Dec. 30, 1924. 1,520,819

F. W. HONENS

DOOR FOR BASEMENT OPENINGS

Filed May 15, 1922

Fig. 1.

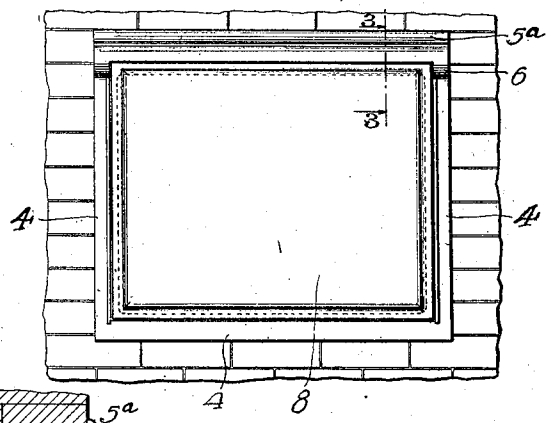


Fig. 2.

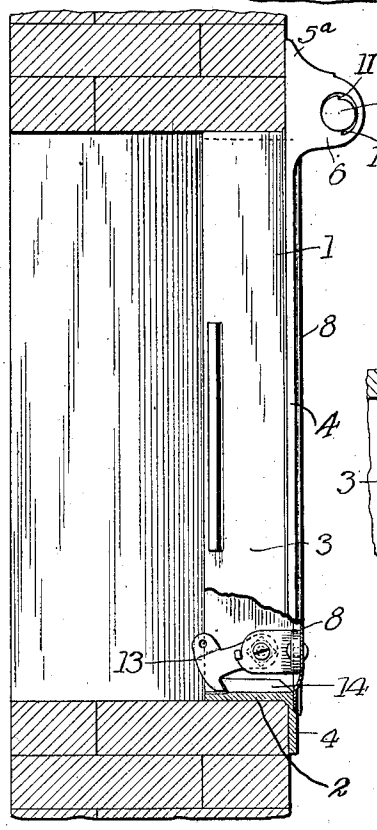


Fig. 3.

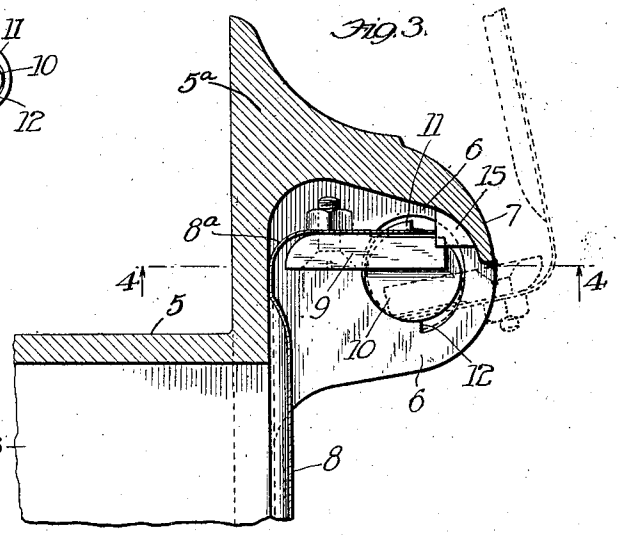


Fig. 4.

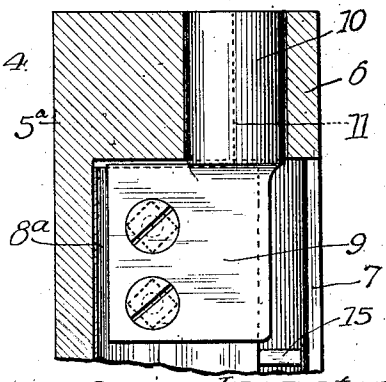


Fig. 5.

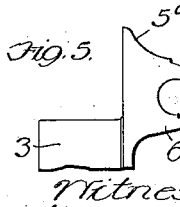
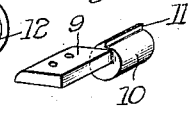


Fig. 6.



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UNITED STATES PATENT OFFICE.

FRED W. HONENS, OF STERLING, ILLINOIS.

DOOR FOR BASEMENT OPENINGS.

Application filed May 15, 1922. Serial No. 561,148.

To all whom it may concern:

Be it known that I, FRED W. HONENS, a citizen of the United States, residing at Sterling, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Doors for Basement Openings, of which the following is a specification.

My invention relates to a door designed to provide a secure, substantial closure for such an opening as the entrance to a coal bin, or a coal chute in the basement of a building, whether a dwelling or other structure which it is desired to guard securely against intrusion and the effects of inclement weather. This object of my invention is the production of a strong, rugged and secure closure having certain novel features of construction which render it more desirable and better adapted for the ends in view than prior doors of a similar character known to me. One feature of my invention relates to simple and effective means for automatically maintaining the door in wide open position when desired while permitting manipulation whereby it may be readily closed; another to means for preventing rattling or clattering of the door in its frame by the wind or from other causes, and other and incidental desirable features of construction and arrangement will be apparent from the description hereinafter given, the essential features of my invention being more fully pointed out in the appended claims.

In the drawings, Figure 1 is a face view of my novel door secured in a wall; Fig. 2 is a side view of the same, a part being broken away to show the latching members and the wall being indicated in sections; Fig. 3 is an enlarged fragmentary section on the line 3—3 of Fig. 2; Fig. 4 is a horizontal section of the same parts on the line 4—4 of Fig. 3; and Figs. 5 and 6 are details showing the construction of the two parts of the door hinges.

The same reference characters indicate the same parts in all the figures of the drawing.

The frame of my novel closure consists of a single integral metal casting 1, in the present instance rectangular in shape, adapted to be built in and permanently secured in place in the wall. The bottom member 2 and side or jamb members 3—3 are formed with facing flanges 4, making such members L-shaped in cross-section, and the top member 5, which has a facing portion 5^a merging into the adjoining portions 4 of the side members, is provided also with bearing lugs 6 extending down on the side members and a curved molding 7 continuous with the upper portion of such lugs and extending forwardly from the facing portion 5^a in the form of an inverted cupped flange or hood between said lugs.

The bottom member and side members of the frame are rabbeted to provide a seat for the reception of the sheet metal door 8, which is formed with an outwardly curved portion 8^a at its top adjacent the inner face of the hood 7 and is equipped at its opposite upper corners with pivot blocks 9 having pivots 10 arranged to engage bearings in the lugs 6. It will be noted (see Fig. 6) that the pivots are each cut away at the top to form a shoulder 11, and the bearings in the lugs 6 are formed with shoulders 12 at the bottom arranged to cooperate with the shoulders 11 when the door is rotated through an angle of approximately 180 degrees, the fitting of the parts of the pivotal conection being sufficiently loose to permit the shoulders to drop into engagement by gravity when the door is rotated on its pivots to extreme open position, and be readily lifted out of engagement when the door is to be closed. If desired the pivot and its bearing at one side only of the door may be constructed as described, the bearing at the other end being of ordinary construction but I regard the construction with stops at both ends as preferable.

The lower side of the door is provided on the inside with a pivoted cam latch 13 arranged to cooperate with a keeper member 14 at the lower side of the frame opening to hold the door closed. In order to put the door under tension on its hinges and in the frame when in latched position, the outer edge of the portion 8^a of the door is arranged to come into contact with a pair of lugs 15 formed on the inside of the hood 7 a little before engagement of the latch 13 as the door is closed, the lugs 15 acting as a fulcrum against which, in the further closing movement of the door, the latter reacts, carrying the pivots towards the rear wall of their bearings and forcing the bend or roll at the top of the door rearwardly against the face of the frame, and the inherent resiliency of the sheet metal of which

the door is formed putting the latch connection under tension, and preventing any rattling of the door which might otherwise arise from a loose connection.

While I have shown the door as supported by separate pivot block members individually secured to the door it will be understood that a single cross shaft journaled in the bearing lugs may be employed, and that other parts and portions of the different members may be made integral or formed of separate parts secured together, as considered convenient or desirable.

It will be noted that the hood 7 overhangs the top edge of the frame opening and shelters the upper edge of the door and the inner portions of the pivots 10, and serves to direct the rain and snow away so that they cannot pass to the inside and so that there is little liability of an incrustation of ice or snow forming along the hinge line and interfering with its movement. The door therefore keeps out the rain and snow effectively and can be opened (from the inside) with entire assurance that it will operate properly.

I claim:

1. A closure having a frame formed with a forwardly extending hood overhanging the top edge of its opening, and a pivoted sheet metal door having a forwardly extending flange adjacent said hood and latching means adjacent its lower edge, said hood being formed with a stop surface arranged to cooperate with the flange on said door to place it under tension when in latched position.

2. A closure having a frame formed with a forwardly extending hood overhanging the top edge of its opening, and a pivoted sheet metal door having a forwardly extending flange adjacent said hood and latching means adjacent its lower edge, said hood being formed with a stop surface against which the forward edge of said flange is arranged to bring up towards the end of the closing movement of the door, whereby said door is put under tension when in latched position.

3. A closure having a frame equipped adjacent and forwardly of the top of the door opening with a stop member, and a pivoted sheet metal door having a forwardly extending flange portion at its top and latching means adjacent its lower edge, said flange being arranged to bring up against said stop member towards the end of the closing movement of the door, whereby said door will be put under tension when in latched position.

4. A closure having a frame formed with a stop surface, and a sheet metal door pivoted at one side to said frame and equipped with a latch at its opposite side, said door being formed with a contact portion arranged to bring up against said stop surface and react to press said door against the face of said frame when the door is closed to latched position.

FRED W. HONENS.