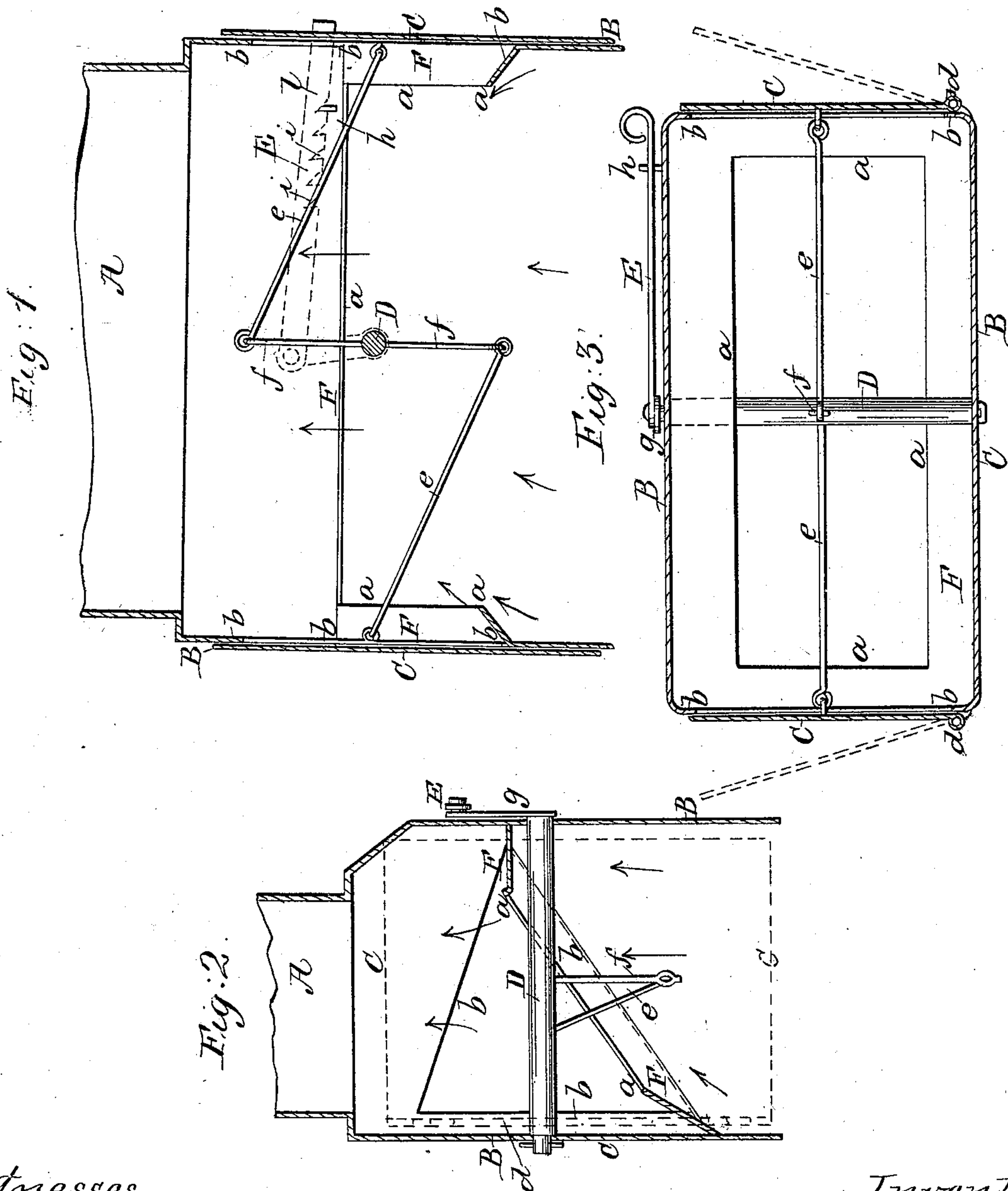


E. HARRINGTON.
Draft Regulator.

No. 44,091.

Patented Sept. 6, 1864.



Witnesses.
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UNITED STATES PATENT OFFICE.

EBENEZER HARRINGTON, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN DRAFT-REGULATORS.

Specification forming part of Letters Patent No. 44,091, dated September 6, 1864.

To all whom it may concern:

Be it known that I, EBENEZER HARRINGTON, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Draft Regulator and Ventilator for Stoves and Furnaces; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others to make and apply the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figures 1 and 2 are vertical sections of the apparatus at right angles to each other. Fig. 3 is a horizontal section of the same.

Similar letters of reference indicate like parts.

This invention consists in the combination of an internal slanting deflecting-plate and two opposite apertures of peculiar form fitted with connected outwardly-opening doors provided in the base of the smoke-pipe of a stove or furnace, for the purpose of regulating the admission into the smoke-pipe of air from the apartment in which the stove or furnace is placed, and thereby reducing the draft and ventilating the apartment in any desirable degree without permitting the escape thereinto of any smoke.

A is the smoke pipe, set upon the base B, the horizontal section of which is of oblong quadrangular form. The stove-pipe is set somewhat forward on the base, as shown in Fig. 2. F is the deflecting-plate, having an opening, *a a*, which forms the outlet of the smoke and gaseous products of combustion from the stove or furnace, the said opening being arranged directly under the stove-pipe, and consequently in a forward position within the base, as shown in Figs. 2 and 3. This plate, which is attached to the base all around, is set in a slanting position, the lowest side being next to the front *c* of the base, as shown in Fig. 2, and its several sides have an upward slope from the general plane of inclination toward the opening *a*, as shown in Figs. 1 and 2.

b b are the opposite openings in the ends of the base B for the admission into the smoke-pipe of air from the apartment in which the stove or furnace is placed. These openings are above the deflecting-plate, and are of triangular form, as shown in Fig. 2, the lower sides being even with the connection of the edges of the deflecting-plate with the ends of

the base, the upper sides slanting upward in the opposite direction, and the third sides, which are next the front *c* of the base, being upright. C C are the outwardly-opening doors, made of quadrangular form, of a depth somewhat greater than that of the upright sides of the openings *b b*, and of a width sufficient to cover the said openings. These doors are hinged, as shown at *d d*, at the front vertical sides of the openings *b*, and are so connected by rods *e e* with opposite arms *f f* of a horizontal rock-shaft, D, that both will be closed together or have an equal amount of opening. The said rock-shaft works in bearings in the back and front of the base B, and at the rear end it is provided outside of the said base with an arm, *g*, to which is connected a notched adjusting-rod, E, which is secured by means of a fixed stop, *h*, attached to the exterior of the base B in any of the positions necessary to give the doors any desirable amount of opening, or to close them entirely, if necessary, by placing one or other of its notches, *i i*, on the said stop.

To set the apparatus in operation, the doors C C are both opened to any desirable width by adjusting the rod E with one or other of its notches upon the stop *h*. The air then enters the openings *b b* and passes upward to the smoke-pipe, reducing the draft and effecting the ventilation of the apartment; and by the form and arrangement of the deflecting-plate F and its opening *a a*, and the arrangement of the openings *b b* at opposite ends of the base, the smoke and ascending gases of combustion are deflected toward the center of the smoke-pipe, and the currents of air entering the base in opposite directions, so as to meet each other, tend to prevent any outward issue of such smoke and gases.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination in the base of the smoke-pipe of the inclined deflecting-plate F, outlet *a a*, opposite openings *b b*, and connected outwardly-opening doors C, the whole arranged and operating substantially as herein specified.

EBENEZER HARRINGTON.

Witnesses:

JAMES ENNIS,

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