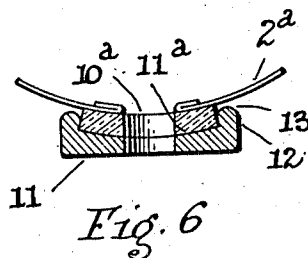
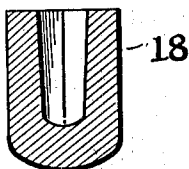
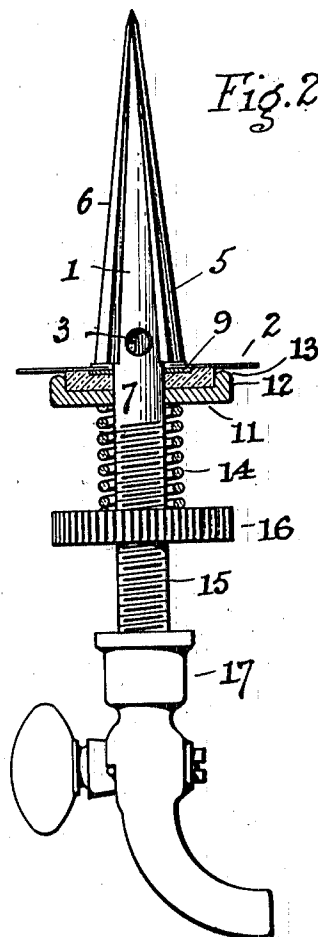
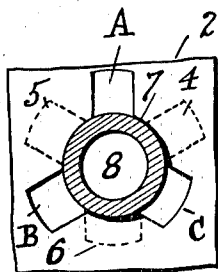
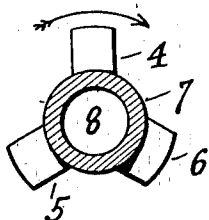
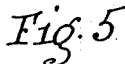
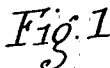


APPLICATION FILED SEPT. 24, 1912.

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Inventor.
Friedrich J. Storey
Witnesses, Withamson Selfackey &
his Attorney

UNITED STATES PATENT OFFICE.

FREDERICK JAMES STOREY, OF SALE, VICTORIA, AUSTRALIA.

TAP, COCK, AND THE LIKE, HAVING TAPPING MEANS.

1,059,231.

Specification of Letters Patent.

Patented Apr. 15, 1913.

Application filed September 24, 1912. Serial No. 722,098.

To all whom it may concern:

Be it known that I, FREDERICK JAMES STOREY, a subject of the King of Great Britain and Ireland, &c., residing at Sale, in the State of Victoria, Commonwealth of Australia, have invented certain new and useful Improvements in Taps, Cocks, and the Like, Having Tapping Means; 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.

Various taps, cocks, and the like have been devised adapted for tapping or perforating vessels to which they are to be connected, and for avoiding leakages therefrom, and the present invention is of that class.

The rapidity with which my invention can be put into use, the ease of operation and the durability of the parts,—washers or the like only requiring renewal at intervals (generally only when the article is being placed on to a new tin or vessel)—are advantages.

Construction employable is illustrated in the drawings herewith, but modifications within the scope of my subsequent "claim" are practicable.

Figure 1 is a view (partly sectional) of my article ready for use; Fig. 2 is a view of the article, when in use. This view is partly sectional and exhibits a nozzle of different form. Figs. 3 to 5 are on a larger scale. Fig. 3 shows a section through the stem in Fig. 1 on the line 3—3, looking toward the tapper; Fig. 4 is a like section but through the stem on the line 4—4 in Fig. 2 looking at the vessel or tin into which the tapper has been introduced, and Fig. 5 shows a modification of Fig. 3. Fig. 6 shows parts of Fig. 2 modified; and Fig. 7 illustrates an adjunct usable at will.

The perforator or tapper I use is an elongated cone body 1 having ribs 4, 5, 6 (or in Fig. 5, ribs 4^a, 4^b) of any suitable cross section, differentiated suitably from one another. They are shown of different widths and not all of equal lengths in Figs. 3 and 4; and set to different angles relatively to the central body in Fig. 5. These ribs have bases to abut within the inside of the kerosene tin, oil drum, food package or other vessel 2 (which need not be as thin as shown) into which the cone is pushed. From the base of the cone there extends outwardly a hollow stem 7, the space or passage

8 within which communicates with the exterior of the cone through holes 3 in the latter, located close to the base, and also away therefrom if desired. In practice stem 7 will often be made relatively shorter than is illustrated. The stem is in part screw threaded exteriorly as at 15. Near the cone base the stem is not threaded, and here it has over it a close fitting elastic or compressible leakage preventing recessed or other ring or member 10.

A ring 9 of material to serve as a washer guard and so far as required as a seal to prevent leakage from the vessel 2 around the stem 7 is located on the cone side of the elastic washer 10 the latter being of larger diameter. This relatively thin ring or disk 9 can be of soft metal as aluminium or copper or some other; or may be of a sufficiently stout composition as fiber or asbestos, or of some material adapted to be cemented or made to adhere to the tin or vessel. Various substances will be used for the washer 10, and its guards 9 at will, regard being had to the local conditions especially to the nature of the liquid in the vessel to be tapped; so as to resist any tendencies of the said liquid to escape or to destroy by corrosion. I do not exclude the use of hard metal guards where suitable. Outside the elastic washer 10 is a cap 11 or flanged washer, also fitting closely around the stem. As shown it has an outer flange 12 with a rounded vessel facing edge 13, and it acts as a packing box. Between the said cap 11 and a nut 16 which is screwed on at the outer end of the stem, is a coiled spring 14 or the like, which can be compressed by turning the nut. It is shown compressed in Fig. 2, and in practice the compression is regulated as found suitable. The spring is not necessarily metal—it might be one of rubber for example. On or connected to the outer end of the stem is any suitable tap or cock 17. There may be a handle or knob 18 for fitting over the end of the cock or tap which can be hammered in applying the device in position on a vessel.

It will be found sufficient with many tins or vessels as 2, to grasp my article in the hand and press its point or end into the vessel,—with or without first having a starting hole,—the cone readily enlarging whatever hole is first made. When the cone is completely inserted and enough more to be just clear of the tin or vessel interior, my article

is to be partly rotated, until the bases of the ribs are no longer opposite to the holes they have made in the tin. If then the spring 14 is pressing the cap 11 on the washer 10, the latter will press on the outer surface of the tin, and thus the vessel is at once sealed against leakage. But in any case the washer 10, (with ring or guard 9 when the latter is used) can be made to press the vessel sufficiently by screwing down the nut, whereupon the fixing action is completed. By further screwing nut 16 down in the case of Fig. 2 the edge 13 can be made to touch or even with some vessels 2 indent the latter. The washer 10 can be of such size as to be completely shut in when compressed. The ring 9 protects the washer 10 from being damaged by the ribs, or by the rough edges of the perforated tin, and facilitates the successful handling of the appliance by unskilled persons.

It is possible for my tap to omit the screw thread and nut, but still retaining a pressure means, to hold the tap in place and prevent leakage. Where the tap's outer end or cock portion 17 is removably screwed to the stem, it may be put on after the said insertion. In some cases it would be a permanent connection or integral part. For tins or vessels 2^a (Fig. 6) having rounded or spherical surfaces, the washer 10^a or cap 11 or both are modified to produce a non-

leaking joint. Thus the vessel facing interior of member 11 is rounded to correspond with vessel 2^a.

Having described this invention, what is claimed by Letters Patent is:—

A tap for vessels comprising a stem having a tubular portion and a conical and pointed end portion, said conical end portion provided with apertures communicating with said tubular portion, and the tubular portion having screw-threaded and smooth outer surfaces; a plurality of tapering ribs on said conical and pointed portion providing an incising device therewith, and the inner ends of said ribs forming shoulders; a flanged washer slidably mounted on the smooth tubular surface of said stem; a packing disk fitting within said flanged washer and disposed adjacent the shoulders of said ribs; a nut screwed on the threaded surface of said tubular stem; and a spiral spring fitting on the stem between the nut and the flanged washer and adapted to compress the washer when the spring is tensioned by the nut to secure the tap to the vessel and prevent leakage.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

FREDERICK JAMES STOREY.

Witnesses:

GEORGE G. TURRI,
BEATRICE M. LOWE.