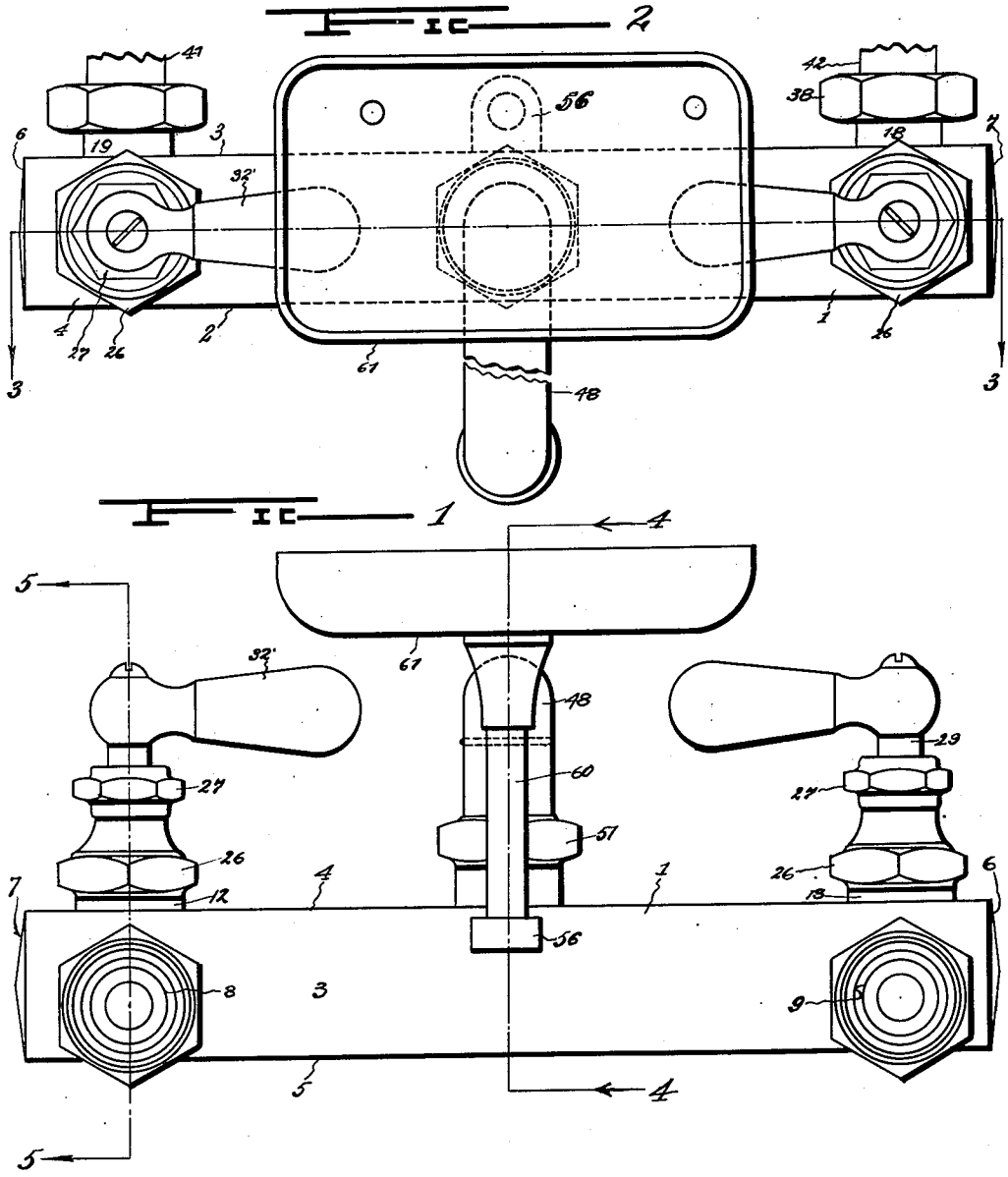
Oct. 10, 1933. J. SCHULTE, JR 1,929,536

PLUMBING FIXTURE

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INVENTOR.
JOHN SCHULTE JR.
BY Leo. P. Dawkes.
ATTORNEY.

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FIG. 3

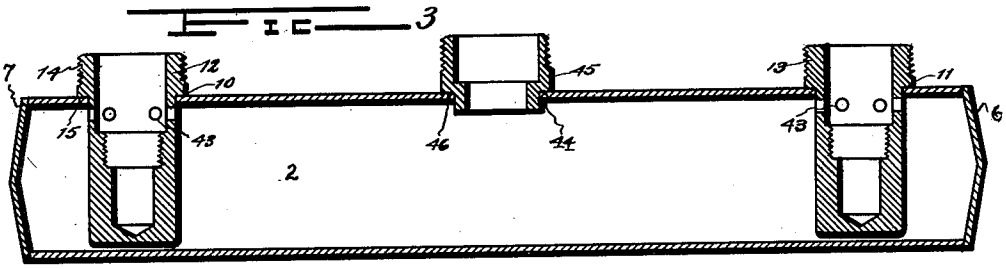



FIG. 4

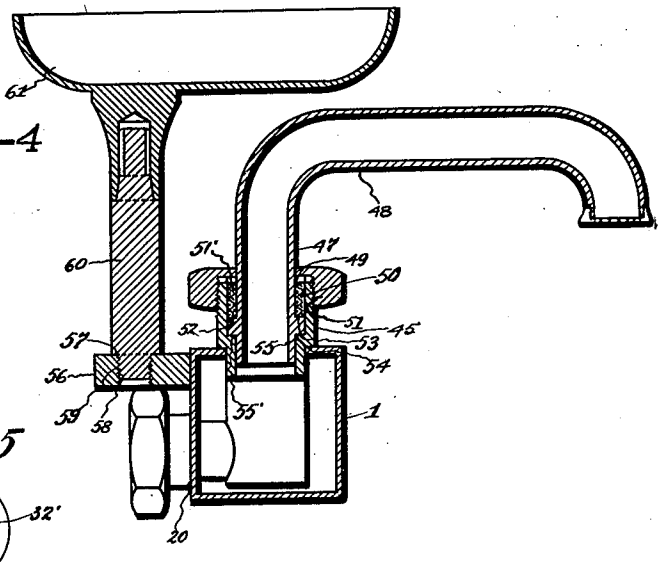
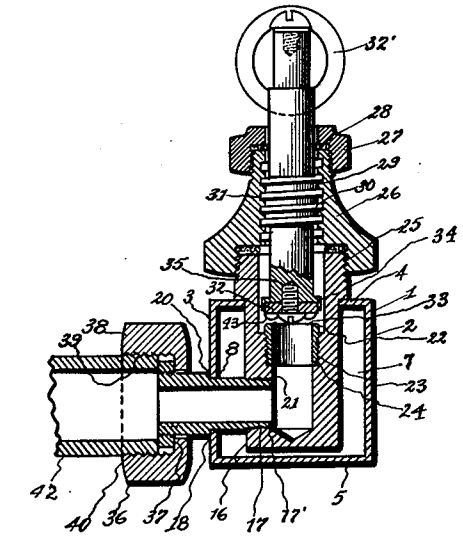



FIG. 5




INVENTOR.
JOHN SCHULTE JR.

BY Leo. N. Dawkes

ATTORNEY.

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1,929,536

## PLUMBING FIXTURE

John Schulte, Jr., Cincinnati, Ohio

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9 Claims. (Cl. 137—111)

The invention relates to a plumbing fixture particularly, although not exclusively, adapted for use in combination with kitchen sinks, bathtubs and the like.

Heretofore, manufacturers of combination sink faucets, or fixtures, adapted for use in combination with kitchen sinks, have utilized castings for the box or body portion having integrally formed and cast therewith the outwardly extending water valve and water supply pipe nipples.

The use of castings for the box or body portion of the fixture results in necessity of the walls being relatively thick to overcome the possibility of defects or leaks resulting from sand holes, and the like. Also, the inner surface of the casting is relatively rough, whereby the jagged surface agitates the water which flows therethrough with the result that the water which passes from the nozzle or spout contains air, and often is an imperfect and deformed stream. Moreover, the outer surface of the box or body, together with the nipples, when formed from cast metal, are relatively rough which necessitates considerable time and a relative great expense in performing the operation of polishing the surface.

Therefore, the general object of the invention is to provide a plumbing fixture having a box or body formed from drawn tubing whose side walls are relatively thin and whose inner surface is relatively smooth.

Other objects of the invention are to provide a sink faucet fixture having simple, efficient, practical and durable water valve nipples, supply pipe nipples, body, soap tray support, and spout nipple, as well as providing a simple, convenient and economical process of assembling said parts; to provide a method of construction during which said water valve nipples, water supply pipe nipples, and spout nipple, within the box or body, may be readily inspected through open ends of the body; and to provide simple, efficient and practical means for securing the usual soap tray to said body.

Other objects of the invention will be apparent by reference to the hereinafter description, claims and by reference to the drawings.

The invention consists in the combination of the elements, arrangement of the parts and in the details of the construction of said plumbing fixture, and the method of making the same.

In the drawings:

Fig. 1 is a side elevational view of the invention;

Fig. 2 is a plan view of the same;

Fig. 3 is a section taken on a line corresponding to 3—3 in Fig. 2, with parts removed;

Fig. 4 is a section taken on a line corresponding to 4—4 in Fig. 2; and

Fig. 5 is a section taken on a line corresponding to 5—5 in Fig. 2.

In the preferred construction of the invention I provide the rectangular tube or body 1 comprising the integrally formed sides 2 and 3, top and bottom 4 and 5, and the end plugs 6 and 7. The side 3 has therein the water pipe holes or openings 8 and 9 in close proximity to the respective end plugs.

In vertical alignment with the holes 8 and 9 is the hot water exit or hole 10 and the cold water exit or hole 11 in the top 4 of the body. The holes 10 and 11 may also be termed as water valve holes. Secured within the holes 10 and 11, as by soldering, brazing, or other suitable means, are the vertical water valve or faucet nipples 12 and 13 having thereon the external threads 14. The shoulders 15 of the nipples 12 and 13 closely engage the top 4 of the body. In the sides 16 of the nipples 12 and 13 are holes or apertures 17 whose walls extend horizontally and having internal threads 17' therein. The centers of the holes 17 are in alignment with the centers of the holes 8 and 9.

Received in the holes 8 and 9 are the horizontal or water supply pipe nipples 18 and 19 each having the shoulder 20 adapted to fit in close contact with the side 3 of the body. The nipples 18 and 19 are suitably secured within the holes 8 and 9 as by soldering, brazing, or other suitable means. The inner ends of the nipples 18 and 19 have the external threads 21 thereon adapted to be screwed in engagement with the internal threads 17' of the respective vertical nipples 12 and 13.

Received within each vertical nipple 12 and 13 is the valve seat 22 having external threads 23 thereon screwed into the internal threads 24 of the respective nipples. Threaded to the external threads 25, on the upper end of each of the nipples 12 and 13, is the bonnet 26 having threaded to its upper end the packing nut 27 adapted, when screwed downwardly, to compress the packing 28 in engagement with the valve stem 29 for the purpose of preventing escape of water upwardly between the respective valve stem and the packing nut.

Each valve stem 29 has external threads 30 thereon meshing with the internal threads 31 within the respective nipples. Each stem 29 has integrally connected to its lower end the valve head 32 having the manually operative handle 32' fixed to its upper end. When the handle is turned for the purpose of screwing the valve stem downwardly the valve head 32 is adapted to engage the valve seat 22 for the purpose of closing the opening 33 in the upper end of the valve seat. The valve head 32 comprises the usual washer 34 suitably secured to the bottom of the valve stem as by the screw 35 which is combinedly received through the washer and into the lower end of the stem.

Threaded to the outer end of each of the horizontal nipples 18 and 19 is the ring 36 adapted to have screwed in contact therewith the inner surface 37 of the union nut 38 having internal threads 39 adapted to mesh with the external threads 40 on the usual hot water supply pipe 41 and the usual cold water supply pipe 42 having suitable outside source of connection with a water supply.

In the side walls of the vertical nipples 8 and 9 are the spaced apart perforations 43, positioned below the top 4 of the body 1, whereby when the valve stems 29 are screwed upwardly, so that the valve heads 32 disengage the valve seats 22, the water is adapted to flow from the supply pipes 41 and 42 through the horizontal nipples 12 and 13, through the lower portion of the vertical nipples 8 and 9 and thence through the holes 43 into the body 1.

In the top 4 of the body 1 is the centrally disposed hole or orifice 44 having received therein the vertical spout nipple 45 having the shoulder 46 adapted to fit in close engagement with the top of the body. The spout nipple 45 is secured within the spout orifice 44 as by soldering, brazing, or other suitable means. The inner vertical end 47 of the spout 48 is received in the hole 49 of the spout nipple 45 and is surrounded by the packing 50. The packing nut 51, threaded to the upper end of the spout nipple, is screwed downwardly in close engagement with the upper end 51 of the packing for the purpose of forcing the packing in contact with the outer surface of the vertical end 47 of the spout, whereby escape of water from the body 1 and between the spout 48 and the inner surface of the spout nipple 45 is prevented.

The lower end 52 of the packing 50 engages the shoulder 53 of the flange 54 which extends circumferentially of the lower end 47 of the spout and is integrally formed therewith. The lower surface 55 of the flange 54 contacts the upper surface of the inwardly extending flange 55' integrally formed with the inner surface of the spout nipple 45.

Secured, as by soldering, brazing, or other suitable means, to the side 3 of the body 1 is the horizontal soap tray support 56 having the hole 57 therein, the vertical walls of which have internal threads 58 formed therein and adapted to mesh with the external threads 59 formed on the lower end of the soap tray vertical support 60 having suitably secured to its upper end the soap tray 61.

An advantage of the invention is that the body 1 is manufactured from ordinary tubing, such as is drawn to suitable size and which is cut into suitable lengths. Use of the body 1, formed from tubing, results in the plumbing fixture being relatively light in weight and having desirable tension strength.

Another advantage of the invention is that the inner surface of the tubing body 1 is relatively smooth which permits an uninterrupted and smooth flow of water from the spout 48.

Another advantage of the invention is that the construction and engagement of the vertical and horizontal nipples 8 and 9, and 12 and 13, as well as their connection with the body 1, results in great sturdiness, durability and efficiency of the assembled parts.

Still another advantage of the invention is that in the manufacture and construction of the fixture no castings are utilized or required, whereby the complete fixture may be manufactured in a plant not equipped for foundering or molding processes. Also, the various parts, such as the body 1, nipples 8, 9, 12, 13 and 45 and the support 56, are relatively smooth, since the body 1 is made from drawn tubing and the nipples from drawn or rolled bars, whereby these parts are quickly and conveniently, as well as economically, polished, whereas it is well known that the external surfaces of castings are relatively rough, whereby considerable expense is entailed in satisfactorily and efficiently polishing the external surfaces of castings. Moreover, the various parts of the invention are manufactured by processes during completion of which the metal is drawn or rolled, and therefore the likelihood of defects, pin holes, and the like, is greatly reduced, whereas it is well known that castings, for similar purposes, are likely to be defective as a result of sand holes or defective molding operations which obviously renders the fixture useless or impractical for the reason that water will leak therethrough.

The process or method of manufacturing the combination sink faucet or plumbing fixture is, as follows:

First, a tube of required shape and size is cut to required length. Then, the holes 10, 11 and 44 are drilled through the top 4. Then, the holes 8 and 9 are drilled through the side 3. Then, the vertical nipples 12 and 13 are soldered, brazed, or suitably secured in the holes 10 and 11. Then, the inner ends of the horizontal nipples 18 and 19 are protruded through the holes 8 and 9 in the side 3 and screwed into the holes 17 in the side walls of the vertical nipples 12 and 13. The horizontal nipples 18 and 19 are fixed within the holes 8 and 9, as by soldering, brazing, or other suitable means. Then, the central spout nipple 45 is secured in the hole 44, as by soldering, brazing, or other suitable means. Then, the valve seats 22 are screwed into the vertical nipples 12 and 13 after which the horizontal support 56 is suitably secured to the side 3 of the body 1 and preferably in alignment with the spout nipple 45.

Afterward, the handles 33, valve stems 29, bonnets 26, and packing nuts 27 are assembled in the position previously described. Also, the spout 48 and soap tray 61, with its vertical support 60, are suitably assembled in the position previously described.

It is, therefore, quite apparent that I have invented a highly desirable and practical article of manufacture, and method of making the same, for the purposes intended.

An important advantage of the invention is that during the assembling of the vertical nipples 12 and 13, spout nipple 45, and the horizontal nipples 18 and 19, the parts within the body 1, may be quickly and conveniently inspected by observance through the open ends of the body. After the various parts, herein previously explained, have been assembled, the end plugs 6 and 7, are secured in the open ends of the body 1 for the purpose of sealing the ends. The end plugs 6 and 7 may be secured within the ends of the body, as by soldering, brazing, or other suitable means.

It is apparent that I have devised a novel and useful structure which embodies the features of advantages enumerated, and while I have, in the present instance, shown and described preferred embodiments thereof, which will give in practice satisfactory and reliable results, it is to be understood that the same is susceptible of modification in various particulars. In other words, it is apparent that the parts of the invention

may be of any size, and constructed of any materials deemed convenient and suitable for an article of this character, and while I have illustrated and described a form of construction and arrangement of the elements found desirable in materializing the invention, I wish to emphasize the fact that I desire to include in this application all equivalents and substitutes that may fairly be considered to come within the scope and purview of the invention as defined in the claims.

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

1. A plumbing fixture having a drawn tube body having closed ends and having spaced apart holes in its top and having spaced apart openings in its side and having an orifice in its top, a water spout received in said orifice, vertical water valve nipples fixed in said holes and having perforations in their side walls, and having their lower ends extending into said body, and having apertures in their lower ends in alignment with said openings, horizontal water supply pipe nipples fixed in said openings and having their inner ends extending into said body and threaded in said apertures, and operative valve stems in said water valve nipples.

2. A plumbing fixture having a drawn tube body having closed ends and having spaced apart holes in its top and having spaced apart openings in its side and having an orifice in its top, vertical water valve nipples fixed in said holes and having perforations in their side walls, and having apertures in their lower ends in alignment with said openings, horizontal water supply pipe nipples fixed in said openings and having their inner ends threaded in said apertures, and operative valve stems in said water valve nipples.

3. A plumbing fixture having a drawn tube body having closed ends and having spaced apart holes in its top and having spaced apart openings in its side and having an orifice in its top, a water spout received in said orifice, water valve nipples fixed in said holes and having perforations in their side walls and having their lower ends extending into said body and having apertures in their lower ends in alignment with said openings, water supply pipe nipples fixed in said openings and having their inner ends extending into said body and threaded in said apertures, and operative valve stems in said water valve nipples.

4. A sink plumbing fixture having a drawn tube body having closed ends and having spaced apart holes in its top and having spaced apart openings in its side and having an orifice in its top, water valve nipples fixed in said holes and having perforations in their side walls and having apertures in their lower ends in alignment with said openings, water supply pipe nipples fixed in said openings and having their inner ends threaded in said apertures, and operative valve stems in said water valve nipples.

5. A plumbing fixture comprising a hollow rectangular body having closed ends, and having holes in its top in close proximity to each end and having an orifice centrally disposed in its top, and having openings in its side in alignment with said end holes, vertical water valve nipples fixed in said end holes and having in their side walls perforations communicating with the inside of said body, the inner ends of said water valve nipples having apertures in their side walls, the walls of said apertures having internal threads formed therein, horizontal water supply pipe nipples fixed in said openings and having external threads on their inner ends screwed into said internal threads, valve seats in said vertical nipples, manually operative valve stems cooperating with said seats, and a water spout in said orifice.

6. A plumbing fixture comprising a hollow rectangular body having closed ends, and having holes in its top in close proximity to each end and having an orifice centrally disposed in its top, and having openings in its side in alignment with said end holes, water valve nipples fixed in said end holes and having in their side walls perforations communicating with the inside of said body, the inner ends of said water valve nipples having apertures in their side walls, the walls of said apertures having internal threads formed therein, water supply pipe nipples fixed in said side openings and having external threads on their inner ends screwed into said internal threads, valve seats in said nipples, manually operative valve stems cooperating with said seats.

7. A plumbing fixture comprising a hollow body having closed ends, and having holes in its top and having an orifice disposed in its top, and having openings in its side in alignment with said holes, vertical water valve nipples fixed in said holes and having in their side walls perforations communicating with the inside of said body, the inner ends of said water valve nipples having apertures in their side walls, the walls of said apertures having internal threads formed therein, horizontal water supply pipe nipples fixed in said side openings and having external threads on their inner ends screwed into said internal threads, valve seats in said vertical nipples, manually operative valve stems co-operating with said seats, and a water spout in said orifice.

8. A plumbing fixture comprising a hollow body having closed ends, and having holes in its top and having an orifice disposed in its top, and having openings in its side in alignment with said holes, water valve nipples fixed in said holes and having in their side walls perforations communicating with the inside of said body, the inner ends of said water valve nipples having apertures in their side walls, the walls of said apertures having internal threads formed therein, water supply pipe nipples fixed in said side openings and having external threads on their inner ends screwed into said internal threads, valve seats in said nipples, manually operative valve stems co-operating with said seats.

9. A sink plumbing fixture having a tubular body having spaced apart holes in its top and in close proximity to its ends, and having spaced apart openings in its side, said openings being in vertical alignment with said holes, said body having an orifice in its top located intermediate said holes, vertical water valve nipples fixed in said holes and having perforations in their side walls, said nipples having shoulders adapted to closely engage said top, horizontal water supply pipe nipples fixed in said openings and having their inner ends connected with said vertical nipples whereby passage of water through said horizontal nipples, said vertical nipples and said perforations may be accomplished, and manually operative means adapted to open and close the water passage through said horizontal and vertical nipples.

JOHN SCHULTE, JR.