Dec. 30, 1930. E. COLLENBURG 1,786,561

DEVICE FOR SOAPING FLOWING WATER

Filed Feb. 16, 1928

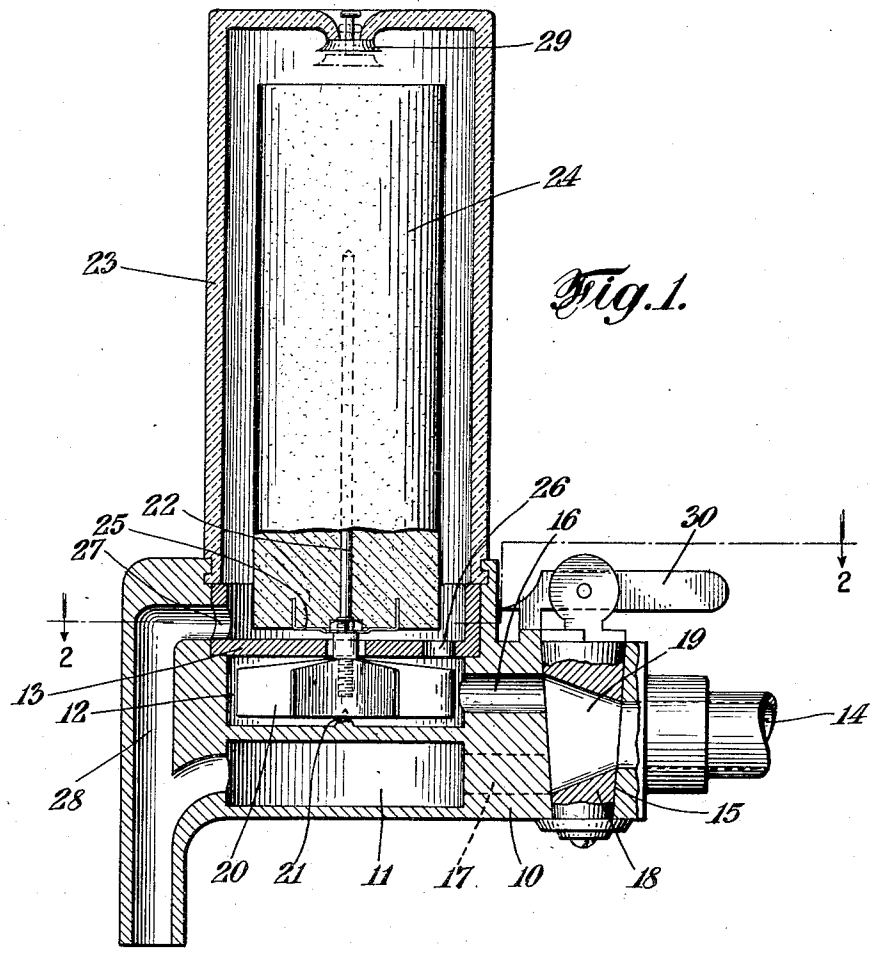
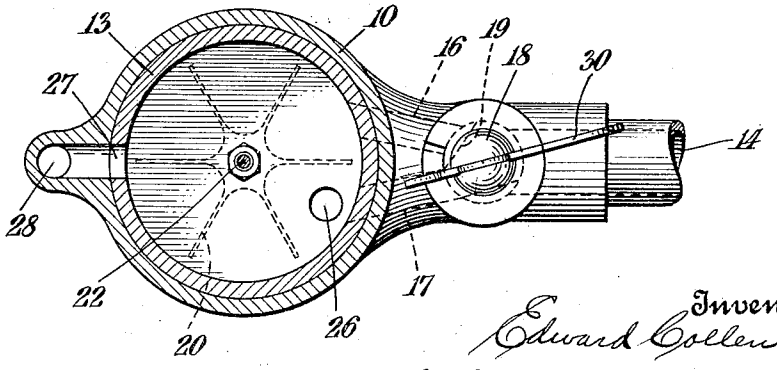


Fig. 1.

Fig. 2.



Inventor
Edward Collenburg
By his Attorneys.
Kenyon & Kenyon

Patented Dec. 30, 1930 1,786,561

UNITED STATES PATENT OFFICE

EDWARD COLLENBURG, OF CORONA, NEW YORK

DEVICE FOR SOAPING FLOWING WATER

Application filed February 16, 1928. Serial No. 254,639.

This invention relates to improvements in devices for soaping flowing water, and has for an object to provide an inexpensive and efficient device of this character.

In one embodiment of the invention, the device comprises a casing divided by a partition into two communicating compartments. A rotatably mounted spindle extends through the partition and has its ends extending into the two compartments. Means are provided for attaching a bar of soap to one end of the spindle and at the other end of the spindle is provided an impeller wheel. A conduit leads into the compartment in which the impeller wheel is mounted, and through this conduit water is introduced into the compartment. As the water flows through this compartment, it turns the impeller, thereby causing rotation of the soap carried by the spindle and arranged in the other compartment. The water is discharged from the first compartment into the second, where it comes in contact with the rotating bar of soap, after which it passes into a conduit by means of which it is delivered to the place where it is to be used. A by-pass is provided for delivering water directly without passing through the soaping chamber. Valve means are provided for directing the water either through the by-pass or through the soaping chamber or for shutting off the water entirely, as desired.

Other objects, novel features and advantages of this invention will be apparent from the following specification and accompanying drawings wherein

Fig. 1 is a vertical section through a device embodying the invention, and

Fig. 2 is a section on the line 2—2 of Fig. 1.

10 designates a casting or the like formed with a lower chamber 11 and an upper chamber 12 which is closed by a cup-shaped cover 13. A conduit 14 leads to a chamber 15 from which lead conduits 16 and 17. These conduits are angularly spaced with respect to each other and are arranged at different levels. The conduit 16 leads to the chamber 12 and the conduit 17 leads to the chamber 11. In the chamber 15 is arranged a plug 18 having a passageway 19 and which constitutes a valve for controlling the flow of water from the conduit 14 to the conduits 16 and 17. The passageway 19 at one end is circular and of approximately the same cross section as the conduit 14 but diverges vertically and converges horizontally toward the other end. Thus when in one position water may flow from the conduit 14 only to the conduit 16 and in another position it may flow from the conduit 14 only to the conduit 17 and when in intermediate position the water is shut off entirely.

An impeller wheel 20 is arranged in the chamber 12 and is rotatably mounted upon the pivot 21. A spindle 22 has one end threaded into the impeller wheel and extends through an aperture in the cover 13 into a cylindrical member 23 carried by the casting 10. The cylindrical member 23 forms with the casting and cover 13 a casing divided into two compartments, the cover 13 acting as the dividing partition. A bar of soap is arranged within the cylindrical member 23 and is supported by the spindle 22 for rotation therewith. A disk 25 is provided on the spindle for rotation therewith and is provided with teeth projecting into the bar of soap to cause the same to rotate with the spindle. A port 26 leads from the chamber 12 into the compartment formed by the cylindrical member 23 and port 27 leads from said compartment into a conduit 28 which also is in communication with the chamber 11. A reversed relief valve 29 is provided in the top of the cylindrical member 23.

When soapy water is desired the plug 18 is turned by means of a handle 30 to permit water to flow from the conduit 14 through the conduit 16 into the chamber 12 and thence through the port 26 into the soap compartment and out through the port 27 into the conduit 28. The water in passing through the chamber 12 causes rotation of the impeller wheel 20 which rotation is communicated to the soap 24. The soap is thus rotated in the water in its compartment to effectively soap the water flowing therethrough. The soapy water is then discharged through the conduit 28 and used as desired. The valve 29 permits quick drainage of the soap compartment after

the water has been turned off. When clear water is desired, the plug 18 is turned to put the conduits 14 and 17 into communication and the water passes directly through the chamber 11 into the conduit 28.

The above described apparatus is efficient in accomplishing soaping of the water due to the agitation of the soap therein accomplished by means of the impeller wheel 20. Also it is simple in structure and inexpensive to manufacture. It is of course to be understood that various modifications may be made in the structure without in any way departing from the spirit of the invention as defined in the appended claim.

I claim:

A device of the character described comprising a casing having a horizontal partition dividing it into upper and lower compartments, an impeller wheel rotatably mounted in the lower compartment, a soap carrier arranged in the upper compartment, means connecting said soap carrier to said impeller wheel for rotation therewith, a port connecting said compartments, an inlet conduit leading to said lower compartment and an outlet conduit leading from the bottom of said upper compartment, and a reversed relief valve for said upper compartment.

In testimony whereof, I have signed my name to this specification.

EDWARD COLLENBURG.