

No. 607,261.

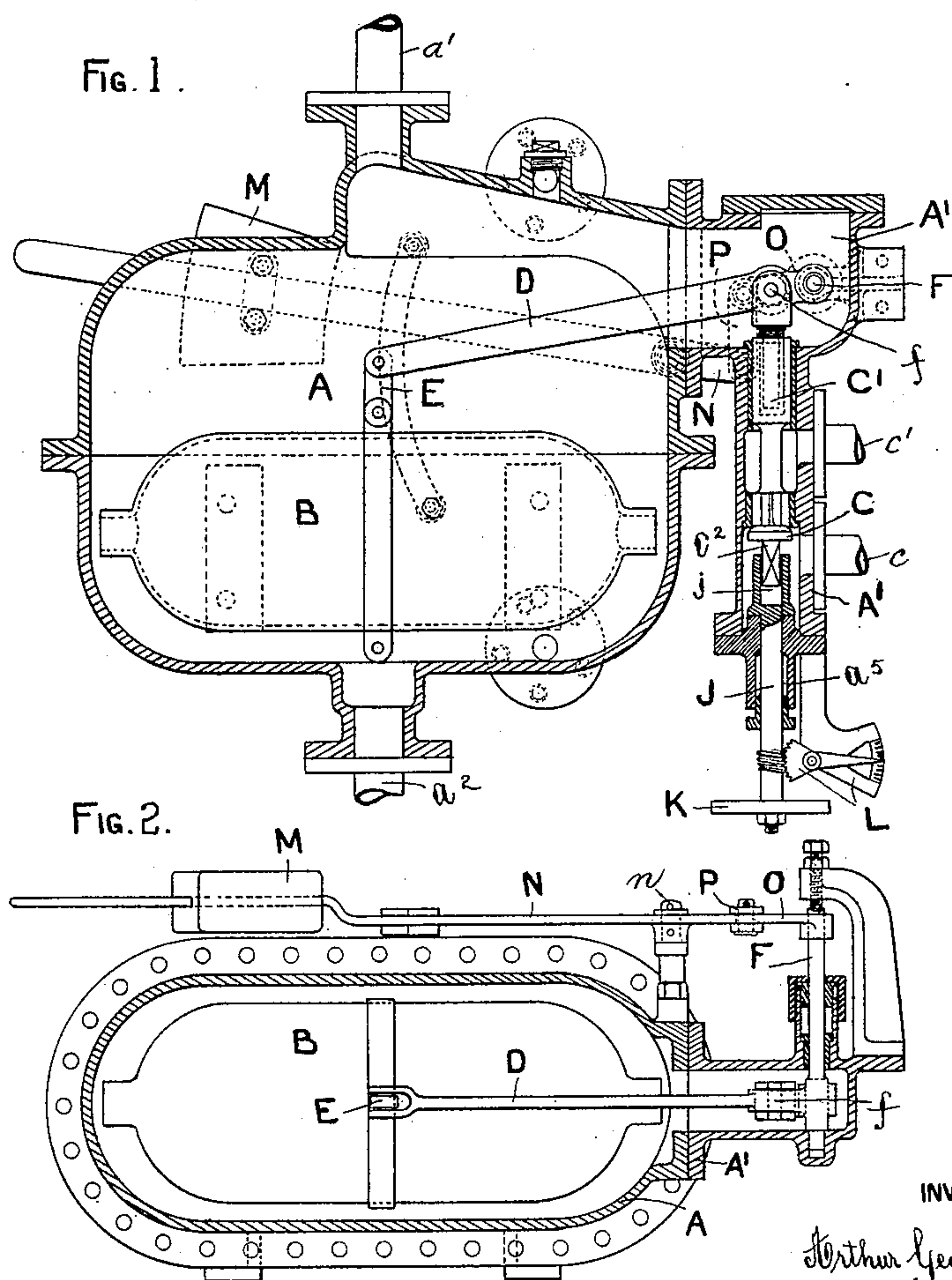
Patented July 12, 1898.

A. G. MUMFORD.

FEED WATER REGULATOR FOR BOILERS.

(Application filed Dec. 28, 1897.)

(No Model.)



WITNESSES.

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UNITED STATES PATENT OFFICE.

ARTHUR GEORGE MUMFORD, OF COLCHESTER, ENGLAND.

FEED-WATER REGULATOR FOR BOILERS.

SPECIFICATION forming part of Letters Patent No. 607,261, dated July 12, 1898.

Application filed December 28, 1897. Serial No. 664,060. (No model.) Patented in England May 2, 1897, No. 9,307.

To all whom it may concern:

Be it known that I, ARTHUR GEORGE MUMFORD, a subject of the Queen of Great Britain, residing at Colchester, in the county of Essex, England, have invented a new and useful Feed-Water Regulator for Boilers, (for which I have obtained a patent in Great Britain, No. 9,307, bearing date May 2, 1897,) of which the following is a full and complete specification.

This invention relates to an improved apparatus for automatically controlling the supply of feed-water to water-tube and other steam-generators, the object being to maintain a constant water-level in the boiler under all working conditions.

This invention consists in the novel construction and combination of the parts hereinafter fully described and claimed.

In the drawings, Figure 1 is a longitudinal section of the device. Fig. 2 is a sectional plan view.

A is a chamber containing a float B.

A' is a chamber containing a valve C and connected to the chamber A. A pipe a^1 connects the upper part of the chamber A with the steam-space of a boiler, and a pipe a^2 connects the lower part of the chamber A with the water-space of the boiler. The chamber A' is connected with the feed-water supply-pipe of the boiler by pipes c and c' .

D is a lever secured on a spindle F inside the chamber A'. The lever D projects into the chamber A and is connected to the float B by a link E. The spindle C' of the valve C is pivoted to the lever D by a pin f , so that the said valve is controlled by the float.

The valve-spindle C' is adjustable in length, being formed of two parts, which are screwed together. The length of the spindle is changed so as to alter the working level of the water in the boiler by means of a spindle J, which works in a stuffing-box a^5 . The inner end of the spindle J has a socket j , which engages with a square projection c^2 on the valve-spindle, and the outer end of the spindle J has a hand-wheel K for revolving it.

L is an indicator operatively connected with the spindle J and showing the working position of the float.

The spindle F is journaled in a stuffing-box on the chamber A', and O is an arm or lever secured on the projecting portion of the spindle F.

N is a lever pivoted on a pin n , which projects from the chamber A. One end of the lever N is pivotally connected with the lever O by a link P, and the other end of the lever N carries an adjustable weight M for balancing the float.

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

1. In a feed-water regulator, the combination, with a casing provided with boiler connections, a float, a valve in the feed-water pipe, a lever D arranged inside the said casing and operatively connected with the said float, a valve-spindle adjustable in length and connecting the said valve and lever, and a pivot-spindle F secured to the said lever and projecting from the casing; of a pivoted balance-lever operatively connected with the projecting end portion of the said spindle F; and means for varying the length of the said valve-spindle, substantially as set forth.

2. In a feed-water regulator, the combination, with a casing provided with boiler connections, a float, a valve in the feed-water pipe, a lever D arranged inside the said casing and operatively connected with the said float and valve, and a pivot-spindle F secured to the said lever and projecting from the said casing; of a pivoted balance-lever, an arm secured on the said spindle outside said casing, and a link pivotally connecting the said arm and balance-lever, substantially as set forth.

ARTHUR GEORGE MUMFORD.

Witnesses:

ESTHER HUMPHREY,
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