J. J. JOHNSON.

Refrigerating Plugs for Cans.

No. 205,486. Patented July 2, 1878.

FIG. 1.

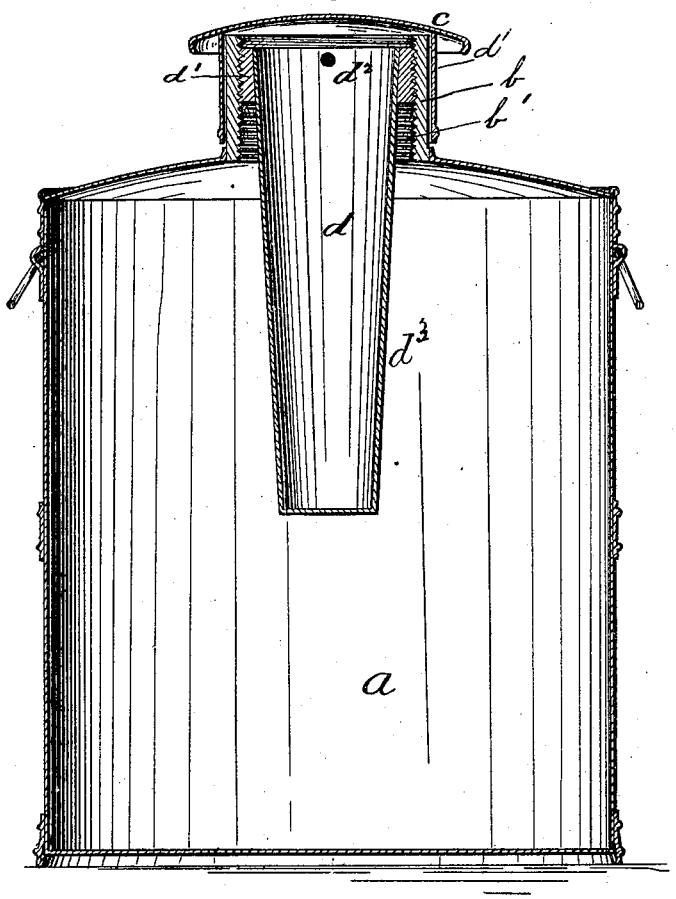
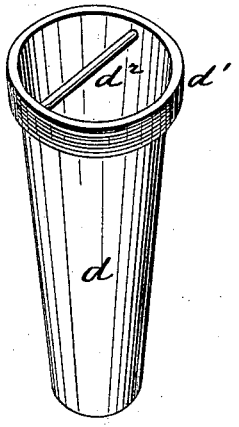


FIG. 2.



WITNESSES

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JAMES J. JOHNSON, OF EAST LIVERPOOL, OHIO.

IMPROVEMENT IN REFRIGERATING-PLUGS FOR CANS.

Specification forming part of Letters Patent No. **205,486**, dated July 2, 1878; application filed February 8, 1878.

To all whom it may concern:

Be it known that I, JAMES J. JOHNSON, of East Liverpool, in the county of Columbiana and State of Ohio, have invented certain new and useful Improvements in Plugs for Vessels for Holding Fluids; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention has for its object to furnish for vessels designed for holding fluids a plug which, when inserted in the vessel, will so compress the fluid that the latter will completely fill the vessel, and thereby be free from agitation while being carried or otherwise shaken; and it consists in a tapering plug provided with a threaded collar adapted to be screwed into the nozzle of the can or other vessel; and it consists, further, in having the plug made hollow, for holding ice or other substances, as will be hereinafter fully explained.

In the drawings, Figure 1 shows a vertical section of a can, bottle, or other vessel with the plug inserted therein; and Fig. 2 shows the plug.

a is the can, bottle, or other vessel for holding the fluid. *b* is the nozzle, on the inner side of which is formed a thread, *b'*, extending down its entire length, as shown. *c* is a cap, which slips over the nozzle.

d is an inverted cone-shaped hollow plug, around and flush with the upper end of which is placed a rim or collar, d^1, on which is formed a thread adapted to be turned into and held by the thread *b'* in the nozzle *b*. The lower end d^3 extends downward into the vessel, as shown, and by its gradually-increasing diameter from the lower to the upper end it provides a means whereby the proper adjustment of the fluid is more perfectly regulated than can possibly be done by devices of ordinary construction. When the plug is placed in the vessel its rim will be held firmly by the thread *b'*, with capability of being raised or lowered at pleasure, for purposes hereinafter described. It will also be held firmly in position, so that any tipping to one side or overturning of the vessel will not disturb or move it, thus admirably adapting it for use in the ordinary milk-can or other vessels which have to be transported in wagons over rough roads.

I make this plug hollow, as shown, so as to adapt it to hold ice for cooling the fluid in the can or bottle, and I provide a small cross-bar or handle, d^2, or other suitable device, whereby it may readily be turned or lifted.

When fluids are placed in the can it is difficult to so perfectly fill the entire inner space as to prevent all agitation in carrying or otherwise shaking the vessel. In this device the can is filled, as usual, nearly full. The plug is then inserted. The increasing size of the plug forces the fluid into the unoccupied space, and so completely fills the can that all agitation is prevented.

If, when the collar d^1 is brought flush with the nozzle *b*, the fluid does not completely fill the vessel, the plug may be turned down, if necessary, till the under edge of the collar is flush with the bottom or lower end of the nozzle, and thereby the larger upper end of the plug will cause the fluid to fill up the vacant space.

I am aware that rectangular devices designed to be let down into tanks transported on cars, for the purposes of inserting ice and controlling the movements of the fluid, have been used, and I do not claim, broadly, such devices; but,

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

The inverted vertically-adjustable cone-shaped plug *d*, provided with a rim or collar, d^1, and handle d^2, and held within and by the nozzle *b* of the vessel *a*, substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JAS. J. JOHNSON.

Witnesses:
SOL. J. FAULK,
W. L. TAFT.