E. W. Manderille,

Steam-Boiler Indicator.

No. 84,201. Patented Nov. 17, 1868.

Fig. 1.

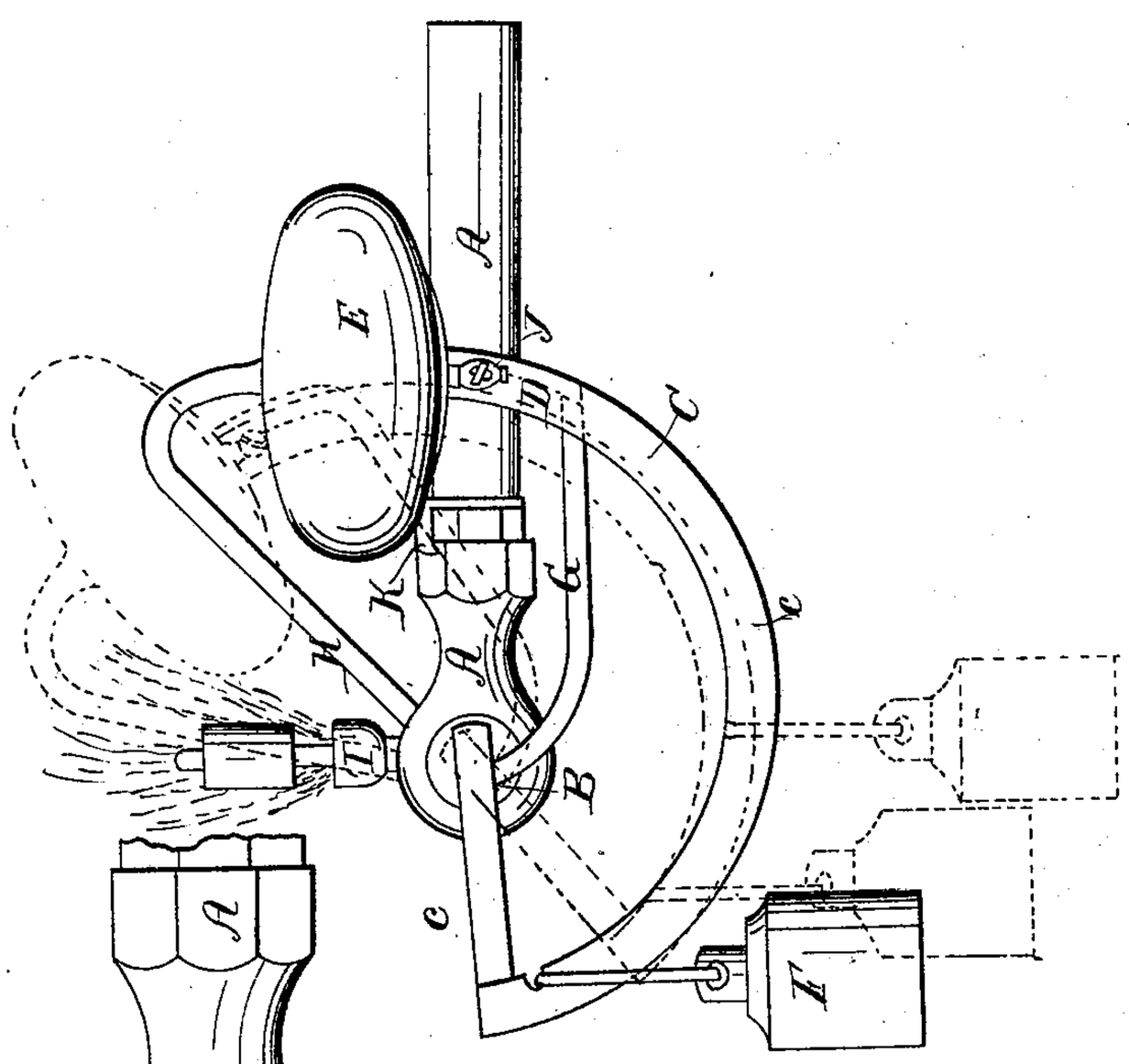


Fig. 3.

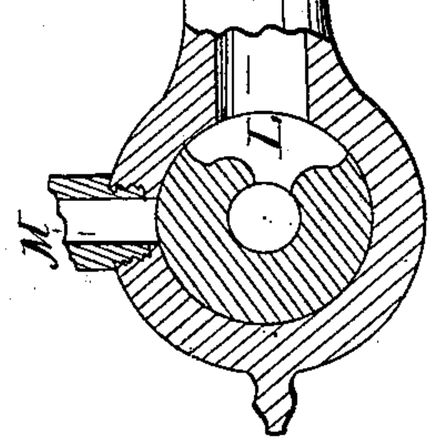
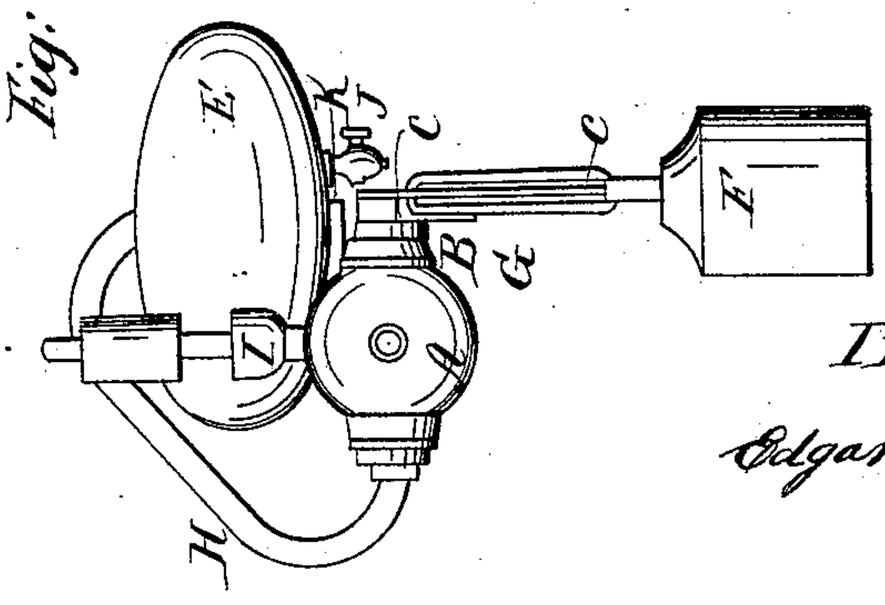


Fig. 2.



Witnesses;
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F. J. McElhaney

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United States Patent Office.

EDGAR W. MANDEVILLE, OF ITHACA, NEW YORK, ASSIGNOR TO HIMSELF AND CHARLES D. JOHNSON, OF SAME PLACE.

Letters Patent No. 84,201, *dated November* 17, 1868.

IMPROVEMENT IN LOW-WATER ALARMS FOR BOILERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, EDGAR W. MANDEVILLE, of Ithaca, Tompkins county, New York, have invented an Improved Low-Water Alarm; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters thereon.

Figure 1 is a side view of my alarm or signal;

Figure 2, an end view of the same; and

Figure 3, a section of the faucet or joint, showing the water and steam-passages through it.

My object is to make a self-acting alarm, such that it shall give a signal whenever the water becomes low in a steam-boiler.

For this purpose, I insert a faucet or plug in the vicinity of the desired low-water line of the boiler, and, by a curved or other-shaped lever, I hang a hollow globe, connected through the faucet by two tubes with the boiler. When the water is sufficiently high in the boiler, the globe is partially or wholly filled with water, and, acting as a counterpoise heavier than the weight on the other end of the lever, closes the faucet, but if the water is low, then the globe is emptied, and the weight being heavier than the globe, the lever moves, and the faucet with it, and steam escapes through and blows a steam-whistle.

These facts and this device are seen in the drawings, where, in fig. 1, A is the faucet-pipe, for introduction to the cavity of the boiler, and B the faucet or joint in the faucet, with the lever C fast to one end of the faucet.

At D, one end of the lever, the globe E is attached, and adjustably arranged at the other end of the lever is the weight F; and one pipe, G, connects with the lower part of the globe, and the other pipe, H, with the upper part of the globe, and both pipes through the faucet with the interior of the boiler.

At I is the steam-whistle, held by a pipe in such relation to the faucet that when the globe shuts the faucet there is no steam admitted to the whistle; and when the low-water change takes place the steam of the boiler blows the whistle, as is indicated by the red lines.

The yellow lines indicate the position of the weight F, when the test is made to keep the indicator in order as often as is necessary.

The try-cock J clears the pipes and globe, and tests them, and the rest K limits both the downward and upward motion of the globe and its connected parts.

In fig. 2, the same letters show the same parts, and, in fig. 3, L is the connected-pipe passage through the joint or faucet, and M the steam-passage to the whistle.

The advantages and uses of my invention are apparent to those skilled in the art to which it appertains.

Claims.

1. The faucet B, as arranged and constructed, whereby the opposite ends of the same receive the two pipes, G and H, one from the upper and the other from the lower part of the globe E, as set forth.

2. The construction of the faucet B, with reference to the pipes G and H, and the arrangement of the steam-passage in the faucet leading to the whistle, whereby, when the globe E is full of water, no steam can pass to the whistle, but, when empty, the turning of the faucet opens the passage, and the whistle gives the alarm.

3. The arrangement of the direct connection between the globe F and faucet B by the lever C, whereby to operate these several parts in combination, through the three-parted passage in the faucet, as set forth.

EDGAR W. MANDEVILLE.

Witnesses:

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