

Aug. 14, 1928.

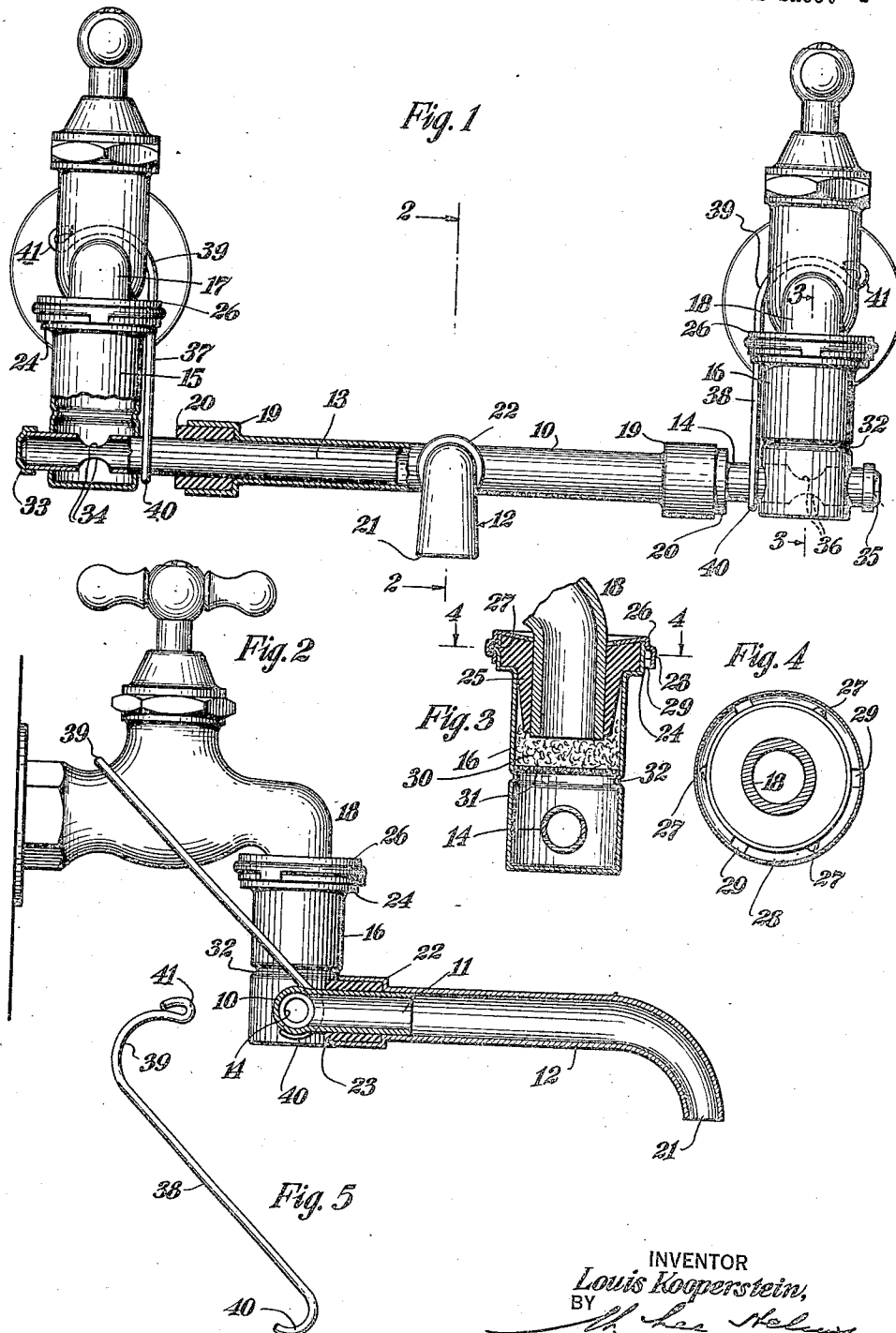
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1,680,333

WATER SUPPLY FAUCET ATTACHMENT

Filed May 25, 1927

2 Sheets-Sheet 1



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Fig. 6

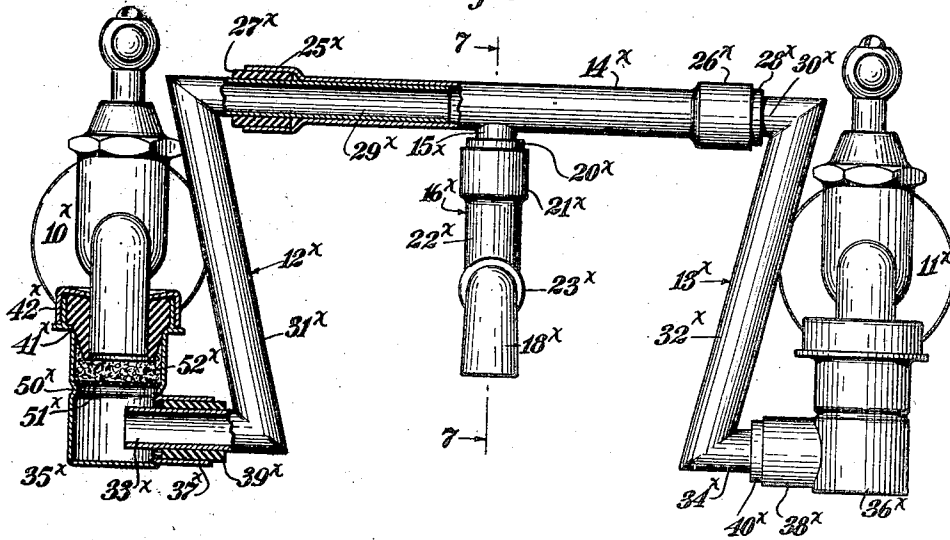
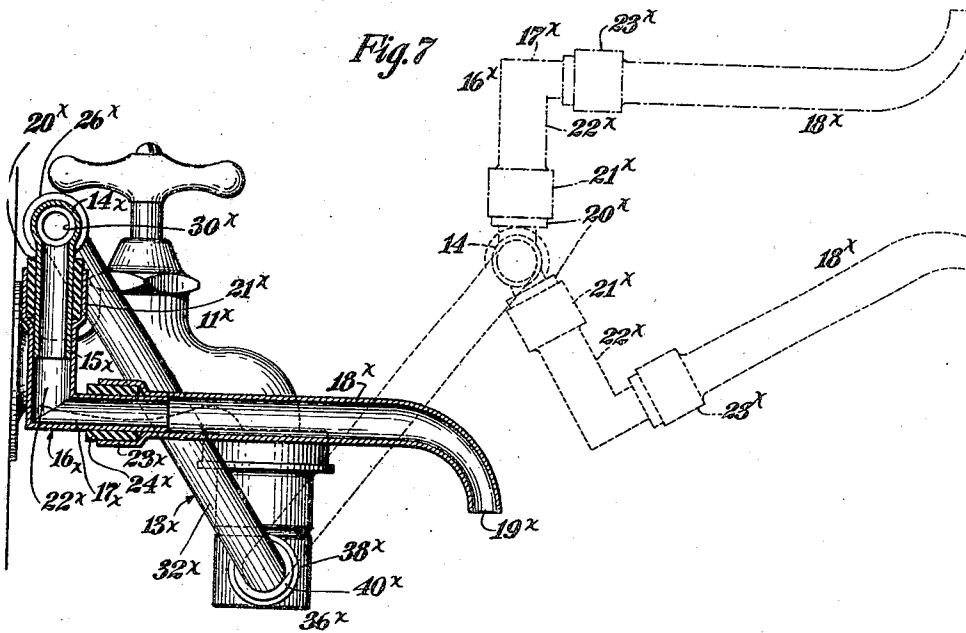


Fig. 7



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UNITED STATES PATENT OFFICE.

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WATER-SUPPLY-FAUCET ATTACHMENT.

Application filed May 25, 1927. Serial No. 193,982.

The invention pertains to attachments for use on twin faucets of the character found in kitchen sinks and elsewhere, one faucet ordinarily being designed for the delivery of cold water and the other for hot water. The attachment of my invention may be conveniently applied to and removed from the faucets and may be used for drawing cold water alone or hot water alone or hot and cold water commingled.

One object of the invention is to provide an attachment which may, with entire convenience, be applied to and removed from the faucets, and which will assure the commingling of the hot and cold water so that on a discharge of the same the water may have the desired temperature.

A further purpose of the invention is to provide an attachment which is adjustable to the spacing or distance between the faucets.

A still further object of the invention is to provide an attachment whose parts may be readily assembled without the use of screw threads and applied to the faucets in a manner to avoid leakage.

The attachment of my invention comprises a main transverse tube having a delivery spout extending therefrom, two tubes telescopically applied within the ends of said transverse tube, certain cups mounted on the end portions of the last-mentioned tubes and adapted for direct application to the faucets, and stirrups detachably engaging the outer portions of the telescopically applied tubes and the faucets for firmly maintaining the relation of the aforesaid cups to the faucets, these stirrups resisting the action of the water in forcing the said cups and the attachment as a whole downwardly from the faucets.

Another object of my invention is, therefore, to secure the continuous proper relation of the attachment to the faucets and to overcome what has been a serious objection to the employment of attachments of the character made the subject hereof.

A further object of the invention is to secure such strength and rigidity in the end portions of the attachment that the strains exerted against said portions during the application of the attachment to the faucets may not strain or break off the end cups from the other portions of the attachment.

The invention will be fully understood from the detailed description hereinafter

presented, preference being had to the accompanying drawings, in which:—

Figure 1 is a front elevation, partly in section, of the attachment of my invention shown applied to a pair of faucets;

Figure 2 is a vertical transverse section through the same taken on the dotted line 2—2, Fig. 1;

Figure 3 is a vertical section through one of the end cups of the attachment and a portion of the faucet engaged by the same, taken on the dotted line 3—3, Figure 1;

Figure 4 is a transverse section through the same taken on the dotted line 4—4, Figure 3, and

Figure 5 is a detached perspective view of one of the stirrups employed by me for maintaining the attachment in proper relation to the faucets;

Figure 6 is a front elevation, partly in section, of a modified form of the attachment of my invention;

Figure 7 is a vertical section, through the same taken on the dotted lines 7—7, Figure 6, the movable portions of the attachment being shown as being moved back against the wall, and said parts being shown by dotted lines as drawn forwardly, the dotted lines also showing how the discharge spout of the attachment may be turned from a lower position to a more elevated position, and also that the nozzle portion of the discharge may be turned angularly so that the discharge orifice points upwardly instead of downwardly.

The attachment of my invention comprises a main transverse tube or pipe 10 having a nipple or short tube section 11 extending centrally therefrom and at a right angle thereto, a discharge spout 12 mounted on said nipple, two branch tubes 13, 14, respectively, telescopically applied to the opposite ends of said pipe 10, and cups 15, 16, respectively, rigidly mounted upon the outer end portions of said tubes 13, 14 and extending upwardly therefrom and at a right angle thereto, said cups 15, 16 being adapted for application to the faucets 17, 18, respectively, which are of customary type.

The transverse tube or pipe 10 may be called a main tube and lies transversely between the vertical planes of the faucets 17, 18, and may receive water from either or both faucets. At its central portion the tube 10 has permanently extended therefrom the

nipple 11, which is a short pipe section through which the water from the tube 10 is discharged either directly or into the spout 12, which is mounted on said nipple. At its end portions the tube 10 is formed with the enlargements 19, which are cylindrical and contain flat band rubber gaskets 20, these gaskets bearing against the inner ends of the enlargements 19 as shoulders and preferably projecting slightly outwardly beyond the outer ends of said enlargements 19, as shown in Figure 1.

The spout 12 has a curved and partly flattened outer end 21, and otherwise said spout is cylindrical in cross-section and at its inner end is formed with an enlargement 22 containing a rubber flat band gasket 23, which abuts against the inner end of the enlargement 22 as a shoulder and projects outwardly to a limited extent beyond the outer edge of said enlargement. The spout 12 is pushed upon the nipple 11, said nipple extending into the spout beyond the inner end of the enlargement 22, as shown in Figure 2. The gasket 23 forms a liquid-tight joint between the inner end of the spout 12 and the outer surface of the nipple 11. The spout 12 may be turned angularly on the nipple 11, so that its discharge end 21 may project downwardly as shown in Figure 2 or upwardly or laterally or on angular lines to the vertical, as may be desired. Should it be desired to drink from the spout 12, said spout may be turned on the nipple 11 so that the outer end 21 of the spout projects upwardly, this position of the spout rendering it convenient for a person to drink therefrom. The tube or pipe 10 may be turned on its longitudinal axis, and hence the spout 12 may be deflected upwardly or downwardly as may be desired. The spout 12 is also detachable from the nipple 11.

The cups 15, 16 are alike in general construction and each comprises an integral metal shell vertically disposed and having a lateral enlargement 24 around its upper edge adapted to form a seat for an enclosed vertical packing band 25, which has an open center, an enlargement at its upper end fitting the enlargement 24 of the cup and a depending portion having downwardly converging outer surfaces, as shown in Figure 3. The packing band 25 is of considerable height and is forced into the upper end of the cup so as to form a tight fit therein. Upon the enlargement 24 of each cup is placed a cap 26 which has an open center and is dished downwardly at its top, which is firmly pressed against the upper surface of the packing band 25. The cap 26 is secured upon the upper end of the cup by a bayonet-joint connection, there being outwardly extending studs 27 (Figure 4) on the vertical edge of the enlargement 24 and an annular groove 28 in the skirt of the cap 26

to receive said studs, openings 29 being formed in the skirt of the cap to be pushed downwardly over the studs 27, whereupon by turning the cap 26 on the enlargement 24, said openings 29 are carried from the studs 27 and the studs are caught within the groove 28. In this manner the cap 26 may be very firmly fastened upon the cup and against the packing band 25 and may, when occasion requires, be readily removed from the cup. In the cup 16 intended for the cold water faucet, I preferably provide filtering material 30, placed upon a perforated plate 31, for filtering the water passing through the cup to the discharge spout. The cup 16 is formed with an annular groove 32 which creates an internal beading on which the perforated disk 31 may be seated. The cups 15, 16 are pushed upwardly upon the discharge members of the faucets 17, 18, and by the means hereinafter described said cups are held upwardly on said discharge members under a pressure which helps to create a liquid tight joint between the packing bands 25 and the faucets and also prevents the force of the discharging water from the faucets from dislodging the cups from the faucets. The caps 26 have central openings therein which are larger than the diameter of the discharge members of the faucets and therefore said caps do not contact with the metal of the faucets.

The tubes 13, 14 are alike except that they project in opposite directions and they slidably enter the opposite ends of the main tube or pipe 10, a liquid-tight joint between the tubes 13, 14 and the tube 10 being created by the packing bands 20. The tube 13 has secured upon its outer end the cup 15 and the manner of securing the cup to the tube 13 is of importance in providing a durable structure capable of long use. The outer end of the tube 13 extends transversely through the lower portion of the cup 15 and is closed at its outer end by a cap 33 (Figure 1) and said tube 13 within the cup 15 is perforated, as at 34, to permit the water entering the cup to freely flow into the tube 13 and thence pass to the tube 10 and spout 12. The tube 13 and cup 15 are thus rigidly secured together, and in this instance both opposite vertical walls of the cup are mounted on and secured to the tube 13, as distinguished from the inner vertical side of the cup being soldered to an outer end of a tube 13 which would terminate at said side. By carrying the tube 13 entirely through the cup 15, I secure a structure of great durability and in which during the use of the attachment the cup is not liable to be broken from the tube. With careless or ordinary handling a great deal of strain comes upon the cups 15, 16 in applying them to and removing them from the faucets and with my construction this strain is resisted by the fact that the

tube extends entirely through the cup and has two opposite points of attachment therewith. The tube 14 extends through the lower portion of the cup 16 and is closed at its outer end by a cap 35, and said tube 14 contains perforations 36 corresponding with the perforations 34 in the outer end of the tube 13. The tube 14 is rigid with the cup 16 in the same manner that the tube 13 and the cup 15 are rigidly secured together.

The cups 15, 16 being rigid with the tubes 13, 14 respectively, may be adjusted laterally, due to the sliding action of the tubes 13, 14 in the tube 10, to suit the the spacing between the faucets 17, 18, there being at times some differences as to the spacing between faucets.

The method of applying the attachment to the faucets will be apparent from the drawings, the cups 15, 16 being forced upwardly on the discharge members of the faucets.

In order to firmly retain the attachment on the faucets and to secure a constant pressure tending to draw the attachment upwardly on the discharge members of the faucets, I provide the stirrups 37, 38 which are of wire and have hooked upper ends 39 to engage over the back portion of the faucets, as shown in Figure 2, and lower hook members 40 to engage under the outer portions of the tubes 13, 14. The stirrups 37, 38 are of such length that when the hooks 40 are engaged on the tubes 13, 14 and the hooks 39 are to be applied over the upper rear portions of the faucets, some force is required to push said hooks 39 upon the faucets so that after the stirrups 37, 38 are in place, they act under the spring tension of the upper hooks 39 to pull against the tubes 13, 14 and very firmly and securely connect the attachment with the faucets. The hooks 40 are at right angles to the hooks 39 and lap around the front surfaces of the tubes 13, 14. The hooks 39 are curved and there is enough spring action in the wire of which the stirrups are made to permit said hooks 39 to be sprung over the upper rear portions of the faucets. I give the free ends of the wires at the hooks 39 reverse bends, as at 41, and thereby form thumb-pieces which facilitate the detachment of the stirrups from the faucets whenever it may be desired to remove the attachment therefrom. It has been found that in the absence of the stirrups 37, 38, the tendency of the attachment is to settle downwardly both of its own weight and by the force of the water issuing from the faucets and acting to create a down pressure against the cups 15, 16, and to resist this tendency of the attachment to lose its position or be forced therefrom by the pressure of the water, is the purpose of the stirrups 37, 38, the pressure of the stirrups also acting to keep the packing bands 25

firmly against the discharge members of the faucets and preserve water tight joints at said members. The stirrups 37, 38 also tend to resist any downward strain that might be exerted on the tube 10 by the pressure of the hand of a person drawing water from the spout 12.

The attachment is adapted to be adjusted to the spacing between the faucets and provides a rigid securing of the cups 15, 16 to the tubes 13, 14. The cups 15, 16 in their construction are durable and well adapted to receive the packing bands 25 and be properly applied to the faucets. The spout 12 is capable of adjustment both longitudinally and angularly, and the attachment when secured in position on the faucets by the stirrups 37, 38, becomes a very firm structure capable of efficient use and of maintaining its correct position.

The modified attachment illustrated in Figures 6 and 7 comprises two approximately Z-shaped branch tubes 12*, 13* respectively, connected at their upper horizontal ends with a coupling 14* having a branch nipple 15* extending outwardly at a right angle thereto and upon which is applied a right-angle tubular coupling 16* upon whose outer member 17* is attached a discharge spout 18*, whose outer end is curved and contains a discharge orifice 19*. The nipple 15* is rigid with the coupling tube 14* and at about the middle of the length thereof, and said nipple has smooth exterior surfaces upon which may be closely slid a rubber gasket 20* held within a tubular formation or sleeve 21* which is rigid on the member 22* of the angle coupling 16*. The gasket 20* is so firmly compressed within the sleeve 21* as to remain therein by friction, and said gasket, while closely engaging the nipple 15*, so as to prevent leakage around the same, may be slid forwardly and rearwardly upon said nipple so as to adjust the angle coupling 16* toward or from the coupling 14*, as the occasion may require. The angle coupling 16* may also be slid off from the nipple 15*, when desired. The discharge spout 18* is tubular and at its inner end is formed with an enlargement or sleeve 23* carrying a rubber gasket 24*, adapted to closely engage the exterior surfaces of the member 17* of the coupling 16* and prevent leakage around said member. The gasket 24* has a sliding fit upon the member 17* of the coupling 16*, and hence the spout 18* may be adjusted along the length of said member 17*, as may be required. The member 17* of the coupling 16* is of such diameter that it may pass into the spout 18* outwardly beyond the gasket 24*, as shown in Figure 7, and likewise the nipple 15* is of such diameter that it may pass into the member 22* of the coupling 16* inwardly beyond the gasket 20*, as shown in Figure 7.

The coupling 16* may be turned angularly on the nipple 15* either to the right or left, as may be desired, for swinging the discharge spout 18* to one side or the other, as the occasion may render convenient. The discharge spout 18* may, in any position of the coupling 16*, be turned angularly on the member 17* of said coupling so as to locate the discharge orifice 19* in such position as may be found most convenient. The discharge spout 18* may be given a rotation on the coupling 16* to position the discharge orifice 19* upwardly instead of downwardly, as shown by the dotted lines in Figure 7, and it being convenient to take a drink from the discharge orifice 19* when said orifice faces upwardly.

The coupling 14* extends transversely between the faucets and has on its outer ends the enlargements or sleeves 25*, 26*, respectively, containing rubber gaskets 27*, 28*, respectively, corresponding with the gaskets 20*, 24*, hereinbefore described. The gaskets 27*, 28* are rigid within the sleeves 25*, 26* and engage the upper horizontal branches 29*, 30*, respectively, of the members 12*, 13*, said branches 29*, 30* extending toward each other and entering the opposite ends of the coupling 14* and leakage around said branches being prevented by the gaskets 27*, 28*.

It will be obvious on reference to Figure 6 that the branches 29*, 30* may be adjusted toward and from each other in accordance with the spacing between the faucets 10*, 11*. The branches 29*, 30* may also be turned angularly or on their own axes within the gaskets 27*, 28* and coupling 14*. It will be obvious also that when the branches 29*, 30* are stationary the coupling 14* may be turned on them so as to locate the coupling 16* and spout 18* in any desired position.

The members 12*, 13* have the upper branches 29*, 30*, downwardly and inwardly diverging body members 31*, 32*, respectively, and lower outwardly extending horizontal branch members 33*, 34*, respectively, and said members 33*, 34* enter corresponding metallic cups 35*, 36*, respectively, which are connected to the usual faucets 10* and 11* and are formed with laterally extending sleeves 37*, 38*, respectively, containing gaskets 39*, 40*, respectively, through which the branch members 33*, 34* extend and within which said members are capable of rotation or axial movement. The gaskets 39*, 40* prevent leakage around the tubular members 33*, 34*, and permit said members to be adjusted laterally in a direction toward and from the faucets and also to turn angularly when the other portions of the attachments are being adjusted as to position.

The cups 35*, 36* are tubular and contain substantial rubber gaskets 41*, which are held in place by caps 42* having openings

permitting the gaskets to slide upwardly upon the discharge spouts of the faucets 10*, 11*, as shown at the left hand side of Figure 6. The gaskets 41* prevent leakage around the faucets and permit the cups 35*, 36* to be conveniently applied to and removed from the faucets.

I have described the several features of the attachment and will now speak of the flexibility of the attachment for permitting various adjustments rendering the attachment adaptable to different conveniences and to different conditions that may be met in applying the attachment to faucets varying in their spacing and other conditions. In Figures 6 and 7 I have shown by full lines one position of the parts of the attachment, and in this position the main branch members 12* and 13* have been pressed at their upper ends toward the wall, and this has located the coupling 14* adjacent to the wall, as shown in Figure 7.

In this position of the parts I have turned the coupling 14* upon the branch members 29*, 30* so as to turn the coupling 16* downwardly and position its member 17* and the spout 18* in a horizontal lower position, as shown by solid lines in Figure 7. In many instances the position of the several parts of the attachment shown in Figure 7 will be entirely convenient for use. If, however, the occasion renders necessary, the branch members 12*, 13* may be swung forwardly at their upper ends and thus carry the coupling 16* and discharge spout 18* forwardly to such position as may be found convenient, a wide range of adjustment on the line just indicated being permissible. Whenever desired the spout 18* may be turned axially on the coupling member 17* so as to cause the discharge orifice 19* to point toward the right or toward the left, or upwardly, as occasion may suggest. The branch tubes 12*, 13* may also be carried or swung forwardly to a considerable extent, as shown by the dotted lines in Figure 7, and at this time the coupling 16* may be turned forwardly and upwardly at its lower portion to the position shown by the lower dotted lines in Figure 7, thus causing the discharge spout 18* to be inclined upwardly and forwardly. In this position of the discharge spout shown by the lower dotted lines in Figure 7, said spout may be turned angularly on the coupling member 17* to direct its discharge orifice 19* either to the right or left or upwardly, as may be desired.

A further position that may be given to the members of the attachment is shown by the upper dotted lines in Figure 7, wherein it may be seen that the coupling 16* has been turned to the upper side of the coupling 14* and projects the discharge spout 18* forwardly, in which position said spout may be turned angularly to direct its orifice 19*

either upwardly or downwardly or laterally, as may be preferred. The parts of the attachment permit of great flexibility of adjustment and enable the discharge spout 18* to have many positions other than those indicated in the drawings. For illustration, if the coupling 16* and discharge spout 18* should be in the position shown by the upper dotted lines in Figure 7, the branch members 12*, 13* may be swung rearwardly against the wall and thus leave the discharge spout in an elevated position above that in which the spout is shown by solid lines in Figure 7, and at this time the spout 18* may be turned angularly to direct its orifice 19* either downwardly or upwardly or laterally to either side, as may be desired.

The metal cups 35*, 36* will preferably be used as filters, and each cup is formed with an annular beading 50* to support a perforated disk 51* upon which will be placed a pad 52* of raw cotton through which the water will pass from the faucets and which will serve to arrest impurities that may be in the water. The cups 35*, 36* are formed of sheet metal, and on the removal of the caps 42* and gaskets 41* the said cups may be readily supplied with the filtering material and also be readily cleaned out whenever necessary.

What I claim and desire to secure by Letters Patent is as follows:—

1. A twin faucet attachment comprising a tubular coupling member to lie between the faucets and having a forward discharge, cups adapted to be connected with the discharges of the faucets and having tubular outlets at the facing sides thereof, and two corresponding main branch pipes each being integral and of approximately Z-shape, the upper inwardly extending horizontal members of said branch pipes having a telescopic and rotatable connection with the ends of said coupling member and the lower outwardly extending horizontal members of said branch pipes having a telescopic and rotatable connection with the tubular outlets from the cups, the discharge from said coupling member comprising a tubular nipple rigid therewith, a tubular angle-coupling having the end of one of its members engaged with said nipple and a spout engaged with the other member of said angle-coupling.

2. A twin faucet attachment comprising a tubular member to lie between the faucets and having a discharge, and main branch pipes connected at their upper ends with the ends of said member and at their lower ends being operatively connected with the faucets, said discharge comprising a nipple rigid

with said member, a tubular angle-coupling having one of its members rotatably mounted on said nipple and a spout slidably and rotatably mounted on the other coupling member and having a deflected discharge end.

3. A twin faucet attachment comprising a tubular coupling member to lie between the faucets and having a forward discharge, cups adapted to be connected with the discharges of the faucets and having outlets, main branch pipes slidably and rotatably connected at their upper ends with the ends of said coupling member and slidably and rotatably connected at their lower ends with the outlets from said cups, said discharge from the coupling member comprising a nipple rigid with said member, a tubular angle-coupling having one of its members rotatably mounted on said nipple and a spout on the other coupling member.

4. A twin faucet attachment comprising a tubular coupling member to lie between the faucets and having a forward discharge, cups adapted to be connected with the discharges of the faucets and having outlets, main branch pipes slidably and rotatably connected at their upper ends with the ends of said coupling member and slidably and rotatably connected at their lower ends with the outlets from said cups, said discharge from the coupling member comprising a nipple rigid with said member, a tubular angle-coupling having one of its members rotatably mounted on said nipple and a spout slidably and rotatably mounted on the other coupling member and having a deflected discharge end.

5. A twin faucet attachment comprising a tubular member to lie between the faucets and having a discharge, and main branch pipes connected at their upper ends with the ends of said member and at their lower ends being operatively connected with the faucets, said discharge comprising a nipple rigid with said member, a tubular angle-coupling having one of its members rotatably mounted on said nipple and a spout slidably and rotatably mounted on the other coupling member and having a deflected discharge end, said coupling-member engaging the nipple having a sleeve enlargement containing a tubular gasket to receive said nipple, and said spout having at its inner end a sleeve enlargement containing a tubular gasket to receive the end of said other coupling-member.

In testimony whereof, I have signed my name to this specification.

LOUIS KOOPERSTEIN.