

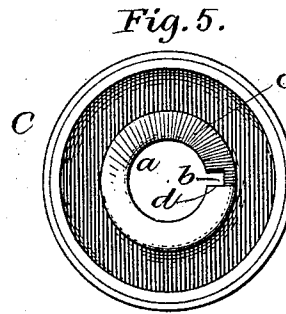
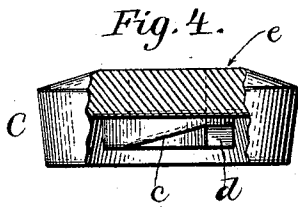
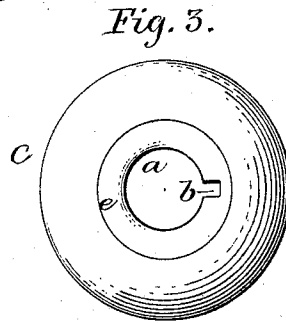
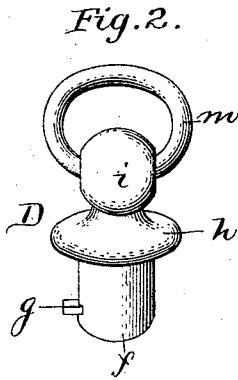
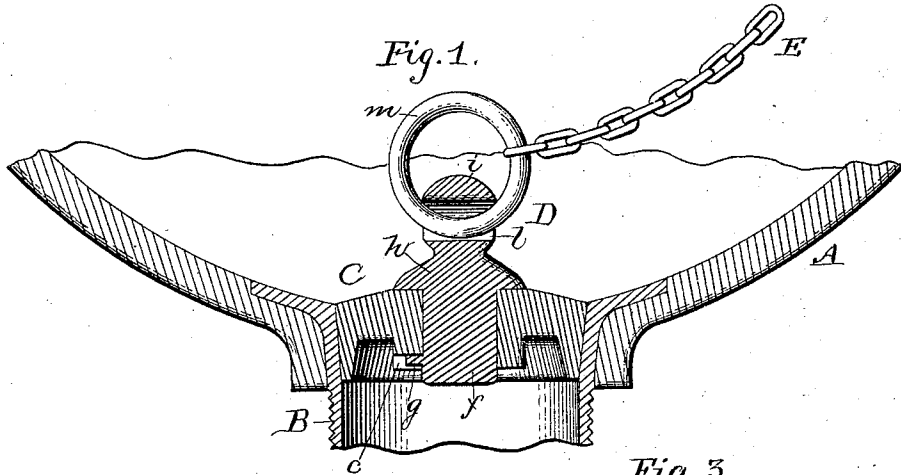
(No Model.)

J. W. HALE.

PLUG OR STOPPER FOR LAVATORY APPARATUS.

No. 492,012.

Patented Feb. 21, 1893.



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UNITED STATES PATENT OFFICE.

JAMES WHITE HALE, OF NEWBURYPORT, MASSACHUSETTS.

PLUG OR STOPPER FOR LAVATORY APPARATUS.

SPECIFICATION forming part of Letters Patent No. 492,012, dated February 21, 1893.

Application filed June 14, 1892. Serial No. 436,677. (No model.)

To all whom it may concern.

Be it known that I, JAMES WHITE HALE, of Newburyport, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Plugs or Stoppers for Lavatory Vessels, of which the following is a specification.

This invention relates to the plugs or stoppers for wash basins, bath tubs, and the like, but it particularly relates to the plugs or stoppers for wash basins.

Wash basins of the most widely-used type are provided with a central outlet which is controlled by a plug or stopper which is ordinarily connected by a chain to a fixture on the slab surrounding the wash basin. Several practical objections exist in this usual arrangement. The chain, which lies in the wash bowl or basin when the plug or stopper is in use, is in the way, it collects dirt and becomes unclean, and it is difficult to clean. Many persons, especially in hotels and other public places, neglect to remove the plug or stopper after using the basin, which results in soiling the basin and is offensive to the next person obliged to use the basin. Many persons in using a basin prefer to wash with the water running and the plug removed. When doing so it is desirable that there should be a volume of water within the basin; but under ordinary circumstances this is difficult to secure. The waste outlet from the bowl is usually of sufficient capacity to empty the bowl rapidly, and to carry off the water nearly if not quite as fast as the supply faucets can furnish it. There is entailed an undue waste of water when the faucets are turned fully on. And when the water is turned on to its full extent, in localities where there is a good pressure in the water mains, the water splashes violently in the bowl, rendering it inconvenient to wash except by reducing the flow of water, which results in the basin emptying itself rapidly and hence retaining no volume of water. Now the present invention (while retaining the use of a plug or stopper attached to the slab of the basin so as to be applicable to the basins in common use and without involving any change in the construction of the basin itself) is designed, by an improvement in the construction of the plug

or stopper, to overcome the recited objections, and to enable the basin to be used without the chain being thereon, to insure the prompt automatic emptying of the bowl, and to enable running water to be used in washing without undue waste.

To accomplish these results, the invention consists in a compound plug or stopper, comprising a main plug having a waterway there-through, and an auxiliary plug controlling said waterway; said auxiliary plug having the chain or handling device secured thereto and being attachable to the main plug, whereby, when the main plug and auxiliary plug are attached together, the compound plug or stopper acts as an ordinary plug or stopper; and said auxiliary plug being separable from said main plug, whereby, when separated, the main plug closes the waste outlet from the basin, at the same time itself providing a restricted outflow opening from the basin.

The improved compound plug or stopper is illustrated in the accompanying drawings, wherein

Figure 1, is a central vertical section of a portion of a lavatory vessel, provided with the improved compound plug or stopper. Fig. 2, is a perspective view of the auxiliary plug. Fig. 3, is a plan view of the main plug. Fig. 4, is a side view, partly broken away, of the main plug. Fig. 5, is a bottom view of the main plug.

A, is a portion of a lavatory vessel such as a wash basin or bowl, and B, is an ordinary coupling constituting the waste outlet from the bowl and the seat for the plug or stopper. The compound plug or stopper comprises the main plug C, and the auxiliary plug D. The main plug C, has a central passage *a* there-through, constituting a waterway, a slot *b* at one side of the passage *a*, a locking cam or incline *c* on its underside adjacent to the periphery of the passage *a*, said cam *c* starting at one edge of the slot *b*, a shoulder *d* on the opposite edge of the slot *b*, and a seat *e* constituting part of its upper surface. The seat *e* extends outward beyond the slot *b* so that the slot *b* is wholly within the seat. The auxiliary plug D, comprises a central spindle *f* having a stud *g*, a seating flange *h*, and a head *i* having an eye *l*, for the reception of a ring

m to which the usual chain *E*, is secured, said ring *m*, and chain *E*, constituting the handling device for the compound plug or stopper.

The main plug *C*, and auxiliary plug *D*, can be either attached together or separated. To
 5 attach them together, the spindle *f* is passed through the passage *a* until the flange *h* seats on seat *e*, the stud *g* passing through slot *b*. Auxiliary plug *D*, is then turned so that its
 10 stud *g*, rides up on the cam incline *c*, thereby securely attaching and locking the main plug *C* and the auxiliary plug *D*, together, at the same time causing flange *h* to seat tightly
 15 against the seat *e*. The stud *g* and slot *b* with cam *c* thus constitute reciprocal means of attachment carried by the auxiliary and main plugs for attaching the same together. When the flange *h* is thus tightly seated against *e*, it entirely closes the slot *b*, thereby rendering the joint between the main and auxiliary
 20 plugs water-tight. When the main and auxiliary plugs are thus locked together, the compound plug or stopper is to all intents and purposes the same in its action and function
 25 as the ordinary plug or stopper in common use. When, however, it is desired to separate the auxiliary plug from the main plug, the compound plug or stopper is placed in the coupling *B*, as shown in Fig. 1. The auxiliary
 30 plug is then turned (the engagement between the main plug and coupling *B*, holding the main plug from rotation) until the stud *g* encounters shoulder *d* and thereby registers with slot *b*. The auxiliary plug can then be
 35 entirely withdrawn and placed with the chain on the slab, leaving the main plug *C*, closing the waste outlet from the basin, the main plug itself furnishing, by its passage *a*, a restricted waste water-way for the water within the
 40 basin. The restricted waste outlet thus furnished enables the basin to be used with running water, and with a volume of water in the basin and without splashing, since a small stream of water from the inlet faucets will
 45 suffice to supply water faster than the restricted outlet *a* will carry it away. At the same time the waste of water is thus reduced to a minimum, and the basin is self-emptying. The auxiliary plug can be quickly and
 50 easily attached to the main plug if it is desired to draw off the water quickly or to use the basin in the usual manner.

The invention is not restricted to the particular construction of the compound plug
 55 stopper here shown and described, since it is obvious that any changes in detail can be made without departing from the spirit of the invention.

I claim as my invention—

60 1. A compound lavatory plug or stopper

which is adapted to close the outlet from the vessel with which it is used and to be entirely removed from said vessel, said plug or stopper comprising a main plug having a waterway therethrough, and an auxiliary plug
 65 controlling said waterway, substantially as set forth.

2. A compound lavatory plug or stopper which is adapted to close the outlet from the vessel with which it is used and to be
 70 entirely removed from said vessel, said plug or stopper comprising a main plug having a waterway therethrough, an auxiliary plug controlling said waterway and having the handling device, said auxiliary plug being
 75 separable from said main plug whereby it may be used independently as the plug or stopper of the lavatory vessel, and means for attaching said auxiliary plug to said main plug whereby
 80 said plugs both act conjointly as the plug or stopper of the lavatory vessel, substantially as set forth.

3. A compound lavatory plug or stopper which is adapted to close the outlet from the vessel with which it is used and to be
 85 entirely removed from said vessel, said plug or stopper comprising a main plug and a separable auxiliary plug provided with the handling device, said main plug having a central passage therethrough constituting a water-
 90 way and a restricted outflow from the lavatory vessel, said auxiliary plug entering said passage and closing and controlling said restricted waterway, and reciprocal means of attachment carried by said main plug and
 95 auxiliary plug for fastening the same together, whereby both may act together to control the outlet from the lavatory vessel, substantially as set forth.

4. The main plug *C*, having water-passage
 100 *a* therethrough, slot *b* in the wall of said passageway, cam *c* on its underside adjacent to the periphery of passage *a* and on one side of said slot *b*, shoulder *d* on the opposite side of
 105 said slot *b*, and seat *e* on its upper face surrounding said passage *a*, in combination with the auxiliary plug *D*, having depending spindle *f* adapted to enter said passage *a*, stud *g* projecting from said spindle and adapted to enter said slot *b*, and seating flange *h* above
 110 said spindle *f* which seats against said seat *e*, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JAMES WHITE HALE.

Witnesses:

ARTHUR S. BROWNE,
 JOS. H. BLACKWOOD.