March 4, 1924. 1,485,738

C. C. TAFT

RECEPTACLE CLOSURE

Filed March 13 1923

Fig. 1.

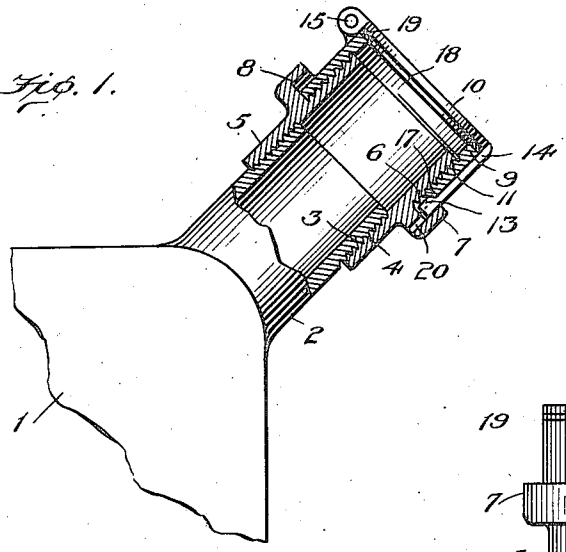


Fig. 3.

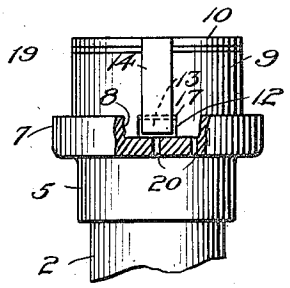


Fig. 2.

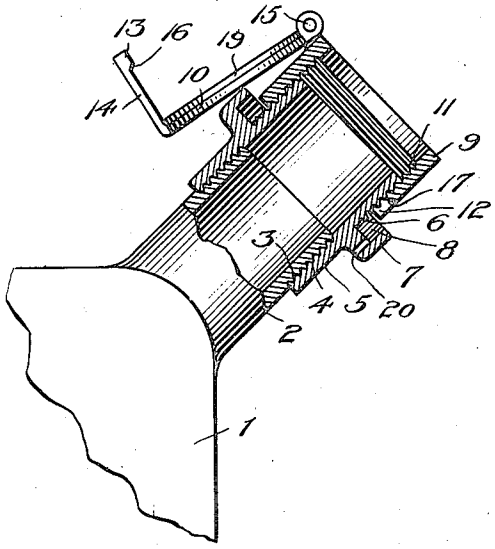
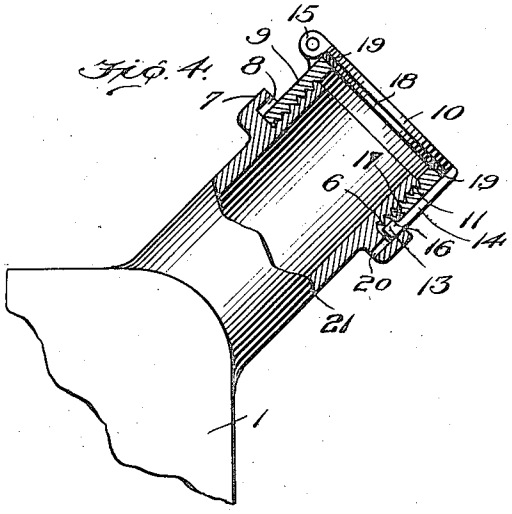


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES C. TAFT, OF NEW HAVEN, CONNECTICUT.

RECEPTACLE CLOSURE.

Application filed March 13, 1923. Serial No. 624,797.

To all whom it may concern:

Be it known that I, CHARLES C. TAFT, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Receptacle Closures; 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 appertains to make and use the same.

My invention relates to a receptacle closure designed to be especially suitable for application to the filling pipe of an automobile gasoline tank, radiator or the like, but which is not limited to such uses. The principal object of the invention is to provide a strong, durable, simple and easily manufactured cover or closure for the filling pipe of a receptacle which, without being entirely disconnected from the filling pipe, may be quickly and readily manipulated to permit the receptacle to be filled and which is provided with means for effectively maintaining said cover in closed position.

The primary feature of the invention, generally stated, involves, in combination with a threaded tubular member, a threaded sleeve rotatably mounted thereon through the cooperation of said threads, and a cover hinged to the said sleeve and forming a closure for the opening therethrough, the said tubular member being provided with a recess opening towards the outer end of said sleeve and bounded externally by a flange spaced radially from the threads of the tubular member, and said cover being provided with a latch member which, by entering said recess and cooperating with said flange, maintains the cover locked in closed relation until the said sleeve has been partially screwed off the tubular member.

In the drawings chosen for the purpose of illustrating the best form in which I now contemplate applying the principle of the invention,—

Figure 1 is a view, partly in elevation and partly in vertical section, showing a closure embodying the invention applied to the filling pipe of the gasoline tank of an automobile, the hinged cover of the device being in closed position.

Figure 2 is a view corresponding to Fig. 1 but illustrating the hinged cover in open position.

Figure 3 is a view, partly in elevation and partly in section, of a portion of the structure illustrated in Figs. 1 and 2, the view being taken at right angles thereto and the cover member of the device being closed.

Figure 4 is a view corresponding to Fig. 1 but showing the cover as combined with a filling pipe especially adapted for cooperation therewith.

In the construction shown in Figs. 1, 2 and 3 of the drawings, 1 is a tank or other receptacle and 2 indicates a pipe or tube through which it may be filled. At its outer end the filling pipe 2 is externally threaded as indicated at 3, such a construction being that commonly adopted for cooperating with a threaded cap such as is customarily used to form a closure for the filling pipe of an automobile fuel tank or radiator.

Threaded upon the outer end of the pipe 2 by means of internal threads 4 which cooperate with the threads 3, is a tubular member 5 provided at its outer end with external screw threads 6 and formed with an annular flange 7 spaced radially outward from said threads to provide a circular recess 8 adapted to receive the lower end of a sleeve 9 upon which the cap or cover 10 for closing access to the filling pipe is mounted. The sleeve 9 is provided on its interior with threads 11 cooperating with the threads 6 of the tubular member 5 and at its inner end is formed with a notch or recess 12 adapted to receive the headed lower end 13 of a latch bar or locking member 14 carried by the cover 10. When the cover 10 is in closed position the lower end of the latch member 13, as shown in Figs. 1 and 3, extends into the annular recess 8 of the tubular member 5 carried by the filling pipe of the receptacle, and the head 13 of said latch projects into the corresponding notch 12 at the lower end of the sleeve 9.

The cover 10 which is designed to fit tightly against the outer end of the sleeve is pivotally mounted upon said sleeve, preferably by means of a hinge 15 whose axis extends perpendicularly to that of the sleeve. The latch bar 14, which is preferably employed for maintaining the cover 10 in closed position, may advantageously be made integral with the cover and may be

positioned diametrically opposite the hinge 15. To facilitate quick release of the cover 10 from the control of the latch 14, so as to permit said cover to be swung to open position after the sleeve 9 has been partially screwed off the tubular member only a comparatively short distance from the position which it assumes (see Fig. 1) when the cover is closed, the upper face 16 of the latch head 13 is preferably beveled and the upper wall 17 of the notch 12 in the lower end of the sleeve 9 is correspondingly inclined.

The inner face of the cover 10 may advantageously be formed with a centrally disposed boss 18 which is surrounded by a gasket 19 of cork or other suitable material. The gasket 19 is adapted to press against the outer end of the sleeve 9 when the cover is closed, thus preventing leakage. To provide for the escape of any liquid which may get into the annular groove 8 during the filling of the receptacle, any desired number of drainage openings or channels 20 communicating with said groove may be provided.

When, as shown in Fig. 1, the pivoted closure or cover 10 is in closed position and the sleeve 9 has been screwed down upon the tubular member 5 so as to cause the lower end of the latching means 14 to enter the annular recess 8 in overlapping relation to the circumferential flange 7 of said tubular member, the cover 10 is locked in closed position, thus preventing accidental opening thereof. The cover may, however, be quickly brought to open position without disconnecting the sleeve 9 from the tubular member 5, merely by rotating the said sleeve the few turns necessary to permit the withdrawal of the lower end of the latch bar 14 from the groove or recess 8. When the latch has thus been relased from overlapping engagement with the flange 7 by which the recess 8 is externally bounded, the cover 10 may immediately be moved to open position, as illustrated in Fig. 2.

It will be appreciated that the tubular member 5 illustrated in Figs. 1, 2 and 3 is employed to adapt the device for application to the form of filling pipes with which fuel tanks and radiators of automobiles now are customarily provided. But, as shown in Fig. 4, the receptacle 1 may be provided with a filling pipe 21 which, except for the omission of the internal threads 4, is the same in function and structural details as the tubular member 5 heretofore described. Accordingly corresponding reference numerals to indicate features of construction similar to those already described have been applied to the tubular member or filling pipe 18 shown in Fig. 4. The threaded sleeve 9, pivoted cover 10 and latch bar 14 which cooperate with the tubular member 21 may be and preferably are constructed as heretofore described, and details of these parts like those embodied in the form of my invention illustrated in Figs. 1, 2 and 3 have therefore been indicated by corresponding reference numerals.

I claim:—

1. In a receptacle closure, the combination with a threaded tubular member provided with a recess bounded externally by a flange spaced radially from said threads, of a threaded sleeve rotatably mounted on said tubular member through the cooperation of said threads upon said member and sleeve, and a cover pivoted to said sleeve and forming a closure for the opening therethrough, said cover being provided with means adapted to extend into said recess and cooperate with said flange to prevent said cover from being moved to open position until after said sleeve has been partially screwed off said tubular member.

2. In a receptacle closure, the combination with a threaded tubular member, of a threaded sleeve rotatably mounted thereon through the cooperation of said threads upon said member and sleeve, and a cover pivoted to said sleeve and forming a closure for the opening therethrough, said tubular member having a recess opening toward the outer end of said sleeve, and said cover being provided with a latch member having a portion which is caused to enter said recess by screwing said sleeve inwardly upon said tubular member, said latch member when entered in said recess serving to retain said cover in closed position.

3. In a receptacle closure, the combination with a threaded tubular member, of a threaded sleeve rotatably mounted thereon through the cooperation of said threads upon said member and sleeve, and a cover pivoted to said sleeve and forming a closure for the opening therethrough, said tubular member being provided with an annular flange spaced radially outward from the threads upon said member and providing a recess which is adapted to receive the inner end of said sleeve, said cover being provided with a latch member adapted to extend into said recess and serving when in such position to lock said cover in closed position.

4. In a receptacle closure, the combination with a tubular member, of a sleeve rotatably mounted thereon and capable of moving axially with respect thereto, a cover pivotally mounted upon said sleeve and forming a closure for the opening therethrough, and means for locking said cover in closed position, said means involving a latch member movable with said sleeve, and a flange carried by said tubular member and adapted to overlap a portion of said latch member so as to retain the latter in a position preventing said cover from being

moved to open position, said latch member being movable into locking relation with said flange by a rotary movement of said sleeve and being releasable from said locking relation by an opposite rotary movement of said sleeve.

5. In a receptacle closure, the combination with an externally threaded member provided with an annular recess bounded externally by an annular flange which is spaced radially outward with respect to said threads, of an internally threaded sleeve provided with a notch at its lower edge and rotatably mounted on said tubular member through the cooperation of said threads upon said member and sleeve, and a cover hinged upon said sleeve and provided with a latch member having a head adapted to enter said notch in said sleeve when the cover is in closed position, said head being adapted to be entered into said annular recess by screwing said sleeve inwardly upon said tubular member when said cover is in closed position, and said latch member when the head thereof is entered in said recess having overlapping engagement with said flange preventing said hinged cover from being moved to open position until after said sleeve has been partially screwed off said tubular member.

6. In a receptacle closure, the combination with a threaded tubular member provided with an annular recess bounded externally by an annular flange, of a sleeve having threads for cooperating with the threads of said tubular member, a cover hinged upon said sleeve, and a latch member carried by said cover, said sleeve being provided at its lower end with a notch, said latch member having a head adapted to enter said notch in said sleeve when the cover is in closed position, the upper wall of said notch and the upper face of said head being beveled, and said latch member when the head thereof is entered in said annular recess having overlapping engagement with said flange, whereby said hinged cover is prevented from moving to open position.

7. In a receptacle closure, the combination with a threaded tubular member provided with a recess bounded externally by a flange spaced radially from said threads and having a drainage opening communicating with said recess, of a threaded sleeve rotatably mounted on said tubular member through the cooperation of said threads upon said member and sleeve, and a cover pivoted to said sleeve and forming a closure for the opening therethrough, said cover being provided with means adapted to extend into said recess and cooperate with said flange to prevent said cover from being moved to open position until after said sleeve has been partially screwed off said tubular member.

In testimony whereof I affix my signature.

CHARLES C. TAFT.