(No Model.)

H. GLANZ.

PRESSURE REGULATOR.

No. 566,164. Patented Aug. 18, 1896.

Fig. 1.

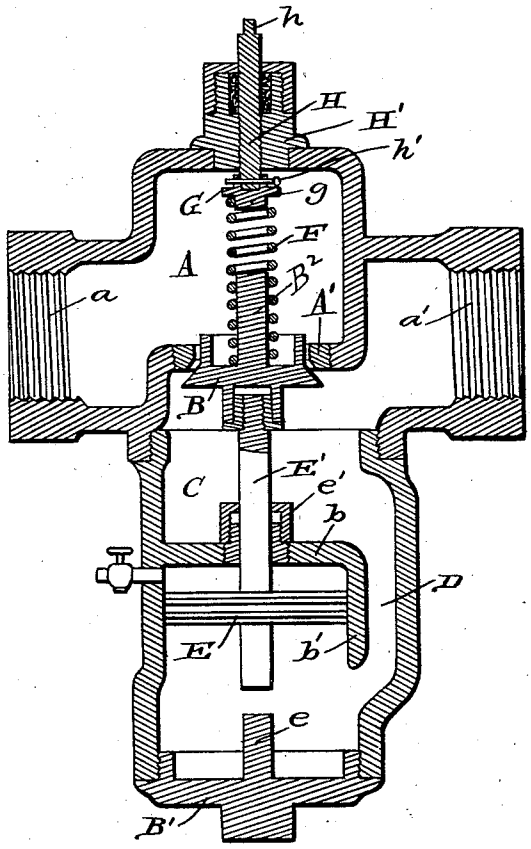
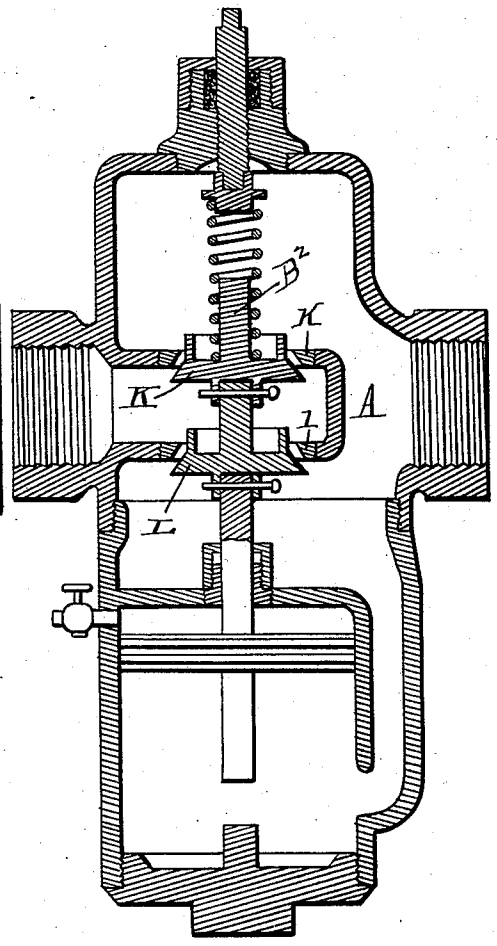


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY GLANZ, OF LOUISVILLE, KENTUCKY.

PRESSURE-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 566,164, dated August 18, 1896.

Application filed February 29, 1896. Serial No. 581,291. (No model.)

To all whom it may concern:

Be it known that I, HENRY GLANZ, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Steam-Pressure Regulators; and I 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 certain new and useful improvements in steam-pressure regulators, and it has for its object, among others, to provide a simple and cheap construction readily applied and which shall be automatic in its action, positive and reliable, and not liable to get out of order.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be particularly pointed out in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a substantially central section through my improvement. Fig. 2 is a view of a slight modification.

Like letters of reference indicate like parts in the views.

Referring now to the details of the drawings by letter, A designates the upper portion, formed with a screw-threaded opening *a* upon one side for the reception of the supply-pipe and upon the opposite side with a screw-threaded neck or nipple *a'* for the connection of another pipe. The part A is formed with a valve-seat A', against which is adapted to be seated the valve B.

C is the lower part, being preferably of brass and secured to the upper part by screw-threaded engagement, as shown, and provided with a detachable end B'. Within the cylinder formed by the lower part is a diaphragm *b*, having a depending portion *b'*, leaving a passage-way D for the steam down the one side and in the cylinder beyond the piston E, which is carried by the stem E', which is limited in its downward movement by the stud or pin *e*, carried by the head or end B', the said stem moving through a stuffing-box *e'* and at its upper end detachably connected with the valve B. This valve carries the projection or pin B^2, around which is a spring F, the upper end of which is held around the boss *g* of the coupling G, which is connected with the screw-threaded stem H, having screw-threaded engagement with the cap H', and having its outer end made polygonal or otherwise, as seen at *h*, to engage a wrench or other tool by which it may be turned in or out to regulate the pressure on the spring. The connection between the stem and the coupling G is preferably a pivotal one formed by means of the pin *h'*, passed through ears on the coupling and through the lower end of the stem, as shown.

The operation will be readily understood, and is, briefly stated, as follows: The valve B is opened by the spring above and closed by the delivery-pressure below as the steam passes through the side passage-way D beneath the piston and forces the same upward and seats the valve. The piston is provided with suitable packing-rings to render it steam-tight.

Modifications in details may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

In Fig. 2 I have shown two valves K and L, carried by the stem and adapted to be seated upon suitable seats *k l*, formed in the upper portion A and connected with the stem or piston-rod by means of the pins in a similar manner to the connection between the stem H and the coupling G in the form shown in Fig. 1.

The opening in the upper end of the cylinder and controlled by the valve is for the purpose of letting compressed air out of the cylinder when not in operation.

Having thus described the invention, what is claimed as new is—

1. The combination of the upper and lower parts detachably connected together, the lower part being formed with a diaphragm with integral depending portion and side passage, a piston-rod working through said diaphragm, a piston carried by the rod below the diaphragm and a valve carried by the piston-rod above the diaphragm fitted to a seat in the upper part, said piston-rod being disconnected at its upper end and a spring

acting upon the upper face of the valve to normally force it downward, substantially as described.

2. The combination of the upper and lower parts detachably connected together, the lower part being formed with a diaphragm with integral depending portion and side passage, a piston-rod working through said diaphragm, a piston carried by the rod below the diaphragm and a valve carried by the piston-rod above the diaphragm fitted to a seat in the upper part, said piston-rod being disconnected at its upper end and a spring acting upon the upper face of the valve to normally force it downward, a coupling connected with the upper end of said spring and a rotatable stem pivotally connected with said coupling and means for adjusting said stem vertically, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

HENRY GLANZ.

Witnesses:
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ROBT. B. SPIES.