Dec. 31, 1929. B. W. KING 1,741,991

PASTE EJECTOR

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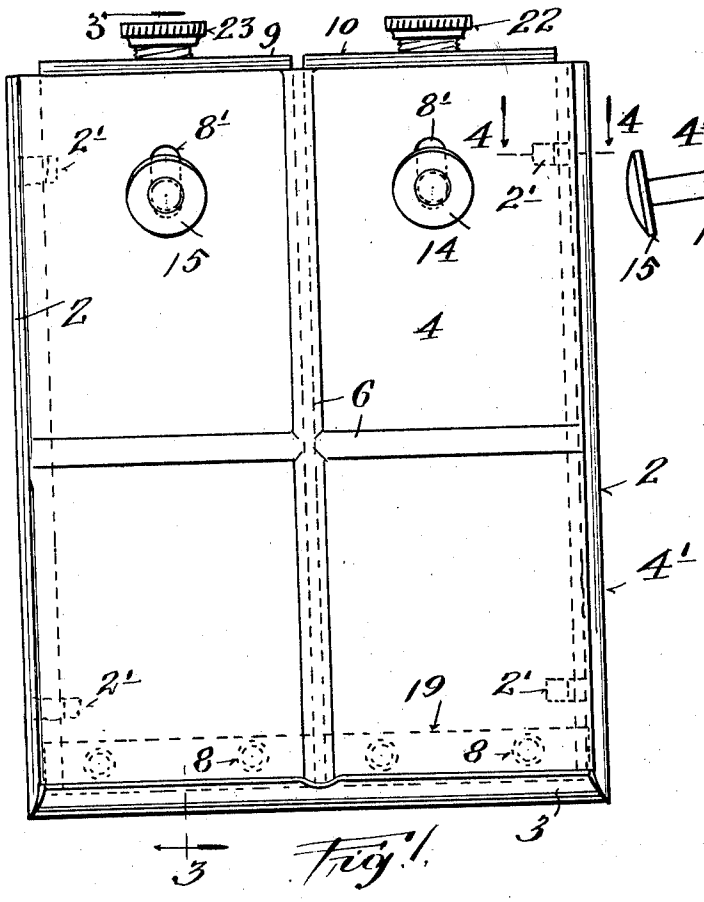


Fig. 1.

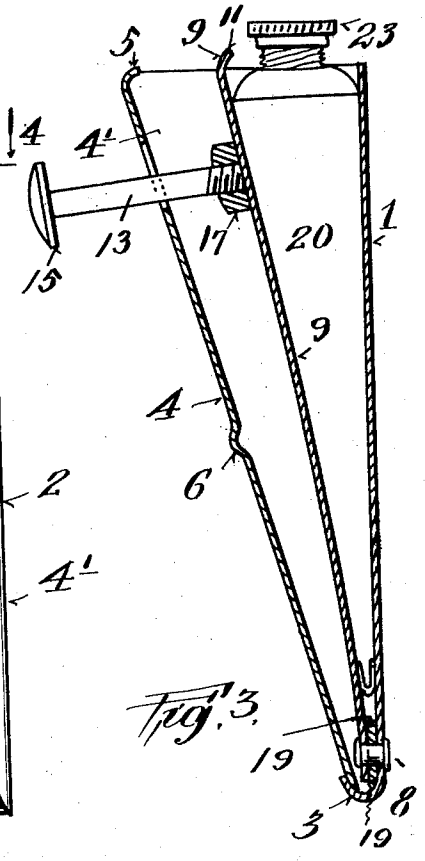


Fig. 3.

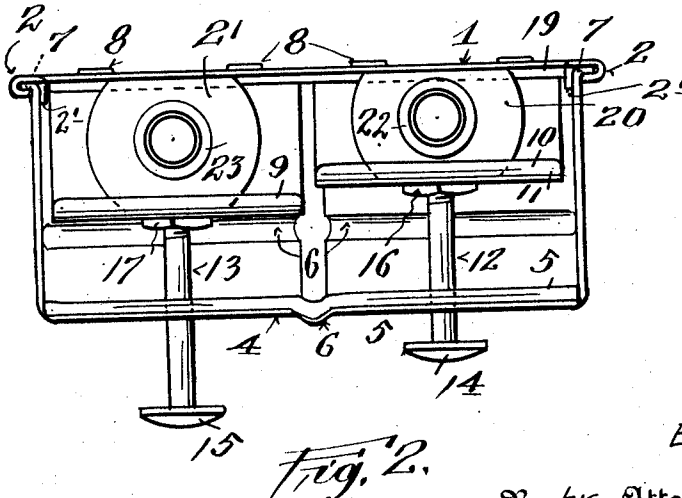


Fig. 2.

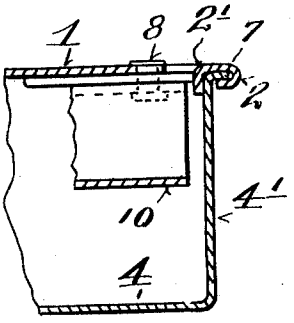


Fig. 4.

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PASTE EJECTOR

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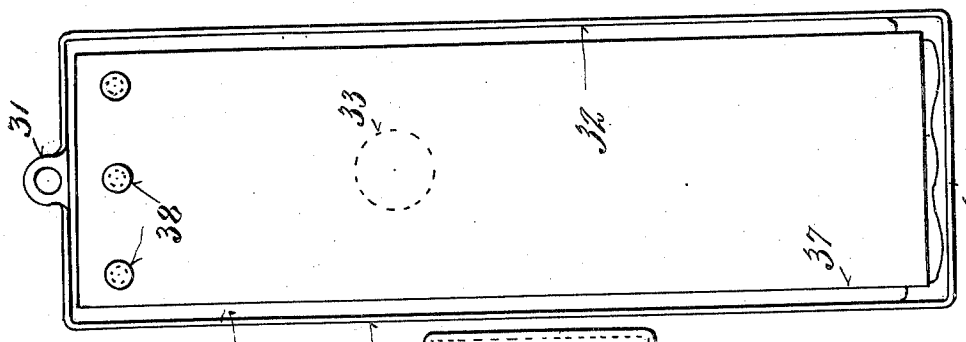


Fig. 8.

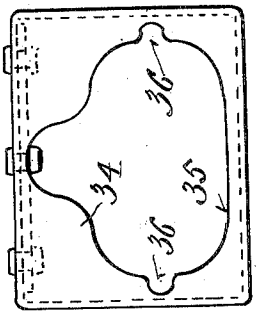


Fig. 7.

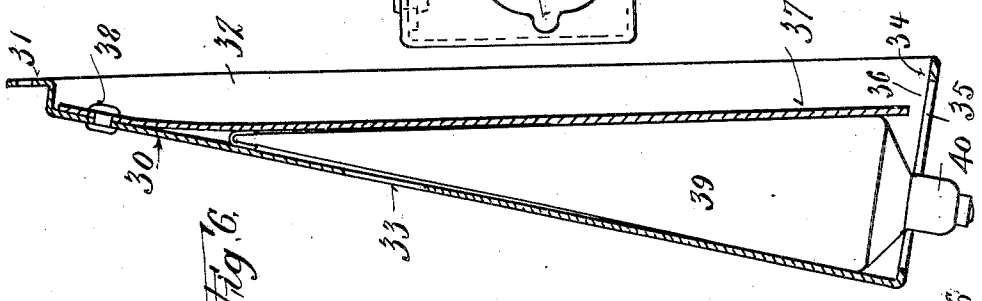


Fig. 6.

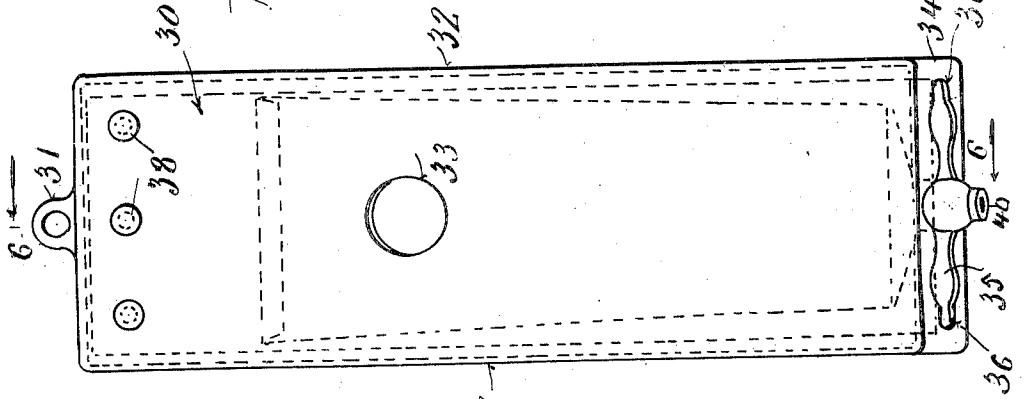


Fig. 5.

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UNITED STATES PATENT OFFICE

BERTELL W. KING, OF NEW YORK, N. Y.

PASTE EJECTOR

Application filed November 1, 1926. Serial No. 145,543.

This invention relates broadly to a device for automatically dispensing paste.

One of the objects of this invention is the provision of a container for receiving a paste receptacle which is adapted to force the paste from the receptacle when its cap is removed with a uniform pressure.

A still further object of this invention is the provision of a novel structure of this type which is relatively simple and easy to construct, and which is adapted for quick repairs. These and many other objects, as will appear from the following description form part of this invention.

This invention resides substantially in the construction, combination, arrangement, and relative location of parts, as will be more fully pointed out hereinafter.

Referring to the drawings, in which the same reference numerals will be used in the several views to indicate the same or similar parts, Fig. 1 is a side elevational view of the device of this invention.

Fig. 2 is a top plan view of the arrangement of Fig. 1.

Fig. 3 is a vertical cross-sectional view taken on the line 3—3 of Fig. 1, looking in the direction of the arrows.

Fig. 4 is an enlarged cross-sectional view taken on the line 4—4 of Fig. 1, looking in the direction of the arrows, showing the method of securing the several parts together.

Fig. 5 is a front elevational view of a modified form of my invention.

Fig. 6 is a cross sectional view of this modification, taken on the line 6—6 of Fig. 5, looking in the direction of the arrows.

Fig. 7 is an end elevational view of this modification, and

Fig. 8 is a rear elevational view.

One of the important objects of this invention is the provision of a container adapted to automatically eject paste from a receptacle when a cap is removed therefrom. My device is particularly adapted for use with containers of the type in which shaving cream, tooth paste, skin lotions and glue are sold. These containers consist of thin flexible walls in the form of tubes having a threaded projection to which the can is attached.

The container comprises a back piece 1, provided with upturned beaded edges 2 at the sides, and a similar beaded edge 3 at the bottom. The front portion of the container comprises a flat surface 4 having its edges formed at right angles to the front surface to provide the sides 4′, as is clearly shown in the drawings. The upper edge of the front piece is provided with a grooved portion 5, extending throughout its length. A series of ridges 6, of any configuration, are formed on the surface 4 to strengthen the container. The edges 7 of the sides 4′ are turned at right angles thereto, and parallel to the front portion 4, as shown clearly in the drawings, to provide means for engaging the beaded edges 2. The front portion may be slid into the grooves to form beaded edges on the back portion to unite the two main elements of the container together. A number of tabs 2′ are struck up from the back piece 1, and engage the sides of the container as shown in Fig. 4. The wall 4 is provided with elongated openings 8′. Two flat springs 9 and 10 extend throughout the length of the casing, and are secured at their bottom edges to the back of the casing by means of rivets 8, as shown. A small bar or strip 19 extends transversely of and between the back piece and springs as shown in Fig. 3, to offset the springs. The upper ends of the springs are slightly curved at 11, see Fig. 3. Rods 12 and 13 are secured by means of nuts 16 and 17 to the springs 10 and 9, respectively, and extend through the openings 8′ in the casing. The rods 12 and 13 are provided with knobs 14 and 15, respectively. The paste containers are shown at 20 and 21 and are provided with the usual threaded caps 22 and 23, respectively.

In the modification shown in Figs. 5 to 8, the casing 30 is shown provided with an integral projection 31, having a hole therein to provide a support for the device which may be hung on a nail, or hook, or other suitable support. Integral upstanding sides 32 and end 34, are provided to form an open faced chamber, as is shown in the drawings. In the wall of the structure 30 is provided an aperture

33 for displacing the spring with the finger. The end wall 34 is provided with an irregular shaped opening 35, having two diametrically opposite notches 36. The general size and shape of this opening is such that the usual form of paste containing tube 39 may be passed therethrough, as will be evident from Fig. 6. A flat spring 37 is secured by means of the rivets 38 to one end of the wall 30, and is adapted to clamp the tube between it and the wall 30. The tube 39 is provided with any suitable form of closure 40, which as illustrated, represents my improved form described in my copending application, Ser. No. 145.544, filed November 1, 1926.

It will be evident that I have shown the first modification supported with the open end of the device upward, while the second modification is disclosed with the open end downward, the idea being that my device may be used in any suitable position.

The operation of the device is as follows:—

The springs are withdrawn away from the back piece by means of the knobs, and a paste receptacle is placed within the casing between the back piece 1 and the spring. The knob is then released and the springs exert a uniform pressure against the paste receptacle as will be apparent from the drawings. By offsetting the springs, as shown, a uniform pressure is applied to the receptacles. When the cap of the paste receptacle is removed, the spring forces the paste from the receptacle at a uniform rate. It is evident that the strength of the springs may be varied to suit the viscosity of the paste which it is to dispense so that its rate of delivery from the receptacle may be controlled as desired.

I am, of course, aware that many changes in the details of construction and relative arrangement of parts will readily suggest themselves to those skilled in the art. For instance, the device may be constructed to dispense material from one receptacle only or from as many as may be desired. The relative shape and arrangement of parts may be varied without departing from the spirit and scope of my invention, and I do not, therefore, desire to be limited to the particular structure shown in the drawings, by way of illustration, but to the spirit and scope of my invention, as I define it in the appended claims. The spring can be used to break down the shoulder of the tube by pressing on the handle or on the spring and box face at the same time.

What I seek to secure by United States Letters Patent is:

1. In a device of the type described the combination with a container for receiving a paste receptacle of resilient means thereon for dispensing the paste when the receptacle is open and means on said dispensing means for moving it out of operative position for removing and inserting the receptacle.

2. In a device of the type described the combination with a container for holding a collapsible paste receptacle, of a spring for engaging the paste receptacle for dispensing paste therefrom and means on said spring and extending through the wall of the container for moving the spring when desired.

3. In a device of the type described the combination with a container for holding a paste receptacle, of a flat spring for engaging a paste receptacle to force the paste therefrom, and a handle on said spring projecting through the wall of the container for controlling the spring.

4. In a device of the type described the combination with a container of a spring secured therein, and means for spacing the spring from the container to receive a paste receptacle so that the spring contacts with substantially the whole side of the receptacle said spring acting to eject paste from the receptacle when it is opened.

5. In a device of the type described the combination with a container of a flat spring for engaging a paste receptacle to force the paste therefrom, and means on said spring projecting through the wall of a container for controlling it exteriorly of the casing.

6. In a device of the type described the combination with a container of a flat spring attached thereto for creating a constant pressure on paste receptacles placed in the container and means for creating added pressure on the shoulder of paste receptacles in order to break it down or crush it.

7. In a device of the type described the combination with a container for receiving a paste receptacle of spring means thereon for exerting a continual spring actuated collapsing pressure on the receptacle for dispensing the paste when said receptacle is opened.

8. In a device of the type described the combination with a container for receiving a filled collapsible tube having a closure cap thereon of spring means which normally exert pressure on said collapsible tube to eject the contents therefrom when the closure cap is removed, and means for releasing the spring means for the purpose of removing the tube and inserting another tube.

In testimony whereof I have hereunto set my hand on this 25th day of October A. D., 1926.

BERTELL W. KING.