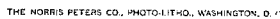


2 Sheets—Sheet 1.

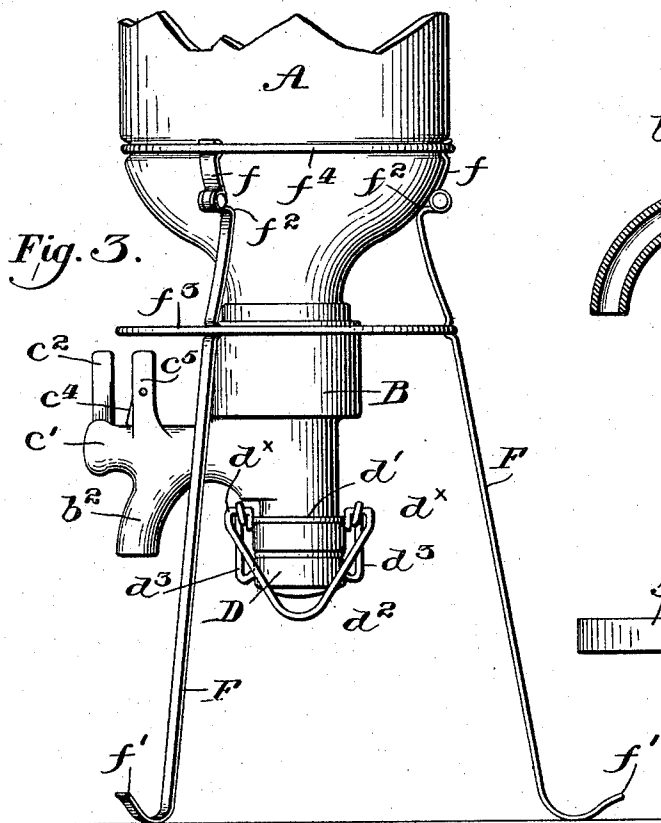
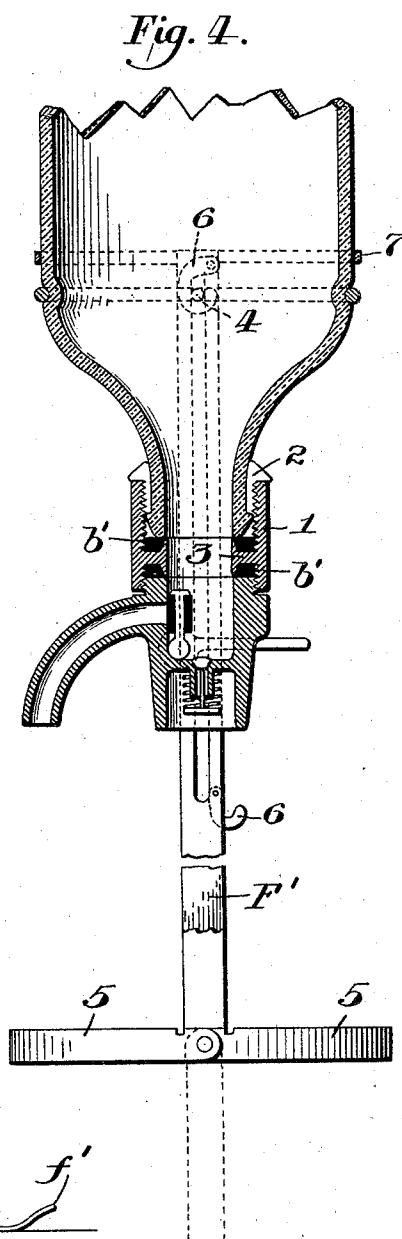
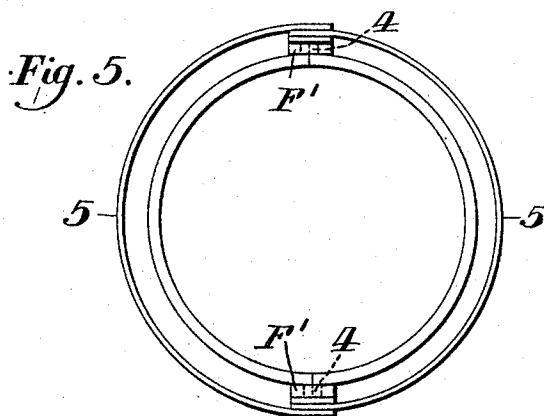
Patented May 4, 1897.



G. CORBION, Jr.
BOTTLE.

No. 581,978.

Patented May 4, 1897.



Witnesses.

A. V. Group

George H. Master.

Inventor.

George Corbion, Jr.
per John T. Nolan

Attorney.

UNITED STATES PATENT OFFICE.

GEORGE CORBION, JR., OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR, BY
DIRECT AND MESNE ASSIGNMENTS, TO FLORENCE L. SCHWERIN, OF
SAME PLACE.

BOTTLE.

SPECIFICATION forming part of Letters Patent No. 581,978, dated May 4, 1897.

Application filed November 23, 1895. Serial No. 569,875. (No model.)

To all whom it may concern:

Be it known that I, GEORGE CORBION, JR., a citizen of the United States, residing in the city and county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Bottles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

The main object of this invention is to provide a receptacle which may be readily and effectively charged with aerated or carbonated beverages of whatever nature, and which receptacle may be readily emptied in whole or in part of its contents without liability of ingress of air to the interior of the receptacle.

Another object of the invention is to provide novel means for preventing the accidental opening of the release or discharge valve.

Another object of the invention is to provide a simple and efficient supporting device for the bottle while the contents are being dispensed or discharged therefrom.

With these objects in view the invention comprehends various novel features of construction and organization of parts, which will be hereinafter particularly described and claimed.

In the drawings, Figure 1 is a vertical section of a bottle embodying my invention. Fig. 2 is a plan thereof. Fig. 3 is an elevation of the bottle as inverted and supported. Fig. 4 is a vertical section of a bottle, illustrating a modification of the filling and discharging head and of the supporting device. Fig. 5 is a plan of said device. Figs. 6 and 7 are sections of modified stopper constructions hereinafter referred to.

A represents a bottle of appropriate shape, its neck being exteriorly screw-threaded for the reception of an internally-threaded tubular head B of peculiar construction. Interposed between the end of the bottle-neck and an annular shoulder *b* on the head is a rubber gasket *b'*, by means of which an air-tight connection between the parts may be secured. Extending from the side of the head is a nozzle *b²*, the mouth of which is directed upward for a purpose below explained. The inner end of the nozzle is normally sealed by means

of a valve C, the stem *c* of which extends through the nozzle and through a recessed projection *c'* on the latter, so that the pressure of the confined gases in the bottle serves to press the valve to its seat and thus insure an effective seal. On the outer end of the stem is a depending arm *c²*, against which acts a suitably-disposed spring *c³* in said projection in a manner to retract the valve normally to its seat. Hence by pressing the arm inward against the stress of the spring the valve may be unseated to open the communication between the nozzle and the interior of the bottle. To obviate liability of the valve being accidentally opened, I provide proper means, which will be farther on described.

The tubular head B is equipped with an appropriate stopper D, which in the present instance is of the so-called "lightning" type—that is to say, the stopper is connected with a suitable bail-and-lever device, which may be actuated by properly-applied thumb-pressure to effect the rapid withdrawal of the stopper from or its forcible insertion into the mouth of the tubular head, as desired. In the construction herein shown there are formed on the neck of the head two diametrically opposite studs *d*, which are constructed of the contiguous outwardly-bent ends of two semicircular pieces of wire *d'*, that embrace said neck. Coiled on these studs are the extremities of a yoke-lever *d²*, the same being offset, as at *d^x*, to afford cam or eccentric members. On these members the stopper-supporting bail *d³* is pivoted, to the end that when the lever is moved upward the stopper will be pressed by the eccentric action into the mouth of the bottle, and the converse. The bail comprises a single piece of wire bent to form a semicircular member *d⁴*, which embraces the neck of the head, diametrically opposite coils *d⁵*, which encircle the eccentric members of the lever, and vertical members *d⁶*, rising from said coils and terminating in in-turned teats *d⁷*, that freely enter opposite sockets (or a groove) in the sides of the stopper, and thus pivotally support the latter.

Through the center of the stopper is a vent or passage *e*, the lower or inner end of which is normally sealed by means of a valve E, that

bears against the end of the stopper. The valve-stem rises into the vent or passage, while a suitably-disposed spring e' , encircling said stem, takes against a head e^2 on the latter and a stop e^3 in the vent or passage, so as to maintain the valve normally to its seat. As will be observed, the top of the valve-stem is confined within the stopper, so that there shall be no liability of the stem being accidentally depressed.

To charge the bottle with carbonated beverages—such as soda, mineral waters, champagne, &c.—the same are introduced by way of the nozzle, the valve C of course being opened and the mouth of the head being sealed. By periodically depressing the valve-stem in the stopper (by means of a pin or the like) during the charging operation a vent is provided to effect the escape of the compressed air, thereby enabling the charging operation to be carried on without cessation or loss of time. When the operation has been completed, the valve C is closed, thus hermetically sealing the bottle and preventing the escape of the carbonic-acid gas.

To fill the bottle with beers or other liquids with or without the addition of chemicals, the stopper is withdrawn and the liquids are introduced to the bottle by way of the neck instead of by the nozzle. This being done, the bottle is hermetically sealed by inserting the stopper in the head. If it then be desired further to treat the contents or to let off all the air on top of the liquid, it is merely requisite to admit or force the gas or chemical through the nozzle into the bottle and to permit the air on top of the liquid to escape by way of the vent in the stopper, as above explained.

It will be seen that if the stopper be withdrawn the bottle may be readily washed out without the necessity of removing the tubular construction.

In order to dispense or draw off the contents of the bottle, as desired, the bottle is inverted and the release-valve C is manipulated to permit the discharge of the liquid by way of the nozzle into a suitably-located receptacle.

As a simple and efficient means for supporting the bottle in the inverted position I have provided the following arrangement: Affixed to the upper portion of the body of the bottle, preferably at equidistant points thereon, are brackets f , to which are pivoted the ends of legs F , which are so arranged that they may be folded against the side of the bottle. The lower extremities of the legs extend to the bottom of the bottle, being preferably, though not essentially, provided with inturned portions f' , which may be sprung under the basic edge of the latter, so as to retain the legs in the folded position. Preparatory to inverting the bottle the legs are drawn outward and thrown upward, so as to present a tripod for the support of the inverted bottle, as seen in Fig. 3. The legs are provided near their pivotal connections with shoulders f^2 , respectively, which

take against the opposing shoulder of the bottle when the legs are thrown upward, so as to determine the inward movement of the latter. To prevent the outspreading of the legs, there is provided a movable ring f^3 , which is so arranged that it may be slipped upon the extended legs in a manner to register with recesses or depressions therein, the yielding or springing nature of the legs permitting this to be effected. When the legs are in their normal or folded condition, the ring f^3 rests upon a clamp-ring f^4 , that is fitted to an external groove in the bottle, such clamp-ring in the particular construction shown embracing and retaining the brackets f , to which the legs are pivoted.

Obviously a bail or handle may be connected with the clamp-ring to facilitate the handling or carrying of the bottle.

The means hereinbefore referred to for guarding against the accidental opening of the release-valve comprises in this instance a latch c^4 , which is pivoted at one end to a lug c^5 on the nozzle rearward of the valve-operating arm, such arm being provided on its opposite edge with a shouldered recess c^6 , into which the latch normally drops when the bottle is resting on its bottom. Thus accidental inward movement of the arm is prevented. When, however, the bottle is inverted, the latch drops by gravity, so as to release the arm.

In Fig. 4 I have shown a modification of the invention wherein the head, instead of being directly screwed to the neck of the bottle, is connected therewith by means of a coupling 1, which is screwed to the head and to a split or two-part collar 2 on the neck of the bottle, such coupling being provided with an internal flange 3, by means of which interposed gaskets $b' b'$ may be clamped against the bottle and the head, respectively. In this construction of head the stopper is omitted, the end of the head being closed by a perforated cover, to which a spring-controlled "snifter" or air-escape valve is fitted. Moreover, the release-valve for the nozzle, instead of being sliding, is a pivotal or swinging one that is controlled by an exterior arm or lever. Furthermore, the supporting device comprises longitudinally-slotted arms F' , through which extend appropriate guide-pins 4 on the sides of the bottle. On the outer ends of these arms are pivoted the extremities of two semicircular members 5, which are so arranged that they may be folded together to form a handle, as indicated by the dotted lines in Fig. 4, or be swung open so as to provide a base upon which to support the bottle. One of the arms is provided at the respective ends of its slot with latches 6, which are designed to be engaged with the guide-studs 4 to lock the arms in the extended or closed position, as desired—that is to say, when the arms are drawn upward, assuming the bottle to be resting on its bottom, the lower latch is engaged with the

stud, and when the arms are drawn down upon the bottle the upper latch is so engaged. A ring 7, connecting the lower or inner extremities of the arms, encircles the bottle and thus prevents the latter from tipping or swinging on the arms.

It will be obvious that other means for supporting the bottle in the inverted position may be employed without departing from the fair spirit of the invention.

In Figs. 6 and 7 I have shown modifications of the invention wherein the discharge-nozzles are formed on and constitute a part of the lightning stopper, such stopper in each instance thus being applied directly to the neck of the bottle. By either of these constructions the liquid may be introduced to the bottle directly by way of the bottle-neck when the stopper is withdrawn, and subsequently be discharged by way of the nozzle when the stopper is inserted and the bottle inverted, or the liquid may be introduced to the bottle by way of the nozzle without removing the stopper. In Fig. 6 the release-valve is represented as substantially similar in construction to that first described, while in Fig. 7 the valve is indicated as an ordinary key mounted in the upwardly-projecting nozzle on the stopper. In these last-described modified constructions the lever-and-bail devices for controlling the stoppers are omitted.

I claim as my invention—

1. The combination, with a receptacle, of a head thereon provided with an upturned nozzle, a valve therefor, a stopper in the head provided with a vent and vent-valve, and a bail-and-lever device for supporting and operating said stopper, substantially as described.

2. The combination, with a tubular neck or head, of a stopper therefor, a yoke-lever fulcrumed on the side of said neck or head and provided with eccentric portions, and a stopper-supporting bail mounted on said eccentric portions, said bail comprising a single piece of wire bent to form a semicircular portion which embraces the neck, coils which encircle the eccentric members of the lever, and vertical members rising from said coils and terminating in inturned teats that freely enter the sides of the stopper, substantially as described.

3. The combination, with a bottle, of a supporting device therefor, comprising shouldered legs pivotally mounted on the sides of the bottle and adapted to be folded upon the body of the bottle or swung beyond the neck

thereof, and a ring adapted to be slipped upon said legs when they are swung outward, substantially as described.

4. The combination, with a bottle of a supporting device, comprising shouldered legs pivotally mounted on the sides of the bottle, and provided with inturned lower extremities, and a ring adapted to be slipped upon said legs when they are swung outward, substantially as described.

5. The combination with a receptacle, of a head secured to the neck thereof, and having an upwardly-directed nozzle, a valve which controls the entrance to said nozzle from the receptacle, means whereby said valve is normally closed, an externally-projecting stem whereby it may be opened, a latch device for said stem, a stopper which closes said head, a vent-opening through said head, and a second and independent valve which normally closes said opening, substantially as specified.

6. The combination with a receptacle, of a head thereon, a stopper which closes the opening at the upper end of said head, said head having a vent-passage therethrough, a spring-actuated valve which normally closes said vent-passage, a laterally and upwardly extending nozzle which communicates with the interior of said head, a second normally-closed valve which controls said nozzle and means whereby said valve is prevented from accidental opening, substantially as specified.

7. The combination with a receptacle, of a head thereon provided with an upturned nozzle, a valve therefor, having an externally-projecting stem, a latch device for said stem, a stopper in the head provided with a vent and vent-valve, and a bail-and-lever device for supporting and operating said stopper, substantially as specified.

8. The combination with the bottle, of a supporting device therefor, comprising legs pivotally mounted on the sides of the bottle and adapted to be folded upon the body of the bottle, or swung beyond the neck thereof, the free ends of said legs having bent portions which form feet therefor, and which are also adapted to engage underneath the bottom of the bottle, substantially as specified.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

GEORGE CORBION, JR.

Witnesses:

JOHN R. NOLAN,
A. V. GROUPE.