(No Model.)

T. KENNEDY.

OVERFLOW FOR BATH TUBS, SINKS, &c.

No. 331,064. Patented Nov. 24, 1885.

FIG. 6.

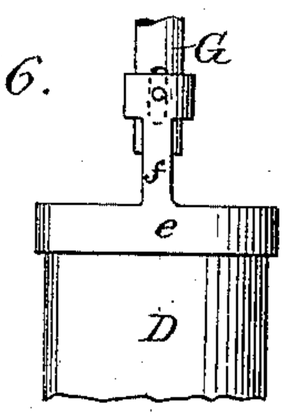


FIG. 1.

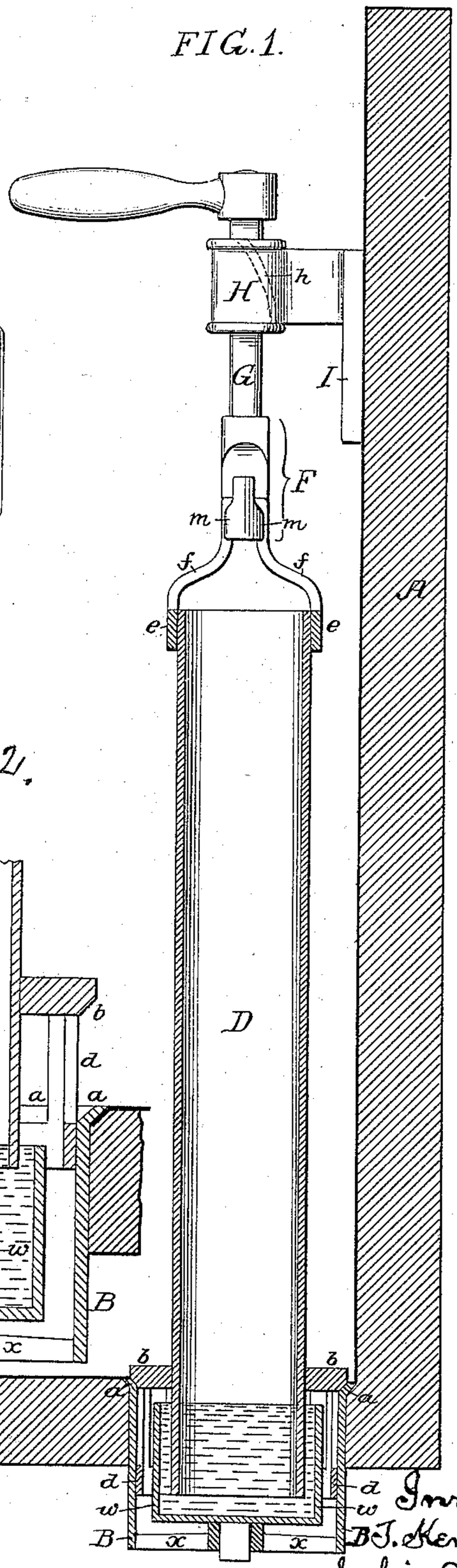
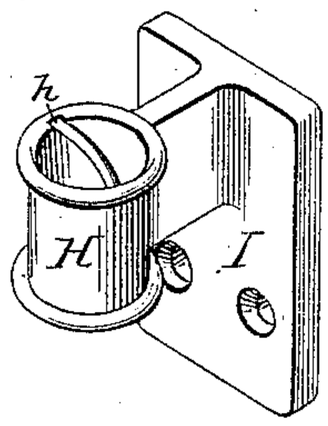


FIG. 5.



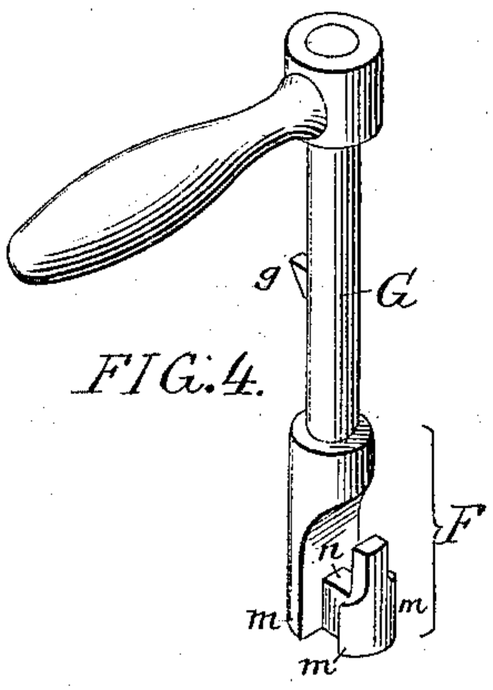


FIG. 4.

FIG. 3.

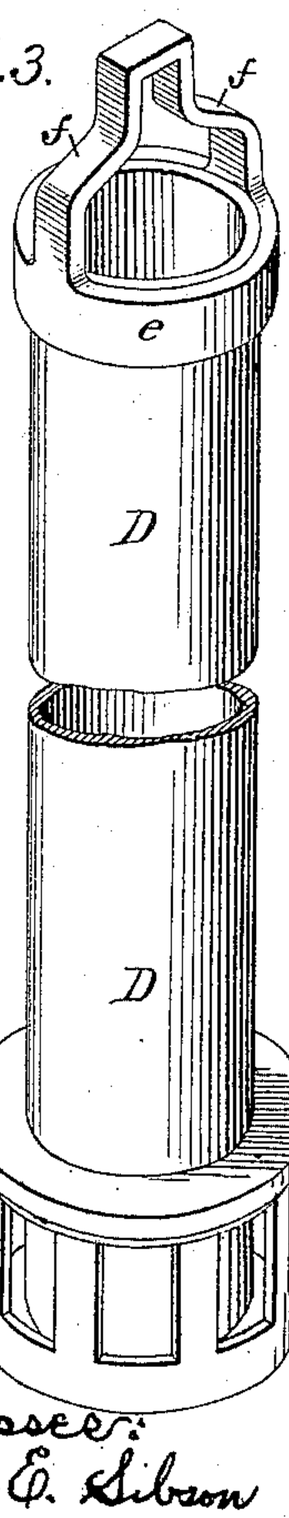


FIG 2.

Witnesses:
George E. Gibson
Harry Drury

Inventor
T. J. Kennedy
by his Attys
Howson & Sons

UNITED STATES PATENT OFFICE.

THOMAS KENNEDY, OF PHILADELPHIA, PENNSYLVANIA.

OVERFLOW FOR BATH-TUBS, SINKS, &c.

SPECIFICATION forming part of Letters Patent No. 331,064, dated November 24, 1885.

Application filed June 22, 1885. Serial No. 169,398. (No model.)

To all whom it may concern:

Be it known that I, THOMAS KENNEDY, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Overflows for Bath-Tubs, Sinks, &c., of which the following is a specification.

My invention relates to improvements in that class of overflow devices for bath-tubs, sinks, &c., which consist of a stand-pipe adapted at the lower end to the outlet-opening of the tub or sink and projecting up into the latter to the desired overflow-level, so that when the water reaches this level it will overflow through the pipe and outlet, the tub or sink being drained by lifting the stand-pipe, so as to open the outlet.

One object of my invention is to so construct an overflow device of this character that the stand-pipe can be readily raised or lowered by turning a handle, and can be readily detached from the operating-spindle and removed from the tub when necessary, but under ordinary circumstances will occupy a fixed relation to the tub, and cannot be accidentally displaced.

Other objects of my invention are to insure the proper seating of the lower end of the pipe in the outlet-opening, to provide for the cleaning of the latter as the pipe is raised and lowered, and to provide an efficient trap to prevent the backflow of the gases from the drain through the overflow-pipe.

In the accompanying drawings, Figure 1 is a sectional view, partly in elevation, of my improved overflow device and sufficient of a bath-tub to illustrate the application of the same thereto; Fig. 2, a sectional view on a larger scale of part of the device, the overflow-pipe being in a different position from that shown in Fig. 1; Figs. 3, 4, and 5, perspective views showing the overflow-pipe and its operating devices, and Fig. 6 a view illustrating a modification of one feature of the invention.

Concealed overflows for bath-tubs, sinks, wash-basins, &c., are justly regarded with disfavor, owing to their inaccessibility for cleansing purposes. For this reason these concealed overflows are in many cases being discarded, and the use of the well-known detachable stand-pipe, projecting up into the tub or bowl to the desired overflow-level, is being resumed. The detachability of the stand-pipe, however, is an objection, as the stand-pipe is likely to be lost or mislaid, and it is with the view of overcoming this objection that my invention has been devised.

In the drawings, A represents part of a bath-tub, and B part of the outlet or drainage tube of the same, the upper edge of this tube forming a seat, *a*, for a valve, *b*, near the lower end of the overflow-pipe D, a grating, *d*, projecting below the valve *b*, and fitting snugly to the outlet-tube B. The overflow-pipe D is of such height that when the valve *b*, at the lower end of the same, is adapted to the seat *a* on the outlet-tube the top of the pipe D will be at the desired overflow-level of the tub. Secured to the upper end of the pipe is a ring, *e*, having a yoke, *f*, which is contracted in width at and near the upper end, and is adapted to a hook, F, secured to or forming part of a stem, G, the latter passing through a sleeve, H, carried by a bracket, I, which is secured to the end of the tub. The upper end of the stem G is furnished with a suitable handle, and from said stem projects a lug, *g*, which is adapted to enter the spiral groove *h*, formed in the inner side of the sleeve G. When the valve *a* of the pipe D is adapted to its seat on the outlet-tube B, the lug *g* is at or near the bottom of the groove *h*, but by turning the stem G by means of its handle the lug *g* is caused to traverse this groove, and as the lug and groove form sections of screw-threads the pipe D will be lifted at the same time that it is turned, a turning movement in the reverse direction causing the pipe to be lowered to its seat. The grating *d* serves as a guide for the lower portion of the pipe D, and, owing to the turning movement in raising and lowering the pipe, said grating serves to scrape away from the inside of the outlet-tube anything which may be deposited thereupon, the interior of said outlet-tube being consequently kept clean. The lower portion of the hook F presents wings *m*, projecting beyond the bridge-bar *n* of the hook, so that when the contracted upper portion of the yoke *f* is applied to said bridge-bar the wings *m* will overlap the opposite side bars of the yoke and insure the turning of the pipe D with the stem G, the wings being such, however, that those on the outer portion of the hook will readily pass through

the expanded lower portion of the yoke, when the pipe is lifted and moved laterally, to free the yoke from the control of the hook when it is desired to remove the pipe for cleansing purposes. Besides permitting the ready detaching of the pipe when necessary, the hook and yoke connection is such that when the pipe is down it is free from the vertical control of the hook, and the valve *b* is therefore at liberty to properly seat itself on the upper end of the outlet-tube B. This feature of my invention may be carried into effect without the use of the hook—for instance, the upper end of the pipe B may have a sleeve with a transverse pin adapted to a vertical slot in the stem G, as shown in Fig. 6; but the use of the hook is preferred, because it permits the pipe to be more readily detached from the stem when desired.

In order to prevent the backflow of gases from the drain through the overflow-pipe D, I provide a water seal or trap by extending the lower end of the pipe below the valve *b*, and placing within the outlet-tube B a cup, *w*, a stem on which is adapted to a bearing carried by a transverse bridge, *x*, in said tube, as shown in Figs. 1 and 2, the lower end of the pipe D being at all times, when in use, submerged in the water in the cup *w*, so as to provide an effective seal. On removing the pipe the cup *w* can be readily withdrawn for cleaning or other purposes.

I claim as my invention—

1. The combination of a tub, sink, or other receptacle having an outlet-tube, B, with the overflow-pipe D, having a valve, *b*, and below the same a grating adapted to the tube B, said overflow-pipe being connected at the upper end to an operating-stem, G, guided in a sleeve or bearing, H, and having a connection therewith, forming a screw-thread or a section of a screw-thread, as set forth.

2. The combination of the overflow-pipe D, having a yoke at the upper end, with the operating-stem G, having a hook, F, adapted to said yoke, as set forth.

3. The combination of the overflow-pipe D, having a yoke, *f*, contracted at the upper end, with the operating-stem G, having a hook, F, with wings *m*, as set forth.

4. The combination of the overflow-pipe D, the operating-stem G, guided parallel with the axis of said pipe, and a vertically-slotted connection between said pipe and the stem, whereby a slight vertical play of the pipe independently of the stem is permitted without interfering with the lateral control of the pipe by the stem, as set forth.

5. The combination of the tub, sink, or other receptacle, the outlet-tube leading directly therefrom, the overflow-pipe having a valve closing the mouth of said tube, and a detachable sealing-cup disconnected from the overflow-pipe and supported in the outlet-tube below the mouth of the latter, whereby, when the overflow-pipe is removed, said sealing-cup is accessible from the tub or sink, and can be removed from the outlet-tube, all substantially as specified.

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

THOS. KENNEDY.

Witnesses:

W. F. DAVIS,

HARRY SMITH.