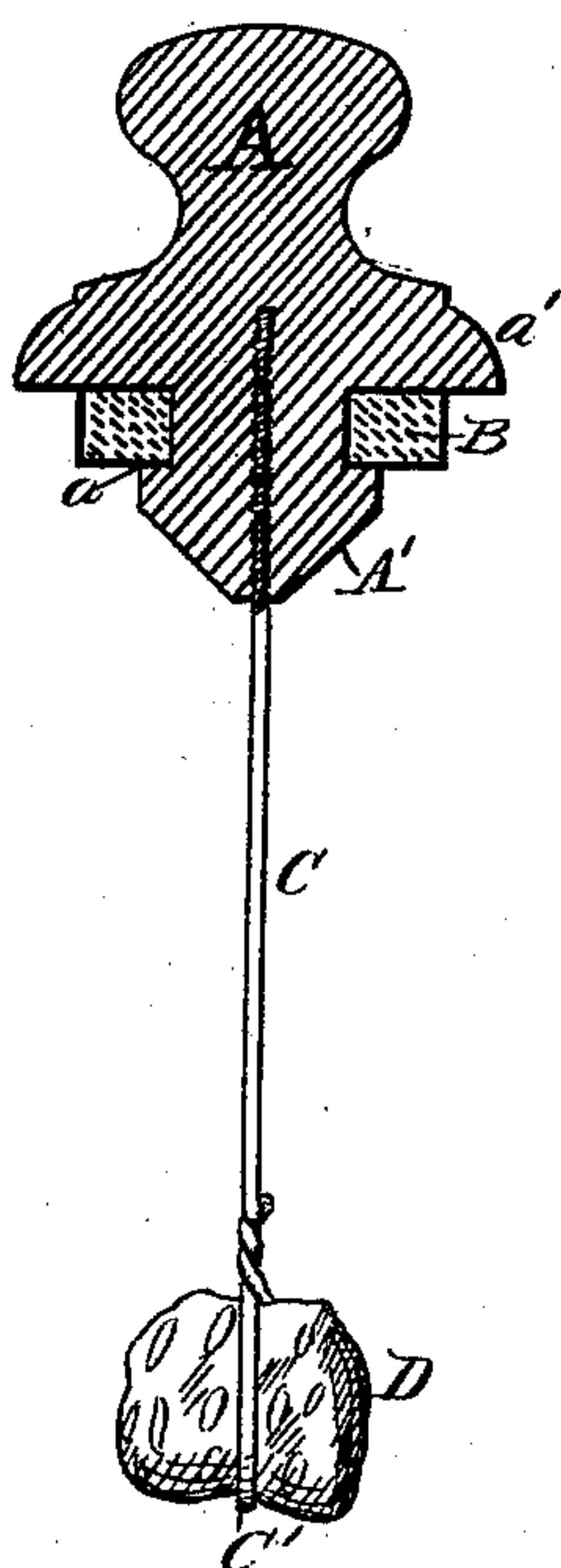


S. S. NEWTON.
Bottle-Stopper.

No. 223,531.

Patented Jan. 13, 1880.

Fig. 1.



Witnesses:

H. A. Low.

J. S. Barker.

Inventor:

Stephen S. Newton
by W. H. Doubleday atty

UNITED STATES PATENT OFFICE.

STEPHEN S. NEWTON, OF BINGHAMTON, NEW YORK.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 223,531, dated January 13, 1880.

Application filed November 1, 1879.

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 Bottle-Stoppers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to letters of reference marked thereon, which form a part of this specification.

The object of my invention is to produce a cheap, convenient, durable, and effective bottle-stopper and sponge-support adapted specially for use in connection with bottles containing liquid blacking; and to this end it consists of the combination of a wooden plug having an external groove or circular seat, in combination with a rubber annulus or packing fitting tightly within the groove and a metallic stem adapted to carry in its lower end a sponge or its equivalent.

In the drawing, which is a vertical section of my improved stopper and sponge-support, A A' is the wooden part or plug, the part A being constructed by preference with a notch at its upper end for convenience in grasping, and being also expanded centrally to cover and hide from view the neck or mouth of the bottle, and also to guard against accidental contact of the hands of the operator with the neck of the bottle, which is apt to have blacking adhere to it, which, were it not for this protecting flange, would be liable to soil the fingers of the person using the blacking.

I prefer to make the lower part of the plug tapering, as at A'.

a is a groove formed in the plug immediately below the flange a'. B is an annulus or ring formed of vulcanized rubber, of such size that it shall be held firmly in the groove by reason of its contractile strength, and shall also be of such external diameter as to fit tightly the neck of the bottle. C C' is the sponge-supporting shank, formed preferably of a single wire, one end of which is bent into a loop, C', to receive the sponge D. The upper end of the shank C is inserted firmly in the lower end of the wooden plug, and by preference

I screw-thread that portion of the shank which enters the plug. But this screw-threading may not be essential, as the wire will be held firmly in place by friction, care being taken that it shall be of such size as to fit tightly in the hole which is formed for its reception in the plug; or, when preferred, the shank may be made of smaller wire doubled upon itself at the center to form the loop C', and properly twisted, so that the two strands shall be seated in the plug, where they may be held by friction, or by glue or some other adhesive substance.

From an examination of the drawing it will be readily seen that this stopper is especially adapted for use in bottles which contain liquid blacking, or any other material which is formed in part of an adhesive substance, because, among other reasons, the elastic nature of the washer B renders the withdrawal of the stopper from the bottle comparatively easy, even though it shall have remained so long that the contents of the bottle have partially dried at that point where the washer is in contact with the neck of the bottle, from the fact that as a person pulls upon the wooden plug the annulus or ring will yield in such manner as to gradually withdraw it from the inside of the neck or throat of the bottle, commencing at the lower edge of said washer.

I am aware that a bottle-stopper has been used consisting of a central plug with a groove substantially like that shown at a, and having a rubber annulus or packing-ring seated in the groove; but I believe I am the first to employ a wooden plug in combination with a rubber ring and a metallic shank for supporting the sponge, and the use of a wooden plug in such combination possesses many advantages over a plug formed of any other material, because, among other things, it is especially adapted for receiving and holding the wire shank—either a screw-threaded shank, like that shown in the drawing, or a shank of such size as to be driven tightly into a hole formed for its reception in the plug, and thus held by friction, or a shank formed of twisted wire and held firmly in a hole in the plug, either by friction or partly by friction and partly by the use of an adhesive material.

I am aware that a tapering wooden plug

provided with a circumferential groove having a rubber annulus seated therein is shown in patent to Ames, January 21, 1862; but his rubber is in the form of a long thin sleeve, which
5 operates in a manner essentially different from mine, as follows: My washer projects so far from the side of the plug that, owing to the flexibility and elasticity of the rubber, an upward pull on the plug will draw up the inner
10 portion of the washer, and thus draw its lower outer edge away from the bottle by pulling it upon a line substantially at right angles to the axis of the plug. This feature of construction and operation adapts the stopper especially for use in that class of bottles which contain liquid blacking and similar sticky substances.
15

Having thus described my invention, what I claim is—

The herein-described stopper and sponge- 20 support for bottles containing adhesive substances, consisting of a wooden plug provided with a circumferential groove, in combination with widely-projecting but thin rubber annulus B, seated in the groove, and a metallic 25 shank, C, 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:

W. H. HECOX,
H. H. DOUBLEDAY.