R. W. BAILY.

CHUTE.

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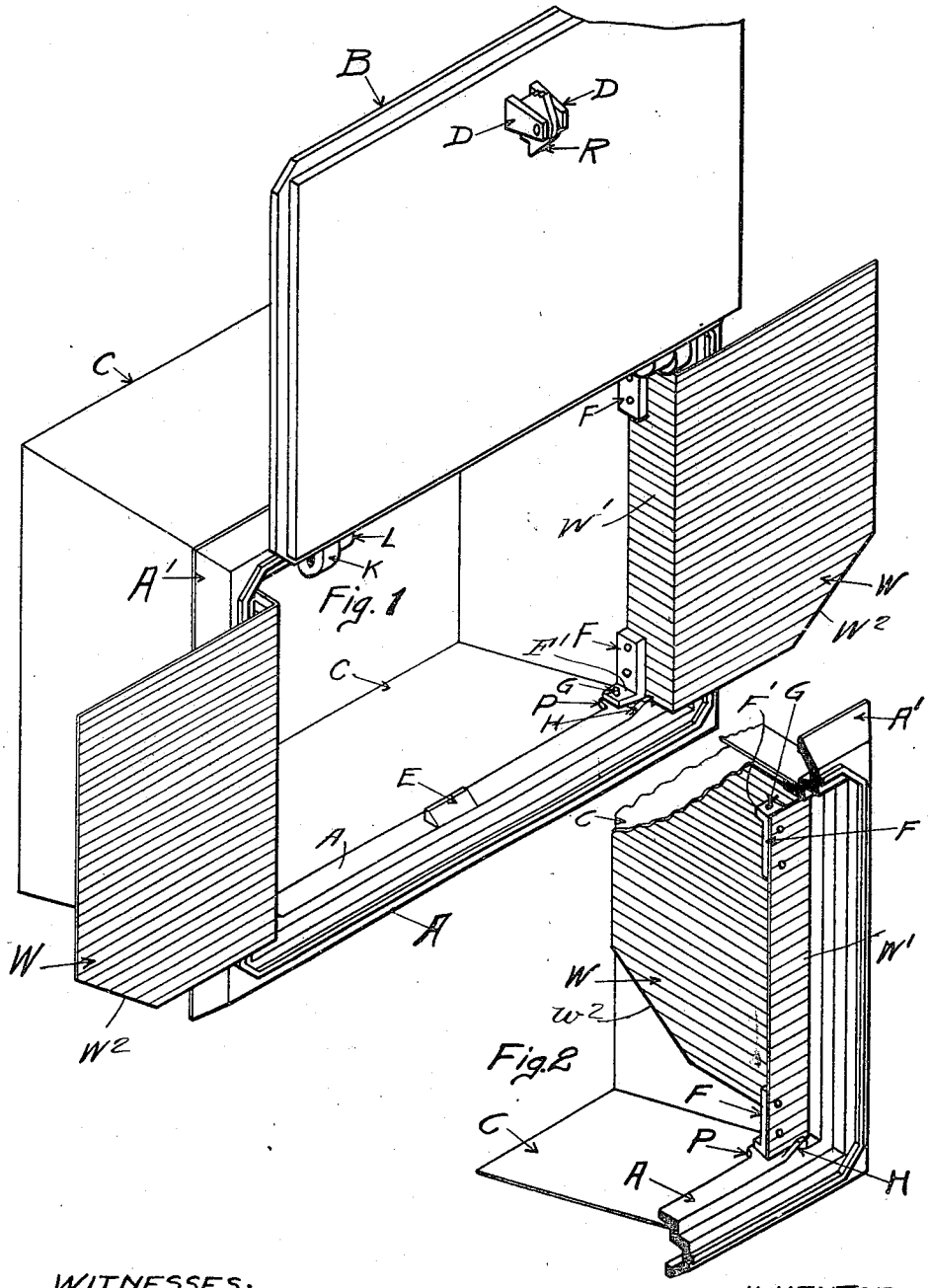


Fig. 1

Fig. 2

WITNESSES:

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CHUTE.

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To all whom it may concern:

Be it known that I, ROBERT W. BAILY, a citizen of the United States, and a resident of Oskaloosa, in the county of Mahaska and State of Iowa, have invented a new and useful Improvement in Chutes, of which the following is a specification.

My invention is an improvement in chutes, and the invention has for its object to provide a chute of the character specified, especially adapted for use in cellars or other places of storage, wherein a substantially rectangular open frame is provided adapted to form a passage or to line or frame an opening through a wall, and having a door for permitting the frame or opening to be closed when desired, and having in addition protecting wings at the opposite sides of the frame for preventing injury to the wall of the building from the impact of fuel or the like passed through the frame or opening, the said wings being so arranged that they may be moved inward into inoperative position or outward into protecting position.

In the drawings:—Figure 1 is a perspective view of the improved chute, and Fig. 2 is a detail partial perspective view showing the wings in inoperative position.

In the present embodiment of the invention, the chute comprises a frame A of suitable dimensions, and preferably of cast iron, and a body C of sheet metal, as for instance sheet iron, is connected with the said frame, the said body extending inwardly from the frame. The body as shown is substantially rectangular in cross section but is tapering or frusto-pyramidal, and the small end of the body is connected to the frame.

The frame as shown has an ornamental extension outside of the frame proper, and the body C is secured to the outer face of the frame, and the ornamental flange A′ extends beyond the body. This flange shown more particularly in Fig. 2 is designed to fit against the outer face of the wall of the building to form a closure between the frame and the wall and to hide the edges of the opening at the frame. The body C is intended to extend through the opening in the wall to the interior of the bin or to the place of storage.

The door B is hinged to the frame at the top thereof, and arranged to swing into open position or downward into closed position. The door is opened by lifting it upward into the position of Fig. 1, and it is normally held in closed position by a latch. This latch is secured to the inner face of the door near the lower edge thereof, and the latch R is supported between bearing lugs D on the door.

The latch is in the form of a plate having a tooth or catch, which is adapted to engage over a catch E in the frame. Protecting wings are provided for protecting the walls at the opposite sides of the opening from injury through the impact of coal or the like, and the door B serves a like purpose at the upper side of the opening. Each of the wings is of sheet metal, consisting of a body portion W and an angular flange portion W′ extending at approximately a right angle from the body.

Hinge plates F are secured to the flange W′ by means of rivets or the like at the top and bottom thereof, and each hinge plate has an angular lug F′ at its outer end which is provided with an opening for receiving a hinge pin G on the frame. The angular lugs F′ extend laterally outward from the flanges W′, and the hinge pins G are at the top and bottom of the frame.

The lower cross member of the frame A is provided near each end with an upstanding lug H, and the wings W are of such width that they may be lifted upward or move over the lugs H. It will be noticed that each lug H has its inner face inclined and its outer face perpendicular, the inclined face acting as a cam to lift the wing when it is swung into open position.

The pivot or hinge pins G are spaced apart inwardly far enough from the adjacent end member of the frame so that the flange W′ of the adjacent wing may swing between the hinge pin and the adjacent end of the frame as shown particularly in Fig. 1. The lower outer corner of each wing is cut away as shown at W^2 to permit the wing to swing above the catch E, and it will be noticed that the door B is provided with hinge lugs K, which are adapted to register with lugs L on the frame and pintles or pivot pins are passed through the registering lugs to hinge the door to the frame.

In use, the body C is arranged in the opening through the wall with the ornamental flange A′ of the frame against the wall. This flange extends outwardly and inwardly to engage the wall at some little distance

from the opening, while the body of the frame fits within the opening. The body C of the chute fits outside of the body portion of the frame, and when not in use, all that is seen of the chute is the ornamental flange A′ and the door. When not in use the wings are arranged as shown in Fig. 2, the body portions W thereof fitting against the end walls of the body. The door B is swung downwardly into the opening of the frame and is held in closed position by the latch R.

When it is desired to use the improved chute the latch of the door is released from the catch and the door is swung upward into the position of Fig. 1, resting upon the wall above the frame. The wings W are then swung outward into the position of Fig. 1. As the bodies of the wings move outward the lower edge of each wing will engage the inclined face of the lug H and the wing will be lifted, moving over the lug and dropping down outside of the same as shown in Fig. 1. The flange W′ is the only portion of the wing that engages the lug and when the flange drops down on the outer side of the lug, the wing is held with the body thereof extending laterally approximately parallel with the outer surface of the wall. The wings are held in this position by the lugs and cannot swing inward. The chute is now open and coal or other material may be thrown through the frame and the body into the bin or other place of storage. Any lumps of coal or other material that might miss the frame will strike the wings W of the door B and will cause no injury to the wall of the building. It will be evident that any other preferred means might be made use of to hold the wings in open position.

I claim:—

1. A device of the character specified, comprising a frame adapted to fit within an opening in a wall and having a marginal flange adapted to engage the wall outside the opening, a body of approximately rectangular cross section and frusto-pyramidal connected with the frame at the inner side thereof, the small end of the body being connected to the frame and said body being adapted to extend through the opening, a door hinged to the upper side of the frame to close downwardly into the frame or upward against the wall, and a wing at each end of the frame, pivoted to the frame to swing inward into the body or outward to extend approximately parallel with the wall, each wing having an angular flange at its inner end, hinge lugs secured to the upper and lower end of the flange and having angular bearing lugs at their outer ends, the frame having pivot pins for engaging the lugs, and cam lugs on the frame for lifting the wings as they are swung outward, said wings being adapted to drop behind the cam lugs to hold the wings in open position.

2. A device of the character specified, comprising a frame adapted to fit within an opening in a wall and having a marginal flange adapted to engage the wall outside the opening, a body of approximately rectangular cross section and frusto-pyramidal connected with the frame at the inner side thereof, the small end of the body being connected to the frame and said body being adapted to extend through the opening, a door hinged to the upper side of the frame to close downwardly into the frame or upward against the wall, and a wing at each end of the frame pivoted to the frame to swing inward into the body or outward to extend approximately parallel with the wall, and means for holding the wings in open position.

3. A device of the character specified, comprising a frame adapted to fit within an opening in a wall and having a marginal flange adapted to engage the wall outside of the opening, a body of approximately rectangular cross section connected with the frame at the inner side thereof and adapted to extend through the opening, a door hinged to the upper side of the frame to close downwardly into the frame or upwardly against the wall, and a wing at each end of the frame and pivoted to the frame to swing inward into the body or outward to extend approximately parallel with the wall, and means for holding the wings in open position.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."