Sept. 1, 1925. 1,551,567

R. K. JEFFREY

STOPPER

Filed April 14, 1925



Fig. 1

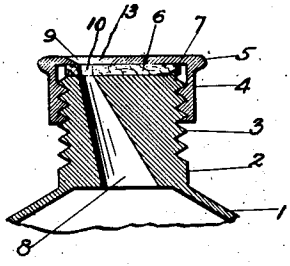


Fig. 7

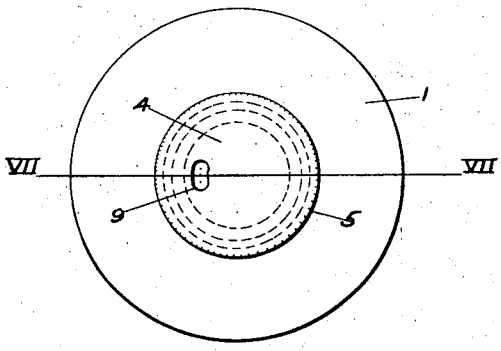


Fig. 2

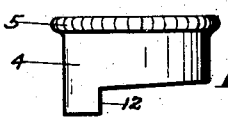


Fig. 4

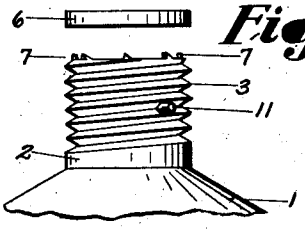


Fig. 5

Fig. 3

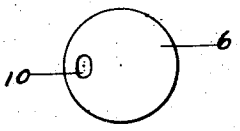


Fig. 6

Witness:-
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His ATTORNEY

Patented Sept. 1, 1925. 1,551,567

UNITED STATES PATENT OFFICE.

ROBERT KILBOURNE JEFFREY, OF COLUMBUS, OHIO.

STOPPER.

Application filed April 14, 1925. Serial No. 23,106.

To all whom it may concern:

Be it known that I, ROBERT KILBOURNE JEFFREY, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented new and useful Improvements in Stoppers, of which the following is a specification.

The present invention relates to certain new and useful improvements in stoppers, and particularly to stoppers adapted to close the discharge orifices of collapsible containers such as are used to dispense toilet creams, shaving soaps, and similar plastic material.

I am aware that numerous devices have been proposed for permanently attached stopper devices for collapsible containers of the class referred to, but all of the devices heretofore produced with which applicant is familiar, possess certain inherent defects which it is the object of this invention to overcome.

The especial object of this invention is to provide a stopper of the class described which is permanently attached to the container, which may be readily and expeditiously adjusted to either open or closed position, and when closed will effectively prevent leakage of the contents of the container when said container is subjected to accidental compression, thereby insuring the sanitary condition of the package.

The means whereby I attain this object are fully set forth in the following specification and illustrated in the accompanying drawings of which—

Fig. 1 is a side elevation of a collapsible container equipped with the stopper of my invention.

Fig. 2 is an end view, on an enlarged scale, of the stopper and container illustrated in Fig. 1.

Fig. 3 is a fragmentary side elevation of the neck portion of the container.

Fig. 4 is a side elevation of the cap disassembled from the container.

Fig. 5 is a side elevation of the resilient gasket.

Fig. 6 is a plan view of the resilient gasket.

Fig. 7 is a sectional view taken along the lines VII—VII of Fig. 2 showing the relation of the several parts assembled and in open position.

Like numerals refer to similar parts in the several figures.

As shown in the drawings the preferred embodiment of my invention comprises a collapsible tube 1, such as is commonly used for dispensing toilet creams, shaving soap, and similar plastic materials, having at one end a substantially cylindrical neck 2 the outer surface of which is shaped to form a screw thread 3. Fitted to the screw thread 3 is a cap 4 having a knurled flange 5 or otherwise suitably shaped head, whereby the cap may be grasped between the fingers to rotate it relative to the neck. A resilient gasket 6 preferably formed of cork or similar material, positioned upon the end of the neck 2 is adapted to be compressed by the screwing action of the cap to form a tight joint between the abutting surfaces of the neck and cap. The gasket 6 is held against rotary movement relative to the neck by a plurality of spikes 7 projecting from the end of the neck. A longitudinally extending passage 8 positioned eccentrically of the neck 2 is adapted to register with an eccentrically positioned aperture 9 in the cap 4 when said cap is in one position of angular adjustment, and a similar aperture 10 in the gasket 6 provides a clear passage for the expulsion of material from the container. A stud 11 projecting from the neck 2 is adapted to engage a shoulder 12 formed in the side walls of the cap 4 when the aperture 9 and the passage 8 are in alignment. And these parts are so disposed that the cap may be rotated from this open position in a direction to remove the aperture 9 from alignment with the passage 8 and at the same time compress the gasket 6, thereby securely closing the passage 8 and preventing the escape of material from the container. The edges of the aperture 9 are preferably beveled, as shown at 13, to produce a relatively wide concave depression from which surplus material may be conveniently wiped after the cap has been moved to its closed position.

By the arrangement of parts above described, I have provided a stopper for collapsible containers of the class described which may be conveniently and expeditiously adjusted to its open position to permit the expulsion of material from the container, or to its closed position to effectively prevent the accidental discharge or leakage of material therefrom when the container is subjected to accidental pressure.

What I claim is:—

1. In a device of the class described, the combination with a container having a substantially cylindrical neck and a passage extending longitudinally therethrough, of a cap adapted to close said passage permanently mounted upon said neck and rotatable about the axis thereof, an aperture in said cap adapted to register with said passage when said cap is in one position of angular adjustment about the axis of said neck, a resilient gasket fixed to said neck and having an aperture in register with said passage, and means to compress said gasket when said cap is in position to close said passage as and for the purpose set forth.

2. In a device of the class described, the combination with a container having a substantially cylindrical neck and a passage extending longitudinally therethrough, of a cap adapted to close said passage mounted upon said neck for limited rotation about the axis thereof, an aperture in said cap adapted to register with said passage when said cap is at one limit of its rotary adjustment about said axis, a resilient gasket fixed to said neck and having an aperture in register with said passage, and means effective when said cap is at the other limit of its rotary adjustment about said axis to compress said gasket as and for the purpose set forth.

3. In a device of the class described, the combination with a container having a substantially cylindrical neck and an eccentrically positioned passage extending longitudinally therethrough, a cap adapted to close said passage mounted upon said neck for limited rotation about the axis thereof, an aperture in said cap adapted to register with said passage when said cap is in one position of angular adjustment about the axis of said neck, a resilient gasket fixed to said neck and having an aperture in register with said passage, and means effective when said cap is in another position of angular adjustment to compress said gasket as and for the purpose set forth.

In testimony whereof I have hereunto set my hand.

ROBERT KILBOURNE JEFFREY.