2 Sheets Sheet 1.

John S. Perry & Andrew Dickey's Cook Stove.

No. 119,949. Patented Oct. 17, 1871.

Fig. 1.

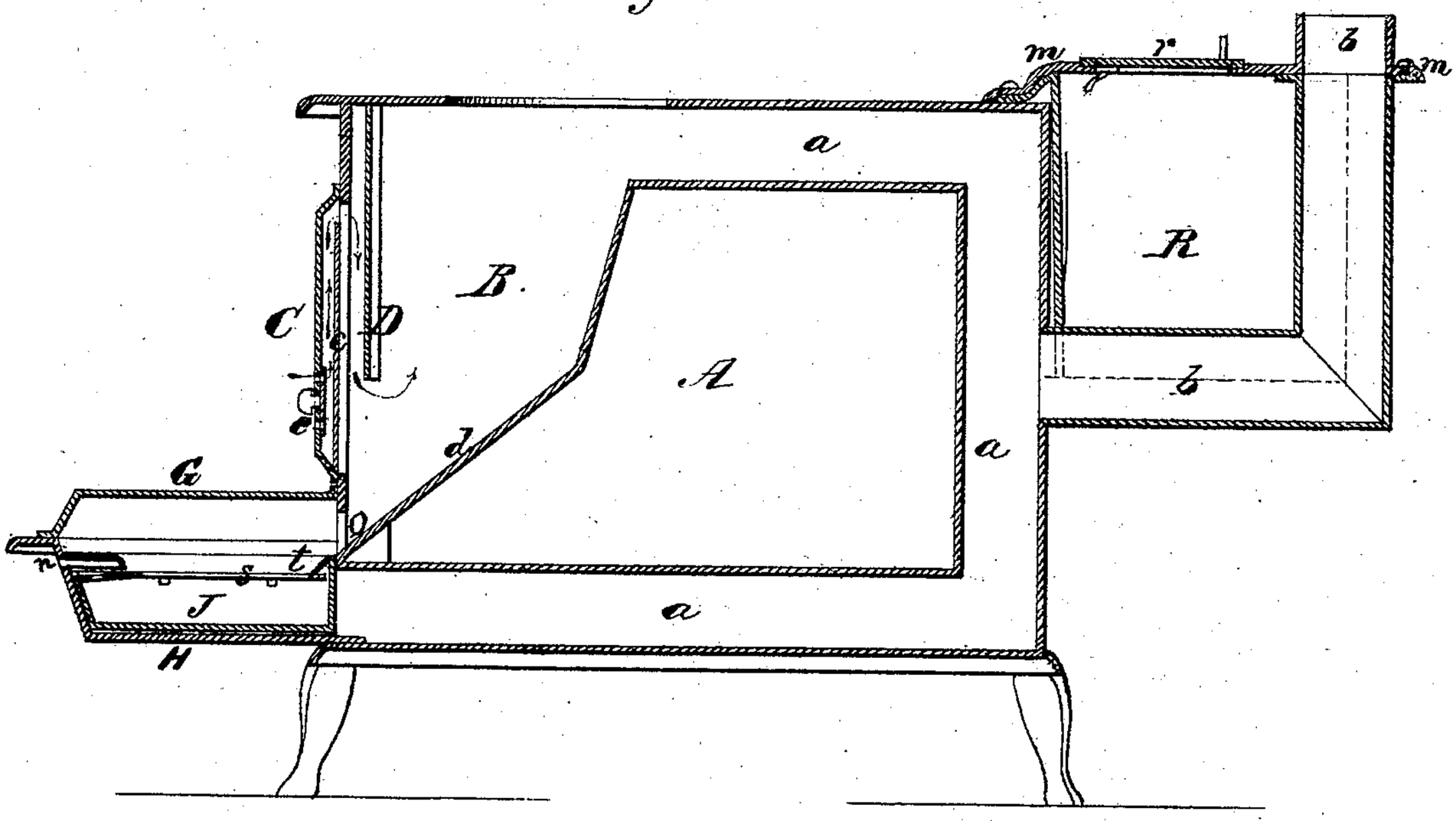
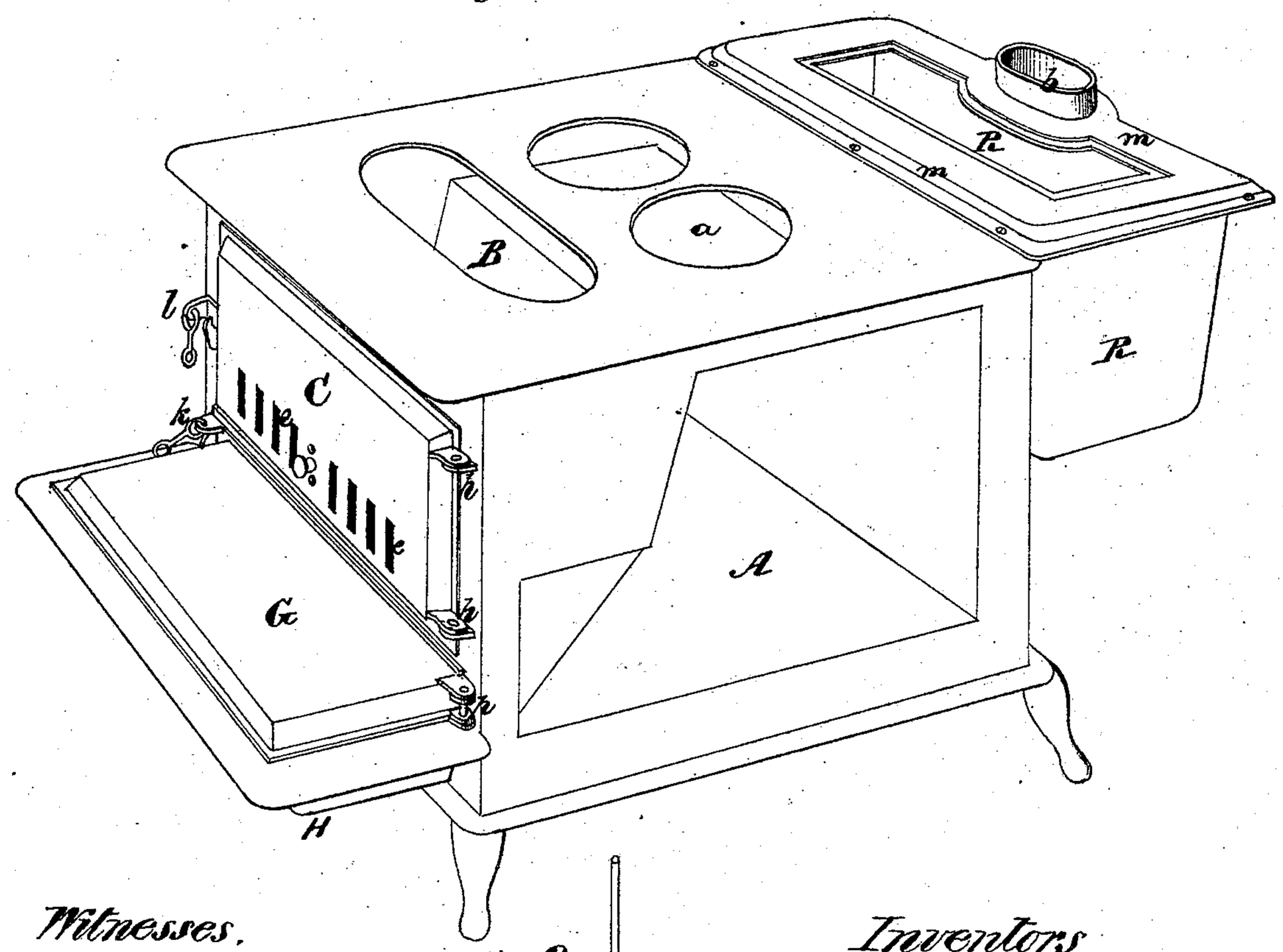
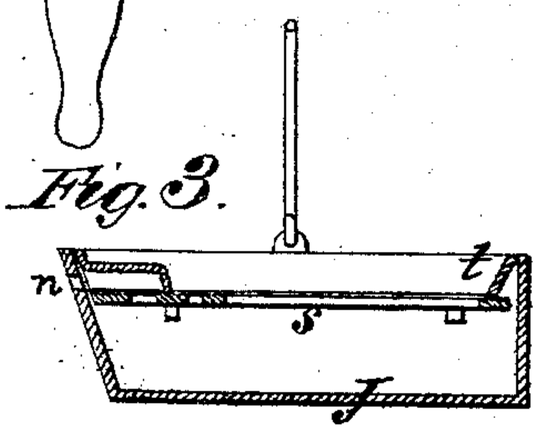


Fig. 2



Witnesses.
R. J. Campbell.
J. H. Campbell

Fig. 3.



Inventors
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Andrew Dickey
by
Munn & Fennell & Lamm

Plate 2 Sheet 2.

John S. Perry & Andrew Dickey's Cook Stove.

No. 119,949. Patented Oct. 17, 1871.

Fig 4

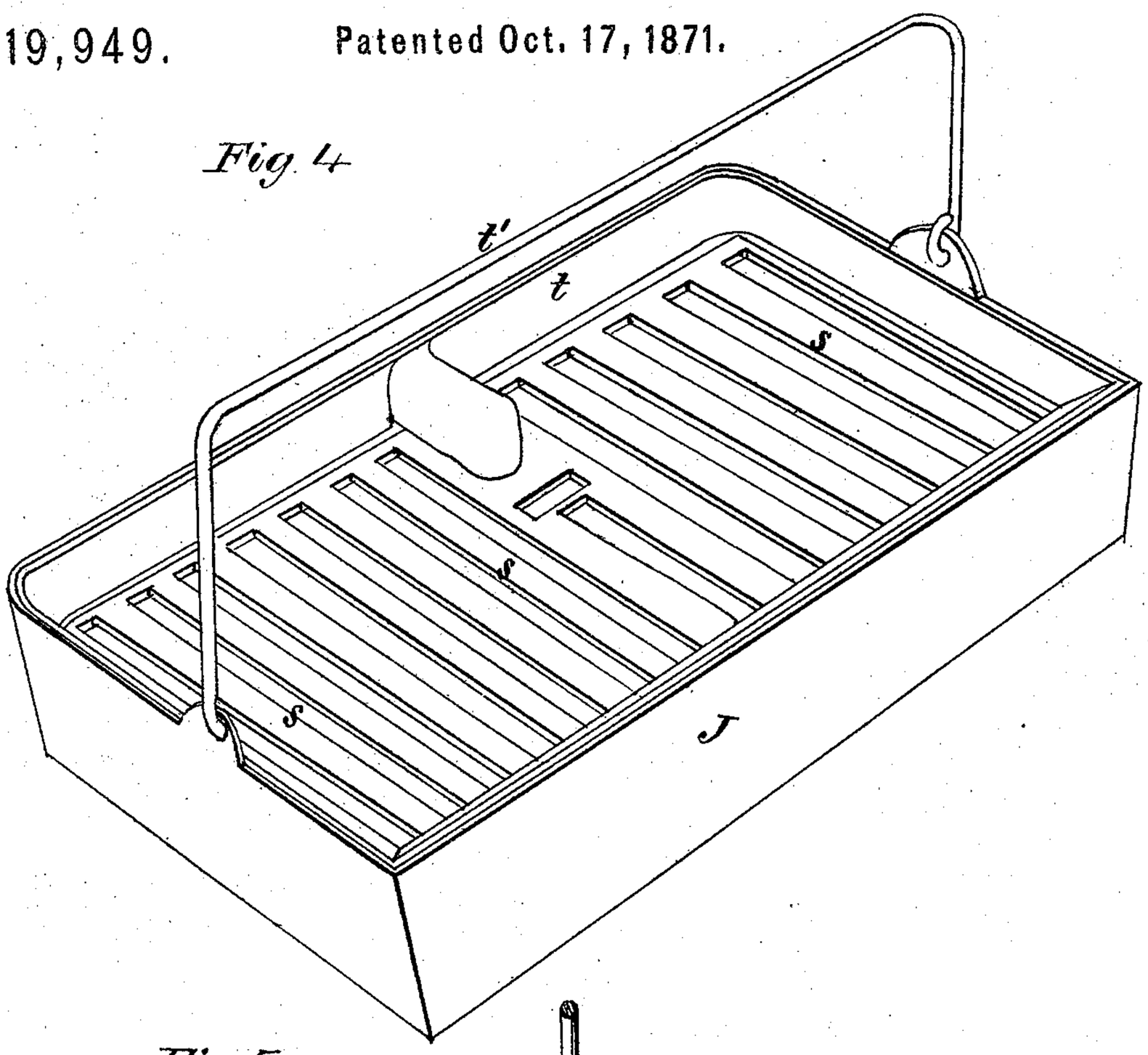
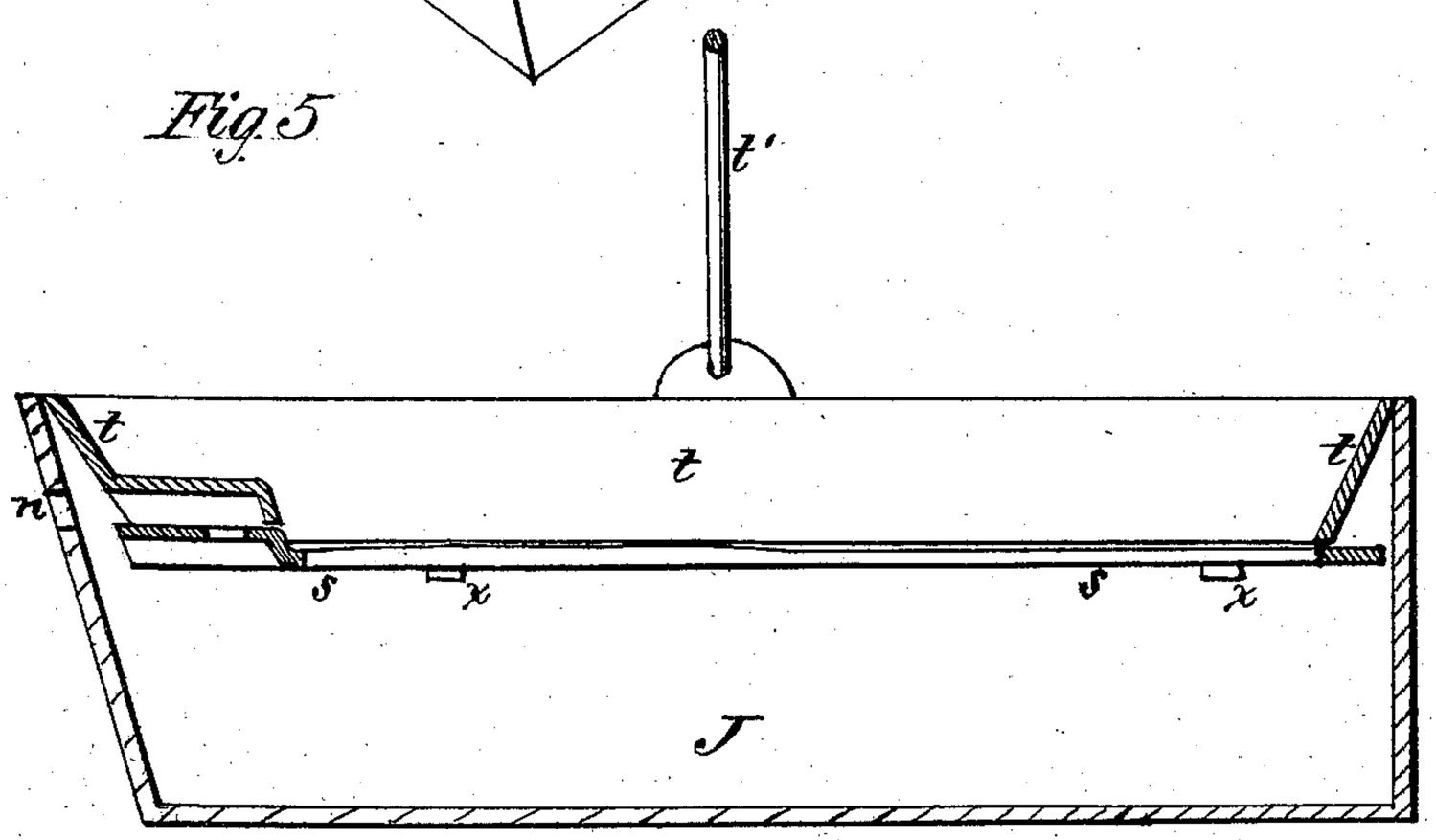


Fig 5



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J. N. Campbell.

Inventors
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UNITED STATES PATENT OFFICE.

JOHN S. PERRY AND ANDREW DICKEY, OF ALBANY, NEW YORK.

IMPROVEMENT IN COOKING-STOVES.

Specification forming part of Letters Patent No. 119,949, dated October 17, 1871.

To all whom it may concern:

Be it known that we, JOHN S. PERRY and ANDREW DICKEY, of the city and county of Albany in the State of New York, have invented an Improvement in Cook-Stoves; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1, Plate 1, is a section taken longitudinally and vertically through the center of the stove. Fig. 2, Plate 1, is a perspective view of the stove. Fig. 3, Plate 1, is a longitudinal section through the ash-pan and sifter. Fig. 4, Plate 2, is a perspective view of the ash-pan and sifter. Fig. 5, Plate 2, is an enlarged longitudinal section through the center of the ash-pan and sifter.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improvement in cook-stoves, wherein the chamber beneath the grate and also the extended hearth of the stove are so constructed that all the ashes and cinders which fall through the grate will be directed forward and outward into said extended hearth. My object is to combine with the hearths of stoves of the above-named construction removable ash-pans, one of which is arranged within the other, the uppermost of which has a vibrating grated bottom, so that ashes can be conveniently sifted within the covered hearth and the cinders readily separated from them without permitting the escape of dust into the room, after which the pans can be removed from the hearth and emptied of their contents, as will be hereinafter explained.

The following description of my invention will enable others skilled in the art to understand it.

In the accompanying drawing, A represents the oven of the improved stove, and B the fire-chamber thereof. The flues *a a* are arranged above, below, and at the back of the oven A in any suitable manner, and these flues communicate with a pipe, *b*, which forms part of the bottom and back side of a water-reservoir, R, and which communicates with the main escape-flue. In front of the fire-chamber B and arranged transversely across the stove in a vertical plane is a deflector, D, which forms the front of the fire-chamber and extends down to or below the level of the grate. This deflector D may be flat or corrugated. In front of the deflector D is the front door C of the stove, which is hinged at *h h* and provided with a fastening, *l*, and which is composed of an outer wall and an inner wall. The inner wall *c* of this door rises nearly to the top thereof, and forms with the outer wall an air-heating space, into which air is received through register openings *e* made through this outer wall near the bottom of the door.

It will be seen from the above that, when the register *e* is open, air will pass into the space between the two walls of the door C, thence rise to the top of the inner wall *c*, and descend through the space between the walls *c* D beneath the grate, and finally pass into the fire-chamber through the grate in a highly-heated state. The air which is thus admitted into the fire-chamber is heated at a point above the level of the hearth of the stove. Other means for heating the air admitted to the fire-chamber may be adopted, although we prefer to employ the plan above set forth.

H is the hearth of the stove, on top of which is a closely-fitting cover, G, which is hinged at *p* to the front wall of the stove so as to swing horizontally. When the cover G is in place, as shown in the drawing, it closes a chamber or chest which communicates with the fire-chamber B through an opening, *o*, shown in Fig. 1, and which receives the ashes and cinders that fall from the fire-chamber upon an inclined plate or chute *d*. This chute directs the ashes and cinders downwardly and outwardly into the hearth, as will be hereinafter explained. Within the depressed portion of the hearth H is a removable pan, J, which is provided with a bail, *t'*, and intended for receiving the ashes. This pan has arranged within it another pan, *t*, the bottom *s* of which is a sieve, and slides freely upon lugs *x x*. The sieve *s* receives a shaking motion from a hooked handle that is inserted through an aperture, *n*. The sides of the inner pan flare outwardly and prevent cinders from getting between it or the edges of the sieve and the outer pan J.

It will be seen that the ashes and cinders which fall from the fire-chamber upon the inclined chute are conducted by the latter into the hollow hearth and delivered upon the sieve *s*, where the ashes can be separated from the cinders and the latter returned into the fire-chamber. When

the ashes collect in large quantities in the pan J, this pan can be readily lifted from the hearth by its bail *t'* and emptied. The reservoir R is surmounted by a cast-metal frame, *m*, which is raised so that anything lying upon the surface will have a tendency to fall outward or from the top openings. The frame *m* has the pipe-collar formed on it, which, when the frame is bolted to the top of the stove and to the flanges surrounding the top edges of the body of the reservoir, will register with the vertical portion of the pipe *b*.

We are aware that cook-stoves have been made before our invention having air-heating chests formed in their hearths, into which chests air was admitted through register-openings; but it will be seen that we do not supply air to the fire through the hearth-chest, but make this chest as tight as possible from without, and supply the air for combustion through another chamber arranged above the hearth.

Hence we obtain the following advantages, to wit: First, by hinging and latching the cover G to the front of the stove we obtain a tightly-fitting cover, a result which cannot be obtained with any loose flat hearth-plate. Second, the cover is moved with ease, while under the old plan it is heavy and inconvenient to handle. Third, the cover being made tight and no opening left for the admission of air from without, the chest becomes a reservoir for air, which is taken from it from above, which air is expanded in the chest by the heat to which it is subjected therein, and thus the chest becomes a kind of natural blower for aiding the draught of the stove.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

Combining with the hearth of a stove removable ash-pans, one of said pans being seated within the other, and the uppermost pan having a removable vibrating grated bottom, substantially as and for the purposes described.

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Witnesses:
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