No 826,541. PATENTED JULY 24, 1906.

T. F. CLARK.

DOOR CHUTE.

APPLICATION FILED MAR. 15, 1906.

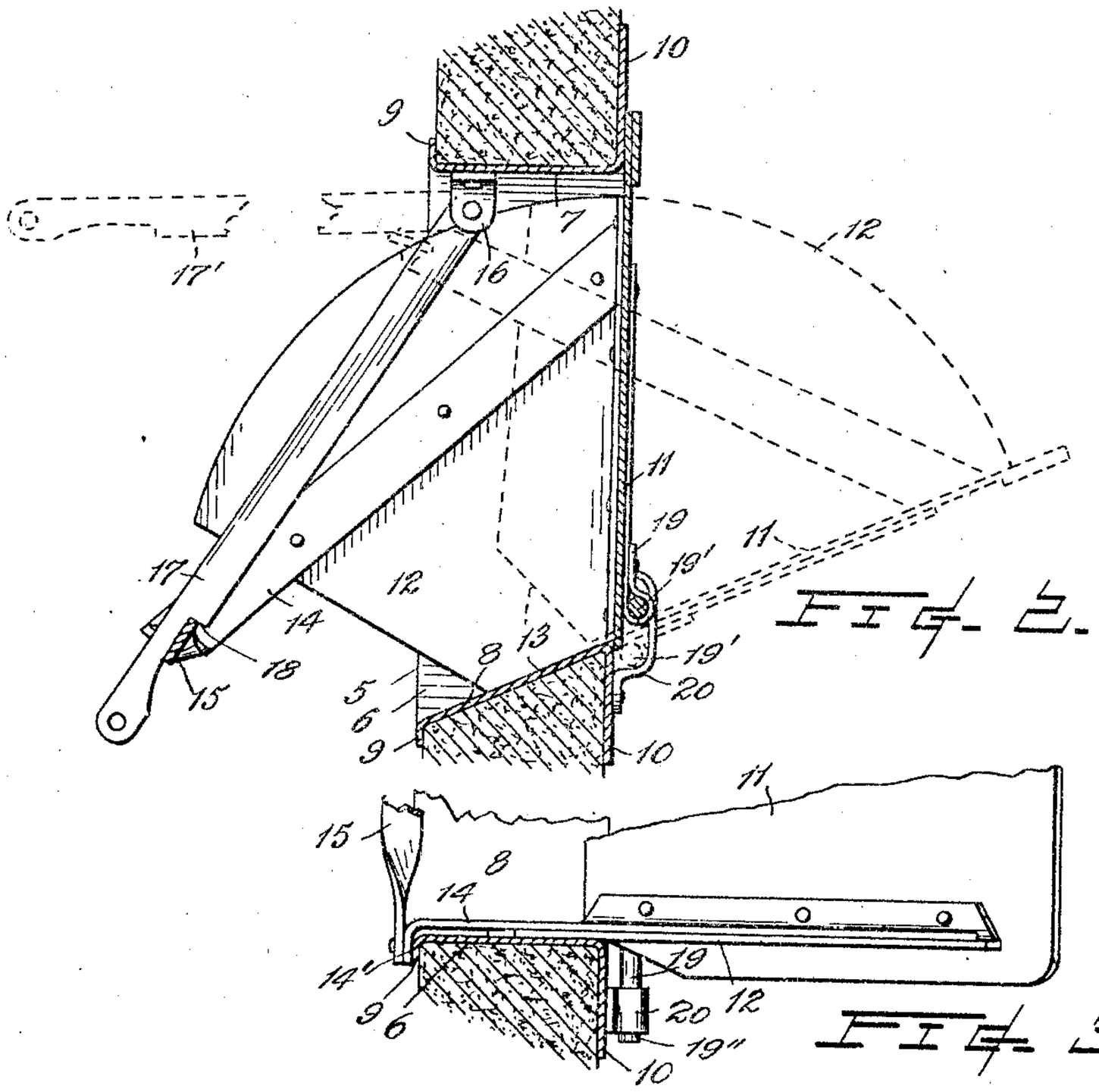

Fig. 2.

Fig. 3.

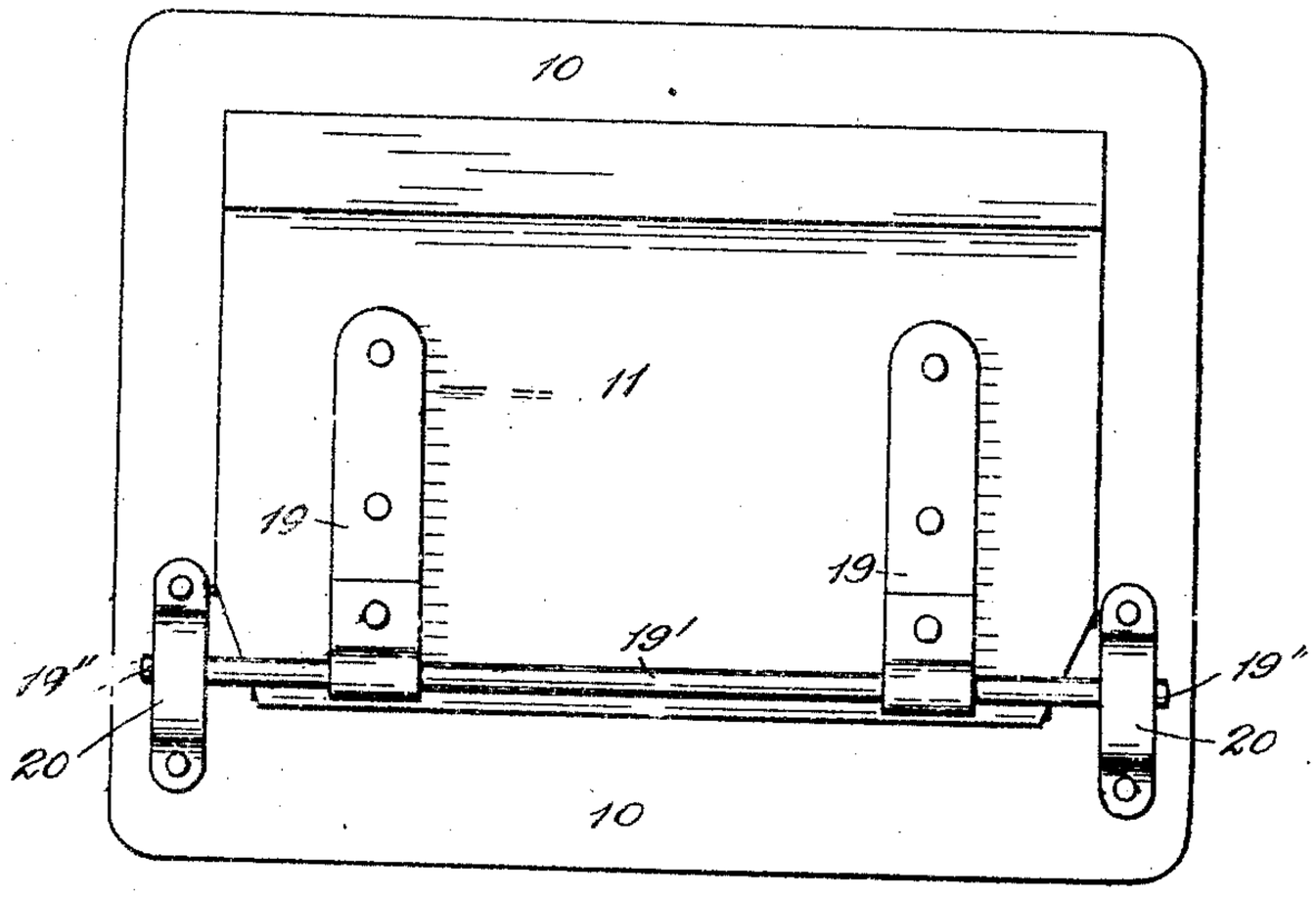

Fig. 1.

Witnesses

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UNITED STATES PATENT OFFICE.

THEODORE F. CLARK, OF SEATTLE, WASHINGTON.

DOOR-CHUTE.

No. 826,541. Specification of Letters Patent. Patented July 24, 1906.

Application filed March 15, 1906. Serial No. 306,115.

To all whom it may concern:

Be it known that I, THEODORE F. CLARK, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Door-Chutes, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 is a front elevation of devices embodying my invention. Fig. 2 is a vertical cross-section of the same, and Fig. 3 is a fragmentary horizontal section in which the device is shown distended.

The object of this invention is the improvement in that class of devices employed in buildings and known as "coal-chutes," though they may be utilized in various services.

The invention consists in the novel construction and combination of parts, as will be hereinafter described, and pointed out in the appended claims.

In the drawings the reference-numeral 5 indicates a casing adapted to be built or inserted within an opening of the wall of a building and is formed with a frame having sides 6, a top 7, and a bottom 8, of which the latter is inclined downwardly toward the inside, as represented in Fig. 2. About the inside edges of said frame parts is a marginal flange 9, and upon the outer edges is a like flange 10, though more extended than the inner one to afford a protective covering to the adjacent surface of the wall to prevent injury thereto through carelessness in supplying coal or the like to the chute.

A tiltable member or chute is hinged to the casing and is formed with an outer plate 11 of greater length and depth than the corresponding dimensions of the frame-opening, excepting that the lower side corners are removed to permit the thus-formed tapering portion entering this opening for a short distance when the device is to be utilized as a chute. Secured to the inner side of said plate and at a distance apart slightly less than the width of the frame-opening are plates 12, forming the sides of the chute, and are desirably of sector shape, as shown, and have the apexes of the angles truncated to provide edges 13, adapted to rest upon the frame-bottom 8, as indicated by full lines in Fig. 2, when the device is in its closed position.

Rigidly secured to and extending inwardly beyond the rear edges of the chute sides are stiffening-bars 14, which terminate in laterally-protruding bends 14′ and are therefrom connected by a transverse bar 15. Swung from an attachment 16 of the frame-top 7 is a latch-bar 17, having a notch 18, adapted to engage with the bar 15 when the chute is in its closed position for the purpose of securing the latter against being opened from the exterior of the building. Connected by straps 19 or their equivalent to the plate 11 and adjacent to its lower edge is a rod 19′, having protruding ends 19″, which are slidably secured in journal attachments 20 of the casing.

The operation of the invention is as follows: When the chute is to be used for the delivery of, say, coal or wood, into the basement of a building, the latch-bar 17 is first raised up to release the bar 15 therefrom, allowing the chute to be tilted outwardly until it is stopped by the bends 14′ contacting with the inner flange 9 of the casing, and the chute in thus tilting by the conjoint action of its bearing edges 13 against the juxtaposed outer corner of the frame and that of the sliding fulcrum or rod 19, being restrained in its travel, is to a small extent raised to permit the then under edge of the plate 11 or chute-bottom to enter the frame-opening, bringing the chute into the position represented in Fig. 3 and by broken lines in Fig. 2. The latch-bar meanwhile is elevated by the bar 15 into the position indicated by 17′ in Fig. 2. The chute is returned to its former position by tilting it inwardly and will be secured in such closed state by the aforesaid latch-bar, and the plate 11 will act in the capacity of a door to completely close the frame-opening.

The advantages of the invention are due to its neat and attractive appearance when closed, its convenience as a coal-chute, and in which capacity it safeguards the surrounding portions of the building-wall from injury.

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

1. The combination with the casing-frame, of a chute having a sliding hinge connection therewith whereby the bottom of the chute will be caused to entirely cover the opening of said frame when closed and be protruded into said opening when the chute is tilted down for use.

2. The combination with the casing-frame,

of a chute having a sliding hinge connection therewith whereby the bottom of the chute will be caused to entirely cover the opening of said frame when closed and be protruded into said opening when the chute is tilted down for use, and means to automatically lock said chute in its closed position.

3. The combination with the casing-frame, of a chute having a sliding hinge connection therewith whereby the bottom of the chute will be caused to entirely cover the opening of said frame when closed and be protruded into said opening when the chute is tilted down for use, means to automatically lock said chute in its closed position, and means to limit the extent of the outward tilting of the chute.

4. The combination with a casing-frame having an inclined bottom, and the journal attachments secured to the frame, of the chute having sides adapted to enter the opening of said frame and a bottom of greater width and length than the corresponding dimensions of said opening, said chute-bottom being formed with a taper at one end, a horizontally-disposed rod secured to said chute-bottom and projecting into the said attachments, bars secured to said chute sides, a bar connecting the said bars, and a latch-bar suspended from the top of the said frame and adapted to engage with said second-named bar.

5. The combination with a casing-frame having an inclined bottom, and the journal attachments secured to the frame, of the chute having sides adapted to enter the opening of said frame and a bottom of greater width and length than the corresponding dimensions of said opening, said chute-bottom being formed with a taper at one end, a horizontally-disposed rod secured to said chute-bottom and projecting into the said attachment, diagonally-disposed bars secured to said chute sides, a bar connecting the said bars, and a latch-bar suspended from the top of the said frame and adapted to engage with said second-named bar.

6. The combination with a casing-frame having an inclined bottom, and the journal attachments secured to the frame, of the chute having sides adapted to enter the opening of said frame and a bottom of greater width and length than the corresponding dimensions of said opening, said chute-bottom being formed with a taper at one end, a horizontally-disposed rod secured to said chute-bottom and projecting into the said attachments, diagonally-disposed bars secured to said chute side and terminating in bends, a bar connecting the said bars, and a latch-bar suspended from the top of the said frame and adapted to engage with said second-named bar.

7. The combination with a casing-frame having an inclined bottom, and the journal attachments secured to the frame, of the chute having truncated sides adapted to enter the opening of said frame and a bottom of greater width and length than the corresponding dimensions of said opening, said chute-bottom being formed with a taper at one end, a horizontally-disposed rod secured to said chute-bottom and projecting into the said attachments, diagonally-disposed bars secured to said chute sides and terminating in bends, a bar connecting the said bars, and a latch-bar suspended from the top of the said frame and adapted to engage with said second-named bar.

8. The combination with a casing-frame having an inclined bottom and flanged inner and outer edges, and the journal attachments secured to the frame, of the chute having truncated sides adapted to enter the opening of said frame and a bottom of greater width and length than the corresponding dimensions of said opening, said chute-bottom being formed with a taper at one end, a horizontally-disposed rod secured to said chute-bottom and projecting into the said attachments, diagonally-disposed bars secured to said chute sides and terminating in bends, a bar connecting the said bars, and a latch-bar suspended from the top of the said frame and adapted to engage with said second-named bar.

In testimony whereof I affix my signature in presence of two witnesses

THEODORE F. CLARK.

Witnesses:

PIERRE BARNES,

PAUL BARNES.