(No Model.)

L. GUNN.

APPARATUS FOR CONTAINING AND APPLYING GUM, PASTE, &c.

No. 564,614. Patented July 28, 1896.

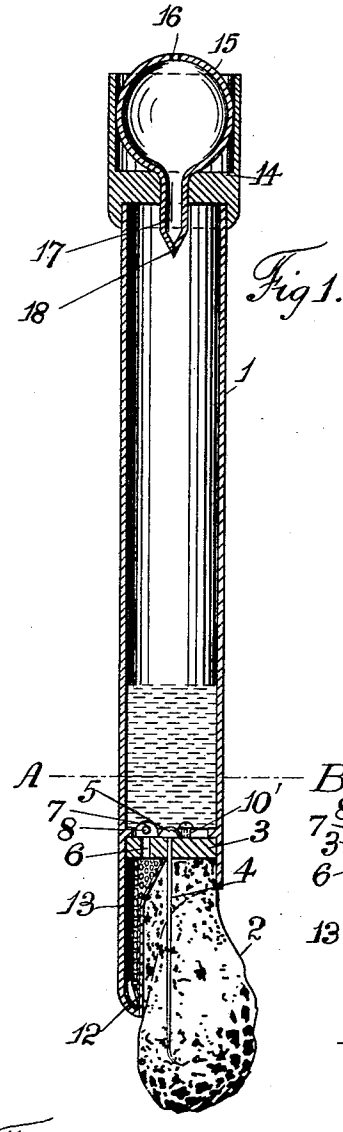

Fig 1.

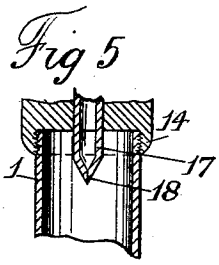

Fig 5

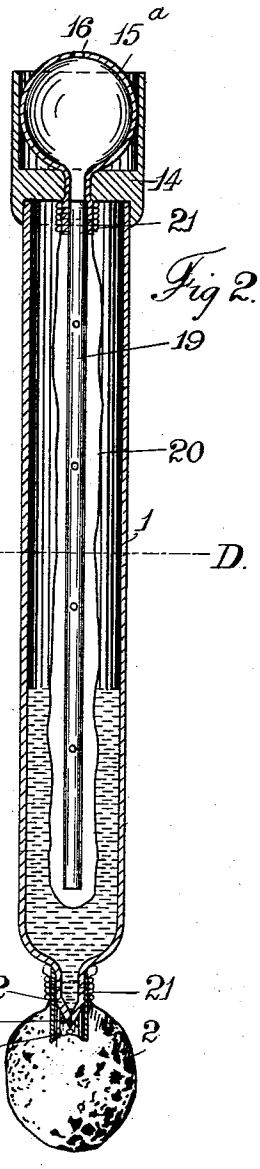

Fig 2.

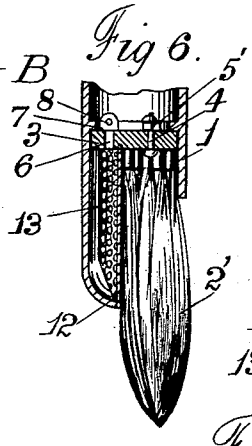

Fig 6.

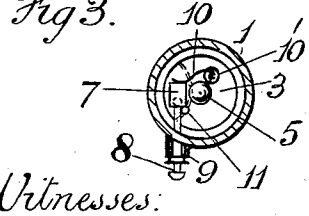

Fig 3.

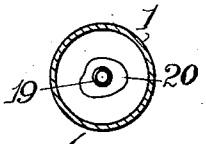

Fig 4.

Witnesses:
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

LEONARD GUNN, OF LONDON, ENGLAND, ASSIGNOR TO HENRY JOYCE, OF SAME PLACE.

APPARATUS FOR CONTAINING AND APPLYING GUM, PASTE, &c.

SPECIFICATION forming part of Letters Patent No. 564,614, dated July 28, 1896.

Application filed October 10, 1895. Serial No. 565,278. (No model.)

To all whom it may concern:

Be it known that I, LEONARD GUNN, engineer, a subject of the Queen of Great Britain, residing at 4 Southampton Row, London, England, have invented a new and useful Improvement in Apparatus for Containing and Applying Gum, Paste, Pigments, Oils, and the Like, of which the following is a specification.

This invention consists in apparatus for containing and applying gum, paste, pigments, oils, and the like. Its construction and operation will be understood by reference to the drawings, in which—

Figure 1 is a vertical section. Fig. 2 is a vertical section of modification. Fig. 3 is a plan on line A B, Fig. 1. Fig. 4 is a plan on line C D, Fig. 2. Fig. 5 is a section showing screwed joint. Fig. 6 shows a brush replacing the sponge.

In the drawings, 1 is the tube or containing vessel. This may be made of glass, celluloid, ebonite, thin metal, or other material unacted upon by the contents.

2 is a sponge, which, however, may be replaced by a brush (see 2′, Fig. 6) or equivalent suitable for laying on or otherwise applying the fluid or semifluid contents of the vessel. I prefer to mount the sponge, brush, or equivalent device 2 so that it may be rotated. This I accomplish by mounting it upon a wire 4, passing through plate 3, and having a head 5 turned over, as shown in Fig. 1, or screwed and fitted with a nut 5′, as shown in Fig. 6. A hole 6 is bored in the plate 3, which is normally covered by the valve 7, preferably formed of metal, such as brass, and fastened to a pin 8, which passes through a stuffing-box 9. (See also Fig. 3.) A spring 10, secured in position by a set-screw 10′, presses the valve 7 against the stop 11, and so closes the hole 6, which when uncovered communicates with chamber 13, formed by an extension of the case 1 and by the wire-gauze sheath 12, which partly surrounds the sponge or brush 2 and is secured by soldering or like means to the plate 3 and end of case 1, so as to be liquid-tight around the edges.

I mount by cementing or otherwise, preferably upon the opposite end of the tube or other vessel 1, in a cup or shroud 14, an elastic rubber ball 15, having a hole 16 at its upper end and tapered and drawn out at its lower end, as at 17. A slit 18 is formed at this end which is normally closed by the pressure of the sides and acts as a valve by preventing any escape of the contents of the vessel upward into the ball.

The operation of this first part of my invention is as follows: The tube or vessel 1 is filled with gum, paste, or the like by forcing off the tightly-fitting cup or shroud 14 or by unscrewing the same, as shown in Fig. 5. Since the valve 7 is closed by the action of spring 10, the fluid or semifluid contents of the vessel 1 cannot escape into the chamber 13. Slight pressure is exerted upon the ball 15 by placing the finger over the hole 16 and pressing in the sides. A charge of air is thus forced in upon the contents of the vessel through slit 18, which closes instantly upon removing the finger and permitting the ball 15 to expand again. The user now presses in pin 8, thereby forcing the valve 7 off its seat against the action of spring 10, thereby enabling a sufficient quantity of the contents of vessel 1 to enter the chamber 13, pass through the interstices of the gauze sheath 12, and moisten the sponge or brush 2. The sponge or brush can be rotated or partially rotated, so as to permit the fluid to be equally distributed, either form being mounted upon a pin or wire 4.

In Fig. 2 I have shown a modification which is more especially useful when the contents of the tube or vessel are liable to deteriorate by contact with air or when sticky substances, such as pigments, are employed. In this case the neck of the elastic ball 15^a embraces a perforated tube 19, formed of metal, glass, or the like and surrounded by a sack or bag 20, made of thin rubber or like elastic material and secured by binding or the like, as at 21. The base of the containing vessel 1 is preferably tapered, as at 22, and has a small opening 18. The end of the tube passes into a perforated gauze sheath 13, which can be readily removed by loosening the string or wire 21, which secures it and the sponge to

the tapered base 22. If desired, the sponge may be attached direct to the tapered base without the gauze sheath 13. Upon pressing the ball 15ª, the hole 16 being closed with the finger, as previously described, air is forced into the sack or bag 20 and the contents of the vessel expelled by the displacement caused by the distension of the bag, without, however, the air coming into contact with the contents.

I claim—

1. In apparatus for containing and applying gum, paste, pigments, oils and the like, the combination with a containing vessel of a perforated elastic ball having a valve opening downward, the valve 7 operated by plunger 8, and spring 10, for controlling the opening 6, communicating with chamber 13, the perforated gauze sheath 12, partly surrounding the sponge 2, which can be turned upon pin 4, substantially as described.

2. A liquid-containing tube 1, having a perforated partition 3 fixed in the lower part thereof, in combination with a sponge or brush suspended from said partition, a reticulated screen depending from said partition and surrounding the said sponge, a valve arranged to normally close the opening through the said partition, and means for operating the said valve at will to let the contained liquid flow from the said tube to the said sponge substantially as set forth.

3. A rotary sponge or brush in combination with a liquid-containing tube having an outlet for moistening the said sponge, and a pin connecting the said sponge to the said tube but allowing the rotation of the former substantially as set forth.

4. A liquid-containing receptacle provided with a sponge or brush at its operating end, in combination with a device for expelling the liquid and independent means of opening the outlet to said sponge at will without pressing on the liquid in said receptacle substantially as set forth.

5. A liquid-containing tube in combination with an air-forcing compressible bulb which discharges into the same, a sponge which is arranged at the outlet of the said tube and a device for governing the said outlet which is independent of the said bulb substantially as set forth.

In testimony whereof I have set my hand in presence of two witnesses.

LEONARD GUNN.

Witnesses:
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