(No Model.)

G. W. CLARK.

BOTTLE.

No. 307,630. Patented Nov. 4, 1884.

Fig. 1

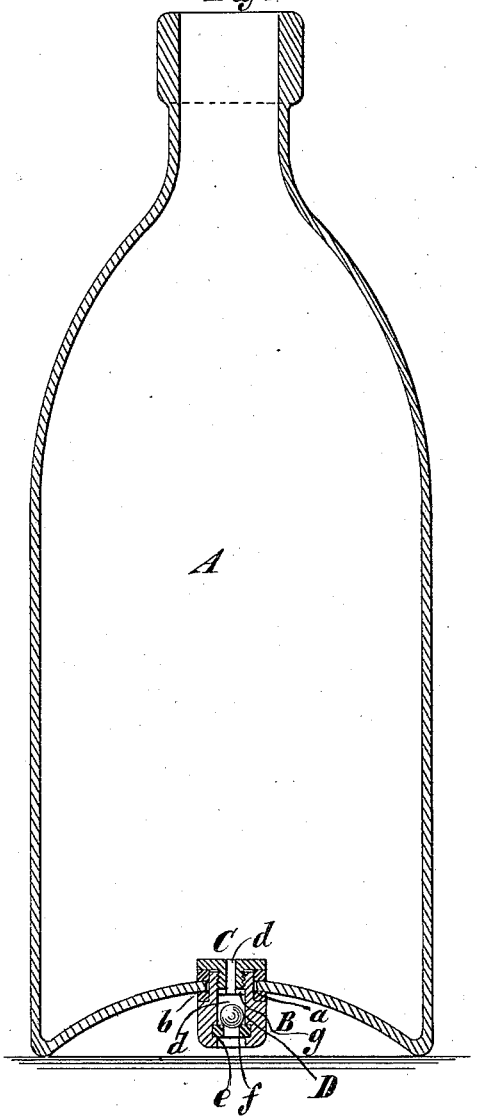
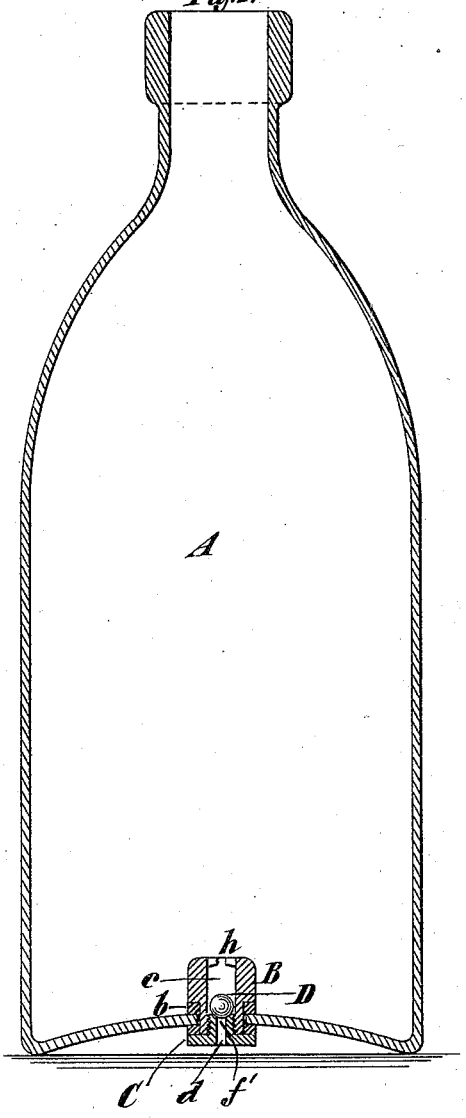


Fig. 2.



Witnesses:
James R. Bowen.
Alfred L. Brown.

Inventor:
George W. Clark,
by his attorney,
Edwin H. Brown.

UNITED STATES PATENT OFFICE.

GEORGE W. CLARK, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF TO MICHAEL H. HAGERTY, OF SAME PLACE.

BOTTLE.

SPECIFICATION forming part of Letters Patent No. 307,630, dated November 4, 1884.

Application filed April 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. CLARK, of Brooklyn, in Kings county, and State of New York, have invented a certain new and useful Improvement in Bottles, of which the following is a specification.

My improvement relates to that kind of a stoppered bottle which, when opened by removing the cork or stoppering device and then inverted, will discharge its contents directly from its so-opened end, in contradistinction to a stoppered bottle, the contents of which must first pass through a siphon-tube or the like.

The improvement consists in a stoppered bottle having in its bottom a vent-aperture and a valve therefor, as hereinafter more particularly recited and claimed.

In the accompanying drawings, Figure 1 is a central vertical section of a bottle embodying the improvement, and Fig. 2 is a similar section of a bottle embodying a modification of the improvement.

Similar letters of reference designate corresponding parts in both figures.

In Fig. 1, A designates a bottle, of glass or other suitable material, having its bottom swelled or extended up into the interior, and provided with a central hole or aperture, *a*.

B C designate a vent consisting of a body-piece, B, and securing-piece, C, applied to the hole or aperture *a* of the bottle. The body-piece B may be externally of cylindrical or other suitable form, and has a neck which fits snugly into the hole or aperture *a* of the bottle, and a shoulder below the neck extending under the portion of the bottle adjacent to the said hole or aperture. The securing device C has a hub which enters the neck of the body-piece B, and a flange which extends over that portion of the inner side of the bottom that is adjacent to the hole or aperture *a*. The hub of the securing-piece is externally screw-threaded, and the neck of the body-piece is internally screw-threaded for the purpose of securing the parts together and to the bottle. A washer, *b*, of india-rubber or other suitable material, is interposed between the shoulder of the body-piece and the bottle, and a similar washer may be interposed between the flange of the securing-piece and the bottle. The body-piece has a passage, *c*, extending longitudinally through it, and the securing-piece has a longitudinal passage, *d*, in line therewith, but made preferably of smaller size.

In the lower part of the interior of the body-piece is a circumferential groove, *e*, in which is inserted a ring of india-rubber or analogous material, *f*. This ring *f* forms a seat for a valve, D, which consists of a ball of metal, india-rubber, or other suitable material. The valve may be inserted through the lower end of the body-piece, and the ring *f* may be subsequently fitted into place. In the lower end of the securing-piece are a number of radial grooves, *g*.

When the bottle is filled and corked or otherwise closed, the pressure within it keeps the valve D down upon the seat *f*, and hence the vent is maintained closed; but when the bottle is opened and liquid is poured out, the reduction of pressure enables the valve to fall from the seat onto the end of the securing-piece. Owing to the grooves in the end of the securing-piece, the valve does not close the passage through it; hence air can enter the bottle so as to facilitate pouring out the liquid.

In Fig. 2 the bottle A has a differently-shaped bottom; hence the body-piece of the vent is extended into the bottle and the securing-piece is applied to the exterior. The seat *f'* for the valve is on the end of the securing-piece, and the ring *f* is omitted from the body-piece, the latter having prongs *h* extending over its passage to prevent the valve from dropping out.

By my improvement the pouring of liquids under pressure from bottles is greatly facilitated, and I am enabled to pour them out much more quietly than when the air has to enter at the same place whence the liquid flows.

I do not wish to limit myself to arranging the vent in the bottom, as it may be arranged in other positions below the mouth.

I am aware that a stoppered bottle having in its bottom a vent-aperture controlled by an automatically-operating valve is old, and the same does not, broadly, constitute a part of my invention.

I am also aware that a stoppered bottle having in its bottom a vent-aperture controlled by an automatically-closing valve, and means exterior to the bottle for operating the valve, is old, and the same does not, broadly, constitute a part of my invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination, with a bottle, of a vent consisting of the body-piece B, provided with a valve-seat, securing-piece C, and valve D, substantially as specified.

GEORGE W. CLARK.

Witnesses:
T. J. KEANE,
JAMES R. BOWEN.