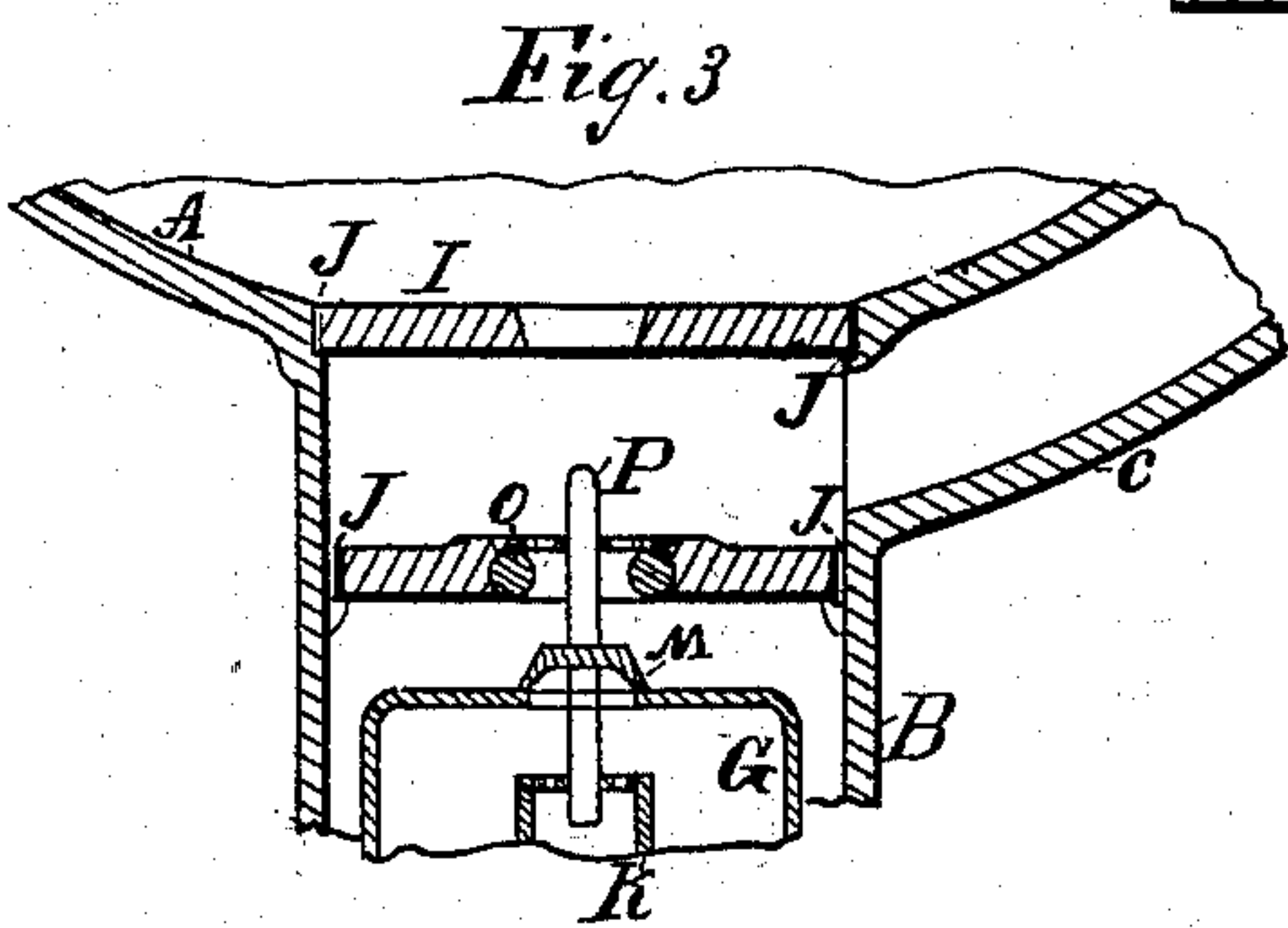
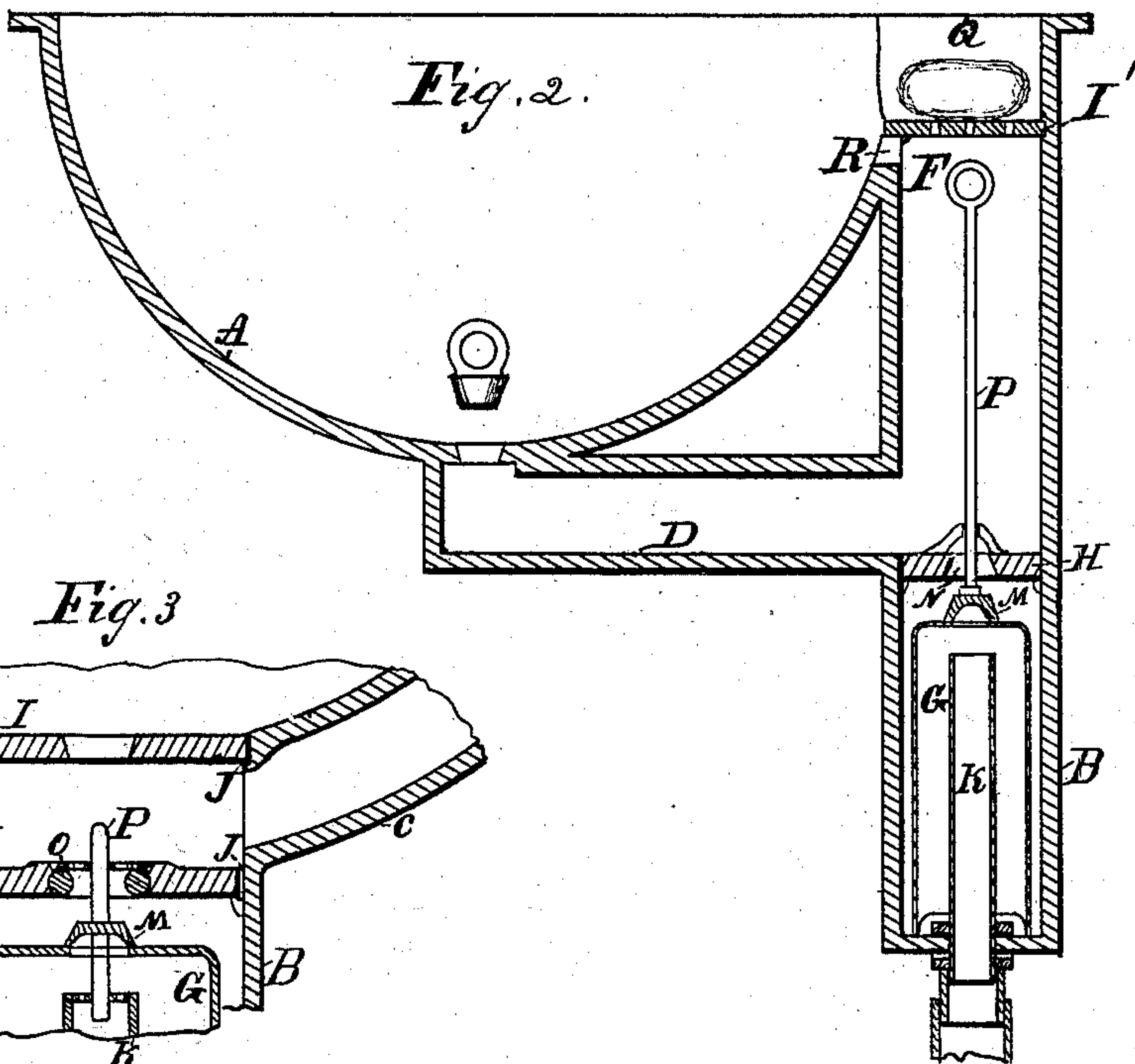
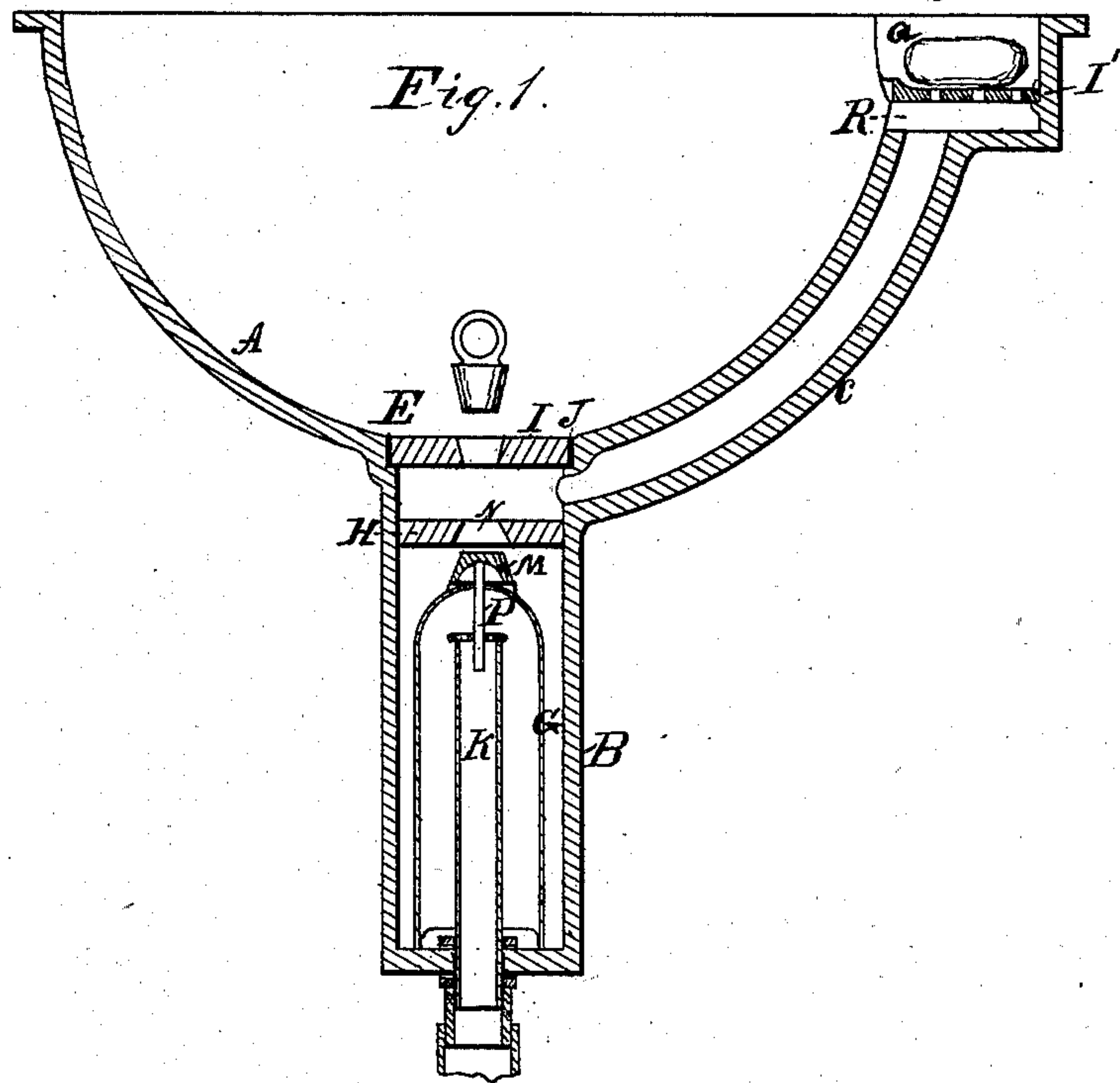


(No Model.)

E. A. TUTTLE.  
WASTE PIPE TRAP.

No. 257,906.

Patented May 16, 1882.



Witnesses:

*W. H. Morgan*  
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# UNITED STATES PATENT OFFICE.

EDWARD A. TUTTLE, OF NEW YORK, N. Y.

## WASTE-PIPE TRAP.

SPECIFICATION forming part of Letters Patent No. 257,906, dated May 16, 1882.

Application filed March 21, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD A. TUTTLE, of New York, in the county and State of New York, have invented a new and useful Improvement in Waste-Pipe Traps, of which the following is a specification.

My invention consists of a valve in the form of an inverted cup placed over the part of the outlet-pipe that stands up within the trap, and a seat for said valve so placed above it in the passage from the basin to the trap that whenever there is any back-flow of gas, water, or air from the sewer the valve will be automatically lifted and closed against its seat, and thus will afford positive resistance to the escape of gas by those back-thrusts of waves or gusts too strong for the resistance of the water that often occur from various causes.

My invention also consists of said valve-seat made removable through an opening in the basin; and it also consists of an improved contrivance of a recess in the basin for a soap-tray, whereby the ordinary soap-tray is dispensed with and the drip from the soap escapes into the basin or waste-pipe.

Figure 1 is a sectional elevation of a basin with my improvements applied, the trap being applied directly under the escape-passage from the bottom of the basin. Fig. 2 is a similar section, showing the trap located under the overflow-passage; and Fig. 3 is a section of the valve and its seat, showing modifications in the arrangements.

My improved trap is alike applicable to wash-basins, sinks, water-closets, bath-tubs, and the like, and it may be located anywhere in the waste-pipe; but I have here represented it in connection with a wash-basin, A, with which I propose to construct the case of the trap B and the branch connection of the overflow C, or the main passage D, as the case may be, together and integral thereto, to avoid as many joints as possible; and for easy access to the space within the trap-case for inserting the valve G and for cleaning out the trap I make the entrance into the case B from the bottom of the basin at E or at the overflow F equal in diameter, or thereabout, to the interior of the case, and fit the valve-seat H over the valve, as well as the cover I or I' at the openings into the passage to the trap, removable from above

the trap, with packing at the joints J to make the same tight.

The valve G consists of a deep inverted cup placed over the stand-pipe K, and made sufficiently large in area and light in material to be readily lifted by the gas that may issue from the pipe K, thus preventing the pressure from forcing the gas down through the water under the valve, and thereby escaping. The conical stud M bears in the corresponding opening, N, through the seat H, which may be a grooved joint, or rubber or other packing may be employed, as at O. The valve-stem may be guided in any approved way, as illustrated by the different arrangements shown in the different figures, and the guide-stem P may have a vertical extension, as in Fig. 2, by which to raise the valve out of the trap when required.

For enabling greater depth of water to be retained in the basin, I propose to substitute for the perforations commonly made through the side of the basin a horizontally-broad and vertically-shallow opening, R, located near the top of the basin and arranged to obtain the necessary capacity of opening with materially less depth.

Q represents the recess which I propose to make in the top and side of the wash-basin for the soap-tray, with one side opening into the basin for the escape of the drip. It may be arranged, as here shown, over the overflow-passage, if preferred, in which case the bottom of it may be perforated, so that the drip may fall directly into it; but that is not essential for in any other position the drip will escape as well into the basin. This arrangement is simpler and cheaper than to provide a special drip-pipe for the soap-tray connected with the main waste-pipe and not liable to clog. It is also cleaner. But this arrangement of the soap-tray independently of the trap case I reserve for a separate application for a patent.

Besides the automatic action of this trap in shutting off the gusts of gases, it performs, without the seat above it, all the functions of an ordinary water-trap.

My improved arrangement for the soap-tray relates particularly to the molded or cast basins or sinks of pottery or cast-metal and fixed in or upon stands, and provided with waste-pipes for the escape of the water after use,



with which form of basin a tray having lateral projection outward from the side of the basin is not objectionable, as it would be in a movable or unattached hand-basin, which would  
5 be unduly overweighted on one side by such arrangement. Moreover, the attachment of a tray of the form which I propose to such a basin would be more expensive than might be otherwise contrived for such basins, whereas  
10 to molded basins of clay or cast-metal it is molded or cast at the same time and together with the basin without material increase of cost. By projecting from the side of the basin outward it avoids the partial obstruction to  
15 the use of the basin that one projecting from the inside of the basin does.

I claim—

1. The combination, with the trap-case B and the vertical extension K of the waste-pipe therein, of the inverted cup-shaped valve G 20 and the seat H therefor, located above said valve, substantially as described.

2. The waste-pipe-trap case B and its connections with the basin, constructed together and integral with the basin A, and with an 25 opening from the basin into said case for the admission of the valve, also with the seat for said valve detachably arranged, substantially as described.

EDWARD A. TUTTLE.

Witnesses:

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