2 Sheets—Sheet 1.

D. STUART.

COOKING STOVE.

No. 181,996. Patented Sept. 5, 1876.

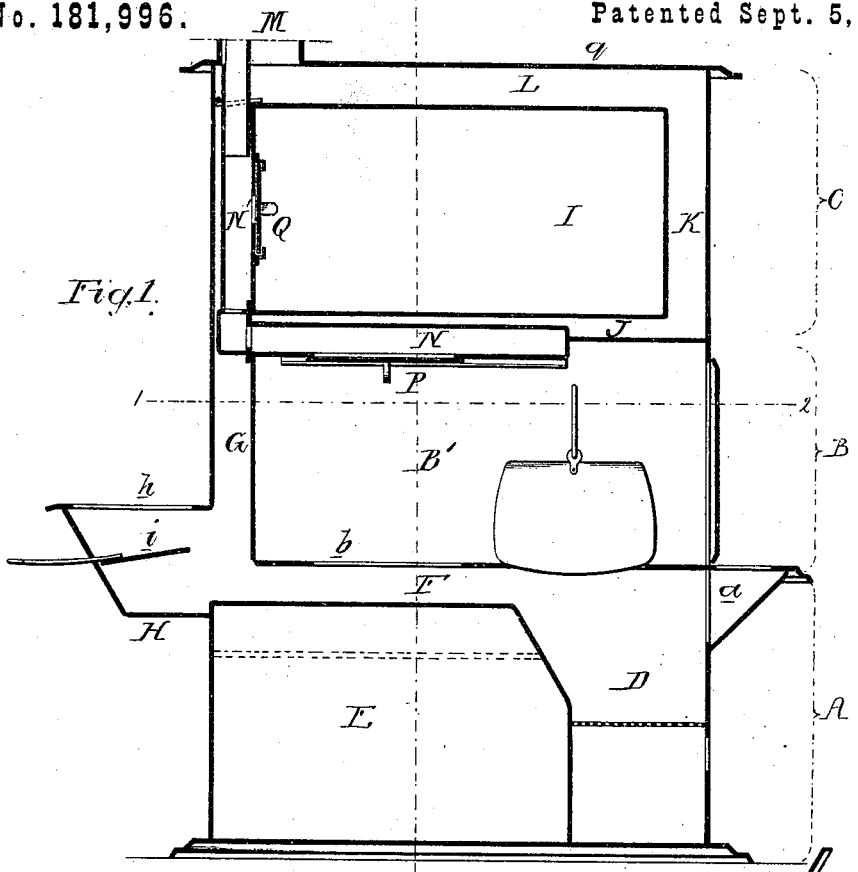
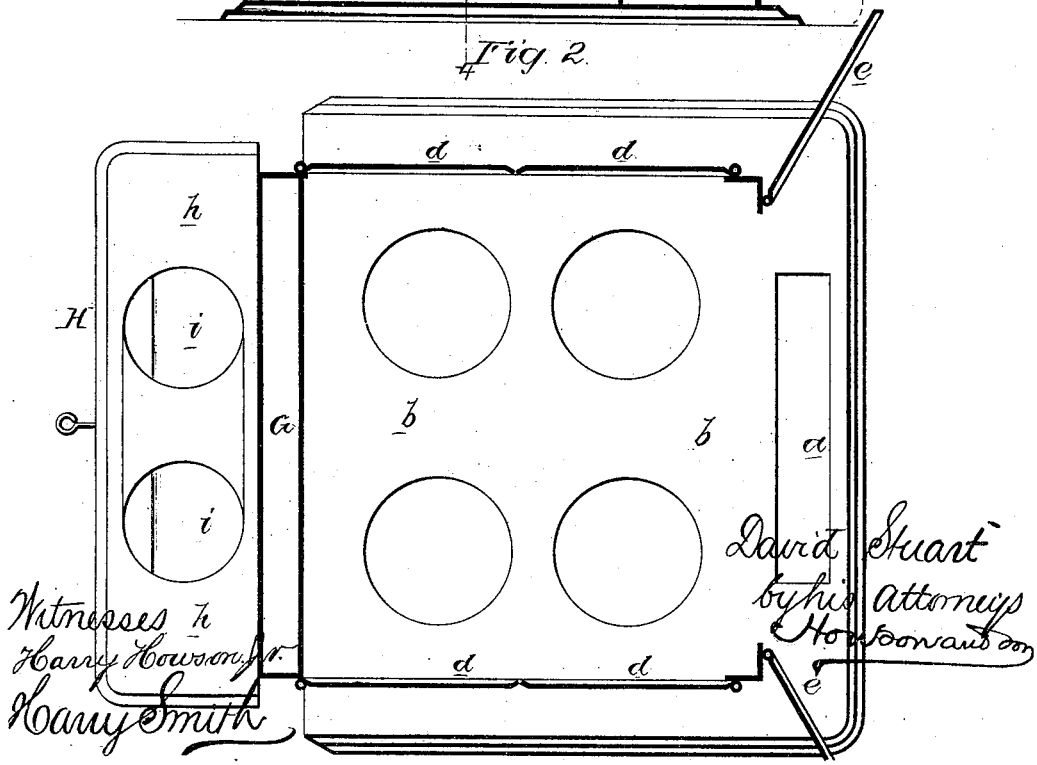


Fig. 2.



Witnesses
Harry Howson Jr.
Harry Smith

David Stuart
by his Attorneys
Howson and Son

2 Sheets—Sheet 2.

D. STUART.

COOKING STOVE.

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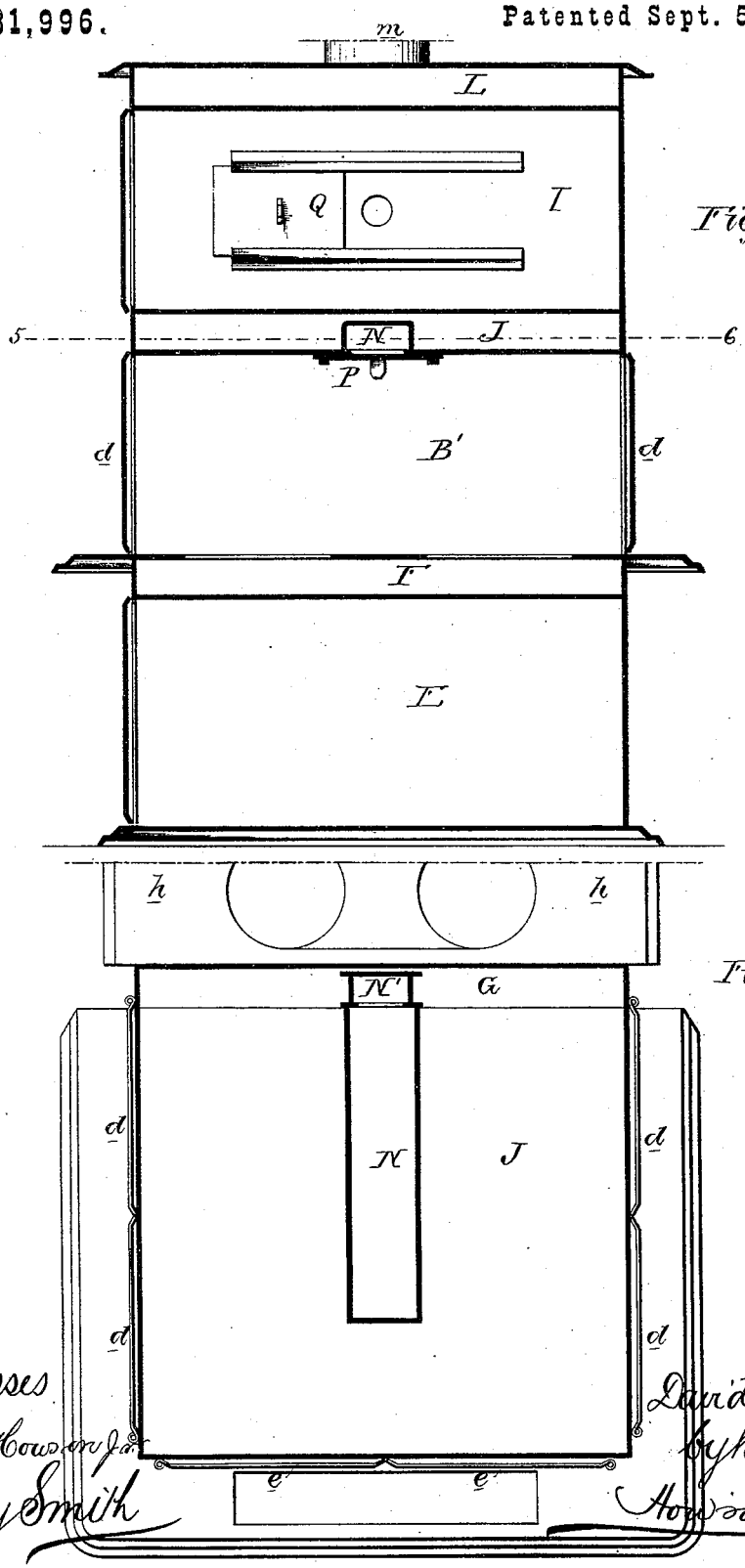

Fig. 3.

Fig. 4.

Witnesses
Harry Howson Jr.
Harry Smith

David Stuart
by his Atty's
Howson and Son

UNITED STATES PATENT OFFICE.

DAVID STUART, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO DAVID W. STUART, OF SAME PLACE.

IMPROVEMENT IN COOKING-STOVES.

Specification forming part of Letters Patent No. **181,996**, dated September 5, 1876; application filed May 18, 1876.

To all whom it may concern:

Be it known that I, DAVID STUART, of Philadelphia, Pennsylvania, have invented certain Improvements in Cooking-Stoves, of which the following is a specification:

My invention relates to a cooking-stove constructed in the peculiar manner fully described hereafter, with the view mainly to economy in the consumption of fuel, increased cooking capacity, and the prevention of the escape of noxious vapors into the room containing the stove.

In the accompanying drawing, Figure 1, Sheet 1, is a vertical section of my improved stove; Fig. 2, a sectional plan on the line 1 2, Fig. 1; Fig. 3, Sheet 2, a transverse vertical section on the line 3 4, Fig. 1; and Fig. 4, a sectional plan on the line 5 6, Fig. 3.

The stove is made in three sections, namely, the lower section A, the intermediate section B, and the top section C. The lowermost section A contains the fire-place D, oven E, and flue F, fuel being admitted to the fire-place through the projection *a*. The plate *b*, immediately above the flue F, and forming the base of the intermediate section B, has a number of boiler-holes, four in the present instance, for the reception of culinary vessels. This intermediate section, containing the boiling-chamber B′, has at the rear a flue, G, communicating with the flue F, and is bounded on opposite sides by doors *d d*, and in front by doors *e*, so that the entire chamber may be inclosed, or any one or more of the doors opened, as circumstances may suggest. At the rear of the stove there is a projection, H, the top-plate *h* of which is arranged for the reception of an ordinary elongated boiler, and has two or more boiler-holes, the projection containing a sliding valve, *i*, which can be so adjusted that the products of combustion will pass directly from the flue F to the flue G, (see Fig. 1,) or so that they will take a course from the said flue F, under and over the damper *i*, and beneath the top-plate *h* of the projection before they pass upward into the flue G.

The uppermost section C of the stove contains the oven I, the lower flue J communicating in one direction with the flue G, and in the opposite direction with the front flue K, top-flue L, and exit-pipe M. At or near the junction of the intermediate with the uppermost section of the stove there is a passage, N, which, by operating a damper, P, can be made to communicate with, or can be cut off from, the boiling-chamber B′ in the intermediate section, and this passage communicates with a vertical passage, N′, arranged at the rear of the oven I, and terminating in the exit-pipe M. By operating a damper, Q, the oven I may be made to communicate with or may be cut off from the passage N′.

Among the many advantages possessed by my improved cooking-stove may be mentioned its large cooking capacity and comparatively small dimensions. There is the lower oven E for keeping articles of diet warm, or for baking purposes, the larger upper oven for general cooking purposes, the intermediate boiling space and the boiling projection at the rear, all comprised in a space which, as regards length and breadth, is much less than that of an ordinary stove of equal cooking capacity.

My improved stove is somewhat higher than ordinary cooking-stoves; but this additional height has, in view of the internal arrangements, special advantages. The main oven, for instance, is in a convenient position for the cook, who can introduce, remove, or replace culinary vessels and their contents without stooping. The top-plate *q* of the oven, moreover, affords a shelf, on which may be placed out of the way many articles which encumber an ordinary stove. Another and prominent advantage is the effectual disposal of all unpleasant vapors, which, in ordinary cooking-stoves, are disseminated from the boiling-pots throughout the room containing the stove, and pass into adjoining rooms. On closing the doors of the intermediate boiling-space, and opening the damper P, all the vapors from the boiling-pots will escape through the passages N N′ to the chimney. The vapors generated in the oven I may also be permitted to escape by opening the damper Q.

In ordinary cooking-stoves much heat is lost, and consequently much fuel wasted, owing to the exposure of the top of the stove, a defect which I obviate by the arrangement of the

boiling-chamber and its doors beneath the oven. The heat retained in this chamber by the doors is in part added to that in the oven I, and, enveloping the culinary vessels in the said chamber, diminishes the demand for heat from below, and a diminution in the consumption of fuel is the result. The intense heat imparted to the top-plate of the oven E may be utilized by inserting a partition in the said oven, as shown by dotted lines in Fig. 1, so as to form a heating-chamber, into which cold air may be introduced, and, after becoming heated, may be carried off through a suitable flue to heat an upper room.

I do not desire to claim, broadly, a stove or range having a boiler-section, which can be entirely closed by doors; but

I claim as my invention—

1. The combination, in a stand-out cooking-stove, of the intermediate boiling section B, and its doors on the front and on the opposite sides, with the upper and lower sections C A, as set forth.

2. The combination, in a cooking-stove, of the oven E, chamber B′, and oven I, with fire-place D, and flues F G J K L, and outlet, all arranged in respect to the ovens and boiling-chamber, as set forth.

3. The combination of the boiling-chamber B′, the passage N, communicating with the chimney and damper P.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DAVID STUART.

Witnesses:

HARRY HOWSON, JR.,

HARRY SMITH.