

PATTON & BALL.

Cooking Stove.

No. 5,680.

Patented July 25, 1848.

Fig. 1.

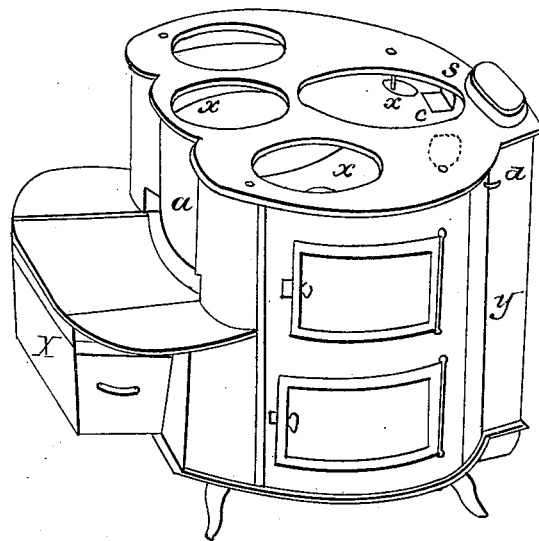
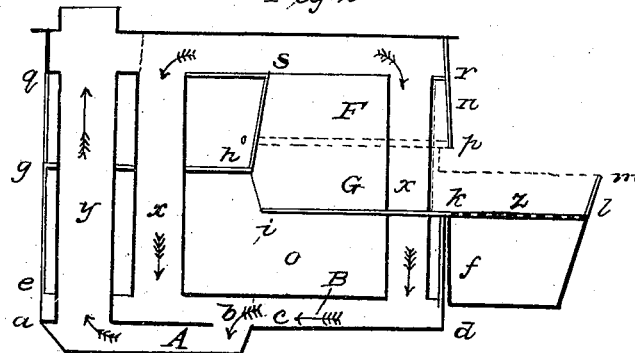


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

JNO. M. PATTON AND SEYMOUR D. BALL, OF MILTON, PENNSYLVANIA.

COOKING-STOVE.

Specification of Letters Patent No. 5,680, dated July 25, 1848.

To all whom it may concern:

Be it known that we, JOHN M. PATTON and SEYMOUR D. BALL, of the borough of Milton, Northumberland county, and State of Pennsylvania, have invented a new and improved Cooking-Stove to Use Anthracite or other Stove-Coal as Fuel, of which the following is a full and exact description, the utility of which we have verified.

The nature of our invention does not consist in the discovery of any elementary parts, but rather in the relative position of particular parts to each other, the principal distinguishing characteristics of which consist in placing the "fire pot" whether it be a rectangular box, cylindrical or ovate formed, &c., above or over the main oven and through which the draft is only admitted through the grate in the bottom of the fire pot. Passing up through the fire the draft is conducted by means of sheet iron or other metallic pipes or flues down through the oven to flues which pass horizontally beneath the oven, from which it ascends, by means of a similar pipe or flue through the oven at the back of the stove to the exterior or common stove pipe, thus bringing all the heat which is carried by the draft to bear upon the articles to be baked or cooked in the oven.

Another novel feature is the position of the ash box, being suspended in front of the stove under the hearth of what we call the middle bottom plate, the ashes descending through a grate in the hearth to the box suspended under it.

In the accompanying drawings Figure 1 is a perspective view. Fig. 2 is a sectional vertical view from front to back, by means of which we will more particularly describe the construction and operation.

We believe the drawings alone are sufficient to enable any person skilled in the art to make the requisite patterns, but will without prolixity make some references.

The form of the extreme bottom plate may be seen in Fig. 1, being nearly circular, a small arc being cut off in front to permit the ash box to slide under the hearth and an extension at the back in form as seen in the top plate for the back or ascending flue Fig. 2. In this bottom a sunk flue is formed at A extending from near the middle of the plate back so as to permit the draft to pass up the back flue or pipe. This sunk flue is covered with a plate extending from *a* to *b* and leaving a suitable space open at *b c* to permit the

draft to descend from the flue B, which flue extends under the whole of the oven O. The last mentioned flue is formed by and between the bottom of the stove and the thin plate *e f*, which forms the bottom of the oven. On this plate are four collars for the reception of the four descending flues, (that being the number we now use, but a fewer number may possibly answer.) A hole is also left in this plate for the ascending flue. The next in order is what we call the middle bottom and seen at *g h i k l m* forming the hearth and ash pit. Under the "fire pot"—as also a sink in the hearth *k l m*, under which the ash box is suspended, there being a grate Z in the hearth plate through which the ashes descend. The fire pot we make cylindrical and which forms part of the exterior of the stove seen at *a*, Fig. 1, and at *p n r*, Fig. 2. The double dotted lines represent the grate, two bars of which are connected and made to draw out front to let down the ashes and cinders before making a fresh fire. The plate at *q, r, s*, is nearly in form of a horse shoe embracing the top of the fire pot F, and on the under side of which are five openings for the reception of the four descending flues *x, x*, and one ascending flue *y*. Between this plate and the top plate there is a space or flue to receive the bottom of the culinary utensils, as also for the descending draft to pass, as well as the direct draft, which is governed by a damper or valve on each side of the back flue, seen at *c* and at *d* in Fig. 1, there being an opening S in front of pipe collar, which leaves a passage around each end for the direct draft and which the dampers mentioned are intended to govern. The top plate, the hearth plate and its slide, as well as the doors, are seen in form and the whole exterior appearance are manifest from inspection of Fig. 1. We would here mention that small openings are made in front of the flues A and B for the admission of a scraper to clean the said flue. Of course these openings are to be closed when the stove is in use.

The mode of operation is simple. Through one of the holes in the top plate introduce some charcoal or kindling wood into the fire pot, the dampers being so arranged as to permit the draft to ascend directly up the exterior or common stove pipe. As soon as the wood or charcoal is sufficiently ignited, introduce in the same way a sufficient quantity of anthracite coal, the whole top being now

closed (except the dampers just mentioned.)

A good fire will soon be the consequence. The top of the stove is used for boiling, for frying, &c., either with the holes open or

5 closed, as may suit the fancy of the cook, but when baking or roasting is to be performed in the main oven, the fire should first be made exhibiting a clear glow in the ashpit
10 as well as on the surface of the fire in the fire pot. In this state the dampers are to be so arranged as to send all the draft down the descending flues or pipes to the flues be-
neath, by which means the oven will be uni-
formly and well heated.

15 Our experience has made clear to us that this stove (not more than any for burning stove coal) requires a good draft, and that a good draft is mainly procured by the amount of vertical pipe which may be used,
20 four or five joints of which will seldom fail. Horizontal pipe will not add to the draft. We use six and one-half inch pipe and consider it the best size for anthracite coal.

Having thus fully and as we think clearly described our stove, we claim—

The combination of the ascending and descending flues in connection with the bottom flues arranged in the manner and for the purpose set forth, as above distinguished by construction and position.

30 We will recapitulate our references: *a*, Fig. 1, and *F, r, s, h, p*, are the fire pot at Fig. 2; *G h i k*, the ash pit, Fig. 2; *O*, the main oven, Fig. 2; *g, h, i, k, l, m*, the middle bottom, Fig. 2; *k, l, m*, the hearth, Fig. 2; 35 *X*, Fig. 1, and *X* the ash box, Fig. 2; *Z*, the ash grate, Fig. 2; *q, s, r*, the horse shoe plate, Fig. 2; *B*, flue under the oven, Fig. 2; *A*, sunk flue, Fig. 2; *o, p*, the fire grate, Fig. 2. *c, d*, Fig. 1, the dampers.

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Witnesses:

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