

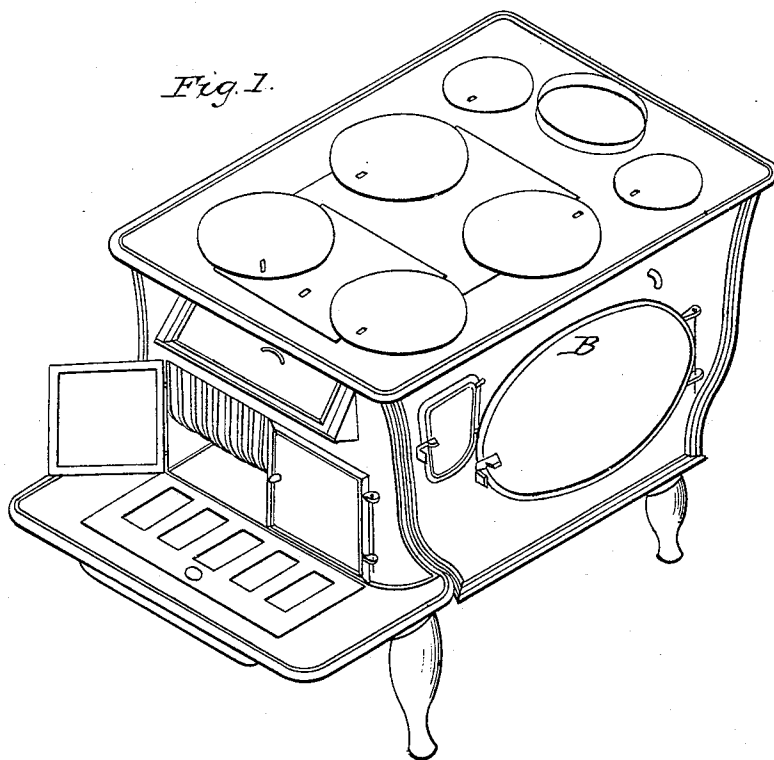
J. J. ANDERSON.

3 Sheets—Sheet 1.

Cooking Stove.

No. 88,112.

Patented March 23, 1869.



Witnesses
James. Arbuckle.
Samuel. Coff

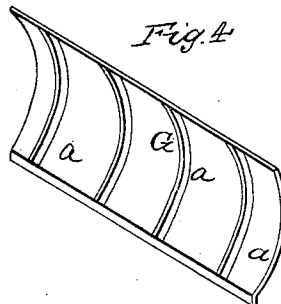
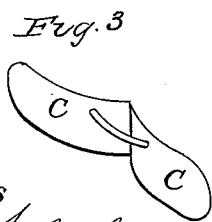
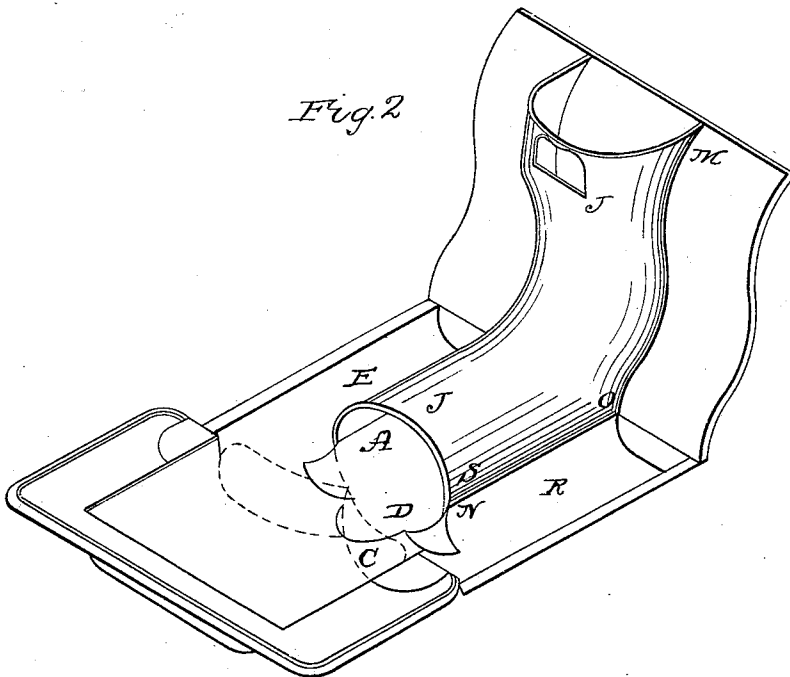
Inventor
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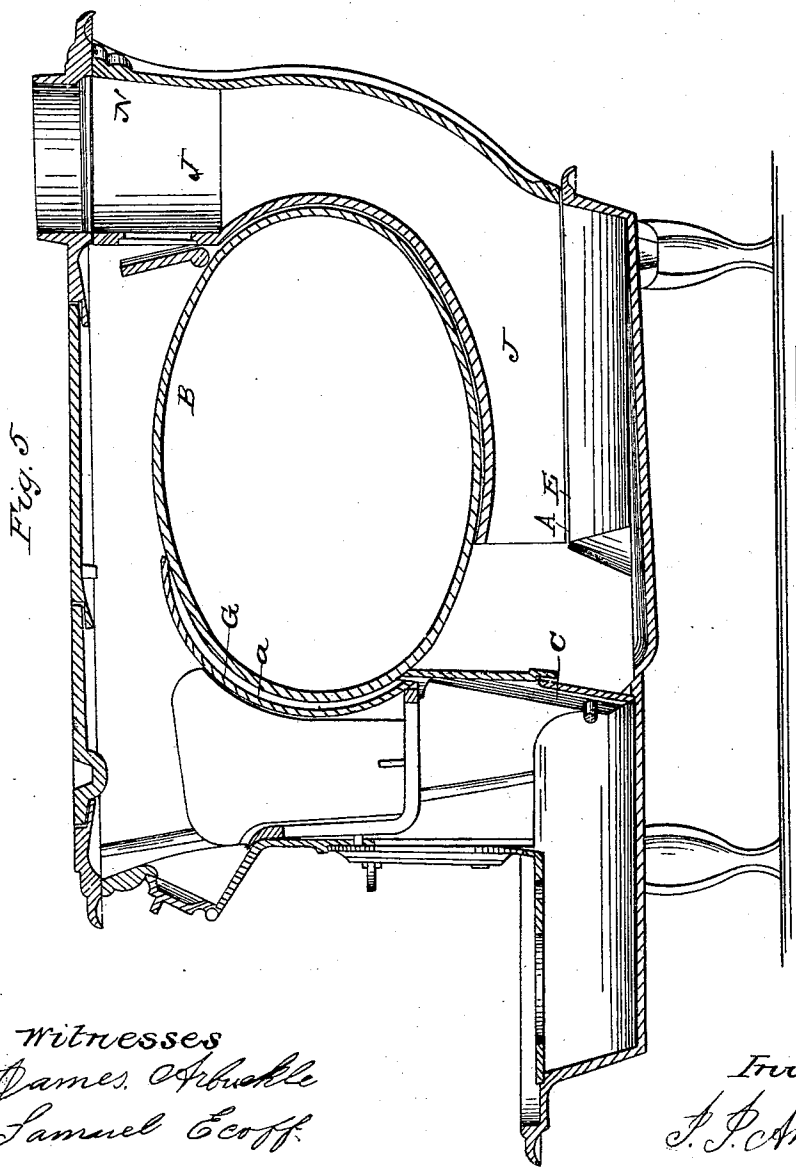
Inventor
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Cooking Stove.

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No. 88,112.

Patented March 23, 1869.



United States Patent Office.

J. J. ANDERSON, OF ROCHESTER, PENNSYLVANIA.

Letters Patent No. 88,112, dated March 23, 1869.

IMPROVEMENT IN COOKING-STOVES.

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

To all whom it may concern:

Be it known that I, J. J. ANDERSON, of Rochester, in the county of Beaver, and State of Pennsylvania, have invented an Improved Construction of Cooking-Stoves; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification—

Figure 1 being a perspective view of the stove.

Figure 2, a perspective view of the bottom and back of the stove, showing the form of the flues.

Figures 3 and 4, perspective views of parts detached.

Figure 5, a central longitudinal vertical section of the stove.

Like letters designate corresponding parts in all of the figures.

The first feature of my improvements consists in combining, with diving-flue stoves, having flues of rounded, or doubly-arched form, and deprived of all abrupt turns, an oven, B, of the form of a flattened cylinder, or elliptic in transverse section, or any unessential variation therefrom, securing a like result.

By this form, all right angles and short turns in the flues are avoided, and the draught is rendered more easy and direct, so that it is turned downward and underneath the oven more readily, and with less obstruction.

The oven is also more evenly heated, and withal, the outward appearance of the stove is rendered more attractive and handsome. Besides, less weight of metal is required, and the plates are less liable to crack than if made plane.

The elliptic, or flattened form has also a decided advantage over a cylindrical form, or a plane-sided oven with rounded corners, for three important reasons: first, its capacity is greater horizontally, where it is required; second, it best suits the form and dimensions of the surrounding stove; third, its reverberatory action is superior to that of the forms named, with the same capacity.

The next feature of improvement consists in covering the top of the central, or return-flue with a single arched plate, J, of metal, meeting and covering a concave depression, D, in the bottom of the stove, so that thereby a flue without corners is formed, and with less joints, and those more easily kept tight than the ordinary joints with plates placed edgewise.

This single covering-plate J also continues upward in front of the stove-back, to the top of the stove, thus avoiding additional joints as well as turns.

It also presents an additional thickness of metal between the flue and the interior of the oven, so that the

heat conducted to the middle of the oven is less intense, where less is wanted, in order to make the heating uniform therein.

Similar depressions, E, R, are made in the bottom of the stove, under the side flues, as represented in fig. 2. The curves of these flues spring from the terminations of the curves of the middle flue, as at N and O, thus assisting to tighten the adjacent joints of all the flues.

Another feature of my invention, in connection with the elliptic oven and doubly-arched flues, consists in a double-curved turn-plate, C, (shown separately in fig. 3, and its position indicated by dotted lines in fig. 2,) situated in front of the flues, so as to direct the draught round in curved paths from the side flues to the return-flue, as indicated. And by causing the two curves of the plate to meet in the middle, the two portions of the draught are directed backward before they meet, so that they do not interfere with each other.

This turn-plate is removable, so that access can be had to the flues, under the fire-grate, thereby.

Another feature of improvement consists in the construction of the fire-back G, fig. 4, smooth, next to the fire, to prevent sulphur from the coal adhering thereto, or lodging thereon, but with ribs, *a a*, on the back side, to prevent its springing, or warping by the heat.

The fire-back being concave these ribs are on the concave side, and cross the same transversely, or vertically. Thus I attain the requisite strength and durability, and avoid the destruction of the plate, by using coals containing sulphur.

I do not claim an elliptic form of oven, of itself, nor flues, circular, or rounded, in cross-section.

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

The combination and arrangement of the elliptic oven B, doubly-arched diving and return-flues, and doubly-curved turn-plate C, substantially as and for the purposes herein specified.

Also, the arched plate J, over the central return-flue, in combination with the concave depression under said flue, substantially as herein specified.

Also, the removable doubly-curved turn-plate C, substantially as and for the purpose set forth.

Also, the construction of the fire-back G, with smooth front, and ribs *a a*, on the concave side, crossing the same transversely, for the purpose set forth.

The above specification of my improved cooking-stove, signed by me, this 29th day of May, 1868.

J. J. ANDERSON.

Witnesses:

SAMUEL ECOFF,
JAMES ARBUCKLE.