

J. E. BROAD.
EJECTING CONTAINER.
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996,055.

Patented June 27, 1911.

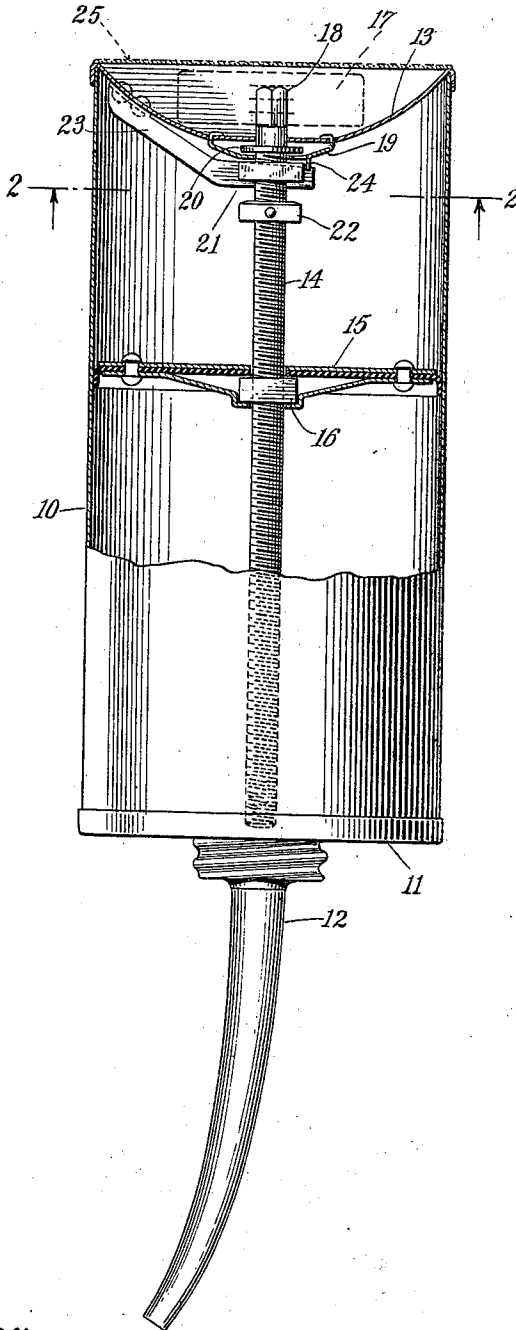


Fig. 1

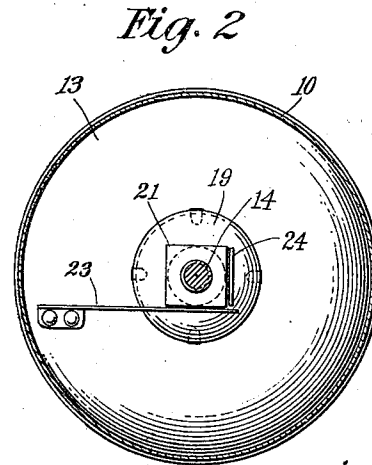


Fig. 2

Witnesses:
G. Blake
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Inventor
John E. Broad
By Attorney
Robert W. Pearson.

UNITED STATES PATENT OFFICE.

JOHN E. BROAD, OF HEMPSTEAD, NEW YORK, ASSIGNOR OF ONE-HALF TO NEW YORK & NEW JERSEY LUBRICANT COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

EJECTING-CONTAINER.

996,055.

Specification of Letters Patent. Patented June 27, 1911.

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To all whom it may concern:

Be it known that I, JOHN E. BROAD, a citizen of the United States, residing at Hempstead, in the county of Nassau and State of New York, have invented certain new and useful Improvements in Ejecting-Containers, of which the following is a specification.

This invention relates to ejecting containers for "non-fluid" oils, greases, and other lubricants or semi-fluid substances, and its object is to provide improved means adapted to eject the desired quantity of the contents and so devised as to prevent the container from being refilled.

My invention is employed in connection with a piston operated by a screw spindle which is worked from the outside of the container by a key or other suitable expedient, and as a means to prevent refilling, I mount within the container or in any inaccessible relation thereto, a one-way retainer or locking device which permits the free movement of the spindle in such a direction as to operate the piston to eject the contents, but connects said spindle with a fixed part of the container when the spindle is reversed, thereby preventing any extended reversal and retraction of the piston.

Of the accompanying drawings, Figure 1 represents a sectional view partly in elevation, showing an ejecting container provided with my improvements. Fig. 2 represents a section on the line 2—2 of Fig. 1.

In the drawings, 10 indicates the barrel or cylinder of the container whose lower or front head 11 is provided with a suitable outlet which may be equipped with a screw cap (not shown) when out of use, or with a removable nozzle 12 in place of the cap, through which the contents are ejected.

13 is the upper or rear head on which a screw spindle 14 is swiveled, and 15 is a piston or plunger held from rotation by its friction in the barrel 10 and having a nut 16 threaded on the spindle, whereby the contents of the receptacle contained between piston 15 and the lower head 11 are ejected when the spindle 14 is rotated, all in the well-known manner. Rotation of said spindle is effected in any suitable way, as by means of a key 17 fitting the squared upper extremity 18 of the spindle, the upper head 13 being preferably dished inwardly as shown so as to contain the key, and permissibly sealed over on the outside when the

package is sent out from the manufacturer, by a removable wall 25 shown in dotted lines. This provision for sealing of the end by which the spindle is manipulated, while not essential to nor claimed as a part of my present invention, is ancillary to the general result for which the invention is designed, namely to enable the dealers in lubricating greases, non-fluid oils, or other plastic materials to place the same on the market in a more convenient package than heretofore and protect themselves against the unauthorized refilling of this package.

19 is a plate fixed on the inside of the head 13, between which plate and said head is a flange or boss 20 formed on the spindle 14 whereby the latter is permitted to rotate but prevented from moving longitudinally with respect to the head. Below this plate a nut 21 is threaded on the spindle and permitted to travel longitudinally thereon for a limited distance between said plate and a flange or boss 22 fixed on the spindle.

23 is a spring arm or pawl fixed to the inner side of the head 13 and engaging the nut 21.

24 is a fixed metal lip projecting downwardly from the plate 19 far enough to engage one of the facets of nut 21 and prevent the latter from turning with respect to the head 13 when said nut is close to the plate 19, said lip however being separated from the flange 22 by a space wider than the thickness of the nut.

Spindle 14 is preferably provided with a left-hand thread as shown, and when turned clockwise, or to the right, as viewed from above, it forces the piston 15 downwardly in the barrel 10 so as to eject the contents. This same movement, as long as the nut 21 is held from rotating by lip 24 or pawl 23, tends to screw said nut downwardly on the spindle, and when the nut reaches flange 22 it begins to turn with the spindle, its corners displacing or vibrating the spring pawl 23. When however the attempt is made to withdraw piston 15 upwardly by reversing the direction of rotating the screw spindle, nut 21 will tend to travel upwardly on the spindle, being held from rotation at first by the pawl 23 and then more securely by the fixed lip 24, said nut finally jamming up against the plate 19 so as to lock the spindle and arrest its further rotation in a reverse direction.

The cost of incorporating this invention in a container of the class described is relatively small, so that the manufacturer can afford to supply at a reasonable price a non-refillable container which the user may discard when emptied.

I do not confine myself to the exact details of construction herein set forth.

I claim,—

10 1. A non-refillable ejecting container comprising a receptacle having an outlet, a piston in said receptacle, a screw spindle threaded in said piston and swiveled on said receptacle, a lock-nut threaded on said spindle and adapted to jam against a fixed part of the receptacle when said spindle is turned to reverse the piston, and means adapted to automatically prevent rotation of said nut during such movement of the spindle and permit its rotation when said spindle is turned in the opposite direction.

25 2. An ejecting container comprising a receptacle having an outlet at one end and a fixed member at the opposite end, an ejecting piston in said receptacle, a screw spindle threaded in said piston and swiveled on said fixed member, a nut having a limited longitudinal travel on the spindle for locking the latter to said fixed member, and a spring pawl for holding said nut against rotation during its travel toward and away from said fixed member.

30 3. An ejecting container comprising a receptacle having an outlet at one end and a fixed member at the opposite end, an eject-

ing piston in said receptacle, a screw spindle swiveled on said fixed member for operating the piston, a faceted nut having a limited longitudinal travel on said spindle for locking the latter to said fixed member, a stop on said fixed member for engaging one of the facets of the nut to prevent the latter from turning when engaged with said member, a spring pawl to prevent said nut from turning when out of range of said stop, and a shoulder on the spindle to limit the travel of said nut away from said fixed member.

4. An ejecting container comprising a barrel having a front head provided with an outlet, and a rear head, a plate mounted on the inner side of said rear head, a screw spindle having an operating end projecting through said rear head and a shoulder located between the latter and said plate, an ejecting piston threaded on said spindle, a collar fixed on the spindle, a faceted nut mounted to travel longitudinally on said spindle between said plate and collar, a stop projection on said plate to prevent rotation of the nut when engaged with the plate, and a spring arm fixed to the inner side of said head and constantly engaging the side of said nut.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses, this 17th day of October, 1910.

JOHN E. BROAD.

Witnesses:

G. BLAKE,
EDWARD E. BLACK.