

No. 745,506.

PATENTED DEC. 1, 1903.

J. M. MANIFOLD.
AUTOMATIC STOCK FEEDER.
APPLICATION FILED MAR. 14, 1903.

NO MODEL.

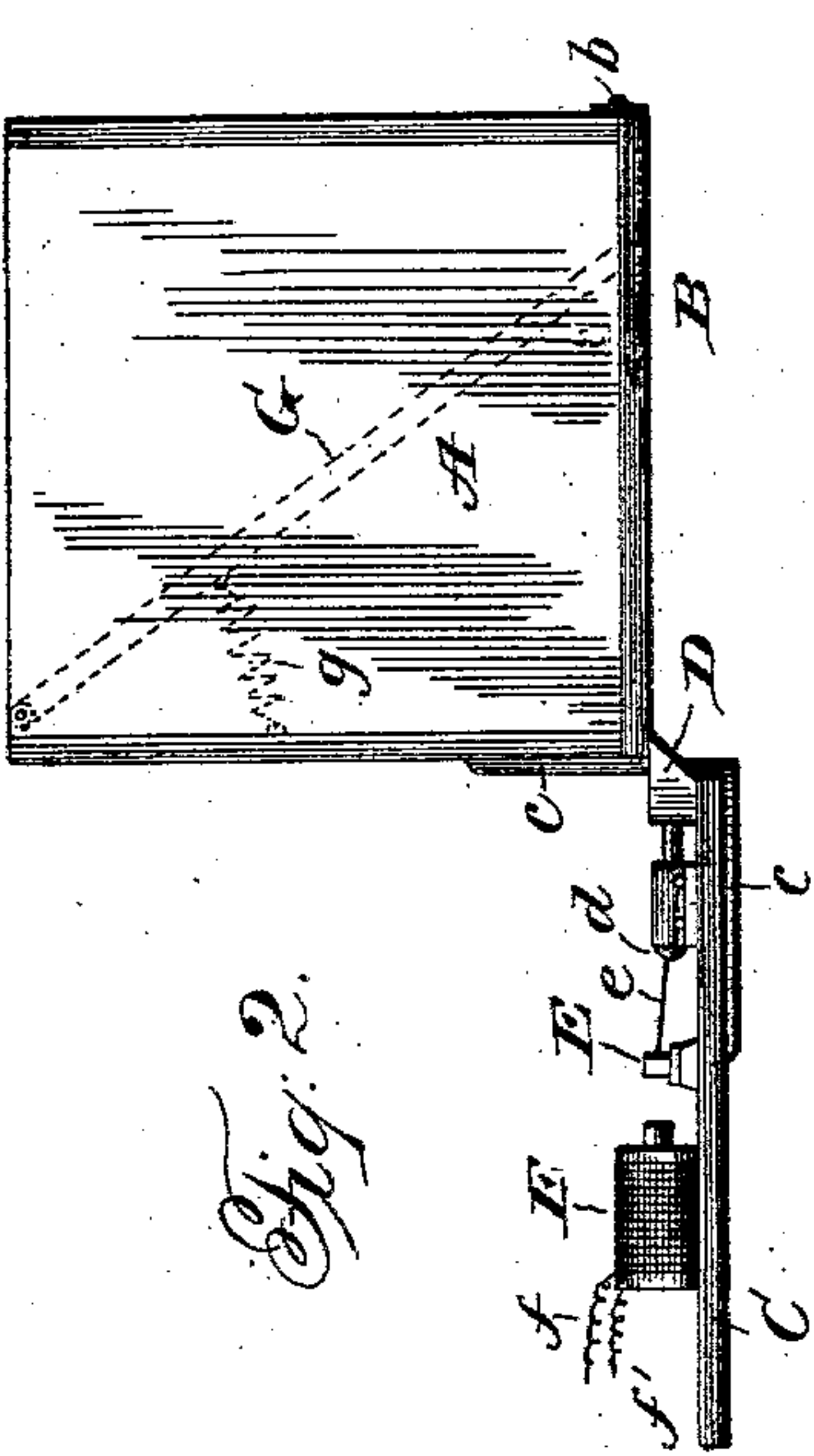


Fig. 2.

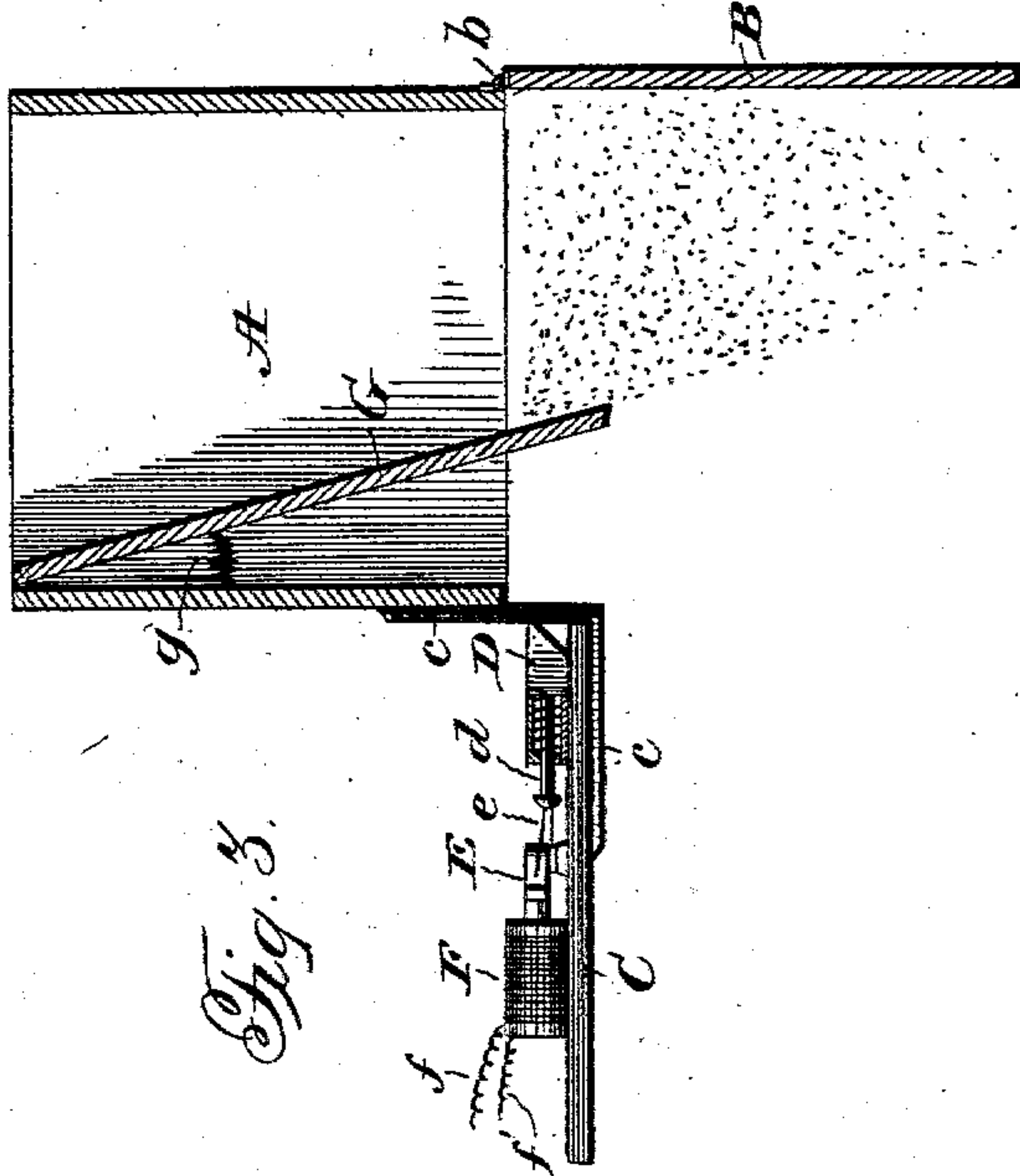


Fig. 3.

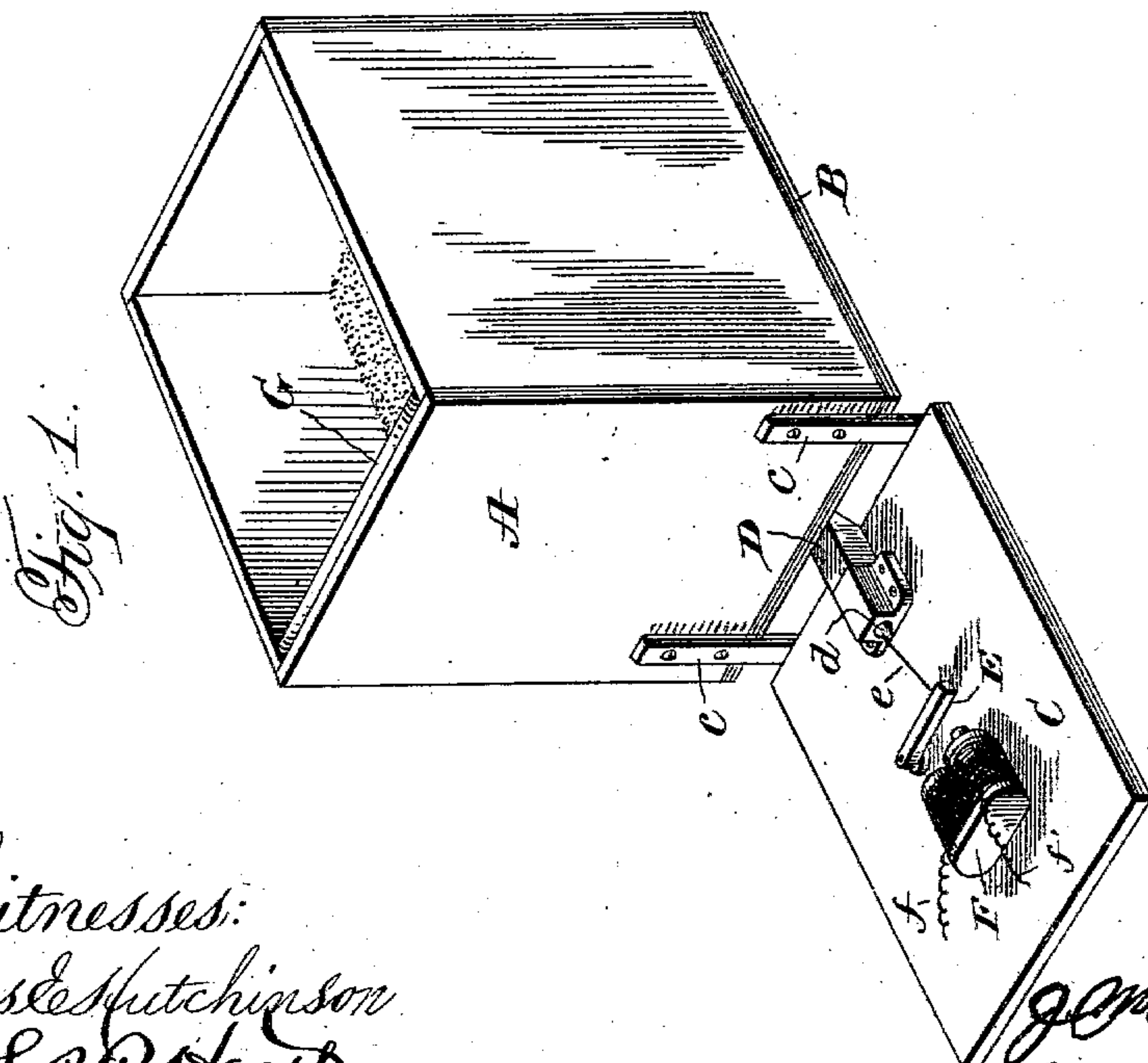


Fig. 1.

Witnesses:
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UNITED STATES PATENT OFFICE.

JAMES M. MANIFOLD, OF RIDGEVILLE, INDIANA.

AUTOMATIC STOCK-FEEDER.

SPECIFICATION forming part of Letters Patent No. 745,506, dated December 1, 1903.

Application filed March 14, 1903. Serial No. 147,698. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. MANIFOLD, a citizen of the United States, residing at Ridgeville, in the county of Randolph and State of Indiana, have invented certain new and useful Improvements in Automatic Stock-Feeders, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to an improvement in an automatic stock-feeding device, and more particularly to that class of automatic feeders in which the feed is stored in a receptacle overlying the feed-trough and from which it is automatically dumped by a tripping mechanism adapted to be operated by closing or opening an electric circuit.

In the drawings accompanying this specification, wherein a preferable embodiment of my invention is shown, and in which like letters of reference refer to similar parts in the several views, Figure 1 is a perspective view of my improved feed-box with the operating mechanism attached. Fig. 2 is a side elevation of the same with the door in its raised position, and Fig. 3 is a longitudinal section of the same with the door in its tripped position.

In the drawings, A is a feed-box open at its top and provided at its bottom with the hinged door B. A shelf C is secured by brackets c or in any other suitable manner to the side of the feed-box against which free edge of the door B rests when in its closed position. The shelf is secured so that it will extend a little below the bottom of the feed-box. A sliding bolt or catch D is secured along the edge of shelf C adjacent the feed-box A. The bolt or catch D is adapted to underlie the free edge of the hinged door B and hold the same in its closed position and is normally held in its forward position by the spring d.

E is a steel bar arranged to operate as an armature, one end of which is pivoted to the shelf C and the free end of which is connected by a wire e to the end of the bolt D. An electric magnet F of any suitable construction is secured in any suitable manner upon the shelf, with the core of the magnet directly behind the steel bar or armature E. The

wires f and f' of the electric magnet extend to the house or any other suitable point, where they are connected to a battery and a push-button or other suitable circuit-closing device. In order that the entire weight of the feed in the box A will not rest upon the bolt or catch D, and consequently in order that the magnet F, employed to retract the bolt or catch D, need not be one of extraordinary strength, I provide the feed-box A with the obliquely-extending partition G. The partition G, which is of substantially the same width as the feed-box A, is hinged in any suitable manner to the sides of the feed-box A at points near the upper edge of the side to which the shelf C is secured and extends downwardly and obliquely to the bottom of the feed-box A, where it rests on the hinged door B when said door is in its closed position. The oblique partition is held in its raised position by a coil-spring g, interposed between the bottom of the partition and the side of the feed-box. The space between the top of the partition G and the side of the feed-box is the hopper in which the feed is stored. Since the lower edge of the partition G rests on the door B at a point near the hinges b, it is evident that the weight of the feed in the hopper will be borne principally by said hinges and not by the bolt or catch D. The coil-spring g is so adjusted that when there is no feed in the hopper said spring will support the oblique partition G in its elevated position, but that when the hopper is full and the door B of the feed-box is tripped the weight of the feed in the hopper will be sufficient to overcome the tension of the spring and cause the partition G to descend and allow the feed to fall from the hopper into the feed-trough. (Not shown.) As soon, however, as all the feed has passed from the hopper into the trough the spring g will cause the partition G to return to its elevated position.

The operation of my device is apparent from the foregoing description. The door B of the feed-box A being secured in its closed position by the bolt or catch D and the hopper filled with feed, to discharge the feed into the feed-trough it is only necessary to close the circuit through the wires f f' by means of a push-button or other circuit-closer, when the

magnet F will become energized and attract the steel bar or armature E, which through the wire e will withdraw the catch or bolt g from under the edge of the door B and allow the same to drop, and consequently the feed to pass from the hopper to the feed-trough.

I have not shown any means for securing my device above a feed-trough; but I may do so in any desired manner, although I prefer to secure it in such a manner that the shelf C will lie against the wall of the stall or stable, so that the operating parts located thereon will not be in the way.

I do not desire to limit myself to the precise form and construction shown in the drawings, as it is obvious that many minor changes might be made without departing from the spirit of the invention.

What I claim is—

1. The combination with a feed-box, of a hinged door, a catch for said door, means for operating said catch and means within the feed-box for throwing the weight of the material upon the door at a point remote from said catch, substantially as described.

2. The combination with a feed-box, of a hinged door, means for operating said door,

and a movable partition secured at its upper end in said feed-box.

3. The combination with a feed-box of a hinged door therefor, means for operating said door, and a partition in said feed-box having its upper end hinged to the upper portion of the feed-box and its lower free end normally supported by the hinged door.

4. The combination with a feed-box, of a hinged door therefor, means for operating said door, an obliquely-disposed partition in said feed-box secured at its upper end and means for normally holding the partition wholly within the feed-box.

5. The combination with a feed-box, of a hinged door therefor, means for operating said door, an obliquely-disposed partition hinged at its upper end in said feed-box, and a spring interposed between the lower side of said partition and the adjacent side of the feed-box.

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

JAMES M. MANIFOLD.

Witnesses:

RICHARD O. FRAZE,
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