

A. S. MARKHAM.

Cooking Stove.

No. 45,256.

Patented Nov. 29, 1864.

Fig. 1,

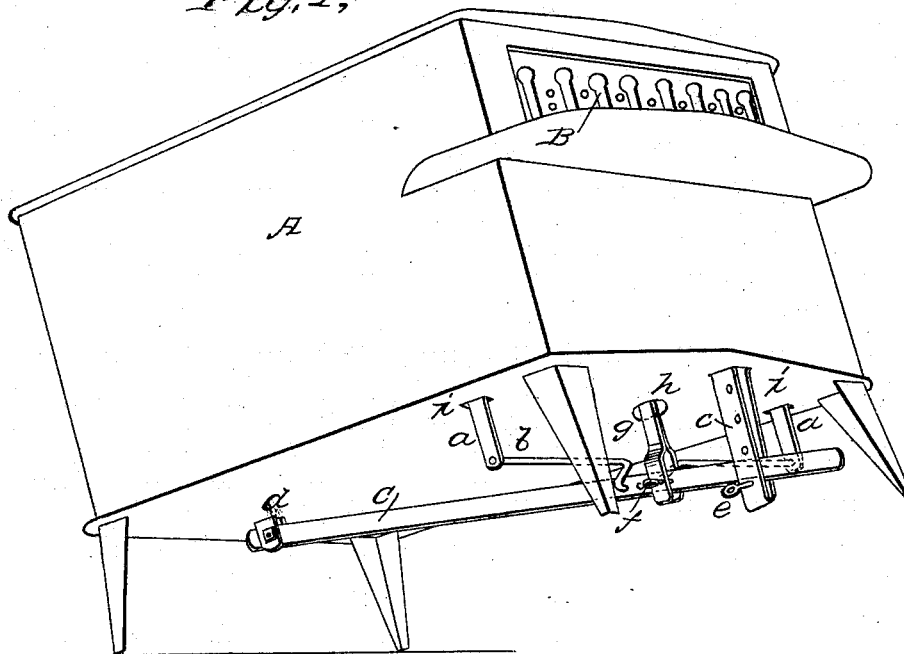
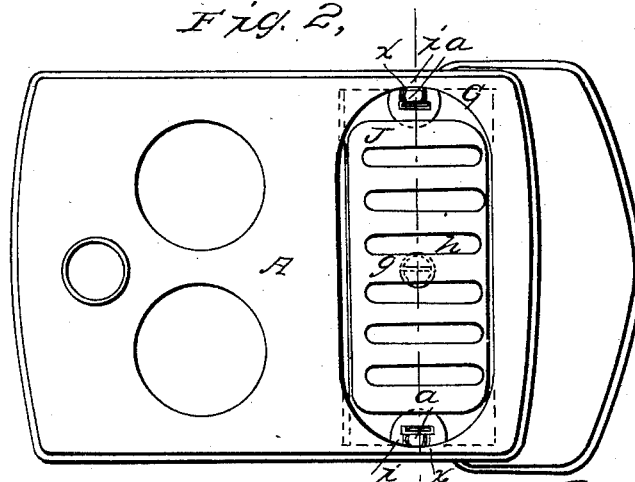


Fig. 2,



Witnesses:
Henry Morus
C. L. Toppleff

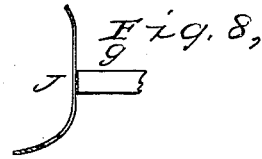
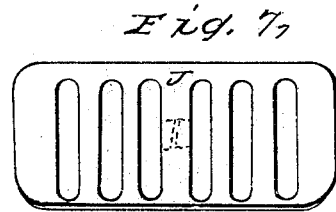
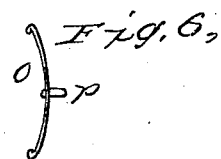
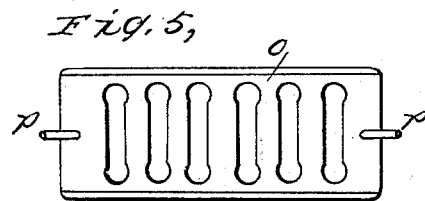
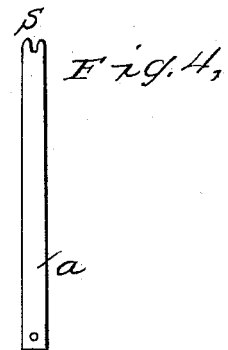
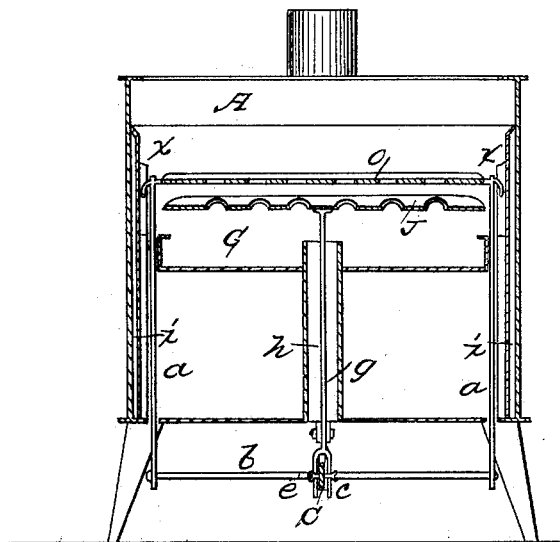
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UNITED STATES PATENT OFFICE.

A. S. MARKHAM, OF BUSHNELL, ILLINOIS.

IMPROVED COOKING-STOVE.

Specification forming part of Letters Patent No. 45,256, dated November 29, 1864.

To all whom it may concern:

Be it known that I, A. S. MARKHAM, of Bushnell, in the county of McDonough and State of Illinois, have invented a new and useful Improvement in Cooking-Stoves; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a cook-stove to which my improvements are applied, the stove being tilted to show the levers and attachments beneath the bottom plate. Fig. 2 is a plan view of the stove, the fire-place being open to show the wood-grate in place. Fig. 3 is a sectional elevation of the stove taken on the line *x* of Fig. 2. Fig. 4 shows one of the rods by which the coal grate is elevated. Fig. 5 is a plan of the coal-grate inverted. Fig. 6 is a cross-section thereof. Fig. 7 is a plan view of the wood-grate inverted. Fig. 8 is a cross-section thereof.

Similar letters of reference indicate corresponding parts.

This invention consists in so constructing grates for cooking and other stoves as to enable one to raise and lower them at pleasure. The devices employed make the principle applicable to both coal and wood grates, and the dumping of the grate is provided for when the coal-grate is used.

A is the stove, to which my improvements are here shown as applied.

G is the fire-chamber. The ash-door is not shown, but may be of the usual construction. The oven extends beneath the fire-chamber. An opening is made in the center of the bottom of the fire-chamber in a line with like openings in the oven plate or plates below and in the bottom plate of the stove. A tube, *h*, open at both ends, is fitted in these openings, rising a short distance above the bottom of the fire-chamber, so that ashes will not be deposited therein and so escape to the floor below. Like tubes, *i*, are placed at each end of the fire chamber. A rod, *g*, firmly attached to the bottom of the wood grate J on the center of its middle bar, extends downward through the tube *h*, being attached below the bottom of the stove to a horizontal lever, *c*, by

a movable pin. The lever C is jointed to the bottom plate of the stove near its end and its handle projects beyond its front plate. The lever C can be held in any position by means of a slotted foot, *e*, projecting downward from the bottom plate of the stove in front of the tube *h*, within whose slot its end moves vertically, being secured therein at any height by means of a stay-pin, *e*.

When it is desired to elevate the wood-grate, it is only necessary to raise the lever C and fasten it by means of the pin *e*, which enters into holes in the sides of the slotted foot *e*.

When it is desired to take the wood-grate out of the stove, the rod *g* is disconnected from the lever C and raised, with the grate, out of the top of the fire-chamber.

Rods *a* are fitted in the side tubes, *i*, their form being shown in Fig. 4. Troughs *t* are set vertically in the tubes *i*, being soldered along their bottoms or convex surfaces to the sides of the stove within the tubes *i*, thus presenting their open sides toward the fire-chamber. The flat rods slide up before their open sides when they are raised, as hereinafter mentioned. Their lower ends, which project below the stove, are connected by a rod, *b*, which is rigidly secured to the lever C, so that they are raised and lowered thereby in like manner with the rod *g*.

The coal-grate, represented at *o*, has arms *p* extending from each end. These arms turn down, as seen in Fig. 3, so that when the grate vibrates on its arms it shall not be dumped, by reason that the ends of the journals strike against the sides of the trough *t*; but when the rods *a* are raised so high that the journals are clear of the trough the grate is free to be dumped. The rods *a* are cut down at their tops at *s* to form bearings for the journals *p*.

The operation of the stove needs no explanation further than is given above, saving to state that when the grate, whichever one may be used, is raised toward the vessel exposed to the fire less fuel need be used than when the grate lies low. Economy in the consumption of fuel is thereby brought about and less heat is thrown into the apartment, which in summer is an item of importance.

I do not claim the raising and lowering of grates in stoves, as, I am aware, that is old and well known; but,

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

1. The wood-grate J and its rod *g*, in combination with the tube *h*, lever C, and slotted foot *c*, constructed and operated substantially as and for the purpose above described.

2. The coal-grate, with its journals *p* bent

down as described, in combination with the tubes *i*, the troughs *t*, and the sliding rods *a*, connecting-rod *b*, and lever C, substantially as and for the purpose above described.

A. S. MARKHAM.

Witnesses:

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C. D. HENDRICKSON.