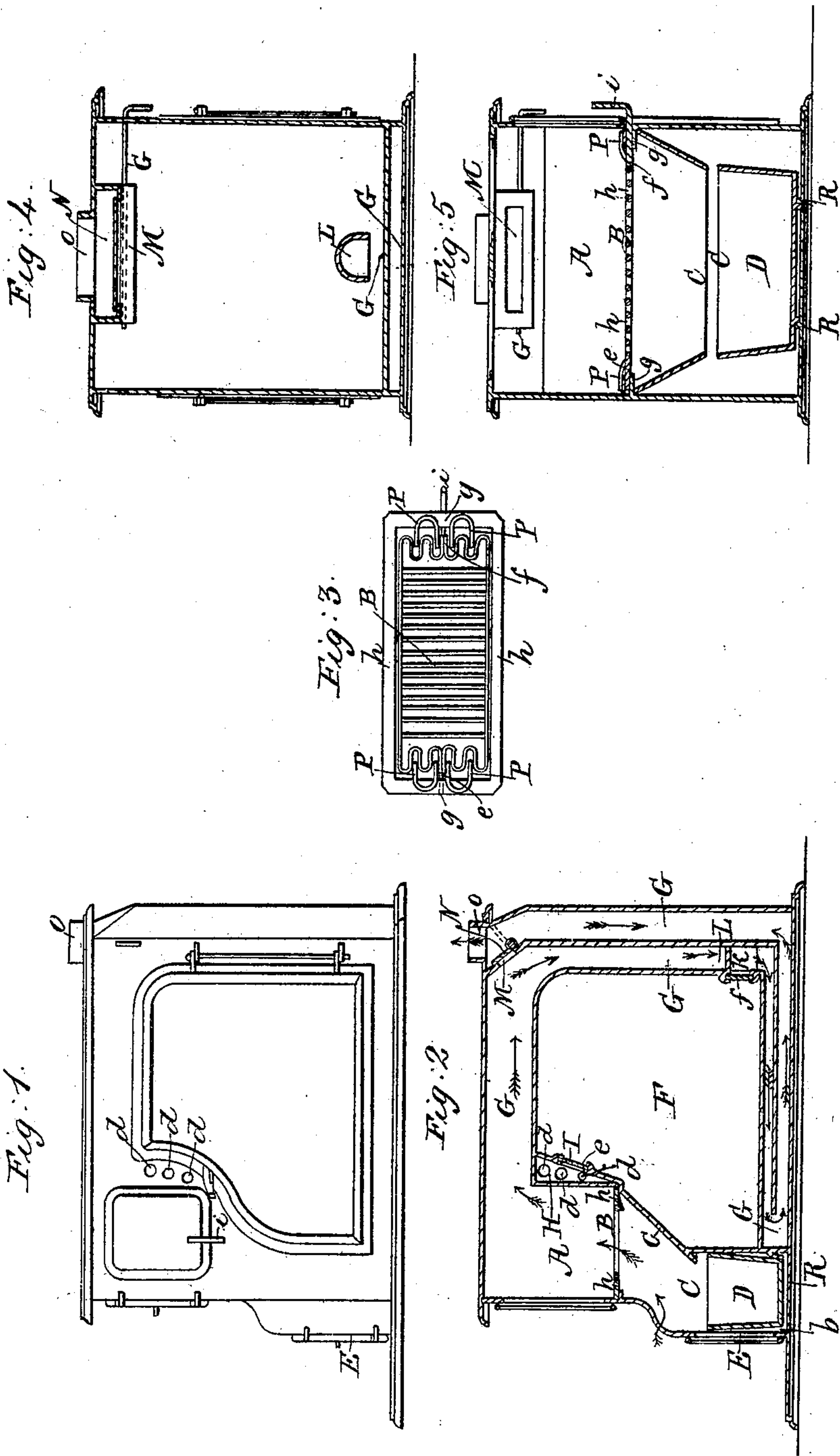


M. POND.  
Cook Stove.

No. 38,838.

Patented June 9, 1863.



Witnesses

R. C. Ledy  
J. B. White

Inventor.

Moses Pond

# UNITED STATES PATENT OFFICE.

MOSES POND, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN COOKING-STOVES.

Specification forming part of Letters Patent No. 38,838, dated June 9, 1863.

*To all whom it may concern:*

Be it known that I, MOSES POND, a resident of Boston, in the county of Suffolk and State of Massachusetts, have made a new and useful invention of certain Improvements in Cooking-Stoves; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a side view, and Fig. 2 a vertical and longitudinal section, of a stove provided with my invention. Fig. 3 is top view of the rotary grate and the prong-grates thereof. Fig. 4 is a transverse and vertical section taken through the flue at the back of the oven. Fig. 5 is another transverse and vertical section taken through the grate, the ash-receptacle, and its chamber underneath the grate.

The nature of my invention or improvements consists in the combination and arrangement of shouldered rests with the ash-pit, the purposes of the said rests being to keep the ash-reservoir close up to the back of its chamber in order to prevent ashes and coals discharged from the grate from falling in rear of the ash-receiver; also, in the combination of a deflector with the smoke-flue and the hot-air receiving and discharging passages arranged with respect to the oven, substantially as hereinafter specified.

In the drawings, A denotes the fuel-chamber or fire-place, B being the rotary grate at the bottom thereof. C is the ash-chamber containing a movable ash trough or receptacle, D, and having elevated on its bottom two shouldered rests or ledges, R R, each of which is provided with a shoulder, *b*, which, when the receptacle D is in place within the chamber C, serves to keep it at its back close up to the foot of the chute *c*, constituting part of the back plate of the said chamber C. The chamber C is provided with a doorway, E, through which the ash-trough D may be removed or put in place as occasion may require.

The oven is shown at F as having between it and the fire-place a hot-air chamber, H. A smoke-flue, G, leading from the fire-place, passes along and over the top plate of the oven, thence downward against the rear part of the oven, thence underneath its bottom, thence returns under itself, and thence finally

passes upward in rear of that part of it which is directly against the back of the oven, the whole being as shown in Fig. 2.

The hot-air chamber is provided with air inlets or openings *d d d*, arranged at one end of it. It has also an outlet or discharging passage, I, which opens from it into the upper part of the oven F, and should be provided with a sliding door or damper, *e*.

In the lower part of the back plate of the oven there is another such opening, K, provided with a door or damper, *f*. In the flue G, and directly over such opening, there is an arched deflector, L, which extends across that part of the flue next to the oven, and is arranged with respect to the opening K, and formed as shown in Figs. 2 and 4. By means of the said deflector the current of smoke and volatile products of combustion passing through the flue G will not only be prevented from entering the oven, but will serve to promote the escape of the hot air from the oven, or, in other words, will cause the hot air, which may enter the oven by the openings I, to descend therein and escape by the opening K, and this latter after the said air may have performed its proper office within the oven.

The flue G is provided with a direct-draft opening, M, and a damper, N, which are arranged in the said flue, as shown in Fig. 2. The flue G opens into a tubular funnel-tenon, O, on which, when the stove may be in use, a smoke-pipe is to be fixed.

The grate B is a rotary one—that is to say, it is supported by journals *e f*, which project from its ends respectively, and into and through bearings *g g*, formed in the rectangular grate-frame *h*, one of the said journals being provided with a crank or lever, *i*. The grate has a length less than that of its opening in the frame *h*, the same being as shown in Fig. 5, and there projects from each end of the said opening or each end of the grate-frame *h*, a prong-grate or a series of prongs, as seen at P P in Fig. 3. The grate B is also formed at each end with a series of prongs to enter the space between the prongs of the prong-grate, as shown in Fig. 2. By such a construction of the grate, and the adaptation of prong-grates to it and its supporting-frame, the grate, besides being capable of being revolved or turned so as to discharge from it and into the ash-receiver a mass of coals,



may at any time be moved alternately back and forth endwise, in order to shake ashes through it; the prong-grates and prongs of the grate serving during such endwise movements to prevent fuel at or near the ends of the grate from falling out of the fire-place. Air-inlets *a* may be made through the front of the ash-pit in order to admit air to the fuel when on the grate and in a state of combustion.

A free ventilation of the oven by means of a stream of heated air caused constantly to circulate through it during the process of baking, besides being very useful during the baking of most articles, is particularly advantageous in baking meats, as it render them more like meats roasted before a fire. Heretofore in stoves whose fire-places have been placed on or about on a level with the lower part of the oven, this could be attained by letting the hot air from the hot-air back or chamber into the lower part of the oven, and allowing it to escape by orifices arranged at the upper part of the oven, but in such stoves as have their fire-places arranged immediately con-

tiguous to the upper part of the oven, as represented in the accompanying drawings, it has been found very difficult, if not impossible, to obtain the desired circulation of hot air through the oven. By my arrangement of the hot-air inlets and outlets of the oven, and by means of the arched deflector arranged in the smoke-flue *G*, and with respect to the air-outlet *K*, as specified, the circulation of the air through the oven can be readily accomplished.

I claim—

1. The combination and arrangement of the shouldered ledges or rests *R R* with the ash-chamber *C*, the same being for the purpose specified.

2. The combination of the deflector *L* with the smoke-flue *G* and the hot-air receiving and discharging passages *I K*, arranged with respect to the oven as hereinbefore specified.

MOSES POND.

Witnesses:

R. H. EDDY,  
F. P. HALE, Jr.