No. 889,809. PATENTED JUNE 2, 1908.

E. W. RITTER.

CHUTE.

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Fig. 1.

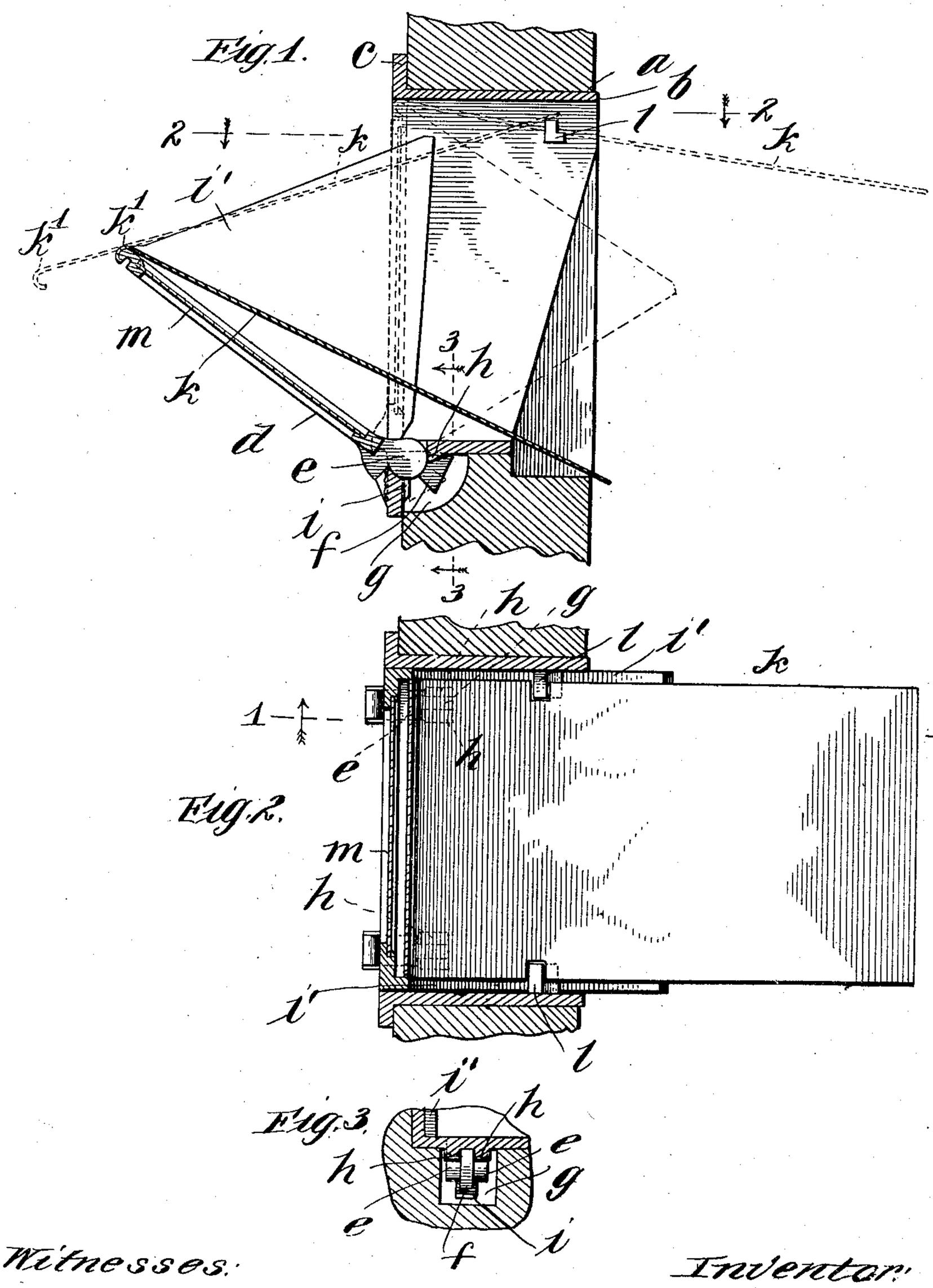

Fig. 2.

Fig. 3.

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CHUTE.

No. 889,809. Specification of Letters Patent. Patented June 2, 1908.

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To all whom it may concern:

Be it known that I, EMIL W. RITTER, citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Chutes, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to buildings, and has for its object the provision of improved means adapted to be used in window or other openings of buildings, whereby said openings may, when required, be used as chute openings, but which ordinarily, may have other purposes.

It is the object of my invention to leave said openings normally clear for the passage of light, whereby the device of my invention becomes of particular service in connection with basements, which may be provided with such openings in their walls for receiving coal and the like, when desired. Normally, as stated, these openings are clear for the passage of light and are preferably protected as by a screen or glass, for example. I provide a swinging frame which may be moved into and out of the opening, which frame has a limited range of swinging movement toward and from the outer face of the wall, and being adapted, when moved outwardly from the wall, to support the displaceable bottom member of a chute, the side members of which chute being desirably attached to said frame so as to move therewith. The swinging frame, when occupying one extreme position, serves to hold the adjustable chute bottom in an inclined position to permit the material that is to be passed through the opening to be cast thereupon, said chute bottom then being suitably inclined for the purpose. The chute bottom is so disposed as to lie above the frame when said bottom is acting in its capacity as a chute element, so as to protect the material inclosed by the frame, be it glass or screen. When said structure is drawn within the building, it is locked in its latter position by the interlocking action of the adjustable chute bottom with locking elements provided upon the sides of the wall opening. The interlocking action between the chute bottom and the locking elements complemental thereto may be effected upon the exterior of the wall, which is a decided advantage in my improved construction.

I will explain my invention more fully by reference to the accompanying drawing, showing the preferred embodiment thereof, in which—

Figure 1 is a view in sectional elevation of the device, indicating the chute structure in operative position in full lines and in unused position in dotted lines. Fig. 2 is a sectional plan showing the parts in the position they occupy when the chute is in an unused position. Fig. 3 is a sectional view indicating the hinge construction.

Like parts are indicated by similar characters of reference throughout the different figures.

The body member *a* of my invention resides in the wall structure formed of brick or other suitable material, which has an opening therethrough for the reception of most of the components of the rest of the structure, the opening in which body member being faced, if desired, by means of a rectangular iron facing *b* provided with a flange *c* that surrounds the opening at the front face of the wall. A swinging frame *d* is desirably journaled at its lower margin to have an axis of rotation near the lower front edge of the opening in the element *b*, said frame having at each end of its lower margin a shaft formation *e* that fits correspondingly shaped recesses in the metal structure *b*, *c*, constituting a journal connection. The elements *e* are provided with wings *f* that are adapted to move in a recess *g* provided in the body structure *a*, in which recess *g* there are provided limiting lugs *h* and *i* that serve, respectively, to limit the outward and inward movement of the frame *d* by their engagement with the elements *f*. The swinging frame *d* is provided with side wings i^1 that margin those edges of said frame which constitute the vertical edges when the frame is closed to the position indicated in Fig. 2, and which constitute sides of a chute that coöperate with the element *k* that is adapted to constitute the bottom of the chute when the parts are in the position shown in Fig. 1 by full lines, and which is adapted to lock the frame element *d* in position when the parts are in the position shown in dotted lines in Fig. 1 and full lines in Fig. 2. When the frame element *d* is closed, the vertical members of the locking lugs *l* project their notches in the sides of the element *k* to lock said frame in its closed position, as indicated in dotted lines in Fig. 1 and as shown in Fig. 2.

When it is desired to use the structure as a chute, the inner and free end of the element *k* is raised until said element clears the locking lugs *l*, whereafter the frame *d* may be swung outwardly until it reaches the limit of its downward movement, in which position the bottom chute element *k* may be supported at one end by the upper marginal portion of the frame *d* and at the lower end by the lower inner marginal portion of the opening in the body member *a*. When the parts are in this position, the elements *i*, *k* constitute a satisfactory chute, through which coal or other substances may be discharged into the interior of the building. When it is desired to restore the frame *d* to a closed position and lock the same in such position, the chute element *k* may be drawn forwardly, as indicated at k^1, so that the forward portion of the element *k* may be grasped to lift the inner end of the element *k* clear of the lugs *l* and above the same, whereafter the element *k* may be shoved forwardly until its side notches drop over the vertical extensions of the lugs *l*, the horizontal extensions of the lugs *l* serving to prevent the element *k* from dropping. In the forward movement of the element *k*, the hooked marginal portion thereof is engaged with the grooved upper marginal portion of the frame *d*, whereupon the frame *d* is also moved forwardly to a closed position, the hooked marginal portion of the element *k* engaging the frame *d* to prevent said frame from moving outwardly when the element *k* has been engaged with the lugs *l*.

If the opening in the body member *a* is to be protected in any way by the element *d*, said frame may be constructed to contain a protecting element *m*, which, in the embodiment of the invention shown, is a pane of glass.

It will be seen that the bottom *k* is disposed back of the frame when the chute is adjusted for use, so that the material *m* is protected from the falling objects that are cast through the chute.

It is obvious that changes may readily be made in the device of my invention as said invention is exhibited in its preferred embodiment, without departing from the spirit of the invention, and I do not, therefore, wish to be limited to the precise construction shown, but,

Having thus described my invention, I claim as new and desire to secure by Letters-Patent:—

1. In a device of the class described, the combination with a body member having an opening therethrough, of a frame member movable toward and from said opening, and an adjustable chute bottom adapted, when said frame is moved outwardly, to lie above the same to enable material to be discharged above said frame onto said bottom.

2. In a device of the class described, the combination with a body member having an opening therethrough, of a frame member movable toward and from said opening, an adjustable chute bottom adapted, when said frame is moved outwardly to lie above the same to enable material to be discharged above said frame onto said bottom, and a locking device having complemental elements afforded upon the body member and said bottom to lock the bottom in position, said bottom having engagement with the said frame, thereby to hold the frame in a closed position when the bottom element is locked.

3. In a device of the class described, the combination with a body member having an opening therethrough, of a frame member movable toward and from said opening, an adjustable chute bottom adapted, when said frame is moved outwardly, to lie above the same to enable material to be discharged above said frame onto said bottom, and side chute members carried by the said frame and coöperating with said bottom member.

4. In a device of the class described, the combination with a body member having an opening therethrough, of a frame member movable toward and from said opening, an adjustable chute bottom adapted, when said frame is moved outwardly, to lie above the same to enable material to be discharged above said frame onto said bottom, a locking device having complemental elements afforded upon the body member and said bottom to lock the bottom in position, said bottom having engagement with the said frame, thereby to hold the frame in a closed position when the bottom element is locked, and side chute members carried by the said frame and coöperating with said bottom member.

5. In a device of the class described, the combination with a body member having an opening therethrough, of a frame member adapted to swing toward and from said opening, and an adjustable chute bottom adapted, when said frame is swung outwardly, to lie above the same to enable material to be discharged above said frame onto said bottom.

6. In a device of the class described, the combination with a body member having an opening therethrough, of a frame member adapted to swing toward and from said opening, an adjustable chute bottom, adapted, when said frame is swung outwardly, to lie above the same to enable material to be discharged above said frame onto said bottom, and a locking device having complemental elements afforded upon the body member and said bottom to lock the bottom in position, said bottom having engagement with the said frame, thereby to hold the frame in a closed position when the bottom element is locked.

7. In a device of the class described, the combination with a body member having an

opening therethrough, of a frame member adapted to swing toward and from said opening, an adjustable chute bottom adapted, when said frame is swung outwardly, to lie above the same to enable material to be discharged above said frame onto said bottom, and side chute members carried by the said frame and coöperating with said bottom member.

8. In a device of the class described, the combination with a body member having an opening therethrough, of a frame member adapted to swing toward and from said opening, an adjustable chute bottom adapted, when said frame is swung outwardly, to lie above the same to enable material to be discharged above said frame onto said bottom, a locking device having complemental elements afforded upon the body member and said bottom to lock the bottom in position, said bottom having engagement with the said frame, thereby to hold the frame in a closed position when the bottom element is locked, and side chute members carried by the said frame and coöperating with said bottom member.

9. In a device of the class described, the combination with a body member having an opening therethrough, of a frame member movable toward and from said opening, and an adjustable chute bottom adapted, when said frame is moved outwardly, to lie above the same to enable material to be discharged above said frame onto said bottom, said frame containing an element serving to protect the opening when the frame is closed, said latter element being protected by the said bottom when the frame is moved outwardly, said bottom then lying above said latter element.

10. In a device of the class described, the combination with a body member having an opening therethrough, of a frame member movable toward and from said opening, an adjustable chute bottom adapted, when said frame is moved outwardly, to lie above the same to enable material to be discharged above said frame onto said bottom, and a locking device having complemental elements afforded upon the body member and said bottom to lock the bottom in position, said bottom having engagement with the said frame, thereby to hold the frame in a closed position when the bottom element is locked, said frame containing an element serving to protect the opening when the frame is closed, said latter element being protected by the said bottom when the frame is moved outwardly, said bottom then lying above said latter element.

11. In a device of the class described, the combination with a body member having an opening therethrough, of a frame member movable toward and from said opening, an adjustable chute bottom adapted, when said frame is moved outwardly, to lie above the same to enable material to be discharged above said frame onto said bottom, and side chute members carried by the said frame and coöperating with said bottom member, said frame containing an element serving to protect the opening when the frame is closed, said latter element being protected by the said bottom when the frame is moved outwardly, said bottom then lying above said latter element.

12. In a device of the class described, the combination with a body member having an opening therethrough, of a frame member movable toward and from said opening, an adjustable chute bottom adapted; when said frame is moved outwardly, to lie above the same to enable material to be discharged above said frame onto said bottom, a locking device having complemental elements afforded upon the body member and said bottom to lock the bottom in position, said bottom having engagement with the said frame, thereby to hold the frame in a closed position when the bottom element is locked, and side chute members carried by the said frame and coöperating with said bottom member, said frame containing an element serving to protect the opening when the frame is closed, said latter element being protected by the said bottom when the frame is moved outwardly, said bottom then lying above said latter element.

13. In a device of the class described, the combination with a body member having an opening therethrough, of a frame member adapted to swing toward and from said opening, and an adjustable chute bottom adapted, when said frame is swung outwardly, to lie above the same to enable material to be discharged above said frame onto said bottom, said frame containing an element serving to protect the opening when the frame is closed, said latter element being protected by the said bottom when the frame is moved outwardly, said bottom then lying above said latter element.

14. In a device of the class described, the combination with a body member having an opening therethrough, of a frame member adapted to swing toward and from said opening, an adjustable chute bottom adapted, when said frame is swung outwardly, to lie above the same to enable material to be discharged above said frame onto said bottom, and a locking device having complemental elements afforded upon the body member and said bottom to lock the bottom in position, said bottom having engagement with the said frame, thereby to hold the frame in a closed position when the bottom element is locked, said frame containing an element serving to protect the opening when the frame is closed, said latter element being protected by the said bottom when the frame is

moved outwardly, said bottom then lying above said latter element.

15. In a device of the class described, the combination with a body member having an opening therethrough, of a frame member adapted to swing toward and from said opening, an adjustable chute bottom adapted, when said frame is swung outwardly, to lie above the same to enable material to be discharged above said frame onto said bottom, and side chute members carried by the said frame and coöperating with said bottom member, said frame containing an element serving to protect the opening when the frame is closed, said latter element being protected by the said bottom when the frame is moved outwardly, said bottom then lying above said latter element.

16. In a device of the class described, the combination with a body member having an opening therethrough, of a frame member adapted to swing toward and from said opening, an adjustable chute bottom adapted, when said frame is swung outwardly, to lie above the same to enable material to be discharged above said frame onto said bottom, a locking device having complemental elements afforded upon the body member and said bottom to lock the bottom in position, said bottom having engagement with the said frame, thereby to hold the frame in a closed position when the bottom element is locked, and side chute members carried by the said frame and coöperating with said bottom member, said frame containing an element serving to protect the opening when the frame is closed, said latter element being protected by the said bottom when the frame is moved outwardly, said bottom then lying above said latter element.

17. In coal chutes, a suitable casing, a door member hinged at the front and bottom thereof and a supplemental bottom hinged to the top of said door member.

18. In coal chutes, a wall casing, a door member hinged at its bottom to the bottom of said casing and a supplemental bottom hinged at its outer end to said door member and over-lapping the hinge of said member to the casing.

In witness whereof, I hereunto subscribe my name this 24th day of January A. D., 1907.

EMIL W. RITTER.

Witnesses:
H. L. ENESLIE,
CHAS. A. ROBINSON.