(No Model.)

M. F. ABBÉ.

PRESSURE REGULATOR.

No. 429,591. Patented June 10, 1890.

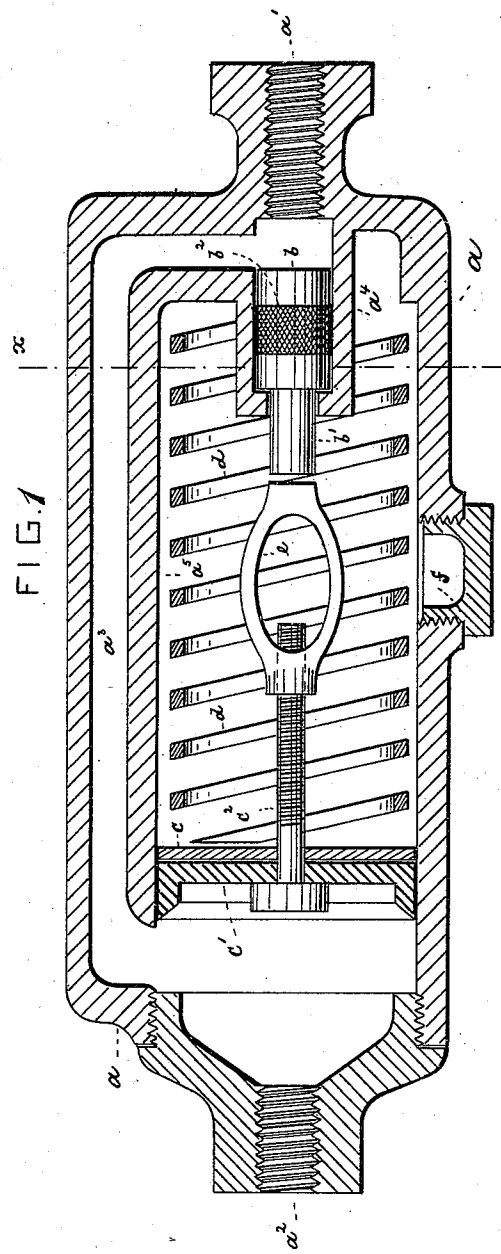


FIG. 1

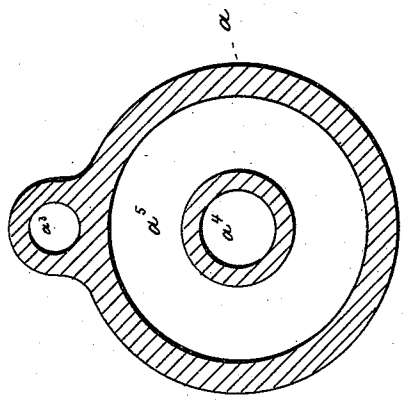


FIG. 2

WITNESSES

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UNITED STATES PATENT OFFICE.

MAX F. ABBÉ, OF SOHO, NEW JERSEY.

PRESSURE-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 429,591, dated June 10, 1890.

Application filed March 28, 1890. Serial No. 345,679. (No model.)

To all whom it may concern:

Be it known that I, MAX F. ABBÉ, of Soho, Essex county, New Jersey, have invented an Improved Pressure-Regulator, of which the following is a specification.

This invention relates to a device by means of which the volume and pressure of liquids and of steam may be regulated.

It consists in the various features of improvement more fully pointed out in the claim.

In the accompanying drawings, Figure 1 is a vertical longitudinal section, partly in side view, of my improved pressure-regulator. Fig. 2 is a cross-section of the casing *a* alone on line *x x*, Fig. 1.

The letter *a* represents a casing or box having an inlet a' and outlet a^2 that communicate with each other by water or steam way a^3. Opposite to inlet a' there is a tubular socket a^4, within which a cylindrical plug *b* is free to move. This plug is provided with an arm b', projecting out of the socket, and is surrounded by a rubber packing b^2. Opposite the outlet a^2 there is a head *c* of a considerably larger diameter than plug *b*. This head is free to slide within the cylindrical portion a^5 of the casing *a*, and bears against a strong coiled spring *d*, placed likewise within said cylindrical portion. Upon head *c* a washer c' may be placed. To the head *c* there is secured a screw-rod c^2, placed opposite to arm b'. This screw-rod carries a sleeve or push-piece *e*, the free end of which is adapted to bear against arm b'. The push-piece *e* may be adjusted by screwing up and down on rod c^2, so that the distance between the push-piece and the arm b' may be varied. To gain access to push-piece *e*, even while the apparatus is in action, the casing *a* is provided with an opening opposite to the push-piece. This opening may be closed by a screw-plug *f*.

The operation of the device will be readily understood. The water, steam, or other matter enters inlet a', passes through channel a^3, and leaves at outlet a^2. It will press upon head *c*, which in turn, by rod c^2 and push-piece *e*, will press upon arm b' of plug *b*. Thus the plug will be moved toward opening a' and diminish the size of said opening to reduce the volume of water or steam admitted. Should the pressure fall beneath the desired limit the spring *d* will force the head *c* outward, and the plug *b* will be free to be also pushed backward by the steam or water pressure. In order to regulate the pressure it is only necessary to adjust the distance between the parts *e* b'. The farther the push-piece *e* is set away from arm b' the farther must the push-piece be moved before it reaches the arm, and consequently before it affects the size of the inlet-opening.

What I claim is—

The combination of casing *a*, having inlet and discharge openings, with a sliding plug *b* opposite the inlet-opening, a sliding head *c* opposite the discharge-opening, a screw-rod c^2 secured to the head *c*, an adjustable push-piece *e* upon the screw-rod, placed opposite plug *b* and adapted to be set at different distances from the same, and with spring *d* bearing against head *c*, substantially as specified.

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Witnesses:
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