

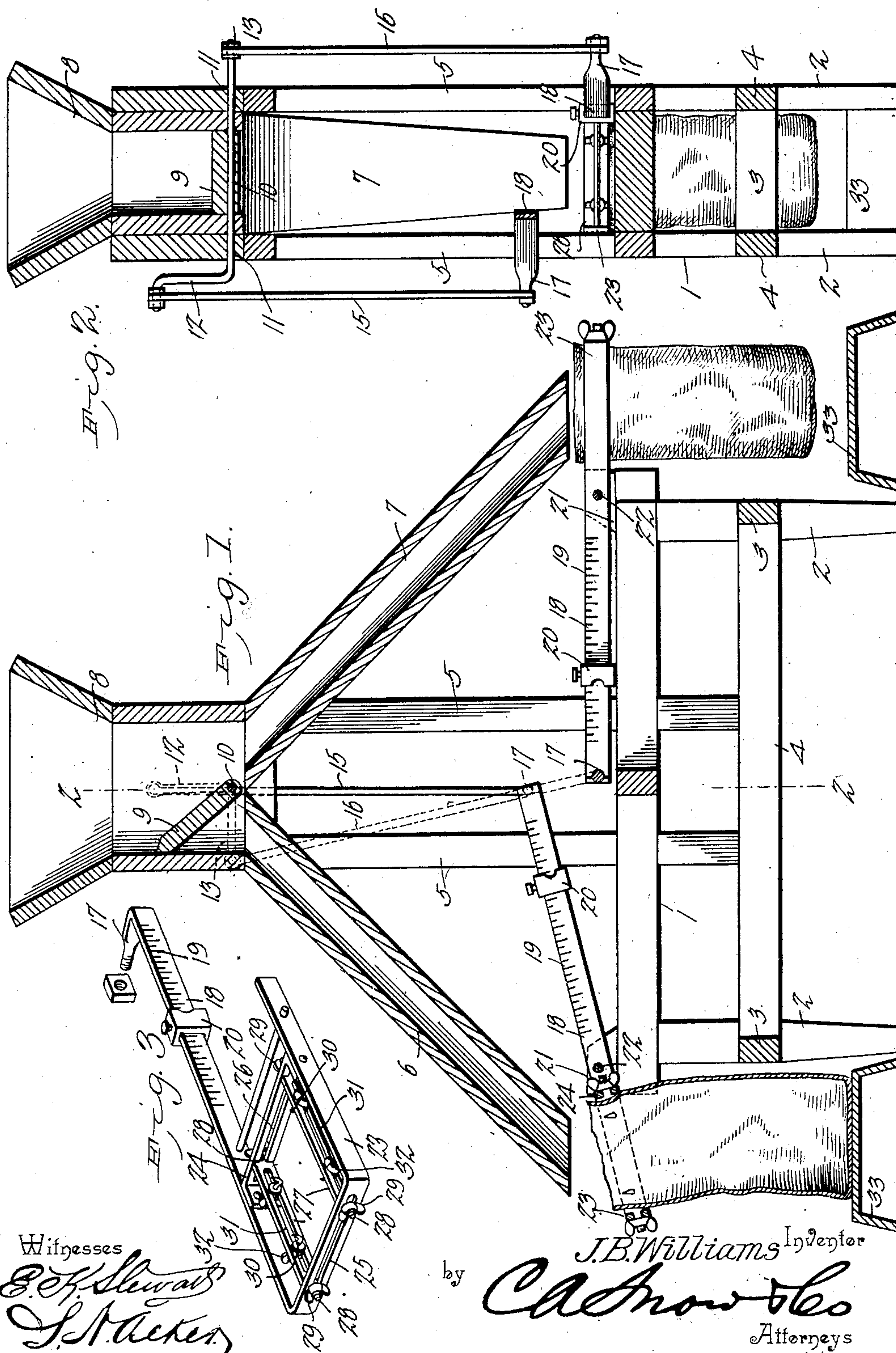
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J. B. WILLIAMS.
MACHINE FOR BAGGING AND WEIGHING GRAIN.

APPLICATION FILED DEC. 19, 1902.

NO MODEL.



Witnesses
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JAMES BERNARD WILLIAMS, OF ALBERTA, LOUISIANA.

MACHINE FOR BAGGING AND WEIGHING GRAIN.

SPECIFICATION forming part of Letters Patent No. 736,663, dated August 18, 1903.

Application filed December 19, 1902. Serial No. 135,935. (No model.)

To all whom it may concern:

Be it known that I, JAMES BERNARD WILLIAMS, a citizen of the United States, residing at Alberta, in the parish of Bienville and State of Louisiana, have invented a new and useful Machine for Bagging and Weighing Grain, of which the following is a specification.

This device relates to a grain weighing and bagging machine in which the grain is alternately discharged through two separate chutes that lead to distinct bag-holders, each of which is attached to a scale-beam having connections with a pivoted valve placed at the junction of the chutes, and has for its primary object to provide a means for automatically shifting and locking said valve when one of the holders sinks under the weight of the filled bag, thereby permitting the removal of said bag without the liability of the valve being shifted until the other bag has been completely filled.

Another object of my invention is to provide a simple inexpensive machine of this character which will automatically bag and weigh in predetermined quantities grain as discharged from a thresher or any other source of supply.

To this end my invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a longitudinal section of the machine. Fig. 2 is a transverse section taken on the line 2 2 of Fig. 1, and Fig. 3 is a detail perspective of the scale-beam and bag-holder.

Referring to the drawings, in which like numerals of reference designate corresponding parts in all the figures, 1 indicates the frame, which is made of wood or other suitable material and consists of the standards 2, connected by cross-beams 3, and parallel longitudinal side bars 4, having secured thereto the uprights 5, which form a support for two divergent chutes 6 and 7, which lead from a hopper 8. Located within the hopper 8, at the junction of the divergent chutes, is a vibrating valve 9, which regulates the flow of grain and discharges it alternately through the chutes 6 and 7. The valve 9 is secured to a rock-shaft 10, which passes transversely

through the hopper 8 and has supporting-bearings 11 in the sides thereof. The shaft has two crank-arms 12 and 13, arranged at right angles to each other and connected, respectively, by means of pitman-rods 15 and 16 to the outwardly-extending arms 17 of scale-beams 18.

The scale-beams 18, which are provided, respectively, with the usual graduations 19 and weight-poise 20, are each pivoted or fulcrumed between the parallel side blocks 21 of the frame by means of a rod 22 and have their end portions bent into a substantially rectangular-shaped bail 23, connected by a slotted cross-bar 24. Slidably mounted in elongated slots 25 and 26, formed in the bail 23 and cross-bar 24, are a pair of slotted bag-holding arms 27, the screw-threaded end portions 28 of which pass through the slots 25 and 26 and are adjustably secured therein by means of clamping-nuts 29. One or more inwardly-extending pins 30 are slidably mounted in slots 31, formed in the arms 27, and these pins may be adjusted to accommodate any-size bag by means of nuts 32, which clamp said pins in the desired position on the arms.

The relative position of the crank-arms 12 and 13 with respect to the pitman-rods is such that when either of the scale-beams is overbalanced the upward movement of the rods will bring said rod in direct vertical alignment with its respective crank-arm or, in other words, on dead-center, as clearly shown by dotted lines in Fig. 1 of the drawings, thereby locking said valve and preventing any further movement of the same until the other bag has been filled.

33 designates suitable platforms adapted to receive the bags after they have been filled and weighed.

The operation of my device is as follows: Grain is fed from a thresher or other source of supply into the hopper and assuming the valve to be in the locked position shown in Fig. 1 of the drawings will flow through the chute 7 into the bag until a predetermined quantity has been delivered thereto, when the beam will tilt, raising the rod 16 and forcing the crank-arm 14 to a vertical position in alignment with the rod or on a dead-center, thereby locking the valve and shutting off the supply of grain to said chute and allow-

ing it to flow through the chute 6 until the beam on this side is overbalanced, when the valve will again be shifted to its first position and locked, as before stated.

5 From the foregoing description it will be seen that I have provided a simple inexpensive machine which will automatically weigh and bag the grain and by reason of the peculiar disposition of the crank-arms allow the
10 filled bags to be removed and replaced by empty bags without the liability of the valve being accidentally shifted before the bags have been filled.

Various changes in form, proportion, and
15 minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention, and although the device has been described as intended for use in bagging grain
20 it will be understood that it may be employed in connection with automatic weighing or filling machines for any purpose and used in filling bags, boxes, or other receptacles.

Having thus described the invention, what
25 is claimed is—

1. In an automatic bagging-machine, a plurality of discharge-chutes, a valve controlling the passage of material into said chutes, a pair of movable members actuated alternately by
30 the weight of the material, and means connecting both members to the valve for changing the position of said valve and positively locking the same with respect to the member effecting such change of position.

35 2. In an automatic bagging-machine, a plurality of discharge-chutes, a pivoted valve mounted therein, crank-arms connected to the said valve, a pair of movable members actuated alternately by the weight of the material, and connecting-rods extending be-
40 tween the movable members and the crank-arms to change the position of the valve, the rods alternately assuming positions in alinement with their respective crank-arms and

forming a positive lock for the valve with re- 45 spect to the member effecting such change of position.

3. In an automatic bagging-machine, the combination with a frame having a pair of scale-beams fulcrumed thereon, divergent
50 chutes mounted on the frame, a valve pivoted at the junction of said chutes, crank-arms connected to said valve, connecting-rods extending between the crank-arms and the scale-beams to change the position of the
55 valve, the rods alternately assuming positions in alinement with their respective crank-arms and forming a positive lock for the valve with respect to the scale-beam effecting such
60 change of position.

4. In an automatic bagging-machine, the combination with a frame, a pair of scale-beams fulcrumed thereon and each having one end bent into a substantially rectangular bail forming a holder for a grain-bag, a pair of
65 divergent chutes mounted on the frame above said scale-beams, a pivoted valve at the junction of said chutes, crank-arms connected to the valve and arranged at right angles to each other and rods extending between the crank-
70 arms and the scale-beams.

5. In an automatic bagging-machine, the combination with a frame, of the chutes, a valve, a pair of scale-beams fulcrumed on the frame, adjustable bag-supporting members
75 carried by said beams, and means connecting the beams to the valve for alternately changing the position of the valve and positively locking the same with respect to the scale-beam effecting such change of position. 80

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

JAMES BERNARD WILLIAMS.

Witnesses:

L. A. SNIDER,
A. B. McLURE.