

(No Model.)

W. PHIPPS.
CHECK DAMPER FOR STOVES, &c.

No. 445,078.

Patented Jan. 20, 1891.

Fig. 1.

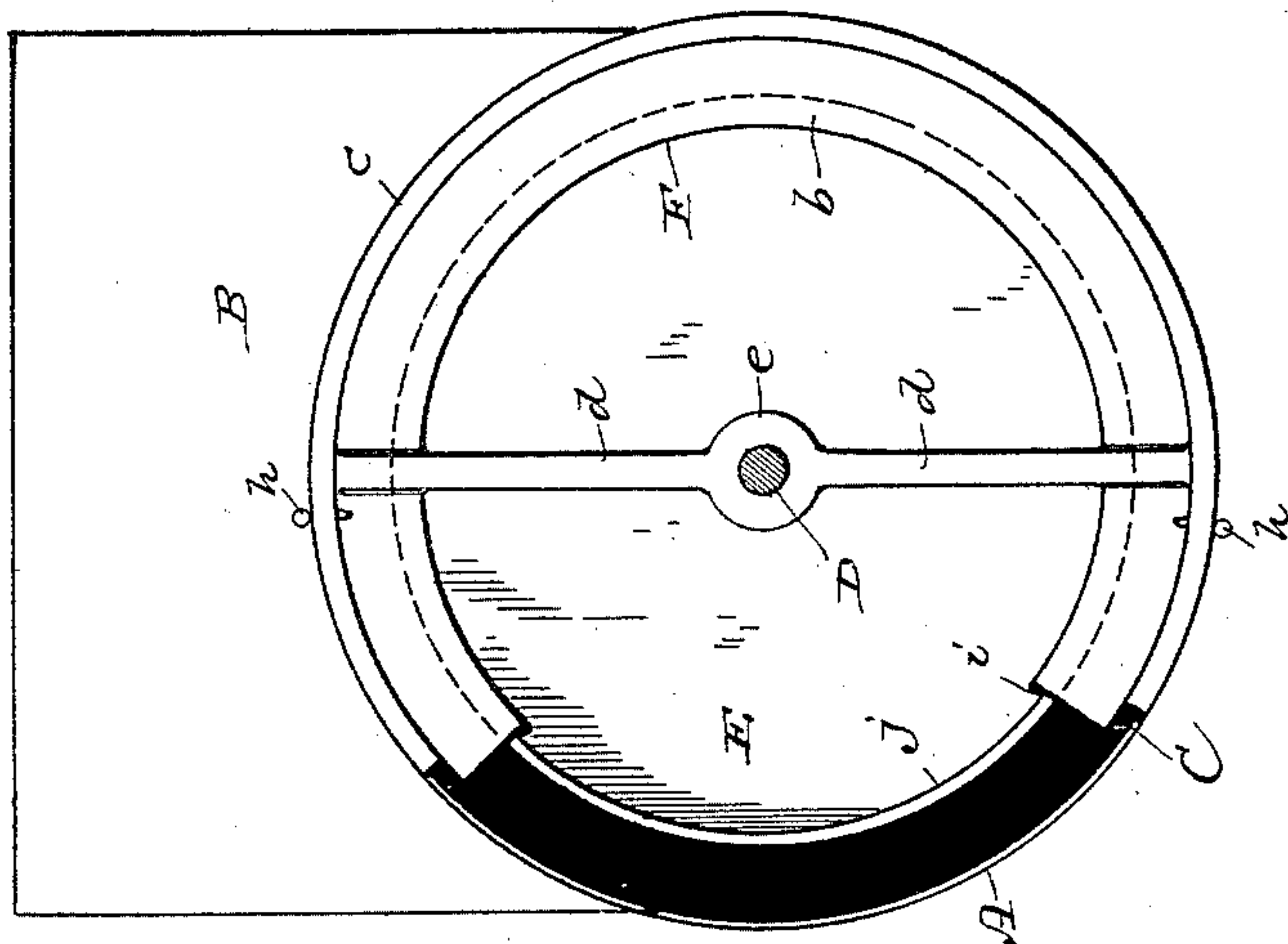
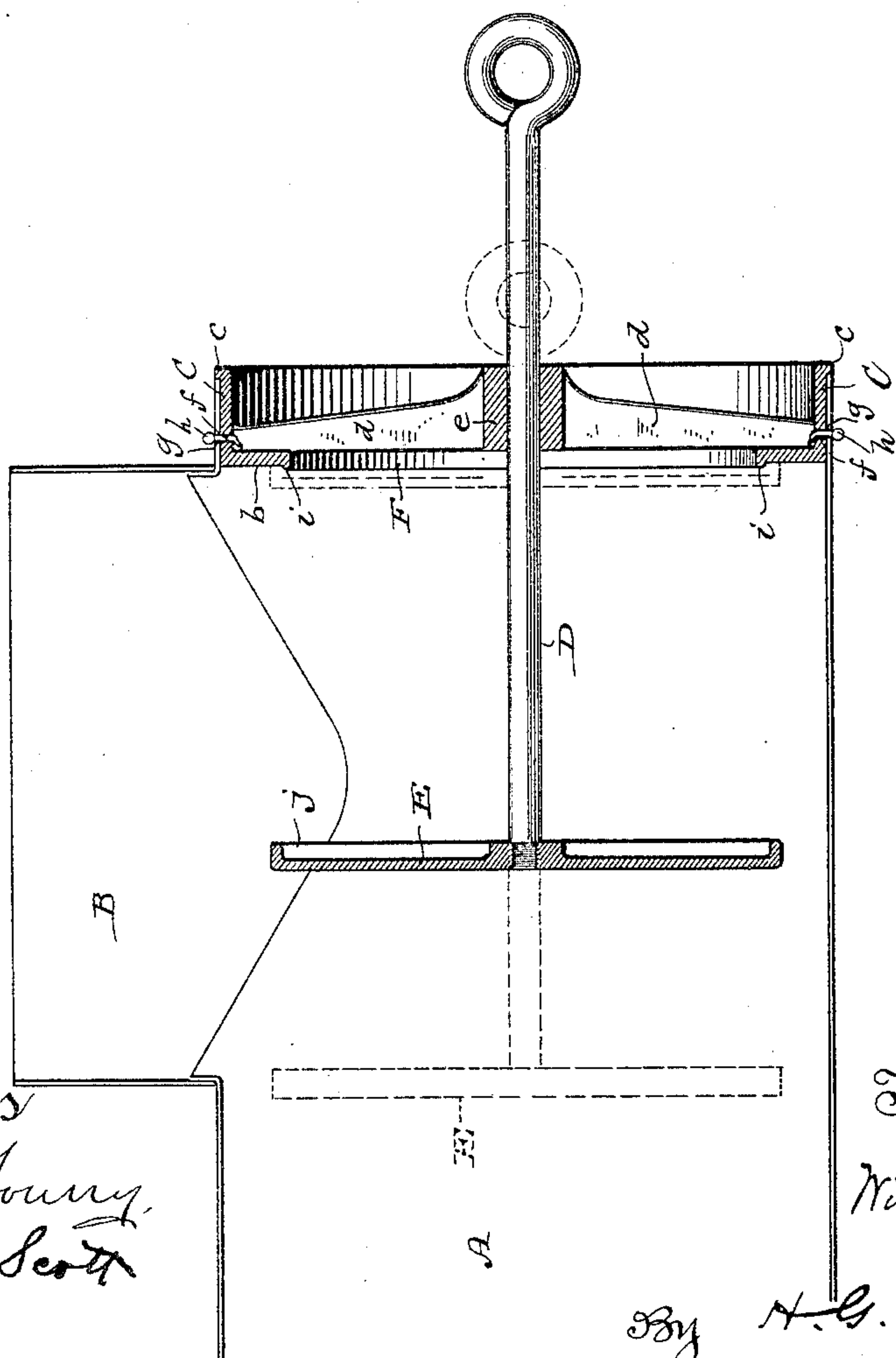


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM PHIPPS, OF MILWAUKEE, WISCONSIN, ASSIGNOR OF ONE-HALF TO
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CHECK-DAMPER FOR STOVES, &c.

SPECIFICATION forming part of Letters Patent No. 445,078, dated January 20, 1891.

Application filed April 25, 1890. Serial No. 349,453. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM PHIPPS, of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Check-Dampers for Hot-Air Furnaces, Stoves, and Heaters; and I do hereby declare that the following is a full, clear, and exact description thereof.

10 My invention relates to check-dampers for hot-air furnaces, stoves, and heaters; and it consists in certain peculiarities of construction and combination of parts, to be hereinafter described with reference to the accompanying drawings, and subsequently claimed.

15 In the drawings, Figure 1 represents an end elevation of my device, partly broken away, and Fig. 2 a longitudinal section of the same.

Referring by letter to the drawings, A represents a horizontal smoke-flue for a hot-air furnace, and B the pipe for connecting the flue with a chimney. The outer end of the flue A is open, and fitted therein is a metallic ring C, having an inward flange *b*, outward flange *c*, and cross-piece *d*, the latter being provided with a central hub *e*, that serves as a guide for a rod D, the latter having its inner end screw-threaded or otherwise suitably connected to a damper E, as illustrated in Fig. 2.

30 The ring C is preferably provided with openings *f*, that register with openings *g* in the flue A, and inserted in these openings are pins *h*, having their inner ends clinched against said ring. By the construction just described a detachable connection is formed between the flue A and ring C; but other suitable means may be employed for the same purpose.

40 The flange *c* on the ring C conceals the outer end of the flue A, forming a head or cap to said flue, and the flange *b* of said ring is provided with a lip *i*, that engages with a flange *j* on the damper E when the latter is closed, as shown by dotted lines in Fig. 2, this engagement forming a close joint sufficient for the exclusion of air.

50 In the operation of my device the rod D is moved in or out to adjust the damper E, outside air being admitted through the opening

F, the boundary of the latter being the inner periphery of flange *b* on the ring C. When the damper is in the position shown by full lines, Fig. 2, the products of combustion and outside air will be drawn into the chimney-pipe B, and the draft on the furnace-fire will always be greater or less in proportion as said damper is adjusted with relation to the inlet for outside air. It will be noticed that the damper is of less diameter than the smoke-flue, and consequently the latter cannot be entirely cut off from the chimney-pipe, even when said damper is pushed in the full limit of its rod, as shown by dotted lines in Fig. 2. The damper being of less diameter than the smoke-flue, as just described, and being pushed in to the full limit of its rod, there will be a sufficient outlet for the escape of smoke and gases into the chimney-pipe, but the greater portion of the heat will be held back by said damper, this being one of the principal objects of my invention.

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

1. The combination of a heater smoke-flue having an end thereof open to outside air, a chimney-pipe communicating with the smoke-flue, and a cut-off for the air-inlet adjustable in said smoke-flue across the chimney-pipe opening, substantially as set forth.

2. The combination, with a heater smoke-flue and chimney-pipe, of an inwardly-flanged ring fitted in the outer end of the smoke-flue and provided with a hub, a rod loose in the hub, and a damper connected to the inner end of the rod in opposition to the flange on the ring, substantially as set forth.

3. The combination, with a heater smoke-flue and chimney-pipe, of a ring C, fitted in the outer end of the smoke-flue and provided with the flanges *b c*, and the cross-piece *d*, having the central hub *e*, the lip *i* on the flange *b*, the rod D, loose in said hub, the damper E, connected to said rod, and the flange *j* on said damper for engagement with said lip on the ring-flange *b*, substantially as set forth.

4. The combination of a heater smoke-flue having an end thereof open to outside air and provided with a central guide, a chimney-pipe

communicating with the smoke-flue, a rod
adjustably arranged in a guide and extended
into said smoke-flue, and a cut-off for the air-
inlet carried on the rod across the chimney-
5 pipe opening, substantially as set forth.

In testimony that I claim the foregoing I
have hereunto set my hand, at Milwaukee, in

the county of Milwaukee and State of Wis-
consin, in the presence of two witnesses.

WILLIAM PHIPPS.

Witnesses:

H. G. UNEDRWOOD,
WM. PHIPPS, JR.