C. H. LAVIS.

Self Regulating Damper.

No. 48,291. Patented June 20, 1865.

Fig. 1.

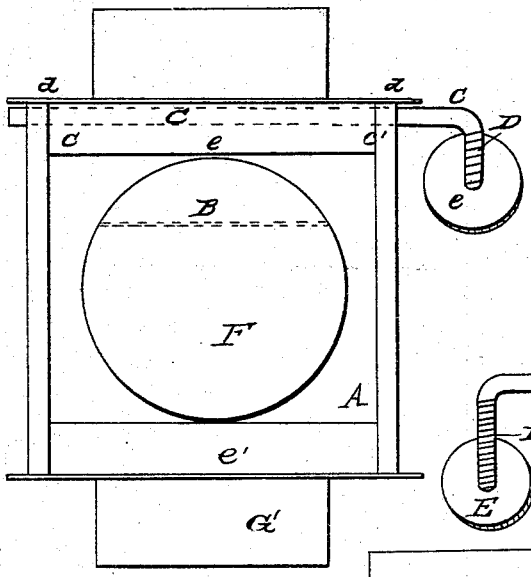


Fig. 3

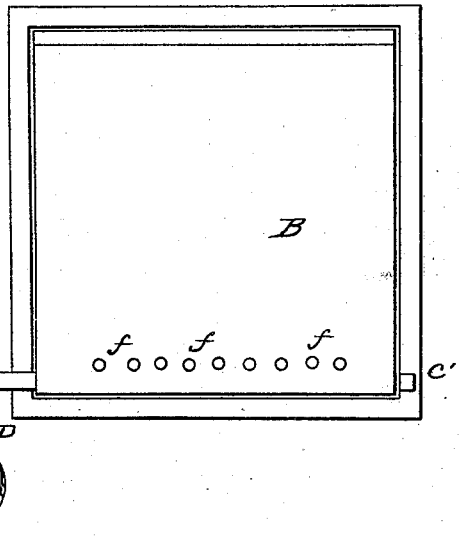
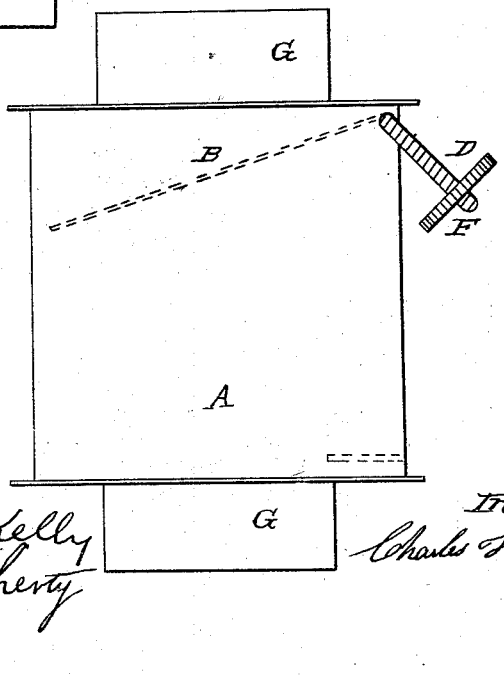


Fig. 2



Witnesses

James J. Kelly

W. W. Dougherty

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UNITED STATES PATENT OFFICE.

CHAS. H. LAVIS, OF PHILADELPHIA, PENNSYLVANIA.

SELF-REGULATING DAMPER.

Specification forming part of Letters Patent No. **48,291**, dated June 20, 1865; antedated March 15, 1865.

To all whom it may concern:

Be it known that I, CHARLES H. LAVIS, of Philadelphia, in the county of Philadelphia, in the State of Pennsylvania, have invented a new and Improved Self-Regulating Damper for stoves, furnaces, smelting-furnaces, and the like, which require a well-regulated draft; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists in regulating the damper by means of a balance screwed onto a lever, so that by properly adjusting the balance any degree of draft can be had.

In order to enable skilled mechanics to construct and use my invention, I will proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figures 1 and 2 are side views, and Fig. 3 a plan view with the top removed.

Similar letters refer to similar parts throughout the several views.

A is a square drum, (of any metal,) in which the damper B, which vibrates with the rod C, is fitted. The rod C passes through the drum A and bears on its sides at *c c'*. It is placed as near the upper corner or angle, *d*, as may be convenient for its proper working. One end D of the rod C is bent to any angle (in this case to a right angle.) This end D has a screw cut on it, on which is screwed the balance E.

Circular holes F F are cut on opposite sides of the drum A, so that the working of the damper B may be seen. These holes are covered with isinglass, which is kept in place by the flaps *e e'*.

Small holes *f f f f* are punched in the damper B, to allow the gas to escape while the damper is closed.

The flanges G G' are to receive the stovepipe to which the drum A is fitted.

The damper B, holes *c c'*, end D of the rod C, and balance E form a lever of the first order. The holes *c c'* are the fulcrums, the damper B the weight, and the balance E the power. The weight E can be so adjusted that a perfect equilibrium will exist and the damper B be entirely closed. It can also be adjusted by screwing the weight up or down that any degree of draft can be obtained.

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

The drum A, the damper B, the rod C, the screw D, and the balance E, constructed and operated with reference to each other, and for the purpose and in the manner as herein shown and described.

CHARLES H. LAVIS.

Witnesses:
W. W. DOUGHERTY,
AMOS J. KELLY.