

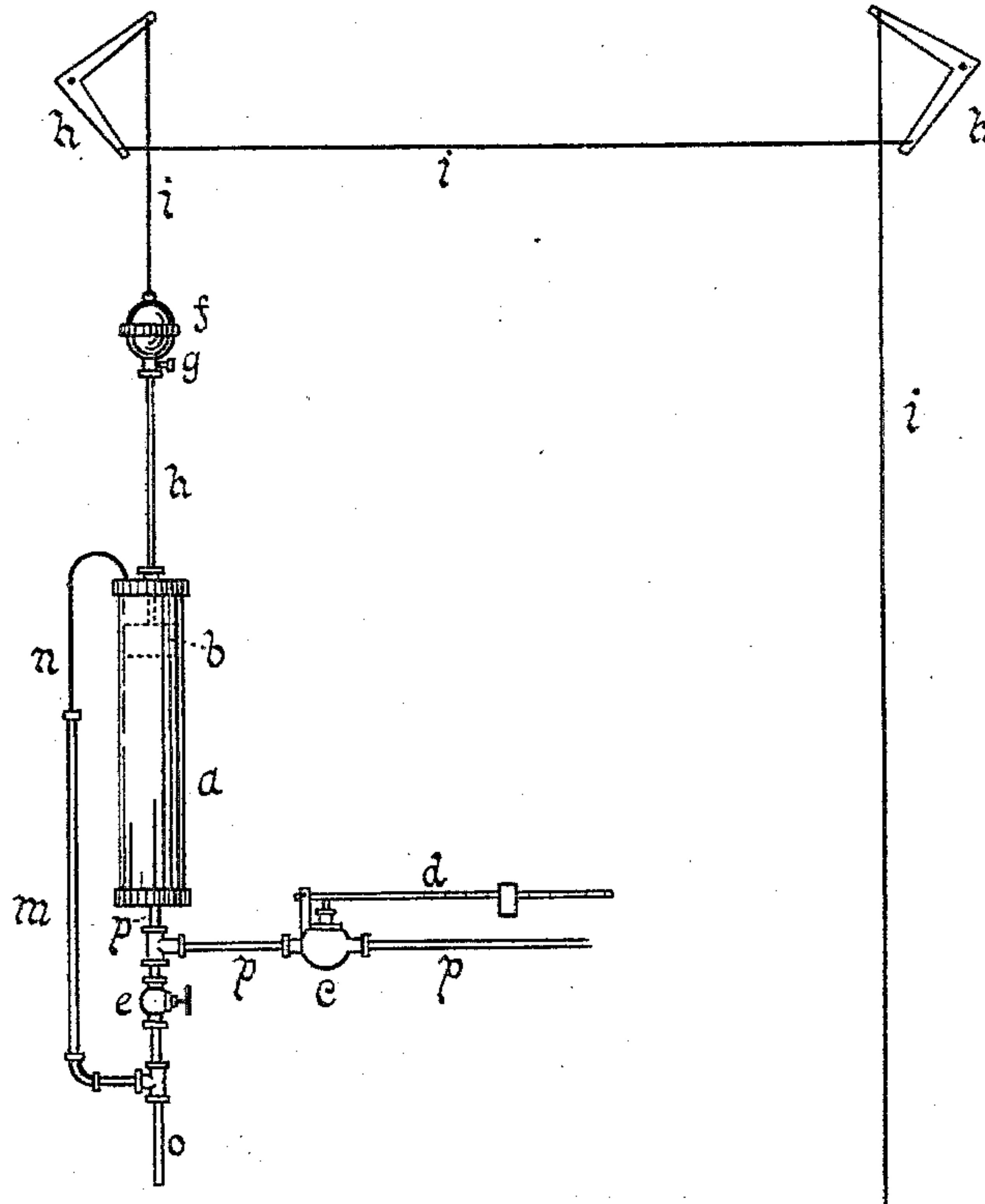
(No Model.)

J. C. JONES & C. T. REID.

STEAM ALARM AND DAMPER REGULATOR.

No. 296,839.

Patented Apr. 15, 1884



Witnesses.  
P. B. Sparks  
W. J. Walker

Inventors.  
John C. Jones.  
Charles T. Reid.  
By L. P. Graham atty.

# UNITED STATES PATENT OFFICE.

JOHN C. JONES AND CHARLES T. REID, OF DECATUR, ILLINOIS.

## STEAM-ALARM AND DAMPER-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 296,839, dated April 15, 1884.

Application filed November 30, 1883. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN C. JONES and CHARLES T. REID, residents of the city of Decatur, county of Macon, and State of Illinois, have invented certain new and useful Improvements in Steam-Alarms and Damper-Regulators, of which the following is a specification.

The object of our invention is to produce an automatic alarm for steam-boilers, which may be relied on to sound an alarm at any distance from the boiler whenever a given amount of steam-pressure is obtained, and also to operate the damper of the furnace. The device used by us to accomplish the above-mentioned result will be hereinafter specified by reference to the drawing accompanying and forming part of this specification, and in which the various parts are referred to by letter as follows:

The figure in the drawing shows an isometric view of the device.

*a* represents a cylinder, provided with a plunger, *b*, and piston-rod *h*.

*f* is a weight secured to the piston-rod by set-screw *g*.

*c d* show a pressure-gage that regulates the supply of steam to the cylinder.

*e* is a drip-valve that permits the condensed steam to escape from the cylinder.

*m n* represent an escape-pipe that conveys the condensed air and escaped steam from the upper end of the cylinder to the discharge-pipe *o*.

*p* shows the feed-pipe, which connects with the boiler, and through which steam is conveyed to the cylinder.

*i h* show an arrangement of wires and bent levers that convey the motion of the piston-rod to a gong or other alarm.

The weight *f* is adjusted to conform to the steam-pressure as regulated by gage *c d*, which pressure can of course be varied as occasion demands.

The operation of our device consists, simply, in conveying the motion of the plunger to a gong or other alarm in such a manner that when by a variation in the steam-pressure the plunger passes a certain point or points, either in ascending or descending, an alarm will be sounded and the damper of the furnace operated by the same motion.

By the use of our device the engineer in charge of the boiler may be warned to a distance of the diminished pressure of steam, and, if preferred, such connection may be made with one or more gongs, that both a high and low pressure alarm may be given.

It will be readily understood that the arrangement of wires and levers shown in the drawing are merely suggestive, and that any known arrangement may be used to produce the desired effect.

We claim—

The combination, in an automatic steam-alarm, of pipe *p*, cylinder *a*, plunger *b*, piston-rod *h*, weight *f*, escape-pipe *m n*, drip-valve *e*, and discharge-pipe *o*, as and for the purpose set forth.

JOHN C. JONES.  
CHARLES T. REID.

Attest:

WM. T. CUSSINS,  
L. P. GRAHAM.