

(No Model.)

C. A. GIFFORD.

MEANS FOR OPENING OR CLOSING AIR INLET OR DRAFT DOORS.

No. 529,166.

Patented Nov. 13, 1894.

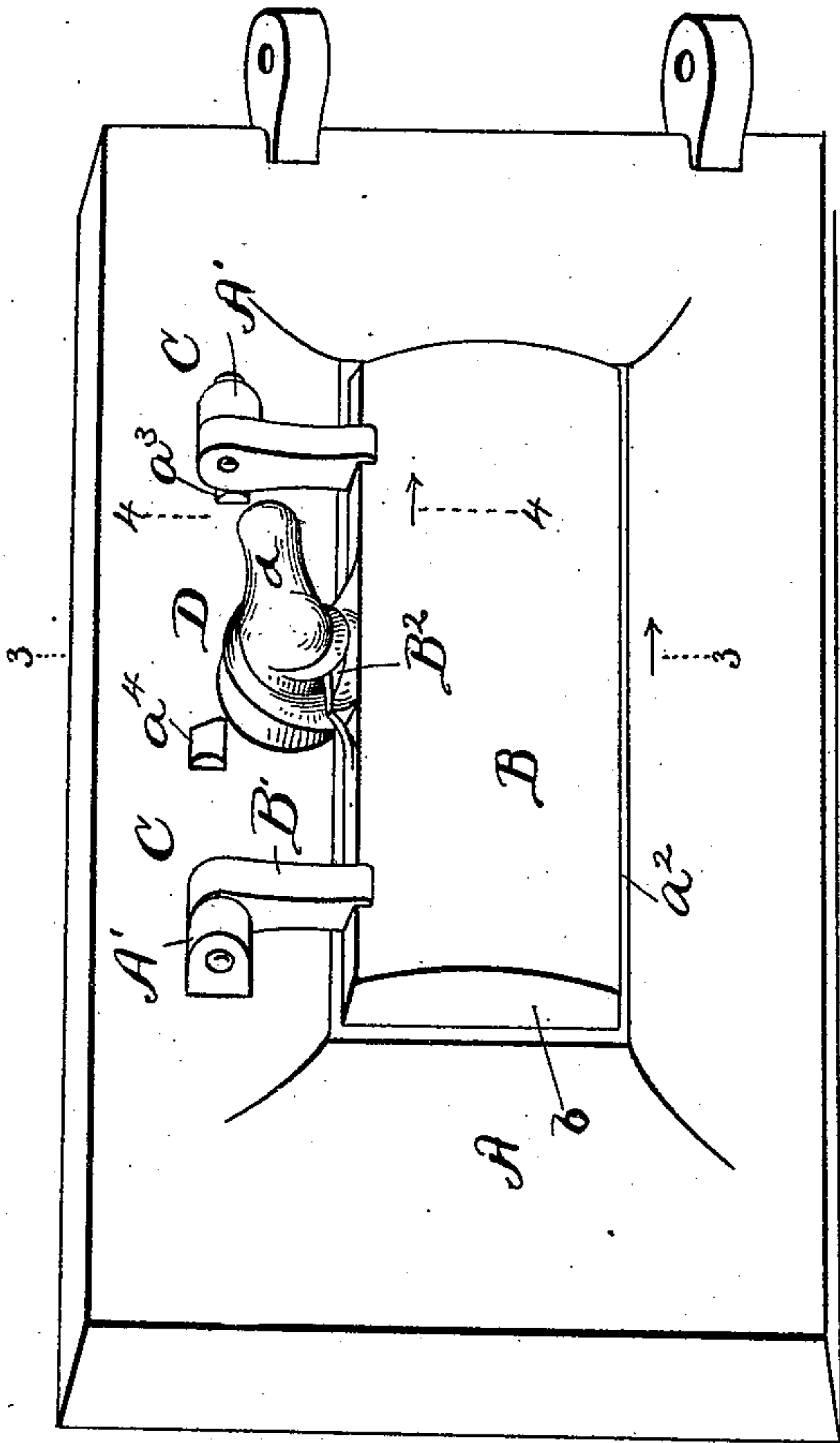


Fig. 1.

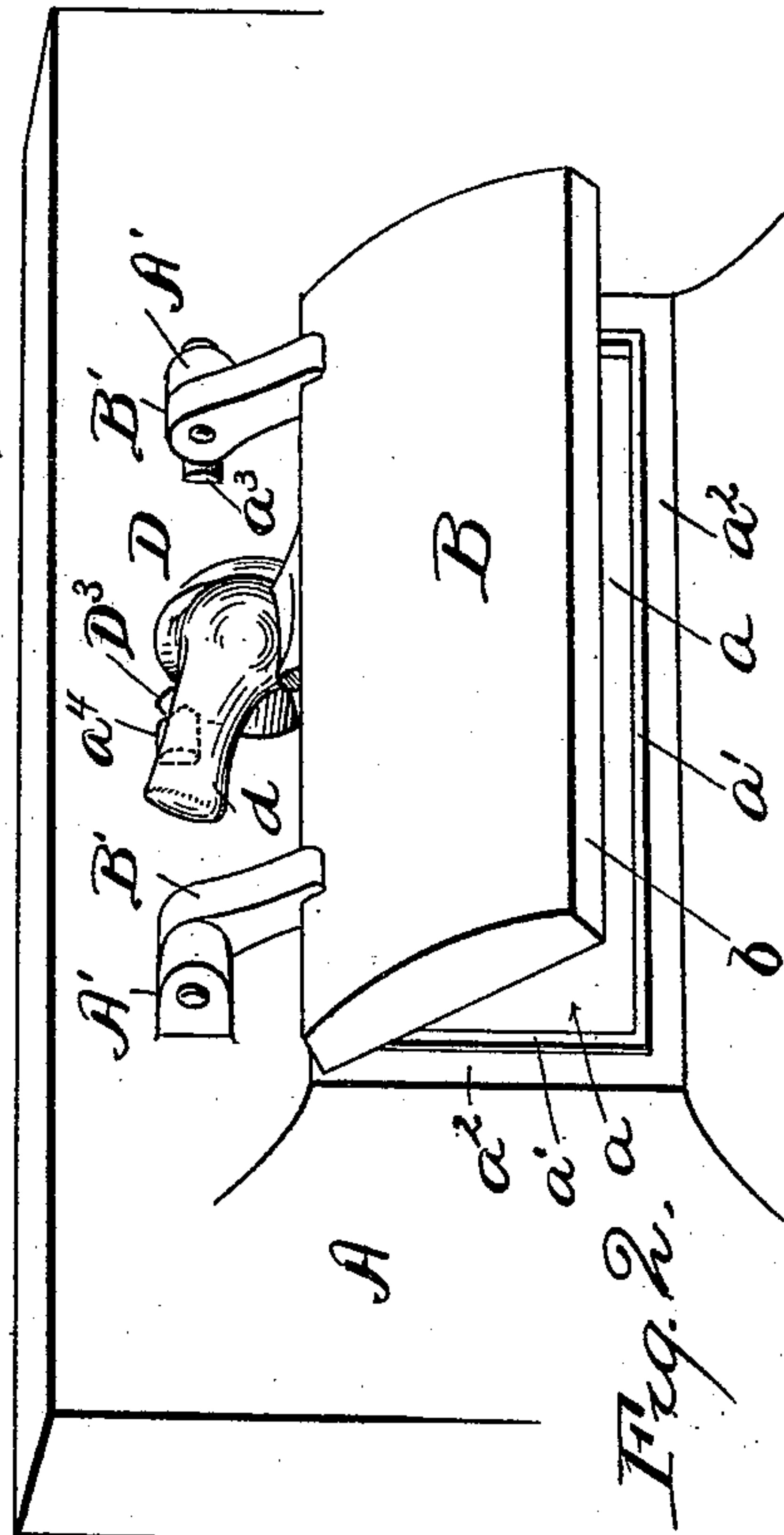


Fig. 2.

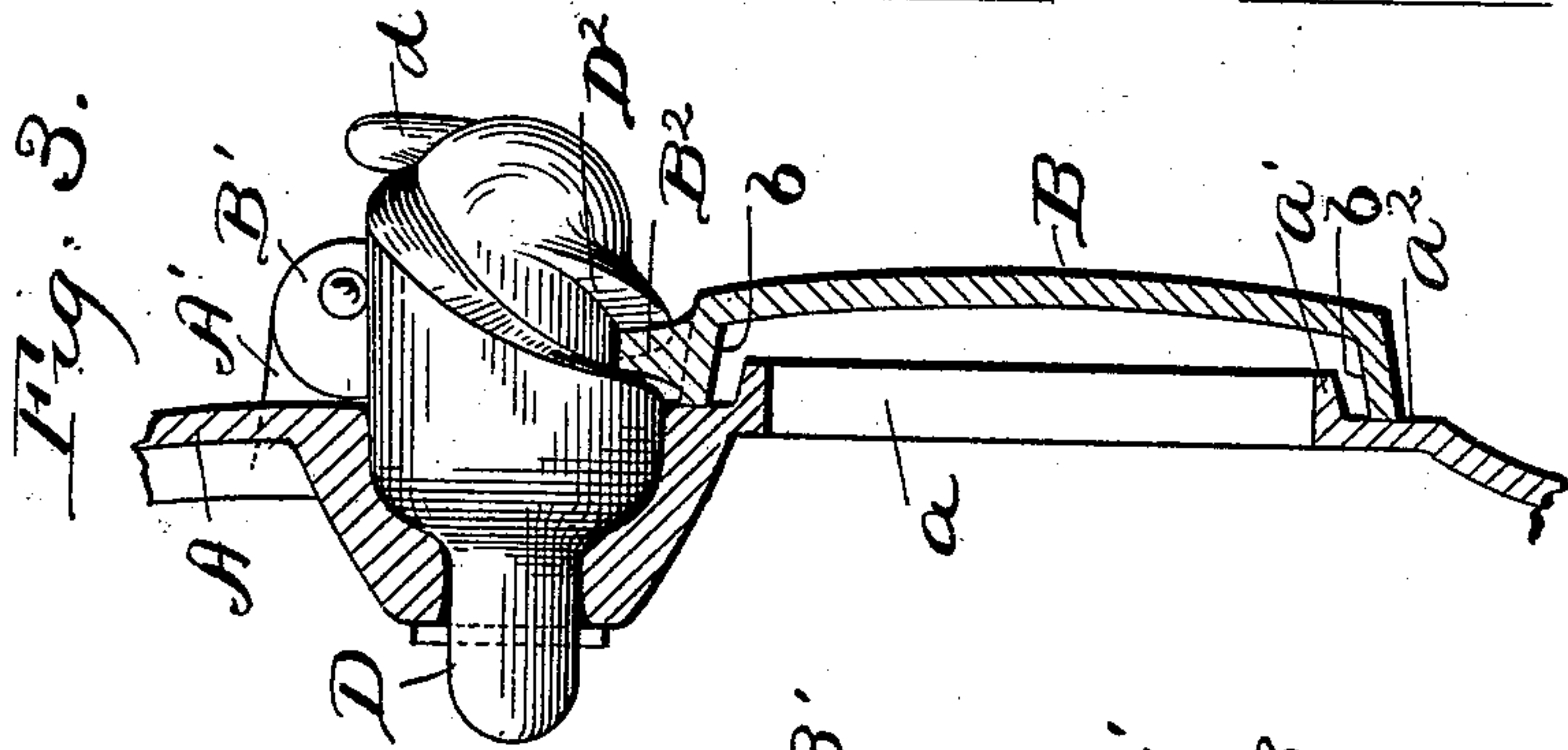


Fig. 3.

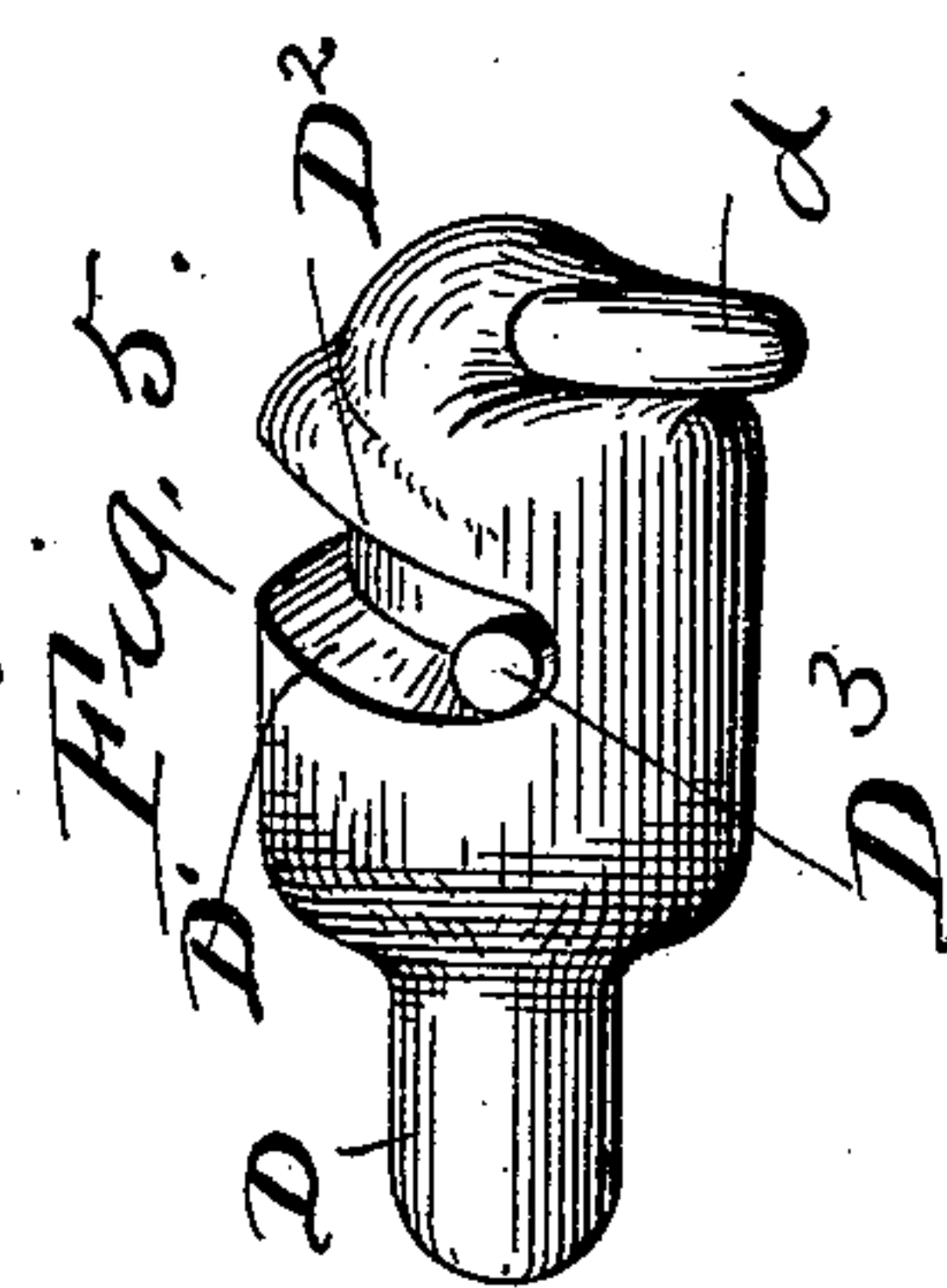


Fig. 5.

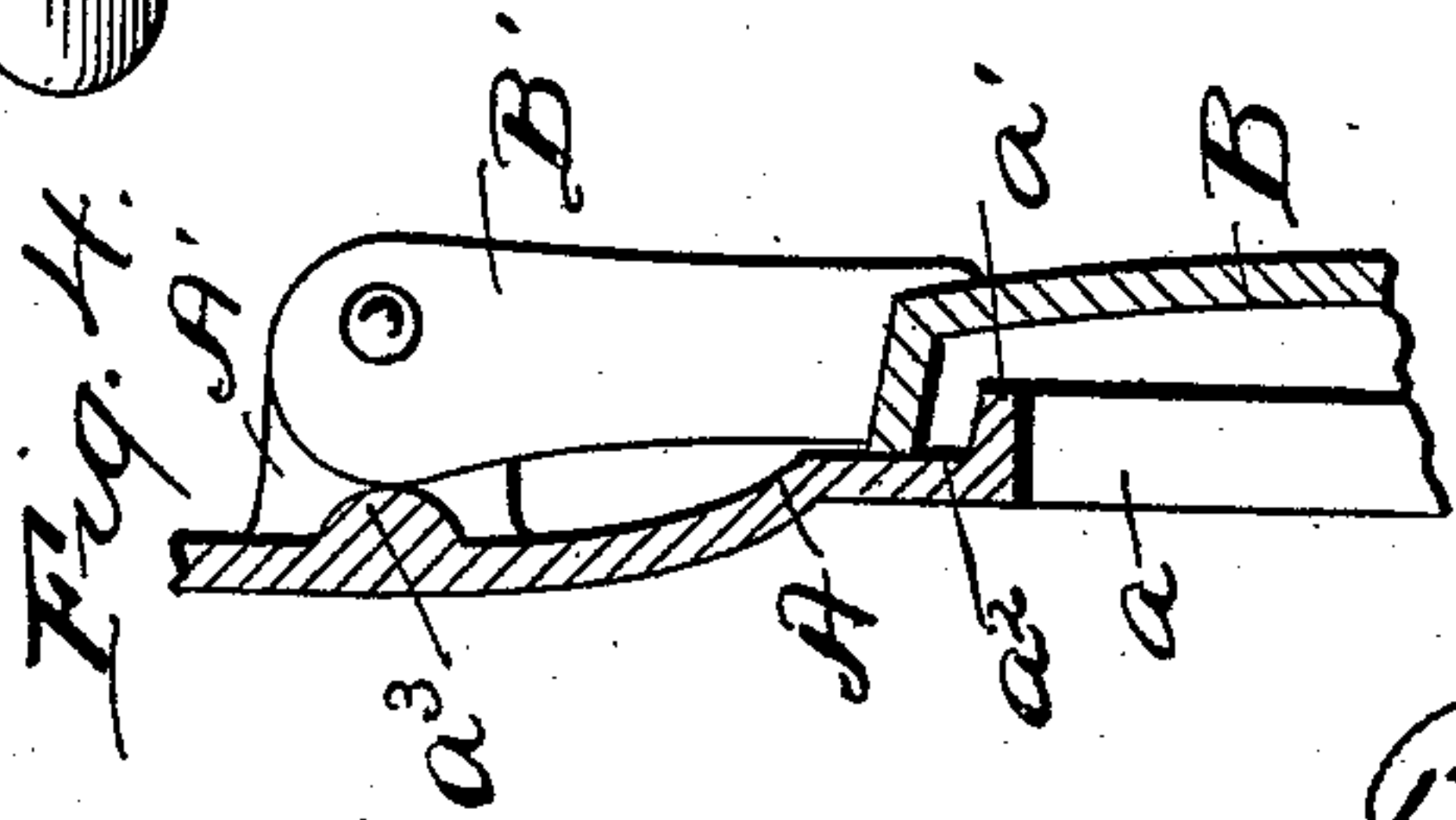


Fig. 4.

Witnesses:
E. B. Gilchrist
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By Seggett & Seggett
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UNITED STATES PATENT OFFICE.

CHARLES A. GIFFORD, OF AKRON, OHIO, ASSIGNOR TO THE TAPLIN,
RICE & COMPANY, OF SAME PLACE.

MEANS FOR OPENING OR CLOSING AIR-INLET OR DRAFT DOORS.

SPECIFICATION forming part of Letters Patent No. 529,166, dated November 13, 1894.

Application filed March 19, 1894. Serial No. 504,192. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. GIFFORD, of Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Means for Opening and Closing Air-Inlet or Draft Doors; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in draft-doors, dampers or air-inlet doors for stoves, furnaces, &c., more especially designed for use on an ash-pit door; and it consists in certain features of construction and combination of parts hereinafter described and pointed out in the claim.

In the accompanying drawings, Figures 1 and 2 are outer side elevations of an ash-pit-door provided with a draft-door or damper embodying my invention, the draft-door or damper being shown in its closed position in Fig. 1, and in its open position in Fig. 2. Figs. 3 and 4 are sections on lines 3—3 and 4—4, respectively, Fig. 1. Fig. 5 is a side elevation of the cam-shaft employed for opening and closing the dampers or air-inlet-door.

Referring to the drawings, A represents the ash-pit-door or casing provided with a draft-opening, α , the draft or air-supply through which is regulated or cut off by means of a door or damper, B, that is hinged at or near opposite ends, as at C, to the upper portion of the ash-pit-door, door or damper B having, preferably, upwardly-projecting lugs or ears, B', that are pivoted at or near their outer end to outwardly-projecting lugs or ears, A', of the ash-pit-door. The draft-opening α , is preferably provided with a flange α' extending all round the outer end of the opening, and door or damper B, on its inner side and extending all round the same, is provided with an inwardly-projecting flange b that, when the door or damper is in its closed position as shown in Fig. 3, is adapted to fit over external flange α' of the ash-pit-door, and bear upon the flat surface α^2 formed upon the ash-pit-door, or casing having the draft-opening, next outside of flange α' .

The means employed for opening and clos-

ing the draft-door or air-inlet door or damper is as follows:—The draft-door or damper at the top, and centrally between the hinges, is provided with an upwardly-projecting flange, B², and D designates a cam-shaft that has suitable bearing in casing or wall containing draft or air-inlet opening, and has a cam D', preferably integral therewith and adapted to engage the back or inner side of flange B², the trend and arrangement of said cam being such that the draft-door or air-inlet-door shall be opened by turning the cam-shaft in the one direction, said door being permitted to close by gravity when the cam-shaft is turned in the opposite direction, or may be positively closed by a cam D² formed upon and preferably integral with cam-shaft D and being adapted to engage the forward or outer side of flange B² of door B and having the trend and arrangement required for the purpose for which it is designed.

By the construction just described, it will be observed that the draft-door or damper is positively actuated to close or open according as cam-shaft D is turned in the one direction or the other. I would also remark that cam-shaft D is preferably provided with a laterally-projecting lug or member D³ adapted to engage a lug α^4 formed upon the outer side of casing A, and the arrangement of parts is such that lug or member D³ in conjunction with lug α^4 forms a stop to limit the movement of the cam-shaft in the direction required to open the air-inlet or draft-door. I would also remark that the ash-pit-door or casing provided with the draft-opening or air-inlet-opening is preferably provided with raised portions or lugs α^3 at the rear or inner side of lugs or ears B' of door B, the size of lugs or members α^3 being such that they, in the closed position of door B, shall afford bearing for ears B' and avoid any strain upon the axial pin of hinges C in closing door B. The cam-shaft is, of course, provided with an arm or lever d for turning the shaft.

What I claim is—

The combination of the air-inlet or draft-door or damper having hinged lugs or ears B' at two points located a suitable interval apart, the part provided with the draft or air-

inlet opening, raised portions or lugs a^3 at the rear or inner side of lugs or ears B' , and means for forcing the door closed, the size of said lugs or members a^3 being such that they, in
5 the closed position of the door or damper, shall afford bearing for ears B' and avoid any strain upon the axial pin of the hinges, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 10
13th day of January, 1894.

CHARLES A. GIFFORD.

Witnesses:

C. H. DORER,
WARD HOOVER.