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L. E. MARSCHNER

WATER SERVICE CLEANER AND STERILIZER

Filed Nov. 3, 1922

Fig. 1.

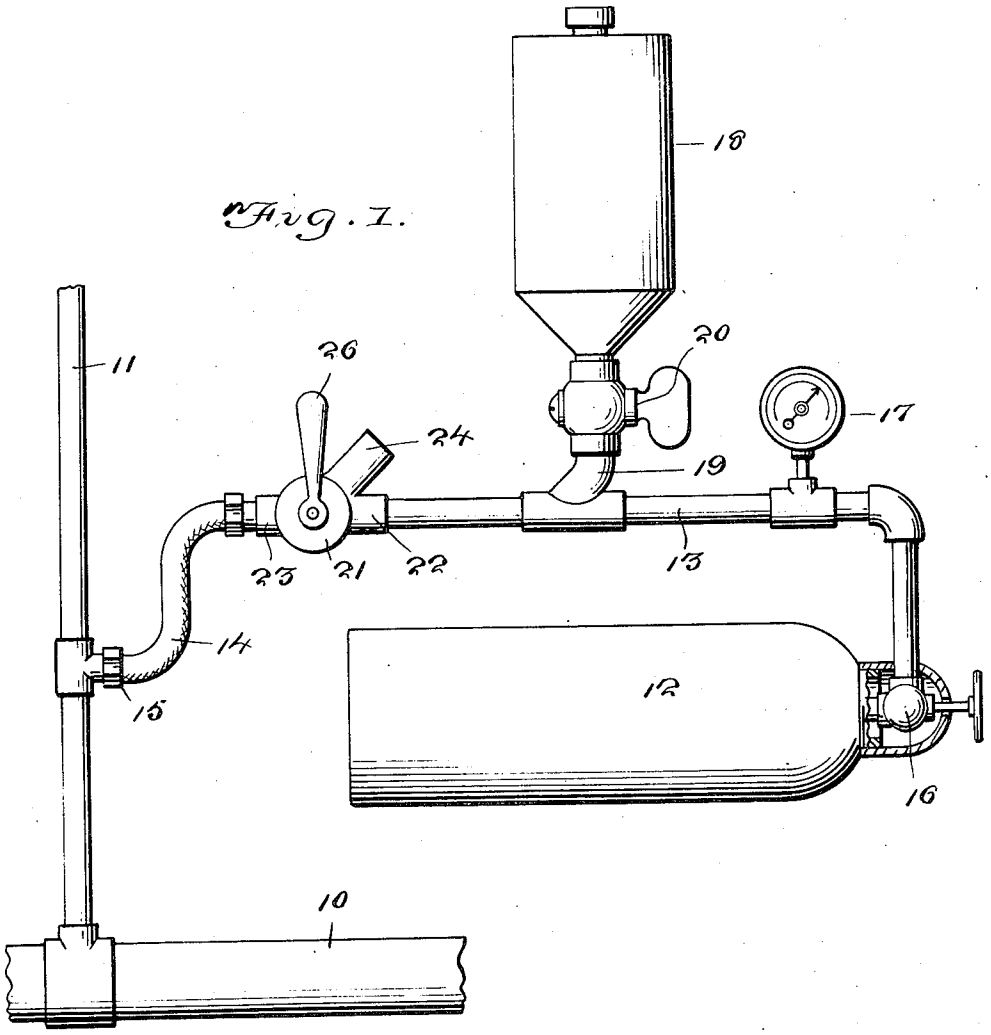
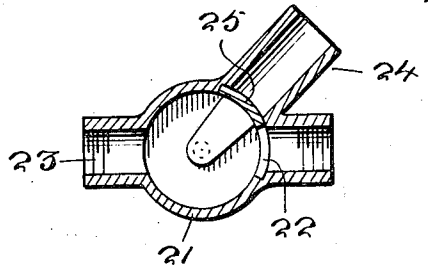


Fig. 2.



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WITNESS:

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UNITED STATES PATENT OFFICE.

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WATER-SERVICE CLEANER AND STERILIZER.

Application filed November 3, 1922. Serial No. 598,953.

To all whom it may concern:

Be it known that I, LOUIS E. MARSCHNER, a citizen of the United States, residing at Wheeling, in the county of Ohio and State of West Virginia, have invented new and useful Improvements in Water-Service Cleaners and Sterilizers, of which the following is a specification.

This invention relates to apparatus for cleaning pipes or conduits and has for an object the provision of means whereby a cleaning agent may be forced through a water supply or other system for the purpose of removing sediment or other extraneous matter which might collect therein, provision being made whereby this sediment or matter is loosened and forced from the pipe or system by back pressure.

With the above and other objects in view, the invention further includes the following novel features and details of construction, to be hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the appended claims.

In the drawings—

Figure 1 is a view illustrating one application of the invention.

Figure 2 is an enlarged sectional view through the three-way control valve.

Referring in detail to the drawings, wherein like characters of reference denote corresponding parts, the invention is shown as being connected to a pipe system such as the water supply system of a building, the reference character 10 indicating a water main and 11 a service pipe through which the water from the main 10 is supplied to a building.

The invention which is shown as connected to the system includes a pressure tank 12, which may contain gas, air or other liquid under pressure and this tank is shown as connected to the service pipe 11 by a pipe 13, the latter including a flexible section 14 which is connected to the service pipe as shown at 15. The means of connection shown is only one of many which may be employed, for example, the pipe 14 may be connected to a spigot or valve within a building. Pressure from the tank 12 into the pipe 13 may be regulated by a valve 16 and the amount of pressure passing through the pipe 13 may be readily ascertained by means of a gauge 17 which is connected in the pipe. The pressure from the tank 12 is utilized to force a cleansing agent into the water supply system for the purpose of loosening sediment or other extraneous matter which clogs or interferes with proper circulation through the system, especially where the water supply is of a muddy character. For this purpose there is provided a container 18 which is adapted to contain a mixture of rock salt and soda, or some other cleansing agent which, when forced into the supply system will accomplish the purpose above stated. The container 18 is connected to the pipe 13 by means of a pipe 19 and the latter is controlled by a valve 20 so that the amount of rock salt and soda passing into the system may be regulated.

Connected within the pipe 13 at a point between the supply system and the connection with the container 18, is a valve 21. This valve is provided with oppositely arranged ports 22 and 23, so as to provide communication between the supply system, the tank 12 and container 18. In addition, the valve is provided with an outlet port 24 which may be in communication with the sewer or the port may discharge into a suitable receptacle. Further included in the valve 21 is a control member 25 which has connected thereto a handle 26 and this member 25 is adapted to close either the port 22 or the port 24, as clearly shown in Figure 2 of the drawings.

In the use of the invention, after the same has been connected to a supply system in the manner before stated, the valve 16 is opened and air under pressure passes through the pipe 13 into the system. The valve 20 may then be opened and the action of this air will function to draw the rock salt and soda from the container 18 and to force the latter under pressure into the water supply system, the valve member 25 being arranged in the position shown in Figure 2. After a sufficient amount of the cleansing agent has been forced into the system, the valve member 25 is operated to close the port 22 and open the port 24, whereupon back pressure within the water supply system will force whatever loosened sediment and rock salt and soda remaining within the system, through the port 24 to a sewer, or to a suitable receptacle.

The invention is susceptible of various changes in its form, proportions and minor details of construction and the right is herein reserved to make such changes as properly

fall within the scope of the appended claim.

Having described the invention what is claimed is:—

In an apparatus for cleaning systems, a pressure tank, a pipe connecting said tank with said system, a valve for controlling the discharge of pressure from the tank, a container in communication with the connecting pipe, a valve located between the container and pipe and a three-way valve located in said pipe between the container and system.

In testimony whereof I affix my signature.

LOUIS E. MARSCHNER.