May 18, 1926. 1,584,895

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TAP, FAUCET, OR THE LIKE

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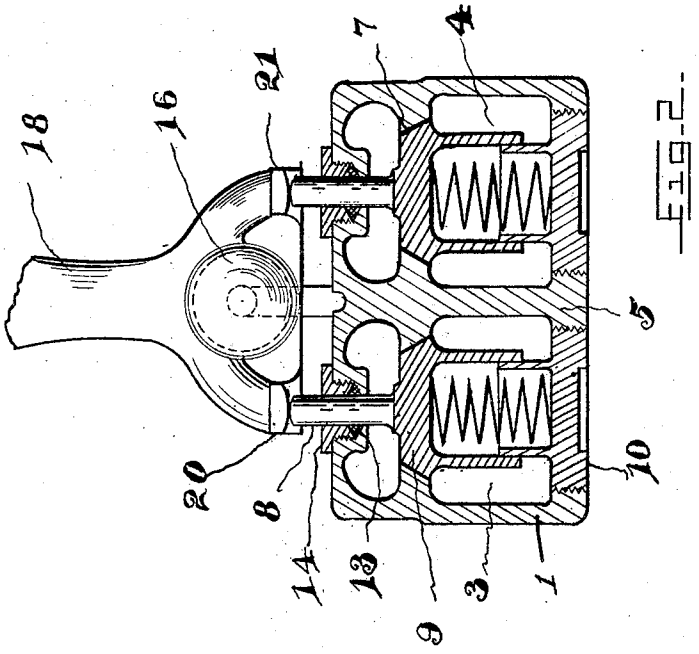


Fig. 2.

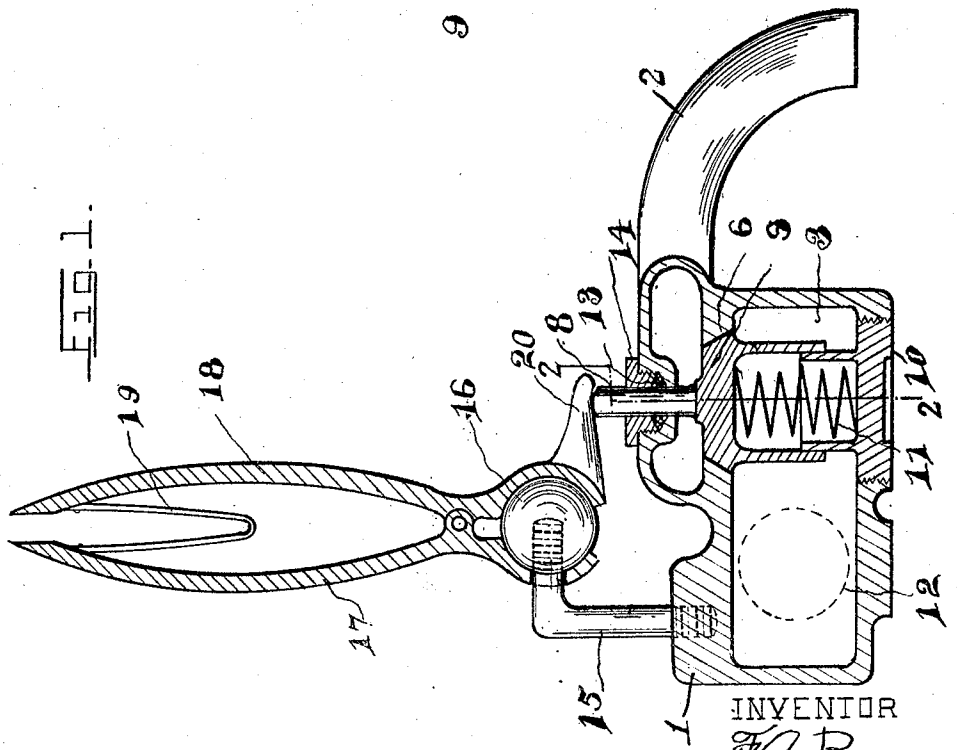


Fig. 1.

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TAP, FAUCET, OR THE LIKE.

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This invention relates to taps, faucets or the like having a single operating handle in which hot or cold water, or a mixture of both, is discharged from a single nozzle. In the constructions with which I am acquainted, it has not been possible to obtain hot water without first, at least momentarily turning on the cold water, or, if the supply pipes be oppositely connected without first turning on the hot water before cold water can be obtained.

My object therefore is to devise a tap in which, by means of a single operating handle, either hot or cold water may be obtained without in any way affecting the other, and in which when desired a mixture of both may be obtained and the proportions of such mixture regulated very finely.

I attain my object by means of the constructions hereinafter more specifically described and illustrated in the accompanying drawings in which—

Fig. 1 is a vertical section through my improved tap; and

Fig. 2 a section on the line 2—2 in Fig. 1 the valve stems being shown in front elevation.

In the drawings like numerals of reference indicate corresponding parts in the different figures.

The tap comprises a body 1 having a nozzle 2 formed integrally therewith. Two chambers 3 and 4 are formed in the body, which chambers are separated by a partition 5. Between the chamber 3 and the nozzle is formed a valve seat 6 and between the chamber 4 and the nozzle is formed a valve seat 7. Suitable openings 12 are provided in the body through which cold water may be led to one chamber and hot water to the other.

Slidably mounted in the top of the body over each valve seat is a stem 8, on the lower end of which is carried a valve 9 adapted to seat against the valve seat. An opening is formed in the body directly below each valve seat through which openings the valves may be inserted. Each opening is normally closed by a plug 10. On the under side of the valve and the upper side of the plug are formed annular projections, the one being adapted to sleeve over the other and within these projections is located a spring 11, which tends to hold the valve in seated position.

A threaded recess is formed in the body around each stem to receive suitable packing 13, which recess is closed by a gland or nut 14. 15 is a handle support, which may be formed integral with the body, although I preferably form it as a separate part threaded into a recess formed in the body. The end of this support is provided with a ball 16 serving as a bearing for the operating handle.

The operating handle is formed of two levers 17 and 18 pivotally connected with one another intermediate their ends and so shaped at one end that they form between them a socket in which the ball 16 is received. A spring 19 tends to keep the other ends of the levers separated so that the ball is firmly gripped, the spring being of sufficient strength to retain the handle in the position to which it has been moved without the handle having to be held by the hand.

The lever 18 is provided with a pair of forwardly directed projections 20 and 21 by means of which the stems 8 may be actuated to unseat the valves to permit the flow of water through the nozzle.

The device is operated as follows. Assuming the cold water to be connected with the chamber 4 and the hot water with the chamber 3, if the handle be rocked to the left the projection 20 will depress the left hand stem 8 to unseat the valve from the seat 6 and thus permit the flow of hot water to the nozzle. If the handle be rocked to the right, the projection 21 will depress the right hand stem 8 to unseat the valve from the seat 7 and thus permit the flow of cold water to the nozzle. If the handle be rocked forwardly both stems will be depressed and both valves unseated, and thus a mixture of hot and cold water will flow from the nozzle. If the handle be rocked forwardly and then inclined to the left, the flow of hot water will be increased and the flow of cold water decreased, thus giving a hotter mixture. If the handle be rocked forwardly and then inclined to the right, the flow of hot water will be decreased and the flow of cold water increased, thus giving a colder mixture.

From the above description it will be seen that I have devised a construction which will satisfactorily attain the objects of my invention as set out in this specification. It will be noted that there are few parts which could get out of order, and these are all readily accessible.

What I claim is:—

1. In a tap, the combination of a casing having two passages formed therein, valves controlling said passages; single means by which said valves may be actuated together or either one independent of the other, said means being mounted on said casing by means of a ball and socket joint; and resilient means normally tending to cause frictional engagement between the ball and the socket to prevent relative movement of the ball and the socket.

2. In a tap, the combination of a casing having two passages formed therein, valves controlling said passages; a handle support on the casing, said support having a ball formed thereon; and a handle comprising a pair of levers pivoted intermediate their ends, said levers at one end forming a socket between which said ball is received, and a spring connected with the other ends of the levers adapted to retain the first mentioned ends of the levers in frictional engagement with the ball, one of said levers being adapted to engage said stems together or either one independent of the other to actuate the valves.

3. In a tap, the combination of a casing having two chambers formed therein, each provided with an inlet opening and an outlet opening, valves controlling said outlet openings, each valve having a stem thereon extending through the casing; a handle support on said casing, said support having a ball formed thereon; and a handle comprising a pair of levers pivoted intermediate their ends, said levers at one end forming a socket between which said ball is received, one of said levers being adapted to engage said stems together or either one independent of the other to actuate the valves.

4. In a tap, the combination of a casing having two chambers formed therein, each provided with an inlet opening and an outlet opening, valves controlling said outlet openings, each valve having a stem thereon extending through the casing; a handle support on said casing, said support having a ball formed thereon; and a handle comprising a pair of levers pivoted intermediate their ends, said levers at one end forming a socket between which said ball is received and a spring connected with the other ends of the levers adapted to retain the first mentioned ends of the levers in frictional engagement with the ball, one of said levers being adapted to engage said stems together or either one independent of the other to actuate the valves.

Signed at Toronto, Canada, this 20th day of June 1924.

FRANK ARTHUR ROWE.