2 Sheets—Sheet 1.

P. P. STEWART.

Cooking Stove.

No. 915. Patented Sept. 12, 1838.

Fig. 1

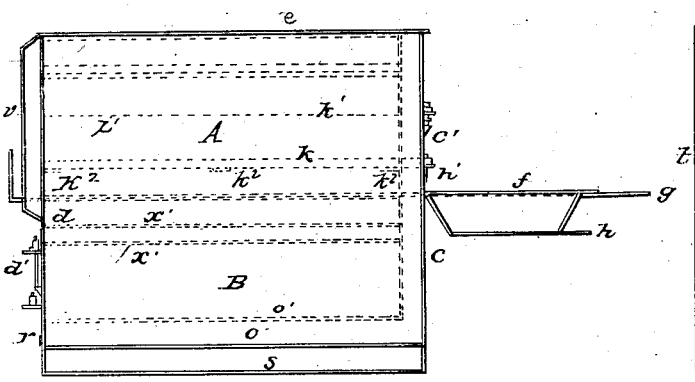


Fig. 2

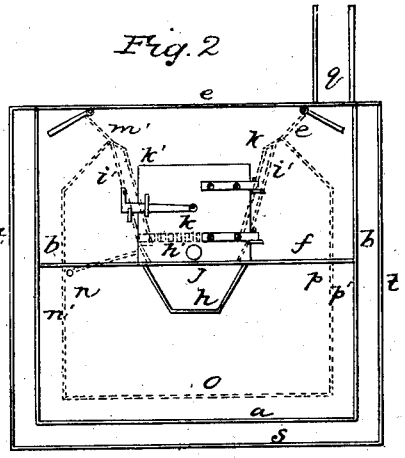


Fig. 4

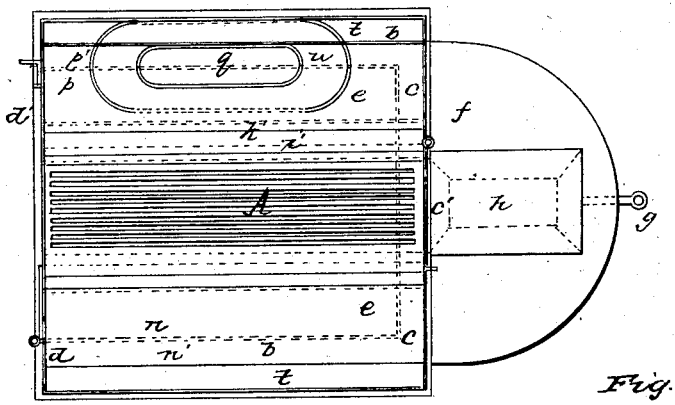


Fig. 5

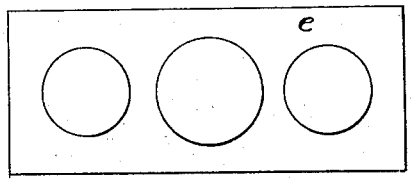
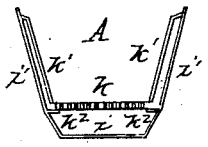


Fig. 7



Witnesses
Wexwell
J. Kerrell

Inventor
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2 Sheets—Sheet 2.

P. P. STEWART.

Cooking Stove.

No. 915.

Patented Sept. 12, 1838.

Fig. 8

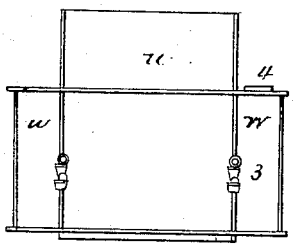


Fig. 9

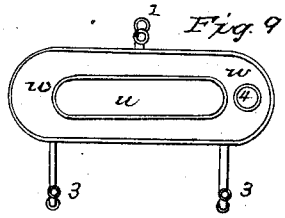
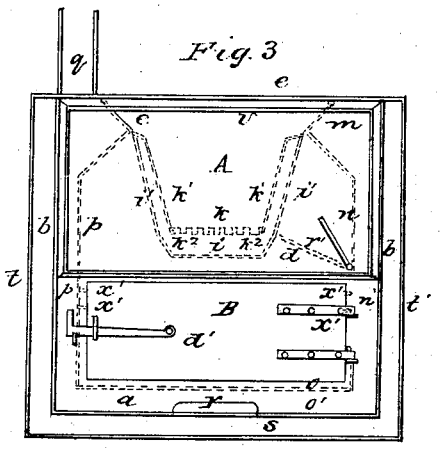


Fig. 3



Figs. 10 & 11

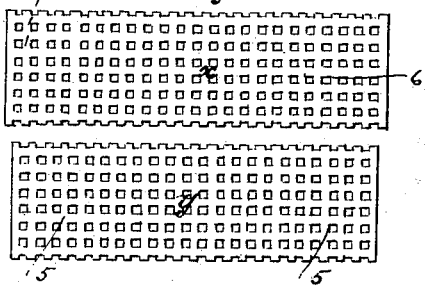


Fig. 6.

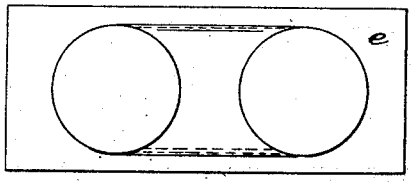


Fig. 16 & 17.

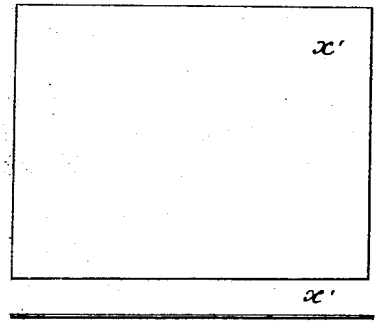
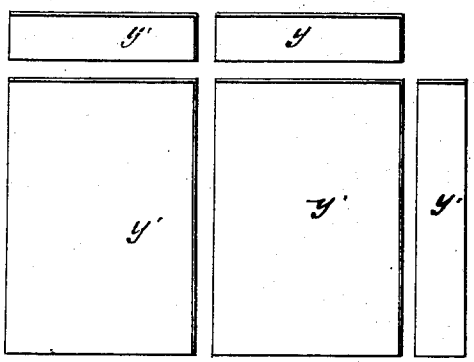


Fig. 13. 14. 15



Witnesses

W. Sterrell

J. Sterrell

Inventor

Phila P. Stewart

UNITED STATES PATENT OFFICE.

PHILO P. STEWART, OF NEW YORK, N. Y.

SUMMER AND WINTER COOKING-STOVE.

Specification of Letters Patent No. 915, dated September 12, 1838.

To all whom it may concern:

Be it known that I, PHILO PENFIELD STEWART, of Hudson street, in the city, county, and State of New York, stove maker, have invented and made certain new and useful Improvements or Arrangements in Manufacturing Stoves, which collectively I designate as "Summer and Winter Cooking-Stoves," using either wood or coal as fuel, and for which improved arrangements I ask Letters Patent of the United States as not having been made or used in such form and combination and with such effect before my invention of the same, and that the mode of constructing and using the said improvements and the advantages intended to be attained thereby are fully and substantially set forth and shown in the following description and in the drawings attached to and making a part of this specification, wherein—

Figure 1. is a sectional side elevation. Fig. 2. is a sectional elevation of the fire door end. Fig. 3. is a like elevation of the oven door end, and Fig. 4. is a horizontal plan of a stove of this arrangement and construction.

The other detached figures are consecutively explained hereafter, and the like figures and letters, as marks of reference, apply to the same parts in all the several figures.

a, is the bottom plate.

b, *b*, are two side plates.

c, is the fire door end plate, made double below the door, at the end of the oven. c^1 is the fire door, made single or double, as may be chosen.

d, is the oven door end plate, d^1 is the oven door, also made double or single.

e, in detached Figs. 5 and 6, is a top plate to cover the fire; with openings, in which to place cooking vessels, made so as to give space, to two or more small vessels, or to change and receive one or more large vessels.

f, is the hearth with a top slide *g*, as a cover, and a bottom slide *h*, to empty the pan.

A is the fire place or chest, shown open in plan, Fig. 4, having its bottom *i*, flat, and sides i^1, formed narrower below than at top, as shown sectionally, by dotted lines in Figs. 2, 3, and 4.

k, is the fire grate for coal or wood fuel, having the flanches k^1 on each side, returned outward toward the top of i^1, as shown in Fig. 7. This grate is made to shift in, or out, by lifting directly out through the opening made by the shifting top plate, or by sliding endwise, on the flanch lugs k^2, shown in Figs. 1, 2 and 3, by dotted lines.

l, is a damper or valve, on one side above the fire place, to open or close the way to the chimney flue.

m, is a damper, or valve, opposite *l*, to open or close the way through the oven flue, which may be fitted in or omitted if so chosen.

B is the oven, formed on one side by the plate *n*, which descends from the top of the fire place, on that side, leaving a descending flue n^1 between the oven and the outside plate *b*. The plate *o*, forms the bottom of the oven, with the flue o^1 below it, and above this, on the other side, the plate *p*, forms that side of the oven, with the ascending flue p^1 between that, and the outside plate *b*. These plates, and flues, are shown direct, and sectionally, by dotted lines, in Figs. 2, 3 and 4.

q, is a chimney flue, leading off as needful.

r, is a soot valve, to clear the flue o^1.

s, is a plate, forming a jacketing piece, under the bottom plate *a*. *t*, *t*, are jacketing pieces on the sides *b*, *b*, made movable, by hinges and catches, or any convenient means.

v, is a jacket, on the oven door end, made either fixed or movable as may be chosen.

All these jacket pieces are to be of tin or other bright metal.

In Fig. 8 is a shifting flue piece *u*, going through the reservoir or boiler *w*, which is fitted with three cocks 1, 2, 3, and a supply cover 4 shown in plan in Fig. 9.

In Figs. 10, 11, *y*, is the upper, and *x*, the lower, of a double sliding plate, to use with wood fuel; in these, the openings 5 and 6, are counterpositioned, so that when the lower plate *x*, is in place, on the flanch lugs k^2 and the upper one, *y*, on it, the draft through the fire, may be regulated or shut off altogether by sliding the plate *y*, farward, toward the door, which will bring the metal parts in *y*, either partially, or entirely over the holes in *x*, and thus decrease, or shut off the draft, and the valve h^1 in the fire door, partially or entirely closing the opening below the fire, will assist to regulate the draft, or if the fire door be a little shortened, and the hearth

slide g, sloped upward at that end, it may be made to serve as a regulator of the draft to the fire.

In Figs. 12, 13, 14, y^1 are covers, to form non conductors of heat, or to aid in heating flat irons on the top plate, or to use with a gridiron to broil over the fire, at any one of the openings in the top plate, c.

In Figs. 15, 16, are represented two plates, meant to be used by sliding them in upon lugs, x^1 in the oven, and thereby regulate the heat within the oven by intercepting the heat, radiated from the bottom and sides, i, and i^1 of the fire-place, and in the space between the fire place, i^1 and flue, n^1 a valve may be placed, as shown by r^1 to intercept the main heat radiated from the upper part of the descending flue, n^1, and thus regulate, and decrease the heat in the oven when needful, and a small wire frame to keep the articles, baking, from touching the bottom of the oven, will effectually prevent their being burnt by the heat of that part.

I do not intend to confine myself to the particular mode described, of fitting the fire grate into the fire place, or forming the fire-place, as a square, or inverted semicircular form, will be the same in effect; the grate may be used, either with, or without the rising returned flanches, at the sides, and with, or without, a lining of steatite, or soap stone, or of fire bricks, as may be found needful, according to the strength of fuel employed. Neither do I intend to confine myself to the sizes, or proportions, shown in the drawing, but to vary the same according to circumstances. Neither do I intend to confine myself to any specific mode of mounting, or attaching the jacketing pieces, but to vary all, or any of the above described parts, in any manner, substantially the same, in the operation effected, and the results obtained.

The advantages intended to be attained by this combination and arrangement are as follows: First. By using the stove in the winter, with the jacks removed, a large amount of heat will be radiated off, and warm the apartment, or dwelling, with considerable effect, by a small increase of fuel consumed; and by using anthracite coal, the warmth may be maintained through the night. Second. By using the stone with the jackets on to confine the heat during summer the apartment or dwelling, will not be uncomfortably heated, and the same amount of cooking can be done with a less consumption of fuel; and these two changes may be made daily if needful, during the variable weather, thereby, offering a ready mode, for equalizing the general heat for cooking, and the warmth of the apartment, or dwelling. Third. By the position of the hearth pan, with its top and bottom slides, the ashes may be at all times removed, without raising an offensive dust. Fourth. By the form of the fire place, and the position of the grate, or plates within it, so large a portion of the heat, generated, is radiated by the sides and flues, that the oven will be made hot for use, by a very small expenditure of fuel; while, from the direction of the radiations, the articles in the oven will be operated on equally, all around, without the tops being scorched, as would be the case, if the heat were strongly reflected direct from that part which forms the bottom of the fire place. Fifth. That, from the position and form of the fire grate, either mineral or vegetable fuel, or both, may be used on it, when required, and the heat, and consumption, be regulated by closing, or opening the valve, h', or the top slide g of the hearth, or by closing, or partially opening, the chimney valve l. Sixth. That, by shifting out the fire grate in summer, and substituting for it, the double sliding plates, y, and x, Figs. 10, and 11, wood or peat fuel may be used, and the draft through the holes 5, 6, be so fully regulated, that almost any increment or decrement of heat may be obtained, and when the object is effected the plates may be slid so as to close the holes 5, 6, on which the fire will go out; but the fuel will remain in place, ready for reignition in a few minutes, thus avoiding, either dust, or, loss of time, or waste of fuel, or the risk of fire, by the disposition of the burning remains of the fuel. Seventh. That when from other operations going on while requiring a strong fire, or from any other cause, the oven may become too hot for present use, the heat may be decreased, and regulated, by closing the valve i', or using the sliding plates, x', or both combined, to intercept the main strength of heat radiated from above. Eighth. That by using the covers y', in any season, the operations of broiling food, or heating flat irons, may be carried on without such radiation of heat, as shall either increase the consumption of fuel, or cause an uncomfortable accession of heat in the apartment or dwelling. Ninth. That by attaching the reservoir or boiler with the apparatus described above, a considerable portion of the heat which would otherwise go off by the chimney flue, may be made available for maintaining a supply of hot water, almost always ready for domestic purposes. Tenth. That among the incidental advantages of this arrangement, the addition of a reflector to hang against the side plate, forming the outside of the descending flue n', will form a means, by which food may be roasted effectually: And finally, that all these advantages may be obtained by a stove occupying but a very small space in the apartment.

And I, the said PHILO P. STEWART, do hereby declare, that I do not claim to have invented grates, flues, or jacketing pieces, or

any of the separate parts, except, as hereafter stated.

1. I claim the arrangement and form of the fire-place, as combined with, and acting within the oven, and the arrangement and action of the heating flues, as described in combination with the fire-place, and oven, irrespective of the form of the stove in which the said arrangements may now, or hereafter be combined, and used.

2. I claim the general combination and arrangement herein before substantially detailed and set forth, under any variations of the proportions which do not cause an alteration of the general effects; and advantages produced by said combination, and arrangement, and the methods of using the same, as herein set forth, which collectively form the summer and winter cooking stove, for which I seek Letters Patent.

In witness whereof I have hereunto set my hand, in the city of New York, this sixteenth day of July, one thousand eight hundred and thirty eight.

PHILO P. STEWART. [L. S.]

Witnesses:

W. SERRELL,

JAS. E. SERRELL.