

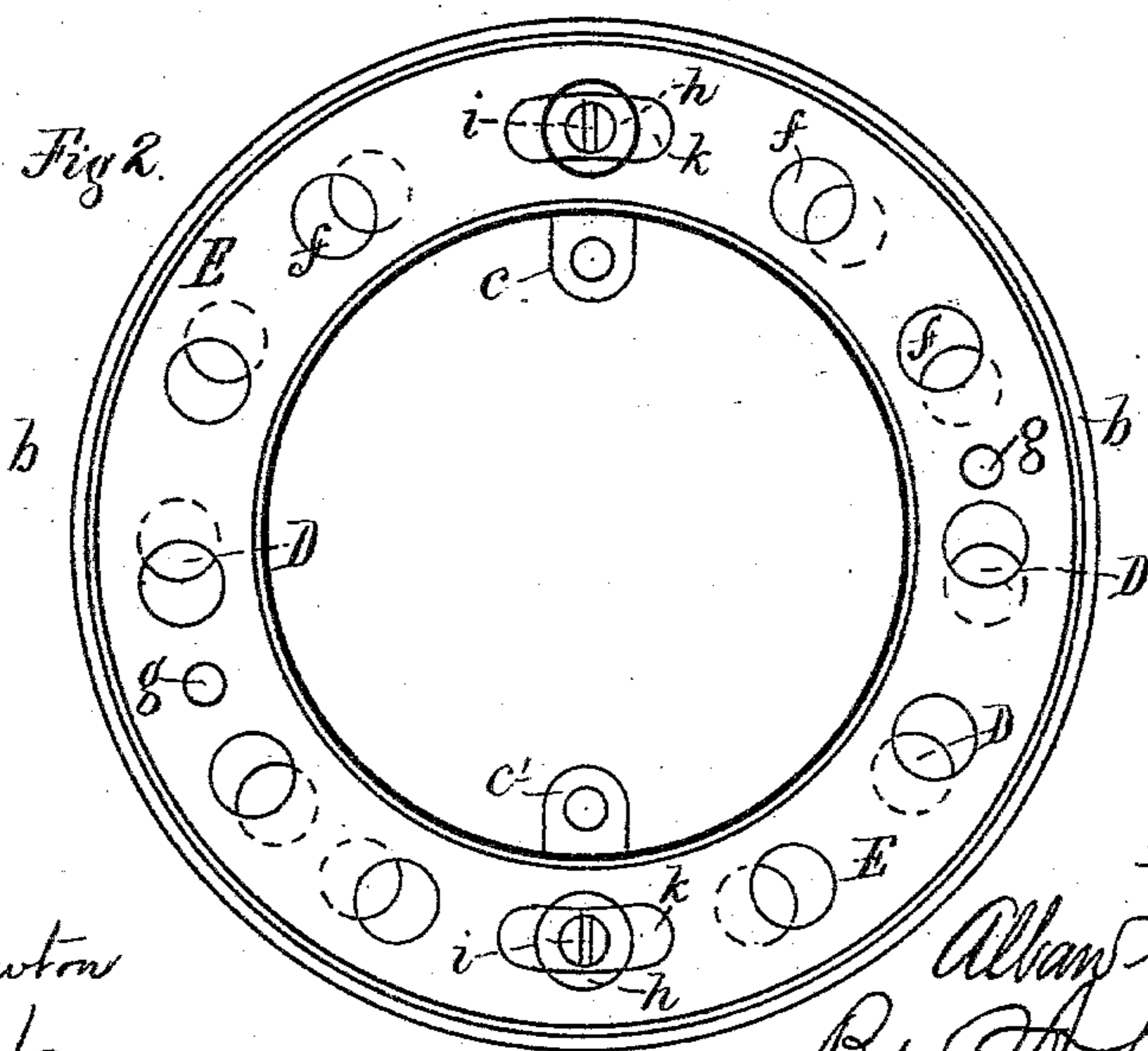
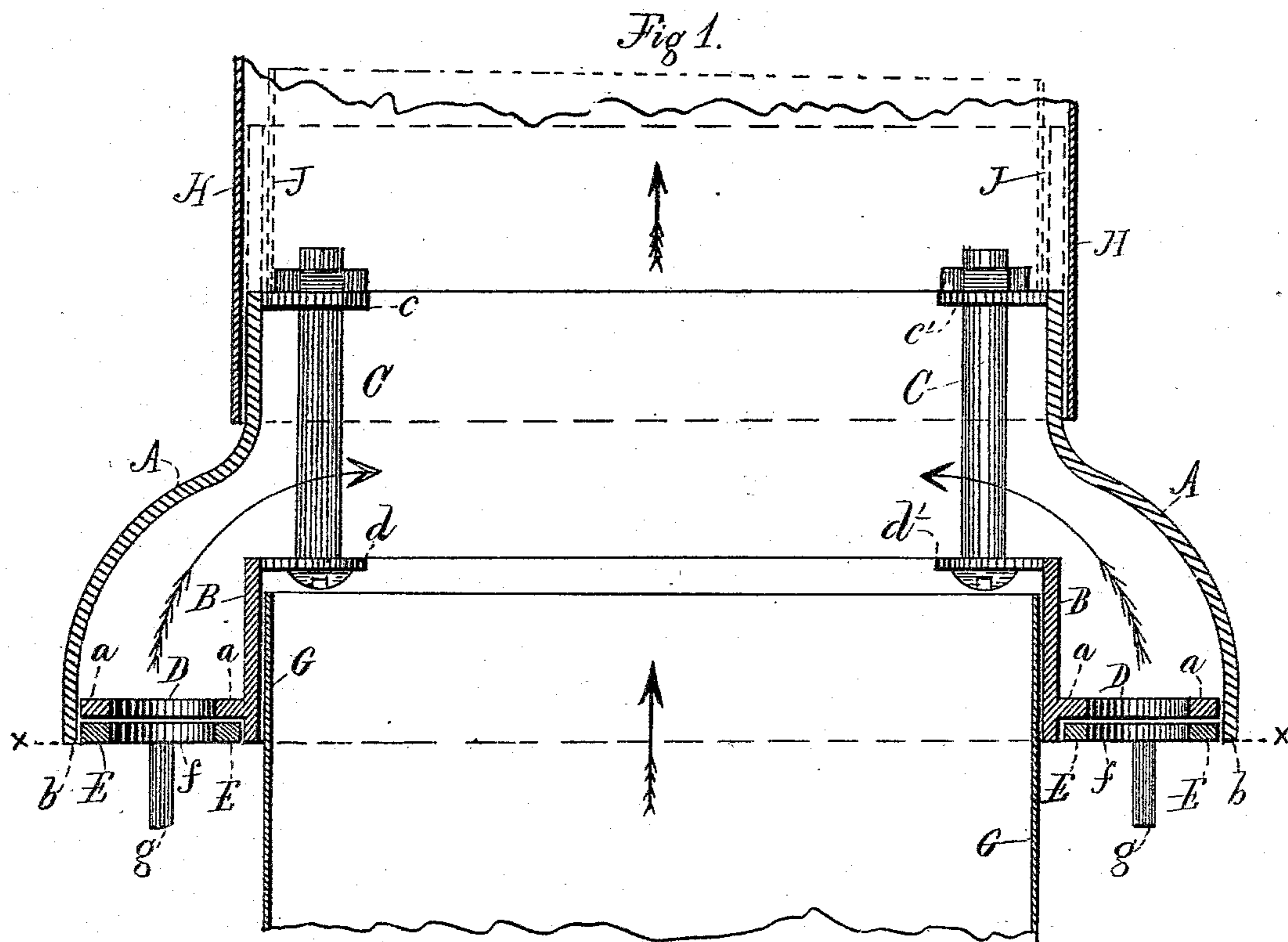
(No Model.)

A. CUMMINGS.

VENTILATING DAMPER FOR STOVE PIPES AND FLUES.

No. 274,567.

Patented Mar. 27, 1883.



Witnesses;

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UNITED STATES PATENT OFFICE.

ALLAN CUMMINGS, OF NEW YORK, N. Y.

VENTILATING-DAMPER FOR STOVE PIPES AND FLUES.

SPECIFICATION forming part of Letters Patent No. 274,567, dated March 27, 1883.

Application filed July 7, 1882. (No model.)

To all whom it may concern:

Be it known that I, ALLAN CUMMINGS, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented a new and useful Ventilating-Damper for Stoves, Pipes, and Flues, of which the following is a specification.

My invention relates to improvements in dampers for use in stoves, pipes, or flues, and is arranged to not only fulfill all of the requirements of an ordinary damper, but in addition thereto to possess the advantages of catching and carrying off the gases that may arise from the stove itself, and the fumes, steam, or odors that may be thrown off in cooking or from any cause whatever; but it will also draw all the impure air that may be in the room or place where such stove is situated. In fact, whenever this damper is opened it is constantly drawing the air from the room, which is of course as constantly replaced by pure air, the apparatus and means of accomplishing which are fully illustrated in the accompanying drawings, which form an essential part of this specification, and in which—

Figure 1 is a vertical sectional elevation of an apparatus in which my invention is fully embodied; and Fig. 2 is a plan view, looking from beneath, and taken on line *x x* in Fig. 1.

The same reference-letters marked on the two figures locate and point out corresponding parts.

A represents the body of the damper-frame, which partakes substantially of the form of an inverted bowl. Other shapes and names may be used and applied to this body, yet these would seem to be preferable. B is the base or bottom thereof, in the form of an annular ring or collar, provided near its base (on the exterior) with a projecting rim or shelf, *a*, the diameter of which conforms to the interior diameter of the base *b* of the bowl or body A. These two parts of the structure are formed from either cast or sheet metal by any of the well-known mechanical means employed in manipulating such metals, and the base B is inserted into the base of bowl A and therein secured, as will presently be fully explained.

At the top of the rim of the bowl A are formed two or more inwardly-projecting lugs, *c* and *c'*, and the top of the ring or collar B is also provided with corresponding inwardly-

projecting lugs, *d* *d'*. Stove-bolts C, of the usual pattern, are passed through these lugs *c* *c'* and *d* *d'*, and serve to rigidly secure the body A and the base B together. The projecting rim or shelf *a* of the base-ring B is provided centrally at suitably-fixed intervals on its entire circle with one or a series of openings, D.

An annular damper-plate, E, corresponding in shape with the projecting shelf or rim *a*, and provided with an opening, a slot, or series of holes, *f*, corresponding with the openings D in the rim *a* of the base-ring B, is inserted in the recess formed in the base of the bowl A and base B, and it is arranged to be rotated therein by means of the depending tips *g*. This damper-plate E is held in its position by means of washers *h* and screws or bolts *i*, which pass through elongated slots *k* in the plate E and enter and are secured to the rim or shelf *a* of the base B. These slots *k* are of such length as to determine the extent of the play of the damper-plate E, so that when the openings D and *f* coincide the position on the base-ring B is held at that point, and vice versa at the other extreme. It is plainly obvious that other means may be readily found by the skilled mechanic to secure the damper-plate E in its place and to limit and control its movements. I therefore do not confine myself to the exact means described.

It is readily seen by referring to Fig. 1 that the annular ring or collar B will fit over the stove-pipe G, and that the projecting lugs *d* and *d'* at the top thereof will act as rests and stops to limit the entry of the stove-pipe and to insure its remaining in the proper position. In a similar manner the upper section of pipe H will fit over the top or extreme point of pipe of the bowl A on the outside, or upon the inside thereof, if preferred, as is plainly indicated by the dotted lines J in Fig. 1. In the latter case the lugs *c* *c'* will act as stops or rests for the pipe H.

As is plainly shown, the entire dampening device is projected beyond the periphery of the stove-pipe, thus leaving a clear and uninterrupted passage for the smoke from the fire at all times, be the damper open or closed. At the same time a passage is provided outside the exterior of the stove-pipes for allowing the foul air from the room to pass around the smoke-channel, and thus find its way to the

smoke-flue, and it is actually drawn into the stove pipe or flue by means of the current or suction caused by the movement of the smoke and heat.

5 Although the damper, when open, dampens the combustion of the fire sufficiently, yet it does not check it so much as to be injurious. It insures at all times the passage of all gases and smoke from the fire, and the generation of
10 heat is avoided. This absolutely prevents the escape of any gas into the room, guaranteeing purity of the air so far as any vibrating cause from the stove is concerned. These dampers can be made in various shapes and forms with-
15 out materially altering the spirit of my invention. They can be made in various sizes to fit various sizes of stove-pipes.

It is obvious that this form of damper may be attached directly to stoves or flues as well
20 as to pipes at any point of juncture of pipe-sec-

tions, as on the elbow running off directly into a fire-board on a line with the top of a stove, where there is no ascending pipe used. It can also be placed in the fire-board or in the chimney-wall. In this latter case the usual form of
25 flue or finishing ring can be dispensed with.

I claim as my invention—

The combination of the pipes G and H, the inverted - bowl - shaped chamber A, provided with lugs *c* and *c'*, base-ring B, having lugs *d*
30 and *d'* and perforated shelf *a*, rotating perforated damper-plate E, and clamping-bolts C, all arranged, applied, and operating substantially as and for the purposes as herein shown and set forth.

ALLAN CUMMINGS.

Witnesses:

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