No. 729,360. PATENTED MAY 26, 1903.

L. KOSIOL.

WASTE AND OVERFLOW FIXTURE.

APPLICATION FILED OCT. 15, 1902.

NO MODEL.

Fig. 1

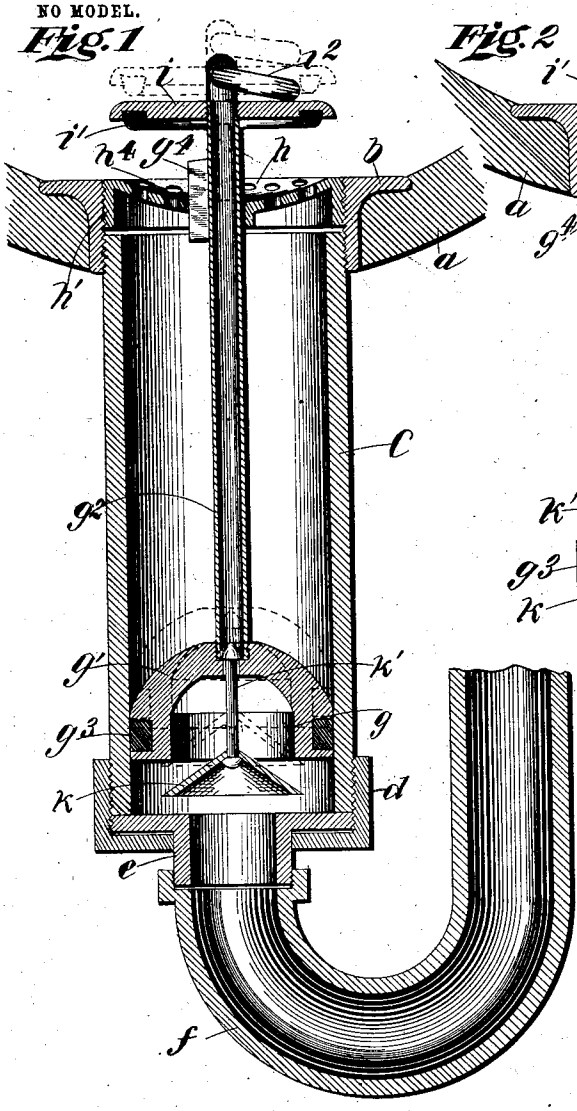


Fig. 2

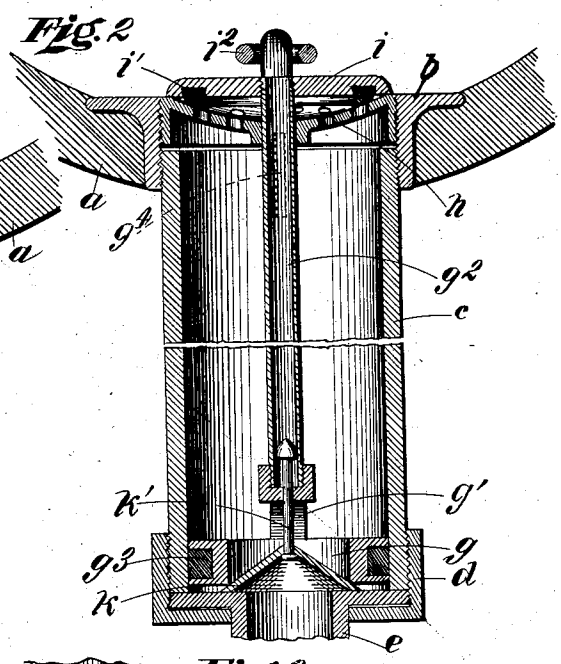


Fig. 3

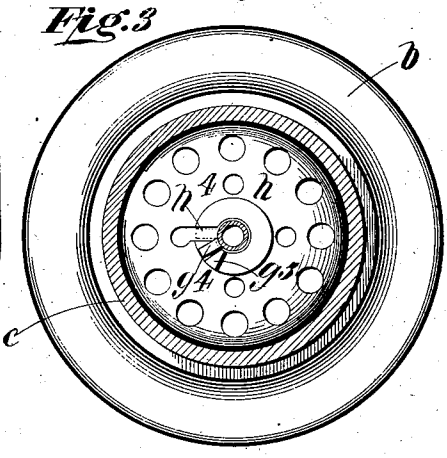
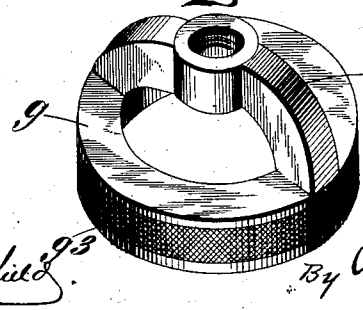


Fig. 4



WITNESSES.

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No. 729,360. Patented May 26, 1903.

UNITED STATES PATENT OFFICE.

LOUIS KOSIOL, OF LOUISVILLE, KENTUCKY, ASSIGNOR OF ONE-FOURTH TO WILLIAM T. LEACHMAN, OF LOUISVILLE, KENTUCKY.

WASTE AND OVERFLOW FIXTURE.

SPECIFICATION forming part of Letters Patent No. 729,360, dated May 26, 1903.

Application filed October 15, 1902. Serial No. 127,393. (No model.)

To all whom it may concern:

Be it known that I, LOUIS KOSIOL, of Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Waste and Overflow Fixtures; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

This invention relates to waste and overflow fixtures, and is an improvement upon the fixtures shown in my Patents No. 630,718 of August 8, 1899, and No. 647,297 of May 14, 1901.

The invention consists in the novel and improved construction of parts hereinafter claimed, and described with reference to the drawings, in which—

Figure 1 is a section view of the fixture as applied to a portion of a washbasin or other vessel, showing the valve open. Fig. 2 is a similar view showing the valve closed. Fig. 3 is an enlarged section of line 3 3, Fig. 1, looking upward, and Fig. 4 is an enlarged perspective view of the plunger-valve.

The sink or other vessel *a* to which it is desired to attach the improved fixture is provided with a screw-collar *b*, which may be integral therewith, if desired, into which is threaded the upper end of a cylinder *c*, forming the valve-chamber, said cylinder being closed at its lower end by a union *d* and nipple *e*. The nipple *e* may be connected in the usual manner to the outlet-pipe *f*. Within the cylinder *c* is an annular plunger *g*, which is provided with an arch *g'*, connected to a stem g^2, which extends upward axially of the cylinder *c* and is guided in central opening in a perforated sieve-plate *h*, which is provided with a threaded flange *h'*, screwed into the collar *b*. On the upper end of this rod is fast a disk *i* of sufficient area to cover all the perforations in the plate N and provided on its under side with a rubber gasket or packing-ring *i'*, which, when the valve is completely lowered, will impinge upon the surface of plate *h* and form an effectual water seal, preventing the escape of liquid from the vessel. The rod $g^{2'}$ is provided above the plate *i* with a suitable pull, which may be a ring i^2, so that the valve may be easily operated. The plunger *g* has a peripheral groove, in which is placed a packing g^3 of any suitable material to maintain a close joint between the plunger *g* and the internal walls of cylinder *c*. The central opening through the plunger *g* is of large diameter, but may be closed by means of a cone-shaped valve *k*, which is suspended at its apex by a rod *k'*, the upper end of which is slidably confined in a bore in the lower portion of stem g^2. Said stem g^2 may be tubular, so as to permit the rod *k'* to play therein sufficiently to allow the valve *k* to rise and fall and close against or depend below the plunger *g*.

On the upper end of the stem *g* is a key g^4, which is adapted to work through the slot N^4 in plate *h*, and when raised above this slot and the stem partially rotated the key g^4 will uphold the plunger. When the plunger is fully lowered, the upper end of this key comes below the plate *h*, and then by turning the stem the plunger can be locked in lowered position. When the stem g^2 is drawn upward, so that water can escape into the cylinder *c* from the vessel *a*, the cone-valve *k* drops, as in Fig. 1, and permits the water to pass freely through the opening in the plunger *g*, but upon pressing down the valve-stem g^2 the valve *k* will first shut itself on the nipple *e* and then the plunger *g* will seat itself upon the valve *k*, making a tight and close fit, as indicated in Fig. 2, thus preventing escape of water and also the ingress of gases. This construction enables the device to be used as a plunger to force any obstructions through the trap if the latter should become choked, which would cause the cylinder *c* to fill with water. Then by raising and forcibly depressing the plunger the valve *k* would close against the plunger and the further descent thereof would force the water below it out of the cylinder into the pipe, and thus an obstruction in the pipe could be forced ahead and removed.

When the device is to be used on overflow fixtures, the stem *g* may be short, so that when the plate *i* is seated upon the strainer *h*, thus preventing the escape of water from the vessel, there will still be a free waterway below. On ordinary fixtures, however, the

plunger and valve will act as a gas seal. While the stem g^2 is shown as tubular throughout, this is not essential, as it may be solid, suitable provision being made for telescoping the stem k'.

The collar b may be dispensed with if the outlet of the vessel a is suitably threaded for engagement of the plate h' and cylinder c, this, however, forming no part of the present invention. When the valve is fully lowered and the stem g^2 is turned to the right, the key g^1 abuts against a stop g^5 on the lower side of plate II (see Fig. 3) and locks the valve in its lowermost position, as indicated in Fig. 2, so as to effectively resist any back pressure of water or gas.

Having thus described my invention, what I therefore claim as new, and desire to secure by Letters Patent thereon, is—

1. The combination of a cylinder, the plunger therein and a stem for operating said plunger, having a guide-key, a guide-plate at the upper end of the cylinder having a slot for the passage of said key, a disk on the stem above the plate and a gasket on the under side of the disk, substantially as described.

2. The combination of a cylinder, the perforated plate in the upper end thereof provided with a keyway, a stem passing through said plate and having a key adapted to engage said keyway, a plunger on the lower end of said stem fitted within the cylinder, and a valve loosely suspended from said plunger, adapted to close the opening therein, with a disk attached to the upper end of the stem above the perforated plate and provided with a packing on its under side adapted to prevent the passage of water through said plate, substantially as described.

3. The combination in a waste and overflow fixture, of the vessel, the cylinder attached thereto, a perforated plate provided with a keyway in the upper end of said cylinder, the stem depending through said plate provided with a locking-key, a plate on the upper end of said stem provided with a packing on its under side, an annular plunger connected to the lower end of said stem and fitted within the cylinder, and a conical valve loosely connected to said stem and adapted to close the opening in the plunger substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

LOUIS KOSIOL.

Witnesses:
LOUIS OHNDORFER,
JOHN P. BAUSCHER.