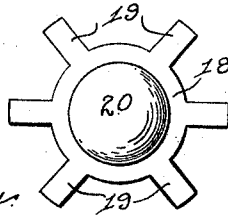
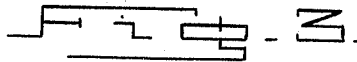
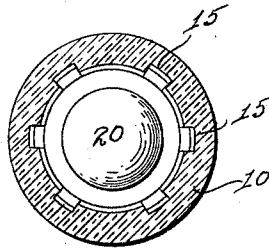
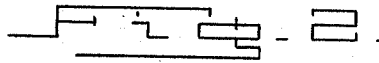
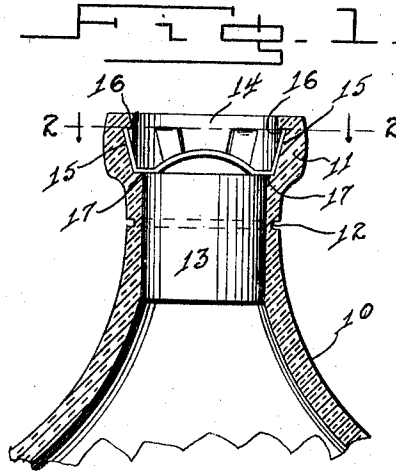


H. W. CYRUS.
NON-REFILLABLE BOTTLE.
APPLICATION FILED JAN. 5, 1916.

1,315,287.

Patented Sept. 9, 1919.



WITNESSES

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HENRY W. CYRUS, OF ASTORIA, OREGON.

NON-REFILLABLE BOTTLE.

1,315,287.

Specification of Letters Patent.

Patented Sept. 9, 1919.

Application filed January 5, 1916. Serial No. 70,527.

To all whom it may concern:

Be it known that I, HENRY W. CYRUS, a citizen of the United States, residing at Astoria, in the county of Clatsop and State of Oregon, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

An object of my invention is to provide a new and improved anti-refillable bottle of that type wherein the closing stopper may be permanently locked in place, provision being made for the dispensing of the original contents by providing the neck of the bottle with an annular groove or weakened portion in order that the upper portion of the neck may be quickly and easily severed from the remaining portion, and the invention more particularly resides in an improved form of locking means for retaining the closing stopper, which when in place acts coöperatively with the stopper and is so arranged whereby its removal is absolutely prevented.

Another object of my invention is to provide a bottle with an improved form of neck so as to coöperate with the locking means to attain a more efficient locking action, and to facilitate placing of the locking means in position.

A further object of my invention is to provide improved locking means of the above character that may be stamped from an integral piece of sheet material, preferably metal, so as to retain, as far as possible the inherent resiliency of the material, and at the same time materially decrease the cost of manufacture of the device.

A still further object of my invention is to provide a device of the type in question that is extremely simple in construction, durable, and highly practical from both the standpoint of the manufacturer and the standpoint of the consumer; and which it is believed, may be manufactured at a minimum cost.

The various objects and advantages will become apparent during the continuance of the following description.

The above and other objects which will become apparent, are accomplished by such means as are shown in their preferred form in the accompanying drawings, described in the following specification and then more specifically pointed out in the appended claims.

In the accompanying drawings wherein like characters designate like parts throughout the several views:

Figure 1 is a fragmentary view of the bottle in connection with which my invention is shown, and illustrating my invention as in its preferred embodiment.

Fig. 2 is a cross sectional view taken on line 2—2 of Fig. 1.

Fig. 3 is a plan view of blank form of locking means.

In the accompanying drawings, numeral 10 designates the neck portion of the bottle which is provided with an annular bead or enlarged portion 11 adjacent its upper end. Below the bead 11 the neck is provided with an annular groove or weakened portion 12 which facilitates the severing of the upper portion of the neck from the body thereof when it is desired to dispense the original contents of the bottle. The neck 10 is closed through the medium of a stopper 13 which may be of cork or the like material, the stopper being so arranged as to project some distance both above and below the plane of the groove 12. Consequently it will be seen that when the upper portion of the neck is broken off the stopper still remains in the neck of the bottle thus preventing particles of glass and other foreign matter from flowing into the contents of the bottle.

Above the upper end of the stopper 13 the bore of the neck 10 is slightly enlarged as at 14 and provided with a plurality of radially disposed sockets 15. The sockets 15 are so formed as to provide shoulders 16 at their upper ends which extend at an approximately right angle to the wall of the adjacent bore of the neck. It will also be noted that by reason of the slightly enlarged portion 14 of the bore a shoulder 17 is formed adjacent the upper end of the stopper, this shoulder also extending at a substantially right angle to the general extent of the bore.

The stopper locking device consists of a sealing disk 18 provided with a series of spring fingers 19 and having its central portion formed concavo-convex as shown at 20. As the disk 18 is forced into the enlarged portion 14 of the bore of the neck and engages the shoulder 17, the spring fingers 19 seat within the sockets 15, their outer ends bearing against the shoulders 16. Should the stopper 13 be formed of cork or a like slightly elastic material, the stopper

may be made slightly longer than is shown in the drawing so as to co-act with the sealing disk to force the same upwardly in the bore of the neck. The tendency of the stopper to force the disk upwardly would naturally force the spring fingers 19 into binding engagement with the shoulders 16 of the sockets and thus obtain a more positive locking action.

After the locking device has been arranged in place as shown in Fig. 1 its removal is absolutely prevented. The spring fingers project almost entirely within the sockets 15 and thus may not be effectually engaged by a sharp tool or the like with a view of removing the same from the sockets. On the other hand the concavo-convex portion of the disk prevents the removal of the spring fingers from the sockets by pressing downwardly on the central portion of the disk. By bending the disk in this manner should pressure be exerted upon the central portion thereof the spring fingers will be more securely forced into the sockets instead of having a tendency to move outwardly therefrom.

From the foregoing it is believed that the advantages and novel features of my invention will be readily understood and therefore further detailed description is deemed unnecessary.

In reducing my invention to practice I find that the form referred to herein as the most practical and preferred embodiment is the most efficient, but realizing that certain conditions will necessarily vary in concurrence with the adoption of my device, I desire to emphasize the fact that various minor changes in the details of construction and in the proportion of parts may be resorted to when required without sacrificing any of the advantages of my invention as defined in the appended claims.

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

1. A bottle having an annular shoulder within its neck and a plurality of spaced sockets above said shoulder and adjacent thereto, said sockets increasing in depth from the shoulder upward and terminating in abrupt shoulders at their upper ends, and a sealing disk held on said inner shoulder and provided at its edges with a plurality of spring fingers seated in the said sockets with their upper ends in contact with the shoulders thereof.

2. A bottle having an annular shoulder within its neck and a plurality of spaced sockets above said shoulder and adjacent thereto, said sockets increasing in depth from the shoulder upward and terminating in abrupt shoulders at their upper ends, and a sealing disk held on said inner shoulder and provided at its edges with a plurality of spring fingers seated in the said sockets with their upper ends in contact with the shoulders thereof, said sealing disk having its middle portion pressed upwardly to increase the difficulty of removing the disk.

3. A bottle having the upper portion of the opening in its neck enlarged to form an inner shoulder and having the walls of the enlarged portion formed with upwardly tapering sockets adjacent the annular shoulder, said sockets terminating at their upper ends in abrupt shoulders, and a sealing disk having an integral portion in contact with the inner annular shoulder, and having its central portion pressed upwardly into concavo-convex form, and having a plurality of spring fingers around its edge to fit within the tapering sockets with their upper ends in contact with the abrupt shoulders at the upper ends of the said sockets.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY W. CYRUS.

Witnesses:

JAS. M. WAGGENER,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."