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DOUBLE FITTING FOR SEWAGE PIPE CONNECTIONS

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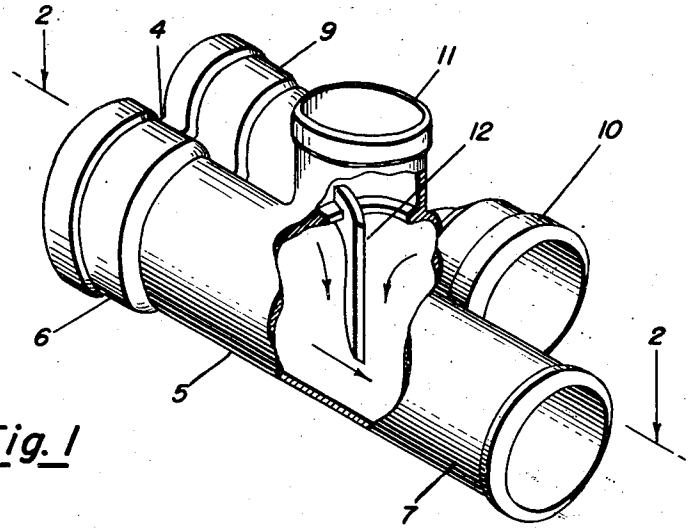


Fig. 1

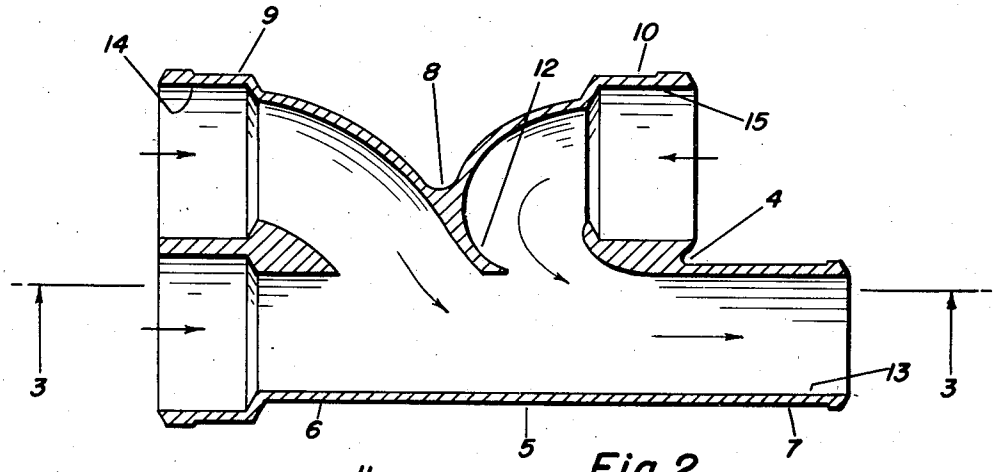


Fig. 2

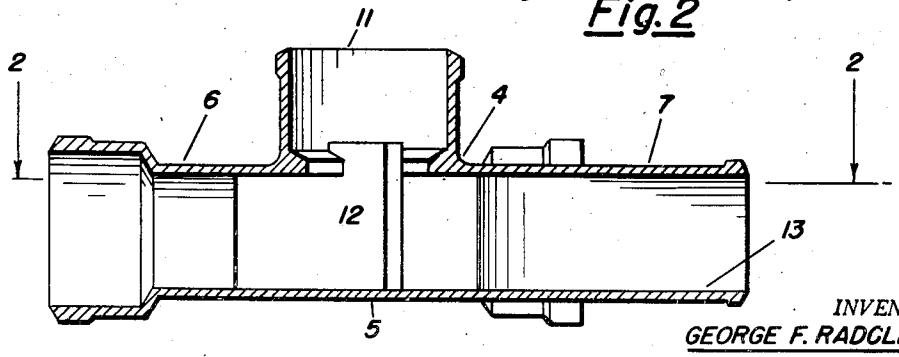


Fig. 3

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DOUBLE FITTING FOR SEWAGE PIPE CONNECTIONS

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3 Claims. (Cl. 285—210)

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My invention relates to double fittings for sewage pipe connections, particularly the form of connection known as vented soil pipe fittings employed in plumbing for two separate water closets; and its objects are to bring about a better and more efficient means for the disposal of sewage coming through bends from said closets and being discharged into the main run of pipe while providing a more effective means of venting the same; to effect a saving in space between floor and ceiling of building structures for the installation of double fittings without the necessity of the cutting of joist or use of false floors or ceilings; to prevent the formation of turbulence or cross currents at the confluence of the sewage streams coming from the closets with the body of sewage flowing through the main and by the use of directional partitions to accomplish such confluence in the general direction of flow therethrough; to provide ample drainage for a large number of closets and disposition of sewage coming therefrom; and generally to provide a double pipe fitting which is simple and economical of construction, efficient in action, and of prolonged life and durability. These and other objects will appear from the drawing and as hereinafter described and set forth.

At the present time, the type of double pipe fitting designed to be horizontally disposed and commonly used in the plumbing trade laterally to connect the bends of two water closets with the main sewage artery, is cumbrous and unwieldy and takes up considerable vertical space between floor and ceiling, so much so that it is often necessary to provide false floors or ceilings, usually at least twenty inches for such between space. Also in such fittings, the confluence of the tributory closet streams flowing at substantially right angles into the main stream of sewage results in considerable turbulence and interruption of direct flow of sewage, and the vent of such fittings is not located so as to provide an equal escape of the gases arising from the said tributory streams or to allow the even flow thereof without retardation. These disadvantages of the old and common form of double fitting, have been fully overcome in my improved form of connection, in which I, by supplying the fitting with a curved directional partition interposed between the inlets of the tributory closet passageways, thereby causing arcuate discharge of the sewage into the main stream thereof have overcome the turbulence of the confluence of streams present in the old form of structure, and by positioning the vent at the side of the partition instead of above the broad face of the same, have, while securing a better and more equal carrying off of the gases and better ventilation, succeeded in making a more compact fitting taking up much less space than the former fitting, and in dispensing with the necessity of putting in false floors or ceilings.

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My invention further consists of other novel features of construction and combinations and arrangements of elements or parts illustrated in the drawing and as will be hereinafter more particularly set forth and described.

Attention is hereby directed to the drawing, illustrating a preferred form of my invention, in which similar numerals of designation refer to similar parts throughout the several views, and in which—

Figure 1 is a view in perspective of my improved double fitting, showing parts broken away for the purpose of better illustration;

Fig. 2 is a transverse section on line 2—2 of Fig. 3, looking in the direction of the arrows, and

Fig. 3 is a vertical section on line 3—3 of Fig. 2, looking in the direction of the arrows.

Referring to the drawing, the double pipe fitting 4 is constructed as shown of a pair of pipe members joined by an interjacent party wall, and comprises first, the member 5, horizontally disposed and having in alignment therewith arms 6 and 7 for connection with the main run of pipe for sewage disposal; second, the member 8, having in parallel relation with the part 5 the pipe branches 9 and 10, each designed for connection with the plumbing of a separate water closet, and each connected with and laterally discharging into the member 5; and third, the vent 11 for the carrying off of gases arising from the sewage flowing through the branches 9 and 10 at their juncture with the member 5. In order that the streams of sewage coming from the two closets may, at their confluence, be properly diverted and directed into the main stream of sewage passing through the fitting without turbulence, I provide the member 8 with the partition 12, which is arcuate or curved in the direction of flow of the current of said main stream of sewage, so that each of the said tributory streams from said closets laterally discharging into the member 5 is positively required to take such arcuate or curved direction and course. At the same time, the vent 11 located immediately above the edge of said partition, and centered therewith, affords a ready means for venting and

carrying off the noxious gases in equal proportions therefrom.

As will be observed from the drawing, the general course of passage of the main stream of sewage is from left to right through the passageway 13 of the member 5 forming part of the main run of pipe; into which passageway pours, obliquely through passageway 14 of branch 9, the tributory stream of sewage coming from one closet located on a floor above, and, obliquely through passageway 15 of branch 10, the tributory stream of sewage coming from another closet similarly located; each of said tributory streams entering the main stream arcuately in the general direction of the current thereof, because of the curved contour of the partition 12, thereby avoiding turbulence or eddy currents at the confluence of the two tributory streams. By locating the vent 11 just above the top edge of the partition 12, as shown in Figs. 1 and 3, so as substantially equally to divide the gases arising from the said confluence of streams, I not only secure greater compactness of construction and economy over said type of prior double fittings, but I also obtain a better and more satisfactory venting and disposition of said gases and more even flow of sewage than I believe has heretofore been accomplished.

My invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiment, as above set forth, is therefore to be considered in all respects as illustrative and not restrictive, the scope of my invention being indicated by the appended claims rather than by the above description, and all changes which come within the meaning and range of equivalency of the claims are therefore intended to be embraced therein.

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

1. A double fitting for connecting the bends of two water closets with the main sewage run, comprising a pair of pipe members disposed in horizontal parallel relation and joined by an interjacent party wall; one of said members having a passageway therethrough formed to connect with the main run of pipe; and the other member having ends formed to connect with the bends of said closets and having two outlets leading from opposite directions through an opening in said party wall into said passageway; and a single curved directional partition vertically disposed inside and secured to said other member and positioned to discharge arcuately the two tributary streams of sewage coming therefrom into the main sewage through said passageway in the general direction of the flow thereof.

2. A double fitting for connecting the bends of two water closets with the main sewage run, comprising a pair of pipe members disposed in horizontal parallel relation and joined by an interjacent party wall; one of said members having a passageway therethrough formed to connect with the main run of pipe; and the other member having ends formed to connect with the bends of said closets and having two outlets leading from opposite directions through an opening in said party wall into said passageway; and a single curved directional partition vertically disposed inside and secured to said other member and positioned to discharge arcuately the two tributary streams of sewage coming therefrom into the main sewage through said passageway in the general direction of the flow thereof; and upwardly extending venting means connected with said fitting above said partition for venting and carrying off gases arising from sewage passing therethrough.

3. A double fitting for connecting the bends of two water closets with the main sewage run, comprising a pair of pipe members disposed in horizontal parallel relation and joined by an interjacent party wall; one of said members having a passageway therethrough formed to connect with the main run of pipe; and the other member having ends formed to connect with the bends of said closets and having two outlets leading from opposite directions through an opening in said party wall into said passageway; and a single curved directional partition vertically disposed inside and secured to said other member and positioned to discharge arcuately the two tributary streams of sewage coming therefrom into the main sewage through said passageway in the general direction of the flow thereof; and upwardly extending venting means connected with said fitting for venting and carrying off gases arising from sewage passing therethrough, said means consisting of an outlet pipe centrally located directly above the upper edge of said directional partition and extending upwardly therefrom so as to cause the gases to pass upwardly from the said streams substantially equal amounts drawn therefrom and equalizing the vent thereof.

GEORGE F. RADCLIFFE.

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