D. STUTZMAN.

FRUIT-DRIER.

No. 192,307. Patented June 19, 1877

Fig. 1.

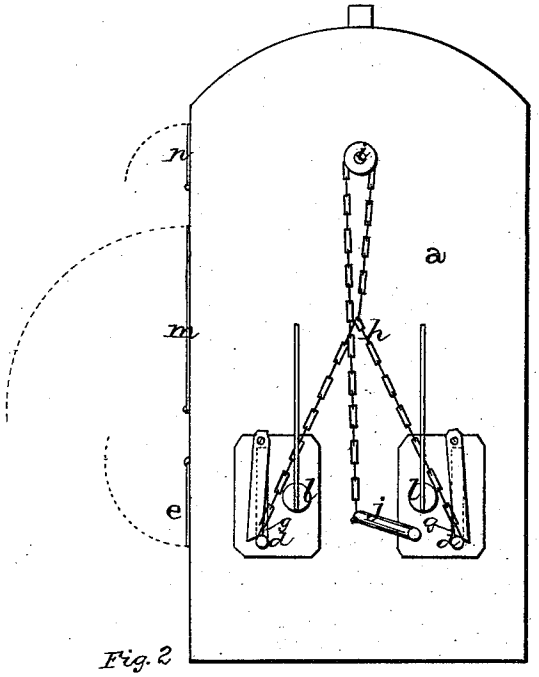


Fig. 2

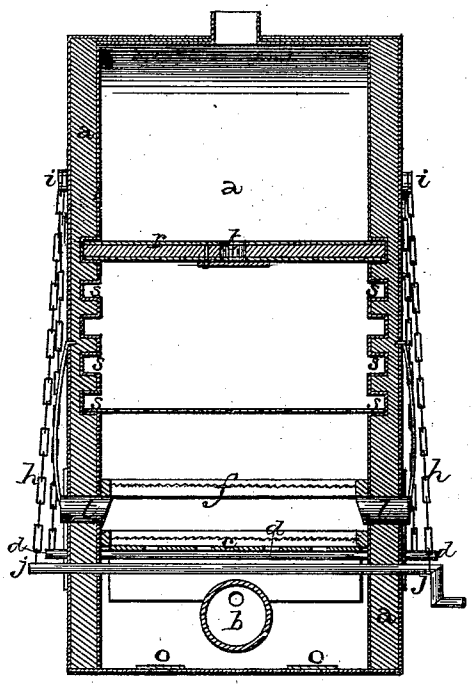
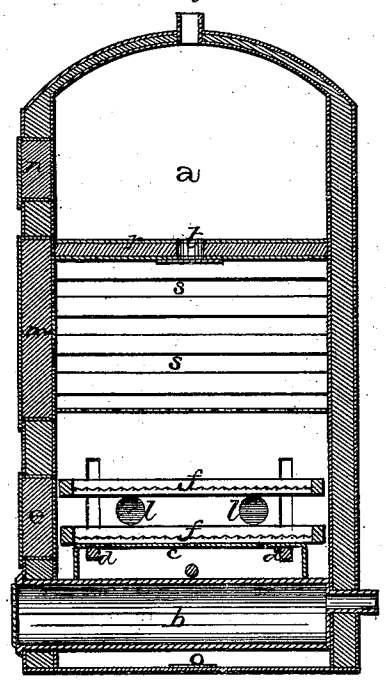


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

DAVID STUTZMAN, OF LIGONIER, INDIANA.

IMPROVEMENT IN FRUIT-DRIERS.

Specification forming part of Letters Patent No. **192,307**, dated June 19, 1877; application filed May 15, 1877.

To all whom it may concern:

Be it known that I, DAVID STUTZMAN, of Ligonier, in the county of Noble and State of Indiana, have invented certain new and useful Improvements in Fruit-Driers; 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 it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to a combined bake-oven and fruit-drier; and it consists in the elevating device by which the trays are fed in at the bottom and are raised upward to any suitable distance in the drier. It also consists in a peculiar arrangement and combination of parts, that will be more fully described hereinafter, whereby a cheap and simple fruit-drier and bake-oven is produced.

The accompanying drawings represent my invention.

a represents a house, which is preferably made of sheet-iron of a double thickness, with any suitable material placed in between the walls as a packing, so as to prevent the escape of the heat outward. Extending horizonally through the lower portion of this combined house and oven is the fire-chamber *b*, which may be of any suitable construction, so that it will heat the oven and drier immediately above it. Placed above this fire-chamber, inside the oven, is the perforated sheet-metal plate *c*, which has its two ends bent at right angles, and which plate rests upon the two sliding rods *d*, that pass horizontally through the lower portion of the oven at right angles to the fire-chamber *b*. This plate serves to distribute the heat evenly throughout the drier as it rises from the fire-chamber. Just above the top of the fire-chamber there is a door, *e*, made, through which the screens *f*, upon which the fruit is placed to be dried, are inserted into the oven. Through two opposite sides of the oven, on a level with this door, are cut vertical mortises *g*, through which the ends of the sliding rods *d* pass to a suitable distance outward. To the ends of these rods, on each side of the oven, are attached the elevating-chain *h*, which passes up over the roller *i*, that is pivoted to the side of the drier, and which then passes downward, and is fastened to a winding-drum, *j*, or other equivalent device. The tray *f* having been inserted into the oven through the lower door, the drum or elevating device is turned so as to wind the chain upon it, thereby raising the sliding-rods *d* upward, bearing the tray upon their top. Passing inward through the sides of the oven, on a level with the lower door, or at any suitable distance above it, are a number of spring-catches, *l*, which have their inner ends beveled away, as shown, so that as the seives are raised upward by the elevating device they press these catches backward until they have passed above them, when the catches at once spring inward again, and form supports, upon which the tray rests. At a suitable distance above the lower door is made another, larger, door, *m*, which opens downward, and upon a level with which are made a number of grooves to receive slides of various kinds.

As the trays *f* are filled in below, one after the other, and raised upward by the elevating device, the trays gradually raise up to a level with the upper door, and even as high as the third door *n*, from either of which points they may be taken out. Thus it will be noticed that the trays are fed in from the bottom and are taken out through the top. Through the bottom of the drier, upon one or both sides of the fire-chamber *b*, are made suitable openings *o*, which are covered with slides or doors, so that fresh air can be continually admitted while the drying process is being carried on.

When it is desired to retain the heat as much as possible in the oven *a*, slide *r* may be inserted in any one of the grooves *s* that are made in the side of the drier above the top of the upper screen. This slide *r* consists preferably of boards, which are covered upon each side by sheet metal, and has a hole, *t*, through its center, which hole is provided with a suitable valve or register, so that the hole can be left open for the free escape of steam from the drying fruit, or can be closed entirely. This hole should be just large enough to allow the steam to escape with sufficient freedom so as not to prevent the process of drying from being carried perfectly on. When it is desired to use this drier as an oven, this slide *r* will be placed in the top groove, and the hole in

its center closed, so as to prevent the escape of any heat whatever upward, and the holes *o* through the bottom closed, so as to prevent the admission of any fresh air. While thus closed up all the heat from the fire-chamber will be retained, and the drier will be converted into an oven, in which baking of all kinds may be carried on. The plate *c* will then be turned with its end up. The mortises *g*, through which the ends of the sliding rods *d* project, may be covered by pivoted plates on the outside of the drier, as shown, for the purpose of preventing the escape of heat through them.

Having thus described my invention, I claim—

1. The slide *r*, having a covered opening through its center, substantially as described.

2. The combination of the house *a*, fire-chamber *b*, sliding rods *d*, mortises *g*, chains *h*, and a winding device, *j*, substantially as specified.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of May, 1877.

DAVID STUTZMAN.

Witnesses:
DAVID HOUGH,
MATHIAS STRAUS.