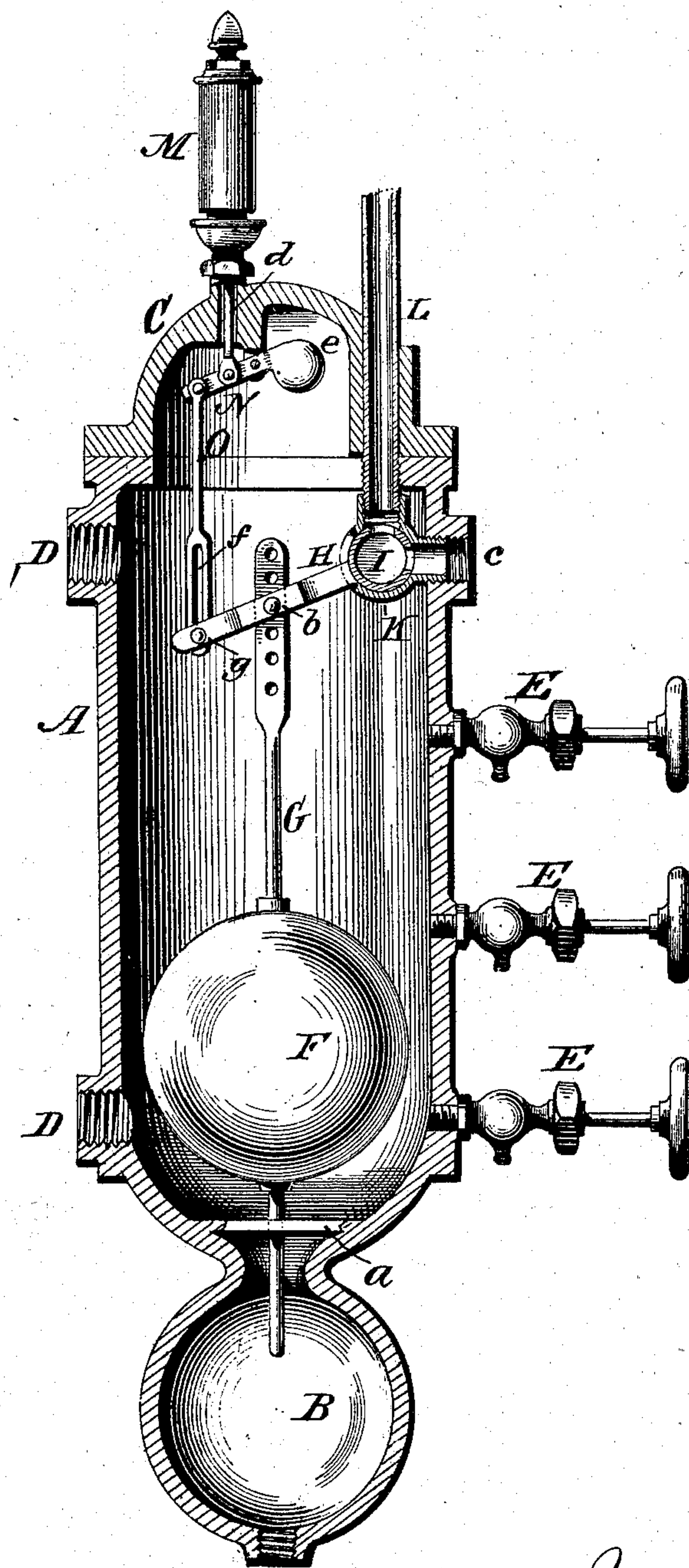


(No Model.)

A. ROTHFUSS.
FEED WATER REGULATOR.

No. 559,497.

Patented May 5, 1896.



Witnesses
J. Williamson.
Wm. Gidding.

Inventor
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per Cha. H. Fowler
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UNITED STATES PATENT OFFICE.

ADAM ROTHFUSS, OF WILLIAMSPORT, PENNSYLVANIA.

FEED-WATER REGULATOR.

SPECIFICATION forming part of Letters Patent No. 559,497, dated May 5, 1896.

Application filed October 31, 1895. Serial No. 567,506. (No model.)

To all whom it may concern:

Be it known that I, ADAM ROTHFUSS, a citizen of the United States, residing at Williamsport, in the county of Lycoming and State of Pennsylvania, have invented certain new and useful Improvements in Feed-Water Regulators; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawing, making a part of this specification, and to the letters of reference marked thereon.

The present invention has relation to certain new and useful improvements in devices for controlling the operation of steam-pumps by the rise and fall of the water in the boiler or tank into which the pump is forcing water.

The improved device consists in a closed vessel which is attached to the boiler where the level of the water is maintained, said connections being made through suitable means whereby steam is permitted to enter the upper and water in the lower portion, the water in the boiler and vessel always remaining the same level, as will be more fully described and claimed.

The accompanying drawing represents an elevation of my improved device, showing the vessel and other portions thereof in section, the vessel being indicated at A, and is provided at its lower end with a sediment-chamber B and at the upper end with a cap C. The vessel is also provided with the usual openings D for the usual pipes to form a connection between the vessel and boiler, and is also provided with the usual glass water-gage, said pipe connections and gage not being shown in the drawing.

The vessel A has the usual gage-cocks E, and within said vessel is the float F, which may be constructed of any suitable material and has connected thereto a stem G, said stem extending through the float and the lower end thereof passing through a guide *a*, while the upper end of the stem is flattened and is perforated at intervals for adjustably connecting it by means of the pin *b* with the lever H, which lever operates the valve I in the valve-casing K. The valve-casing is connected to the interior of the vessel and near the top thereof to a screw-threaded opening *c*, a pipe L connecting with the valve-casing and ex-

tending up through the cap C. Through a suitable pipe connection, which is not deemed necessary to show, a communication is made between the opening *c* and the pump, and the steam-pipe L connects with the boiler.

The valve I has two ports through which the steam passes to the pump and which are closed or partly closed to regulate the steam supply to the pump according to the height of water in the boiler.

On the top of the cap C is secured the whistle M, of the usual construction, the valve-stem *d* thereof being attached to a lever N, which lever has a weight *e* at one end, and to the opposite end is pivoted the upper end of a rod O. This rod at its lower end is formed with a slot *f*, which extends longitudinally thereof and connects with the free end of the lever H by means of a pin *g*, which pin extends through the slot and forms a connection between the lever and rod. The slot in the rod permits the valve-lever to be moved by the float until the steam is shut off from the engine or when the float has reached its predetermined lowest limit due to the fall of the water in the boiler, the pin *g* engaging with the rod O at the bottom of the slot *f* and opening the valve to the whistle. As the float rises by the increased rise of water in the boiler the valve to the whistle will be closed by the weight *e*.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a feed-water regulator, a suitable vessel provided with a float, a valve connecting therewith, a whistle, a weighted lever connecting with the valve-stem thereof, and intermediate connection between the weighted lever and the lever of the valve which controls the opening to the pump, substantially as and for the purpose set forth.

2. In a feed-water regulator, a suitable vessel, a steam-valve located therein, a lever for said valve, a whistle on the casing, a lever weighted at one end to close the valve to the whistle, a rod connecting the two levers, and a float for operating the levers to positively move the steam-valve in both directions and to open the valve to the whistle, substantially as and for the purpose described.

3. In a feed-water regulator, a suitable ves-

sel, a float located therein, a perforated stem
for adjustably connecting the float to steam-
valve lever, the weighted valve-lever for the
whistle, and the slotted rod for connecting the
5 two levers together, substantially as and for
the purpose set forth.

In testimony that I claim the above I have

hereunto subscribed my name in the presence
of two witnesses.

ADAM ROTHFUSS.

Witnesses:

J. CLINTON HILL,

H. RUSSELL HILL.