(Model.)

DeE. A. REYNOLDS.

2 Sheets—Sheet 1.

Grain Measure and Register.

No. 234,891. **Patented Nov. 30, 1880.**

Fig. 2.

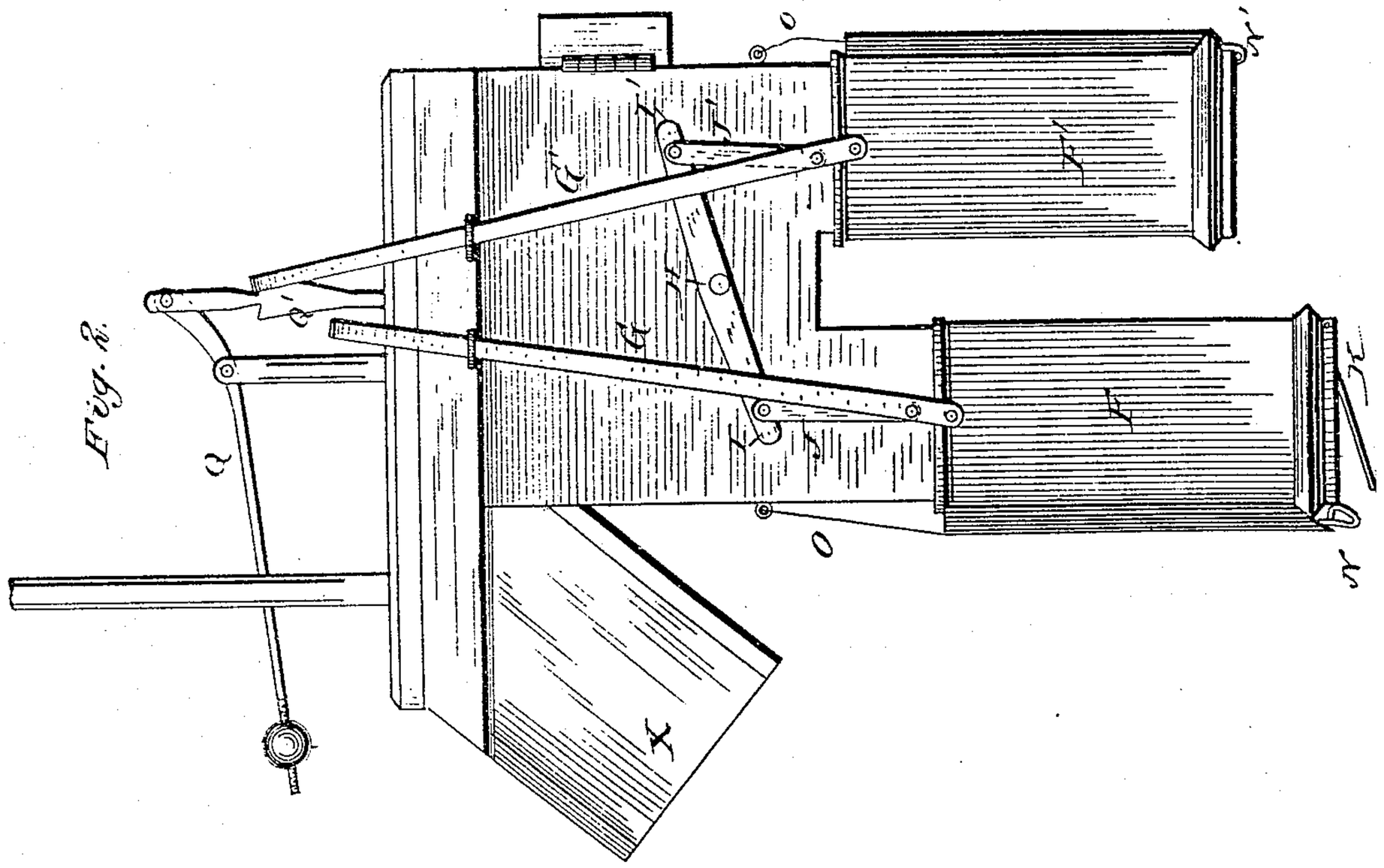
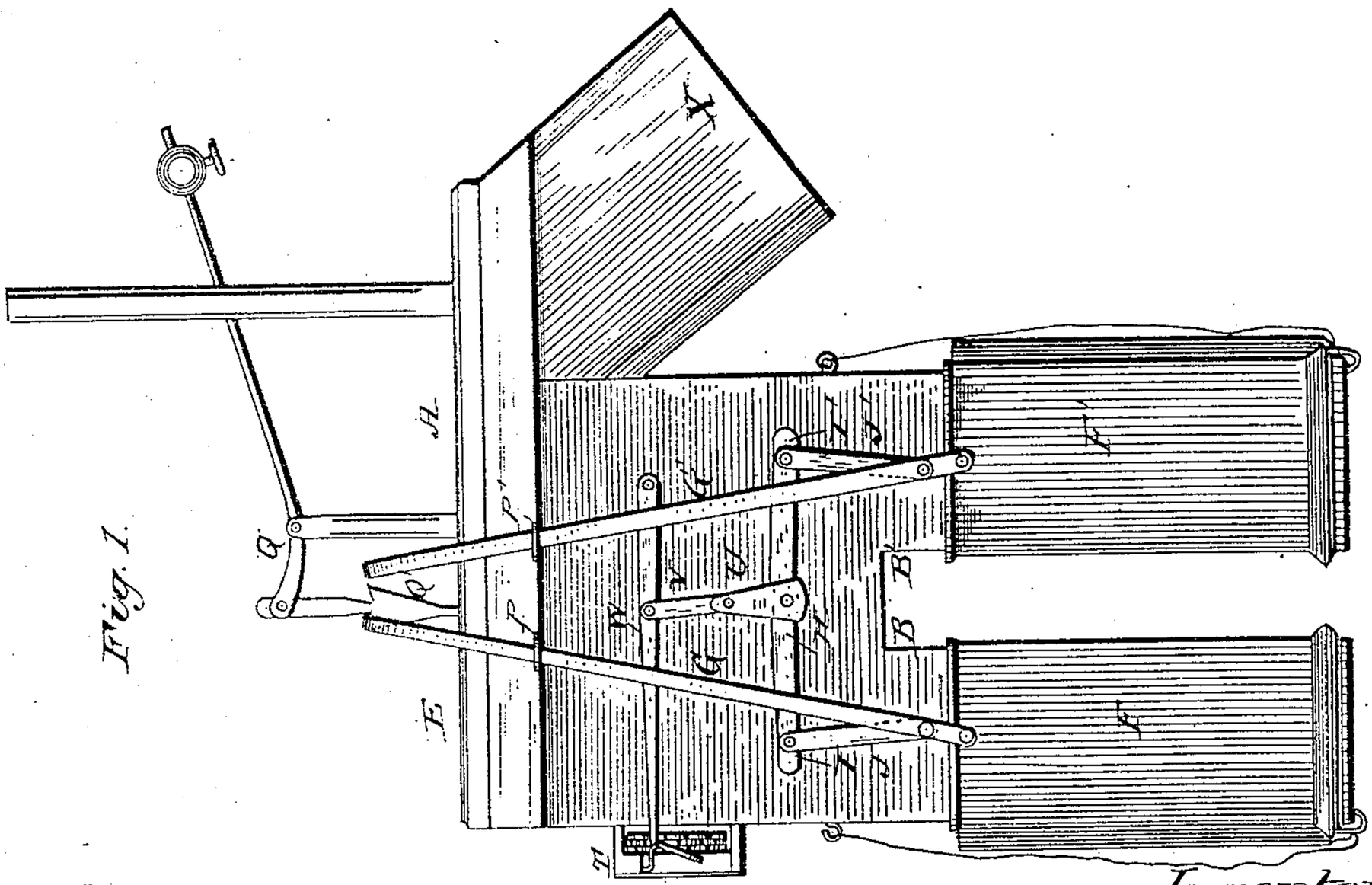


Fig. 1.



Witnesses:
Fred. L. Dietrich
M. Littell,

Inventor:
DeEbert A. Reynolds,
by C. A. Snow & Co.
Attys.

(Model.) 2 Sheets—Sheet 2.

DeE. A. REYNOLDS.

Grain Measure and Register.

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Fig. 3.

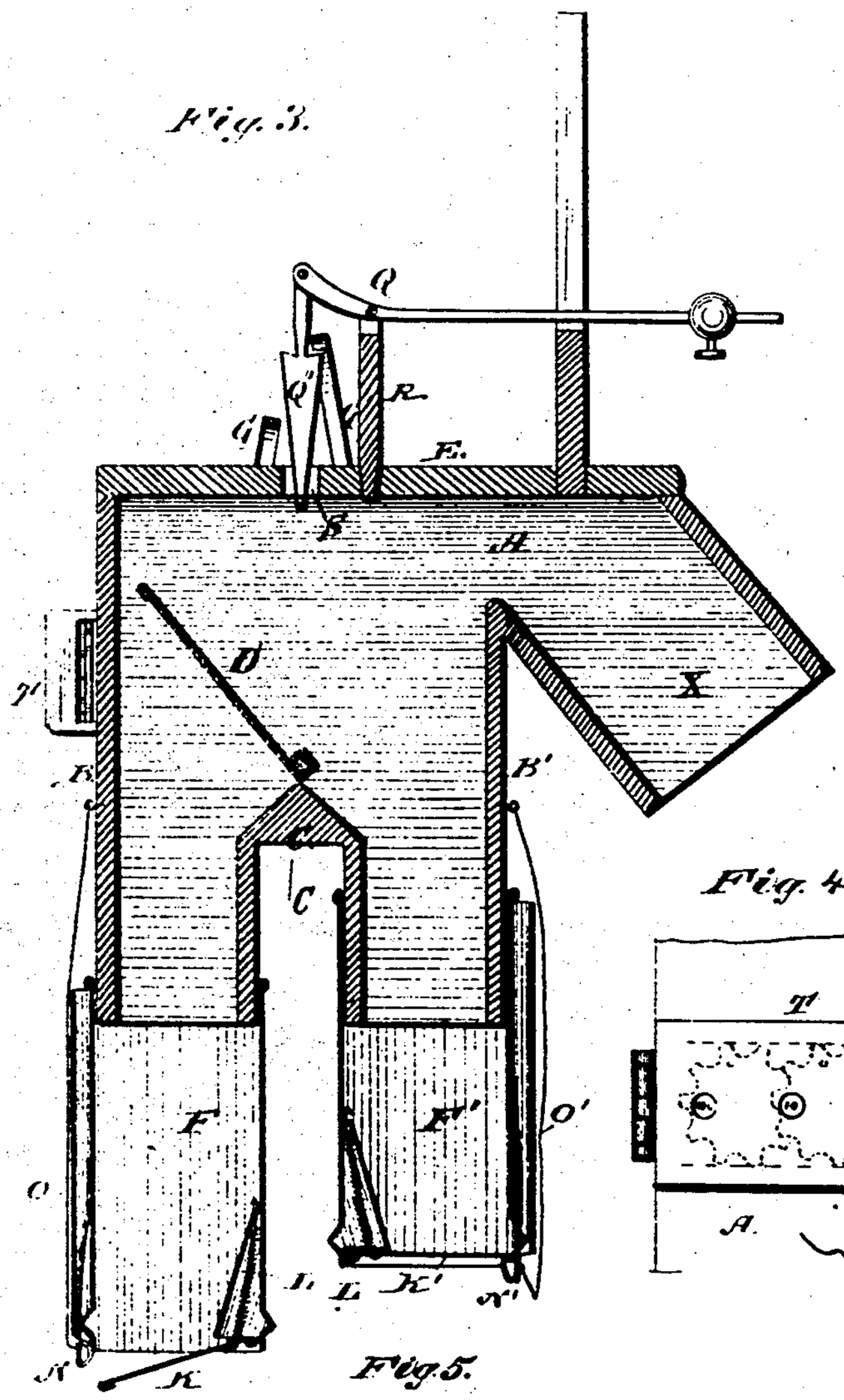


Fig. 4.

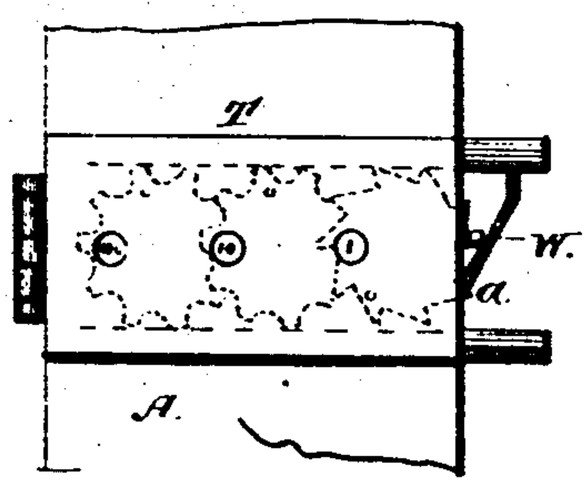
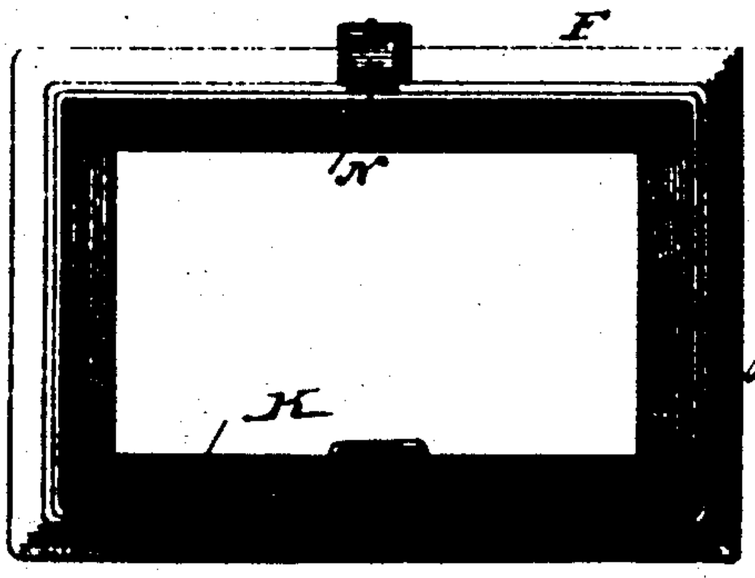


Fig. 5.



Witnesses:
Fred'k Gilbert
W. Gilbert.

Inventor:
DeE. A. Reynolds,
by C. A. Snow & Co.
Attorneys.

UNITED STATES PATENT OFFICE.

DE ELBERT A. REYNOLDS, OF FOWLER, MICHIGAN.

GRAIN MEASURE AND REGISTER.

SPECIFICATION forming part of Letters Patent No. 234,891, dated November 30, 1880.

Application filed September 14, 1880. (Model.)

To all whom it may concern:

Be it known that I, DE ELBERT A. REYNOLDS, of Fowler, in the county of Clinton and State of Michigan, have invented certain new and useful Improvements in Grain Measures and Registers; 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, which form a part of this specification.

Figure 1 is an elevation of one side of a device embodying the improvements of my invention. Fig. 2 is an elevation of the reverse side of the same. Fig. 3 is a vertical longitudinal sectional view. Fig. 4 is an end elevation, showing the register; and Fig. 5 is a view showing the bottom of the buckets open.

This invention has relation to grain measures and registers employed in weighing and bagging grain from the elevator of a thrashing-machine or clover-huller; and it consists in the novel features of construction and combination hereinafter fully described, and particularly pointed out in the claims.

Similar letters of reference indicate corresponding parts in the several figures of the accompanying drawings.

A designates an elevator-head for a thrashing-machine or clover-huller, provided with the legs B B, between the mouths of which is placed the double-inclined partition C, dividing the elevator-head into two equal parts. Above the partition C is a pivoted valve, D, which extends nearly to the top or cover E of the elevator-head, and which is of such a width that it will just comfortably work on its pivot from side to side in the elevator-head.

F F′ are buckets, which slide over the lower ends of the legs B B′, and which are provided with bails G G′, which extend up the sides and over the top of the elevator head at a little distance above the same, as shown. The ends of the valve-pivot H are provided with balance-levers I I′, and rods J J′ connect the ends of these balance-levers I I′ with the bails G G′ a short distance above the top of the buckets F F′. Both ends of the rods J J′ have pivot-connections. The bottoms of the buckets F F′ are provided with downwardly-opening doors K K′, which are closed by retracting-springs L L′, incased to protect them from the contents of the buckets when filled, and spring-latches N N′, incased on the outsides of the buckets, serve to hold the doors closed until the latches are automatically released by the cords O O′ connected therewith and with the sides of the elevator-head, as shown. Guides P in the sides of the elevator-head, near its top, guide the bails G G′ in an inclined position and toward each other. On the top of the elevator-head is placed a pair of steelyards, Q, of common construction, except that the pivoted pendent hook Q′ is in the shape of an inverted arrow-head, and a guide, R, is provided to hold the arm of the steelyards in a proper position to permit the point of the arrow-headed hook to work in an opening, S, in the cover of the elevator-head. At the left-hand edge of the elevator-head is a hinged register, T, with a system of wheels representing units, tens, and hundreds, or units, hundreds, and thousands, as may be desired. It is hinged so that when opened the wheels may be reset at any time when necessary. The back of the register is open at all times, except when closed against the casing of the measure, so that to inspect the wheels or reset them it is only necessary to swing the register open, when the mechanism will be exposed. No hinged cover or door is employed. The state of the register may be seen from the outside when closed.

The register is operated by the following mechanism when the buckets are operated: From one of the balance-levers I or I′ or the end of the valve-pivot or shaft H an arm, U, extends upward, and is connected by a joint with another arm, V, extending downward from a pivoted arm, W, pivoted to the side of the elevator-head, and extending to the left of the same, where its point comes in contact with the first toothed wheel, *a*, of the register when the latter is closed. A button or other suitable means is employed to hold the register closed against the elevator-head. At the right of the elevator-head is the conveyer-chute X.

The device is automatic, and its operation is as follows: One of the buckets should be

elevated, so as to form an articulation between the bail and the steelyards. This throws the valve over the opposite bucket, allowing the grain to run into the bucket resting on the hook of the steelyards. When the number of pounds designated by the steelyards has run into the bucket it draws the hook down a distance equal to one-half the distance between the bails of the two buckets, respectively. As the bail of the filled bucket passes downward the other is raised an equal distance, when the hook is caused by the bail of the receding bucket and the forward motion of the empty bucket to pass from the one to the other, and immediately regains its former position. As the weighed and filled bucket is lowered it operates the pivot H and turns the valve in the elevator-head to the opposite side, causing the grain to run into the empty bucket, operating the pivoted arm W, and consequently the register at the same time. As the descending bucket drops to its lowest point the latch-string becomes tightened and withdraws the latch, allowing the bottom or door of the bucket to open by the weight of the grain and to be discharged into the sack or bag secured in any suitable manner to the bottom of the bucket. When the grain has been discharged from the bucket the retracting-spring closes the door automatically.

Any suitable material may be used in the construction of the device.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

In a grain weighing and bagging device, the elevator-head A, provided with the legs B B′, the double-inclined partition C, and the pivoted valve D, in combination with the sliding buckets F F′, having the bails G G′, connected by rods J J′ to the balance-levers I I′, and the steelyards Q, having the arrow-headed hook Q′, constructed and operating substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

DE ELBERT A. REYNOLDS.

Witnesses:

CHARLES A. VREDENBURG,

RICHARD WATERS.