

(No Model.)

P. W. CORNWELL.  
DRAFT REGULATOR.

No. 390,284.

Patented Oct. 2, 1888.

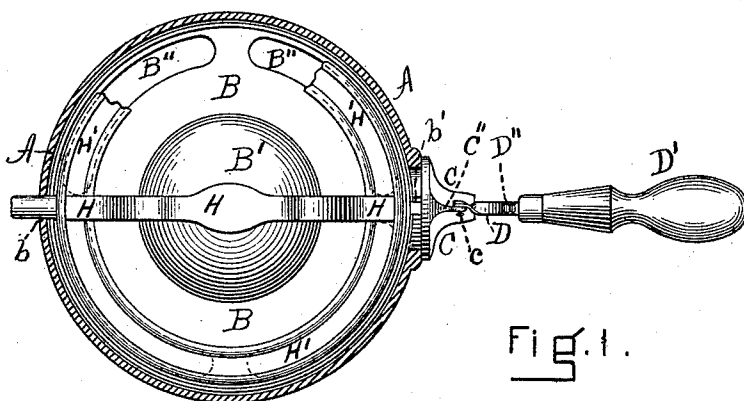


Fig. 1.

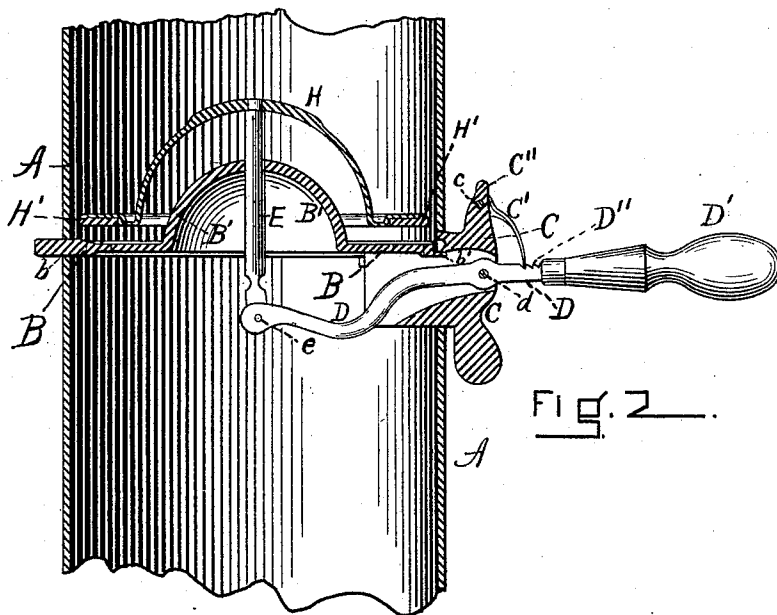


Fig. 2.

WITNESSES.

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# UNITED STATES PATENT OFFICE.

PHILLIP W. CORNWELL, OF BROCKTON, MASSACHUSETTS.

## DRAFT-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 390,284, dated October 2, 1888.

Application filed January 7, 1888. Serial No. 260,066. (No model.)

*To all whom it may concern:*

Be it known that I, PHILLIP W. CORNWELL, of Brockton, in the county of Plymouth and State of Massachusetts, have invented new and useful Improvements in Draft-Regulators, of which the following is a specification.

This invention relates to draft-regulators for stoves and furnaces; and it consists in the means and construction below described, where the regulation of heat is accomplished with greater accuracy, efficient means is provided for the escape of gas, and an economic combustion of the fuel is obtained.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a cross-section of a stove-pipe or flue with my improved draft-regulator applied thereto, the damper being closed, and a portion of the supplemental damper or ring represented as broken out, the better to illustrate the invention. Fig. 2 is a vertical section of the flue with the damper and regulating device in the same positions as shown in Fig. 1.

A represents an ordinary stove-pipe or flue. B is the main damper provided centrally with the concavo-convex dome B', (not new in this invention,) and pivoted at *b* in one side of the pipe. This damper is provided on its opposite side with a projection, *b'*, which rests against the inner surface of the hollow plug or thimble C, which is driven into the side of the flue, as shown in Fig. 2. Pivotaly secured at *d* to this thimble is the lever D, which extends from the outside to the inside of the flue through the chamber in the plug or thimble C. This lever is provided with a suitable handle, D', on its outer or free end, and with a few teeth, D'', on its upper edge, into which drops a pawl, C', pivotaly secured at *e* to a projection, C'', integral with the thimble C. The inner end of the lever D is pivotaly secured at *e* to one end of a rod, E. This rod passes through the center of the dome B' on the damper B, and its opposite end is rigidly secured in and supports the curved piece or bail H, said bail describing an arc of a circle

substantially concentric with the dome and supporting a flat annular piece of metal or ring, H'. Now the damper B is provided near its periphery with the curved slots B'', said slots being situated exactly beneath the ring H'.

It is evident that if the handle D' is vibrated longitudinal motion will be given to the rod E, and the ring H' will be moved toward or from the curved slots B'' in the damper B; hence to lift the handle D' until said ring comes in contact with said damper shuts off the draft entirely, and the amount of draft or the amount of space desired for the escape of gases is regulated by depressing said handle, and hence lifting said ring from the main damper. The pawl C' serves to hold the handle in any desired position.

The main damper, together with the supplemental damper or ring H', may be turned in the flue so as to produce the greatest draft by simply turning the handle D' in the ordinary manner. When this is done, the damper B turns on its pivot *b* on one side, while on the other side the projection *b'*, which is not a pivot, moves in the arc of a circle along the inner surface of the thimble C.

Of course turning the damper, as above described, is mainly done when building a fire; but the regulation of the draft when the fire has been built is principally accomplished by moving the supplemental damper or ring in relation to the main damper.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is--

The combination of the flue, damper B, provided with the dome B' and slots B'', thimble C, pawl C', lever D, rod E, bail H, and ring H', substantially as and for the purpose set forth.

PHILLIP W. CORNWELL.

Witnesses:

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