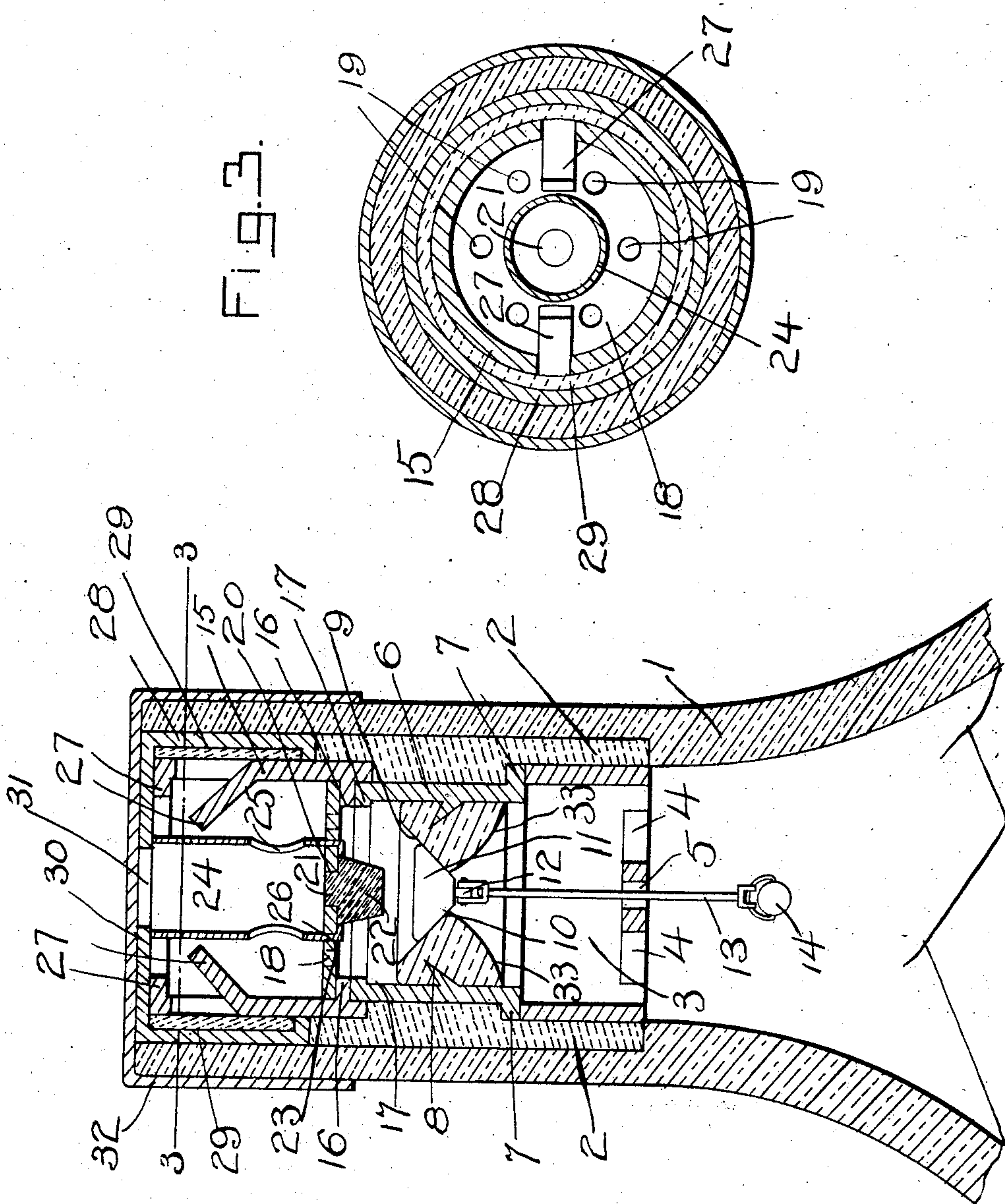


No. 884,147.

PATENTED APR. 7, 1908.

A. J. GRABEL.
NON-REFILLABLE BOTTLE.
APPLICATION FILED MAY 18, 1907.

2 SHEETS—SHEET 1.



Witnesses

John E. Miller
John Powers

Fig. 1.

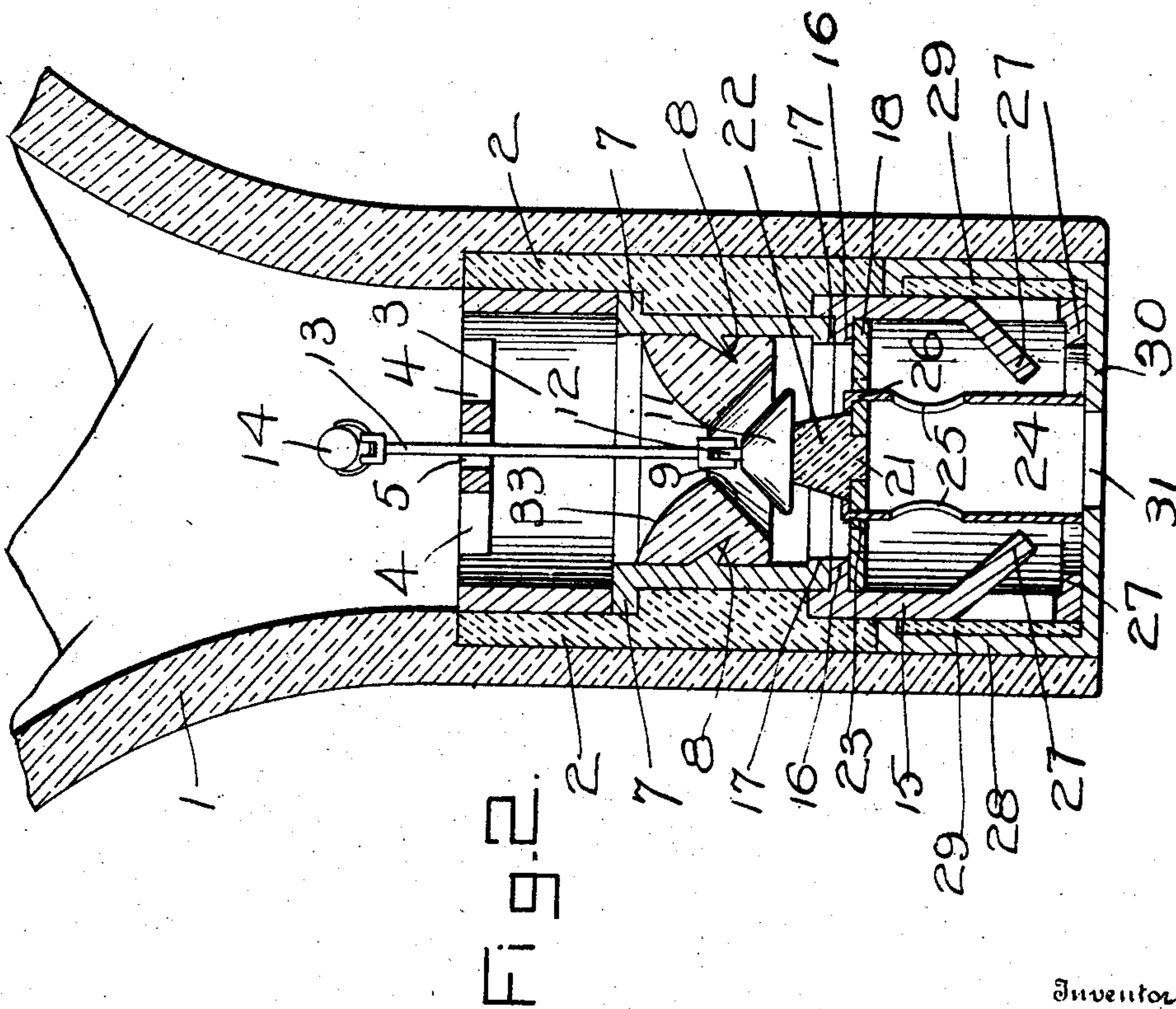
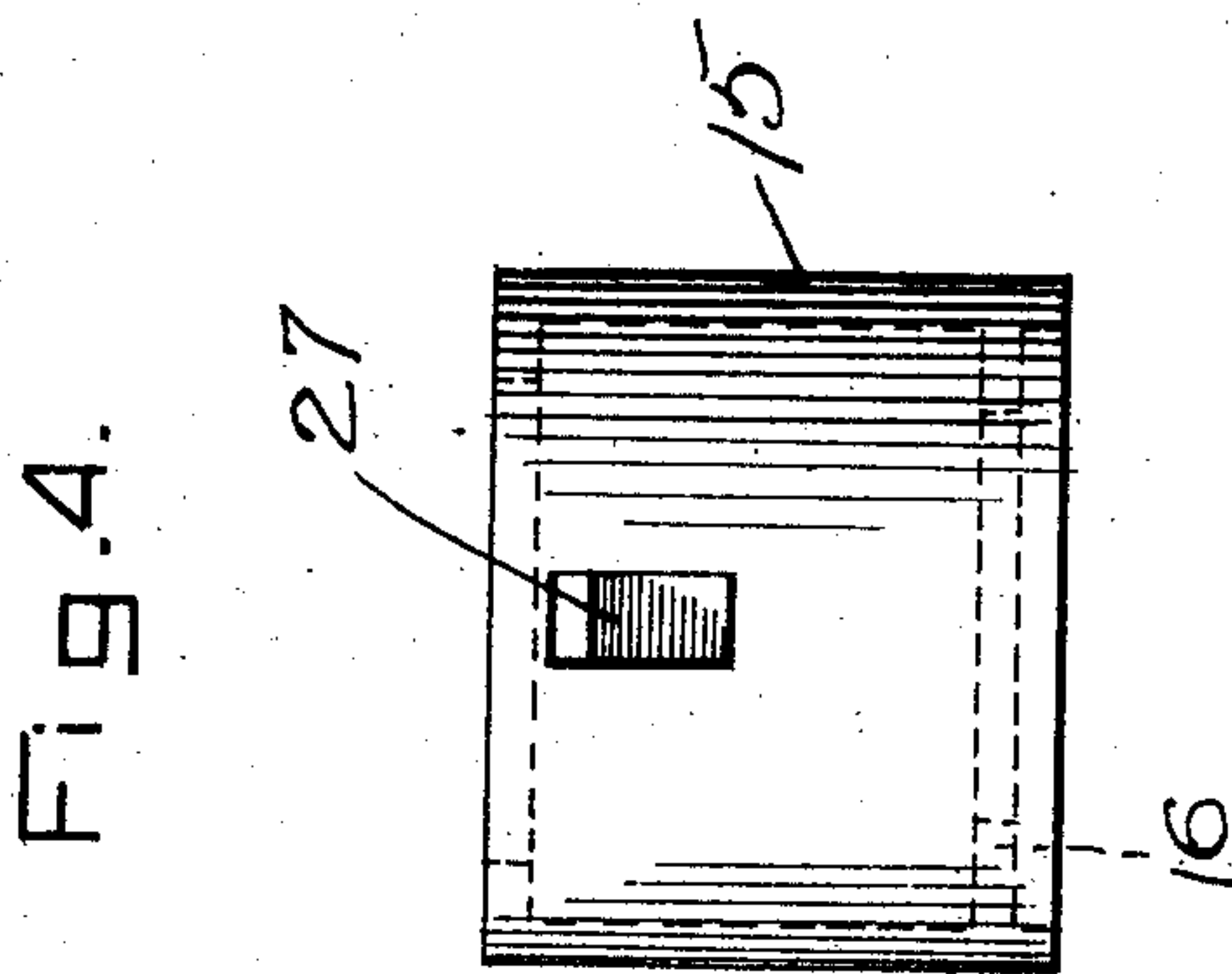
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By *August J. Grabel*
Attorneys

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2 SHEETS—SHEET 2.



Witnesses

Jesse C. Miller.
John D. Miller.

Inventor

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By

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Attorneys

UNITED STATES PATENT OFFICE.

AUGUST J. GRABEL, OF JAMESTOWN, NEW YORK.

NON-REFILLABLE BOTTLE.

No. 884,147.

Specification of Letters Patent.

Patented April 7, 1908.

Application filed May 18, 1907. Serial No. 374,381.

To all whom it may concern:

Be it known that I, AUGUST J. GRABEL, a citizen of the United States, residing at Jamestown, in the county of Chautauqua, State of New York, have invented certain new and useful Improvements in Non-Refillable Bottles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in non-refillable bottles, and it has particular reference to a bottle of that class which includes a displaceable valve, a pendent weight for holding the same upon its seat, and a guard for preventing fraudulent manipulation of the valve.

In connection with a bottle constructed generally as above described, the invention aims as a primary object to provide a novel construction, combination and arrangement of parts, the details of which will appear in the course of the following description, in which reference is had to the accompanying drawings forming a part of this specification, like characters of reference designating similar parts throughout the several views, wherein:

Figure 1 is a central longitudinal section of a bottle constructed in accordance with the present invention. Fig. 2 is a similar view thereof inverted to drain the contents. Fig. 3 is a transverse section on the line 3—3 of Fig. 1. Fig. 4 is a detailed view of the guard above referred to.

Referring specifically to the accompanying drawings, the numeral 1 designates the neck of the bottle proper, and in connection with which the present invention is employed, the parts being held in the neck by cement 2.

The present invention comprises a cup-shaped member 3 disposed at the base of the neck and having its bottom formed with discharge openings 4 and with a centrally located opening 5. Engaged with the member 3 is a member 6, which rests upon the upper edge of said member 3, by means of a laterally projecting annular flange 7. The member 6 is of tubular form and is provided within its body portion with struck out legs 8 arranged at suitable intervals and which point inwardly and hold an annular valve seat 9 of vitreous material and constructed with a central opening 10. A valve 11 is formed to rest on the seat 9 and is constructed with a

depending eye 12, with which is engaged one end of a wire 13, said wire being passed through the openings 10 and 5, and at its lower end having suitable connection with a pendent weight 14, employed for retaining the valve 11 on its seat 9.

The guard embodied in the present invention comprises a tubular member 15, which surrounds the upper end of the member 6, and which rests thereupon by means of an inwardly projecting flange 16, the latter engaging a similar flange 17 provided at the upper end of the member 6. The member 15 coöperates in its function as a guard with a disk-shaped plate 18, which rests upon the flange 16, and is constructed with discharge openings 19, and a central opening 20. Engaged in the opening 20 is a reduced end 21 of a depending glass member 22, which is arranged directly above the valve 11. The plate 18 is constructed with a plurality of slits 23 and disposed within the member 15 is a reduced member 24, constructed with discharge openings 25, and with depending ears 26, which are formed to be engaged through the slits 23 and bent upon the plate 18. The member 15 is likewise constructed with upper and lower inwardly projecting teeth or spurs 27, which point towards the member 24 and which render it impossible to insert an instrument into the neck of the bottle for fraudulent manipulation of the valve 11. Surrounding the member 15, is a cap member 28 held to said member 15 by a filling of cement 29 and constructed at its upper end with an inwardly pointing flange 30 having a central discharge opening 31. The bottle may be closed by a surrounding cap or stopper 32.

In use, when the bottle is inverted, the weight 14 drops toward the bottom of the member 3, and the valve 11 moves from its seat 9 against the glass member 22, which limits the displaceable movement of said valve and maintains the same centered with relation to its seat. The contents of the bottle are discharged through the openings 4, 10, 19, 25 and finally through the opening 31. In order that the liquid may flow freely the valve seat 9 is rounded on its underneath surface as at 33.

From the foregoing description it will be seen that simple and efficient means are provided for accomplishing the objects of the invention, but while the elements herein shown and described are well adapted to

serve the functions set forth, it is obvious that various changes may be made in the proportions, shape and arrangement of the several parts without departing from the spirit and scope of the invention as defined in the appended claims.

What is claimed is:

A bottle of the type set forth, comprising a lower member of tubular form and having a perforated bottom, a tubular member imposed on said lower member, a glass valve seat carried by said tubular member and having a central opening, a valve formed to rest on said seat, a wire having one end engaged through said valve, said wire being projected through said perforated bottom and carrying a pendent weight, a guard member of tubular form imposed on said last

named tubular member, and constructed with an inwardly pointing flange, a perforated plate imposed on said flange, a glass member connected with said plate and formed to overlie said valve, a tubular member connected with said plate and disposed within said guard member, said last named tubular member having openings in the sides thereof, and a cap closing said guard member and having a central opening in its top.

In testimony whereof, I affix my signature, in presence of two witnesses.

AUGUST J. GRABEL.

Witnesses:

GEORGE ELLIS,
ROBERT BRECKENRIDGE.