

STUART & BRIDGE.

Cooking Stove.

No. 110,305.

Patented Dec. 20, 1870.

Fig. 1

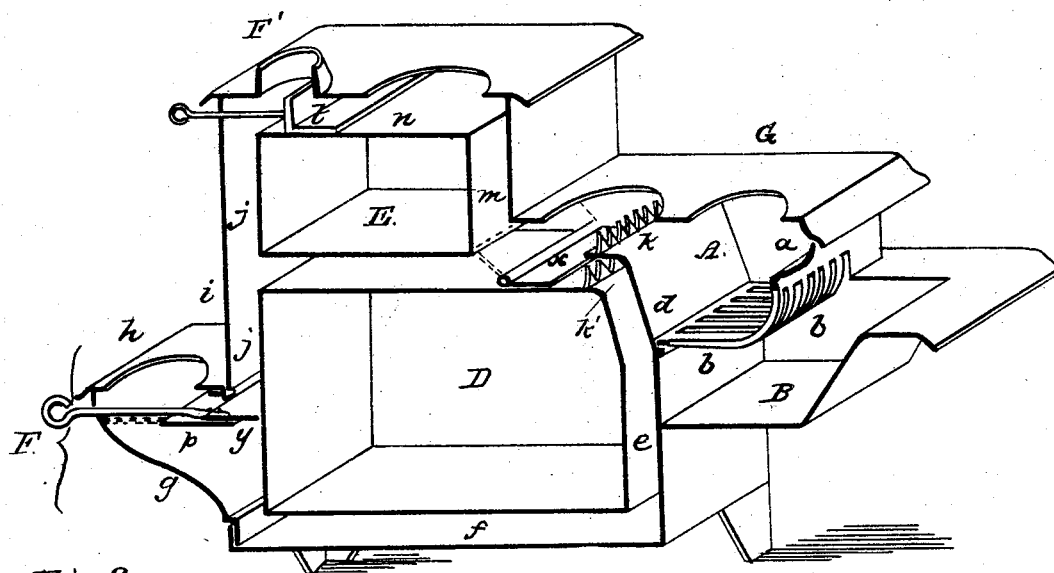


Fig. 2

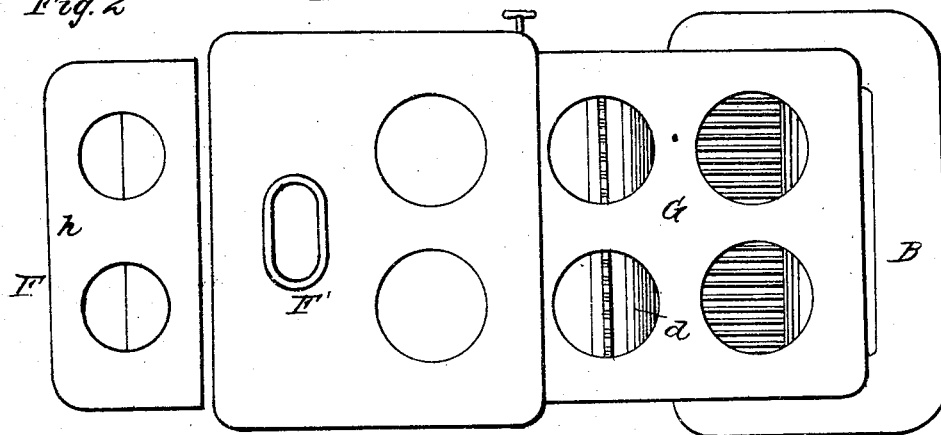


Fig. 5

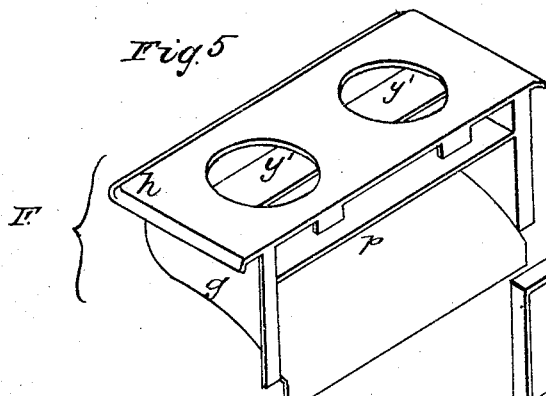


Fig. 4

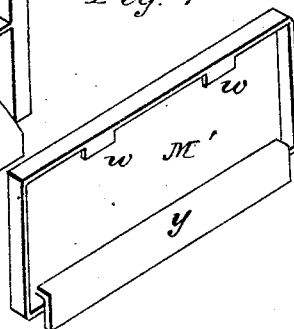
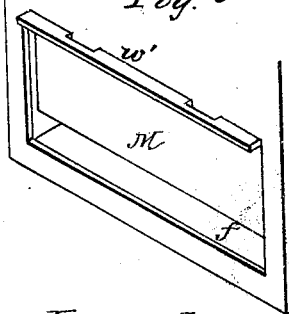


Fig. 3



witnesses

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By their attys
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United States Patent Office.

DAVID STUART AND LEWIS BRIDGE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGN-
ORS TO DAVID STUART AND RICHARD PETERSON, OF SAME PLACE.

Letters Patent No. 110,305, dated December 20, 1870.

IMPROVEMENT IN COOKING-STOVES.

The Schedule referred to in these Letters Patent and making part of the same.

We, DAVID STUART and LEWIS BRIDGE, both of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented an Improvement in Cooking-Stoves, of which the following is a specification.

Nature and Object of the Invention.

Our invention relates to certain improvements in the cooking-stove for which Letters Patent were granted to our assignees, Stuart, Peterson & Co., on the 3d day of November, A. D. 1868; and

Our invention consists—

First, in constructing the stove-plates, the back, and the rear projections, as fully described hereafter, so that either a plain or projecting back may be fitted to the stove.

Secondly, of certain peculiar guards, so arranged as to prevent the coal from falling into the flues.

Description of the Accompanying Drawing.

Figure 1 is a sectional perspective view of our improved cook-stove;

Figure 2, a plan view;

Figure 3, a perspective view of part of the rear of the stove; and

Figures 4 and 5, views of detached portions of the stove.

General Description.

A is the fire-place of the stove, to which fuel is admitted through the usual opening *a*, in front, *b* being the grate, and

B, the hearth-plate.

D is the large oven;

E, the small oven of the stove; G being a plate situated above the fire-place, and provided with suitable holes for receiving culinary utensils.

The back of the fire-place consists of an inclined plate, *d*, the upper portion of which is made horizontal, and is so arranged as to be midway, or thereabout, between the plate G and the top of the large oven D, between which oven and the said plate *d* is formed a flue, *e*, passing downward and communicating with the horizontal flue *f*, between the bottom of the oven and bottom plate of the stove.

At the rear of the oven is a hollow projection, F, formed by the curved plate *g* and horizontal plate *h*, which has two openings for receiving culinary utensils.

So far the stove is similar to that for which the aforesaid Letters Patent were granted to our said assignees.

In that patent, however, the rear projection F of the stove was a fixture; but as many stove-purchasers would not require this projection, we make at the rear of the stove an oblong opening, M, fig. 3, to

which can be fitted a plate, M', fig. 4, having lips, *w*, for fitting into slots in a flange, *w'*, on the stove, the plate having at its lower edge a lip, *y*, fitting into the opening M at the rear of the stove.

When the plate M' is fitted to its place, the rear of the stove is equivalent to that of an ordinary stove; but this plate may be removed and hollow projection, F, fig. 5, which has lips like those of the plate M', may be fitted to the opening M, at the rear of the stove, when the latter will assume the form seen in fig. 1.

This changing of the stove from one having a plain back to one having the projection F may be effected in the patterns, which may be so constructed that the back plate will be cast plain or with the hollow projection F.

Within this projection is a plate, *p*, on which rests a sliding damper, *y*; by moving the latter to the position shown in fig. 1, the products of combustion from the flue *f* may be made to pass outward and return between the plate *h* and the plate *p*, to the rear flue *j*, between the back plate *i* and the ovens.

On sliding the damper outward, however, the communication between the lower flue *f* and rear flue *j* will be direct.

This rear flue *j* will communicate directly with the exit-opening F', if the sliding damper *t*, on the top of the upper oven, be moved inward; but the communication between the rear flue *j* and exit-opening will be cut off if the damper be moved outward.

In the flue immediately behind the fire-place is a damper, *x*, which may rest on the top of the lower oven, as shown, or may be turned so that its edge will rest against the lower front corner of the oven, as shown by dotted lines, in which case the products of combustion will pass upward through the flue *m* of the upper oven, and through the flue *n* to the exit-opening, while, if the damper *x* be depressed, part of the products of combustion will pass between the two ovens.

In fact, it will be seen, without further description, that by manipulating the dampers *x*, *t*, and *y*, the products of combustion may be directed to any part of the stove which circumstances may suggest.

To prevent dust and ashes or particles of fuel from passing over the end of the plate *d*, I secure to the same a serrated guard *k*, seen in fig. 1, and should any particles pass this guard they are prevented from falling into and obstructing the flue *e* by a similar guard, *k'*, secured to the upper front corner of the oven D.

It will be seen that the guards *k* and *k'* do not project entirely across the flues, and therefore do not obstruct or interfere with the passage of gases through

the flues; that they are so constructed as not to be burnt out or injured by the heated gases, are inexpensive, and can be readily applied.

Claims.

1. The plates of the stove, the half-plate, *i*, and projection *F*, adapted to each other, as described, so that the said half-plate and projection may be fitted to the stove, or detached from the same and replaced by a whole plate, as set forth.

2. The guard *k*, consisting of projections extending upward from the rear of the plate *d*, as described.

3. The combination of the guards *k k'* and the flue *e*, as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

DAVID STUART.
LEWIS BRIDGE.

Witnesses:

A. H. PERKINPINE,
JAS. McCLANY.