R. E. CASE & F. M. WAIT.

DEVICE FOR CONTROLLING THE FLOW OF WATER UNDER PRESSURE.

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1,132,439. Patented Mar. 16, 1915.

Fig. 1

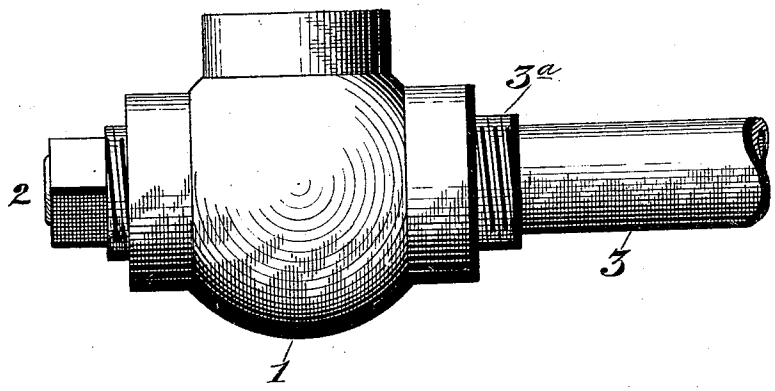
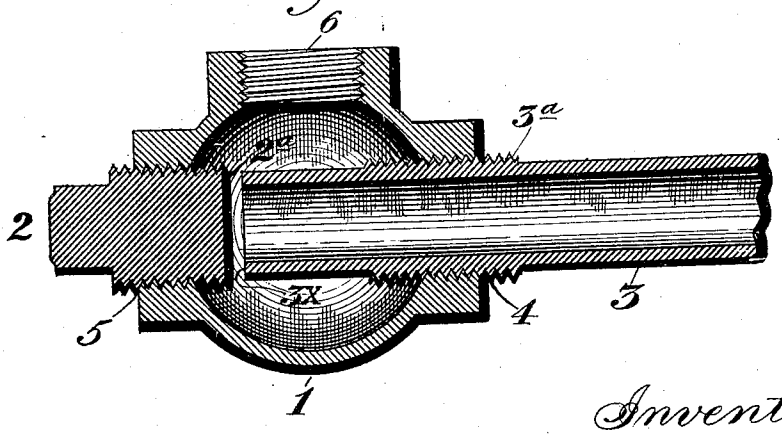


Fig. 2



Witnesses

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DEVICE FOR CONTROLLING THE FLOW OF WATER UNDER PRESSURE.

1,132,439. Specification of Letters Patent. Patented Mar. 16, 1915.

Application filed April 13, 1914. Serial No. 831,683.

To all whom it may concern:

Be it known that we, ROBERT E. CASE and FRANCIS M. WAIT, citizens of the United States, residing at St. Edward, in the county of Boone and State of Nebraska, have invented certain new and useful Improvements in Devices for Controlling the Flow of Water Under Pressure, of which the following is a specification.

Our invention relates to devices for controlling the flow of fluids under pressure, and our object is to provide a device of this character which will be simple, cheap, and durable in its construction, and thoroughly reliable in its operation; one that will require no further attention after it has been installed, and will be practically indestructible.

The invention consists in certain novel combinations and arrangements of parts, as will be hereinafter described and claimed, reference being had to the accompanying drawings which form a part of this application.

One of the principal features of our invention consists in a globe T-fitting having diametrically alined openings and a third radial opening extending at right angles to said alined openings; one of the alined openings having an adjustable pipe extending into the fitting preferably across the path of the radial opening, and the other alined opening having an adjustable plug adapted to be adjusted toward or from the inner end of said pipe; the radial opening being adapted to connect with an inlet pipe.

Referring to the drawings; Figure 1 is a side elevation of our improved flow regulator; and Fig. 2 is a central longitudinal section of Fig. 1.

The numeral 1 indicates a globe T-fitting having the alined horizontal openings 4 and 5, and the vertical opening 6 radiating toward the center of the fitting, all of said openings being threaded. The outlet pipe 3 passes through the opening 4 into the fitting, said pipe being provided near its inner end with a threaded peripheral enlargement 3^a adapted to fit the threaded opening 4. This pipe has its inner end 3^x trued in a plane at right angles to the longitudinal extent of the pipe. The opening 5 is adapted to receive the threaded plug 2 which also has its inner face 2^a trued in parallelism with the inner end of the pipe 3. The pipe 3 extends into the fitting past the opening 6 where its end face 3^x comes into greater or less proximity to the end face 2^a of the plug. The radial opening 6 is adapted to receive an inlet pipe (not shown).

The operation of our device is as follows: Water flows in through the opening 6 and strikes the side of the pipe 3, which breaks its force, so to speak, and it then escapes into the outlet pipe 3 through the space between the inner end of said pipe and the end face 2^a of the plug. In order to do this the water is compelled, when it first enters the fitting and strikes the pipe 3, to turn slightly backward from the course it would otherwise take, in order to reach the end of the pipe. In this way the momentum of the column of water in the pipe line will be effectually checked when it reaches the regulator, and will thence forward flow in an even and steady current. When it is desired to regulate the flow of water, all that is necessary is to give the plug a turn to bring its inner end face nearer to or farther from the end of the pipe 3, according as it is desired to increase or diminish the quantity of water. The same effect would be produced by giving a proper turn to the pipe 3, but when that pipe is once connected up in the pipe line, to turn it would be difficult and inconvenient; but the plug 2 is always accessible, and being connected with the fitting only can always be adjusted without inconvenience. The inner end faces of the plug 2 and the pipe 3 are ground true, so that if it is ever necessary to entirely stop the flow of water, it can be done effectually by bringing them into engagement with each other.

Water being very heavy and only slightly elastic, cannot be compressed to any considerable extent, and hence a moving column of water when suddenly stopped subjects the pipe line—fittings and all—to a very severe strain; and in cases where these sudden stops are frequent, they produce a very telling effect upon the regulating devices now in use, causing them to be constantly getting out of order, and in that way causing much waste and annoyance, and requiring frequent adjustments.

Our device as herein set forth is so strong and simple and durable, that when properly adjusted it will work for an indefinite length of time without any attention whatever, and

is practically indestructible, as has been proved in a number of instances where the devices are in practical use.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:—

1. A flow regulator, comprising a fitting having alined openings and a third opening at an angle to the alined openings; a pipe adjustable in one of the alined openings with its free end facing the other alined opening; and a plug in the last named opening adjustable toward and from the said free end of the pipe.

2. A flow regulator comprising a fitting having an inlet opening and an outlet opening at an angle to the inlet opening with the wall of the fitting opposite said outlet opening closed; and an outlet pipe in the outlet opening extending into the fitting past the inlet opening with its free end facing said closed wall of the fitting, said pipe being adjustable toward and from said closed wall to bring its free end into different degrees of proximity to said wall.

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