Jan. 21, 1941. F. B. EILERS 2,229,596

CLOSURE FOR HOUSING

Filed March 3, 1938 3 Sheets-Sheet 1

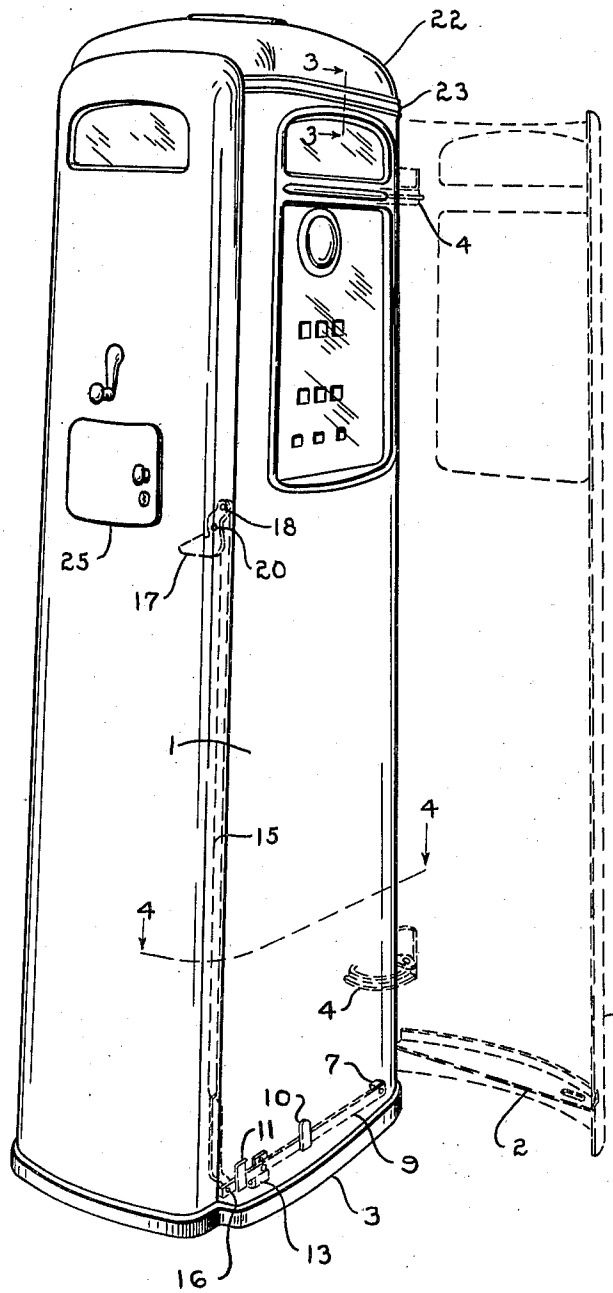


FIG. - 1

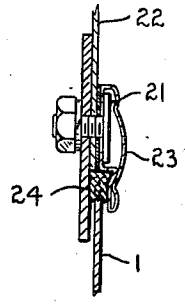


FIG. - 3

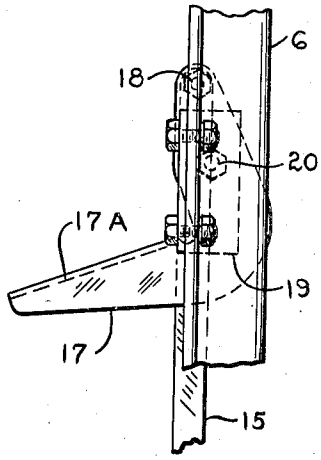


FIG - 2

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CLOSURE FOR HOUSING

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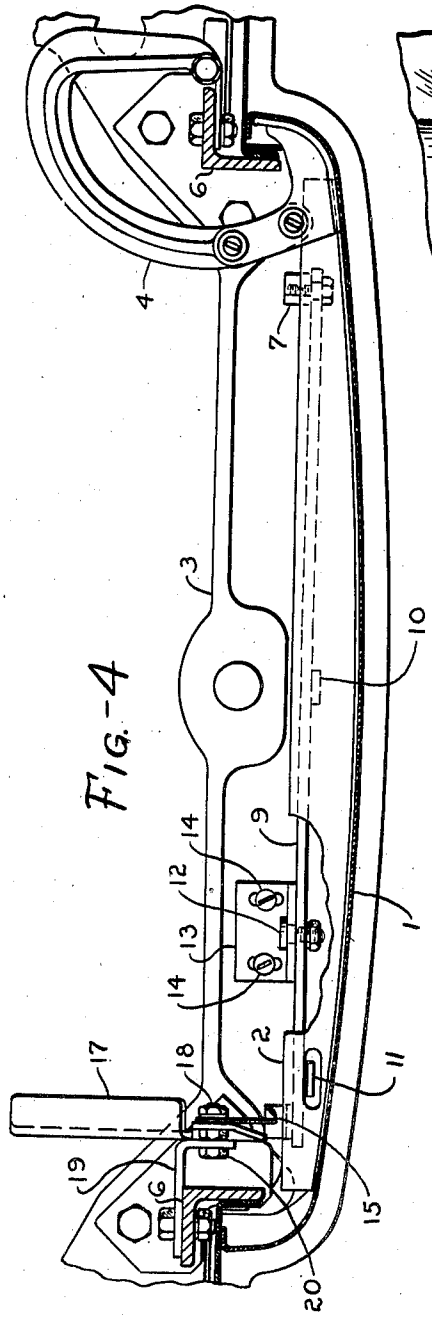


FIG. 4

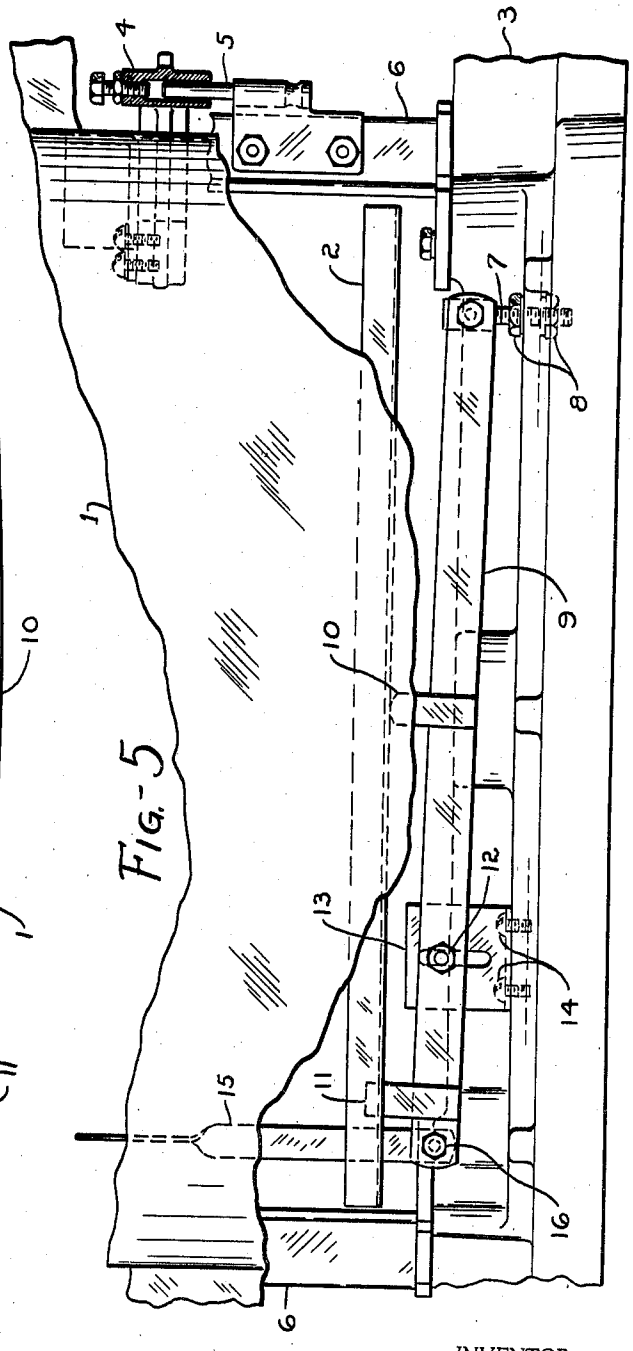


FIG. 5

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CLOSURE FOR HOUSING

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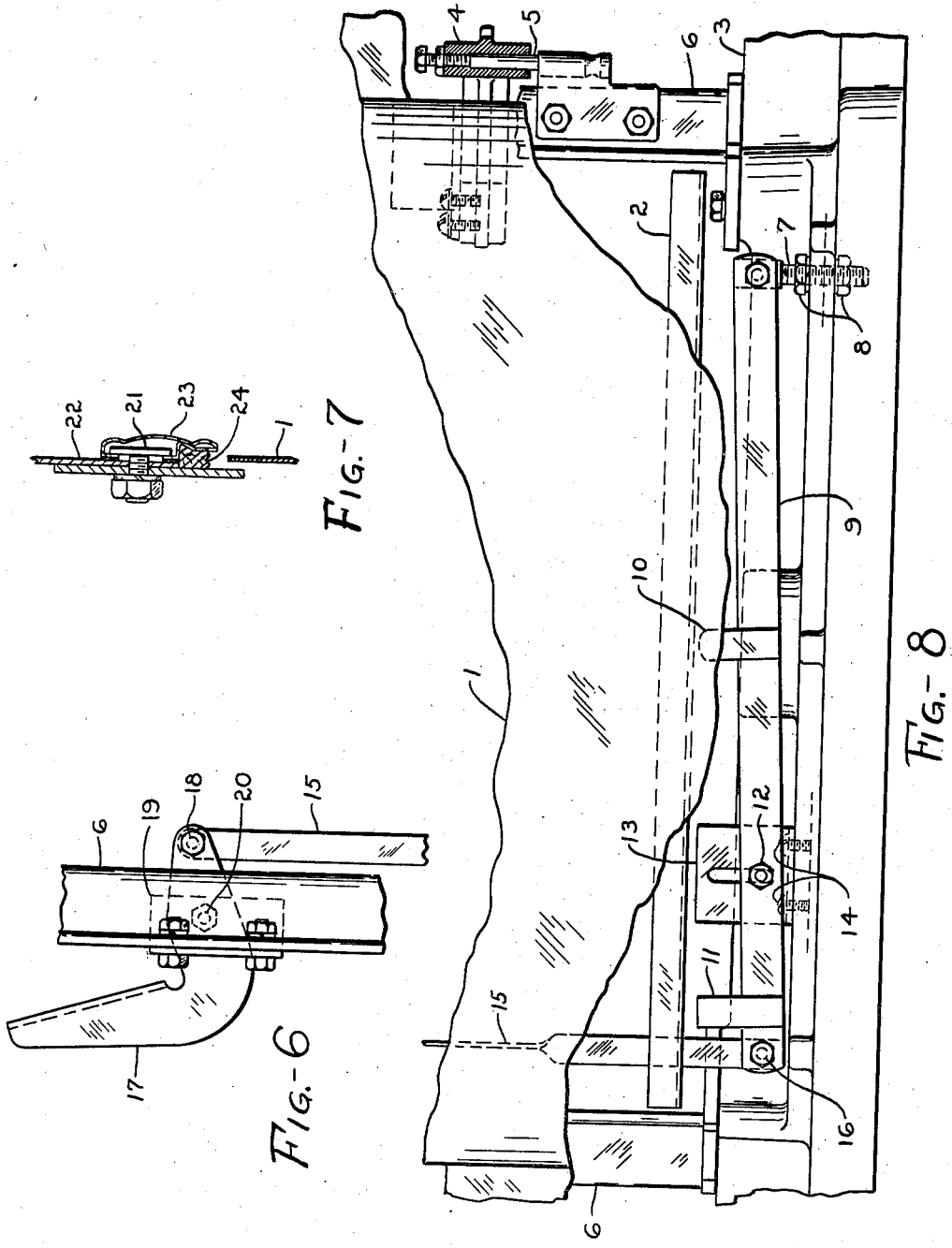


FIG. 7

FIG. 8

FIG. 6

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2,229,596

UNITED STATES PATENT OFFICE

2,229,596

CLOSURE FOR HOUSING

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Application March 3, 1938, Serial No. 193,675

4 Claims. (Cl. 292—196)

This invention relates to a closure for a housing, and particularly that type of metal housing which is used out of doors for protecting operating mechanism from the weather, such as gasoline pump housings and the like.

The principal object of the invention is to provide a door or closure, such as the entire side wall of a housing for a gasoline pump, with such supporting and latching mechanism as will not only lock it in closed position but move it into a water proofing relation with the housing.

This is accomplished by so hinging the side of the housing in the form of a swinging door that upon it being swung to closed position, it may be simultaneously latched and elevated. The elevating movement is such that it carries the upper edge of the door upwardly and under an overhanging decorative molding and into engagement with a sealing or waterproofing strip.

The full nature of the invention will be understood from the accompanying drawings and the following description and claims:

Fig. 1 is a perspective view showing a gasoline pump housing with the closure and latching mechanism shown in dotted lines swung to open position. Fig. 2 is a detailed view of a part of the latching mechanism with parts broken away, showing it in latched position. Fig. 3 is a section taken on the line 3—3 of Fig. 1 with the closure in latched position. Fig. 4 is a horizontal section with parts removed, taken on the line 4—4 of Fig. 1. Fig. 5 is a front elevation of the lower latching mechanism when the closure is in latched position, with parts broken away. Fig. 6 is the same as Fig. 2 showing the position of the latch in unlatched position. Fig. 7 is the same as Fig. 3 showing the position of the closure in unlatched position. Fig. 8 is the same as Fig. 5 showing the mechanism in unlatched position.

In the drawings there is shown for purposes of illustration as an example of the invention, a gasoline pump housing. The front side wall or panel of the pump housing is in the form of a door or closure indicated at 1. At the bottom of the door there is provided an inwardly and angularly extending locking plate 2 rigidly secured to the inner surface of the door immediately above the base 3 of the pump housing. The door is mounted upon the supporting hinges 4, such hinges being vertically slidable upon the hinge pins 5 which are rigidly secured to the frame 6 of the housing.

Secured to the base 3 there is an adjustable threaded stud 7 having adjustable locking nuts 8 mounted thereon on opposite sides of the base 3. Said stud is adapted to adjustably and pivotally support one end of an elevating lever 9, accurate adjustment of the supported end of said lever being afforded by the manipulation of the nuts 8. The lever 9 extends across the face of the housing adjacent the inner surface of the door 1 and immediately below the plate 2.

Secured to the lever 9 substantially midway between its ends there is an elevating pin 10 positioned to engage the underside of the plate 2 for raising the door upon the lever 9 being lifted, as will be hereinafter more fully described. Adjacent the free end of the lever there is a latching plate 11. A shouldered guide stud 12 is also secured near the free end of the lever which is slidably engaged in a longitudinal slot of a guide bracket 13 for guiding and controlling the movement of said lever. The guide bracket 13 is secured to the base 3 by the screws 14 which pass through elongated slots therein for permitting lateral adjustment for securing the proper tension on the door through the medium of the lever and its associated latching members when latched in closed position.

Pivotally connected with the end of the lever opposite its pivotal mounting there is a connecting rod 15 having its pivotal connection with said lever indicated at 16. The upper end of the connecting rod 15 is secured to a toggle lever 17 through the medium of a shoulder stud 18. The lever 17 is pivotally mounted upon a bracket 19 by a bolt 20, which bracket is secured to the pump frame 6.

Above the top of the door and secured by means of screws 21 to the housing 22 of the pump there is provided a decorative retaining strip or overhanging lip 23. Between the lower edge of the strip 23 and the housing 22 and in a space provided therefor, there is a strip of sealing material such as felt 24 or the like, against which the upper edge of the door is adapted to abut in sealing engagement when in closed position.

On one of the permanent side walls of the housing 22 there is provided a hand door 25 having a suitable lock through which access may be had by the hand to the lever 17.

When the door stands open, as shown in dotted lines in Fig. 1, the upper edge thereof is below the lower edge of the decorative strip 23 and the sealing strip 24 so as to be free thereof, and the latching mechanism is in the position shown in Figs. 6 and 8.

To close the door 1, it is swung about its hinged mountings into closed position. Thereupon the operator having access to the lever 17 through

the hand door 25 forces the lever downwardly from the position shown in Fig. 6 to that shown in Fig. 2. In the latter position the pivotal connection 18 between the lever 17 and connecting rod 15 is moved to over center position with respect to its pivotal mounting 20. In such movement to its over center position, the connecting rod 15 is elevated so as to lift the lever 9 from the position shown in Fig. 8 to that shown in Fig. 5. Elevation of the lever 9 causes the pin 10 to elevate the entire door 1 upon the hinge pins 5 until the upper edge thereof engages under and behind the decorative strip 23 and into sealing engagement with the strip 24, as shown in Fig. 3. At the same time the latching plate 11, which is bent slightly outwardly so as to engage easily into an elongated slot formed in the plate 2, tends to draw the door inwardly into closed position by reason of its wedging action in the slot of the plate 2, as illustrated in Figs. 4 and 5.

The entire weight of the door assembly is now supported upon the end of the lever 17 pivoted at 18 which supports it through the connecting rod 15 by reason of the over center position thereof and the limit of movement of the lever 17 because of the engagement of the laterally-extending lip 17*a* with the connecting rod 15 for preventing further movement.

By reason of the foregoing it is to be noted that the latching action of the door or closure is such that it is not only drawn inwardly into closing position through the wedging action of the latching plate 11, but is simultaneously elevated to seal the top thereof by the pin 10. Thus, it has both an inward and upward movement into locking and sealing position. The upward movement has the effect of not only sealing the top of the closure against the elements, but positions the upper edge back of the decorative strip so that it will be concealed.

The invention claimed is:

1. In a device for manipulating a closure member, the combination with a housing member provided with an opening and a downwardly projecting flange along the upper edge thereof, of hinges on said members to pivotally and slidably support the closure member on the housing member in closing position below and behind said flange, a projection on one of said members, a lever pivoted on the other member in position to engage said projection, a latching device associated with said lever, and means connected with said lever and latching device for simultaneously moving them into position for engaging said projection to elevate the closure member for inserting its upper edge behind said flange and latch it in closed position.

2. In a device for manipulating a closure, the combination with a housing provided with an opening and a downwardly projecting flange along the upper edge thereof, of hinges on said members to pivotally and slidably support the closure member on the housing member in closing position below and behind said flange, an inwardly extending projection on said door, a lever pivoted to said housing and extending into position for engagement with said projection when the door is closed, a latching device on said lever adapted to interlock with said projection, and means connected with said lever for swinging it into engagement with said projection and causing said latching device to interlock therewith, whereby said door will be simultaneously elevated with its upper edge behind said flange and be latched in closed position.

3. In a device for manipulating a closure, the combination with a housing provided with an opening and a downwardly projecting flange along the upper edge thereof, hinged members for swingingly and slidably supporting said closure on said housing along the vertical edge of said opening so as to swing from open to closed position below and behind said flange, a sealing strip secured to said housing along the upper edge of said opening behind said flange, an inwardly projecting plate secured to the inner surface of said closure and having an aperture therein, a lever pivoted to said housing and provided with a pin movable into engagement with said plate, a latching member on said lever in position to engage in the aperture of said plate when the door is closed for latching it in closed position, and an operating handle connected with said lever for moving it into position to simultaneously latch said closure and move the upper edge thereof into sealing engagement with said sealing strip behind the flange.

4. In a housing having an opening and a closure therefor, an overhanging flange on said housing extending along the upper edge of the opening, a sealing strip defining the upper edge of the opening behind said flange, hinges for slidably and pivotally supporting said closure along the side of the opening, said closure being movable thereon to a position below and behind said flange, and means for engaging said closure when in said position for simultaneously drawing it into sealing and latched position with respect to said housing and elevating it on said hinges for causing the top edge thereof to slide into engagement with said sealing strip behind said flange.

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