

N. F. GOODRICH.

Heat Radiator for Stovepipes.

No. 50,069.

Patented Sept. 19, 1865.

FIG. 1.

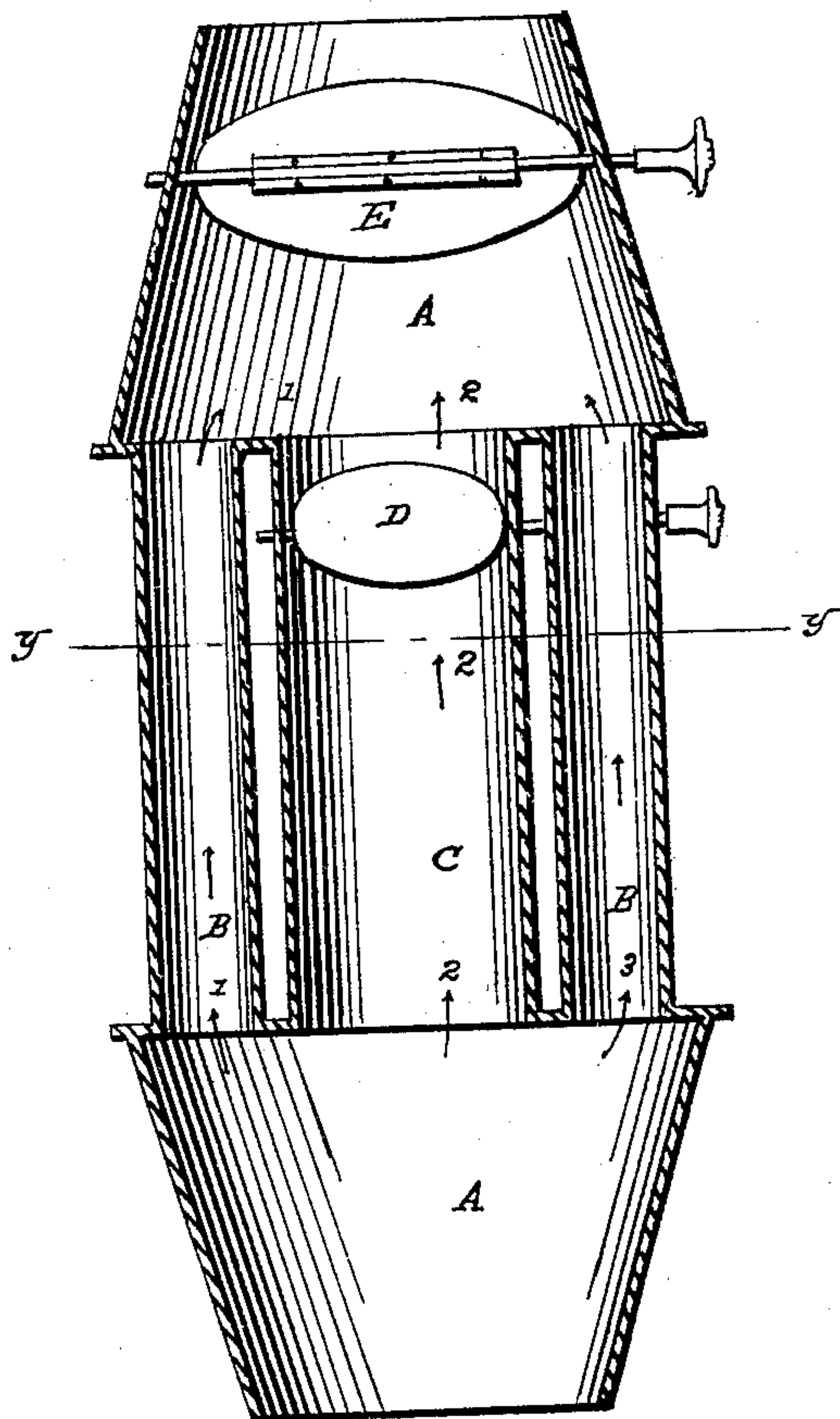
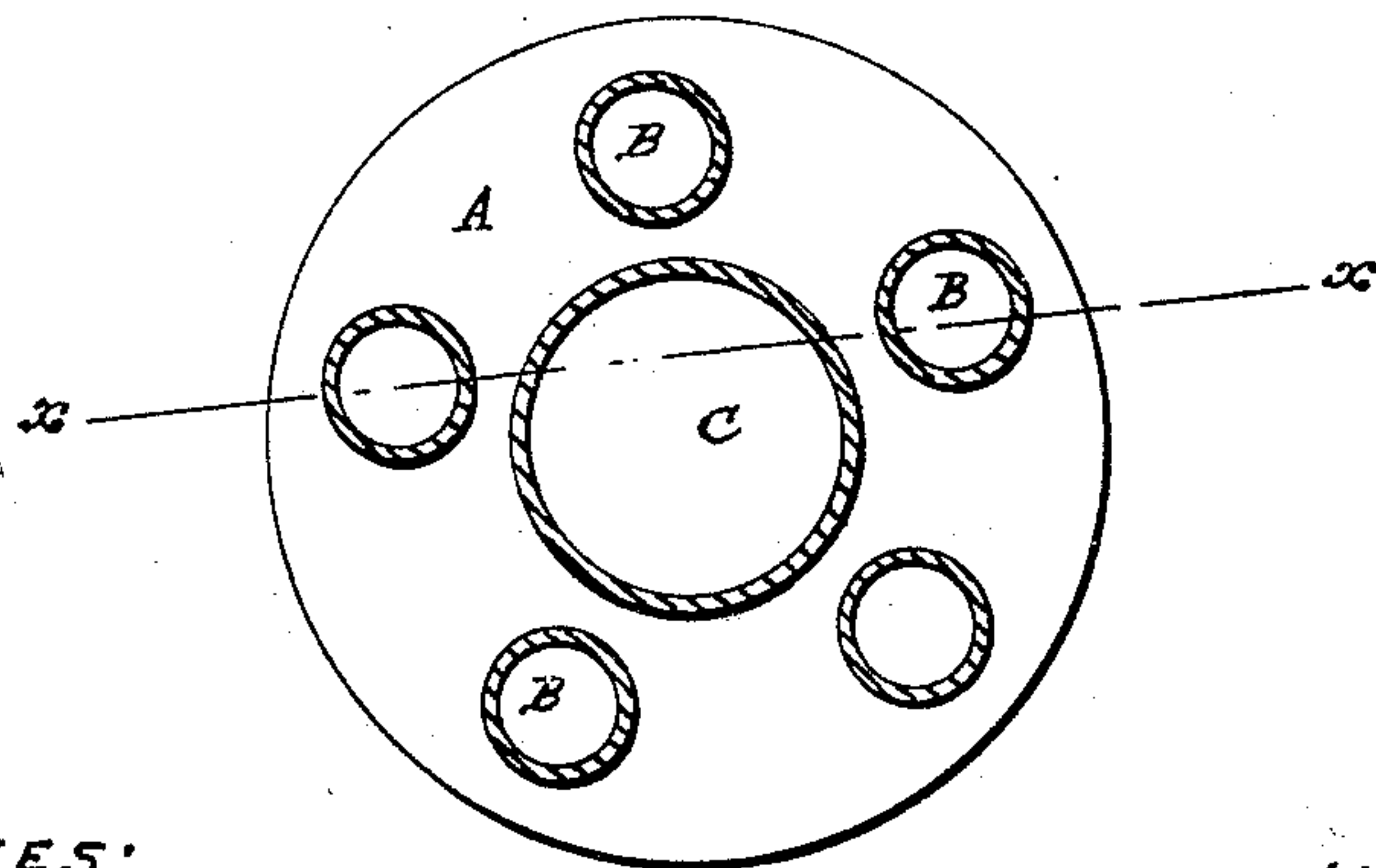


FIG. 2.



WITNESSES:
Geo. Trench
Wm. Brewin

INVENTOR.
N. F. Goodrich
By *Wm. Brewin*

UNITED STATES PATENT OFFICE.

N. F. GOODRICH, OF MERIDEN, CONNECTICUT, ASSIGNOR TO HIMSELF AND
ISAAC L. HOLMES, OF HAYDENVILLE, MASSACHUSETTS.

HEAT-RADIATOR FOR STOVE-PIPES.

Specification forming part of Letters Patent No. 50,069, dated September 19, 1865.

To all whom it may concern:

Be it known that I, N. F. GOODRICH, of Meriden, in the county of New Haven and State of Connecticut, have invented a new and Improved Heat-Radiator for Stove-Pipes; 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 make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical or longitudinal section of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a transverse section of the same, taken in the line *y y*, Fig. 1.

Similar letters of reference indicate like parts.

This invention relates to a new and useful improvement in a heat-radiator for stove-pipes, for which Letters Patent were granted to I. L. Holmes, August 30, 1864.

The radiator of Holmes consists of two conical chambers connected by a series of pipes, forming in the aggregate quite a large heat-radiating surface. This radiator answers a good purpose, but it has one defect, to wit, no means by which a direct draft may be obtained when required—as, for instance, in kindling a fire, and at times when, owing to the direction of the wind and from other causes, the draft is sluggish and insufficient to insure a rapid combustion of the fuel within the stove.

My invention is designed to obviate this difficulty; and to this end it consists in providing the radiator with a central pipe of larger diameter than those surrounding it, and providing said central pipe with a damper, all being arranged as hereinafter set forth, whereby a direct draft may be obtained through the central pipe whenever required, and an indirect

draft through the smaller pipes when the radiation of heat from the device is required.

A A represent two chambers of conical form, communicating with each other by means of pipes B, placed in the form of a circle between A A, as shown in Fig. 2. The two chambers A A are connected by a pipe, C, which connects with the centers of the larger ends of A A, the pipes B, which are considerably smaller than C, surrounding it. The pipe C is provided with a damper, D, and a damper, E, is placed within one of the chambers A.

The device is connected with the stove-pipe by having its joints fitted on the smaller ends of the chambers A A; and it will be seen from the above description that when the damper D is closed the products of combustion will pass up through the small pipes B, as indicated by the arrows 1, and a large heat-radiating surface obtained. This, however, is rather an indirect draft, and in cases where the combustion of the fuel in the stove will be too much checked, or when a strong draft is required—as in kindling a fire, for instance, the damper D of pipe C is opened, and the products of combustion will pass up directly through C, as indicated by arrow 2. Thus, by this very simple arrangement, the patented device of Holmes, previously alluded to, is made perfect.

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

The central pipe, C, provided with a damper, D, in combination with the pipes B and chambers A A, all arranged substantially as and for the purpose specified.

N. F. GOODRICH.

Witnesses:

JOHN IVES,
LEVI E. COE.