April 8, 1930. E. P. LINCH 1,753,660

CLOSURE RETAINING MEANS FOR CONTAINERS

Filed Oct. 15, 1928

Fig. 1.

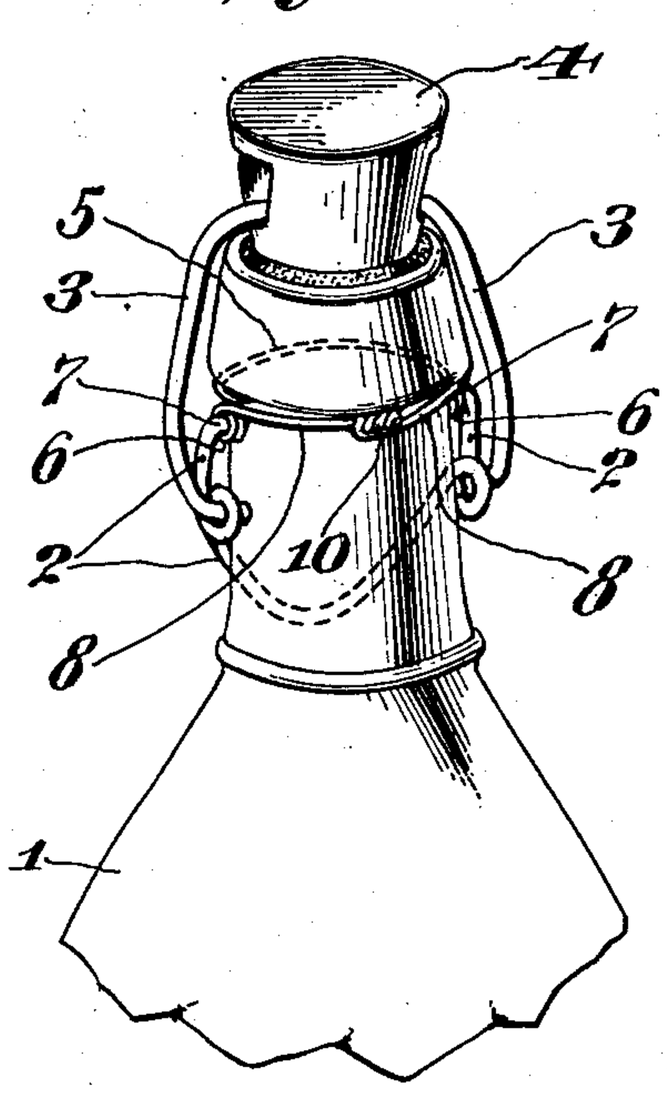


Fig. 2.

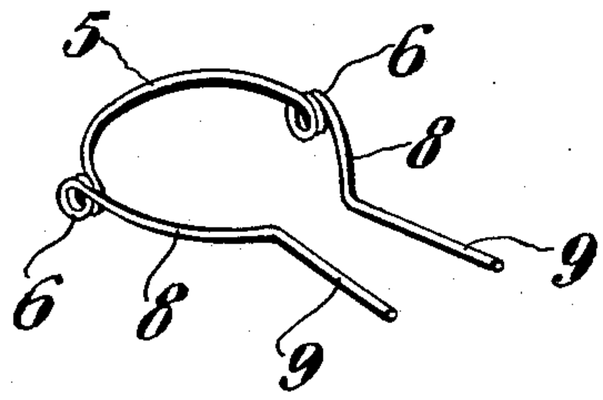


Fig. 3.

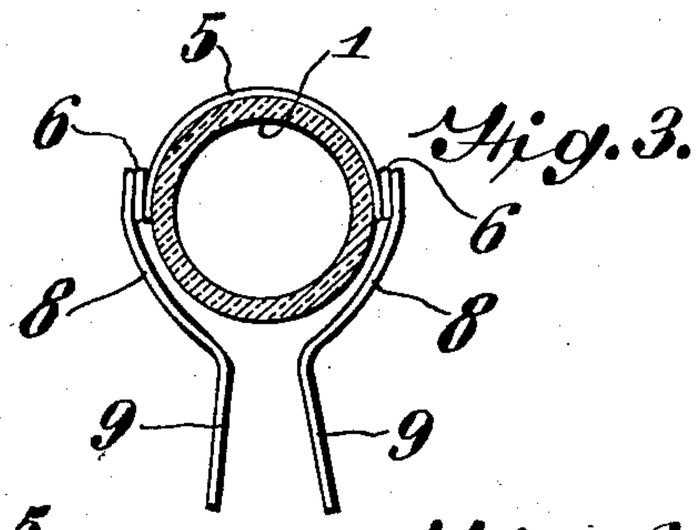


Fig. 4.

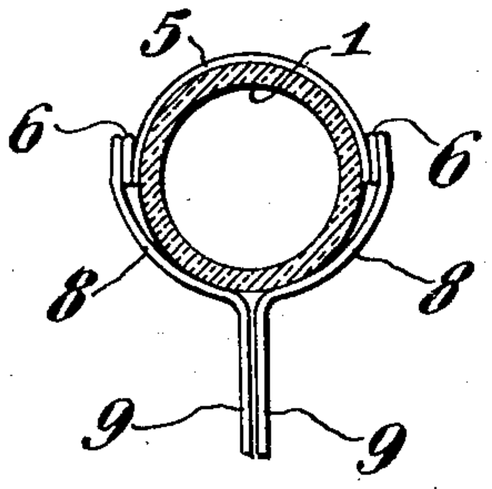


Fig. 5.

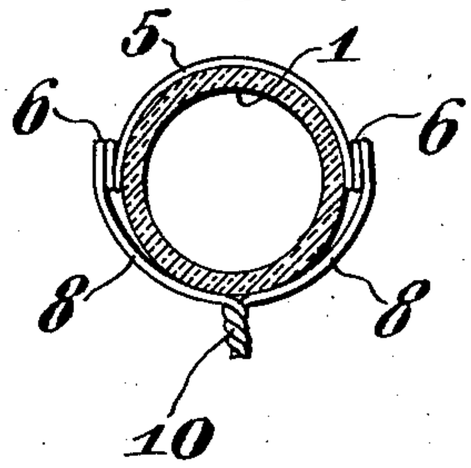
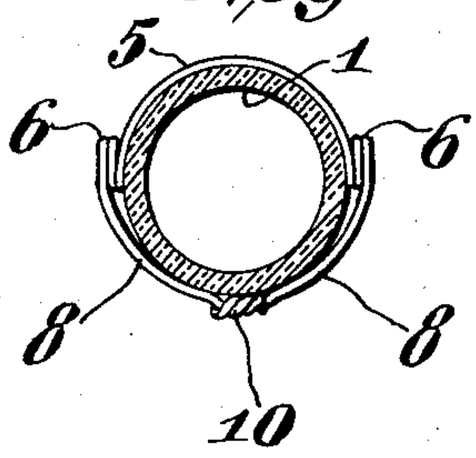


Fig. 6.



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UNITED STATES PATENT OFFICE

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CLOSURE-RETAINING MEANS FOR CONTAINERS

Application filed October 15, 1928. Serial No. 312,433.

My invention relates broadly to devices of wire for retaining closures such as stoppers, lids or the like in closed position upon a bottle, jar, jug, carboy or other like container, but more specifically the invention relates to what is known as the neck wire of a retaining means of the character to which the invention relates.

The general object of the invention is to provide a retainer of the character indicated including a neck wire which is shaped initially so as to conform with greater or less exactness to the circular shape of the neck or other portion of the container to which the retaining means is to be applied.

It also is an object of the invention to provide a neck wire of a construction such that when the projecting end portions thereof are brought together in the operation of securing the neck wire in place upon the neck of a container the said projections occupy positions in substantially parallel relation to each other whereby the operation of effecting interengagement of the said projections by twisting is facilitated and whereby also the said neck wire, after having been fastened in place, presents a neater appearance than heretofore has been practical, as far as I am aware.

The objects and advantages of my invention will become more apparent and obvious as the description thereof proceeds.

In order that the invention may be readily understood and its practical advantages fully appreciated reference should be had to the accompanying drawing in which I have illustrated an embodiment of the invention in the form which is at present preferred by me.

In the drawing:

Fig. 1 is a view in perspective of the upper end portion of a bottle provided with a retaining means including a neck wire constructed in accordance with my invention;

Fig. 2 is a view in perspective of a neck wire ready to be applied to the neck of a container such as a bottle or the like, as above indicated;

Fig. 3 is a transverse sectional view of the neck of the bottle shown in Fig. 1 with the neck wire in position thereon ready to receive the lever wire and to be fastened permanently in position;

Fig. 4 is a view similar to that shown in Fig. 3 with the disconnected ends of the neck wire in proximate relation with respect to each other;

Fig. 5 is a view also similar to that shown in Fig. 3 but showing the projecting end portions of the wire twisted together and portions thereof broken away and removed; and

Fig. 6 is a similar view showing the twisted portion of the wire appearing in Fig. 5 bent into position against the adjoining side of the neck of the bottle.

In the drawing I have shown at 1 the upper portion of a bottle constituting one example of the container to which a closure retainer including a neck wire embodying my invention may be attached. As has been indicated already, it is to be understood that my invention is adapted for use not only with bottles of the character of that illustrated but with containers of other character such as jugs, carboys, jars and the like.

The lever and bail wires 2 and 3 are of the usual construction and are hinged together in the usual manner. The lever wire also is pivotally connected to the neck wire in the usual manner. A stopper 4 is illustrated as being connected with the bail wire, but it will be understood that in some cases the closure device is not connected with the bail wire but is first placed in position to close the opening of a container and the bail wire thereafter moved into contact therewith and held in such contact by the action of the lever such as the lever 2.

The neck wire comprises a semicircular portion 5 which terminates at its opposite ends in coils 6 which form eyes constituting bearings for the inwardly turned portions 7 of the lever 2 whereby the latter is pivotally connected with the said neck wire. The portions 8 of the neck wire beyond the coils 6 are also curved and form quadrantal portions of a circle, the portion 5 constituting the remaining semicircular portion thereof. The adjoining or opposing ends of the portions 8 are provided with outwardly projecting extensions 9 which initially slightly diverge, as indicated in Fig. 3 of the drawing, so that after the neck wire is placed in

position upon the neck of a bottle and the ends of the quadrantal portions 8 brought into juxtaposition or proximate relation with respect to each other, as shown in Fig. 4, the said extensions are in substantially parallel relation as shown. It will be understood that the projections 7 of the lever 2 should be placed in engagement with the eyes formed by the coils 6 prior to the placing of the neck wire upon the neck of the container. That is the usual practice. The extensions 9 having been brought or adjusted into proximate relation, as shown in Fig. 4, they are then twisted together by a suitable tool which operates to sever the outer portions of the said extensions, leaving a relatively short twisted together portion, as indicated at 10 in Fig. 5 of the drawing. The radially projecting twisted portion 10 is then bent laterally into position against the adjoining side of the neck of the container, as shown in Fig. 6 of the drawing.

To those who are familiar with or skilled in the art to which the invention relates it will be apparent that I have provided a neck wire having features of great practical advantage and that by the employment of the invention a completed structure may be produced characterized by a high degree of neatness in appearance.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A neck wire for retaining means for fastening a closure for containers in closed position comprising a semicircular portion terminating at its opposite ends in coils and having curved quadrantal portions beyond said coils, the opposed ends of said quadrantal portions having outwardly projecting extensions which initially are located in divergent relation with respect to each other, the said extensions, when the ends of said quadrantal portions are moved into proximate relation to each other, being substantially parallel.

2. A neck wire of the character described comprising approximately one-half portion shaped to fit approximately one-half portion of the neck of a container to which it may be applied, and curved quadrantal portions which, when moved into position to bring the opposed ends thereof in proximate relation to each other, fit against the adjoining sides of the neck of the container to which it is applied, the adjoining ends of the said quadrantal portions having extensions which project radially with respect to the container, the said extensions adapted to be twisted together.

3. A neck wire of the character described comprising a semicircular portion terminating at its opposite ends in bearings, and quadrantal portions beyond said bearings, the outer opposed ends of which are provided with extensions which are adapted, when the said neck wire is placed upon the neck of a container, to occupy positions in parallel relation to each other, the said extensions adapted to be twisted together and to have portions thereof removed to permit positioning of the twisted portion against the adjoining side of the neck of the container.

In testimony that I claim the foregoing as my invention I have hereunto signed my name this 11th day of October, A. D. 1928.

EDWARD P. LINCH.