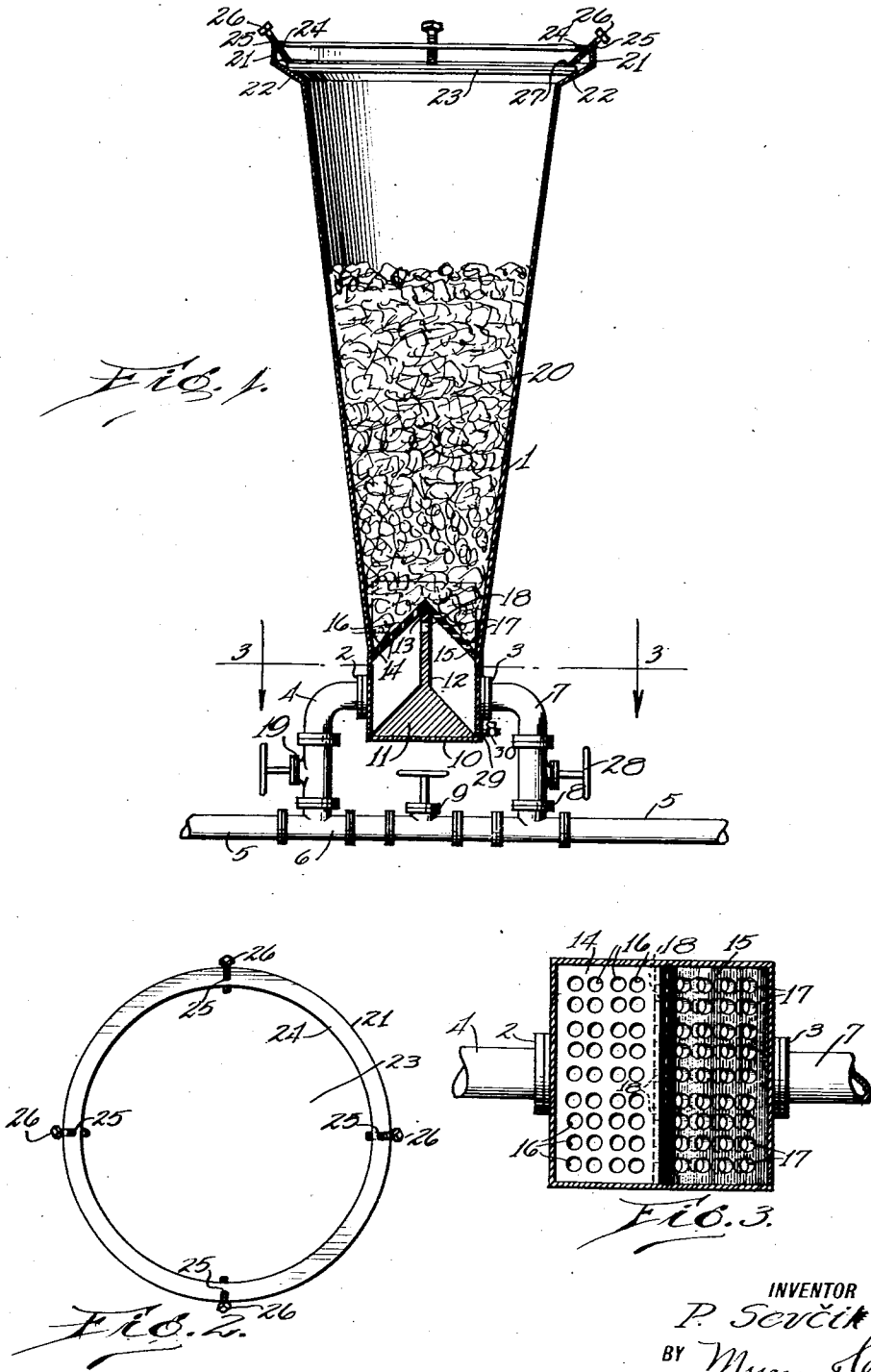


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 DEVICE FOR FEEDING COMPOUNDS IN WATER SYSTEMS.
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1,409,248.

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DEVICE FOR FEEDING COMPOUNDS IN WATER SYSTEMS.

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To all whom it may concern:

Be it known that I, PAUL SEVČIK, a citizen of Czecho-Slovakia, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Devices for Feeding Compounds in Water Systems, of which the following is a full, clear, and exact description.

10 My invention relates to devices for feeding compounds to the liquid in water systems for the purpose of purifying the water, for preventing the accumulation of scale on the apparatus in the system, or for other purposes, and it consists in the combinations, constructions and arrangements herein described and claimed.

An object of my invention is to provide a simple device for feeding a compound to a liquid, such as water, in a liquid system that is adapted to be incorporated in the system without extensive changes in the latter being necessary.

25 A further object of my invention is to provide a device of the character described that can be operated at will and which, when inoperative, will not interfere with the functioning in the ordinary manner of the system to which the device is applied.

30 A further object of my invention is to provide a device of the character described that is designed to conduct a proportionate part of the liquid passing through the apparatus to which the device is applied through a compound container so that the composition of the liquid after treatment can be determined.

40 A further object of my invention is to provide a device of the character described that is simple in construction, thoroughly effective for the purpose intended, and not likely to get out of order easily.

Other objects and advantages will appear in the following specification, and the novel features of the invention will be particularly pointed out in the appended claims.

My invention is illustrated in the accompanying drawings, forming part of this application, in which—

50 Figure 1 is a view partly in section, showing the device operatively applied,

Figure 2 is a plan view of the device, and

Figure 3 is an enlarged section along the line 3—3 of Figure 1.

55 In carrying out my invention, I provide a container 1 that is made of any suitable ma-

terial, such as a light metal and is provided adjacent its lower end with an inlet 2 and a diametrically opposed outlet 3. A conduit 4 communicatingly connects the inlet 2 with a water main or conduit 5 that is a part of the system in which the device is installed. The conduit 4 is joined to the water main 5 in any suitable manner, as by means of an ordinary T 6. In a like manner, the outlet 3 is connected by a conduit 7 with the main 5, as at 8. A section of the main is thus interposed between the T's 6 and 8 and in this section is disposed a valve 9 for controlling the flow of the liquid along the main 5.

Resting upon the bottom 10 of the container 1 and secured thereto in any suitable manner is a baffle member having a base 11 that is preferably triangular in section and has an integral vertical extension 12 along its apex. The extension 12 is secured at its upper end to a partition 13 that is angular in cross section, the sides 14 and 15 thereof being parallel with the corresponding sides of the base 11. The side 14 of the partition is perforated and the perforations 16 therethrough preferably extend vertically. The side 15 is likewise perforated and its perforations 17 extend at right angles to the perforations 16. The extension 12 is formed with a plurality of horizontally aligned openings 18 therethrough adjacent its upper edge.

From the foregoing description of the various parts of the device, the operation thereof may be readily understood. A valve 19 in the conduit 4 is normally closed so that the liquid circulating through the system of which the main 5 is a part, is prevented from entering the container 1. When it is desired to feed a suitable compound 20 to the liquid passing along the main 5, the valve 19 is opened and the valve 9 is closed, thereby diverting the liquid through the conduit 4 into the lower part of the container 1. Part of the liquid passing through the inlet 2 into the space below the partition 13 will pass through the openings 18 in the extension 12 and thence through the outlet to the water main, without coming into direct contact with the compound 20. The remaining part of the liquid will pass upwardly through the vertical openings 16 in the inclined side 14 into the space occupied by the compound 20 and after absorbing some of the compound will pass through the horizontal openings 17 in the inclined side 15 into the space be-

low the partition 13 at the opposite side of the extension 12 and thence through the outlet 3 to the water main so that the treated liquid will be mingled with the liquid circulating through the system to effect a desired result. Obviously, a desired proportionate part of the liquid passing through the main may be conducted into the space above the partition 13 by regulating the number and size of the openings 16 with respect to the number and size of the openings 18.

It is essential when the device is applied to systems operating under a high pressure that the container 1 be liquid tight. The upper portion 21 is therefore enlarged, thus defining an inclined portion 22 on which a lid or cover 23 rests. The upper portion 21 of the container is formed with an inwardly extending flange 24 having a plurality of spaced apart threaded openings 25 therethrough. A bolt 26 is provided for each opening and is screwed therethrough to engage with a socket 27 in the upper surface of the lid or cover 23 so that the latter may be forced downwardly tightly against the inclined portion 22 of the container to prevent the passage of the liquid between the lid and the walls of the container should the pressure in the system to which the device is applied be so great as to force the liquid upwardly in the container against the lid. One of the bolts 24 has its end fast in the lid 23 so that operation of this bolt will draw the lid upwardly to permit the displacement thereof conveniently, as when it is desired to place a quantity of the compound 20 within the container. If required, the conduit 7 may be provided with a valve 28 that may be closed to prevent the flow of a liquid into the container on account of back pressure.

The device can be applied to any suitable part of a water system and the suitable compound placed therein will be fed to the liquid as desired. It will not be necessary in applying the device to a liquid system that any extensive changes be made in the apparatus installed in the system. The device is simple, relatively inexpensive and thoroughly effective for the purpose intended. Obviously, many forms of the device other than that illustrated may be made without departing from the spirit and scope of the invention disclosed in the foregoing specification and outlined more particularly in the appended claims. I therefore consider such modifications and adaptations as my own.

It will be observed that a drain pipe 29 communicating with the space below the partition 13 and having connected therewith a valve 30 for controlling the flow of a liquid therethrough provides a means for draining the container 1 when required, as for instance when the supply of compound above the partition has been depleted and it is de-

sired to place an additional supply of the compound therein.

I claim:

1. A device of the character described comprising a container having separate inlet and outlet openings adjacent its bottom, said inlet and outlets being adapted for connection with conduits in a liquid system, and a transverse partition disposed in said container above the inlet and outlet to provide an upper compartment adapted to hold a compound, said partition being perforated to permit the circulation of the liquid through the compound compartment.

2. A device of the character described comprising a container having diametrically opposed inlet and outlet ports through its walls adjacent the lower end thereof, said ports being adapted for connection with conduits incorporated in a liquid supply system, a partition disposed in said container above the ports to provide an upper compartment adapted to hold a compound, said partition being angular in cross section and having each side thereof perforated, the openings through the two sides being arranged to extend therethrough at different angles, and means disposed between the angular partition and the bottom of the container for causing the liquid entering the container to pass into the compound holding compartment through the openings in one side of the angular partition and to pass from the compound holding compartment through the openings in the other side of the angular partition.

3. A device of the character described comprising a container having diametrically opposed inlet and outlet ports through its walls adjacent the lower end thereof, said ports being adapted for connection with conduits incorporated in a liquid supply system, a partition disposed in said container above the ports to provide an upper compartment adapted to hold a compound, said partition being angular in cross section and having each side thereof perforated, the openings through the two sides being arranged to extend therethrough at different angles, and means disposed between the angular partition and the bottom of the container for causing some of the liquid entering the container to pass into the compound holding compartment through the openings in one side of the angular partition and to pass from the compound holding compartment through the openings in the other side of the angular partition.

4. A device of the character described comprising a container having diametrically opposed inlet and outlet ports through its walls adjacent the lower end thereof, said ports being adapted for connection with conduits incorporated in a liquid supply

system, a partition disposed in said container above the ports to provide an upper compartment adapted to hold a compound, said partition being angular in cross section and having each side thereof perforated, the openings through the two sides being arranged to extend therethrough at different angles, means disposed between the angular partition and the bottom of the container for causing the liquid entering the container to pass into the compound holding compartment through the openings in one side of the angular partition and to pass from the compound holding compartment through the openings in the other side of the angular partition, a removable lid fitting within the upper end of the container, and means carried by the container and engaging with the lid for forcing the latter into engagement with the walls of the latter to effect a tight connection therewith.

PAUL SEVČIK.