

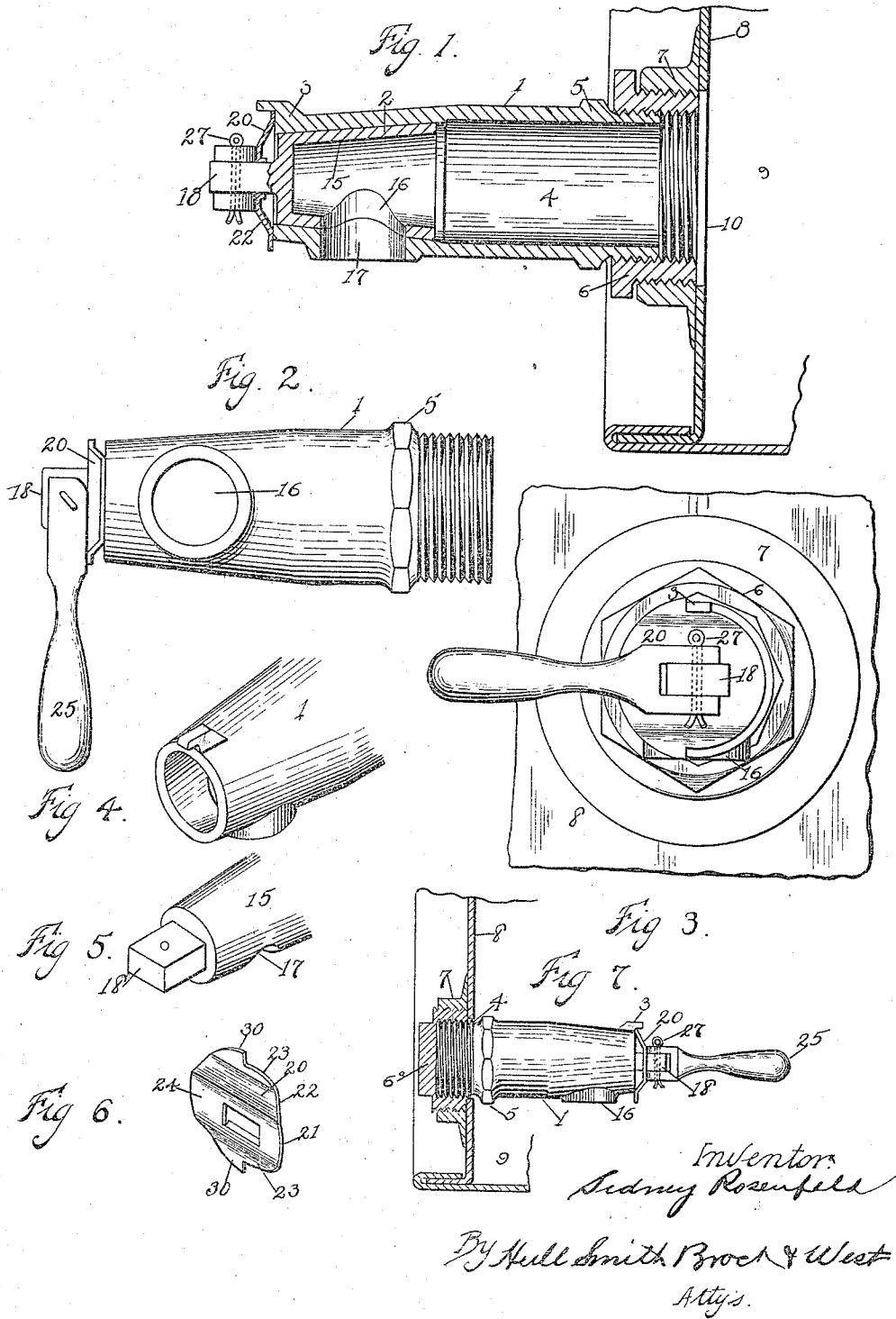
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FAUCET.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, SIDNEY ROSENFELD, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Faucets, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to faucets, particularly of the sort that are adapted for use with barrels, the same being so designed and constructed as to permit of their being inserted through the bung hole of the barrel into the interior thereof and supported from the closure of the bung hole during storage or shipment of the barrel.

The objects of the invention are to simplify the construction and lessen the cost of manufacture of devices of this character, while maintaining the highest efficiency. To these ends the faucet of my invention comprises but few parts, and so designed that they may be easily made and very conveniently assembled, such parts requiring only a slight amount of machine work to fit them for proper coöperation.

Also the parts are designed so as to fit together in such a way as to require but a single fastening means, and this of the simplest sort, to hold the assembly together.

A further object of my invention is to provide a faucet wherein the fit between the coöperating surface of the valve body and valve seat is improved through continued use of the valve. And a still further object is to provide a faucet of the aforesaid type with an operating handle that may be held in operative position at substantially right angles to the longitudinal axis of the faucet, or in substantial alinement with such axis of the faucet when it is desired to reverse the faucet and project it into the barrel as above mentioned; and, more limitedly, to provide the same means for holding the handle in either of the aforesaid positions, that holds the valve body against its seat.

The foregoing objects, and others which will become apparent as this description proceeds, are attained in the faucet illustrated in the accompanying drawing which forms a part hereof, and wherein Figure 1 is a longitudinal section through the faucet and the adjacent portion of a metal barrel to which the faucet is attached, the view showing the parts in readiness for use; Fig.

2 is a bottom plan view of the faucet; Fig. 3 is an end view of the parts shown in Fig. 1; Figs. 4, 5 and 6 are perspective views of the end of the valve casing, the valve body, and the spring plate which serves to hold the valve body against its seat, respectively; and Fig. 7 shows the faucet with its operating handle in alinement with its longitudinal axis and inserted through the bung hole of a barrel.

Describing the invention by the use of reference characters, 1 represents a hollow or tubular casing that is open at each end and within one end of which there is a tapered valve seat or bearing surface 2, the exterior of the adjacent end of the casing being shown as tapered to correspond substantially to the angle of taper of the valve seat. A lug 3 projects laterally and beyond the reduced end of the casing; and the opposite end of the casing is threaded at 4 and provided, adjacent the threads, with a wrench receiving portion 5. In Fig. 1 the threaded end of the casing is shown as contained within a bushing 6, which, in turn, is threaded into a boss 7 that extends from the wall 8 of the barrel 9 and surrounds the bung hole 10 thereof. It will be observed that the diameter of the bung hole is greater than the maximum diameter of the valve casing, the purpose of which is well known to those familiar with the art, although the same will be explained more fully hereinafter.

A cup shaped valve body 15 occupies the reduced end of the casing 1 and is tapered to fit the bearing surface 2 of the casing, the open end of the valve body being presented toward the larger end of the casing. The tapered wall of the valve body has a port 16 that is adapted to register with an opening 17 extending through the side wall of the casing. The valve is shown open in Fig. 1 with the port 16 registering with the opening 17. A rectangular lug 18 projects from the end wall of the casing and has applied to its a spring plate 20, the plate having a central aperture 21 which corresponds in shape substantially to the cross section of the lug 18, a portion of the material that is struck from such opening being turned inward along each side of the opening, as shown at 22, to provide an adequate bearing surface of the plate upon the sides of the lug. The side portions 23 of the plate are adapted to bear against the end of the casing 1,

while the central portion 24 thereof is projected some distance from the plane of the portions 23 by inclined portions. The forked end of an operating handle 25 straddles the lug 18 and is pivotally connected thereto by a cotter pin 27 (or equivalent thereof) which passes through alining holes in the opposed branches of the forked end of the handle, and in the lug 18.

It will be explained that the plate 20 is made of resilient material and, when the parts are assembled as just described, is under tension, thus tending to separate the opposed surfaces of the end of the casing 1 and the handle 25. One side of the forked end of the handle 25 is made flat for engagement with the central portion 24 of the plate 20, when the handle is in operative position as shown in Figs. 1 to 3. The resiliency of the plate holds the handle in such position against easy displacement because of the lateral extension of the aforesaid flattened side of the handle on both sides of the longitudinal axis of the faucet. The forked end of the handle is squared off or flattened at 28, also for coöperation with the plate 20 when the handle is turned into alinement with the longitudinal axis of the faucet, as shown in Fig. 7. As in the former case the resiliency of the plate holds the handle against accidental displacement.

While the following feature constitutes no part of my invention, it may be explained that in supporting the faucet within the barrel, a plug 6^a is substituted for the former bushing 6, such plug serving to close the bung hole and support the faucet, the same being tapped on its inner side for the reception of the threaded end 4 of the valve casing.

It is obvious, also, that the springing action of the plate 20 constantly retains the valve body in firm contact with its seat, and that continuous use of the valve will enhance the fit of such parts.

The plate 20 is provided with opposed stops 30 for coöperation with the lug 3 to limit the rotation of the valve body with respect to the valve casing, permitting the same to turn through substantially 180°.

Attention is called to the symmetrical design of all parts of the valve. This allows the parts to be assembled without thought as to arrangement, for the valve body can be placed within the valve casing at any angle and the plate 20 and handle 25 applied to the lug 18 thereof, and when the valve body is turned until its movement is arrested by one of the stops 30 engaging the lug 3 of the valve casing, the valve will be either entirely open or entirely closed, and the reverse of such condition is obtained by rotating the valve body until the opposite stop 30 engages the lug 3.

It will be understood, also, that the valve

casing 1, the valve body 15, and the handle 25, may be cast and the only machine work required to fit them for coöperation is the finishing of the coöperating surfaces of the valve body and casing, the threading of the end of the casing, and the boring of the holes through the lug 18 of the valve body and the forked end of the handle. The making of the plate 20 is a simple metal stamping operation; and the means for pivoting the handle to the valve body preferably constitutes an ordinary cotter pin. From this the cheapness with which the parts may be produced and the ease with which they may be finished and assembled, will be appreciated.

Having thus described my invention, what I claim is:—

1. A device of the character set forth comprising a casing having an internal tapered valve seat and an open end beyond the reduced end of said seat, a tapered valve body for coöperation with said seat and having a passageway, the casing having an opening wherewith the passageway of the valve body is adapted to register, the valve body having an extension which projects from its smaller end through the aforesaid end of the casing and being provided therebeyond with an abutment, a spring member interposed between said abutment and the end of the casing and tending to hold the valve body in engagement with the bearing surface of the casing, said spring member being fixed against rotation with respect to the valve body, and means for turning the valve body, the casing and the aforesaid spring member having coöperating parts for limiting the angular movement of the valve body with respect to the casing.

2. A device of the character set forth comprising a casing having an internal tapered valve seat and an open end beyond the reduced end of said seat, a tapered valve body for coöperation with said seat and having a passageway, the casing having an opening with which the passageway of the valve body is adapted to register, the valve body having a polygonal lug which projects from its smaller end through the aforesaid end of the casing, an operating handle connected to said lug, and a spring plate interposed between the handle and the adjacent end of the casing, said plate having an aperture for the reception of the aforesaid lug that corresponds in shape substantially to the cross section of the lug, the plate and casing having parts which coöperate to limit the angular movement of the valve body with respect to the casing.

3. A device of the character set forth, comprising a casing having an internal tapered valve seat and an open end beyond the reduced end of said seat, a tapered valve body for coöperation with said seat and

having a passageway, the casing having an opening with which the passageway of the valve body is adapted to register, the valve body having an extension which projects
 5 from its smaller end and through the aforesaid end of the casing and having a flat side, an operating handle connected to said extension, and a spring plate interposed between said handle and the adjacent end of
 10 the valve casing and having an aperture for the reception of the aforesaid extension, said aperture having a straight side for cooperation with the flat side of the extension, whereby the plate is held against turning
 15 with respect to the extension, the casing and plate having parts which cooperate to limit the angular movement of the valve body.

4. A device of the character set forth comprising a casing having an internal tapered valve seat and an open end beyond the reduced end of said seat, a tapered valve body for cooperation with said seat and having a passageway, the casing having an opening with which the passageway of the
 20 valve body is adapted to register, the valve body having an extension which projects from its smaller end through the aforesaid end of the casing, an operating handle pivotally connected to said extension, and a spring
 25 plate interposed between said handle and the end of the casing and having bearing surfaces which cooperate with the opposed surfaces of the handle and casing, the handle having substantially flat surfaces that are at
 30 an angle with respect to each other and one or the other of which is adapted to engage the adjacent bearing surface of the plate to retain said handle in one of two positions.

5. A device of the character set forth, comprising a casing having an internal tapered valve seat and an open end beyond the reduced end of said seat, a tapered valve body for cooperation with said seat and having a passageway, the casing having an
 40 opening with which the passageway of the valve body is adapted to register, the valve body having an extension which projects from its smaller end through the adjacent end of the casing, an operating handle pivotally connected to said extension, and a
 45 spring plate interposed between said handle and the end of the casing and having bearing surfaces which cooperate with the opposed surfaces of the handle and casing, the end of the handle being flat for cooperation with the adjacent bearing surface of the
 50 plate to hold said handle in substantial alignment with the longitudinal axis of the valve body, the handle having a flat portion at substantially right angles to its flat end and in a plane parallel to the pivotal axis of the handle for cooperation with the aforesaid bearing surface of the plate to retain the handle in operative position.

65 6. A faucet comprising a tubular casing

having open ends and a tapered valve seat intermediate its ends, a tapered cupped valve body for cooperation with said bearing surface and having its smaller end closed and a port through its tapered wall, the casing
 70 having an opening wherewith said port is adapted to register, a lug extending from the smaller end of the valve body through the adjacent end of the casing and provided therebeyond with a transverse hole, an oper-
 75 ating handle for application to said lug and having a hole for register with the hole in the lug, means extending through the holes of the handle and lug for securing said parts together, and a spring plate interposed be-
 80 tween the end of the valve casing and said operating handle and acting to retain the valve body in engagement with the valve seat of the casing.

7. A faucet comprising a tubular casing
 85 having open ends and a tapered valve seat intermediate its ends, a tapered cupped valve body for cooperation with said bearing surface and having its smaller end closed and a port through its tapered wall, the casing
 90 having an opening wherewith said port is adapted to register, a lug extending from the smaller end of the valve body through the adjacent end of the casing and provided therebeyond with a transverse hole, an oper-
 95 ating handle for application to said lug and having a hole for register with the hole in the lug, means extending through the holes of the handle and lug for securing said parts together, and a spring plate inter-
 100 posed between the end of the valve casing and said operating handle, and acting to retain the valve body in engagement with the valve seat of the casing, the plate and valve body being secured against relative angular
 105 movement, and the plate and casing have one a lug, and the other a pair of opposed stops for cooperation with said lug to limit the angular movement of the valve body.

8. A device of the character set forth com-
 110 prising a casing having a valve seat and a passageway, a valve body for cooperation with said seat, said body also having a passageway that is adapted to be moved into and out of register with the passageway of
 115 the casing, the casing and body having opposed portions, a spring member interposed between said portions thereby to maintain the valve body against the seat, said member being non-movable with respect to the valve
 120 body in the direction of the movement of the latter upon the seat, the casing and spring member having cooperating parts for limiting the movement of the valve body with respect to the casing, and means for moving
 125 the valve body.

9. A device of the character set forth comprising a casing having a valve seat and an opening, a valve body for cooperation with said seat and having a passageway, the cas-
 130

ing also having a passageway wherewith the
passageway of the valve body is adapted to
register, the valve body having an extension
which projects through the aforesaid open-
5 ing of the casing and being provided there-
beyond with an abutment, a spring member
interposed between said abutment and the
opposed portion of the casing and tending
to hold the valve body in engagement with
the seat, the casing and spring member hav- 10
ing cooperating parts for limiting the angu-
lar movement of the body with respect to
the casing, and means for turning the valve
body.

In testimony whereof, I hereunto affix my 15
signature.

SIDNEY ROSENFELD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents
Washington, D. C."