H. E. TURNER.

Draft Regulator.

No. 37,781. Patented Feb. 24, 1863.

Fig. 2.

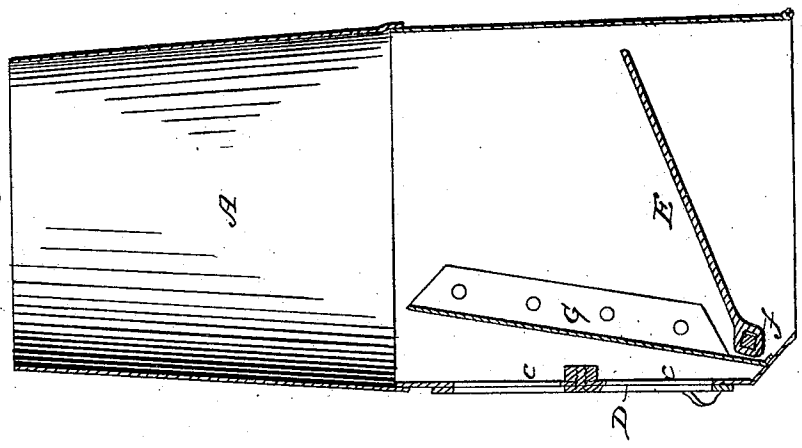
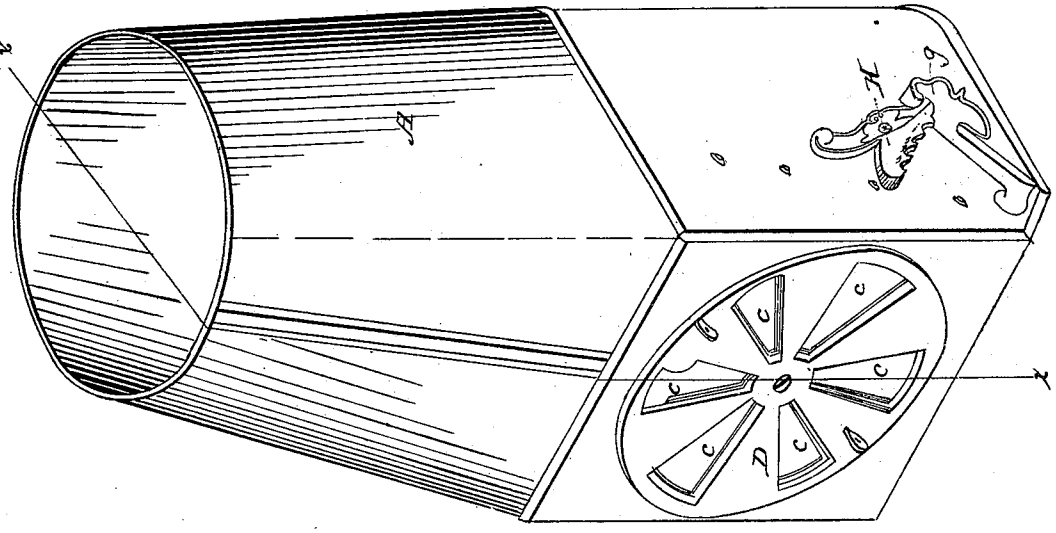


Fig. 1.



WITNESSES

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UNITED STATES PATENT OFFICE.

HENRY E. TURNER, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN DRAFT-REGULATORS.

Specification forming part of Letters Patent No. **37,781**, dated February 24, 1863.

To all whom it may concern:

Be it known that I, HENRY E. TURNER, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improved Compound Draft-Regulator for Stoves and Furnaces, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a view of a stove-pipe with my improved draft-regulator attached; Fig. 2, a section upon the line *x x* of Fig. 1.

Ventilating registers and dampers for stoves have been used in which the passage through the smoke pipe and air-opening into the pipe have both been commanded by one and the same valve, so arranged that the more the valve is opened the greater will be the passage for the admission of air into the pipe and the more it will shut off or diminish the flow of the products of combustion through the pipe. This arrangement is different from the one which I employ, and will not answer the purpose which I accomplish by means of my improved valve.

In the arrangement above referred to, if the stove be employed to heat two rooms, the one above the other, by means of a drum in the upper room, if the valve be turned so as to check the draft through the stove and the stove-pipe, the air-passage into the pipe will be opened, and so great a volume of cold air will enter and pass into the drum above that no heat will be given out in the upper room. This arises from the mutual dependence between the ventilating-opening, or that which admits the air, and the smoke-passage, which renders it impossible to change the one without at the same time altering the other.

My invention consists in so arranging a ventilating-valve and a damper-valve in the same pipe that they may act independently the one of the other, either to dampen the fire below and still throw the products of combustion, uncooled by admixture with cold air, into the drum above, or else, as may often be required when ventilation is for the time unnecessary, as in rooms temporarily unoccupied or during the night, to dampen the fire without opening the ventilating-valve and losing the warm air from the room below; and my invention also consists in dividing the smoke-flue by a vertical partition into two portions, one of which is commanded by a valve or damper and the other by a ventilating register or valve, as will now be more particularly described.

In the accompanying drawings, A is the smoke-pipe, in some portion of which is an opening or openings, *c*, commanded by a register, D, by which the openings may be closed entirely, as required. E is a damper, secured to the rod *f*, which pivots freely in the pipe. The damper is of a size and form that shall just fill the pipe, and has attached to its rod *f* a handle, *g*, by which it may be operated so as to open the pipe to its full extent or to obstruct the passage of the products of combustion to any extent required. The handle *g* is held in any position in which it is put by the rack H, which is also pivoted to the pipe.

Between the damper E and the register D, I place a partition, G, which is tight at the bottom, but open at the top, as seen in the drawings, by which the smoke is prevented from issuing from the register when it is open and defeating the end in view.

I do not claim a damper so arranged as to command at the same time the passage through the smoke-pipe and an opening for the purposes of ventilation; but

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

The combination of the register D, the damper E, and the division-plate or partition G, operating as set forth, for the purposes described.

Witnesses: HENRY E. TURNER.
SAM. COOPER,
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