(No Model.)

A. ROCKFELLOW.

CAN FILLING APPARATUS.

No. 287,725. Patented Oct. 30, 1883.

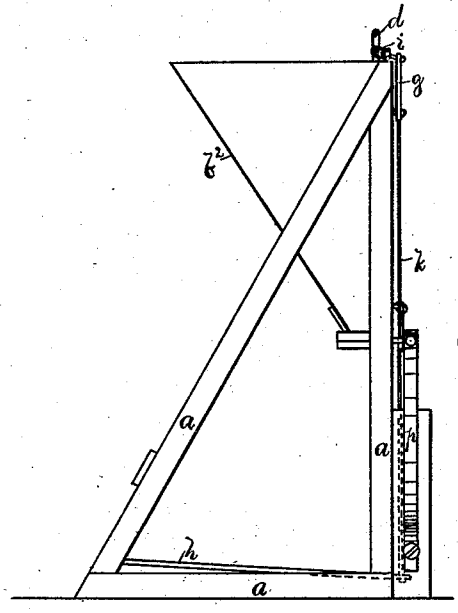


Fig 2

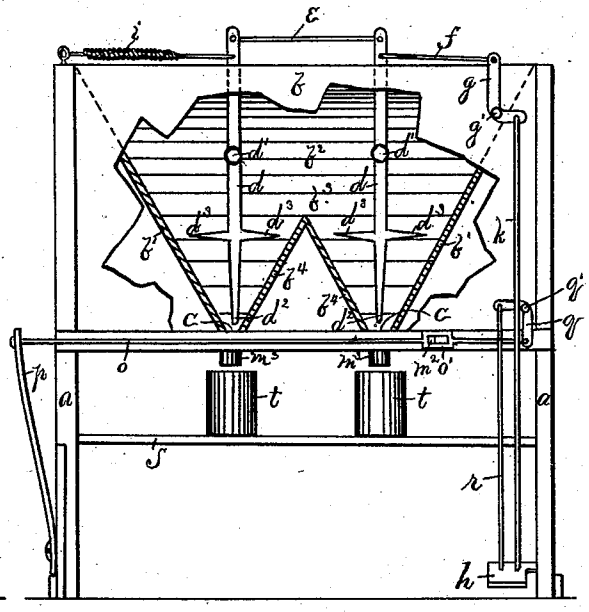


Fig 1

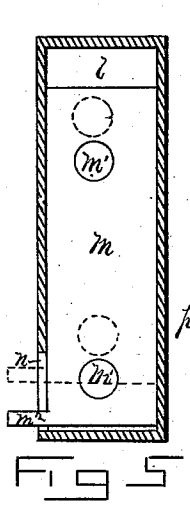


Fig 5

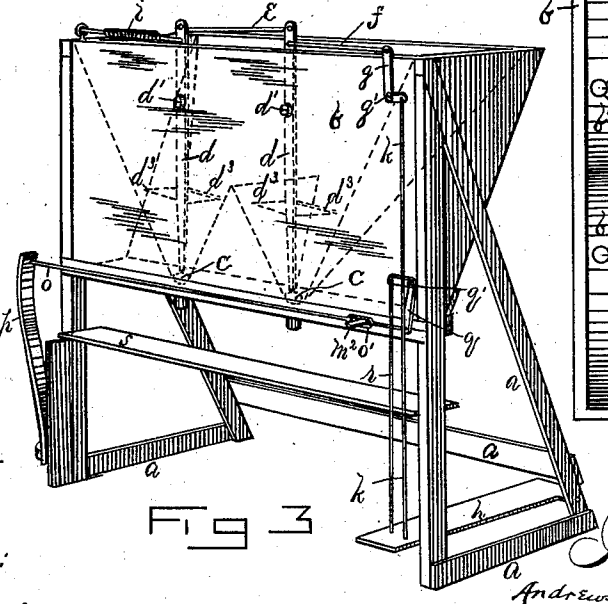


Fig 3

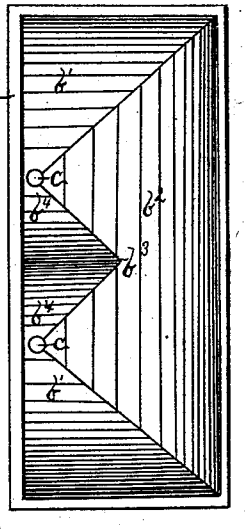


Fig 4

Witnesses:

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UNITED STATES PATENT OFFICE.

ANDREWS ROCKFELLOW, OF EDEN, NEW YORK, ASSIGNOR OF ONE-HALF TO AMMI H. CURTISS, OF SAME PLACE.

CAN-FILLING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 287,725, dated October 30, 1883.

Application filed September 19, 1883. (No model.)

To all whom it may concern:

Be it known that I, ANDREWS ROCKFELLOW, a citizen of the United States, residing at Eden, in the county of Erie and State of New York, have invented certain new and useful Improvements in Can-Filling Apparatus; 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates more particularly to apparatus for filling cans with peas.

It is a well-known fact that the peas, after being prepared for canning, are apt to clog in the hopper, owing to their increased weight and softness.

The object of my invention is to facilitate the discharge of the peas from the hopper to the can without injury thereto; and to that end it consists in a novel combination of devices, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is a front elevation of my improved apparatus with portions broken away, to show interior construction. Fig. 2 is a side elevation of Fig. 1. Fig. 3 is a front perspective view of the apparatus. Fig. 4 is a top plan view of the hopper, and Fig. 5 is a detail view of the slide which operates in connection with the discharge-openings in the hopper.

Referring to the drawings, *a* is the frame-work, which supports the hopper and operative mechanism. The hopper which I have herein shown as adapted for filling two cans simultaneously is located in the upper half of the frame-work *a*, and has the front vertical wall, *b*, the two side sloping walls, *b′ b′*, the rear sloping wall, b^2, and the angular partition b^3, which extends upwardly about one-half, or a little less than one-half, of the height of the hopper. The sloping sides *b′ b′* and b^2 of the hopper and the sloping sides b^4 b^4 of the angular partition b^3 converge to the two discharge-openings *c c*, through which the peas pass to the cans.

d d are two agitators loosely pivoted to the vertical front wall, *b*, at the points *d′ d′*, located above the center of such wall *b*. These agitators *d d* consist of narrow strips, preferably of metal, having the tapering ends d^2 d^2 extending down to a point just above the discharge-openings *c c* in the hopper upon each of the agitators *d d*, and at a point about midway between their lower ends, d^2 d^2, and their pivots *d′ d′*, and a short distance between the angle of the dividing-partition b^3, are located the tapering wings d^3 d^3, which extend in opposite directions from the agitators *d d* at right angles thereto, and parallel to the front vertical wall *b* of the hopper. The upper ends of these agitators *d d* are loosely connected by the rod *e*. The agitator to the right has loosely attached to it, above the hopper, one end of the rod *f*, the other end of which is loosely secured to the upper arm of the bell-crank lever *g*, pivoted to the vertical wall *b* of the hopper at the point *g′*. The other arm of this bell-crank lever *g* is connected with the foot-treadle *h* by the rod *k*. The agitator to the left is connected with the side of the hopper by the coiled spring *i*.

The mechanism just described is employed in vibrating the agitators *d d* within the hopper. Across the base of the hopper, just underneath its discharge-openings *c c*, and within a suitable recess, *l*, in the frame-work, (as clearly shown in Fig. 5,) is located the slide *m*, provided with the openings *m′ m′* at such a distance apart that they will register with the discharge-openings *c c*.

m^2 is a projecting lug at one end of the slide *m*, which lug extends out through an elongated slot, *n*, in the frame-work.

m^3 m^3 are short passages through the bottom of the recess *l*, immediately below the discharge-openings *c c*.

o is a rod provided with an elongated eye, *o′*, through which the lug m^2 of the slide *m* extends. The left-hand end of this rod *o* is secured to the upper end of the flat metal spring *p*, riveted at its lower end to the frame-work. The right-hand end of the rod *o* is loosely connected to the lower arm of the bell-crank lever *q*, pivoted at *q′* to the wall *b* of the hopper. The upper arm of this bell-crank lever

q is connected with the foot-treadle h by the rod r. By pressing the foot-treadle h the slide m is moved in its recess against the action of the spring p, which returns the slide to its normal position when the foot is raised from the treadle.

The operation of the mechanism described is substantially as follows: The hopper is filled with the peas, which are in a proper condition for canning. Upon a shelf, s, extending across the frame-work underneath the hopper, are placed the two cans t t, the openings in the cans being directly under the discharge-openings c c and passages m^3 m^3. The treadle h being now depressed by the foot, the attached rod k serves, by means of the intervening mechanism, to turn the agitators slightly on their pivots, by means of which the lower tapering ends, d^2, and the tapering side wings, d^3 d^3, effect a gentle displacement of the mass of peas at the discharge-openings, and just above them, thereby preventing the troublesome clogging (which is so liable to occur) without any material injury to the peas. In the same movement of the treadle the rod r is drawn down, and serves, by means of the intervening mechanism, to move the slide m until the openings m' register with the discharge-openings c c and the short passages m^3 m^3, thereby permitting the peas in the hopper to pass down into the cans placed below for their reception. It will be noticed that the elongated eye o' in the rod o is of such a length that the lug m', and with it the slide m, of which it is a part, is not moved until after the agitators d d have commenced to turn on their axes, which has the effect of causing the agitation in the mass of peas just in advance of their release from the hopper, thus preparing them for a quick discharge into the cans without loss of time. It is apparent that by a proper duplication of parts the capacity of my improved apparatus can be increased, as desired.

I have herein shown the agitators d as each provided with a single pair of tapering wings d^3 d^3, having found them in practice sufficient for the purpose; but it is apparent that I might change their number, as well as their shape and location, without departing from the spirit of my invention.

I claim—

1. A can-filling apparatus consisting, substantially, of the following instrumentalities, viz: a hopper provided with one or more discharge-openings, one or more pivoted winged agitators operating within the hopper at or near the discharge-openings, and a slide provided with an opening or openings acting in conjunction with the discharge-openings in the hopper, the winged agitators and slide being provided with suitable mechanism for operating them simultaneously, all arranged and combined substantially as shown and described.

2. In a can-filling apparatus substantially as shown, one or more pivoted winged agitators and a slide operating in conjunction with one or more discharge-openings in the hopper, the winged agitators and slide being operated by mechanism so arranged that the agitation of the contents of the hopper is effected just in advance of the release of the same by the slide from the hopper, substantially as shown and described.

3. In a can-filling apparatus, the combination, with the hopper provided with the discharge-openings c c, of the pivoted agitators d d, joined by the rod e, and provided with the tapering ends d^2 d^2 and the wings d^3 d^3, the rods f and k, the bell-crank lever g, the foot-treadle h, and the spring i, substantially as shown and described.

4. In a can-filling apparatus, the combination, with the hopper provided with the discharge-openings c c, of the slide m, adapted to move in the recess l, and provided with the openings m' m' and lug m^2, the rod o, with elongated eye o', the spring p, the bell-crank lever q, rod r, and foot-treadle h, substantially as shown and described.

5. The can-filling apparatus consisting of the hopper, substantially as shown, having the discharge-openings c c, the pivoted agitators d d, having the wings d^3 d^3, the mechanism for operating the agitators, as shown, the slide m, having the openings m' m' and lug m^2, the rod o, with elongated slot o', in engagement with the lug m^2, and the mechanism for moving the slide m and rod o, the entire apparatus being operated by the foot-treadle h, substantially as shown and described.

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

ANDREWS ROCKFELLOW.

Witnesses:

AMMI H. CURTISS,

OTTO HODDICK.