

(No Model.)

B. C. SMITH.
FLOOR FLANGE FOR WATER CLOSETS, &c. —

No. 404,874.

Patented June 11, 1889.

Fig. 1.

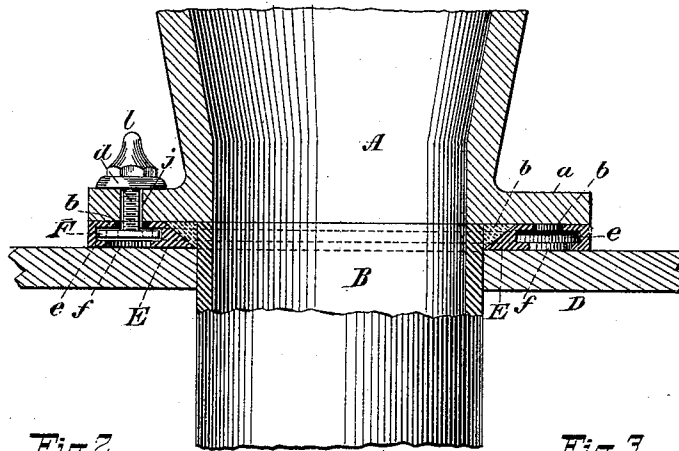


Fig. 2.

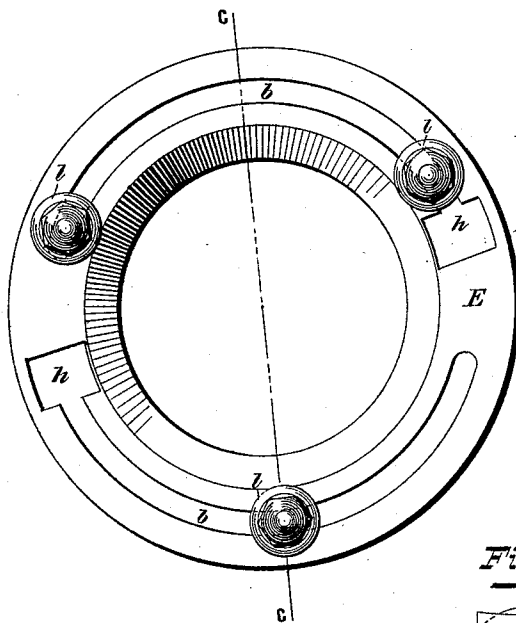


Fig. 3.

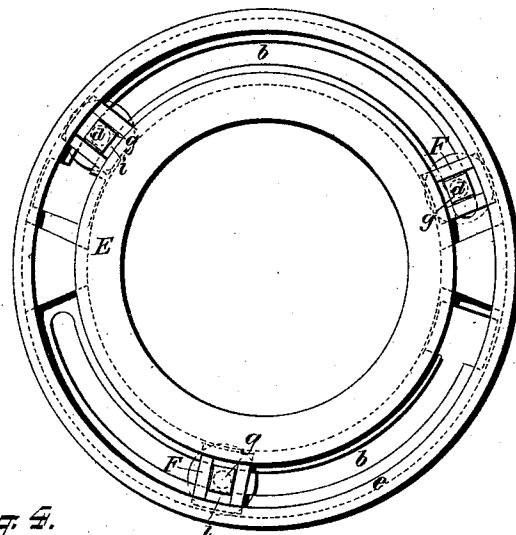
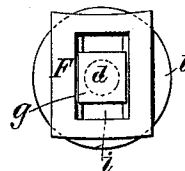


Fig. 4.



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FLOOR-FLANGE FOR WATER-CLOSETS, &c.

SPECIFICATION forming part of Letters Patent No. 404,874, dated June 11, 1889.

Application filed August 31, 1888. Serial No. 284,240. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN C. SMITH, of Brooklyn, Kings county, in the State of New York, have invented an Improved Floor-Flange for Water-Closets, &c., of which the following is a specification.

The object of my invention is to provide a floor-flange to which water-closets and the like may be attached in a simple and expeditious manner.

The invention consists in the details of improvement and the combinations of parts that will be more fully hereinafter set forth.

Reference is to be had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a cross-section on the line *c c*, Fig. 2, of my improved floor-flange, showing said flange connected to the outlet-pipe and to the flange of a water-closet basin. Fig. 2 is a detail top view of my improved flange. Fig. 3 is a detail view looking from the under side thereof, and Fig. 4 is a detail view of the movable plate for holding the bolt-head.

In the accompanying drawings, the letter *A* represents the lower portion of a water-closet basin, and *a* is the flange at the lower part thereof.

B represents the outlet-pipe that passes through the floor *D*.

E represents my improved floor-flange, which is in the form of a ring adapted to surround the upper end of the pipe *B*. The inner edge of the ring *E* is preferably beveled, as shown, so as to present a surface to receive solder or the like *b*, by which means the flange is secured to the pipe *B*. The flange *E* rests upon the floor *D* in the ordinary manner.

The flange *E* is provided with slots *b*, that are adapted to receive bolts or screws *d*. (See Fig. 1.) In the metal of the floor-flange *E*, and directly beneath the slot *b*, is a groove *e*, that is somewhat wider than the slot *b*. This groove passes substantially the whole length of the slot *b*. The metal below the groove *e* may be cut away to form a slot *f*, if desired, to permit the passage of a bolt or screw-head *g*. The groove *e* will hold the head of the bolt on the flange. At one end of the slot *b* the metal of the floor-flange *E* is cut away, as at *h*, to permit a small plate *F* to be passed

into the groove *e*. When the plate *F* is passed into the opening or cut-away part *h*, it will rest upon the metal of the floor-flange *E*—that is, at the under side of the groove *e*—and may then be passed through said groove. The plate *F*, being larger than the slot *b*, is prevented from being moved upward through said slot. In order that the plate *F* may be moved through the groove *e* without turning therein, the edges of the plate are made to conform to the curvature of the sides of the groove *e*. (See Fig. 4.)

The plate *F* is provided with a slot *i*, whereby a bolt *d*, that is passed through said plate, may have slight lateral play in said plate and also in the slot *b*.

If preferred, the whole of the metal below the groove *e* may be removed; but by leaving some metal below said groove, as shown, the plate *F* is prevented from falling outward from the flange *E*, and is thereby retained in the groove *e* ready for adjustment.

The opening or cut-away part *h* can be on the under side of the floor-flange *E*, if desired.

My improved floor-flange is adjusted in position to hold the water-closet *A* as follows: The pipe *B* is passed between the floor *D* and the floor-flange *E* and soldered to the pipe in the ordinary manner. Before the flange is soldered to the pipe the plates *F*, having a bolt or screw passed through their slot *i*, are passed into the groove *e*, while the shank of the bolt passes upward through the slot *b*. The water-closet *A* is then placed over the floor-flange *E* and the bolts *d* moved into the proper position to be passed through the holes *j* in the flange *a* of the water-closet. The nuts *l* on the bolts are then drawn up to secure the water-closet to the flange in the ordinary manner.

With my improved floor-flange water-closets and the like may be secured in position without regard to the position of the holes *j*, that are made in the flange of the water-closet to receive the bolts from the floor-flange. As the holes *j* of the flanges of these water-closets are made at different distances apart, it will be seen that a ready adjustment of my improved floor-flange may be made by merely moving the bolt along the slot *b* until the proper position for the hole *j* is

reached. If the hole *j* be more or less distant from the outer edge of the flange *a* of the water-closet, the bolt *d* may be moved laterally in the slot *i* of the plate F. It is for
5 this lateral adjustment of the bolt that I prefer to use the plate F.

As shown in Fig. 2, the floor-flange is provided with two slots *b* on opposite sides of the flange; but it is evident that these slots
10 may be increased in number or otherwise arranged, if desired.

Having now described my invention, what I claim is—

1. The combination, with a water-closet A,
15 having flange *a*, of the independent and separate ring E, having slots *b*, for the passage of bolts, and grooved below the slots to retain the heads of the bolts, and of bolts passing through said slots and through the flange *a*
20 and nuts on the bolts, said nuts being on the

upper side of the flange *a*, whereby said bolts may be adjusted in the slots to register with the holes in the flange *a*, substantially as described.

2. The floor-flange E, having the slots *b* and 25 the grooves *e* beneath the slots, combined with the plates F and with bolts or screws for passing through said plates, substantially as described.

3. The combination, with a floor-flange hav- 30 ing slots *b* and grooves *e*, of the plates F, having slots *i*, and of bolts or screws for passing through said plates, whereby the bolts may be adjusted around the flange and laterally thereon, substantially as described.

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Witnesses:

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