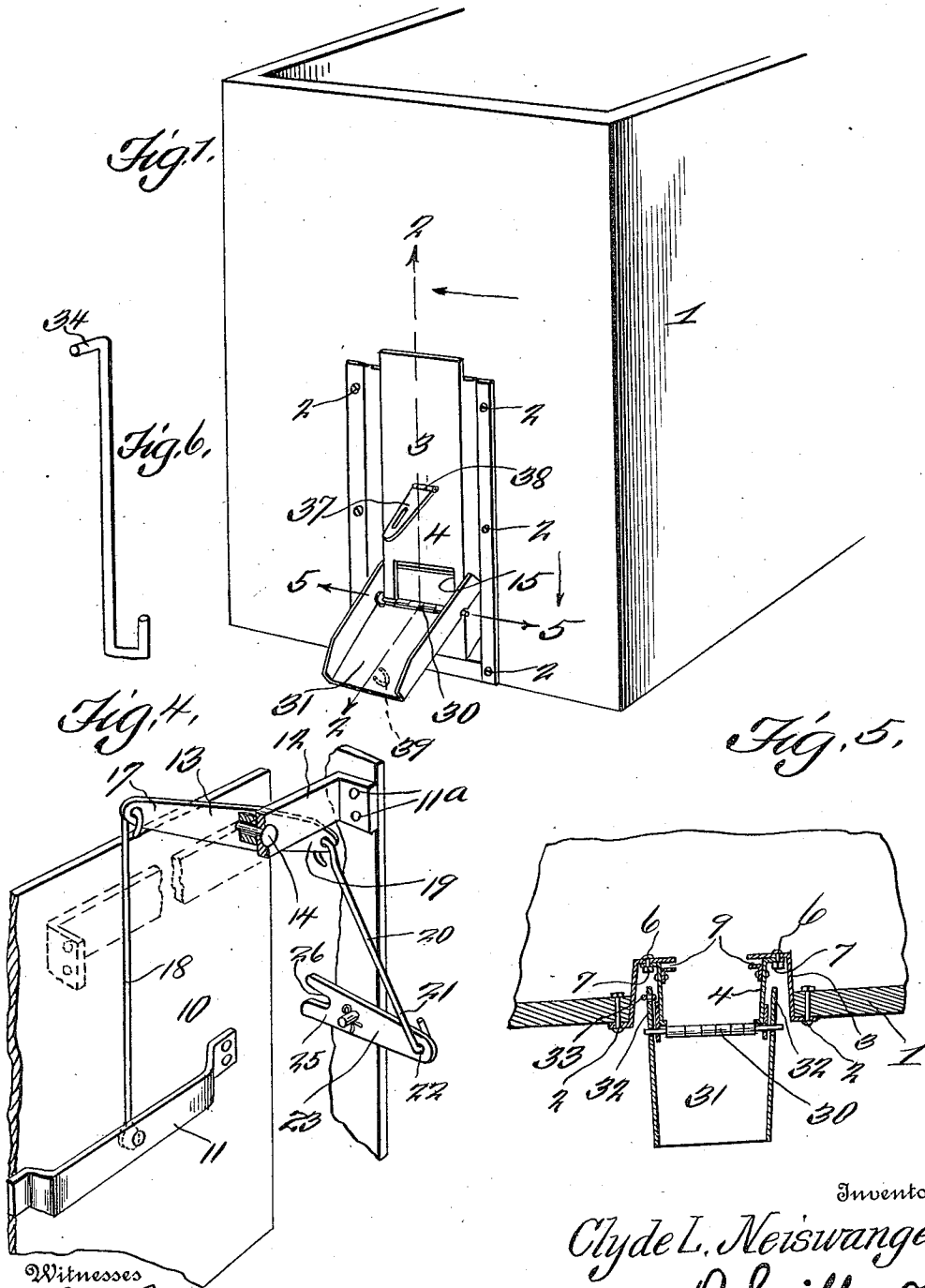


C. L. NEISWANGER.
GRAIN CHUTE.
APPLICATION FILED AUG. 24, 1912.

1,050,983.

Patented Jan. 21, 1913.

2 SHEETS—SHEET 1.



Witnesses
Rhe Meyer.
Francis J. Poswell.

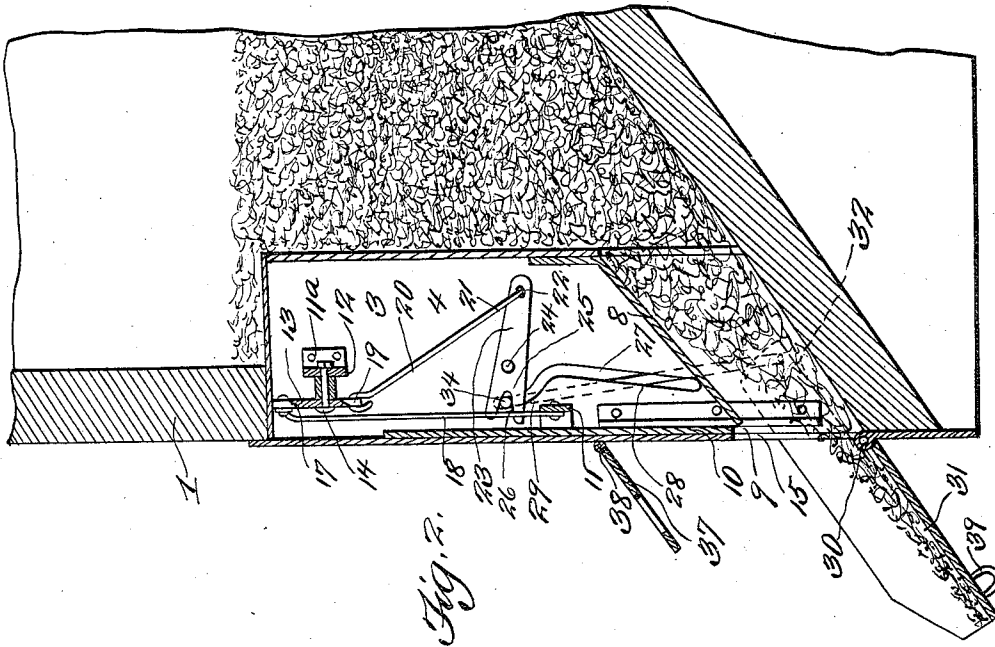
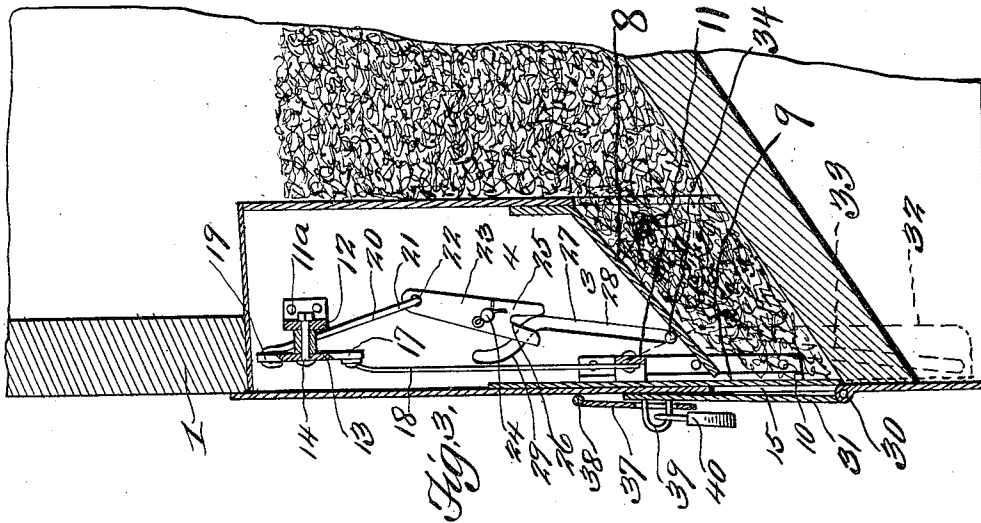
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2 SHEETS—SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

CLYDE L. NEISWANGER, OF BLADEN, NEBRASKA.

GRAIN-CHUTE.

1,050,983.

Specification of Letters Patent.

Patented Jan. 21, 1913.

Application filed August 24, 1912. Serial No. 716,862.

To all whom it may concern:

Be it known that I, CLYDE L. NEISWANGER, a citizen of the United States, residing at Bladen, in the county of Webster and State of Nebraska, have invented a new and useful Grain-Chute; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a new and useful grain chute adapted for use in connection with grain bins or granaries.

As one of the objects of this invention, a vertical sliding door or gate is provided, having connections with a pivoted section of the chute or spout, whereby as said section is lowered in position, the door is opened, and when the said section is raised out of position, the door is automatically closed.

The invention comprises further features and combinations of parts, as hereinafter set forth, shown in the drawings and claimed.

In the drawings, Figure 1 is a view showing the application of the improved chute or spout, showing the door open and the sectional chute swung downwardly. Fig. 2 is a sectional view on line 2—2 of Fig. 1. Fig. 3 is a view similar to Fig. 2, showing the door closed and the section of the chute raised. Fig. 4 is a detail view of the connections between the door and the movable section of the chute. Fig. 5 is a detail view. Fig. 6 is a detail view of the rod 33.

Referring more particularly to the drawings, 1 designates a portion of a grain bin, in which, by the screws 2, the chute or spout 3 is fastened. The chute or spout comprises the two parts 4 and 5, which are trough-shaped, one secured within the other by the bolts 6 including nuts 7. Secured in the trough-shaped part 4 is an inclined portion or plate 8. Mounted in guides 9 of the part 4 is a door 10, upon the rear face of which a strap 11 is secured. Fastened by any suitable means 11^a to the opposite sides of the part 4, and extending transversely thereof, is a bar 12, to which a lever 13 is pivoted at 14. The door 10 closes an opening 15. Connecting one end 17 of the lever is a rod 18, the lower end of which is connected to the strap of the door. The other end 19 of the lever has pivoted to it a rod 20, the end 21 of which is pivoted at 22 to the lever 23. This

lever 23 is pivoted at 24 to one side of the part 4 of the chute or spout. The end 25 of the lever 23 is constructed with a slot 26, which, when the door 10 is closed, registers with the elongated portion 27 of the slot 28, which is formed in one side of the part 4 of the chute or spout. The upper end of the slot 28 terminates in a curved cam slot 29.

Hinged at 30 to the part 4 is a pivoted chute or spout 31, which is provided with extensions 32, one of which has pivoted to it a rod 33. The upper end of the rod 33 terminates in a lateral portion 34, which moves in the elongated portion 27 of the slot 28, and also in the curved cam portion thereof. When the hinged chute or spout is in a raised position, the lateral portion 34 of the rod is in the lower end of the elongated portion 27 of the slot 28, but when the hinged chute or spout is being lowered, the lateral portion 34 moves upwardly in the elongated portion 27 of the slot 28 and engages the slot 26 of the lever 23. As the hinged chute or spout further lowers, the lever 23 is rocked upon its pivot, which, in turn, will rock the lever 13 through the medium of the rod connection, and when the lever 13 is rocked, the door 10 will be raised, thereby allowing the grain to pass through the door opening into the hinged chute or spout. As the lever 23 is rocked in this manner, the lateral portion 34 of the rod 33 moves through the cam curved slot 29. When the hinged chute or spout is raised, the reverse of these operations is accomplished, thereby closing the door 10. When the hinged chute or spout is fully raised, the same is held in such position by the slotted tongue 37 hinged at 38 to the part 4 engaging the staple 39, which receives the usual form of padlock 40.

From the foregoing it will be noted that there has been devised a simple, novel and efficient construction, and one which has been found desirable and practical.

The invention having been set forth, what is claimed as new and useful is:—

1. In combination, a chute having an opening, a door therefor, a spout hinged to the chute and provided with an extension, a rod connected to the extension and provided with a lateral portion, the chute having an elongated slot terminating at its upper portion in a curved cam slot, said slots receiving the lateral portion of the rod, and means

actuated by said lateral portion for opening or closing the door when the hinged spout is raised or lowered.

2. In combination, a chute having an opening, a door therefor, a spout hinged to the chute and provided with an extension, a rod connected to the extension and provided with a lateral portion, the chute having an elongated slot terminating at its upper portion in a curved cam slot, said slots receiving the lateral portion of the rod, a lever pivoted in the chute and constructed with an angular slot at one end adapted to receive the lateral portion of the rod when the hinged spout is lowered, and means connected between the lever and the door whereby the door is opened or closed as the spout is lowered or raised.

3. In combination, a chute having an

opening and provided with a hinged spout, a door for said opening, guides for the door, the chute having an elongated slot terminating at its upper portion in a curved cam portion, and connections between the hinged spout and the door, whereby as the spout is raised or lowered, the door will be closed or opened, the connections including a rod having a portion operable in the slot, said connections including a pivoted member to be actuated by said portion of the rod.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CLYDE L. NEISWANGER.

Witnesses:

W. E. STAHLY,
V. S. HALL.

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