(No Model.)

E. S. HYDE.

COMBINED FLUSH TANK AND MANHOLE.

No. 500,000. Patented June 20, 1893.

Fig. 1.

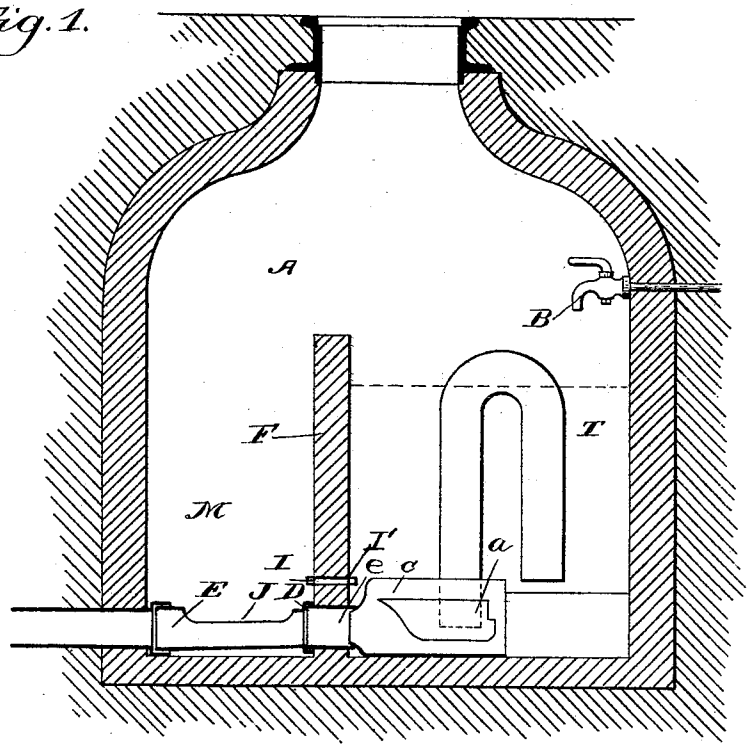
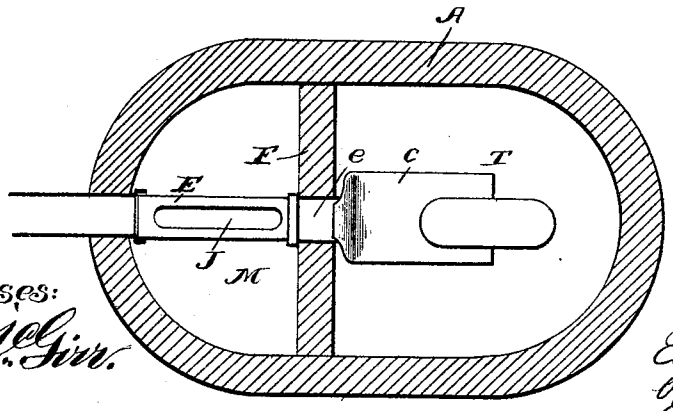


Fig. 2.



Witnesses:
J. B. McGirr.
Raymond H. Dyer.

Inventor:
Edward S. Hyde
by Frank L. Dyer
Attorney.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

EDWARD S. HYDE, OF DUBUQUE, IOWA.

COMBINED FLUSH-TANK AND MANHOLE.

SPECIFICATION forming part of Letters Patent No. 500,000, dated June 20, 1893.

Application filed March 4, 1892. Serial No. 423,762. (No model.)

To all whom it may concern:

Be it known that I, EDWARD S. HYDE, a citizen of the United States, residing at Dubuque, in the county of Dubuque and State of Iowa, have invented certain new and useful Improvements in a Combined Flush-Tank and Manhole; and I do hereby declare the following to be a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to the construction and care of sewers and consists generally in combining a "manhole" with a "flushing tank," whereby obstructions may be more easily removed from the flushing apparatus and the sewer pipes.

In the construction and care of sewers, especially those of small diameters, it becomes necessary to construct, at short intervals, what are called "manholes" into which those having the care of the sewer can enter and inspect and clean the sewer pipes. It also becomes necessary, at the upper extremities of the sewer pipes, or what are called "dead ends," to construct flush tanks or reservoirs, which will, when filled with water automatically empty themselves suddenly into the sewer pipes and thus flush and clean them out. These tanks are usually supplied with an additional pipe, connecting the sewer on the outside of the tank with the tank near the top, in order that there may be a perfect communication of air with the flushing apparatus, which is generally siphonic and also that the warm air of the sewer may keep the tank from freezing. Again, whenever the flushing apparatus now in use, becomes obstructed, from any cause, before the one having charge of the sewer, can enter the tank to remove the obstruction or repair the same, the water must be first bailed out or removed in some way and if the sewer becomes obstructed between the flush tank and the next nearest manhole, it is necessary under the present system of sewers, to clean them from the manhole back up to the flush tank, from the fact there is no opening from the tank into the sewer pipe except through the flushing apparatus and this is not of sufficient size to introduce the "scraper" with which to clean the sewer down to the manhole.

The object of my invention is to avoid these various defects in the present modes of caring for sewers and to so combine the manhole with the flush tank that one can enter the tank and remove any obstruction without removing the water used in flushing or he can mechanically flush the sewer if the flushing apparatus for any cause will not work and while in the tank can help operate the "scraper" between the tank and the next nearest manhole, or otherwise to clean the sewer pipes, the same as between two manholes. I also do away with the additional pipe from the sewer to the top of the siphon for supplying air to operate the siphon and to protect the tank from freezing, all of which will be more fully hereinafter described and claimed.

For the better understanding of my invention, attention is invited to the accompanying drawings in which—

Figure 1, is a section of my tank and manhole combined. Fig. 2, is a plan view of the same.

Like letters denote corresponding parts in both of the figures.

A little to one side of the middle of the tank A, I construct a water tight partition F, extending up about two-thirds of the height of the tank, dividing the lower part of the tank A, into two parts or spaces T, and M. Through the lower middle of this partition F, I cut the hole I, about four or five inches in diameter and insert in it a water tight plug I'. The object of this is to draw off the water from the flushing part of the tank, whenever it is necessary either to repair the flush tank or to mechanically clear out the sewer pipe by flushing it. Under the partition F, I also insert the end D, of the sewer pipe E, and connect it with the basin C, of the flushing apparatus to carry the water from the flushing apparatus into the sewer E.

I supply the space T, with the flushing apparatus *a*, and the basin C, and the faucet B, for supplying water to the flushing apparatus. It will be seen that all of the furniture of the space T, may be of any well known construction. I have shown the siphonic system, as being the one most usually employed in this vicinity.

Along the floor of the space N, runs the sewer pipe E, which is open along its upper

surface its entire length in the space M, as shown at J. The object of this construction will presently appear.

The manner of operating my device is as follows: Whenever the flushing apparatus becomes obstructed or the sewer needs cleaning, the one having the care of the sewer, enters the man-hole, without first having to bail out the water in the flush tank space T, and stand in the space M. Now standing in the space M, he can reach over the partition wall F, and remove any obstruction, which is above or around the upper part of the flushing apparatus *a;* but if the obstruction be below, in and around the basin C, then he can pass his hand through the pipe D, and remove it. If he desires to remove the water from the space T, to flush the sewer or to clean the tank T, he pulls out the plug I′ in the hole I, and allows the water to escape rapidly into the sewer E, through the open part J. This will flush the sewer pipe the same as the flushing apparatus. Again if the sewer pipe becomes obstructed he can pass a float, to which is attached a scraper down through the sewer E, to the party in the next nearest man-hole and the two can operate the scraper the same as between any two adjacent man-holes and thus clean out the sewer. The air to operate the siphon and to prevent freezing will escape into the tank through the opening J, in the sewer pipe E, and thus dispense with the extra pipe now in use in most flush tanks.

It will be seen that a man-hole constructed in this manner and containing a flushing apparatus combines all the advantages of a man-hole and flush tank and avoids all the inconveniences of the flush tank now in use.

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

A device of the character described, consisting of a chamber "A," a vertical partition "F" near the center thereof and dividing the chamber "A" into two portions, "M" and "T," the portion "T" containing the flushing mechanism "*a*" and the faucet "B," the portion "M" containing the sewer "E" connected with the flushing mechanism "*a*" by the uncovered portion "J" and a water tight removable plug "I′" within the opening "I" of the partition "F."

EDWARD S. HYDE.

Witnesses:

MONROE M. CADY,

JOS. NEEDHAM.