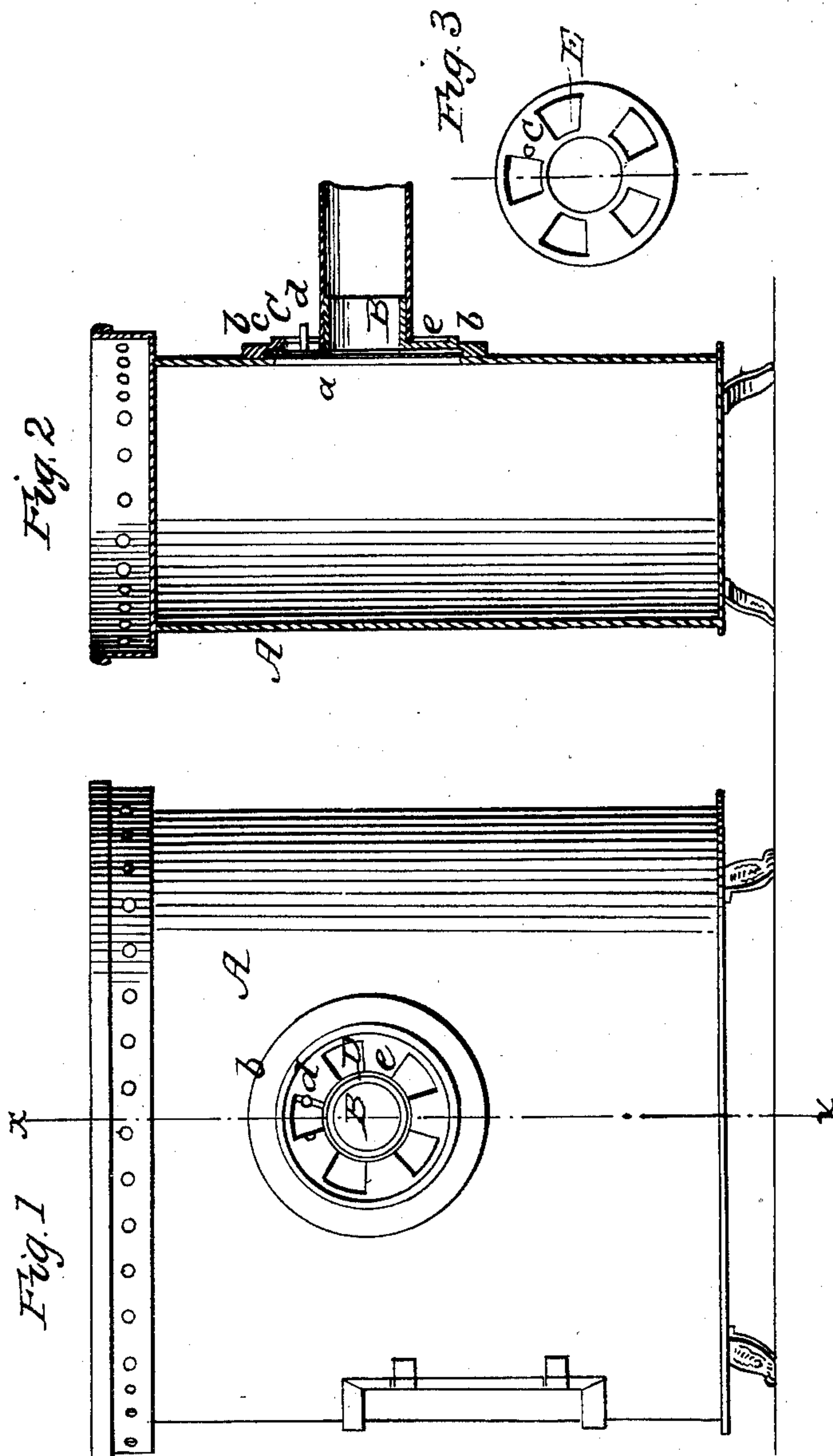


W. SANFORD.

Damper.

No. 35,179.

Patented May 6, 1862.



Witnesses
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UNITED STATES PATENT OFFICE.

WATSON SANFORD, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN DAMPERS.

Specification forming part of Letters Patent No. 35,179, dated May 6, 1862.

To all whom it may concern:

Be it known that I, WATSON SANFORD, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Method of Regulating the Draft of Stoves and Heaters and Ventilating Rooms; and I do hereby declare that the following is a description of the same in terms which now appear to me to be sufficiently full, clear, and exact, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a view of the back of a stove having my improvement attached; Fig. 2, a vertical section in the line *x x* of Fig. 1; and Fig. 3, a face view of the annular valve or register detached.

The nature of my invention consists in surrounding the stove or furnace pipe collar with a valve or register, whereby the draft of the heater may be regulated or checked and the room in which such heater is located ventilated.

Prior to my invention the only way known to practically check the draft of stoves and furnaces was by means of a throttle-valve or damper placed in the smoke-pipe or by shutting the front or door valve and opening the door; but both these plans have been found objectionable in practice, inasmuch as in the one case the gases are forced and in the other left free to escape into the room. My improvement avoids these evils and at the same time affords an efficient means of ventilation.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The stove or heater *A* may be of any desirable form or construction, except that the smoke and gas exit *a* is of a considerably larger diameter than that of the stove-pipe collar. The pipe-collar *B* is constructed with a flange, *b*, all around it of larger diameter than that of the smoke and gas exit in the heater, which flange has formed on its inner face a depressed annular space or chamber, *c*, for the purpose of receiving the annular valve or register *C*. The space immediately around the collar *B* in the flange *b* is provided

with openings *D*, which correspond with similar openings, *E*, in the valve or register *C*. The parts thus described are organized as follows: The collar *B* is riveted or otherwise secured to the heater, with its flange *b* arranged concentrically with the smoke and gas exit *a*, and with the valve or register *C* received within the depressed annular space or chamber *c*, where it is held by the said flange and the exterior surface of the stove immediately around the smoke and gas exit and allowed partially to revolve by means of the pin *d*. When a full draft is desired, the valve or register *C* is revolved until its openings *E* are made to correspond with the solid parts *e* of the flange *b*. When, on the other hand, it is requisite to deaden the draft, and thus decrease the heat of the stove, the openings *D* and *E* are brought more or less into correspondence, when air is admitted above the fuel and the draft checked. The admission of air also ventilates the room, and I thus gain two important objects. The heat is arrested and at the same time the hot and vitiated air is drawn off.

I am aware that valves or registers have been arranged around stove-pipe thimbles, which are placed in the walls or floors of buildings; but such valves do not admit air into the stove above the fuel, and they do not, therefore, check the draft. On the contrary, when placed around a thimble which is fixed in the wall of the chimney, through which the stove-pipe projects, they increase the draft, however much they may serve as safeguards against fire and as ventilators.

Having thus described my invention and pointed out the manner in which it operates, what I claim therein as new, and desire to secure by Letters Patent of the United States, is—

The valve or register *C*, when combined with the pipe-collar and its flange and applied to a stove or heater, for the purposes and substantially in the manner described.

WATSON SANFORD.

Witnesses:

JOHN R. KENNADAY,
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