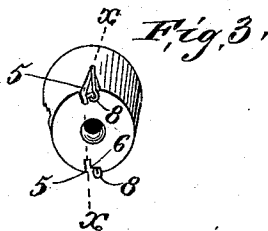
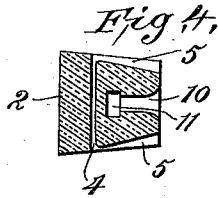
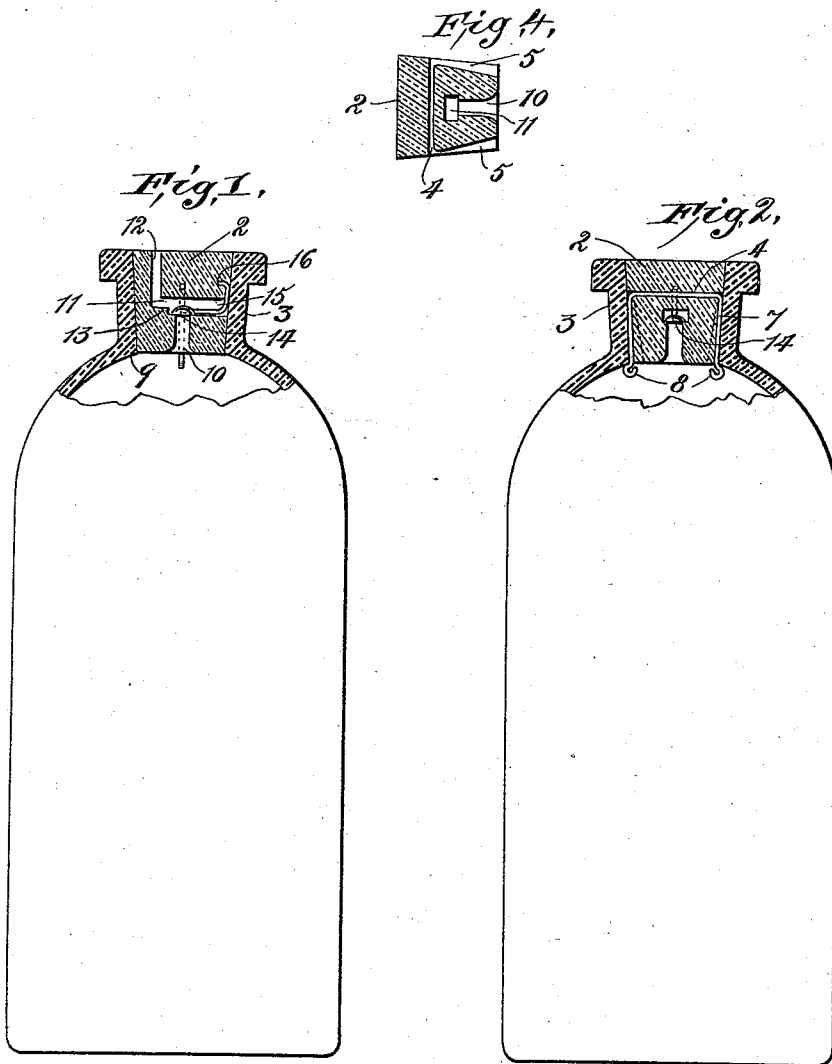


(No Model.)

B. F. BARNES.
NON-FILLABLE BOTTLE.

No. 551,917.

Patented Dec. 24, 1895.



WITNESSES:
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UNITED STATES PATENT OFFICE.

BURR F. BARNES, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO WILLIAM
MAITLAND ABELL, OF SAME PLACE.

NON-FILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 551,917, dated December 24, 1895.

Application filed March 4, 1895. Serial No. 540,423. (No model.)

To all whom it may concern:

Be it known that I, BURR F. BARNES, a citizen of the United States, and a resident of New York, county of New York, and State of New York, have invented certain new and useful Improvements in Non-Fillable Bottles, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar numerals of reference indicate corresponding parts in all the figures.

This invention relates to non-fillable bottles, and the object thereof is to produce a non-removable stopper for bottles, so constructed that when the bottle has been filled and the stopper applied the contents thereof may be discharged but the bottle cannot be refilled, whereby I guard against certain frauds frequently perpetrated against the proprietors or manufacturers of various kinds of liquors, cordials, medicines, &c., which are usually bottled by the proprietors or manufacturers and bear their distinctive marks, by persons or parties so inclined, who, the bottles having been emptied of their contents, refill the same with articles of their own manufacture, of the same general class as those originally contained in the bottles, or with a cheaper or worthless article of the same general class of any manufacture, and sell the same by recommending it as the article originally contained in the bottle. This object I accomplish by means of the construction described in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 represents a bottle provided with my improved stopper, the nozzle and stopper being in vertical section; Fig. 2, a transverse vertical section at right angles to that of Fig. 1; Fig. 3, a perspective of my improved stopper, and Fig. 4 a transverse section thereof.

Referring to the drawings, it will be seen that my improved stopper 2 consists of a single piece, preferably formed of glass, and adapted to be inserted and secured within the nozzle 3 of the neck of the bottle.

The stopper is provided with a transverse bore 4, and extending from each of the opposite ends of said bore downward to the lower end of the stopper is a groove 5, preferably increasing in depth from the bore to

the lower end, also widened at the lower end, as shown in Fig. 3, the widened portion decreasing in width from the bottom to the top, as shown in said figure, the construction being such that an abrupt shoulder 6 separates the deep portion from the wide portion of the groove. A spring-wire 7 is passed through the bore 4, and the ends thereof are bent down at each side so as to fit within the grooves 5, and each end is bent to form a hook, shoulder, or loop 8, adapted to extend outward from the stopper when the latter is in position, as shown in Fig. 2, under the shoulder 9 formed at the lower end of the neck or nozzle of the bottle, and hold the stopper in position.

Formed centrally and vertically in the bottom of the stopper is a bore or passage 10, which communicates with a transverse bore or passage 11, extending from one side of the stopper to and past the passage 10, as shown in Fig. 1, where it communicates with a vertical bore or passage 12, extending to and opening at the top of the stopper. That portion of the bore 11 which extends to and slightly past the vertical bore or passage 10 is deeper than the continuation thereof which connects with the vertical bore 12, whereby an abrupt shoulder 13 is formed in the lower wall or bottom of the passage 11. Adjacent to the shoulder 13, and over the opening of the bore 10, is placed an automatic valve 14, attached to and held in position by a small spring-wire 15, which extends through the bore or passage 11 to the outer end thereof and carried upward and the end thereof secured in a small hole 16, formed in the side of the stopper above the bore 11, and between which and said bore in the side of the stopper is a small groove, within which the wire 15 fits.

When the wire 15 is in place the valve 14 is over the entrance or upper opening of the bore 10, where it rests lightly, and will permit the liquid contained in the bottle to pass out through passages 10, 11 and 12, but will be seated and prevent any fluid from entering through said passages in an attempt to fill the bottle. The shoulder 13 in the bottom wall of the passage 11 prevents any interference with the operation of the valve 14 by inserting a wire or other device through the discharge-passage 11.

Normally, the lower ends of the spring-

wires 7 rest in the widened portions of the grooves or slots 5, as shown in Fig. 3, and when it is desired to place the stopper in position and close the bottle said wires must be pressed 5 into the deep portion of said grooves or slots, so as to allow the hooks or loops 8 to pass into the bottle, and the stopper is then pressed down into the nozzle to its lowest position, when the wires will spring back out of the 10 deep portion of said grooves into the normal position, and the hooks or loops 8 will rest beneath the shoulder 9 at the bottom of the nozzle or neck, where they will be held by the stopper and effectually prevent the removal 15 of the latter.

The operation is as follows: The bottle having been filled and the stopper applied as described, and the passage 12 having been closed by a plug or cork in the usual manner, if it is 20 desired to discharge the contents of the bottle it is only necessary to remove the plug or cork closing the passage 12 and hold the bottle in the usual position, when the contents thereof will flow out through the passages 10, 25 11 and 12, which may be of any desired size, the valve being unseated by the pressure of the fluids, and this operation may be repeated or continued until the bottle is emptied of its contents, the valve 14 being so lightly held 30 that but very slight pressure is needed to unseat it. If, now, an attempt be made to refill the bottle, the valve will be at once seated and no fluid substance can pass into the bottle, and it is evident that the operation of the 35 valve would be the same in whatever position the bottle be held or regardless of the means employed to fill it.

It will be observed that the top of my stopper is flush with the top of the nozzle, and

that the device is neat in appearance and comparatively inexpensive in construction. 40

Having fully described my invention, I claim and desire to secure by Letters Patent the following:

1. A non-removable stopper for bottles, consisting of a single piece having a vertical central passage 10, a vertical passage 12 out of alignment with said central passage, a transverse bore 11, extending from one side of the piece to the lower end of passage 12 and communicating with the upper end of passage 10, 50 a portion of said transverse bore being deeper than one end thereof and forming a shoulder 13, a valve arranged in said transverse bore beneath the horizontal plane of the shoulder 55 and a spring wire 15 attached to the side of the piece and to the valve to hold the latter in place, substantially as described.

2. A bottle stopper having a transverse bore, vertical grooves on opposite sides of said stopper extending from said bore to the lower edge 60 of the stopper, said grooves being deeper and wider at their lower ends than at their upper ends and each having a shoulder wire arranged in said bore and grooves and adapted 65 to fit in the deep portion of the grooves when the stopper is being inserted in the bottle and automatically spring into the shallow portion to secure the stopper in place, substantially 70 as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 2d day of March, 1895.

BURR F. BARNES.

Witnesses:

PERCY T. GRIFFITH,
A. M. CUSACK.