J. L. MOTT.

Cooking Stove.

No. 2,503. Patented March 23, 1842.

Fig. 1

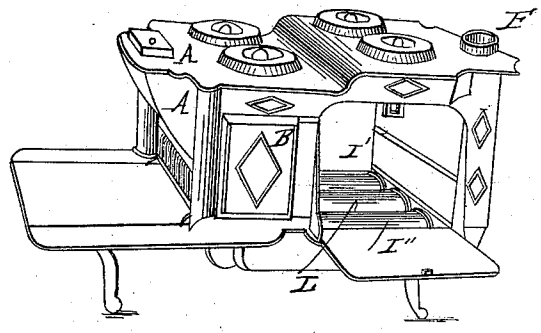


Fig. 2

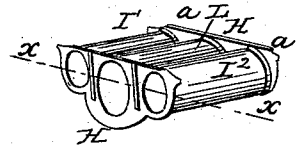


Fig. 3.

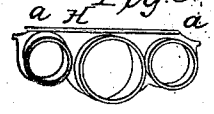


Fig. 4

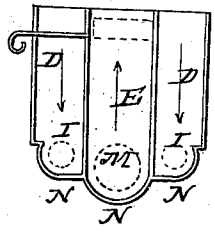


Fig. 6.

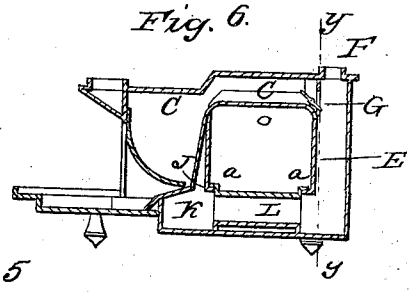
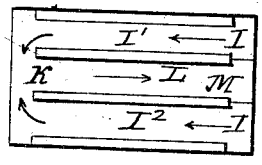


Fig. 5



UNITED STATES PATENT OFFICE.

JORDAN L. MOTT, OF NEW YORK, N. Y.

MODE OF CONSTRUCTING THE BOTTOM PLATES AND FLUES OF OVENS IN COOKING APPARATUS.

Specification of Letters Patent No. 2,503, dated March 23, 1842.

To all whom it may concern:

Be it known that I, JORDAN L. MOTT, of the city of New York, in the State of New York, have invented certain new and useful improvements in the manner of constructing a cooking stove or apparatus, which I denominate the "Tubular-Oven Cooking Stove or Apparatus;" and I do hereby declare that the following is a full and exact description thereof.

The form of my cooking stove, or apparatus, may be varied, but its distinguishing feature is the manner in which I conduct the draft under the oven, by means of two, three, or more, tubes, and combine these with the flues in front of, above, and behind, the oven.

In the accompanying drawings, Figure 1, is a perspective view of a cooking stove of a common form, but having my tubular flues at its bottom. Fig. 2, represents the said tubular flues connected together by means of suitable end pieces, and Fig. 3, one of the end pieces, or castings, by which they are connected, and retained in place. Fig. 4, shows the back of the oven, which is divided into three vertical flues, two of them descending, and one ascending. Fig. 5, is a horizontal section through the lower oven flues, in the line *x*, *x*, of Fig. 2. Fig. 6, is a vertical section of the stove, from front to back, through its middle.

A, A, is a feeder which may be used when coal is employed as fuel; B, a side door for supplying wood when that article is to be burnt. I′, I², and L, are the tubes or flues, which form the lower part of the oven, the bottom plate of the stove being sunk, or depressed, so as to admit said tubes, and being made in such a shape as to conform to them.

The draft from the fire first passes over the top of the oven through an upper flue, or boiler space, C, C, in the usual way. The three vertical flues, into which the back of the oven is divided, are shown in Fig. 4, the back plate of the oven being supposed to be removed, and a section made down to the bottom plate N, N, of the stove, in the line *y*, *y*, of Fig. 6. The two outermost of the flues D, D, are descending, and the center one E, an ascending flue. From the space C, C, the draft passes down the two flues D, D; and these, are connected at their lower ends with the two tubular oven flues I′, and I², by means of the openings I, I, shown in Fig. 4; the draft passes along these tubes toward the front, as shown by the arrows in Fig. 5. The fore ends of the tubes I′, I², and L, open into a flue space K, which extends from side to side of the stove; and from this space the draft returns toward the back of the stove through the center, tubular oven flue L, and thence it ascends through the center, back flue E, to the smoke pipe F. When it is not desired to use the oven, or when the fire is first lighted, a direct communication to the smoke pipe, from the space C, may be opened by a valve G, as in many other stoves. J, is a hot-air space between the back of the fire chamber, and the fore oven plate.

The tubes I′, I², and L, I attach together by means of cast-iron end pieces H, H, Fig. 2, one of which, with its rims, or collars, for receiving these tubes, is shown separately at Fig. 3. The lower edges of these end pieces are made to conform in shape to the bottom plate of the stove, so as to insure a close joint, and to cause the draft to pass properly through them. I have represented these tubes as round, but they may be square, or in any other form that may be preferred. I have spoken, also, of using two, or three, tubes only, but their number may be increased; it is desirable, however, to have them large, or they may be liable to be obstructed, to impede the draft, and are not easily cleaned; they are to be lifted out in their combined or connected state, and to enable them to fit closely when in place, there are ledges along the upper edges of the end pieces H, H, as shown at *a*, *a*, more distinctly in Fig. 6. The tubes may be made of sheet-iron, and by putting them together in the manner described, by means of the connecting pieces H, they may be readily removed, cleaned, and replaced. This tubular form of the lower portion of the oven greatly increases the temperature of the air contained in it, by the increased radiation and communication of heat from so large a portion of tubular surface; and a much smaller quantity is lost by radiation from the bottom plate of the stove. A grated bottom may be placed over the tubes, to support dishes, or other articles, in the oven.

Having thus, fully described the nature of my improved tubular-oven cooking stove,

and shown the manner in which I connect and combine the respective parts thereof, what I claim therein as new, and desire to secure by Letters Patent, is—

1. The combining, in the manner set forth, of two, three, or more, tubes, which constitute the lower oven flue, or flues, with the flue, or boiler space, C, C, over the oven, with the descending and ascending flues D, and E, at the back of the oven, and with the flue space K, into which the fore ends of said oven flues open.

2. I claim, also, the manner of arranging and combining the lower oven flues together, by means of the end pieces and collars H, H, so as to render them removable at pleasure, for the purpose of cleaning, or repairing, them, and I do not intend to limit myself to any particular form, or construction, of the stove, or cooking apparatus, in which I apply my tubular flues to constitute the lower part of an oven, but I claim the using, or combining, them, substantially in the manner set forth, with any kind of cooking stove, caboose, or range, which is furnished with an oven, or with ovens, and in which they can be conveniently employed.

JORDAN L. MOTT.

Witnesses:
AUGS. F. WEEKS,
ETHELBERT S. MILLS.