No. 657,536. Patented Sept. 11, 1900.

A. W. HAWKINS.

RANGE, &c.

(Application filed Nov. 6, 1899.)

(No Model.)

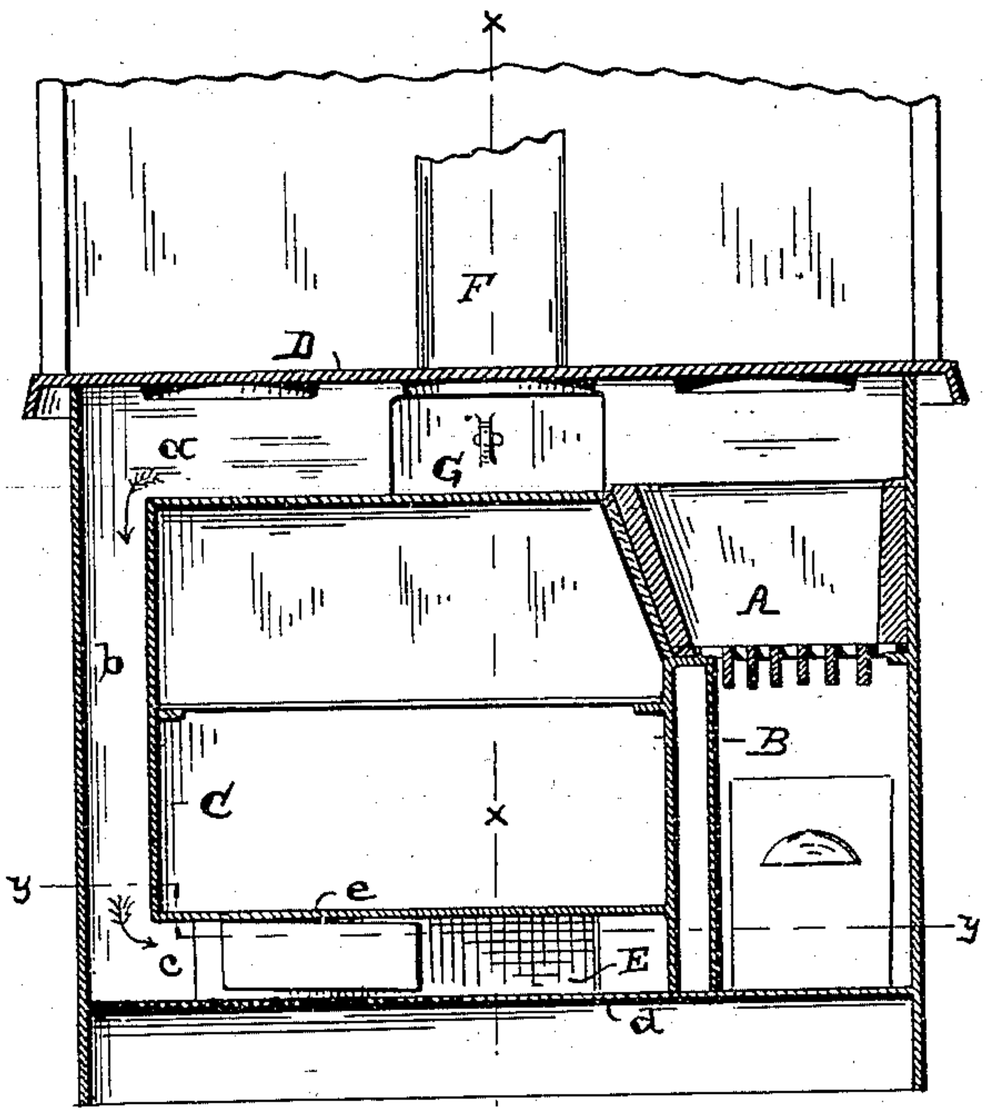

Fig. 1

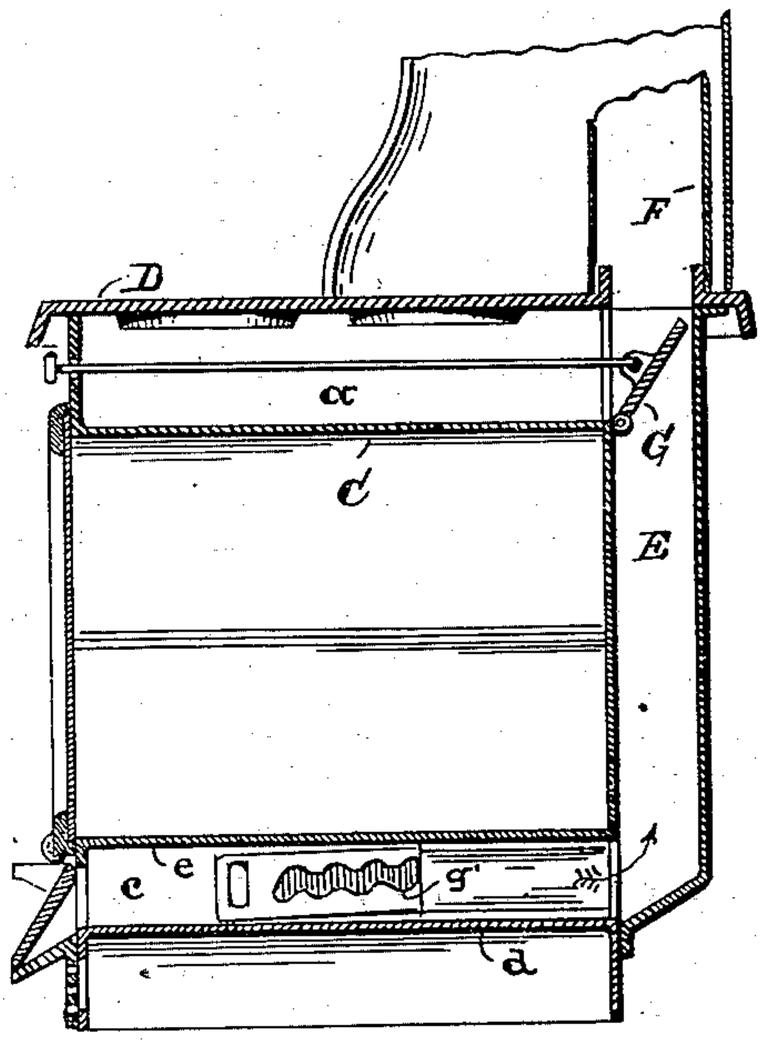

Fig. 2

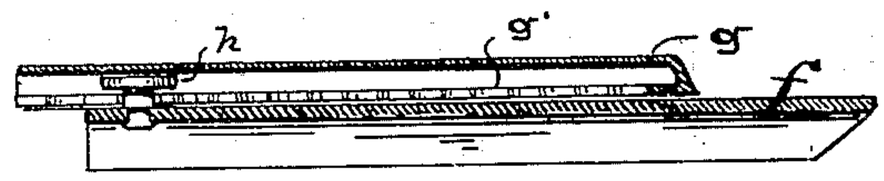

Fig. 4

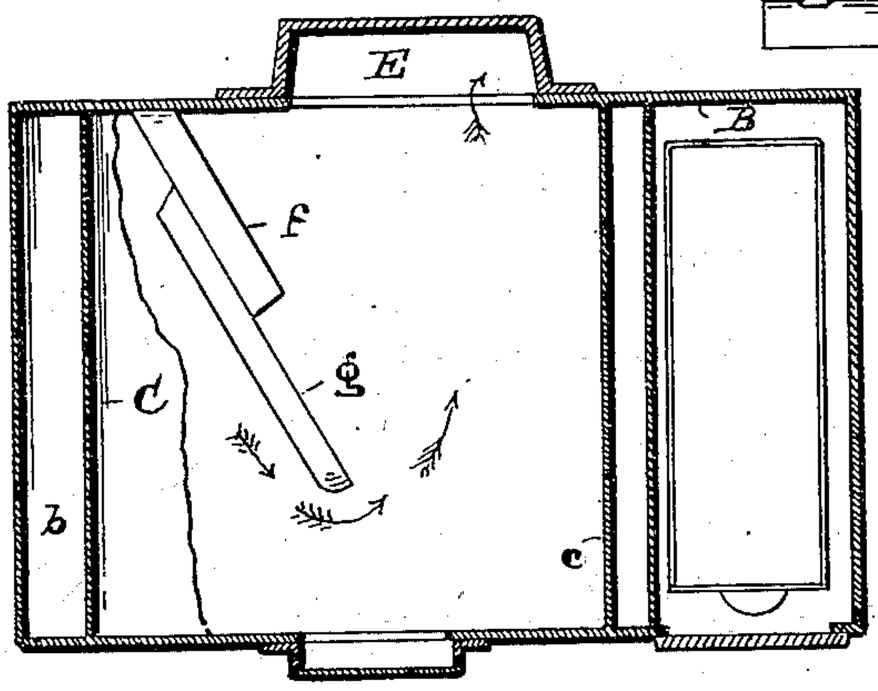

Fig. 3

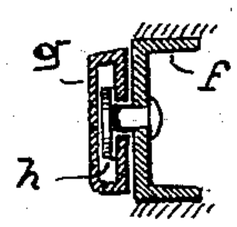

Fig. 5

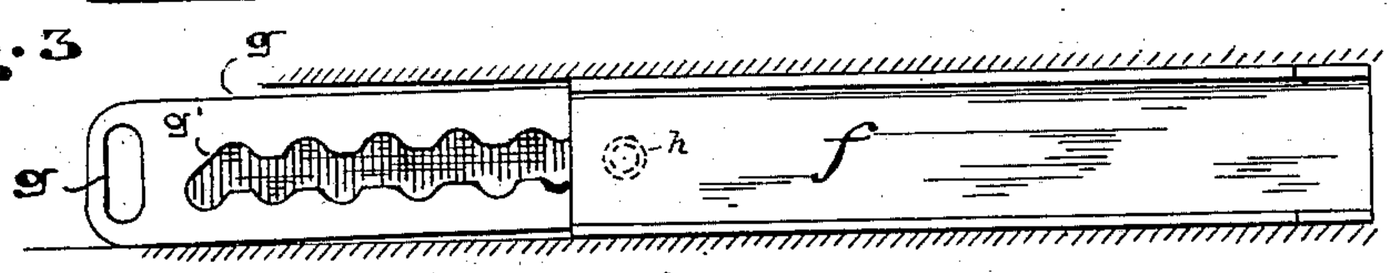

Fig. 6

WITNESSES

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UNITED STATES PATENT OFFICE.

ALBERT W. HAWKINS, OF CLEVELAND, OHIO.

RANGE, &c.

SPECIFICATION forming part of Letters Patent No. 657,536, dated September 11, 1900.

Application filed November 6, 1899. Serial No. 735,864. (No model.)

To all whom it may concern:

Be it known that I, ALBERT W. HAWKINS, a citizen of the United States of America, and a resident of Cleveland, county of Cuyahoga, State of Ohio, have invented certain new and useful Improvements in Ranges, &c., of which the following is a specification.

My invention relates to improvements in ranges, &c., particularly to means establishing the course of the hot gases (respectively products of combustion) under the ovens of such ranges; and one object of my improvement is to render such means capable of adjustment and self-locking, and another object is to construct such means in a simple and practical manner and convenient for adjustment. I attain these objects by the means constructed and arranged substantially as illustrated in the accompanying drawings, in which—

Figure 1 represents a vertical sectional view of a range equipped with the improvement above referred to. Fig. 2 is a transverse sectional view of same on line *x x*. (See Fig. 1.) Fig. 3 is a horizontal sectional view of said range on line *y y*. Figs. 4, 5, and 6 represent detail views of the particular means constituting the nature of this invention.

Like letters of reference denote like parts in the drawings and specification.

The illustration of a range herewith given represents the ordinary style or type. In the main it comprises the fire-box or combustion-chamber A, the ash-pit B, the oven C, top plate D, and flue E.

A direct draft to smoke-pipe F can be had by opening the damper G; but ordinarily the hot gases or products of combustion are conveyed around the oven by way of the channels *a b c*. (See Figs. 1, 2, and 3.) Thence they pass off through flue E into smoke-pipe F, the flue E being in communication with channel *c* and the smoke-pipe, as seen in Figs. 2 and 3. The channel *a* is formed between the top plate A and the top of the oven adjacent the fire-box. The channel *b* extends downward between the side of the oven and the outer side wall of the range, while the channel *c* is formed between the bottom of the oven and the partition *d*. In order to heat the bottom *e* of the oven effectually, it is essential that the hot gases pass over the entire surface of said bottom, or at least over as large a part thereof as conditions will admit. Naturally the products of combustion would pursue the most direct route toward the flue were it not for a barrier obstructing the nearest course toward the flue E. Preferably such barrier is constructed in the form of an extensible partition placed between the walls forming the channel *c* and extending in diagonal or oblique direction into or across said channel. In the present instance said barrier consists of the stationary or fixed plate *f* and the slide *g*. (See Figs. 3, 4, 5, and 6.) To adapt such plate and slide for a convenient and self-locking adjustment constitutes the chief feature of this invention. The plate *f* is flanged along both its top and bottom edges, where it comes in contact with the plates *d* and *e* of the stove, so as to brace and support it in position and so that it can be fastened in position without being moved when the plate *g* is adjusted. This construction is very necessary, because considerable power is necessary to adjust the plate *g*, and the strain exerted in doing so is applied to a very great extent to the plate *f*. The plate *g*, instead of being made flat, is make tubular in shape, and the slot *g'* is made through only that side which is brought in contact with the flat side of the flanged plate *f*. By making the plate in the form of a flat tube it is closed at its ends, and a protecting-pocket is thereby formed for the head of the button *h*, as shown more especially in Figs. 4 and 5. This plate is also strengthened by being made tubular, so that it will not break or allow the products of combustion to pass through the slot, as would otherwise be the case if made of only a single thickness. The connection of the slide with the plate is accomplished by means of the button *h*, which engages the slide through the slot *g'*, the latter extending well-nigh over the entire length of said slide to admit of a large range of adjustment for the slide and consequent diversion of the gases in the channel *c*. The slot *g'* is corrugated or notched for engagement with the shank *h* of the button, and it is such engagement which retains the slide in whatever position same may be placed. To enable convenient adjustment of said slide, I provide an eye *g''* in the front part thereof, into which

eye the end of the flue-scraper or similar implement can be placed. By slightly lifting the front part of the slide same can be pushed or pulled into any desired position to suit the particular kind of fuel which may be used in the range and the chimney in connection with which the range may be placed. In order to direct the bulk of the gases around or over the end for the slide, I prefer a case or box like form for the slide, whereby clearance is afforded for the button-head, and a covering for the slot, which prevents the gases from passing direct through said slot. It is essential that such slides cannot be moved accidentally in cleaning the channels or flues. For this reason it should require a special effort for moving or changing the position of such slides when necessary or desirable. It is obvious that the self-locking of the slide may be attained with analogous constructions without departing from the nature of my invention. However, the construction as shown fulfils the requirement and is also simple, durable, and inexpensive in point of manufacture.

What I claim, and desire to secure by Letters Patent, is—

A stove provided with the flues *a*, *b*, *c*, and E, combined with the stationary double-flanged plate *f*, which is placed diagonally across the flue *c* and provided with a stationary headed button *h*, which projects therefrom near one end, an adjustable plate which is applied to the flat side of the stationary plate, *f*, and which adjustable plate is provided with a slot which is corrugated upon opposite edges, and through which the button is made to pass, and which plate is adapted to be adjusted back and forth upon the button so as to extend a greater or less distance across the flue *c*, and which adjustable plate is also provided with an eye at its outer end, substantially as shown.

Signed by me at Cleveland, Ohio, this 28th day of October, 1899.

ALBERT W. HAWKINS.

Witnesses:

BERNH. F. EIBLER,

HOWARD R. LYNN.