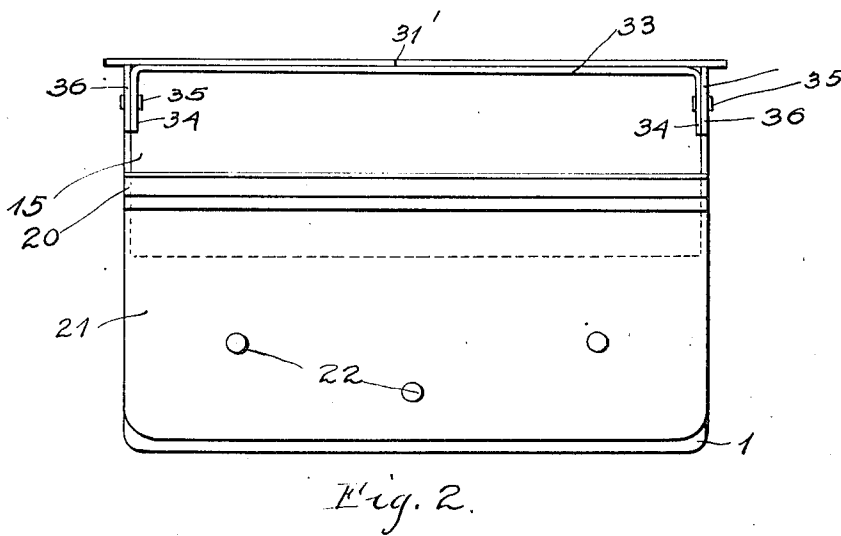
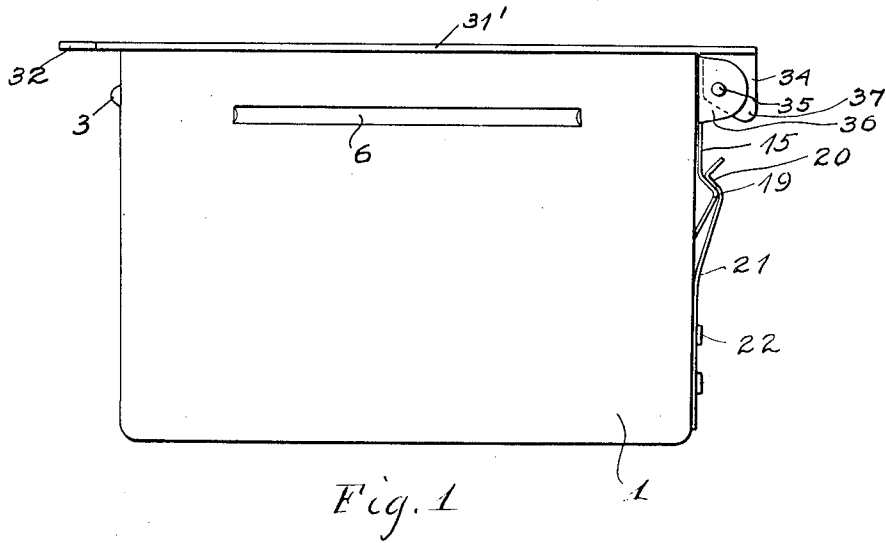


F. HARDINGE.
 RECEPTACLE.
 APPLICATION FILED OCT. 23, 1907.

943,825.

Patented Dec. 21, 1909.
 2 SHEETS—SHEET 1.



Witnesses
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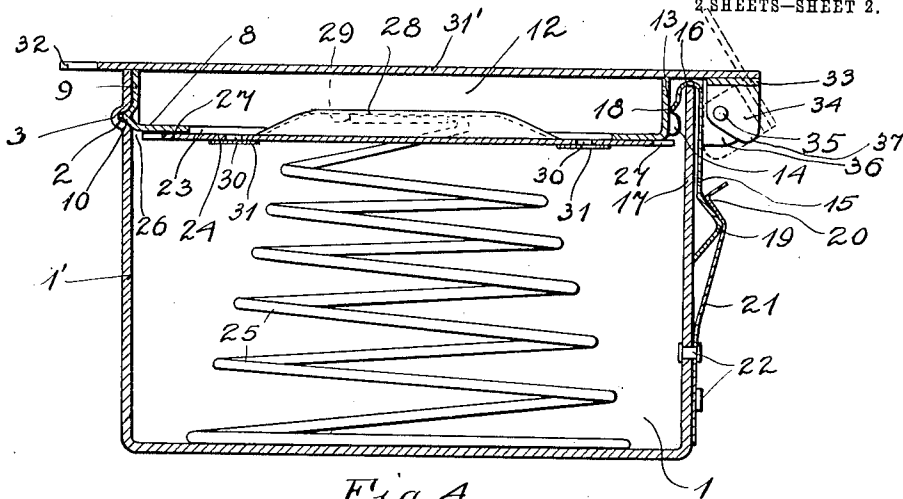


Fig. 4.

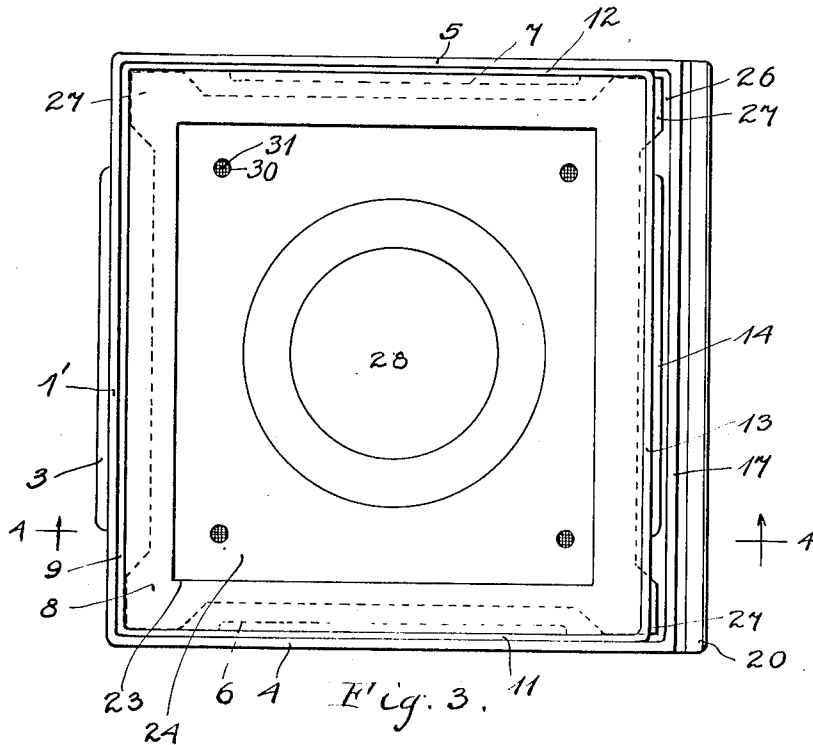


Fig. 3.

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UNITED STATES PATENT OFFICE.

FRANKLIN HARDINGE, OF CHICAGO, ILLINOIS.

RECEPTACLE.

943,825.

Specification of Letters Patent.

Patented Dec. 21, 1909.

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To all whom it may concern:

Be it known that I, FRANKLIN HARDINGE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Receptacles, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to receptacles, particularly to receptacles intended for containing volatile oils, its object being to provide an improved form of portable receptacle which is non-spillable and self-closing.

In various trades volatile oils are constantly in use, as, for example, in machine shops, where machine parts or tools are to be cleaned of oil and grease. Where open receptacles are used, or those having detachable covers, there is great danger of fire, as upon tipping or dropping of the receptacle the oil will flow therefrom and rapidly spread, and if it should become ignited the flame would travel with great rapidity to surrounding combustible objects and the fire would almost instantly become uncontrollable. Even where a detachable cover is provided for a receptacle, the receptacle is open during the time that it is in use, and it is during this time that tipping or spilling will usually occur. Also, in carrying the receptacle about, even with the cover on, the cover would become detached should the receptacle be dropped.

In general, my invention provides for cover or closing means which is always attached to the receptacle and which forms part thereof. The closing means is automatic in its operation and allows ready access to the oil within the receptacle but which instantly automatically closes the receptacle after use thereof.

The details of my invention will be better understood when described by reference to the accompanying drawings, in which—

Figure 1 is a side elevation of a receptacle embodying my invention; Fig. 2 is a rear elevation thereof; Fig. 3 is a plan view with the outer cover removed, and Fig. 4 is a sectional view of the entire device taken on a plane passing through line 4—4 in Fig. 3.

I have shown a receptacle 1 in the form of a rectangular box which may be formed integral of sheet material. The front wall 1' along its upper edge has the indentation

2 forming the projection 3 at the outside. The side walls 4 and 5 at their upper edge are indented to form the inner shelves or ridges 6 and 7. Arranged just within the upper edge of the box is the frame 8 having an L-shaped cross-section, as shown, and which frame may also be formed integral from sheet material. The front wall 9 of this frame is indented from the inside to form a bead 10 for engaging in the indentation 2 in the front wall of the box, while the side walls 11 and 12 of the frame 8 rest on the ledges 6 and 7 in the side walls of the box. The rear wall 13 of the frame is also indented outwardly to form the ledge or lug 14. The front end of the frame 8 is locked to the box by the engagement of the bead 10 with the indentation 2, and to lock the rear end of the frame to the box I provide a locking frame 15 of sheet material whose upper part 16 is hooked to engage over the top edge of the rear wall 17 of the box, the end 18 of the hook engaging the lug 14 of the frame 8.

The frame 15 has the V-shaped locking ridge 19 along its lower edge and is engaged by the locking hook 20 extending along the edge of the sheet metal spring frame 21 secured to the rear wall of the box by means of rivets 22. The frame 8 is thus locked against the side ledges 6 and 7. The entrance opening 23 provided by the frame 8 is normally closed by the trap door or lid 24 disposed within the box below the frame 8 and held against the frame 8 by means of a coiled spring 25. The trap lid is of sheet material and is rectangular, its dimensions being slightly less than those of the box to leave a small clearance space 26. The edges of the lid are, however, cut away the greater part of their length, leaving the guide lugs 27 at the corners, the body part of the lid, however, being larger than the entrance opening 23. The shape of this lid is best shown in Fig. 3. The middle portion of the trap lid is intended to provide a dome or pocket 28 for receiving the upper end 29 of the coiled spring, the spring being secured at this end to the lid. The trap lid by pressure thereon can readily be moved downwardly and to the bottom of the box, the spring being of the bed spring kind to contain itself when collapsed. The lugs 27 at the corners of the trap lid guide the lid in its vertical movement up or down in the receptacle. The main reason for cutting away the edges

of the trap lid is, as before stated, to form by-passageways for oils upon downward movement of the lid and also to allow the lid to clear the ledges 6 and 7. Thus, if it is desired to clean a tool or a piece of work, the workman pushes down the trap lid below the surface of the oil and uses the oil in any way desired. Upon withdrawing of the hand or work the lid immediately falls and is pressed against the frame 8 to seal the opening 23. Thus the receptacle is always automatically kept in closed condition. As the trap lid is carried upwardly some of the oil may be carried therewith, but to drain this oil back into the receptacle I provide small drain openings 30 through the trap lid which I cover with gauze 31, as shown. Any oil which may be carried out with the trap lid will flow back into the receptacle through these drain openings. If the box should come into contact with a flame, this flame could not reach the oil through the drain openings on account of the gauze and the worst that could happen would be the burning of the oil vapor over the drain openings. If the receptacle is tipped the gauze will allow very little of the oil to escape, and at any rate, the receptacle would be picked up and righted before sufficient oil could escape through the gauze meshes to cause any harm. If it were not for this automatic self-closing lid, tipping of the receptacle would allow escape of the entire contents or a sufficient amount thereof before the receptacle could be righted, and the oil would rapidly spread over surrounding combustible objects and, therefore, if ignited would spread the flames very rapidly. An outer lid 31' might also be provided which would assist in preventing spilling of the oil and which would also be effective in choking out any flames which might reach oil within the frame 8 or on the trap lid. This cover 31' is so attached that its center of gravity will tend to move it toward the closed position. The cover is rectangular and slightly larger than the receptacle outlet and has at its front edge the lug 32. At its rear end is secured the hinge frame 33 having hinge lugs 34 at its ends. These hinge lugs are hinged, as by means of rivets 35, to companion hinge lugs 36 which may form part of the locking frame 15, as shown. The outer corners of the hinge lugs 34 form stops 37 which engage the locking frame 15 and prevent opening of the cover beyond a point at which its center of gravity would tend to return it to its closed position. When the oil in the receptacle is to be used the workman must first open the cover and then press down the trap lid. When he withdraws from the receptacle the trap lid is snapped upwardly by the spring to automatically close the entrance opening 23 and the cover 31' automatically drops shut. The

top edges of the frame 8 are preferably brought in a plane with the edges of the receptacle to be engaged by the cover when closed.

The receptacle can readily be filled or some of its contents removed by holding down the trap lid. The receptacle can also be readily cleaned by removing the cover, the trap frame and lid, and the spring, by pulling out the spring frame 21 to remove its pressure from the lock 19, and by pulling upwardly at the rear end of the cover, the cover with the locking frame 15 can be removed and thus the end 18 of the hook 16 removed from the path of the ledge or lug 14 on the frame 8, and by lifting the rear end of this frame upward its front end can be withdrawn to release the bead 10 from the locking indent 2. The trap lid and the spring secured thereto can then be lifted from the receptacle, which can then be readily cleaned. The reverse operation will again bring the parts in their proper positions within and on the receptacle.

In the particular form of receptacle I have shown, the trap lid should be of a width sufficiently greater than the distance between the frame 8 and the bottom of the receptacle to prevent it from wedging itself in an upright position between the frame and bottom. Where a deeper receptacle is used the downward travel of the lid should be limited so that its proper closure is insured.

A very simple but efficient portable, self-closing receptacle is thus formed, of which all the parts except the spring can be made from sheet material by means of dies. I do not wish to be restricted to the exact form or shape of the receptacle, nor to the exact form or shape of the various parts thereof.

I desire to secure the following claims by Letters Patent:

1. In a device of the class described, the combination of a receptacle, ledges formed on the inner sides of the walls of the receptacle near the mouth thereof, a removable frame for engaging within the mouth to rest on said ledges, means for locking said frame to said ledges, there being an entrance opening through said frame, a trap lid within the receptacle below said frame, and a compression spring for tending to hold said lid against said frame to seal the entrance opening.

2. In a device of the class described, the combination of a receptacle, a perforated movable frame entirely within the mouth of the receptacle, said frame forming a seat about the opening therethrough, a trap lid within the receptacle below said frame, a coiled spring tending to press said trap lid against the frame to close the opening, and spring clip mechanism for locking said frame to the receptacle.

3. In a device of the class described, the combination of a receptacle, a removable frame inserted within the receptacle at the mouth thereof and having an opening there-
 5 through, a trap lid, spring means within the receptacle tending to close said trap lid to close the opening, a removable locking frame for engaging said receptacle and for lock-
 10 ing said frame thereto, and a main cover for the receptacle hinged to said locking frame.

4. In a device of the class described, the combination of a receptacle, a frame sup-
 15 ported at the mouth of said receptacle and having an opening therethrough, a trap lid for said opening, a frame adapted to be detachably clamped to the receptacle, a cover for the receptacle pivoted to said clamped
 20 frame, and a spring member on said clamped frame for engaging with the removable frame to lock said removable frame in position.

5. In combination, a receptacle, a cover for the receptacle, a locking frame to which
 25 the cover is pivoted, said locking frame engaging against the outside of one wall of the receptacle, and a spring secured at one end to said wall and at its other end having
 30 clamping engagement with said locking frame.

6. In combination, a receptacle, a cover for the receptacle, a locking frame compris-
 35 ing a plate and pivot lugs extending from the plate, pivot lugs extending from the cover and pivoted to the pivot lugs of the plate, said plate being applied to the outside
 40 of the receptacle, and a spring secured to the outside of the receptacle and engaging said plate to clamp said plate in position on the receptacle.

7. In combination a locking frame, a pivot

plate on said frame, a cover pivoted at one end to said plate, a receptacle, said locking frame being adapted to be applied to the outside of said receptacle so that the cover
 45 may be moved to a position to close the mouth of said receptacle, a spring secured to the receptacle and adapted to engage the locking frame to clamp said frame to the
 50 receptacle, and means for preventing opening of said cover beyond a plane at which the force of gravity would tend to restore the cover to close the receptacle.

8. In combination, a receptacle, a locking frame on the receptacle, a spring member
 55 forming the sole means for holding said frame in place, a cover for the receptacle pivoted to said locking frame, a removable frame inserted at the mouth of the recep-
 60 tacle, said frame having an opening there- through, a trap lid for closing said opening, and a locking member extending from the locking frame into engagement with said
 65 removable frame to hold said removable frame in position.

9. In combination, a receptacle, grooves in the inner side of the receptacle walls near the mouth thereof, a removable frame hav-
 70 ing extensions for engaging in said grooves, a locking frame detachably clamped to the receptacle, and a locking member extending from said locking frame into engagement with the removable frame to lock said re-
 75 movable frame in position.

In witness whereof, I hereunto subscribe
 my name this 9th day of October A. D.,
 1907.

FRANKLIN HARDINGE.

Witnesses:

CHARLES J. SCHMIDT,
 LEONARD W. NOVANDER.