D. G. ROLLIN.

LIQUID BLACKING-DISTRIBUTER.

No. 183,470. Patented Oct. 17, 1876.

Fig. 1.

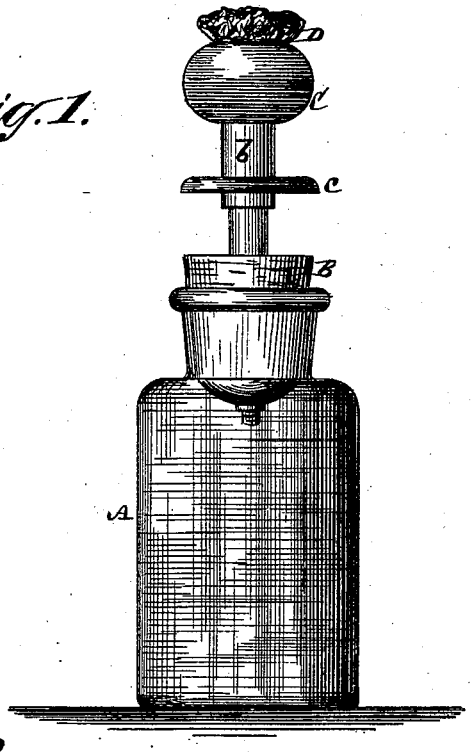



Fig. 2.

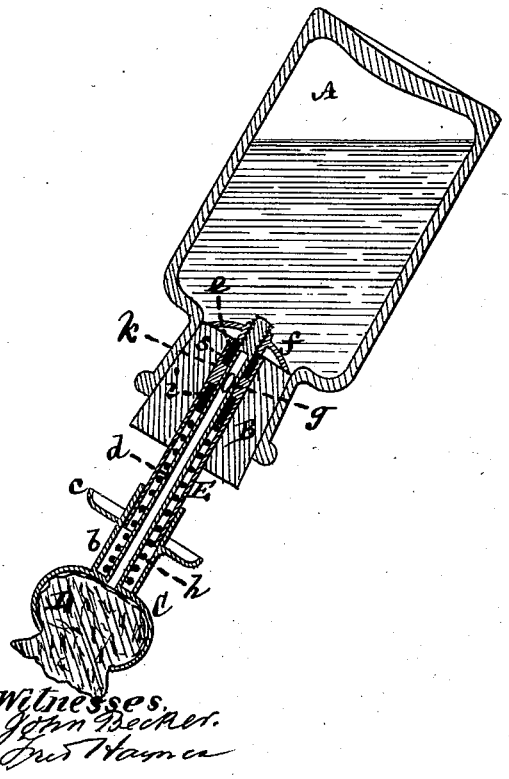
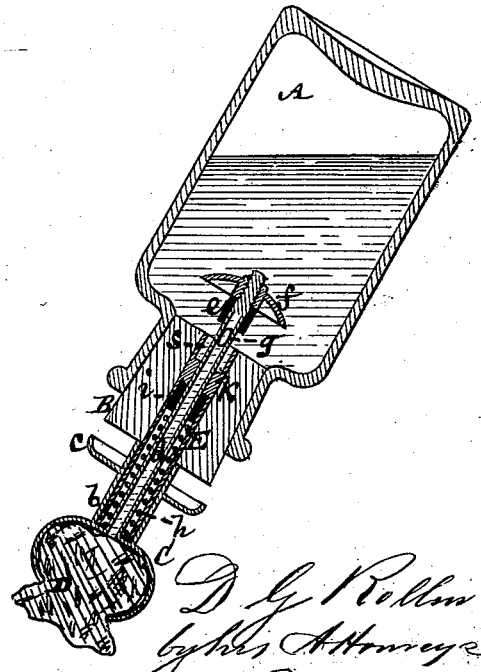



Fig. 3.




Witnesses.
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# UNITED STATES PATENT OFFICE.

DANIEL G. ROLLIN, OF NEW YORK, N. Y., ASSIGNOR TO PATRICK H. DRAKE AND WILLIAM P. WARD, OF SAME PLACE.

## IMPROVEMENT IN LIQUID-BLACKING DISTRIBUTERS.

Specification forming part of Letters Patent No. **183,470**, dated October 17, 1876; application filed August 12, 1876.

*To all whom it may concern:*

Be it known that I, DANIEL G. ROLLIN, of the city, county, and State of New York, have invented a new and useful Improvement in Devices for Distributing or Dispensing Liquid Blacking and other liquid substances or fluids; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms part of this specification.

This invention relates to hand devices for applying liquid blacking to boots and shoes, black lead or polishing solutions to stone, and for various other purposes requiring a spasmodic or intermittent discharge of liquid either into a sponge or other absorbent designed to receive the liquid as it is discharged from the vessel containing it, or in a direct manner from the vessel itself, which latter in the present instance is a sealed or corked bottle, and may be made of glass, thereby economizing production, and doing away with any injurious chemical action, either upon the vessel itself, or upon the liquid contained in it.

The invention consists in a mechanical ejector constructed to pass through the cork or stopper of the bottle, and capable of manipulation by the hand which holds the bottle, substantially as hereinafter described. It also consists in various advantageous combinations of the working parts of said ejector.

Figure 1 represents an outside elevation, prior to use, of a combined fount and pad for containing and applying liquid blacking to boots and shoes, with my invention applied. Figs. 2 and 3 are longitudinal sections of the same while in use, and showing the working parts in different positions.

A is a glass bottle containing the liquid to be distributed, and fitted with a cork or stopper, B, which carries the ejector. The ejector, when used to apply liquid blacking or other liquids requiring a sponge or pad to distribute them, is constructed with a sponge or other absorbent pad-holder, which is omitted when the liquid is discharged from the bottle or vessel in a direct manner, or without the intervention of an absorbent pad. C is a spherical, conical, or other suitably-shaped absorbent pad-holder containing a sponge, brush, or absorbent pad, D. This pad-holder is provided with a hollow stem or sleeve, *b*, and lower button or disk *c*. Within the stem *b* is a small concentric tube, *d*, opening at its outer end within the holder C to which it is attached. This tube *d*, which is extended to enter the bottle A on the inner end of the cork, is closed at its inner end and fitted at or near said end with a valve-plunger, *e*, outside of or beyond which is a cup or disk, *f*, also fast to the inner closed end of the tube *d*. Said tube *d* is also provided in its sides with one or more openings, *g*, immediately above or on the outside of the valve-plunger *e*. E is a tube of larger diameter than the tube *d*, and freely inclosing the latter, so as to leave a space between them for the reception of a spiral spring, *h*. This tube, which receives over or on the outside of it in a free sliding manner the hollow stem *b*, is projected through the cork B, and is open at its outer end to allow of the spring *h* being extended through it, and pressing at its outer end against the pad-holder C. The inner end of the spring bears against a packing, *i*, arranged around the tube *d*, on the outer end or face of a valve-seat, *k*, with which the tube E is provided at a distance from its inner end, to receive within such end of the tube E the valve-plunger *e* when the spring *h* is distended, and so that said plunger bears or closes against the valve-seat *k*, and the openings *g* in the tube *d* are under cover of or inclosed by said valve-seat, the tube *d* passing freely through the latter. When the spring *h* is compressed, however, then the valve-plunger *e* is caused to pass out of the recess or chamber *s* in the inner end of the tube E, so as to enter the bottle A and to expose the openings *g* in the tube *d* to the free ingress of the liquid thereto, and through into the tube *d*. These two positions are clearly shown in Figs. 2 and 3 of the drawing.

To operate the device, supposing the bottle A to be charged with the liquid to be ejected, it is only necessary to more or less invert the bottle, and, by a suitable application of the thumb and fingers of the hand against the under side of the bottle, and on the button or disk *c*, to manipulate the device sharply or

quickly, so as to suddenly compress and relax the spring *h*. When the spring *h* is compressed, not only is the tube *d*, which may be termed the ejecting-tube, filled with liquid by the exposed lateral openings *g*, but also the cavity or chamber *s* on the inner side or face of the valve-seat *k*, as represented in Fig. 3, and so that when the spring *h* is suddenly relaxed, the valve-plunger *e*, as it enters the chamber *s*, forcibly expels the liquid therein through the openings *g* into the tube *d*, and out from the latter. This expulsion continues until the openings *g* come within the valve-seat, and the valve-plunger *e* bears against the latter and acts as a cut-off or shut-off valve, not only to exclude all further egress of the liquid till the spring *h* is compressed again, but also to exclude all ingress of air to the bottle, and doing away with any continuous vent to the latter to affect the contents thereof. By making the button *f* concave or hollow it serves to hold the liquid and assist in the expulsion of the latter by the valve-plunger *e*.

I claim—

1. In combination with the stopper B and bottle A, the tube E, the ejecting-tube *d*, surrounded by the spring *h*, and provided at its outer end with a sponge-cup, D, and at its inner end with the openings *g*, valve *e*, and button or stop *f*, the whole arranged to operate substantially as described.

2. In combination with the ejecting-tube *d* and tube E, the valve-seat S in the inner end of the tube E, and valve *e* on the inner end of the ejecting-tube *d*, constructed to operate substantially as described.

3. In combination with the tube E, the ejecting-tube *d*, the cup *c* secured to the sleeve *b*, and button *f* secured to the tube *d* for limiting the motion of said tube in the tube E, substantially as described.

4. The sponge or absorbent pad-cup C and the hollow sleeve *b*, ejecting-tube *d*, its spring *h*, and valve *e*, in combination with the tube E, the whole arranged to operate substantially as described.

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Witnesses:

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