W. GOODWIN.

TAP.

APPLICATION FILED SEPT. 29, 1905.

945,517.

Patented Jan. 4, 1910.

Fig. 1.

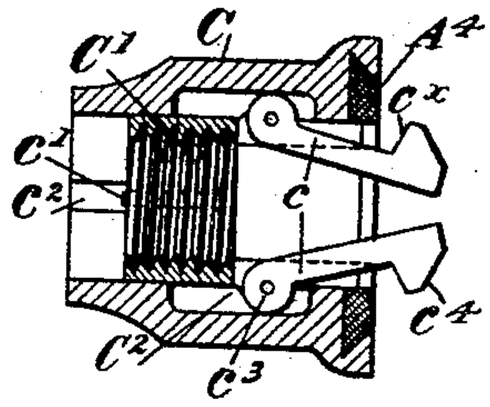


Fig. 2.

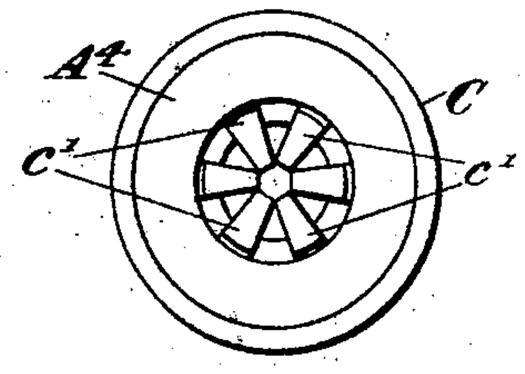


Fig. 3.

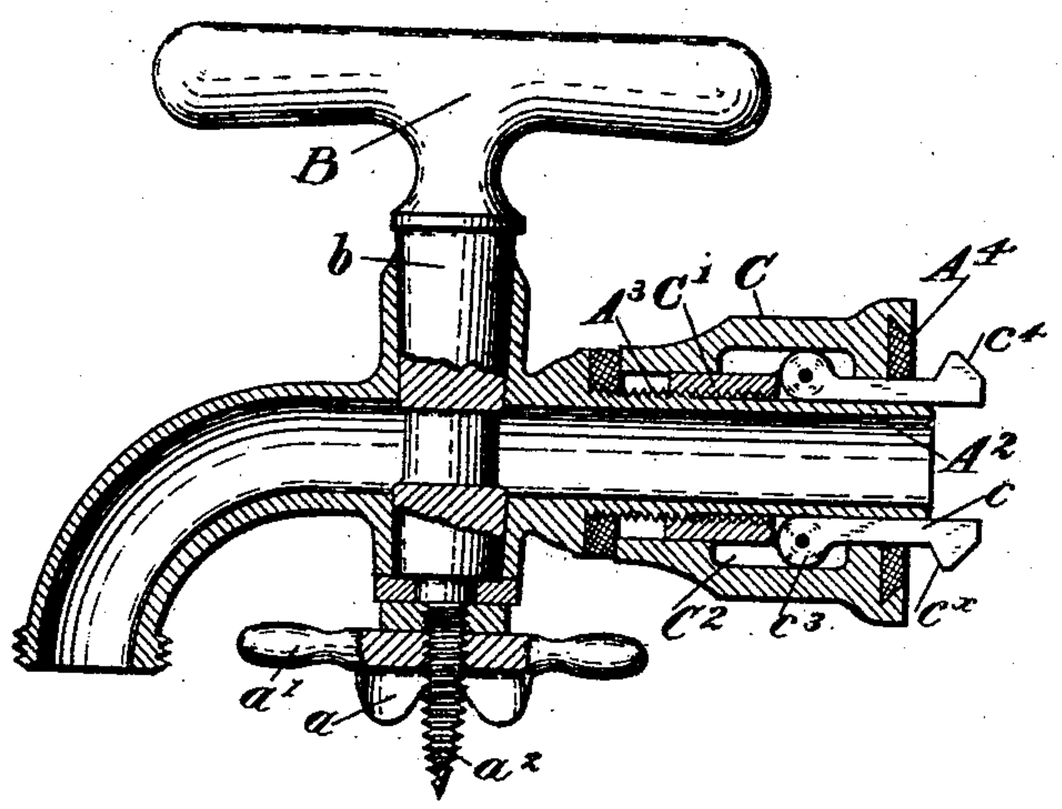
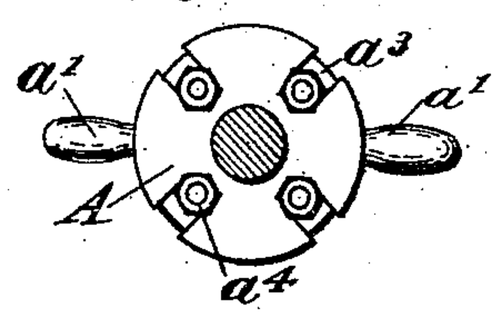


Fig. 4.



Witnesses:

M. F. Keating

W. Scott Connor

Inventor:

William Goodwin

By his Attorney:

Charles J. Kintner

UNITED STATES PATENT OFFICE.

WILLIAM GOODWIN, OF SOUTH HAYLING, ENGLAND.

TAP.

945,517. Specification of Letters Patent. Patented Jan. 4, 1910.

Application filed September 29, 1905. Serial No. 280,674.

To all whom it may concern:

Be it known that I, WILLIAM GOODWIN, a subject of the King of Great Britain, residing at Park Road, South Hayling, Hayling Island, in the county of Hants, England, engineer, have invented certain new and useful Improvements Relating to Taps, of which the following is a specification.

This invention has reference to taps particularly applicable for use with drums, tanks and similar receptacles adapted to contain oil or other liquid, the chief object being to enable such taps to be readily and efficiently secured or fixed in any desired position for the purpose of drawing off the contents of the receptacle as required.

According to this invention the tap is attached or secured to the wall of the receptacle by the intervention of a connecting piece comprising an outer member and an inner member, the latter of which is provided with a number of fingers arranged and constructed in such a manner that when the tap spigot is screwed or otherwise attached to the inner member, the fingers will be forced outwardly and securely hold the tap upon the wall of the receptacle, the said connecting piece by being drawn against the outer face of the receptacle affording a firm and tight joint.

In order that the said invention may be clearly understood and readily carried into effect, I will proceed to describe the same with reference to the accompanying drawings, in which,

Figure 1 is a longitudinal section, and, Fig. 2 an end view of the connecting piece above referred to. Fig. 3 is a longitudinal section of the tap and connecting piece fitted together. Fig. 4 is a sectional plan of a plate hereinafter referred to carrying cutters for cutting the hole in the receptacle.

The connecting piece comprises an outer member C surrounding a hollow cylindrical inner chamber C^1, screw-threaded internally for a portion of its length and having pivoted thereto a number of gripping members or fingers c. The member C^1 is prevented from independent rotation by any suitable means, as for example, by a longitudinal projection c^1 thereon working in a corresponding groove c^2 in the outer member C. It is, however, capable of a certain amount of axial or longitudinal motion within the member C, the recessed chamber C^2 enabling the pivoted ends c^3 of the gripping members or fingers c to participate in such motion. The said gripping members or fingers c in the forward position of the member C^1 extend beyond the outer member C, and are provided at their free extremities with outwardly extending projections or teeth c^4. To fix the tap to the wall of the receptacle, the gripping members or fingers c are moved about their pivoted ends c^3 so that the free extremities converge as shown in Figs. 1 and 2, in which position the projections or teeth c^4 are capable of passing through the hole in the wall of the receptacle. Upon inserting the spigot A^2 of the tap into the rear end of the member C^1, the gripping members or fingers c are caused to spread and overlap the surface surrounding the hole in the receptacle. As the threaded portion A^3 of the spigot A^2 is screwed into the threaded portion of the member C^1, the latter is drawn back, and the projections or teeth c^4, gripping the inner surface of the receptacle, force the outer surface thereof into close contact with the washer A^4. To afford additional security against the possibility of leakage, the projections or teeth c^4 are slightly beveled on their bearing surfaces, as at c^x, so that during the tightening operation, the periphery of the hole or aperture in the wall of the receptacle is forced back and compelled to bite into the washer A^4.

In some instances it may be desirable to remove the handle B of the tap, this being effected by any well known method; for example, by making a square end on the plug b and forming the handle B with a socket adapted to be applied thereto.

The lower end of the plug b may be formed with a tapered screw a^2 to which a disk or plate A, provided with blades or cutters a may be attached. The plate A has thumb pieces or projections a^1 to facilitate its attachment to or removal from the screw a^2, and the blades or cutters may be integral with said disk or plate A as shown in Fig. 3, or detachably secured thereto in recesses a^3 by means of nuts a^4, as shown in Fig. 4. This arrangement forms a convenient means for cutting a hole of the required size in the receptacle and being mounted upon the tap is always at hand ready for use. To cut a hole, the point of the tapered screw a^2 is first applied to the wall of the receptacle and the tap handle B turned; as the screw a^2 pierces the said wall, the blades or cutters A are brought into contact there-

with, and during the advance of the screw a hole is cut of the required size.

What I claim and desire to secure by Letters Patent of the United States is:—

1. A connecting piece for a tap comprising an outer member and a co-axial inner member forming no part of the tap but having a sliding movement relatively to each other, a series of gripping members pivoted each at one end in the wall of the said inner member so as to form part of said wall when spread to their gripping position, outwardly projecting teeth on the free ends of said gripping members where they extend beyond the wall of said inner member, and means for spreading said gripping members.

2. A connecting piece for a tap comprising an outer member and a co-axial inner member forming no part of the tap but having a sliding movement relatively to each other, a series of gripping members pivoted each at one end in the wall of the said inner member so as to form part of said wall when spread to their gripping position, outwardly projecting teeth on the free ends of said gripping members where they extend beyond the wall of said inner member, and means for engaging said inner member with the spigot of the tap so that the spigot spreads the gripping members.

3. A connecting piece for a tap comprising an outer member and a co-axial inner member forming no part of the tap but having a sliding movement relatively to each other, a series of gripping members pivoted each at one end in the wall of the said inner member so as to form part of said wall when spread to their gripping position, outwardly projecting teeth on the free ends of said gripping members where they extend beyond the wall of said inner member, the surfaces of said notches that face the end of the wall of the outer member being beveled, for the purpose specified.

4. A connecting piece for a tap comprising an outer member and a co-axial inner member forming no part of the tap but having a sliding movement relatively to each other, a series of gripping members pivoted each at one end in the wall of the said inner member so as to form part of said wall when spread to their gripping position, outwardly projecting teeth on the free ends of said gripping members where they extend beyond the wall of said inner member, the surfaces of said teeth that face the end of the wall of the outer member being beveled, and means for spreading the said gripping members, for the purpose specified.

5. The combination with a tap, of a connecting piece comprising an outer member and a co-axial inner member forming no part of the tap but having a sliding movement relatively to each other, gripping members pivoted each at one end in the wall of said inner member so as to form part of said wall when spread to their gripping position, outwardly extending teeth on the free ends of said gripping members where they project beyond the wall of said inner member, and means for operating said gripping members by the angular motion of the tap, the spigot of which is inserted into said inner member, to cause the gripping members to secure the tap to the vessel to which it is applied, for the purpose specified.

6. The combination with a tap of a connecting piece comprising an outer member and a co-axial inner member forming no part of the tap but having a sliding movement relatively to each other, gripping members pivoted each at one end in the wall of said inner member so as to form part of said wall when spread to their gripping position and adapted to enter the tap-hole in the vessel to which the tap is applied, outwardly projecting beveled teeth on the free ends of said gripping members for bearing against the inner face of the vessel near the periphery of the tap-hole, and means for operating said gripping members by the angular motion of the tap, the spigot of which is inserted into said inner member, to cause the gripping members to secure the tap to the vessel, for the purpose specified.

7. The combination with a tap, of a connecting piece comprising an outer member and a co-axial inner member, said members having a limited sliding movement relatively to each other, means for preventing said inner member from angular movement with respect to said outer member, gripping members pivoted in the wall of said inner member so as to form part of said wall when spread to their gripping position and adapted to enter the tap-hole in the vessel to which the tap is applied, and means for causing said inner member to slide relatively to said outer member by the motion of the tap, the spigot of which is inserted into said inner member, to cause the gripping members to secure the tap to the vessel, for the purpose specified.

8. The combination with a tap, of a connecting piece comprising an outer member and a co-axial inner member, said members having a limited sliding movement relatively to each other, means for preventing said inner member from angular movement with respect to said outer member, gripping members pivoted each at one end in the wall of said inner member so as to form part of said wall when spread to their gripping position, and adapted to enter the tap-hole in the vessel to which the tap is applied, outwardly projecting beveled teeth on the free ends of said gripping members for bearing against the inner face of the vessel near the periphery of the tap-hole, and means for causing said inner member to

slide relatively to said outer member by the angular motion of the tap, the spigot of which is inserted into said inner member, to cause the gripping members to secure the tap to the vessel for the purpose specified.

9. The combination with a tap of a connecting piece adapted to receive and hold the tap-spigot, comprising an inner member and an outer member forming no part of the tap but having a sliding movement relatively to each other, gripping members on said inner member, outwardly extending beveled teeth on the extremities of said gripping members for entering the tap-hole in the vessel to which the tap is applied, and for bearing against the inner face of the vessel near the periphery of the tap-hole, a screw-thread on the spigot, a corresponding screw-thread on said inner member, whereby the angular motion of the tap causes said gripping members to secure the tap to the vessel, for the purpose specified.

10. The combination with a tap, of a connecting piece comprising an outer member and an inner member, said members having a limited sliding movement relatively to each other, gripping members pivoted to said inner member and adapted to enter the tap-hole in the vessel to which the tap is applied, a screw-thread on the spigot of said tap, and a corresponding screw-thread on said inner member whereby the angular motion of the tap causes said gripping members to secure the tap to the vessel for the purpose specified.

11. The combination with a tap, of a connecting piece comprising an outer member and an inner member, said members having a limited sliding movement relatively to each other, gripping members pivoted to said inner member and adapted to enter the tap-hole in the vessel to which the tap is applied, outwardly extending beveled projections or teeth on the extremities of said gripping members for bearing against the inner face of the vessel near the periphery of the tap-hole, a screw-thread on the spigot of said tap, a corresponding screw-thread on said inner member whereby the angular motion of the tap causes said gripping members to secure the tap to the vessel for the purpose specified.

12. The combination with a tap, of a connecting piece comprising an outer member and an inner member, said members having a limited sliding movement relatively to each other, means for preventing said inner member from angular movement with respect to said outer member, gripping members pivoted to said inner member and adapted to enter the tap-hole in the vessel to which the tap is applied, a screw-thread on the spigot of said tap, a corresponding screw-thread on said inner member whereby the angular motion of the tap causes said gripping members to secure the tap to the vessel for the purpose specified.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses this fourteenth day of September 1905.

WILLIAM GOODWIN.

Witnesses:
T. SELBY WARDLE,
GEORGE ISAAC BRIDGES.