(No Model.)

O. F. FROST.

DETACHABLE SHELF AND HEAT REGULATOR FOR OVENS.

No. 381,229. Patented Apr. 17, 1888.

Fig. 1.

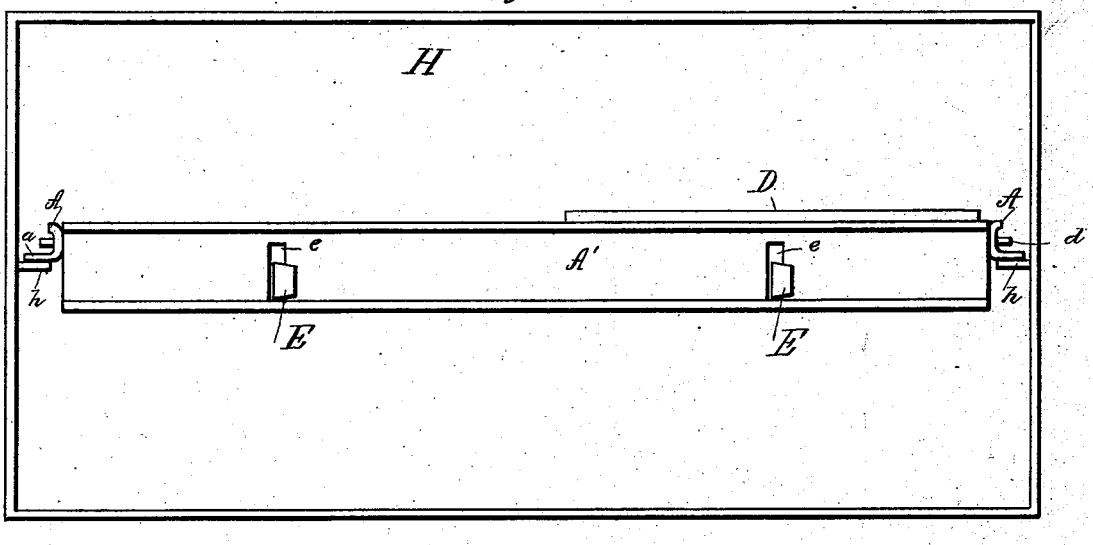


Fig. 2.

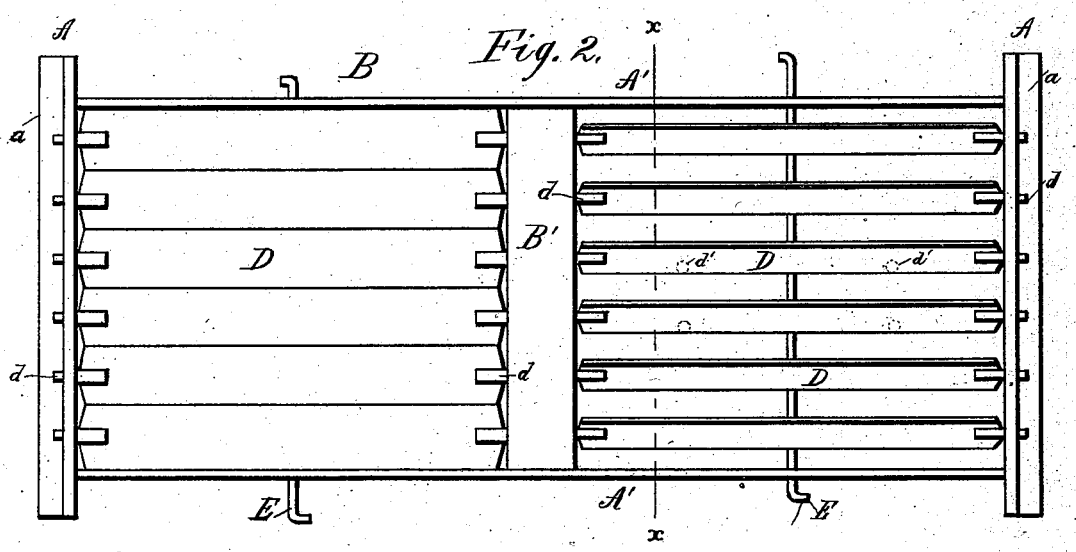
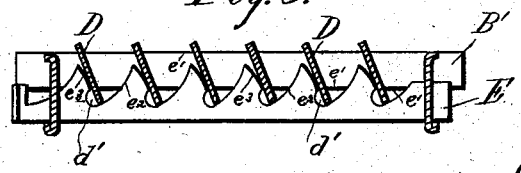


Fig. 3.



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OSCAR F. FROST, OF MONMOUTH, MAINE, ASSIGNOR OF ONE-HALF TO AUGUSTUS A. FILLEBROWN, OF AYER, MASSACHUSETTS.

DETACHABLE SHELF AND HEAT-REGULATOR FOR OVENS.

SPECIFICATION forming part of Letters Patent No. 381,229, dated April 17, 1888.

Application filed June 8, 1887. Serial No. 240,636. (No model.)

To all whom it may concern:

Be it known that I, OSCAR F. FROST, of Monmouth, in the county of Kennebec and State of Maine, have invented a new and Improved Detachable Shelf and Heat-Regulator for Ovens, of which the following is a full, clear, and exact description.

My invention relates to a detachable shelf and heat-regulator for ovens, and has for its object to provide a means whereby the heat may be regulated at will in an oven, although a fierce fire may be made in the stove to boil or fry upon its surface, and wherein the device, when not in use as a regulator, may be employed as a shelf or support for pans.

The invention consists in the construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

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

Figure 1 is an edge view of the device in position in an oven. Fig. 2 is a plan view of the same. Fig. 3 is a transverse section through line *x x* of Fig. 2.

In carrying out the invention the sides A of the shelf are constructed of angle-iron or any light metal bent in that shape with the flanging portion *a* at the bottom, and the ends A′ are composed, preferably, of straight strips of metal, whereby a rectangular frame, B, is formed, as shown in Fig. 2.

Centrally the frame a transverse strip, B′, is attached to the end pieces. Into each side of said strip and in the sides A the trunnions *d* of a series of shutters, D, are journaled, each of said shutters being provided upon one side at or near one longitudinal edge, both sides of the center, with counterpoise-weights *d′*, whereby the said shutters are normally kept in a vertical position.

When the shutters are carried to a horizontal position, they are so spaced that the longitudinal edge of one will overlap the opposing edge of the other. In order to conveniently bring the shutters to a horizontal position centrally beneath each section, a rod, E, is extended adapted to slide in slots *e*, cut in the end pieces, as shown in Figs. 1 and 3. In the upper side of the said sliding bars a series of recesses, *e′*, are cut, one recess corresponding with each shutter, one wall, e^2, of the recesses being made decidedly concave and the upper portion of the opposing wall, e^3, convex, as shown in Fig. 3.

The upper convex surface of the rods by contact with the weighted under surface of the shutters retains them in a closed or horizontal position. Therefore, when the rods are drawn forward, bringing the recesses in alignment with the said weighted edges of the shutters, the shutters drop automatically in a substantially vertical or open position, as shown in Fig. 3.

In application the flanges *a* are made to rest upon the usual lugs, *h*, common to all ovens H, as shown in Fig. 1, above the floor, and the article to be baked is placed beneath the shelf. If the heat upon top is too severe, the shutters are closed or partially closed, as desired, and if the oven is too hasty at the bottom the pan may be placed upon the shelf.

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

1. A detachable shelf consisting of a horizontal rectangular frame, B, to rest on the slide rests or supports of a baking-oven, counterbalanced shutters D, pivoted within the frame at their ends, and a sliding bar placed edgewise under said shutters, extending through the ends of the frame to form a handle or finger-piece, and having a series of recesses, *e′*, in its upper surface, into which the counterbalanced sides of the shutters extend when open, and intermediate walls or projections, one for each shutter and contacting with the lower faces thereof, substantially as set forth.

2. In an oven-shelf and heat-regulator, the combination, with a frame, B, consisting of the angular side pieces, A, end pieces, A′, central dividing-bar, B′, and a series of shutters pivoted in said ends and dividing-bar, of sliding bars E, extending transversely beneath said shutters through the sides of the frame to form the operating finger-pieces or handles, and provided in their upper edges with a series of recesses, *e′*, having a concaved wall, e^2, and an opposing convex wall, e^3, one for each shelf, all arranged to operate substantially as herein shown and described.

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Witnesses:

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