

L. L. LEE.
Low Water Indicator.

No. 95,595.

Patented Oct. 5, 1869.

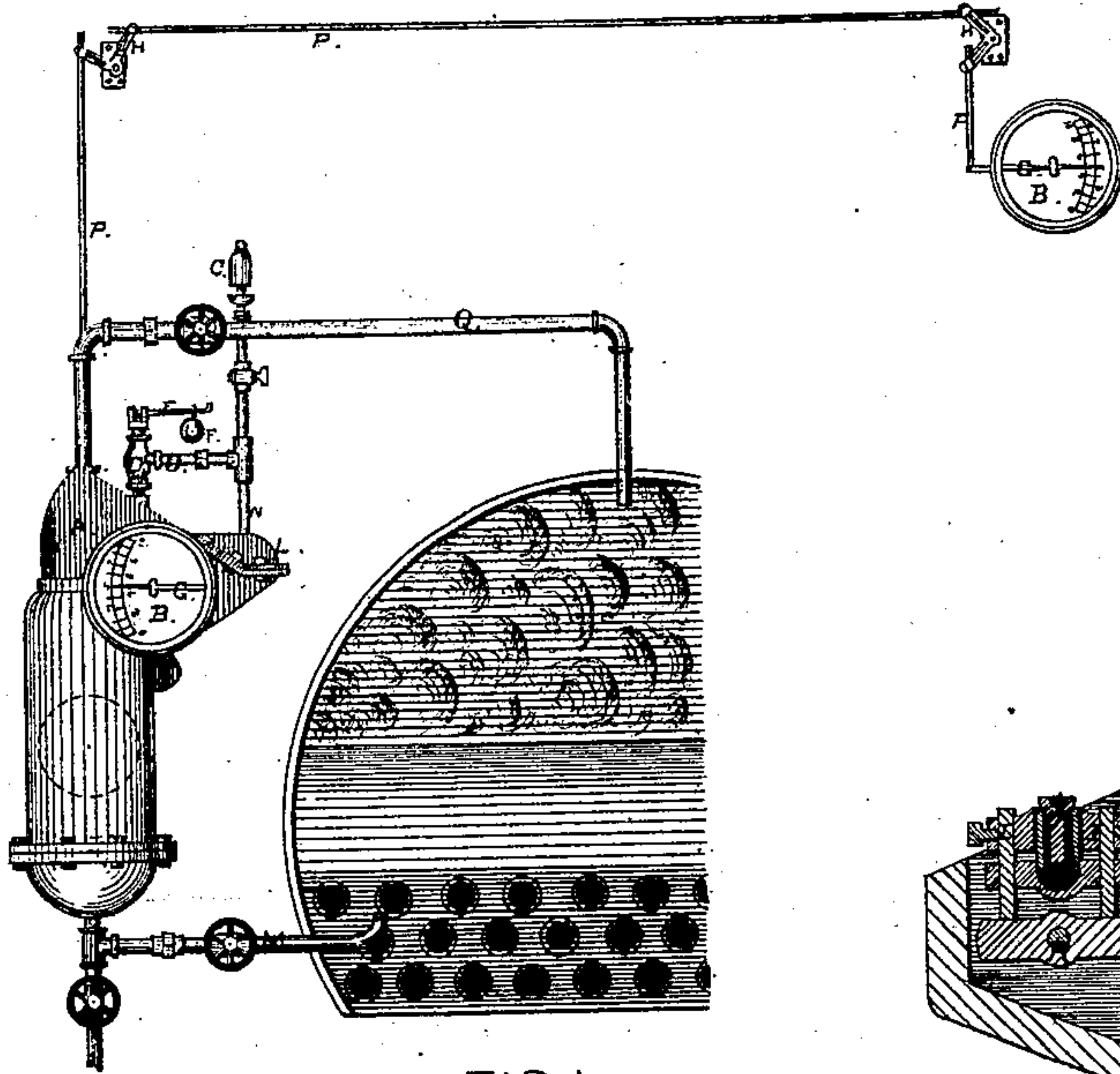


FIG. 1.

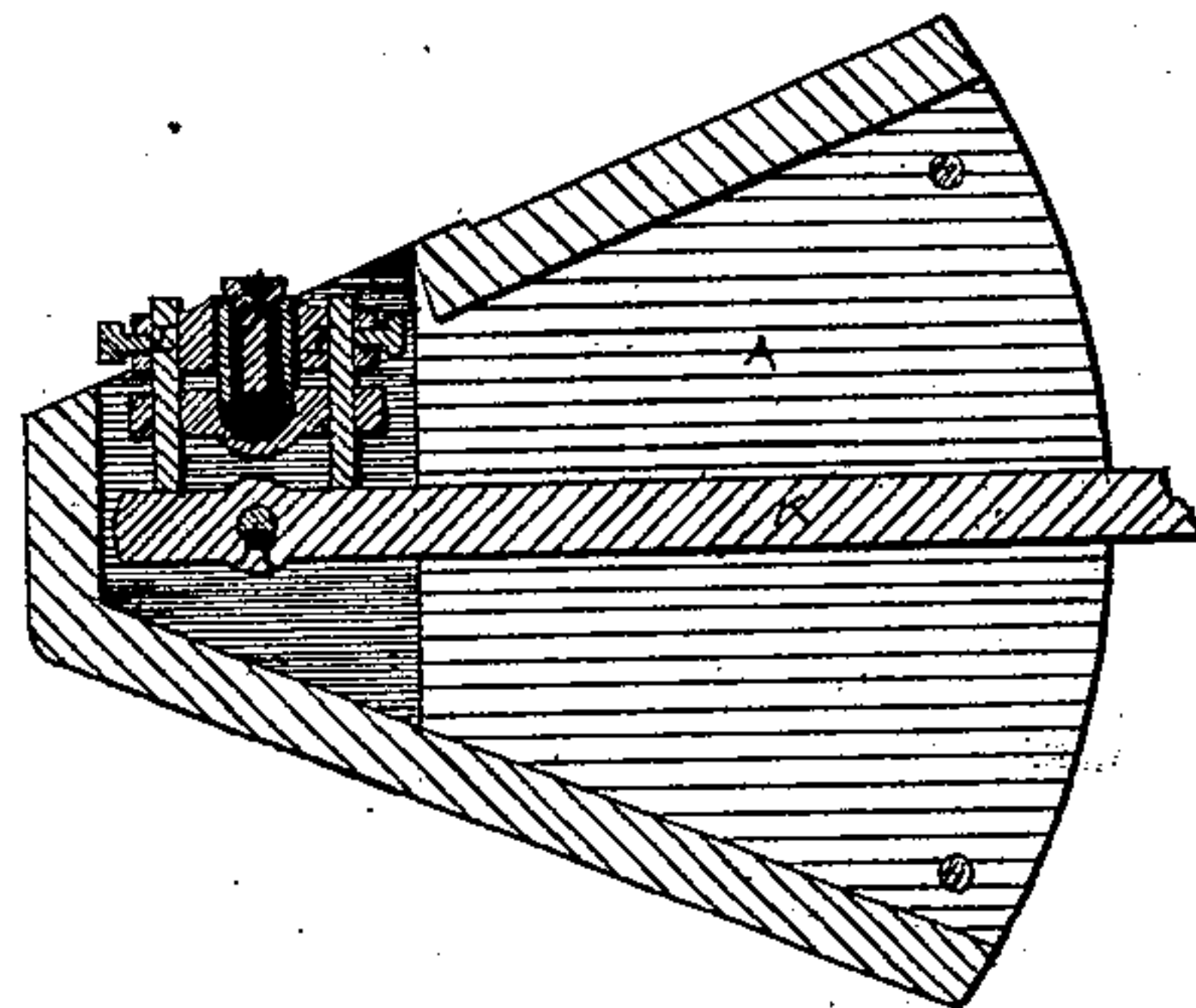


FIG. 4.

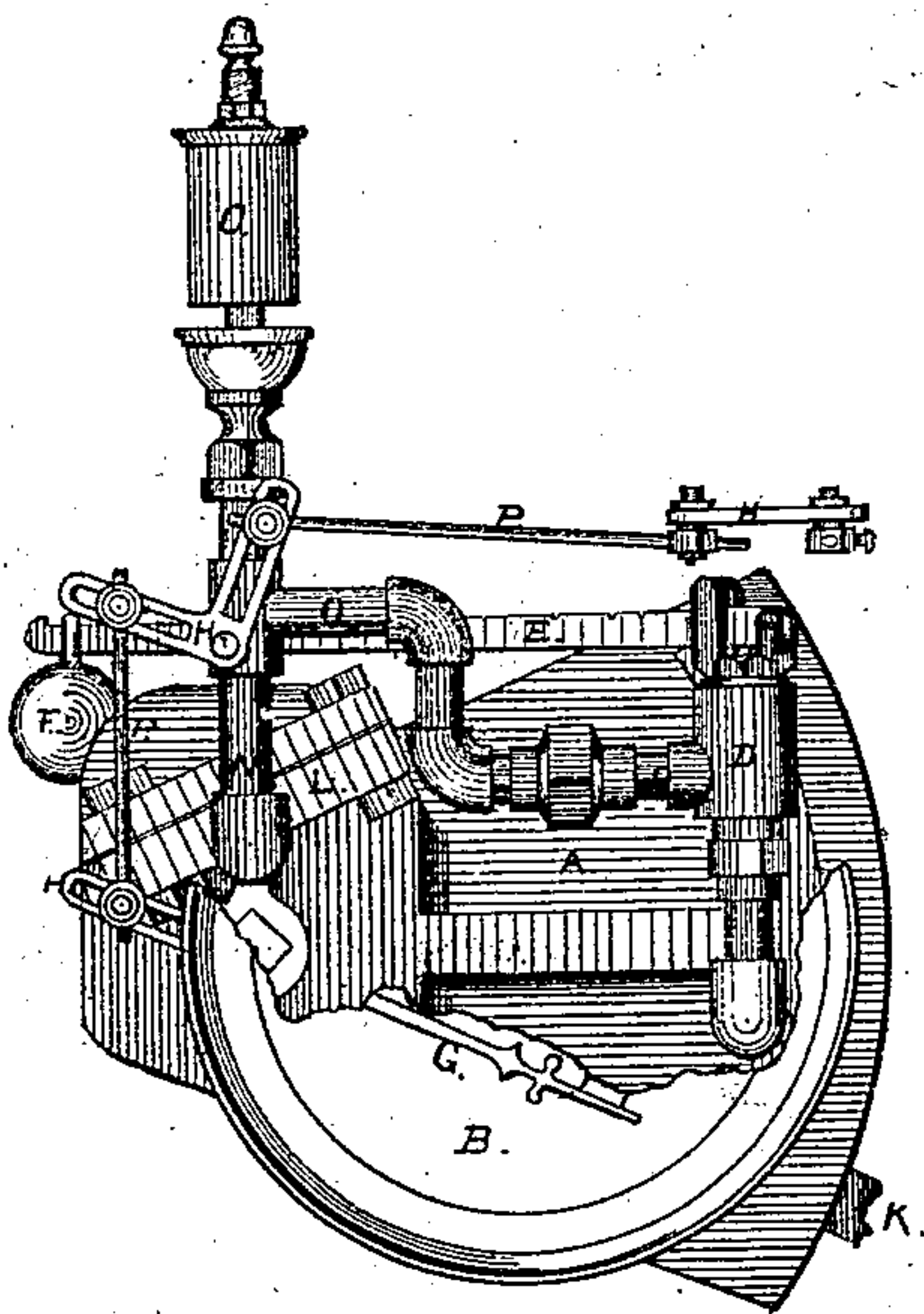


FIG. 2.

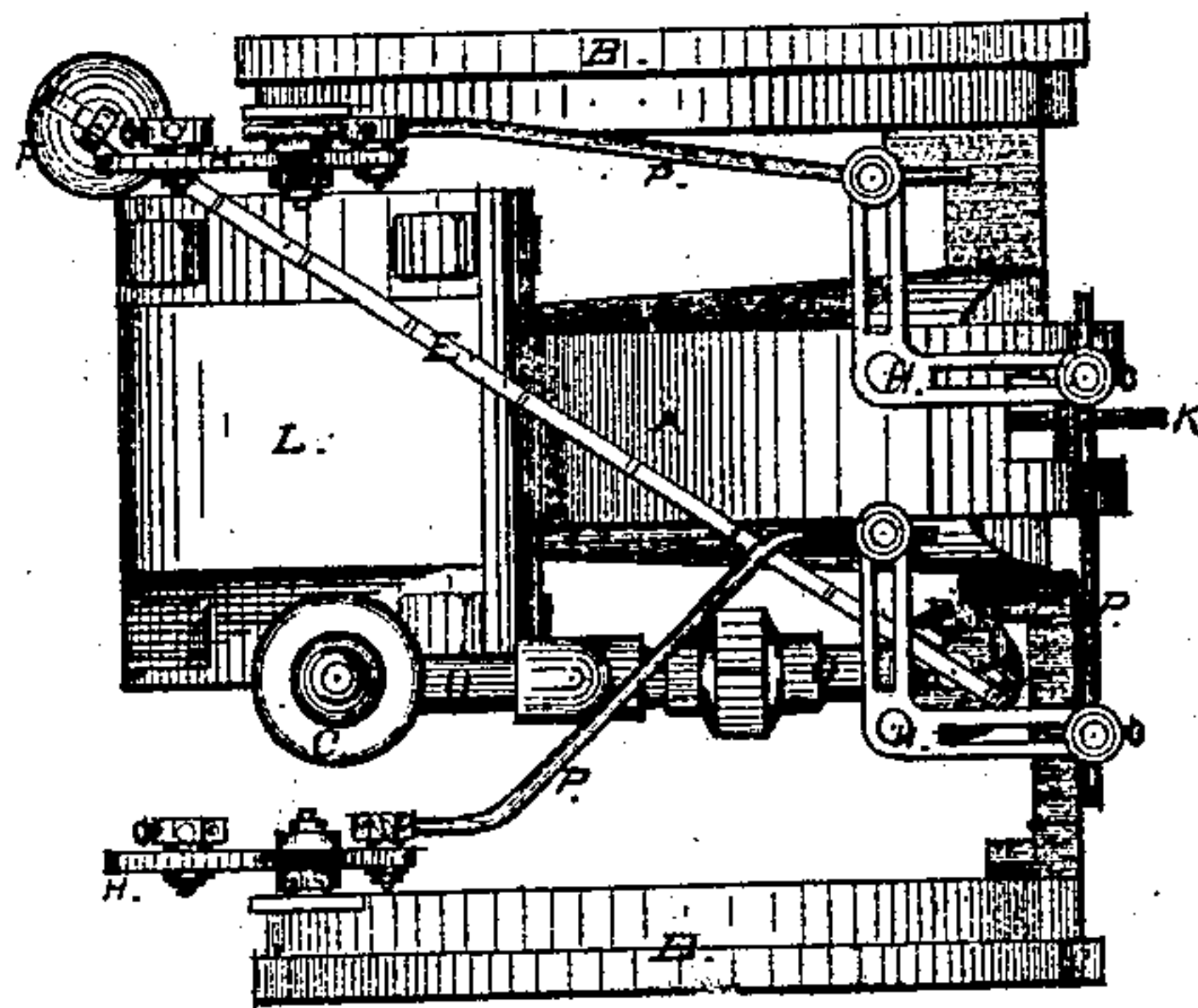


FIG. 3.

WITNESS.

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L. L. LEE, OF MILWAUKEE, WISCONSIN.

Letters Patent No. 95,595, dated October 5, 1869.

IMPROVEMENT IN LOW-WATER INDICATOR.

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, L. L. LEE, of the city and county of Milwaukee, and State of Wisconsin, have invented a new and useful Improvement in Alarm Safety-Valve, Alarm Water-Indicator, and Duplicate Dials for same; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a view of my improvement as attached to a boiler.

Figure 2, a side view of the same, with the dial broken away.

Figure 3, a top view of the same, as shown looking down on to it.

Figure 4, a sectional view, showing the valve which sounds the alarm for high or low water.

Similar letters of reference in each of the figures indicate corresponding parts.

The object of my invention is to provide an apparatus which will show the height of water in the boiler, in any part of the establishment, by the dial-indicator, and also, to give an alarm when the water is too high or too low, by sounding a whistle, and with a safety-valve, with a weight, which will sound the whistle at any pressure of steam desired.

A is the outside shell of the water-indicator.

B, dial-indicators.

C, whistle.

D, safety-valve.

E, safety-valve lever.

F, safety-valve weight.

G, indicator hand.

H, adjustable joints to move the indicator-hand.

I, yoke, with which the low and high-water valve is opened.

K, lever, with which the yoke I is operated.

L, cover of the low-water valve.

M, water-pipe.

N, steam-pipe, to show when the water is too high or too low.

O, steam-pipe from safety-valve to whistle.

P, rods, with which the duplicate dial is operated.

Q, steam-pipe from the boiler to the top of the apparatus.

R, a ground joint to the spindle, which moves the

hand on the dial. This spindle is a prolongation through the valve-case of the fulcrum of lever K.

S, low and high-water valve.

Operation.

When this gauge, which is an improvement on mine, patented April 19, 1864, is placed on a boiler, it will be, as shown in fig. 1, with a ball-float attached to lever K. The water in the lower part of the apparatus will be just about as high as shown in fig. 1. When the water falls too low in the boiler, the lever K will be brought down, and the pin, on the yoke at the outer end of the lever, will be thrown up, and open the valve. When the water is too high, the pin I, toward the float, will be raised, and the valve will be opened, and the steam will pass to the whistle, and the alarm will be sounded.

The weight on the safety-alarm lever E can be placed so as to have the safety-valve raised and sound the whistle at any amount of pressure desired.

The lever K, as it raises and falls, turns the dial-hand so as to show the height of the water at any point, and the duplicate dial, placed in any part of the building, by means of joints H, which can, by means of the slots, and screws, and rods P, be adjusted so as to show the same height of water as the dial at the indicator, and by this means the owner of an establishment can have the means of knowing the height of the water in his boilers without going to the boilers to find out.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. Safety-valve D, whistle C, yoke I, valve S, indicator-dials B B, and shell A, all constructed and arranged substantially as described.

2. Duplicate dials B B, rod P, adjustable joints H, so arranged in any part of the building as to show the height of water, in combination with the water-indicator, substantially as described.

3. Ground joint R, dial B, yoke I, valve S, lever K, and shell A, arranged substantially as described.

4. Shell A, dial B, whistle C, safety-valve D, safety-rod E, weight F, hand G, joints H, rods P, yoke I, and valve S, all combined substantially as described.

L. L. LEE.

Witnesses:

J. B. SMITH,

W. M. HORNOR.