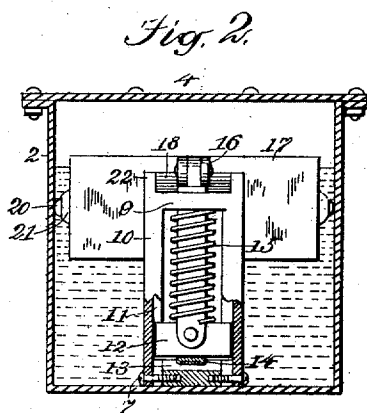
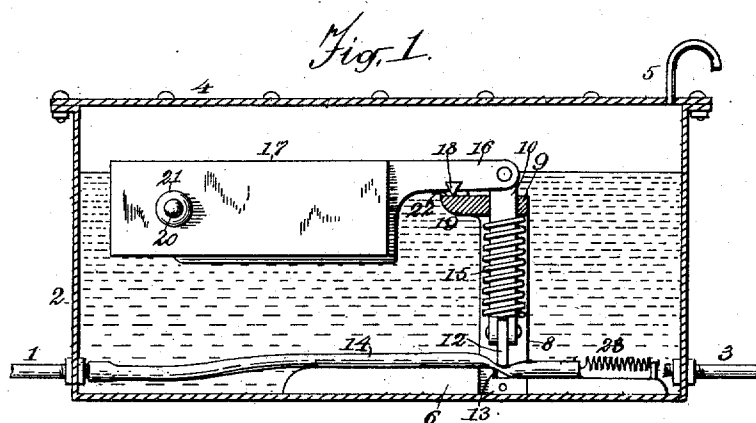


C. L. BESLER.
 FLUID REGULATING DEVICE.
 APPLICATION FILED MAY 10, 1915.

1,208,274.

Patented Dec. 12, 1916.



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UNITED STATES PATENT OFFICE.

CHARLES L. BESLER, OF WINFIELD, KANSAS.

FLUID-REGULATING DEVICE.

1,208,274.

Specification of Letters Patent.

Patented Dec. 12, 1916.

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To all whom it may concern:

Be it known that I, CHARLES L. BESLER, a citizen of the United States, residing at Winfield, in the county of Cowley and State of Kansas, have invented certain new and useful Improvements in Fluid-Regulating Devices, and 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.

This invention relates to water distribution, and more particularly to the supplying of water to the radiators of gasoline engines, especially those of automobiles.

The object of the invention is to provide a regulating apparatus adapted to maintain a uniform level of water in a radiator, the supply of such water being furnished from an auxiliary tank set at a higher level than the radiator.

The nature of the invention is fully disclosed in the description and claims following, reference being had to the accompanying drawing, in which—

Figure 1 is a side elevation of a device embodying my invention, the water chamber and a part of the valve mechanism being shown in section. Fig. 2 is an elevation of the same as seen from the right end of Fig. 1, a part here also being shown in section in a line central to the valve or cut-off.

As above mentioned, the device has been designed more especially for use in connection with automobiles, and to insure a uniform and sufficient supply of water to the radiator, the need of which is many times urgent during long trips in an arid country. It will therefore be assumed that the intake pipe 1 for the chamber 2 communicates with a suitable supply-tank, not shown, and that the outlet-pipe 3 in the same manner communicates with the radiator, not shown. It will also be understood that the desired water level in the radiator is the same as that indicated in the water chamber 2. This chamber is provided with a suitable cover 4, preferably removable, and should be suitably vented, as by the vent-pipe 5.

Suitably attached to the bottom of the regulating chamber is a base-plate 6, to which is connected, as by screws 7, a standard 8, of stirrup form, as shown in Fig. 2. Its upper end 9 is pierced to receive the shank of a plunger 10, and its sides are

grooved at 11 to form guides for the edges of a cut-off plate or blade 12 pivoted to the plunger at the lower end. The lower edge of this blade coincides with a shoulder 13 formed in the base, the purpose of which is to present two rather sharp angles to a section of rubber hose or tubing 14 interposed between them, the better to crimp and perfectly close said tubing with very little pressure. One end of the tubing is slipped tightly over the inner end of the supply pipe, and to the free end is attached a light spring, 23 which keeps the tube taut, and when the blade lifts overcomes any tendency on the part of the tube to stick together, or to become set in a flattened position and so obstruct the flow of water from the supply-pipe. The blade is pivoted to the plunger so as to have a slight play or rocking action, whereby it may automatically adjust itself to inequalities in the tubing, or to any position of the same on its seat. Between the blade and the upper end of the standard is a compression spring 15 which coöperates with the float to force the blade down and crimp the tube. This spring should be strong enough to partially overcome the weight of the float when not buoyed by the water, the use of both the spring and float tending to steady the action of the float and to render it sensitive to variations of the water level. To the upper end of the plunger is pivoted the arm 16 of a float 17, the weight of which, as fulcrumed at 18 on the ledge 19, is sufficient, out of water, to overcome the pressure of the spring 15. When the float is buoyed up by the water in the chamber as shown, however, the spring acts with full efficiency, and the water is shut off at the desired level. The float is guided and steadied in its lateral position by guides 20, which in practice may be balls held in suitable cups 21. Guides 22 may also be provided for the ends of the fulcrum 18, as shown.

The device as described secures that certainty and delicacy of action which is necessary in the conditions of service to which it is subjected, involving frequent changes in the position of the automobile, and varied but constant vibration. This too is accomplished without extraordinary refinement in the construction of the parts, a matter of advantage not only in manufacture, but in the practical operation of the device as well.

It is to be understood that in practice the parts exposed to the water are of non-rusting metal or material, such as aluminum or brass.

Having thus described my invention, I claim:

1. In a water regulator of the class specified, a chamber with an inlet and outlet, a compressible tube connected with one of them, a pinching blade and a notched seat therefor cooperating to crimp and close said tube, a plunger pivoted to said blade, guiding supports for the blade and plunger, a spring tending to press said blade into crimping position, and a float fulcrumed on said support connecting pivotally with the plunger, and provided with lateral guides,

substantially as and for the purpose set forth.

2. In a water-regulator of the class specified, a chamber provided with inlet and outlet, a compressible tube connecting with one of them, spring actuated means for closing said tube, float-actuated means for releasing the same, and a spring connected with the free end of the tube to stretch the same, and prevent obstructive crimping or flattening of the same. 20 25

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES L. BESLER.

Witnesses:

C. E. SNOWDEN,
GEORGE W. HAER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."