J. B. ANDREWS.

Draught Apparatus for Stoves, &c.

No. 199,396. Patented Jan. 22, 1878.

Fig. 2.

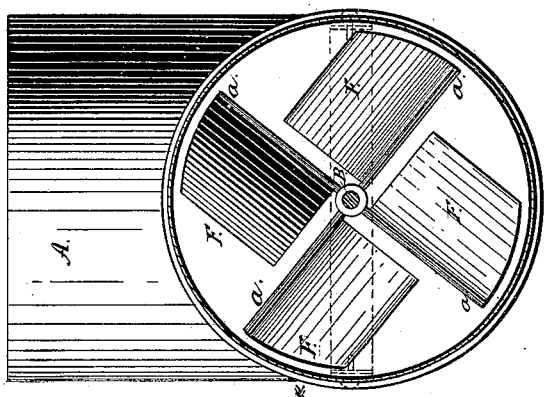
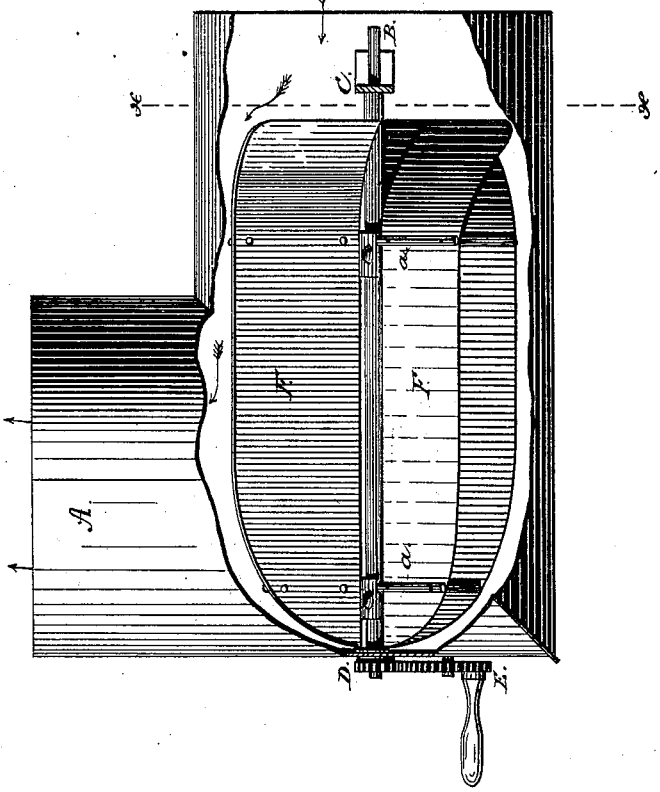


Fig. 1.



Attest

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UNITED STATES PATENT OFFICE.

JAMES B. ANDREWS, OF JERSEY CITY, NEW JERSEY.

IMPROVEMENT IN DRAFT APPARATUS FOR STOVES, &c.

Specification forming part of Letters Patent No. **199,396**, dated January 22, 1878; application filed December 27, 1877.

To all whom it may concern:

Be it known that I, JAMES B. ANDREWS, of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Draft Apparatus for Stoves, &c.; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification.

My invention relates to certain novel improvements in draft apparatus for heating stoves, furnaces, and the like.

It has for its object to produce an artificial current of air to induce draft through the grate and fire-pot, especially at the time when the fire is being started.

With this object in view, my invention consists in the arrangement and combination with the stove-pipe of a draft and blower, as will hereinafter more fully appear.

To enable others to make and use my invention, I will proceed to describe the same more in detail, referring by letters to the accompanying drawing, in which—

Figure 1 is a side elevation of a stove-pipe elbow provided with my improvement, the side of the elbow being broken away, exposing the mechanism inside; and Fig. 2 is a cross-section at the line *x x* of Fig. 1.

Similar letters indicate like parts in both views.

A represents an ordinary sheet-metal stove-pipe elbow, within the horizontal portion of which is arranged centrally a suction and blower fan, composed of a shaft, B, one end of which has its bearing in a cross-bar, C, arranged across the pipe, as seen more clearly in dotted lines at Fig. 2. This shaft B has its opposite end projecting through the vertical end of the elbow, in which it has its bearing. The projecting end of the shaft B is provided with a pinion, D, meshing with one of a train of gears rotated by a crank-gear, E. The shaft B is provided with radial arms *a a*, to which are secured any desirable number of vanes, F, the rear ends curved to conform to the interior shape of the vertical end of the elbow, and thence running straight to within a short distance of the front end, where they are bent, as shown more particularly at Fig. 2, to produce a suction or draft, so that the front ends draw, and the portion back of the same blow upward, producing a current in the direction of the arrows.

By turning the crank E the suction-blower is rapidly rotated, and an upward strong current is induced, which quickly kindles the fire in the fire-pot of a stove or furnace.

I have shown my invention as applied to the elbow of the stove-pipe; but I do not wish to limit myself to the exact location shown, as it may be applied to some other part of the stove with equal advantage. Nor do I wish to confine myself to the exact means shown for rotating the suction-blower, as other equivalent means may be employed.

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

The suction-blower constructed, as described, with vanes having their forward ends bent and rear ends curved, the whole mounted and secured to the shaft, as shown and described.

In witness whereof I have hereunto set my hand and affixed my seal this 24th day of December, A. D. 1877.

JAMES B. ANDREWS. [L. S.]

In presence of—

THEODORE RITTER,

WILLIAM T. P. BROWN.