

J. KLEE.
Bottling Liquids.

No. 141,360.

Patented July 29, 1873.

Fig. 1.

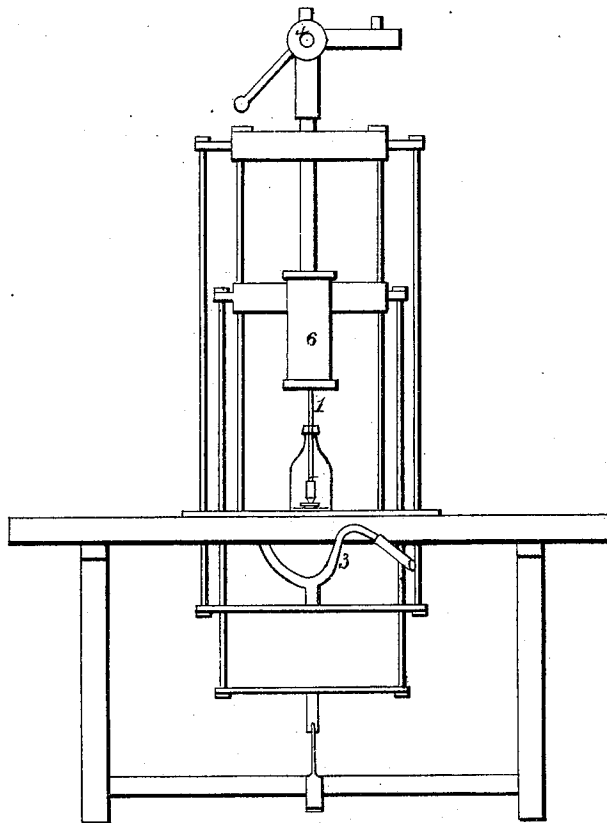
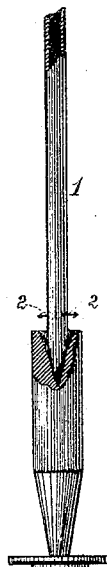


Fig. 2.



WITNESSES.

Wm. Johnson
W. P. Kendig.

INVENTOR.

Jno. Klee
per
J. W. Lehmann, Atty.

UNITED STATES PATENT OFFICE.

JOHN KLEE, OF DAYTON, OHIO.

IMPROVEMENT IN BOTTLING LIQUIDS.

Specification forming part of Letters Patent No. **141,360**, dated July 29, 1873; application filed June 16, 1873.

To all whom it may concern:

Be it known that I, JOHN KLEE, of Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Bottling Liquids; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

The nature of my invention relates to an improvement in bottling liquids; and it consists in a pointed perforated tube, which serves to both fill the bottle from the bottom upward and to draw the stopper into position for closing the bottle, as will be more fully set forth hereafter.

Figure 1 shows a side elevation of a bottling-machine in which my invention is used. Fig. 2 is a view of the plunger and stopper alone.

Heretofore, in filling bottles with aerated liquids, it has been customary to force the liquid under pressure directly into the neck of the bottle, and as a consequence there is always more or less of the fluid lost.

In order to use self-closing stoppers for bottles containing aerated liquids, it has always been found necessary to invert the bottle, and then use a stopper made of glass or some heavy material, so that when the bottle was filled the stopper would sink into place, and then be held there by the pressure of the gas. Filling inverted bottles is troublesome, and attended with greater waste than filling them standing, and heavy stoppers are not only too expensive, but often break the bottles. My invention is designed to overcome these defects.

The plunger 1 is connected directly to the cylinder 6, through which the liquid flows, and it consists of a long tube having a solid sharpened end and a number of openings, 2, through it, out of which the liquid flows into the bottle. The cylinder is provided with a suitable stuffing-box, so as to prevent the escape of liquid or gas around the plunger, and has a rubber cushion upon its lower end, so that when lowered upon the top of the bottle it will hermetically close it.

The stopper consists of the wooden stem, having a rubber disk secured to its end in such a manner that the stopper can be inserted into the bottle, but cannot be withdrawn. The stem has a cavity formed in its head so as to receive the point of the plunger, and is coated with a suitable composition to prevent the wood from imparting a taste to the liquid, and should be long enough to prevent the stopper from turning in the bottle.

The stopper is forced upon the end of the plunger, and then, by pressing down upon the lever 3, the plunger and stopper are both forced downward into the bottle; and then, by turning the stop-cock 4, the liquid is turned on, which, escaping through the holes in the plunger, fills the bottle from the bottom upward. As soon as the bottle is full the stop-cock is closed, and in releasing the lever 3 the plunger is drawn upward, bringing the stopper with it into position, where it is held by the pressure of the gas.

When the bottle is returned to be refilled, the plunger is lowered upon the upturned end of the stem with sufficient force to fasten the stopper to it, so that when the plunger is drawn out, the stopper will be again drawn into position.

By filling the bottles through a hollow plunger a great saving of time, trouble, and liquid is effected; and by operating the stopper by means of the plunger, stoppers made of a wooden stem, with a disk of rubber and lead upon their ends, are made practicable—something not heretofore done.

Having described my invention, I claim—

1. The pointed perforated tube 1 for filling the bottle from the bottom upward, and drawing the stopper into position for closing the bottle, substantially as shown and described.

2. The method described of drawing the stoppers into position by the plunger, substantially as specified.

In testimony that I claim the foregoing I have hereunto set my hand this 4th day of June, 1873.

JOHN KLEE.

Witnesses:

F. B. SHULL,
C. S. BAUMANN.