

F. EVANS & G. A. DURYEE.
STOPPER.

APPLICATION FILED NOV. 11, 1911. RENEWED AUG. 26, 1912.

1,061,829

Patented May 13, 1913.

Fig. 1.

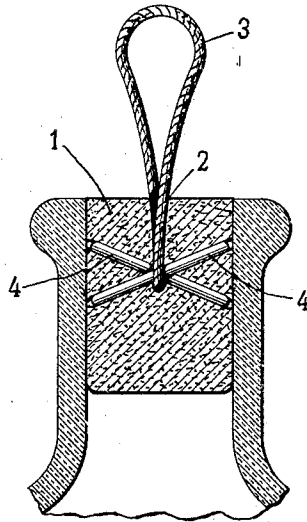


Fig. 2.

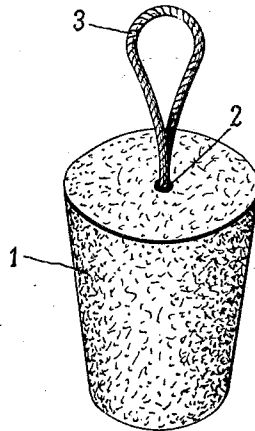
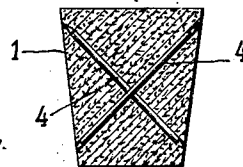


Fig. 3.



WITNESSES

J. C. Dwyer
M. A. Thompson

INVENTORS

Fred Evans and
Gustav A. Duryee
Wilson Hunt
ATTORNEYS

UNITED STATES PATENT OFFICE.

FRED EVANS, OF NEW YORK, N. Y., AND GUSTAVUS A. DURYEE, OF SUMMIT, NEW JERSEY, ASSIGNORS TO UNIVERSAL CORK EXTRACTOR COMPANY, A CORPORATION OF NEW YORK.

STOPPER.

1,061,829.

Specification of Letters Patent.

Patented May 13, 1913.

Application filed November 11, 1911, Serial No. 659,686. Renewed August 26, 1912. Serial No. 717,191.

To all whom it may concern:

Be it known that we, FRED EVANS, residing at New York city, in the county of New York and State of New York, and GUSTAVUS ABEEL DURYEE, residing at Summit, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Stoppers, of which the following is a specification.

This invention relates to a new and useful stopper, which may be used for closing bottles or other receptacles.

One of the objects of the invention is to provide a stopper, of cork or other material, having within it reinforcing means, whereby the durability and effectiveness of the article are enhanced.

Another object of the invention is to provide a stopper having means associated therewith whereby the stopper may be readily withdrawn from the bottle or receptacle, and without danger of rupture of the material of which the stopper is made.

Another object is to provide a stopper with a flexible loop secured within the body of the stopper extending from the top thereof.

Another object is to provide a stopper with a flexible loop extending from the top of the stopper whereby the stopper may be withdrawn from the bottle or receptacle, said loop being held within the body of the stopper by anchoring means which distribute the strain of the loop through the material of the stopper, and which in themselves act to reinforce the stopper.

Other objects and means of the invention, more or less broad than those stated above, will be in part obvious and in part specifically referred to in the course of the following description of the elements, combinations, arrangements of parts, and applications of principles constituting the invention; and the scope of protection contemplated will appear from the claims.

In the accompanying drawings, which are to be taken as a part of this specification, and in which I have shown a merely illustrative embodiment of the invention, Figure 1 is a central vertical section, with parts in elevation, showing a stopper including my invention, as applied to the mouth of a bottle; Fig. 2 is a perspective of the stopper shown in Fig. 1; and Fig. 3 is a section of a stopper, showing the reinforcing means

within the stopper, but omitting the finger-engaging member.

Referring to the numerals on the drawings 1 indicates a stopper of ordinary form, which may be made of any usual or preferred material, as, for instance, cork. Extending down into the body of the stopper preferably from the center of the top thereof, is an opening indicated by the numeral 2. A looped member 3, which may be of cord or wire or any preferred material, but which we prefer should be flexible, is inserted into the opening 2, and held in position by means of a preferably rigid pin of any appropriate material, which pierces the stopper transversely of its length, and passes through the end of the loop within the opening 2. This pin 4 may be disposed perpendicularly to the length of the stopper, or it may be arranged at an angle as shown in Fig. 1, which arrangement has the advantage that the pin will not interfere with the forcing of the stopper into a bottle mouth of smaller size than the device is intended for. Whatever the disposition, it will be seen that we have provided a very neat and strong device for the purposes specified. The loop can readily be bent over the cork, as might be desirable where a seal is to be placed over the cork, and furthermore the stopper may be used again and again, since it is not apt to be broken in ordinary use. For the attainment of certain objects, however, we prefer that instead of having a single anchorage pin within the stopper, there shall be a plurality of such. In Figs. 1 and 3 we have shown two pins, inclined to the axis of the stopper, said pins crossing each other about medially of their lengths, and both passing through the end of the loop 3 within the stopper. It will be obvious that the pull of the loop upon the pins 4 will be at their crossing points, always substantially centrally of the diameter of the stopper, and the strain will be distributed throughout the body of the material. It will also be evident that with this construction the tendency is to prevent any shearing movement of a pin or pins through the stopper, which would destroy the usefulness of the latter, and the pins in themselves serve to reinforce the stopper. The structure of Fig. 3, which shows the stopper provided with crossing reinforcing pins, is an improvement *per se*, though it omits the

finger-engaging member secured to the pins as shown in Fig. 1, since it provides a stopper whose parts are held together by the pins, to a great extent, so that the stopper will not be likely to break up when a cork-screw is applied. Furthermore, if a cork-screw is used with this stopper the same will secure a firm hold under or between the pins, facilitating the removal of the stopper, and without any danger of breaking it. These pins 4 are made somewhat short, so that when they are driven home the ends will be within the stopper and the material of the latter will close up over the ends, so that the pins will be practically invisible, and out of the possibility of coming in contact with the contents of the bottle or receptacle.

It will be obvious that we may employ a plurality of more than two anchorage pins, all of them crossing each other and all of them engaging the loop at their crossing portions; also that instead of arranging the pins, as shown in Fig. 1, they may be disposed horizontally.

As many changes could be made in the above construction and many apparently widely different embodiments of this invention could be made without departing from

the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense. It is also to be understood that the language used in the following claim is intended to cover all of the generic and specific features of the invention herein described and all statements of the scope of the invention, which as a matter of language, might be said to fall therebetween.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:

A stopper having an opening extending therein from its top, a pull extending into said opening and a plurality of pins crossing each other within the stopper and engaging said pull within the stopper at their points of crossing, said pins being inclined with respect to the axis of the stopper.

In testimony whereof we affix our signatures in the presence of two witnesses.

FRED EVANS.
GUSTAVUS A. DURYEE

Witnesses:

CHAS. W. NIVENS,
J. WALTER DEWITT.