

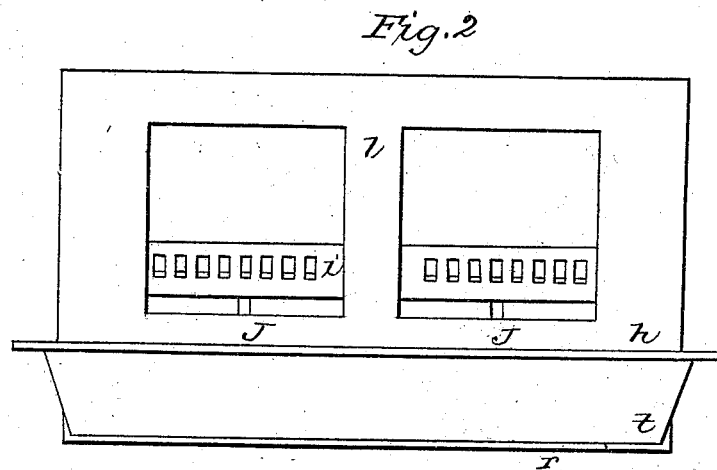
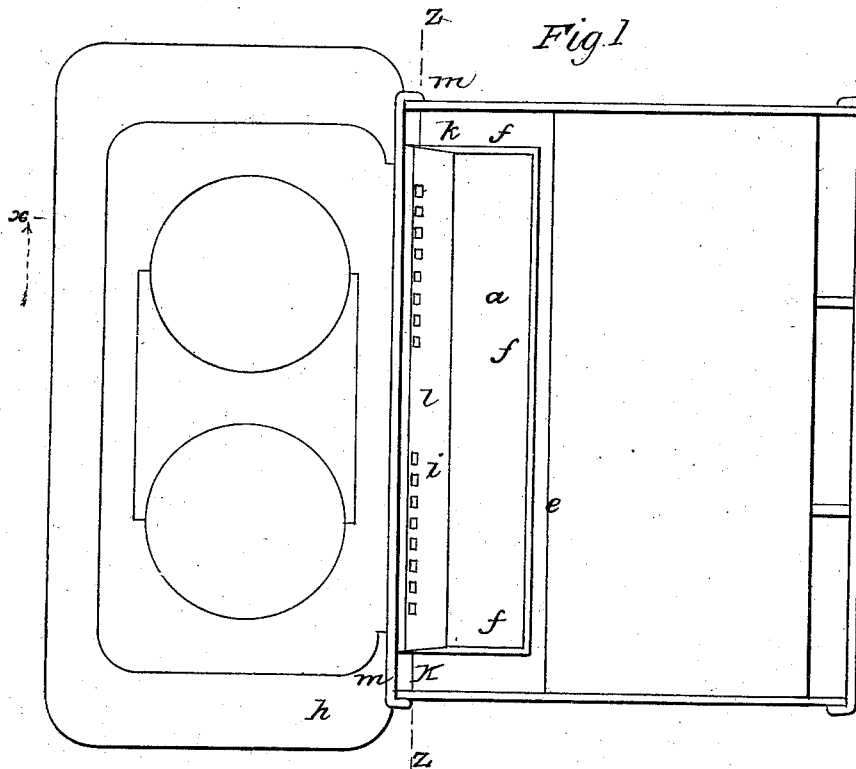
S. H. RANSOM.

2 Sheets—Sheet 1.

Cooking Stove.

No. 7,483.

Patented July 2, 1850.



S. H. RANSOM.

2 Sheets—Sheet 2.

Cooking Stove.

No. 7,483.

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Fig. 4. in fig. 1

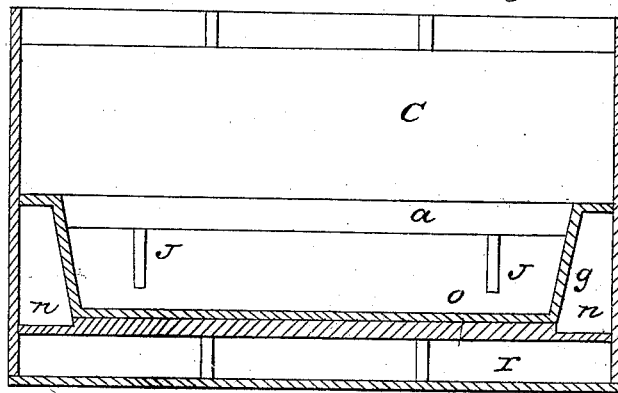
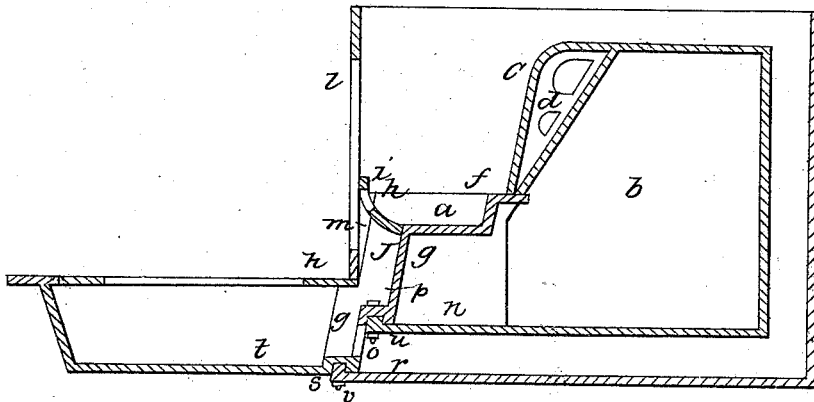


Fig. 3. x-x fig. 1



UNITED STATES PATENT OFFICE.

S. H. RANSOM, OF ALBANY, NEW YORK.

CONSTRUCTION OF COOKING-STOVES.

Specification of Letters Patent No. 7,483, dated July 2, 1850.

To all whom it may concern:

Be it known that I, S. H. RANSOM, of Albany, in the county of Albany and State of New York, have invented certain new and
5 useful Improvements in Cooking-Stoves, and that the following is a full, clear, and exact description of the principle or character of my invention which distinguishes it from all other things before known and of
10 the manner of making, constructing, and using the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a plan, Fig. 2 a front elevation,
15 and Figs. 3 and 4 vertical sections taken at the line X X and Z Z of Fig. 1.

The same letters indicate like parts in all the figures.

My improvements are in that class of
20 cooking stoves, in which the oven is back of the fire place and partly extending under it. Heretofore in making such stoves it has been necessary either to make the fire bottom and front hearth in two parts, which is more
25 costly, makes an imperfect finish, and the connection of the two, for permanence and durability is difficult,—or else it has been cast in one piece with the connecting part outside; and as in this class of stoves it is
30 necessary to have the front hearth below the level of the fire bottom, that the ashes may descend from the fire bottom into the front hearth; when cast in one piece as heretofore, the front connecting part must necessarily
35 be inclined to give the necessary draft for molding, so that one part of the front of the stove is inclined, and what is a still greater objection the lower edge of the front plate must rest on and be fitted to
40 the upper surface of this connecting part, which, however perfect the joint may be made, will leave a leak for ashes which fall into the articles that are being cooked on the front hearth. And in addition to all
45 this, the doors which are fitted and hung to the front plate cannot come down low enough for convenience, and to give the requisite draft to the fire at the proper place.

All the objections above enumerated are
50 avoided by my invention, which consists in casting the fire bottom and front hearth, or summer arrangement in one piece by making the connecting part inside of the front plate of the stove that the lower edge of the
55 said front plate may be fitted directly onto the hearth-plate, the inclination given to the

connecting part for the draft in molding, being thereby carried inside of the front plate, and also in combining this with the fitting of the said hearth-plate, to the bottom plate of the stove, and with the front
60 edge of the bottom oven plate by rabbets or their equivalents, the fire bottom being extended under the lower edge of the fire back with which it makes a good joint, the greater
65 weight of the part in front of the stove tending constantly to keep this joint tight,—and also in combining the manner of forming the said hearth and fire bottom in combination with projections on the inner
70 surface of the front plate, which bear against the inclined surface of the front part of the connection between the hearth and fire bottom.

In the accompanying drawings (*a*) represents the fire-chamber and (*b*) the oven
75 which in part extends under the fire chamber. The fire back (*c*) is protected against the intensity of the heat by an air chamber (*d*), and the oven is heated by the passage
80 of the products of combustion from the fire chamber over it, down the back, under the bottom, and thence in return flues under the bottom, and up the back to the exit pipe, in a manner well known to stove makers. The
85 fire-bottom (*e*) extends under the lower edge of the fire back and makes a close joint therewith, and is sunken within the lines (*f f f*) for the reception of the fuel, this said fire bottom constituting the top of that
90 part of the oven which extends under the fire chamber;—and the front of this part of the oven is formed by the plate (*g*) which unites the fire bottom with the hearth (*h*) and which is cast in one piece with the two,
95 this part of the casting being inclined as shown in the drawings to give the requisite draft for molding.

To the front edge of the fire-bottom is attached a grate (*i*) which rests on brackets
100 (*j j*) cast on the inclined plate (*g*) the ends of the same grate extending on each side to the jamb (*k k*) of the fire bottom which are carried above the fire-bottom and farther
105 forward than the inclined plate (*g*), the lower end of these jambs being flush with the front plate (*l*) which is cast with inclined projecting pieces (*m*) to fit against their inclined front faces to aid in securing and holding them in place. The lower edge
110 of the inclined plate (*g*) is cast with a groove which fits into a tongue cast into the

top of the bottom oven plate (*n*) and at the front edge thereof as shown at (*o*). The plate (*g*) then extends forward a short distance in a horizontal direction as at (*p*), and then down in a direction parallel with the part (*g*) (as at (*q*)) the lower edge of this being in like manner cast with a groove to fit into a tongue on the front edge of the bottom-plate (*r*), (as at (*s*)), the back edge of the hearth-bottom (*t*) resting against the front edge of the said stove bottom. In this way the parts are all connected and when secured by two screw bolts (*u, u,*) the hearth and fire bottom, and the parts connecting them are firmly secured to the oven and front of the stove.

The top of the hearth (*h*) is elevated above the bottom (*t*) thereof, to give the requisite space for making fire therein to constitute what is called the summer arrangement the hearth being provided with the requisite utensils for cooking in the usual manner, and the air for the fire therein receiving entrance through the boiler holes in the plate (*h*) and the products of combustion pass through holes in plate (*g*) communicating with the main flue of the stove under the oven.

The front plate (*l*) of the stove extends down in front of the jambs (*k k*) as stated above the lower edge thereof resting on the hearth plate (*h*) which makes a good finish as it is termed. The ashes from the grate fall directly into the summer arrangement, and the front plate being extended down to the hearth plate, there is no possibility of their falling on to the top of the hearth.

By the above described mode of construction I avoid all the objections to the old

modes entirely and am enabled to produce a stove of this class at less cost and which is less liable to derangement than any other stove of this class heretofore made.

What I claim as my invention and desire to secure by Letters Patent is,

1. Making the fire-bottom and front hearth, or summer arrangement of the class of stoves herein specified, in one piece, connecting the two with inclined plates placed within the front plate of the stove substantially as described, whereby I am enabled to have the hearth below the level of the fire-bottom while the inclination given to the connecting parts are not visible, thereby effecting the purposes herein specified.

2. I also claim the above method of making the hearth and fire bottom in combination with the method of connecting them with the oven bottom and stove bottom by means of tongues and grooves while the fire bottom extends under the fire back, substantially in the manner and for the purpose specified.

3. And I also claim in combination with the above described method of making the hearth and fire bottom, the extension of the front stove plate down in front of the parts which unite the hearth and fire bottom, the said front stove plate being provided with projecting pieces to rest against the inclined joints to aid in securing in place the said united hearth and fire bottom substantially as described.

S. H. RANSOM.

Witnesses:

H. CLARK,
GEO. A. WELLS.