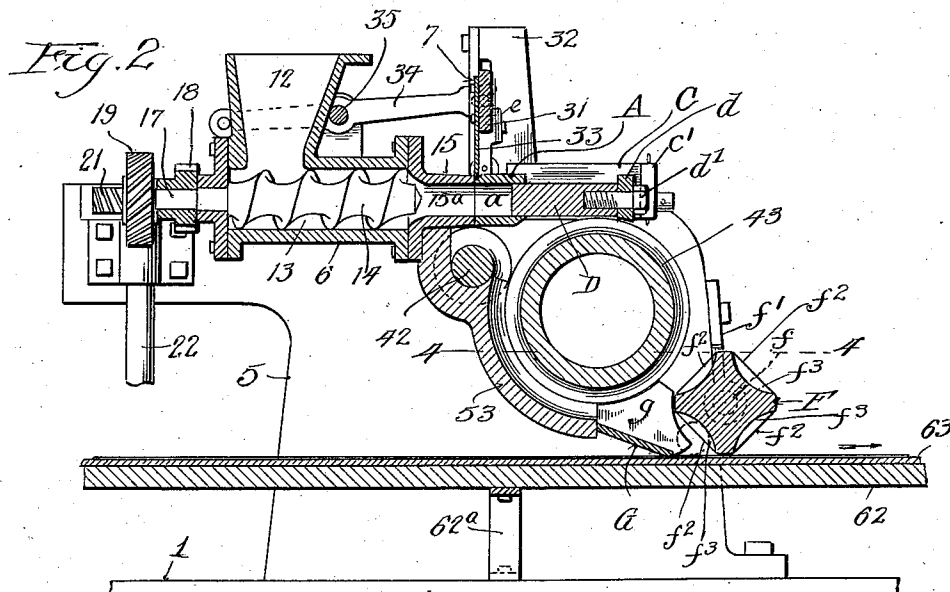
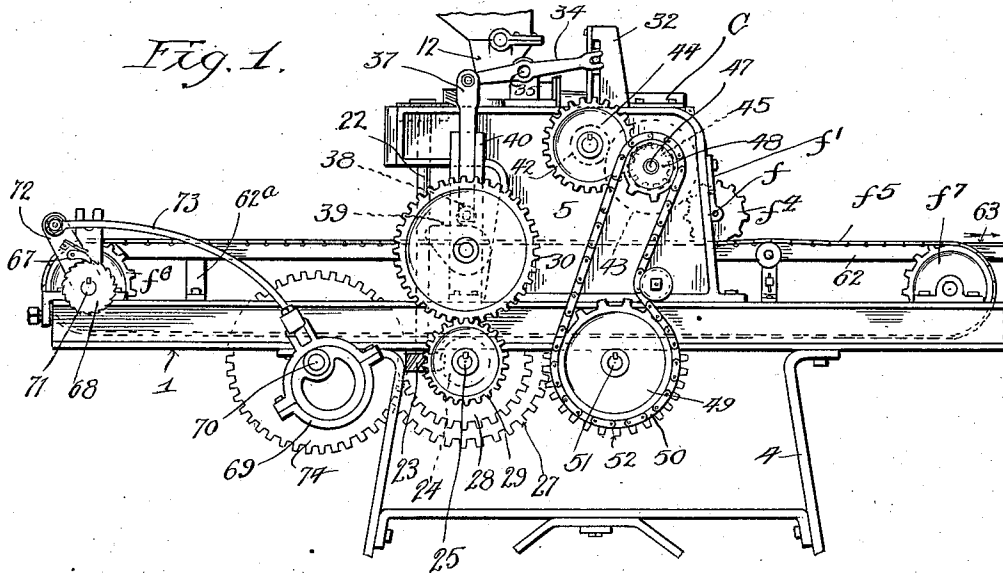


S. POOLEY.
CONFECTIONERY MACHINERY.
APPLICATION FILED SEPT. 29, 1910.

1,010,175.

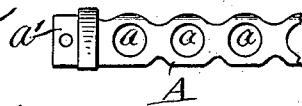
Patented Nov. 28, 1911.

2 SHEETS—SHEET 1.



Witnesses:
Famie & Richards
C.A. Shervey.

Fig. 2^a.



Inventor:

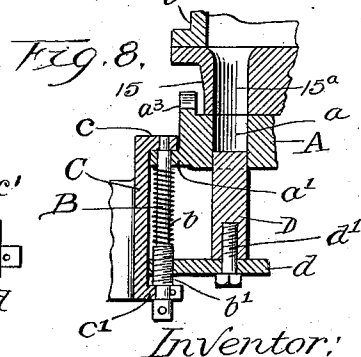
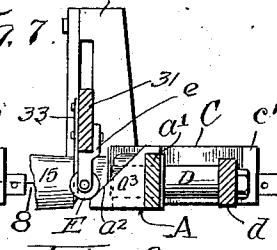
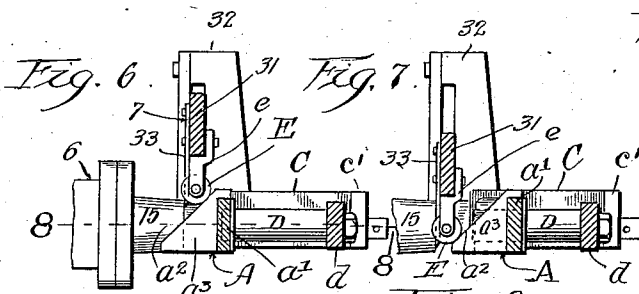
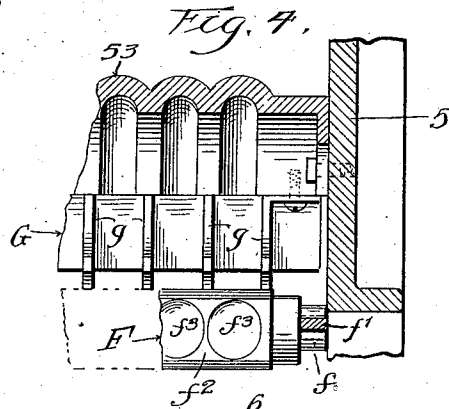
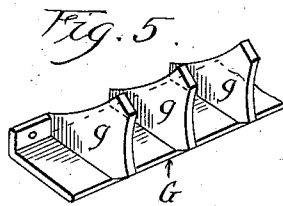
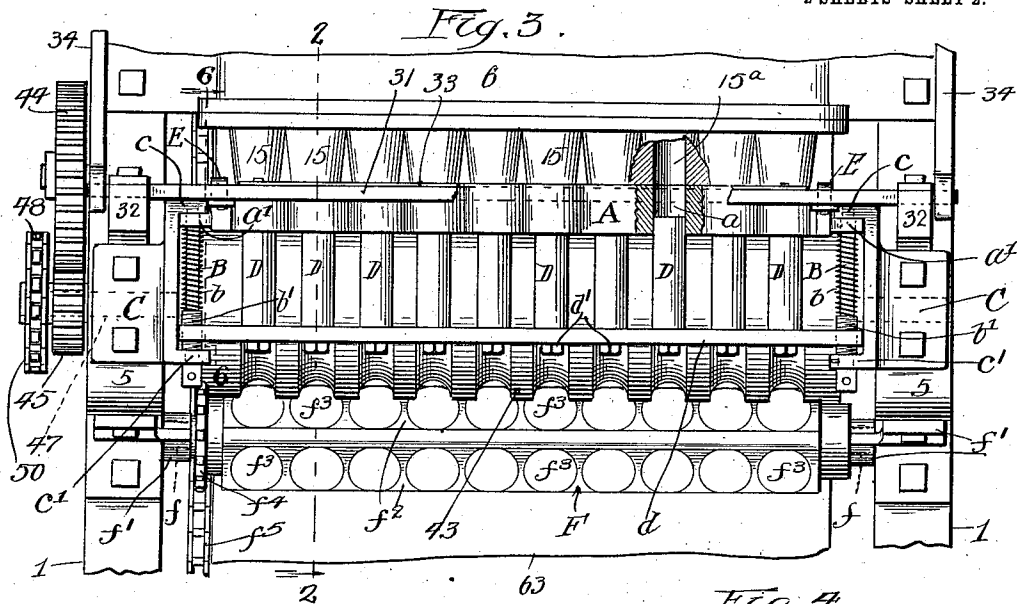
Speero Pooley
by Charles O. Shervey
his Atty.

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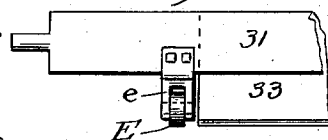
1,010,175.

Patented Nov. 28, 1911.

2 SHEETS-SHEET 2.



Witnesses:
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C. A. Sheroey



Inventor:
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his Atty

UNITED STATES PATENT OFFICE.

SPEERO POOLEY, OF CHICAGO, ILLINOIS.

CONFECTIONERY MACHINERY.

1,010,175.

Specification of Letters Patent. Patented Nov. 28, 1911.

Application filed September 29, 1910. Serial No. 584,408.

To all whom it may concern:

Be it known that I, SPEERO POOLEY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Confectionery Machinery, of which the following is a specification.

This invention relates to confectionery machinery of that class in which the machine shown and described in my prior Patent No. 966357, dated August 2, 1910, is an example.

This invention has reference more particularly to the mechanism for measuring the size of the confections and giving them their finished form.

To such ends this invention consists in the several novel features of construction, arrangement and combination of parts set forth in the following specification and particularly pointed out in the claims.

The invention is clearly illustrated in the drawings furnished herewith, in which—

Figure 1 is a side view of a fragment of a confectionery machine embodying my improvements, Fig. 2 is a detail, vertical, longitudinal section taken on the line 2—2 of Fig. 3, Fig. 2^a is a face view of a measuring bar, Fig. 3 is a fragmental plan view of the parts seen in Fig. 2, Fig. 4 is a detail horizontal section taken on the line 4—4 of Fig. 2, Fig. 5 is a perspective view of a delivery platform, Fig. 6 is a detail vertical, longitudinal section taken on the line 6—6 of Fig. 3, Fig. 7 is a similar view showing the operating parts in a different position, Fig. 8 is a horizontal section taken on the line 8—8 of Fig. 6 and Fig. 9 is a fragmental face view of a knife.

In general the construction of the present machine is similar to that shown in my prior patent above referred to and the old parts will now be described.

The main frame 1, is supported by legs 4, and supports a pair of brackets 5, which carry the main operating devices of the machine. Upon said brackets 5, is carried a stock feeding mechanism 6, having a hopper 12, for receiving the material, and a feed chamber 13, containing spiral conveyers or worms, one of which is shown at 14, in Fig. 2. The spindles 17, of the conveyers carry intermeshing gears 18, which are driven from a shaft 22, by spiral gears 19, 21, as will be more fully understood by ref-

erence to my prior patent. The shaft 22, is driven from the main driving shaft 25, of the machine by spiral gears 23, 24. At the forward end of the feed mechanism 6, are discharge spouts 15, having discharge orifices 15^a, through which the material is discharged from the feed mechanism 6, into the measuring device hereafter described.

Extending up from the brackets 5, are posts 32, in which is guided a vertically reciprocable knife 7, which is actuated by arms 34, carried by a cross shaft 35, journaled in bearings upon the brackets 5, one of said arms 34, being operated by a link 37, guided in a post 40. The link is reciprocated vertically by a cam 39, which engages with a roller 38, journaled upon the lower end of the link 37. The cam 39, is driven by a gear wheel 30, which meshes with a pinion 29, fast upon the main drive shaft 25. The knife preferably comprises a blade-supporting bar 31, guided in the posts 32, and a downwardly projecting blade 33, secured upon the bar 31, the lower edge of the blade being sharpened and arranged to sever the material after it has been forced out through the discharge orifices 15^a.

Immediately below the discharge orifices is a circumferentially grooved feeding roller 42, which is journaled in the brackets 5, and one end of said roller carries a gear wheel 44, meshing with a pinion 45, upon a shaft 47, journaled in the brackets 5, said shaft 47, carrying a grooved cylinder 43, lying in front of the grooved roller 42, and adapted to coöperate with a grooved, arc-shaped, shaping plate 53, to roll the severed blocks of material into spherical form. Said shaft 47, is driven from the main driving shaft 25, as for instance by means of sprocket wheels 48, 49, a chain 50, trained around said sprocket wheels, a counter shaft 51, upon which the gear wheel 49, is mounted and intermeshing gears 27, 52, fast upon the shafts 25, 51, respectively.

Traveling underneath the grooved cylinder 43, and extending longitudinally of the machine is a belt or apron 63, which runs over a pair of rollers journaled at the ends of the machine. The belt is moved intermittently in the direction indicated by the arrow in Fig. 2, by driving mechanism here shown as comprising a ratchet wheel 68, fast upon the shaft 71, of the rear roller, a pawl 67, engaging with the teeth of said ratchet

and carried by an arm 72, which is operated from an eccentric 69, by a link 73, said eccentric being mounted upon a shaft 70, which bears a gear wheel 74, meshing with a gear 28, fast upon the drive shaft 25. The upper bight of the belt 63, preferably runs upon a table 62, supported from the frame of the machine by brackets 62^a.

All of the parts thus far described are similar to the same parts shown in my prior patent above referred to and operate in substantially the same manner.

The subject matter of the present invention will now be particularly set forth.

Inasmuch as the consistency of the material operated upon varies somewhat, it is found desirable to measure the quantity fed out so that the confections may be of a standard size and weight. To accomplish this I provide a measuring device immediately in front of the discharge spouts, having cavities or cups for receiving the material as it is fed out of the spouts 15, and mechanism for releasing the material thus fed out after it has been severed from the main supply. As shown in the drawings this measuring device comprises a bar A, having a plurality of transverse holes *a*, registering with the discharge orifices 15^a, and into which the stock material is compressed. Said bar A, is carried by a pair of rods B, journaled in ears *c*, *c*¹, of brackets C, and is yieldingly pressed toward the discharge spouts by springs *b*, that surround the rods B, and bear against the sides of ears *a*¹, of the bar A. Projecting into the holes *a*, of the bar A, are stationary supported plungers D, which are carried by a bar *d*, adjustably supported by the rods B, said rods having screw-threaded portions *b*¹, engaging with internally screw-threaded holes in the ends of the bar *d*. The plungers may be secured to said bar as for instance by means of cap screws *d*¹, passing through said bar *d*, and threaded in holes in the plungers D. The plungers may be adjusted so as to bring their abutment ends into the proper position within the holes *a*, of the bar A, whereby the cups or sockets thus formed in the bar may be increased or decreased in depth to make confections of the desired size and weight. The outer ends of the rods *b*, are preferably provided with holes through which a pin may be inserted for turning the rods *b*, in their bearings in the ears *c*, *c*¹, to adjust the plungers.

Mechanism is provided for moving the measuring bar A, back upon the plungers to release the confections after they have been forced into the sockets in the bar and as shown one form of mechanism for accomplishing this consists in rollers E, supported from the knife carrying bar 31, as by brackets *e*, and arranged to travel upon inclined faces *a*², formed upon lugs *a*³, of the bar A,

as clearly illustrated in Figs. 6 and 7. It is obvious that as the knife carrying bar 31, descends and the rollers E, travel down the inclined faces of the lugs *a*³, the bar A, will be forced back upon the plungers, against the tension of the springs *b*, until the whole of the confections are exposed and released, and drop into the grooves between the grooved cylinder 43, and grooved shaping plate 53. As the knife carrying bar 31, rises and the rollers E, move up therewith, the springs *b*, force the bar A, back into position against the discharge spouts 15, bringing the sockets *a*, into register with the discharge orifices 15^a.

Immediately in front of the grooved cylinder 43, is an intermittently rotated shaping roller F, which is provided with guide-grooves *f*, journaled in bearings *f*¹, supported upon the brackets 5. Said shaping roller F, is arranged quite close to the conveyor belt 63, and also close to the grooved cylinder 43, and between said shaping roller and grooved cylinder in an inclined platform G, arranged to convey the cylindrical confections from the lower end of the shaping plate 53, to the shaping roller F. Said inclined platform is provided with a plurality of vertical partitions *g*, arranged to form therebetween continuations of the grooves in the shaping plate, and adapted to guide each individual confection to its proper position to be acted upon by the shaping roller F, prior to the time that the latter operates upon the confection to give it its finished form. The upper edge of each partition *g*, is preferably curved to fit the periphery of the grooved cylinder 43, and the forward edge is curved to fit the periphery of the shaping roller F. The shaping roller is formed with a plurality of flat faces *f*², having concave pits *f*³, arranged in alinement with the grooves of the cylinder 43, and shaping plate 53, and said pits receive the cylindrical bodies as they roll off the inclined platform G, and afterward flatten the confections somewhat to give them their finished form. The roller F, is geared to move in unison with the belt 63, and at a peripheral speed equal to the speed of the belt. As shown in the drawings one manner of driving the roller comprises a sprocket wheel *f*⁴, upon the end of the roller and rotated by a sprocket chain *f*⁵, trained over sprocket wheels *f*⁶, *f*⁷. The sprocket *f*⁶, is carried by the shaft 71, of the rear roller and travels in unison therewith, consequently the sprocket chain *f*⁵, moves at the same rate of speed as the belt 63, and therefore the sprocket wheel *f*⁴, and roller F, travel at the same speed as the belt.

By reference to Fig. 2 of the drawings, it will be seen that the discharge edge of the inclined platform is arranged immediately above the belt 63, and close to the

roller F, so as to insure the lodging of the confections in the adjacent concave pits of the roller, said confections remaining stationary until the belt moves forward, whereupon they are carried along with said belt underneath the roller and flattened down somewhat by the latter as it turns in unison with the belt.

The operation of the machine will be readily understood from the foregoing specification and by reference to the description set forth in my prior patent. The operation of the measuring device and shaping roller will be readily understood by reference to the above specification.

I am aware that various alterations and modifications of this device are possible without departing from the spirit of my invention and I do not therefore desire to limit myself to the exact form of construction shown and described.

I claim as new and desire to secure by Letters Patent:

1. In a confectionery machine, the combination with stock feeding mechanism having a discharge end, stock severing mechanism, including a knife movable across said discharge end to sever the discharged material from the body of the stock and knife operating mechanism, of a measuring device having open ended cups in front of said discharge end, means for closing the rear ends of said cups, and mechanism carried by said stock severing mechanism for moving said cups back on the end closing means.

2. In a confectionery machine, the combination with stock feeding mechanism having a plurality of discharge orifices, a knife moving across said orifices, and knife operating mechanism for reciprocating said knife, of a movable bar in front of said discharge orifices and having holes registering therewith, stationary plungers projecting into said holes to close the rear ends thereof, and bar actuating mechanism operatively connected with said knife operating mechanism for moving said bar back upon the plungers to release said confections.

3. In a confectionery machine, the combination with stock feeding mechanism having a plurality of discharge orifices, a reciprocable knife traversing said openings, a knife carrying bar supporting said knife, and mechanism for reciprocating the bar, of a measuring bar having a plurality of holes registering with the discharge orifices, stationarily supported plungers projecting into said holes, and shifting mechanism, operatively connected with said knife carrying bar, for moving the measuring bar back upon the plungers to release the confections.

4. In a confectionery machine, the combination with stock feeding mechanism having a plurality of discharge orifices, a re-

ciprocable knife traversing said openings, a knife carrying bar supporting said knife, and mechanism for reciprocating the bar, of a measuring bar having a plurality of holes registering with the discharge orifices, stationarily supported plungers projecting into said holes, shifting mechanism, operatively connected with said knife carrying bar, for moving the measuring bar back upon the plungers to release the confections, and yielding means for yieldingly pressing the measuring bar toward the discharge orifices.

5. In a confectionery machine, the combination with confectionery rolling mechanism, of a rotatable shaping roller located immediately in front of said confectionery rolling mechanism and having a plurality of flat faces formed with pits therein, a partitioned delivering platform extending from the rolling mechanism to the shaping roller and arranged to deliver the confections from the rolling mechanism to the adjacent pits in the shaping roller and a traveling belt moving in unison with and at the same speed as the periphery of the shaping roller, said belt and pits being adapted to receive the confections at the delivery end of the platform.

6. In a confectionery machine, the combination with confectionery rolling mechanism, of an intermittently rotated shaping roller journaled immediately in front thereof and having a plurality of flat faces formed with pits therein, an inclined, partitioned platform extending from the confectionery rolling mechanism to the shaping roller and arranged to deliver the confections from the rolling mechanism to the adjacent pits in the roller, and an intermittently moving belt traveling underneath said roller and traveling at the same speed as the periphery of said roller and in unison with said roller, said belt and pits being adapted to receive the confections at the delivery end of the platform.

7. In a confectionery machine, the combination with a grooved, arc-shaped, shaping plate, and a grooved shaping roller co-operating therewith to roll stock material into spherical form, of an intermittently rotated shaping roller having a plurality of flat faces provided with pits therein arranged in alinement with the grooves of the shaping plate and shaping roller, an inclined platform between the discharge end of the shaping plate and the shaping roller, partitions extending up from said platform and arranged to form continuations of the grooves of the shaping plate and roller whereby the rolled confections may be delivered to the adjacent pits of the roller, and an intermittently moving belt traveling at the same speed as the peripheral speed of the shaping roller and in unison there-

with, said belt and pits being adapted to receive the confections at the delivery end of the platform.

8. In a confectionery machine, the combination with a stationary, grooved, arc-shaped, shaping plate, and a continuously rotating, grooved, shaping roller cooperating therewith to roll blocks of stock into spherical form, of a shaping roller having a plurality of flat faces formed with concave pits therein, an inclined platform extending from said shaping plate to the shaping roller for delivering the rolled material to the adjacent pits on the roller and having vertical partitions forming therebetween continuations of the grooves, an apron traveling underneath the shaping roller, and mechanism for intermittently advancing said belt and intermittently moving said roller in unison, said apron and pits being arranged to receive the confections at the delivery end of the platform.

9. In a confectionery machine, the combination with a stationary, grooved, arc-shaped, shaping plate, and a continuously

rotating, grooved, shaping roller cooperating therewith to roll blocks of stock into spherical form, of a shaping roller having a plurality of flat faces formed with concave pits therein, an inclined platform extending from said shaping plate to the shaping roller for delivering the rolled material to the adjacent pits on the roller and having vertical partitions forming therebetween continuations of the grooves, an apron traveling underneath the shaping roller, mechanism for intermittently advancing the apron, and driving mechanism operatively connected with said apron for intermittently rotating said roller in unison with said apron, said apron and pits being arranged to receive the confections at the delivery end of the platform.

In witness whereof, I have hereunto signed my name at Chicago, Cook county, this 24th day of September 1910.

SPEERO POOLEY.

Witnesses:

FANNIE F. RICHARDS,
CHARLES O. SHERVEY.

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