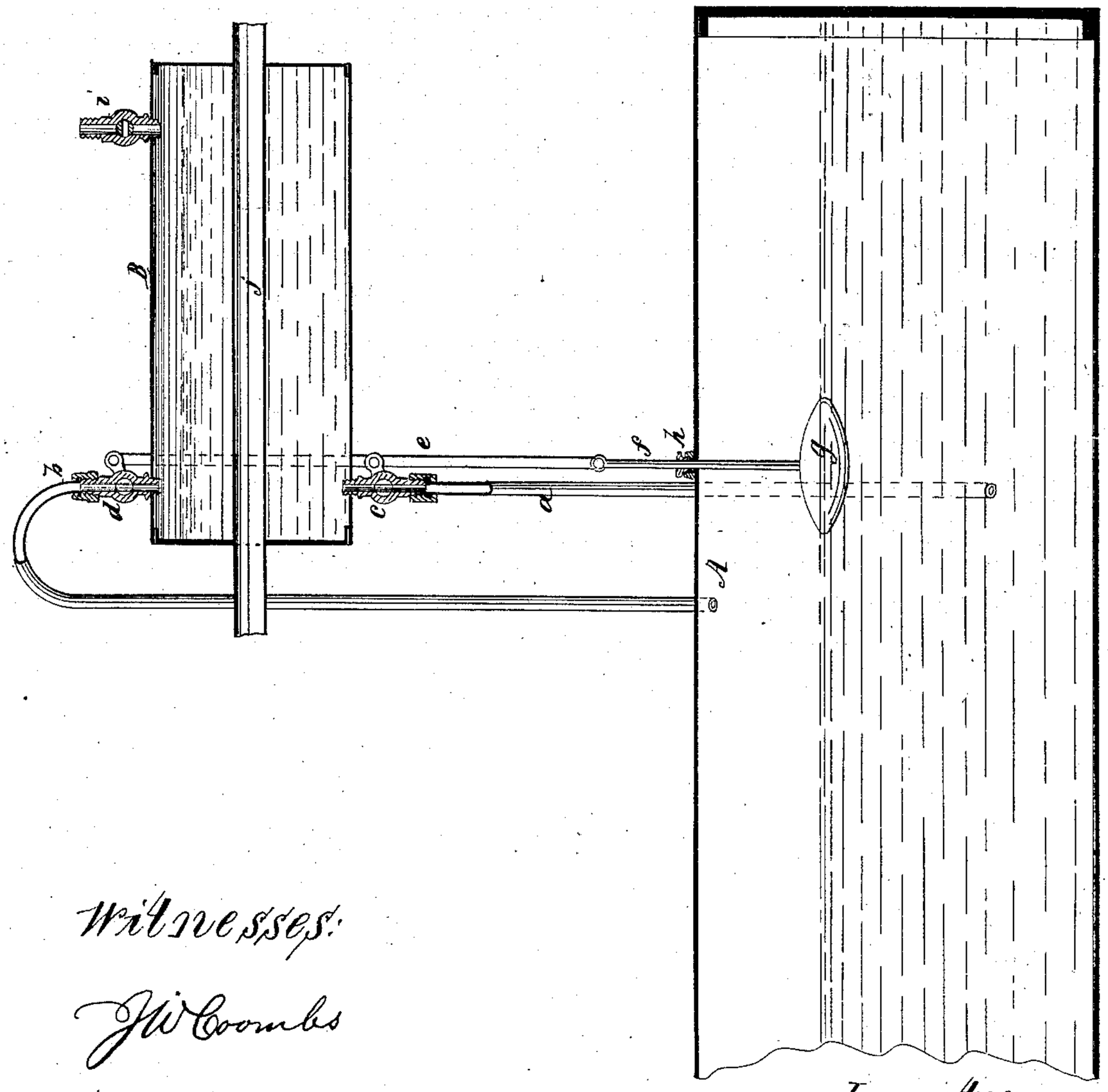
A. Hammond,

Steam-Boiler Water-Feeder,

No. 41,504, Patented Feb. 9, 1864.



Witnesses:

J. W. Coombs

Geo. B. Reed

Inventor:

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per Munn & Co

Attys

UNITED STATES PATENT OFFICE.

A. HAMMOND, OF JACKSONVILLE, ILLINOIS.

IMPROVEMENT IN BOILER-FEEDERS.

Specification forming part of Letters Patent No. **41,504,** dated February 9, 1864.

To all whom it may concern:

Be it known that I, A. HAMMOND, of Jacksonville, in the county of Morgan and State of Illinois, have invented a new and Improved Automatic Boiler-Feeder; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, said drawing representing a vertical section of the boiler with the invention applied.

This boiler-feeder consists of a steam-tight water reservoir or tank arranged above the boiler, and having its top and bottom connected therewith by two suitable pipes, in which there are stop-cocks, which are connected with a float in the boiler in such manner that when the water in the boiler gets below a certain level the weight of the said float opens both cocks, and so places the water *in equilibrio* and allows it to descend by gravitation into the boiler. As the water in the boiler rises it raises the float and gradually closes the cocks, shutting off the water when the boiler has been supplied to a proper level.

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

A is the boiler. B is the elevated steam-tight water-reservoir connected at its bottom with the boiler by the pipe *a*, which passes nearly to the bottom of the boiler, and having its upper part connected with the upper part of the boiler by the pipe *b*. *c* is the stop-cock of the pipe *a*, and *d* is the stop-cock of the pipe *b*. These cocks are connected by a rod, *e*, which is connected with the upright stem *f* of the float *g*, which rests upon the surface of the water in the boiler, the said stem *f* passing through a stuffing-box, *h*, in the top of the boiler. *i* is a cock in the reservoir B for filling it with water, closed at all times but while filling, when the cocks *c* and *d* are closed. *j* is a pipe for heating the water in the reservoir by the exhaust-steam from an engine when convenient.

While the water in the boiler is at a desirable level the float is at such a height that it keeps the cocks *c* and *d* closed; but when the water gets low in the boiler the float descends, and by its weight opens the cocks *c* and *d* simultaneously, admitting steam from the boiler above the surface of the water in the reservoir at the same time that water communication is formed between the bottom of the reservoir and the boiler, and thus placing the water in the reservoir *in equilibrio* and allowing the water to descend therefrom into the boiler until by the rise of the water in the latter the float closes the cocks and stops the supply to the boiler until the water therein again gets low, when the cocks are again opened, as before described.

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

The arrangement of the reservoir B and pipes *a b* with the boiler A, cock *c*, float and rod *f g*, all in the manner herein shown and described.

A. HAMMOND.

Witnesses:

JNO. C. POFFENBERGER,

THOS. H. STORMS.