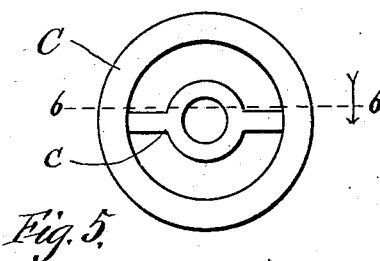
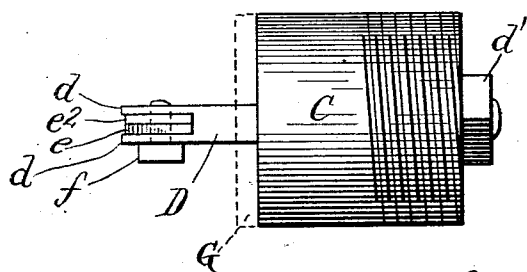
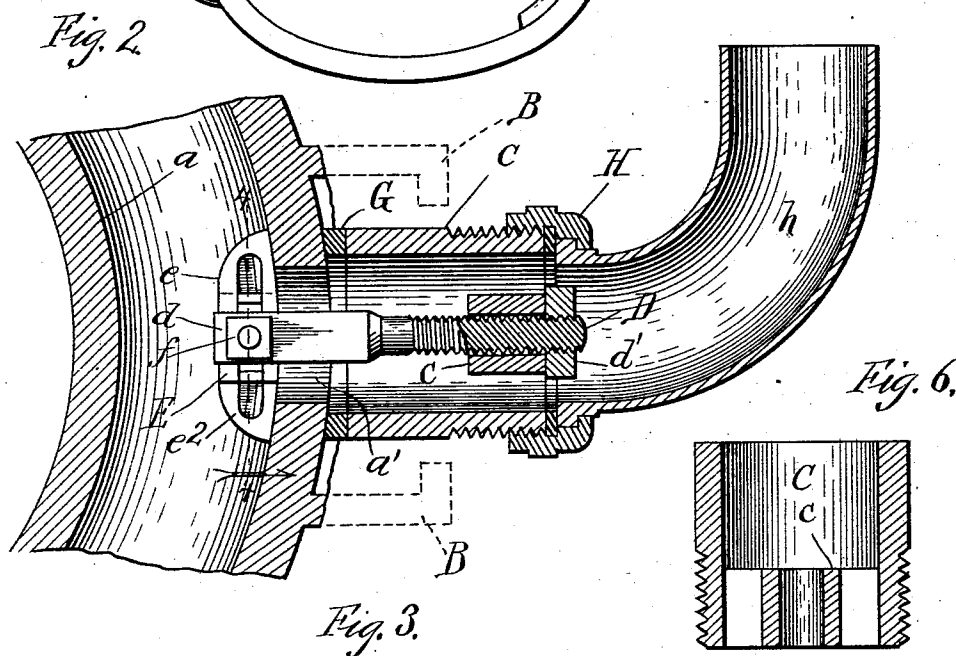
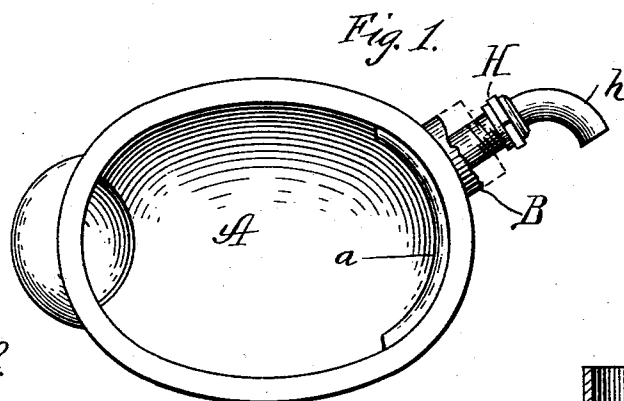


(No Model.)

W. G. COLES & F. A. BARKER.
WATER CLOSET.

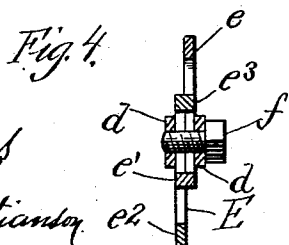
No. 570,543.

Patented Nov. 3, 1896.



Witnesses:

W. C. Coates
Jno. A. Christie



Inventor:

William G. Coles
Frank A. Barker
By Louis K. Gilson
His Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM G. COLES AND FRANK A. BARKER, OF CHICAGO, ILLINOIS,
ASSIGNORS TO HERMANN VERBEEK, OF SAME PLACE.

WATER-CLOSET.

SPECIFICATION forming part of Letters Patent No. 570,543, dated November 3, 1896.

Application filed December 4, 1893. Serial No. 492,697. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM G. COLES and FRANK A. BARKER, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Water-Closets; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Our invention relates to water-closets.

It consists of an improved means for attaching the service-pipe to the closet, particularly in the event of the horn being broken off, its object being to provide means for attaching the service-pipe to the closet in case of such fracture.

In the accompanying drawings, Figure 1 is a plan view of a closet with our improved attachment in use thereon. Fig. 2 is a plan section of a portion of the closet-wall. Fig. 3 is an elevation of the nipple used in making the attachment. Fig. 4 is a sectional view on the line 4 4 of Fig. 2. Fig. 5 is an end elevation of the nipple. Fig. 6 is a longitudinal section of the same on the line 6 6 of Fig. 5.

We show at A an ordinary flush water-closet, and at *a* the fan forming a part of the rim and covering the orifice *a'*, at which the water enters. The pipe is ordinarily attached to the closet by means of a horn B, forming an integral part of the same. This horn is of necessity quite fragile, and, furthermore, in many instances is not originally molded with the closet, and consequently is in great danger of becoming detached therefrom. In the event of the horn B being broken off the closet has heretofore been worthless, as no means have been known for attaching the service-pipe so as to make a tight joint.

The horn B is always of considerably greater diameter than the orifice *a'*, so that when it is broken away a smooth surface is left exposed around the orifice. We make use of a short nipple C, screw-threaded at one end for the attachment of the pipe *h* by means of the union-coupling H, and having extending

across it a bar *c*, apertured centrally and longitudinally as to the nipple to receive loosely the screw-threaded end of a T-headed bolt D. The end of the nipple is drawn tightly against the smooth surface of the closet around the orifice *a'* by inserting the head E of the bolt D into the orifice so that its ends *e* and *e'* will bear against the inner surface of the closet wall at each side of the orifice *a'*. The screw-threaded end of the bolt is passed through the aperture in the bar *c*, and a nut *d'* is turned up on its outer end, so as to draw the nipple tightly against the wall of the closet. In order to insure a tight joint, a flexible gasket G is interposed between the end of the nipple and the closet wall. Attachment is now made to the source of water supply by connecting the pipe *h* with the nipple C by means of the union-joint H, in the ordinary manner.

It is found in practice that the orifice *a'* varies in diameter in different makes of closets. If, therefore, the head E of the bolt D be long enough for use in connection with the larger orifice, it will be too large for insertion into those which are smaller. In order to construct the device so as to be adapted for use under either condition, we prefer to use an extensible head for the bolt. This is formed by making the head E of two sections *e e'* by forming the end of the bolt with a fork, as shown at *d*, the two sections of the head being placed within the slot so that one projects in one direction and the other in the opposite direction. The two sections of the bolt-head are longitudinally slotted, and a set-screw *f* is placed so as to pass through the bolt and the slot of each section. As the two sections of the bolt-head will slide freely within the slotted end of the bolt, it will be seen that the length of the head may be varied at pleasure. The two arms of the fork *d* are sufficiently flexible, so that by turning up the set-screw *f* the two sections of the bolt-head are firmly locked.

In order that the two sections of the bolt-head may be securely held in alinement, the rearward end of each is provided with a lateral boss *e' e''*, adapted to project through the slot of the other section, as plainly shown in Fig. 4.

We claim as our invention—

1. The combination with a closet, of a nipple, C, adapted to cover the intake-orifice, an apertured bar across the nipple, a bolt extending through the aperture and the orifice and having an extensible T-head and having its outer end screw-threaded, and a nut adapted to fit the outer end of the bolt, substantially as described and for the purpose specified.
2. The combination, with a water-closet and with a nipple adapted to cover its intake-orifice and having an apertured cross-bar, of a bolt extending through the bar-aperture and into the orifice and having its outer end screw-

threaded, a cross-head for the inner end of the bolt comprising two members, e , e^2 , capable of longitudinal adjustment, and a nut adapted to fit the outer end of the bolt, substantially as described and for the purpose specified.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM G. COLES.
FRANK A. BARKER.

Witnesses:

LOUIS K. GILLSON,
M. H. L. WING.