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PIPE CLOSURE

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Fig. 1.

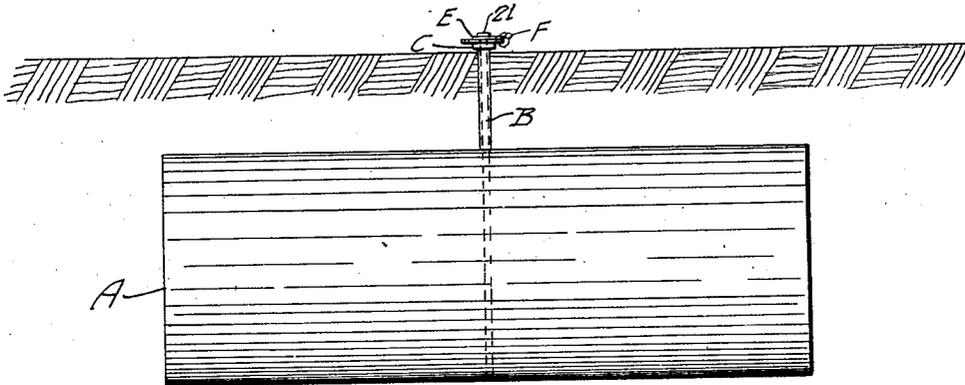


Fig. 2.

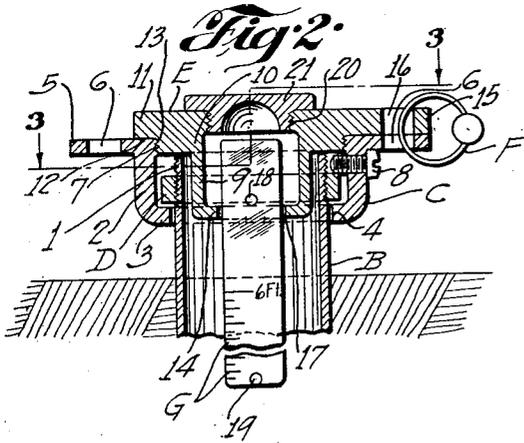
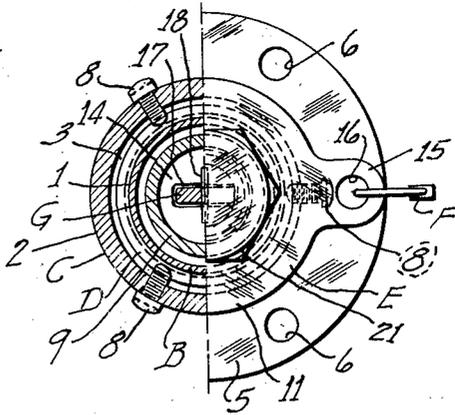


Fig. 3.



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PIPE CLOSURE

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This invention relates generally to pipe-closures. More particularly, my invention relates to a certain new and useful improvement in closures especially adapted for use in connection with sunken and embedded gasoline tanks and the like for preventing unauthorized filling thereof and has for its chief object the provision of a closure of simple, inexpensive, compact, and durable structure for sealing the inlet-end of the filling-pipe against unauthorized filling of the tank, the closure being readily and conveniently installed, and efficient in the performance of its intended function.

And with the above and other objects in view, my invention resides in the novel features of form, construction, arrangement, and combination of parts hereinafter described and pointed out in the claims.

In the accompanying drawing,—

Figure 1 illustrates an embedded gasoline-tank whose filling-pipe is equipped with a sealing-closure embodying my invention;

Figure 2 is an enlarged vertical sectional view of the tank-pipe and my new sealing-closure; and

Figure 3 is a transverse sectional view taken approximately on the line 3—3, Figure 2.

Referring now more in detail and by reference characters to said drawing, which illustrates a preferred embodiment of my invention, A designates a standard tank for gasoline or other hydro-carbon, which, for safety against combustion or explosion, is usually, as is customary, embedded in and suitably below the surface of the ground, as shown.

The tank A has a filling-pipe B extending upwardly through and opening over the surface of the ground, the pipe B at its upper end being externally threaded, as at 1, for co-operation with my new sealing-closure, which includes an approximately cup-shaped member C, whose annular side wall 2 has a somewhat greater diametrical dimension than that of pipe B, and whose end-wall 3 is apertured, as at 4, to freely accommodate the pipe B, the member C being adapted to loosely fit on and about the pipe B. For purposes presently appearing, the member C at

its rim has a lateral annular flange 5 provided or formed with a series of suitably spaced openings 6, and the wall 2 is internally threaded, as at 7, at or adjacent the rim of the member C.

Threaded on the pipe 1 and of dimensions to fit within the confines of the annular wall 2 of member C, is a retaining-ring D, bearing upon the upper end face of which and projecting through the side wall 2 of the cup C preferably closely under its rim-flange 5, as shown, is a series of screws or the like 8, whereby the cup C is secured in position on the projecting upper end of pipe B, but yet permitted to freely swivel thereabout.

E designates a second cup-shaped member or cap, whose annular side wall 9 has a somewhat lesser diametrical dimension than that of pipe B, and which at its upper end is extended upwardly, as at 10, and formed with a relatively thick annular flange 11 rabbeted and thereby shouldered on the under face of its marginal peripheral portion, as at 12, the inner or peripheral wall of said shoulder being threaded, as at 13, for detachable engagement with the threads 7 of the wall 2 of the cup C. As so engaged with the first cup C, the side wall 9 and end wall 14 of the cap E are disposed in pipe-closing position within the confines of pipe B, the cap E, however, being then also designed to swivel with the cup C on and relatively to the pipe B.

The flange 11 of the cap E is preferably of reduced diametrical dimension relatively to the flange 5 of the lower cup C, as best seen in Figure 3, the flange 11, however, being provided with a radial ear 15 apertured, as at 16, for registration with a respective opening 6 of the cup C for accommodating means, such as a seal F, for securing the cap E against unauthorized removal from the cup C and hence also from the pipe B, the cup C and cap E, when threaded together, as described, being adapted to swivel as a unit on and relatively to the pipe B, as previously stated. And it will be evident that, when the cup C and cap E are so secured together, the ring D is wholly concealed, and hence neither the cap E nor the closure as a whole may be removed for filling of the tank A until the

seal F is removed by an authorized agent, breakage of the seal F by an unauthorized individual at once giving notice that the closure has been tampered with, the contents of the tank A diluted, or the tank A filled with a spurious product.

The closure is relatively simple in structure, may be economically manufactured, may be readily installed on the pipe B, and is efficient in the performance of its intended function.

To facilitate measurement of the contents of the tank A, the end-wall 14 of the cap E is preferably provided with an opening, as at 17, corresponding in size and contour, as shown, to snugly accommodate a measuring or scale-rod G, which latter normally is suspended on a cross-pin 18 engaging the upper face of the cap end-wall 14 to depend in measuring position through the pipe B and into tank A, removal of the rod G being prevented by means of a second cross-pin 19 fixed in and adjacent the lower end of the rod G for retaining engagement with the under face of the cap end-wall 14 when the rod G is pulled upwardly.

Preferably also, as shown, the enlargement 10 of the cap E is threaded, as at 20, for engagement with a cap 21 for normally closing the chamber of the cap E and concealing the measuring rod G.

And it is to be understood that changes and modifications in the form, construction, arrangement, and combination of the several parts of the closure may be made and substituted for those herein shown and described without departing from the nature and principle of my invention.

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

1. A pipe sealing-closure including, in combination, a cup-shaped member apertured in its end wall for loosely fitting on and about the pipe, means comprising a ring adapted for engagement with the pipe within the confines of the annular wall of said member for retaining said member for swiveling on the pipe, a closure-cap for the pipe adapted for detachable engagement with said member over said ring for swiveling with said member as a unit relatively to the pipe, and means for sealing the cap against unauthorized removal from said member.

2. A pipe sealing-closure including, in combination, a cup-shaped member apertured in its end wall for loosely fitting on and about the pipe, said member having a laterally presented apertured flange, means comprising a ring adapted for threaded engagement with the pipe within the confines of the annular wall of said member for retaining said member for swiveling on the pipe, a cup-shaped closure-cap for the pipe having an annular lateral flange adapted for threaded

detachable engagement with said member over said ring for swiveling with said member as a unit relatively to the pipe, the flange of the cap having an apertured extension for registration with the aperture of the flange of said member, and sealing means including a member for engaging the member and cap at their registering apertures for securing the cap against unauthorized removal from said member.

3. A pipe sealing-closure including, in combination, a cup-shaped member apertured in its end wall for loosely fitting on and about an end of the pipe, said member being internally threaded and having an outwardly presented flange, means having engagement with said member and with the pipe for retaining said member for swiveling on the pipe, a closure-cap for the pipe having a depending annular threaded flange for threaded engagement with said member for swivelling with said member as a unit on and relatively to the pipe, the cap also having an outwardly presented flange for flatwise abutting engagement with the flange of said member, the outwardly presented flanges of the member and the cap having for registration series of apertures, and means for engagement with said flanges at respective registering apertures for preventing unauthorized removal of the cap.

In testimony whereof, I have signed my name to this specification.

EDWIN S. LEWIS.