

R. S. MILLER.
Stovepipe Damper.

No. 57,544.

Patented Aug. 28, 1866.

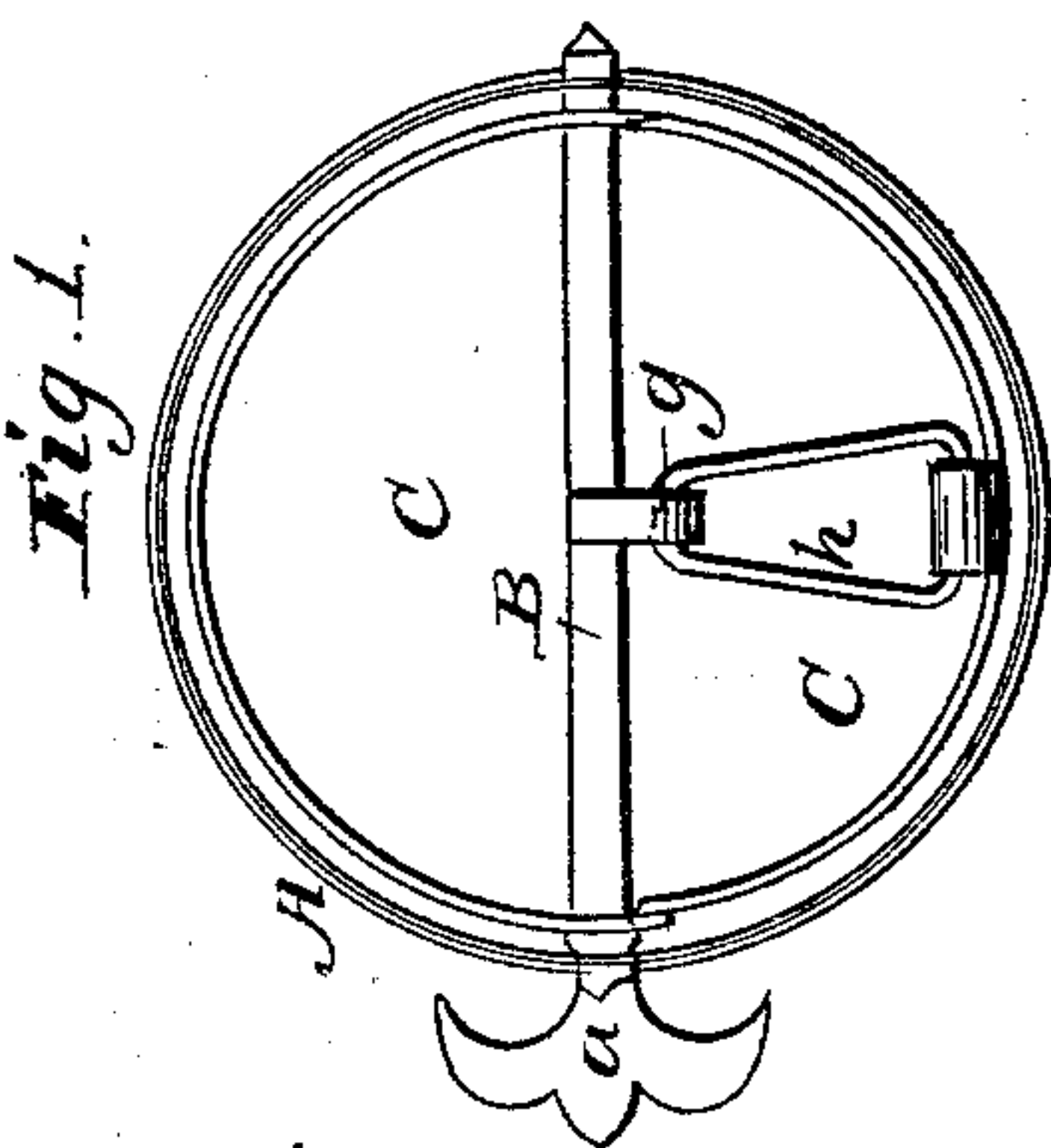


Fig. 1.

Witnesses:
R. T. Campbell
Ocho Schaffer

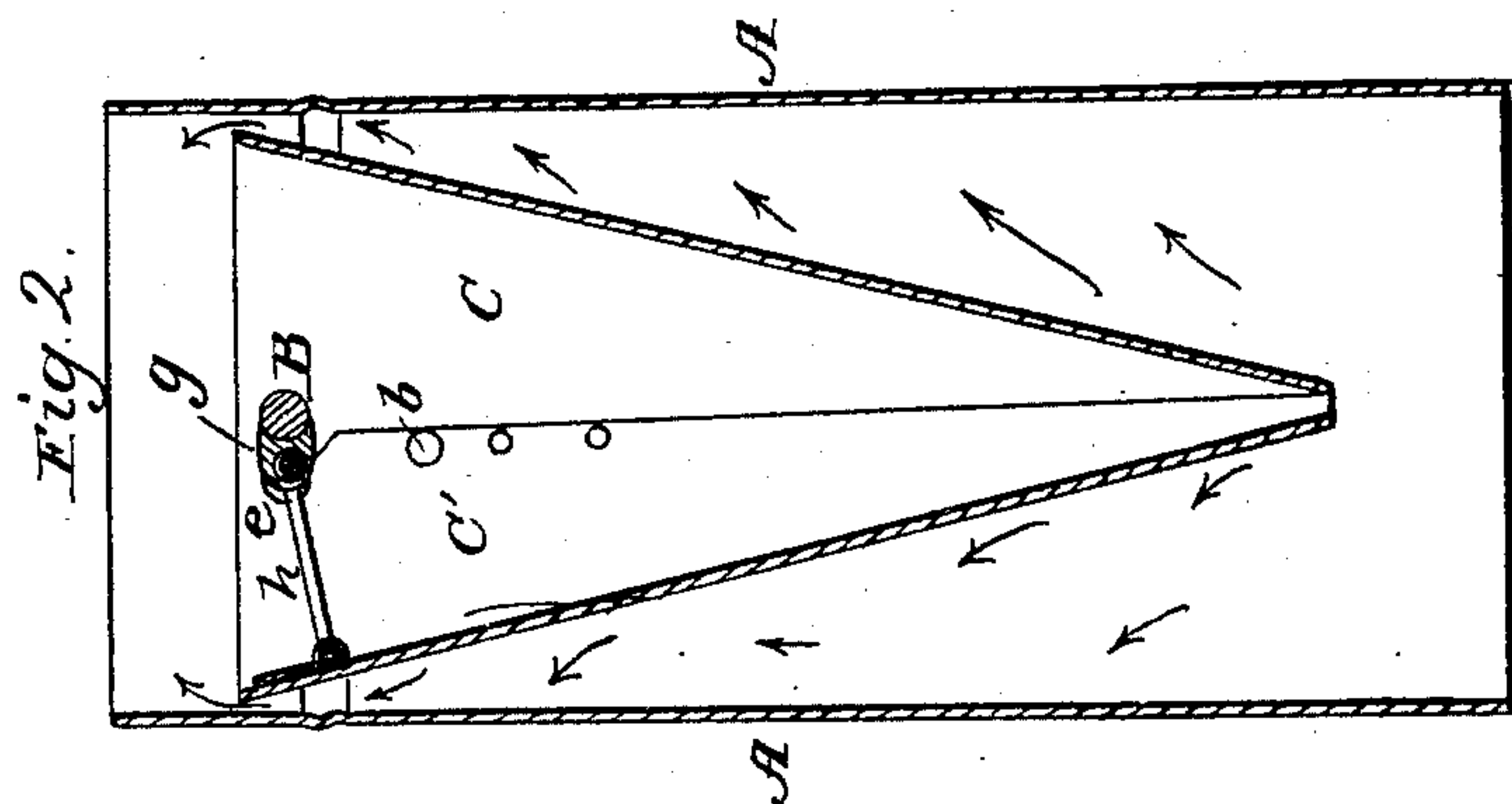


Fig. 2.

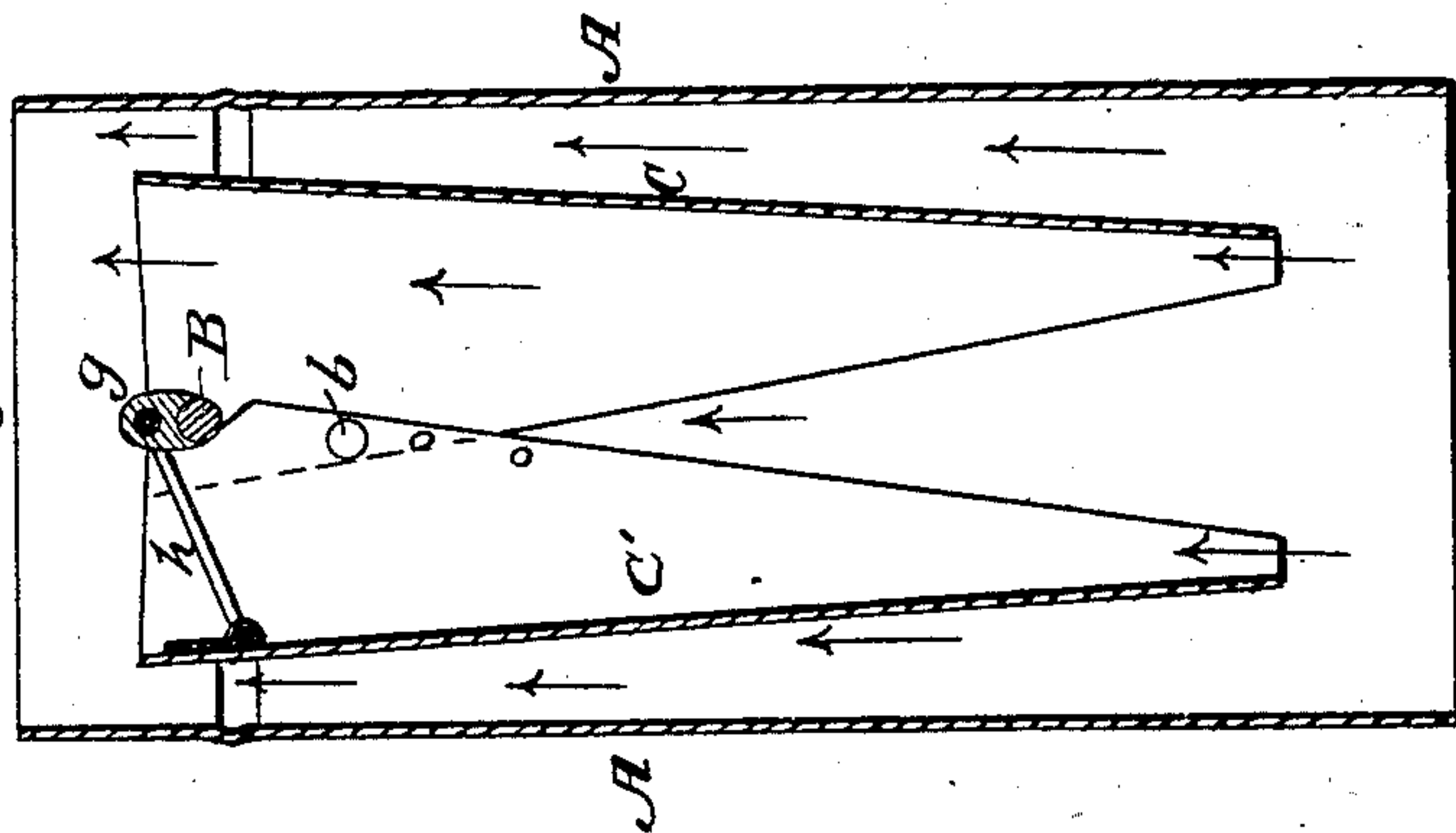


Fig. 4.

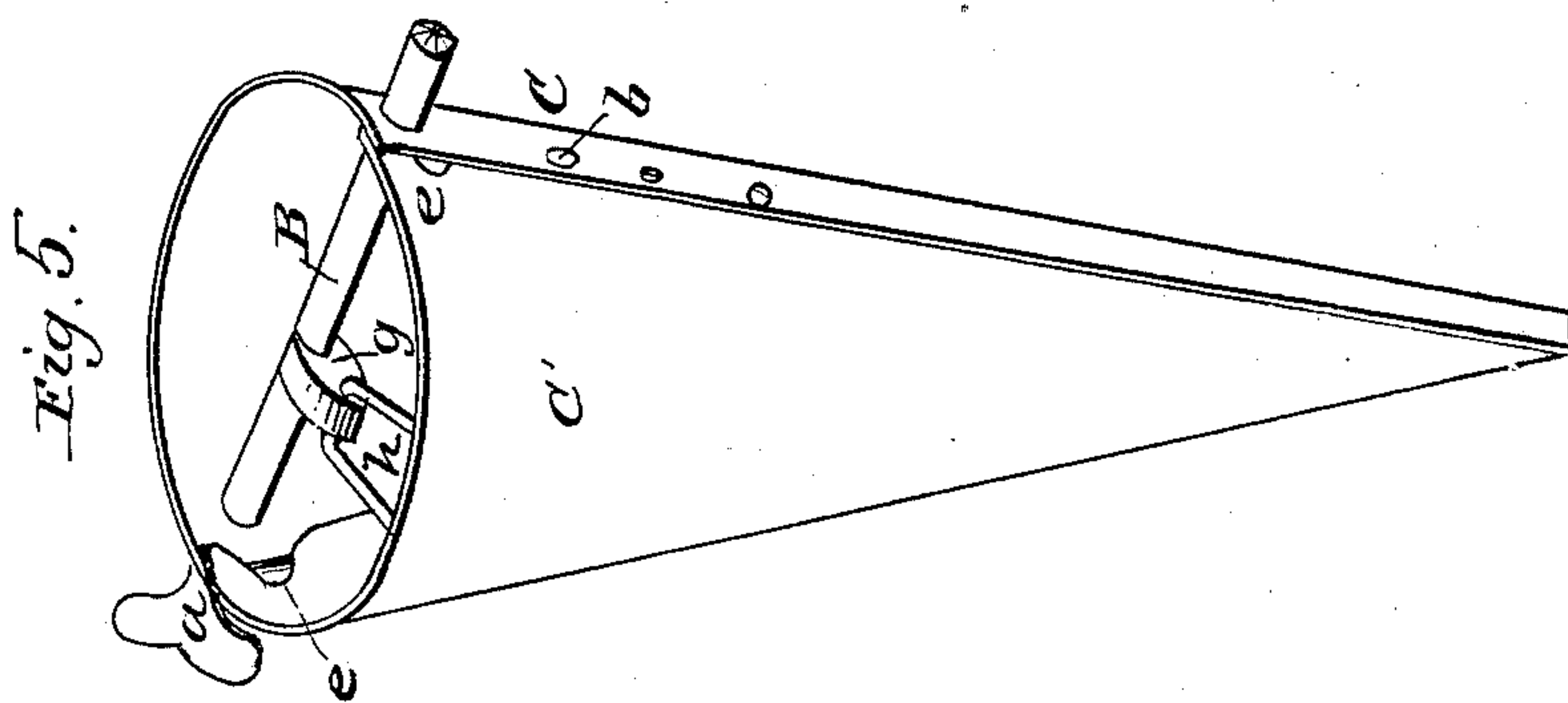


Fig. 5.

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UNITED STATES PATENT OFFICE.

RICHARD S. MILLER, OF BATTLE CREEK, MICHIGAN.

STOVE-PIPE DAMPER.

Specification forming part of Letters Patent No. 57,544, dated August 28, 1866.

To all whom it may concern:

Be it known that I, RICHARD S. MILLER, of Battle Creek, in the county of Calhoun and State of Michigan, have invented a new and Improved Stove-Pipe Damper; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a top view of my improved damper applied to a stove-pipe. Fig. 2 is a vertical central section through the damper applied to a stove-pipe. Figs. 3 and 4 are similar views, showing the damper when it is opened to its fullest extent. Fig. 5 is a perspective view of the damper detached from the pipe.

Similar letters of reference indicate corresponding parts in the several figures.

This invention is intended for regulating the escape of the products of combustion from a stove or furnace into the chimney or main escape-flue, by arranging within a stove-pipe a sectional damper, which is of the form of a cone, this cone being suspended by a rod which extends diametrically across the stove-pipe, and the two vertical sections connected together in such manner that by oscillating the said rod the sections can be opened or closed for obtaining a central or side draft, as may be desired, and as will be hereinafter described.

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

In the accompanying drawings, A represents a section of stove-pipe, and B is a horizontal rod which extends diametrically through said pipe, and which has a handle, *a*, formed on one end, by which the rod can be oscillated toward the right or toward the left.

C C' are two sections of a vertical cone, which is suspended by its base from the rod B, as shown in the drawings. The base of this inverted cone is somewhat less in diameter than the interior diameter of the pipe A, so that when the two sections C C' are closed, as shown in Figs. 1 and 2, this cone will hang vertically in the center of the pipe and direct the heated products of combustion rising in pipe A outward against the sides of this pipe, as indicated by the direction of the arrows in

Fig. 2; and as the base of said cone is smaller than the pipe A the products of combustion will escape slowly through the space which surrounds the base of the cone. In this way a large amount of heat which would without my damper escape into the chimney will be radiated into the room from the stove-pipe.

The two sections C C' of the cone overlap each other, as shown in Figs. 4 and 5, and are pivoted together at *b b*—points which are diametrically opposite each other and below the rod B. The cone C' is notched at *e e*, in order that the upper ends of the inverted half-cones may be allowed to come closer together in making the adjustment shown in Fig. 4, and it is connected to an arm, *g*, on the rod B by means of a link, *h*, so that when this rod B is turned about one-quarter around in one direction the sections C C' will be separated at their lower ends, as shown in Figs. 3 and 4, thus allowing the products of combustion to pass upward through the pipe A unobstructedly, as indicated by the arrows in the last-mentioned figures. When the rod B is turned in the opposite direction to that above mentioned the arm *g* and its link *h* will force the upper ends of the sections apart, and consequently close the lower ends, as shown in Figs. 1, 2, and 5.

By pivoting the sections of the conical radiator at points below the rod B, and below the point of connection of the link *h* with the section C', these sections operate like levers or shears, and their upper ends are contracted at the same time that their lower ends are opened, thus allowing a free space for the escape of the gas and heat on both sides of each section. When these sections C C' are closed their outer sides direct the gas and heat and smoke outward toward the stove-pipe for a considerable distance, and allow the products of combustion to escape at the upper end of the cone after they have given off considerable heat.

I am aware that a sectional conical damper is not new; and I am also aware that such a damper has been constructed so that its lower end could be opened or closed by means of a horizontally-vibrating band or rod, so as to throw the heat, &c., into the room through an opening which is made through the stove-pipe.

I am also aware that two flat plates have been pivoted together at their lower ends and

linked together at their upper ends, such an arrangement being shown in the patent granted to J. Knickerbocker, July 11, 1865. I do not, therefore, lay claim to such a damper.

I am further aware that H. Rugee shows in his patent of February 21, 1865, a cone divided into two halves vertically, and placed in an inverted position. These half-cones, however, are not controlled and operated by means so simple and perfect as I have invented. Therefore, while I do not claim such an arrangement as is shown in said Rugee's patent, I believe I am entitled to a patent for what I have described and shown as a new means for operating divided inverted-cone dampers.

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

1. The construction and arrangement of the two inverted half-cones *C C'*, pivots *bb*, crank-shaft *B g*, and link *h*, in combination with the stove-pipe *A*, as herein described and shown, for the purpose set forth.

2. The combination of the pivots *bb*, notches *e e*, and rock-shaft *B g* in the construction of a damper formed of two inverted half-cones, and arranged in a stove-pipe, all as herein described, and for the purpose set forth.

RICHARD S. MILLER.

Witnesses:

WM. A. BALDWIN,
A. W. WHITE.