R. G. SLEE.

LIQUID DISPENSING APPARATUS.

APPLICATION FILED MAR. 27, 1911.

999,602.

Patented Aug. 1, 1911.

Fig. 2.

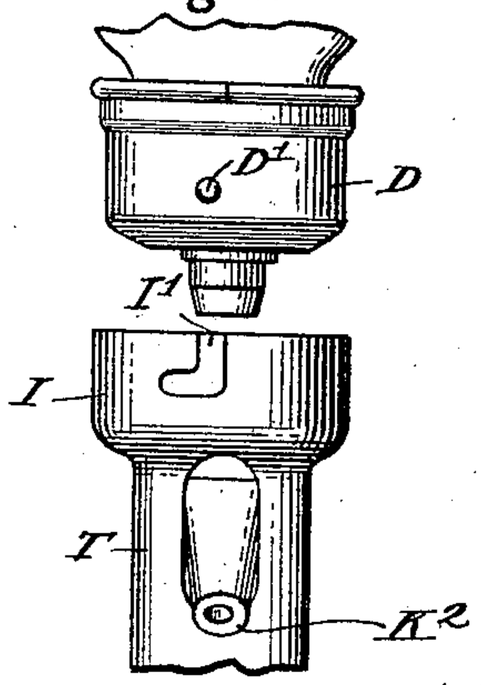

Fig. 1.

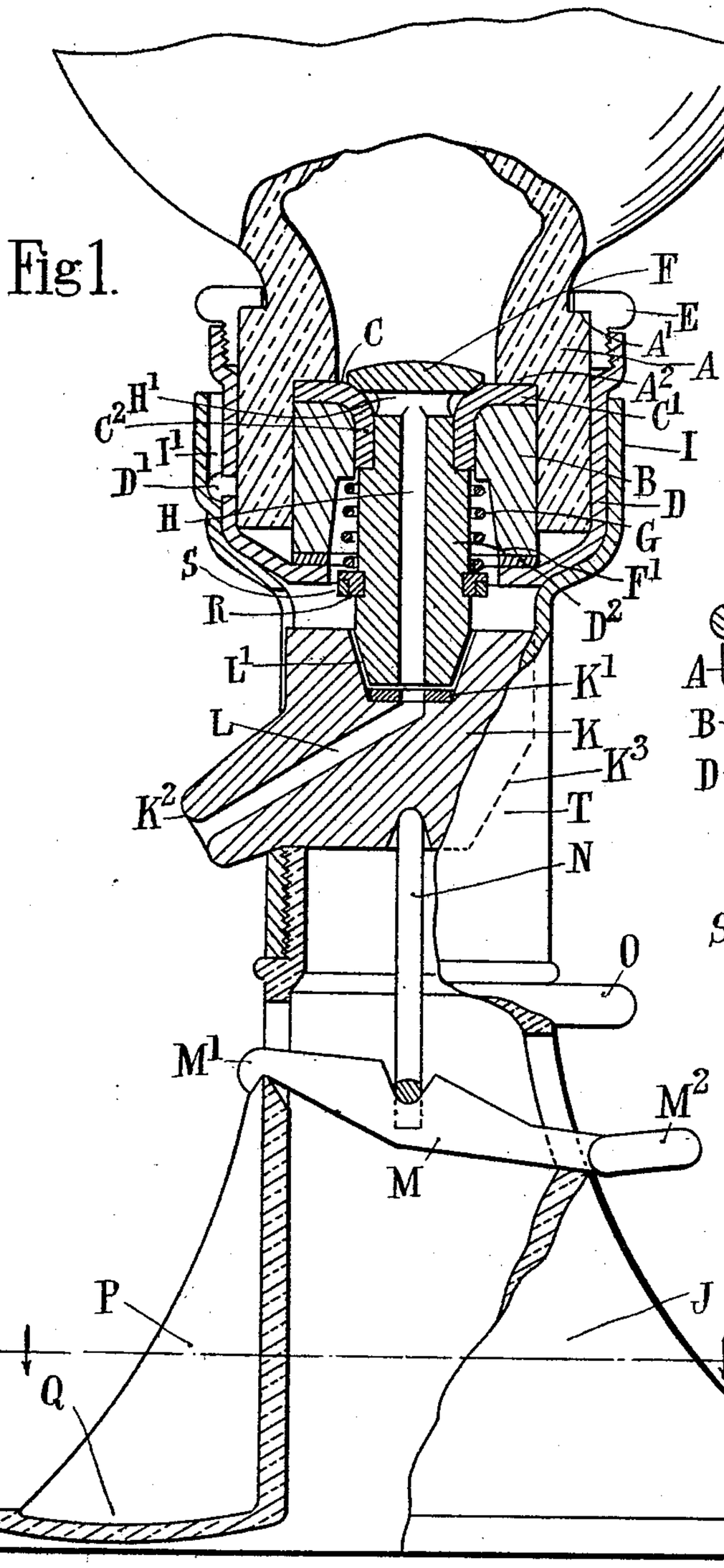

Fig. 3.

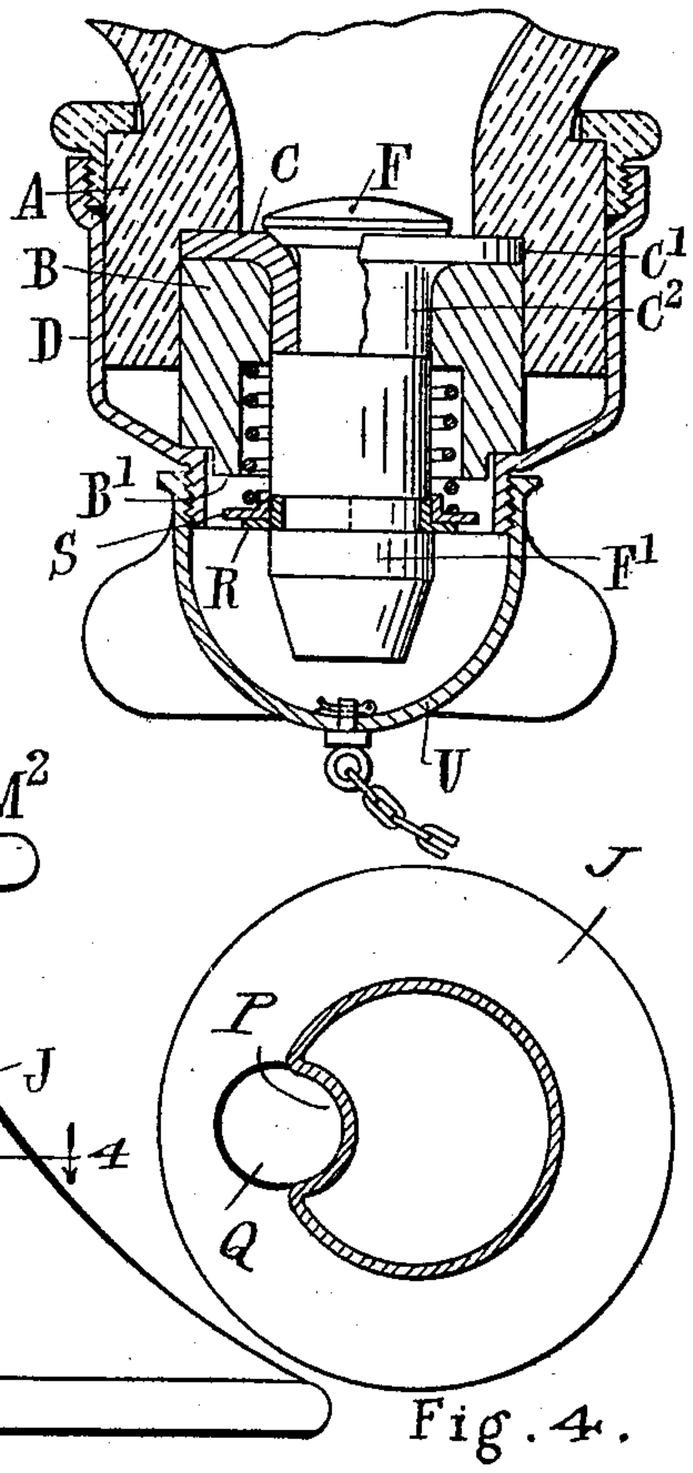

Fig. 4.

Witnesses:
A. J. Hadden
C. A. Walter

Inventor
Reginald George Slee.
by R. H. Hadden
Attorney

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

REGINALD GEORGE SLEE, OF LONDON, ENGLAND.

LIQUID-DISPENSING APPARATUS.

999,602. Specification of Letters Patent. **Patented Aug. 1, 1911.**

Application filed March 27, 1911. Serial No. 617,093.

To all whom it may concern:

Be it known that I, REGINALD GEORGE SLEE, a subject of the King of Great Britain, residing at London, England, have invented certain new and useful Improvements in Liquid-Dispensing Apparatus, of which the following is a specification.

This invention relates to improvements in the construction of the valve closures of inverted bottles intended to be fitted in stands and of apparatus in said stands for withdrawing liquids, under pressure, from the said inverted bottles of this character and refers more particularly to apparatus where it is desired to draw off small quantities of carbonated liquids and the like, retaining the gaseous qualities of the liquid remaining in the bottle.

The present invention comprises a vertically slidable block (preferably of non-metallic material), furnished with a suitable passage and spout, which is carried in a stand; means for operating same, a valve-seat of improved construction for the bottle with valve intended to be operated by the movement of the aforesaid block.

In the accompanying drawings, Figure 1 is a partial sectional side elevation of the stand and bottle arranged for operation, the bottle being broken away. Fig. 2 is a front elevation of the upper end of the stand and the lower end of the bottle detached therefrom. Fig. 3 illustrates a modification of the construction of certain parts adjacent the valve. Fig. 4 is a section of Fig. 1 on the line 4—4.

The block K, with its spout-like projection K^2, outlet passage L and recess L^1 is mounted vertically slidable within the cylindrical portion T of the stand J with its spout K^2 projecting through the vertical opening provided for it. The block K is chamfered at K^3 (dotted in Fig. 1) to enable its easy insertion and removal from its place in the stand J. Between the block K and a lever M fulcrumed as at M^1, in the stand J is a forked rod N. The upper portion of the cylindrical part of the stand J is enlarged in its diameter as at I to provide a cup-like receptacle for the annular cap D of the bottle, and has two or more bayonet joint slots I^1 formed in its circumference to engage studs D^1 on the cap D. The base of the stand J is formed with a recess at P to provide a dish-like depression Q, which not only allows room for a glass, but catches any drips from the spout K^2, after the glass has been removed.

The neck A of a bottle or similar vessel, which is inverted when in operation, is formed with an external shoulder A^1, and an internal shoulder A^2. A rubber valve-seat C comprising a flat circular flange-like portion C^1 and a tubular portion C^2 tightly surrounds the stem of the valve F. This rubber valve seat is placed within the neck A of the vessel and resting upon the internal shoulder A^2 is held in position by a sleeve B which is passed over the projecting valve-stem F^1 into the neck A of the vessel. The annular cap D upon being screwed on to the two halves of the annular ring E bearing upon the external shoulder A of the vessel, comes into contact with the said sleeve B and so supplies the necessary pressure, through the aforesaid sleeve B, for holding the valve-seat C tightly against the internal shoulder A^2 of the vessel. A washer D^2 may be interposed between the cap D and sleeve B. The valve-seat C is normally closed by the enlarged head of the valve F formed with the stem F^1. A spring G surrounds part of the valve-stem F^1, contained in an enlarged internal diameter of the sleeve B, and bears between the shoulder thus formed and a collar suitably carried by the valve-stem F^1 and made up of the two half rings R, and the complete ring S as shown in Fig. 1 or Fig. 3. The collar R, S in Fig. 3 also acts as a stop for the valve F by coming into contact with the sleeve B at B^1 Fig. 3. The valve-stem F^1 is provided with a longitudinal passage H communicating with a cross passage H^1, opening out to opposite sides under the head of the valve F. It is preferred to provide a detachable cap U of suitable form, which shall pass over the protruding end of the valve-stem F^1 into or on to the annular cap D for the purpose of excluding dust from the valve passages when the bottle is apart from the stand J.

In order to operate the invention as hereinbefore described, the bottle, upon being inverted, is placed with its cap D, in the cup-like receptacle I of the stand J and secured in that position by the bayonet-joints D^1 I^1. This operation brings the protruding extremity of the valve-stem F^1 into the recess L^1 formed in the block K and nearly bearing upon a washer K^1 carried therein. In this position the passage H in the valve-

stem coincides with the outlet passage L in the block K. When the lever M is pressed upward by the fingers beneath the end M^2 toward the thumb-piece O upon the stand the rod N raises the block K which on coming into contact with the valve stem F^1 raises that also, opens the valve and permits the liquid to pass out through the passages H^1 H and L into the glass or other receptacle.

What I claim as my invention and desire to secure by Letters Patent of the United States is:—

1. In liquid dispensing apparatus, a bottle having an interiorly shouldered neck, a permanently positioned closure for the bottle including a stemmed valve having a passage through the stem thereof and lateral openings to said passage below the head thereof, a rubber seat embracing the valve stem and extending beneath the shoulder in the neck, a sleeve surrounding the valve stem and bearing on the rubber seat and an annular cap for retaining said sleeve in place in combination with a stand having means for receiving and engaging said cap, a block movable in said stand and adapted to abut on the end of the valve stem, said block having a spout extending from the stand and having a passage way from its abutting surface through the spout thereof and means for raising the block by hand, whereby the valve is raised to open communication through the passage in its stem between the spout and interior of the bottle.

2. In liquid dispensing apparatus, a bottle having an interiorly shouldered neck, a permanently positioned closure for the bottle including a stemmed valve having a passage through the stem thereof and lateral openings to said passage below the head thereof, a rubber seat embracing the valve stem and extending beneath the shoulder in the neck, a sleeve surrounding the valve stem and bearing on the rubber seat, and an annular cap for retaining said sleeve in place, in combination with a stand having means for receiving and engaging said cap, a block movable in said stand recessed to receive the valve stem, said block having a spout extending from the stand and having a passage way from said recess through the spout thereof, a lever fulcrumed in said stand, and means intermediate the lever and block for raising the block by movement of the lever, whereby the valve is raised to open communication through the passage in its stem between the spout and interior of the bottle.

3. In liquid dispensing apparatus, a bottle having an interiorly shouldered neck, a permanently positioned closure for the bottle including a stemmed valve having a passage through the stem thereof and lateral openings to said passage below the head thereof, a rubber seat embracing the valve stem and extending beneath the shoulder in the neck, a sleeve surrounding the valve stem and bearing on the rubber seat, a screw threaded annular cap and a bipartite annular ring coacting therewith for retaining said sleeve in place, a stand having an enlarged head for receiving and engaging said cap, a block movable in said stand recessed to receive the valve stem, said block having a spout extending from the stand and having a passage way from said recess through the spout thereof in prolongation of that in the valve stem, a lever fulcrumed in said stand, and means intermediate the lever and block for raising the block by manual movement of the lever whereby the valve is raised to open communication through the passage in its stem between the spout and interior of the bottle.

In witness whereof I have signed this specification in the presence of two witnesses.

REGINALD GEORGE SLEE.

Witnesses:
S. Ford,
R. Westacott.