No. 844,433. PATENTED FEB. 19, 1907.

T. R. WEYMOUTH.

THIEF FOR TESTING LIQUIDS.

APPLICATION FILED JUNE 3, 1905.

2 SHEETS—SHEET 1.

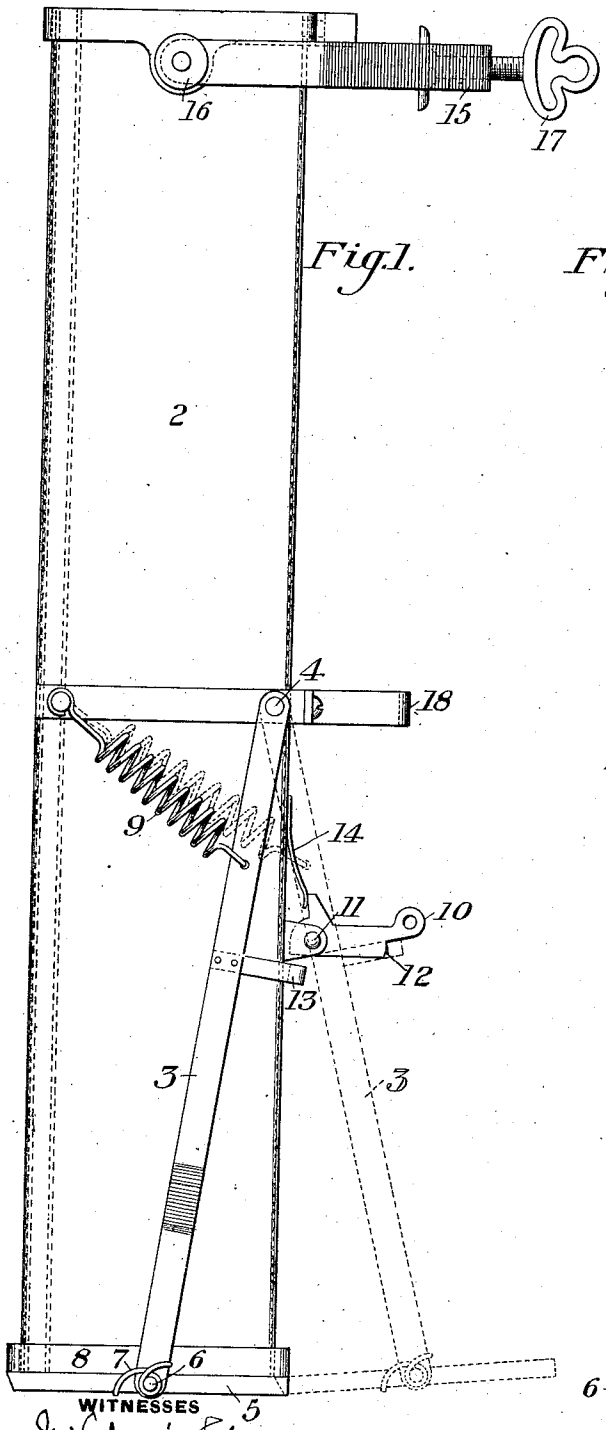


Fig. 1.

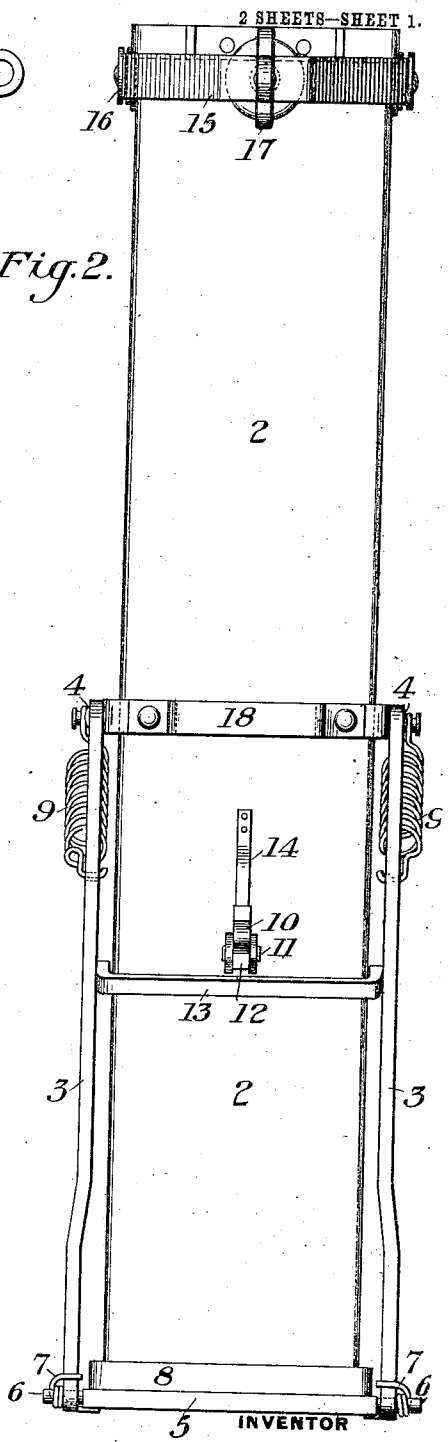


Fig. 2.

WITNESSES

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Fig. 3.

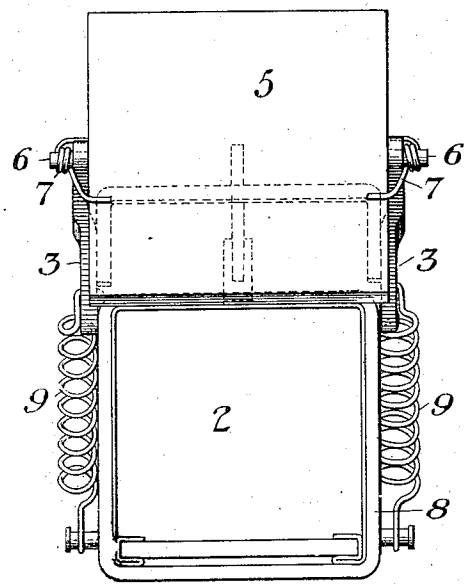


Fig. 4.

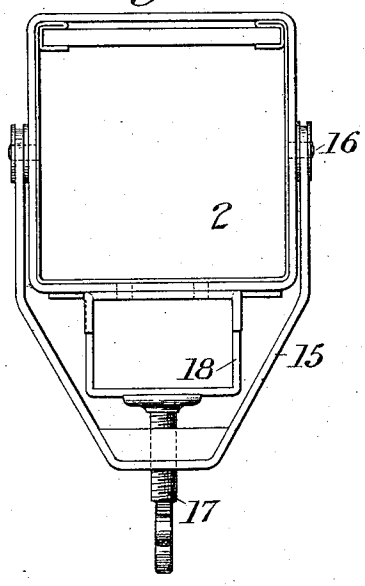
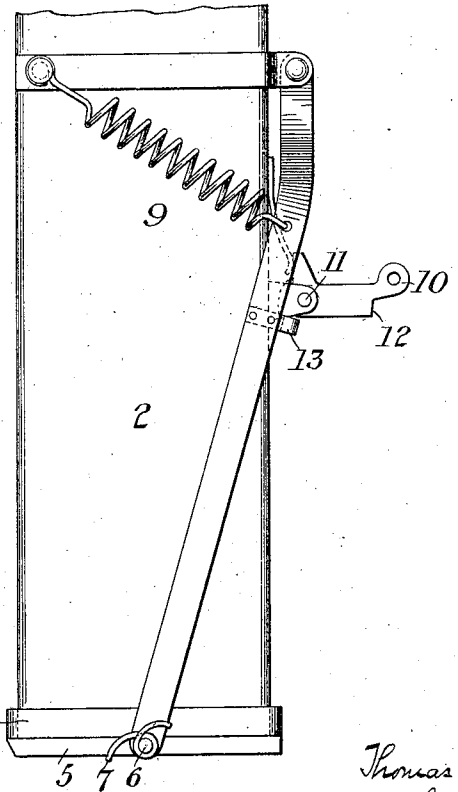


Fig. 5.



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THIEF FOR TESTING LIQUIDS.

No. 844,433. Specification of Letters Patent. Patented Feb. 19, 1907.

Application filed June 3, 1905. Serial No. 263,541.

To all whom it may concern:

Be it known that I, THOMAS R. WEYMOUTH, of Oil City, Venango county, Pennsylvania, have invented a new and useful Improvement in Thieves for Testing Liquids, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of a thief constructed in accordance with my invention. Fig. 2 is a front elevation. Fig. 3 is a bottom plan view showing the thief when open, and Fig. 4 is a top plan view.

The purpose of my invention is to provide a thief for the testing of oils and other liquids in which the valve or gate will be easy to operate and effective in its action and will automatically seal itself tightly, so that the contents of the thief cannot escape after the thief is closed.

As shown in the drawings, the body of the thief consists of a box or tube 2, which is preferably rectangular in cross-section and is provided with arms or levers 3 3, pivoted thereto at points 4 near the back of the box or tube for the purpose of carrying the valve or shutter 5, which consists of a flat plate having lateral trunnions 6, by which it is pivotally connected to the arms 3. Small coiled springs 7 are applied to the arms and the plate, as shown, so as to exert on the plate an upwardly-tipping action for the purpose of causing its front end to bear closely against the bottom of the tube. The bottom of the tube is provided with a marginal portion 8, which is accurately faced, so as to present with the walls of the thief a true seat against which the plate 5 may fit tightly. The arms 3 are connected with the thief by springs 9, which being connected to the arms near their fulcrums tend to draw the arms inwardly, so as to bring the plate 5 into closed position at the bottom of the tube. For this purpose the springs are preferably made and mounted so that they will be under constant tension even when the valve or shutter 5 is closed. The arms 3 3 being pivoted to the box or tube near the back thereof rather than in the center of its side tends to make the valve rest more tightly on its seat and to close the box or tube much more firmly. For the purpose of holding the valve in open position during the time when the thief is being lowered into the liquid to be tested I provide a trigger 10, pivoted at 11 and having a shoulder 12, which is adapted to engage a bail or projection 13, connected to the bars 3 when the latter are in open position, as shown by dotted lines in Fig. 1. The trigger is held in locking position by means of a spring 14, and a cord or other device (not shown) extends from the trigger upwardly to the operator, so that by drawing thereon he may raise the trigger and release the bail 13, whereupon the arms 3 will be drawn by the springs 9 and will close the valve.

When the valve is open, as shown in dotted lines, it leaves an obstructed passage into the bottom of the thief, because there are no parts of the mechanism which remain opposite this opening after the valve or shutter has been retracted. When the trigger is released, the valve or shutter will slide along its seat at the bottom of the tube, and by reason of the tipping action of the springs 7 will scrape from the seat any obstructions which would otherwise interfere with the tight seating thereof. As the springs 9 are always under tension and have a relatively short motion because of their proximity to the axis of the arms 3 they are very effective both in closing the valve and in holding it closed. The tightness with which the bottom of the thief is sealed when the valve is closed and the wide opening which it affords for the entrance of liquid when the valve is open are characteristic features of my invention.

For the purpose of holding the thief to a pole, by which it is lowered into the tank, I prefer to employ a bail 15, pivoted at 16 to the top of the tube and having at its outer end a screw-clamp 17. When the bail is brought into horizontal position, the rod is inserted between the tube and the end of the clamp and at its lower end is fitted in a projecting loop 18, and when the clamp is tightened it will connect the rod rigidly to the tube.

Instead of using two arms 3, one on each side of the tube, as shown in Figs. 1 and 2, I may employ a modified construction in which a single arm pivoted to the back or side of the tube may be employed, said arm being forked at its lower end, so as to have side branches which connect to the valve. This modification I show in Fig. 5.

Within the scope of my invention as defined in the claims the parts may be modified in many ways, since

What I claim is—

1. A device of the class described com-

prising a receptacle having an open bottom constituting an inlet, a closure working edgewise across the open bottom of the receptacle, a swinging arm pivoted to the receptacle and pivotally carrying the closure, a tension device tending to swing the arm and operating to normally maintain the closure yieldably closed, and mechanical means for holding the closure open against the action of the tension device and capable of being tripped to release the closure, substantially as described.

2. A device of the class described comprising a receptacle which is open at its bottom, an arm pivotally connected to the receptacle, a closure pivotally carried by the arm and working edgewise across the bottom of the receptacle, a tension device operating to yieldably maintain the closure in its closed position, one or more springs operating upon the closure with a tendency to tilt it upon its pivotal connection with the arm into positive engagement with the receptacle, and mechanical means for holding the closure open and capable of being tripped to release the closure, substantially as described.

3. A device of the class described comprising a receptacle having an open bottom constituting an inlet, a closure swung from the receptacle and working edgewise across the open bottom thereof, tension means tending to swing the closure and operating to yieldably maintain the closure closed, and a trigger carried by the receptacle and adapted to hold the closure in its open position against the action of the tension device, substantially as described.

4. A device of the class described comprising a receptacle having an open bottom, a closure working edgewise across the open bottom, a suspension device for the closure, a tension device to yieldably maintain the closure closed, a trigger mounted upon the receptacle, and a bail carried by the suspension device and spanning the receptacle for engagement by the trigger to hold the closure open, substantially as described.

5. A device of the class described comprising a receptacle which is open at its bottom, a closure working edgewise across the open bottom of the receptacle, a suspension device for the closure pivotally connected to the receptacle adjacent one side thereof, a spring operating upon the suspension device to yieldably maintain the closure in its closed position, a trigger carried by the receptacle, and means upon the suspension device for engagement with the trigger to hold the closure open, substantially as described.

6. A device of the class described comprising a receptacle open at the bottom, a closure working edgewise across the bottom of the receptacle, a suspension device straddling the receptacle and pivoted at its upper end thereto adjacent one side thereof, the closure being pivotally carried by the suspension device, a spring engaging the suspension device and the closure and operating to tilt the closure into positive engagement with the bottom of the receptacle, a spring extending between the suspension device and the receptacle and exerting a tendency to yieldingly maintain the closure closed, a bail carried by the suspension device and spanning the receptacle, and a trigger pivotally mounted upon the receptacle in position for engagement by the bail to hold the closure open, substantially as described.

In testimony whereof I have hereunto set my hand.

THOS. R. WEYMOUTH.

Witnesses:
H. McSWEENEY,
THOS. P. BRESNAN.