(No Model.) 2 Sheets—Sheet 1.

A. M. BLAKESLEY.

STOVE OR RANGE DAMPER.

No. 337,233. Patented Mar. 2, 1886.

Fig 1

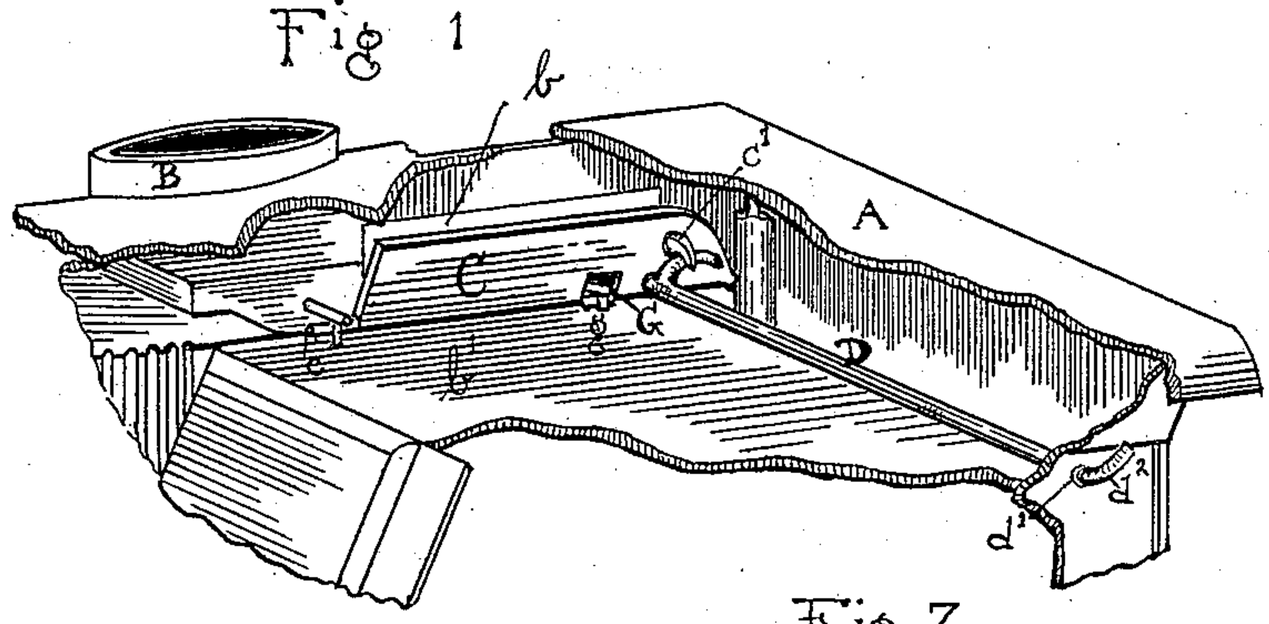


Fig. 7.

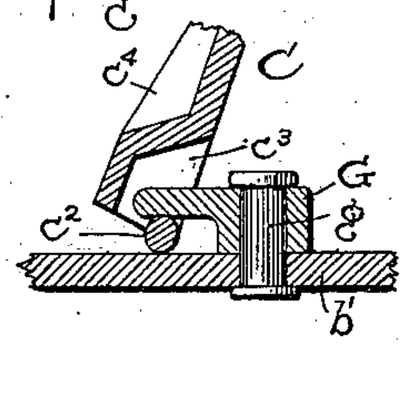


Fig 2

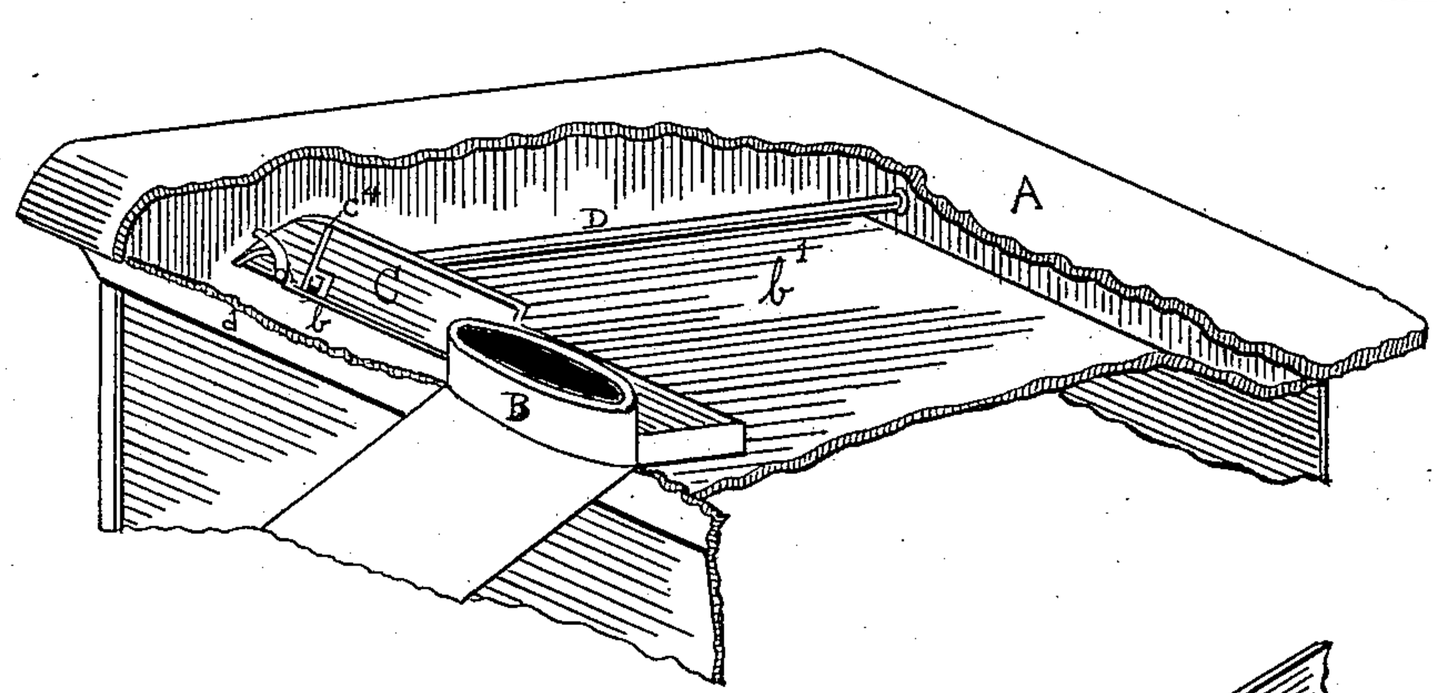
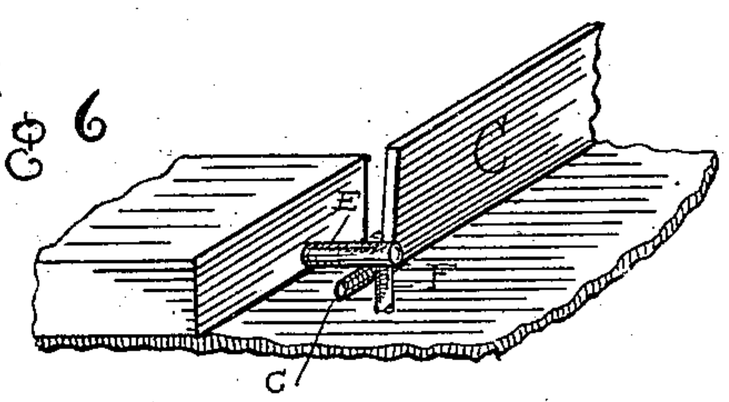


Fig 6



Witnesses.

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(No Model.) 2 Sheets—Sheet 2.

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Fig 3.

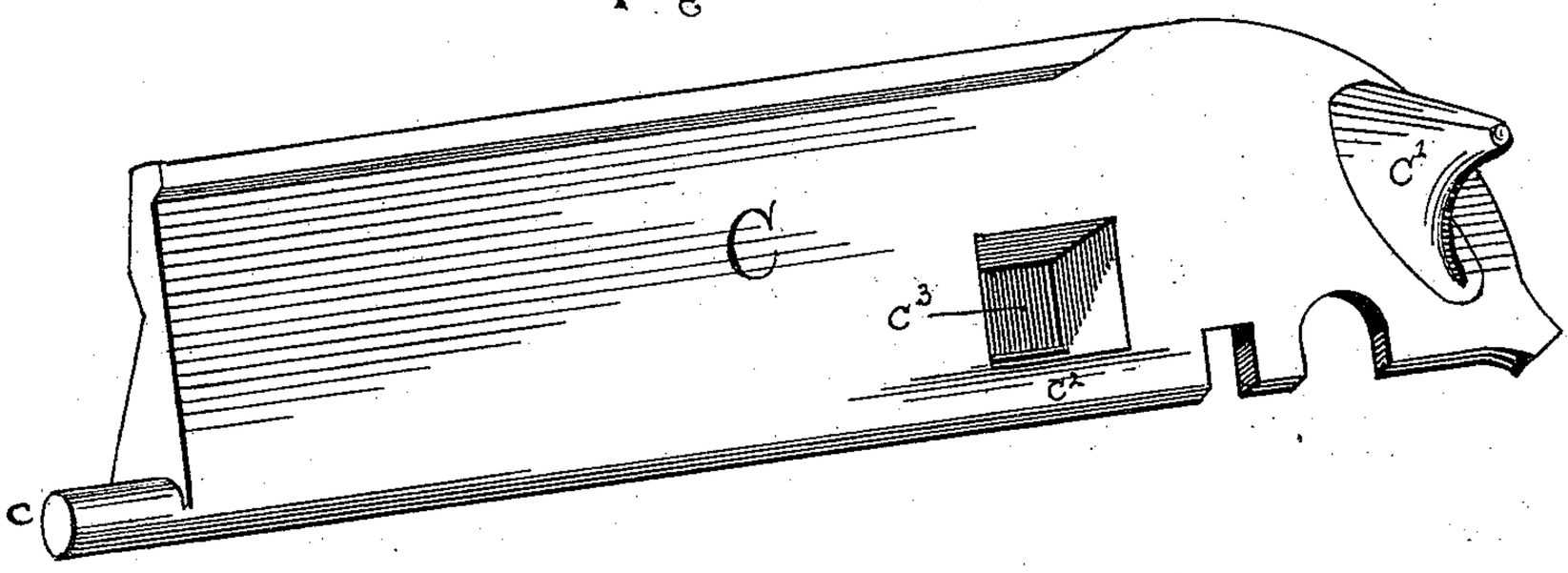


Fig 4.

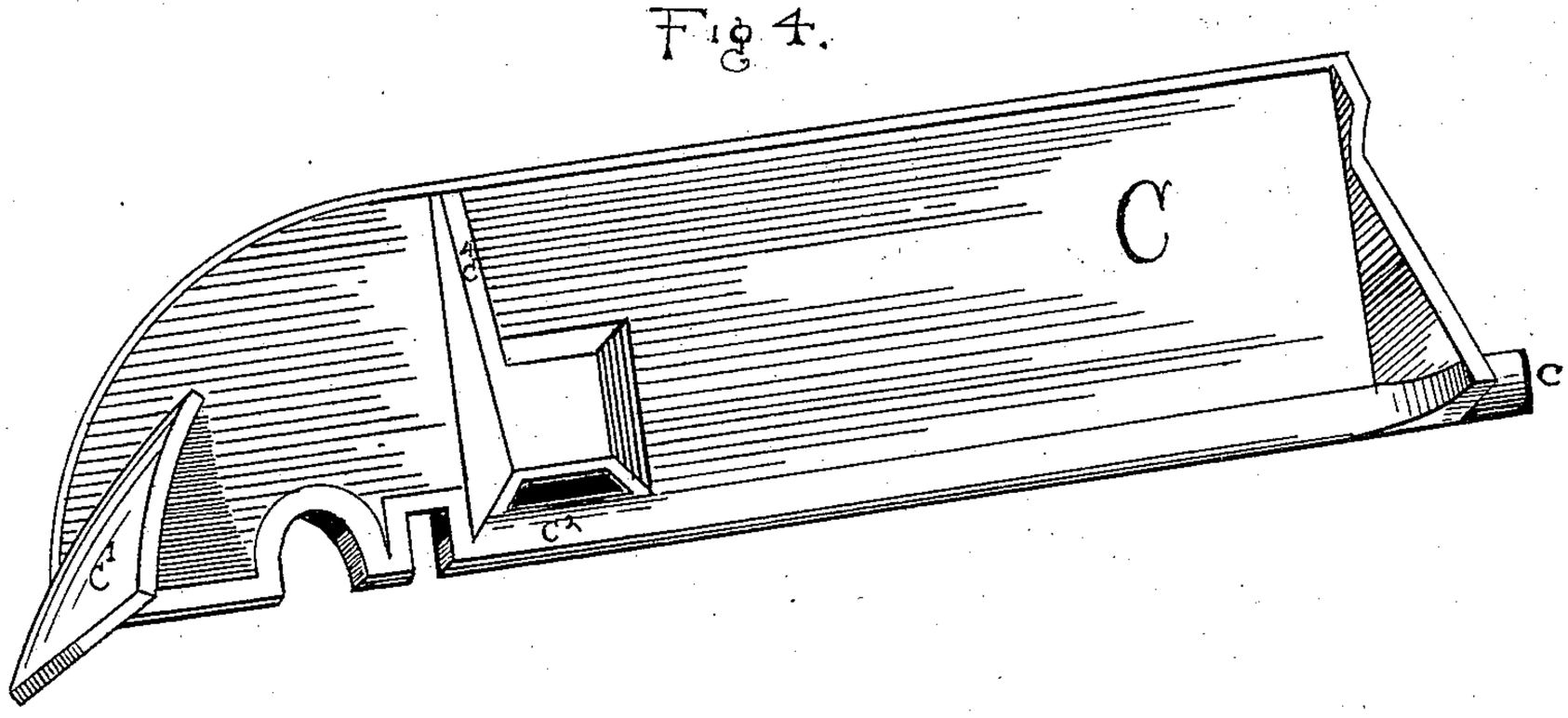
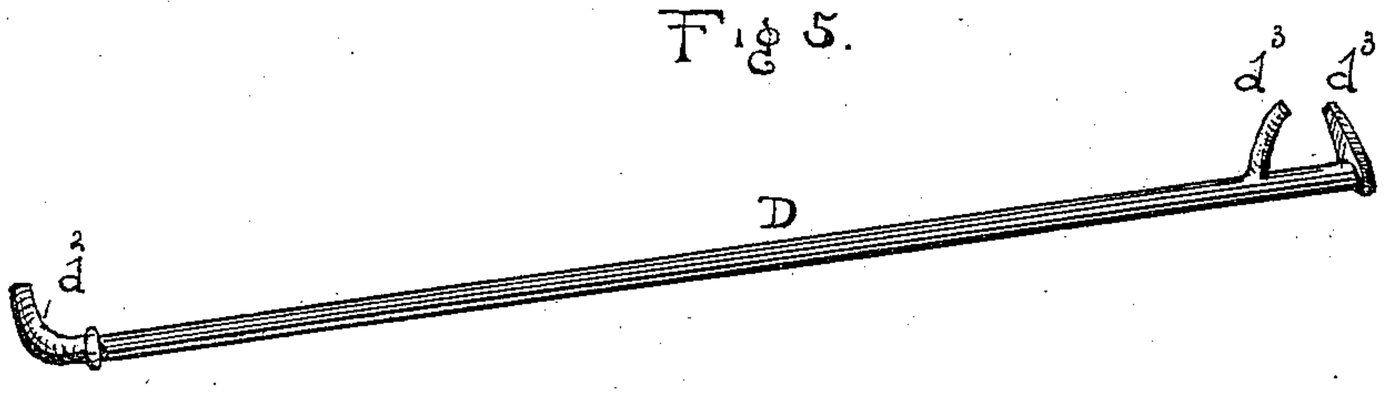


Fig 5.



Witnesses

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UNITED STATES PATENT OFFICE.

ALPHEUS M. BLAKESLEY, OF ROCK ISLAND, ILLINOIS.

STOVE OR RANGE DAMPER.

SPECIFICATION forming part of Letters Patent No. 337,233, dated March 2, 1886.

Application filed May 28, 1885. Serial No. 166,905. (No model.)

To all whom it may concern:

Be it known that I, ALPHEUS M. BLAKESLEY, of Rock Island, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Stove or Range Dampers, of which the following is a specification.

My invention is for a damper for ranges and stoves in which the exit-flue is in or about the center of one of the sides thereof, or in which the valve of the damper is at right angles to the damper handle or lever; and it consists in a damper-valve constructed with a pivot at one end and projections or cams on both sides of its other end, adapted to engage with fingers upon a damper lever or rod extending at right angles to such valve, and by the actuation of such lever up and down to open and close the exit-flue.

It consists, further, in such construction of the damper-valve and the parts of the stove-plates adjacent thereto that the same may be adjusted thereon with the use of a single rivet, and may be readily removed therefrom when the same becomes necessary—for instance, to replace the valve or for any other purpose—without disturbing the permanent adjustment of the range, breaking any joints, removing screws, or the like.

In the drawings, Figure 1 is a perspective view of the top of a range from the open side, a portion of the plates broken away, showing a damper embodying my invention. Fig. 2 is a like view of such top portion from the closed side of a range, parts of the interior plates broken away. Fig. 3 is an enlarged front view of the damper-valve. Fig. 4 is an enlarged rear view of the damper-valve. Fig. 5 is a perspective view of the damper-lever. Fig. 6 is a view of a portion of the stove plates and damper, showing the mode of adjusting the pivotal end of the damper-valve; Fig. 7, a detail view.

A is a range or stove having exit-flue B in the center of its closed side, with draft-hole *b* from the top flue, *b'*, leading thereto—the usual construction and arrangement of the parts in a range of this class.

C is the damper-valve, operating in front of the draft-hole *b* to open or close the latter, as may be desired, and cause either a direct draft into the pipe or an indirect draft thereto by a course around and through the oven-flues. This valve is constructed with a pivot, *c*, at one end, and at the other has cams or projections c' on each side, adapted to engage with fingers from the damper rod or lever, as hereinafter described. The body of the valve, about midway its length, is constructed with a depression to the rear, having a thin body of metal, c^2, at the bottom, in a line, substantially, with the bottom of the valve, and an inset, c^3, above it sufficient to permit the insertion of the free end of a button secured to the top oven-plate of the range. On the rear from the upper end of this depression to the top of the valve, to afford additional strength thereto and avoid the weakening effect of the depression, I add a rib, c^4.

D is the damper rod or lever, pivoted at its rear to the exterior plate of the closed side *d* of the range or some other suitable part, and having a bearing, *d'*, in front through the plate in the open side thereof, in which the rod works, and a handle, d^2, projecting therefrom. This rod or lever is constructed with two fingers, d^3, projecting therefrom, about the farther end thereof, and in a position relatively to the damper-valve, when it is adjusted upon the rod between such fingers, that each of the fingers of the rod will engage with the cam on the valve to which it is opposed, and operate, when the handle of the lever is moved, to actuate the valve.

E is a lug projecting from the inner side of the plate of the closed side or other suitable part.

F is an upward-extending lug from the upper oven-plate. The ends of these two lugs meet and form a bearing for the pivoted end of the damper-valve inserted therebetween.

G is a button secured by a rivet, *g*, to the top of the oven-plate, upon which it turns, with its free end adapted to be slid over the thin plate or body of metal c^2 at the bottom of the valve below the depression or inset, and forming an additional bearing for the valve, and serving to retain it in adjustment when in operation.

The adjustment of the damper to a range is made by inserting the rod in its bearing in the plate in the closed side, and that in the plate on the open side, with the handle projecting from the latter, then placing the pivoted rod

of the valve in the bearing formed by the lugs projecting from the top oven-plate and plate on the closed side, and the other end having the cams between the fingers of the damper, and, finally, by sliding the button over the thin rib of metal below the depression in the valve. Thus adjusted, any movement of the damper will, by the engagement of its fingers with the cams on the valve, operate to actuate the latter. When the handle is thrown down, the valve will be open and the draft into the exit-flue will be direct. When the handle is pushed up, the valve will close, causing the heat to course around and underneath the oven, and then reach the exit indirectly. The construction and arrangement of the fingers and cams are such that in whatever position the valve may be, one or the other of the cams and its fingers will invariably serve to actuate it, and if, for any reason, one of the fingers should not engage promptly with its cam, the opposite finger will, by engagement with its cam, assist in actuating the valve. For instance, if while the handle is thrown down the valve should by any means be raised from contact with the forward finger of the rod, and it is desired to close the flue, any movement of the rod will cause the farther finger to engage with its cam and raise the valve. If, on the other hand, while the handle is up, the valve should fall away from contact with the rear finger of the rod, and in consequence from contact with the exit-flue, any actuation of the handle will cause the forward finger to engage with its cam. The action of the fingers upon the cams is joint in each actuation of the valve. In the operation of throwing the damper up the forefinger lifts or pushes upon its cam, while the rear finger recedes from its cam, and in dropping the damper the action of the fingers is reversed.

By the use of the pivotal bearing formed by the projecting lugs in which the pivot end of the valve works, and the employment of the middle bearing formed by the button sliding over the ribs on the bottom of the valve, sufficient means are afforded for retaining the valve in adjustment without joints, separable bearings, and the like, and the valve can be readily removed when broken, or when it is necessary for any purpose, and replaced without the removal of screws or breaking any joints, and the construction and arrangement of the parts is such as to afford strength with lightness, little friction, and perfect freedom of movement.

I claim—

1. The combination, with a stove or range, of the damper-valve C, having cams c' on its opposite faces, a socket, c^3, therein, and a lug, c, at one end, a button, G, pivoted to the top plate of the oven and projecting into the socket c^3, and the valve-rod D, provided with fingers d^3, to engage the cams c', all arranged and operating as described.

2. The combination, with a stove or range, of a damper-valve, C, provided with an end journal, c, and a socket, c^3, a bearing for the end journal, a support, as G, between said ends, cams c' on the opposite faces of the valve C, and a rod, D, passing under the latter and provided with fingers d^3, to engage the cams c'.

ALPHEUS M. BLAKESLEY.

Witnesses:
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T. D. BENTLEY, Jr.