

(No Model.)

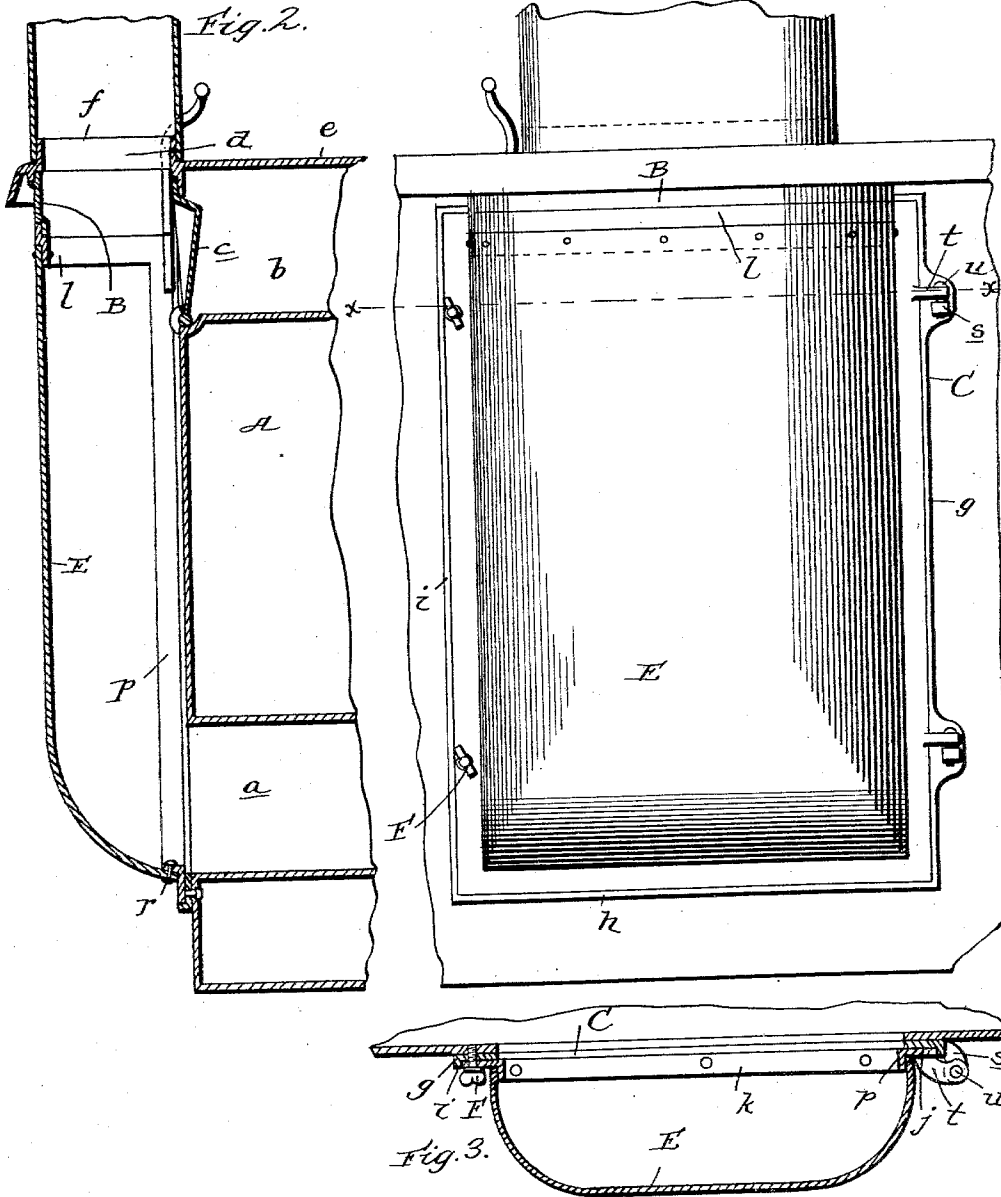
2 Sheets—Sheet 1.

M. M. KOCH.
STOVE OR RANGE.

No. 566,773.

Patented Sept. 1, 1896.

Fig. 1.



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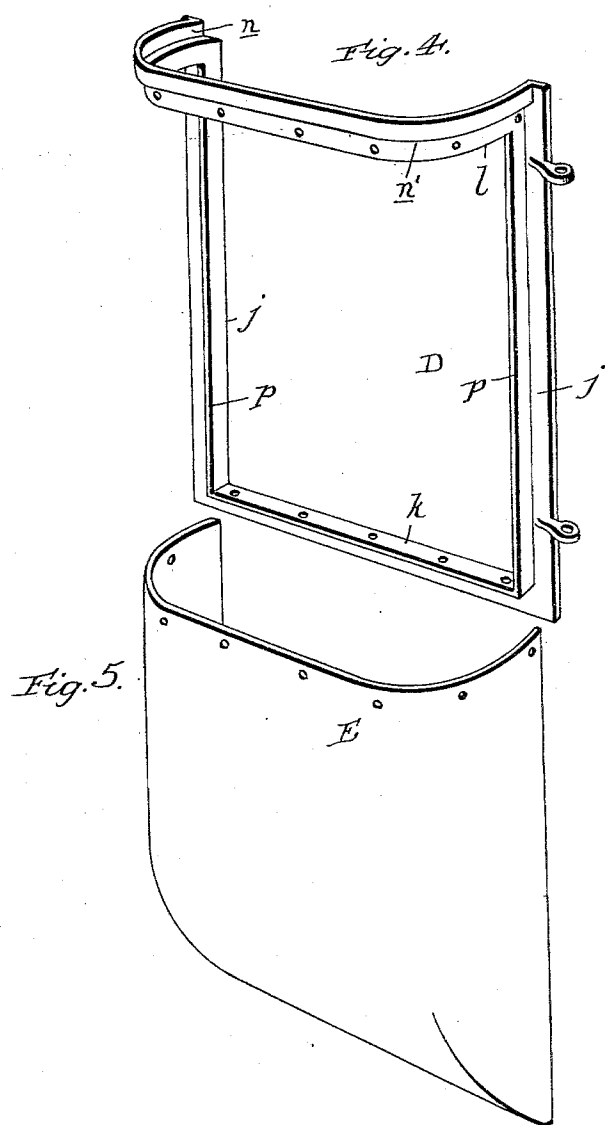
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

MAX M. KOCH, OF CLEVELAND, OHIO.

STOVE OR RANGE.

SPECIFICATION forming part of Letters Patent No. 566,773, dated September 1, 1896.

Application filed February 20, 1896. Serial No. 580,094. (No model.)

To all whom it may concern:

Be it known that I, MAX M. KOCH, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Stoves or Ranges; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to cooking stoves or ranges, and more particularly to smoke-boxes therefor; and it has for its general object to provide a smoke-box, or a door which serves in conjunction with a wall of the stove-body to form a smoke-box, comprising a frame which is so connected with the main body of the stove or range that it may be readily swung away or may be disconnected from the said body to permit of convenient access being had to the rear ends of the flues thereof for the purpose of cleaning the same or repairing the dampers therein, and sheet metal, composing the flue, which is so connected with the frame that when it becomes corroded, as is frequently the case, or otherwise damaged, it may be readily disconnected from the frame and be replaced by a new flue.

Other objects and advantages of the invention will be fully understood from the following description and claims when taken in conjunction with the accompanying drawings, in which—

Figure 1 is a detail rear elevation of a portion of the main body of a stove or range provided with my improvements. Fig. 2 is a vertical section taken in the plane indicated by the line *y y* of Fig. 1. Fig. 3 is a horizontal section taken in the plane indicated by the line *x x* of Fig. 1. Fig. 4 is a perspective view of the cast-metal frame of the smoke-box, and Fig. 5 is a detail perspective view of the sheet-metal portion of the smoke-box.

In the said drawings similar letters designate corresponding parts in all of the several views.

A indicates the main body of the stove or range, which may be provided with the lower and upper flues *a b*, the damper *c* at the rear end of the upper flue, the opening *d* in its top plate *e*, and the flange *f*, surrounding said

opening, and may otherwise be of the ordinary or any suitable general construction, and B indicates a frame which may be formed integral with the top plate of or connected with the main body of the stove by bolts or other suitable means, and is arranged immediately below the top plate of the main body, as shown, and forms a stationary part of the said body, that is to say, it is not adapted to be disconnected from the main body except when it wears out before the said main body, which is not generally the case. The said frame B also forms a part of the smoke-box and is of the same general form in cross-section as said smoke-box, and it effects communication between the swinging and removable portion of the smoke-box, when the same is in its operative position, and the smoke-pipe opening *d* in the top plate of the body, as illustrated.

C indicates a frame which is preferably cast, although it may be formed in any other suitable manner, and is permanently connected to the rear wall of the main body A of the stove or range by bolts or other suitable means, as better illustrated in Fig. 1 of the drawings. This frame C comprises the side bars *g*, which rest at opposite sides of the flues *a b*, and the lower cross-bar *h*, and it is preferably provided at the outer edges of said bars *g* and *h* with the flanges *i*, within which the movable and removable frame D is designed to rest, as shown in Fig. 1, so as to make a tight joint and prevent the escape of smoke between the two frames C and D.

The frame D comprises the vertical side bars *j*, the lower cross-bar *k*, and the bar *l*, connecting the upper ends of the bars *j*, as better shown in Fig. 4, and it has its bar *l* rabbeted at its inner side, as indicated by *n*, to conform to the rabbeted edges of the front and side walls of the stationary frame B, and also has the outer sides of the said bar *l* rabbeted, as indicated by *n'*, and the side bars *j* and bottom cross-bar *k* provided with flanges *p*, as illustrated, for the connection of the sheet-metal flue E. (Better illustrated in Fig. 5 of the drawings.) The said sheet-metal flue E is connected to the flanges *p* of the side bars *j* and cross-bar *k* and to the rabbeted portion of the bar *l* by bolts *r* or by any other suitable means that will per-

mit of its being readily disconnected from the frame D and replaced by a new sheet-metal flue.

As better shown in Fig. 1, the frame C is provided upon one of its vertical bars *g* with apertured lugs *s*, and the frame D is also provided upon one of its side bars *j* with apertured lugs *t*, which are designed to bear upon the lugs *s* and be connected thereto in a hinged manner by the pintles *u*, which are preferably removable for a purpose which will presently appear. The frame D is secured in its closed position by screws *F*, preferably thumb-screws, which take through one of its side bars *j* and into threaded apertures in one of the side bars *g* of the frame C and the back wall of the stove-body A, as better shown in Fig. 3 of the drawings. The screws *F* are preferred for securing the smoke-box, or the door which serves in conjunction with the stove-wall to form a smoke-box, in its operative position against the back of the stove, but I desire to have it distinctly understood that the door or smoke-box may be secured in its closed position by any device suitable to the purposes of my invention, that is to say, any devices that will permit of the door or smoke-box being readily disconnected from the main body of the stove or range.

In virtue of the construction described it will be seen that when it is desirable to gain access to the rear ends of the flues *a b* to clear the same of collected sediment or to repair or replace the dampers therein it is simply necessary to remove the screws *F* or turn the same out of the threaded apertures in the frame C and stove-body, when the door or smoke-box may be swung open, leaving the flues *a* and *b* entirely exposed and convenient of access. When the space behind the stove or range is not sufficiently large to permit of the door or smoke-box being swung rearwardly, the hinge-pintles *u* may be readily removed, when, as will be readily seen, the door or smoke-box may be conveniently lifted off of the frame C.

In case the sheet-metal portion E of the door or smoke-box becomes corroded or otherwise impaired it may, when the door or smoke-box is disconnected from the stove, be

readily disconnected from the frame D, and a new flue or sheet-metal portion may be as readily secured to said frame, and this without the employment of skilled labor, which is an important desideratum and an advantage in this class of devices. The sheet-metal portion of the door or smoke-box is the only part liable to wear out, and, as will be readily appreciated, it may be replaced by a new sheet-metal portion at a much less cost than an entirely new smoke-box.

It will be appreciated from the foregoing that with all of its advantages my improved door or smoke-box is in the end as cheap as the ordinary smoke-box, and, in fact, cheaper, inasmuch as the frame D, which is the most costly part, will last as long as the main body A of the stove, while the sheet-metal portion may be removed and replaced without the cost of skilled labor.

Having described my invention, what I claim is—

1. In a stove, the combination of a body having lower and upper flues, and also having the opening in its top plate, the frame fixedly connected with the stove-body below the top plate thereof and communicating with the opening in said top plate, and a door connected at one side in a hinged manner with the body and forming a smoke-box in communication with the flues and also with the frame, substantially as specified.

2. In a stove, the combination of the main body having lower and upper flues and also having the opening *d*, in its top plate, the frame permanently connected with the stove-body below the top plate thereof and communicating with the opening *d*, and a smoke-box detachably connected with the main body; the said smoke-box when in its closed position communicating with the flues and also with the permanently-connected frame, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

MAX M. KOCH.

Witnesses:

S. ERBEN,

PHILIP KNAPPENBERGER.