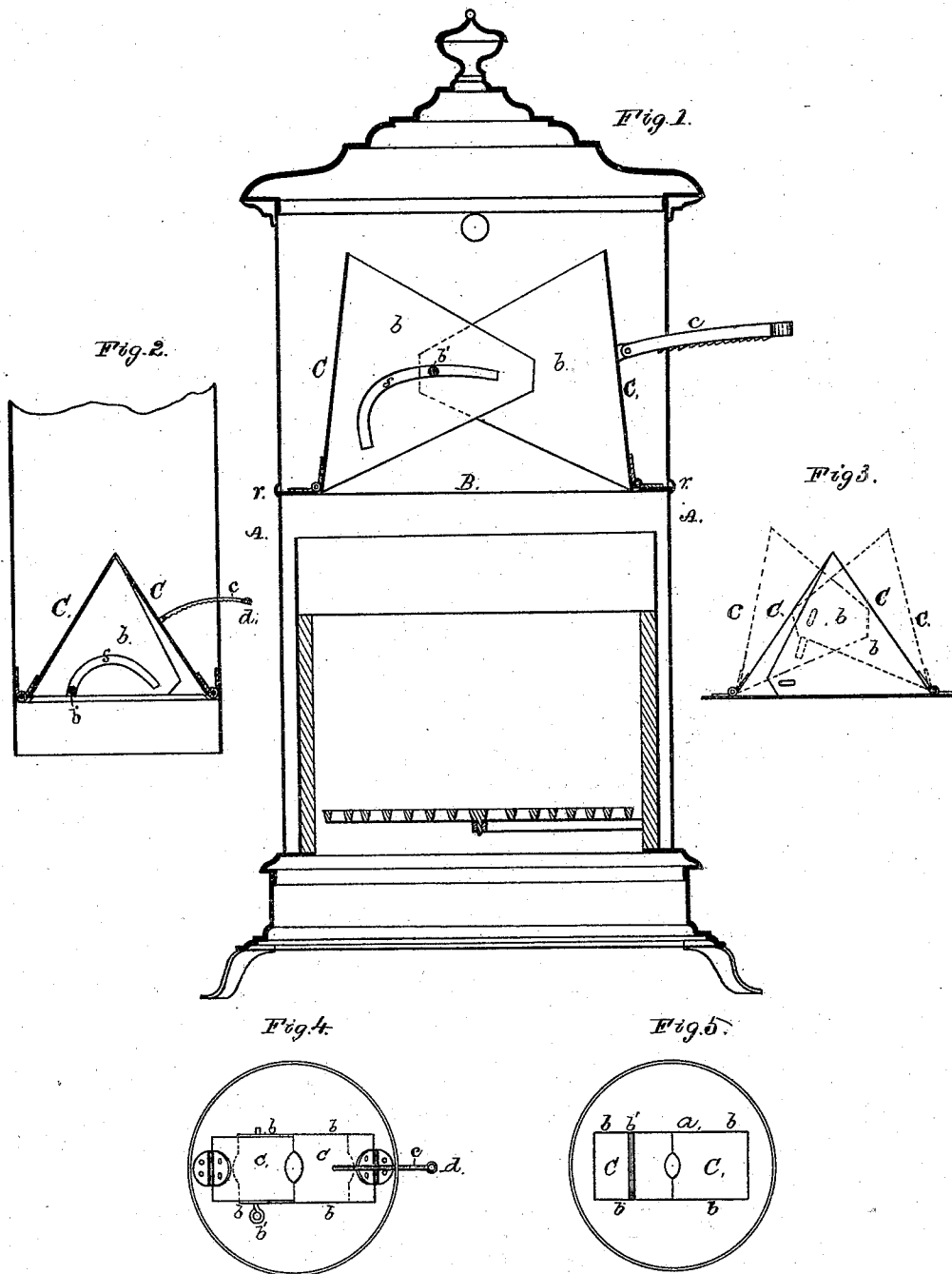


N. W. GRAFFAM.
STOVE-DAMPER.

No. 172,115.

Patented Jan. 11, 1876.



Witnesses.
Geo. Gray
J. L. Stahl

N. W. Graffam
by his attorney
J. P. Hale

UNITED STATES PATENT OFFICE

NATHANIEL W. GRAFFAM, OF LYNN, MASSACHUSETTS.

IMPROVEMENT IN STOVE-DAMPERS.

Specification forming part of Letters Patent No. **172,115**, dated January 11, 1876; application filed December 18, 1875.

To all whom it may concern:

Be it known that I, NATHANIEL W. GRAFFAM, of Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Dampers for Stoves; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing and to the letters of reference marked thereon, which form a part of this specification.

In said drawing, Figure 1 denotes a central and vertical section of a cylinder-stove provided with my invention, the same representing the damper as open. Fig. 2 represents the same as applied to a stove-pipe, and shows the same as closed. Fig. 3 is a side elevation of the damper as detached, the dark lines showing it closed and the dotted denoting it as open. Figs. 4 is a top view, the dark lines denoting the damper as closed and the dotted lines as open. Fig. 5 is a bottom view of the damper.

The object of my invention is to provide a simple and effective device to be applied to a stove, &c., above the chamber of combustion, for the purpose of regulating the consumption of the fuel, as may be desirable; and consists in the peculiar construction and arrangement of the parts and its application to a stove, &c., as hereinafter described and claimed.

In the said drawing, A denotes a cylinder-stove, made in sections, and of the ordinary construction, *r* being the ordinary section-connector. B is the base of the damper, the same resting upon the inner flange of the connector, and being of a circular form and of a diameter corresponding with the internal diameter of the stove, and provided with a central rectangular opening, *a*. C C are two plates, each of which is hinged to the base B, and is formed with a triangular wing, *b*, extending inward from each of its vertical edges, the two wings of one plate sliding into those of the other. The two outer wings have a rod, *b'*, extending through them and through

curved slots *s* formed through each of the inner wings. Each of these wings is of triangular form, the same being to enable the plates C C to be brought into impingement at their superior edges, in order to form a close chamber, or approximately so, when the damper is closed, a small opening being left at central part of their junction for the escape of any gas that may be generated in the stove when the damper is closed. To one of the plates C C is hinged an arm or rod, *c*, which is notched on its lower edge, such rod extending through one of the walls of the stove, and having a knob or handle, *d*, by taking hold of which and moving the same either outward or inward, the plates C C may be either drawn together or forced apart, as may be desirable, and as shown in the drawings. The notches on the rod, acting in conjunction with the edge of the hole through which it passes, serve to hold the plates C C or damper in the position desired.

I would remark that although I have designed and prefer to attach my damper within the body of the stove above the chamber of combustion, it may be applied with good effect in one of the sections of a stove-pipe, a flange being formed around the lower edge of the base, by which it may be riveted or connected with the body of the stove-pipe, as shown in Fig. 2, but I prefer to arrange it in the body of the stove, in order to retain the radiation of the heat on a lower plane.

I am aware that dampers have been arranged in a stove-pipe and so operated as to control the draft or the combustion of the fuel by admitting cold air above them. I am also aware that dampers have been made of a circular disk, with a hole in their centers, such disk rotating upon a spindle extending transversely through the walls of the stove-pipe, and serving to control the draft without the admission of cold air, my invention relating to this latter class.

What I claim as my invention is—

The improved damper, as described, the same consisting of the base A, plates C C hinged thereto, and having wings *a a a a* connected by a rod, *b'*, (extending through the

outer wings and through slots *s* in the inner ones,) and an operating-rod, *e*, the whole being constructed and arranged as stated, and to be disposed within the body of the stove or furnace above the chamber of combustion, or in a section of stove-pipe, as shown and described.

In testimony that I claim the foregoing as my own invention, I affix my signature in the presence of two witnesses.

N. W. GRAFFAM.

Witnesses:

F. P. HALE,
F. C. HALE.