N. T. EDSON.

Feed-Water Regulator for Steam-Boilers

No. 197,258. Patented Nov. 20, 1877.

Fig. 1.

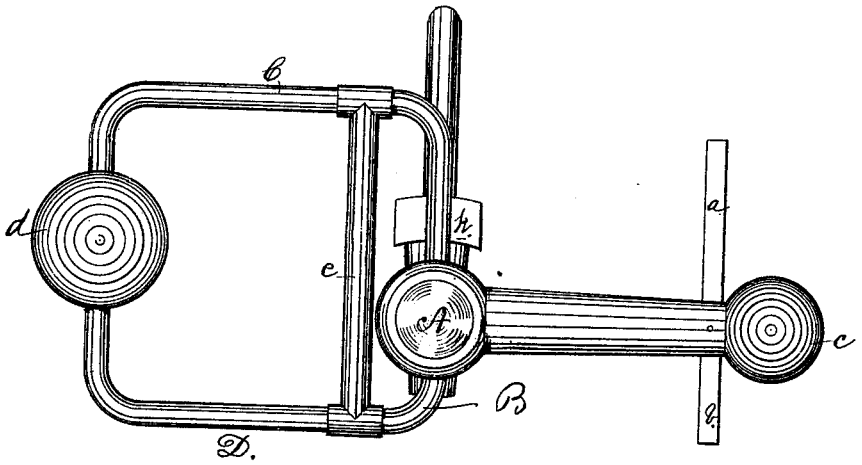
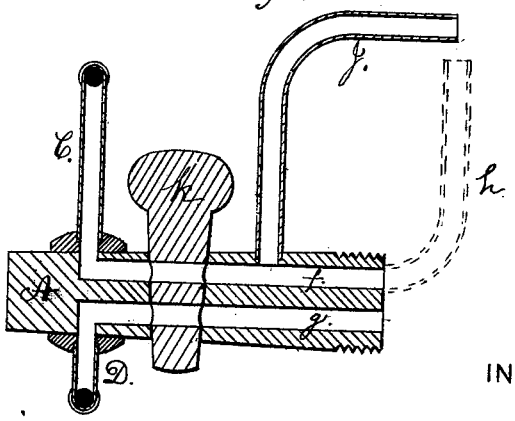


Fig. 2.



WITNESSES.

H. A. Jenkins.

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NATHANIEL T. EDSON, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN FEED-WATER REGULATORS FOR STEAM-BOILERS.

Specification forming part of Letters Patent No. **197,258**, dated November 20, 1877; application filed May 10, 1875.

To all whom it may concern:

Be it known that I, N. T. EDSON, of New Orleans, State of Louisiana, have invented a Feed-Water Regulator for Steam-Boilers, of which the following is a specification:

The object of my invention is to indicate the height of water in the boiler, to regulate the supply of feed-water, and to cause an alarm in case of failure of proper supply.

Figure 1 is a front view of my indicator and regulator, composed of shaft A, to be screwed into the boiler or otherwise made stable, at a level a little below a proper water-line, and lever B, composed of steam-pipe C and water-pipe D, weight *c*, and steam and water vessel *d*.

The lever is fitted with a steam-tight joint onto and near the outer end of shaft A. The rod *a*, pivoted to the lever, is intended to be put in connection with a whistle, and rod *b* with the feed-water valve.

The weight *c* should be sufficiently heavy to trip the valve and blow the whistle, and the vessel *d*, at the opposite end of the lever, sufficiently large so that when half full of water the lever will be balanced. The shaft A should be so located that when the water in the boiler is at a proper height the vessel *d* will be half full of water and the lever horizontal.

If the water in the boiler is raised above a proper height it will flow into the vessel *d*, causing that end of the lever to descend, and thereby cause rod *b* to close the water-feed valve. If the water in the boiler falls below a proper level, it will flow out of the vessel, and the weight will cause that end of the lever to descend, and thereby cause rod *b* to open the water-feed valve. If, from any cause, the water in the boiler continues to fall, with the valve open, the rod *a* will open a valve to the alarm-whistle.

e is a glass tube connected with the steam and water pipes C and D, to indicate the height of water in the boiler and show whether the lever is in action.

Fig. 2 is a sectional view of shaft A. *f* is a steam-passage, which forms a connection with steam-pipe C; and *g*, a passage which forms a connection with water-pipe, D at the junction of shaft A and lever B.

If the interior of the boiler will admit of it, shaft A is screwed into the boiler with pipe *h* in its end, and pipe J dispensed with. If not admissible, passage *f* terminates at its junction with steam-pipe J, the upper end of which passes into the boiler.

I do not confine myself to the attaching of weight C directly to lever B, as the same results can be produced by connecting a cord to the same, and to the lever C or D, and passing it over a pulley, and connecting it to a weight.

I claim as my invention—

1. Shaft A, with its steam and water passages *f* and *g*, in combination with lever B, composed of steam and water pipes C and D, vessel *d*, and weight *c*, as and for the purposes specified.

2. The combination of the glass tube *e* with shaft A and its steam and water passages, and with steam-pipe C and water-pipe D, substantially as and for the purposes set forth.

NATHL. T. EDSON.

Witnesses:

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