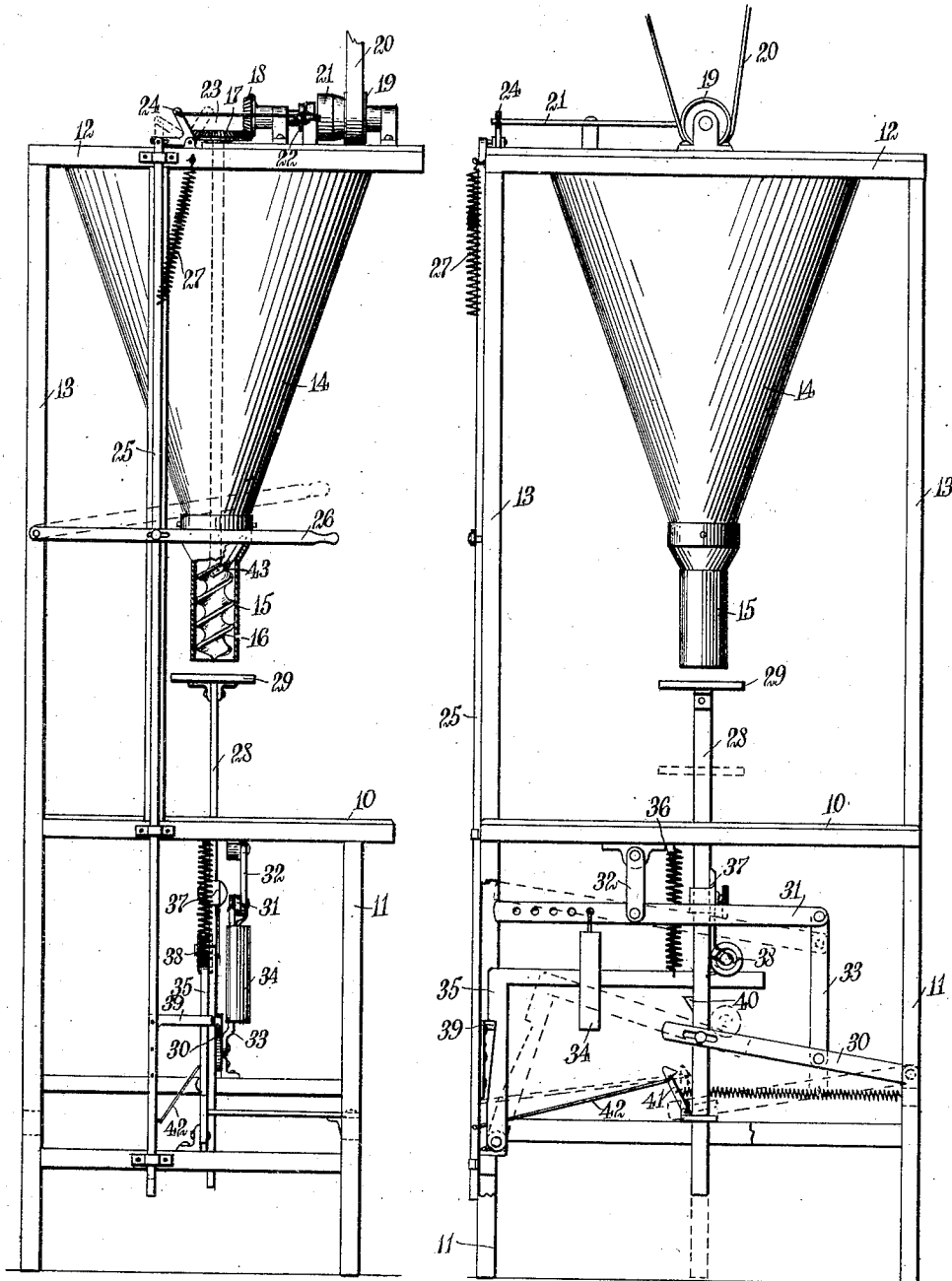


A. K. ROBBINS.
 PACKAGE PACKER.
 APPLICATION FILED AUG. 25, 1910.

990,777.

Patented Apr. 25, 1911.



WITNESSES:
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PACKAGE-PACKER.

990,777.

Specification of Letters Patent. Patented Apr. 25, 1911.

Application filed August 25, 1910. Serial No. 578,969.

To all whom it may concern:

Be it known that I, ALFRED KAPLE ROBBINS, a citizen of the United States, and a resident of Cobleskill, in the county of Schoharie and State of New York, have invented a new and Improved Package-Packer, of which the following is a full, clear, and exact description.

This invention relates to certain improvements in machines for use in filling packages with granular, pulverulent, crystalline or other similar material, and one object of the invention is to provide for the automatic stopping of the delivering mechanism when the package is filled to the required extent.

The machine is so constructed that it works with great accuracy and speed, and cannot readily become clogged. The mechanism is comparatively simple, so that the machine may be manufactured and sold at a comparatively low price, and cannot readily get out of proper adjustment.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in both views, and in which—

Figure 1 is a side elevation of a machine constructed in accordance with my invention, a portion of the delivery funnel being broken away; and Fig. 2 is a front elevation of the machine, certain of the parts being shown in a second position in dotted lines.

In the specific form of machine illustrated in the accompanying drawings, I provide a suitable frame, which includes a platform or table 10, mounted on suitable legs 11, and an upper or top portion 12 supported on suitable standards 13. Suspended from the top portion 12 of the frame, I provide a container 14, in the form of a hopper and adapted to receive the material to be delivered to the packages. This container terminates at its lower end in a delivery nozzle 15, within which there is mounted a screw conveyer, rotatable about a vertical axis. The conveyer is so formed that when stationary, it effectively prevents the escape of the material through the nozzle, but when rotated, serves to feed the material from the container through the nozzle. The screw is rotated by a shaft extending up through the container and having at its upper end a bevel gear 17, intermeshing with a bevel gear 18, on a drive shaft carried by the upper portion of the frame. This drive shaft may be

rotated in any suitable manner from any suitable source of power, and is provided with a clutch for stopping and starting the drive shaft. The details of this driving mechanism are unimportant, and have not been illustrated in detail, but preferably there is employed a loose pulley 19, over which a drive belt 20 extends, and this pulley may be locked to the drive shaft by a suitable clutch collar 21, controlled by a lever 22. The lever is pivoted intermediate its ends and connected by a rod 23 to a bell crank lever 24. The opposite arm of the bell crank lever is connected to a vertical slide 25 on the frame, and this slide is connected to a lever 26, by means of which the slide may be reciprocated. A spring 27 normally tends to hold the slide in raised position and the clutch in its inoperative position.

Extending up through the table or platform 10 is a vertical plunger 28, terminating at its upper end in a plate 29, which serves to support the package to be filled. This plunger is normally held in its upper limiting position by means of a lever 30 pivoted to the plunger and to the frame, a lever 31, supported by link 32 from the table, a link 33, connecting the two levers, and a weight 34 suspended from one end of the lever 31. As will be readily seen, the downward movement of the plunger 28 lowers the lever 30 and the link 33, and pulls down on one end of the lever 31 so as to raise the weight. The position of the weight on the lever may be varied in accordance with the weight of the package to be filled.

Pivoted to the frame is a lever member 35, normally held in an upper limiting position by a spring 36, and having a free end extending adjacent the plunger 28. On this plunger is an adjustable bracket 37, carrying at its lower end a roller 38 engaging with the upper side of the member 35. The slide 25, previously referred to, has an arm 39 extending adjacent the side of the lever member 35 and adapted to enter a recess in the vertical edge of the latter. The plunger 28 has a catch 40 on the side thereof, and pivoted to the lower portion of the frame is a catch 41, which may engage with this catch 40 and hold the plunger in lowered position. The catch 41 is connected to the slide 25 by a rod 42, so that the catch will be operated by the reciprocation of the rod.

To prevent the material from clogging adjacent the upper end of the conveyer 15, I

may provide a scraper 43 in the form of a piece of metal, one end of which is riveted to the conveyer, and the opposite end of which extends adjacent the inclined bottom of the hopper.

The operation of the machine is substantially as follows:—When the parts are at rest, they are normally in the position indicated in dotted lines in the drawings; that is, the support 29 for the package or carton is in lowered position, and the catch 41 engages in the catch 40 to hold the plunger 28 in its lowered position. The spring 27 holds the slide 25 in its raised position, with the clutch 21 out of operation. When it is desired to fill a package, an empty container is placed on the platform 29, and the handle 26 is forced downwardly to the position indicated in solid lines in Fig. 1. This throws the clutch into operation to start the propeller, and at the same time it pulls down on the link 42 and disengages the catch 41 so that the spring 36 may pull the plunger and carton support upwardly to the position shown in solid lines. The plunger is held in its lowered position during the filling of the carton by the engagement of the arm 39 with the recess in the side of the member 35. As the material is delivered to the carton by the screw, the carton is forced downwardly, not only by the pressure of the material, but also by the weight of this material counteracting the weight 34. The machine is so adjusted that when the carton is filled to the required extent, the roller 38 will have pressed the lever member 35 downwardly to release the arm 39 and permit the spring to raise the slide 25 and the handle 26 and disengage the clutch. At the same time, the upward movement of the slide will bring the catch 41 over into position so as to engage above the catch 40 and hold the plunger 28 in its lowered position. The filled carton is then removed and an empty one placed on the platform, ready for the repetition of the operation.

The position of the roller 38 may be adjusted at will, so as to release the slide 25 at any desired time. The catch 41 may be adjusted or replaced by a longer or shorter one, to insure its proper engagement with the catch 40, to hold the plunger in its lowered position.

Various changes may be made in the construction and operation of the machine without departing from the spirit of my invention.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. A package filling machine, comprising a container having a delivery nozzle, a screw conveyer in the nozzle of the container, means for operating the screw conveyer, a clutch for controlling the operating means,

a vertically slidable support below the nozzle of the container, a lever mechanism connected with the support and having an adjustable weight on one of its members, a sliding clutch operating member, means controlled by the support for locking the clutch operating member, and means controlled by the clutch operating member for locking the support in its lowermost position.

2. A package filling machine, comprising a container having a delivery nozzle, a feed device in the delivery nozzle, means for operating the feed device, a vertically sliding plunger having a plate on its end, a lever pivoted at one end and having its other end pivoted to the plunger, a pivoted lever provided with an adjustable weight, a link connecting the said levers, a sliding member controlling the operating means of the feed device, a pivoted and spring pressed lever for locking the said sliding member, and means on the plunger for engaging the said spring pressed lever to release the sliding member.

3. In a package filling machine, the combination with a container, a feed device in the container, means for operating the feed device, and a sliding and spring actuated member for controlling the operating means, of a plunger below the container and carrying a support at its upper end, a lever pivoted at one end and having its other end pivoted to the plunger, a lever pivoted intermediate of its ends and having an adjustable weight on one end, a link connecting the levers, a pivoted and spring pressed lever for locking the sliding member which controls the operating means, means on the plunger for engaging the said lever, a pivoted and spring pressed catch for engaging the plunger to hold it in its lowermost position, and a connection between the catch and the said sliding member.

4. In a package filling machine, the combination with a container, a feed device in the container, means for operating the feed device, and a sliding and spring actuated member for controlling the operating means, said member being provided with an angular arm, of a plunger below the container and carrying a support on its upper end and provided with a projection intermediate of its ends, a lever pivoted at one end and having its other end loosely pivoted to the plunger, a lever pivoted intermediate of its ends and carrying an adjustable weight, a link connecting the levers, a pivoted and spring pressed angular lever provided with a recess in one member engaged by the arm of the sliding member, a roller on the plunger and engaging the angular lever, a pivoted and spring pressed catch adapted to engage the projection of the plunger, and a connection between the catch and sliding member.

5. In a package filling machine, the com-

5 bination of a container, a feed device in the container, means for operating the feed device, a sliding and spring actuated member for controlling the operating means, a vertically slidable support below the container, a lever mechanism connected with the support and having an adjustable weight on one of its members, a locking device controlled by the support for locking the slid-

ing member, and a locking device for the support controlled by the sliding member. 10

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALFRED KAPLE ROBBINS.

Witnesses:

WM. H. GOLDING,
LILLIAN W. KLING.

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