

GEORGE AAB.

Improvement in Water Governors for Steam Engines.

No. 119,490.

Patented Oct. 3, 1871.

Fig. 1.

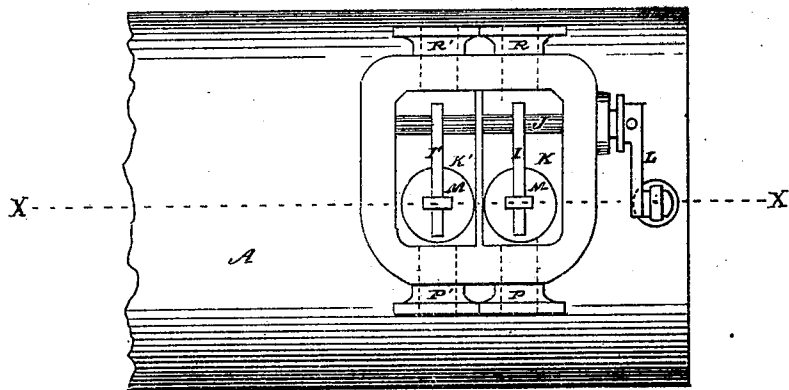
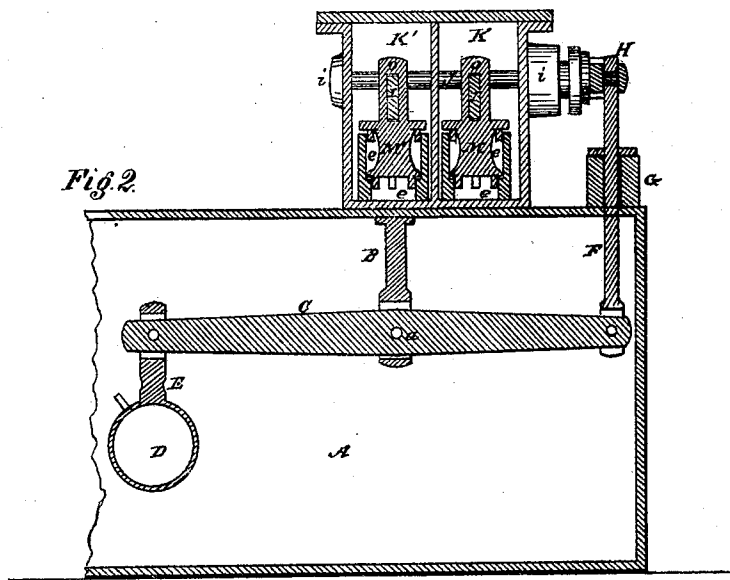


Fig. 2.



Witnesses.

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GEORGE AAB, OF BROOKLYN, NEW YORK, ASSIGNOR TO HIMSELF AND JOHN McANDREWS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN WATER-GOVERNORS FOR STEAM-ENGINES.

Specification forming part of Letters Patent No. 119,490, dated October 3, 1871.

To all whom it may concern:

Be it known that I, GEORGE AAB, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Absolute Water-Governor for Steam-Boilers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing forming a part of this specification, and to the letters of reference marked thereon.

My invention has for its object an improvement in feeding or injecting water into steam-boilers, which I intend shall be automatic in its operation, and which at the same time shall be cheap, simple, and at all times reliable. Being operated by means of the pressure of steam and through the agency of a float, it always indicates the amount of water in the boiler and governs the flow thereto accordingly. The nature of my invention consists in the combination of double water and steam-valves, located in separate chests and operated by means of one shaft, with the said shaft, and an air-float which operates the valves through the medium of a pivoted lever, rod, and crank.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

Figure 1 is a plan view of my invention. Fig. 2 is a longitudinal sectional elevation of the same taken through the line *x x*.

Letters of like name and kind indicate like parts in each of the figures.

Let A represent a section of a steam-boiler, which may be cylindrical in form or of any common design. Within the boiler is pivoted, to the pendant B, the lever C. This lever C is pivoted to the pendant B at *a*, and is of proper proportions. At one end of this said lever is an air-float, D, in the form of a hollow sphere. On one side of this float is a stem, E, which extends upward, and, by means of a pivoted joint, is attached to the lever C. At the opposite end of the lever is a rod, F, that extends up through the shell of the boiler and a stuffing-box, G, where it connects, by a strap-joint, H, to the wrist-pin of a

crank, L, which said crank is rigidly secured to the rock-shaft J. This rock-shaft lies and works in a horizontal position in stuffing-boxes *i i* that are secured to the steam and water-chests. To this rock-shaft, and upon the inside of the steam and water-chests K K', are arms I I', rigidly secured thereto, that extend outward and connect loosely with the valve-stems *o o*, which said valve-stems are attached to the double valves M M'. These valves are provided, as shown at *e e*, with suitable seats and openings. P P' represent the steam and water-induction pipes of suitable capacity for the boiler. It is immaterial which of these is used for water or for steam. R R' are the eduction-pipes. In practice I make a hollow wall between the water and steam-chests for the better protection of the wall or partition against expansion and contraction, although it is not shown in the drawing.

The water may be carried or forced from the force-pump to either side of the water-chest, as also the steam; but I prefer to bring it from the valve side of the chest, as it is then more evenly balanced.

The advantages of my invention are that my governor will regulate the water in any number of boilers, an object which has not heretofore been accomplished. So far as relates to the steam-chest in my invention it only has reference to a steam-pump. When the water becomes heated and expands in the boiler the float will rise and close both the water and steam-valves, when both the force and steam-pump will cease to work.

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

The combination of the float D and sleeve C, operating the double valves M M' by means of a single rod, F, crank L, and shaft J, substantially in the manner as herein shown and described.

GEORGE AAB.

Witnesses:

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(72)