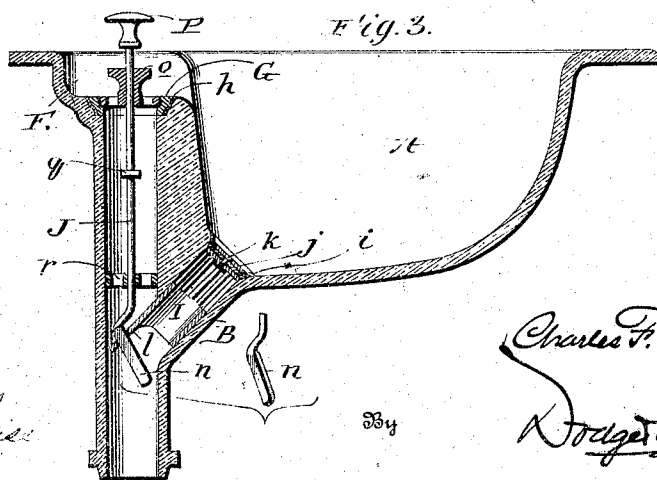
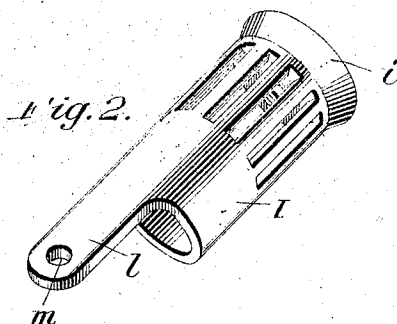
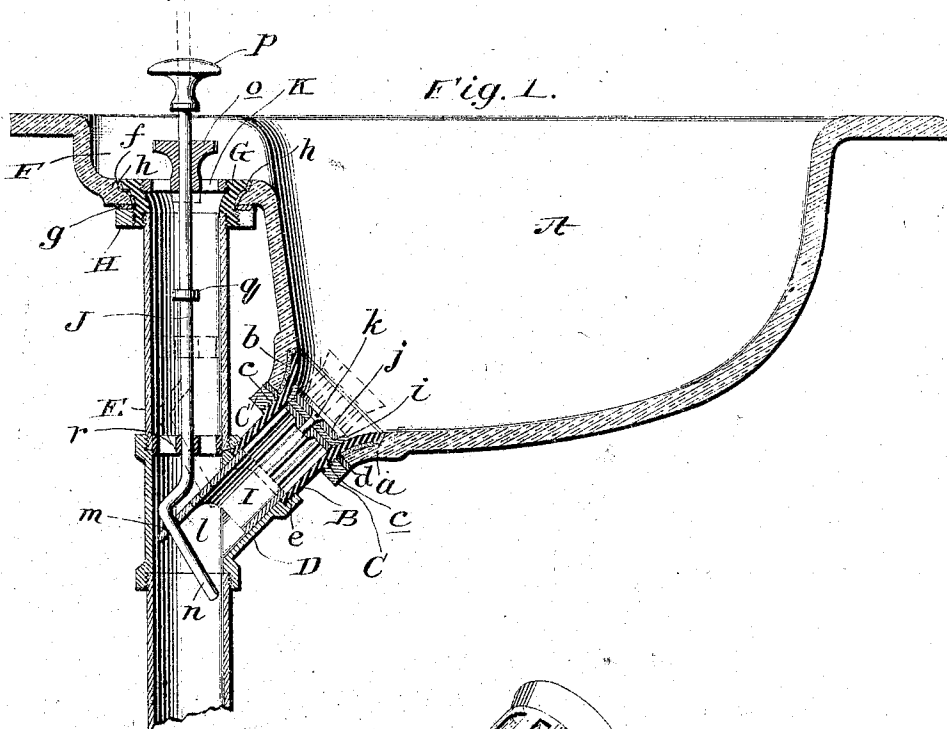


C. F. LONGFELLOW.
WASTE AND OVERFLOW FOR BASINS, TUBS, AND THE LIKE.
APPLICATION FILED JULY 22, 1908.

937,079.

Patented Oct. 19, 1909.



Witnesses
C. F. Longfellow
James H. Vail

34

Inventor:
Charles F. Longfellow
By
W. J. Longfellow
Attorney

UNITED STATES PATENT OFFICE.

CHARLES F. LONGFELLOW, OF ST. LOUIS, MISSOURI.

WASTE AND OVERFLOW FOR BASINS, TUBS, AND THE LIKE.

937,079.

Specification of Letters Patent.

Patented Oct. 19, 1909.

Application filed July 22, 1908. Serial No. 444,830.

To all whom it may concern:

Be it known that I, CHARLES F. LONGFELLOW, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Wastes and Overflows for Basins, Tubs, and the Like, of which the following is a specification.

My invention relates to a waste and overflow for basins, tubs, and the like, and consists in a novel construction thereof, whereby straight and unobstructed passages are provided which may be readily cleaned, and kept clean.

The invention further consists in various novel features, details, and combinations, hereinafter pointed out.

In the accompanying drawings: Figure 1 is a vertical section taken through a basin, and through the waste and overflow, constructed in accordance with my invention; Fig. 2, a view of the waste plug removed from its seat, somewhat enlarged; Fig. 3, a view similar to Fig. 1, but showing the overflow and outlet pipes made integral with the bowl.

At the present time various waste and overflow devices are in use, in most of which one or the other of the two passages,—waste or overflow,—is formed in the body of the bowl, tub, or other structure, and usually of curved or angular form, rendering difficult or impossible the ready and thorough cleaning thereof. In others the waste and overflow passages are formed in metallic fittings applied to the tub, bowl, or vessel, but in these the passages are generally angular in form, and involve the same difficulty as to maintenance of cleanly and sanitary conditions.

Under my construction, by unscrewing a single disk or fitting, which may be readily done without tool or implement of any kind, a straight and direct passage without obstruction of any sort is afforded, both in the overflow and in the waste connection, through which may be passed a brush, swab, or other cleaning device, so that both passages may be quickly and thoroughly cleaned. The waste plug or valve is itself so constructed and arranged that any appreciable accumulation of sediment, or formation of any deposit upon its exterior, is precluded, and that such as may lodge or form may be easily removed.

Referring to the drawings, A indicates a

washbowl or basin having its bottom inclined slightly toward the rear, and provided at the junction of the bottom and rear walls with an outlet neck *a*, fashioned to receive a fitting B, which will be made of brass, or other suitable material. This fitting is of tubular form, flaring at its upper end and flanged to fit a corresponding seat in the outlet neck of the basin, and packing or luting *b* is advisedly interposed between the seat and the fitting B to insure a perfect joint. The exterior of the fitting B is provided with a threaded portion *c* to receive a clamping nut C which screws against the outer end or mouth of the neck *a*, or against a washer *d* interposed between the nut and said neck. The lower extremity of the fitting B is likewise provided with a threaded portion *e* to enter the threaded collar of a Y, D, forming a section of the waste pipe E.

The bowl, basin, or other structure A is provided at a suitable distance below its upper edge with a horizontal offset F, having a shouldered seat *f* to receive a fitting G of annular, and preferably of slightly conical or tapering form, which is secured in its seat by a nut H screwed upon its exterior beneath the offset F, a suitable disk or washer *g* being advisably interposed between the body of the offset and the nut, and luting or packing *h* being by preference employed between the fitting G and its seat, to insure a tight joint and proper seating of the fitting.

A section of the waste pipe E connects the Y, D, and the fitting G, the lower end of the Y being in turn connected with the main waste pipe, or with a trap therein as usual.

To close the waste opening or outlet, I provide a plug comprising a tubular shell I, closed at its upper end, and furnished with a conical or flaring member *i*, which will preferably be made of soft rubber, leather, or other flexible material capable of adapting itself to, and making a close joint with, the conical seat provided for it within the fitting B, a clamping disk *j* and holding screw *k* being employed to hold the member *i* in place. Obviously, however, the part *i* may be of metal integral with the body I. Below the closed head the body of the plug I is longitudinally slotted, or made in the form of a grid, so that when the plug is lifted from its seat and moved upward within the basin, an ample outlet for the flow of water to and through the interior of the plug I shall be provided. The lower end of the plug I is

provided with a tang or tail *l* having an eye or perforation *m* to receive the lower, obliquely arranged end, *n*, of an actuating rod J passing axially through the upper portion of the Y, D, and the waste pipe E and fitting G above said Y. The rod J passes at its upper end through a central boss *o*, rising from a circumferentially threaded perforate disk K, which is screwed into the fitting G, and by reason of its perforations affords an overflow outlet. The boss *o* is preferably milled to facilitate its being turned by hand to screw in or out the disk K. At its upper end the rod J carries a knob *p*, and at a suitable distance below the disk K it is provided with a collar or stop *q* to limit its vertical movement. As shown, the rod J near its lower end bends sharply to one side, and hence again sharply in the reverse direction to produce the oblique or angled end *n*, which as shown, passes through the perforation *m* in the tang or tail *l* of the plug I. Just above the upper bend the rod J is provided with a guiding collar *r* of perforate or spider form, the circumference of which makes sliding contact with the interior of the waste pipe E.

It will thus be seen that the rod J will be maintained in axial alinement with the waste pipe E during its rise and fall. Owing to the angular form of the rod and the bearing of the plug I against it, there will be little or no tendency of either to rotate about its axis; but to guard against such possibility I prefer to flatten the portion *n*, as shown, and to make the opening *m* of corresponding form, as illustrated in Fig. 3.

Under the above described construction it will be seen that if the knob *p*, attached to the rod J, be pushed down, the plug will be seated in, and will close the waste outlet, the rod J stopping at such point as is determined by the inclination of its extremity *n*, and the bearing thereof in the eye *m* of the plug. By lifting the rod J the inclined portion *n* thereof, rising through the opening *m*, will cause the plug I to move upward, and this will result in unsealing the outlet and carrying the gridded or slotted portion of the plug I upward within the bowl, basin, or tub a distance sufficient to afford a free and ample outlet for the water therein. As the overflow extension F is placed well below the upper edge of the bowl, tub, or other structure, and as the openings through the disk K and collar *r* are quite large, a very free overflow outlet is afforded, precluding any danger of clogging, or of being inadequate to carry off the full flow from the faucets, should they be left open.

It will be observed that by my construction I avoid entirely all openings through the outer walls of the waste and overflow pipes or fittings, and render stuffing glands

unnecessary. It will also be seen that by merely unscrewing the disk K, which may be readily done by the fingers, without the use of any implement whatsoever, the plug I and rod J may be easily removed, leaving both the overflow and the outlet passages entirely unobstructed, and permitting a brush or swab to be passed directly through each from end to end. When removed from its seat the interior of the plug I may similarly be cleaned thoroughly and easily, the exterior being kept free from any deposit by reason of its sliding within the Y, D, and its upper side, which alone is in the path of anything falling through the pipe E, being scraped clean by the sharp edge of the opening in the Y through which it passes.

As shown in the drawings, the outlet or discharge pipe is placed at an angle to the horizon, so that a brush, swab, or cleaning implement may be readily introduced and passed through the same, and downward into the waste pipe, the handle, if long, passing up over the top of the vessel at the side opposite the outlet. This, though not absolutely necessary, materially facilitates cleaning, and permits the use of a long handled implement, which is often desirable.

The details of construction may, of course, be varied more or less without departing from the spirit or scope of my invention, the most important feature of which is the provision of straight and unobstructed passages both from the overflow and from the outlet into the waste pipe.

It will be seen that the overflow and the outlet can be used with merely a plug or stopper of any suitable character to close the waste through fitting B, though it is preferred to employ the plug I and actuating rod J herein shown and described.

In Fig. 3 I have shown the overflow and outlet pipes integral with the bowl, an obvious variation of the embodiment of my invention illustrated in Fig. 1. This integral construction dispenses with the metallic fittings B, D and E and their fastenings. The outlet pipe may in such case be bushed with metal, or unbushed as shown.

Having thus described my invention, what I claim is:

1. In combination with a waste pipe, a vessel provided with a discharge pipe and with an overflow pipe, each open and unobstructed from end to end, and each extending in a direct line to the waste pipe without bend, curve, or angle; and fittings applied within the discharge pipe and overflow pipe, but freely removable therefrom at will, said fittings adapted to effect a closing and opening of the discharge pipe as required.

2. In combination with a waste pipe, a vessel having an overflow extension below its upper edge; a waste pipe extending

directly downward from said extension; a discharge pipe extending in a direct line, at an angle to the horizon, from the lower part of the vessel to the waste pipe and communicating therewith, the waste pipe and discharge pipe being free and unobstructed from end to end; a closing plug applied to the discharge pipe and having a tang or tail extending through said pipe into the waste pipe; and an actuating rod J arranged within the waste pipe and serving to seat and unseat the plug, the plug and rod being freely removable to permit ready cleaning of the pipes.

3. In combination with a vessel, A, provided in its upper part with an overflow extension F and in its lower part with a straight and unobstructed discharge pipe B, the projected axis of which passes above the edge of the vessel in a plane oblique to the horizon; a straight, open-ended waste pipe E communicating with said overflow; a Y connecting the discharge pipe B and waste pipe E; and a plug, adapted to close the passage through the discharge pipe, the straight and unobstructed waste and discharge pipes permitting a cleaning implement to be passed freely through them from end to end.

4. In combination with a vessel having an overflow outlet at a point somewhat below its upper edge, a straight waste pipe of uniform internal diameter extending downward from said overflow to the point of attachment of the usual waste pipe of a building, and devoid of internal projections or obstructions; and a straight, unobstructed discharge pipe extending obliquely downward from the lower part of the vessel and opening into the waste pipe thereof, said straight and unobstructed pipes permitting the ready introduction and passage through each from end to end, of a cleaning implement adapted to fill the same and make contact with the entire inner surface thereof.

5. In combination with a vessel A having an overflow F; a fitting G applied to said overflow; a waste pipe E connected with said fitting and provided with a Y, D; an outlet fitting B applied to the lower portion of the vessel and connected with the Y, D; a plug I seated within the fitting B and having openings through its side walls below its closed upper end, and provided with a tang I; and an actuating rod J located

within the overflow pipe and having an oblique portion *n* engaging with and adapted to move the plug I, substantially as set forth.

6. In combination with a vessel A having an overflow fitting G and a waste pipe extending therefrom; a perforate disk K seated in said fitting; a fitting B applied to the lower part of the vessel and communicating with the waste pipe; a plug I mounted within the fitting B; and a rod J passing centrally through the disk K, and provided with an oblique portion *n* to engage and move the plug I.

7. In combination with a waste pipe, and a vessel A provided with an overflow extension below its upper edge and in communication with said waste pipe, and provided also with a straight discharge pipe opening from its lower part; a waste plug I arranged within the discharge pipe; an actuating rod J having an oblique portion *n* in operative engagement with plug I; and freely removable guides for maintaining said rod in axial relation to the overflow pipe, substantially as set forth.

8. In combination with a vessel A having a discharge pipe B; a waste pipe E, a Y, D connecting the discharge pipe and the waste pipe, said several pipes and Y being straight and unobstructed; an overflow fitting G applied to the open upper end of the waste pipe; a plug I applied to the discharge pipe B; a disk K applied to the overflow fitting G and provided with a boss *o*; and rod J passing axially through the boss *o*, provided with guiding collar *r*, and having oblique portion *n* arranged to bear against and to actuate the plug I, substantially as described.

9. In combination with a vessel A having overflow and waste fittings such as shown and described, a waste plug applied to the waste opening and having a tang or tail provided with an opening; and an actuating rod within the overflow pipe, provided with an oblique portion *n* of form to fit said opening in the plug.

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

CHARLES F. LONGFELLOW.

Witnesses:

WILLIAM W. DODGE,
FANNIE WISE.