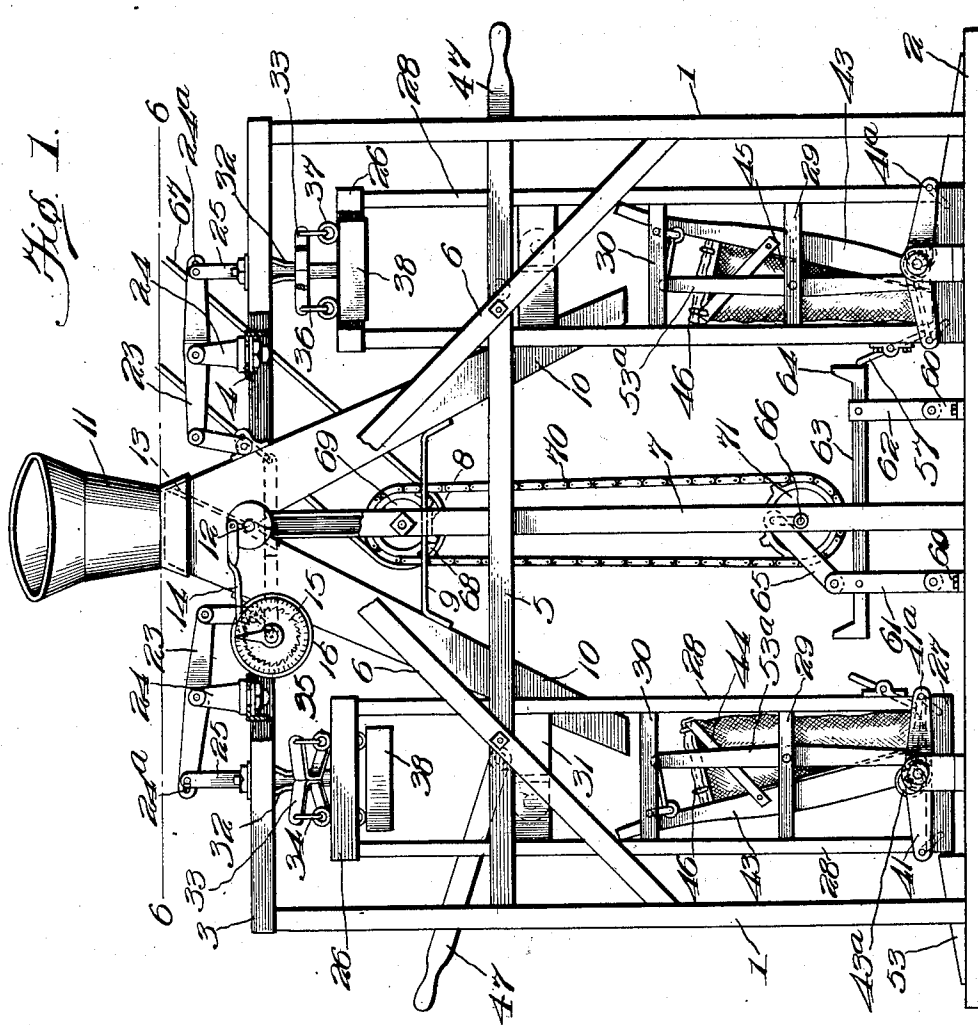


J. BROUSSARD.
BAG FILLING MACHINE.
APPLICATION FILED SEPT. 18, 1911.

1,014,444.

Patented Jan. 9, 1912.

4 SHEETS—SHEET 1.



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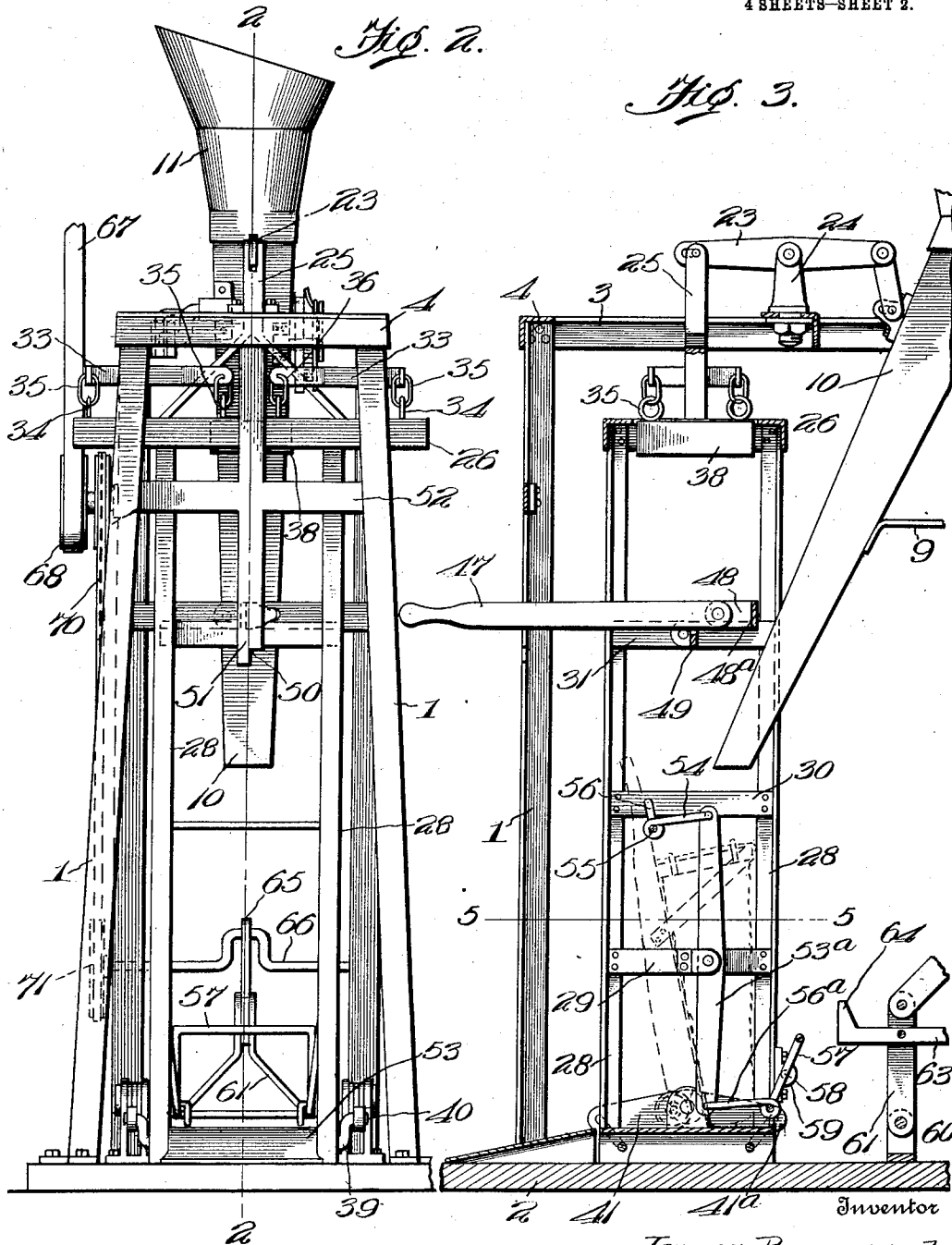
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4 SHEETS—SHEET 2.



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4 SHEETS—SHEET 3.

Fig. 5.

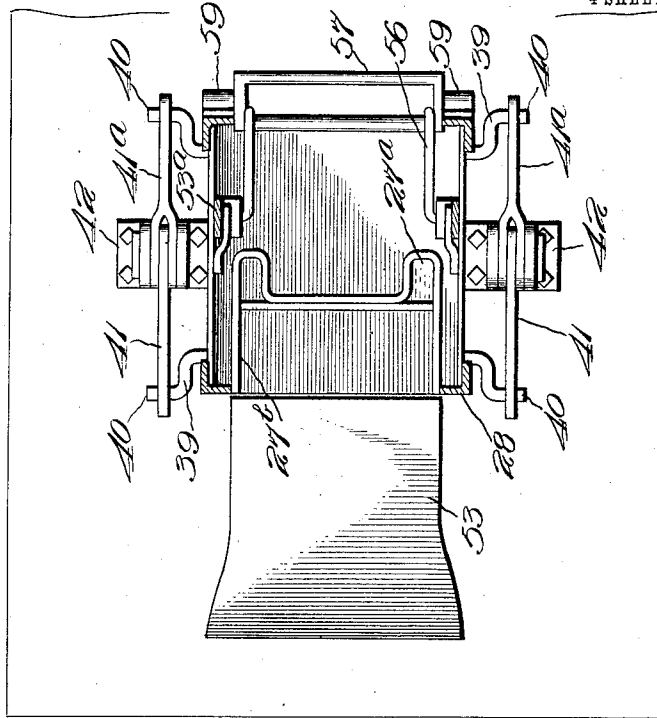
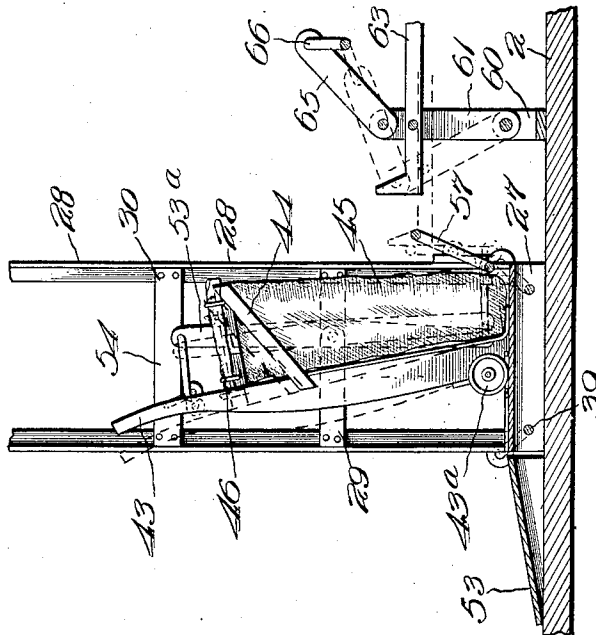


Fig. 4.



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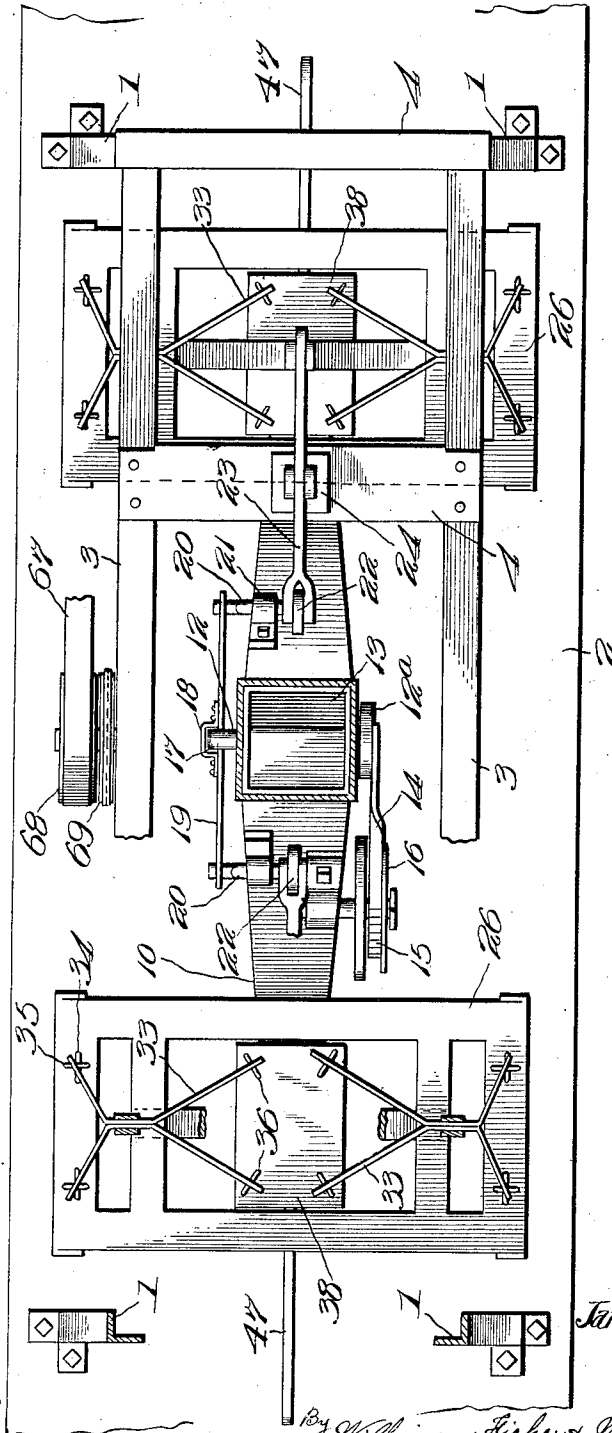
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4 SHEETS—SHEET 4.

Fig. 6.



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UNITED STATES PATENT OFFICE.

JAMES BROUSSARD, OF LOREAUVILLE, LOUISIANA.

BAG-FILLING MACHINE.

1,014,444.

Specification of Letters Patent.

Patented Jan. 9, 1912.

Application filed September 18, 1911. Serial No. 649,920.

To all whom it may concern:

Be it known that I, JAMES BROUSSARD, a citizen of the United States, residing at Loreauville, in the parish of Iberia and State of Louisiana, have invented certain new and useful Improvements in Bag-Filling Machines; 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 apparatus for packing materials such as sugar, corn and rice, and is particularly directed to improvements in the machine disclosed in my pending application, Serial No. 610,342, filed February 23, 1911.

The principal object of the present invention is to provide a machine to save handling of the bags or sacks to be filled by suitably supporting them on trucks and running the trucks on the machine, and also to provide means for effectually jiggering the bags or sacks on the trucks while being filled.

Other objects and advantages will appear from the following description when taken in connection with the accompanying drawings which illustrate a preferred embodiment of the invention, and the novel features of the details of construction, combinations and arrangements of the parts will be distinctly pointed out in the appended claims.

In the drawings like characters of reference indicate corresponding parts.

Figure 1 is a front elevation of a machine constructed in accordance with my invention, one of the cages carrying a truck and sack thereon being shown in elevated position and the other in normal position, and parts of the framework being broken away; Fig. 2 is an end elevation of the machine; Fig. 3 is a fragmental vertical sectional view taken on line 3—3 of Fig. 2; Fig. 4 is a similar view as the lower portion of Fig. 3, the truck carrying a sack and the jiggering mechanism being shown in different positions; Fig. 5 is a fragmental cross sectional view on an enlarged scale taken on line 5—5 of Fig. 3; and Fig. 6 is a cross sectional view taken on line 6—6 of Fig. 1, certain portions being broken away.

The framework of the machine is prefer-

ably constructed of structural material, and consists of corner uprights 1 which project from a base 2 and are suitably connected together at their upper ends by longitudinal beams 3 and cross pieces 4. A suitable distance below the longitudinal beams 3 are other similar beams 5, and diagonal braces 6 are also provided for strengthening the framework. Arranged centrally between the uprights 1 and secured to the base 2 and longitudinal beams 3 are stud posts 7 which are connected together near their upper ends by a cross beam 8 for supporting a member 9 connected to a pair of diverging chutes 10 leading from the bottom of a hopper 11. Pivoted at the intersection of the chutes 10 is a rod 12 having fixed thereto a divisional plate 13 for closing one or the other chute, and thereby directing the material from the hopper into the open chute. The divisional plate 13 is automatically operated when a sack is filled and registering means are provided for indicating the number of sacks filled as will be hereinafter described. The forward end of the rod 12 carries a disk 12^a to which is pivoted a pawl 14 for engaging the teeth of a ratchet wheel 15 of a suitable registering device as indicated at 16 supported from one of the chutes. The rear end of the rod 12 is bent downwardly as at 17 for engaging a central eye 18 of a double ended connecting rod 19 having its free ends connected to double crank shafts 20 mounted in bearings 21 fixed to the chutes. One of the cranks of each crank shaft 20 is connected to a link 22 pivotally connected to the inner end of a rock lever 23 pivotally supported in a bracket 24 carried by a cross piece of the framework.

As both ends of the machine are similar, only one will be described for the sake of simplicity.

The outer end of the rock lever 23 is connected at 24 by means of a pin and slot to a forked member 25 which projects upwardly from the top 26 of a vertically movable cage. The cage consists of a platform 27 connected to the top 26 by upright posts 28, the two side ones being connected together by suitably spaced longitudinal bars 29, 30 and 31. The cage is pivotally suspended from the longitudinal beams 3 of the framework by

means of depending forked brackets 32 to which are pivotally connected double forked levers 33 having their outer legs connected by links 34 to eye bolts 35 projecting from the top 26 of the cage, and their inner legs connected by links 36 to eye bolts 37 fixed to a balance weight 38.

The platform 27 of the cage is movably connected to the base 2 of the machine by means of transverse shafts 39 journaled in the platform and having cranks 40 at their projecting ends to which are connected inwardly extending levers 41 and 41^a which are pivotally connected to brackets 42 fixed to the base. The platform 27 is for the purpose of carrying an ordinary truck 43 having fixed thereto a pair of supporting brackets 44 to which is fastened the open mouth of a sack 45 by clips 46 or other suitable means for holding the mouth of the sack below the chute 10. The balance weight 38 is suitable for holding the cage in an elevated position until the sack is filled to a predetermined weight, when the cage will descend and thereby swing the divisional plate 13 to direct the material from the hopper 11 to the other chute under which the open mouth of an empty sack carried by a truck has been placed, and also to operate the registering device 16.

The cage is held in its lower position during the loading and unloading of the trucks on the platform by means of a locking lever 47 which is pivoted to a central lug 48 of a cross beam 48^a fastened to the longitudinal beams 5 of the framework, and is adapted to bear downwardly on a cross bar 49 secured to the longitudinal bars 31 of the cage and engage a notch 50 at the lower end of a vertical bar 51 secured to the end cross piece 4 and having arms 52 fastened to the uprights 1 of the framework. An incline 53 leading to the platform 27 facilitates the loading and unloading of the trucks thereon.

In order to properly jigger the sacks while being filled to shake down the material, the following means are provided:—Pivotally connected to the longitudinal bars 29 of the cage are shaker levers 53^a, to the upper ends of which are pivoted outwardly extending links 54 having their outer ends connected to a rod 55 terminating at its ends in cranks 56 which are journaled in the longitudinal bar 30 at such a position that the front edges of the handles of a truck will rest against the rod 55 when the truck is in an upright position on the platform 27 with its wheels 43^a held in the loops 27^a of a chocking member 27^b fixed to the platform. Extending inwardly from the lower ends of the shaker levers 53^a are links 56^a similar to the links 54. The links 56^a are pivotally connected to the lower bar of a rectangular shaker frame 57 having trunnions 58 which

are journaled in suitable bearings 59 carried by the end upright posts 28 of the cage. Pivotally connected to laterally spaced brackets 60 projecting from the base 2 of the machine are the lower ends of a pair of forked levers 61 and 62 which pivotally support a reciprocating bar 63 terminating in upwardly projecting heads 64 for striking against the upper bar of the shaker frame 57. One of the forked levers 61 extends beyond the upper pivotal point and is connected by means of a connecting rod 65 to a crank shaft 66 journaled in the centrally arranged stud posts 7. The crank shaft 66 may be rotated in any suitable manner as by means of a belt 67 driving a pulley 68 connected to a chain wheel 69 over which passes a continuous chain 70 leading to a similar chain wheel 71 fixed to the crank shaft. When the reciprocating bar 63 strikes the shaker frame 57, the rod 55 through the movement of the shaker levers 53^a causes the truck 63 to tilt backwardly, as shown in dotted lines, Fig. 4, and as the reciprocating bar moved in the opposite direction, the truck will tilt forwardly on account of the weight of the filled sack.

Operation: Assuming the machine is in the position shown in Fig. 1 with the divisional plate 13 swung to the right, the locking lever 47 out of engagement with the notch 50 and the sack under the left hand chute 10 being filled from the hopper 11. As soon as the sack becomes filled sufficiently to overcome the action of the balance weight 38, the cage will descend, which movement will cause the forked member 25 to pull downwardly on the rocking lever 23 thereby rotating the double crank shaft 20 which in turn actuates the double ended connecting rod 19 to rotate the pivotal rod 12 and swing the divisional plate 13 into its other position, and at the same time cause the pawl 14 to operate the registering device 16. The locking lever 47 is then brought into engagement with the notch 50 to hold the cage in its lower position while removing the truck with the filled sack from the platform, and after another truck carrying an empty sack has been rolled upon the platform, the lever is again released to allow the cage to return to its elevated position. While the sack is being filled the bar 53 is reciprocated and by striking the upper bar to the shaker frame 57, the frame is rocked on its trunnions and a rocking movement imparted to the shaker levers 53^a which transmit movement to the rod 55, thereby causing jiggering backward and forward movement of the truck to pack the material in the sack.

Although the elements set forth and described are well adapted to accomplish the purposes for which they are intended, it is to be understood that slight changes in the

form, proportion and minor details of construction may be resorted to without sacrificing any of the advantages or departing from the spirit of the invention.

5 Having fully described my invention, what I claim is:—

1. In a bag filling machine, the combination of a delivery chute, a truck having handles, means for supporting a sack on the truck with its mouth under the chute, and means engaging the handles of the truck to impart a jiggering movement to the truck while the sack is being filled, substantially as described.

15 2. In a bag filling machine, the combination of a delivery chute, a platform, a truck having wheels and handles, means fixed to the platform for chocking the wheels of the truck, means for supporting a sack on the truck with its mouth open, means engaging the handles of the truck when the truck is in an upright position on the platform with the sack under the chute, and means for imparting a jiggering movement to the last mentioned means, substantially as described.

25 3. In a bag filling machine, the combination of a delivery chute, a truck having handles, means for supporting a sack on the truck with its mouth open, a crank rod engaging the front edges of the truck handles when the truck is in an upright position with the sack under the chute, a shaker lever pivoted to the crank rod, and means for actuating the shaker lever to cause the truck to tilt backwardly, substantially as described.

35 4. In a bag filling machine, the combination of a delivery chute, a truck having handles, means for supporting a sack on the truck with its mouth open, a rod engaging the front edges of the truck handles when the truck is in an upright position, cranks at each end of the rod, shaker levers pivotally connected to the cranks, a pivotally mounted shaker frame pivotally connected to the shaker levers, and means for actuating the shaker frame, substantially as described.

45 5. In a bag filling machine, the combination of a delivery chute, a truck having handles, means for supporting a sack on the truck with its mouth open, a rod engaging the front edges of the truck handles when the truck is in an upright position, cranks at each end of the rod, shaker levers pivotally connected to the cranks, a pivotally mounted shaker frame pivotally connected to the shaker levers at the opposite sides from said rod, a reciprocating bar for imparting a jiggering movement to said frame, and means for reciprocating said bar, substantially as described.

60 6. In a bag filling machine, the combination of a delivery chute, a truck having

handles, means for supporting a sack on the truck with its mouth open, a rod engaging the front edges of the truck handles when the truck is in an upright position, cranks at each end of the rod, shaker levers pivotally connected to the cranks, a pivotally mounted shaker frame arranged at the opposite sides of the shaker levers from said rod, means connecting the lower portion of the frame to the shaker levers, a bar for striking the upper portion of the frame to impart a jiggering movement thereto, anchored brackets, links pivotally connected to the brackets and to said bar, and means for reciprocating said bar, substantially as described.

7. In a bag filling machine, the combination of a delivery chute, a pivotally suspended cage adapted to carry a truck in an upright position, the truck having handles, means for supporting a sack on the truck with its mouth open, the mouth of the sack being arranged under the chute, means engaging the handles of the truck to impart a jiggering movement to the truck while the sack is being filled, a weight connected with the cage for balancing the cage with the truck thereon and the sack filled to a predetermined weight, and means for closing the delivery chute and registering the downward movement of the cage, substantially as described.

8. In a bag filling machine, the combination of a delivery chute, a pivotally suspended cage adapted to carry a truck in an upright position, the truck having handles, means for supporting a sack on the truck with its mouth open, the mouth of the sack being arranged under the chute, a rod rotatably mounted in the cage for engaging the front edges of the truck handles, cranks at each end of the rod, a shaker frame journaled to the cage, shaker levers pivoted to the cage between said rod and said shaker frame, links connecting the shaker levers to the cranks, means connecting the shaker levers to the shaker frame, a reciprocating bar for imparting a jiggering movement to the shaker frame, means for reciprocating said bar, a weight connected with the cage for balancing the cage with the truck thereon when the sack is filled to a predetermined weight, and means for closing the delivery chute by the downward movement of the cage, substantially as described.

9. In a bag filling machine, the combination of a frame, a delivery chute fixed to the frame, a pair of forked levers pivotally connected to the frame, a cage suspended from the outer ends of the forked levers adapted to carry a truck in an upright position, the truck having handles, means for supporting a sack on the truck with its mouth under the chute, a weight connected to the inner

ends of the forked levers for balancing the cage with the truck thereon and the sack filled to a predetermined weight, means engaging the handles of the truck to impart
5 a jiggering movement to the truck while the sack is being filled, crank shafts mounted in the lower portion of the cage, anchored brackets, and links pivotally connecting the

crank shafts to the brackets, substantially as described.

10

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

JAMES BROUSSARD.

Witnesses:

PAUL BASSIN,

ANTHONY GIRARD.

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