

(No Model.)

F. C. DAVIS.

DAMPER.

No. 287,637.

Patented Oct. 30, 1883.

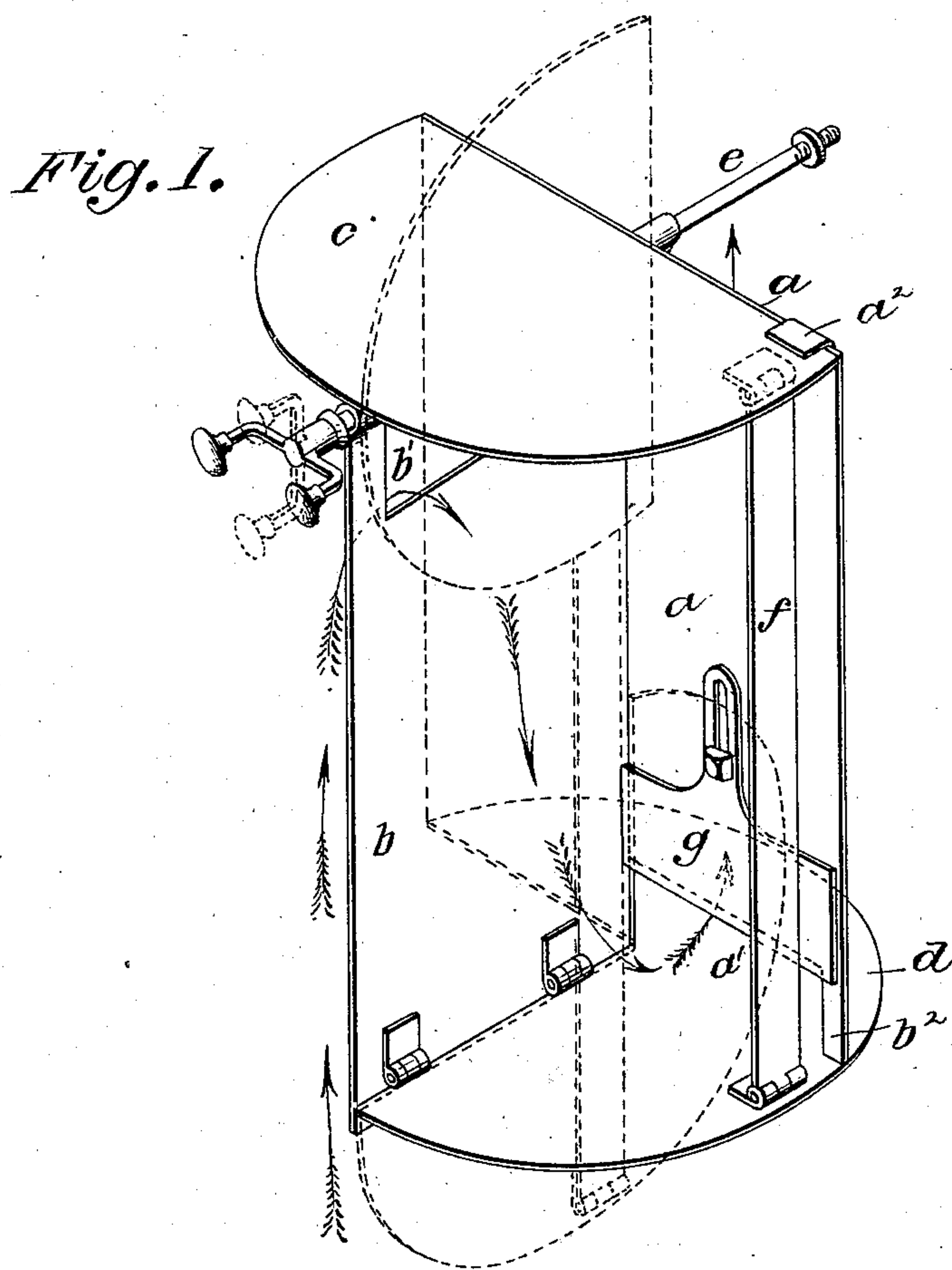
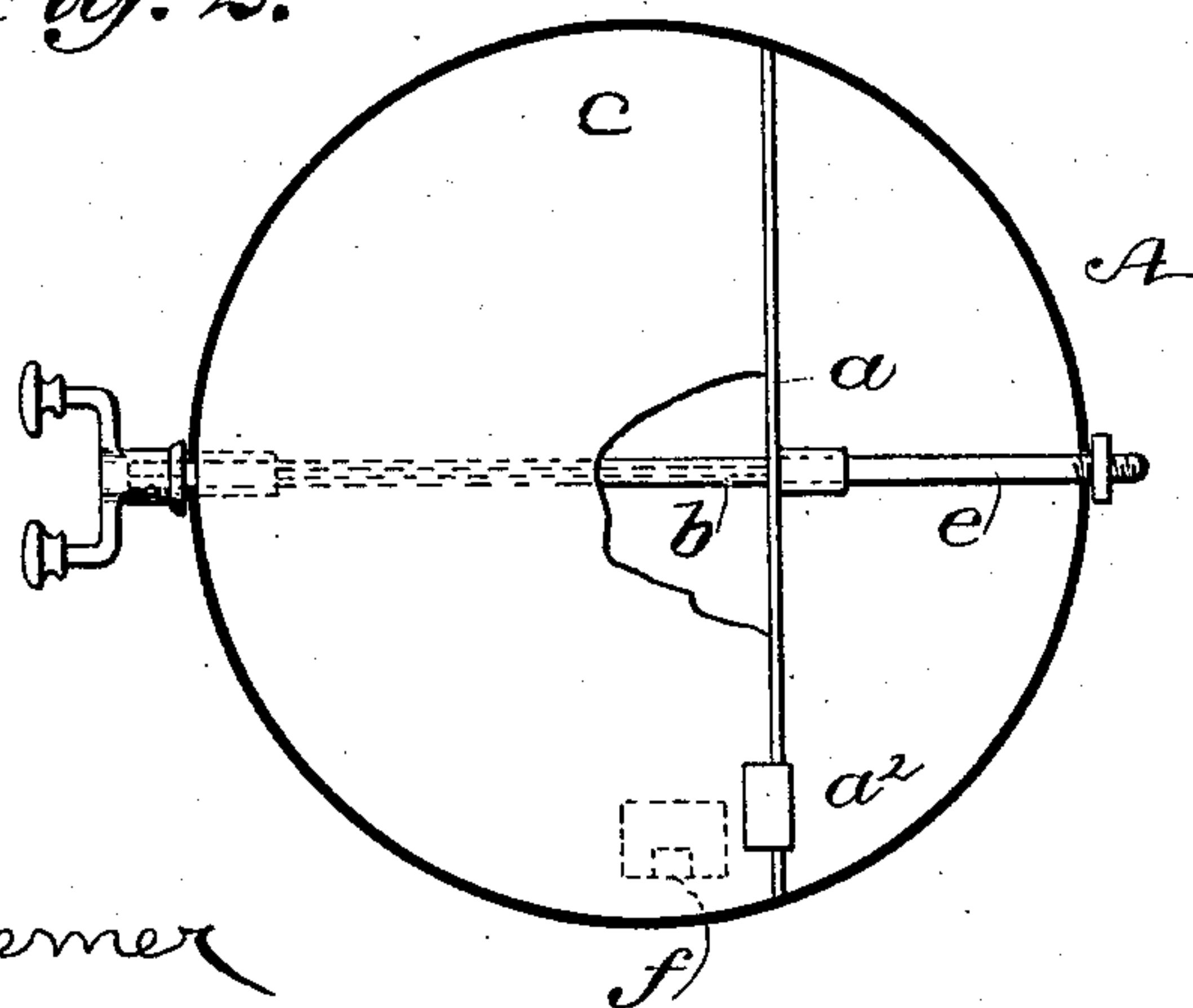


Fig. 2.



WITNESSES:

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FREDRIC C. DAVIS, OF AUBURN, INDIANA.

DAMPER.

SPECIFICATION forming part of Letters Patent No. 287,637, dated October 30, 1883.

Application filed June 16, 1883. (No model.)

To all whom it may concern:

Be it known that I, FREDRIC C. DAVIS, of Auburn, in the county of De Kalb and State of Indiana, have invented a new and Improved Damper for Stove Pipes and Drums, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a perspective view of my new and improved damper; and Fig. 2 is a sectional plan view, showing the damper in place in a stove pipe or drum.

The invention will first be described in connection with the drawings, and then pointed out in the claims.

The main frame of the damper is composed of the plates *a b*. These are by preference made of cast-iron, and are cast separately and bolted together at right angles to each other, the plate *b* being arranged along the longitudinal center of the plate *a*, so that when the damper is in place in the stove pipe or drum A the frame (plates *a b*) will divide the inside space of the pipe or drum into three equal or nearly equal vertical passages.

c is the upper and *d* is the lower damper-plate. These are also, by preference, made of cast-iron. The upper plate, *c*, is semicircular (or nearly so) in form, and is secured centrally upon the operating-rod *e*, which passes through the stove pipe or drum, as shown in Fig. 2, while the plate *d* is segmental in form, (constituting nearly three-quarters of a circular disk,) and is hinged to the lower edge of the plate *b*, as shown in Fig. 2, and the plates *c d* are connected together by the hinged rod or plate *f*, so that both may be operated simultaneously for opening and closing the draft by the one rod *e*, and so that they will always maintain the same relative position to each other. When open, the plates *c d* will stand in vertical position, as shown in dotted lines in Fig. 1. When closed, they will be turned to horizontal position across the pipe or drum, as shown in full lines in Figs. 1 and 2.

The plate *b* is notched or cut away at its upper end to form the passage *b'*, and the plate *a* is notched or cut away at its lower end to form the passage *a'*, and this latter passage is adapted to be closed more or less by the sliding plate *g*, for regulating the current or draft

that may pass through the damper when the damper-plates are closed, and for adjusting the damper to suit different stoves or furnaces.

When the damper-plates are open, the damper presents no material obstruction to the free draft of the stove or furnace; but when the plates are closed they cut off all draft through the pipe or drum, except that which finds its way first through the upper passage, *b'*, then down and out through the lower passage, *a'*, as illustrated by the arrows; and the plates *c d*, acting as deflectors to this parted draft or current, cause it to take this circuitous and retarded route of about three times the ordinary distance, and cause it also at each turn to come against the inner wall or surface of the pipe or drum, effecting considerable economy in heat.

To prevent all danger of turning the damper-plates too far in closing the damper, I form upon the upper edge of the plate *a* the stop *a'*, for the plate *c* to act against; or I form the leg *b'* at the lower end of the plate *a*, as shown in Fig. 1, for the plate *d* to act against.

I do not abandon or dedicate to the public any patentable features set forth herein and not hereinafter claimed, but reserve the right to claim the same, either in a reissue of any patent that may be granted upon this application or in other applications for Letters Patent that I may make.

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

1. In a damper, the plates *a b*, that divide the pipe or drum into three vertical passages, substantially as described.

2. In a damper, the combination, with the plates *a b*, of the damper-plates *c d*, arranged to cut off the passages formed in the pipe by the plates *a b*, substantially as described.

3. The plates *a b*, cut away to form the passages *a' b'*, in combination with the damper-plates *c d*, substantially as described.

4. The damper herein described, consisting of the plates *a b*, arranged to divide the pipe or drum into three passages, and cut away to form upper passage, *b'*, and lower passage, *a'*, in combination with the damper-plates *c d*, arranged to reduce and deflect the draft when closed, substantially as described.

FREDRIC C. DAVIS.

Witnesses:

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