

(No Model.)

T. J. BROGAN.
AUTOMATIC TRAP FOR WATER PIPES.

No. 496,994.

Patented May 9, 1893.

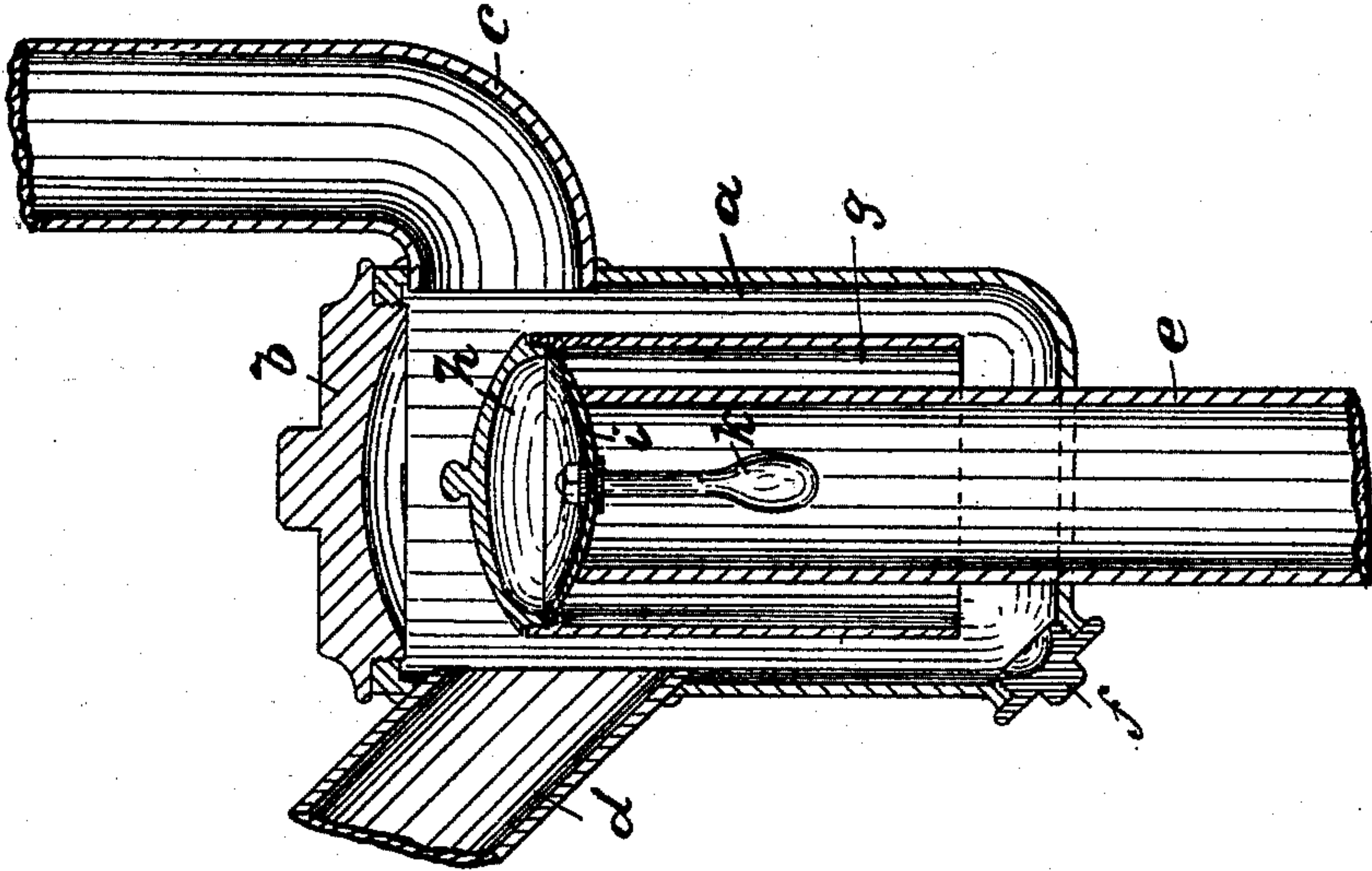


Fig. 2.

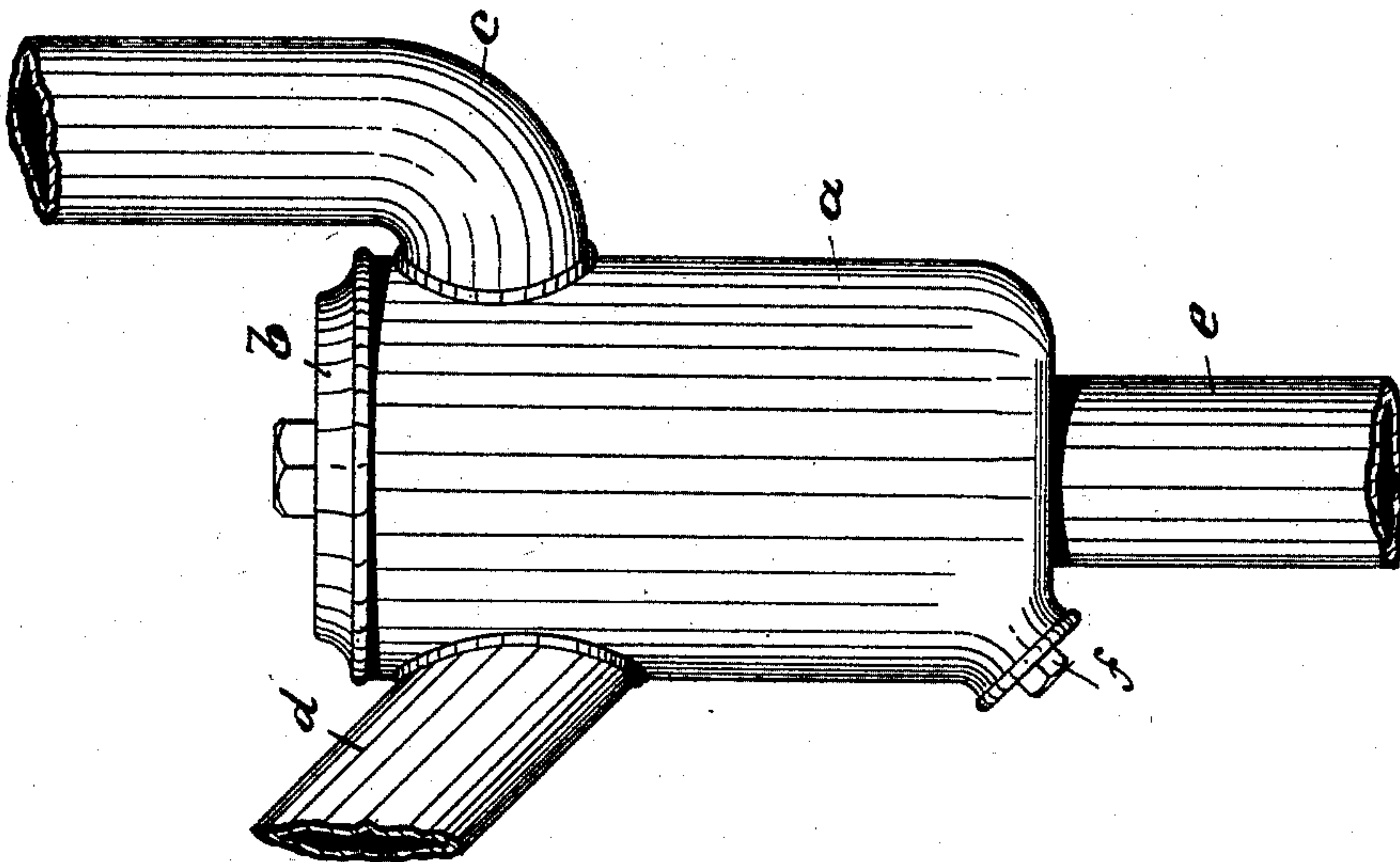


Fig. 1.

WITNESSES:

Wm. D. Bell.
Walter Thompson.

INVENTOR:

Thomas J. Brogan
BY Gartner & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

THOMAS J. BROGAN, OF PATERSON, NEW JERSEY, ASSIGNOR OF ONE-HALF
TO HARRY FOZARD, OF SAME PLACE.

AUTOMATIC TRAP FOR WATER-PIPES.

SPECIFICATION forming part of Letters Patent No. 496,994, dated May 9, 1893.

Application filed August 3, 1892. Serial No. 441,993. (No model.)

To all whom it may concern:

Be it known that I, THOMAS J. BROGAN, a citizen of the United States, residing at Paterson, county of Passaic, and State of New Jersey, have invented certain new and useful Improvements in Automatic Traps for Water-Pipes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide an automatic trap for water pipes—in connection with sinks, &c.; simple and durable in construction and reliable in operation.

The invention consists in the improved automatic trap for water pipes, and the combination and arrangements of the various parts thereof, substantially as will be hereinafter more fully described and finally embodied in the clauses of the claim.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in the two views: Figure 1. is an elevation and Fig. 2. a vertical central section, of my improved trap.

In said drawings *a* represents the shell or body of the trap, to which is removably secured a top or cover *b*. At the bottom of the shell is arranged an opening, which is provided with a removable plug *f*. The pipe *c* connects the interior of said shell with the sink, and the pipe *d* acts as a vent in the usual manner. The sewer connecting pipe *e* extends upward into the shell *a*, and is provided at its top with a diaphragm *i* made of rubber or other suitable material, secured to a cylindrical tube or receptacle *g*, by means of cap *h*. To the center of the rubber diaphragm is secured a weight *k*, adapted to hold said diaphragm and its receptacle in normal position.

In operation, when water enters the shell *a* through pipe *c*, the air in said shell is expelled through vent *d*, and the receptacle *g*

is raised simultaneously, and floats by the buoyancy of the air contained therein. The pipe *e* is thus opened and the water allowed to escape through said pipe into the sewer. A certain amount of water will remain in the shell *a* (to about the same level as the top of outlet pipe *e*), whereby the lower portion of receptacle *g* is submerged, thus preventing the escape of any gas from the sewer.

By my improved trap, the chance of siphoning (by the sewer) is reduced to a minimum, as the rubber diaphragm will close the top of the outlet pipe *e*; moreover, should the water in the shell *a* evaporate, the weight of the receptacle *g*, together with the weight *k*, will hold the diaphragm in closed contact with the pipe *e*, thus thoroughly preventing any escapement of gas from the sewer. Should it be found desirable to repair the receptacle or diaphragm, the cover *b* can be easily removed, the receptacle extracted and the necessary repairs effected. If any sediment should accumulate in the bottom of the shell *a*, the plug *f* may be removed, and said sediment extracted.

I do not intend to limit myself to the construction shown and described, as various alterations can be made, without changing the scope of my invention.

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

1. In a trap for water pipes, the combination with the shell and outlet pipe, of a cylindrical tube arranged around said outlet pipe, and within the shell, a diaphragm arranged on the top of said cylindrical tube and adapted to rest, when in normal position on the top of said outlet pipe, and a removable cover securely fastening said diaphragm to the said cylindrical tube, all said parts, substantially as described and for the purposes set forth.

2. In a trap for water pipes, the combination with the body, its top, the inlet- and the outlet pipe, of a cylindrical tube surrounding the upper portion of the outlet pipe, a diaphragm arranged on the top of said cylin-

dricul tube and adapted to rest, when in normal position, on the top of said outlet pipe, and a weight depending from the center of said diaphragm and adapted to control the latter
5 and the cylindrical tube, all said parts, substantially as described and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 27th day of July, 1892.

THOMAS J. BROGAN.

Witnesses:

ALFRED GARTNER,
JAMES J. VAN HORENBERG.