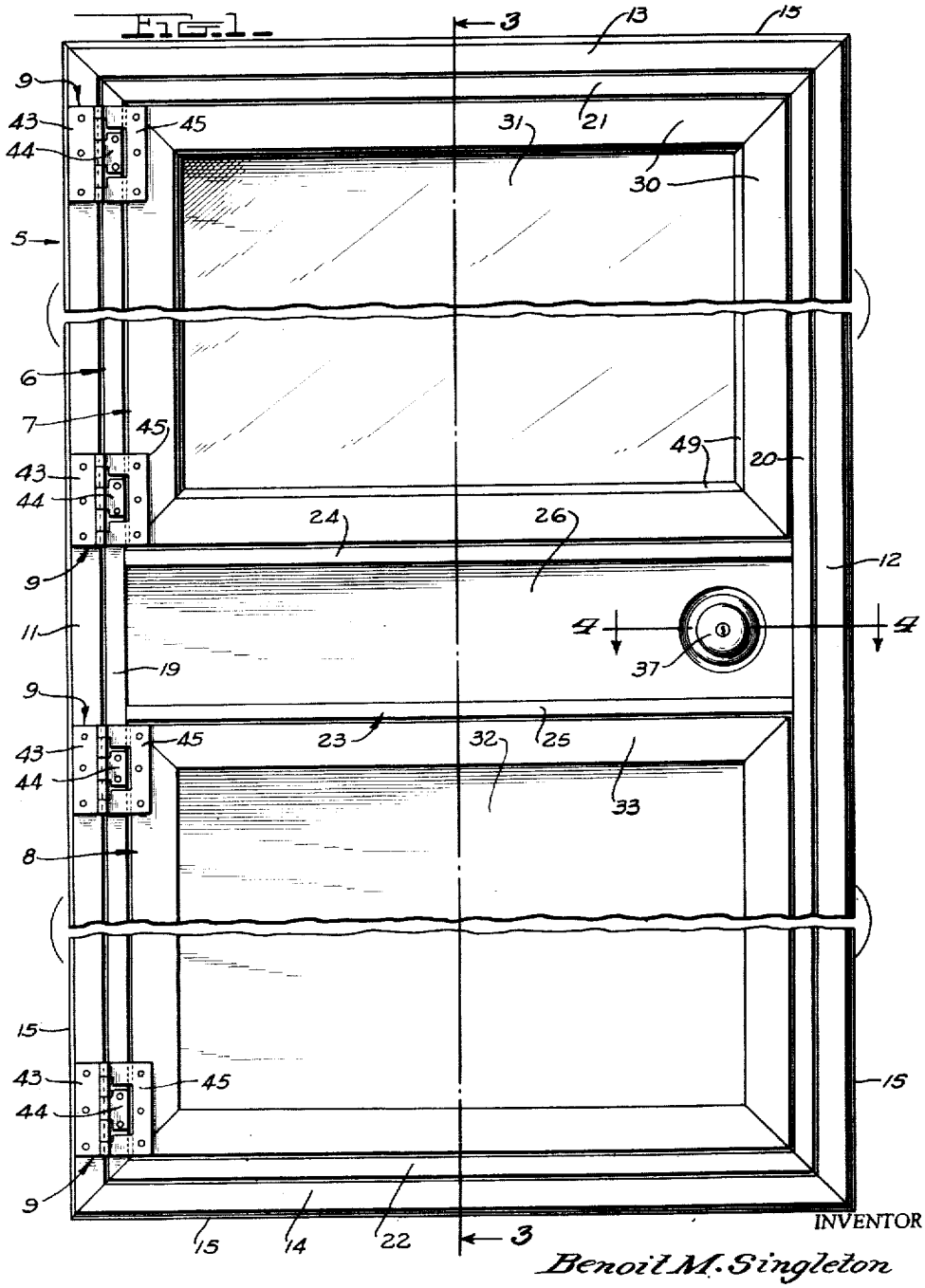
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DOOR AND DOOR JAMB ASSEMBLY

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Fig. 1



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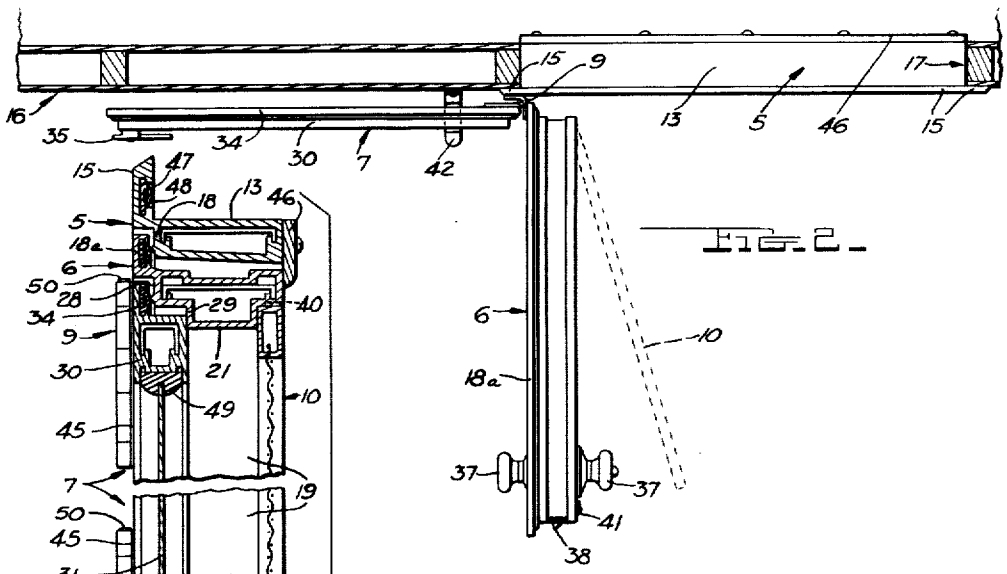


FIG. 2

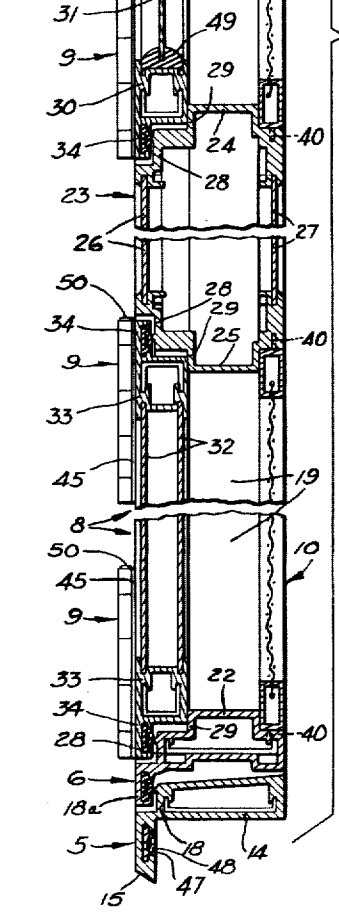


FIG. 3

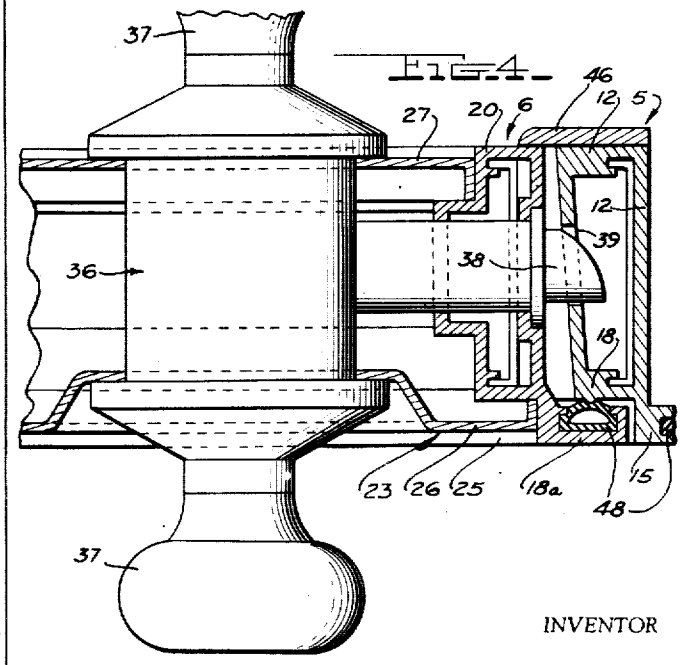


FIG. 4

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DOOR AND DOOR JAMB ASSEMBLY

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Application June 10, 1954, Serial No. 435,765

5 Claims. (Cl. 160—96)

The present invention relates broadly to door and door jamb assemblies, and in its more specific phases to a modified form of the so-called Dutch doors having upper and lowered hinged door sections which may be independently opened and closed.

Conventional house trailer door constructions involve the use of a one-piece thin panel main door for which a door jamb has to be built into the opening of the house trailer and, in addition, there is a separate full size thin panel screen door which fits the door jamb at the inner face of the door with such door jamb considerably thicker than the trailer wall to handle the two separately hinged doors. When the screen door is being used, it is common practice to fasten the outward opening main door in the fully opened position to the outer face of the house trailer. In case of a sudden rain storm, it is then necessary for someone to go out doors to disengage the fastener holding the outer door at its latch edge, following which it can be closed. This is far from satisfactory since the person assuming this duty gets wet in taking care of it. The fitting of a door and screen door in accordance with this practice also requires costly skilled help and normally several hours work to frame and fit the door and screen door. It was a recognition of such unsatisfactory condition of the house trailer door art and the complete lack of a thoroughly satisfactory solution to same which led to the conception and development of the present invention which, while intended primarily for house trailer use, is not restricted to same.

Accordingly among the objects of the present invention is the provision of a complete assembly of a mounting frame or door jamb, a hinged door frame, and separately hinged door panels fitting said door frame and fastenable to same, which assembly may be shipped as a unit from a factory and may be quickly and easily installed as a unit, thus saving a great deal of time, trouble, and labor and producing a better job than could be otherwise done.

The mounting frame or door jamb referred to above is a relatively rigid main frame to be secured to a wall in an opening such as a door opening in the latter; and the door frame referred to above is a unit construction hinged frame which fits into and closes against said mounting frame or door jamb. This door frame includes a horizontal frame member between its ends; an upper hinged door panel which is mounted between this horizontal frame member and the top member of the door frame; and a lower hinged door panel which is mounted between said horizontal frame member and the bottom member of said door frame. Hinge means unitarily unite the mounting frame or door jamb, the door frame, and the two door panels into a single unitary assembly which may be compactly packaged for shipment, and may be quickly and easily installed without highly skilled help. This assembly also preferably includes two hinged screens for the openings, which are normally closed by the hinged door panels, with the separate members of the whole assembly, except for the screens, mounted on a common

set of hinges which thus avoids separate hinging operations.

Another object is to provide a strong and relatively light weight, durable, and rigid assembly, which may be made from hollow extruded aluminum alloy frame members, with the door much stronger than the ordinary house trailer door and with the door jamb of a thickness suitably matching the thickness of the wall at the opening into which it is to be framed, rather than too thick as is the case with the standard house trailer door and door jamb assembly on which is separately mounted both a door and screen door, and wherein means are provided for preventing moisture carried by warm air within the house trailer from condensing at least on part of the inner surface of the door jamb assembly.

Another object is to utilize the aforesaid horizontal frame member of the door frame for mounting the door latch which may be in the form of an ordinary door lock having a bevel-ended spring-projected bolt, knobs, and other conventional parts, thus simplifying the construction.

Another object is to provide releasable means for holding either or both door panels, which are of sash-like form with marginal frames, fully open adjacent the outer side of the trailer wall or the like in hot weather with the door frame movable independently of said panels, said means being readily accessible from the inside of the trailer by simply swinging the screens inwardly. Thus, in case of sudden rain, the door panels may be quickly closed without going outside.

Still further objects and advantages of the present invention will appear as the description proceeds.

To the accomplishment of the foregoing and related ends, the invention, then, consists of the door and door jamb assembly hereinafter fully described and particularly pointed out in the claims, the annexed drawings and the following description setting forth in detail certain means for carrying out the invention, such disclosed means illustrating, however, but one of various ways in which the principle of the invention may be used.

In the accompanying drawings:

Figure 1 is an outer side elevation of the assembly with the door frame and both door panels closed.

Figure 2 is an upper end view of the assembly installed, the upper door panel being held in extreme open position at the outer side of the wall, the door frame being open, and the upper screen being dotted in partly open position.

Figure 3 is a vertical sectional view taken on line **3—3** of Figure 1, looking in the direction of the arrows.

Figure 4 is an enlarged fragmentary detail horizontal sectional view taken on line **4—4** of Figure 1, looking in the direction of the arrows.

A practicable construction of the door and door jamb assembly has been disclosed in the drawings, and while that construction will now be rather specifically described, it is to be understood that varitions may be made within the spirit and scope of the invention as thus set forth. Referring more particularly to the drawings, the mounting frame or door jamb is generally designated at **5**, the door frame at **6**, the upper door panel at **7**, the lower door panel at **8**, the hinges at **9**, and the screens at **10**.

The mounting frame **5** has vertical side members or jambs **11** and **12**, a top member **13**, and a bottom member or threshold **14**, all of said members being suitably joined in conventional manner at the corners of the frame, and all having flanges **15** to be secured against a wall **16** when the frame **5** is inserted into the opening **17** of said wall. The flanges **15** are preferably provided with recesses **47**, Figure 3, to carry a suitable gasket, such as a tubular gasket **48** of the type shown in gasket carrying flanges **18*a***, Figure 4, for sealing engagement with the wall **16**. The members **11**, **12**, **13**, and **14** each have a

set-back shoulder **18** against which the door frame **6** is closable.

The door frame **6** comprises vertical side members **19** and **20**, a top member **21**, a bottom member **22**, and a horizontal member **23** between said top and bottom members. This member **23**, Figure 3, includes an upper horizontal bar **24**, and a lower horizontal bar **25**, both suitably secured at their ends to the door frame vertical members **19** and **20**, respectively. Between these bars **24**, **25**, there are an outer plate **26** and an inner plate **27** disposed in parallel vertical planes. The horizontal edges of the plates **26** and **27** are suitably held by the bars **24**, **25** and the ends of said plates abut the members **19**, **20**, as will be clear from Figures 1, 3, and 4.

All of the frame elements **19**, **20**, **21**, **22**, **24**, and **25** each have an outer set-back shoulder **28** and an inner set-back shoulder **29** against which the door panels **7** and **8** are closable. The elements **19** to **22** have gasket-carrying flanges **18***a* which coact with the set-back shoulders **18** of the mounting frame or door jamb **6**.

The upper door panel **7** is of sash-like form, being provided with a marginal frame **30**, and a window glass **31**, supported thereon in conventional manner such as by means of a rubber gasket **49**. The lower door panel **8** is also of sash-like form, but normally has opaque panels **32** held in any convenient manner by its marginal frame **33**. The side and end members of the frames **30** and **33** close against the inner set-back shoulders **29** of the door frame **7** and are provided with gasket-carrying flanges **34**, similar to flanges **18***a* of the door frame, which close against the outer set-back shoulders **28**.

Suitable latches **35**, one form of which is shown in Figure 2, are provided to lock the door panels **7** and **8** in closed position, and any suitable latch such as a conventional tubular lock **36** is mounted in the hollow frame member **23** of the door frame **6** for holding the latter closed. This lock has conventional knobs **37** and a beveled spring-pressed bolt **38**, the latter being engageable with an opening **39** in the jamb **12** of the mounting frame or door jamb **5**, which opening functions the same as a suitable keeper or strike-plate.

The frames of the screens **10** are preferably hinged at one edge by means of vertical studs **40** (dotted in Figure 3) to door frame **6**, and said screens may be held closed by suitable releasable means such as turn-buttons, one of which is indicated at **41** in Figure 2.

Any suitable holding means, such as a spring catch **42**, Figure 2, is provided on the ball **16** for holding the door panels **7** and **8** in extreme open positions adjacent the outer side of said wall, when desired. By swinging the screens **10** inwardly out of the way, a person within the trailer or the like may reach through the door frame **6** and release the catch **42**, thus allowing the door panels **7** and **8** to be pulled shut in case of sudden rain, or at night, without having to go out doors.

Each hinge **9**, Figures 1 and 3, has three leaves **43**, **44**, **45** connected by a single hinge pin **50**. The leaves **43** are secured to the jamb **11** of the mounting frame or door jamb **5**; the leaves **44** are secured to the door frame **6**; and the leaves **45** are secured two to the door panel **7** and two to the door panel **8**. This allows either or both of the door panels **7** and **8** to be fastened open while allowing the door frame **6** to be moved independently, door fashion, without shifting the position of either of the door panels **7** or **8**.

The element **46** in Figures 2, 3, and 4 is a strip of thermal insulation of any suitable material, such as wood or plastic, which prevents warm air in the trailer or the like from freely contacting with the inner edge of the mounting frame **5** and condensing thereon when said frame is relatively cold. While this strip, for convenience of illustration in Figure 3, is shown only on the top member **13** of frame **5**, similar strips are preferably secured to the jambs **11** and **12**, as shown in Figure 4. The strips, when extended over the edge of the door, would

then act also as inner stops for the hinged door frame **6**.

From the foregoing it will be seen that a novel structure for a door and door jamb assembly has been disclosed for attaining the desired ends, but attention is again invited to the possibility of making variations without departing from the spirit and scope of the invention as set forth. While, for convenience, the apparatus has been shown in its normal upright position, it is not limited to that position since it can be operated in other positions if desired. The directional terms such as "inner," "outer," "upper," "lower," "top," and "bottom," are accordingly to be considered as relative only, and not limiting on the construction involved.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the article and combinations herein disclosed, provided the means stated by any of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:

1. A door and door jamb unit assembly for application bodily to a wall around the edge of an opening therein, comprising a substantially rectangular mounting frame or door jamb adapted to be secured to said wall, said frame having a flange to lie against said wall, said flange carrying a gasket for sealing on said wall, a substantially rectangular door frame closable against said mounting frame, said door frame having a horizontal frame member between its upper and lower ends, a latching means mounted on said horizontal frame member for releasably fastening said door frame to said door jamb, an upper door panel closable against the outer face of said door frame to cover the opening above said horizontal frame member, a lower door panel closable against the outer face of said door frame to cover the opening below said horizontal frame member, latching means for said upper and lower door panels, said latching means being solely on the inner face of said door and not accessible from the outer face of same, and hinge means uniting said mounting and door frames and said door panels into a single unitary assembly with common alined hinge axes, said latching means holding said door panels closed against said door frame for movement with the latter and for allowing opening of either door panel with respect to said door frame and independently of the latter, and when either or both of said door panels are open said door frame can be hingedly moved without moving such door panel or panels.

2. A structure as specified in claim 1; wherein said hinge means comprises a set of three-leaf hinges with each hinge having a single hinge pin, one leaf of each of said hinges being secured to said mounting frame, another leaf being secured to said door frame, and the remaining leaf being secured to one of said door panels, said last two leaves nesting with each other when the door panel mounted on same is closed.

3. A structure as specified in claim 1; wherein said door frame is of relatively narrow tubular form and said additional releasable means comprising a conventional door lock secured to said horizontal frame member and has the usual inner and outer operators, and a bevel-ended latching bolt.

4. A door and door jamb assembly for application bodily to a wall around the edge of an opening therein, comprising a substantially rectangular mounting frame or door jamb to be secured to said wall, a substantially rectangular door frame closable against said mounting frame, said door frame having a horizontal frame member between its upper and lower ends, an upper door panel closable against said door frame to cover the opening above said horizontal frame member, a lower door panel closable against said door frame to cover the opening below said horizontal frame member, hinge means uniting said mounting and door frames and said door panels into

a single unitary assembly, releasable means for holding said door panels closed against said door frame for movement with the latter and for allowing opening of either door panel with respect to said door frame, and additional releasable means for holding said door frame closed, wherein both of said frames are of hollow metal form; said mounting frame having a flange to lie against said wall; said door frame having a gasket-carrying flange to close and seal against said mounting frame; said door panels having gasket-carrying flanges to close and seal against said door frame; said mounting frame having a set-back shoulder for coaction with said flange of said door frame; said door frame having set-back shoulders for coaction with said flanges of said door panels.

5. A door and door jamb assembly for application bodily to a wall around the edge of an opening therein, comprising a substantially rectangular mounting frame or door jamb to be secured to said wall, a substantially rectangular door frame closable against said mounting frame, said door frame having a horizontal frame member between its upper and lower ends, an upper door panel closable against said door frame to cover the opening above said horizontal frame member, a lower door panel closable against said door frame to cover the opening below said horizontal frame member, hinge means uniting

said mounting and door frames and said door panels into a single unitary assembly, releasable means for holding said door panels closed against said door frame for movement with the latter and for allowing opening of either door panel with respect to said door frame, and additional releasable means for holding said door frame closed, wherein same has inwardly swingable screens hinged to said door frame, and releasable means for holding said door panels in extreme open position adjacent the outer side of said wall, said releasable means being accessible from the inner side of said wall by swinging said screens inwardly out of the way, and without opening said door.

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