April 29, 1930. W. S. SWETT 1,756,222

CHERRY DROPPER

Filed June 25, 1925 2 Sheets-Sheet 1

Fig. 1.

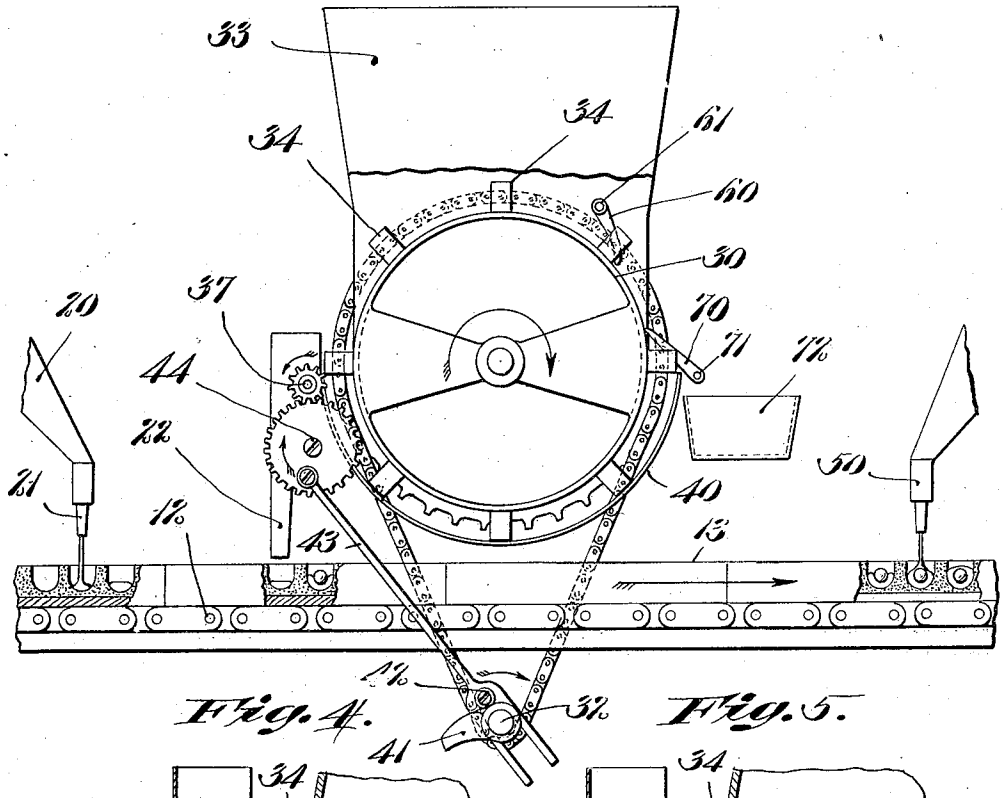


Fig. 4.

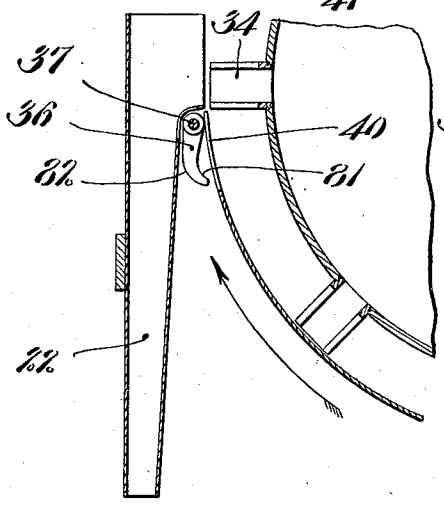
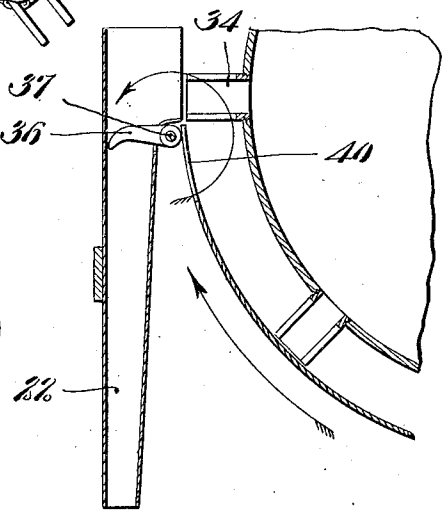


Fig. 5.



Inventor
Wesley S. Swett
by Jesse A. Holton
his Atty.

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Fig. 2.

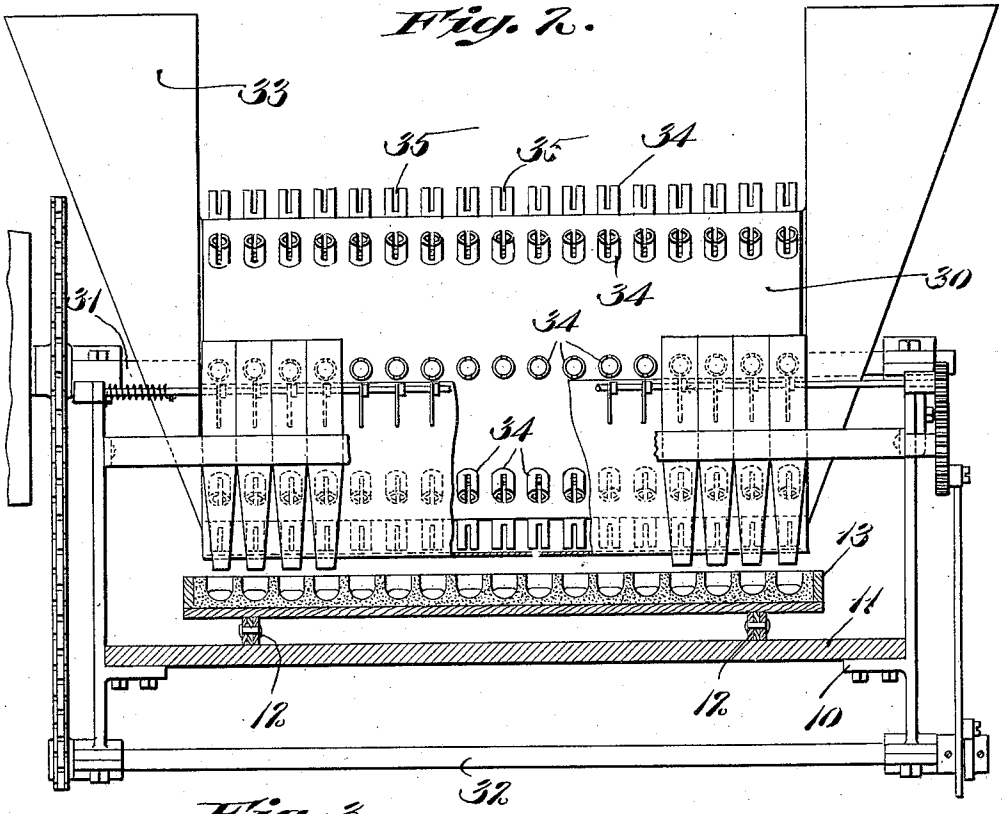


Fig. 3.

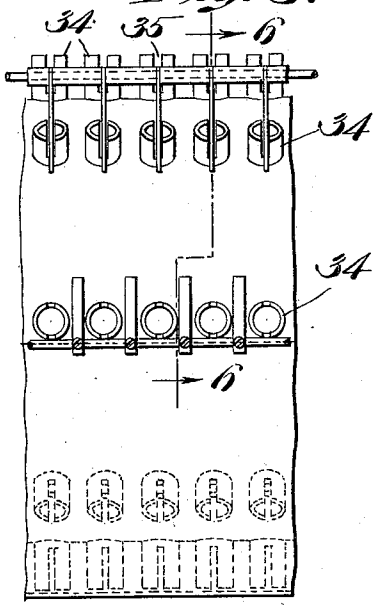
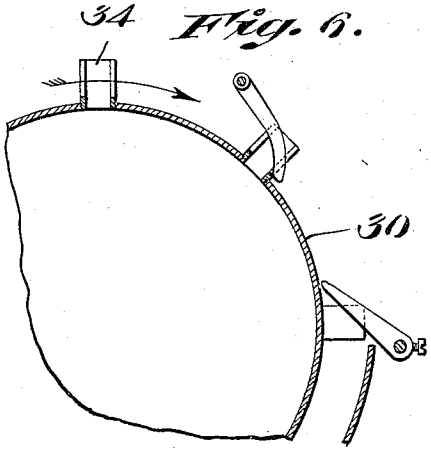


Fig. 6.



Inventor
Wesley S. Swett
by Jesse A. Holton
his Atty

Patented Apr. 29, 1930 1,756,222

UNITED STATES PATENT OFFICE

WESLEY S. SWETT, OF NEWTONVILLE, MASSACHUSETTS, ASSIGNOR TO UNITED CANDY COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF NEW YORK

CHERRY DROPPER

Application filed June 25, 1925. Serial No. 39,508.

This invention relates to machines for selecting and depositing candy inserts or the like, and with respect to certain more specific features thereof to automatically operating devices timed with certain feeding devices having provision for taking individual pieces from bulk and assembling these pieces at the proper times with other materials moving under the control of the feeding devices.

It is one of the objects of the present invention to provide a mechanism which shall have highly efficient operation on a material which ordinarily does not offer a good possibility of automatic selection, such for example, as preserved cherries which do not run uniform either as to size or shape, and which furthermore, are apt to be soft and sticky.

In candy making where these cherries are used as cores or inserts, it has been necessary as a commercial matter to employ as high as eight or ten operatives to place the inserts by hand as automatic feeding devices transfer the candy molds from one feeding or depositing mechanism to another. The present invention is quite inexpensive, highly efficient and durable, involves practically no loss of the materials operated upon, and may be safely placed under the control of relatively unskilled workmen.

The invention accordingly consists in the various features of construction, combinations of elements and arrangements of parts which will be exemplified by the construction hereinafter set forth and the scope of the application of which will be indicated in the following claims.

In the accompanying drawings wherein is shown one of various possible embodiments of the invention,—

Figure 1 is a view in side elevation of a candy depositing machine with the improved insert selector and depositor.

Figure 2 is a cross sectional view of the mechanism shown in Figure 1.

Figure 3 is a view in elevation of a portion of the insert carrying drum.

Figure 4 is a sectional view illustrating a portion of the insert carrying drum and the selecting finger and deposit chute.

Figure 5 is a view of the same showing the path of the selecting finger.

Figure 6 is a sectional view taken on the line 6—6 of Figure 3.

Referring now more particularly to the drawings wherein similar reference characters refer to similar parts throughout the several views, a frame is indicated at 10 comprising a flat table 11 over which there travels in the direction of the arrow shown in Figure 1 a pair of conveyor chains 12. Mounted on these conveyor chains are successive molds 13 formed ready for the confection deposit. One depositor is indicated in Figure 1 at 20 and is adapted to supply a cream to the molds as the machine in its intermittent operation registers successive rows of molds opposite the discharge spout 21 of the depository. As these molds move on intermittently they come opposite a series of conduits 22 which are related with the selecting and depositing mechanism now to be described.

A rotatable drum 30 is mounted on a driving shaft 31 connected by chain and sprocket mechanism to a shaft 32 which is in turn journaled in the frame of the machine. Fixed hoppers 33 are arranged at either end of the drum communicating with openings in the ends thereof, so that from time to time additional inserts of cherries or the like may be supplied to the drum. The drum is equipped with a plurality of rows of discharge spouts 34, which in the present instance are short pipes threaded into apertures in the drum and having slots 35 into which selector fingers 36 mounted on a shaft 37, are adapted to move. A guard 40 is arranged around the lower half of the drum nearly in contact with the outer ends of the discharge spouts 34. This guard serves to prevent the inserts from dropping out of the drum until the spouts have moved into a position where they are acted upon by the picker or selector fingers 36. The movement of the fingers 36 is oscillatory and in timed relation with the rotary movement of the drum. This movement of the picker fingers is effected by a cam 41 operating on a cam roll 42 through a crank rod 43 to rock a shaft 44 about eighty degrees. Through gear and pinion connection between the shaft

44 and the shaft 37, a rotary movement of about three hundred degrees is given to the latter shaft and to the selector fingers thereon. This movement is timed to take place as one of the discharge spouts 34 is moving beyond the end of the guard 40, so that as the drum approaches this position the selector fingers 36 moving in unison with the shaft 37 will approach from behind the outermost insert contained in the spout 34 and move between it and the next succeeding insert. This will cause the outermost insert to be delivered into the delivery conduit 22, and to drop therethrough into position in the candy molds on top of the cream previously deposited through the spout 21. As the molds move on in the direction of the arrow, Figure 1, they arrive presently in a portion of registration opposite a second depositor 50 which applies more cream above the insert resulting in the finished bonbon.

After the inserts have been selected from one row of discharge spouts 34 of the drum 30, this particular row commences its upward movement above the horizontal axis of the drum which ordinarily results in the cherries or inserts dropping back into the drum. In order to assure this backward movement, however, a series of fingers 60 are provided further along in the rotary path of the discharge spouts, these fingers being loosely mounted on a rod 61 so that by gravity the fingers follow into the path of the spouts opposite the grooves. By this means any cherries remaining for any reason in the spouts are urged back into the drum. It happens occasionally that in the operation of the selector or picker fingers, or in feeding the cherries to the drum through the hoppers, some of the cherries are deposited on the outer side of the drum and become wedged between the spouts 34. In order to compensate for this, another series of fingers 70 are fixedly arranged on a shaft or rod 71 in position to skive the cherries from between the spouts and allow them to run off into a removable container 72 properly placed in position to receive the cherries.

The relative movements, arrangements and shapes of the drum, spouts, guard 40 and picker fingers 36 have been found highly efficient in performing the difficult work of selecting individual inserts, particularly cherries and the like from the mass. It is to be noted that while the forward hooked face 81 of the picker fingers 36 controls the outward movement of the outermost cherry in the discharge spout, the rearward face 82 of the selector finger tends to baffle the outward flow of the remaining cherries until such time as the spout 34 has moved from its horizontal position upwardly to a point where the action of gravity if not actually returning the cherries to the drum will at least prevent their continuing in outward movement, leaving them in the discharge spout until the action of the fingers 60 forces them back into the drum.

What I claim is:—

1. In a machine for selecting and depositing candy inserts or the like, a rotatable drum adapted to contain a mass of candy inserts, means on said drum for receiving individual inserts from the mass in said drum, a fixed guard cooperative with said receiving means for retaining the individual inserts in said means, a plurality of delivery conduits, and a plurality of picker fingers arranged to operate near the termination of said guard to select the inserts and transfer the same to said delivery conduits.

2. In a machine for selecting and depositing candy inserts or the like, a rotatable drum adapted to contain a mass of candy inserts, means comprising outwardly projecting discharge spouts on said drum for receiving individual inserts from the mass in said drum, a fixed guard cooperative with said spouts for retaining the individual inserts in said spouts, a plurality of delivery conduits, and a plurality of picker fingers arranged to operate near the termination of said guard to select the inserts and transfer the same from said spouts to said delivery conduits.

3. In a machine of the character described, in combination, a rotatable drum container for a multiplicity of pieces, slotted spouts projecting outwardly from said drum, picker fingers arranged to move into the slots of said spouts, and means for operating said picker fingers periodically to co-operate with successive spouts on the drum whereby the outermost piece in each spout will be selected and delivered while the flow of the other pieces is baffled by the finger.

4. In a machine of the character described, in combination, a rotatable drum container for a multiplicity of pieces, a plurality of rows of spouts projecting outwardly from said drum, a row of picker fingers arranged to select pieces at the openings of said spouts, and a row of delivery conduits cooperatively arranged with said picker fingers to receive said pieces.

5. In a machine of the character described, in combination, a rotatable drum container for a multiplicity of pieces, a plurality of rows of slotted spouts projecting outwardly from said drum, a row of picker fingers adapted to rock in and out of the slots in said spouts, a row of pusher fingers arranged in the rotary path of said spouts to enter said slots whereby the pieces in the spouts may be forced into the drum, and a row of clearance fingers arranged to project toward the drum between the spouts.

WESLEY S. SWETT.