Feb. 28, 1950 A. SHOBE 2,499,115

FLOOR DRAIN FOR TOILET FIXTURES

Filed Jan. 29, 1947

FIG.1

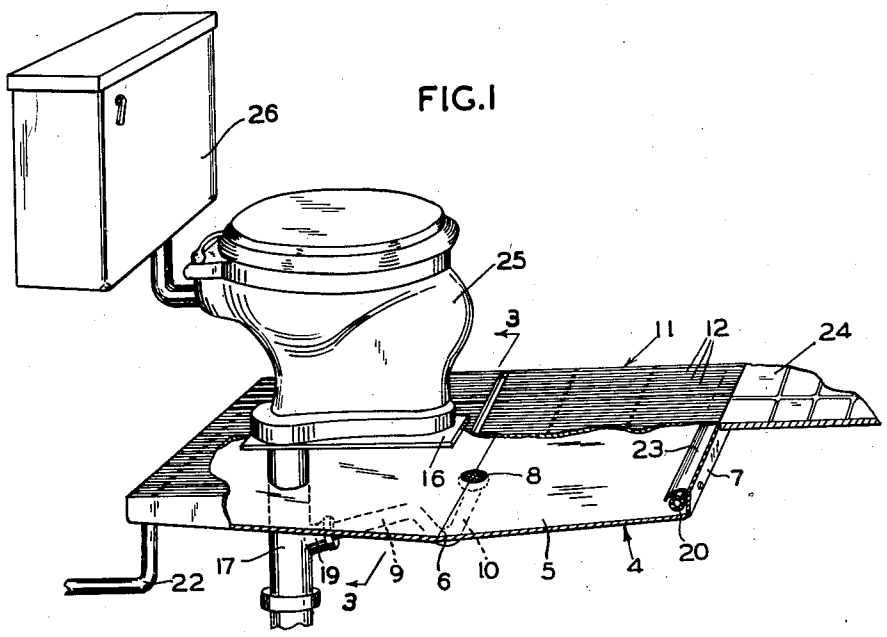


FIG.2

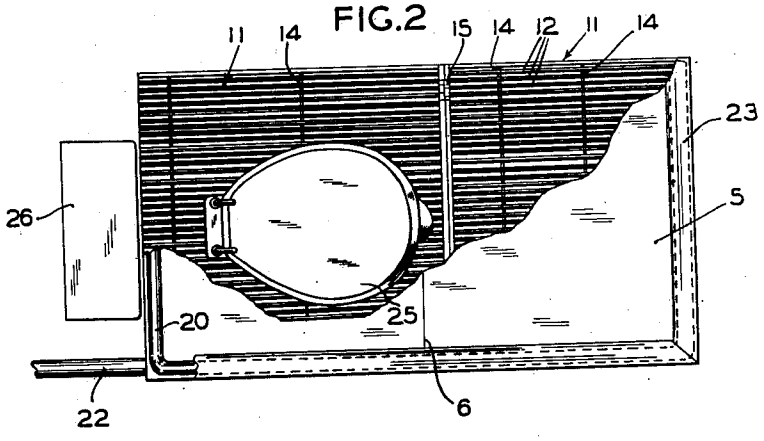
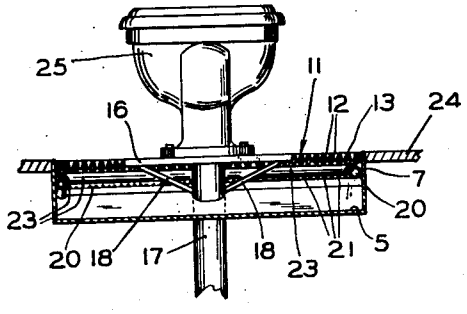


FIG.3



Inventor

AGNES SHOBE

By Williamson & Williamson

Attorney

Patented Feb. 28, 1950

2,499,115

UNITED STATES PATENT OFFICE

2,499,115

FLOOR DRAIN FOR TOILET FIXTURES

Agnes Shobe, Bismarck, N. Dak.

Application January 29, 1947, Serial No. 724,969

9 Claims. (Cl. 4—99)

1

This invention relates to toilet structures.

It is an object of the invention to provide a toilet structure arranged for association with a toilet fixture such as a seat wherein waste matter such as urine which is not properly directed into the toilet fixture will be caught and carried off, thereby eliminating puddles of accumulated urine on the floor adjacent and particularly in front of the toilet seat.

Another object of the invention is to provide a unitary structure upon which a standard toilet seat can be conveniently mounted, such structure preferably being countersunk in the floor so that its upper surface is level with the floor.

Still a further object of the invention is to provide a unitary structure such as that set forth above which has means for flushing the receiving pan so that it can be kept sanitary and odorless.

Still a further object of the invention is to provide a toilet structure of the type described which includes a receiving pan and a grill top which is so constructed that the receiving pan can be readily reached for cleaning purposes.

The above and other objects and advantages of the invention will more fully appear from the following description made in connection with the accompanying drawings, wherein like reference characters refer to the same parts throughout the views, and, in which:

Figure 1 is a perspective view with parts broken away of an embodiment of the invention;

Figure 2 is a plan view with parts broken away; and

Figure 3 is a section taken approximately on the line 3—3 of Figure 1.

In the drawings there is shown a floor pan 4 having a bottom 5 which slopes downwardly from each end to a low point 6 approximately at the longitudinal center of the pan. The pan is provided with suitable side walls 7. At the low point 6 is a drain outlet 8 from which extends a drain pipe 9 having a trap 10.

Resting on the top of the side wall 7 of the floor pan 4 is a grill 11 made up of a plurality of longitudinally spaced parallel bars 12, said bars preferably having relatively sharp vertical edges 13 so that any moisture dropping on the bars will readily flow down the sides thereof and there is no substantial upwardly directed surface upon which moisture can collect. The grill bars 12 are connected by means of transverse webs 14 which serve to brace the bars and keep them properly spaced. At a point adjacent the longitudinal center of the grill the structure is divided and connected by suitable hinges 15 so that the forward

2

portion of the grill can be raised to expose the interior of the pan 4 for cleaning.

The stationary rear portion of the grill 11 has a toilet fixture support in the form of a plate 16 countersunk therein, the plate 16 being secured to the grill by any suitable means such as welding. Extending downwardly from the plate 16 is a waste pipe 17 which preferably is permanently secured to said plate. Braces 18 extend in opposite directions upwardly and laterally to opposite side portions of the plate 16 to more firmly connect said plate and the waste pipe 17. The waste pipe 17 is provided with a branch 19 to which the rearward end of the floor pan drain pipe 9 is secured.

Extending about the inside of the pan 4 is a flushing conduit 20 which is provided with a plurality of spaced water outlet apertures 21. A supply conduit 22 extends into the pan at the rearward portion thereof to connect with the conduit 20. In order to protect the outlets of the flushing conduit 20 from dirt which might drop through the grill 11 there is provided a shield 23 which overlies the flushing conduit between said conduit and the underside of the grill 11.

The means of supporting the pan 4 in a suitable opening in the floor 24 shown in Figures 1 and 3 is not disclosed, any suitable connection being intended. It is preferred, however, that it be mounted in such a way that the upper side of the grill 11 and the floor surface be at the same level.

With the structure such as shown and described the toilet bowl 25 is mounted on and suitably secured to a toilet fixture supporting plate 16 with its outlet in communication with the waste pipe section 17, the latter being, of course, secured to a waste pipe leading to a sewer. When the device is installed the entire unit can be put into place and the only connection is that between the waste pipe 17 and the remainder of the sewer pipe, the connection between the water supply conduit 22 and a source of water, and a suitable supporting connection for the flush tank 26. If any liquids fall around and particularly in front of the toilet fixture 25 they will fall through the grill 11 and be received by the pan 4. The liquids drain out through the outlet 8 and pipe 9, and the pan 4 can be periodically flushed by admitting water into the pan through the apertured flushing conduit 20. When scrubbing of the interior of the pan is necessary the forward portion of the grill 11 can be swung up to provide access to the interior of said pan.

Location of the low point 6 of the pan 4 rearwardly from the front end of the pan provides a relatively short pipe connection between the pan outlet 8 and the waste pipe 17. The grill structure is of sufficient strength that it can support the toilet fixture 25 while at the same time the grill is relatively open.

With the structure such as that disclosed toilets such as those in public buildings or ones which are used by a large number of people can be kept much more sanitary than in the case of installations where the toilet fixture is mounted directly on a solid floor. There are no moving parts to cause wear except for the hinged portion of the grill, and, as a result, the structure is capable of long use without any attention except for occasional cleaning. Not only does the construction render toilet rooms much more agreeable to the users thereof, but it is an important factor in the reduction of the carrying of disease since obviously if a person's shoes become wet from accumulated pools of urine about a toilet fixture any bacteria in the urine on the floor will be picked up on the shoes.

While I have shown and described the structure as being one wherein the supporting grill is countersunk in the floor it is obvious that the same structure can be placed upon existing floors, utilizing standard outlet pipe connections and giving a raised floor effect upon which the unit is mounted.

It will, of course, be understood that various changes may be made in the form, details, arrangement and proportions of the various parts without departing from the scope of my invention.

What I claim is:

1. In a toilet structure, a floor pan having a drain outlet, a grill supported by and lying over the upper portion of said pan, a toilet fixture support carried by said grill, a waste pipe section secured to and supported by said fixture support, and a floor pan outlet pipe connected to said pan outlet and to said waste pipe section to provide a unitary drain pan, grill, waste pipe section and pan drain pipe assembly.

2. In a toilet structure, a floor pan having a drain outlet, a grill supported and lying over the upper portion of said pan, a toilet fixture attachment and supporting plate supported on said grill, a waste pipe section secured to and supported by said toilet fixture supporting plate, and a floor pan outlet pipe connected to said pan outlet and to said waste pipe section.

3. The structure in claim 2, and said pan drain pipe having a trap therein between said pan outlet and said waste pipe section.

4. In a toilet structure, a floor pan having a drain outlet, a grill supported by and lying over the top of said pan, a toilet fixture support carried by said grill, and a floor pan flushing conduit supported by and communicating with the interior of said pan below said grill.

5. The structure in claim 4, and said floor pan flushing conduit extending about the inner side wall of said pan and having spaced outlets therein.

6. The structure in claim 4, and said flushing pipe conduit extending about the inner side wall of said floor pan, and having a plurality of spaced outlets therein, and a shield extending inwardly from the side wall of said floor pan and lying over said flushing conduit between said conduit and said grill.

7. In a toilet structure, a floor pan, a grill over said pan, a toilet fixture support on said grill, and a portion of said grill being movable relative to said floor pan and fixture support to provide access to the interior of the pan for cleaning the same.

8. In a toilet structure, a floor pan, a grill over said floor pan, a toilet fixture support on said grill, said support being located on the rearward portion of the grill, and the forward portion of said grill being hingedly connected to the rearward portion thereof and swingable away from said floor pan to give access to the interior thereof.

9. In a toilet structure, a floor pan having a bottom with a low point having an outlet therein located rearwardly from the front end of said pan, a grill on said pan, a toilet fixture support on said grill adjacent and above the low point of said pan, a waste pipe section connected to said fixture support and extending downwardly through said pan, and a pan drain pipe connected between said pan outlet and said waste pipe section.

AGNES SHOBE.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
510,869	Dellar	Dec. 12, 1893
927,026	Clayton	July 6, 1909