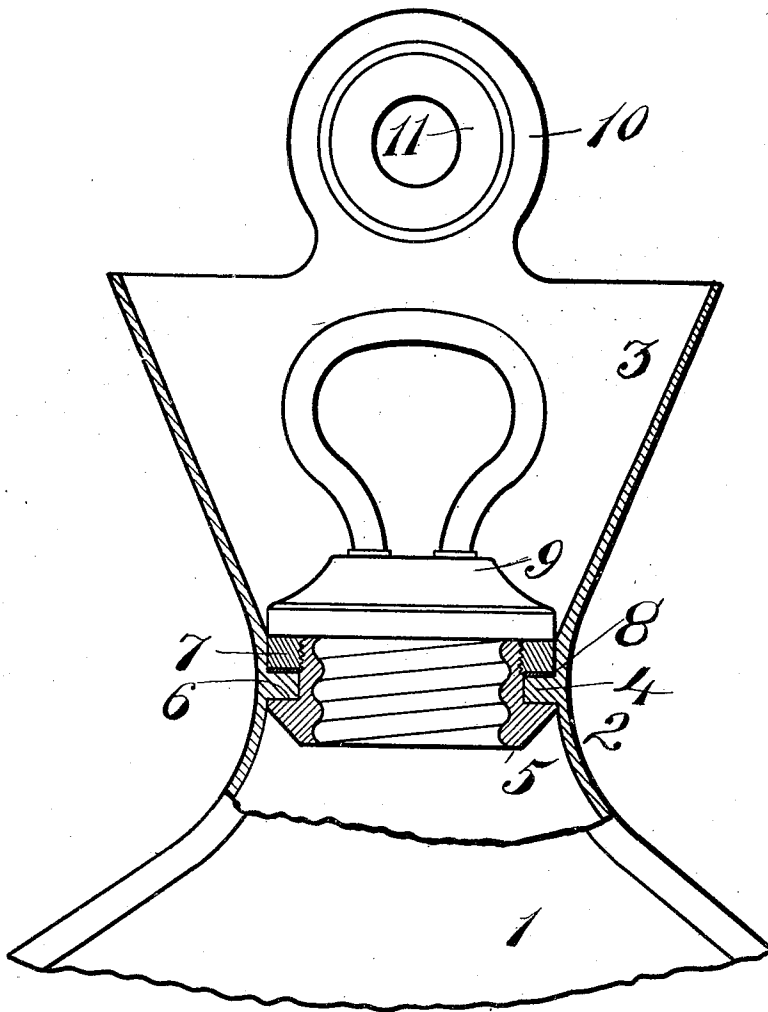


No. 809,141.

PATENTED JAN. 2, 1906.

E. J. SCHUTZ.
HOT WATER BOTTLE.
APPLICATION FILED MAR. 27, 1905.



Witnesses.
J. H. Stuart
Glenara Fox

Inventor,
E. J. Schutz
by C. E. Humphrey
Atty.

UNITED STATES PATENT OFFICE.

EDWARD J. SCHUTZ, OF AKRON, OHIO.

HOT-WATER BOTTLE.

No. 809,141.

Specification of Letters Patent.

Patented Jan. 2, 1906.

Application filed March 27, 1905. Serial No. 252,401.

To all whom it may concern:

Be it known that I, EDWARD J. SCHUTZ, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented new and useful Improvements in Hot-Water Bottles, of which the following is a specification.

My invention relates to improvements in the manufacture of hot-water bottles.

The primary object of this invention is to provide means for retaining the stopper-receiving socket in the neck of the bottle.

The invention aims in accomplishing the before-mentioned object to provide a peculiarly-constructed socket to be firmly retained in position and yet detachable at will and one which can be inserted in the neck of the bottle after the bottle has been constructed as contradistinguished from building or securing the socket immovably in the neck of the bottle by cement or wires.

The invention further aims to provide such means for the retention of the socket in place as will at all times insure a fluid-tight joint between the side walls of the neck of the bottle and the socket.

With the foregoing and other objects in view the invention consists of the novel construction, combination, and arrangement of parts constituting the device to be hereinafter referred to, and illustrated in the accompanying drawing, which forms a part of this specification, in which is shown the preferred embodiment of the invention; but it is to be understood that changes, variations, and modifications can be resorted to which come within the scope of the claims hereunto appended.

The drawing shows the upper end of a hot-water bottle with the neck portion in vertical central section and the bottom of the bottle, which is of the ordinary kind, broken away.

In the drawing, 1 represents the body portion of the hot-water bottle, having its neck portion 2 inwardly converging on curvilinear lines and then outwardly flaring to form the filling-funnel 3.

It will be noted by an examination of the drawing that the body, neck, and funnel are integral, thereby eliminating the disadvantages of fastening the neck of the bottle to the funnel portion by a separate operation.

In the neck portion 2 of the bottle is an annular internal rib 4, integral with the material of which the bottle is composed, and

this rib, which will be hereinafter more fully referred to, constitutes the device to which the stopper-receiving socket is attached, and this invention involves making the socket in two portions capable of cooperation with each other in such a manner as to firmly compress and grasp the annular rib 4. The form of socket which I prefer to use with this bottle consists of a main portion 5, which is hollow and provided in its interior with rounded female threads, and its lower portion is made in the shape of a frustum of an inverted cone, and this beveling of the lower end of the socket is done so that when the socket 5 is inserted from above it will pass easily by and force backward the annular rib 4 to permit of its passage. On the outside of this member 5 of the socket is a shoulder 6, and the balance of the upper portion of the exterior of the member 5 is approximately cylindrical and is provided with exterior threads. After the member 5 of the socket has been inserted in the neck of the bottle there is screwed onto the exterior threads thereof a ring 7, having its interior threaded, and the manipulation of this ring 7 on the exterior threads of the member 5 will compress the annular rib 4 upon the shoulder 6, the amount of compression given to the rib 4 being governed by the number of revolutions imparted to the ring 7.

In practice I prefer to insert between the upper face of the rib 4 and the under face of the ring 7 an independent ring 8. This ring 8 is inserted, as described, to prevent the wearing or grinding away of the rib 4 by the revolution of the ring 7 as it gradually compresses it, the ring 8 having sufficient frictional engagement with the upper face of the rib 4 to remain stationary while the ring 7 is revolved, and the wear incident to this revolution will be wholly upon the rings 7 and 8.

The central opening in the member 5 is closed by the ordinary stopper 9 in the ordinary manner now in common use, and the upper part of the funnel 3 is provided with an ear 10, through which is a gromet 11 to permit of the hanging up of the bottle or suspending it when not in use.

It will be apparent from the foregoing that the bottle and funnel may all be constructed in one operation without requiring vulcanizing or cementing of the stopper-receiving socket into the neck of the bottle; but this socket may be placed in the completed bottle after the vulcanizing process has been con-

cluded. It will also be seen that if for any reason it is necessary to remove the socket from the neck of the bottle it may be readily done at any time and that the clamping or engagement of the internal rib 4 between the ring 7 and member 5 will afford at all times a perfect and efficient seal against the escape of the contents of the bottle.

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

1. A water-bottle having its body portion extended to form a filling-funnel and further having its neck provided with an integral inwardly-extending annular rib, and a stopper-receiving means clamped to said rib.

2. A water-bottle having its body portion extended to form a filling-funnel and further having its neck provided with an integral inwardly-extending annular rib, a socket-forming means arranged within said neck and having a portion thereof engaging one face of said rib, and means engaging said socket-forming means for clamping the socket to the rib, said socket-forming means adapted to receive the bottle-stopper.

3. A water-bottle having its body portion

extended to form a filling-funnel and further provided with an integral inwardly-extending annular rib in the neck portion thereof, a socket-forming means arranged within said neck and having a portion thereof engaging one face of said rib, and means engaging said socket-forming means for clamping the socket-forming means to the rib, said socket-forming means adapted to receive the bottle-stopper.

4. A water-bottle having its body portion extended to form a filling-funnel and further provided with an integral inwardly-extending annular rib in the neck portion thereof, a socket-forming means having a part thereof engaging one face of said rib, a ring mounted upon the opposite face of said rib, and means engaging the socket-forming means for clamping the same to the rib, said socket-forming means adapted to receive the bottle-stopper.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

EDWARD J. SCHUTZ.

Witnesses:

C. E. HUMPHREY,

GLENARA FOX.