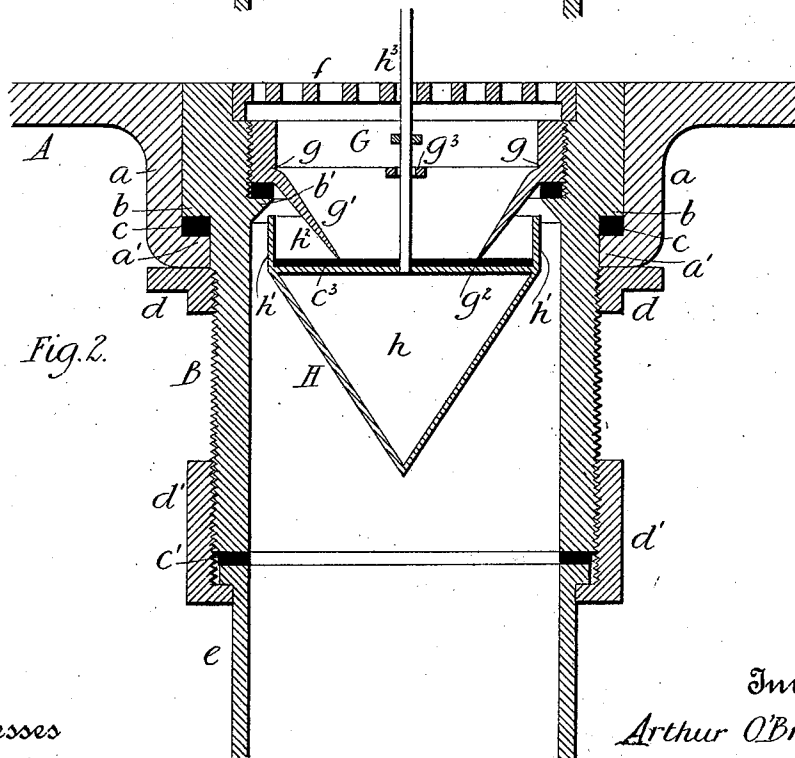
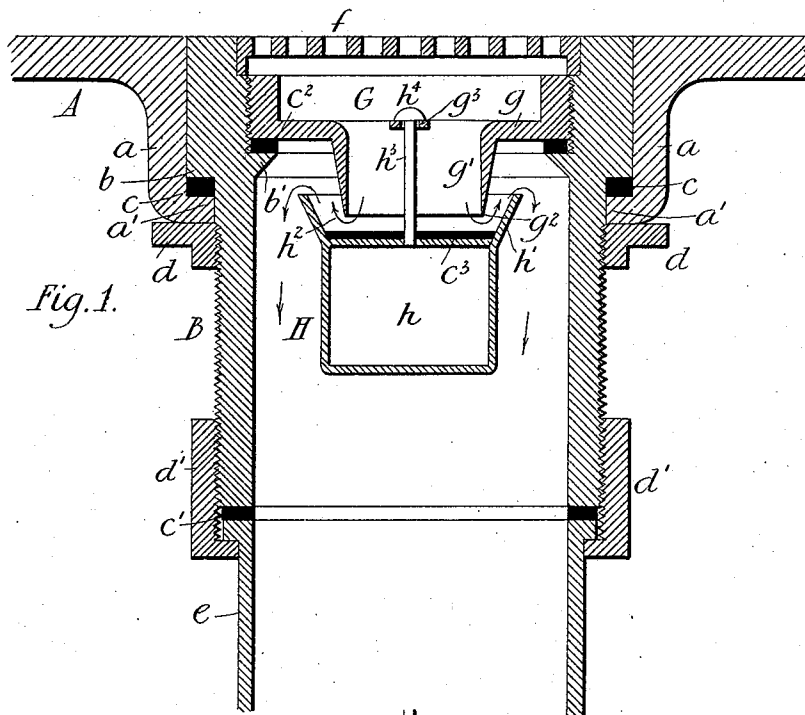


(No Model.)

A. O'BRIEN.
SANITARY APPLIANCE.

No. 576,790.

Patented Feb. 9, 1897.



Witnesses

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UNITED STATES PATENT OFFICE

ARTHUR O'BRIEN, OF HELENA, MONTANA, ASSIGNOR OF ONE-HALF TO
C. B. MILLER, OF SAME PLACE.

SANITARY APPLIANCE.

SPECIFICATION forming part of Letters Patent No. 576,790, dated February 9, 1897.

Application filed February 13, 1896. Serial No. 579,176. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR O'BRIEN, a citizen of the United States, residing at Helena, in the county of Lewis and Clarke and State of Montana, have invented certain new and useful Improvements in Sanitary Appliances; and I 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.

This invention relates to sanitary appliances, and has for its object the production of improved means to be employed in connection with bowls, bath-tubs, sinks, cesspools, and the like, by which is obtained the maximum efficiency in the direction of gas and backwatersealing, and added to this the means are susceptible of utilization as a temporary closure against the draining of the bowl or other device to which the same is applied.

The nature of the invention will become apparent from a reading of the subjoined description when taken in connection with the accompanying drawings, in which—

Figure 1 is a sectional view of the appliance with the movable part in its normal or lowered position or when serving as a gas seal; and Fig. 2 is a similar view, but showing a modified form of construction and also showing said movable part in the position it assumes when raised and operating as a backwater seal or as a closure for the bowl or the like.

Referring to the said drawings by letter, A denotes a portion of the bowl or other like appliance, having at its opening a depending flange *a*, which terminates in an inwardly-projecting annular shoulder *a'*. This shoulder serves as a support for a pipe-section B, the upper end of which is enlarged and fits the opening closely, a shoulder being provided at *b*, and between the shoulders B and *a'* is a gasket *c* to provide a water-tight joint, which is augmented by a binding-nut *d*, engaging the threaded portion of the pipe-section, the same being turned tightly against the lower end of the flange *a*, as shown. Connection is made between the lower end of this pipe-

section and the drain-pipe *e* by means of a socket *d'*, and *c'* is a gasket interposed between the pipe ends to form a tight joint. At the upper end of the pipe-section B is an annular seat in which rests closely a strainer-disk *f*, and below said seat the section is internally screw-threaded for connection with an inner reducing pipe-section G, which is screwed tightly against a gasket *c'*, seated on a shoulder *b'*, formed integrally with the section B. The section G is reduced at its lower end by an interposed flange *g*, as shown in Fig. 1, by which the reduced end *g'* is of the same internal diameter throughout, or by tapering said end *g'*, as shown in Fig. 2. In either construction the outer wall of said end is tapered and terminates with the inner wall in a comparatively sharp edge *g''* for a purpose presently to be explained.

At H is shown a combination trap or seal, a closure, and a float-valve, which has a cylindrical or other shaped hollow body *h*, which forms the float, from the upper end of which extends an outwardly-flaring flange *h'*, preferably formed integrally therewith. This flange provides a cup-shaped trap *h''*, in the bottom of which is a disk gasket *c''*. The diameter of this trap is in excess of the diameter of the lower end of the section G, and said lower end *g'* is at all times below the top of the trap, as will be understood.

The trap and float are supported in their normal or lowered position by a headed rod *h''*, which is passed through a bridge *g''*, extending across the center of the end *g'*, the head or stop-collar *h'''* on the rod resting on said bridge. In Fig. 1 said rod *h''* is shown as terminating at the head *h'''*, but in Fig. 2 the rod is extended through and beyond said strainer, for a purpose hereinafter explained.

In Fig. 1 the parts are shown in the position they assume in sealing against the gas from the sewer and drain pipe, the seal being effected through the body of water in the trap *h''* and the extension below the surface of said body of the lower end *g'* of the inner pipe-section G. The water in its passage from the bowl or other appliance flows through said inner pipe-section and fills the trap and overflows therefrom into the drain-pipe, its course being indicated by arrows shown in

Fig. 1. In Fig. 2 the parts are shown in the position they assume during backwater-pressure or when the opening in the bowl or other appliance is closed for filling purposes, the trap and float in either event being raised to form a contact between the lower end g' of the inner pipe-section and the gasket in the bottom of the trap, said lower end being brought to a comparatively sharp edge, as before stated, in order to provide a good contact with the gasket, and consequently a water-tight joint. When a back pressure of the drain-water occurs, the float is raised and through the said lower end and gasket the opening in the bowl or other appliance is effectually closed, and the greater the back pressure of the water the tighter will become the seal, as will be understood.

Any means may be employed to effect the raising of the trap to form a closure through the extended rod h^3 for the purpose of filling the bowl or other appliance, said means to accomplish the raising and the temporary holding in the raised position of the trap against the lower end of the inner pipe-section and thereby to provide a tight seal against the draining of the bowl.

The parts of my invention are few in number and of simple construction, and may be

readily removed and replaced, and are not liable to disorder. The peculiar construction of the parts renders the device susceptible of being employed, as before stated, as a gas seal, a backwater seal, and a closure, and each of the uses are attended with maximum efficiency.

I claim—

1. The combination with a pipe-section having a reduced lower end, of a float vertically movable and flanged at its upper end said flange surrounding the pipe end and extending above the same to provide a constant seal, and a stop for supporting the float in its normal lowered position.

2. The combination with a pipe-section of a strainer at its upper end, an inner pipe-section having a reduced lower end terminating in a thin edge, a float below said inner section supported by a rod and flanged at its upper end to provide a trap into which the thin edge of the section extends, and a gasket in the base of the trap.

In testimony whereof I affix my signature in presence of two witnesses.

ARTHUR O'BRIEN.

Witnesses:

V. C. RINDE,
W. E. NORRIS.