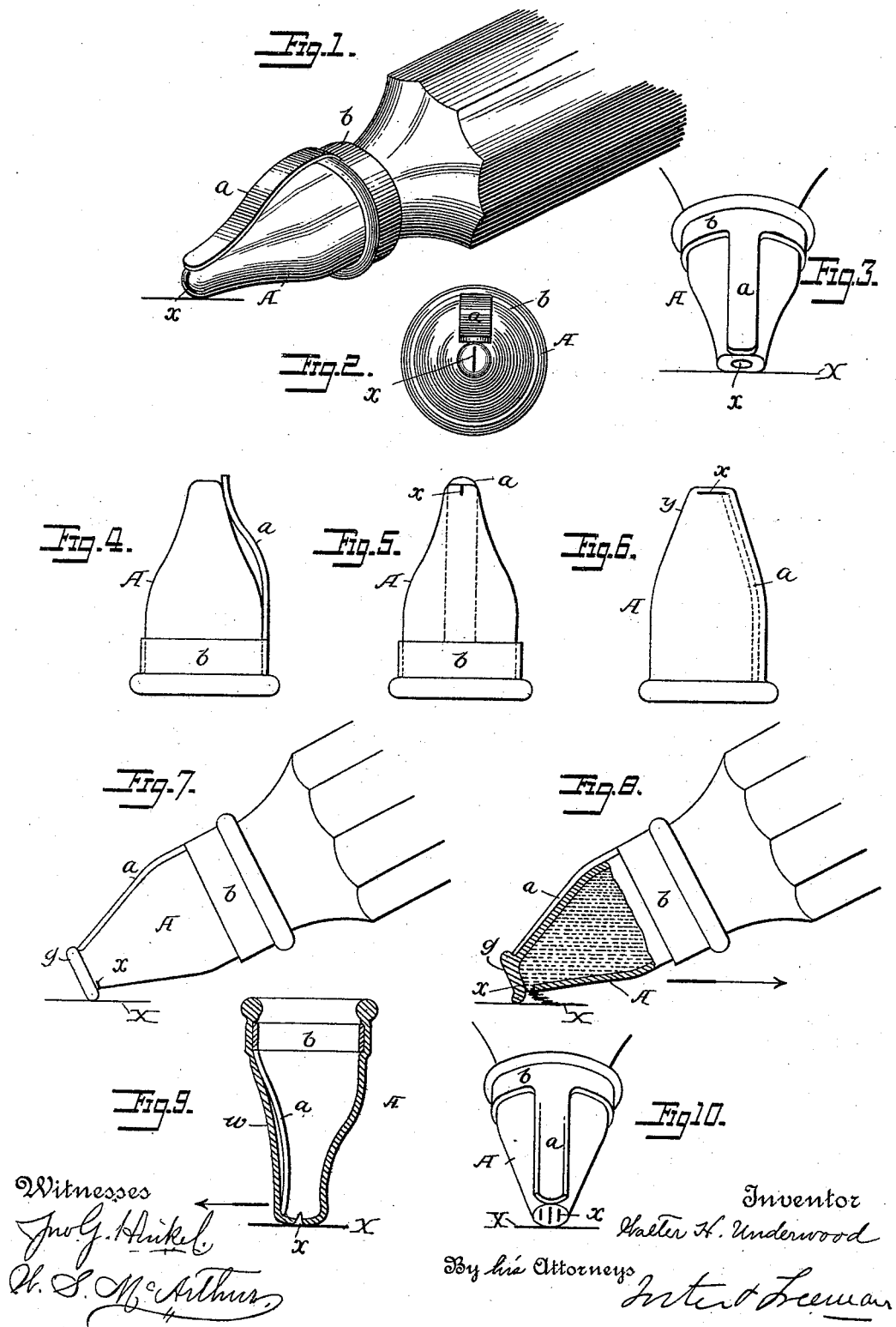


(No Model.)

W. H. UNDERWOOD.  
TIP FOR MUCILAGE BOTTLES.

No. 492,068.

Patented Feb. 21, 1893.



# UNITED STATES PATENT OFFICE.

WALTER H. UNDERWOOD, OF YONKERS, NEW YORK.

## TIP FOR MUCILAGE-BOTTLES.

SPECIFICATION forming part of Letters Patent No. 492,068, dated February 21, 1893.

Application filed February 1, 1890. Serial No. 338,865. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER H. UNDERWOOD, a citizen of the United States, residing in the city of Yonkers, county of Westchester, and State of New York, have invented certain new and useful Improvements in Tips for Mucilage-Bottles, of which the following is a specification.

In that class of tips that are used for sealing bottles of mucilage and other materials which are perforated to permit the limited passage of portions of the contents when the tip is pressed upon the surface to be coated, the perforations have sometimes been obstructed by the hardening of the solution or material upon the outside of the tip, or by the thickening of the solution interfering with its ready passage through the perforations, or from the failure of the perforations to be properly distended by pressure upon the surface to be coated. In order to obviate these defects I combine with the perforated tip a bearing of such a character and so arranged that the pressure by the tip upon the surface to be coated will compress a part of the tip in such manner as to distend the opening so as to permit a free passage of the contents of the bottle.

In the accompanying drawings: Figure 1 is a perspective view illustrating a mucilage-bottle and tip with my improvement. Figs. 2 and 3 are end views illustrating the action of the bearing in distending the opening of the tip shown in Fig. 1. Figs. 4 and 5 are side views illustrating the tip and bearing having the perforation arranged substantially as in Fig. 1. Fig. 6 is a side view of the tip showing the perforation differently arranged. Fig. 7 is an exterior view of the tip illustrating a modification. Fig. 8 is a sectional view of Fig. 7. Figs. 9 and 10 are views illustrating another modification.

The tip A, may be constructed as shown in the Letters Patent, heretofore granted to me Nos. 378,742, Feb. 28, 1888; 421,362, Feb. 11, 1880, or it may be of any suitable construction with one or more slits or perforations of any desirable form, or marked to be perforated as set forth in my Letters Patent No. 378,743, Feb. 28, 1888. In any case, however, the lips of the perforations are together when

the tip is in its normal condition, thereby sealing the bottle, but said lips may be separated to open the perforations and permit the discharge of the contents of the bottle.

In combination with a tip of the character described, I make use of a bearing of such form and so arranged either within or outside of the tip that it will hold practically immovable that portion of the tip in immediate contact therewith, while the remaining portion between the bearing and the surface to be coated may be depressed or distended in such manner as to insure the separation of the lips of the perforation, permitting the discharge of the contents. Thus, in Fig. 1 the bearing is in the form of an arm *a*, secured to a collar *b*, encircling the end of the bottle B, but it may be secured to a band encircling or clasp- ing the body of the tip as shown in Figs. 4 and 5, or it may be embedded into the material constituting the tip, as shown in dotted lines Fig. 6. In the construction shown in Figs. 1 to 5 the bearing or support *a*, extends from the base at one side toward the end of the tip, the bearing being in the form of an arm which is flat transversely and the perforation *x*, is in the form of a slit which is in the end of the tip and at right angles to the face of the bearing *a*.

Looking at the end of the tip when the latter is applied to a surface X, to be coated without pressure, the parts occupy the position illustrated in Fig. 2, but when pressure is applied by the bearing against the tip to compress the latter between the bearing and the surface X, the perforation is distended as shown in Fig. 3, so as to effectually break any coating of material which may have hardened upon the tip and afford a passage for the contents from the bottle.

In the construction shown in Fig. 6, where the slit is transverse to the body of the tip and near the end, the application of the side face *y*, of the tip to the surface and pressure compressing the tip between the surface and the bearing *a*, shown in dotted lines, will distend the perforation.

In the construction shown in Figs. 7 and 8, the end of the bearing *a*, abuts against a shoulder *g*, extending around the tip at the end,

while the perforation is in the form of a slit *a*, at the side opposite the bearing and nearly at right angles to the inner bearing face.

When the tip is applied to the surface X, and drawn in the direction of the arrow, the bearing *a*, prevents that portion in contact therewith from yielding while the shoulder *g*, dragging upon the surface carries the outer lip of the opening away from the inner lip, permitting the passage of the contents. A like result ensues in the construction shown in Fig. 9, where the bearing is within the tip and prevents the yielding of one side *w*, so as to open the terminal slit or perforation when the end of the tip is dragged upon the surface in the direction of the arrow.

In Fig. 10 the bearing is shown as curved in crosssection while the tip is truncated with a number of perforations in the end.

In a separate application for Letters Patent, Serial No. 335,972, I have described a tip combined with a brace across the end of which the end of the tip is bent to separate the lips of a side opening, which particular construction is not herein claimed.

Without limiting myself to the precise construction and arrangement of parts shown and described, I claim—

1. A hollow tip having a bearing or support

extending longitudinally from the base to a point adjacent to the end of the tip and an aperture adjacent thereto arranged between the point of pressure on the object and the support to be opened by pressure upon the tip opposite such support.

2. The combination of a tip having a perforation the lips of which are normally closed together, and a support at one side of the tip between which and the surface to be coated the tip may be compressed by application to said surface to open the perforation, substantially as described.

3. The combination of a perforated tip and an independent arm extending from the base to a point adjacent to the perforation and constituting a support or bearing, substantially as set forth.

4. A perforated tip provided with an independent bearing against which the tip is pressed to open the perforation, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WALTER H. UNDERWOOD.

Witnesses:

WALKER PRONS,

EDW. K. ANDERTON.