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A. C. E. ERICHSEN.

BOTTLE HOLDER.

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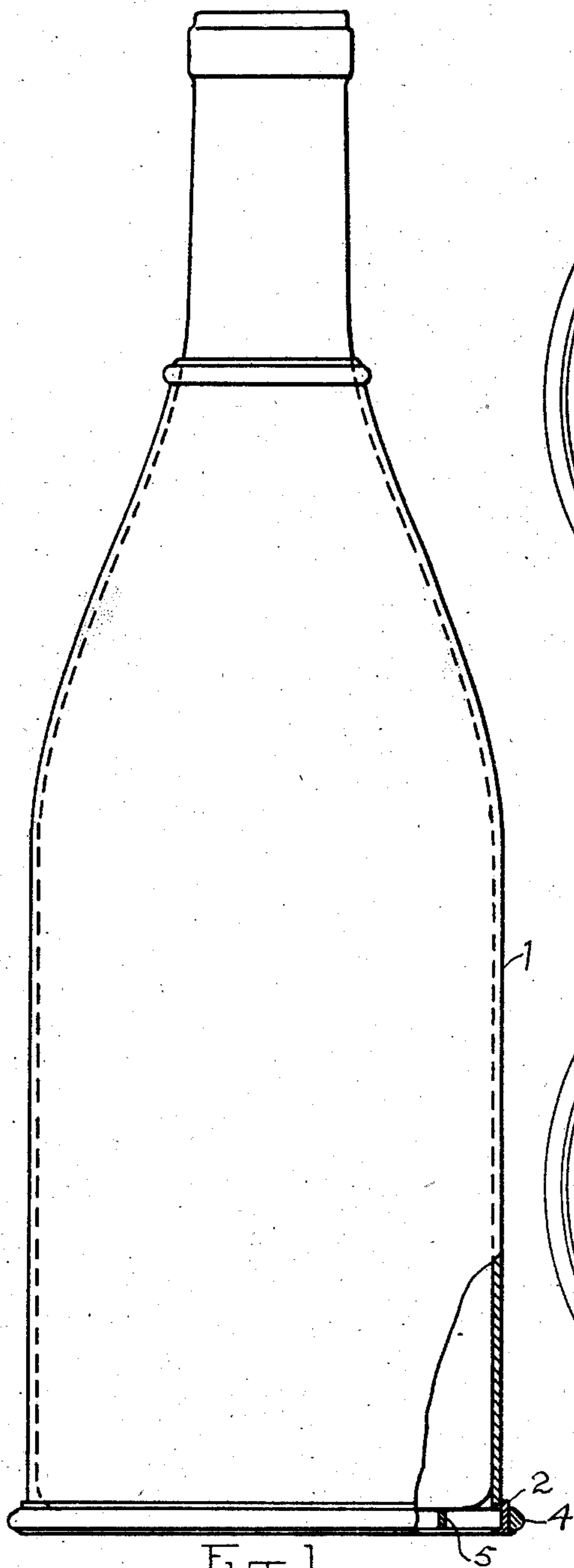


Fig 1

WITNESSES

*John H. Henshaw.*  
*E. G. Bradley.*

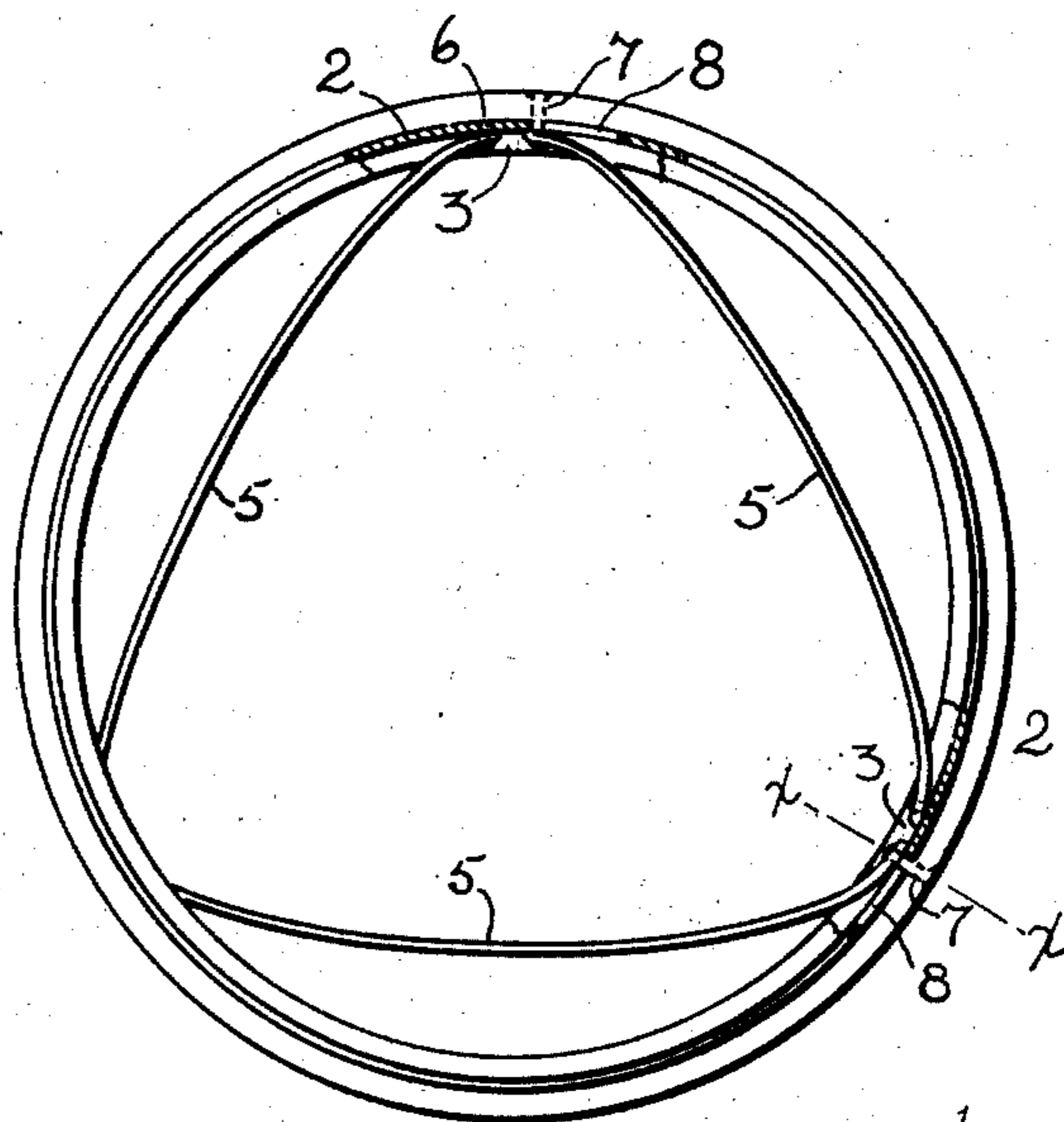


Fig 2

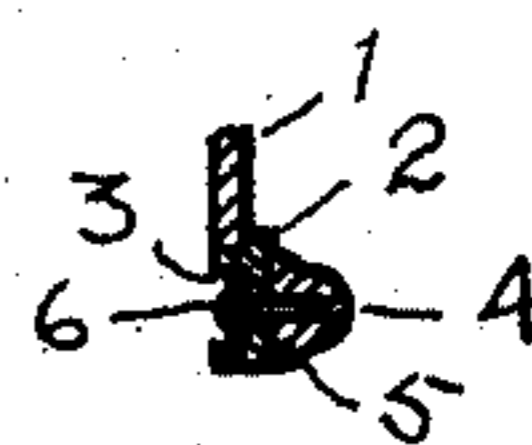


Fig 4

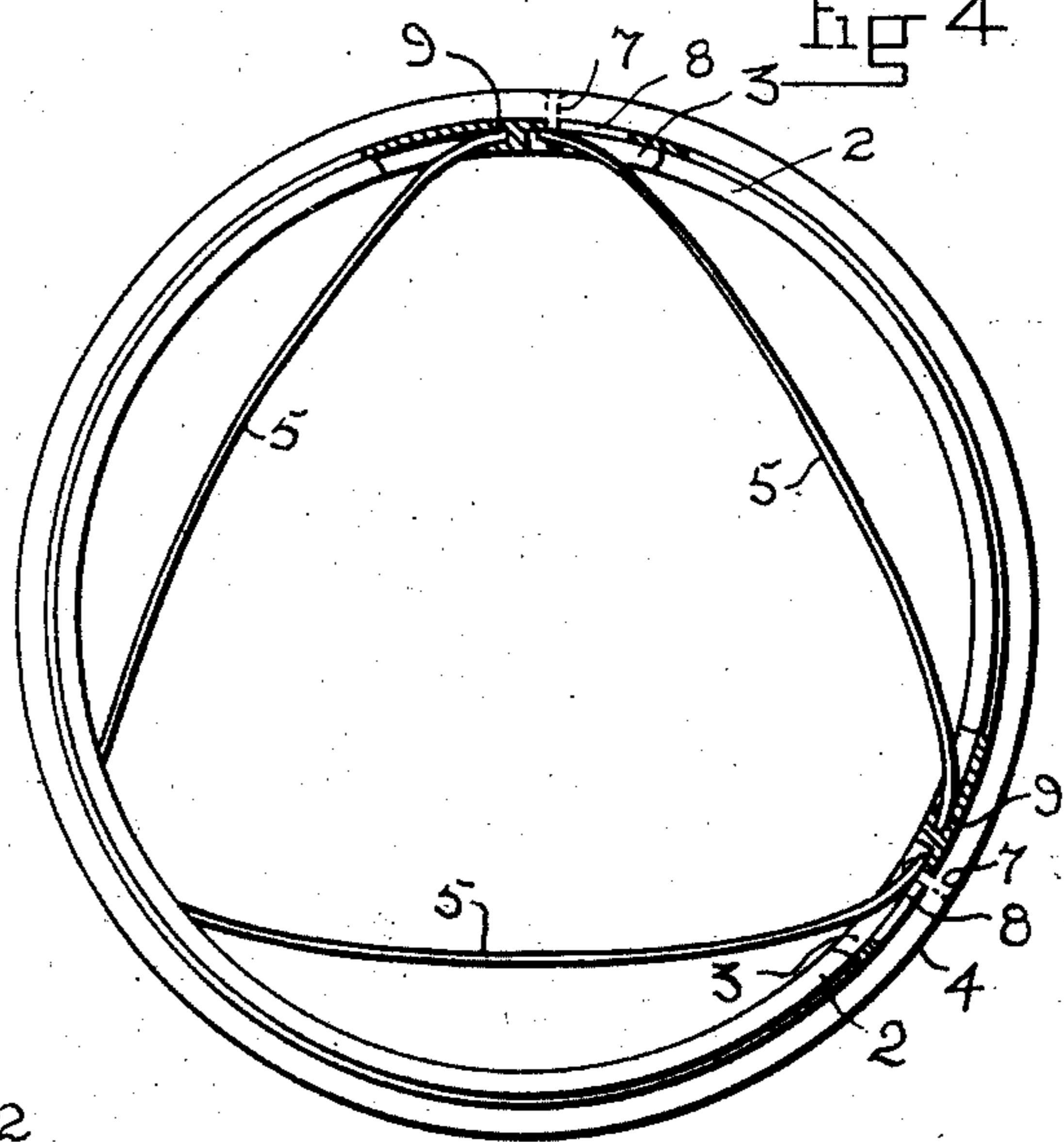


Fig 3

INVENTOR

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ATTY

# UNITED STATES PATENT OFFICE.

ADOLPH C. E. ERICHSEN, OF CRANSTON, RHODE ISLAND, ASSIGNOR TO GORHAM MANUFACTURING COMPANY, OF PROVIDENCE, RHODE ISLAND, A CORPORATION OF RHODE ISLAND.

## BOTTLE-HOLDER.

No. 883,395.

Specification of Letters Patent.

Patented March 31, 1908.

Application filed June 20, 1906. Serial No. 322,600.

*To all whom it may concern:*

Be it known that I, ADOLPH C. E. ERICHSEN, of Cranston, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Bottle-Holders; and I do hereby declare the following specification, taken in connection with the accompanying drawings, forming a part of the same, to be a full, clear, and exact description thereof.

The invention relates to bottle-holders of that class in which the holder surrounds and incloses the bottle throughout the greater portion of its length, or at least extends upward on to that portion of the bottle which is of reduced diameter. In order to apply a holder of this class to a bottle it is necessary that the holder shall be so constructed that it may be passed over the neck-end of the bottle, and also that the holder, when brought to proper position on the bottle, may be so engaged with the bottle that the bottle will be securely held within the holder. Heretofore these conditions have been met by making the bottom of the holder in the form of a lid hinged to the body of the holder, and so that by opening said lid the bottle could be inserted through the bottom of the holder, and the lid then closed and held in closed position by means of some suitable holding device, usually in the form of a hasp engaging a staple and with a locking pin therefor. This construction of bottle-holder is awkward to apply and remove, requiring that both the bottle and the holder shall be held in the hand, and furthermore involves, both in applying and removing the holder, the opening and closing of the hinged lid or bottom and the manipulating of the fastening devices.

The object of the present invention is to provide a bottle-holder of the class referred to which may be conveniently and quickly applied to the bottle and without the manipulation of any parts or fastening devices, and which may also be removed from the bottle by a very simple manipulation.

To that end the invention consists primarily in a bottle-holder provided with holding devices which normally occupy a position to hold the bottle in the holder, but which will be moved from this position by the engagement of the bottle therewith when the bottle

is inserted within the holder, and will thereafter automatically resume their holding position.

A further feature of invention consists in the means provided for moving such holding devices from their holding position when it is desired to release and remove the bottle.

The invention further consists in features of construction and combinations of parts hereinafter described and claimed.

Referring to the drawings, Figure 1 represents a holder embodying my invention in position upon a bottle; Fig. 2 is a plan of the bottom of the holder, partly in section; Fig. 3 is a corresponding view of a modified construction; and Fig. 4 is a section on the line  $x-x$  of Fig. 2.

The holder comprises a casing 1 constructed to approximately fit a bottle of the size and shape with which it is designed to be used, and to extend upward on to the reduced portion of the bottle, as shown in Fig. 1. The holder is open at the bottom and is provided with a ring 2 secured to or formed with the body of the holder, said ring being provided on its interior with a groove or channel 3. Surrounding this ring 2 and adapted to turn thereon is a second ring 4.

The means for holding the bottle in place within the holder comprise three flat springs 5, which normally occupy the position shown in Figs. 2 and 3.

Referring first to the construction shown in Fig. 2, one end of each spring is secured by a rivet 6, or otherwise, to the inner ring 2, while the opposite end of each spring is secured by a rivet 7, or otherwise, to the outer ring 4. Slots 8 are formed in the inner ring 2 through which the rivets 7 extend, said slots serving to permit the movement of said rivets 7 and the turning of the outer ring 4, with relation to the inner ring 2. With this construction, when the neck of the bottle is inserted in the holder and pressed to position, the tapering portion of the bottle acts as a wedge to force the springs 5 outward and to house the same in the channel 3 in the ring 2, and so as to thus permit the bottom of the bottle to pass by said springs, whereupon the springs will fly back to their normal position, which will bring said springs beneath the bottom of the bottle, and so that the bottle will

be held and supported thereby within the holder.

In order that the springs may be thus forced outward by the bottle and into the channel 3, it is necessary that one end of each spring shall be free to move lengthwise, and this is made possible by reason of the fact that the ring 4 is free to turn on the ring 2. Thus while one end of each spring is secured to the inner ring 2 and is thus securely held, the other end of each spring is connected to the outer ring 4, and as this ring 4 is, by reason of the slots 8, free to turn when power is applied to turn the same, the outward movement of the springs under the wedge action of the bottle will result in a pulling force being applied by each spring to said ring 4, whereby said ring will be turned, thereby permitting the necessary outward movement of the springs. When the bottom of the bottle has passed the springs, and the springs return to their normal position, they will in so doing return the ring 4 to its normal position.

When it is desired to release the bottle and remove it from the holder, all that is necessary to be done is to take hold of the outer ring 4 and turn it by hand, which will serve to withdraw the springs from beneath the bottle, and so that the bottle will slip out of the holder.

The construction shown in Fig. 3 is the same as that shown in Fig. 2, with the exception that, instead of having one end of each spring rigidly secured to the inner ring 2, this end of the spring is left free, and the ring 2 is provided with pockets 9, one for each spring, and into which pocket the free end of the spring extends when the springs are in normal position, as shown in said Fig. 3. With this construction, when the springs are forced outward by the wedging action of the bottle in inserting the same in the holder, the lengthwise pull thereby exerted on the springs will serve to pull the free ends of the springs out of and away from the pockets 9, instead of serving to turn the ring 4, less force being required to thus pull the free ends of the springs out of said pockets than is required to turn said ring 4. To release the bottle and remove it from the holder the springs are withdrawn from beneath the bottle by turning the ring 4 by hand, the same as in the construction shown in Fig. 2.

With both constructions above described it will be seen that the bottle is inserted in the holder, and so as to be securely held therein, by simply passing the bottle into the holder to a point where the springs, which are forced outward by the wedging action of the tapered portion of the bottle, may spring back to their normal position which will bring them beneath the bottom of the bottle, and no manipulation of any fastening devices or other parts is required. It will also

be seen that to release the bottle a single turning of the outer ring is all that is required.

Another important advantage of the bottle-holder above described is that it may be applied to the bottle with the bottle resting upon a table or other surface. In such case the holder is simply pressed down over the bottle until the bottom of the holder comes in contact with the surface upon which the bottle is resting, and then by slightly raising the bottle with relation to the holder, the bottom of the bottle may be brought above the springs, which will thus be permitted to return to their normal position and to a position beneath the bottom of the bottle.

As will be seen, the employment of the groove or channel 3, into which the springs may be moved or withdrawn, enables the casing to be of a diameter to approximately fit the bottle with which it is to be employed. If, however, a close fit of the casing on the bottle is not desired, said groove or channel may be dispensed with, and said springs simply moved outward against or toward the inner wall of the casing.

While I prefer to employ three springs arranged as shown for holding the bottle within the holder, it will be understood that a greater or less number of such holding devices may be employed. So also, instead of making the holding devices in the form of springs, the holding devices themselves may be rigid with independent springs cooperating therewith. It will also be understood that the construction and arrangement of parts may be otherwise changed in various ways without departing from the invention.

What I claim as my invention and desire to secure by Letters Patent is:

1. A bottle-holder comprising a casing open at the bottom, and a holding device normally extending across the open bottom of said casing, said holding device being adapted when engaged by the bottle to be moved toward the wall of said casing to permit the passage of the bottle, substantially as described.

2. A bottle-holder comprising a casing open at the bottom, and a holding device normally extending across the open bottom of said casing, said holding device being adapted, when engaged by the bottle, to be moved toward the wall of said casing to permit the passage of the bottle, and to resume its normal position when the bottom of the bottle has passed by said holding device, substantially as described.

3. A bottle-holder comprising a casing open at the bottom, a holding device normally extending across the open bottom of said casing, said holding device being adapted, when engaged by the bottle, to be moved toward the wall of said casing, and to resume its normal position when the bottom

of the bottle has passed by the same; and means for withdrawing said holding device to release the bottle, substantially as described.

5 4. In a bottle-holder, the combination of a casing open at the bottom, a ring mounted to turn on said casing, and a holding device normally extending across the open bottom of said casing, said spring being connected  
10 at one end to said ring, substantially as described.

5 5. In a bottle-holder, the combination of a casing open at the bottom, a ring mounted to turn on said casing, and a holding device normally extending across the open bottom of  
15 said casing, said spring being connected at one end to said ring and at the other end to said casing, substantially as described.

20 6. In a bottle-holder, the combination of a casing open at the bottom, said casing being provided at the interior of its lower end with a groove or channel, a ring mounted to turn on said casing, and a spring normally extending across the open bottom of said casing,  
25 ing, said spring being connected at one end to said ring, and said ring being adapted to

withdraw said spring into said groove, substantially as described.

7. In a bottle-holder, the combination of a casing open at the bottom, said casing being  
30 provided at the interior of its lower end with a groove or channel, a ring mounted to turn on said casing, springs normally extending across the open bottom of said casing, each of said springs being connected at one end to  
35 said ring, and said ring being adapted to withdraw said springs into the groove of said casing, substantially as described.

8. In a bottle-holder, the combination of a casing, open at the bottom, a ring mounted  
40 to turn on said casing, springs normally extending across the open bottom of said casing, each of said springs being connected at one end to said ring and at the other end to said casing, and said ring being adapted to  
45 move said springs toward the wall of said casing, substantially as described.

ADOLPH C. E. ERICHSEN.

Witnesses:

W. H. THURSTON,  
C. G. BRADLEY.