

J. R. HYDE.
Cooking-Stoves.

No. 140,044.

Patented June 17, 1873.

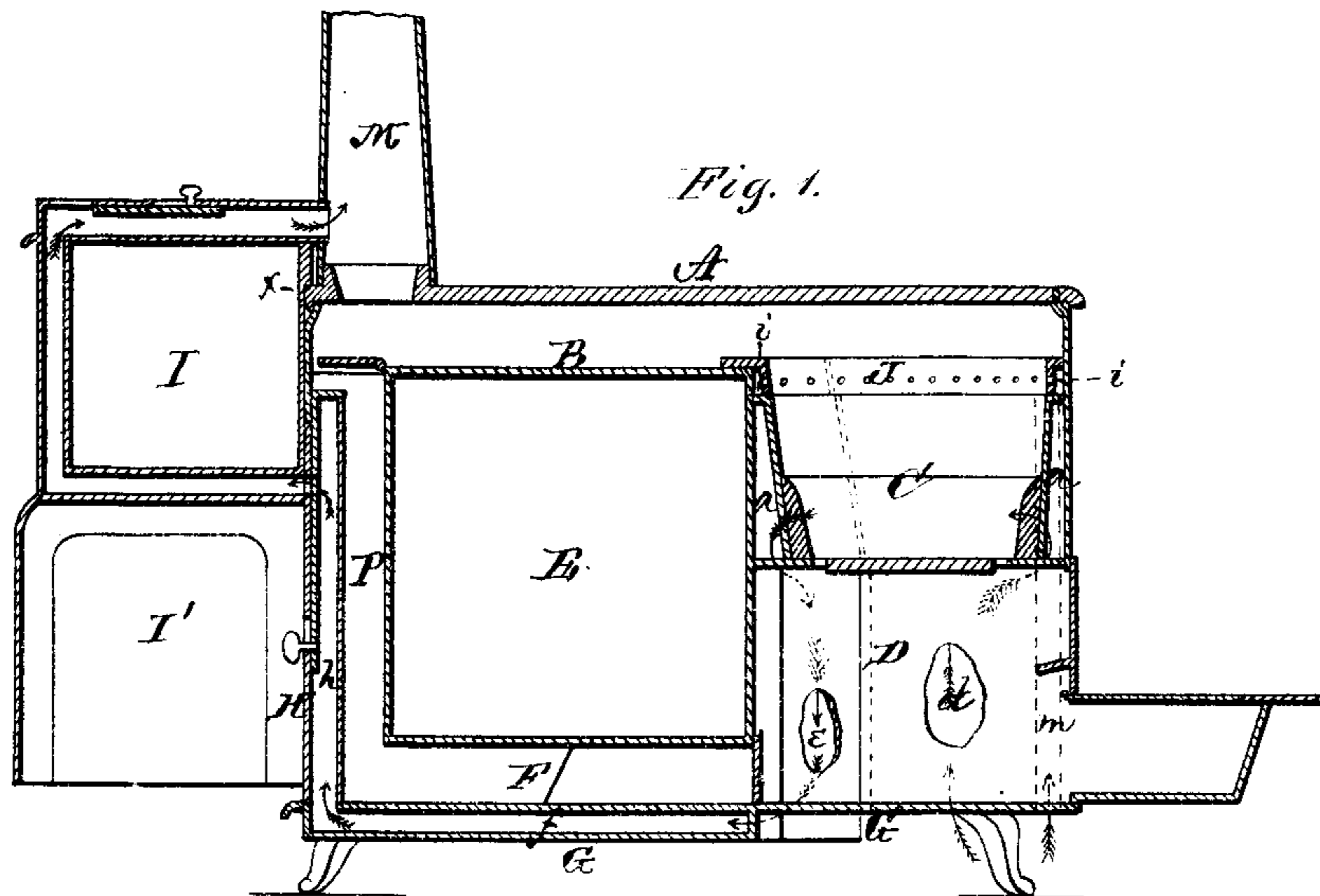


Fig. 2.

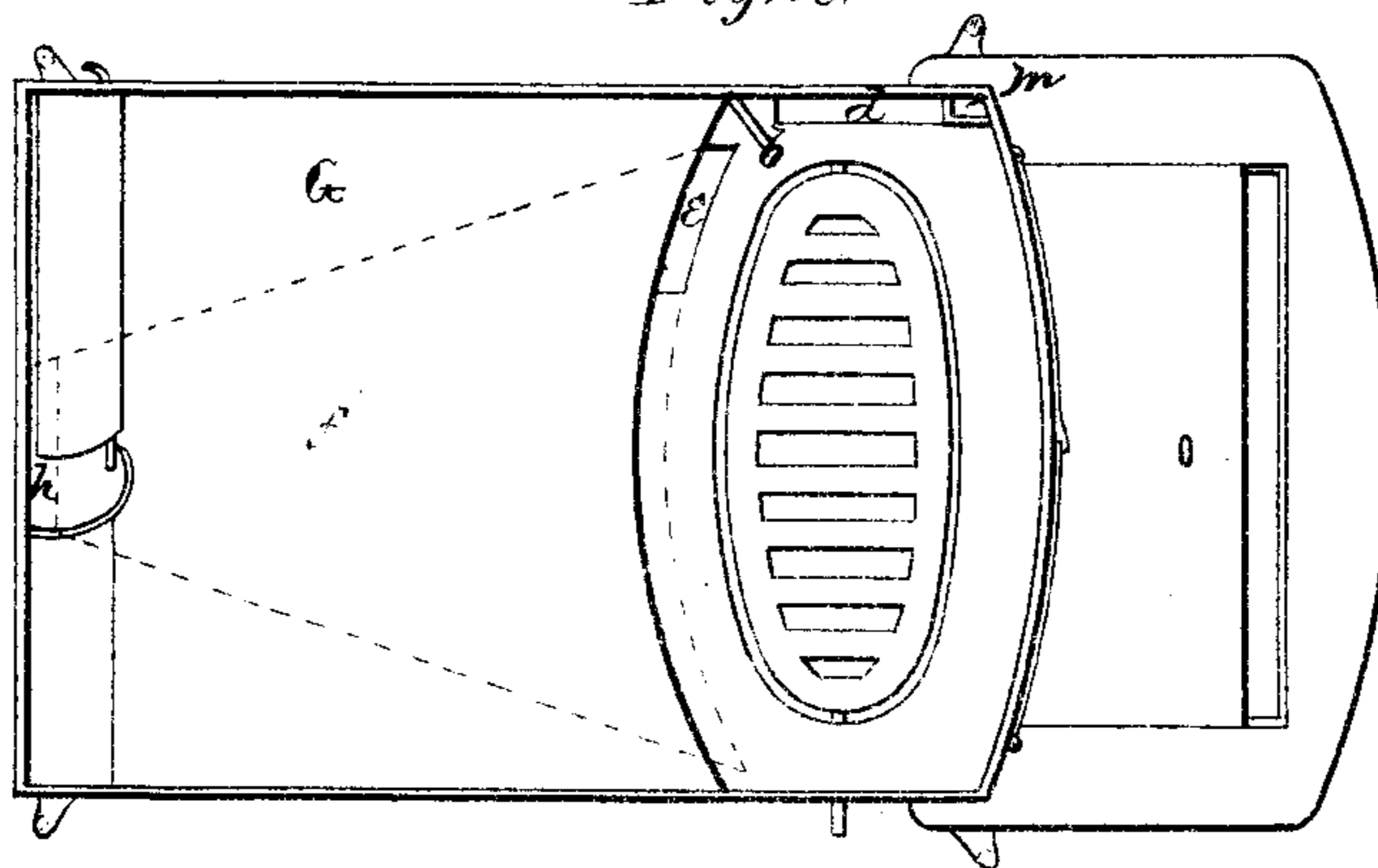


Fig. 3.

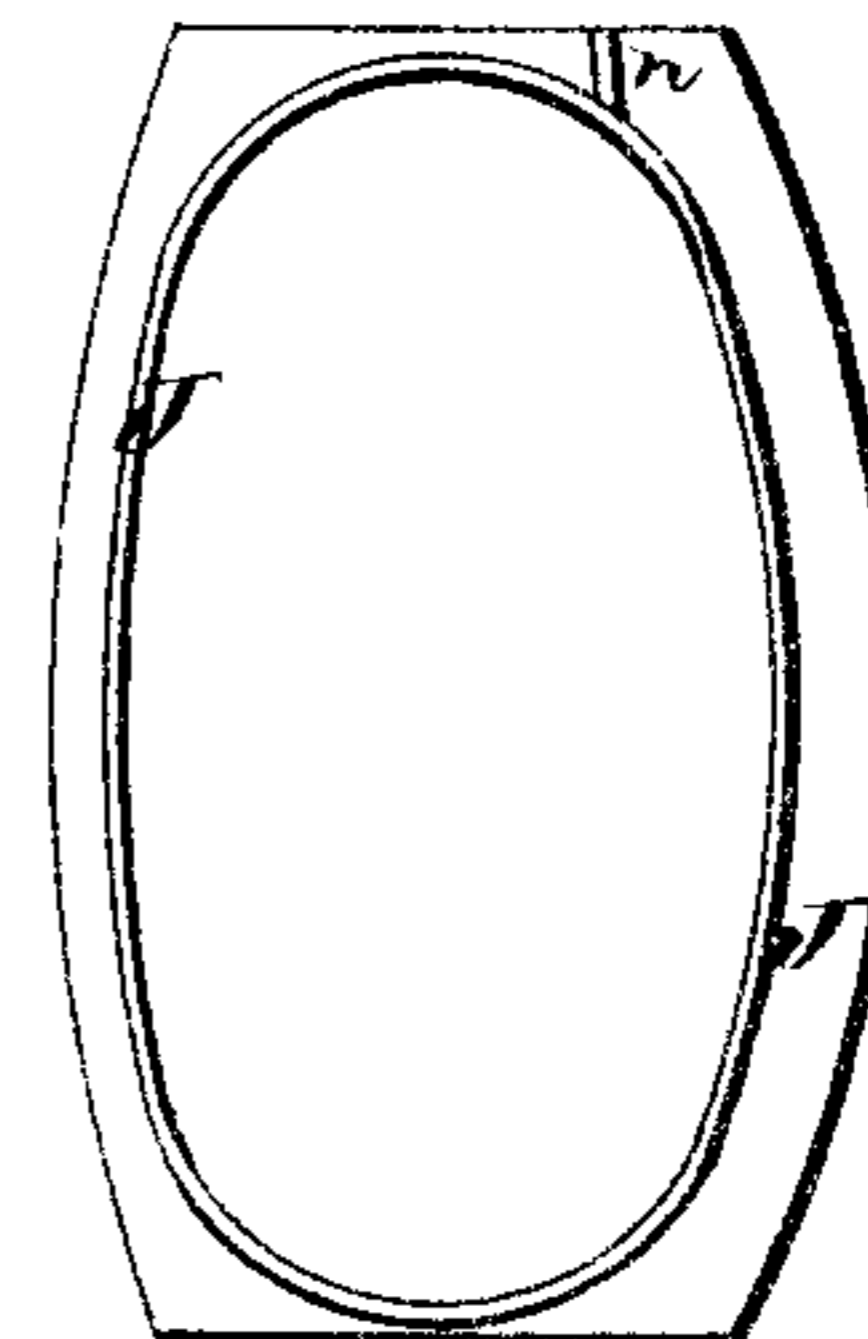


Fig. 4.

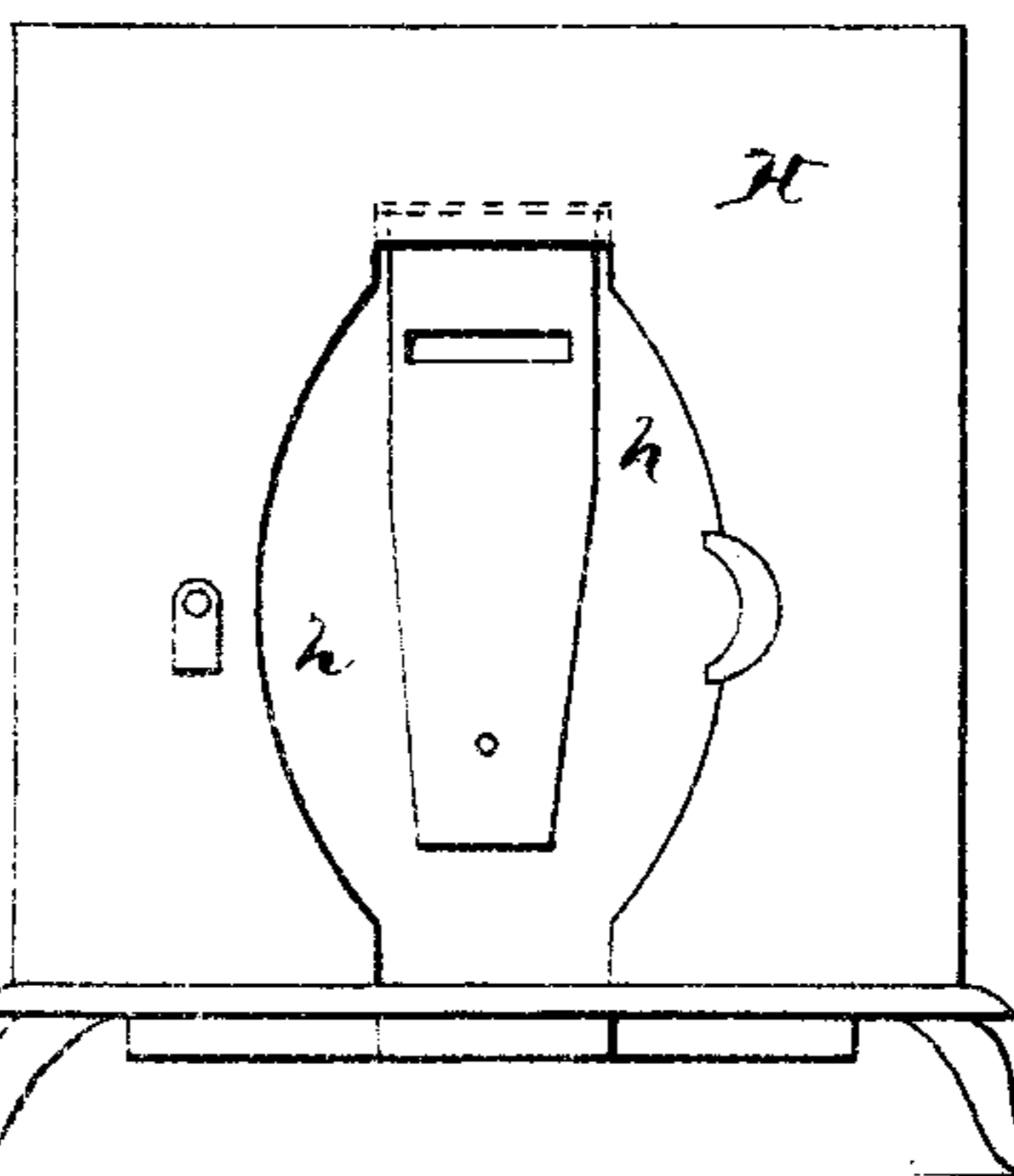
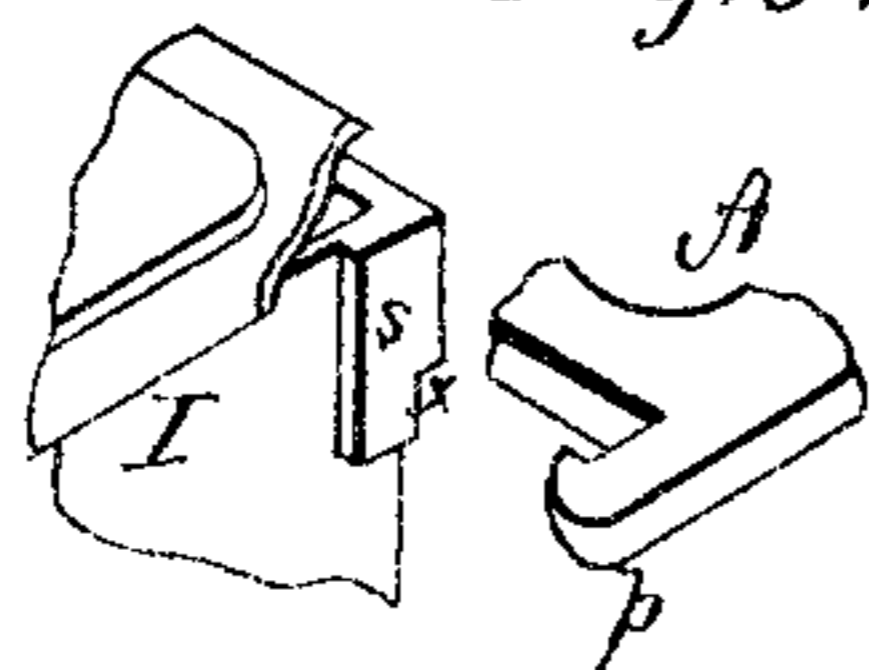


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

JAMES R. HYDE, OF TROY, NEW YORK.

IMPROVEMENT IN COOKING-STOVES.

Specification forming part of Letters Patent No. **140,044**, dated June 17, 1873; application filed April 3, 1873.

To all whom it may concern:

Be it known that I, JAMES R. HYDE, of Troy, in the county of Rensselaer and in the State of New York, have invented certain new and useful Improvements in Stove; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon making a part of this specification.

The nature of invention relates to an improvement on Letters Patent granted to me for an improvement in stoves, dated March 11, 1873; and it consists, first, in providing the fire-box with an air-chamber around all of its sides, said chamber communicating with a cold-air duct extending through the bottom plate of the stove, and with a flue at its rear which leads into a flue in the bottom plate of the stove for supplying heated air to a reservoir in the rear of the stove, and at the same time giving additional heat to the oven; second, in the construction of the flue in the bottom plate of the stove; third, in the construction of the flue in the back end of the stove.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a longitudinal vertical section of my stove. Fig. 2 is a plan view of the same with the top plate and fire-box removed. Fig. 3 is an inverted view of the perforated rim above the fire-box. Fig. 4 is a view of the stove-back; and Fig. 5 represents the device for attaching the reservoir to the stove.

In the accompanying drawing, A represents the top plate of a cook-stove, made in any of the known ways. B represents the oven-top; C, the fire-box; D, the ash-pit; E, the oven; F, the common two or three flue under said oven; P, the common back flue; I, the reservoir attached to the rear of the stove; I', the warming-chamber, placed under said reservoir; and M, the stove-pipe. Around the fire-box C is formed an air-chamber, *a*, extending entirely around the same, and provided with a vertical partition, *b*, as shown in

Fig. 2. Cold air is admitted into this chamber through a duct or flue, *d*, on one side of the partition *b*, said duct extending down through the bottom plate G of the stove and taking in cold air at the bottom. The cold air, passing entirely around the fire-box, becomes thoroughly heated and passes down through a flue, *e*, on the other side of the partition *b*. This flue *e* leads into a flue, *f*, formed in the bottom plate G of the stove. The flue *f*, at its front end, or where it communicates with the vertical flue *e*, is extended to, or nearly to, the entire width of the bottom plate, and then contracts toward the rear, as shown by the dotted lines in Fig. 2. By this construction of the flue *f*, as well as of the flue *h*, hereinafter described, additional heat is given to the oven. The rear end of the flue *f* communicates with a vertical flue, *h*, in the back plate H of the stove, to supply heated air to the reservoir in the same manner as described in my former patent above referred to; but in this case the flue *h* is extended in width in elliptical-shaped form, as shown in Fig. 4, and then contracted toward its upper end, whereby the back of the oven obtains additional heat, the bottom of the oven being given additional heat by the construction of the flue *f*. On the top edges of the fire-box C is placed a perforated rim, J, forming an air-chamber, *i*, between it and the stove-body, into which chamber air is admitted through a flue or pipe, *m*, extending through the bottom of the stove. A partition, *n*, is made in the chamber *i* near the entrance of the pipe or flue *m*, to cause the air to pass entirely around, and then through the perforations, thereby supplying cold air to the fire for consuming the gases arising from the combustion of the material in the fire-box. The side edges of the top plate A are extended toward the rear beyond the back plate H of the stove, forming ears *p*, each of which has a notch or recess cut in its inner side, as shown in Fig. 5. On each end of the reservoir I, at the upper front corner, is cast a lug or projection, *s*, and along the entire front side of the reservoir a suitable distance from the top edge, is formed a shoulder or offset, *x*. The reservoir I is attached to the back of the stove by the lugs or pro-

jections *s s* fitting in the notched or recessed ears *p p*, and the shoulder *x* resting on the rear edge of the top plate *A*.

By this means the reservoir can easily be attached and detached, when desired. When the reservoir is not in use, and detached, a bar, properly shaped, may be used to fill out the space between the two ears *p p*.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a reservoir cooking-stove, of an air-chamber surrounding the fire-box, a cold-air duct leading into the same, and a flue or flues leading from the chamber and conveying heated air directly under the reservoir.

2. The flue *f*, in the bottom plate *G*, extended in width at the front end, and contracted toward the rear, as and for the purposes specified.

3. The flue *h*, in the back plate *H*, made in elliptical shape, as and for the purposes specified.

In testimony that I claim the foregoing I have hereunto set my hand this 2d day of April, 1873.

JAMES R. HYDE.

Witnesses:

A. N. MARR,
J. M. MASON.