

W. A. HULL.
FAUCET AND SUPPORT THEREFOR.
APPLICATION FILED SEPT. 28, 1911.

1,030,306.

Patented June 25, 1912.

Fig. 1.

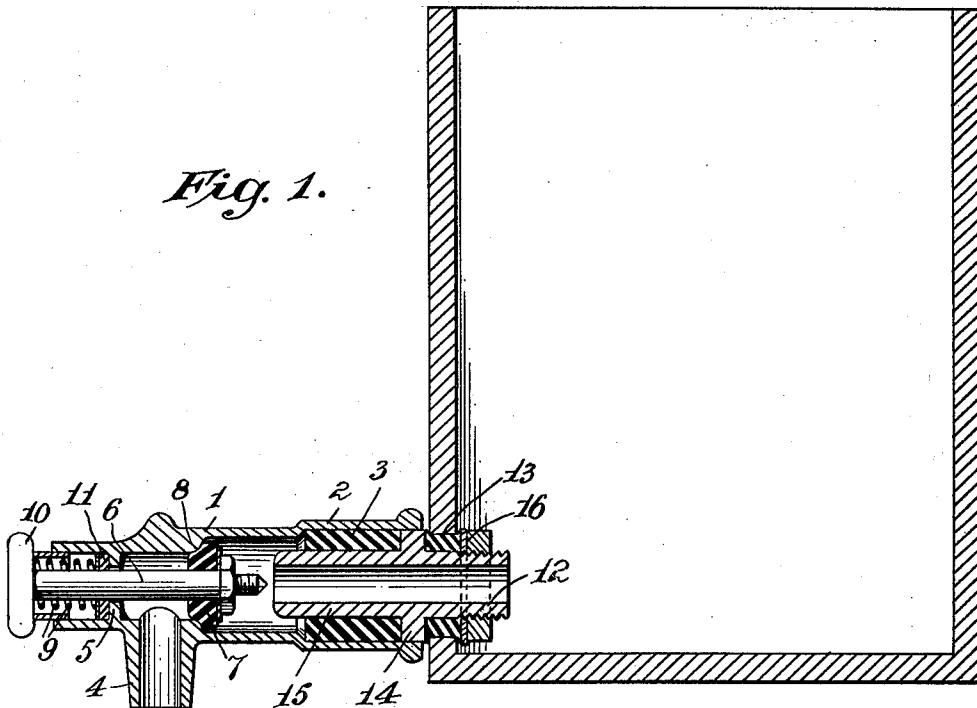


Fig. 2.

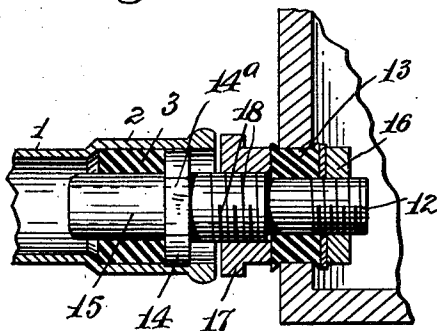
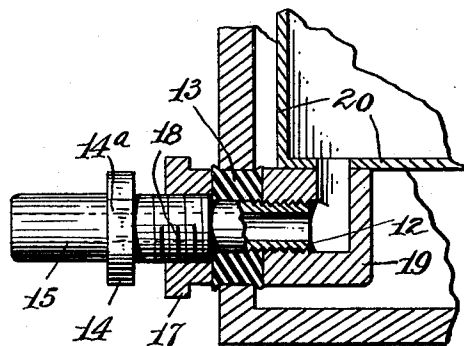


Fig. 3.



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FAUCET AND SUPPORT THEREFOR.

1,030,306.

Specification of Letters Patent.

Patented June 25, 1912.

Application filed September 28, 1911. Serial No. 651,750.

To all whom it may concern:

Be it known that I, WOLCOTT A. HULL, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a certain new and useful Improved Faucet and Support Therefor, of which the following is a specification.

My present invention relates to an improved faucet and a supporting part therefor adapted for use in connection with water coolers and elsewhere. Its advantages are (1st) it does away with screwing the faucet onto the cooler which is the usual method and which has the great disadvantage that the faucet rarely finds itself in the proper operating position when it has been screwed up tight, but on the contrary is usually more or less inclined out of proper position so that an additional thickness of washer has to be inserted between it and the cooler, or it has to be unscrewed through part of a revolution until it is in proper operating position with the attendant disadvantage, however, that the screw connection is then necessarily loose and not tight as it should be. My present improvement does away with screw connecting the faucet with the cooler and substitutes for it a construction whereby the faucet may be pushed endwise into place on the supporting part on the cooler and as quickly withdrawn by a direct outward pull. In spite of the readiness with which this connection is made, the construction is such that no leakage can occur, and further, the faucet is rigidly supported against both lateral and up and down displacement. Finally, there is the other advantage of my improvements that the supporting part mounted in the outlet opening of the cooler is so constructed that it prevents leakage at this point of the cooler contents into the wall of the cooler. This is especially necessary in water coolers since these walls are ordinarily hollow and filled with sawdust or equivalent insulating material. Similarly, it is necessary in the case of solid wall coolers made of the so-called "fiber material" which also soaks up water if it infiltrates below or inside the glazed surface of the fiber to its quick detriment. These and additional advantages will readily appear to those skilled in the art from an understanding of the following description in connection with the drawings, wherein—

Figure 1 is a vertical section partly in

elevation through a faucet and supporting device within my invention shown mounted on a water cooler, the latter being shown merely in a fragmentary way; Fig. 2 is the same showing a slight modification; and Fig. 3 is the same showing a still further modification.

I will now describe the devices of the drawings, reserving it to the claims to point out the novel features and to define the scope of the invention, it being understood that the claims will be given the due range of equivalents to which they may be entitled in view of the art.

The particular type of faucet shown is a so-called push-button faucet, but the invention is not limited to this type of faucet but includes other types such as handle-operated faucets, etc.

Describing now the particular form of faucet shown, it consists of a tubular body 1 having an enlarged socket 2 formed in its rear end. A piece of tubular packing material 3 (preferably rubber) fits snugly the inside of this socket. 4 is a delivery outlet from the interior of the faucet body. 5 is a centrally perforated diaphragm across the interior of the body between the outlet 4 and the end of the body. 6 is a plunger or stem received slidably through the opening in the diaphragm 5. 7 is a rubber button secured on the inner end of the stem 6 adapted to seat itself water-tight against a contracted portion or seat 8 within the body of the faucet. 9 is a spiral spring surrounding the plunger 6 between the diaphragm 5 and a head 10 on the outer end of the plunger, said spring being normally under compression so as to keep the button 7 normally seated. When the head 10 is pressed inwardly, it unseats the button 7 and permits the water to flow through the outlet 4. 11 is a washer snugly surrounding the plunger and held against the diaphragm 5 by the spring 9 to make this part of the faucet water-tight.

The supporting part which is mounted in the outlet opening of the water cooler for the purpose of supporting the faucet consists in Fig. 1 of a tubular body 12 received through said outlet opening, and further consists of a piece of tubular packing material 13, such as rubber, snugly surrounding the portion of the tubular body 12 that is within said outlet opening. This piece 13 of rubber tubing is shown projecting beyond

the outlet opening. 14 is a collar on the tubular body in front of the rubber piece 13. 15 is a tubular extension from the tubular body located in front of the collar 14. 16 is a washer and nut on the threaded rear end of the tubular body which have the function that when the nut is tightened it compresses endwise the rubber tubing 13 and therefore expands it circumferentially into complete surface contact with the wall of the outlet opening. This means that no water from the cooler can penetrate to the interior of the wall of the cooler. It will be noted that the ends of the rubber piece 13 where they project beyond the outlet hole are spread laterally over the edges of the respective mouths of said hole with the advantage of additional protection against the infiltration of water into the interior of the wall of the cooler. The periphery of the collar 14 is flatted at 14^a to provide a grip for a wrench to prevent the tubular supporting part from turning when the nut 16 is tightened up.

25 The supporting part being mounted as described in the outlet hole of the cooler, the faucet is inserted therein by merely pushing the socket of the faucet over the tubular extension 15 which then enters the bore in the tubular packing 3 with a snug fit sufficient to make the connection watertight; and further the rigid collar 14 enters with a snug sliding fit into the mouth of the socket 2. This collar 14 being unyielding prevents the faucet from being displaced off the supporting part by being rocked or pushed sidewise or vertically or in any other transverse direction. In short, the only way to remove the faucet is to pull it directly outward away from the tubular extension 15. Besides this readiness of attachment and removal, there is no difficulty in positioning the faucet properly on the cooler with its outlet nozzle 4 vertical, because the tightness of the supporting connection between the faucet and the cooler is independent of any screw connection or other rotary connection therewith.

The devices of Fig. 2 are similar to Fig. 1 with the single exception that an internally threaded sleeve 17 surrounds the tubular body of the supporting part between the rubber tubing 13 and the collar 14 and engages external threads 18 provided for the purpose on said tubular body. The periphery of this sleeve 17 is provided with wrench-engaging surfaces so that it may be tightened inwardly like the nut 16 in the direction of compressing the rubber tubing 13 endwise. In short, the modification in Fig. 2 consists in making the sleeve 17 perform the duty of a front abutment for the rubber piece 13, which function in Fig. 1 is performed by the collar 14.

Finally, the modification of Fig. 3 differs

from Fig. 2 merely in doing away with the nut and washer 16 and substituting for it an internally threaded member 19 in the form of an elbow-pipe mounted at the outlet of a reservoir 20 located within the cooler. Here the mouth of the internally threaded member 19 acts as the rear abutment for the piece of rubber tubing 13 when same is compressed endwise by tightening the sleeve 17.

What I claim is:

1. The combination of two members comprising a faucet and a supporting part, one of said members having a tubular extension provided with a collar and the other having a socket, a piece of tubular packing material fitting inside of said socket, the tubular extension fitting into the bore of the tubular packing, and the collar of the tubular extension fitting the inside of the socket, when the faucet is on the supporting part.

2. The combination of two members comprising a faucet and a supporting part, one of said members having a tubular extension provided with a collar and the other having a socket, a piece of tubular packing material tightly fitting the inside of said socket, the tubular extension slidably fitting into the bore of the tubular packing, and the collar of the tubular extension fitting the inside of the socket, when the faucet is on the supporting part.

3. The combination of a faucet and a supporting part adapted for use in connection with a water cooler, the faucet having a socket at its rear end and a piece of tubular packing material fitting the inside of said socket, and the supporting part consisting of a tubular body that projects through the outlet hole in the wall of the cooler, and further consisting of a piece of rubber tubing snugly surrounding the tubular body within said hole, said tubing being longer than said hole, a collar on the tubular body in front of the piece of rubber tubing, a tubular extension from the tubular body in front of the collar, said collar fitting the inside of the socket on the faucet, and said tubular extension fitting into the bore of the packing material in said socket, when the faucet is in position on the supporting part, and means on the tubular body of said supporting part for compressing endwise the piece of rubber tubing thereon.

4. The combination of a faucet and a supporting part adapted for use in connection with a water cooler, the faucet having a socket at its rear end and a piece of tubular packing material fitting the inside of said socket, and the supporting part consisting of a tubular body that projects through the outlet hole in the wall of the cooler, and further consisting of a piece of rubber tubing snugly surrounding the tubular body within said hole, said tubing being longer than said hole, a collar on the tubular body

in front of the piece of rubber tubing; a tubular extension from the tubular body in front of the collar, said collar fitting the inside of the socket on the faucet, and said 5 tubular extension fitting into the bore of the packing material in said socket when the faucet is in position on the supporting part, and means on the tubular body of said supporting part for compressing endwise the 10 piece of rubber tubing thereon, said means consisting of a nut on the free end of the tubular body, said free end being screw-threaded to receive said nut.

5. The combination of a faucet and a supporting part adapted for use in connection with a water cooler, the faucet having a socket at its rear end and a piece of tubular packing material fitting the inside of said socket, and the supporting part consisting of 20 a tubular body that projects through the outlet hole in the wall of the cooler, and further consisting of a piece of rubber tubing snugly surrounding the tubular body within said hole, said tubing being longer 25 than said hole, a collar on the tubular body in front of the piece of rubber tubing, a tubular extension from the tubular body in front of the collar, said collar fitting the inside of the socket on the faucet, and said 30 tubular extension fitting into the bore of the packing material in said socket, when the faucet is in position on the supporting part, and means on the tubular body of said supporting part for compressing endwise the 35 piece of rubber tubing thereon consisting of an internally threaded member on the free end of the tubular body, said free end being threaded to engage therewith, and the periphery of the above mentioned collar being 40 flatted to engage a wrench.

6. The combination of a faucet and a supporting part adapted for use in connection with a water cooler, the faucet having a socket at its rear end and a piece of tubular 45 packing material fitting the inside of said socket, and the supporting part consisting of a tubular body that projects through the outlet hole in the wall of the cooler, and further consisting of a piece of rubber tubing snugly surrounding the tubular body 50

within said hole, said tubing being longer than said hole, a collar on the tubular body in front of the piece of rubber tubing, a tubular extension from the tubular body in front of the collar, said collar fitting the inside of the socket on the faucet, and said 55 tubular extension fitting into the bore of the packing material in said socket, when the faucet is in position on the supporting part, and means on the tubular body of said supporting part for compressing endwise the 60 piece of rubber tubing thereon consisting of an internally threaded member on the free end of the tubular body, said free end being threaded to engage therewith, the tubular 65 body of the supporting part being externally screw-threaded between the collar and the front end of the piece of rubber tubing, and a sleeve with wrench-engaging periphery on said last named threaded portion of 70 the tubular body.

7. The combination of a faucet and a supporting part adapted for use in connection with a water cooler, the faucet having a socket at its rear end and a piece of tubular 75 packing material fitting the inside of said socket, and the supporting part consisting of a tubular body that projects through the outlet hole in the wall of the cooler and further having a piece of rubber tubing surrounding the tubular body within said hole, 80 a collar on the tubular body in front of the piece of rubber tubing, a tubular extension from the tubular body in front of said collar, said collar fitting the inside of the socket 85 on the faucet and said tubular extension fitting into the bore of the packing material in said socket, when the faucet is in position on the supporting part, and means on the tubular body of said supporting part for 90 compressing endwise the piece of rubber tubing thereon to fill the space between the tubular part and the periphery of the outlet hole in the cooler.

In testimony whereof I affix my signature 95 in presence of two witnesses.

WOLCOTT A. HULL.

Witnesses:

GEO. HENNINGS,
E. W. SCHERR, Jr.