PATENT SPECIFICATION

694,394

Date of Application and filing Complete Specification July 4, 1951.

No. 15843/51.

Application made in India on July 4, 1950.

Complete Specification Published July 22, 1953.

Index at acceptance :—**Class 135,** M1c4.

COMPLETE SPECIFICATION

An Improved Glandless Self-Closing Tap

I, THOMAS NEVILLE HUGH MARQUIS, a British Subject, of Hapugastenne Group, Ratnapura, Ceylon, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

My invention relates to a very simple form of the type of taps for controlling the issue of water and like fluids, commonly known as "push" taps, in which the opening of the passage for fluid is effected by pressure upon a button or knob projecting out of the tap, the water pressure effecting the closing of the passage.

Such "push" taps generally in use embody a plurality of parts including glands, washers and the like and the improved feature in my invention is that the tap employs no glands in its construction and embodies only two units one of which is a moving part that is pushed inwards to open the passage for flow of fluid, and on being released returns into the "closed" position, as a result of the pressure of the fluid in the supply pipe.

A tap of this construction, whilst being capable of production at a very low cost as compared with types now in use eliminates the periodical repair and replacements.

The working of the improved tap according to my invention can be understood from the accompanying drawings.

Fig. 1 is a side view of the tap.

Fig. 2 is a vertical cross section of Fig. 1.

Fig. 3 is a rear view of Fig. 1.

The body 1 of the tap as in Fig. 1 is of one piece construction having a longitudinally disposed passage of circular cross section the rear end 3 being threaded internally to fit corresponding threads in the supply pipe, the opposite or forward end being closed except for a central opening or channel 4 in which the valve stem 5 slides.

At a convenient distance from the forward end is fitted, welded or cast integrally with the body the outlet spout 6, the central passage in which opens into the water chamber 7 of the body of the tap.

The button or the knob 2 is permanently fixed to the stem 5 which is of circular cross section and is a sliding fit in the channel 4. Such stem extends through the water chamber and beyond the spout opening and is formed into a mushroom headed valve 8 for which a seating is provided in the tap body as at 9. The button or knob is fitted at a determined point on the stem, so that when the valve 8 is in the seating 9 the button is some distance away from the forward outer end of the tap body.

In operation, when the button or knob 2 is pressed inwards and retained in that position, the valve will be moved away from its seating, thus allowing the fluid emanating from the supply pipe to flow through the space between the valve and seating into the water chamber 7 and out through the outlet spout. When the pressure on the button or knob is released the pressure of the fluid in the supply pipe acting on the valve face will push it back to its seating thus stopping the flow of fluid.

Considering that the valve, stem and button form one rigid unit and are axially fitted with regard to each other and to the channel 4 and valve seating very little pressure is required to return and retain the valve in its seating and it has been found in practice that the normal pressure of the ordinary water supply systems or that obtained from an overhead tank is sufficient.

What I claim is:—

1. A glandless self-closing tap comprising a body portion formed in one piece and having a longitudinally disposed passage of circular cross section internally threaded at one end for connection to a source of supply and having the diameter

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Such "push" taps generally in use embody a plurality of parts including glands, washers and the like and the improved feature in my invention is that the tap employs no glands in its construction and embodies only two units one of which is a moving part that is pushed inwards to open the passage for flow of fluid, and on being released returns into the "closed" position, as a result of the pressure of the fluid in the supply pipe.

A tap of this construction, whilst being capable of production at a very low cost as compared with types now in use eliminates the periodical repair and replacements.

The working of the improved tap according to my invention can be understood from the accompanying drawings.

Fig. 1 is a side view of the tap.

Fig. 2 is a vertical cross section of Fig. 1.

Fig. 3 is a rear view of Fig. 1.

The body 1 of the tap as in Fig. 1 is of one piece construction having a longitudinally disposed passage of circular cross section the rear end 3 being threaded internally to fit corresponding threads in the supply pipe, the opposite or forward end being closed except for a central opening or channel 4 in which the valve stem 5 slides.

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thereof reduced intermediate its length to form a chamber having an integral valve seat at the point of reduction, a valve unit having a mushroom shaped head cooperating with the seat and urged into sealing contact therewith solely by the pressure of the fluid supply acting thereon, and a stem disposed along the passage extending through the intermediate chamber to and beyond the other end of the body portion terminating in a knob or button member, said stem being a sliding fit in the end of the body portion and forming with the walls of the intermediate chamber an annular space which communicates with a spout or outlet member integral with or mounted on the body portion.

2. A tap for controlling the issue of water and like fluids as hereinbefore described and as illustrated in the accompanying drawings.

MARKS & CLERK.

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M.E.

