UNITED STATES PATENT OFFICE.

STEPHEN S. NEWTON, OF BINGHAMTON, NEW YORK.

IMPROVEMENT IN MUCILAGE-HOLDERS.

Specification forming part of Letters Patent No. **201,279**, dated March 12, 1878; application filed October 30, 1877.

To all whom it may concern:

Be it known that I, STEPHEN S. NEWTON, of Binghamton, in the county of Broome and State of New York, have invented certain new and useful Improvements in Liquid-Blacking Bottles; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a vertical section of a bottle, showing my invention; and Fig. 2 is a detached view of the agitator.

A represents the body, and A′ the neck, of any suitable receptacle for the blacking. B is a cylindrical plug, secured firmly in the neck A′. C is a tube, seated in the plug B, or formed in one piece with the plug, and provided with an internal screw-thread. D is the delivery-tube, having an external screw-thread, which engages with the thread of tube C, and having also at its lower or inner end one or more ports, *d*, and a cap or flange, *d′*. E is a rod or stem attached firmly (by preference) to the inner end of the delivery-tube D, and provided with projecting spurs *e*, or with teeth, or otherwise roughened, and constituting an agitator. I usually attach four or more of these teeth or spurs *e* at or near the extreme lower end of the stem.

As will be readily understood from an inspection of the drawings, when the parts are in the position shown, the ports *d* are open—that is, they are below the inner end of the tube C—so that the blacking can flow through said ports and through the delivery-tube if the bottle be inverted and shaken vertically, and that such shaking motion will agitate the plumbago, of which the blacking is in part composed, and thus insure that it (the plumbago) shall be discharged in the desired proportion.

It will, of course, be preferable that, when the blacking is not being used, the discharging-tube shall be screwed out from the bottle to such distance as will withdraw the ports *d* within the inner end of the tube C, to prevent leakage of the blacking, and that, therefore, when the ports are being opened by screwing the delivery-tube D down into the bottle, the rotary motion of the spindle E and arms or spurs *e* downward, the plumbago, which has settled to the bottom of the bottle, will be stirred up to such an extent that it will be readily and thoroughly mixed with the liquid by the shaking motion above referred to.

Although I usually prefer to attach the stem E to the lower end of the delivery-tube D, yet I do not wish to be confined to such construction, because some of the advantages of my invention may be derived from a detached agitator, from the fact that a sharp shaking motion of the bottle in an inverted position is required to eject its contents through the ports *d* and tube D.

In Fig. 2 I have shown the agitator detached from the tube D, and as, under some circumstances, I may use the agitator thus disconnected from the delivery-tube, or even with a bottle having an ordinary cork stopper, the plug or central portion may be made solid with reduced ends, to which collars or rings *e′* may be secured by riveting or soldering, the arms or spurs *e* being firmly attached to the rings, or formed in one piece with each ring.

As the arms or spurs *e* are made flexible, it will be seen that the distance between their outer extremities can be longer than the diameter of the neck of the bottle, yet not prevent their passing through said neck; and, further, that after they have been passed through the neck, their elasticity will prevent the escape of the agitator from the bottle. On the contrary, when rigid and inflexible arms are used, the distance between their outer ends cannot exceed the diameter of the neck, which prevents the stirring of the contents near the sides, and necessitates that, in order to retain the agitator, it should be attached at the top or bottom of the bottle. I am aware that such rigid and inflexible arms have been heretofore employed.

When the tube E is employed, the ring *e′* (one or more) may be soldered on, the ring or rings being of such size as to pass readily over the tube or rod.

One advantage which is due to the combination which I have invented—that is to say, of a stopper for closing the mouth of the bottle, and an agitator which is retained in the

bottle when the liquid is being delivered—is this: a person can intimately mix the contents of the bottle while it is closed, and the mixing will be kept up while the liquid is being discharged, thus maintaining a desirable uniformity in the consistency of the blacking while it is applied. Hence I do not wish to be limited to or by a construction in which the agitator is connected with the discharging-tube or the stopper; but

What I do claim is—

1. In combination with the bottle A A′, an agitator having the central support E and the elastic metallic arms *e e*, adapted to operate over an area whose diameter is greater than that of the bottle-neck, substantially as set forth.

2. The combination, with a liquid-blacking bottle, of an agitator for mixing the contents of the bottle, and a gate for controlling the discharge of the liquid, substantially as set forth.

3. The combination, with a liquid-blacking bottle, of tube C, delivery-tube D, provided with ports *d*, and an agitator attached to said delivery-tube D, substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

STEPHEN S. NEWTON.

Witnesses:

J. C. ELDREDGE,

JEROME DE WITT.