

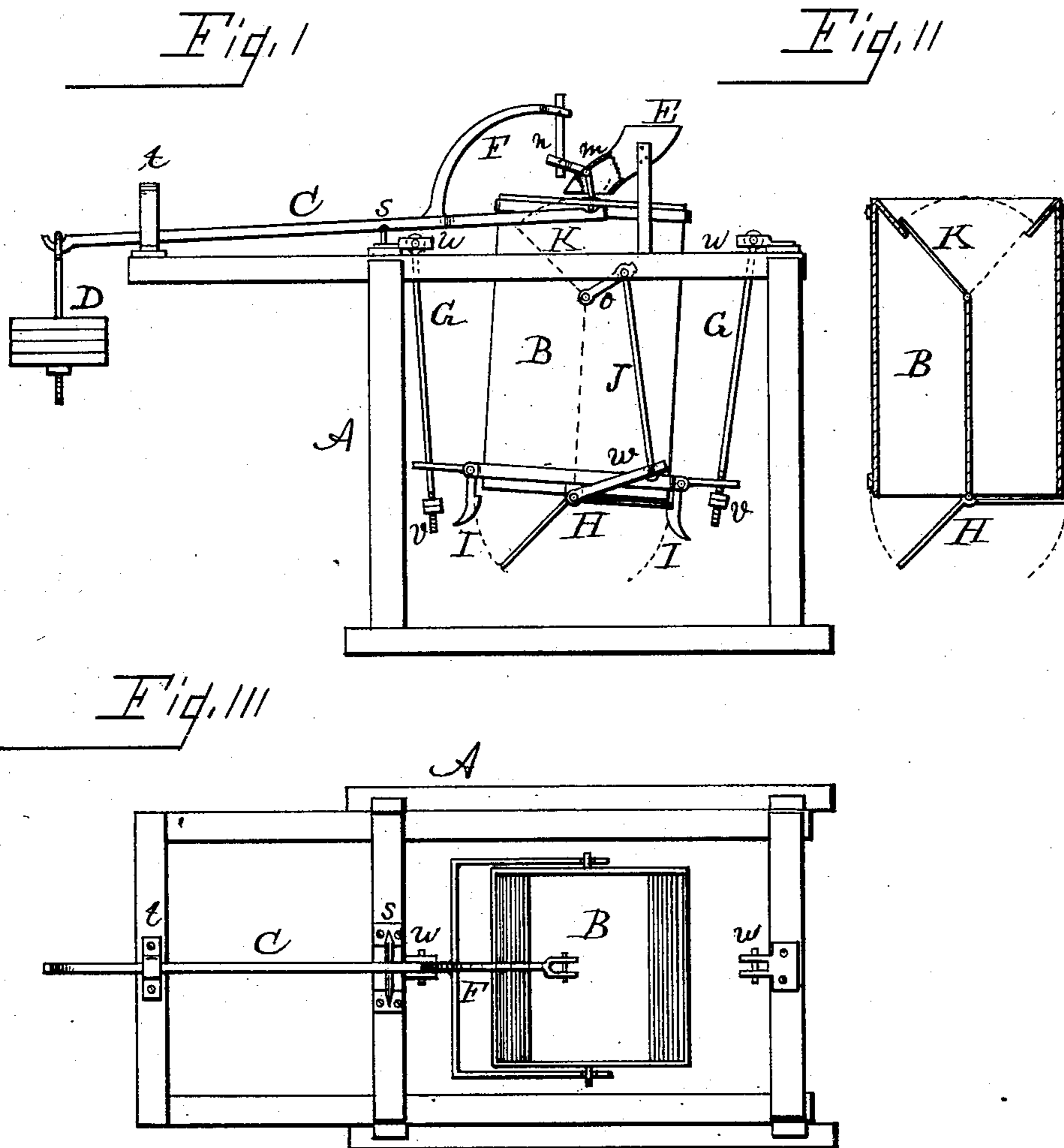
(No Model.)

E. A. HOOVER.

AUTOMATIC GRAIN WEIGHER.

No. 374,362.

Patented Dec. 6, 1887.



Witnesses

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UNITED STATES PATENT OFFICE.

ELLIS A. HOOVER, OF WEST MILTON, OHIO.

AUTOMATIC GRAIN-WEIGHER.

SPECIFICATION forming part of Letters Patent No. 374,362, dated December 6, 1887.

Application filed February 28, 1887. Serial No. 229,239. (No model.)

To all whom it may concern:

Be it known that I, ELLIS A. HOOVER, a citizen of the United States, residing at West Milton, in the county of Miami and State of Ohio, have invented certain new and useful Improvements in Automatic Grain-Weighers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification

My invention relates to improvements in automatic grain-weighers, the several features of which will be hereinafter fully set forth.

The mechanism is illustrated in the accompanying drawings, in which—

Figure I is a side elevation of the automatic grain-weigher with a portion of the spout cut away to exhibit a cut-off valve. Fig. II is a vertical longitudinal section of the receptacle with the pivotal shifting plate and the pivotal bottom connected thereto. Fig. III is a fragmentary top view of the weigher.

Like letters designate like parts throughout the several views.

A is a wooden frame, which serves to support the operative parts of the weigher, and may be modified in construction. On a cross-piece of the frame is attached the pivotal point S, and on this is supported the beam C. The outer end of the beam is held in the guide 4, attached to a cross-piece on the end of the frame. On the outer end of the beam are suspended a series of weights, D, which serve as a counterbalance to the receptacle and its contents. Within the forked end of the beam is suspended on pivotal points the receptacle B. To the top of the beam is the curved arm F, which supports the link *n*, which is connected to the arm of the cut-off valve *m*, the use of which being to narrow the passage within the spout. The spout E is supported on the frame, and its lower end occupies a position central to the mouth of the receptacle, and through this spout the grain flows into the receptacle. When the receptacle is sufficiently loaded to overcome the weight on the beam,

the descent of the inner end carries downward the arm of the cut-off valve *m*, and thereby narrows the orifice of the spout and consequently diminishes the flow of the grain just about the time the requisite volume is attained, and the transfer is made to the other apartment of the receptacle.

At Fig. II is shown the receptacle B in section. It is open top and bottom, and is divided by a central partition, and over this partition is pivoted in the sides of the vessel the shifting plate K, and at the bottom of said partition is pivoted the bottom H, the two parts of which are at an obtuse angle, so that the two divisions of the receptacle are alternately opened and closed.

On the sides of the receptacle, near the bottom, are pivoted the catches I I. These serve to hold the bottom against the receptacle as the same is brought alternately over the separate divisions.

To the pivot of the shifting plate K outside of the receptacle is attached the arm *o*, and to the pivot of the bottom is likewise attached the arm *w*, and these are connected by the rod J.

To the plates *u u* are pivoted the rods G, the lower ends of which pass through slots of the catches I, and on the ends are nuts *v*, so adjusted on said rods that they engage the catches as the receptacle descends, and thereby opens one division thereof to discharge the grain.

The mechanism may be greatly varied from that set forth.

The operation is thus: The flowing through the spout fills the right division of the receptacle until the weight of the beam is overcome, when the receptacle descends. This action partially cuts off the flow in the spout, as before described, and as the horizontal arm of the catch is engaged by the nut the said catch is disengaged from the angular bottom and the grain of that division is discharged. The weight of the descending grain causes the other half of the bottom to rise, and is fastened by the catch. This movement, through the arms *o w* and rod J, throws the shifting plate, as indicated by dotted lines, Fig. 2, and this causes the grain to flow into the left-hand division, and the operation continues so long

as the grain flows into the spout. The device for checking the flow in the spout as the descent of the receptacle commences is only necessary in the larger weighers.

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

In an automatic grain-weigher, a receptacle having two equal divisions suspended on a
10 beam with a counter-weight, in combination

with shifting plate K, arm *o*, rod J, arm *w*, angular pivotal bottom H, catches I I, and pivotal rods G G, substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two
15 witnesses.

ELLIS A. HOOVER.

Witnesses:

B. PICKERING,

CHAS. A. WALTMIRE.