Feb. 24, 1931. B. F. FOSS 1,794,069

MAIL BOX DOOR PLATE AND COVER

Filed Feb. 28, 1929 2 Sheets-Sheet 1

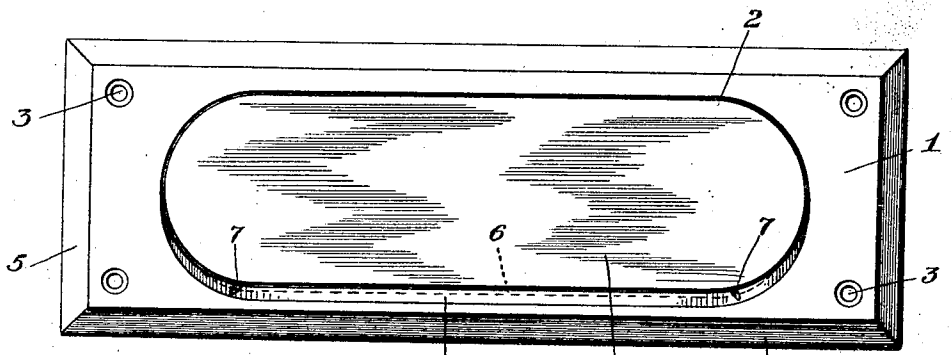


Fig. 1

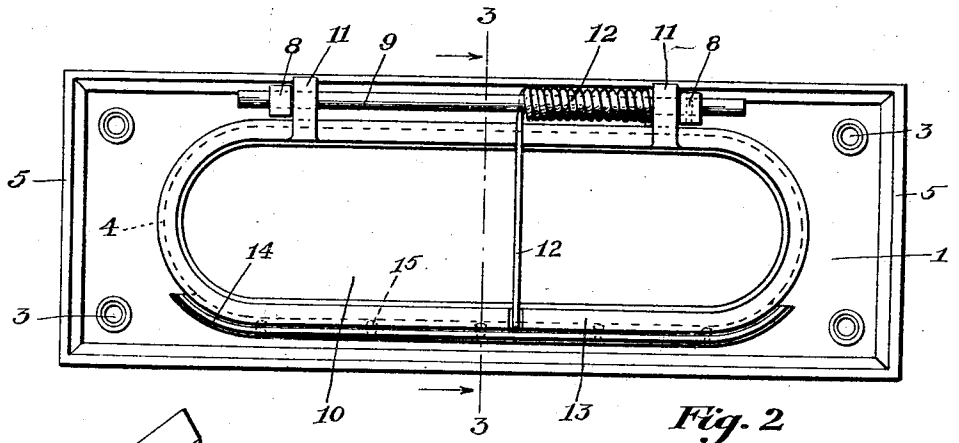


Fig. 2

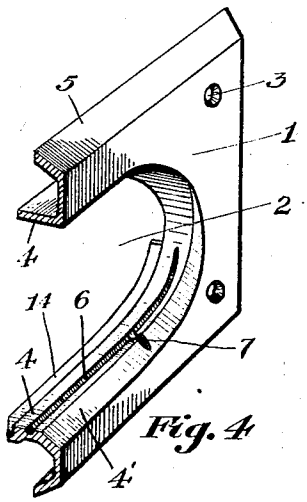


Fig. 4

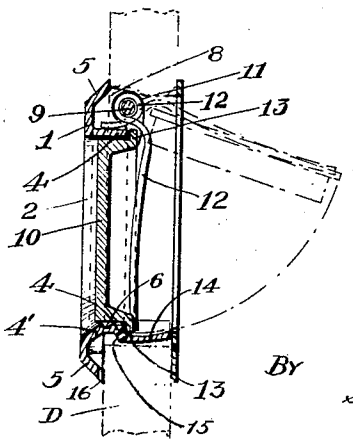


Fig. 3

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MAIL BOX DOOR PLATE AND COVER

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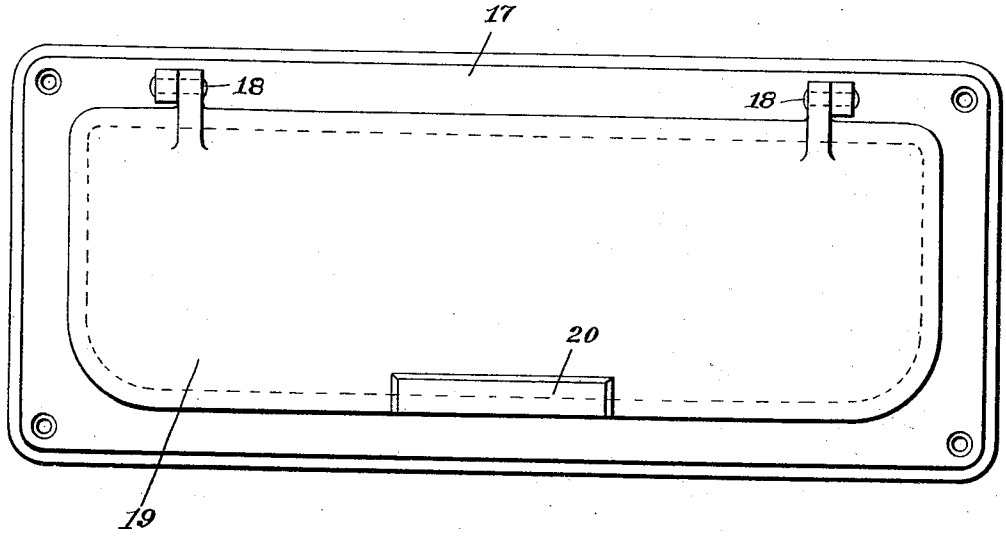


Fig. 5

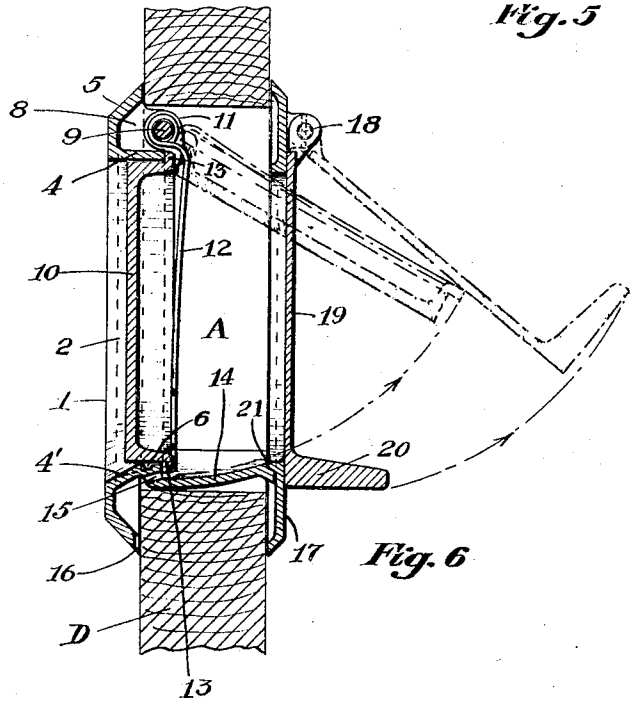


Fig. 6

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UNITED STATES PATENT OFFICE

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MAIL-BOX DOOR PLATE AND COVER

Application filed February 28, 1929. Serial No. 343,471.

In house to house delivery of mail matter it is quite usual for the carrier to deposit the householder's mail in a box secured to the wall of the house or otherwise located on the householder's grounds.

In most instances these boxes are more or less unsightly in appearance and their use by the householder necessitates his going out of doors to get his mail.

In many cases, however, the carrier will find the well known door-plate through the opening in which he will insert the mail, making it much more convenient for the householder as he has it delivered to him inside his house.

Heretofore, one serious objection to these door-plates has been their inability to prevent rain or snow, especially when accompanied with high velocity of wind, leaking through the cover joint into the interior of the dwelling.

It is a general object of my present invention, which deals with mail-receiving devices, to provide improved facilities therein whereby a door-plate and cover which is leak-proof against rain, snow or air may be had.

Specific objects of my invention are providing a very deep front cover extending for a considerable distance into the opening in the front door-plate, and in bevelling the sill of the latter to secure a water-shed, the inclined surface of which is carried rearwardly a short distance under the bottom of the cover so that a large portion of the rain, beating against the latter, may be deflected and directed downwardly on the outside of the door.

Another object is to provide on the rear of the front cover a laterally projecting peripheral flange which abuts on the inner face of the front door-plate and forms an air lock or seal largely preventing the passage of air or water through the very confined space between the edges of the cover and the wall of the opening in the door-plate.

Another object is to provide a longitudinally disposed gutter on the sill of the front door-plate which intercepts any water which might possibly start inwardly, between the cover and the wall of the door-plate, and returns it, through transverse gutters, to the outside of the door.

A further object concerns a catch basin extending rearwardly from the front door-plate sill, with catch drains therefrom to return to the outside any water which may have passed the front cover.

And a still further and final object resides in the employment of a rear cover and door-plate which effectively blocks all chances of rain seeping through the apparatus to the inside of the building,—this provision being a precautionary measure adopted in cases where the door is in a particularly exposed location.

I have illustrated my invention by the use of the accompanying drawings in which,—

Fig. 1 is an elevation of my device showing the outside view of the front door-plate and cover;

Fig. 2 is the same, viewed from the inside;

Fig. 3 is a transverse sectional elevation, the section being taken on line 3—3, Fig. 2;

Fig. 4 is a fragmentary perspective view of the front door-plate;

Fig. 5 is an elevation of the rear door-plate and cover, and

Fig. 6 is a transverse sectional elevation of the two door-plates and two covers therefor shown assembled on a door.

Similar reference characters identify like parts in all views.

Referring to the drawings, 1 represents the front door-plate which has an opening 2 therein through which mail matter may be passed into the interior of the building. The door-plate is secured to a door by screws or bolts (not shown) operable in holes 3.

A peripheral flange 4 projecting inwardly from and extending completely around the hole or opening 2 has its rearward edge ground or milled to present a true flat surface, and a bevelled flange 5 making face contact with the side of the door forms the outer margins of the front door-plate.

I provide a water-shed 4′ on the lower wall of the oblong opening 2 by bevelling the edge of the front door-plate and extending the bevel along the horizontal portion and

for a considerable distance up the rounded ends of the opening.

Immediately to the rear of the top edge of the inclined water-shed there is made a longitudinal groove or gutter 6, the latter, also, extending part way up the rounded ends of the opening 2. Making connection with the gutter 6 are transverse gutters 7 which cut the surface of the water-shed and provide means to conduct any water accumulating in the main gutter outwardly and downwardly over the outside of the door.

On the rearward side of the door-plate 1 are bosses 8 in which is secured a shaft 9. A cover 10, having ears 11 in which the shaft 9 is journalled, swings from the latter and normally closes the opening 2, through the instrumentality of the spring 12.

Extending around the rearward edge of the cover 10 is a lateral flange 13 fitted to closely abut the door-plate flange 4 when the cover is closed.

By reference to Figs. 3 and 6 it will be observed that the forward side of the cover 10 extends into the opening 2 beyond the line where the water-shed starts to incline downwardly. This overhang of the cover acts as a hood to shield the entrance to the space between the cover and the wall of the opening 2, and causes the water, when deflected from the cover, to pass on to the water-shed at a point below the entrance to the space just referred to. However, should any water seep through this space it will collect in the gutter 6 and eventually pass out through the gutters 7, the flange 13 contacting with the flange 4 greatly assisting in procuring a non-leak combination by establishing an air lock or seal, which, by checking the draft of air otherwise possible of being drawn through the confined space, largely prevents the water passing beyond the gutter 6.

Occasionally, during a very severe rain storm with high pressure wind, the cover 10 will vibrate slightly,—enough, however, to allow slight amounts of water to pass by it. To collect this water and return it to the outside, I provide a shelf, or as I term it a catch basin 14, integral with the flange 4. This catch basin is higher at the rear, so that any water entering it will drain toward the front, and at this point are a plurality of catch drains or scuppers 15 which carry the water outside the door and downward through openings 16 made in the door-contacting face of the flange 5.

As it is not desirable to make the torsional strength of the spring 12 sufficient to withstand all extreme wind pressures in its duty of holding the cover closed, due to the necessity of having the latter operate without too great resistance to opening when passing mail through the door-plate, I equip my device with an auxiliary cover, which, in conjunction with the front door-plate cover 10 provides a substantially air-tight combination.

Secured to the inside of the door, D, is a rear door-plate 17, hinged to which, at 18, is a rear cover 19. On the bottom of the cover 19, projecting inwardly, is a counterweight 20, which, being outside the plumb line from the pivotal point of the cover acts to automatically keep the cover closed without resort to springs or other devices. The door-plate 17 has close fitting connection with the end of the catch basin 14, at 21, so that water may not pass down on the inside of the door.

The prime object of the rear cover 19 is to complete the sealing of the device against admission of outside atmosphere into the room, hall or vestibule of the dwelling, but in the exercise of this function it also provides a dead air space A which is effective not only to check the draft of air through the several joints and openings, with a consequent hindrance to the entrance of water into the apparatus but further acts as an insulating agent, protecting the interior of the house from low temperatures outside, which protection is not offered in a single cover door-plate.

So as to reduce the cost of manufacture and make the device as simple as possible I have employed no gaskets in the combination, relying solely on the exercise of due care in having good mutually contacting surface joints between the several respective flanges and as small a space between the cover 10 and the wall of the opening 2 as modern manufacturing methods can consistently maintain.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:—

1. In a device of the character described adapted to be attached to the door of a building, the combination of a door-plate having an opening therethrough, a rearwardly disposed, continuous flange extending from said door-plate and surrounding a space coextensive in length and breadth with said door-plate opening, a cover hinged to and on the rearward side of said door-plate, adapted to enter the space surrounded by said flange so that when said cover is in its extreme forward position its front face stands substantially midway of the outside faces, respectively, of said door-plate and said flange, a lateral projector extending completely around the rearward face of said cover and adapted to impinge on the face of said flange to close the opening through said device, a forwardly inclined water-shed starting on said flange from a point rearwardly of the front face of said cover when closed and continuing to the front face of said door-plate, a longitudinal gutter disposed on said flange rearwardly of said water-shed and beneath said cover, transversely disposed gutters ex-

tending outwardly from said longitudinal gutter and terminating on said water-shed, and means to normally hold said cover in yielding engagement with said flange.

2. In a device of the character described, adapted to be applied to the door of a building, comprising in combination with a door-plate having an opening therethrough, means to secure said door-plate on the outer side of the door, a continuous flange on and extending rearwardly from said door-plate and enclosing a space co-extensive in length and breadth with the opening in said door-plate, a cover hinged to the rearward side of said door-plate and projecting for a spaced distance into the opening therethrough, a lateral flange on said cover adapted to engage the rearward edge of said door-plate flange, a water-shed on said door-plate flange, the bevelled face thereof extending rearwardly of the front face of said cover when closed, a longitudinally disposed gutter on the top side of the lower, horizontal portion of said door-plate flange, inwardly of said water-shed, means to drain said gutter toward the front side of said door-plate, a catch basin on and extending rearwardly from the lower portion of said door-plate flange, its top surface being inclined forwardly and its ends upturned, means to drain said catch-basin toward the front side of said door-plate, and a spring adapted to normally hold the forward face of said lateral flange on said cover in yielding engagement with the rearward edge of said door-plate flange.

3. In a device of the character described, adapted to be applied to the door of a building, comprising in combination, a door-plate secured to the outer side of the door and having a portion extending into the orifice in the door, a cover hinged to and engaging the rearward side of said door-plate, a second door-plate, secured to the inner side of the door, in substantial alignment with the first mentioned door-plate, a cover hinged to and adapted to swingingly engage the rearward side of said second mentioned door-plate, said second cover adapted to be actuated from outside the door by the movement inwardly of said first mentioned cover, a catch basin on and extending rearwardly from the lower portion of said first mentioned door-plate to the second mentioned door-plate, and means to normally hold each of said covers in yielding engagement with its adjacent and respective door-plate.

In testimony whereof I affix my signature.

BENJAMIN F. FOSS.