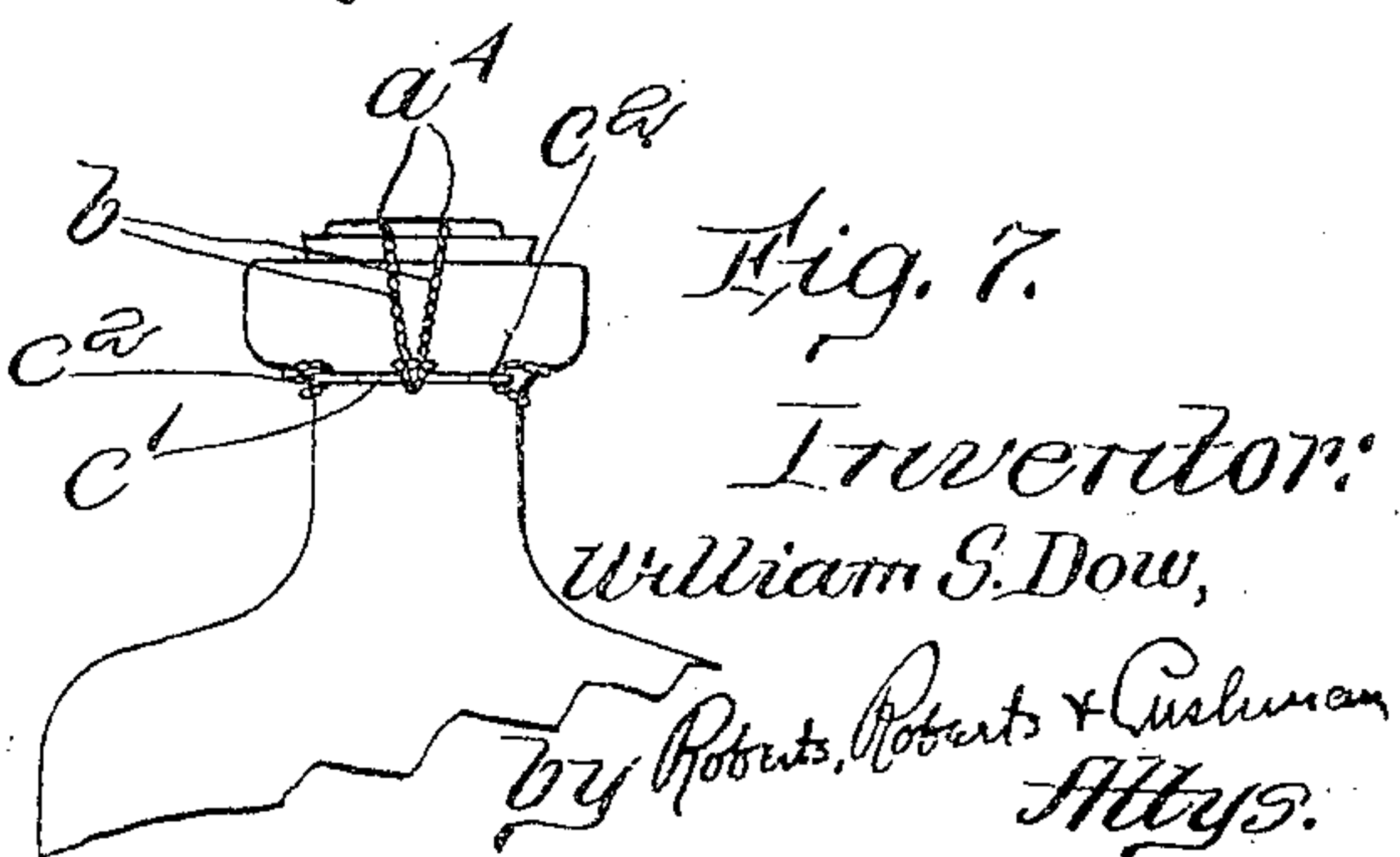
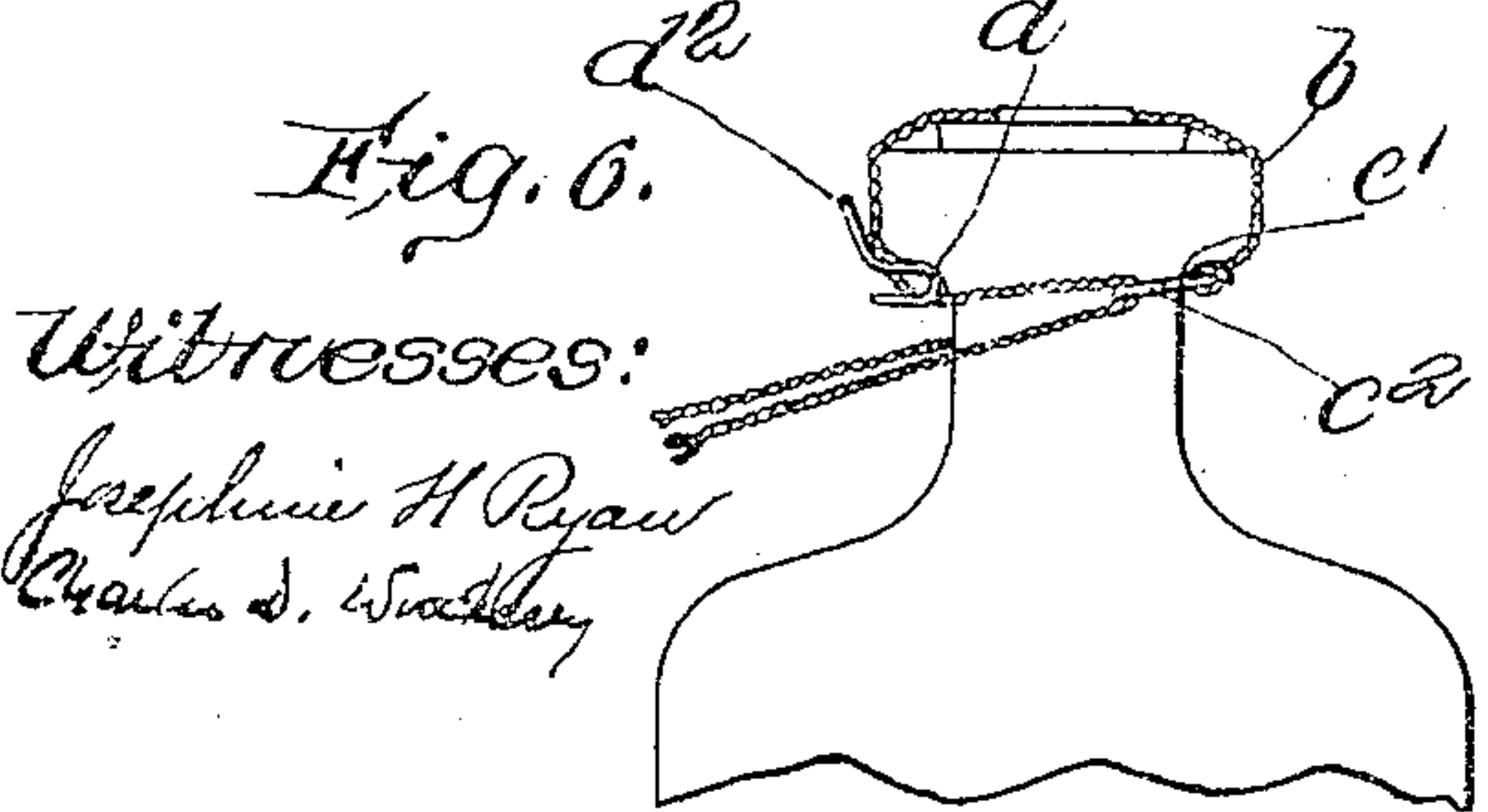
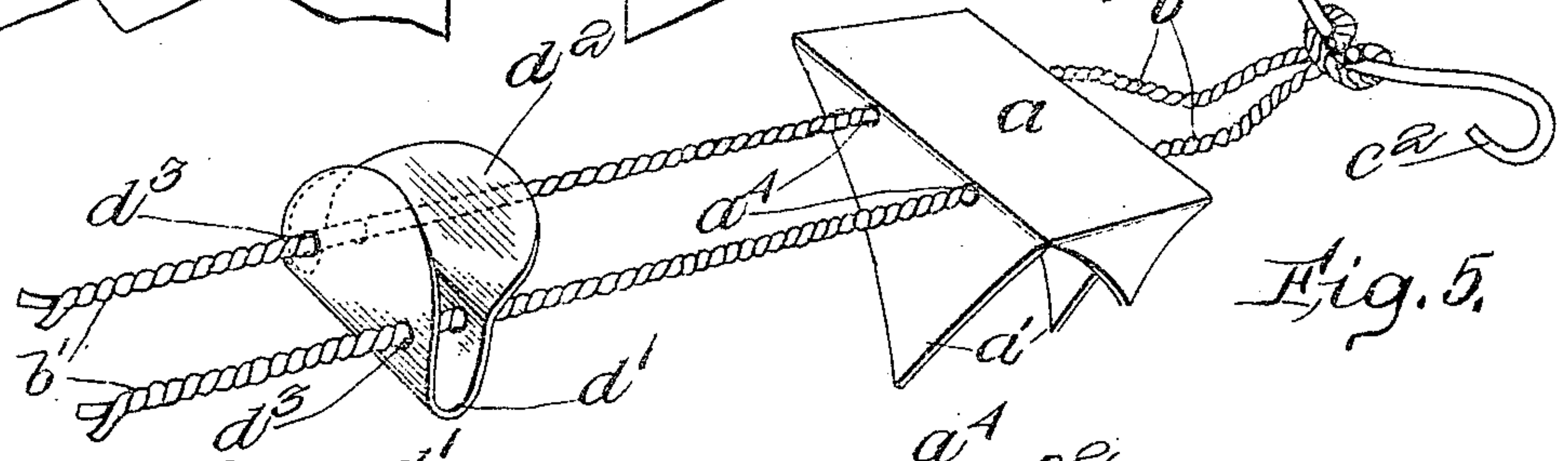
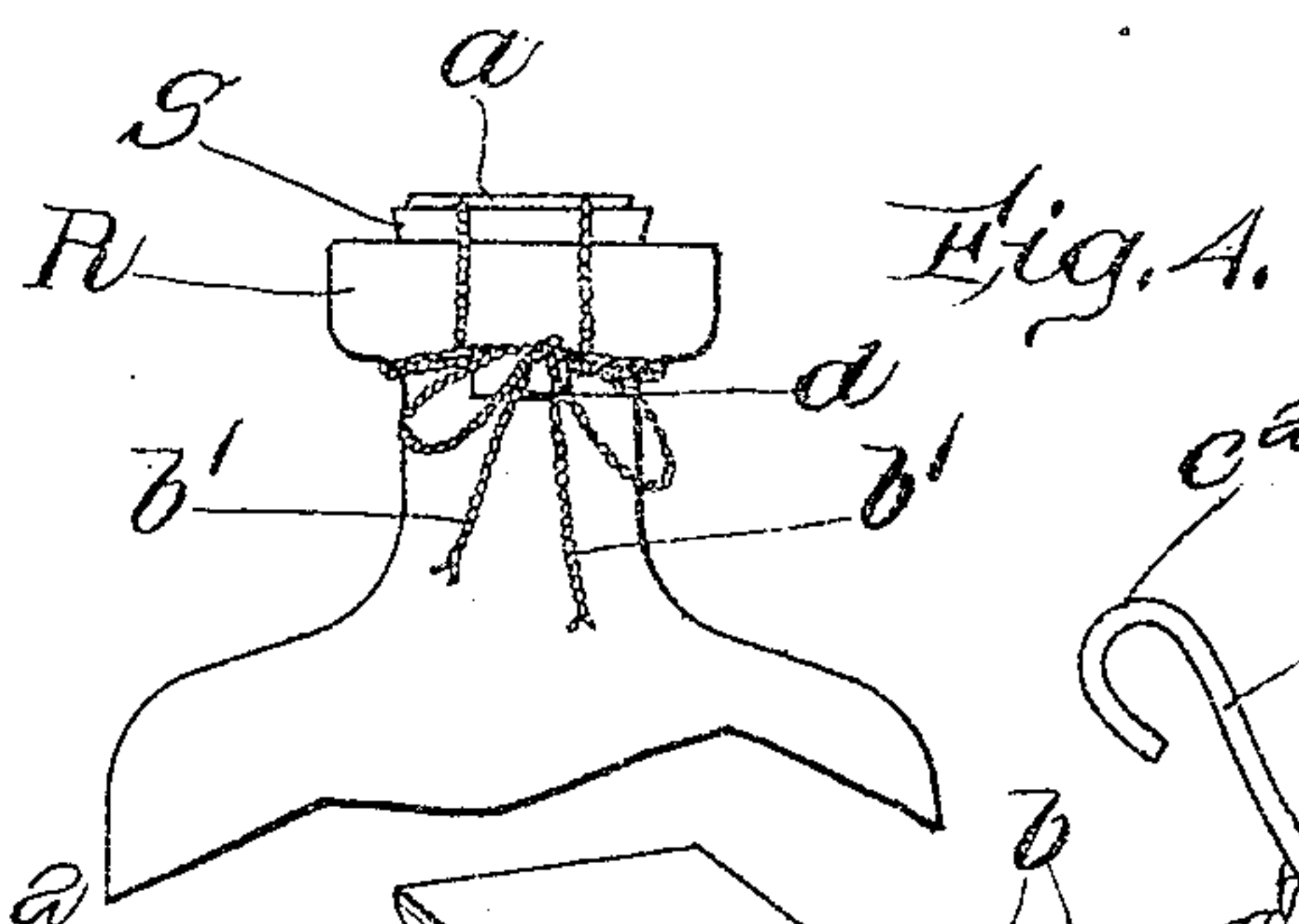
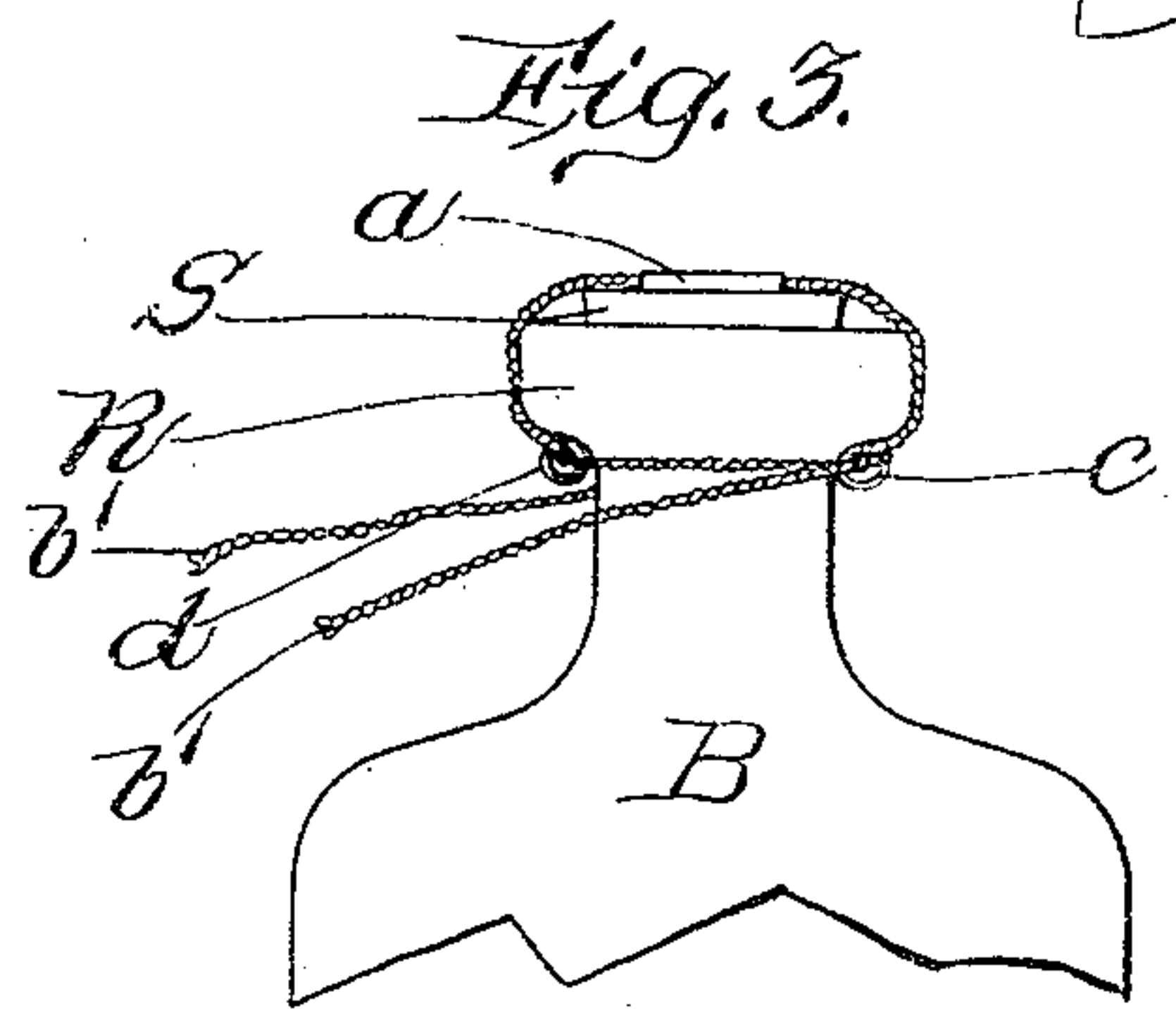
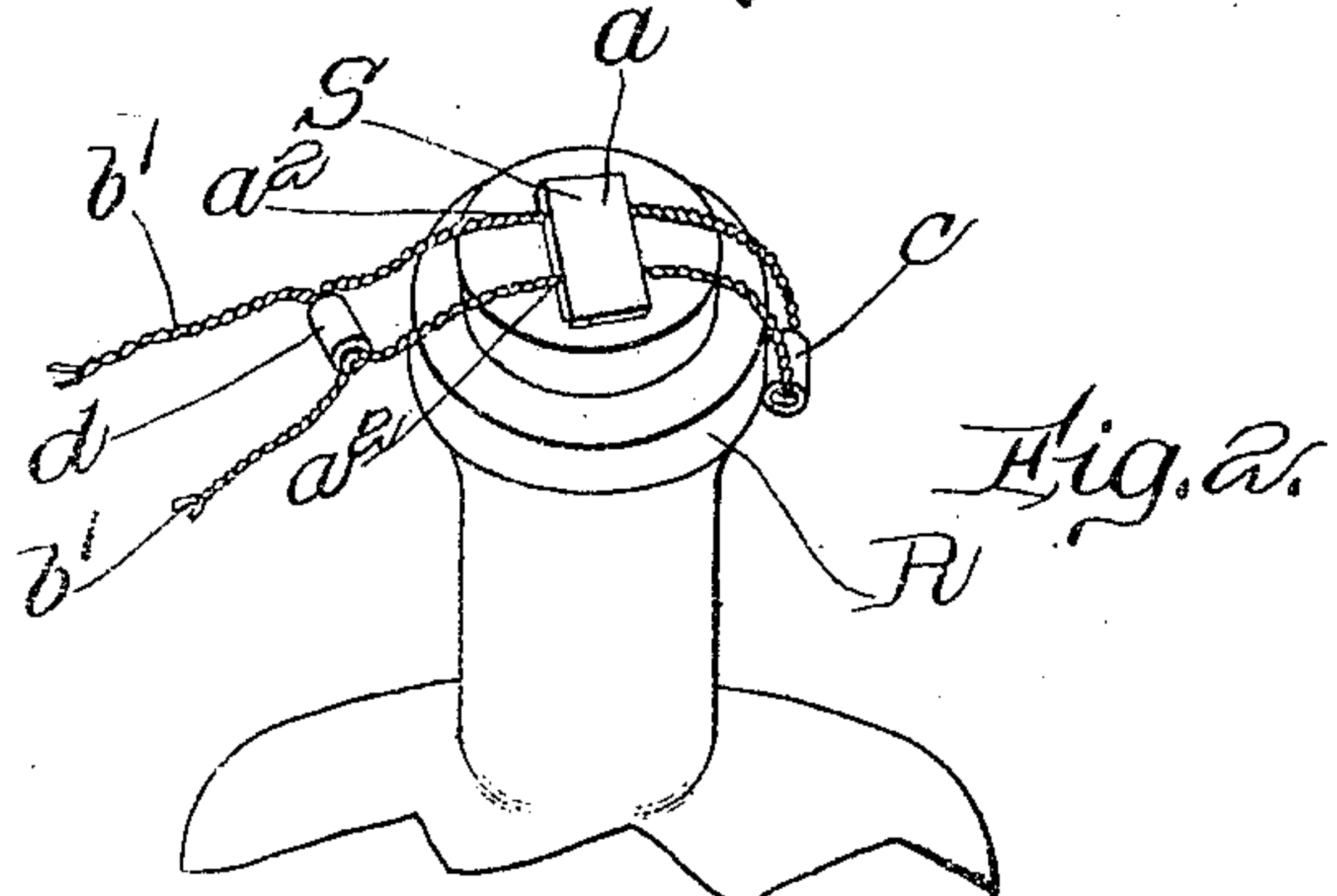
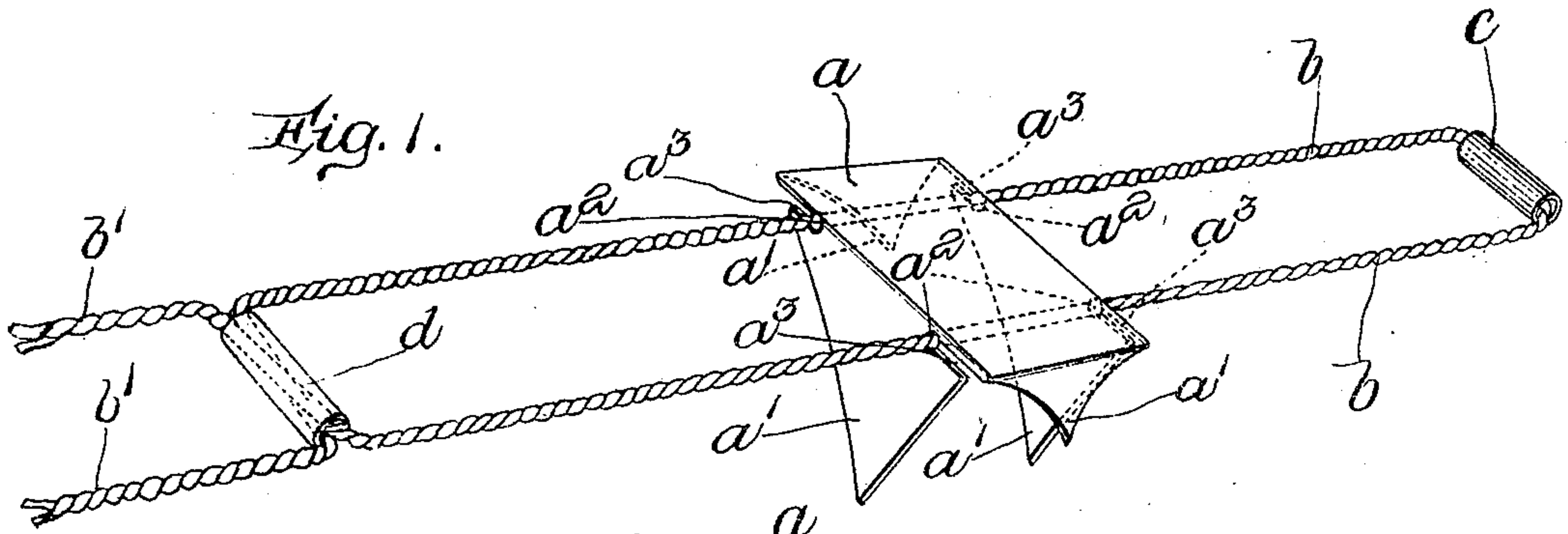


W. S. DOW.
STOPPER TIE.

APPLICATION FILED NOV. 22, 1909.

954,503.

Patented Apr. 12, 1910.



Witnesses:
Josephine H. Ryan
Charles D. Swadlow

Inventor:
William S. Dow,
by Roberts, Roberts & Cushman
Attys.

UNITED STATES PATENT OFFICE.

WILLIAM S. DOW, OF CAMBRIDGE, MASSACHUSETTS.

STOPPER-TIE.

954,503.

Specification of Letters Patent.

Patented Apr. 12, 1910.

Application filed November 22, 1909. Serial No. 529,192.

To all whom it may concern:

Be it known that I, WILLIAM S. DOW, a citizen of the United States, and resident of Cambridge, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Stopper-Ties, of which the following is a specification.

This invention relates to ties for bottle stoppers and its object is to provide a stopper-tie which may be readily attached to a bottle of any size and will hold the stopper securely against the possibility of its dislodgment; which may be as readily removed from the bottle and will not be destroyed or injured in the removal so that it may be used again; and which is so convenient to use and cheap to make that it will commend itself for general use by shopkeepers in putting up bottled goods for delivery, by travelers who have occasion to carry bottled goods in their luggage, and under other circumstances in which it is desirable to fasten a bottle stopper to the bottle.

In the accompanying drawings which illustrate certain embodiments of the invention,—Figure 1 is a perspective view of a stopper-tie embodying my invention in its preferred form; Fig. 2 is a perspective view of the stopper-tie shown in Fig. 1 applied to a bottle stopper and before it is secured to the bottle neck; Fig. 3 is a side view of the tie shown in Fig. 1 in its position secured to the bottle save only that the free ends of the strands remain to be tied; Fig. 4 is an end view of the stopper-tie shown in Fig. 1 in its final position secured to the bottle; Fig. 5 is a perspective view of a modified form of stopper-tie embodying my invention; Fig. 6 is a side view of the stopper-tie shown in Fig. 5 applied to the stopper and secured to the bottle neck excepting only for the tying of the free ends of the strands; and Fig. 7 is an end view of the stopper-tie shown in Fig. 5 in its final position applied to a stopper and bottle.

Referring first to the stopper-tie shown in Figs. 1 to 4 inclusive, the tie comprises two strands of cord, string, or other suitable material, united by a plate *a* which serves as a bond connecting the strands. The strands extending from one side of the bond *a* are preferably united to form a loop *b* and are provided with means, such as a head, to engage the strands *b'*, *b'* which extend from the other side of the bond *a* when

the latter strands are passed around the neck of the bottle as presently to be described. In my preferred form of structure the head carried by the strands *b*, is in the form of an eyelet or ring *c* through which the loop passes and in which it slides. The bond *a* is also preferably made so that the strands will slide therein, and in the preferred form consists of the plate *a* having the downwardly turned prongs *a'*. Two opposite prongs *a'* are made with eyes *a²* having open ended slots *a³* extending to the edges of the prongs. These slots *a³* are sufficiently wide to allow the strands to be passed laterally therethrough into the eyes *a²*, but at the same time will prevent the accidental dislodgment of the strands from the eyes. The eyes *a²* are made large enough so that the strands will slide freely therethrough, and are located close to the under side of the plate *a* so that when the prongs *a'* are pressed into the cork as hereinafter described, the eyes will not be buried. On the side of the bond opposite loop *b* the strands *b'*, *b'* extend, terminating in open free ends as shown. The strands *b'* are provided with a slide *d* which, in the form shown in Figs. 1 to 4 inclusive, consists of a ring or eyelet through which the strands *b'* are oppositely threaded as best shown in Fig. 1.

In applying the tie, the prongs *a'* of the bond are forced into the top end of the cork or stopper *S* nearly but not quite to their bases so that the eyes *a²* will remain above the surface of the cork, thus permitting the strands to slide freely therethrough. The tie is now in the position shown in Fig. 2. The head *c* is then placed under the rim or flange *R* of the neck of the bottle *B*, and the strands drawn through the eyes of the bond until they are taut between the head *c* and the bond *a*. The slide *d* is then pressed under the rim *R* opposite the head *c* and the strands *b'*, *b'* drawn through the slide *d* until they are taut between the slide *d* and the bond *a*. The free ends of the strands *b'*, *b'* are then passed around the neck of the bottle in opposite directions, and above the head *c*, thus lodging between the head *c* and the rim *R* and holding the head *c*, and the strands leading therefrom over the stopper, in position. The strands *b'*, *b'* are then brought forward again as shown in Fig. 3. It remains now merely to tie the free ends *b'*, *b'* to complete the fastening of the tie. The strands *b'*, *b'* are preferably tied above

the slide d and between it and the rim R of the bottle. Fig. 4 is a front view of the tie when finally secured in operative position on the bottle. It is obvious that the strands b' , b' may be made of any desired length and may be wrapped around the bottle neck in the manner described as many times as desired. I believe, however, that it will ordinarily be sufficient to pass each strand once around the bottle as described.

Referring now to the form of tie shown in Figs. 5, 6 and 7, the strands b' , b' are arranged with reference to the bond the same as already described. The bond consists of a plate a and prongs a' like the similar parts shown in Figs. 1 to 4 inclusive, save that instead of making the eyes a^2 for the strands with a slot a^3 to facilitate assembling the device, the eyes are in the form of simple perforations a^4 through which the strands are threaded and in which the strands slide. The head also in this form of the device instead of being a slide such as the eyelet c , is a cross head c' to the center of which the end of loop b is fastened. The cross head c' has two laterally extending arms, slightly curved as shown, to conform with the curve of the bottle neck. Each arm terminates in a hook c^2 for engaging the strands b' , b' which extend from the other side of the bond. The strands b' , b' are provided with a slide d' which consists of a metal plate bent into a fold, as shown, of suitable shape to engage the under side of the rim R of the bottle. Extending from the upper edge of this fold is the ear d^2 which fits against the periphery of the flange R. Perforations are made through the opposite walls of the fold d' , as shown at d^3 , and the strands b' , b' slide in these perforations. The bond in this form of tie is applied to the end of the stopper preparatory to securing the tie in the manner already described. The head c' is then placed against the neck of the bottle below the rim R as shown in Fig. 7, and the slide d' placed in a similar position on the opposite side of the neck, after which the free ends b' of the strands instead of being passed completely around the bottle neck to engage the head in the manner shown in Figs. 3 and 4, are passed part way around the bottle neck over the hooks c^2 and thence back to the front again as shown in Fig. 6, after which the free ends b' are tied, preferably with the strands within the fold d' of the slide.

I claim:

1. A stopper-tie comprising two strands, a bond connecting said strands adapted to engage the top of a stopper, the strands extending from one side of the bond being

united to form a loop, and the strands which extend from the other side of the bond terminating in free ends, and a head upon said loop adapted to engage the free-end strands when the latter are passed around the neck of the bottle.

2. A stopper-tie comprising two strands, a bond connecting said strands and mounted to slide thereon adapted to engage the top of a stopper, the strands extending from one side of the bond being in the form of a closed loop, and the strands which extend from the other side of the bond terminating in free ends, and a head mounted to slide upon said loop and adapted to engage the free-end strands when the latter are passed around the neck of the bottle.

3. A stopper-tie comprising two strands, a bond connecting said strands and mounted to slide thereon adapted to engage the top of a stopper, a head on the strands extending from one side of the bond, adapted to engage the strands which extend from the other side of the bond under the flange of the bottle neck, and a slide mounted on the last named strands adapted to engage the flange of the bottle neck opposite the said head.

4. A stopper-tie comprising two strands, a bond connecting said strands and mounted to slide thereon adapted to engage the top of a stopper, a head on the strands extending from one side of the bond, adapted to engage the strands which extend from the other side of the bond under the flange of the bottle neck, and an eyelet or ring through which the ends of the last named strands are oppositely threaded and in which said strands slide, adapted to engage the flange of the bottle neck opposite said head.

5. A stopper-tie comprising two strands, and a bond connecting the same, said bond consisting of a plate made with downwardly extending prongs at opposite sides of the plate adapted to penetrate the end of a stopper, said prongs having eyes there-through close to said plate, through which eyes said strands are threaded and in which they will slide, the strands extending from one side of the bond provided with means to engage the strands which extend from the other side of the bond, when the latter are passed around the neck of the bottle.

Signed by me at Boston, Massachusetts, this nineteenth day of November 1909.

WILLIAM S. DOW.

Witnesses:

CHARLES D. WOODBERRY,
JOSEPHINE H. RYAN.