

(No Model.)

S. S. RICHARDSON.
DAMPER.

No. 431,708.

Patented July 8, 1890.

Fig. 1.

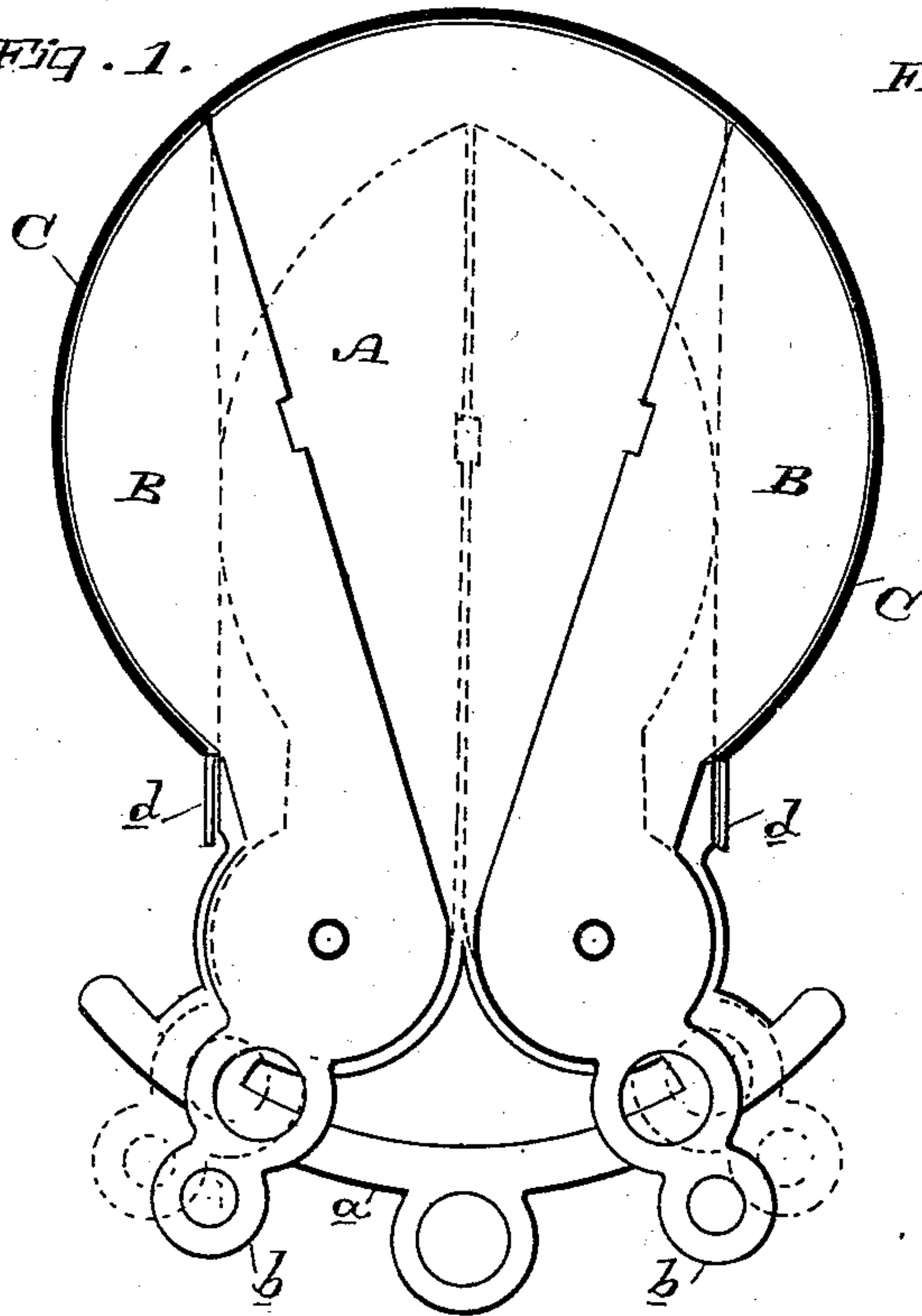


Fig. 2.

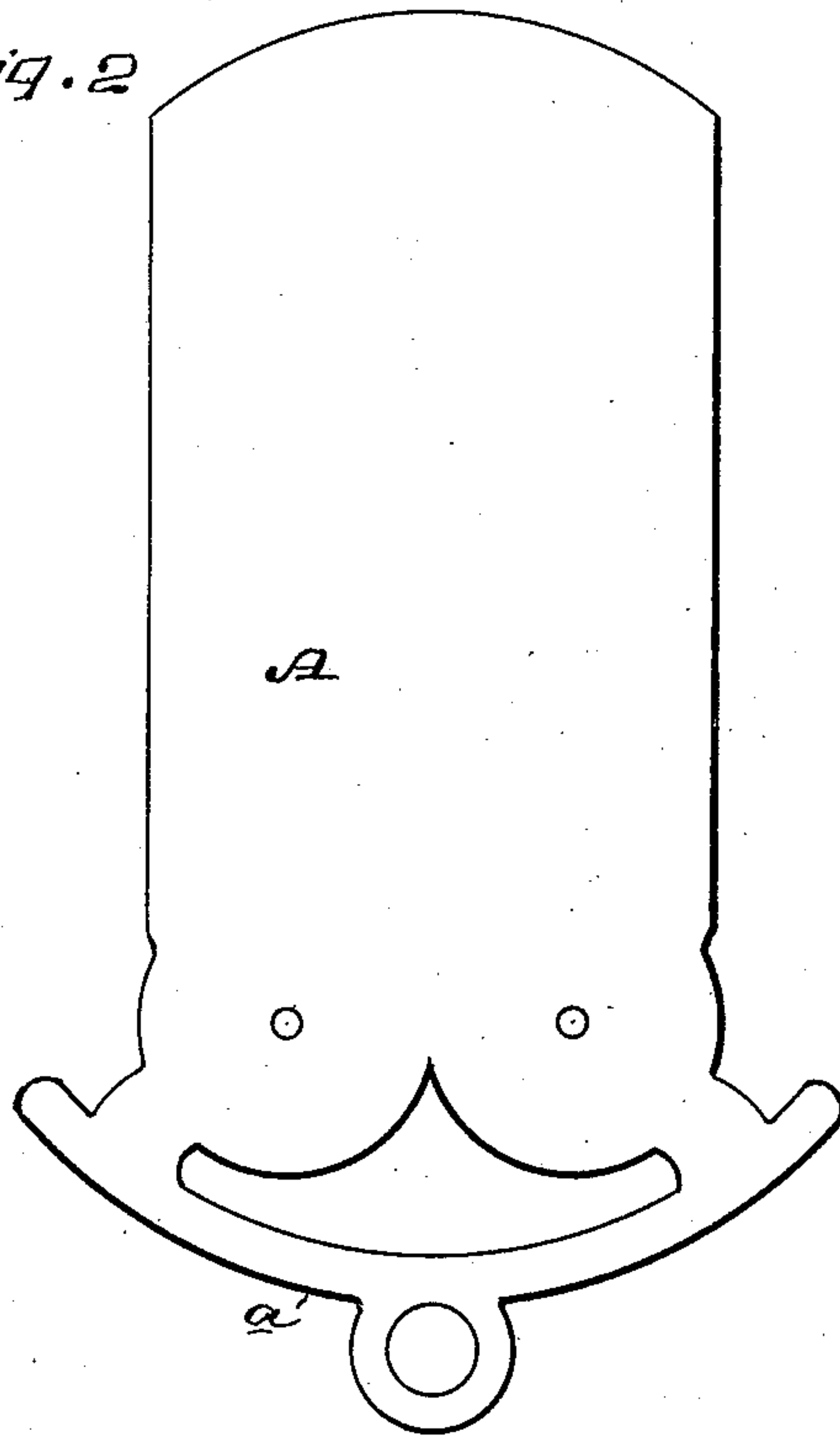


Fig. 3.

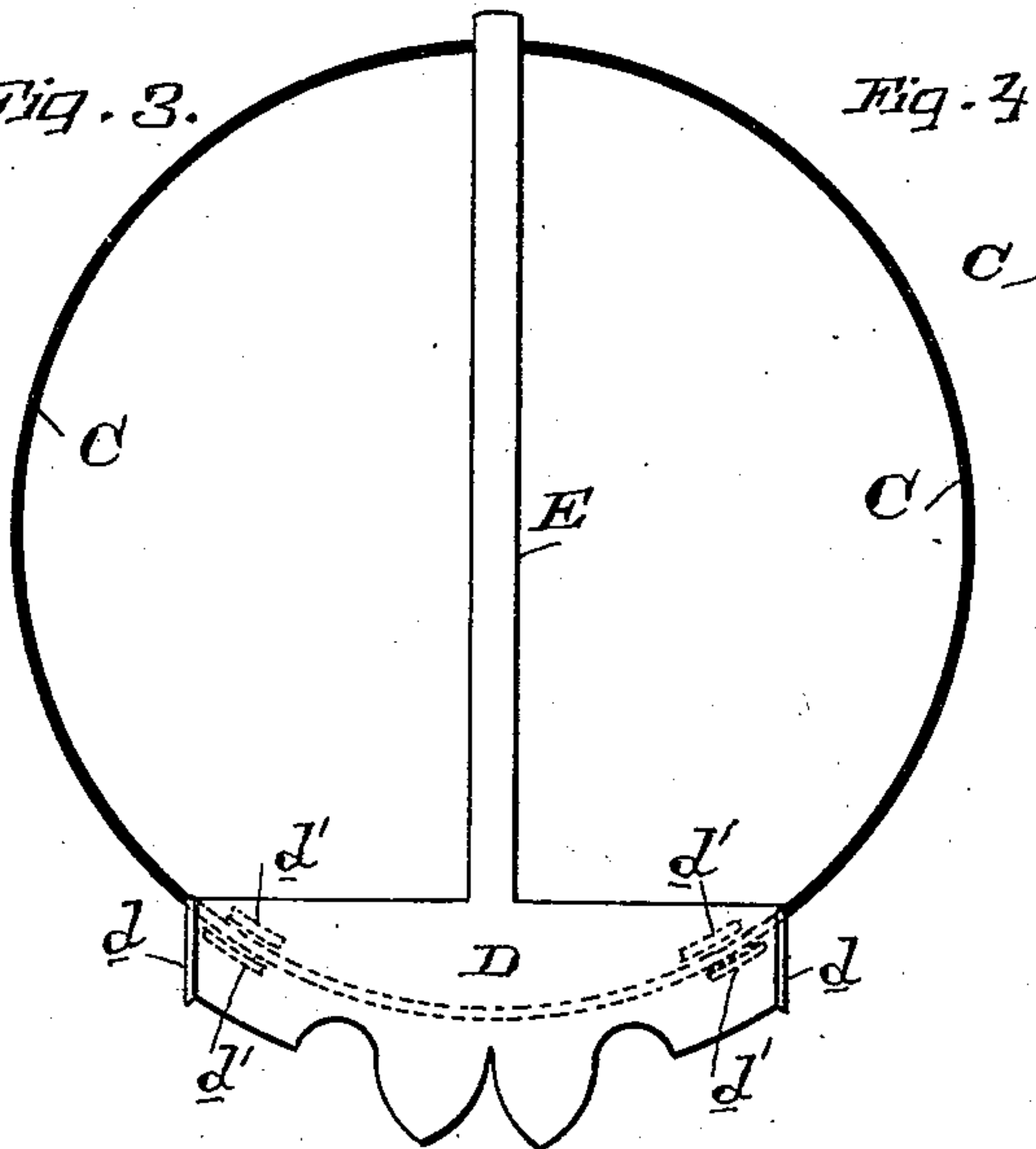
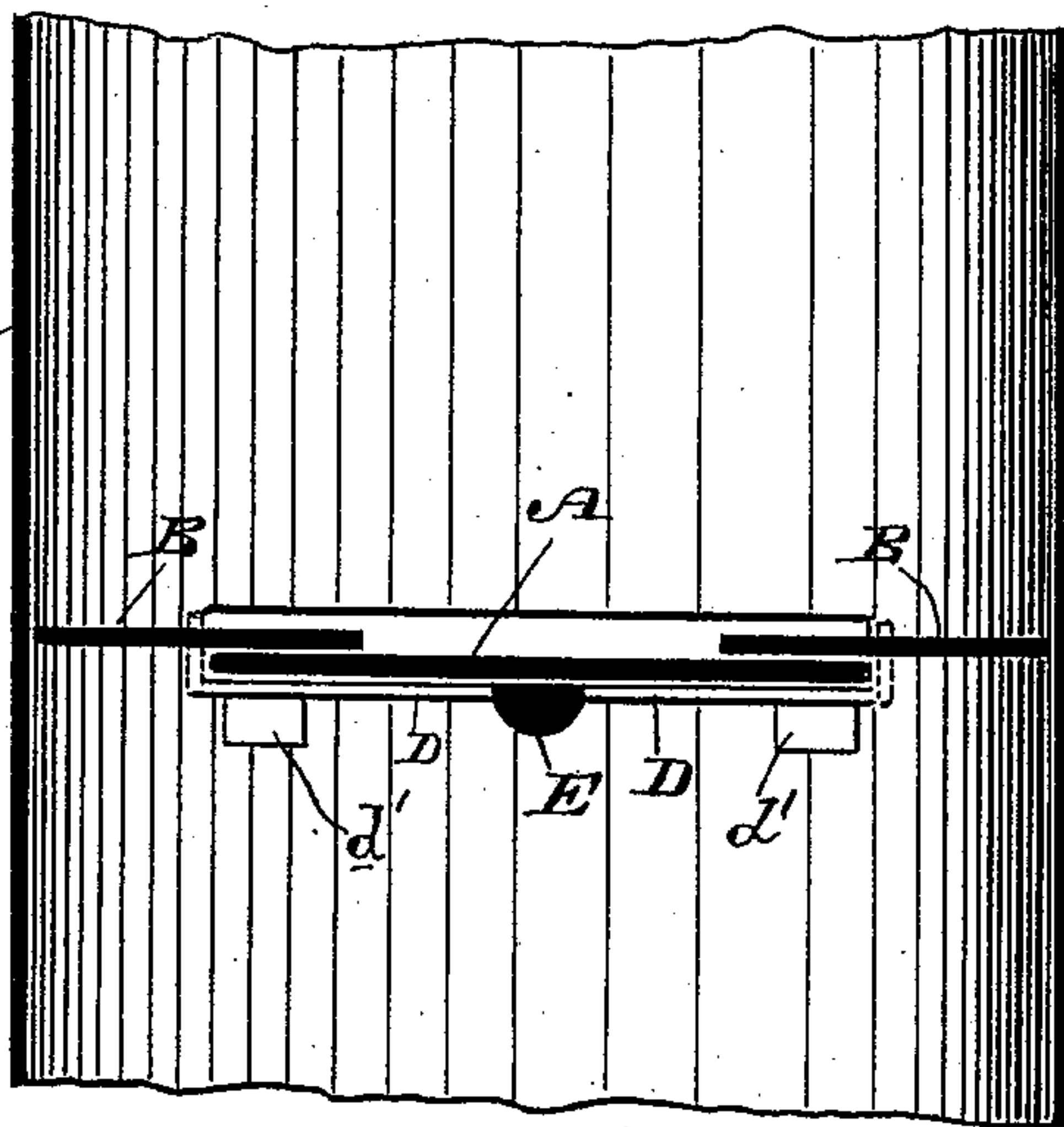


Fig. 4.



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UNITED STATES PATENT OFFICE.

SAMUEL STONE RICHARDSON, OF HAPPY CAMP, CALIFORNIA.

DAMPER.

SPECIFICATION forming part of Letters Patent No. 431,708, dated July 8, 1890.

Application filed March 17, 1890. Serial No. 344,193. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL STONE RICHARDSON, a citizen of the United States, residing at Happy Camp, in the county of Del Norte and State of California, have invented an Improvement in Dampers; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to the class of dampers specially adapted to be fitted to stove-pipes and other similar flues and smoke-conduits.

My invention consists in the new and useful adjustable damper hereinafter fully described, and its features of novelty are specifically pointed out in the claims.

The object of my invention is to provide a simple and readily-operated damper for stove-pipes and similar conduits, which can be readily inserted in place without materially weakening the stove-pipe, and which, when in position, can be expanded or contracted so as to adjust it suitably to the interior area of the pipe.

Referring to the accompanying drawings, Figure 1 is a plan of my damper, showing it in position and with its wings extended, the dotted lines showing them contracted. Fig. 2 is a plan of the body portion A. Fig. 3 is a view showing the support for the damper. Fig. 4 is a vertical section of the stove-pipe and damper within it.

The main portion or body of the damper consists of an elongated plate A, having a head or outer portion *a*. Upon this body portion A, near its head, are pivoted the wings B of the damper, said wings consisting of sector-like pieces having straight inner or adjacent edges and curved outer edges, which, when closed together, lie wholly upon the body-plate without extending or projecting over its edges, but which, when separated or expanded, project over the edges of said plate, and so increase the superficial area of the damper. These wings have handle-pieces *b*, whereby they may be readily operated.

C is the stove-pipe, and in the front of this a sufficiently extended slot is made to receive the damper, which, when inserted, has its wings closed up, so that the damper is only of the width of the body-piece A, and therefore the slot in the stove-pipe need not be

made so wide as to weaken said pipe. The head portion *a* of the plate A is curved, as shown. The damper is therefore of the sliding pattern, and in order to support and guide it I have the rest-plate D, at each end of which are raised flanges *d* for guiding the sides of the damper, and said plate also has the downwardly-extending flanges *d'* in pairs at each side, one being inside of the stove-pipe and one outside, whereby the rest-plate itself is held in firm position. From this plate D extends inwardly the rest-bar E, which is a half-round rod, the rear end of which is mounted in a hole in the stove-pipe. This rest-rod supports the damper while in position, while, when the damper is pulled out, the plate D guides it and supports it.

In operation, when I wish to have a large passage in the pipe, I need only push the damper in a certain distance. Then by pushing it in a greater distance I contract the area of the pipe until finally the damper is pushed in to its full position, whereupon the pipe is contracted, leaving only a space on each side of the damper, and this may be governed and controlled by swinging the wings B out or in.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A damper consisting of the body-piece A, adapted to be inserted through a slot in the stove-pipe, and the swinging wing-pieces B, pivoted to said body-piece, and provided with handle-pieces *b*, projecting through said slot, whereby the area of the damper may be increased or diminished by the swinging of the wings, substantially as described.

2. A damper consisting of the body-piece A and the swinging wing-pieces B, pivoted thereto, said wing-pieces having straight inner or adjacent edges and curved outer edges, whereby they are adapted to enlarge or diminish the pipe-area, and provided with handle-pieces projecting exteriorly, whereby the wing-pieces may be moved, substantially as described.

3. A damper consisting of the body piece or plate A, adapted to be inserted through a slot in the stove-pipe and having a head portion *a* on the exterior of the stove-pipe, and the sector-like wing-pieces B, pivoted to

the plate A, and having handle-pieces *b*, whereby they are operated to extend or contract the superficial area of the damper, substantially as described.

5 4. In combination with the sliding damper of a stove-pipe, the rest-rod E, crossing the pipe under the damper, the extended end plate D of said rod, the end flanges *d* of the plate for guiding the damper, and the down-
10 wardly-projecting flanges *d'* for holding the rest-rod and end plate in place, substantially as described.

5 5. The sliding damper consisting of the body-plate A and the sector-like wing-plates
15 B, pivoted on said body-plate, whereby the

superficial area of the damper may be increased and diminished, in combination with the rest for said damper, consisting of the rest-head E, crossing the stove-pipe, the extended end plate D of said rod, having the 20 end flanges by which the sliding damper is guided, and the downwardly - extending flanges for holding the rest in place in the pipe, substantially as described.

In witness whereof I have hereunto set my 25 hand.

SAMUEL STONE RICHARDSON.

Witnesses.

J. B. JOHNSTON,

S. K. THORP.