

(No Model.)

2 Sheets—Sheet 1.

M. M. KOCH.
STOVE OR RANGE.

No. 577,557.

Patented Feb. 23, 1897.

Fig. 1.

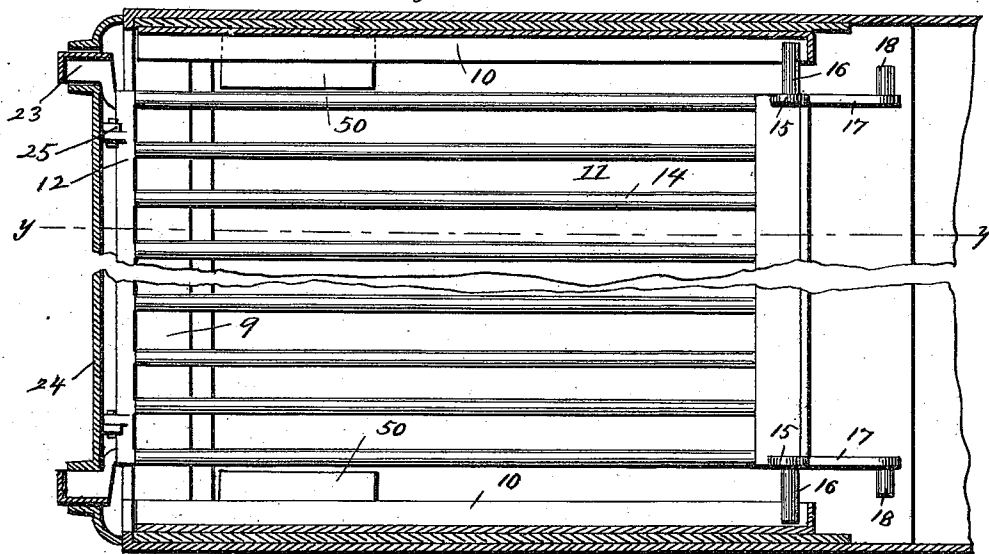
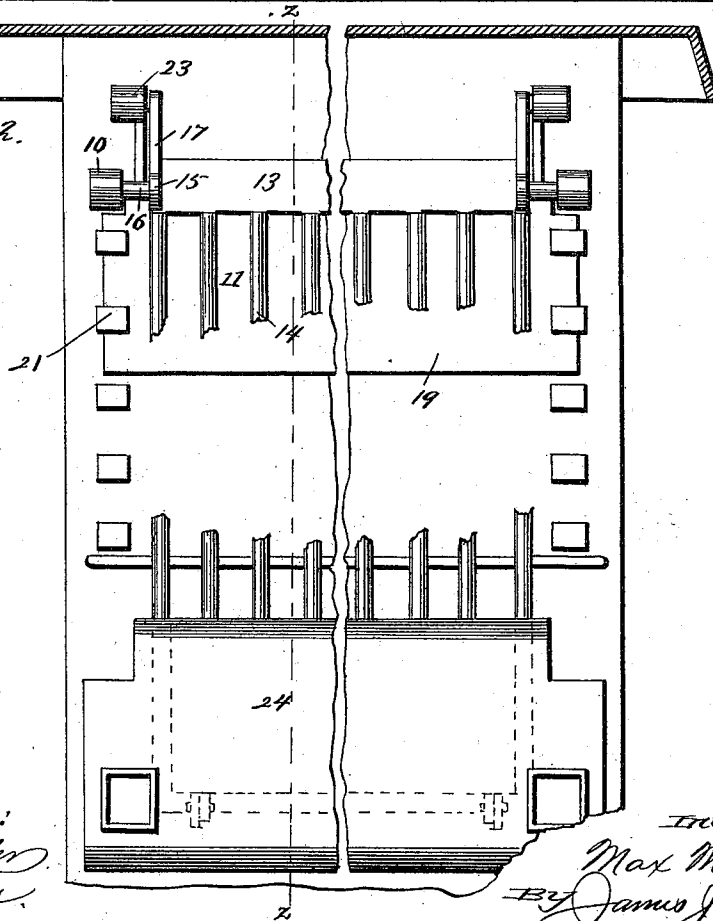


Fig. 2.



Witnesses:

C. H. Pader
H. A. James

Inventor

Max M. Koch

By *James J. Shuey*
Attorney

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2 Sheets—Sheet 2.

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Fig. 3.

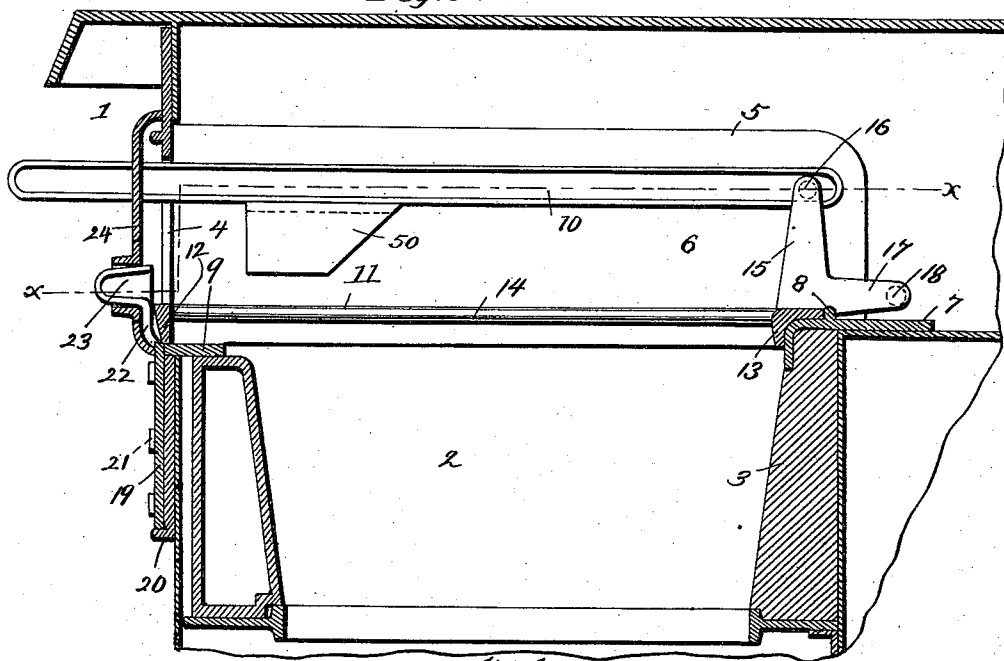
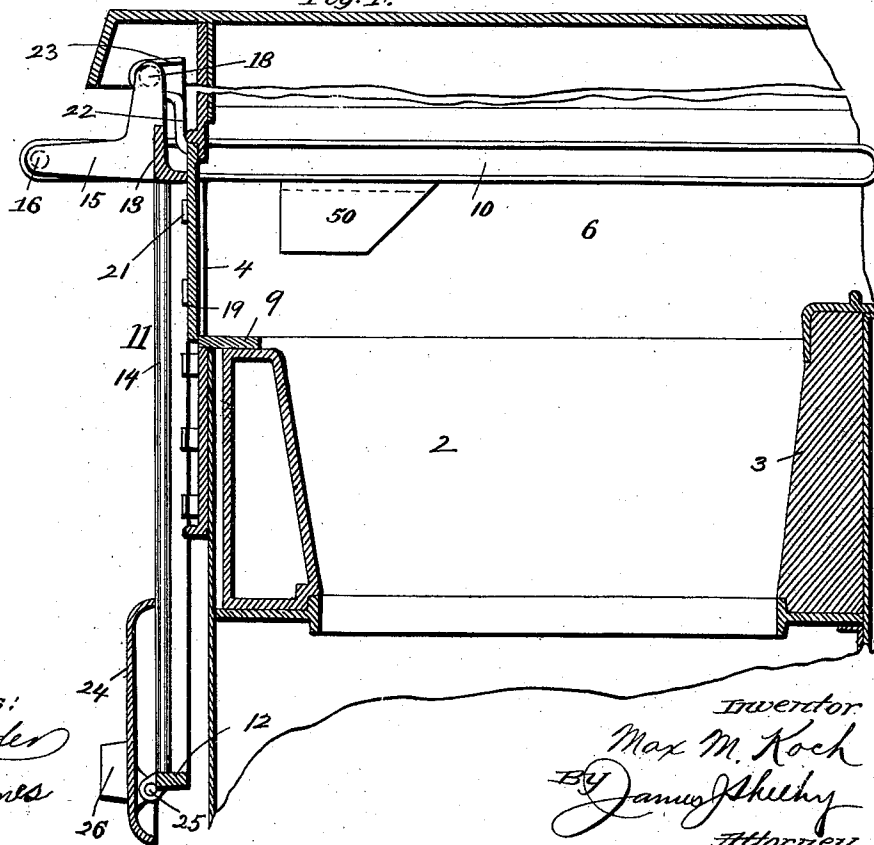


Fig. 4.



Witnesses:
Chas. Rauber
H. A. James

Inventor
Max M. Koch
By *James J. Shelly*
Attorney

UNITED STATES PATENT OFFICE.

MAX M. KOCH, OF CLEVELAND, OHIO.

STOVE OR RANGE.

SPECIFICATION forming part of Letters Patent No. 577,557, dated February 23, 1897.

Application filed July 13, 1896. Serial No. 599,042. (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 improvements in that class of cooking stoves or ranges which are equipped with broiler attachments; and it is designed more particularly as an improvement upon the stove or range disclosed in my Letters Patent bearing date of May 12, 1896, and numbered 560,138.

The general object of my present invention is to provide a stove or range having an opening in one of its walls in a plane above its fire-box, a broiler movable through said opening, and doors designed to be actuated by the broiler to close the opening and prevent the escape of heat from the stove when the broiler is in its operative position within the stove and when it is without the same.

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 horizontal section of a portion of a stove or range embodying my improvements, taken in the planes indicated by the dotted line *xx* of Fig. 3. Fig. 2 is a broken elevation showing the broiler without the stove-body. Fig. 3 is a vertical section taken in the plane indicated by the line *yy* of Fig. 1, and Fig. 4 is a vertical section taken in the plane indicated by the line *zz* of Fig. 2.

In the said drawings similar numerals designate corresponding parts in all of the several views, referring to which—

1 indicates the body of a stove or range. This body 1 has a fire-box 2, which may be lined in the ordinary manner with fire-resisting material 3, as shown; and it is provided in one of its vertical or side walls, in a plane above the fire-box, with an opening 4, for a purpose presently described.

5 indicates a frame which is arranged and suitably secured upon the fire-resisting ma-

terial 4 of the fire-box. This frame 5 comprises, by preference, the side bars 6, the inner cross-bar 7, which has a flange 8, and the outer cross-bar 9; and it is provided on its side bars with the horizontal tracks or ways 10, which extend outwardly through the opening 4 and are closed at their opposite ends and have the outer ends adapted to serve as bearings, for a purpose presently described.

11 indicates the broiler, which may be of any suitable construction and is designed to rest above the fire-box 2 and move through the opening 4 of the stove-body. This broiler preferably comprises the outer cross-bar 12, the inner cross-bar 13, and the bars 14; and it is provided at its inner end upon opposite sides with the arms 15, having lugs 16, designed to rest and move in the ways 10, and is also provided with the arms 17, having the lugs 18, the said arms 17 being disposed at right angles, or approximately right angles, to the arms 15, for a purpose presently described.

19 indicates a slidable door which is designed to close the opening 4 in the stove-body when the broiler is withdrawn from the same. This door 19 when in its open position rests upon a flange 20, which limits its downward movement; and it is designed to be moved upward between guides 21 on the body 1 and is provided with upwardly-extending arms 22, which are provided at their upper ends with bearings 23 for the lugs 18 of the broiler, which bearings are open at their inner ends, as shown, to permit the lugs 18 to enter and leave the same.

24 indicates a door which is designed and adapted to close the opening 4 when the broiler is in its operative position within the same. This door 24 is connected in a hinged manner with the outer cross-bar 12 of the broiler 11, as indicated by 25, and it is provided with the preferably flanged openings 26, which are designed and adapted to receive the bearings 23 of the door 19 when the door 24 is in its closed position, as shown in Fig. 3.

In practice when the broiler 11 is not in use it hangs at the side of the stove-body 1, and the other parts occupy the positions shown in Fig. 4, the opening 4 being effectually closed by the door 19, so as to prevent the escape of heat from the stove-body. Now when it is de-

sired to introduce the broiler into the stove it is simply necessary for the operator to swing the lower end of the broiler outwardly and upwardly and then push it into the stove until it occupies the position above the fire-box 2 shown in Fig. 3. When the broiler 11 is swung outward and upward, the lugs 16 of said broiler perform the functions of fulcrums and the lugs 18 of arms 17, resting in the bearings 23 of the door 19, will force the said door down into the position shown in Fig. 3. The downward movement of the door 19 will be coincident with the upward movement of the broiler 11, and therefore when the broiler has reached the horizontal position the opening 4 in the wall of the body 1 will be unobstructed and the broiler may be pushed into the said body to the position shown in Fig. 3. When the broiler is pushed the full extent into the body 1, the door 24 will come against the body 1, as shown in Fig. 3, and will effectually close the opening 4, so as to prevent the escape of heat through the said opening.

When the broiler is drawn outwardly through the opening 4, the lugs 16 will travel in the ways 10 and the lugs 18 will enter and rest in the bearings 23 of the door 19, and when the broiler is swung down, with the lugs 16 serving as fulcrums, the lugs 18, remaining in the bearings 23 of the door 19, will raise the said door to the closed position shown in Fig. 4 and will hold it in such position until the broiler is again raised. It will thus be seen that the opening 4 in the body will be automatically closed when the broiler is shoved through the same and into the stove and will also be automatically closed when the broiler is withdrawn from the stove and hung at the side of the same, and that in consequence waste of heat through the said opening 4 will be effectually prevented, which is a desideratum and an important advantage. It will also be seen that when the broiler is hanging at the side of the stove it takes up but a minimum amount of room, which is also a material advantage.

I have in some respects specifically described the construction and relative arrangement of the parts of the present embodiment of my invention in order to impart a full, clear, and exact understanding of the same. I do not desire, however, to be understood as confining myself to such specific construction and arrangement, as such changes or modifications may be made in practice as fairly fall within the scope of my invention.

In order to support the broiler 10 in a horizontal position when extended from the stove-body, so as to permit of meat or the like being conveniently placed upon or removed from the broiler or turned while on the same, I provide the lugs 50 below the tracks or ways 10, as shown. When the broiler 11 is drawn out to almost the full extent, the lugs 18 of arms 17 will engage the under side of the lugs 50, and thereby support the broiler in its horizontal position, and when the broiler is drawn

out slightly farther it may be swung down alongside the stove-body, as before described, without interference from the lugs 50.

It will also be seen from the foregoing that when desirable or necessary the broiler 11 may be readily removed from the stove-body for the purpose of cleansing it, and may be as readily replaced in its operative position illustrated in the drawings.

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

1. The combination of a stove-body having a fire-box and an opening in one of its walls in a plane above the fire-box and also having a bearing adjacent to said opening, a movable door for closing the opening in the wall of the body, and a broiler adapted to be introduced through the opening in the wall of the body and having a device adapted to engage the bearing of the body when the broiler is withdrawn through the opening in said body so as to hang the broiler at the side of the body and also having a device for closing the door when the broiler is withdrawn from the stove-body and for opening said door when the broiler is moved to insert it in the body, substantially as and for the purpose set forth.

2. The combination of a stove-body having a fire-box and an opening in one of its walls in a plane above the fire-box and also having a bearing adjacent to said opening, a movable door for closing the opening in the wall of the body, a broiler adapted to be introduced through the opening in the wall of the body and having a device adapted to engage the bearing of the body when the broiler is withdrawn through the opening in said body so as to hang the broiler at the side of the body and also having a device for closing the door when the broiler is withdrawn from the stove-body and for opening said door when the broiler is moved to insert it in the body, and a door carried by the broiler and adapted to close the opening in the wall of the body when the broiler is inserted in said body, substantially as and for the purpose specified.

3. The combination of a stove-body having a fire-box and an opening in one of its walls in a plane above the fire-box and also having a bearing adjacent to said opening, a vertically-movable door adapted to slide between guides on the body and close the opening thereof and having a bearing, and a broiler adapted to be introduced through the opening in the wall of the body and having a device adapted to engage the bearing of the body when the broiler is withdrawn through the opening in said body so as to hang the broiler at the side of the body and also having a device adapted to engage the bearing of the movable door and raise said door when the broiler is lowered to its position at the side of the body and lower said door when the broiler is raised, substantially as and for the purpose set forth.

4. The combination of a stove-body having

a fire-box and an opening in one of its walls in a plane above the fire-box and also having a bearing adjacent to said opening to permit of the broiler being swung down at the side of the body, a door carried by the broiler for closing the opening in the stove when the broiler is within the same, and a door for closing the said opening when the broiler is without the body; the latter door being connected with the broiler when the said broiler is without the body so that it will be opened by the raising of the broiler and will be closed by the lowering of the same, substantially as specified.

5 5. The combination of a stove-body having a fire-box and an opening in one of its walls in a plane above the fire-box and also having bearings adjacent to said opening, a vertically-movable door for closing the opening in the wall of the body and having bearings, and a broiler adapted to be introduced through the opening in the wall of the body and having arms provided with lugs adapted to engage the bearings of the body and also having arms provided with lugs adapted to engage the bearings of the movable door; the latter arms being disposed at an angle to the first-named arms, substantially as and for the purpose set forth.

30 6. The combination of a stove-body having a fire-box and an opening in one of its walls in a plane above the fire-box, and also having ways, and bearings at the outer ends of said ways, a vertically-movable door for closing the opening in the wall of the body and having bearings, a broiler adapted to be in-

roduced through the opening in the wall of the body and having arms provided with lugs adapted to move in the ways and engage the bearings of the body and also having arms provided with lugs adapted to engage the bearings of the movable door; the last-named arms being disposed at an angle to the first-named arms, and a door connected to the broiler and adapted to close the opening in the body when the broiler is within the same, substantially as and for the purpose set forth.

7. The combination of a stove-body having a fire-box and an opening in one of its walls in a plane above the fire-box and also having ways, bearings at the outer ends of said ways and lugs below the ways at points adjacent to the door-opening, a vertically-movable door for closing the opening in the wall of the body and having bearings, a broiler adapted to be introduced through the opening in the wall of the body and having arms provided with lugs adapted to move in the ways and engage the bearings of the body and also having arms provided with lugs adapted to engage the bearings of the movable door; the last-named arms being disposed at an angle to the first-named arms and being also adapted to engage the lugs below the tracks or ways, substantially as and for the purpose set forth.

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

MAX M. KOCH.

Witnesses:

LENA ERBEN,
P. KNAPPENBERGER.