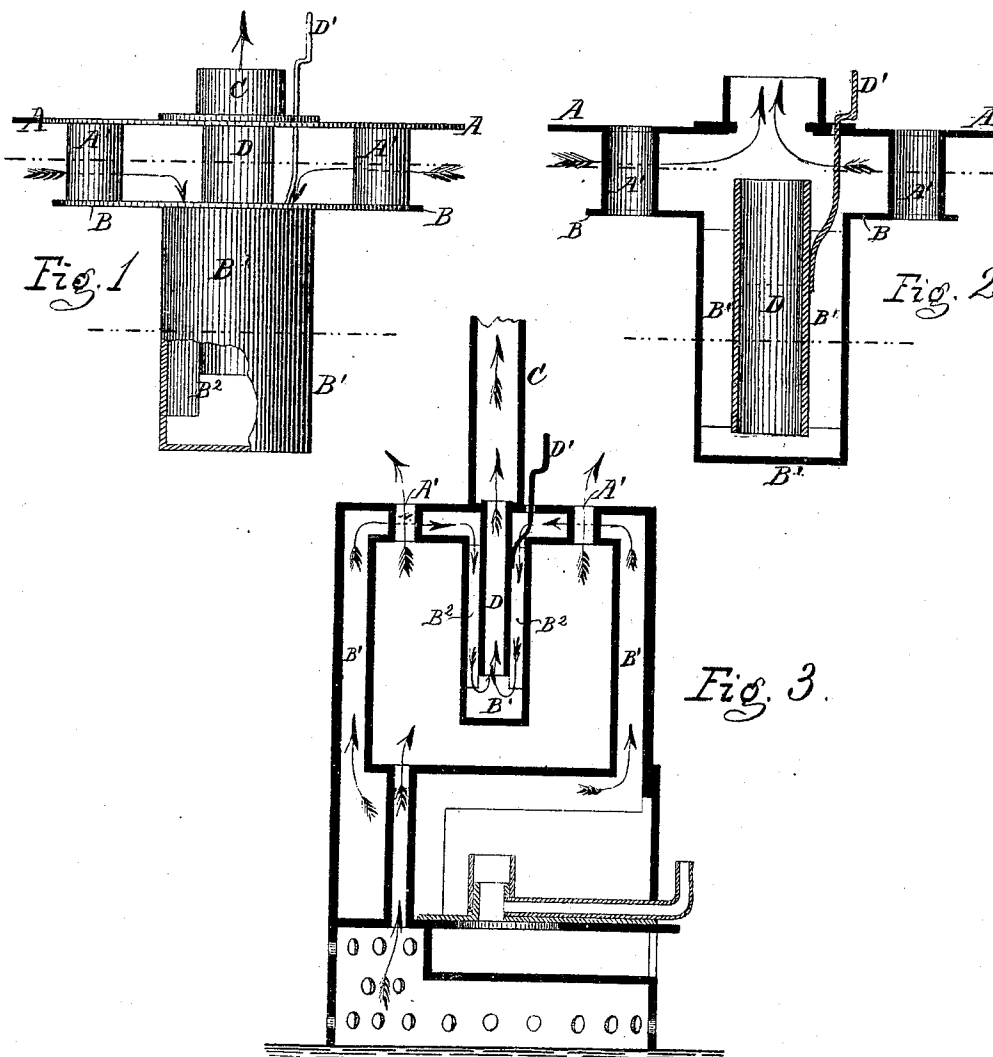


C. A. HARPER.

Draught-Regulator.

No. 129,551.

Patented July 16, 1372.



Attest
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A. Ruppert.

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UNITED STATES PATENT OFFICE.

CHARLES A. HARPER, OF BURLINGTON, NEW JERSEY.

IMPROVEMENT IN DRAUGHT-REGULATORS.

Specification forming part of Letters Patent No. 129,551, dated July 16, 1872.

Specification describing a certain Improvement in Draught-Regulators, invented by CHARLES A. HARPER, residing at Burlington, in the county of Burlington and State of New Jersey.

This invention relates to draught-regulators for gas and other stoves, it being designed as an improvement upon a stove a patent for which was granted to me on the 20th of November, 1866; but it is applicable to other stoves and to various forms of furnaces, it consisting of a regulator so combined with, and with reference to, the stove or furnace that a direct draught through the pipe can be had, or so that a circuitous draught through the hot-air drum can be maintained.

Figure 1 is an elevation of my improved regulator, showing the upper and lower plates, the pipes for the escape of the heated air, the drum, the eduction-pipe, and the adjustable regulator. Fig. 2 is a central vertical section, showing the parts enumerated. Fig. 3 is an elevation of a stove with my regulator attached.

Corresponding letters refer to corresponding parts in the several figures.

In constructing devices of this character I use any suitable plate, A, which is secured to or made to form the top of the stove, and is connected to another plate, B, by means of short hot-air pipes A' A', in order that the air which has become heated in the chamber or chambers below the lower plate may pass into the room through said pipes. Attached to the lower plate B there is a drum, B', which extends downward into the stove, as shown in Figs. 1 and 2, while upon the top of the upper plate there is secured a section of pipe, which serves to take off any smoke or gas which may arise from the burning fuel. Within the drum B' there are placed a series of plates of metal, which project inward for a distance sufficient to allow the inner edges to form a guide for a section of adjustable pipe, D, which, together

with the upper plate A, forms the regulator. This pipe D has upon it, and firmly secured thereto, a handle, D', which passes up through the plate A, where a shoulder or an equivalent device is formed upon it, so that when the pipe is dropped down, as shown in Fig. 2, it shall rest upon the shoulder of the handle, at which time a direct draught will be allowed, as indicated by the arrows in the last-named figure; but when the pipe is drawn up, as shown in Fig. 1, the gases will be obliged to pass down within the drum, as indicated by the arrows, and enter the pipe at its lower open end, and thence out through the pipe C.

Fig. 3 shows the improved regulator as applied to a stove, which, as above stated, is patented to me, it being introduced here only to show how the present invention may be attached to it, and to indicate to some extent how it may be arranged upon various forms of stoves and furnaces. The adjustable pipe D, by being made a little smaller than the collar on the top plate over which the pipe C is slipped, may be arranged to slide up within the pipe C and be held at any point therein, according to the amount of draught desired. Still another modification would be to make a portion only of the pipe extending into the drum B' movable, to operate as a damper for changing the draught.

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

The combination of the drum B', adjustable pipe D, and plate A, they being constructed and arranged substantially as set forth, as a consequence of which the direct draught or circuitous draught may be produced, as shown.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES A. HARPER.

Witnesses:

EMILY M. HARPER,
FANNIE E. DEACON.