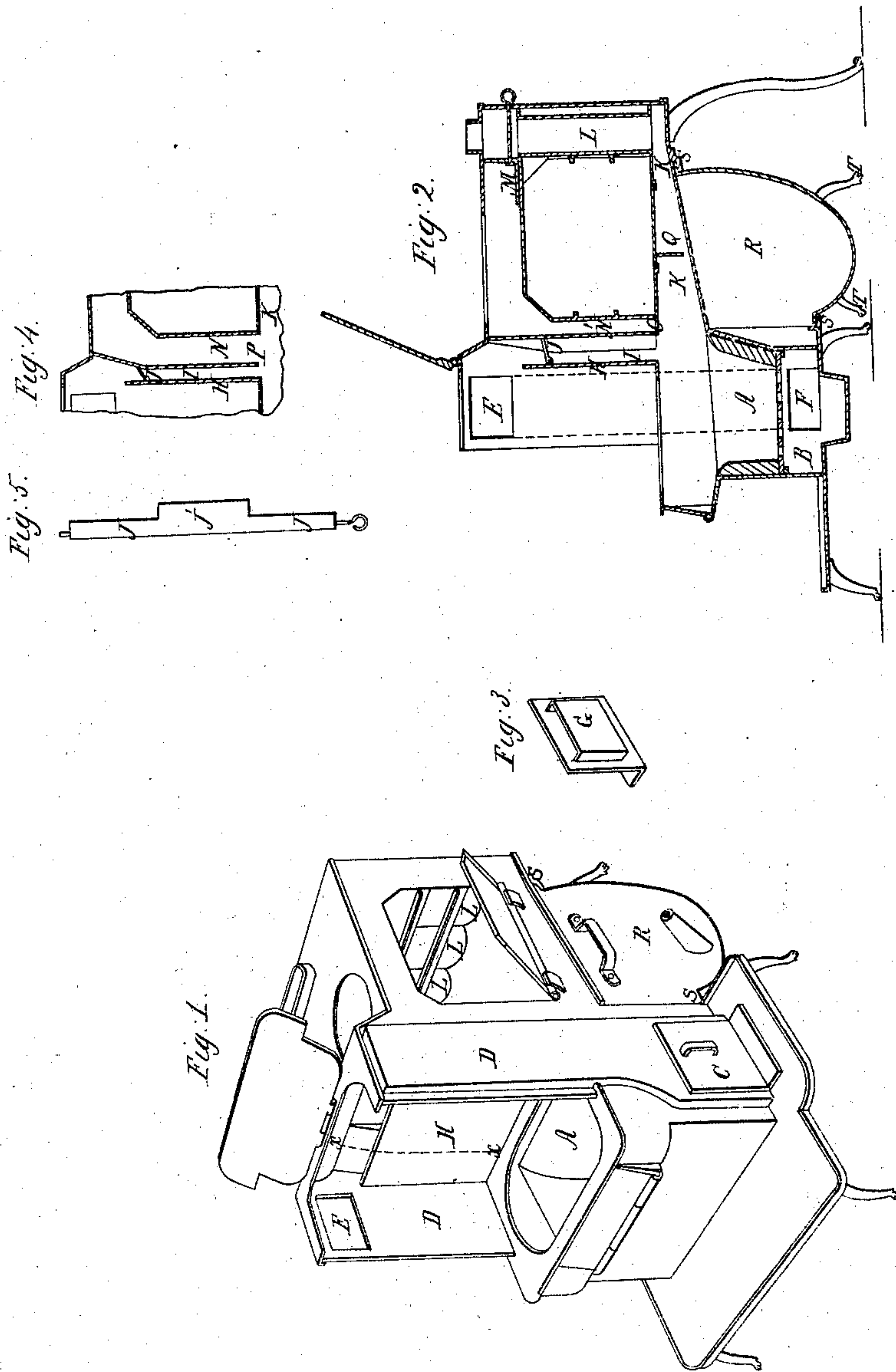


G. Thorp,
Coal Stove.

No. 3976.

Patented Mar. 26. 1845.



UNITED STATES PATENT OFFICE.

GOULD THORP, OF NEW YORK, N. Y.

COOKING-STOVE.

Specification of Letters Patent No. 3,976, dated March 26, 1845.

To all whom it may concern:

Be it known that I, GOULD THORP, of the city of New York, in the State of New York, have made certain new and useful Improvements in the Manner of Constructing Cooking-Stoves; and I do hereby declare that the following is a full and exact description thereof.

In the accompanying drawing, Figure 1 is a perspective view of my improved stove. Fig. 2 is a vertical section through the middle of it, from front to back, the other figures representing detached parts, to be presently described.

The first novel feature of my cooking stove is the inclosing the fire chamber and ash-pit on all sides, so that no part of the draft to feed the fire shall enter the ash-pit, through a door-way, or other opening, in the lower part of the stove, the whole of the air required for that purpose being made to descend to the ash-pit through two flues which I denominate jamb flues, that extend up from said ash-pit, through the jambs of the stove, to the upper part of the boiler space.

Another improvement consists in my forming a descending vapor flue, extending the whole width of the stove at the back of the boiler space; by means of which the heat of the fore part of the oven is moderated, and the fumes and vapor arising from the articles which are being cooked are carried off, as they are, also by the jamb flues first named. The wide, descending vapor flue, in front of the oven, is furnished with a damper by which the draft down it may be regulated at pleasure. To increase the heat at the rear of the oven, where it is usually deficient, I carry the ascending draft throughout several tubes, instead of through a flat flue, as usual, and thus attain the desired end. Below the oven in the rear of the fire-chamber, I place a tin roaster of the kind used in many other stoves; but instead of allowing it to stand upon feet in the ordinary manner, I cause it to slide in place by means of ledges, or grooves, attached to it and to the stove; by this means it is made to fit closely, confining the heat more effectually than can be done when such roaster is sustained upon the floor, which has hitherto been the case.

A, A, is the fire chamber, which is represented as lined with fire-brick; this lining may, however, be removed if desired when wood is used as fuel.

B, is the ash-pit, which for the purpose of removing the ashes only, is furnished with a shutter at C; this shutter is made to fit as nearly air-tight as may be to prevent the entrance of any notable portion thereof through its junctures.

D, D, are the jambs, which constitute flat flues, the upper opening into which is seen at E, E, and the lower opening, through which the air enters the ash-pit at F, F. These jamb flues may be furnished with dampers, if required, and the stove will thus become air-tight.

Fig. 3 is a perspective view of the inner side of the shutter, C; on this inner side, G, is a continuation of the jamb-flue, which is necessary to the conducting of the draft completely down into the ash-pit, particularly when the brick lining is removed from the fire-chamber.

Behind the plate, H, of the boiler space above the fire-chamber, there is a descending flue, I, Figs. 2, and 4, the latter being a section of a part of the stove in the line *x, x*, of Fig. 1; the flue I, extends from side to side of the stove and has a damper, J, Fig. 5, adapted to it. Through this flue space a large portion of the exhaling matter will be carried down, whilst portions will also descend through the jamb-flues, down which there will be a strong draft whenever there is a fire kindled. The flue, I, is wide at its middle portion, as indicated by the width of the damper at J'. The flue space, K, K, under the oven, leads directly to a series of tubular flues L, L, L, in its rear, which tubes stand entirely within the oven, and connect the lower and the upper horizontal flues; the draft up these tubular flues is regulated by a sliding damper, M, which extends over the whole of them. Between the descending flue space I, and the oven there is an ascending flue space, N, N, the middle, or narrow, portion, N', of which is closed, as at O, Fig. 2, by the bottom oven plate extending under it; but its wider portion at each end is open at bottom, as at P, Fig. 4, which thereby serves to distribute the heat the more perfectly by conducting it toward the sides of

the oven. By means of the damper M, any portion of the heated air escaping from the fire, may be made to pass up the flue N. From the bottom plate of the oven I also allow a partition plate, Q, to descend and to extend, say half across the flue space, at its middle portion, to aid in compelling the larger portion of the heated air below the oven to pass toward its sides, where it is most exposed to the cooling influence of the external air.

R is the roaster, which slides into place on ledges S, S, thereby keeping its feet, T, T, clear of the floor, and causing it always to fit closely.

Having thus fully described the nature of my improvements in the cooking stove, and shown the structure and operation of the respective parts thereof, what I claim

therein as new, and desire to secure by Letters Patent, is—

1. The manner of combining the jamb flues, D, D, with the upper part of the boiler space, and with the closed ash-pit, for the purpose of feeding the fire, and of carrying off the effluvia from said boiler space.

2. I also claim the combining with the foregoing, the descending flue, I, furnished with a valve, J; the said flue-space and its valve serving, also, to carry off the effluvia, and to regulate the draft down the jamb flues, D, D, said flue, I, being arranged, and connected with the other parts of the stove, as set forth.

GOULD THORP.

Witnesses:

THOS. P. JONES,
EDWIN L. BRUNDAGE.