

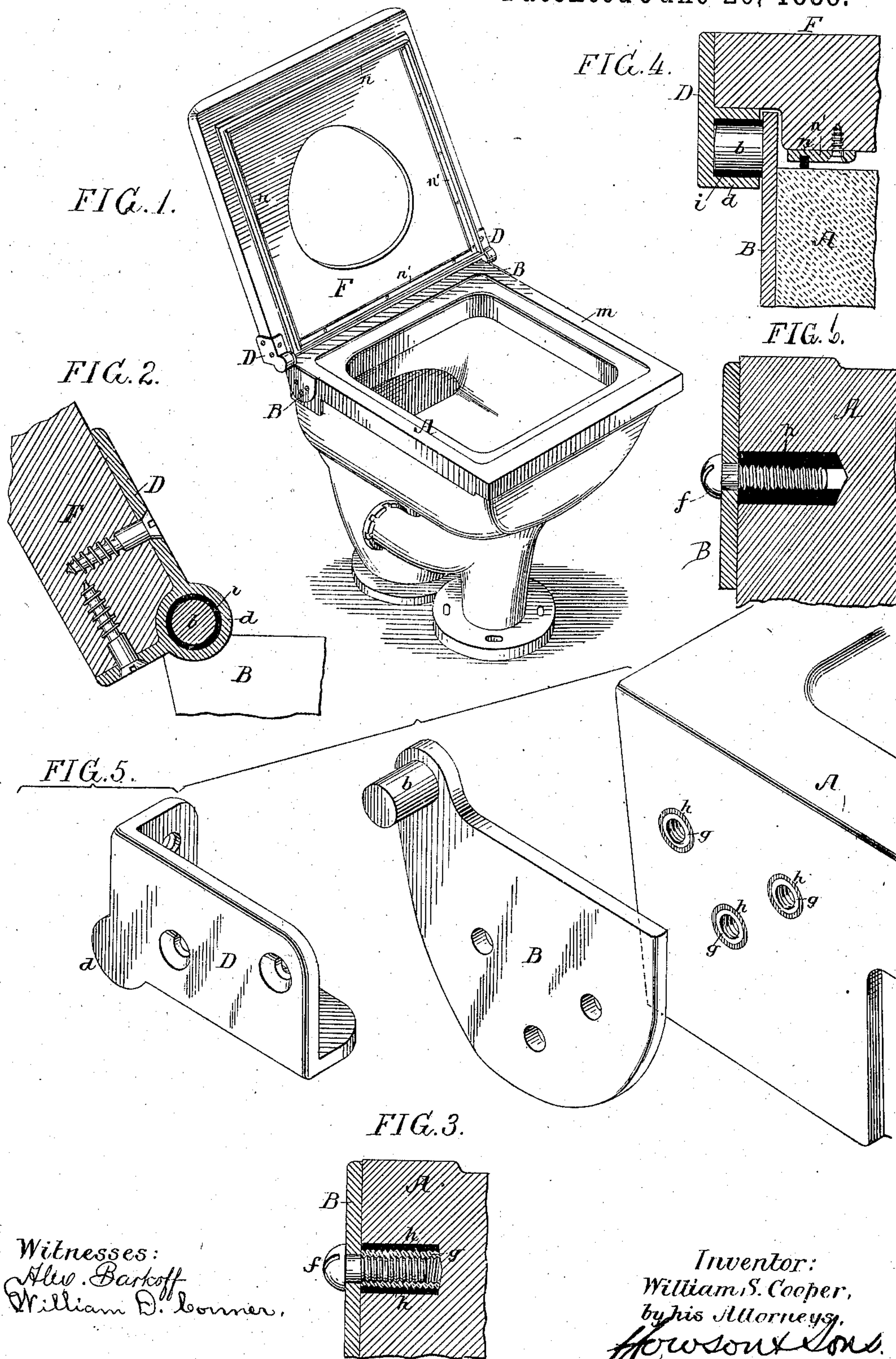
(No Model.)

W. S. COOPER.

WATER CLOSET.

No. 385,167.

Patented June 26, 1888.



Witnesses:
 Alex. Barkoff
 William D. Conner.

Inventor:
William S. Cooper,
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UNITED STATES PATENT OFFICE.

WILLIAM S. COOPER, OF PHILADELPHIA, PENNSYLVANIA.

WATER-CLOSET.

SPECIFICATION forming part of Letters Patent No. 385,167, dated June 26, 1888.

Application filed December 30, 1886. Serial No. 232,966. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. COOPER, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Water-Closets, of which the following is a specification.

One object of my invention is to provide means for hinging the seat or lid of a water-closet to the earthenware bowl without risk of breakage of the latter due to strain upon the hinge, a further object being to prevent excessive strain upon the hinge when the seat is thrown forcibly down upon the bowl. These objects I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a water-closet bowl with seat hinged thereto in accordance with my invention, the seat being shown in the raised position. Figs. 2, 3, and 4 are sections of parts of the hinge structure, illustrating features of my invention. Fig. 5 is a perspective view showing part of the bowl of the closet and the hinge-plates detached from the bowl and seat, and Fig. 6 is a sectional view illustrating a modification of part of the invention.

The hinging of the lids or seats of water-closets directly to the earthenware bowls has been hitherto regarded as objectionable, for the reason that the strain upon the hinge is likely to fracture the bowl. If this objection can be overcome, however, it is an advantage to be able to hinge the seat or lid directly to the bowl, as the structure in that case will be self contained and can be set up in any position desired without regard to the provision of outside means for hinging said seat or lid.

In carrying out my invention I secure to each side of the bowl A of the closet a plate, B, having a projecting pin, *b*, which is adapted to a socket, *d*, on a plate, D, secured to the seat F of the closet. Lateral openings or recesses are formed in the side walls of the bowl A for the reception of the screw-bolts *f*, whereby the plate B is secured to said bowl, these screw-bolts being adapted to the internal thread of a sleeve, *g*, which is externally threaded and screwed into a bushing, *h*, of

rubber or other elastic material, which has previously been driven tightly into the opening or recess in the bowl. By this means not only are the plates B firmly secured to the bowl A of the closet, but an elastic medium is interposed between the confining-bolts and the material of the bowl, so that the latter cannot be subjected to such injurious shocks or jars as would tend to fracture the same. The bolts *f* may, if desired, be screwed directly into the bushings *h*, as shown in Fig. 6; but the use of the interposed sleeve *g* is preferred.

The strains on the hinge-plate B are lessened by reason of an elastic bushing, *i*, contained in the socket *d* of the hinge-plate D of the cover, this elastic bushing forming the bearing for the hinge-pin *h*.

The bowl A has a flat top, *m*, forming a bearing for a gasket, *n*, carried by a plate, *n'*, secured to the under side of the seat, (see Fig. 4,) this gasket being of rubber or other elastic material, and serving to form a buffer to prevent contact of the seat with the bowl when said seat is thrown forcibly down upon the bowl, excessive strain upon the hinge being thus overcome. The gasket *n* also serves to prevent the escape of any odor between the upper edge of the bowl and the seat.

I claim as my invention—

1. The combination of the earthenware bowl of a water-closet, hinge-plates for the lid or seat, securing-bolts for said plates adapted to recesses in the bowl, and elastic bushings interposed between said bolts and the walls of the recesses, all substantially as specified.

2. The combination of the bowl having recesses, the hinge-plates, the confining-bolts therefor, elastic bushings adapted to the recesses of the bowl, and sleeves confined to said bushings and receiving the bolts which secure the hinge-plates, all substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM S. COOPER.

Witnesses:

WILLIAM D. CONNER,
HARRY SMITH.