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VENDING DEVICE.

APPLICATION FILED APR. 5, 1915.

1,246,566.

Patented Nov. 13, 1917.

Fig. 1

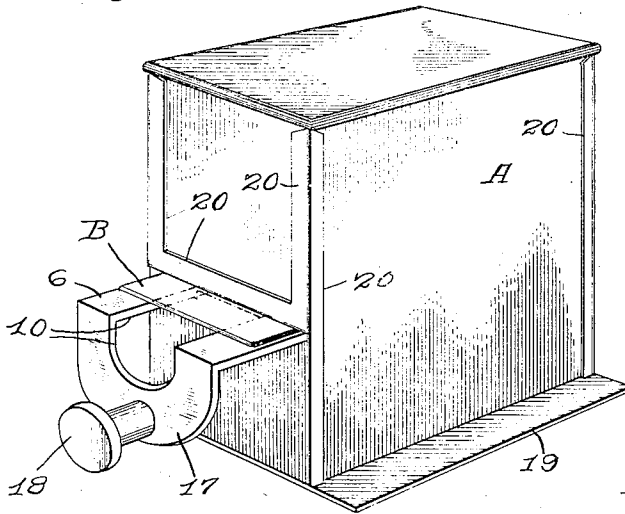


Fig. 3

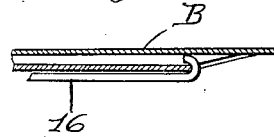


Fig. 2

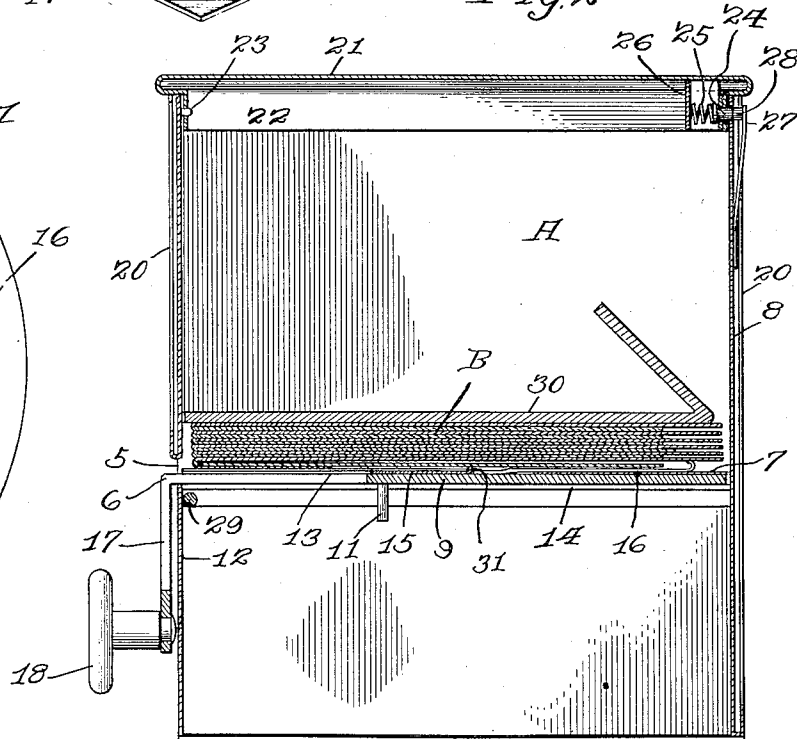
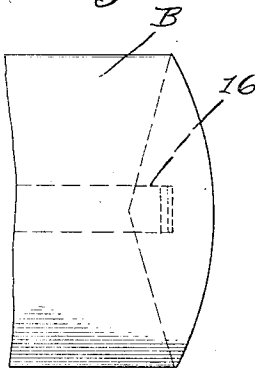


Fig. 4



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UNITED STATES PATENT OFFICE.

HENRY DOERING, CHARLES DOERING, JR., AND MAX DOERING, OF CHICAGO, ILLINOIS.

VENDING DEVICE.

1,246,566.

Specification of Letters Patent.

Patented Nov. 13, 1917.

Application filed April 5, 1915. Serial No. 19,298.

To all whom it may concern:

Be it known that we, HENRY DOERING, CHARLES DOERING, JR., and MAX DOERING, citizens of the United States, and residents of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Vending Devices, of which the following is a description, reference being had to the accompanying drawing, which forms a part of our specification.

Our invention relates to a device adapted to vending thin, flat sided articles, being more especially intended for the purpose of dispensing what are known as sanitary paper cups used in connection with water coolers for receiving the drinking water.

The object of the invention is to provide a proper receptacle or device for storing or receiving a number of such paper cups, in collapsed condition; and the device is so constructed that merely a single cup will be fed at each operation of the device, so that the remaining cups cannot be handled or fingered by the different users, as will more fully be understood from the following detailed description of the accompanying drawing, wherein:—

Figure 1 is a perspective view of our improved device, with the operating plunger or slide shown drawn out with a superimposed collapsed cup.

Fig. 2 is a vertical sectional view of the device, with the operating plunger or slide shown in normal or inward position, while a number of collapsed cups are shown superimposed on the slide.

Fig. 3 is a detail view of the inner end of the plunger or slide, and the orifice or open end of a cup shown in longitudinal section, in order to illustrate the operative relation effected between the slide and successive cups.

Fig. 4 is a detail plan view of the open end of a cup, with the inner end of the slide or plunger shown in dotted lines.

In the particular exemplification of our invention, it is shown in the nature of a rectangular receptacle A, adapted to receive what are known as sanitary paper cups, indicated at B which are normally in collapsed condition with the two sides in close parallel relation being similar in construction to an open-ended envelop, as more clearly shown in Fig. 4.

The receptacle A is preferably made of thin sheet metal with the front wall thereof

provided with an opening or slot, as shown at 5, slightly larger vertically than the thickness of the plunger or slide 6 upon which the collapsed cups B are superimposed; in other words, slot 5 is made just sufficient to permit a single cup to pass through when the plunger or slide is drawn out as shown in Fig. 1.

The receptacle A is provided with a partial bottom 7, adjacent the rear wall or side 8 of the receptacle, see Fig. 2, while the main or body portion 9 of the plunger or slide 6 constitutes a portion of the bottom or support for the cups B.

In order to permit the withdrawn cup to be easily grasped by the manipulator, we prefer to construct the forward part of the main portion of the slide or plunger 6 in skeleton form, so as to provide an open portion, as shown in Fig. 1, at 10 of sufficient length to enable the cup B to be grasped and completely withdrawn from the device.

The slide or plunger 6 is preferably provided on its bottom with a suitable stop, as, for example, shown at 11, adapted to abut against the front wall 12 of the receptacle when the slide or plunger 6 is withdrawn, thus preventing the complete or accidental withdrawal of the slide-member or plunger 6.

The side walls of the receptacle 6 are each provided with a slide-way formed by the projecting flange-members or ribs 13 and 14 spaced apart sufficiently to receive the main or body portion of the plunger or slide-member 6, see Fig. 2; the partial bottom 7 constituting a part of the slide-way produced by upper flange 13.

The slide-member or plunger 6 is preferably provided on its upper surface with a portion 15, the sides whereof may be made to overlap the upper flange or rib 13, arranged substantially in the same horizontal plane as the bottom 7, so as to provide positive contact with the undermost cup of a superimposed pack.

Portion 15 is shown provided with a rearwardly presented finger or hook-member 16, which is adapted to extend above the partial bottom or ledge 7, see Fig. 2.

The forward end of slide-member or plunger 6 is shown provided with the downwardly presented portion 17, on which is provided a knob or grasp 18, either made integral therewith or suitably secured thereto.

By bending or depending the forward portion 17, as shown, it is evident that freer access may be had to the partially withdrawn cup B.

- 3 With the forward end 17 of the slide-member or plunger 6 bent downwardly as shown and described, it is preferable to arrange the cup-holding ledge or inner bottom and the slide-way somewhat above the lower
10 edge of the walls of the receptacle. Furthermore, by arranging the bottom as shown and described, a chamber is provided in the lower part of the receptacle, which may be employed for various purposes, especially
15 when our improved cup vender is secured on a water-cooler.

- In order to permit the vending device to be readily attached in place, we provide the side walls of the device with a longitudinally disposed flange 19.

- In order that the device may also be employed for displaying advertisements in a manner which will permit their being readily changed from time to time, we show
25 the side walls provided with flanges along the edges or corners of the device, as shown at 20, extending parallel with the side walls, as can be seen in Fig. 2. It is evident that advertisements may be readily inserted intermediate of the walls and the flanges when
30 the cover or lid 21 has been removed.

- The cover or lid 21 is preferably provided with a depending flange 22 adapted to extend into the receptacle, while the main
35 or body portion of the cover slightly overlaps the sides of the receptacle.

- The cover or lid 21 is locked in place by means of a pin 23, secured to the wall of the receptacle and arranged to extend through
40 an opening in the depending flange 22 of the lid or cover, see Fig. 2. The opposite end of the cover is provided with a loosely mounted pin 24, maintained in outward or locking position by the spring 25, which is
45 preferably mounted in a small housing 26, secured to the flange 22 of the lid 21; the flange of the lid being, of course, provided with an opening for the passage of the pin 24, which opening and pin also register with
50 an opening in the wall of the receptacle when the lid has been properly put into place. With the lid so placed that pin 23 has entered the hole in the flange 22 and pin 24 has been pressed through the hole in the
55 wall of the receptacle, it is evident that the lid or cover 21 will be locked in place.

- Secured to the wall through which pin 24 is adapted to pass, we provide a releasing member 27, preferably of thin resilient
60 metal, having its free end provided with a projection or pin 28, adapted to engage pin 24. In order to release the cover or lid 21, slight pressure on member 27 will press pin 24 inwardly so as to enable that end of the
65 cover or lid to be lifted, which action will

also withdraw the other end of the cover or lid out of engagement with pin 23.

As the receptacle is preferably made of thin sheet metal, the front wall with which the stop-pin 11 on slide-member 6 would
70 come into contact, we prefer to reinforce the receptacle at this point with a transversely arranged brace-rod or bar 29, see Fig. 2, so that rough handling of the device will not injure the wall of the receptacle.

The superimposed cups B are preferably weighted down by a suitable weight-member 30 so as to maintain the lowermost cup or other light article in proper frictional
80 contact with slide-member or plunger 6.

As the cups B, for which our device is especially intended, are usually made by having the one or lower end overlap as shown in Fig. 2, we prefer to provide the
85 portion 15 of the plunger 6 with a small upwardly presented lip or portion as at 31, which is adapted to engage the seam or overlapped end of the cup and thus assist the finger 16 in moving the lowermost cup B outwardly therewith; the finger 16 being
90 intended to engage the open end of the cup, as shown in Figs. 2 and 3, as the other end-flap of the cup is unfolded to provide a suitable lip or mouth-piece.

In practice, the cups B are placed in the
95 receptacle A, with the open ends toward the rear of the receptacle and the unfolded end flap or mouth-piece on the upper side as illustrated in the drawing, so that the hook of finger 16 will engage with the cup
100 B, as shown.

We have shown and described what we believe to be the simplest and best form of our invention, especially when employed for the purpose herein set forth, but it is evident that certain modifications may be made without, however, departing from the spirit of our invention, and we do not wish to be understood as limiting ourselves to the exact construction shown and described.

What we claim is:—

1. A device of the class described, comprising a receptacle provided with an article-holding ledge or bottom provided with an opening toward the front side and extending lengthwise of the bottom, the front
115 wall of the device being provided with a slot substantially in alinement with said ledge or bottom, a flange or rib secured to each side wall adjacent the under side of the ledge or bottom of the device so as to provide a slide-way with said ledge or bottom, a member slidably mounted in said
120 slide-way, the forward portion of said member being provided with a longitudinal cut-away portion along the longitudinal center line thereof, with the outer forward end of said member being angularly disposed so as to provide an open end to said cut-away
125 portion, and a hook member secured to the

upper surface of said slide member and adapted to move along the upper side of said ledge or bottom and arranged to engage with the lowermost article of a superimposed pack.

2. A device of the class described, comprising a rectangular receptacle provided with a partial bottom and a flange immediately beneath the bottom secured to the side walls of the receptacle so as to provide a slide-way with said partial bottom, a slot arranged in the front wall of the receptacle substantially in alinement with said partial bottom, and a member slidably mounted in said slide-way, the forward end whereof is provided with a cut-out portion substantially at the longitudinal center plate

thereof, with the forward outer end of said member being disposed downwardly to provide a grasp and present an open end to said cut-out portion, said bent-portion of the member constituting a stop for the inward movement of said slide-member, the upper surface of said member being provided with upwardly disposed hook-portions adapted to engage with the lowermost article of a superimposed pack.

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