

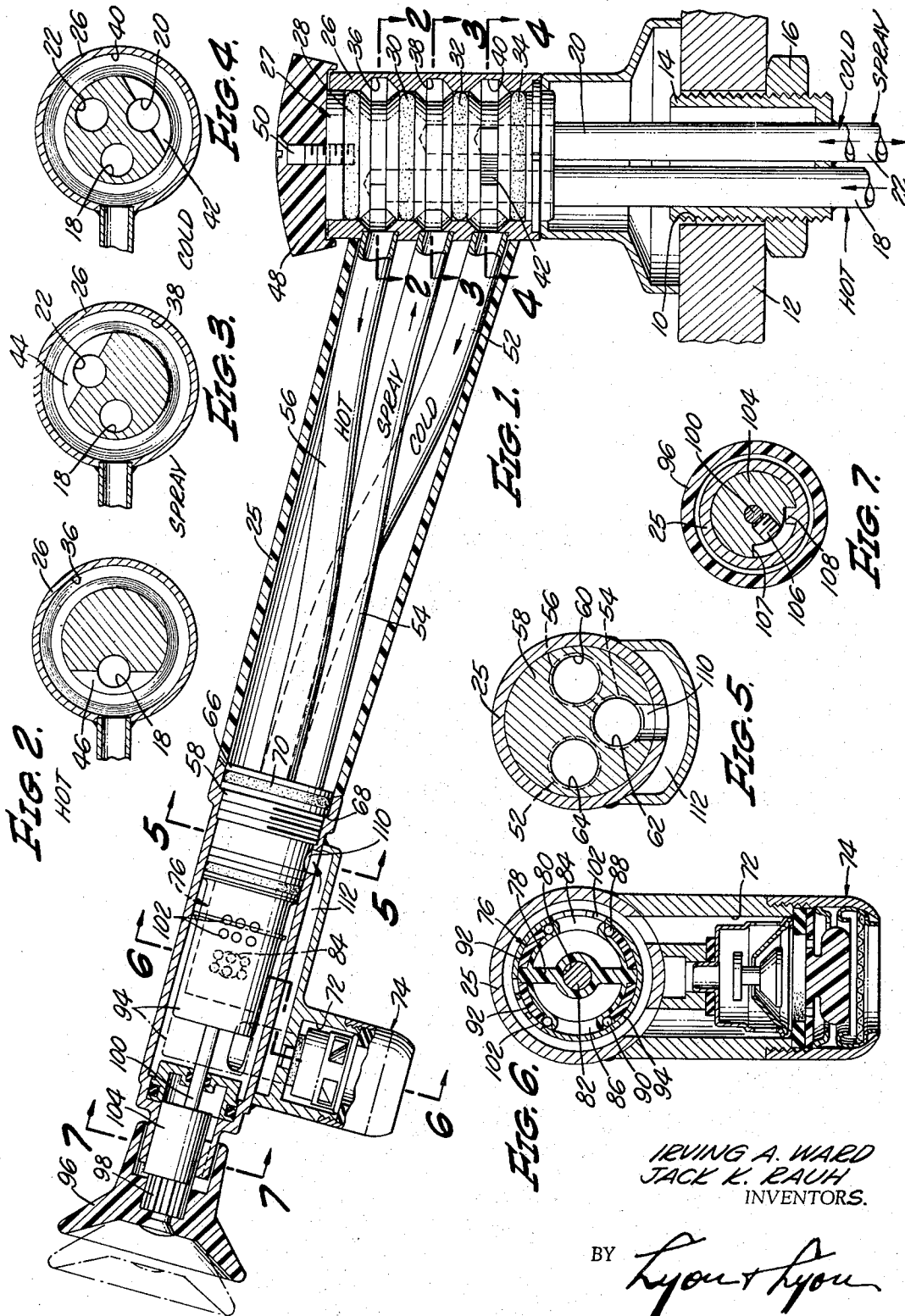
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I. A. WARD ET AL

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SWING SPOUT CONTROL MECHANISM

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IRVING A. WARD
JACK K. RAUH
INVENTORS.

BY

Lyon & Lyon
ATTORNEYS

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SWING SPOUT CONTROL MECHANISM

Irving A. Ward, Los Angeles, and Jack K. Rauh, Hacienda Heights, Calif., assignors to Modern Faucet Mfg. Co., Los Angeles, Calif., a corporation of California
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ABSTRACT OF THE DISCLOSURE

A swing spout for supplying hot and cold water having a mixing valve positioned adjacent the spout outlet for controlling the volume of mixture of water discharged therefrom.

This invention relates to an improved swing spout control mechanism.

It is an object of this invention to provide a mechanism which is housed in the extremity of a swing spout to control the volume and mixture of water discharged therefrom.

It is a further object of this invention to provide such a device which is quickly and easily operated by a single control.

Still a further object of this invention is to provide a structure wherein the parts are readily accessible for replacement and repair.

Other objects and advantages will be readily apparent from the following description:

In the drawings:

FIGURE 1 is a side elevation in section of a swing spout embodying this invention.

FIGURE 2 is a view taken along line 2—2 of FIGURE 1.

FIGURE 3 is a view taken along line 3—3 of FIGURE 1.

FIGURE 4 is a view taken along line 4—4 of FIGURE 1.

FIGURE 5 is a view taken along line 5—5 of FIGURE 1.

FIGURE 6 is a view taken along line 6—6 of FIGURE 1.

FIGURE 7 is a view taken along line 7—7 of FIGURE 1.

Three tubes project through an opening 10 in deck 12 and through threaded nipple 14 held in place by nut 16. The tube 18 carries in this embodiment hot water, while tube 20 supplies cold water and tube 22 carries water to a hand spray (not shown). The tubes pass through bonnet 24 and into cylindrical hub 26 of swing spout 25. A cylindrical head 27 fits within hub 26 which carries sealing rings 28, 30, 32 and 34 peripherally which are spaced from one another forming annuli 36, 38 and 40.

The head receives the ends of tubes 18, 20 and 22 and is slotted as at 42, 44 and 46 to communicate the end of each tube with one of the annuli. A cap 48 fits over the hub 26 and is secured to head 27 by screw 50.

A second series of three tubes 52, 54, and 56 communicate through hub 26 with annuli 36, 38, and 40, respectively, at one extremity, with the opposite extremities terminating in valve base 58 having ports 60, 62, and 64 therethrough communicating with said tubes respectively.

The valve base 58 screws into spout 25 and has an enlarged head 66 which abuts an internal shoulder 68 in said spout 25, which head carries a sealing ring 70.

Spout 25 has an outlet 72 upon which an aerator 74 may be mounted through which water is discharged into a sink or similar receptacle (not shown).

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Secured to the extremity of valve base 58 is a post 76 (see FIGURE 6) which is divided by barrier wall 78 which extends the length thereof. The barrier wall has a bore 80 which receives rod 82 rigidly secured to base 58, the rod having a nut at its extremity furthest from base 58 abutting the closed end of the post 76 and retaining same in position.

The ports 60 and 64 communicate with opposite sides of barrier wall 78. Radial discharge openings 84 and 86 are provided in the post, each having flared flange surrounding same upon which an O-ring 88 or 90 is mounted held in position by a pair of support plates such as 92 which are contoured to snugly fit the outer periphery of the post.

A sleeve 94 fits over the post 76 and plates 92 and with the O-rings forms a barrier against flow. The sleeve is positioned by knob 96, which receives the grooved extremity 98 mounted upon operating rod 100 in turn secured to sleeve 94.

The sleeve has an opposed series of openings 102 which, by longitudinal movement of the knob, are brought opposite discharge openings 84 and 86, permitting flow from the spout. Thus, the volume of mixed hot and cold water may be controlled by pushing or pulling knob 96. The mixture thereof is controlled by rotation of knob 96 and hence sleeve 94.

The knob 96 is recessed to receive the extremity of spout 25 within which enlarged head 104 is positioned which in turn is clamped to operating rod 100 by set screw 106. The head has a groove 107 cut therein which receives stop 108 on spout 25, limiting rotation of the knob.

The valve base 58 is provided with a peripheral annulus 110 with which spray port 62 communicates, and flow passage 112 in turn communicates the passage with spout outlet 72 so that when the hand spray attached to tube 22 is opened, flow is diverted therethrough instead of through the spout outlet 72 as is well known to those skilled in the art.

While what hereinbefore has been described as the preferred embodiment of this invention, it is readily apparent that alterations and modifications may be resorted to without departing from the scope of this invention and such alterations and modifications are intended to be included within the scope of the appended claim.

We claim:

1. In combination with a swing spout having a hot and cold water inlet; valve means positioned in the spout adjacent the spout outlet for controlling both the mixture of hot and cold water and the volume of flow through the spout, a control member accessible from outside the extremity of said spout to control said valve member, said control member being rotatable about the longitudinal axis of said spout; and longitudinally movable along the longitudinal axis of said spout to control the mixture and volume of flow through said spout respectively.

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M. CARY NELSON, *Primary Examiner*.

W. CLINE, *Assistant Examiner*.