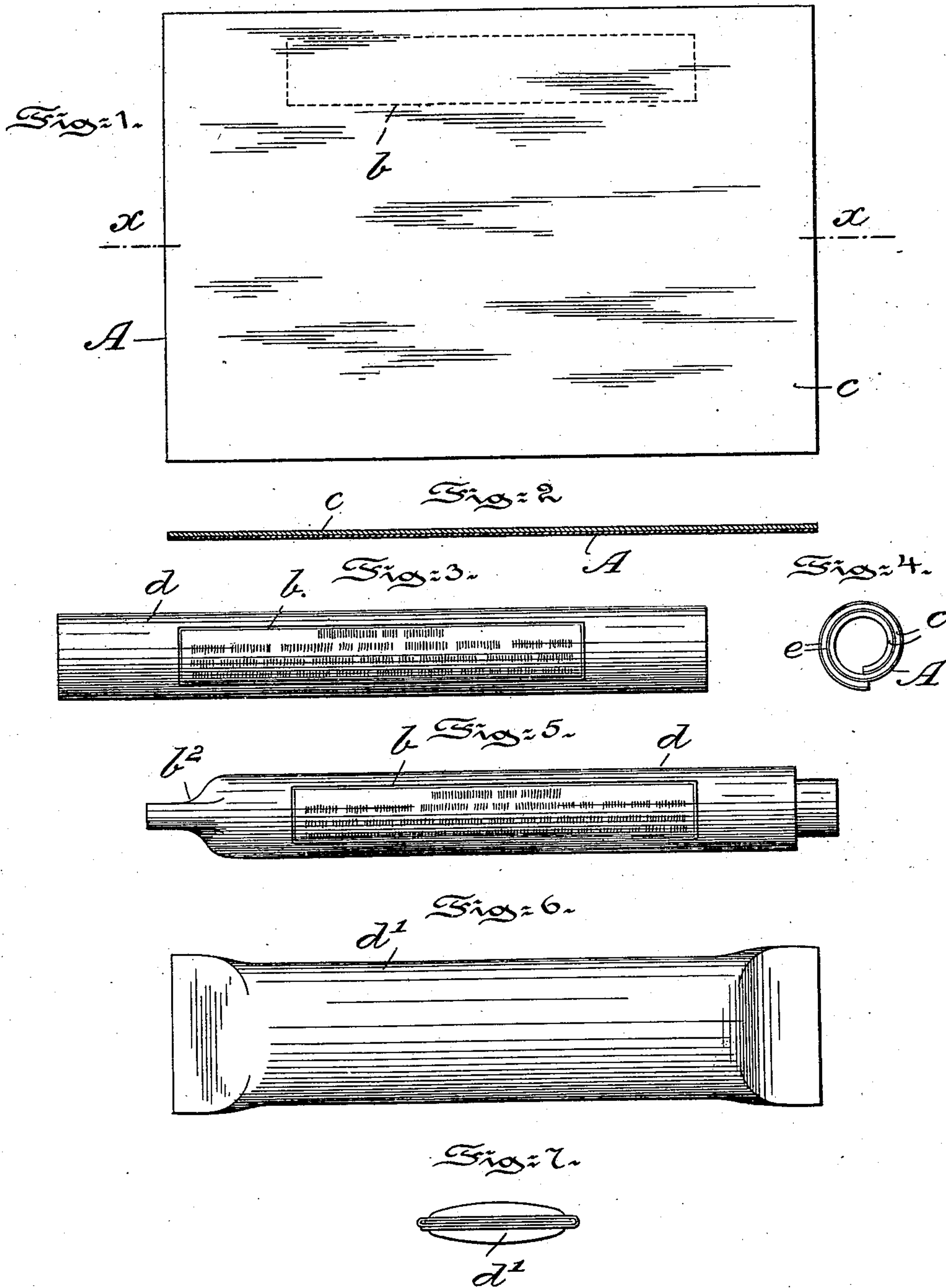


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G. H. PAINE.  
MANUFACTURE OF CAPSULE TUBES.  
APPLICATION FILED AUG. 22, 1900.

NO MODEL.



Witnesses:  
Wilhelm Vogt  
Thomas M. Smith,

Inventor:  
Geo. H. Paine,  
by J. Walter Douglas,  
Attorney

# UNITED STATES PATENT OFFICE.

GEORGE H. PAINE, OF GERMANTOWN, PENNSYLVANIA, ASSIGNOR TO  
BENJAMIN T. BABBITT HYDE, OF NEW YORK, N. Y.

## MANUFACTURE OF CAPSULE-TUBES.

SPECIFICATION forming part of Letters Patent No. 722,881, dated March 17, 1903.

Application filed August 22, 1900. Serial No. 27,653. (No specimens.)

*To all whom it may concern:*

Be it known that I, GEORGE H. PAINE, a citizen of the United States, residing at the corner of Morris street and West School Lane, Germantown, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in the Manufacture of Capsule-Tubes, of which the following is a specification.

My invention has relation to the manufacture of capsule-like structures, vials, bottles, or the like adapted to safely hold liquid and volatile substances or preparations and also to the method of making such structures for said purposes, among others.

The principal object of my invention is to provide a capsule-tube consisting of a sheet of tough material, such as paper, having one face coated with a gelatinous substance and the other face free to receive the imprint of advertising matter, said sheet having one edge curled inwardly into several convolutions to form a tube, the gelatinous face forming the inner layer or wall of the tube, as well as a binder securing the several convolutions together.

The nature and scope of my present invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, in which—

Figure 1 is a top or plan view of an oblong sheet of paper, parchment, linen, silk, or the like adapted to receive on one surface suitable matter, as directions with respect to the internal contents of the sheet when formed into a capsule-like structure or advertising matter with respect to the contents of said structure. Fig. 2 is a longitudinal section on the line  $x-x$  of Fig. 1, showing the applied coating of gelatin or other substance. Fig. 3 is a top or plan view of the formed tube, containing on the exterior surface lines to indicate directions or advertising matter as to the internal contents of the tube. Fig. 4 is an end elevational view of Fig. 3. Fig. 5 is a plan view of a modified form of my invention, showing one end of the tube pinched together and the other end provided with a cork. Fig. 6 is a plan view of a further-modified form of my invention, showing the cap-

sule-like structure in the form of a bag with the respective ends pinched together, and thereby sealed; and Fig. 7 is an end view thereof.

Referring to the drawings, A represents a sheet of paper, parchment, linen, silk, or the like having impressed thereon in a certain portion lines  $b$  to represent printed matter.

$c$  is a coating of gelatinous or similar substance or material applied in any suitable manner to the inner surface and so as to permeate the pores or body of the paper, parchment, or other flexible material constituting the binder or strengthening means of the structure to be formed, so as to assume a capsule-like structure, bottle, or vial.

In Fig. 3 the sheet is formed into a tube  $d$ , with the line-panel  $b$  to represent printed matter, as directions with respect to the internal contents of the vial or tube or as an advertising means for the tube  $d$ . It may be here remarked that the tube may consist of two or more convolutions  $e$ , as illustrated in Fig. 4, to constitute the vial or bottle.

In Fig. 5 the vial or bottle, with its panel  $b$ , is provided with a recessed end  $b^2$  and at the opposite end with an opening adapted to receive a cork or similar device as a sealing means therefor. The internal surface of the vial or bottle so formed is coated with a gelatinous or similar substance to render the vial water and air proof and at the same time to give rigidity or firmness to the structure, so that it may be shipped or handled without collapsing, breaking, or wrinkling.

In Figs. 6 and 7 a further modification of my invention is illustrated in which the packet in this instance consists of an oblong bag or pouch  $d'$ , having the respective ends recessed and pinched together to seal the packet.

The advantage of providing a packet, vial, or bottle in the manner described in particular is that any required quantity of the internal contents of the packet may be used without necessarily disturbing the remaining portions, and to that end it is possible to provide along the length of the packet, vial, or bottle graduations to indicate the exact quantity contained within the vial and which may be removed according to such graduations.



Moreover, such a packet can be carried in the pocket and is not subject to the same extent to breakage as a bottle or vial is so carried.

5 Having thus described the nature and objects of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A capsule-tube, consisting of a blank composed of tough and flexible parchment-  
10 like material formed by a series of convolutions into a tube having one surface coated with an adhesive constituting the interior wall of said tube, and having either end flattened and secured by such adhesive to form  
15 a closure for said tube.

2. A capsule-tube, consisting of a blank composed of gelatinized parchment-like ma-

terial formed by a series of convolutions into a tube, whereof the gelatinized surface of the material forms the inner surface of the tube 20 and a binder for securing the convolutions together, and whereof the outer surface of the formed tube is smooth to receive an imprint or directions and either end flattened and secured by the adhesive to form a clo- 25 sure for said tube.

In testimony whereof I have hereunto set my signature in the presence of two subscribing witnesses.

GEORGE H. PAINE.

Witnesses:

J. WALTER DOUGLASS,  
THOMAS M. SMITH.