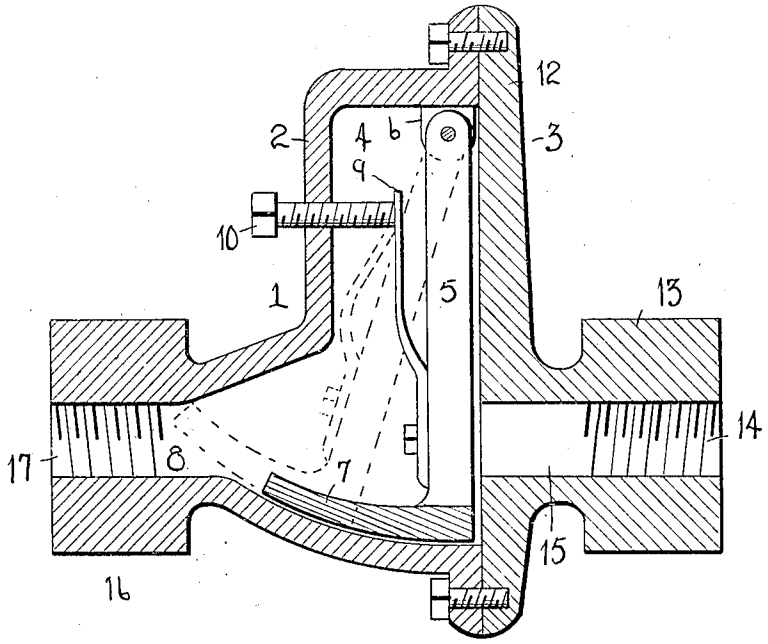
No. 876,066. PATENTED JAN. 7, 1908.

A. KLEVER.

AUTOMATIC FLUID PRESSURE REGULATOR.

APPLICATION FILED JUNE 24, 1907.



Witnesses
L. B. James
C. A. Griesbauer

Inventor
A. Klever
by A. B. Williamson & Co
Attorneys

UNITED STATES PATENT OFFICE.

ARCHIE KLEVER, OF HANNIBAL, MISSOURI.

AUTOMATIC FLUID-PRESSURE REGULATOR.

No. 876,066. Specification of Letters Patent. Patented Jan. 7, 1908.

Application filed June 24, 1907. Serial No. 380,491.

To all whom it may concern:

Be it known that I, ARCHIE KLEVER, a citizen of the United States, residing at Hannibal, in the county of Marion and State of Missouri, have invented certain new and useful Improvements in Automatic Fluid-Pressure Regulators; and I do 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 improvements in fluid pressure regulators.

The object of the invention is to provide a device of this character by means of which an even, regular pressure of fluid may be automatically maintained, irrespective of the initial pressure of the fluid.

With this object in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawing is shown a longitudinal, sectional view of the regulator.

Referring more particularly to the drawing, 1 denotes the regulator casing, which is preferably formed in two parts, or sections, 2, and 3, which are suitably connected together to form a fluid-tight joint by means of screws or other fastening devices. The section 2 of the casing is provided with a chamber 4, in which is adapted to swing a pressure-regulating plate 5. The plate 5 is hingedly or pivotally connected at its upper end to an inwardly projecting lug, 6, formed on the upper wall of the chamber 4, as shown. On the lower end of the plate 5 is formed a laterally projecting segmental shoe, 7, which, as the plate 5 is moved by the pressure of the fluid passing through the casing, will be moved across the discharge passage 8 in the outer side of the section 2 of the casing, as is shown in dotted lines in the drawing.

The plate 5 is provided on its outer side with a pressure-regulating spring 9, which is adapted to engage the inner end of an adjusting screw 10, which is screwed into the chamber 4 through one side of the section 2 of the casing, as shown.

The section 3 of the casing comprises a plate 12, adapted to close the open side of the chamber 4 of the section 2, and on said plate, adjacent to its lower end, is formed a laterally projecting boss 13, having formed therein a threaded socket 14, which communicates at its inner end with an inlet passage 15, extending through the plate 12 of the section 2, and opening into the chamber 4 substantially in line with the discharge opening 8 in the opposite side of said section 2.

On the outer side of the section 2 is formed a laterally projecting boss 16 having formed therein a threaded socket 17, which communicates with the discharge opening 8. Into the sockets 14 and 17 are adapted to be screwed the ends of the fluid supply pipes with which the regulator is connected.

In operation the fluid entering through the inlet passage 15 engages the plate 5, and swings the same over away from the inner wall of the section 3 of the casing against the tension of the regulator spring, 9. This swinging movement of the plate 5 causes the shoe 7 to move across the discharge opening 8 of the casing to a greater or less degree, thereby letting more or less fluid flow through the discharge passage and thus regulating the pressure. The spring 9 serves to restore the plate to its normal position and to open the discharge port 8, when the pressure of the water decreases, thus letting a larger flow of fluid pass through said discharge opening. The screw 10 is provided to regulate the tension of the spring 9 to cause the regulator to maintain the desired pressure of fluid, irrespective or regardless of the initial pressure passing into the inlet opening 15.

From the foregoing description, it will be seen that the pressure of the fluid is automatically controlled by the regulator to maintain an even, regular pressure through the discharge end of the regulator casing.

Having thus fully described my invention, what I claim as new and desire to secure by Letter-Patent, is:

1. A fluid pressure regulator comprising a casing having an inlet and a discharge port, a pressure regulating plate hingedly mounted in said casing and adapted to be acted upon by the pressure of the fluid entering the latter, a segmental cut-off shoe formed integral with and projecting laterally from said plate, and adapted to be swung thereby across the discharge port of said casing, a pressure regulating spring arranged on said regulating plate, and an adjusting screw to regulate the tension of said spring, substantially as described.

2. An automatic fluid pressure regulator comprising a casing formed in sections adapted to be secured together to form a

fluid-tight joint, one of said sections having formed therein an inlet port and the other section having formed therein a hollow chamber and a discharge port connected thereto, a regulating plate hingedly mounted to swing in the chamber of said sections, a shoe formed on the lower end of the plate and adapted to be swung thereby across the discharge port in said section of the casing, a regulating spring secured to said plate, and an adjusting screw adapted to be screwed into engagement with said spring to regulate the tension thereof, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ARCHIE KLEVER.

Witnesses:
JAS. J. SHACKLEFORD,
OWEN KLEVER.