

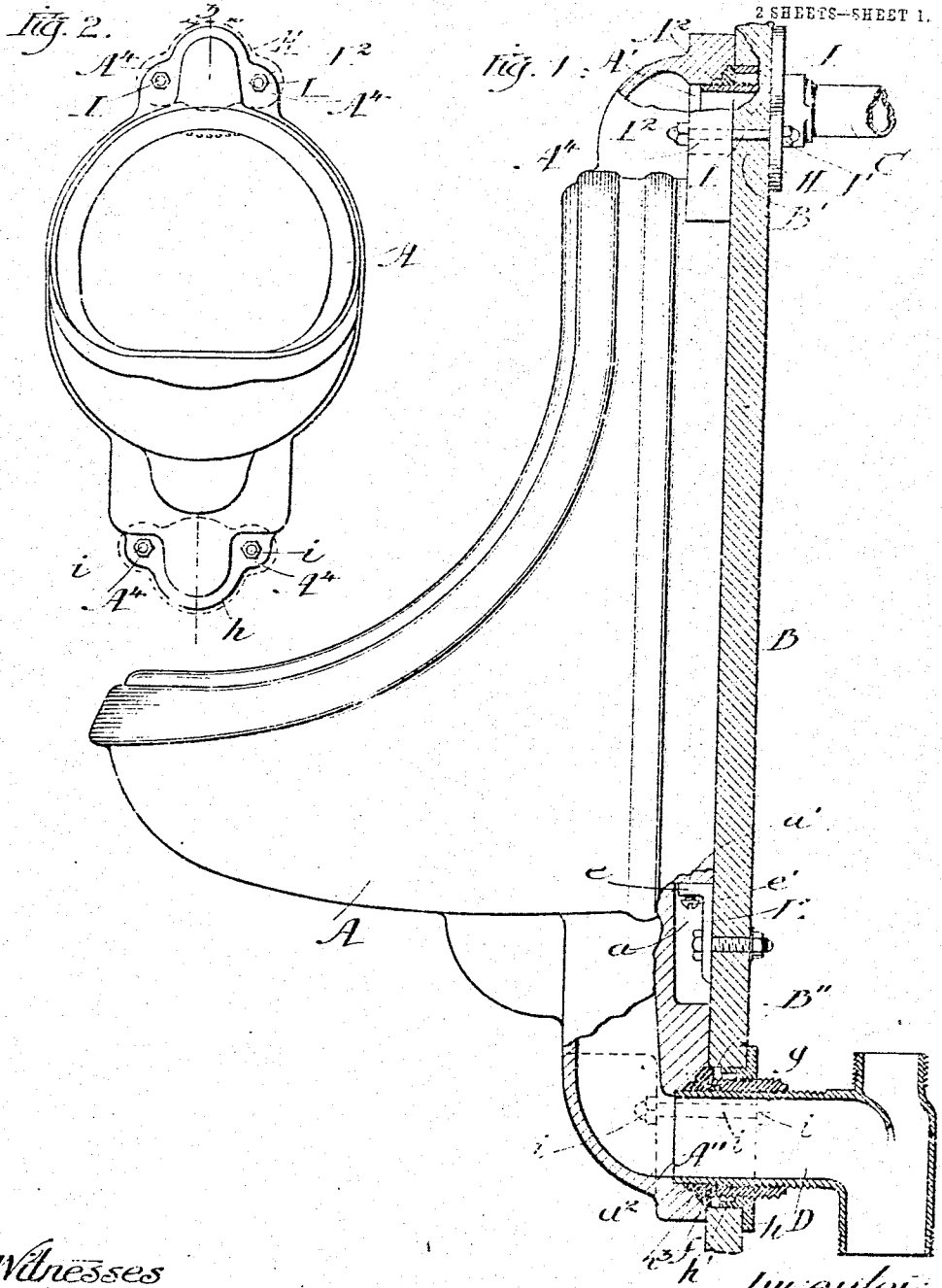
P. J. MADDEN.
PLUMBING FIXTURE.

APPLICATION FILED MAY 24, 1906. RENEWED JUNE 5, 1909.

931,940.

Patented Aug. 24, 1909.

2 SHEETS—SHEET 1.



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Fig. 3.

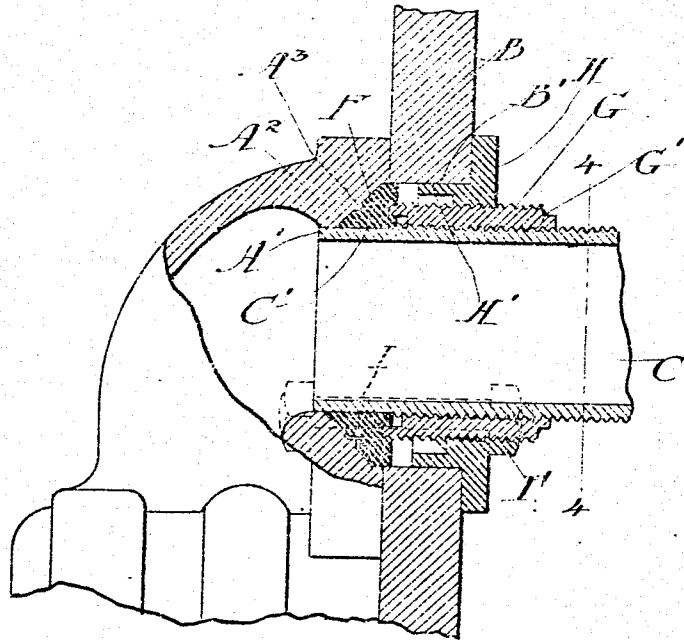
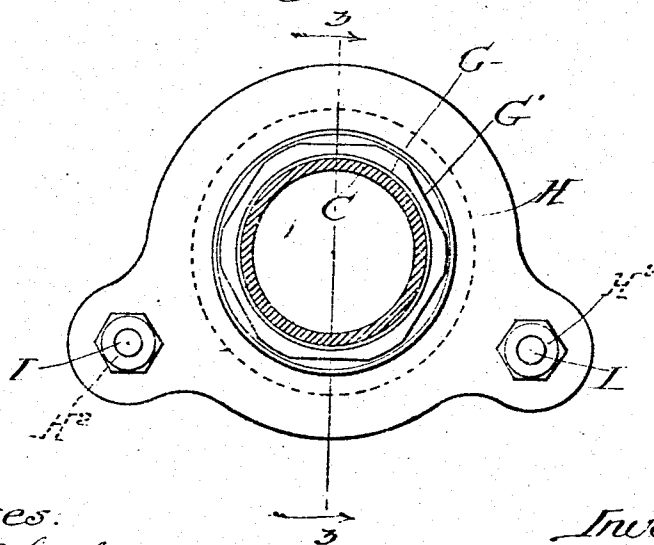


Fig. 4.



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UNITED STATES PATENT OFFICE.

PATRICK J. MADDEN, OF CHICAGO, ILLINOIS.

PLUMBING-FIXTURE.

931,940.

Specification of Letters Patent. Patented Aug. 24, 1909.

Application filed May 24, 1906, Serial No. 318,514. Renewed June 5, 1909. Serial No. 500,404.

To all whom it may concern:

Be it known that I, PATRICK J. MADDEN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Plumbing-Fixtures, of which the following is a specification.

The term "fixtures" as used in this specification is intended to comprehend water closets, urinals, sinks, bath tubs, wash basins, and all other plumbing devices in the nature of receptacles with which it is necessary to make a pipe connection for either supplying or evacuating the receptacle.

In its broadest aspect the invention covers and includes either an inlet or an outlet pipe, and in a more limited aspect it includes a cooperative relation of both, with respect to the bowl.

For the sake of brevity the term "bowl" will be hereinafter used to denote the receptacle of the fixture, but with the understanding that any other specific name for a receptacle of any particular type or character may be read for it.

The invention is particularly well adapted to that class of fixtures in which the bowl has to be removed from time to time for the purpose of removing obstructions or for repair purposes, and with fixtures of this class, especially those in which the bowl must be removed and put in place from "in front" (*i. e.*, without going back of the wall or slab through which the pipe connection or connections extend), facility of removal and replacement is, of course, important.

As before intimated, the invention is applicable to all classes of plumbing fixtures, but my original aim was to provide an improved urinal, and since it is to this class of fixtures that the invention is particularly adapted, I have selected such a fixture for illustrating it and will hereinafter particularly describe this embodiment of it, with the understanding, however, that excepting as to those features which are peculiar to this class of fixtures the invention includes fixtures of all classes to which it is applicable.

The invention consists in the features of novelty that are hereinafter described with reference to the accompanying drawings which are made a part of this specification and in which:

Figure 1 is a sectional elevation of a urinal embodying the invention. Fig. 2 is a

front elevation of the bowl. Fig. 3 is a vertical section on the line 3—3, Figs. 2 and 4, looking in the direction of the arrows. Fig. 4 is a vertical section on the line 4—4, Figs. 1 and 5, looking in the direction of the arrows.

A represents the bowl (of a urinal) having at top an inlet opening A' and at bottom an outlet opening A'', both disposed horizontally and extending through the back of the bowl. The bowl shown in the drawings has a vertical back adapted to fit against a wall or slab B, that side of the wall upon which the bowl is located being herein referred to as the front side. The wall has through it two openings B' and B'', through the former of which extends an inlet or supply pipe C, and through the latter of which extends an outlet or discharge pipe D.

The bowl has in its rear side a recess or cavity *a* the top of which provides a shoulder *a'* which is preferably horizontal and this shoulder rests upon the horizontal arm *a* of a bracket E which is secured to the wall B by any suitable means, (or upon a set screw *c'* carried by said arm). This bracket is, in itself, sufficient to support the weight of the bowl, but in the construction shown it is only one of a number of supporting devices, each of which serves to relieve the others.

The parts accessory to the inlet and outlet pipes are similar in all of their essential features, so that a description of one will serve for both, but for the sake of distinction capital letters will be used for the parts accessory to the inlet pipe and corresponding small letters for the parts accessory to the outlet pipe.

The pipe C is threaded on its exterior to within a short distance of its extremity, and on the unthreaded portion, C', is mounted a gasket F of rubber, or other suitable material. The unthreaded end of the pipe enters the opening A' and fits it rather snugly so as to form a slip joint between the bowl and the pipe. The opening A' has a countersink A'' which receives the gasket F and in this countersink is an annular rib, A'', which cooperates with means hereinafter described for compressing the gasket and forcing it into close contact with the bowl and pipe. The gasket is engaged by a seat formed on the inner end of a flange G which surrounds the pipe C and is provided on its interior

with a thread corresponding with the thread on the exterior of the pipe, the inner end of the sleeve being provided with a hexagon G', or some other suitable feature adapted to be engaged by a wrench or tool for turning it. The sleeve is also threaded on its exterior, and occupies a correspondingly threaded opening in a wall plate H, all of the threads being of the same pitch. The wall plate H fits against the rear side of the wall B and has a tubular flange or projection H' which extends into the opening B' and fits the same snugly, whereby the bowl is supported, either wholly or partially. The plate has through it square or other non-circular openings 11² for receiving corresponding non-circular reduced portions of bolts I, said bolts having their extremities adjacent to said non-circular portions threaded for receiving the nuts I' between which and the shoulders resulting from the reduced non-circular portions of the bolts the wall plate H is clamped so that the bolts are rigidly attached to the wall plate and project therefrom at right angles to its general plane. The wall or partition B is provided with openings through which the bolts pass and these openings and the bolts are preferably of practically the same diameter so that the bolts fit the openings snugly and are incapable of any lateral movement. The bolts, therefore, constitute means additional to the flange H' for supporting and sustaining the wall plate. The bolts pass through openings formed through ears A⁴ on the bowl and the outer ends of the bolts are threaded for receiving the nuts I².

When the parts are assembled and occupy the positions shown in the drawings the bolts will hold the back of the bowl firmly against the wall B independently of the pipe C and the outer end of the sleeve G will compress and expand the gasket F within the countersink so as to form a tight joint between the bowl and the pipe C. The bowl is therefore supported and held against downward movement by the bracket E, the pipes C and D, and the bolts I and I' and, by the same elements, with the exception of the bracket E, it is held against upward movement, its outward movement, away from the wall, being prevented by the bolts.

When the fixture has once been properly put in place, in order to remove the bowl it is simply necessary to remove the four nuts I² and I'², after which the bowl may be moved horizontally away from the wall, and in order to replace it the reverse of these operations is all that is required. It will be understood that initially, or in the first instance, the parts are adjusted from behind the wall B. The sleeve G being in position on the pipe C, the wall plate H being in position on the sleeve G and the bolts being attached to the wall plate, the wall plate is

presented from the rear side of the wall, so that its flange H' enters the opening B' and so that the bolts I enter their respective openings in the wall B. The thickness of the wall B is not the same in all instances and hence it becomes necessary to adjust the positions of the pipe C and the sleeve G with relation to each other and to the wall plate. After the wall plate has been thus put in place, the pipe C is adjusted so that its end projects the necessary distance in front of the wall B and the gasket F is then put in place upon its projecting unthreaded end. The plumber, knowing the extent to which it is desired to compress the gasket, then adjusts the sleeve G', so that its outer extremity will occupy the proper position with relation to the back of the bowl when the latter is brought to a bearing against the front of the wall. Ordinarily when the sleeve G is once adjusted to its proper position it is not necessary to change its adjustment, but should this become necessary for any reason, as for instance the decay of the gasket or, the substitution of a smaller gasket, the adjustment may be made either from in front of or behind the wall.

I do not broadly claim in this application a plumbing fixture having a bowl provided with an opening, a support located opposite said opening, a pipe having an open end registering with said opening, and means for forming a tight joint between the bowl and pipe, said means including a gasket and a pressure screw reacting in one direction against said support and in the other direction against the bowl, such a fixture being claimed in my copending application of even date herewith bearing Serial No. 318,512.

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

1. In a plumbing fixture, the combination of a bowl having an opening, a pipe registering with said opening, a gasket surrounding the opening and contacting with the bowl, a seat for the gasket carried by the pipe, a wall plate carrying the pipe, means for preventing the endwise movement of the pipe relatively to the wall plate, and bolts connecting the bowl and wall plate independently of the pipe, substantially as described.

2. In a plumbing fixture, the combination of a bowl having an opening, a pipe registering with said opening, a gasket surrounding the opening and contacting with the bowl, a seat for the gasket carried by the pipe and adjustable thereon, a wall plate carrying the pipe, means for preventing the endwise movement of the pipe relatively to the wall plate, and bolts connecting the bowl and wall plate independently of the pipe, substantially as described.

3. In a plumbing fixture, the combination of a bowl having an opening, a pipe regis-

tering with said opening, a gasket surrounding the opening and contacting with the bowl, a sleeve having threaded engagement with the pipe and carrying a seat for the gasket, and means for forcing the bowl and pipe toward each other and thereby compressing the gasket, substantially as described.

4. In a plumbing fixture, the combination of a bowl having an opening, a pipe registering with said opening, a gasket surrounding said opening and contacting with the bowl, a sleeve having threaded engagement with the pipe, a wall plate having threaded engagement with the sleeve, and bolts connecting the bowl and wall plate independently of the pipe, substantially as described.

5. In a plumbing fixture, the combination of a bowl having an opening, a wall having an opening, a pipe passing through the opening of the wall and registering with the opening of the bowl, a gasket contacting with the bowl and surrounding its opening,

a seat for the gasket carried by the pipe, means for preventing the inward movement of the pipe, relatively to the wall, and bolts for forcing the bowl toward the wall, independently of the pipe, substantially as described.

6. In a plumbing fixture, the combination of a bowl having an opening, a pipe registering with said opening, a gasket contacting with the bowl and surrounding its opening, a seat for the gasket carried by the pipe, a wall plate, means connecting the pipe and wall plate, bolts carried by the wall plate and extending outward therefrom, the bowl being provided with perforations, through which said bolts pass, and nuts turned onto the bolts and engaging the bowl for drawing the wall plate and bowl toward each other, substantially as described.

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