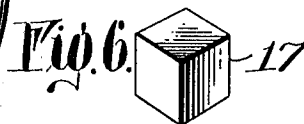
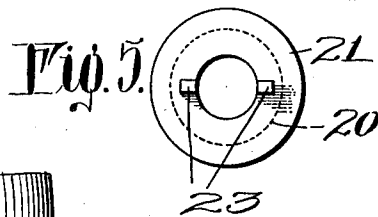
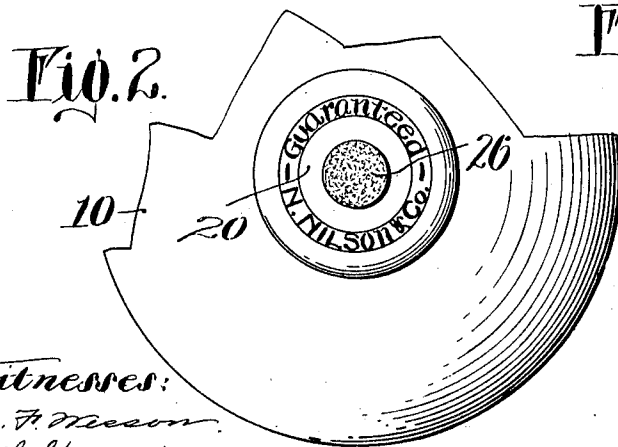
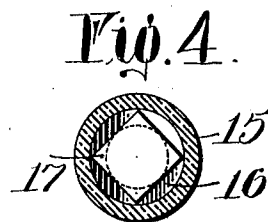
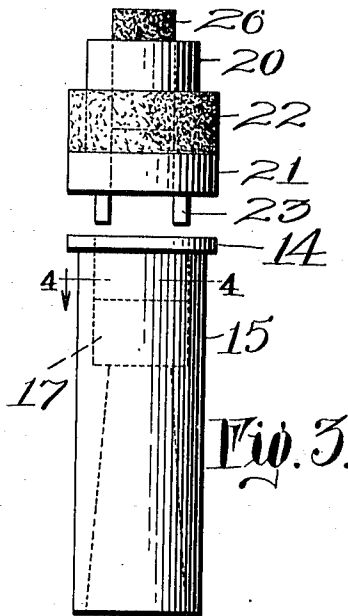
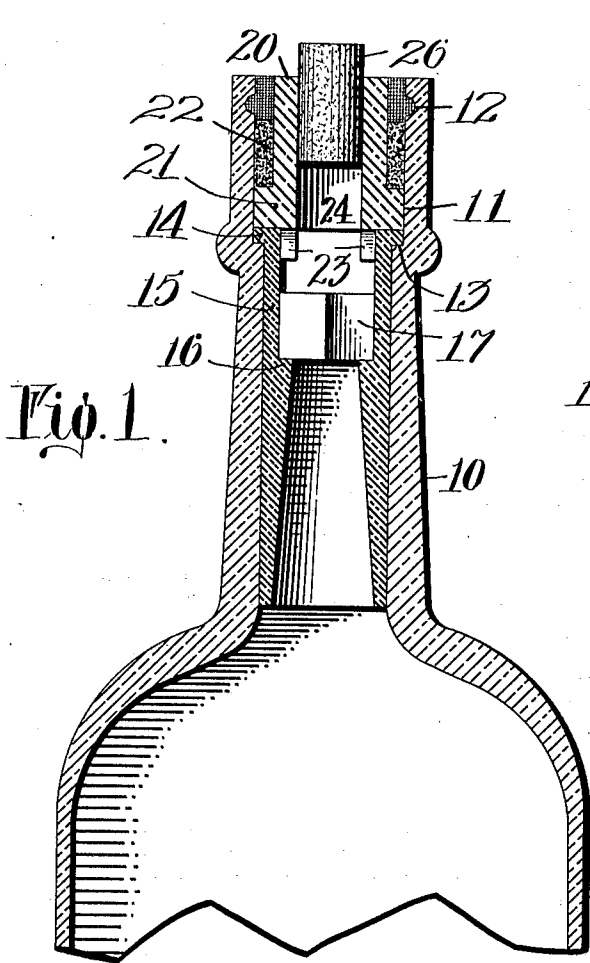


N. NILSON.
DOUBLE NECK BOTTLE.
APPLICATION FILED JUNE 17, 1912.

1,040,390.

Patented Oct. 8, 1912.



Witnesses:
C. F. Mason
O. J. Hartnett

Inventor:
Nils Nilson.
by Attorneys,
Southgate & Southgate.

UNITED STATES PATENT OFFICE.

NILS NILSON, OF WORCESTER, MASSACHUSETTS.

DOUBLE-NECK BOTTLE.

1,040,390.

Specification of Letters Patent.

Patented Oct. 8, 1912.

Application filed June 17, 1912. Serial No. 704,029.

To all whom it may concern:

Be it known that I, NILS NILSON, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Double-Neck Bottle, of which the following is a specification.

The principal objects of this invention are to provide an effective seal for a bottle of such a character that it can be employed with bottles of ordinary manufacture without any material alterations therein and at the same time to avoid the use of clumsy, large necks and the use of complicated mechanism and all springs and metal pieces, which are not in accord with the pure food law; to provide a construction which will be sanitary, neat and clean, nearly all the parts being of transparent glass so that the cleanliness will be obvious; to provide a construction which can be sealed after filling in such a way that it is practically impossible to break the seal without breaking the bottle; to combine therewith an arrangement by which the bottle can be emptied readily, but cannot be refilled in any ordinary manner; and to provide a glass valve which can be dropped into the neck any side up so that it will require no attention on the part of the assembler.

The invention also involves the simplification of bottles of this character so that they can be made in large quantities or small as desired at a relatively low expense.

Reference is to be had to the accompanying drawings, in which—

Figure 1 is a central vertical sectional view of a preferred form of the invention with the seals in place; Fig. 2 is a plan thereof; Fig. 3 is a side view of the inner parts removed from the bottle; Fig. 4 is a transverse sectional view of the same on the line 4—4 of Fig. 3; Fig. 5 is a bottom plan of one of the parts; and Fig. 6 is a perspective view of the valve.

The invention is shown as applied to an ordinary type of bottle having a neck 10 provided with an enlargement 11 therein near the mouth. At the top of this enlargement is shown a depression or circular groove 12 for a purpose to be described hereinafter. Aside from this groove the bottle shown is of well-known type and can be made without any material additional expense.

The bottom of the enlargement 11 forms

a shelf or shoulder 13. Resting on this is a glass ring 14 which constitutes an outwardly projecting ledge on the top of an inserted tube 15. This ledge is designed to rest on the shoulder 13 with the tube depending therefrom. This tube is provided with an inwardly extending flange 16 spaced from the top thereof so as to form an enlarged chamber above it. Within this chamber is designed to be located a valve 17 of a symmetrical form throughout. Preferably it is of cubical shape having of course all its surfaces equal and of the same form. For this reason it can be applied in any position in the tube so long as one of its surfaces is horizontal. This feature in itself is of importance because it eliminates all necessity of selection in the assembling of the device and facilitates that operation very materially. It is of such size that its longest dimension fits loosely within the enlarged cylindrical chamber at the top of the tube 15. The opening into the ledge 16 is of such size that when the valve 17 is in position it entirely covers and incloses this opening.

These parts being put in position after the bottle is filled the same is closed and used in the following manner: A glass stopper 20 is placed in the upper end of the chamber 11, this stopper being of smaller diameter than the chamber, but having a bottom circular flange 21 substantially fitting the inner walls of this chamber or enlargement. Above this flange is an annular cork or other yielding packing 22 which projects slightly beyond the edges of the flange 21 and effectively seals the chamber. From the bottom of the stopper 20 project downwardly a plurality of integral spaced projections or lugs 23 a distance sufficient to prevent the valve 17 from covering the bottom of a central passage 24 which extends through the stopper. The yielding packing 22 does not come to the top of the stopper but falls short thereof a sufficient distance to allow for a space around the stopper. This space is filled with cement after the other parts are in position. A cement preferably is used which is capable of hardening to such an extent that it will be substantially as hard as the glass, the so-called "white cement" being preferred. This cement is placed in a space formed at the top of the yielding packing and enters the groove 12 which effectively holds it in position. It is pro-

vided with the name or mark of the manufacturer or dealer impressed thereon while soft as shown in Fig. 2. After this is done an ordinary stopper 26 is placed in the pas-

5 sage 24.

The tube 15, valve 17, and stopper 20 are all preferably made of glass so that the parts are transparent, and it can be seen readily that the device is entirely clean. It will be
10 seen that the soft packing 22 is entirely surrounded by hard sanitary surfaces of glass and cement. It will be seen, therefore, that after the bottle is once filled and sealed it is a simple matter to remove the metal
15 seal and cork 26 to permit the bottle to be emptied. It will be seen also that the emptying operation can be carried on rapidly and effectually because of the wide passages for the liquid and admission of air, yet on
20 the other hand if it is attempted to refill the bottle it will be found to be practically impossible because of the operation of the valve 17 to cover the opening through the ledge 16 whenever the bottle is in upright
25 position or whenever pressure is applied to it or when the bottle is inverted. It will be seen furthermore, that it is practically impossible to introduce a wire or tube into the bottle for the reason that the only way to
30 get at the passage through the ledge 16 is to pass the wire or tube in through the passage 24, then downwardly around the cubical valve, and then inwardly under the same. This valve does not shift laterally on its
35 seat and although it can turn in the tube it cannot be moved to any position in which there is any exposure of any part of the passage through the flange 16, and it is just as difficult to pass a wire under it in one po-
40 sition as in another. Moreover the ease with which this valve turns is another safe guard, because in tampering with the bottle with a wire the valve will turn every time any pressure is put on it laterally and thus afford
45 no resistance that can be used to assist in bending the wire in the bottle neck. On account of the effective nature of the cement seal it is practically impossible to tamper with the bottle in that way as ordinarily the
50 bottle would be broken in breaking the seal.

When the stopper 20 is placed in position it is driven in until its bottom flange 21 rests

on the top of the flange 14 and thus holds that firmly in position so that there can be no movement of the tube 15.

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Although I have illustrated and described a preferred embodiment of the invention, I am aware that many modifications can be made therein by any person skilled in the art without departing from the scope of the
60 invention as expressed in the claims. Therefore, I do not wish to be limited to all the details of construction herein shown and described, but

What I do claim is:—

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1. As an article of manufacture, a bottle having a passage in the neck thereof and provided with an enlarged cylindrical chamber at the top of said passage, a square stopper in said chamber, the diagonal di-
70 mension of which is slightly less than the diameter of said chamber, whereby said valve cannot shift laterally, and a stopper above said chamber having a central pas-
75 sage therethrough and provided with integral projections extending downwardly from the bottom thereof into the chamber to permit the valve to move longitudinally but to prevent it from covering the central pas-
80 sage of the stopper when the bottle is inverted.

2. As an article of manufacture, a bottle having an inner transparent tube in the neck thereof provided with an enlarged chamber at the top, said tube having a cen-
85 tral passage down through the same from said chamber, a cubical stopper in said chamber, the diagonal dimension of which is slightly less than the diameter of said chamber, whereby said valve can turn in the
90 tube but cannot shift laterally, and a stopper above said tube having a central pas-
95 sage therethrough and provided with projections extending into the tube to permit the valve to move longitudinally but to prevent it from covering the central passage of the stopper.

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

NILS NILSON.

Witnesses:

ALBERT E. FAY,
C. FORREST WESSON.