Oct. 3, 1939. G. W. LYONS 2,174,989

HATCHWAY

Filed Oct. 9, 1936

FIG. 1.

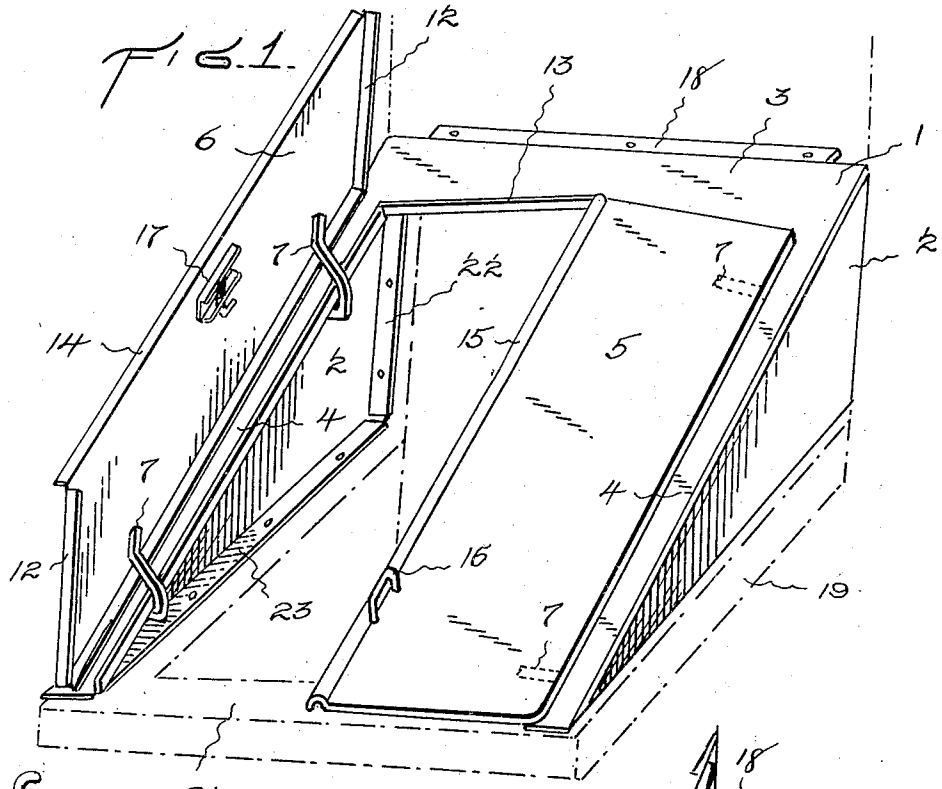


FIG. 4.

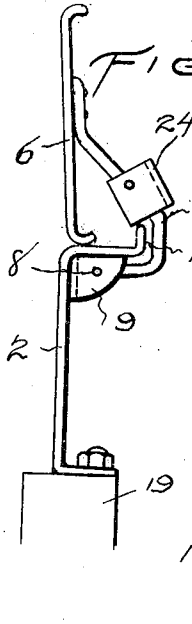


FIG. 3.

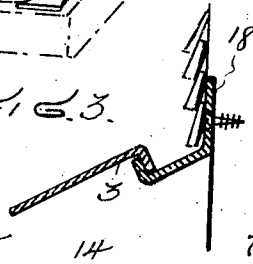
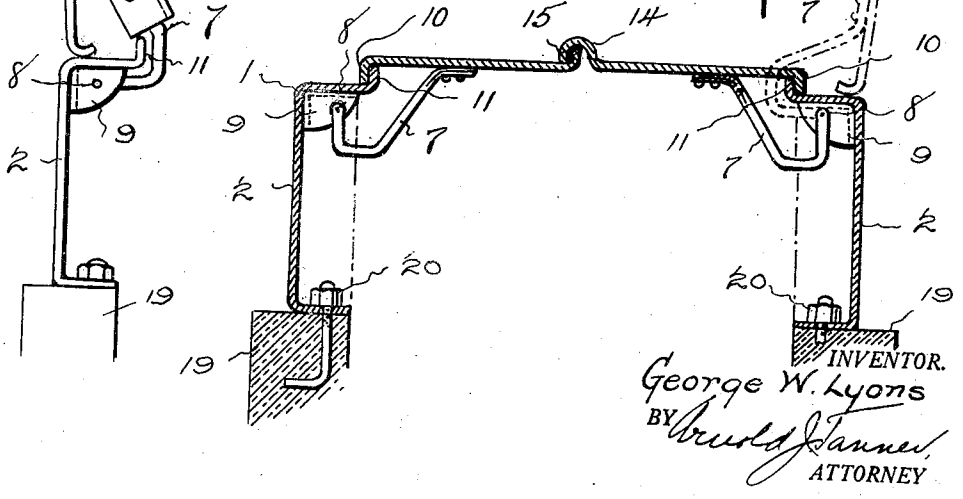


FIG. 2.



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HATCHWAY

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4 Claims. (Cl. 94—36)

The present invention has relation to hatchways and more particularly to doors or closure means therefor and amongst several objects of the invention one is to provide a structure including the doors and frame therefor, all composed of sheet metal.

Another object is to provide a structure which is water-tight, fire-proof and burglar-proof and still another object is to compose the structure of several parts to facilitate manufacture, handling and transportation and to provide means for assembling said parts whereby the structure may be easily set up by a comparatively inexperienced person.

As a part of the present invention the frame is designed so as to be of angular shape having a downwardly sloping top so as to act as a watershed and further the doors are diagonally hinged relatively to the frame so that when closed they will fit tightly on the frame and when open said hinges will operate as stops to hold the doors in a vertical open position so as to permit the full opening of the hatchway.

The invention will be hereinafter more fully described with reference to the accompanying drawing, wherein—

Figure 1 is a perspective view showing the complete device with one of the doors shown in the full open position;

Figure 2 is a cross-sectional view of the improved device;

Figure 3 is a detail view in section showing a plate used when the structure is secured over the lentil of a door, and

Figure 4 is a detail end view showing one door with support therefor and a device for preventing self closing of the door.

Referring to said drawing, 1 indicates the complete frame which as shown in the drawing comprises in one piece the angular side walls 2 and a connecting cross head 3, but it will be understood if so desired the side walls and head may be in separate pieces bolted together. The side pieces have inwardly extending flanges 4 which may form a part of the frame and also serve as supports for the double doors 5—5. These doors are hinged to said flanges 4 by the means of angular under hung brackets 7 secured at one end to the doors and pivoted at 8 to bearing blocks 9 secured to the frame members 2 and 3.

It should be noted that the doors being hinged to a sloping or angular structure the hinges are diagonally disposed so that the doors will swing on the hinges in a relatively angular position in order that the downwardly extending lips 10 on the inner edge of the doors will abut and fit against the upwardly projecting lips 11 on the frame flanges 4. This close fit eliminates possibility of water entering at the sides and to effectually close the top of the door downwardly projecting lip 12 on the doors fit against lips 13 on the head member 3. The top edges of the door are arranged at an angle and the head is so shaped that there is a slope from the middle towards both sides thereby acting as an efficient watershed.

To further effectually close the doors against entrance of water the free edge of one door has upwardly extending lip 14 which fits into turned over edge 15 of the other door.

The door with the over-lapping turned edge 15 is provided with a handle 16 to facilitate opening of the door and the other door is provided with a lock 17 which engages companion lock member carried by the other door so that the doors may be locked.

In setting up the device the head piece 3 of the frame is secured under the lentil of the door and to facilitate fitting a separate plate 18 is provided. In some instances when conditions make it necessary the plate 18^1, as shown in Figure 3, is employed to secure the structure over the lentil of the door. The sides of the frame 2 are secured to a brick or cement foundation 19 by bolts 20 or other suitable means. The brick or cement foundation is provided with a front sill 21 on which the front end of the structure rests. To secure the frame at all points end flanges 22 and bottom flanges 23 are provided and by such means the sides of the device are secured to the foundation and the door casing. As shown the flanges 22 and 23 form an integral part of the frame but it be understood to facilitate manufacture these flanges may be separate plates secured to the side frame.

Referring to Figure 4, 24 is an eccentrically pivoted bifurcated piece mounted on the bracket 7 arranged to engage the lip 11 when the door is in the open position and thereby prevent self closing of the door. The block 24 must be manipulated to release it when the door is closed and to facilitate operation only one block is used on each door.

Various modifications may be made in carrying out the details of the invention hereinbefore described, and it is to be understood that any modification coming fairly within the terms of the appended claims shall be covered thereby.

I claim:

1. A hatchway closure means comprising a frame having angular sides and a downwardly sloping top, said angular sides having inwardly

turned flanges, an opening in said frame between said flanges, doors for closing said opening, means hinged on the underside of said flanges, said doors being diagonally hinged relatively to said frame whereby said doors are retained in a vertical open position substantially at right angles to said sloping top and said means comprising eccentrically pivoted pieces carried by said hinges for preventing self closing of said doors.

2. A structure of the class described providing closure means for a hatchway, said structure comprising a sheet metal frame having angular side walls having inwardly bent flanges, a sloping top with an opening hinged on the underside of said flanges therein; doors for closing said opening and means comprising upwardly bent lips on said flanges providing a tight closure of said doors to prevent entrance of water.

3. A structure of the class described providing closure means for a hatchway, said structure comprising a sheet metal frame having side walls with inwardly bent flanges, an opening between said flanges; doors for closing said opening hinged on the underside of said flanges, means comprising downwardly bent edges of said doors providing a tight closure of said doors and said means being adapted to fit and abut against upwardly bent lips carried by said flanges.

4. A sheet metal structure of the class described comprising a frame having angular sides, a head piece connecting said sides, inwardly extending flanges formed by bending edges of said sides bounding an opening in the structure, doors having lips or turned up edges for closing said opening, said doors being hinged on the underside to said flanges, said angular side walls and said head piece carrying means for securing the structure to fixed points, and said flanges and head piece having lips arranged to fit closely with the lips provided on the doors so as to provide a watertight seat for said doors when closed.

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