

C. ELLIS & N. L. FOSTER.
MULTICONTAINER BOTTLE.
APPLICATION FILED MAY 14, 1909.

1,007,679.

Patented Nov. 7, 1911.

Fig 1

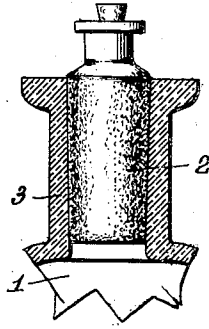
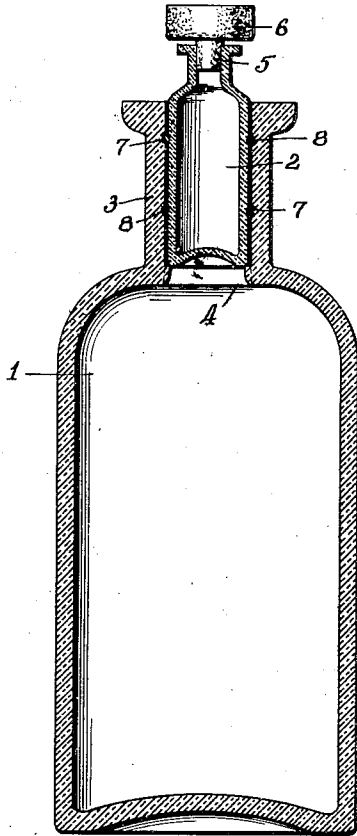
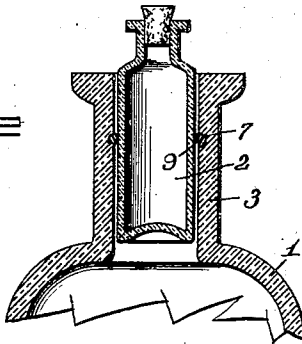


Fig 3

Fig 2



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UNITED STATES PATENT OFFICE.

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MULTICONTAINER-BOTTLE.

1,007,679.

Specification of Letters Patent.

Patented Nov. 7, 1911.

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To all whom it may concern:

Be it known that we, CARLETON ELLIS and NATHANIEL L. FOSTER, citizens of the United States, residing at Larchmont, in the county of Westchester and State of New York, and at New Rochelle, New York, respectively, have invented certain new and useful Improvements in Multicontainer-Bottles, of which the following is a specification.

This invention relates to multicontainer bottles, and particularly to bottles to be used for containing medicaments; and it comprises a plurality of nesting or engaging bottles, the body of one such bottle being adapted for a stopper-like engagement with the mouth of another such bottle, and each such bottle being adapted to contain liquids to be used in conjunction or in connection with one another; all as more fully herein- after set forth, and as claimed.

It is frequently necessary to use one liquid directly after an application of another liquid, as for instance, in surgery where a wound or cut is being treated. In such cases, generally an antiseptic is first applied to the wounded part, or a wash is first used, and then a healing lotion or a substance adapted to form a protective coating over the treated place is next applied. And it is often extremely desirable that there should be no time lost between the first and second applications. For instance frequently a small cut is first washed and antisepticized with a solution of hydrogen peroxid, and then a "liquid court plaster" is applied to the cut. It is very convenient to have both the medicaments in place when needed in such emergencies and this is often necessary when an accident of any severity has occurred. Containers under the present invention are very desirable for holding such liquids adapted for conjoint use as healing or antisepticizing lotions, and as coating or medicinal substances to be applied in connection with such a lotion or antiseptic. In one form of our invention we use a relatively large bottle which may serve to contain for instance such a solution as hydrogen peroxid, for treating cuts, bruises and the like and a relatively small bottle adapted to function as a stopper for the larger one, such smaller bottle serving for instance as a container for any of the well known liquid court plasters, such as collodion. The smaller bottle acting as a stopper for the

larger bottle is always in place when wanted since the larger cannot be stoppered without it, and serves a useful purpose when so in place, preventing evaporation of the liquid in the larger bottle in the same manner as an ordinary stopper. Being of the ordinary shape with a flat or incurving bottom enabling it to stand alone, the stopper bottle is capable of independent use.

One of the commonest solutions used for treating accidental injuries is the well known 3 per cent. or 10-volume solution of hydrogen peroxid. This solution on standing loses its strength if left exposed to contamination from a dust laden atmosphere since dust finding its way into the solution starts a decomposition with a result of setting free oxygen. This oxygen being gaseous, if the bottle be tightly stoppered, explosions are apt to result. In multicontainer bottles under the present invention, this may be provided for, the engagement of the bottle and stopper bottle being such as to provide means for the escape of liberated gas while preventing admission of air and dust to any substantial amount. This may be done by providing the base of the stopper bottle with washers arranged therearound in such a manner as to allow them to function as valves, permitting the gas to pass outward when pressure in the container rises to any extent above that of the atmosphere while preventing any substantial inward passage of air.

In the accompanying illustration are shown more or less diagrammatically, embodiments of our invention. In this showing:—Figure 1 represents a vertical section of a pair of nested bottles under the present invention; Fig. 2 is a detail view of an alternative method of placing gaskets between the bottle and stopper bottle; and Fig. 3 is a view of an alternative form.

In the illustration of Fig. 1 but two nested bottles are shown, though obviously more might be employed. The larger of these bottles 1, has a relatively large neck in which is seated a smaller bottle 2. The larger bottle may be used to contain a solution of an antiseptic, such as hydrogen peroxid, a healing lotion or other medicament which may be desired. We regard it as particularly adapted for containing hydrogen peroxid. The smaller bottle may be used to contain a liquid court plaster, such as collo-

dion, healing oil or any other protective medicament. As shown, the larger bottle is or the ordinary shape, having a straight neck 3. The stopper bottle is adapted for independent use and of such a size and shape as will facilitate its being placed in position in the neck of the larger bottle. The neck of the larger bottle may be provided with a constriction 4 preventing the stopper bottle entering the larger bottle. The exterior of the stopper bottle and the interior of the neck of the larger bottle may be ground together to give a suitable fit if desired as shown in Fig. 3. Preferably, however, another type of engagement is used. The stopper bottle is provided with a closure 5 which may be any ordinary type of stopper, such as cork, rubber or glass. Preferably it is of glass and ground to fit the neck of the stopper bottle. If desired, this secondary stopper (5) may be provided with an enlargement 6 of such shape and size as to adapt it to be used for stoppering the primary bottle, if the stopper bottle be broken or mislaid.

In order that the small bottle may exactly fit and coincide with the internal dimensions of the neck of the larger bottle, as stated, the neck of the larger bottle and the body of the smaller bottle may be ground to fit together; but when it is desired to use the larger bottle for such liquids as hydrogen peroxid or when a cheaper article is to be produced, I provide the neck of the larger bottle and the body of the smaller bottle with circumferential grooves 7, and rubber or leather washers 8, at a plurality of points along its length. Such plurality of washers act as a steadying means, preventing lateral motion of the stopper, as would be the case were but one washer used. The washers also act as valves. As shown in more detail in Fig. 2, the grooves may be provided only in the larger bottle neck. This is a simpler and cheaper construction. The round rubber or leather gaskets employed in such grooves may also be, as shown, given a sort of flattened face 9. With this construction an edge of the washer rests against the stopper bottle in such a manner as to give a valve-like engagement therewith, permitting outward movement of gases more freely than inward. If desired, the grooves may be placed in a sort of spiral in the interior of the neck thereby facilitating engagement and disengagement with the stopper bottle in the neck of the larger bottle. This form of washer is very convenient in preserving liquids, such as hydrogen peroxid, which tend to give off gas since it prevents the possibility of an internal accumulation of pressure while preventing inward passage of dust laden air.

A round washer, however, serves the same purpose fairly well.

The form of stopper 5 having flange 6 adapted to engage the neck of the larger bottle is very convenient for many purposes when it is desired to use the smaller bottle separately and temporarily stopper the larger.

We do not limit our invention to the exact construction shown, as a departure from the specific and detailed description as shown will be considered within the general scope of our invention. For instance, there may be three bottles so arranged, although this is not generally necessary; or the smaller bottle may be inverted in the neck of the larger, though this is not usually desirable. When such a method of assembling the bottles is adopted it is well to have a rubber or other tightly fitting stopper in the neck of the smaller bottle and fastening means for the same. For liquids not having a tendency toward the evolution of gas, the alternative form shown in Fig. 3 is convenient. In this showing the basal portion of the smaller bottle 2 is adapted to fit in and directly engage the neck of the larger bottle 1. For this purpose the base of the smaller bottle and the inner neck of the larger bottle are ground to fit.

What we claim is:—

1. As a new article of manufacture, a multicontainer vessel comprising a plurality of bottles, one bottle having a body adapted to enter and seat within the neck of another bottle and having a bottom allowing it to stand alone and the neck of said other bottle being provided with a constriction limiting the inward passage of the first named bottle; and a plurality of intermediate gaskets between said body and said neck at different levels acting as steadying means when said first-named bottle is so seated, said gasket means being also constructed to operate as pressure relieving valves.

2. As a new article of manufacture, a multicontainer vessel comprising a plurality of bottles, one bottle having a body adapted to enter and seat within the neck of another bottle and a plurality of intermediate gasket rings facilitating such seating and adapted to permit relief of pressure within the last stated bottle, said gasket rings each having a flattened face and being so disposed as to give an edgewise engagement with the base of the first stated bottle.

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

CARLETON ELLIS.

NATHANIEL L. FOSTER.

Witnesses:

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JOHN R. JOHNSON.