No. 641,126. Patented Jan. 9, 1900.

S. W. LEWIS.

WASTE APPARATUS FOR WASHBASINS, BATHS, &c.

(Application filed Dec. 6, 1897.)

(No Model.)

Fig. 7

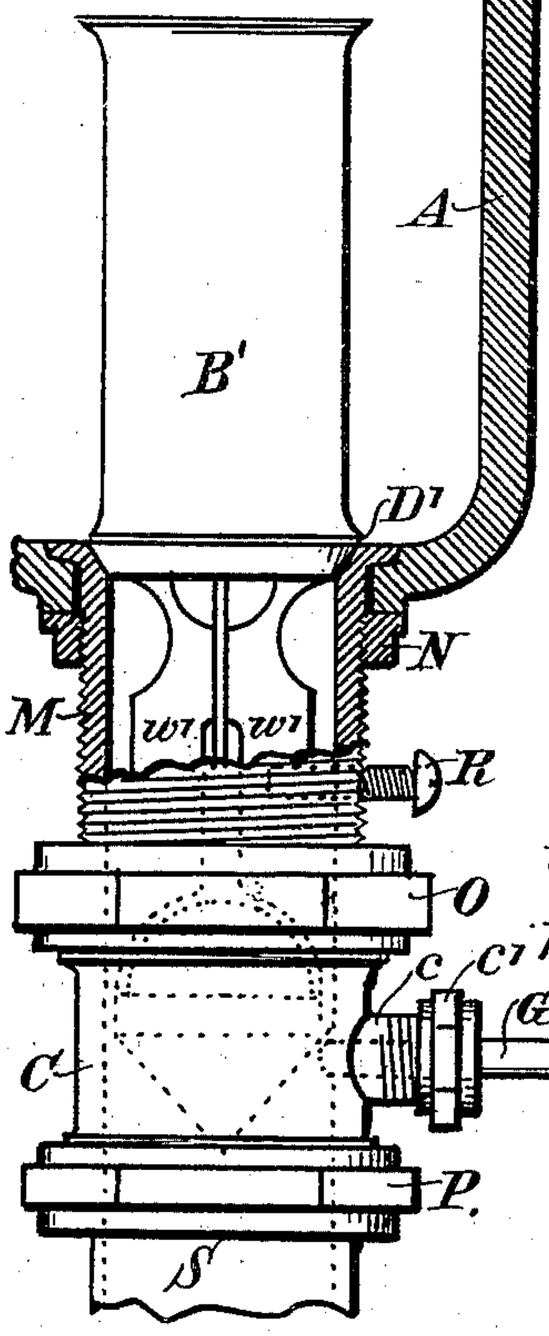


Fig. 10

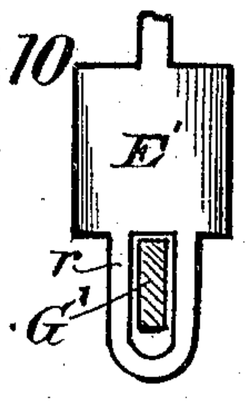


Fig. 6

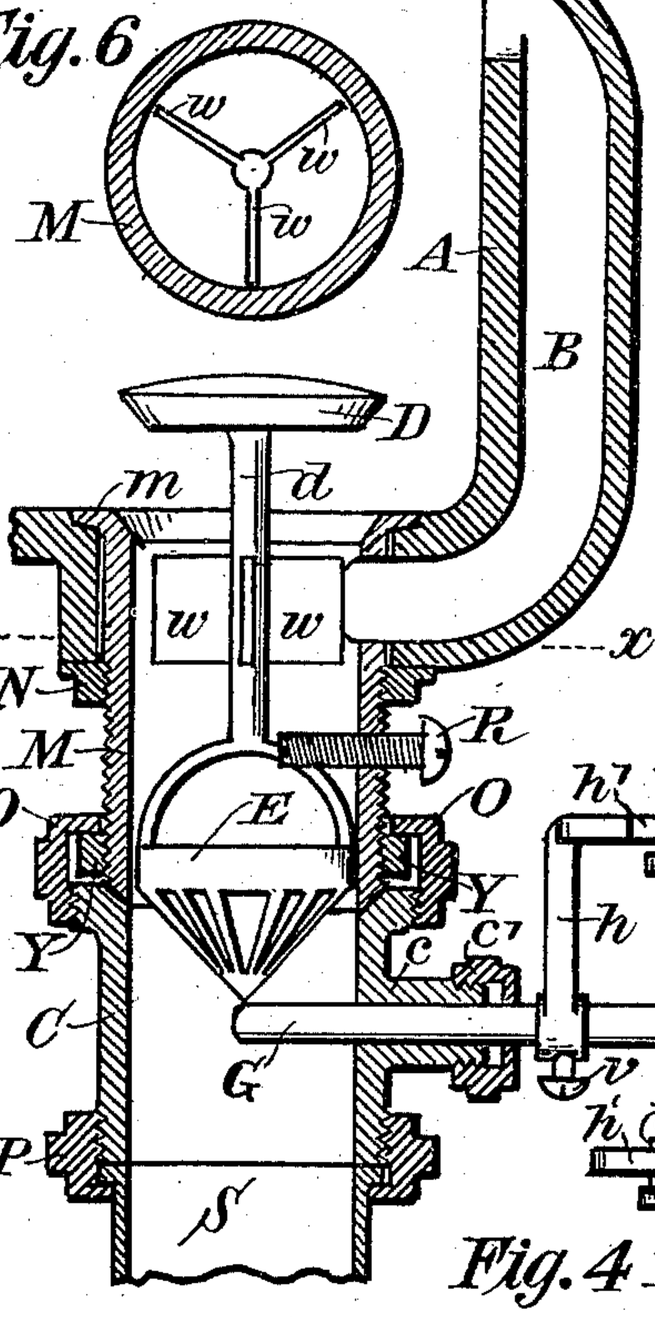


Fig. 1

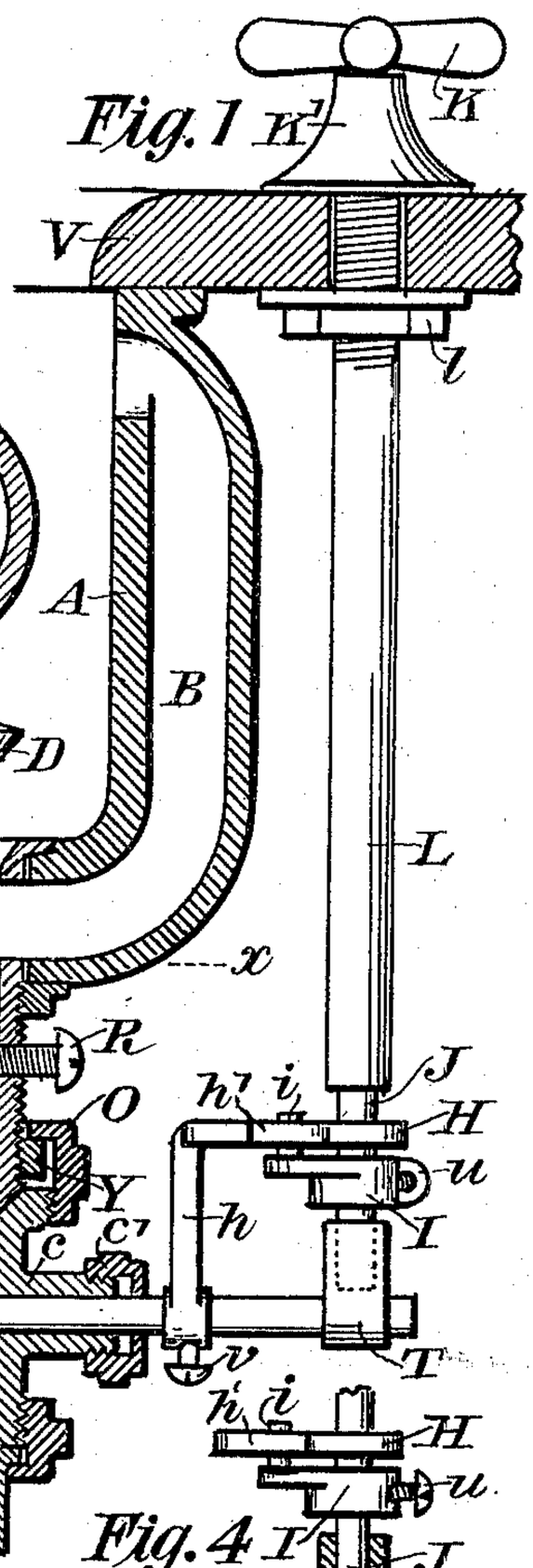


Fig. 4

Fig. 8

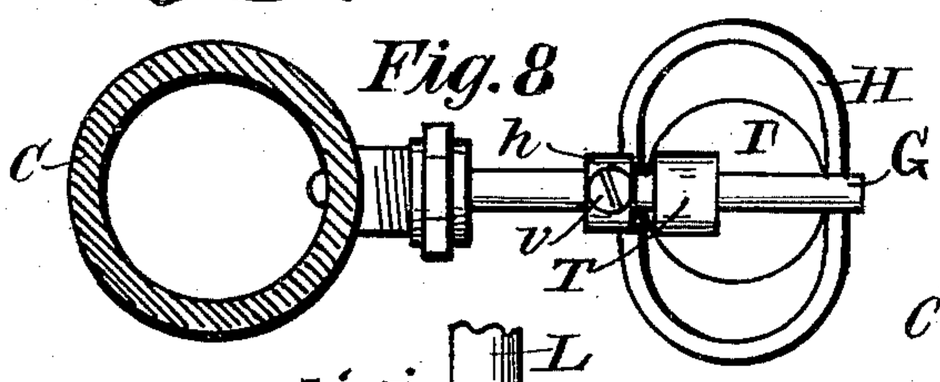


Fig. 2

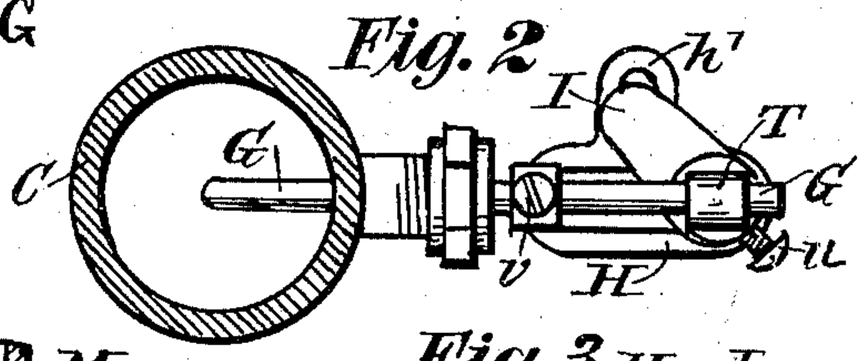
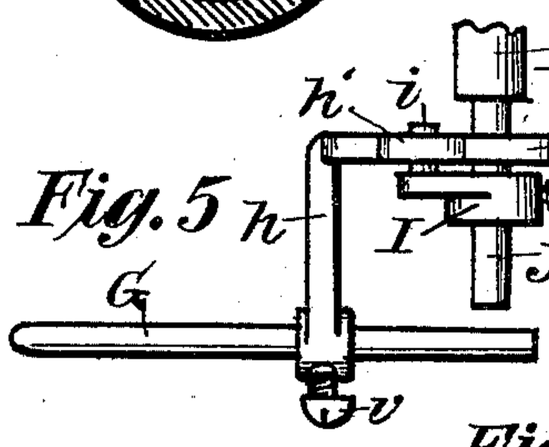


Fig. 5



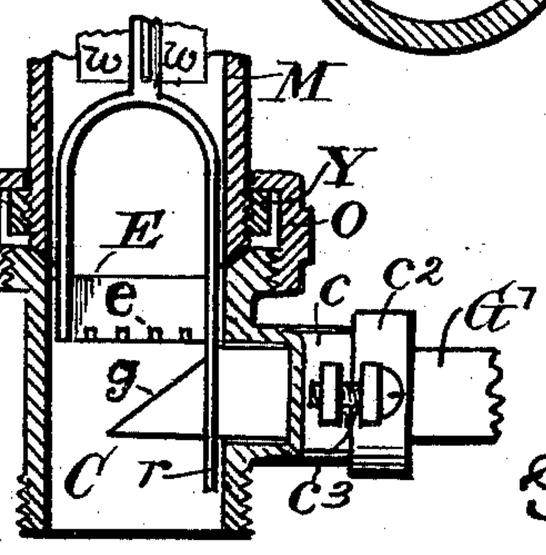
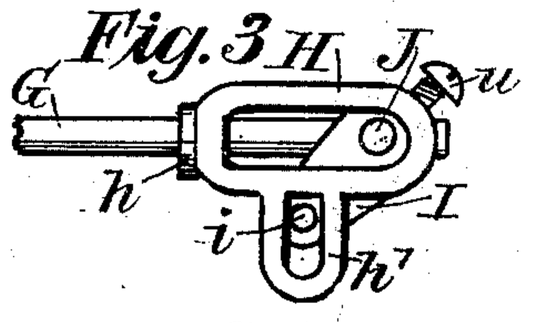


Fig. 9

Fig. 3



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UNITED STATES PATENT OFFICE.

SAMUEL WALKER LEWIS, OF NEW YORK, N. Y.

WASTE APPARATUS FOR WASHBASINS, BATHS, &c.

SPECIFICATION forming part of Letters Patent No. 641,126, dated January 9, 1900.

Application filed December 6, 1897. Serial No. 660,913. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL WALKER LEWIS, a citizen of the United States, residing at New York, (Brooklyn,) in the county of Kings and State of New York, have invented certain new and useful Improvements in Waste Apparatus for Washbasins, Baths, Sinks, &c., of which the following is a specification.

My invention is similar to the apparatus described in my Patent No. 568,261, dated September 22, 1896, and has for its objects convenient adjustment of the device, a means for preventing removal of the valve or stopper, and the operation of the device by a slide or cam provided with an inclined plane or slope formed upon its inner end to produce a cam motion when engaging the stopper to open it. I attain these objects by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal section showing the application of my device to a washbasin or bath. Fig. 2 is a plan of the same looking up. Fig. 3 is a plan of the same looking down. Fig. 4 is a cross-section of a part of Fig. 1. Fig. 5 is a part of Fig. 1. Fig. 6 is a detail plan of Fig. 1 on the line *x x*. Fig. 7 is a longitudinal section similar to Fig. 1, showing a modified construction. Fig. 8 is a plan of same looking up. Fig. 9 is a section to illustrate my sliding-cam construction, and Fig. 10 is a cross-sectional view of one form of the same with stop to prevent removal of the stopper.

The same letters of reference indicate identical parts in all the views.

The basin or bath A, Fig. 1, is fitted to the usual rim or slab V and is provided with an overflow B, a waste-plug M, a stopper D, a basket-shaped strainer E, provided with a sloping bottom, and a horizontal slide or shaft G, guided by its supporting-arm *c* and adapted to engage or bear against the sloping bottom of said strainer or stopper, as described in my said patent.

In Figs. 1, 2, 3, 4, and 5, H is a slotted yoke which straddles or surrounds the rod J, as shown in Fig. 3, and is secured to the slide G or G′ by its drop-arm *h* and set-screw *v*. A lateral-slotted projection *h′* on the side of the yoke H is adapted to receive the pin *i* of the crank I, which latter is secured to the handle-rod J by the set-screw *u*. By this effective and simple mechanism, as illustrated in Fig. 5, a slight turn of the rod or axis J imparts the desired motion to the slide G or G′.

In Figs. 7 and 8 the yoke H is an ellipse adapted to reciprocate with the motion of an eccentric I′, as described in my said patent, said yoke being secured to the slide G or G′ by the drop-arm *h* and set-screw *v*, the eccentric being secured to the handle-rod J by the set-screw *u′* or otherwise. In this construction the friction causes a lateral displacement of the slide G and operating-rod J, to overcome which I sometimes employ the part T, which illustrates one means for the purpose and which I term an "alinement-block." The rod J is socketed in the upper part of said block, as shown in Fig. 4, and turns loosely in it, and the slide G moves or plays freely through it below and in line with the rod J. Thus the parts J and G are always in alinement, and all friction is confined to the part T; but although a means of alinement is essential to the smooth working of the eccentric device shown in Figs. 7 and 8 it is not essential to the yoke and crank device shown in Figs. 1 to 5.

The waste plug or pipe M is firmly secured within the outlet-opening of the basin or bath A by its flange *m* and jam-nut N. Hence to make my apparatus adjustable, whereby the handle K and its support K′ can be located at any desired point on the rim or slab V without disturbing the parts A or M, I make my waste plug or passage of two parts M and C, connected by the inverted swivel or union O, which latter is supported by a gland ring or collar Y, which engages the part M by a right-hand thread, the union-nut O engaging the part C by a left-hand thread. Hence the union-nut O being freely swiveled upon the part M, it can be tightened without strain or injury to the part M or its connection with the basin, and by loosening the nut O the arm *c* and slide G can be adjusted at any angle to connect with the rod J.

To prevent removal of the stopper when used in public lavatories, I employ a set or stop screw R, as in Figs. 1 and 7, which when the stopper is lifted engages with the rim E of the strainer and prevents removal. When

desired, the screw or pin R can be removed or withdrawn far enough to release the stopper.

In Figs. 9 and 10 I illustrate my earliest device and plan for operating a waste valve or stopper by a slide and inclined-plane contact or cam motion. In this construction the slide G′, which may be flat or round or any convenient shape, is cut away or shaped on its inner end to form an incline or cam *g*. The rim E is provided with a flat or horizontal strainer *e*, as described in my said patent, and finally the strainer *e* might be omitted. In Fig. 9 guide-wings *w w* are shown, and in Fig. 10 the stopper is guided by the cylinder E′, or other means might be arranged to guide the stopper. In operation the inward thrust of the slide G′ causes the inclined surface or cam *g* to bear against and slide under the rim E and raise the valve, the reverse motion permitting the stopper to drop back and close the passage. The stuffing-box or packing-gland c^2 may be secured to the arm *c* by the lugs and bolts c^3 or otherwise.

Depending from the stopper or its guide I sometimes provide a hook or complete loop *r*, which engages with the slide G′ to prevent removal of the stopper, except when the slide is withdrawn from the waste-passage and free from the stop *r*.

In Fig. 7 the overflow B′ has its outlet through the stopper D′, and from the several modifications of the apparatus illustrated it will be evident that various ways may be devised or employed substantially within the scope of my invention to accomplish the same results.

Having described my invention, I claim—

1. In a waste device for a washbasin, bath or the like, the combination of a waste-outlet passage a valve or stopper for said passage, a horizontal slide adapted to open said valve a vertical handle-rod provided with an eccentric and capable of complete rotation in either direction, a yoke or traveler attached to or forming a part of said slide and surrounding said handle-rod and adapted to engage the front and back of said eccentric and a means between said handle-rod and slide supported upon one of them and engaging the other for preserving their alinement, whereby when said rod and its eccentric are turned to impart motion to the slide the frictional contact or lateral effort of the eccentric against the yoke or slide cannot cause lateral displacement of the rod and slide from proper alinement, substantially as and for the purpose described.

2. The combination for a washbasin, or bath or the like, of a waste-outlet passage and a stopper or valve for said passage, a hollow supporting-arm and packing-nut extending rigidly and laterally from said passage, a horizontally-moving slide fitting within and carried by said supporting-arm, the inner end of said slide forming an incline or cam *g* to slide under and open said stopper, a vertical handle-rod provided with an eccentric and capable of complete rotation in either direction, a yoke surrounding said rod and engaging said eccentric and means between said handle-rod and slide supported by one of them and engaging the other for preserving their alinement, whereby the rotation of said eccentric within said yoke will cause the slide in perfect alinement with said rod to open said stopper, substantially as described and set forth.

3. The combination for a washbasin, or bath or the like, of a waste-outlet passage a stopper or valve for said passage a hollow supporting-arm and packing-nut extending rigidly and laterally from said passage a horizontally-moving slide closely fitting within said supporting-arm the inner end of said slide forming an incline or cam to slide under and open said stopper a vertical handle-rod means for conveying motion from said handle-rod to said slide and a means of alinement for said rod and slide and a stop depending from said stopper under said slide, whereby the movement of said handle-rod will cause the slide in perfect alinement with said rod to open said stopper and the stop engaging the bottom of said slide will prevent removal of the stopper until the slide is withdrawn from contact with said stop, substantially as described.

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