

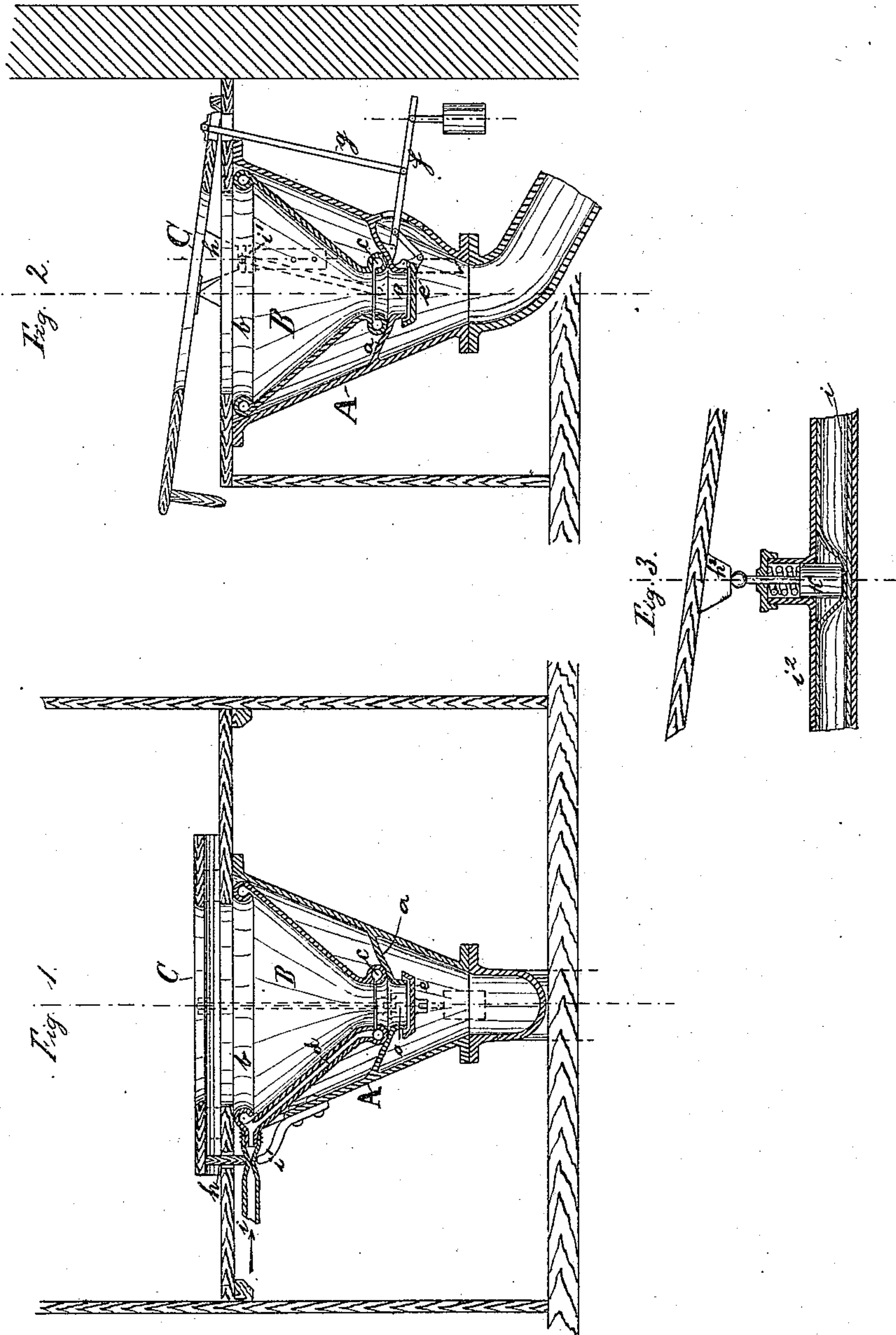
(No Model.)

H. C. KÜRTEŦ.

WATER CLOSET.

No. 334,176.

Patented Jan. 12, 1886.



Witnesses:
Delbert H. Decker.
M. E. Chappin

Inventor.
HUBERT C. KÜRTEŦ.
By his Attorney,
Jas. L. Ewing.

UNITED STATES PATENT OFFICE.

HUBERT C. KÜRTEEN, OF AIX-LA-CHAPELLE, PRUSSIA, GERMANY.

WATER-CLOSET.

SPECIFICATION forming part of Letters Patent No. 334,176, dated January 12, 1886.

Application filed May 26, 1885. Serial No. 166,742. (No model.)

To all whom it may concern:

Be it known that I, HUBERT CASPAR KÜRTEEN, a subject of the King of Prussia, and residing at Aix-la-Chapelle, in the Kingdom of Prussia, Germany, have invented an Improvement in Water-Closets, of which the following is a specification.

My invention relates to water-closets; and it is designed to afford a sufficient water-seal for closets both when in use and when disused without interference with the movements of the excreta and their entrance into the drain-pipe, and to provide a more efficient flush than hitherto, and to simplify the regulation of the supply of the flushing-water as much as possible, with special reference to the adaptation of the improved closet to be used alternatively as a urinal.

This invention consists in certain novel combinations of parts, hereinafter set forth and claimed.

A sheet of drawings accompanies this specification as part thereof.

Figure 1 of the drawings represents a nearly vertical transverse section; and Fig. 2 a vertical longitudinal section of my improved "closet," the plane of each being indicated by a dotted line across the other figure. Fig. 3 represents a section in the same plane as Fig. 1, illustrating a modification.

The closet consists of an outer funnel, A, in which is placed a second somewhat narrower funnel or bowl, B, which rests upon a diaphragm or bottom, *a'*, cast with the outer funnel, A. The inner funnel or bowl, B, is thus supported vertically and laterally without the aid of flanges or the like thereon, while the outer funnel is at the same time adapted to be hung by top flanges on it from the top of the closet-casing or to support the latter, as occasion may demand. The bowl B is also thus adapted to be made with rolled edges, forming tubular rims *b c* at the top and bottom. The rim *b* is perforated at its lower side with numerous holes, and the rim *c* has a slot running completely round its inner face, or may be perforated on its inner face with a large number of holes placed closely together. Both rims communicate with each other by means of a pipe or channel, *d*, conveniently cast with the pan.

The discharge-mouth of the bottom or dia-

phragm *a* of the outer pan is formed into a short depending neck, *o*, to which is hinged a flap valve or trap, *e*, provided with a high rim. This trap is operated through a connecting-link by a weighted lever, *f*, and a rod, *g*, which is attached to the rear edge of the seat C. The seat is made to pivot upon a central axis, so that when sat upon the forward part depresses and the hinder part rises, operating the rod *g*.

On the upper part of funnel A is situated a bridge, *i'*, or tube *i''*, upon or within which is placed a strong tube, *i*, Figs. 1 and 3, made of very soft india-rubber, but which at the same time is capable of retaining the water-pressure, and which is in communication with the service-pipe and the rim *b*. To the lower surface of the seat-board is fixed a block, *h* or *h''*, above the before-mentioned india-rubber tube, where it preferably rests upon a piston-valve piece, *k*, Fig. 3, which by its downward pressure can compress and close the india-rubber pipe.

When the closet is not used, the front part of the seat is raised by the counterbalance-weight on the lever *f*, the aforesaid valve-piece *k* is depressed, and the supply of water is thus interrupted.

In that arrangement of the elastic flushing-tube *i* shown in Fig. 1 the tube lies uncovered upon a bridge, and is acted on directly by said block *h* as a valve-piece, to interrupt the supply of water. Either arrangement may be used to effect this result.

When the closet is in use, the seat is pressed downward at the front, and thus turned upon its central axis, lifting the back of the seat as aforesaid. In consequence of this movement the lower closing-trap or flap-valve *e* is turned through a right angle, so that it hangs vertically, and the escape of the excreta from the neck *o* is thus unobstructed. At the same time the block *h* or *h''*, fixed to the lower side of the seat C, is lifted sufficiently to free the india-rubber tube *i* from pressure. The water now enters the two rims, from the upper one of which it escapes in the form of separate sprays, watering the walls of the inner pan, and from the lower one it escapes in horizontal sprays, which unite to close the bottom of the orifice with a water-veil. The effects produced are, first, the walls of the bowl B are constantly

watered and rendered slippery, thus preventing the adhesion of the excreta; second, and more particularly during the use of the closet, when the protection of the flap valve or trap 5 *e* is removed, a water veil or cover is formed above the mouth of the bowl, thus preventing the rise of gases from the drain-pipe, but not the escape of the excreta. When the closet is no longer used, the seat goes back into its 10 former position. The india-rubber tube is again pressed together and the supply of water is cut off. The trap or flap valve *e* is lifted and retains part of the water leaving the rims at the last moment, and the water-seal 15 thus formed prevents the escape of gases from the drain when the closet is not in use.

This flushing apparatus allows of this closet being used as a urinal by the lifting back of the seat. In so exposing the top of the closet- 20 casing with its larger opening, the seat *C* turns on its rear edge, (see Fig. 2,) lifting the rod *g* enough to partly lower the trap *e* and fully releasing the flushing-pipe *i*, so that there shall be a free flow of the flushing-water until 25 the seat is lowered to its normal position. (Represented in Figs. 1 and 2.)

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, 30 I declare that what I claim is—

1. In a water-closet, an outer funnel having a flanged upper end to coact with the top of the closet-casing and an apertured diaphragm

or bottom, in combination with an inner funnel or bowl supported vertically upon said bot- 35 tom and laterally by the upper end of said outer funnel, substantially as herein specified.

2. In combination with an outer funnel having an apertured diaphragm or bottom, an inner funnel or bowl supported vertically upon 40 said bottom and laterally by the upper end of said outer funnel, and constructed with tubular rims at its respective ends, having suitable water-outlets, and connected with the flushing-pipe and with each other, substan- 45 tially as herein specified.

3. In a water-closet adapted to be used as a urinal, the combination of a seat having pivots midway between its front and rear edges, and adapted also to turn back upon its rear 50 edge, a connection near the latter with a water-seal trap, a water-cut-off block carried by the seat behind said pivots, an elastic flushing-pipe supported horizontally beneath said block, an inner funnel or bowl provided with 55 water-outlets, and an outer funnel having a diaphragm beneath said bowl, constructed with a depending neck to coact with said trap, substantially as herein specified.

In testimony whereof I have signed my name 60 to this specification in the presence of two subscribing witnesses.

H. C. KÜRTEN.

Witnesses:

PETER HECKMANNS,
C. HECKMANN.