

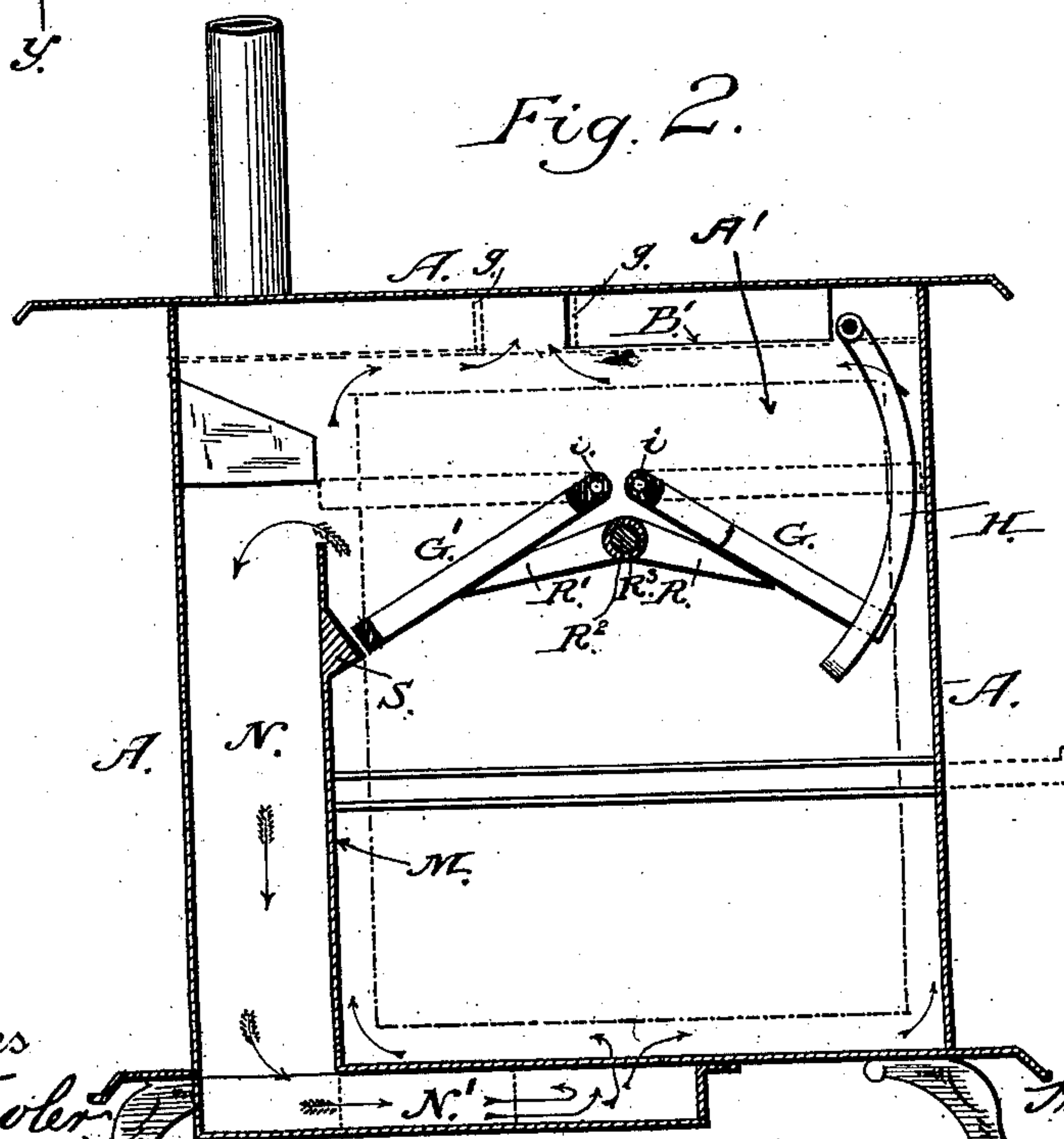
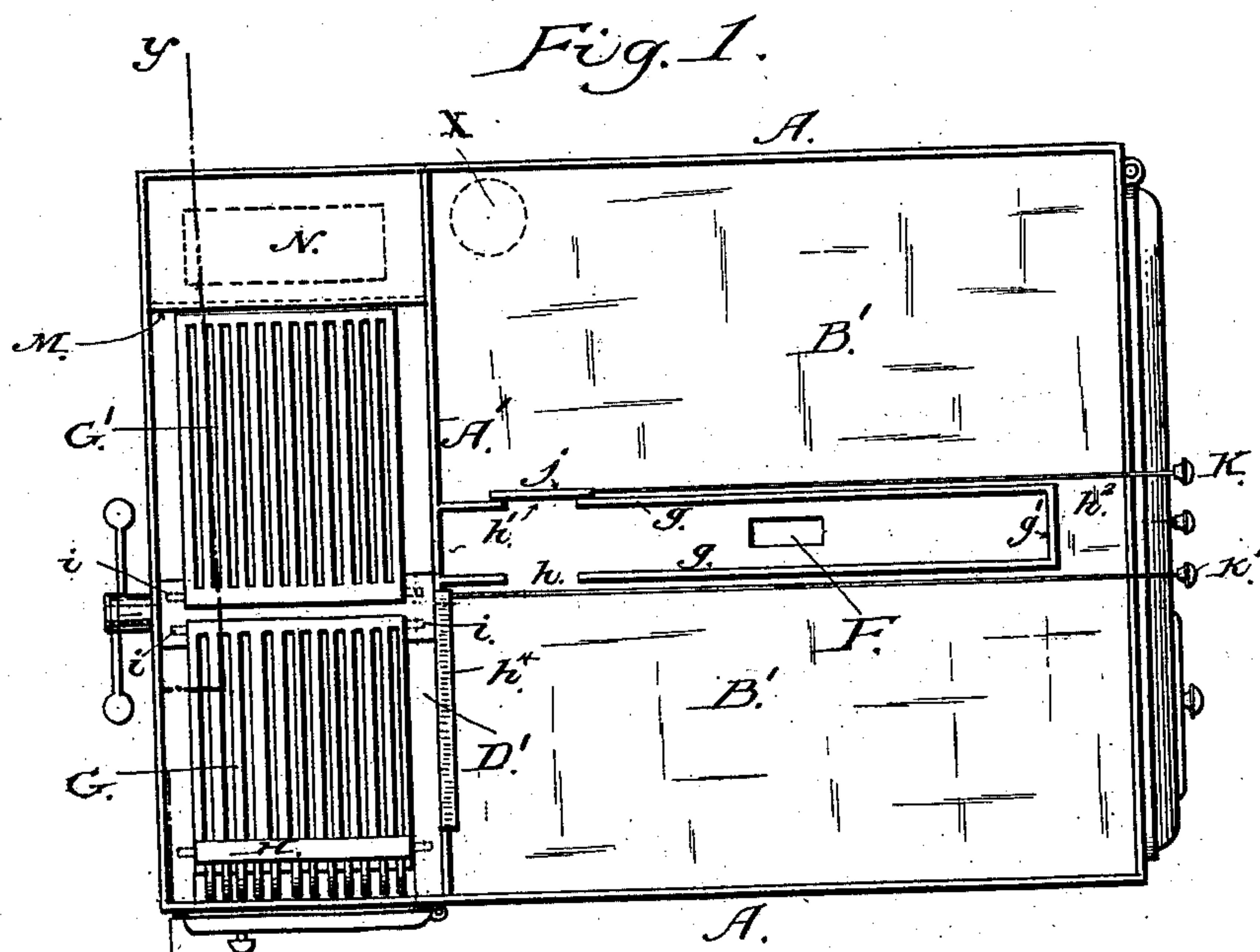
(No Model.)

3 Sheets—Sheet 1.

F. JACKSON.
COOK STOVE OR RANGE.

No. 361,064.

Patented Apr. 12, 1887.



Witnesses

J. W. Fowler
W. H. Patterson.

Inventor

Francis Jackson

By an Attorney

A. A. Evans & Co.

(No Model.)

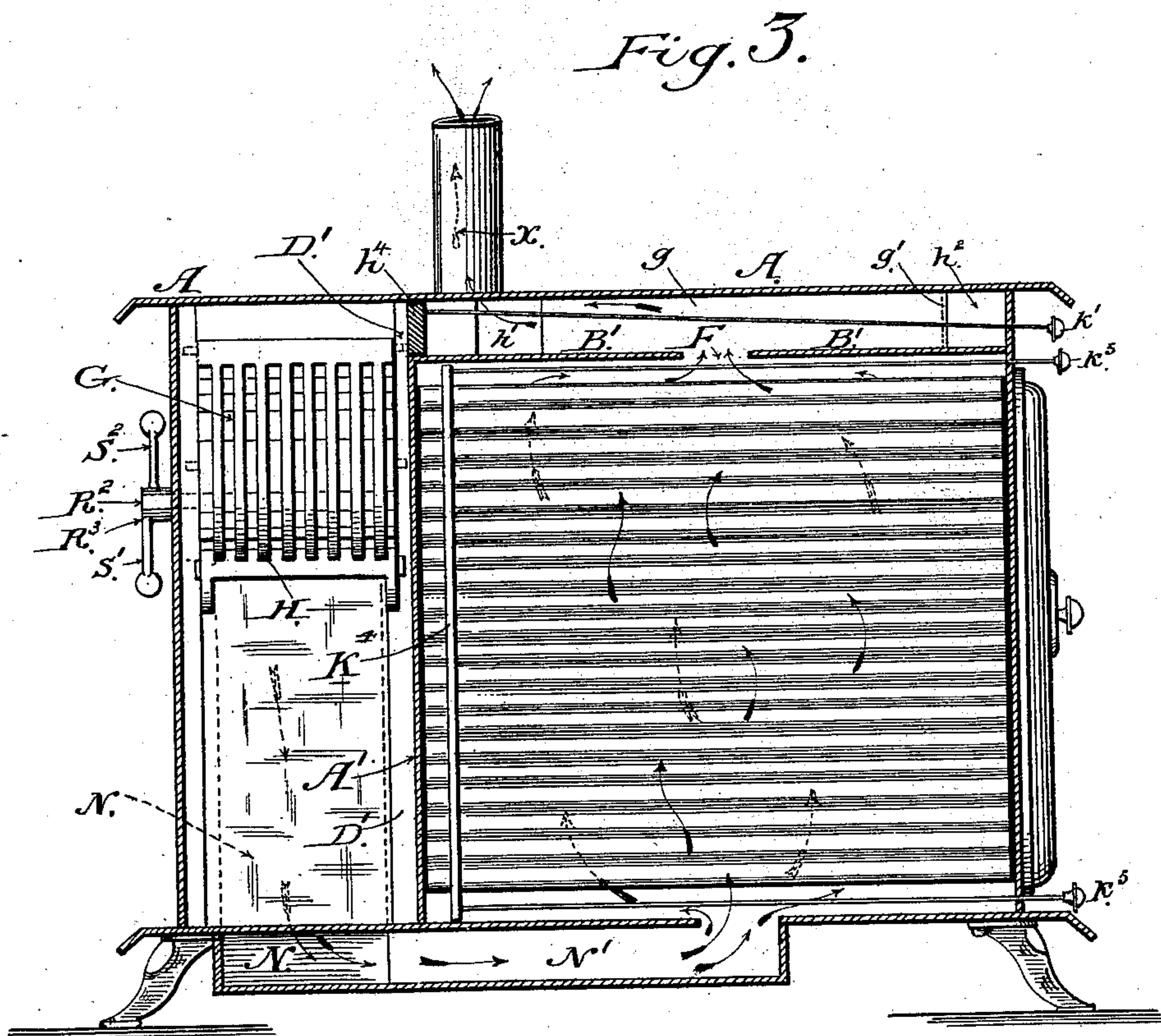
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J. W. Fowler,
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Fig. 4.

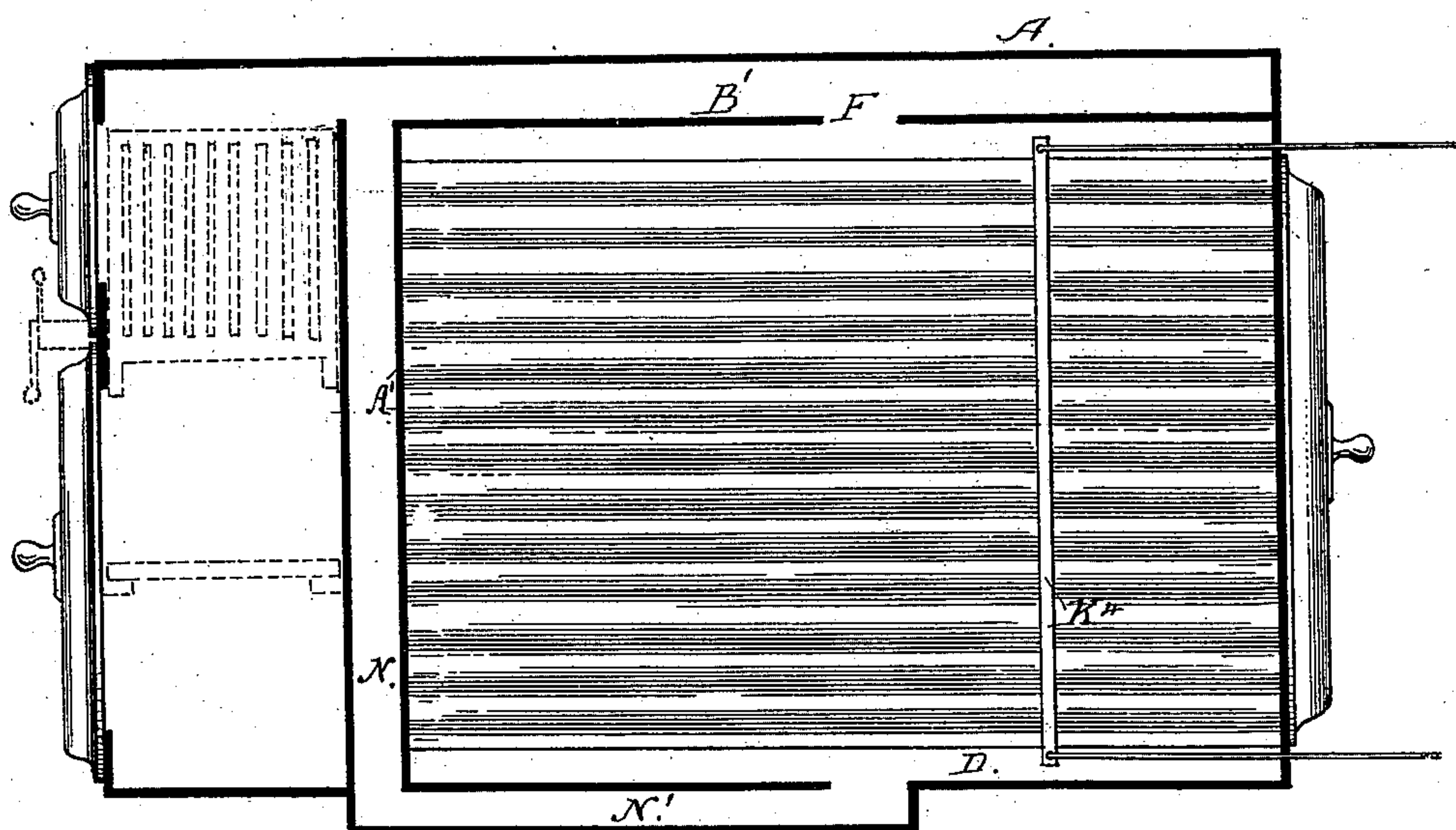
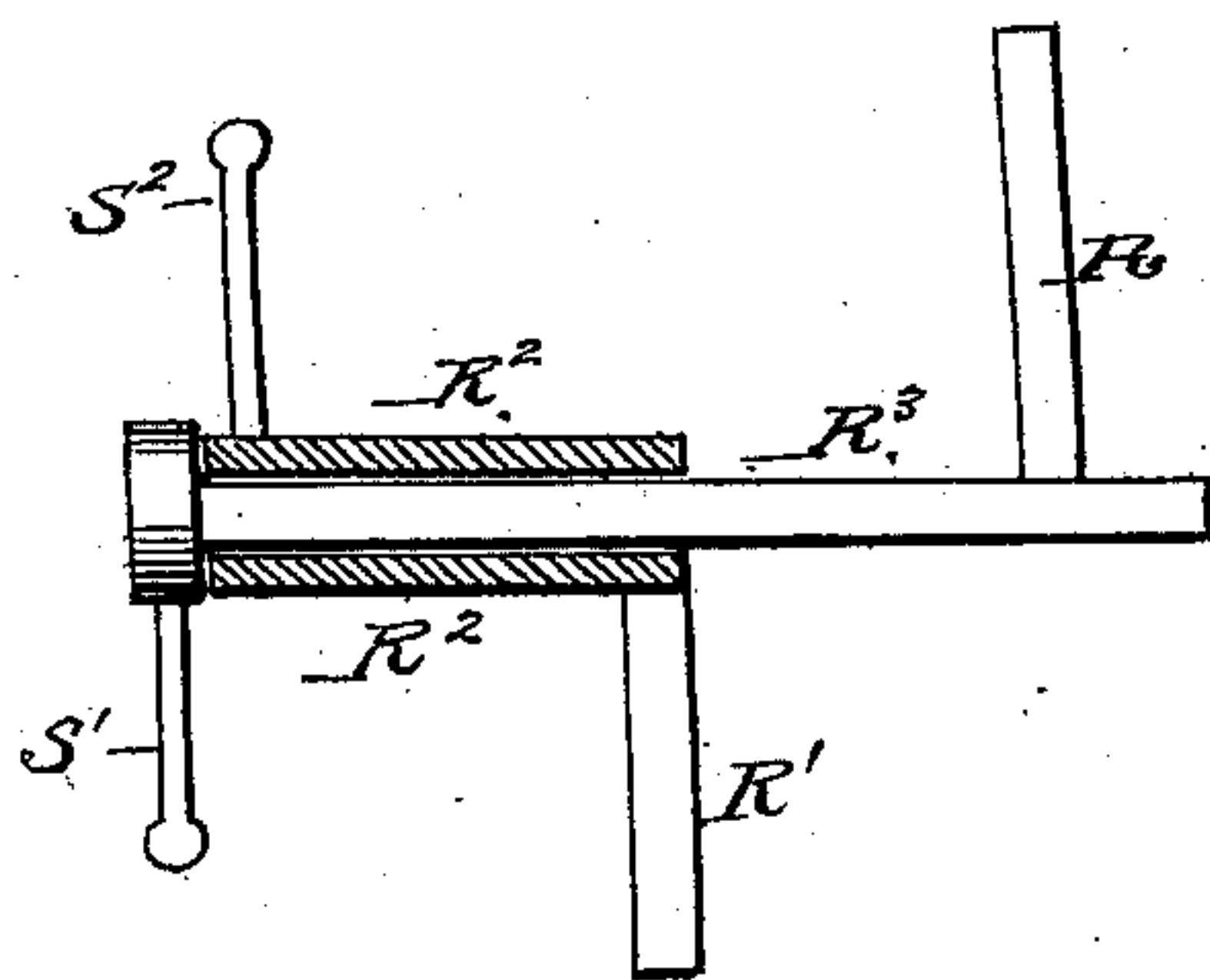


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

FRANCIS JACKSON, OF OAKLAND, CALIFORNIA.

COOK STOVE OR RANGE.

SPECIFICATION forming part of Letters Patent No. 361,064, dated April 12, 1887.

Application filed April 12, 1884. Serial No. 127,662. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS JACKSON, of Oakland, county of Alameda, State of California, have invented an Improvement in Cooking Stoves or Ranges; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to certain improvements in cooking stoves or ranges; and it consists in certain details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a top view of the stove with its top plate removed, showing the fire chamber, grate, and the flues and passages above the top of the oven. Fig. 2 is a vertical section on the line *y y* of Fig. 1, showing a section view of the grate and a section of the passage leading from the fire-place round beneath the oven. Fig. 3 is a vertical longitudinal section showing one side of the stove removed, and an end view of the grate and side view of the oven with the passage beneath. Fig. 4 is a sectional view similar to Fig. 3, showing the passage from the grate extending between the fire-place and the side of the oven, and thence beneath it, as in Figs. 2 and 3, the grate being shown in dotted lines. Fig. 5 is an enlarged view of the levers *S'* and *S²* and their shafts *R²*. A A are the outside plates or body of the stove. A' is a vertical partition extending from top to bottom across the stove between the fire-place and the oven-space.

B' is a partition extending horizontally between the top of the stove and the oven space or chamber, having a central aperture, F, made through it.

g g are vertical partitions extending from the plate A' nearly to the rear of the stove, and having a plate, *g'*, connecting the rear ends, so as to form a chamber between the plate B' and the top of the stove, which incloses the space through which the opening F is made. Both the partitions *g* have openings made in them, as shown at *h h'*. The opening *h* has no damper; but the opening *h'* has a damper, *j*, which is operated by a rod extending to the rear of the stove provided with a handle, K. Between the end partition, *g'*, and the rear of the stove is an open passage at *h²*, which connects the space upon one

side of the vertical partitions *g* with that upon the other.

An opening is made through the vertical partition A', connecting the fire-place with the flue-spaces D', and this is controlled by the damper *h⁴*, which is operated by a rod extending through the rear of the stove, having a handle, *k'*.

The oven is made small enough to be supported in the space between the vertical diaphragm A' and the rear of the stove and between the bottom of the stove and the horizontal diaphragm B' above, so that there is a space around the oven, which allows heated products admitted below the oven, as will be hereinafter described, to pass around it and escape through the opening F at the top. The sides of the oven are corrugated, as shown, so as to provide a greater heating-space, and it has a scraper, *k⁴*, fitting it and provided with rods and handles *k⁵*, exterior to the stove, so that the scraper may be drawn backward and forward to clean the oven from any deposits of soot upon it.

The grate is composed of two sections, G G', which have pivot or hinge pins at *i*, where the two edges of the grates are adjacent to each other, so that the outer edges of the grates may be moved up and down about these central hinges. The grates are supported by means of arms R R', upon the outer ends of which the lower parts of the grate-sections rest loosely. These arms R R' are fixed to central shafts, R² and R³, one being hollow and the other extending through it to the outside of the stove, the two being provided with handles S' S², by which they may be turned. The shafts R² R³ are journaled just beneath the center or meeting line of the grate-sections, and it will be manifest that when the handles S' and S² are turned the arms R R' will act to raise the grate-sections G G'. The outer ends of the arms R R' slide loosely beneath the grate-sections, not being attached to them. When the grate is raised into a horizontal position, as shown in the dotted lines in Fig. 2, it will be manifest that a smaller amount of fuel will be needed, and that the fire will be retained nearer the top of the stove; and when the grate is let down so that the two sections stand at an angle, as shown in Fig. 2, a con-

siderably larger amount of fuel may be employed.

H is a vertically-curved grate (shown in Figs. 1, 2, and 3) fixed at one end of the fire-place, and the ends of one of the horizontal swinging sections pass through the slots in this curved grate, so that when the horizontal section is moved up or down these ends will follow the curve of the grate H, and at the same time clear it from any obstruction of coal or ashes.

The rear grate swings in the same manner against the vertical diaphragm or partition M and a projecting lug, S, which practically serves the same purpose as the curved grate in front, and prevents the fuel from falling down beyond the end of this grate when it is low down.

Between the partition M and the back of the stove is a vertical passage, N, Fig. 2, which connects with the horizontal passage N', and this opens into the space beneath the oven, as shown in Figs. 2 and 3, so as to allow the heat of the grate to pass around the oven, when desired.

The modification, Fig. 4, illustrates the passage N as being between the side of the grate and the partition A', instead of between the end of said grate and the rear of the stove-casing, as shown in Fig. 1, the result in both instances being the same.

The operation of my stove will then be as follows: When the fire is to be made upon the grate, the latter being set in any desired position by means of the handles or levers S' S², upon the outside of the stove, the damper h¹ will be opened, and also the damper j, so that the draft will be established directly through the grate and these passages to the pipe or chimney X until the fuel has become thoroughly ignited. When it is desired to pass the heat beneath the oven, the damper h¹ is closed and the grate G' being dropped into position shown in Fig. 2 the heat will pass, as shown by the arrows, through the passages N N' into the space around the oven, rising thence through the passage F in the diaphragm or partition B', and thence, passing through the open passage h in the partition g, (the damper j being closed,) it will pass through the flue-

space D', thence through the passage h² and through the other flue-space upon the opposite side of the partition g to the chimney or pipe X, thus heating all portions of the oven above and below, and also distributing the heat above the top of the oven and beneath the top plate of the stove.

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

1. The combination, with a stove, of two grate-sections having their adjacent or meeting edges hinged or pivoted so that their outer edges may swing about their pivotal points, levers or arms acting upon these sections, whereby the latter may be raised or depressed, concentric shafts to which these arms are attached, and levers exterior to the stove adapted to be moved to raise and lower the grate sections, substantially as herein described.

2. The combination, with a stove, of two grate-sections having their adjacent edges hinged or pivoted, levers on the outside of the stove and connected with the sections, whereby the latter are operated, a vertically-arranged grate at the outer end of one of said sections, and a rear plate or diaphragm at the outer end of the other section and having the lug S, substantially as herein described.

3. The fire-place having the hinged or swinging grates and the flues or passages N N', leading beneath the oven-space, in combination with the oven-chamber containing the oven, of smaller dimensions, around which the heat may pass, a horizontal plate or diaphragm above the oven with the opening through which the heat may leave the oven-space, and the vertical partitions g g', with their openings and dampers, substantially as described.

4. The combination, with the stove-casing having the vertical partition A' and horizontal perforated partition B', of the vertical partitions g g' between the top of the casing and horizontal partition, and the dampers h¹ and j, with their operating rods and handles, substantially as herein described.

FRANCIS JACKSON. [L. S.]

Witnesses:

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JNO. L. TAGGARD.