

No. 774,617.

PATENTED NOV. 8, 1904.

M. TITTEL.
NON-REFILLABLE BOTTLE.
APPLICATION FILED MAR. 26, 1904.

NO MODEL.

Fig. 1.

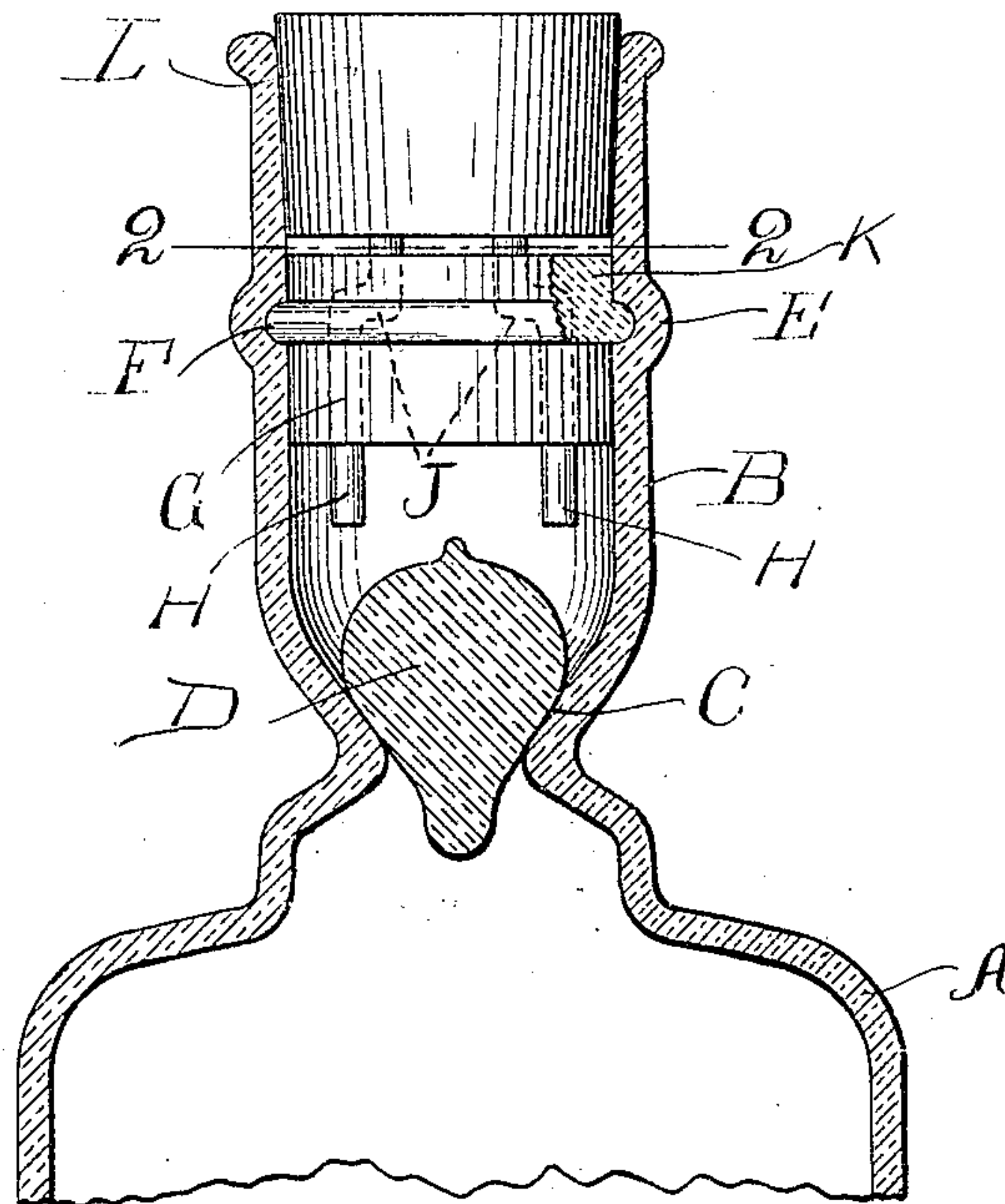
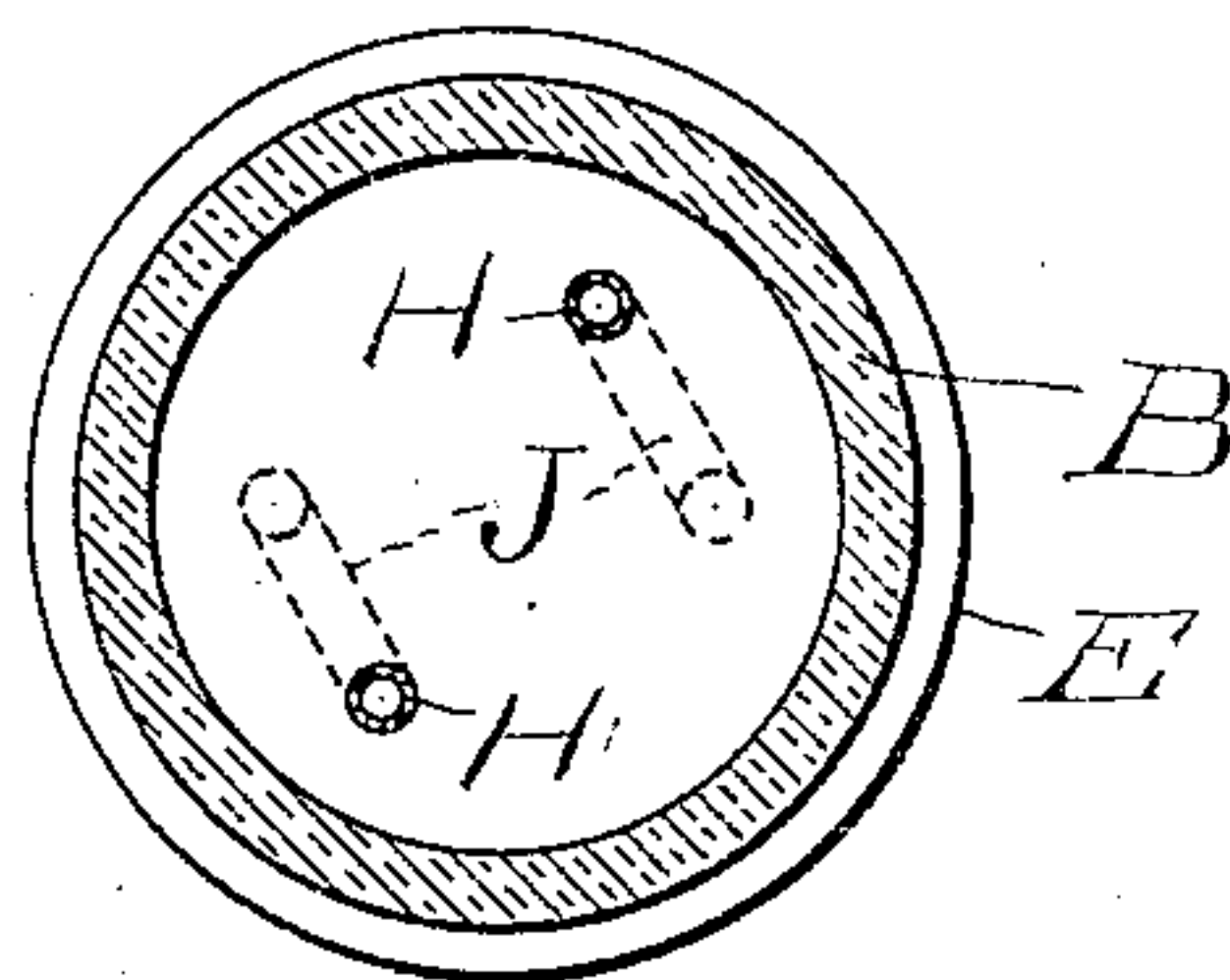


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

MORITZ TITTEL, OF CHICAGO, ILLINOIS.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 774,617, dated November 8, 1904.

Application filed March 26, 1904. Serial No. 200,144. (No model.)

To all whom it may concern:

Be it known that I, MORITZ TITTEL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, 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.

My invention relates to a novel construction in a non-refillable bottle, the object being to provide a simple efficient inexpensive device of this character; and it consists in the features of construction and combinations of parts hereinafter fully described and claimed.

In the accompanying drawings, illustrating my invention, Figure 1 is a central vertical section of the upper end portion of a bottle constructed in accordance with my invention. Fig. 2 is a horizontal section on the line 2 2 of Fig. 1.

My invention has for its main object to provide a so-called practically "non-refillable" bottle which is simple, comparatively cheap, and which while substantially non-refillable does not hinder the discharge of the contents of the bottle with reasonable rapidity.

To this end I provide a bottle A with a neck B, contracted at its lower portion to form a tapered valve-seat C, upon which the conical valve D is adapted to seat, said valve D being preferably of glass and ground upon said valve-seat, so as to effect a fluid-tight joint. Said neck B is provided between its ends above the said valve-seat C with annular enlargement E, in which is an internal annular groove F. A disk G, of cork or the like, is adapted to be inserted into said neck B to a point immediately below said groove F and is provided at two points adjacent its periphery with openings through which glass tubes H are adapted to be inserted, said tubes H being adapted to project through said cork and extend into the path of said valve D. At their other end portions said tubes H project above said cork G, and such portion projecting above said cork is bent between its ends to a Z shape, the horizontal arms J thereof

extending parallel with each other and being disposed so that the free ends are separated by a space equal to the distance between the lower ends of said tubes.

In use after the bottle has been filled the valve D is dropped in place and said cork G, with the tubes H, inserted in proper position. Plastic cement is then poured into said neck B, as shown at K, so as to embed the upper end Z-shaped portion of said tube H, the extreme free end portions of the latter projecting slightly above the upper level of said cement. The said cement is preferably of a quick-setting character and is allowed to become set, and thereupon the cork L is inserted in the extreme upper end of said neck B and presses upon the upper ends of said tubes H, thus completely sealing the bottle. Upon removing said cork L and inverting said bottle A the valve D will obviously move from its seat, but is limited in its movement, so that it cannot become so displaced as not to reseat itself in proper position. Owing to the bends J in said tubes H, the insertion of any tool to tamper with said valve D is rendered impossible without fracturing said tubes, and thus plainly showing that the bottle had been tampered with.

When my said bottle is inverted, the liquid will flow from the lowermost of said tubes H, and air to replace the liquid discharged will enter through the upper of said tubes, so that a constant flow of sufficient volume for all ordinary purposes is assured.

I claim as my invention—

1. A non-refillable bottle comprising in combination a neck contracted at its lower end and having a tapered valve-seat, a valve ground upon said valve-seat and projecting partially below the latter, a stopper in said neck, a pair of tubes mounted therein and projecting at one end into the path of said valve and adapted to serve as stops to limit the movements thereof, said tubes being bent to Z shape at their other ends, and said bent portions being adapted to be partially embedded in a plastic cement adapted to reinforce said tubes and prevent withdrawal of said stopper.

2. A non-refillable bottle comprising in

combination a neck contracted at its lower
end and provided with a tapered valve-seat
and with an internal annular recess between
its ends, a conical valve ground upon said
5 valve-seat and seating thereon and extending
partly below the latter, a stopper adapted to
be inserted in said neck to a point below said
annular recess, a pair of glass tubes extend-
ing through said stopper and at their lower
10 ends projecting into the path of and adapted
to limit the movements of said valve in one
direction, said tubes being bent to a Z shape
at their other ends projecting above said stop-

per and said ends being adapted to be em-
bedded in plastic cement adapted to enter said 15
annular recess and when set to hold said stop-
per against removal, the extreme upper end
of said neck being adapted to receive a cork
or the like bearing upon and sealing the up-
per ends of said tubes. 20

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

MORITZ TITTEL.

Witnesses:

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