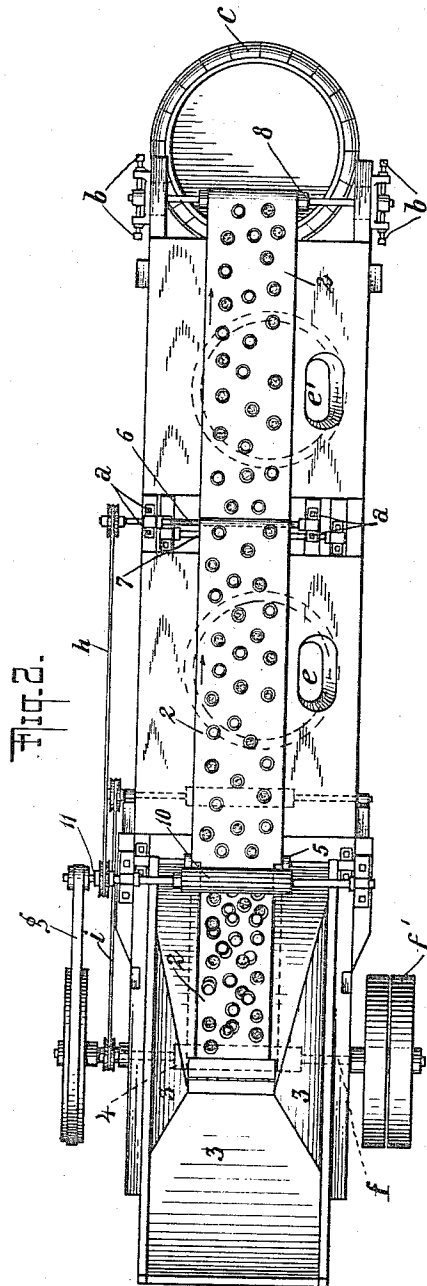
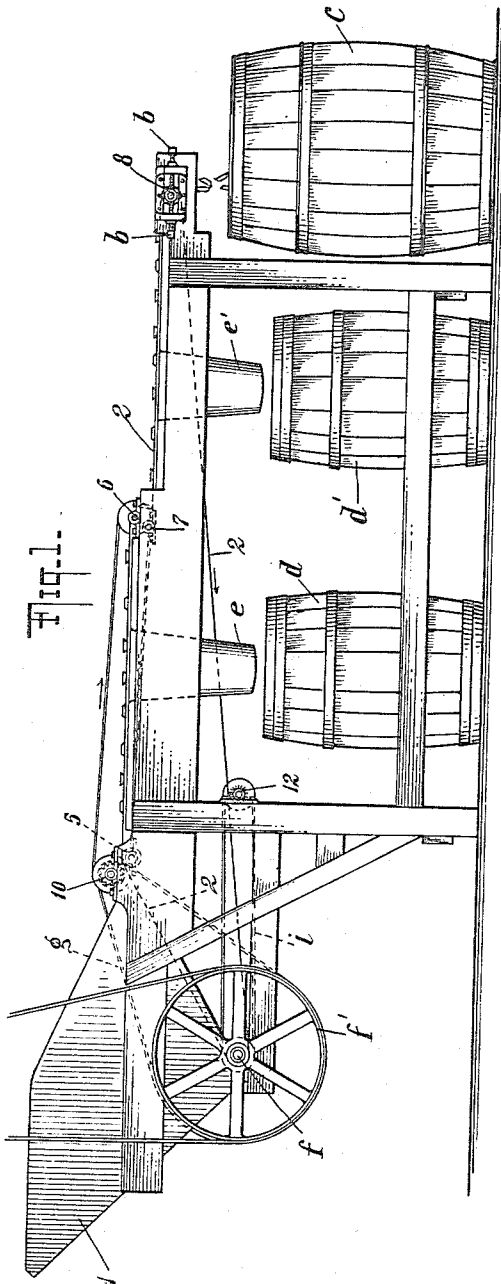


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DISK DISTRIBUTING OR ASSORTING MACHINE.
APPLICATION FILED AUG. 19, 1913.

1,235,281.

Patented July 31, 1917.

2 SHEETS—SHEET 1.



WITNESSES:
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UNITED STATES PATENT OFFICE.

ALVARO BOERA, OF NEW YORK, N. Y.

DISK DISTRIBUTING OR ASSORTING MACHINE.

1,235,281.

Specification of Letters Patent.

Patented July 31, 1917.

Application filed August 19, 1913. Serial No. 785,487.

To all whom it may concern:

Be it known that I, ALVARO BOERA, a citizen of the United States, residing in the borough of Richmond, city and State of New York, have invented certain new and useful Improvements in Disk Distributing or Assorting Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to machines for assorting or distributing corks, crown seals, and cork disks or washers or like articles which I hereafter refer to as disks. The disks are so distributed or assorted that they may be readily and thoroughly inspected, being turned over so that all sides are exposed to view and the defective or objectionable ones may be removed.

Referring to the accompanying drawing:—

Figure 1 is a side-view of the machine. Fig. 2 is a plane view, Fig. 3 a side view of the machine with the table shown in dotted lines. Fig. 4 is an enlarged sectional view of the distributing apparatus. Fig. 5 illustrates an enlarged view of the means for adjusting the height of the step.

The receptacle 1 for receiving the disks carries within it the conveyer 2. The sides 3 of the receptacle 1 are preferably inclined so that its lower edge is inside of the outer edges of the conveyer 2.

The conveyer 2 is preferably endless and flexible and I prefer to use a canvas or rubber belting. The conveyer passes successively over the rollers 4 and 5, over the shaft 6, under the shaft 7, over the roller 8, and then back to the roller 4. At 9 the conveyer, passing from the shaft 6 to shaft 7, forms a step in the conveyer. The step at 9 must be adjusted so that a disk may turn over in passing down it.

The roller 10 as shown ribbed is used to distribute crown seals and is preferably made of iron. In distributing ordinary bottle corks a smooth roller is used in place of the ribbed roller 10 and preferably made of wood. In distributing cork disks or washers a ribbed wooden roller 10 is employed. The roller must in all cases be of sufficient diameter to allow the disks, but one deep, to pass under it on the conveyer 2.

It will be seen that the conveyer is divided into sections by the rollers and shafts. The first section is between the roller 4 and the roller 5, the second between the roller 5 and

the shaft 7 and the third between the shaft 7 and the roller 8.

The shaft 6 is fluted and is driven by a belt from the shaft 11. This fluted shaft 6 keeps the conveyer 2 taut and assists in feeding it and in the preferred construction is always of an outer diameter less than the greatest diameter of the particular individual disks being distributed whereby an abrupt turn is formed and the tendency of the disks to cling to the conveyer is overcome. With this arrangement it is unnecessary to provide any additional means for reversing the disks.

In order to accommodate disks of varying sizes the step at 9 is adjustable by removing the bolts *a* and placing under the bearings a block *a'* of suitable thickness to bring the shaft 6 and the conveyer with it, to the position desired. The roller 8 is made adjustable to regulate the slack on the conveyer by adjusting the screw bolts *b*. At the end of the belt I place a receptacle *c* into which the disks are dropped when the conveyer passes around the roller 8. Attendants at the machines remove the defective disks, and may drop them through the funnels *e*, *e'* into the receptacles *d*, *d'*. The roller 4 is driven by suitable means such as the shaft *f* and driving wheel *f'*. The roller 10 is driven from the wheel *f'* by means of the belt *g* through shaft 11. The shaft 6 is driven by the shaft 11 through the belt *h*. Underneath the conveyer 2 I place a brush 12 driven by the wheel *f'* through the belt *i*. The brush 12 roughens the conveyer so that the disks will grip it.

The disks, in an indiscriminate mass, are placed in the receptacle 1 and on the conveyer 2. As the conveyer moves in the direction shown by the arrow the disks are carried over what I have heretofore called the first section of the conveyer to the roller 10. The roller 10 permits the disks to pass under it, but one deep, to the second section of the conveyer. An attendant inspects the disks, on this second section, removing the objectionable ones. At the step 9 the disks are turned so that the surface that was exposed to view, on the second section of the conveyer, is next to the conveyer, and the other surface is exposed to view of the attendant on the third section of the conveyer. An attendant inspects the disks on the third section of the conveyer removing the defective or objectionable ones. The disks are

dropped into the receptacle *c* as the conveyer passes around the roller 8.

The attendants selecting the defective or objectionable disks may drop them into the receptacle *d*, *d'* through the funnels *e*, *e'*. In adjusting the machine to sort ordinary bottle corks, the inclination of conveyer in the receptacle 1, should be adjusted at such an angle, so that the corks will be carried along on the conveyer.

What I claim is:

1. In combination, in a machine for distributing disks a conveyer having a step therein and means to vary the depth of said step.

2. In combination in a machine for distributing disks, a stepped conveyer, shafts carrying said conveyer and forming said step, one of said shafts with the conveyer being adjustable to vary the depth of the step.

3. In a machine for distributing disks, in combination, a hopper, a conveyer forming the bottom of said hopper, said hopper and conveyer being both adapted to receive a mass of undistributed disks, means located above the conveyer distant less than the

thickness of two disks and greater than the thickness of one disk whereby the disks are distributed singly over the conveyer and a step in the conveyer whereby the disks are reversed.

4. In a machine for distributing disks in combination a conveyer adapted to carry disks distributed singly over its surface, a pair of rollers supporting said conveyer and forming a step therein, the diameter of at least one of said rollers being less than the greatest diameter of the individual disks carried by said conveyer.

5. In a machine for distributing disks, in combination, a conveyer, means for distributing the disks over the conveyer, a step in the conveyer, said conveyer being free from obstructions at the step, whereby the disks may be turned by falling directly from the surface of the conveyer.

In testimony whereof, I have hereunto set my hand in the presence of two subscribing witnesses.

ALVARO BOERA.

Witnesses:

FRED A. KLEIN,
RAMON J. BOERA.