No. 867,303. PATENTED OCT. 1, 1907.

W. S. ROBERTSON.

GATE FOR LIQUID RECEPTACLES.

APPLICATION FILED MAY 22, 1905.

Fig. 1.

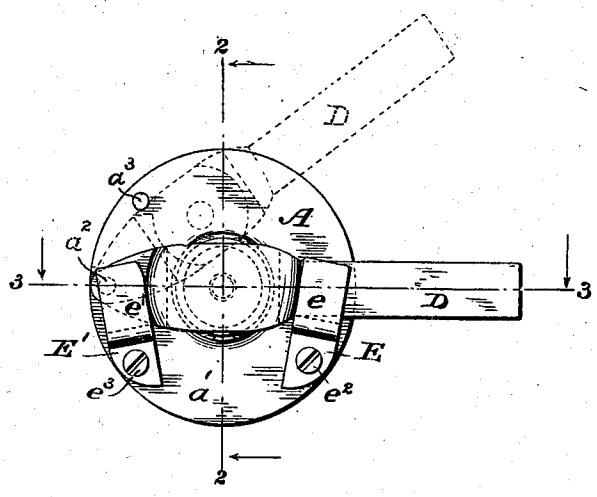


Fig. 2.

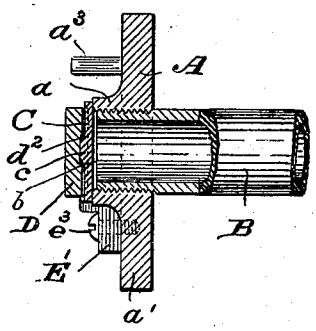


Fig. 3.

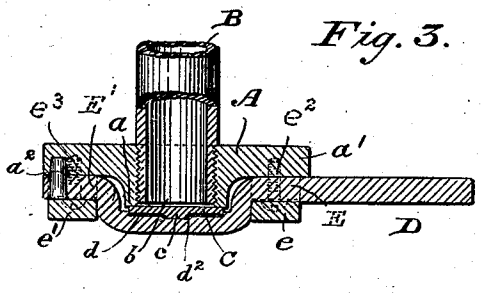
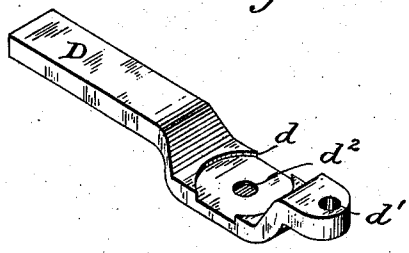


Fig. 4.

Fig. 5.



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GATE FOR LIQUID-RECEPTACLES.

No. 867,303. Specification of Letters Patent. Patented Oct. 1, 1907.

Application filed May 22, 1905. Serial No. 261,731.

To all whom it may concern:

Be it known that I, WILLIAM S. ROBERTSON, a citizen of the United States, and a resident of Barberton, county of Summit, and State of Ohio, have invented a new and useful Improvement in Gates for Liquid-Receptacles, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

My invention relates to a gate for varnish or similar liquid receptacles and has for its object the production of a gate which shall be simple, easily operable and effective.

Said invention consists of means hereinafter fully described and specifically set forth in the claims.

The annexed drawing and the following description set forth in detail certain means embodying the invention, such disclosed means constituting but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawing:—Figure 1 represents a front elevation of my improved gate attached to a varnish or similar receptacle, the open position of the operating handle being also shown in dotted lines; Fig. 2 represents a central vertical section, taken upon the plane indicated by the line 2—2, Fig. 1; Fig. 3 represents a central horizontal section, taken upon the plane indicated by line 3—3, Fig. 1; Fig. 4 represents a perspective view of a cap adapted to fit snugly over a port registering with the outlet of the receptacle and provided with a small centrally located shoulder by reason of which, as hereinafter fully explained, it has a limited rocking or tilting movement; and Fig. 5 represents a perspective view of an operating lever or handle.

My improved gate will find most ready use upon barrels, kegs and other receptacles which are adapted to retain molasses, paint, varnish, etc., and from which it is frequently desired to draw off certain quantities. My invention is designed to enable this to be done conveniently and without leakage of the liquid. Said invention comprises a plate or a body portion A provided with a central annular hollow boss a which has an internal screw-thread, whereby it is adapted to be secured to a conduit B or any other suitable outlet from the liquid receptacle. I prefer this method of attaching the gate to the receptacle, although, obviously, any other suitable connection may be employed which will provide suitable registering ports in the gate and the receptacle outlet. When the gate is closed, the port b of the conduit B is covered by a small cap C which is of a size and contour to enable it to fit snugly up against the outer periphery of the boss a. The cap C is held in such position by means of an operating handle or lever D which is provided with a shallow seat d within which the cap C is partially confined, and thus restrained from sliding laterally and being displaced from off the boss a.

The handle D is of a contour which enables it to be fitted over the boss a and still allow it to lie flat against the main part a' of the plate A upon both sides of said boss a, as clearly shown in Fig. 3. Said handle D is provided with a passage-way d' for a small pin a^2 fixed in the plate A, said passage-way forming a bearing for said pin, thus pivoting the handle D at one end. The pivotal movement of the handle D is limited in both directions, in one direction by a lug or stop-pin a^3 against which the handle abuts when the gate is opened to allow liquid to escape, as shown in dotted lines in Fig. 1, said pin a^3 being so positioned that the handle engages same just before the cap C has been carried entirely over and off the boss a, thus preventing the cap C from falling out of the retaining seat d. In the other direction the handle D is allowed pivotal movement only to the extent of enabling it to carry the cap C completely over the port b, it then being prevented from further movement by means of a lug or clip E, screwed to the plate A by a screw e^2 and having secured to it an angular off-set or arm e under which the lever passes and which is adapted to engage the latter tightly from the top when the lug E is screwed down tightly to the plate A. In the construction shown, the lug E and arm e are one integral piece. A similar lug E′, screw e^3 and arm e' are used to retain the lever D upon the pin a^2, as shown in Fig. 1. Slightly loosening up the screw e^2 will enable the handle D to be moved to open or close the gate, as will be readily understood. Slightly loosening up the screw e^3 will enable the lug E′ and arm e' to be swung around upon such screw e^3 as an axis, and allow the handle D to be taken off from or replaced upon the pin a^2. It will be noted from Fig. 4 that the cap C is provided with a small centrally located cylindrical teat c which is adapted to lie within a shallow socket d^2 cut within the portion d of the handle D, that serves as a seat for the cap C, the socket d^2 being somewhat less in depth than the thickness of the teat c, as will be noted from Figs. 2 and 3, whereby said cap C has a slight rocking or tilting movement within the seat d. By means of this construction, the handle D is enabled to slide easily under the arm e when closing the gate, but is engaged by such arm tightly, when the gate is completely closed and the cap lies equally flush with all parts of the boss a. This effect is due to the fact that, when the gate is closed, the cap C engages all parts of the boss a with equal pressure, and hence cannot be tilted or rocked, and so

presses the handle D tightly up against the arm *e;* whereas, when the cap C is partially displaced from the boss *a*, it is tilted to some extent, due to the unequal pressure of said cap upon different portions of said boss and thus the handle D drops away a trifle from the arm *e* and has a freer movement thereunder.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the means herein disclosed, provided the means stated by any one of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:—

1. In a gate for liquid receptacles, the combination of a body-portion adapted to be connected to the receptacle and provided with an outlet for the receptacle's contents; a pin secured to said body-portion at one side of said outlet; a handle pivoted at one end to said pin; means movably mounted upon said body-portion and adapted to retain such end of said handle upon said pin; and a cap borne by said handle and adapted to close said outlet.

2. In a gate for liquid receptacles, the combination of a body-portion adapted to be connected to the receptacle and provided with an outlet for the receptacle's contents; a pin secured to said body-portion at one side of said outlet; a handle pivoted at one end to said pin; a clip movably mounted upon said body-portion and provided with an angular offset adapted in one position of said clip to retain such end of said handle upon said pin; and a cap borne by said handle and adapted to close said outlet.

3. In a gate for liquid receptacles, the combination of a body portion adapted to be connected to the receptacle and provided with an apertured boss adapted to register with said receptacle's outlet; a pin secured to said body portion at one side of said boss; a handle pivoted at one end on said pin and conforming to the shape of said boss so as to be movable transversely across the same; a clip movably mounted on said body portion and adapted normally to retain such end of said handle upon said pin; a separate cap borne by said handle and adapted to close the aperture in said boss; and a second clip adapted to engage said handle when disposed across said boss so as to seat said cap tightly upon the latter.

4. In a gate for liquid receptacles, the combination of a body portion adapted to be connected to the receptacle and provided with a hollow boss adapted to register with the receptacle outlet; a pin secured to said body portion, an operating handle pivoted at one end to said pin and movable transversely of said boss; stop-lugs secured to said body portion and adapted to contact with said handle to limit the movement of the latter; a cap located intermediately of said handle and said boss and adapted to close the outlet of the latter; a seat in said handle for said cap; a cylindrical teat upon said cap; and a socket, of less depth than the thickness of the teat, in said seat-portion of said cap for receiving said teat; said stop-lugs being arranged to allow the movement of said handle only upon one side of said boss, and on that side only to the extreme engaging position of said cap and said boss; and said cap arranged, by the construction of said teat and socket, to assume a tilted position except when it completely covers said boss opening.

Signed by me, this 19th day of May 1905.

WILLIAM S. ROBERTSON.

Attested by:

CHAS. M. KARCH,

A. F. HUGHES.