR SLIDING DOORS

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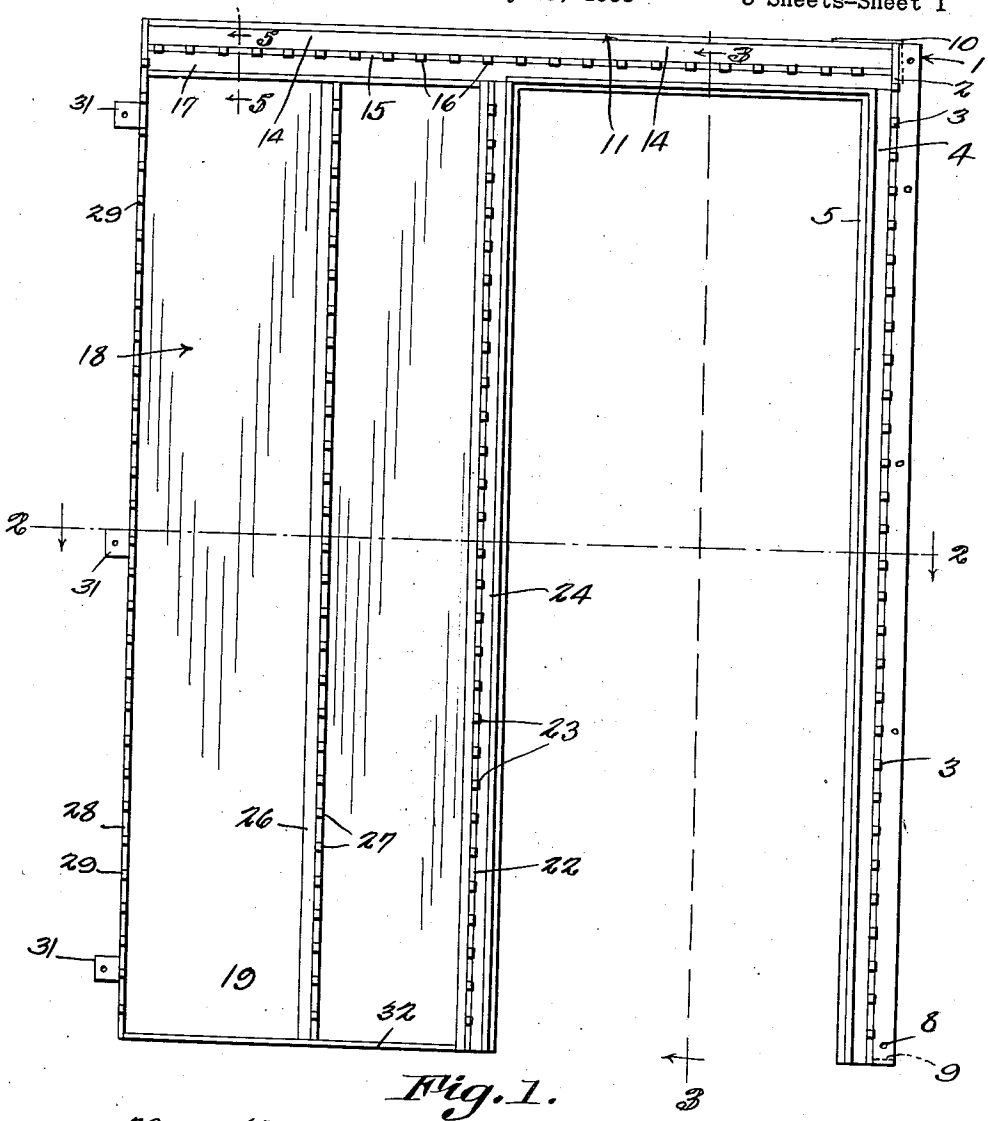


Fig. 1.

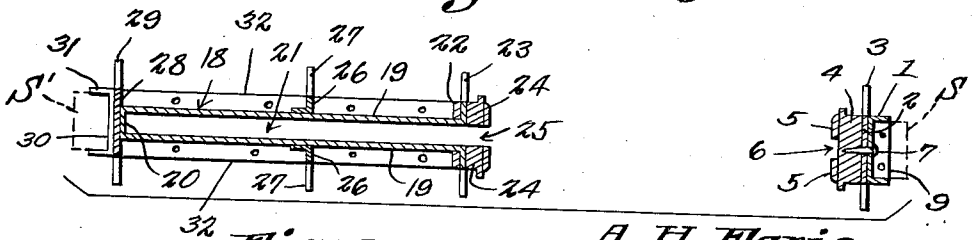


Fig. 2.

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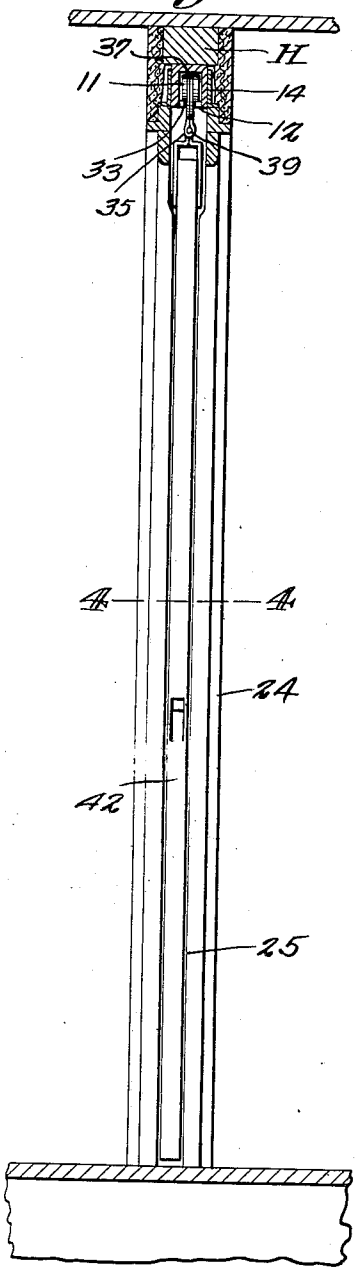
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WALL UNIT FOR SLIDING DOORS

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Fig. 3.



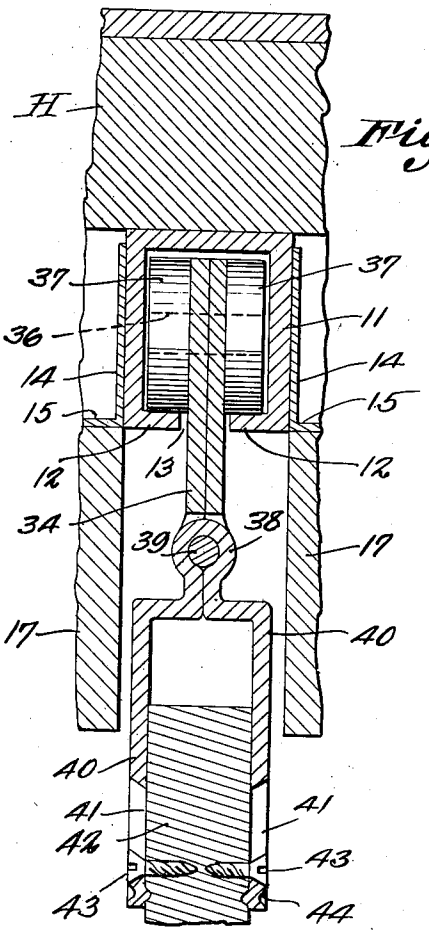


Fig. 7.

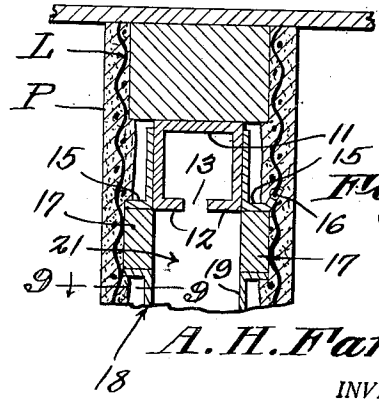


Fig. 5

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Fig. 4.

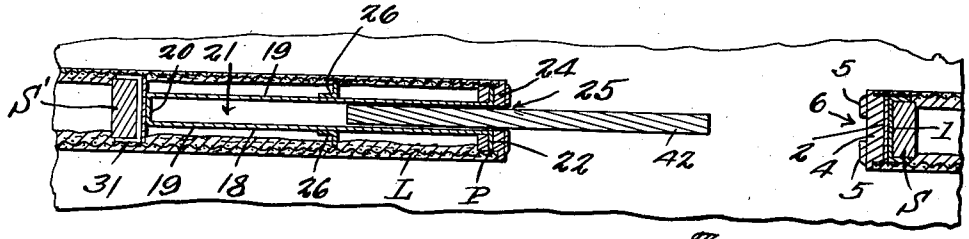


Fig. 9.

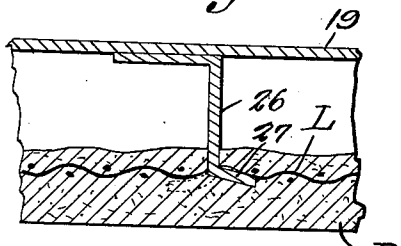
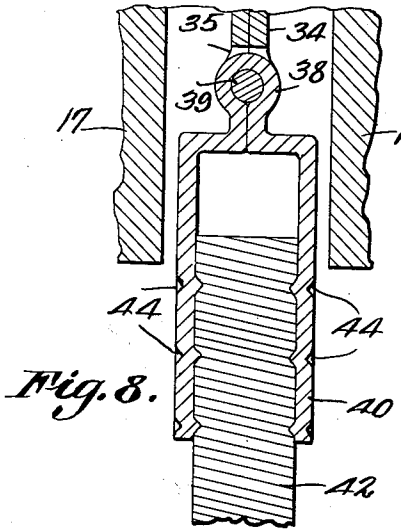


Fig. 8.



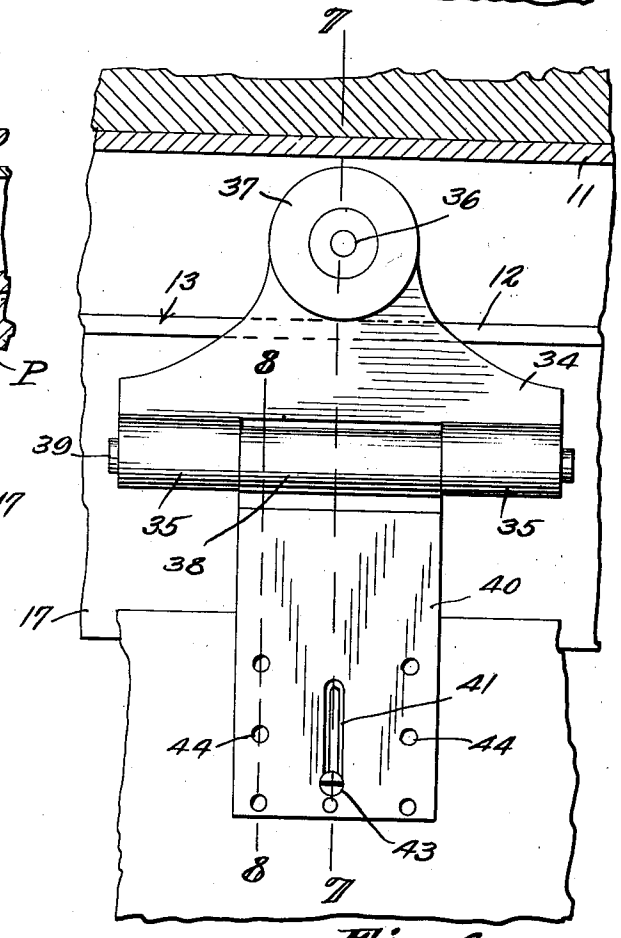


Fig. 6.

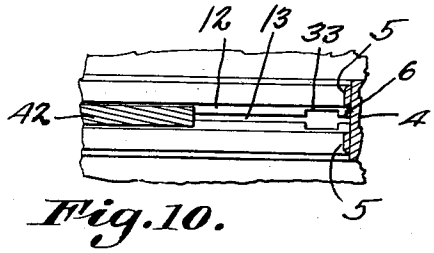


Fig. 10.

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UNITED STATES PATENT OFFICE

2,220,400

WALL UNIT FOR SLIDING DOORS

Albert H. Faris, Lawrence, Kans.

Application July 19, 1938, Serial No. 220,089

1 Claim. (Cl. 189—34)

This invention relates to a wall unit for installation where it is desired to mount a sliding door in a building construction, one of the objects being to provide a unit to be sold as such ready for installation in a wall and which, after being installed, will completely house the sliding door when open without necessitating any increase in the thickness of the wall over that which is ordinarily employed.

A further object is to provide a prefabricated unit which, because of the ease of its installation during the construction of a building, permits the general substitution of sliding doors for swinging doors so that maximum wall space is thus left for utilization, this being a result which is particularly desirable in small buildings and apartments.

A further object is to provide a prefabricated unit of this type which can be used in any four inch wall whether it be formed of wood, tile, brick, concrete or other material.

A still further object is to provide a unit of this character which, when delivered to the builder, is ready for installation, it being possible, after installation, to sheathe the unit with either metal or wooden laths to which plaster or any other wall finish can be joined.

A further object is to provide a unit which is light but durable in construction and can be handled readily.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claim, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:

Figure 1 is a front elevation of the prefabricated unit ready for installation.

Figure 2 is a section on line 2—2, Figure 1.

Figure 3 is a section on line 3—3, Figure 1, showing the unit after it has been properly installed and a door assembled therewith.

Figure 4 is a horizontal section through the installed unit, said section being taken on the line 4—4, Figure 3.

Figure 5 is an enlarged vertical transverse section through the upper portion of the installed unit and adjacent parts, said section being taken on the line 5—5, Figure 1.

Figure 6 is an enlarged longitudinal section through the upper portion of the installed unit and showing one of the door hangers and its supporting carriage.

Figure 7 is a section on line 7—7, Figure 6.

Figure 8 is a section on line 8—8, Figure 6.

Figure 9 is an enlarged section on line 9—9, Figure 5, showing how a metal lath is joined to the unit.

Figure 10 is a bottom plan view on a reduced scale of a portion of the top of the unit showing the slot therein for guiding the door hangers, a portion of the door being shown in section.

Referring to the figures by characters of reference 1 designates a channelled frame member formed preferably of sheet metal. A tie-plate 2 extends longitudinally of and bears against the web portion of this channelled member and has bendable fingers 3 extending from opposed edges thereof and beyond the sides of the channelled member 1. A jamb strip 4 extends longitudinally along and contacts with the plate 2 and is provided on its inner side face with spaced stop strips 5 forming a door-receiving channel 6 therebetween. The channelled member 1, plate 2 and strip 4 are all held together in any suitable manner, as by means of nails 7 driven thereinto, screws or the like. Apertures 8 can be located at any desired point in the side flanges of the channelled member 1 for receiving nails or the like whereby this channelled member, after being placed astride a stud, can be nailed thereto. The position of a stud in this channelled member has been indicated by broken lines at S in Figure 2. The lower end of the channelled member 1 is closed by a cross flange 9 adapted to be nailed or otherwise fastened to the floor of the building in which the unit is installed.

The parts 1, 2 and 4 cooperate to form one of the jambs of the door and the upper end of the channelled member 1 has a laterally extending tongue 10. Jamb strip 4 terminates below this tongue so as to provide sufficient space between it and the tongue to receive the top member of the unit. This top member includes an inverted channelled member 11 formed of sheet metal the lower edges of which are inturned as at 12 to form a track, the flanges being separated by a slot 13 of sufficient width to receive the door-supporting hangers hereinafter referred to. Tongue 10 overlies and is soldered or otherwise fastened to one end portion of the channelled

member 11, as shown and to the sides of this channelled member 11 are soldered or otherwise connected angle strips 14 of sheet metal having oppositely extending flanges 15 at their lower edges from which extend bendable prongs or fingers 16.

The member 11 is of a length not less than twice the width of the door to be mounted in the unit and the flanges 15 are nailed or otherwise joined to spaced finishing strips 17 preferably of wood and which extend throughout the length of the member 11. The distance between these strips 17 is sufficient to permit the door and its hangers to work freely between the strips, as shown in Figure 7 and as hereinafter explained.

Member 11 and the strip 17 joined thereto, is extended over the upper end of a housing 18 formed of sheet metal bent to provide side walls 19 and an end wall 20. These walls cooperate to provide a pocket 21 proportioned to receive and completely house the sliding door when installed and the free vertical edges of the walls 19 are outturned, as at 22 to form flanges and each of these flanges has outwardly extending prongs or fingers 23. To the flanges are nailed or otherwise fastened jamb strips 24 which are spaced apart to provide a door-receiving opening 25 of the same width as the pocket 21 into which it opens. The walls 19 can be reenforced at one or more intermediate points by angle strips 26 soldered or otherwise attached thereto each of which has outwardly extending prongs or fingers 27.

A plate 28 formed of sheet metal is extended longitudinally of the end wall 20 and housing 18 and is provided with oppositely extending prongs or fingers 29 which are bendable. To this plate is soldered or otherwise secured a number of plates 30 provided at their side edges with attaching ears 31 adapted to engage opposed faces of a stud S' shown in Figure 2 and which stud forms a part of the building construction.

Strips 24 and 4 cooperate to define opposed sides of a door opening in the unit, the top of this opening being defined by those portions of strips 17 extending between the jamb strips 4 and 24.

An outturned flange 32 is formed along the bottom edge of each wall 19 of housing or casing 18 and these flanges are adapted to be nailed or otherwise fastened to a floor or other supporting structure on which the unit is mounted.

The slot 13 formed between the inturned flanges 12 and stop member 11 is provided near one end with a widened portion shown at 33 in Figure 10 so that it is thus possible to insert into the channel member the carriages used for supporting the sliding door. These can be of any preferred construction. In the drawings each carriage has been shown formed of a plate 34 folded to provide spaced sleeves 35 at the bottom thereof while the remaining portions of the plate remain in contact so as to travel within slots 13 and are connected by a pin 36 on the ends of which are mounted rollers 37. These rollers are adapted to travel along the upper surfaces of the flanges 12 as shown for example in Figure 7.

A sleeve 38 is interposed between sleeves 35 and mounted on a hinge pin 39 carried by sleeves 35. This sleeve 38 is formed by folding a plate to bring opposed portions together as in Figure 7, the free ends of the plate being offset to provide spaced angular attaching members 40 each of which has a longitudinal slot 41. The door 42 is adapted to be inserted at its upper edge between the members 40 and is attached thereto by screws 43 or the like seated in the slots 41. Thus the door can be adjusted upwardly or downwardly relative to its supporting means. It is to be understood that two or more of these supporting means are used and that the carriages will travel freely within the channelled member 11. The members 40 can be further attached to the door, following adjustment, by offsetting portions thereof into the door as shown at 44, this offsetting being done with a suitable punch or the like.

As has already been stated the unit thus far described is to be sold as such for installation in a wall under construction. The door and the hardware connected thereto constitutes no part of the present invention. The unit is not designed to support any of the weight of the wall but the space constructed to receive the unit should be bridged by a header H of wood or metal sufficiently strong to support the weight thereabove. Studs S and S' are adapted to be placed one within the channelled member 1 and the other between the attaching ears 31, these studs being fitted tightly against the respective sides of the unit and then attached to the framework of the wall. If the unit is used in a wall formed of masonry, it is designed to erect the unit and extend the masonry into the channelled member 1 and between the ears 31 of plates 30 so that the unit will thus be permanently joined to the wall structure. If metal laths are to be used with the unit, the same are placed on the bendable prongs or fingers 3, 16, 23, 27 and 29 after which said fingers are bent over, as shown for example in Figures 5 and 9 so that the metal laths will thus be held firmly to the unit. These laths have been indicated at L. Plaster can then be applied to the laths in the usual way as shown at P.

It will be apparent that a unit which has been prefabricated and constructed as herein described can be quickly installed by a single mechanic and following its installation it is a simple matter to place the carriages within the channelled member 11 and to attach them to the door so that it is thus possible for the door to slide back and forth into and out of the pocket 21.

What is claimed is:

A sliding door unit including a single sheet of material bent to provide a door receiving pocket open at the top, bottom and one end and having its other end and its sides closed, said sheet having laterally extended top and bottom flanges and laterally extended flanges at its open end and bendable anchoring fingers projecting from said end flanges, all of the flanges being integral with the sheet, means joined to the other end of the pocket for embracing a wall, spaced finishing strips above, secured to and projecting beyond the top flanges, a track member connected to and bridging the space between the finishing strips at the top thereof, a channelled wall-embracing strip connected to and supporting the projecting ends of the finishing strips and track member, a jamb strip connected to the channelled member, and spaced jamb strips connected to the fingered end flanges of the pocket.

ALBERT H. FARIS.