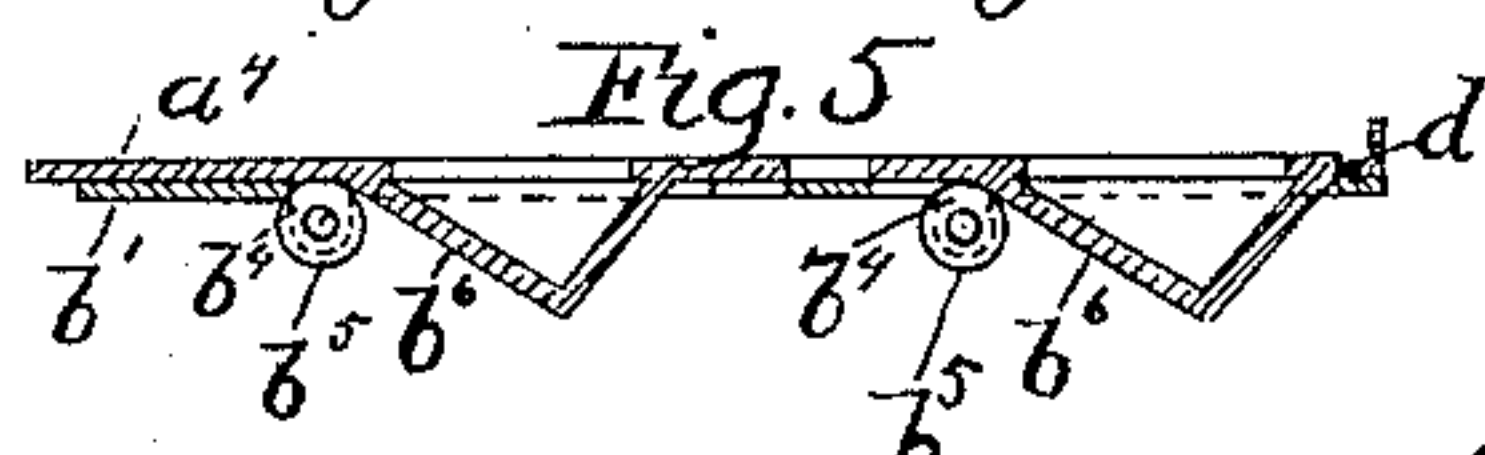
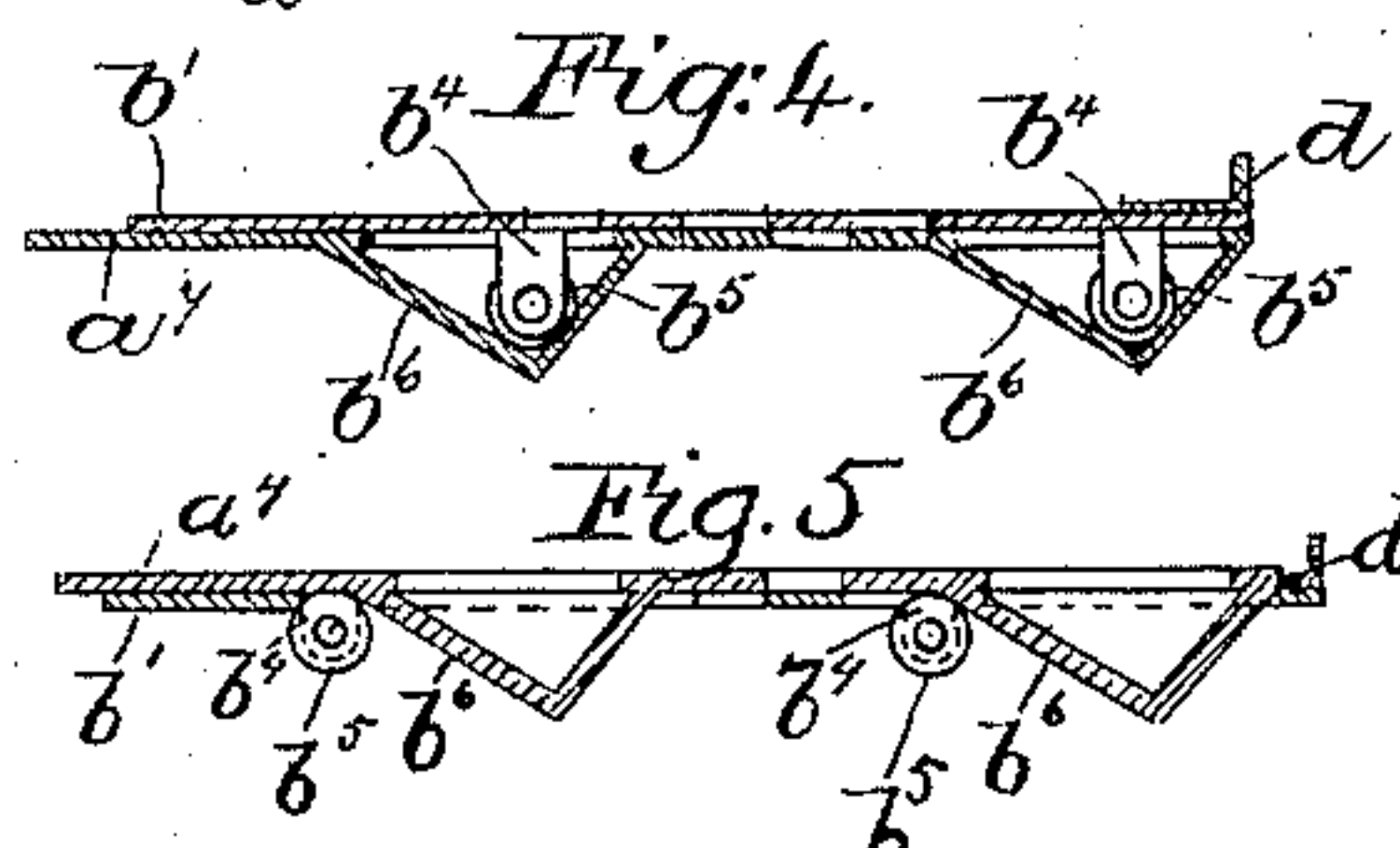
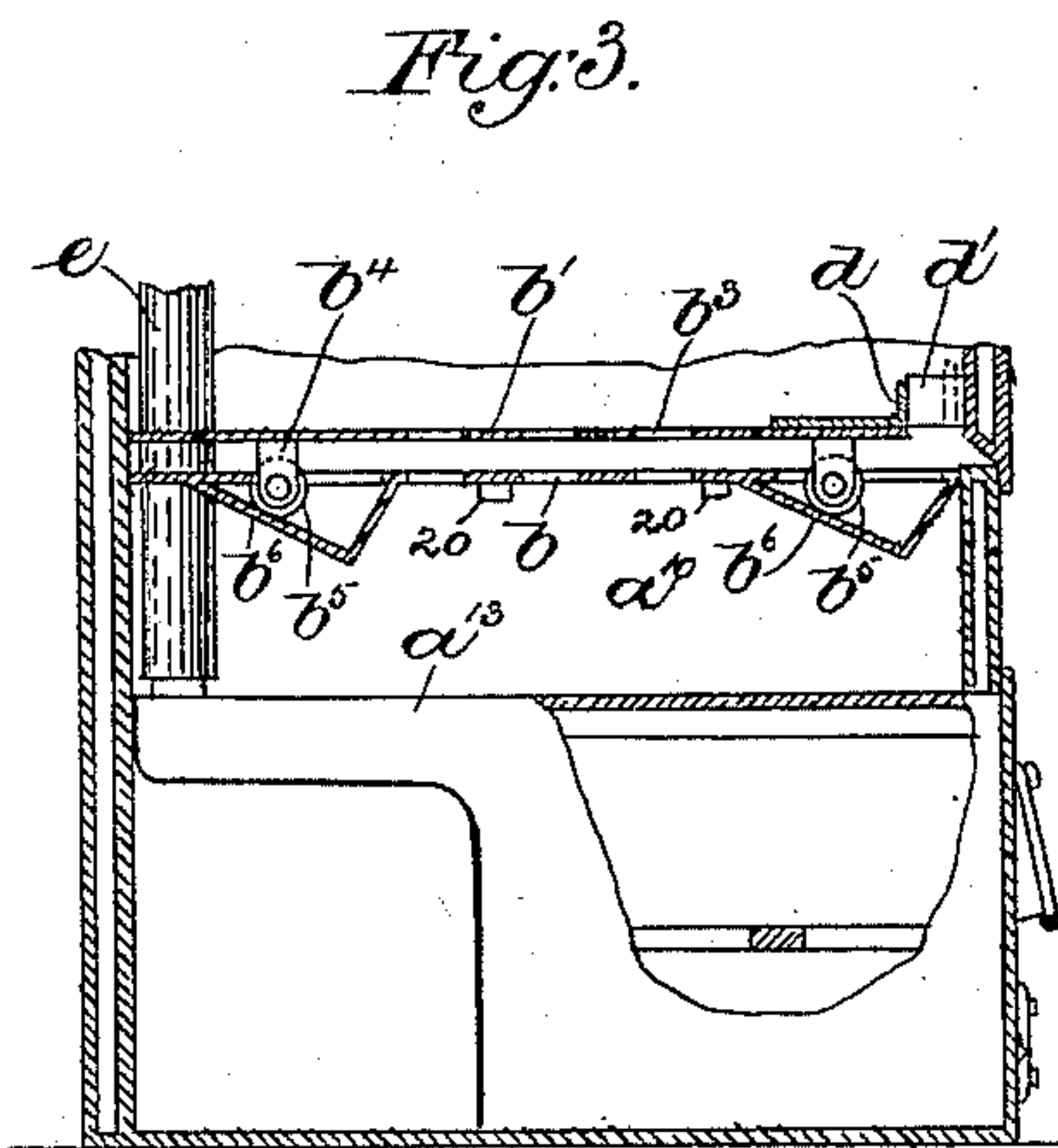
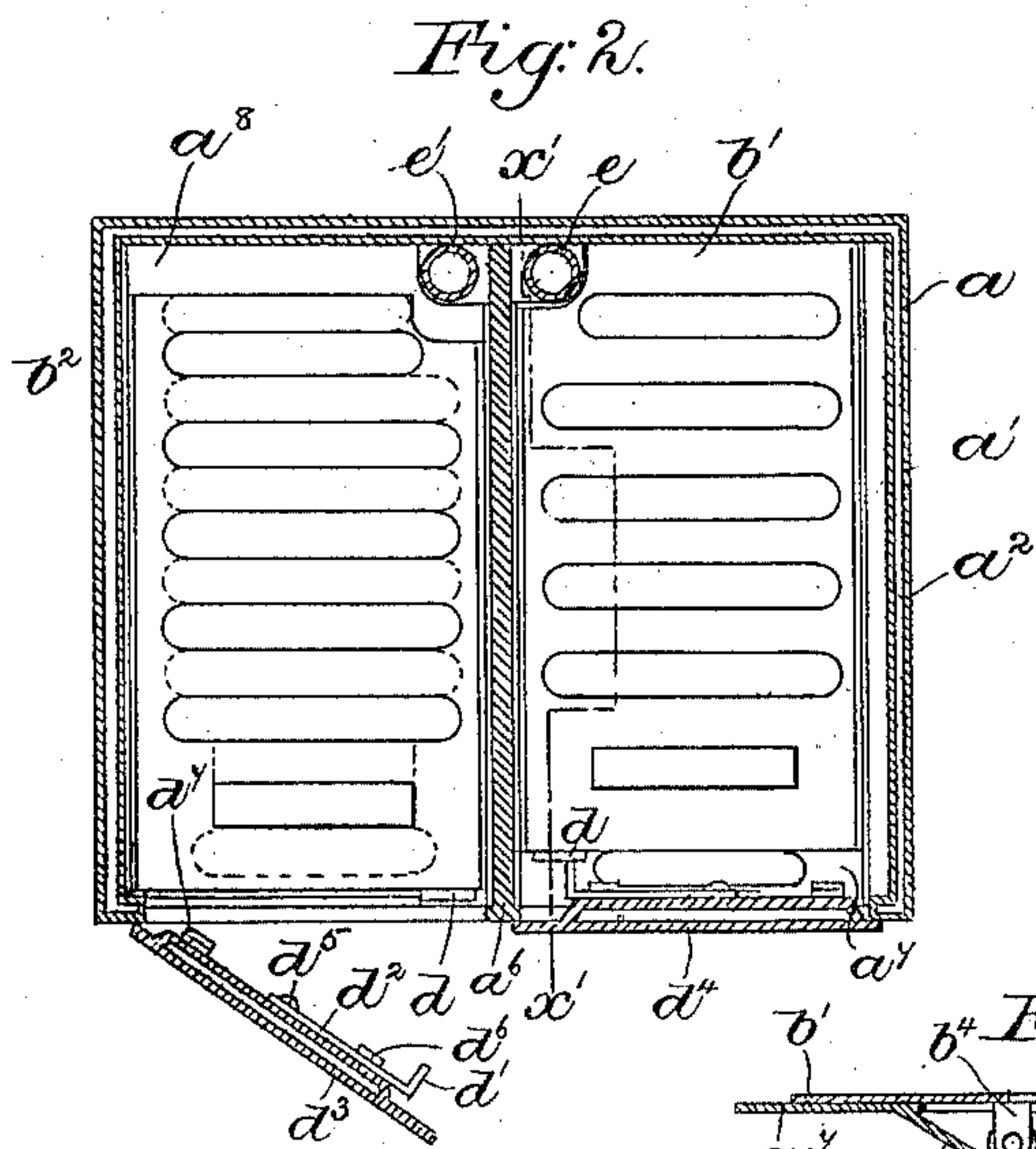
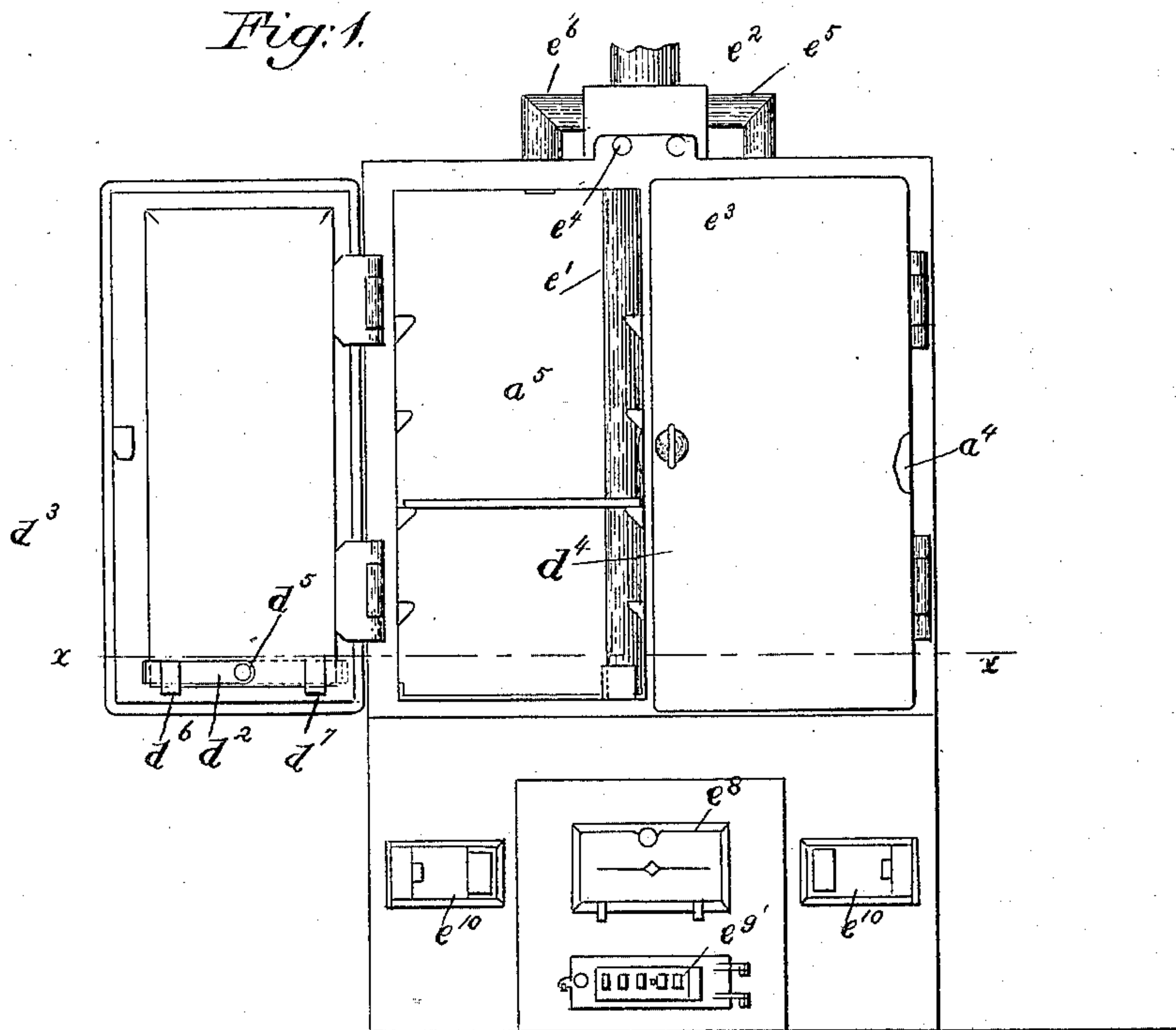


(No Model.)

G. W. WALKER.
PORTABLE OVEN.

No. 433,501.

Patented Aug. 5, 1890.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE W. WALKER, OF MALDEN, MASSACHUSETTS.

PORTABLE OVEN.

SPECIFICATION forming part of Letters Patent No. 433,501, dated August 5, 1890.

Application filed February 10, 1890. Serial No. 339,810. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. WALKER, of Malden, county of Middlesex, State of Massachusetts, have invented an Improvement in Portable Ovens, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts. This invention relates to cooking apparatus, and is herein shown as embodied in a portable oven provided, preferably, with two compartments, one or both of which have preferably perforated or open bottoms, a damper registering with the said openings, and means to separate the said damper from the perforated bottom when the said damper is moved to uncover the said openings.

The portable oven herein shown consists of an outer casing, preferably made of double walls having an intervening air-space and divided by a central wall or partition extending from the top toward the bottom of the casing to form two compartments, one or both of which may be provided with a bottom having one or more openings and forming below it a chamber, in which is located the stove or other heater. The openings in the bottom are normally closed by a sliding damper having one or more openings to register with the openings in the bottom of the compartment, and provided with means (herein shown as rollers secured to the damper, and movable on inclined guides or ways) to separate the damper from the bottom plate when the said damper is moved to uncover the said opening. Each compartment is preferably provided with a door having a projection or cam, preferably made adjustable, as will be described, whereby when in one position it may act on the sliding damper and move the same inward to uncover the openings in the bottom of the compartment to permit of the passage of heat into said compartment and when in another position it will not act upon the said damper, and the latter will remain closed when the door is shut. The sliding damper of each compartment is automatically returned to its normal position by the rollers moving down on the inclined ways or guides located below the bottom of the compartment.

The particular features of my invention will be pointed out in the claims at the end of this specification.

Figure 1 is a front elevation of a portable oven embodying my invention, the door of one of the compartments being shown open. Fig. 2 is a horizontal section of the oven shown in Fig. 1 on line xx , the open door being shown in different position from that shown in Fig. 1; Fig. 3, a transverse sectional detail on the irregular line $x'x'$, Fig. 2; Fig. 4, a sectional detail to more clearly show the sliding damper, the rollers carried thereby, and the inclines upon which the rollers move; and Fig. 5, a sectional modification to be referred to.

The casing or oven of sheet metal or other suitable material, provided, as herein shown, with double walls $a a'$, secured together in any suitable manner to leave an intervening air-space a^2 , which, if desired, may be filled with magnesia or other non-heat-conducting material, is herein shown as divided into two compartments $a^4 a^5$ by a central wall a^6 , extended from the top of the inner wall a' toward the bottom of the casing, preferably nearly two-thirds the height of the oven, and may be substantially such as shown and described in another application, Serial No. 316,204, filed by me July 1, 1889. The compartments $a^4 a^5$ may both be provided with bottom plates or walls $a^7 a^8$, preferably made removable and supported by lugs 20, secured to the central wall and to the inner wall a' , and forming below the compartments a chamber a^{10} , in which is located a stove a^{13} or other heater—such, for instance, as a gas-burner.

Each bottom plate $a^7 a^8$ is provided, as herein shown, with a number of slots or openings b , and the said bottom plates have co-operating with them sliding dampers $b' b^2$, provided with openings b^3 adapted to register with the openings b to permit heat from the heater a^{13} to pass into the said compartments.

The sliding dampers $b' b^2$ are provided, as herein shown, with depending lugs or ears b^4 , one at each end on its opposite sides, to which are secured rollers or wheels b^5 , resting upon inclined ways or guides b^6 , secured to or forming part of the bottom of the compartment.

The sliding dampers $b' b^2$ are provided at their front ends near the central wall, as here-

in shown, with an upright portion or lug d , which is preferably adapted to be engaged by a cam or projection d' . (Herein shown as forming part of a lever d^2 , pivoted to the inner side of the doors d^3 d^4 .) The lever d^2 , as herein shown, is pivoted at d^5 , substantially near the center of each door near its bottom, and is adapted to be moved toward the outer or inner side of the said door, according to whether or not it is desired that the cam d' should act upon the projection d on the sliding damper. The lever d^2 on each door is maintained in its operative or inoperative position by catches or retaining devices. (Herein shown as bent lugs d^6 d^7 , secured to or forming part of the door.)

The heater a^{13} is provided, as herein shown, with two stove-pipes e e' , which are extended, as herein shown, up through the compartments a^4 a^5 , and are connected to a hood e^2 , provided with suitable dampers e^3 e^4 , substantially as in the application referred to, the said hood being connected to the compartments a^4 a^5 by the pipes e^5 e^6 .

The chamber a^{10} is provided with the usual door e^8 and dampers e^9 e^{10} , as in the application referred to.

In the operation of my improved portable oven each lever d^2 may be turned to engage with its catch or retaining device d^6 , as shown in Fig. 2, so that when both doors d^3 d^4 are closed the projection or cam d' will strike the upright d on the sliding damper of its compartment and move the said damper backward. As each damper is moved backward the rollers b^5 ride up the inclined paths or guideways until the rear end of the dampers are brought against a suitable stop, which in the present instance is shown as the rear inner wall a' , the openings b^3 of the damper at such time registering with the openings b on the bottom of the compartment. When both dampers are moved back to uncover the openings b , as described, both compartments a^4 a^5 may be used for cooking purposes; but if it is desired to use only one of the said compartments for cooking purposes and the other as a hot-closet—as, for instance, if it is desired to employ the compartment a^4 for cooking purposes and the compartment a^5 as a hot-closet—the lever d^2 on the door d^4 will be engaged with its catch d^6 , and the lever d^2 on the door d^3 will be turned on its pivot and engaged with the catch d^7 on the door d^3 , so that when the said door d^3 is closed the sliding damper b^2 will not be acted upon, but will remain in its normal position, (shown in Fig. 2,) and the openings b in the bottom plate a^8 will remain covered, while the sliding damper b' of the compartment a^4 is moved backward when the door d^4 is closed to permit the heat from the chamber a^{10} to pass directly into the said compartment. When the door d^4 of the compartment a^4 is again opened, the rollers b^5 travel down the inclined guideways, and thus close the openings in the bottom plate of the said compartment.

I have herein shown the bottom plate of each compartment provided with a number of openings and the sliding dampers provided with a like number; but I do not desire to limit myself to any particular number of openings in the bottom plate, as one or more may be used. So, also, the sliding damper, provided with a projection adapted to be engaged by a cam or projection, may be used on an oven having but one compartment, and therefore I do not desire to limit this feature of my invention to an oven having but two compartments, as herein shown.

I have herein shown my invention as embodied in a portable oven; but I do not desire to limit myself to this form of oven, as it is evident the said damper may be employed in a single or multiple oven made of brick, iron, or other usual material.

I have herein shown the damper as restored to its normal or closed position by means of inclined ways; but I do not desire to limit myself to the specific device shown, as other equivalent means may be employed—as, for instance, the damper might be actuated by a spring.

I have herein shown the bottom plate provided with openings; but, if desired, the said bottom plate may be made solid and the central dividing-wall a^6 provided with one or more openings, which are controlled by a damper.

I have described the lugs supporting the rollers as secured to the movable damper; but I do not desire to limit myself in this respect, as the said lugs and rollers may be attached to the bottom plate and the inclined guideways secured to the movable damper, substantially as shown in Fig. 5.

I claim—

1. In an oven, the combination, with the oven-casing provided with a door and a plate or wall provided with one or more openings, and forming within the said oven two compartments, of a movable damper registering with said opening, and means to automatically move said damper to close said opening when the oven-door is opened, substantially as described.

2. In an oven, the combination, with the oven-casing provided with a door and a plate or wall provided with one or more openings, and forming within the said oven two compartments, and guideways located below the bottom plate or wall, of a movable damper registering with said opening and provided with lugs or ears having rollers to travel on said guideways, and a cam or projection adapted to be operated by the closing of the door to uncover the opening in the bottom plate, substantially as described.

3. In an oven, the combination, with the oven-casing provided with a door and a plate or wall provided with one or more openings, and forming within the said oven two compartments, of a movable damper registering with said opening and means to separate the movable damper from the plate or wall to

avoid friction when the damper is moved, substantially as described.

4. In a portable oven, the combination, with an outer wall or casing, of a central dividing-wall secured to the front and rear wall of the said casing and extended from the top toward the bottom of the casing to form independent compartments on opposite sides thereof, a chamber a^{10} below it, a bottom plate or wall for one or both of said compartments provided with one or more openings, a sliding damper to close said opening, and a heater located in the chamber a^{10} , and an exit flue or passage for said heater, passing through, but not communicating with, the compartments, a hood for said flue, and connections between the hood and the compartments, substantially as described.

5. In a portable oven, the combination, with an outer wall or casing, of a door for said compartment, a chamber a^{10} , located below the said compartment, a heater in said chamber, a bottom plate for the compartment provided with one or more openings, a damper for each bottom plate provided with a lug or projection, a cam or projection adjustable on the door adapted to be brought into position to

engage the lug or projection on the damper when the door is closed, inclined guides or ways secured to the bottom plate, and rollers carried by the sliding damper and movable on the said guides or ways to thereby raise said damper from and uncover the openings in said bottom plate, substantially as described.

6. In a portable oven, the combination, with a wall or casing, of a bottom plate forming an upper compartment and a chamber below it, one or more openings in said bottom plate, a damper to close said opening having a lug or projection on said door adapted to be brought into position to engage the lug or projection on the damper when the door is closed, and means to restore the damper to its normal position when the door is open, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE W. WALKER.

Witnesses:

JAS. H. CHURCHILL,
EMMA J. BENNETT.