E. ALBERTI.

FEEDING ATTACHMENT FOR CROWN CORK MAKING MACHINES.

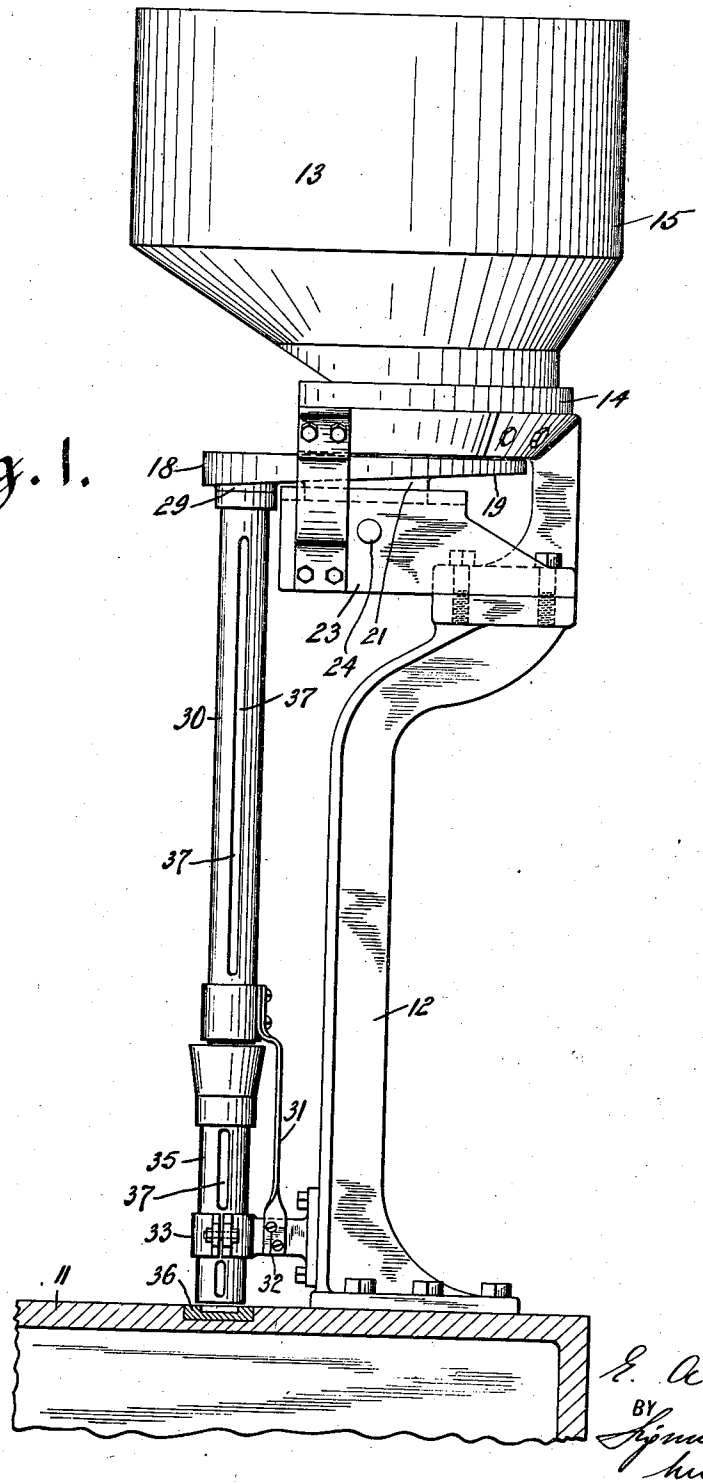
APPLICATION FILED AUG. 17, 1918.

1,353,136.

Patented Sept. 21, 1920.

3 SHEETS—SHEET 1.

Fig. 1.



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3 SHEETS—SHEET 2.

Fig. 2.

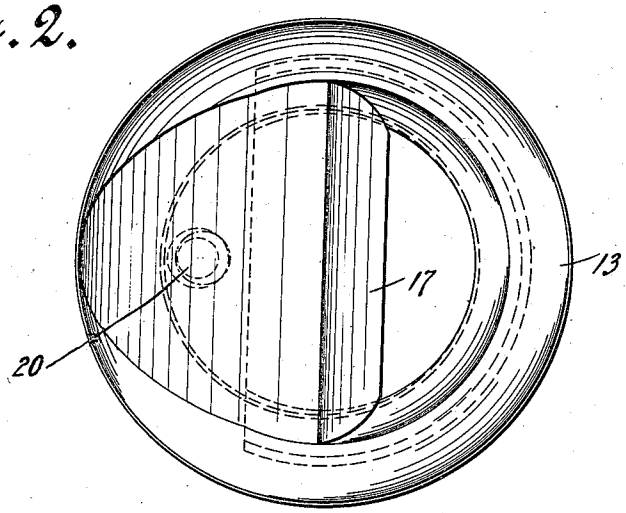
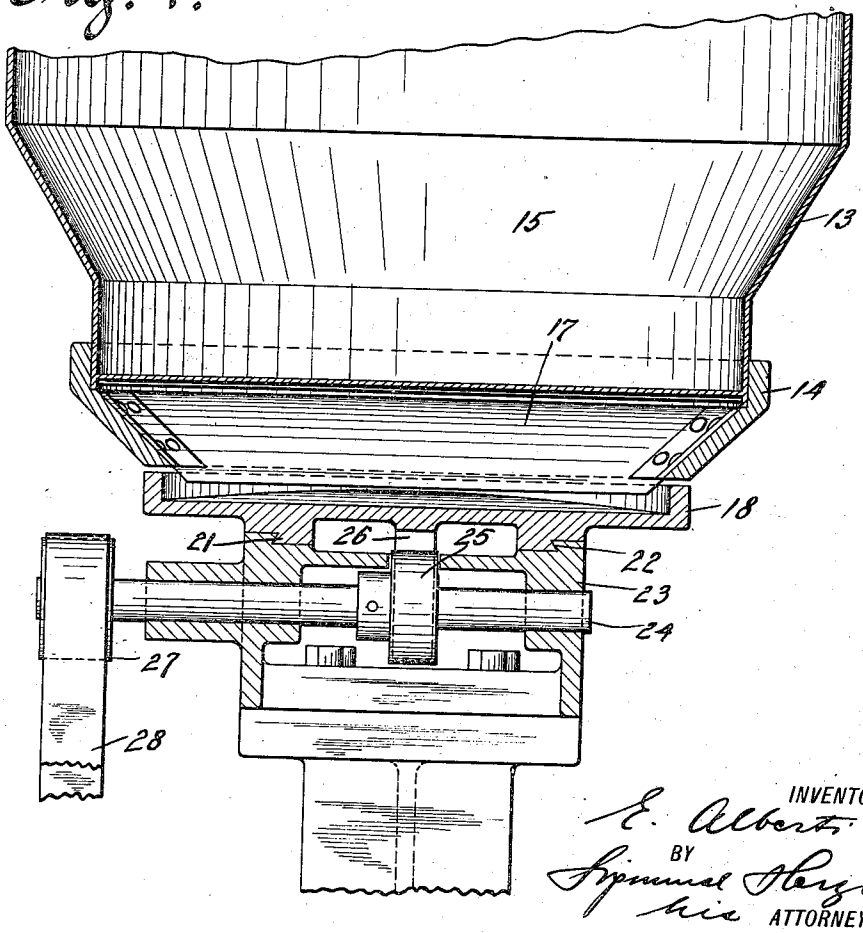


Fig. 4.



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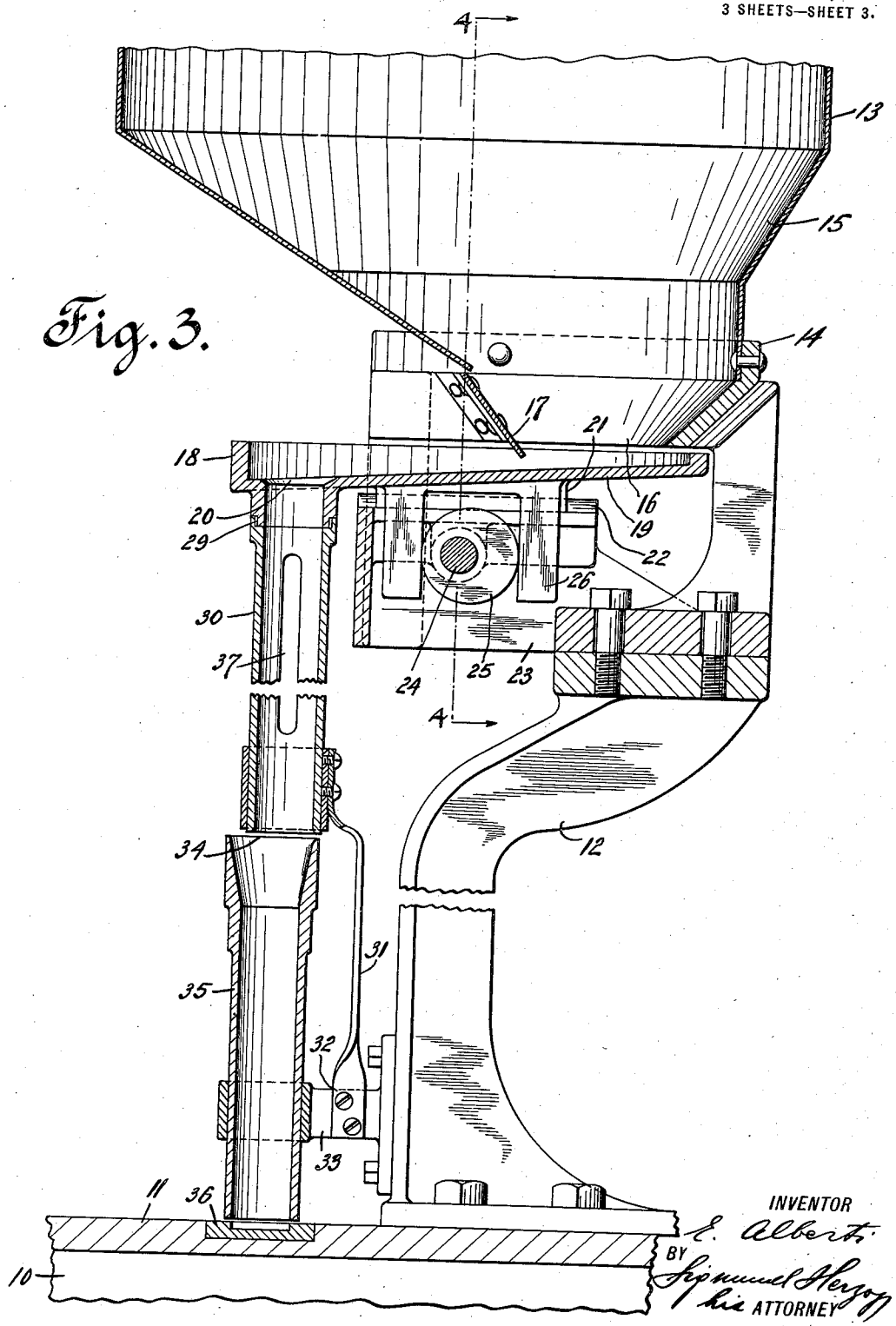
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3 SHEETS—SHEET 3.

Fig. 3.



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UNITED STATES PATENT OFFICE.

EMILIO ALBERTI, OF NEW YORK, N. Y., ASSIGNOR TO INTERNATIONAL CORK COMPANY, OF BROOKLYN, NEW YORK, A CORPORATION OF NEW YORK.

FEEDING ATTACHMENT FOR CROWN-CORK-MAKING MACHINES.

1,353,136. Specification of Letters Patent. Patented Sept. 21, 1920.

Application filed August 17, 1918. Serial No. 250,378.

To all whom it may concern:

Be it known that I, EMILIO ALBERTI, a citizen of the United States, and a resident of the city of New York, in the county of Kings and State of New York, have invented certain new and useful Improvements in Feeding Attachments for Crown-Cork-Making Machines, of which the following is a specification.

The present invention relates to machines for manufacturing bottle-, can-, and like closures of the cap variety, including those termed "crown corks." The invention pertains more particularly to means for feeding the sealing disks of cork or similar material of the closures to the assembling devices of the machine.

The main object of the invention is to provide a simple and efficient attachment for cap making machines, which automatically delivers the sealing disks from a mass to the assembling machine without regard to the thickness, weight, and more or less curved shapes of the disks.

With these and other objects in view, which will more fully appear as the nature of the invention is better understood, the same consists in the combination, arrangement and construction of parts hereinafter described, pointed out in the appended claims and illustrated in the accompanying drawings, it being understood that many changes may be made in the size and proportion of the several parts and details of construction within the scope of the appended claims without departing from the spirit or sacrificing any of the advantages of the invention.

One of the many possible embodiments of the invention is illustrated in the accompanying drawings, in which:—

Figure 1 is a side elevation of a feeding attachment constructed in accordance with the present invention; Fig. 2 is a top plan view thereof; Fig. 3 is a central vertical section taken therethrough, on a larger scale; and Fig. 4 is a section taken on line 4—4 of Fig. 3.

In the drawings, the numeral 10 indicates a portion of the frame of a crown cork assembling machine, having upon its table portion 11 mounted an upwardly extending support 12, which carries a hopper 13. This hopper may be of any suitable construction, for instance in the case illustrated in the drawings, it comprises a cast iron member 14, held upon the support 12, and to the said member is attached a hopper body 15, preferably made of sheet iron. The outlet of the hopper is denoted by the numeral 16, and is constituted by part of the member 14 and by an inclined substantially diametrically extending plate 17, the latter being attached in any suitable manner to the said member and projecting below the lower edge thereof, for a purpose hereinafter to be described. The hopper discharges into a shallow receptacle 18, that is disposed below the same and is provided with a slanting bottom 19, having a circular discharge opening 20, the diameter of which is slightly larger than that of an individual sealing disk. The discharge opening is formed, preferably, in the lowermost portion of the slanting bottom of the receptacle 18 and is out of alinement with the outlet of the hopper, the latter discharging onto a higher portion of the slanting bottom of the said receptacle. The inclined plate 17 projects into the receptacle 18, but stops short a suitable distance above the bottom of the latter, thereby permitting the sealing disks to pass toward the discharge opening 20, preventing, however, too many of the same to pass at a time toward the said opening. The plate 17 thus divides the receptacle 18 into a disk receiving portion and a discharging portion.

The receptacle 18 is oscillated or reciprocated in relation to the hopper. For this purpose there may be provided any suitable means, for instance there may be formed upon the bottom of the receptacle 18 dovetailed projections 21, fitting similarly shaped guides 22 upon a bracket 23, the latter being carried by the support 12. In this bracket is rotatably mounted a shaft 24, provided with a cam 25, the latter cooperating with lugs 26 upon the bottom of the receptacle 18. To the shaft is keyed a pulley 27, over which runs a belt 28, receiving motion from a rotary shaft of the crown cork assembling machine. In the case illustrated in the drawings, the dovetailed projections 21 and the guides 22 extend horizontally, so that the receptacle 18 will be reciprocated in a horizontal plane. It is, however, obvious that it may be reciprocated in a slightly inclined plane in relation to the hopper, without departing

from the invention. Attention is also called to the fact that, instead of reciprocating the receptacle 18 rectilinearly, it may be oscillated in a curved path, or in other words it may be vibrated or shaken in any suitable manner, for a purpose that will appear hereinafter.

The outlet of the receptacle 18 is constituted by a short tubular extension 29, that projects below the bottom thereof and fits somewhat loosely into a tube 30. The lower end of this tube is attached to the upper end of a resilient support 31, the lower end 32 of which is fixed to a bracket 33, the latter being secured to the support 12, above described. The outlet of the tube 30 is in alinement with the mouth 34 of a stationary, preferably, vertically extending tube 35, leading to the transporting means 36 of the machine, which conveys the sealing disks one after the other to the assembling mechanism. The tube 35 is held above the transporting mechanism by the bracket 33. Both tubes 30 and 35 are provided with longitudinal slots 37, permitting of an insertion of a pointed instrument for the purpose of properly arranging the disks therein, should, by accident, some of the disks travel therein edgewise.

The operation of this device is as follows:—A mass of sealing disks is placed indiscriminately into the hopper, part of the same sliding through the outlet 16 into the receptacle 18. When now this receptacle is reciprocated, the tube 30 is caused to move therewith and to swing around the point 32 of the resilient member 31. The disks in the said receptacle are thus caused to pass toward the discharge opening 20 therein, finding their way into the tube 30, the continuous vibration of which causes a proper stacking of the disks therein. No matter in what position they arrive in the said tube, they will be brought, by the continuous vibrating motion, before they reach the mouth of the tube 35, into substantially horizontal positions and into exactly horizontal positions as they pass into the stationary tube 35. The thickness and more or less curved shapes of the disks do in no way affect the proper operation of the device.

The inclined plate 17 prevents a clogging of the discharge opening of the receptacle 18, in that it permits, at a time, only a limited number of disks to move toward the said opening. The said plate, in coöperation with the reciprocating receptacle 18, serves also to agitate the mass of disks, and thereby insures a continuous operation of the feeding device.

The outlet of the hopper is comparatively smaller than the horizontal cross-section of the receptacle 18, so as to prevent the whole mass of sealing disks from resting upon the bottom of the said receptacle and to interfere with the proper operation of the device.

What I claim is:—

1. In a device for stacking disks, the combination with a receptacle having a discharge opening, of a downwardly extending tube connected to the said receptacle and into which the latter is adapted to discharge through said opening, a stationary element below said receptacle, the lower end of said tube being in swinging engagement with said stationary element, means for shaking the said receptacle and the tube connected therewith, a hopper arranged above said receptacle and delivering the disks into the latter, and a member carried by said hopper projecting into and across said receptacle, the lower edge of said member being disposed a substantial distance above the bottom of said receptacle, whereby the latter is divided into two communicating compartments, one of which is provided with said discharge opening and the other one receives the disks from said hopper.

2. In a device for stacking disks, the combination with a receptacle having a slanting bottom provided with a discharge opening in its lowermost portion, of a downwardly extending tube connected to the said receptacle and into which the latter is adapted to discharge through said opening, a stationary element below said receptacle, the lower end of said tube being in swinging engagement with said stationary element, means for shaking the said receptacle and the tube connected therewith, a hopper arranged above said receptacle and delivering the disks into the latter, and a member carried by said hopper projecting into and across said receptacle, the lower edge of said member being disposed a substantial distance above the bottom of said receptacle, whereby the latter is divided into two communicating compartments, one of which is provided with said discharge opening and the other one receives the disks from said hopper.

Signed at New York, in the county of Kings, and State of New York, this 15th day of August, A. D. 1918.

EMILIO ALBERTI.