

R. J. BLANCHARD.

Cooking Stove.

No. 9,212.

Patented Aug. 24, 1852.

Fig. 1.

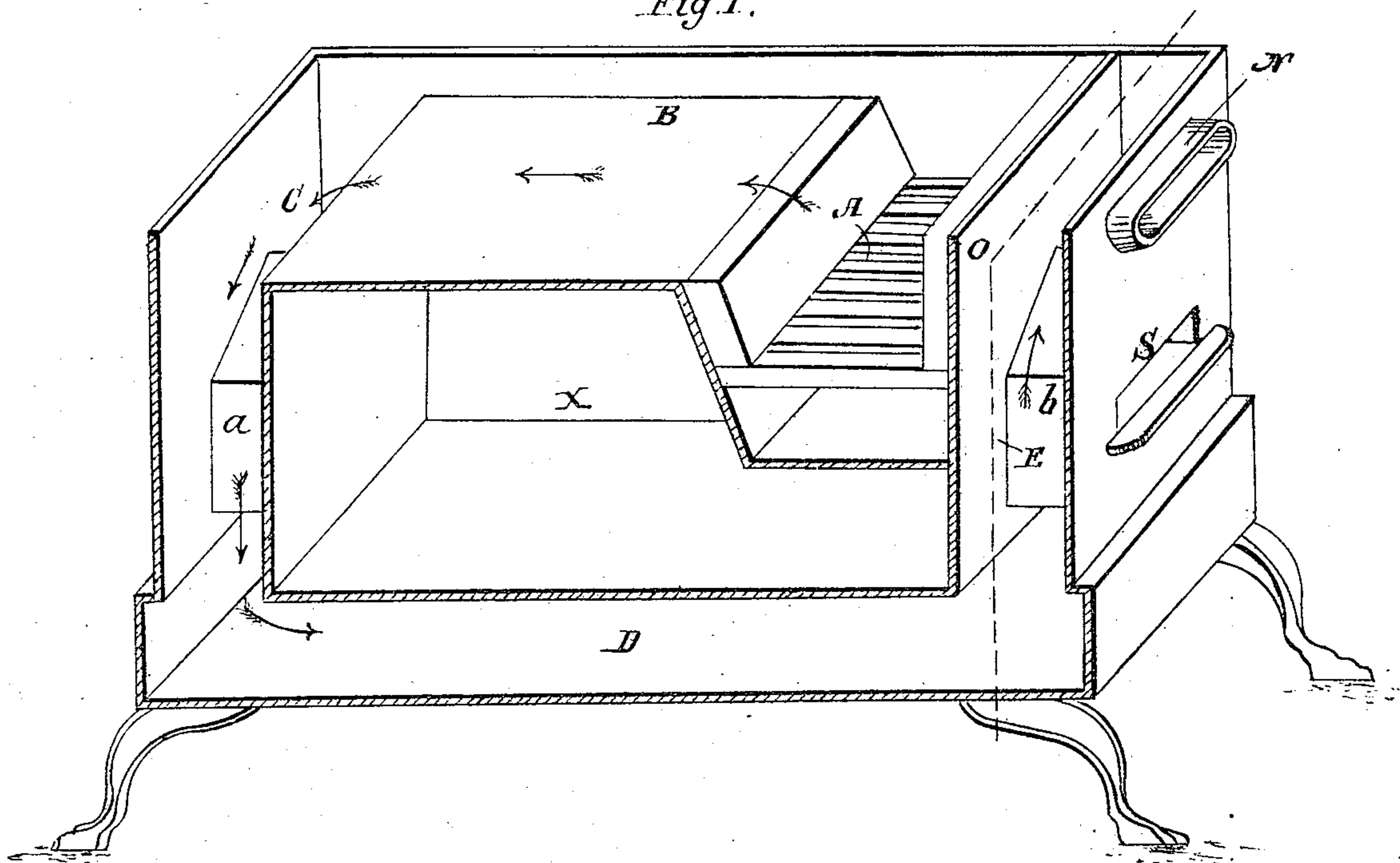
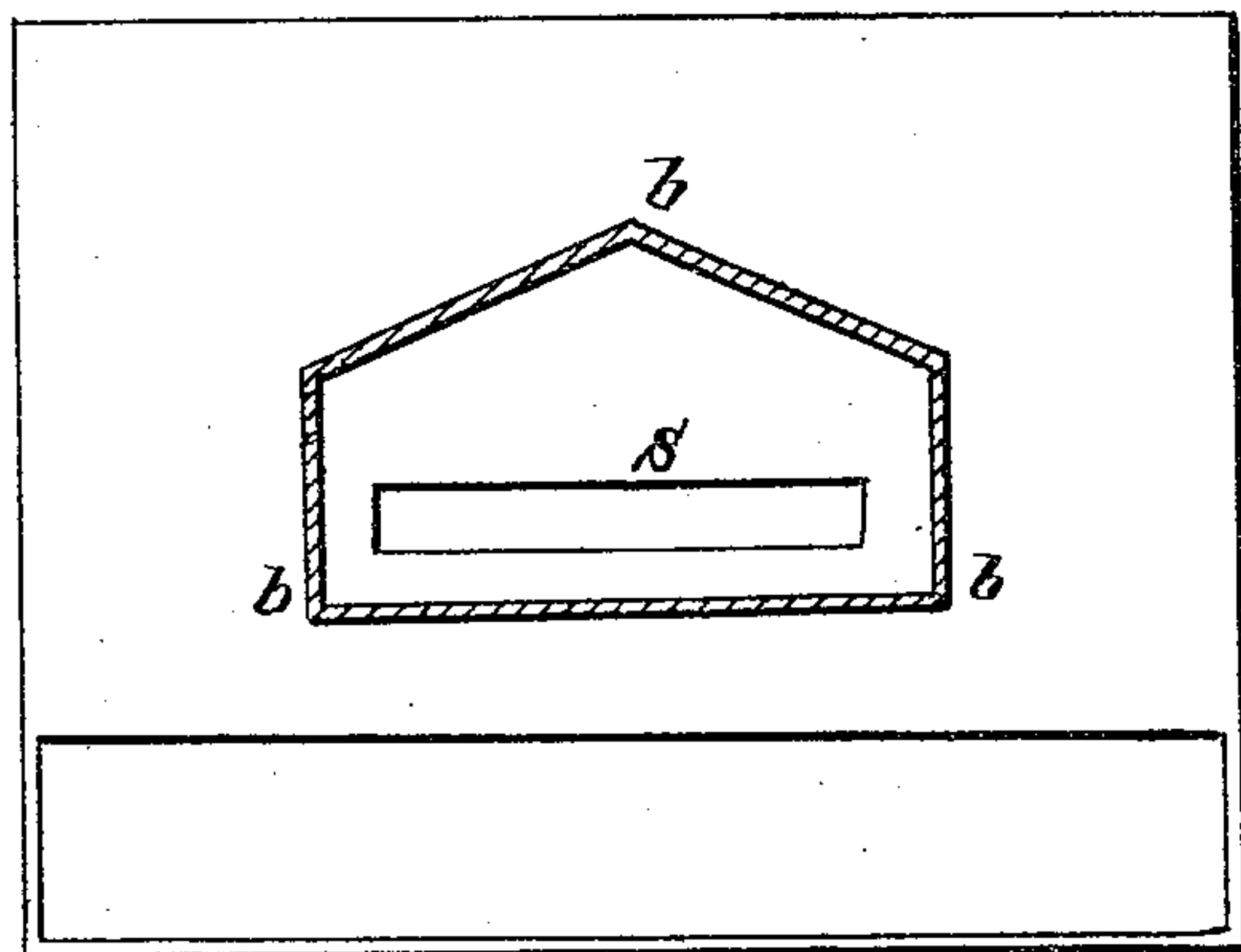


Fig. 2.



UNITED STATES PATENT OFFICE.

R. J. BLANCHARD, OF ALBANY, NEW YORK.

COOKING-STOVE.

Specification of Letters Patent No. 9,212 dated August 24, 1852.

To all whom it may concern:

Be it known that I, REUBEN J. BLANCHARD, of the city of Albany and State of New York, have invented a new and useful
5 Improvement in the Construction of the Flues of Stoves; and I declare the following specification, with the drawings hereto annexed as part of the same, to be a full and perfect description thereof.

10 Figure 1 represents a perspective view of a cooking stove with one side and the top removed in order to show the interior arrangement of the flues with my improvement. Fig. 2 represents an end view, showing a cross section of the stove in the line
15 *y, o, z*, through the back flue see Fig. 1.

From Fig. 1 the arrangements of the furnace and flues will be at once understood. The flame and heated gases from the furnace A pass into the flue B lying between the
20 top of the stove and the top plate of the oven X, then down the front flue C between the front of the stove and the front plate of the oven, then along the bottom flue D between the bottom of the stove, and the bottom
25 plate of the oven, then up the back flue E between the back of the stove and the back plate of the oven passing out at the nozzle N.

Stoves have been constructed in which the
30 heat has been conducted from a furnace placed similarly to the one above described, over a top flue then through two corner flues, one being in each angle of the front of the stove, then through a bottom flue and up
35 through a plain back flue to the exit nozzle situated as the one shown above. The result of this arrangement has been that the front end of the oven has been deprived of heat, over a large middle space, and also that the
40 separated columns of heated gases, after passing downward through the flues would keep separated till they arrived near the back flue, thus depriving a large central portion of the bottom of the oven of the effect of
45 the heat, and when the columns had united they would contract their surface toward the center of the back flue to nearly the width of the nozzle thus depriving the side portions of the back plate of the oven from
50 receiving a due portion of heat.

My improvement consists in introducing

into the front and back flues, a separator to divide the columns of heated gases during a portion of their descent and ascent in those flues. These separators are shown at *a* and
55 *b* Fig. 1 and *b* Fig. 2. They are plates of metal arranged like the sides, roof and floor of a house as shown in profile in Fig. 2 and extending from the outside plates of the stove to those of the oven. In width the
60 apparatus occupies about two-thirds of the space between the side plates of the stove, and in height about two thirds of the space between the top and bottom plates of the stove, the apex of its roof plates being a
65 small distance below the range of the top plate of the oven in the front flue, and below the lower edge of the nozzle in the back flue. By this arrangement the hot gases are kept
70 spread over the entire surface of the top plate, and after being turned over into the front flue are divided for a short time, then they partially unite below the separator and turn into the bottom flue where they unite
75 more thoroughly and are kept spread over the whole flue, by the effect of the separator in the back flue to prevent them from tending toward the central opening through the nozzle. In this state the hot gases pass up
80 the back flue on each side of the separator, converge above it, and pass through the nozzle into the chimney.

The draft of the furnace is supplied to the ash pit through an air-passage S which passes through the separator in the rear flue
85 to the ash pit under the grate.

In parlor stoves where the entire oven is under the furnace, the air passage is made through either the front or rear separator.

What I claim as my invention and desire
90 to secure by Letters Patent is—

The placing the separators *a* and *b* in the front and back descending and ascending flues of a cooking stove to divide the products of combustion while they are permitted
95 to pass undivided over the top and under the bottom plates of the oven substantially as described in the above specification.

R. J. BLANCHARD.

Witnesses:

RICHARD VARICK DE WITT,
T. W. GHERT.