

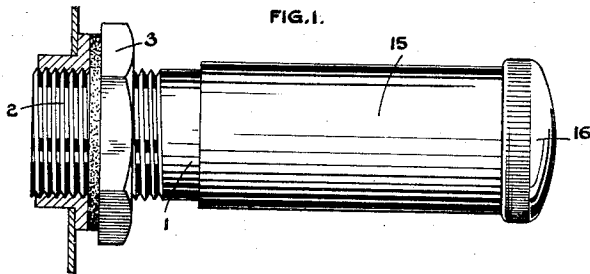
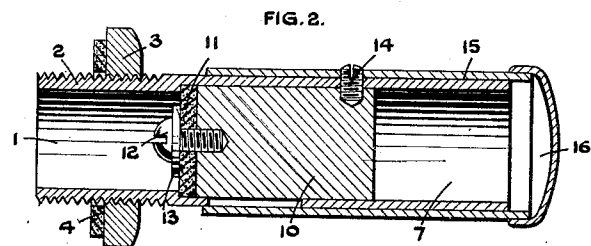
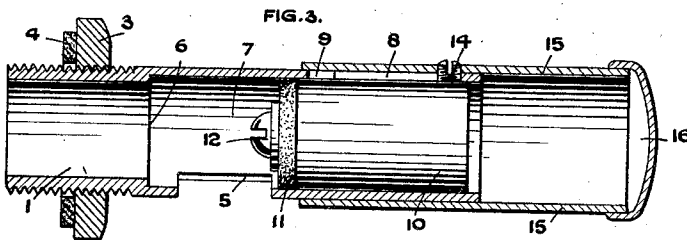
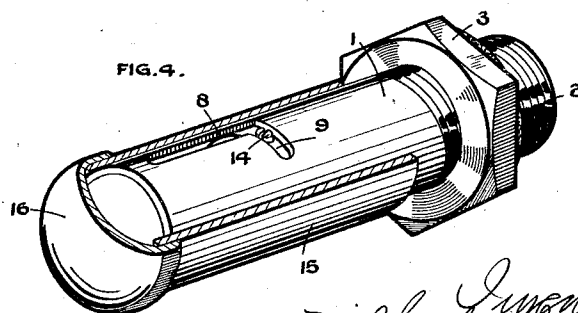
Oct. 1, 1929.

W. TRYHORN

1,729,914

TAP, MORE PARTICULARLY APPLICABLE TO OIL DRUMS

Filed Nov. 21, 1927



Inventor
Wilfred Tryhorn
By B. Singer, Atty.

UNITED STATES PATENT OFFICE

WILFRED TRYHORN, OF BIRMINGHAM, ENGLAND, ASSIGNOR TO THE PENNANT
MANUFACTURING COMPANY LIMITED, OF BIRMINGHAM, ENGLAND, A COMPANY
OF ENGLAND

TAP, MORE PARTICULARLY APPLICABLE TO OIL DRUMS

Application filed November 21, 1927, Serial No. 234,865, and in Great Britain November 27, 1926.

This invention relates to taps generally. The object of the present invention is to provide an improved construction of tap, and more particularly a tap adapted for fitting
5 to oil drums or other containers such as are used in garages or elsewhere for containing lubricating oil or the like.

It is desirable that such taps should possess the following features; they should be
10 capable of easy and quick operation; they should ensure when in the shut position that the oil does not leak or drip past the valve or obstructing member of the tap; there should be a minimum capacity beyond the point of
15 the valve or obstructing member to avoid dripping or discharge after the tap has been shut; the tap should be of a construction which will not require adjustment in order to
20 take up wear after prolonged use; it should be possible to lock the tap in the container with the outlet of the tap in the correct position for use; and finally the tap should be of a simple and strong construction which can be readily manufactured at a low cost.

25 With these objects in view I provide a tap comprising a body, a piston within the body, a discharge opening in the wall of the body positioned so as to be closed or uncovered by the sliding of the piston, and means for oper-
30 ating the piston comprising a slot having a portion substantially parallel to the axis of the body and also having a transverse portion, said slot being provided in the body rearwardly of the discharge opening, and
35 a projecting arm or pin which is mounted on the piston and engages the slot.

The arm or pin may be connected to an outer sleeve or cover which slides on the out-
40 side of the body and forms the member which is grasped and operated when it is desired to open or shut the tap.

45 The outer sleeve may be arranged so that when it moves on the body it covers the discharge opening when the tap is shut and un- covers the discharge opening when the tap

is open, the outer sleeve thus serving the purpose of preventing drip from the edges of the discharge opening when the tap has been closed.

The piston is preferably provided with a
50 soft portion at its forward end which is adapted for maintaining a fluid tight engagement with the walls of the body and which is also adapted to engage, when the piston is in the forward or closed position,
55 with an internal shoulder disposed within the body forwardly of the discharge opening. The internal shoulder provides an additional safeguard against any oil leaking past the piston when the tap is shut. 60

Referring to the drawings:—

Figure 1 is a view in side elevation showing one form of the present invention.

Figure 2 is a sectional view showing the tap in its closed position. 65

Figure 3 is a sectional view showing the tap in its open position.

Figure 4 is a perspective view partly in section.

In the construction illustrated I form the
70 barrel or body from a cylindrical member 1 and I provide its forward end with an external screw thread 2 for engaging within the screw threaded opening usually provided in the side, and near to the bottom, of oil
75 drums. A lock nut 3 and washer 4 are provided on this screw threaded end for enabling the tap to be mounted tightly in position with the discharge opening 5 in the body directed
80 downwardly. The interior of the cylindrical member or body 1 is bored out for the greater portion of its length so as to leave an internal shoulder 6 near its forward end, the
85 portion 7 of larger diameter in the interior being at the rear end of the body member. At a short distance rearwardly of the internal shoulder 6 the rectangular (or other
90 shaped) discharge opening 5 is formed in the side of the body member. On the opposite side of the body from that having the

discharge opening an L shaped or inclined bayonet slot 8 is formed, this slot being disposed with its forward end 9, which is helical, slightly to the rear of the discharge opening 5.

The piston 10, which in effect forms the valve of the tap, may be formed from a solid metal cylinder. On the forward end of the piston a disc 11 of leather, fibre or rubber is secured by means of a screw 12 which passes through the disc and engages with an axial hole in the end of the piston, a washer 13 being provided between the head of the screw and the face of the disc. A pin or screw 14, which extends through the bayonet slot 8, is secured in a hole in the periphery of the piston 10 near to its rear end. This pin or screw engages in a recess or hole in the outer cap or sleeve 15 which has a closed end 16 and is mounted externally in the rear end of the body 1.

In operation in order to open or close the tap it is merely necessary to operate the sleeve or cap 15 so as to slide the pin or screw 14 from one end of the slot towards the other, thus causing the piston either to uncover the discharge opening or to move forwardly until the soft part of the piston engages with the internal shoulder 6 of the body. As it moves forwardly the piston engaging the wall of the body prevents any oil from clinging thereto. The bayonet slot is positioned so that the pin or screw is at the forward end of the longitudinal arm when the soft end of the piston is in engagement with the internal shoulder 6, and the short arm 9 of the slot is arranged at a slight incline so that by turning the sleeve 15 on the body a cam action is obtained between the screw 14 and the slot part 9 and the front end of the piston is pressed tightly into engagement with the internal shoulder 6, thus ensuring that an oil tight joint is formed and preventing the piston from being moved into the open position by the pressure of oil within the drum.

The bayonet slot in the body is formed so that when the disc 11 is new and unworn and the tap is in its closed position, the screw or pin 14 engages the forward end 9 of the bayonet slot adjacent to the longitudinal part of the slot. With this arrangement, when the washer or disc 11 wears, the tap can still be closed tightly as the pin or screw 14 is able to move further along the part 9 of the bayonet slot.

From the foregoing it will be appreciated that I have provided an exceedingly simple and effective construction of tap, as it is only necessary to slide the sleeve or operating member in order to open or close the tap, it being understood that directly the piston is moved to the shut position the discharge of the oil will stop, and there will be no subsequent dripping such as takes place when

taps having spouts are used in connection with oil drums.

The external sleeve or cap improves the appearance of the tap and prevents dirt from entering into the interior by way of the L shaped slot on the end of the body. The sleeve also closes the discharge opening when the tap is shut, and provides a further safeguard against dripping.

It will be understood that, if desired, the body of the tap may be formed from a length of tube, and that the internal shoulder may be formed by brazing or otherwise securing a ring or sleeve within the tube. Alternately the body may be formed from a casting.

If desired the slot through which the rod or operating member projects may be of a helical or curved formation.

What I claim then is:—

1. A tap comprising a tubular body open at both ends, the one open end serving as an inlet opening, a slot formed in the side of the body and constituting a discharge opening, an internal shoulder upon the inner wall of said body, and situated between the inlet and discharge openings, a piston slidably mounted on said body, said piston including a metal plug carrying a soft washer upon its end and fitting the body, said body having a slot extending through its sides, said slot having a portion which is arranged transversely in relation to the axis of the body, a pin on said piston extending through said slot, a sleeve slidable on said body and connected to said pin said sleeve being closed at one end, said sleeve and pin constituting means for operating said piston and means for retaining the piston in engagement with said internal shoulder when required.

2. A tap comprising a tubular body open at both ends, the one open end serving as an inlet opening, a slot formed in the side of the body and constituting a discharge opening, an internal shoulder upon the inner wall of said body and situated between the inlet and discharge openings and constituting a seating, a piston slidably mounted in said body, said piston including a metal plug carrying a soft washer upon its end adapted to engage said seating, an L shaped slot formed in the side of said body, and a pin carried by said piston and extending through said slot into engagement with a sleeve member surrounding said body and constituting means for operating said piston, one end of the sleeve being closed.

3. A tap comprising a tubular body open at both ends, the one open end serving as an inlet opening, a slot formed in the side of the body and constituting a discharge opening, an internal shoulder upon the inner wall of said body and situated between the inlet and discharge openings and constituting a seating, a piston slidably mounted in said body, said piston including a metal plug and

a soft washer carried upon its end and adapted to contact with said seating, said body having a slot extending through its side, said slot including a portion disposed longitudinally of the body and a portion inclined thereto, a pin carried by the metal part of said piston projecting through said slot and connected to a sleeve member surrounding said body and slidable thereon said sleeve serving by a combined sliding and rotary movement to cause the piston to engage with its seating and thereby prevent the flow of liquid.

In witness whereof I affix my signature.
WILFRED TRYHORN.

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