STEVENS & PUFFER.

Stovepipe Damper.

No. 63,959. Patented April 16, 1867.

Fig. 1

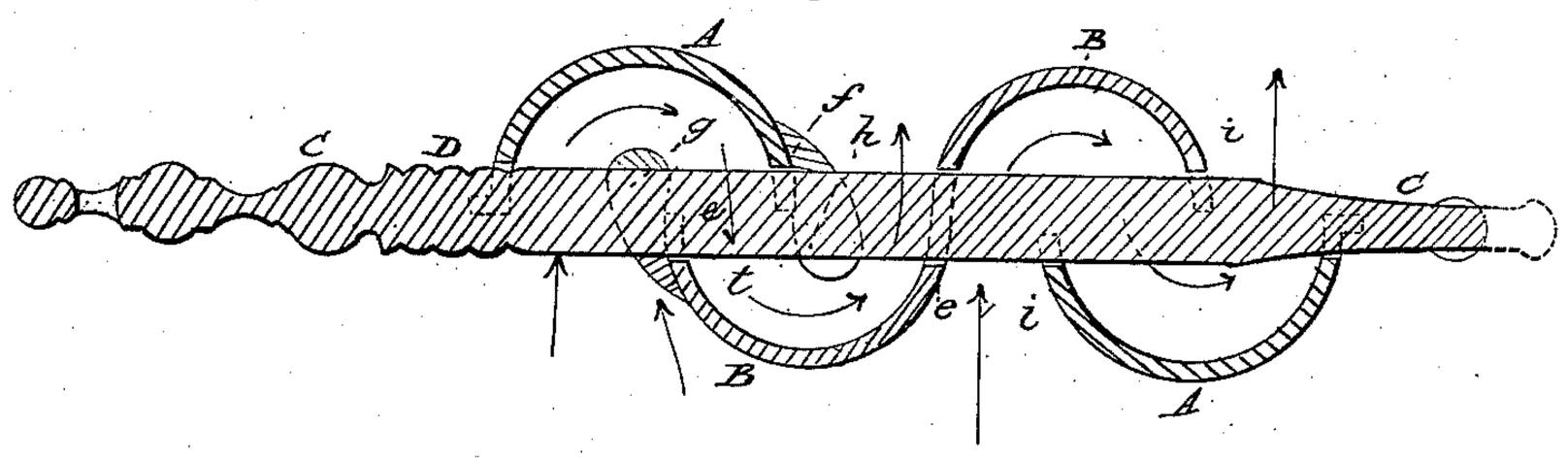


Fig. 2

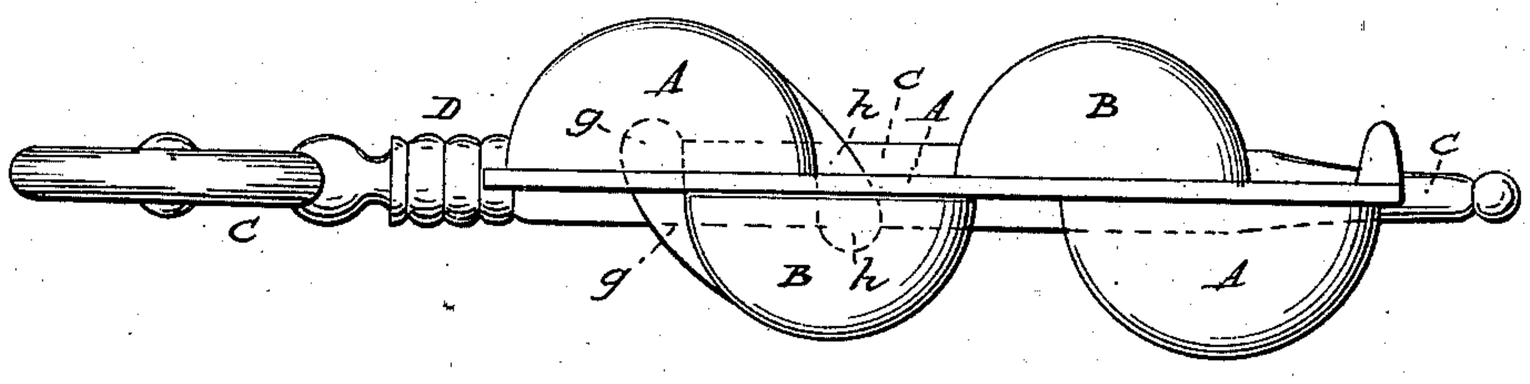
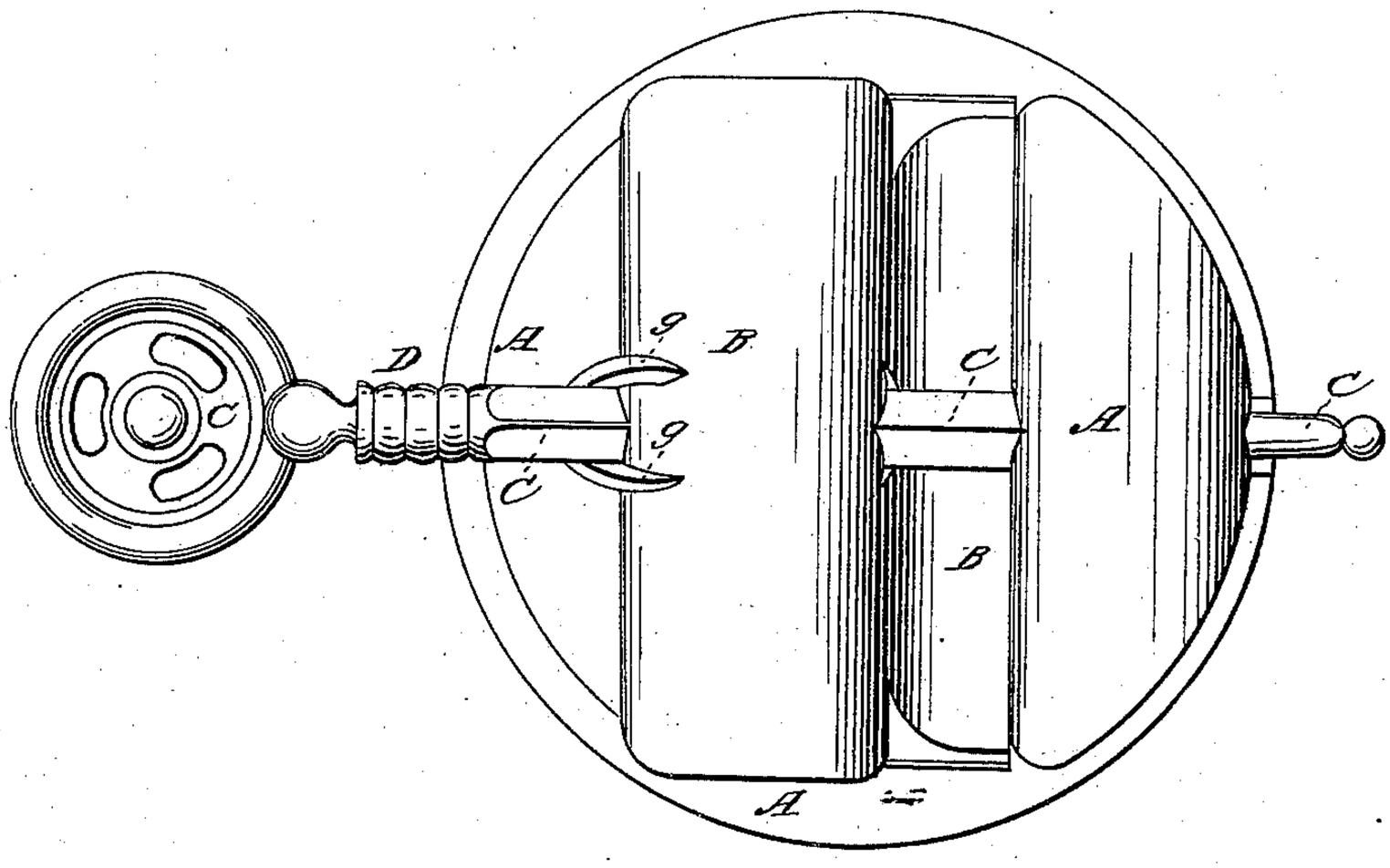


Fig. 3



Witnesses
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WILLIAM X. STEVENS, OF WORCESTER, AND WILLIAM E. PUFFER, OF LEXINGTON, MASSACHUSETTS.

Letters Patent No. 63,959, *dated April* 16, 1867.

DAMPERS FOR STOVE PIPES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, WILLIAM X. STEVENS, of the city and county of Worcester, and State of Massachusetts, and WILLIAM E. PUFFER, of Lexington, in the county of Middlesex, and State of Massachusetts, have invented a new and useful implement for controlling the draught and heat of stoves, called a "Heat Regulator;" and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a central longitudinal vertical section.

Figure 2, a longitudinal elevation.

Figure 3, a view of the lower side of a heat regulator made according to our invention.

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

This invention consists in a certain novel construction of stove-pipe damper, and certain means of operating the same, whereby a great portion of the heat usually allowed to escape, may be retained, and yet allow sufficient draught of air to supply the fire and take away the gas of coal burners. It also consists in a certain arrangement and means of operating the parts, whereby the amount of draught may be regulated to more perfectly suit each place where it is used.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

A is a circular frame of as large a size as will turn freely in the pipe, having about one-third of its area, on each side of a parallel sided opening across its centre, formed into a deep trough, one trough facing up, the other down. B is a gate formed of two troughs so joined by an opposite edge of each that one faces up and the other down, in direct opposition to the similar troughs of frame A, through the opening of which it passes and wholly covers, overlapping the edges of the frame in such a manner that the air and smoke must pass into the hollows of the gate to go around the inner edges of the frame, and then into the hollows of the frame to go around the edges of the gate, as shown by the direction of the arrows, in fig. 1. C is a bar of the usual form for dampers, except that it is about an inch longer than the diameter of the pipe, and has several grooved rings D under the bead. This bar is made to pass horizontally through and across the pipe, longitudinally from edge to edge through frame A, in which it slides loosely, and through gate B to which it fits tightly for the purpose of moving gate B across the opening of frame A to close said opening wholly or in part, as may be desired, while the rings D being seen outside the pipe indicate the amount of said opening. When entirely closed gate B is in the position of the dotted lines *i i i*, in fig. 1, and its portions *e e* come in contact with portions *f f* of the frame. *g* represents a loop on the gate, and *h* a similar loop on the frame, through which bar C passes to hold the two parts together. By this arrangement of pinning together, the holes for the bar C, (which bar serves as a pin,) may be cast in both frame and gate or any such opposing parts, thus saving all machine work in their construction.

To use this damper as a heat regulator, put one edge of gate B through the opening of frame A, place both parts thus together in the pipe, with all the holes, including those in the pipe, in line, then push the bar through all the holes. When the fire is started, turn the damper edgwise with the line of pipe to get all the draught, but as soon as the first deluge of smoke has passed and the flue is warm, turn it square across. Now pull the bar out endways till one ring is outside the pipe, and it is in condition to be left over night; pull out another ring and you have more draught; thus with a little experimenting, the draught of each chimney may be regulated.

What we claim as our invention, and wish to secure by Letters Patent, is—

1. Keeping two or more parts of a stove-pipe damper in the desired relation to each other by means of the turning bar used as a pin in the manner and for the purposes described.

2. The combination and arrangement of frame A, gate B, and bar C, as specified and for the purposes set forth.

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