No. 827,212. PATENTED JULY 31, 1906.

A. & D. CELENZA.

NON-REFILLABLE BOTTLE.

APPLICATION FILED MAY 17, 1906.

Fig: 1.

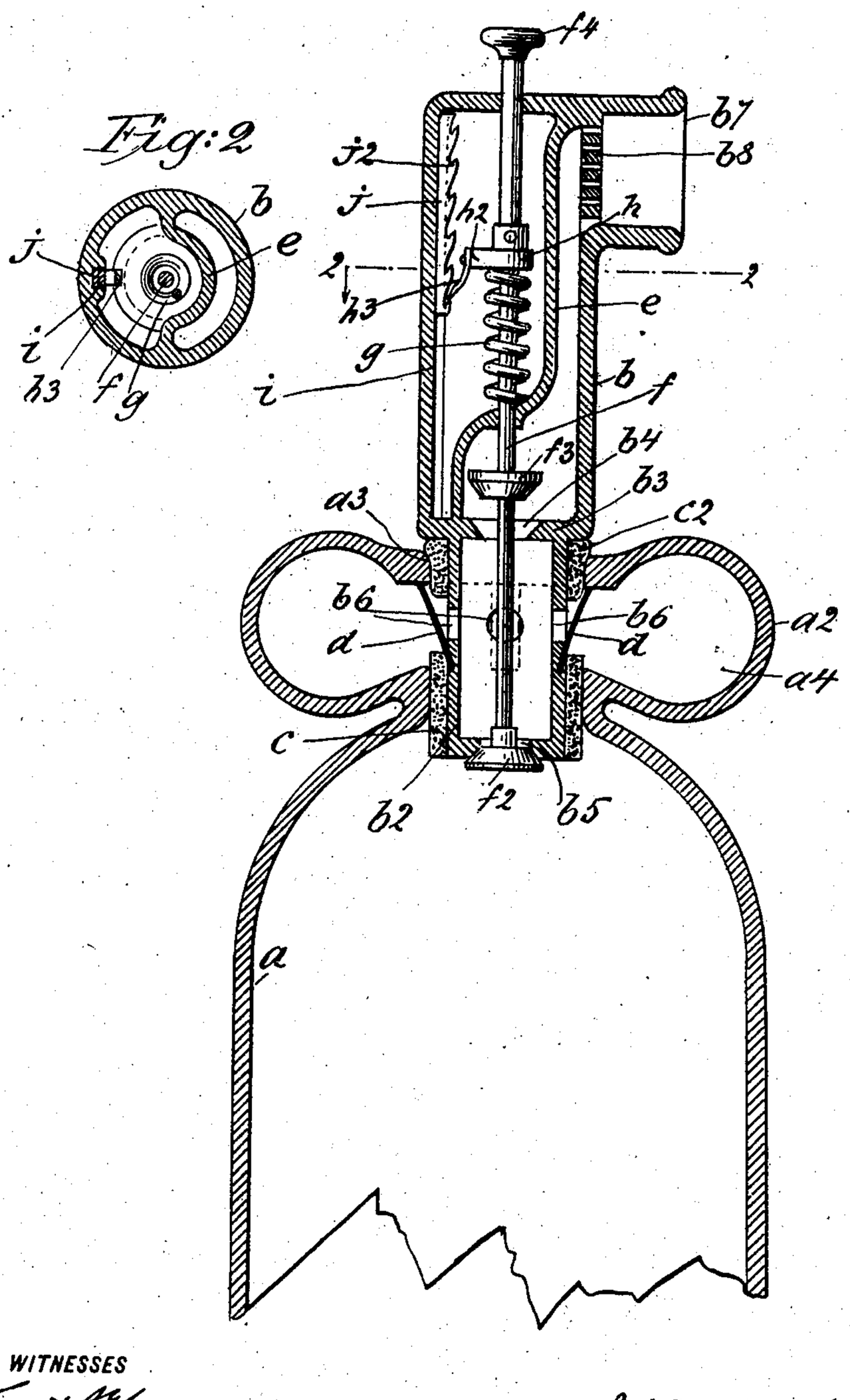

Fig: 2.

WITNESSES

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NON-REFILLABLE BOTTLE.

No. 827,212. Specification of Letters Patent. Patented July 31, 1906.

Application filed May 17, 1906. Serial No. 317,288.

To all whom it may concern:

Be it known that we, ARISTODEMO CELENZA and DOMENICO CELENZA, subjects of the King of Italy, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to bottles, jugs, jars, and similar vessels; and the object thereof is to provide an improved form of vessel of this class having a neck attachment which is so constructed that when the vessel has been filled and the neck attachment applied the vessel may be emptied of its contents, but cannot be refilled or reused.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of our improvement are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a central vertical section of a bottle involving our invention and provided with our improved attachment, and Fig. 2 a transverse section on the line 2 2 of Fig. 1.

In the practice of our invention, as shown in the drawings we provide a bottle a having an enlarged neck portion a^2, provided with a tubular neck-opening a^3, which extends through the enlarged neck portion a^2 into the bottle, and the enlarged end portion a^2 when the neck attachment is applied forms an annular chamber a^4.

The neck attachment b is tubular in form and provided at the bottom thereof with a tubular supplemental member b^2, adapted to be inserted into the opening a^2, and which is also separated from the main top portion of the neck attachment by a transverse partition b^3, having a central port or passage b^4, and the bottom portion b^2 is provided in the bottom thereof with a port or passage b^5. The bottom b^2 of the neck attachment is provided with a packing band or gasket c, adapted to close the bottom part of the opening a^3, and the top part thereof is provided with a packing band or gasket c^2, adapted to close the top part of the opening a^3, and the bottom part of said neck attachment is also provided with ports or passages b^6, which communicate with the annular chamber a^4, below which are secured springs d, which normally range outwardly and upwardly.

The top portion of the neck attachment b is provided with a laterally-directed tubular outlet b^7, preferably provided with a transverse perforated partition b^8, and said neck attachment is also provided adjacent to the outlet b^7 with a downwardly and transversely ranging partition e, and passing vertically through the neck attachment and the bottom portion thereof is a rod f, provided at its lower end with a valve f^2, adapted to close the port or passage b^5, and within the main portion of the neck attachment is a valve f^3, adapted to close the port or passage b^4, and the rod f passes through the laterally-ranging portion of the partition e, and mounted on said rod above said laterally-ranging portion of the partition e is a spring g, which bears on a collar h, secured to the rod f above the laterally-ranging portion of the partition e, and in one side of the top portion of the attachment opposite the outlet b^7 is a groove i, in which is mounted a rack-bar slide j, having inwardly-directed teeth j^2, and the collar h is provided with a projecting member h^2, to which is secured a spring-finger h^3, which is adapted to operate in connection with the teeth j^2 of the rack-bar slide j. The rod f projects above and through the top portion of the neck attachment, which is closed, and is provided with a knob or head f^4.

In practice the bottle a is first filled with the desired contents, and the neck attachment or the bottom portion thereof is forced downwardly through the annular enlargement a^3, formed in the neck portion of the bottle, into the position shown in Fig. 1, in which operation the springs d are forced inwardly and then sprung outwardly, as shown in said figure, and securely lock the neck attachment in said position. It will be observed that the bottle is normally closed when the neck attachment is applied by means of the spring g, which holds the valve f^2 seated, as shown in Fig. 1, and whenever it is desired to empty the bottle or discharge a portion of its contents the rod f is forced downwardly and the bottle is inverted or tilted. The operation of forcing the rod f downwardly opens the port or passage b^5 and closes the port or passage b^4, and the contents

of the bottle or a portion thereof will flow out into the annular chamber a^4 through the port or passage b^5 and the ports or passages b^6, and then by releasing the pressure on the rod f the spring g will force said rod into the position shown in Fig. 1, in which position the port or passage b^4 is opened and the port or passage b^5 is closed, and the contents of the chamber a^4 will flow out through the laterally-directed outlet b^7. By another downward movement of the rod f the above operation will be repeated, and at each of said operations the rack-bar slide j is forced downward one step, and in each upward movement of the rod f the spring-finger h^3 moves upward one step and locks the rack-bar slide j one step lower in the neck attachment. It will be understood that the top portion of the neck attachment and the rack-bar slide j may be of any desired length, and the length of said parts may be regulated so that when the bottle is emptied the rack-bar slide j will be in its lowest position, and in this position of said slide the spring-finger h^3 engages the top thereof, and the rod f cannot again be depressed, and the port or passage b^5 will be permanently closed by the valve f^2, and the bottle cannot be refilled.

The annular enlarged neck portion a^3 and the annular chamber a^4 therein may be of any desired size, and at each operation of the neck attachment, as hereinbefore described, or at each downward movement of the rod f said annular chamber a^4 may be entirely filled, and any desired part of the contents thereof or all of said contents may be poured out through the laterally-directed outlet b^7.

It will be understood that at each downward movement of the rod f the contents of the bottle can be transferred into the chamber a^4, and said chamber may be entirely filled or partially filled, according to the time that pressure on said rod is applied to the rod f; but as soon as the pressure on said rod is released the spring g will force the valve f^2 upwardly and close the port or passage b^5, and said port or passage can only be opened by depressing the rod f.

The rack-bar slide j may be made to snugly fit the groove i, so that it will not move except downwardly, when the spring-finger h^3 is operating in connection with the teeth j^2 on said rack-bar slide, or any suitable means may be provided for preventing the upward movement of said rack-bar slide.

It will be apparent that our improvement may be applied to any kind or class of vessels having the enlargement a^2 at the top or in the neck portion thereof, and it will also be apparent that our improvement may be applied to any vessel of the class specified without the neck attachment a^4, in which event the bottom portion b^2 of the neck attachment would be secured in the neck portion of the vessel, and the ports or passages b^6 would not be necessary, and in this event the size of the bottom portion b^2 of the neck attachment would determine the amount of the contents of the bottle discharged at each operation of the rod f or the amount of said contents that could be discharged at each operation of said rod.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A neck attachment for vessels of the class described, comprising a top portion having a bottom portion adapted to be secured in said neck, said bottom portion being provided with a bottom port or passage and with a top port or passage, a spring-supported rod passing vertically through the neck attachment and provided with valves adapted to close both of said ports or passages, a rack-bar slide mounted in one side of the top portion of the neck attachment, and a spring-finger adapted to engage the teeth of said slide, said neck attachment being also provided with an outlet.

2. A bottle or similar vessel provided with an enlarged neck member having a central vertical opening which communicates with the vessel, and a neck attachment having a bottom portion adapted to be secured in said opening and forming an annular chamber in said neck member and provided with side ports or passages which communicate with said annular chamber, said bottom portion of the neck attachment being also provided at the top and bottom thereof with ports or passages, and a spring-supported rod passing through said attachment and provided with valves adapted to close the ports or passages in the top and bottom portions of said neck attachment, a rack-bar slide mounted in one side of the top portion of the neck attachment, and a spring-finger connected with said rod and adapted to operate in connection with the teeth of said rack-bar slide, the top portion of said neck attachment being also provided with an outlet.

3. A bottle or similar vessel provided with an enlarged neck member having a central vertical opening which communicates with the vessel, and a neck attachment provided with a bottom tubular member secured in said opening and forming an annular chamber in said neck member and provided with side ports or passages which communicate with said chamber, the bottom member of the neck attachment being also provided at the top and bottom thereof with ports or passages and the top portion thereof being provided with a downwardly and transversely ranging partition, a spring-supported rod passing vertically through the neck attachment and provided with valves adapted to close the ports or passages at the top and bottom of the bottom portion of said neck attachment, a rack-bar slide mounted in one

side of the top portion of said attachment, and a spring-finger connected with said rod and adapted to operate in connection with the teeth of said slide, the top portion of said neck attachment being also provided with an outlet.

In testimony that we claim the foregoing as our invention we have signed our names, in presence of the subscribing witnesses, this 12th day of May, 1906.

ARISTODEMO CELENZA.
DOMENICO CELENZA.

Witnesses:
GIOVENNI MATERA,
PASQUALE MACHIAVERNA.