April 19, 1932. S. KERSTEN 1,855,024

PLUMBING FITTING

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Fig. 1

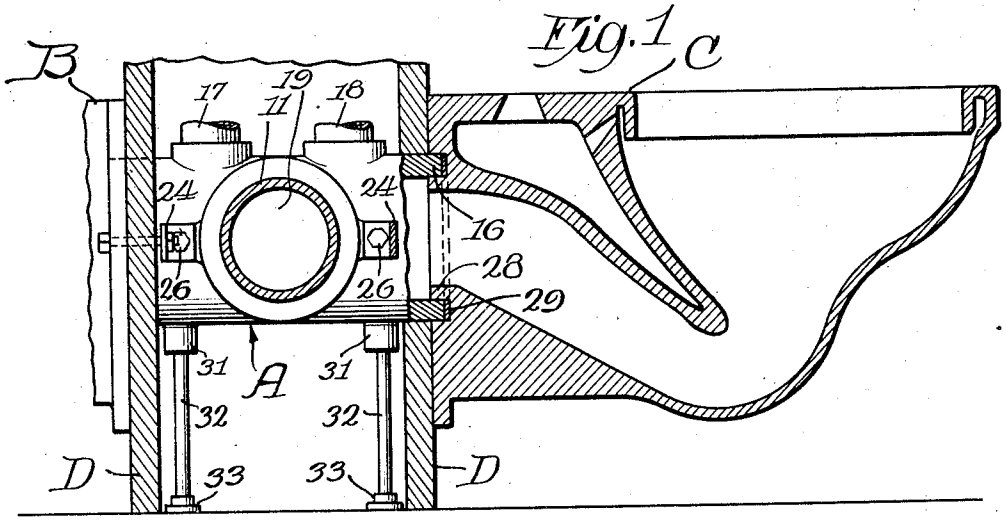

Fig. 2

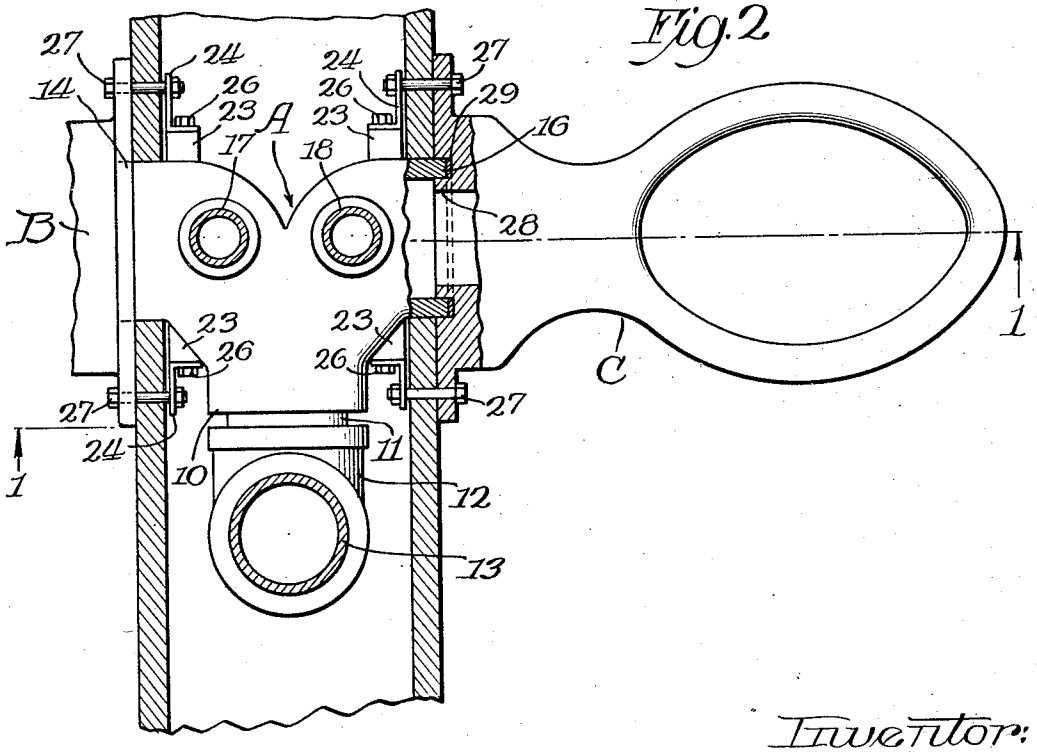

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Fig. 3

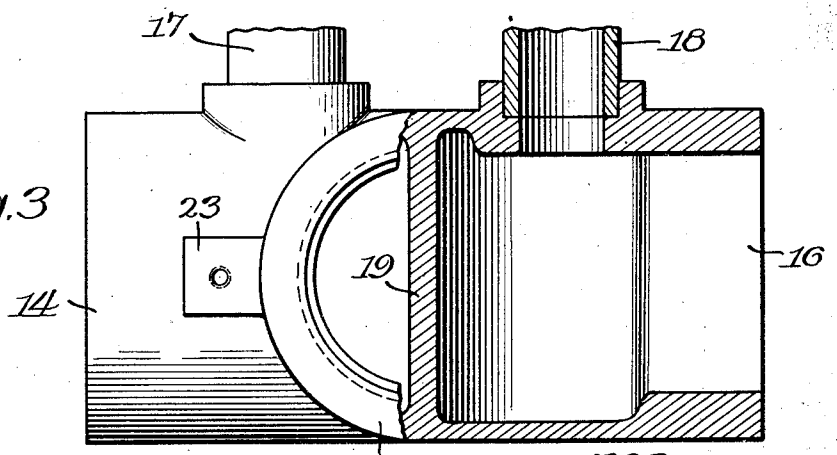
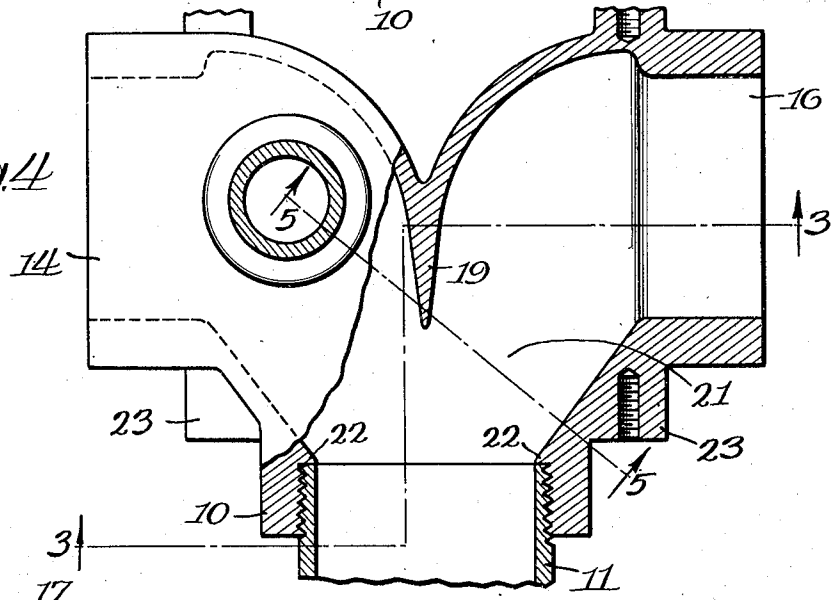


Fig. 4



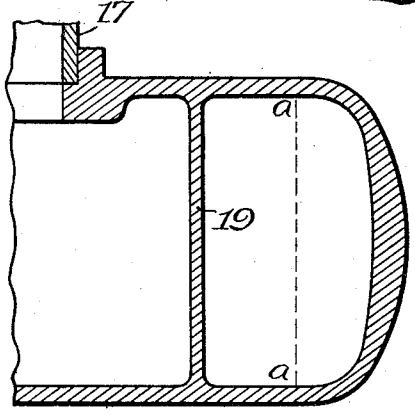


Fig. 5

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UNITED STATES PATENT OFFICE

SAMUEL KERSTEN, OF CHICAGO, ILLINOIS

PLUMBING FITTING

Application filed November 17, 1928. Serial No. 320,113.

My invention relates in general to plumbing fittings. It relates more particularly to a fitting for connecting a closet bowl to a soil or waste pipe and the combination of such fitting with the bowl.

In old style plumbing installations the pipes have been carried in the floor but for a number of reasons known to the trade this is not satisfactory; and attempts are made now wherever possible to carry all of the pipes in the partitions. In this connection wall hung type of closet bowls have been brought into use and with some degree of success. It has been suggested to mount the bowls back to back but this has not been entirely satisfactory for a number of reasons principally because when the bowls were connected directly discharge would take place from one bowl into another and of course this was entirely unsatisfactory. Another disadvantage was the fact that a large amount of space was required in the partition or pipe space so that the floor space actually lost became a serious item. No fitting or method of connecting a fitting which would solve these difficulties has ever been employed in the plumbing trade as far as I am aware.

Accordingly the principal object of the present invention is the provision of a new plumbing fitting of the type described.

Another object is the provision of a fitting adapted to connect the two closet bowls back to back to a soil or waste pipe without any possibility of one bowl discharging into the other.

Another object is the provision of such a fitting which at the same time may be placed in a standard toilet room partition.

Another object is the provision of such a fitting particularly adapted for use with a wall hung type of bowl.

Other objects and features of the invention will be apparent from a consideration of the detailed description taken with the accompanying drawings wherein

Fig. 1 is a vertical fragmentary sectional view showing a closet bowl mounted directly onto the fitting, the section irregular and taken along the line 1—1 of Fig. 2;

Fig. 2 is a plan view of the fitting of my invention and showing its manner of use;

Fig. 3 is a front view of the fitting, half in section, the section line being along the line 3—3 of Fig. 4;

Fig. 4 is a plan view of the fitting, partly broken away, and

Fig. 5 is a fragmentary sectional view taken along the line 5—5 of Fig. 4 looking in the directions of the arrows.

In carrying out my invention I provide a fitting with a three way connection, one running to each closet bowl and the third running connection to the usual soil or waste pipe. A baffle is provided to prevent discharge straight across the fitting from one bowl to another, but the fitting is proportioned so that the area of the sweep opening is the same or greater than the area of the intake opening so that it is impossible to get any back pressure and whatever city ordinance may exist regulating the size of the opening can be readily complied with. The ends of the fitting project through the toilet room wall and means is provided for hanging the bowl with its horn in direct contact with the projecting end of the fitting. This is my preferred form but the invention may be modfied in many ways without departing from the spirit and scope thereof.

Referring now more particularly to the drawings the fitting A is adapted to connect to bowls B and C which are of a wall hung type and are connected against a standard toilet room partition D.

The fitting A has one opening 10 for connection by means of a nipple 11 and T 12 to the usual soil or waste pipe 13. The other openings 14 and 16 are disposed opposite from each other and at right angles to the opening 10 and are adapted to be connected to the bowls B and C respectively. Smaller openings 17 and 18 are provided for vent purposes at suitable positions with respect to the openings 14 and 16.

It is obvious that the usual type of three way connection cannot be employed as the fitting A or the discharge would take place from the bowl B to the bowl C and vice versa. To overcome this I place a baffle 19 between

the two openings and, as Fig. 4 illustrates, this baffle 19 extends beyond the edge of the openings so that no matter how water is discharged through the opening it will be impossible for it to cross to the other bowl but it will strike the baffle 19 and be deflected through the fitting into the running line or in other words through the sweep opening 21 as it is termed. For several reasons, particularly legal reasons the sweep opening 21 must be at least as large as the opening 16. I obtain this result by forming the sweep opening higher as can be done at this point and in this way I am able to obtain more than the area of the opening 16 at the sweep opening. With the area of the opening 16 slightly more than 12½ square inches (4 inches diameter) the sweep opening 21 may be formed so as to obtain almost 17 square inches of area. This is done by making the distance from the tip of the baffle to the opposite wall of the fitting three inches, and the height of the opening, that is the distance represented by the broken line *a*—*a* in Fig. 5 is 5¼ inches. This height is obtained by taking advantage of the natural shape of the fitting at this point, and modifying dimensions slightly.

One of the most necessary things in the design of this fitting is that the discharge have a clean sweep around the bend so that there will be no obstruction to an even flow, or nothing on which any waste matter might become lodged and so interrupt the discharge movement. To secure this result I provide no shoulders or the like at the discharge openings, that is the openings to which the bowls connect; but the running line connected to the nipple 11 is provided with a continuous flange 22 from a shoulder against which the nipple 11 projects. This flange is arranged to be substantially the same width as the thickness of the nipple.

For securing the bowl to the fitting lugs 23—23 are cast on to the fitting and hinges 24—24 are secured thereto by cap screws 26—26. The unconnected legs of the hinges are provided with slots through which bolts 27—27 extend for drawing the horn 28 of the bowl against the end of the fitting. The usual gasket 29 is provided as a seal at this point. In order to have an adjustment the hinges 24 are provided with slots for receiving the bolts 27 so that they may be regulated with respect to the position of the holes in the bowl. In order to support the fitting from the floor I provide suitable legs on the fitting and in the preferred form this comprises lugs 31 formed integral with the fitting support legs 32 and floor flanges 33. In actual practice I have constructed the legs 32 of ordinary one-half inch pipe, but any suitable support may be employed in this connection.

Any other usual adjusting means may be provided, for any usual way of connecting the bowl may be utilized. The present invention is not meant to be entirely self sufficient but where necessary depending upon the installation may be hooked up with any of the present standard plumbing appliances. In installing my fitting the usual methods of roughing in etc. are used, the plaster being finished to the fitting as is the custom. I have not attempted to show any particular type of wall construction, as the fitting may be mounted in any standard toilet room partition. Most of these partitions even when employing the floor type bowls are approximately 10 inches in thickness, but I am able to mount my fitting in a 9 inch wall and do away with lost floor space entirely.

The fitting of my invention can be employed on either a vertical or horizontal waste pipe and is of very great advantage in either case. In mounting it on a horizontal line, there is considerable advantage in certain types of construction particularly where cement is used because the horizontal waste pipe or running line as it is called can be "roughed in" at the floor level with the proper pitch and embedded in cement before the closet bowl fittings are installed. Subsequently, these fittings can be placed in and the elevation thereof very easily controlled or adjusted for by choosing nipples 11 of suitable length to bring these fittings to the elevation required. Similarly, these nipples 11 can be controlled in length to adjust the position of the fitting with respect to a vertical line.

While my provision of the baffle 19 is apparently of extreme simplicity, I found a very great deal of designing and study over a period of years required before I obtained fully satisfactory results. It is to be noted that with the particular manner of supporting the bowl which I employ the weight of a person on the bowl cannot have the effect of loosening the connection. On the contrary cantilever action takes place and the connection between the fitting and horn of the bowl, made tighter. The invention supplies a very real need in the plumbing industry, and while I have explained in very great detail the features of one embodiment of my invention to enable those skilled in the art to practice it, I do not restrict myself to the use of any particular form of fitting except within the scope of the appended claims.

What I claim as new and desire to protect by Letters Patent of the United States is:

1. A plumbing fitting of substantially standard T dimensions for mounting two closet bowls back to back comprising a connection for a soil or waste pipe oppositely disposed connections for the bowls communicating with the waste pipe connection, and a baffle disposed between the closet bowl connections forming sweep openings on both sides thereof, leading to the waste pipe connection, each sweep opening having an

area at least as large as the opening in the closet bowl connection.

2. A three way fitting of substantially standard T dimensions for connecting closet bowls back to back having a closet connection with the usual circular opening, a soil or waste pipe connection with the usual circular opening, and a baffle between the closet bowl connections extending toward the waste pipe opening, the baffle forming a relatively narrow sweep opening on each side thereof, each sweep opening being formed higher resulting in an oblong opening having at least the area of the closet bowl openings.

3. A plumbing fitting for mounting closet bowls back to back, said fitting comprising a T with the outward general appearance and dimensions of a standard T fitting, oppositely disposed openings adapted for connection to the closet bowls and a right angularly placed opening communicating with the oppositely disposed openings and adapted by suitable means to be connected to a waste pipe and a baffle between the two closet openings to prevent discharge across from one to the other, the opening at the baffle being oval shaped to have at least the area of the closet openings to avoid any possibility of back pressure into the closets and maintaining the outward size of a standard T fitting so that a minimum amount of wall space is needed to make connections.

4. In a plumbing installation, a fitting for connection to a soil or waste pipe of and having the dimensions and appearance substantially of a standard T, oppositely faced connections for closet bowls, a waste pipe connection communicating with the closet connections, and a baffle between the closet connections for preventing discharge from one bowl to the other and formed to produce sweep openings having at least the cross sectional area of the closet openings, and a pipe nipple for interconnecting the waste opening of the fitting with the waste pipe.

In witness whereof, I hereunto subscribe my name this 27th day of October, 1928.

SAMUEL KERSTEN.