

No. 706,693.

Patented Aug. 12, 1902.

S. SCHWERIN.
BOTTLE STOPPER.

(Application filed Nov. 18, 1901.)

(No Model.)

FIG. 1

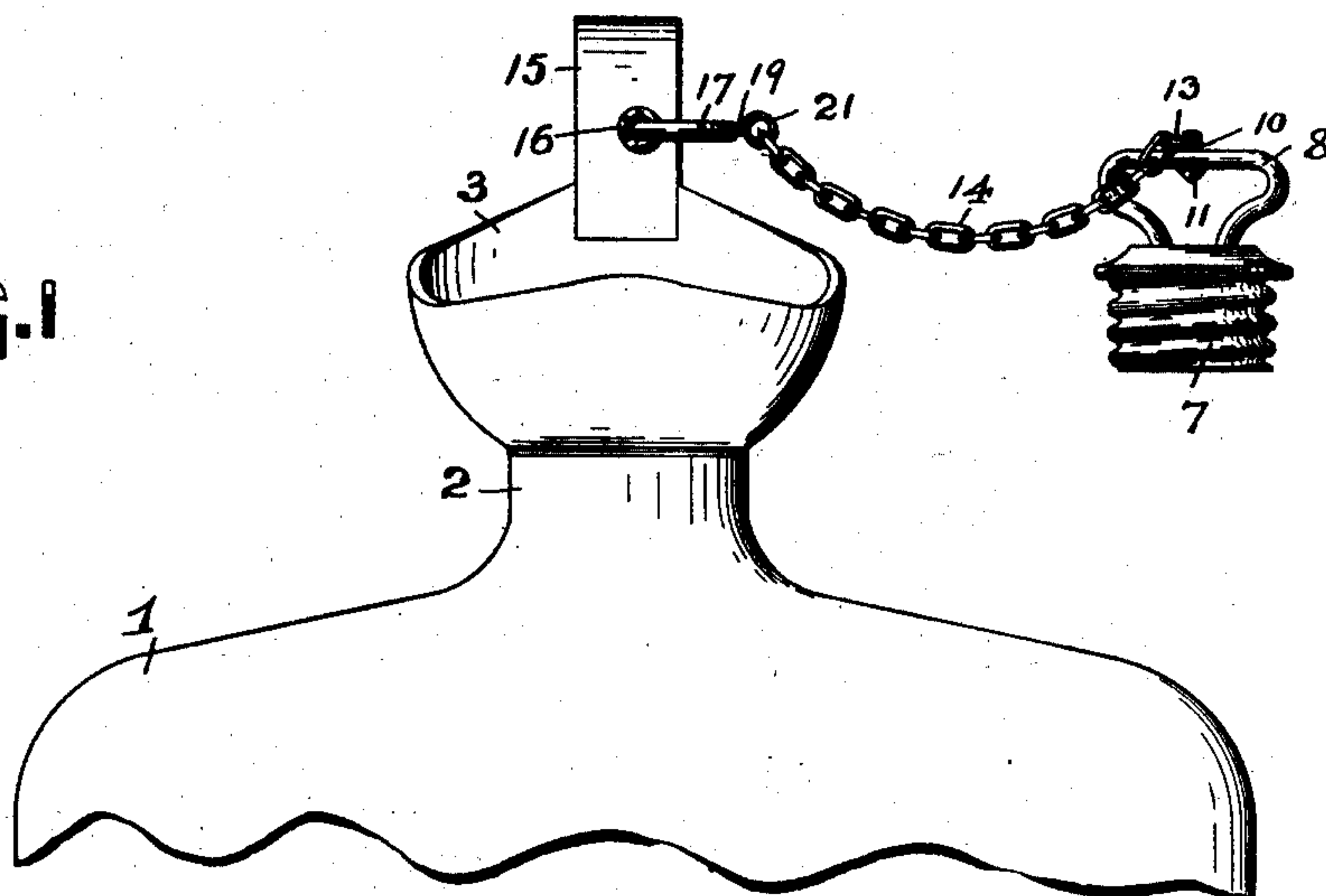


FIG. 2

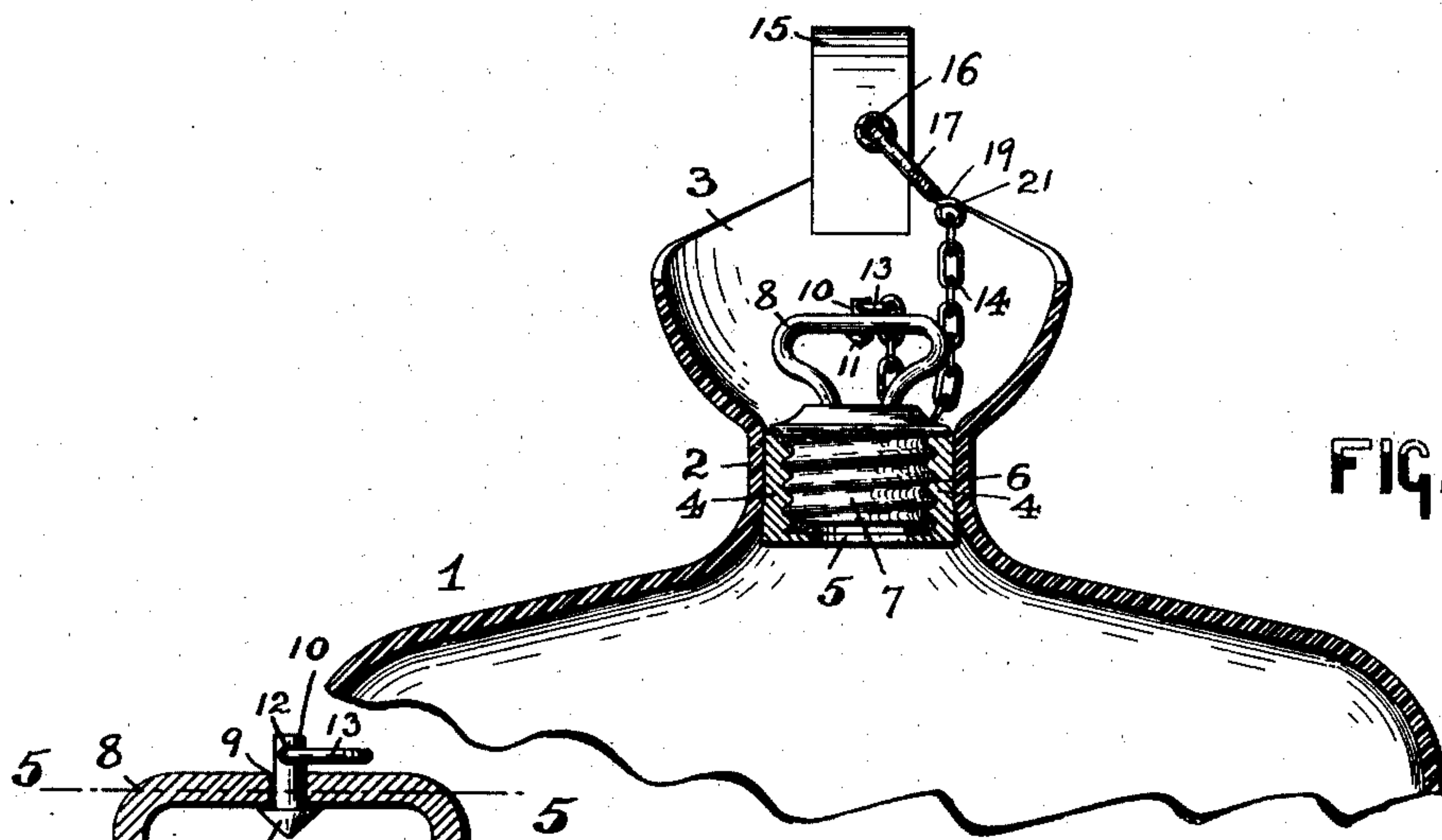


FIG. 3

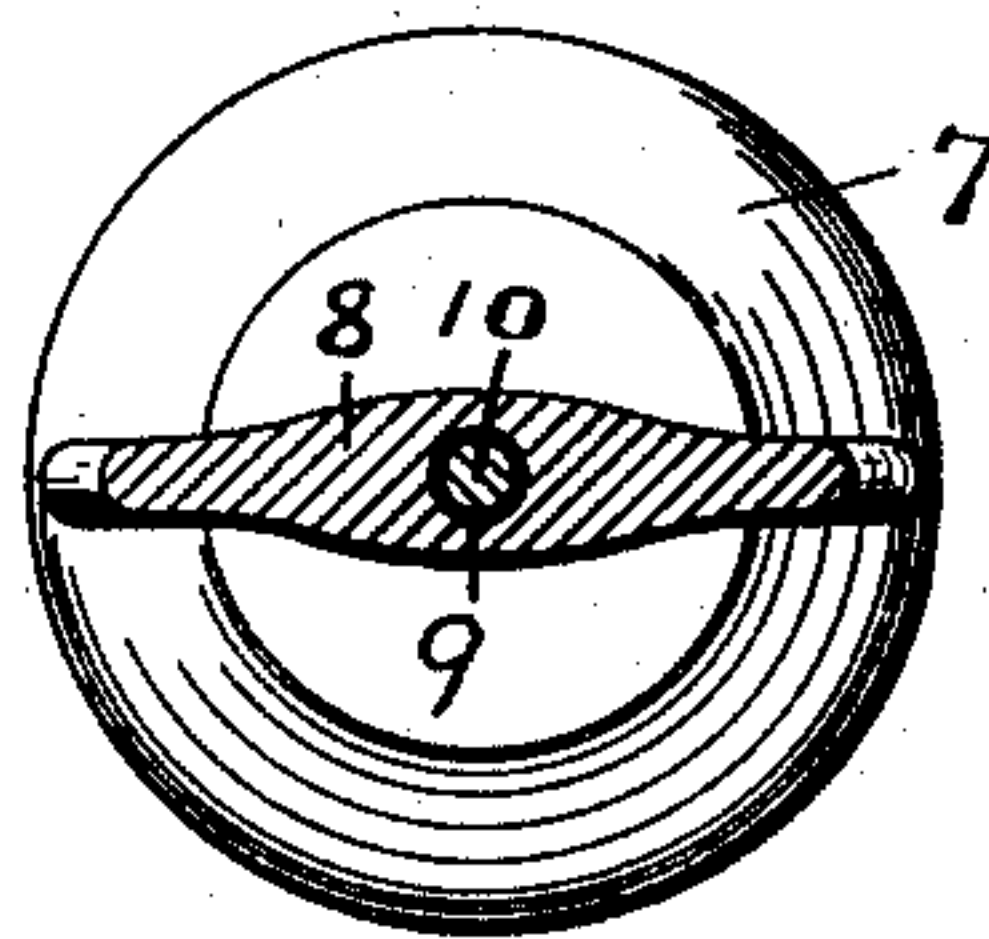
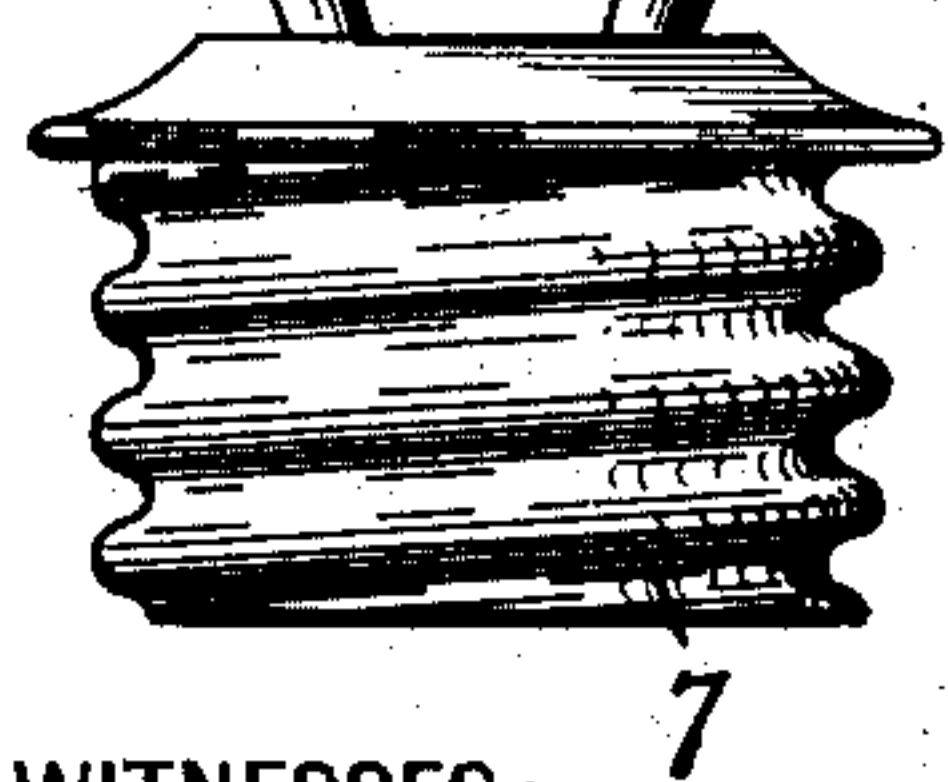
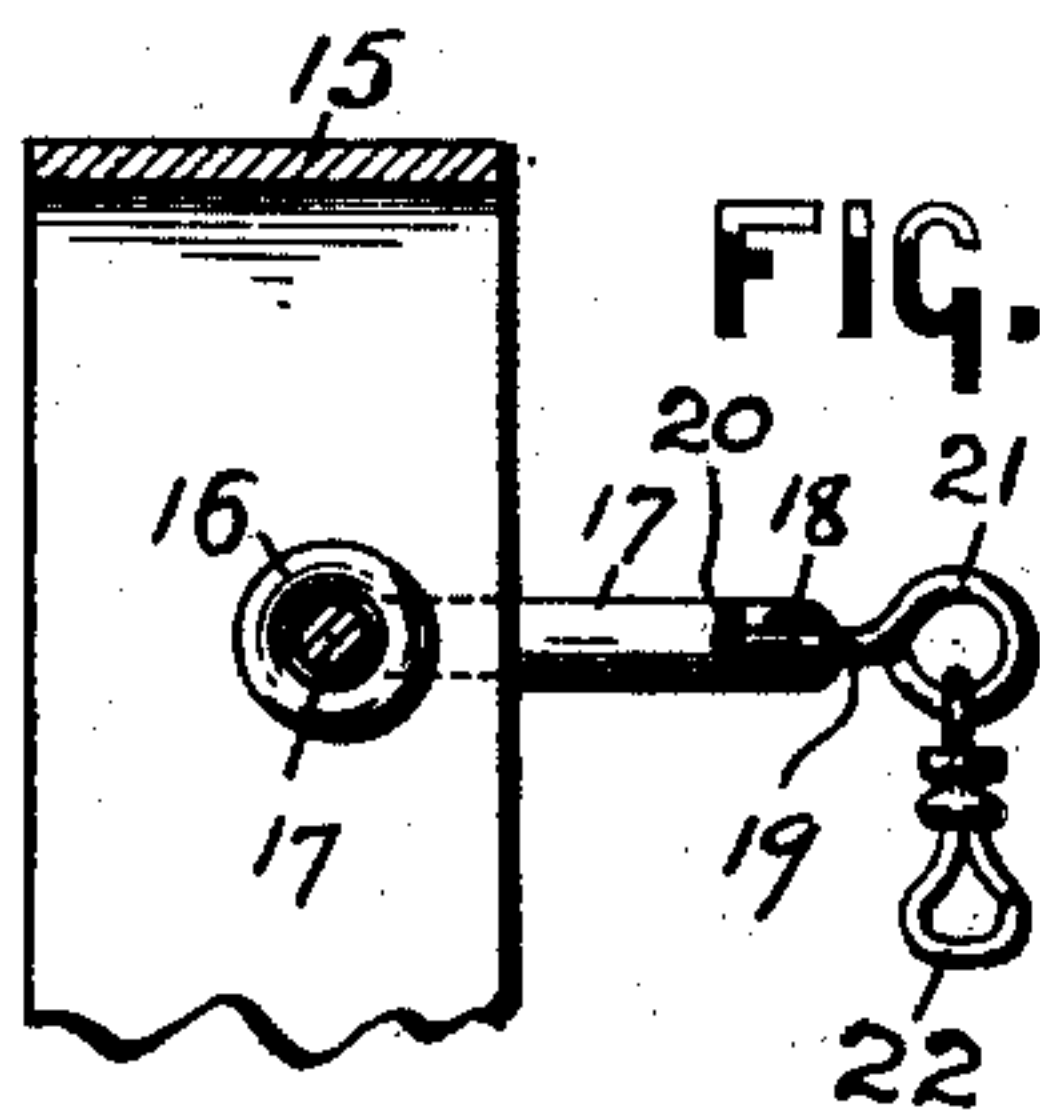


FIG. 5

WITNESSES:

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FIG. 4



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UNITED STATES PATENT OFFICE.

SILAS SCHWERIN, OF BELLEVILLE, NEW JERSEY, ASSIGNOR TO HARDMAN RUBBER COMPANY, OF BELLEVILLE, NEW JERSEY, A CORPORATION OF NEW JERSEY.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 706,693, dated August 12, 1902.

Application filed November 18, 1901. Serial No. 82,612. (No model.)

To all whom it may concern:

Be it known that I, SILAS SCHWERIN, a citizen of the United States, residing at Belleville, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Bottle-Stoppers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

This invention has reference to improvements in bottle-stoppers; and the invention relates more particularly to improvements in that class of bottle-stoppers which are especially applicable to water bottles or bags.

The invention has for its primary object to provide a stopper for bottles, said stopper having attached thereto a freely-rotatable connection in the form of a chain or other flexible connection, which is fastened at one end to the stopper and at the other end to any suitable portion of the bottle to permit the arrangement of the stopper in the mouth of the bottle or its detachment therefrom without causing the flexible connection to snarl and not interfere with the rotation of the stopper, and, furthermore, to hold the stopper in its detached relation from the mouth of the bottle, and thus avoiding any possible loss of the stopper.

The invention therefore consists in the novel arrangements and combinations of the devices, as well as in the details of the construction of the various parts thereof, all of which will be more fully set forth in the following description of my invention and then finally embodied in the clauses of the claim.

The invention is clearly illustrated in the accompanying drawings, in which the device is shown as applied to a screw-stopper of a water bottle or bag.

In the said drawings, Figure 1 is a representation of the upper portion of a water bottle or bag and the funnel-shaped mouth thereof, provided with a holding loop or lift, with which is connected, by means of a flexible connection embodying the principles of my present invention, a screw-stopper, the

said stopper being represented in its detached relation. Fig. 2 is a vertical section of the same portion of the water bottle or bag and its funnel-shaped mouth with the stopper-seat in the neck of the bottle also represented in vertical section, but the holding loop or lift of the bottle, the flexible connection, and the stopper being represented in elevation and the said stopper being shown in its closing position in the stopper-seat. Fig. 3 is a part side elevation and part vertical section of the stopper on an enlarged scale, the handle portion or finger-piece of the stopper being represented with a perforation and a rotatable connection or pin in said perforation, to which the one end of the flexible connection is attached. Fig. 4 is a vertical section, on an enlarged scale, of the holding loop or lift of the water bottle or bag and a ring attachment for connecting the opposite end of the flexible connection to said loop or lift; and Fig. 5 is a horizontal section taken on line 5 5 in said Fig. 3.

Similar characters of reference are employed in all of the said above-described views to indicate corresponding parts.

Referring to the said drawings, the reference character 1 indicates a portion of the body of a water bottle or bag. 2 is the neck thereof, and 3 the funnel-shaped mouth. Within the said neck is secured in the usual manner a fitting 4, provided with an opening 5 and an internal screw-thread 6 for the reception of a screw-stopper 7, for which the said fitting 4 provides a seat. The said stopper 7 is usually made of metal, being provided with a handle or finger-piece 8, preferably made of stout wire, as shown; but the said stopper and its handle or finger-piece may be made in any other usual and well-known manner, as will be clearly evident. The said handle or finger-piece 8 is made with a hole or perforation 9, in which is loosely fitted, so as to be capable of rotation in said hole or perforation 9 a swivel or pin 10, which is provided with a suitable head or enlargement 11 at the one end and with a perforation 12 and a ring 13 therein at its other end to prevent the displacement of the said pin 10 from said hole or perforation 9, but still permit of the rotation of the said pin in the

manner and for the purposes to be presently more fully set forth. Suitably attached to the said ring 13 is the lower end of a chain or other flexible connection 14.

5 The funnel-shaped mouth 3 of the water bottle or bag is usually provided with a holding loop or lift 15, and secured thereto is an eyelet 16, in which I have placed a ring 17. To this ring may be rotatively secured in a
10 perforation 18 in the said ring a pin 19, which is provided at the one end with a suitable head or enlargement 20 and at the other end with an eye 21, substantially as illustrated in the several figures of the drawings. To
15 this eye 21 may be secured the upper end of the chain or other flexible connection 14 hereinabove mentioned, as clearly illustrated in Figs. 1 and 2 of the drawings. In some cases, if found desirable, the eye 21 of the pin 19
20 may be provided with a suitably-constructed snap-hook 22, as illustrated in Fig. 4, into which the last link of the upper end of the chain 14 can be sprung and readily disconnected therefrom when it becomes necessary
25 to replace a worn-out stopper by a new stopper.

From the above description of the several parts of my invention it will be clearly seen that by means of the swivel or rotary connection at the one or both ends of the chain or
30 flexible connection 14 with the bottle-stopper or with the stopper and the holding loop or lift of the water bottle or bag the stopper can be screwed into position in the neck
35 of the bottle or unscrewed therefrom without the least danger of causing the flexible connection to snarl or the links of the chain to kink, and, furthermore, when the stopper has been removed from the neck of the bottle it
40 remains suspended in its detached position without any possibility of loss. The stopper is therefore at all times in a most convenient position for immediate use with the bottle.

Although the attachment for the reception
45 of the upper end of the flexible connection is illustrated in the drawings as attached directly to the holding loop or lift of the water bottle or bag, it will be clearly evident that the said attachment may be secured directly
50 to the funnel-shaped portion of the mouth of the water bottle or bag in any desired parts thereof. It will also be understood that some changes may be made in the various arrangements and combinations of the various devices, as well as in the details of the construction thereof, without departing from the scope
55 of this invention. Hence I do not limit my invention to the exact arrangements and combinations of the parts as described in the foregoing specification and as illustrated in the accompanying drawings, nor do I confine myself to the exact details of the construction of the said parts.

Having thus described my invention, what
65 I claim is—

1. In a bottle, a stopper provided with a finger-piece, a means of attachment rotatively

connected with said finger-piece so as not to interfere with the rotation of said stopper, a flexible connection secured at its one end to
70 said means of attachment which is connected with the said finger-piece, and a second means of attachment rotatively connected with a portion of said bottle to which the other end of
75 said flexible connection is attached, comprising, an eyelet connected with a portion of said bottle, a pin, and means connected with said eyelet for retaining said pin in its rotative relation to said eyelet, and means on said
80 pin to which the other end of said flexible connection is attached, substantially as and for the purposes set forth.

2. In a bottle, a stopper provided with a finger-piece, a means of attachment rotatively
85 connected with said finger-piece so as not to interfere with the rotation of said stopper, a flexible connection secured at its one end to said means of attachment which is connected with the said finger-piece, a second means of
90 attachment rotatively connected with a portion of said bottle, consisting, essentially, of an eyelet, a ring in said eyelet, a pin rotatively connected with said ring, and means on said pin to which the other end of said
95 flexible connection is attached, substantially as and for the purposes set forth.

3. In a bottle, a stopper provided with a finger-piece, a means of attachment rotatively
100 connected with said finger-piece so as not to interfere with the rotation of said stopper, a flexible connection secured at its one end to said means of attachment which is connected with the said finger-piece, a second means of
105 attachment rotatively connected with a portion of said bottle, consisting, essentially, of an eyelet, a ring in said eyelet, a pin rotatively connected with said ring, said ring being provided with an eye, and a snap-hook
110 connected with said eye to which the other end of said flexible connection is attached, substantially as and for the purposes set forth.

4. In a bottle, a stopper provided with a finger-piece having a perforation, a pin rotatively
115 arranged in said perforation, means connected with said pin for preventing the displacement of said pin, a flexible connection secured at one end to said pin, and a means of attachment rotatively connected with a portion of said bottle to which the
120 other end of said flexible connection is attached, comprising, an eyelet connected with a portion of said bottle, a pin, and means connected with said eyelet for retaining said pin in its rotative relation to said eyelet, and
125 means on said pin to which the other end of said flexible connection is attached, substantially as and for the purposes set forth.

5. In a bottle, a stopper provided with a finger-piece having a perforation, a pin rotatively
130 arranged in said perforation, means connected with said pin for preventing the displacement of said pin, a flexible connection secured at one end to said pin, and a means of attachment rotatively connected

with a portion of said bottle, consisting, essentially, of an eyelet, a ring in said eyelet, a pin rotatively connected with said ring, and means on said pin to which the other end of said flexible connection is attached, substantially as and for the purposes set forth.

6. In a bottle, a stopper provided with a finger-piece having a perforation, a pin rotatively arranged in said perforation, means connected with said pin for preventing the displacement of said pin, a flexible connection secured at one end to said pin, and a means of attachment rotatively connected with a portion of said bottle, consisting, essentially, of an eyelet, a ring in said eyelet, a pin rotatively connected with said ring, said ring being provided with an eye, and a snap-hook connected with said eye to which the other end of said flexible connection is attached, substantially as and for the purposes set forth.

7. In a bottle, a stopper, a means of attach-

ment rotatively connected with said stopper so as not to interfere with the rotation of said stopper, a flexible connection secured at its one end to said means of attachment which is connected with the stopper, and means for detachably connecting the other end of said flexible connection to a portion of the bottle, consisting, essentially, of an eyelet, a ring in said eyelet, a pin rotatively connected with said ring, said ring being provided with an eye, and a snap-hook connected to said eye and also attached to the other end of said flexible connection, substantially as and for the purposes set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this 15th day of November, 1901.

SILAS SCHWERIN.

Witnesses:

FREDK C. FRAENTZEL,
GEO. D. RICHARDS.