Dec. 11, 1956 P. J. BEYERLE 2,773,708

PLUMBING ASSEMBLY

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Fig. 1.

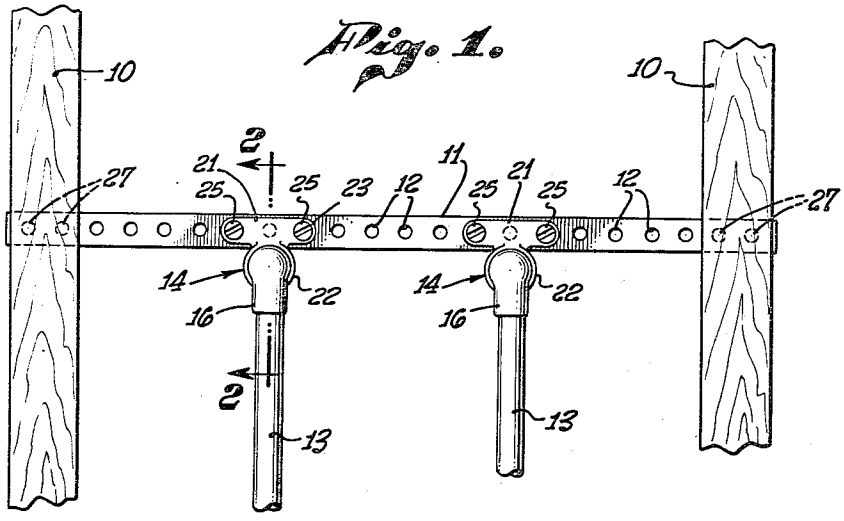
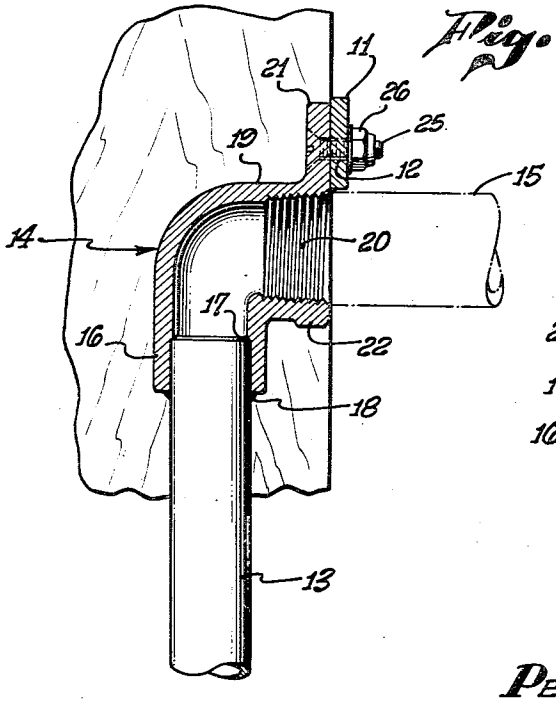


Fig. 2.



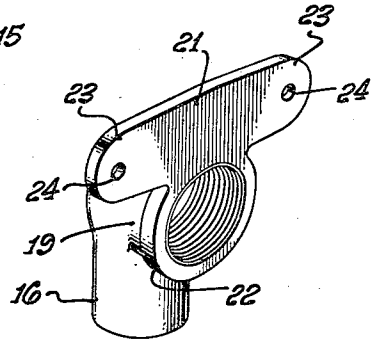


Fig. 3

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PLUMBING ASSEMBLY

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Continuation of abandoned application Serial No. 322,903, November 28, 1952. This application February 1, 1955, Serial No. 485,563

1 Claim. (Cl. 285—64)

The present invention relates to plumbing assemblies, and to the manner in which plumbing fittings are assembled in connection with a supporting structure.

This application is a continuation of my application for "Plumbing Assembly and Fitting," Serial No. 322,903, filed November 28, 1952, now abandoned.

An object of the present invention is to provide a plumbing assembly which enables plumbing fittings to be readily mounted in their desired respective positions and on a suitable supporting structure, such as the studs or joists of a building.

Another object of the invention is to provide a plumbing assembly readily mountable on a building, or similar supporting structure, and embodying fittings to which pipes can be mounted in a rapid and easy manner.

A further object of the invention is to provide a plumbing assembly in which the plumbing fittings can be preassembled prior to installation of the assembly in a building, the fittings, when embodied in the building, being disposed in non-interfering positions so as to facilitate the securing of pipes thereto.

This invention possesses many other advantages, and has other objects which may be made more clearly apparent from a consideration of a form in which it may be embodied. This form is shown in the drawings accompanying and forming part of the present specification. It will now be described in detail, for the purpose of illustrating the general principles of the invention; but it is to be understood that such detailed description is not to be taken in a limiting sense, since the scope of the invention is best defined by the appended claims.

Referring to the drawings:

Figure 1 is a front elevational view of a plumbing assembly embodying the invention, shown applied to the studs or joists of a wood building frame;

Fig. 2 is a section, on an enlarged scale, taken along the line 2—2 on Fig. 1;

Fig. 3 is an isometric projection of one of the plumbing fittings.

As disclosed in the drawings, the invention is related to a building structure, wherein it is desired to support plumbing fittings and pipes connected thereto from the uprights or studs 10 of a building frame in a convenient and rapid manner. A crossbar or strip 11, preferably made of metal, is provided which has a row of holes 12 therein suitably spaced from one another, the strip being of a length to extend between the studs 10 of the building structure, and also to be secured thereto. As disclosed, it is desired to run water pipes 13, or the like, to one or a plurality of fittings 14 carried by the strip 11, and then have another pipe section 15 connected to each of the fittings at an angle (such as a right angle) to the other pipe 13 connected to the fitting. This is done in the present instance by providing a particular kind of fitting, which is shown in the drawings in the form of an elbow 14.

The elbow has one end 16 formed as the box portion of a slip joint, terminating in an inner circumferentially

continuous shoulder 17. A plain end pipe section 13 may be slipped into this box 16 until it engages the shoulder 17, whereupon the pipe 13 can be attached to the fitting 14 in leakproof relation, as by use of solder 18 extending completely around the pipe 13 and around the end of the box 16 itself.

The other end portion of the elbow, which is disposed substantially at right angles to the slip joint portion, may be formed as a threaded box 19 capable of receiving the threaded pin 20 of another pipe section 15, this last-mentioned pipe section, of course, extending substantially at right angles to the other pipe section 13.

The fittings 14 and the pipe sections 13, 15 attached thereto are supported by the crossbar or strip 11, and such support occurs in such manner that the crossbar or strip does not interfere with the attachment of any of the pipe sections 13, 15 to the fitting 14. In addition, the arrangement disclosed is such that the fittings may be preassembled, if desired, to the crossbar or strip 11 and firmly attached thereto in such manner as to afford sufficient clearance to one side of the strip 11 for the passage of the pipe sections which are to be united to the fittings. To effectuate this purpose, each fitting 14 has a cross-piece or lug portion 21 integral with, or otherwise permanently secured to, the thickened flange end portion 22 of one of the box sections, such as the threaded box section 19. This cross-piece or lug 21 is disposed completely to one side of the threaded box member 19 and lies in a plane which is substantially at right angles to the axis of the threaded box 19. The cross-piece includes end ear portions 23 extending in opposite directions, the ear portions having holes 24 formed therein which generally lie on axes that are parallel to the axis of the threaded box 19.

It is evident that the cross-piece 11 is displaced completely to one side of the threaded box portion 19, and that it extends with respect to the axis of the threaded box portion 19 in a direction opposite to that in which the slip joint box portion 16 of the fitting extends.

The holes 12 through the strip 11 are preferably uniformly spaced from one another and conform in spacing to the distance between the two holes 24 through the cross-piece 21 of the fitting 14. As specifically shown, the holes 12 through the strip have their center-to-center distance one-half the center-to-center distance between the holes 24 through the cross-piece. Accordingly, the holes 24 through the cross-piece 21 may be aligned with a pair of holes 12 in the strip, and such alignment will occur when the fitting is moved lengthwise along the strip 11 only one-half the distance between the fitting holes 24.

In the use of the assembly disclosed, the plumber knows how many fittings will be needed, in view of the number of pipe lines to be run through the particular portion of the building. He will also know of the spacing required between these fittings. With such knowledge, he can assemble the fittings 14 to the strip 11, in proper spaced relation with respect to one another, by passing bolts 25 through the ear holes 24 in each cross-piece 21 and through the aligned holes 12 in the strip 11, nuts 26 then being threaded on the bolts 25 and tightened, to securely attach the fittings to the strip. It is to be noted that the width of the strip 11 is such that it does not extend across any portion of the threaded box 19 of each fitting.

After the fittings 14 have all been assembled on the strip 11, the latter can be disposed across and between a pair of studs or uprights 10 and suitable size nails 27 driven through the end holes 12 in the strip and into the wood studs 10, for the purpose of securely fastening the strip to the latter. Thereafter, the pipe 13, 15 can be related to each fitting. As an example, the pipe section 15 with the threaded end 20 runs horizontally, as shown

in the drawings, and can be threadedly attached without difficulty whatsoever into the threaded box portion **19** of the associated fitting **14**, the pipe section **15** itself passing below the strip **11**, which does not interfere with it. Similarly, the other slip joint pipe section **13** can be slipped into position within its companion box **16** until it engages the shoulder **17**, whereupon the fitting **14** and plain end pipe section can be attached to each other by means of solder **18**.

Of course, a pipe section could be mounted on the fitting **14**, with the fitting attached to the strip **11**, prior to the securing of the strip to the studs **10**. This is a matter of choice, depending upon the particular plumbing job to be performed.

Although elbows **14** are specifically shown in the drawings, it is apparent the invention is applicable to other kinds of fittings, such as T's, crosses, and the like. The cross-piece **21** of each fitting is disposed to one side of and at right angles to the axis of the adjacent threaded box element **19**, which enables the latter to be disposed completely to one side of the mounting crossbar or strip **11**. Because of this arrangement, it is possible to rapidly assemble the fittings **14** to the strip **11**, and, if desired, to preassemble them prior to securing of the strip **11** to the building structure.

The arrangement also lends itself for use in connection with floor and ceiling joists. The strip **11** could be secured to such joists and the fittings **14** attached in the same manner as disclosed in Fig. 1, in which the vertical studs **10** shown would be considered to be the generally horizontal joist members.

The inventor claims:

In a plumbing assembly: a suporting strip having a longitudinal row of equidistant holes, one or more of said holes at the end portions of said strip being adapted to receive fastening elements to secure said strip to the structural members of a building; at least one tubular fitting secured to said strip, each such fitting comprising a tubular body having a plane of symmetry and having

a first wall portion defining a tubular passage having an open end lying entirely to one side of said strip to receive a companion pipe and a second wall portion disposed at a substantial angle less than a straight angle to said first portion to receive a companion pipe, said first wall portion having a tangent perpendicular to said plane and having a longitudinal axis, each such fitting having a single cross-piece integral with said first wall portion but disposed radially outwardly solely on one side thereof and having a surface lying in a plane substantially normal to said axis and common to said open end, said wall portion and cross-piece of each such fitting having substantially equal thicknesses throughout, each of such cross-pieces containing spaced fastener-receiving openings penetrating said surface in an area radially completely beyond said tangent and lying on opposite sides of said plane of symmetry, said fastener-receiving openings being alignable with said strip holes; and means passing through said strip holes and the openings of each such cross-piece aligned therewith to secure said cross-piece to said strip with said first wall portion disposed laterally completely to one side of said strip, the spacing between the openings of each cross-piece being a whole number multiple of the spacing between adjacent strip holes.

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