

T. T. McNISH.
CLOSING CONTAINING VESSELS.

(Application filed Jan. 2, 1902.)

(No Model.)

FIG. 1.

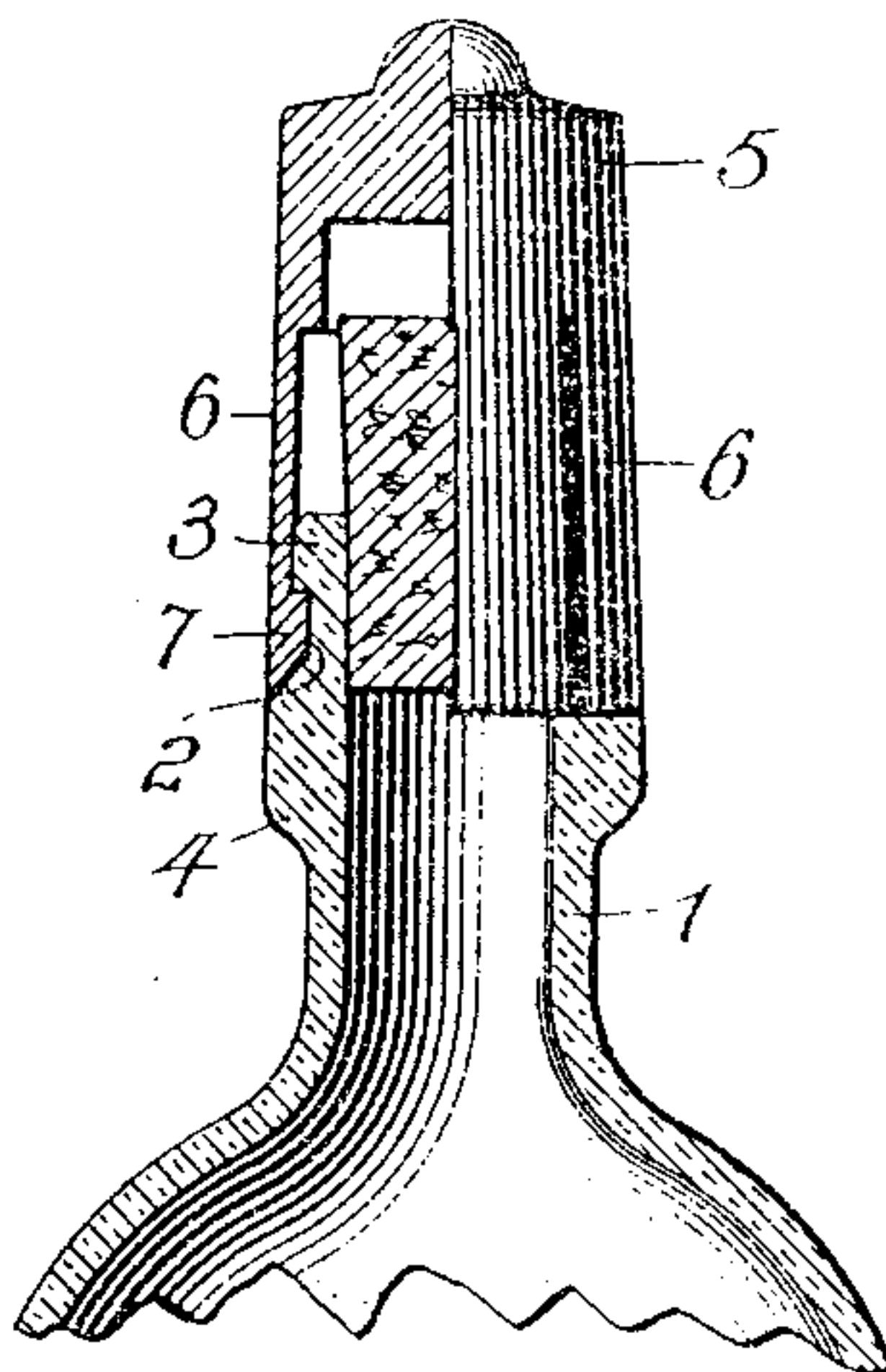


FIG. 3.

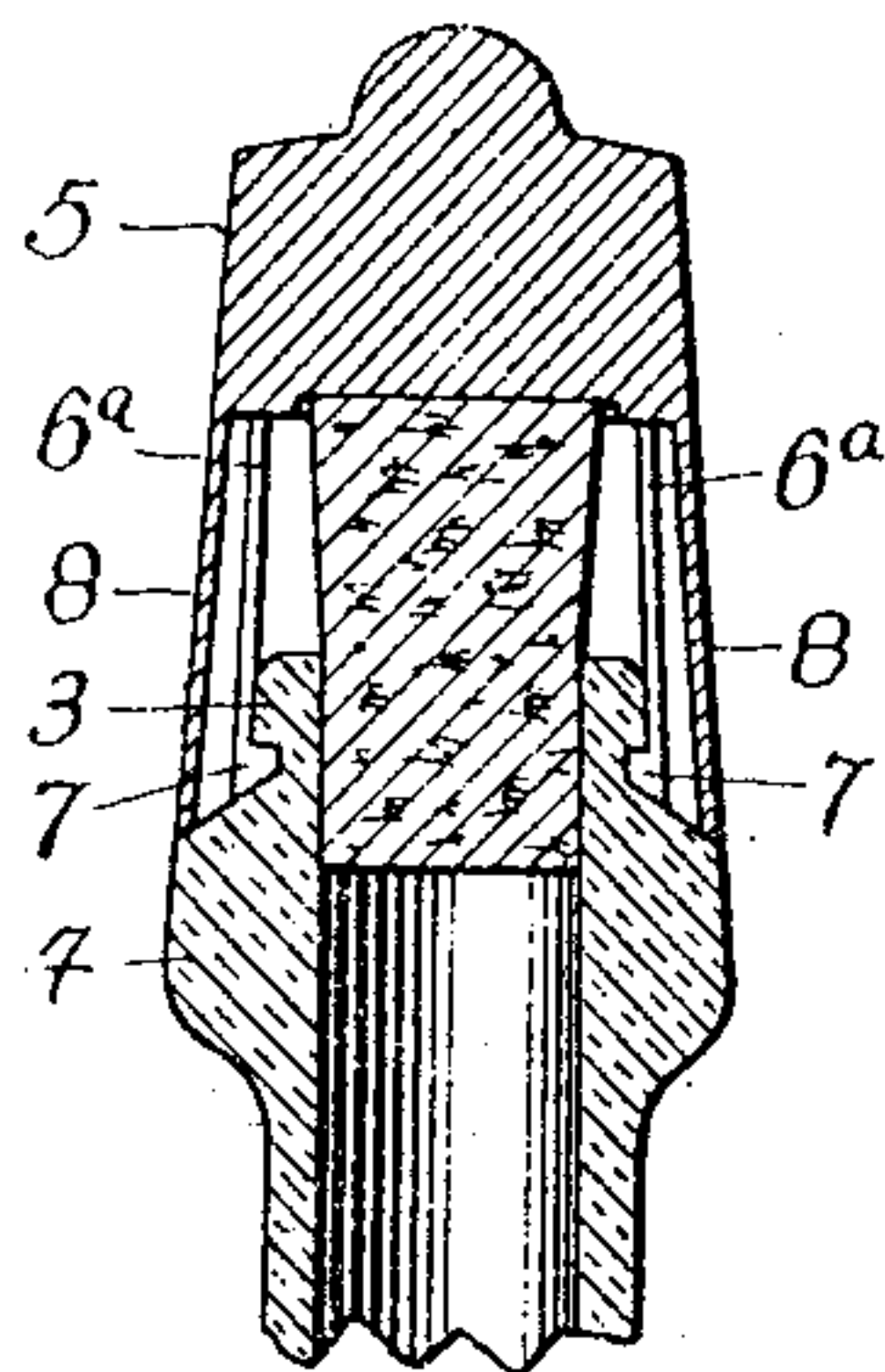


FIG. 4.

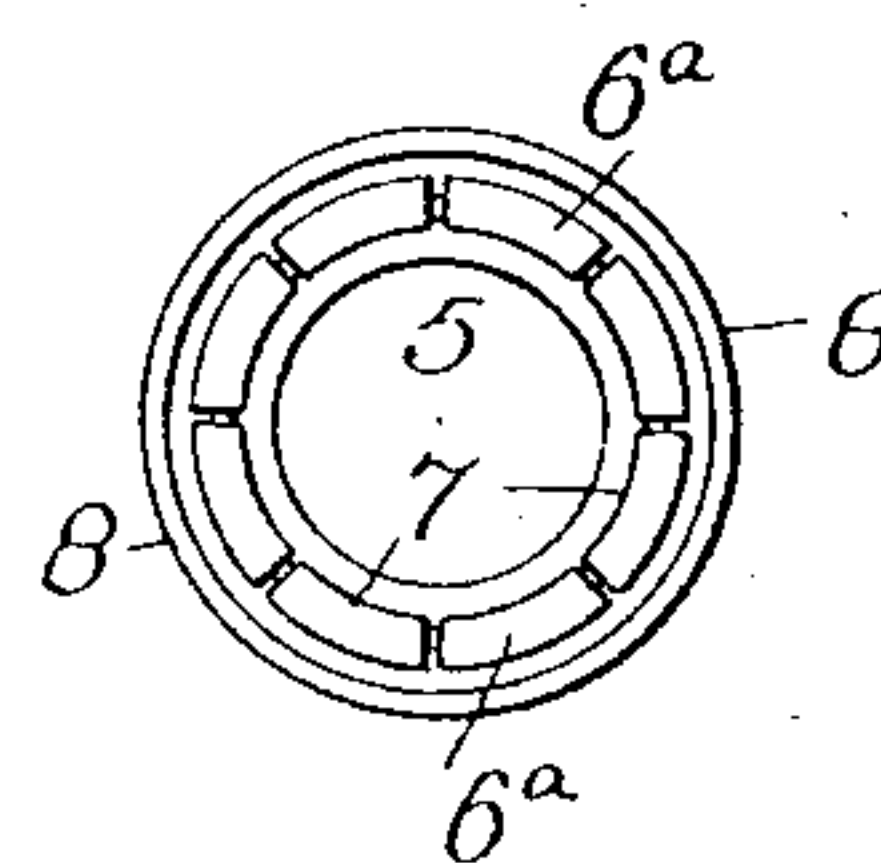


FIG. 2.

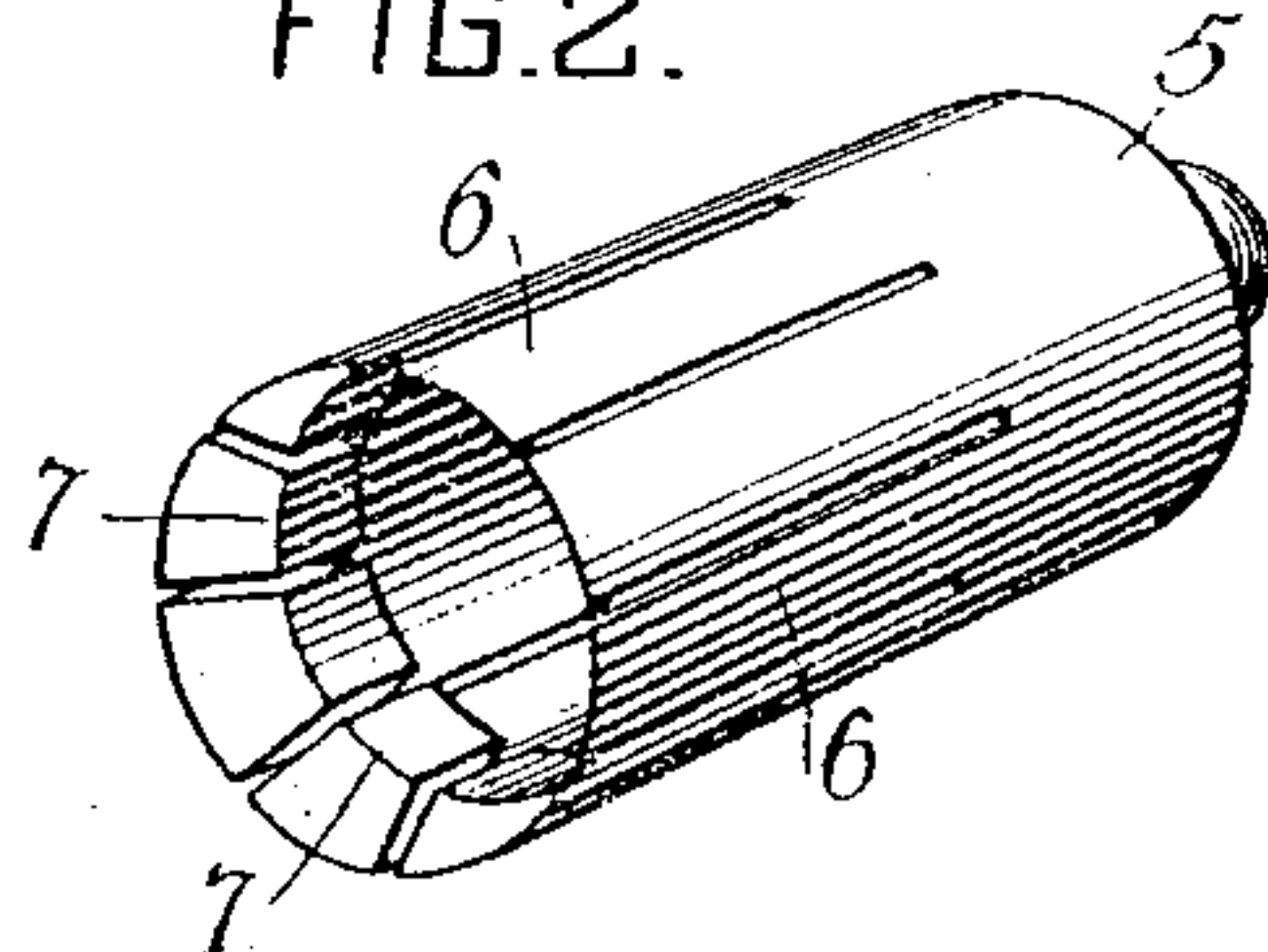


FIG. 5.

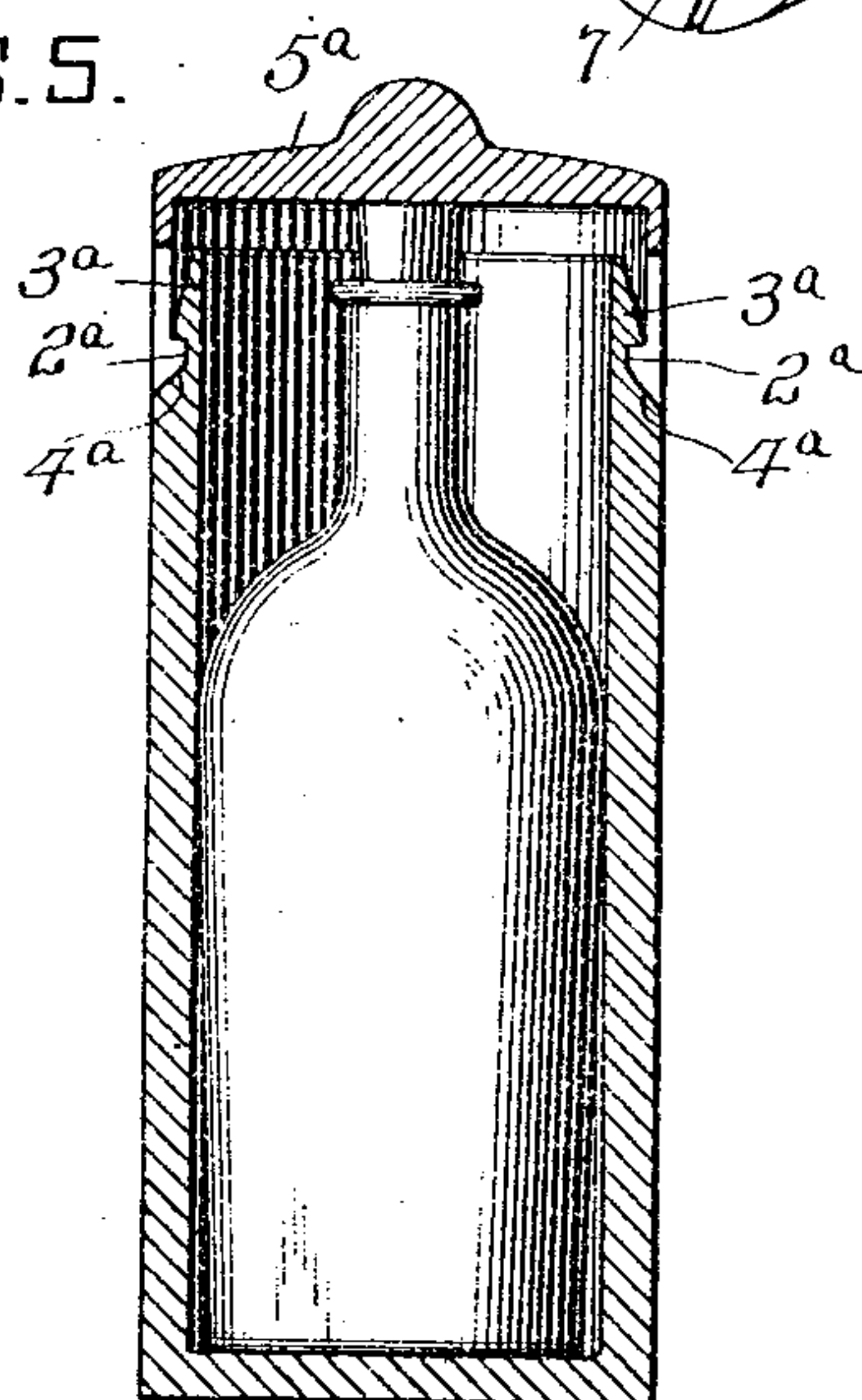
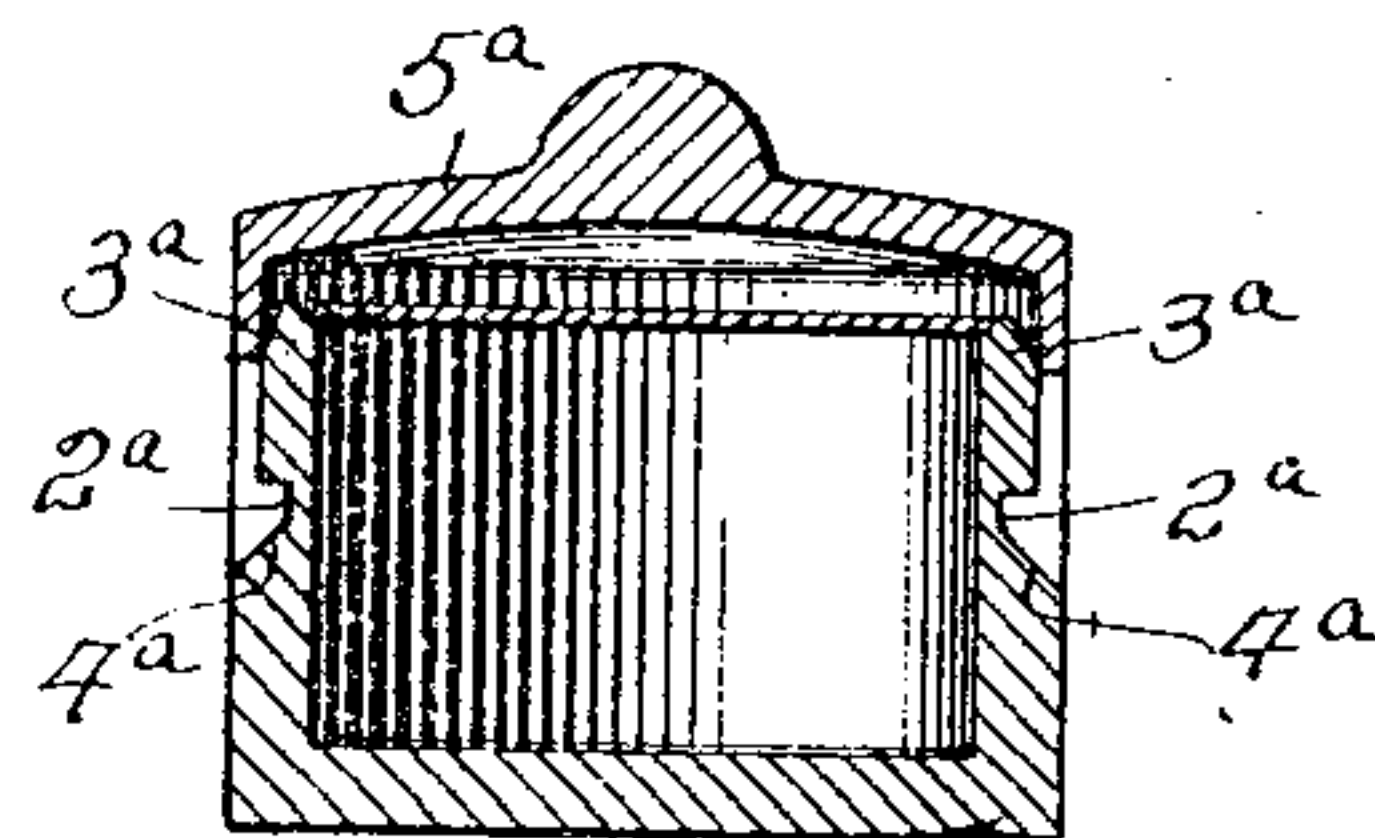


FIG. 6.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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CLOSING CONTAINING VESSELS.

SPECIFICATION forming part of Letters Patent No. 695,759, dated March 18, 1902.

Application filed January 2, 1902. Serial No. 88,237. (No model.)

To all whom it may concern:

Be it known that I, THOMAS T. McNISH, a citizen of the United States, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented or discovered certain new and useful Improvements in Closing Containing Vessels, of which the following is a specification.

The invention described herein relates to certain improvements in closing devices for containing vessels—such as bottles, boxes, &c.—and has for its object a closing cover or cap which cannot be removed from the containing vessel without such destruction or injury as will prevent a second use thereof.

The invention is hereinafter more fully described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a sectional elevation of a bottle having my improved closing-cap applied thereto. Fig. 2 is a perspective view of the cap. Fig. 3 is a sectional view illustrating a modification of my improvement. Fig. 4 is an end elevation of the cap shown in Fig. 3. Fig. 5 is a sectional view of vessel for containing dry or solid articles, such as pills, powders, &c.; and Fig. 6 is a similar view of a box or case forming a jacket for a containing vessel requiring protection during transportation or storage.

In adapting my invention to the closure of bottles the neck 1 of the bottle is formed with a groove 2, in such proximity to the upper end of the neck as to form an engaging rib or shoulder 3, which is made of a diameter less than the portion 4 of the neck below the groove, so that said portion forms a protecting and supporting shoulder. The cap 5, which is preferably formed of wood, rubber, or other frangible material, has its wall formed in part by a series of fingers 6, preferably formed by longitudinally slitting the wall of the cap, as shown. The cap is made of an internal diameter equal to or a little greater than the external diameter of rib 3. The fingers 6 are provided with projections 7, which are adapted to pass below and hook under the rib 3, and thereby lock the cap on the neck. The fingers are given sufficient resiliency by extending the slits as to permit the projections to pass beyond the rib 3, provided a majority of the fingers are forced

outwardly at the same time. As the outer diameter of the cap is equal to and preferably slightly less than the external diameter of the portion 4 of the bottle-neck and as the projections are made of a height equal to the height of the groove 2 and are so located on the fingers that the ends of the latter will be held against the shoulder 4, an instrument cannot be inserted readily to spring the fingers outwardly. Hence access to the contents of the bottle can be had only by breaking the neck of the bottle or cap, which when made of frangible material can be split by a sharp blow on its outer end.

In the construction shown in Figs. 3 and 4 the cap is made with double side walls and the fingers 6^a are formed by slitting the internal wall, as shown, so that the outer wall or curtain 8 will prevent all access to the locking-fingers. The recess or pocket between the fingers and the curtain 8 is made wide enough to permit only such outward movement of the fingers as is necessary for the fingers to pass below the rib 3.

In addition to preventing access to the contents of the bottle my improvement is adapted to securing the cork in the bottle. This fastening function can be attained by so constructing the cap, as shown in Fig. 3, that the latter will when forced into locking engagement with the bottle-neck bear firmly on the cork or stopper.

In Figs. 5 and 6 the invention is shown as applied to the closure or sealing of vessels adapted to contain dry or solid substances. Such vessels may be formed of wood, rubber, or other material suitable for the purpose. The containing vessel is provided at its upper end with a groove 2^a, constructed as described in connection with the bottle to form an engaging shoulder 3, and the shoulder 4, forming the lower wall of the groove, is so constructed and proportioned as to protect the lower ends of the fingers on the cap or cover. The portion of the containing vessel above the shoulder 3 is slightly tapering, as shown, to facilitate the spreading out of the fingers when the cap or cover is being applied to the vessel. The cap or cover 5^a is constructed, except as regards shape and dimensions, as heretofore described. While the form of cap or cover illustrated in Figs. 1 and 2 is shown

as applied to the vessels illustrated, Figs. 5 and 6, it will be understood that the construction of cap or cover shown in Figs. 3 and 4 may be used in connection with such vessels.

5 It is preferred that the shoulder 4 and projections 7 should be beveled or inclined, as shown, so as to facilitate the spreading and breaking of the fingers 6 when the cap is driven down onto the vessel.

10 It will be readily understood by those skilled in the art that my improved cap or cover is readily applicable to a large variety of containing vessels and that the shape of the vessel, the purpose to which it is to be put, and
15 the material of which it is formed are immaterial.

I claim herein as my invention—

1. As a means for closing containing vessels, such as bottles, boxes, &c., a cap formed
20 of frangible material and having its side wall slit longitudinally to form a series of resilient fingers closely adjacent to each other and provided with inwardly-projecting shoulders adjacent to their lower ends, substantially as
25 set forth.

2. As a means for closing containing vessels, such as bottles, boxes, &c., a cap formed of frangible material and having its side walls longitudinally slit to form a series of resilient fingers provided with inwardly-projecting
30 shoulders adjacent to their lower ends in combination with a curtain or inclosed wall independent of and outside of the fingers and integral with the cap, substantially as set forth.

3. The combination of a containing vessel, 35 such as a bottle, box, &c., provided with a locking-rib with a cap formed of frangible material having its side wall longitudinally slit to form a series of resilient fingers closely
40 adjacent to each other and provided with inwardly-projecting shoulders adjacent to their lower ends, and a curtain or inclosed wall outside of the fingers and integral with the cap, substantially as set forth.

In testimony whereof I have hereunto set
45 my hand.

THOMAS T. MCNISH.

Witnesses:

F. E. GAITHER,

DARWIN S. WOLCOTT.