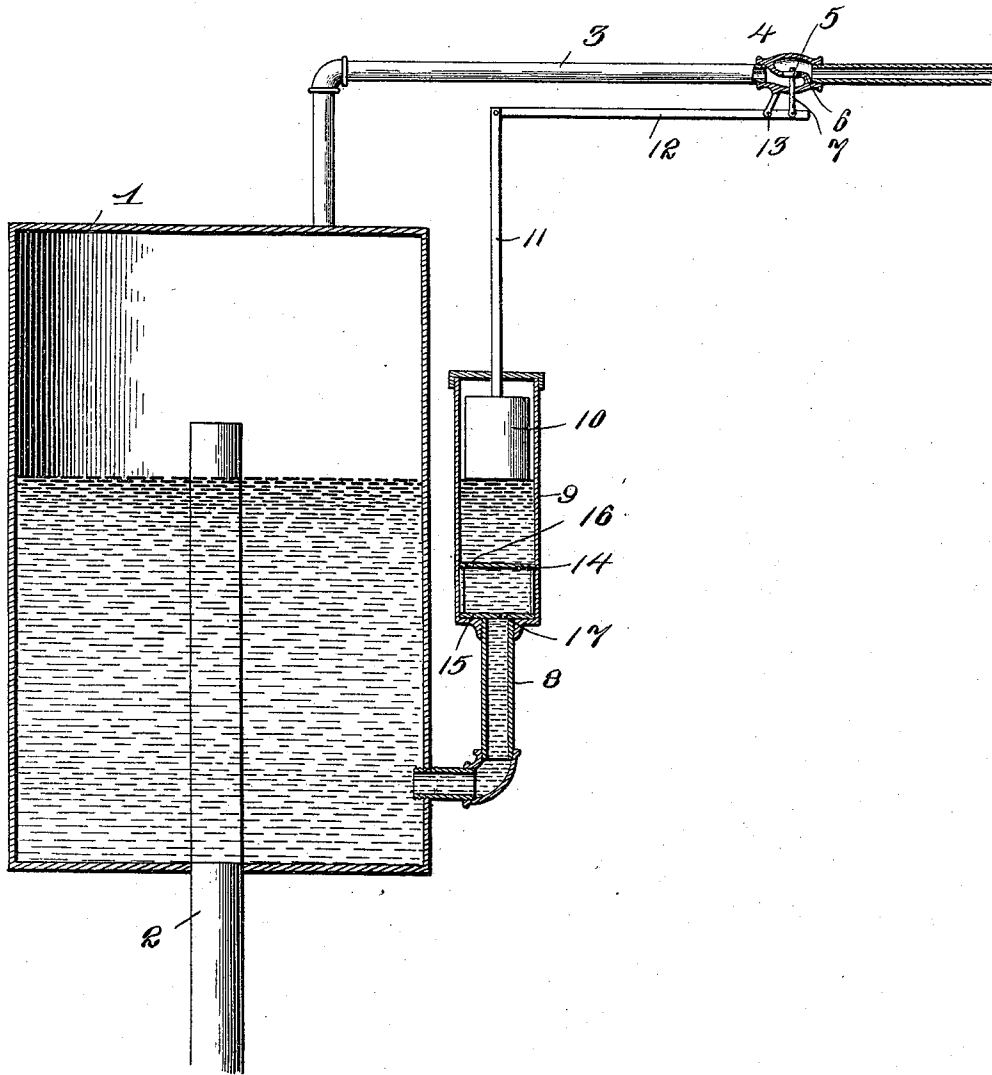


(No Model.)

J. PERRY.
REGULATOR FOR FEED WATER HEATERS.

No. 570,227.

Patented Oct. 27, 1896.



Witnesses

H. Koerth.
A. E. Hoff

By *his* Attorneys,

Inventor
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UNITED STATES PATENT OFFICE.

JOHN PERRY, OF MISSOURI VALLEY, IOWA, ASSIGNOR OF ONE-HALF TO
JAMES W. ANDERSON, OF SAME PLACE.

REGULATOR FOR FEED-WATER HEATERS.

SPECIFICATION forming part of Letters Patent No. 570,227, dated October 27, 1896.

Application filed March 17, 1896. Serial No. 583,578. (No model.)

To all whom it may concern:

Be it known that I, JOHN PERRY, a citizen of the United States, residing at Missouri Valley, in the county of Harrison and State of Iowa, have invented a new and useful Regulator for Feed-Water Heaters, of which the following is a specification.

My invention relates to regulating devices for feed-water heaters, and the object in view is to provide a regulator located outside of the heater for controlling the valve in the water-supply pipe, the construction and combination of parts being such as to prevent vibration of the regulator by reason of the pulsations of the pump and exhaust.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claim.

In the drawing I have illustrated in section a feed-water regulator constructed in accordance with my invention and applied in operative position to a feed-water-heater valve and connections.

1 designates a feed-water heater into which extends the exhaust 2 from the engine, and communicating with the heater is the water-supply pipe 3, provided with a controlling-valve 4. This valve may be of any ordinary construction, but in the drawing it is shown as consisting of a disk 5, arranged to fit a seat 6 and provided with a stem 7.

Arranged in communication with the feed-water heater near its bottom by means of a connecting-pipe 8 is a cylinder 9, in which operates a float 10, connected by means of a stem 11 to the lever 12; and this lever, which is fulcrumed at 13, is connected to the stem 7 of the controlling-valve. Without other means than those above described the pulsations of the pump and the exhaust from the engine would cause vibration of the float and a corre-

sponding vibration of the controlling-valve, and in order to prevent this vibration I arrange near the lower end of the cylinder 9 a plurality of transverse disks or diaphragms 14 and 15, which are spaced or arranged at intervals, and are provided, out of alinement with each other, with perforations 16 and 17, which prevent the rapid movements of the water in the heater from being communicated to the interior of the cylinder. The size of the perforations in the disks varies according to the amount of water used by the pump at each stroke. Any desired number of these disks may be employed, but two are usually found sufficient, the perforations being small in order to allow a gradual change of level of the water in the cylinder to correspond with the change in the heater.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

The combination with a feed-water heater, and a controlling-valve arranged in a supply-pipe for said heater, of an exterior regulator in communication with the interior of the heater, a float arranged in said cylinder and operatively connected with the controlling-valve, and spaced disks disposed in the cylinder and each provided with a perforation, the perforations being out of alinement, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN PERRY.

Witnesses:

CLARENCE H. BELL,
JOHN ANDERSON.