

(No Model.)

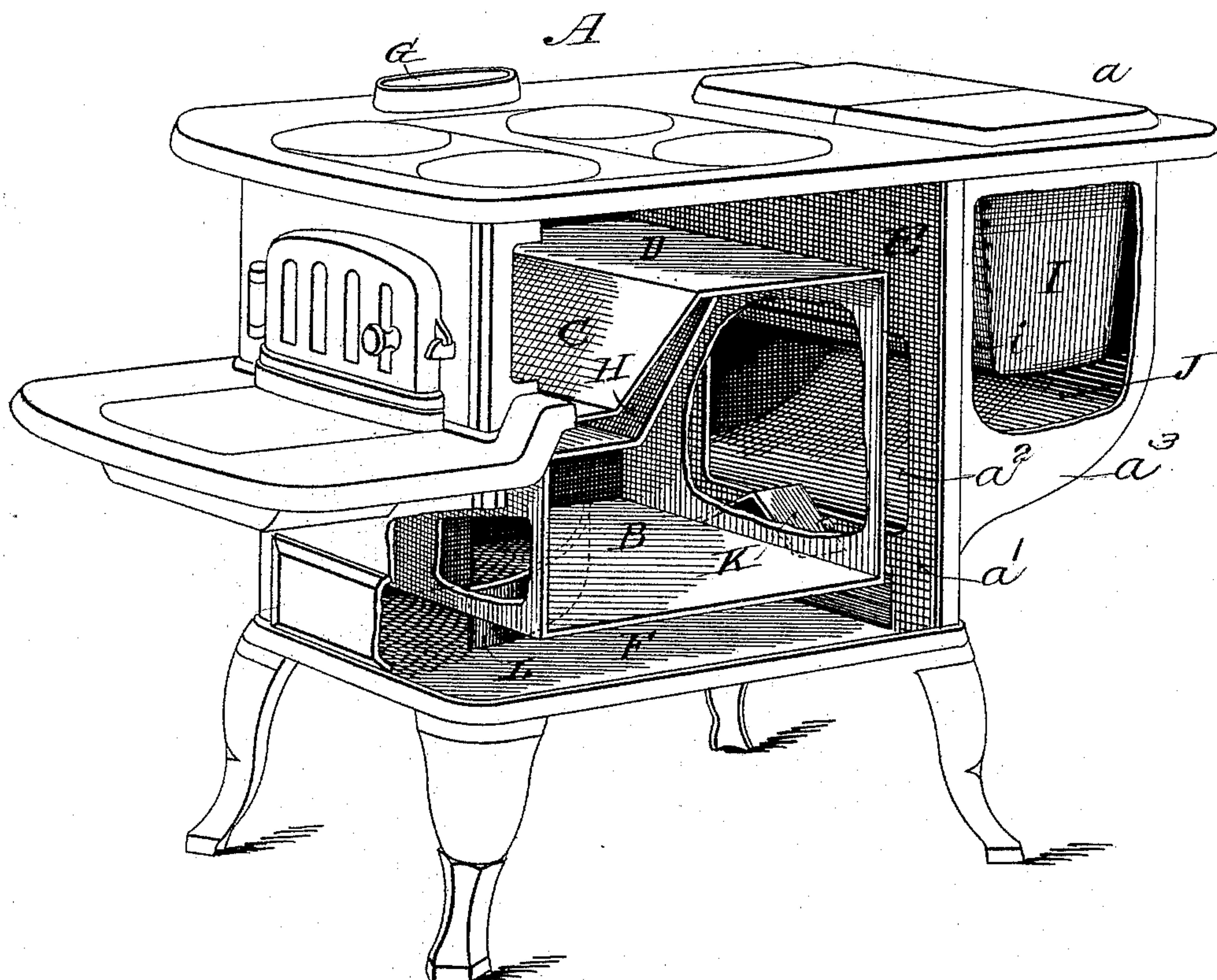
2 Sheets—Sheet 1.

G. F. FILLEY.  
RANGE.

No. 497,271.

Patented May 9, 1893.

*Fig. I.*



*Attest:*  
*A. Bonville*  
*Notary*

*Inventor:*  
*Giles F. Filley*  
*by C. P. Moody*  
*his atty*

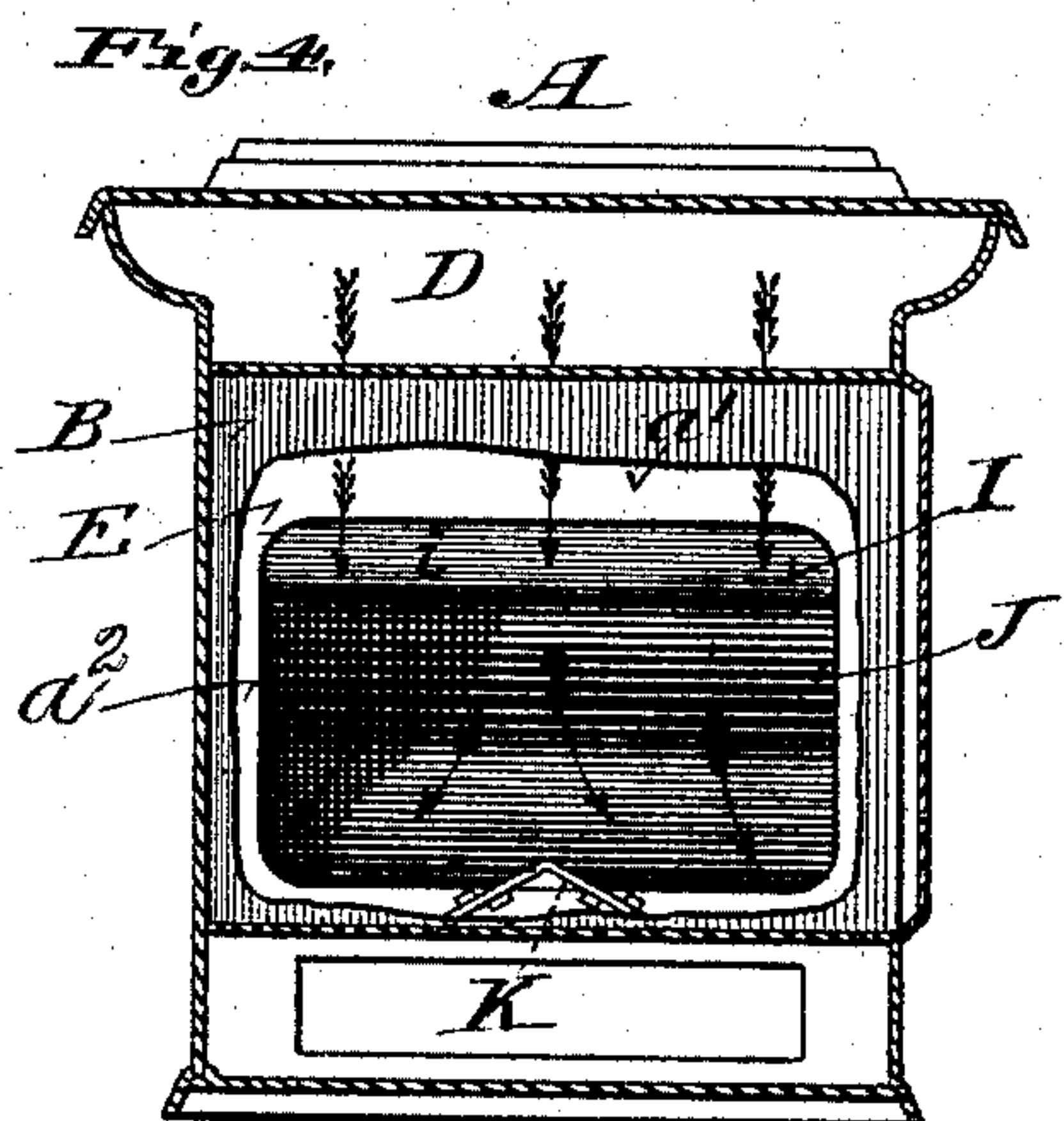
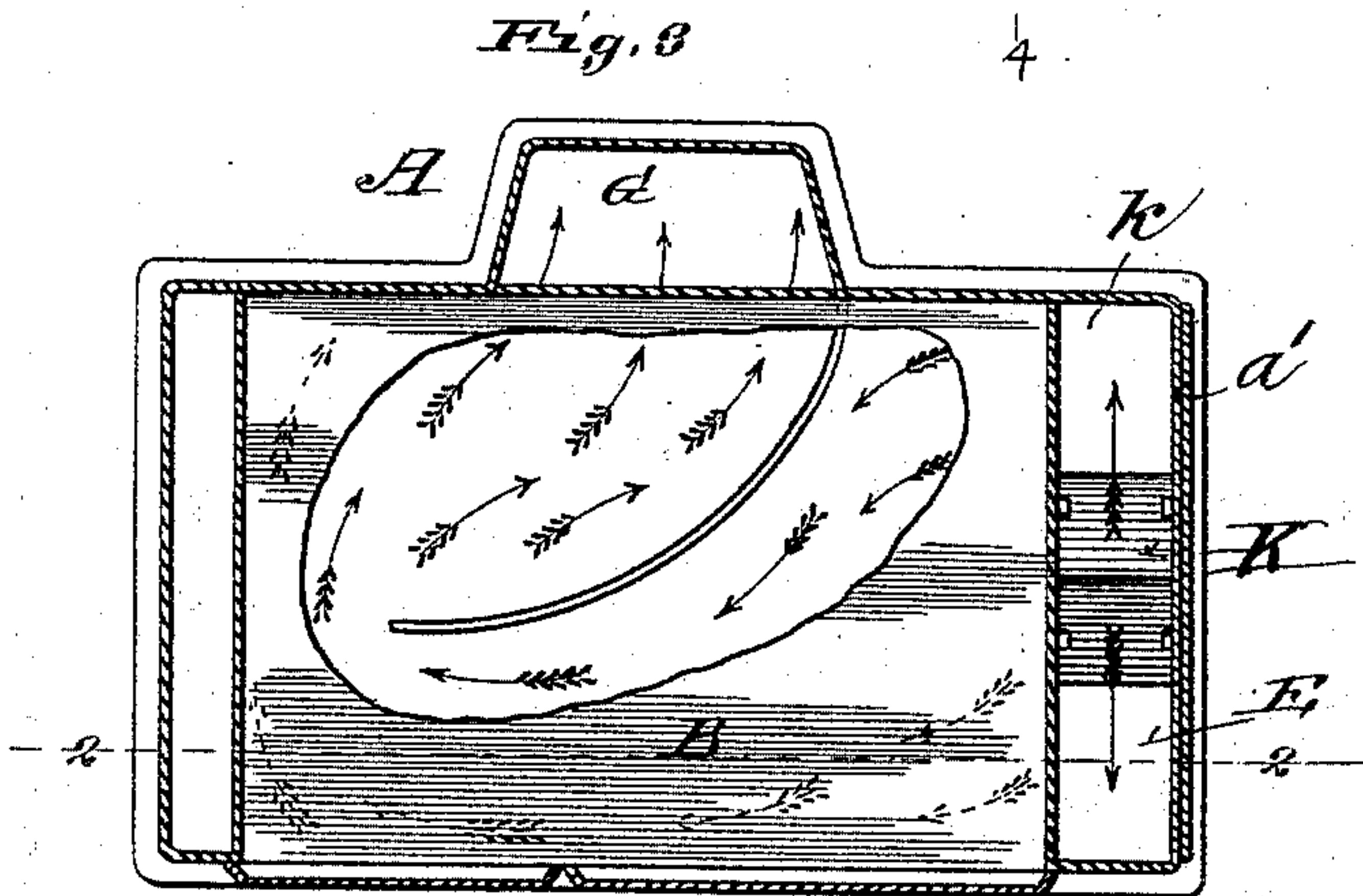
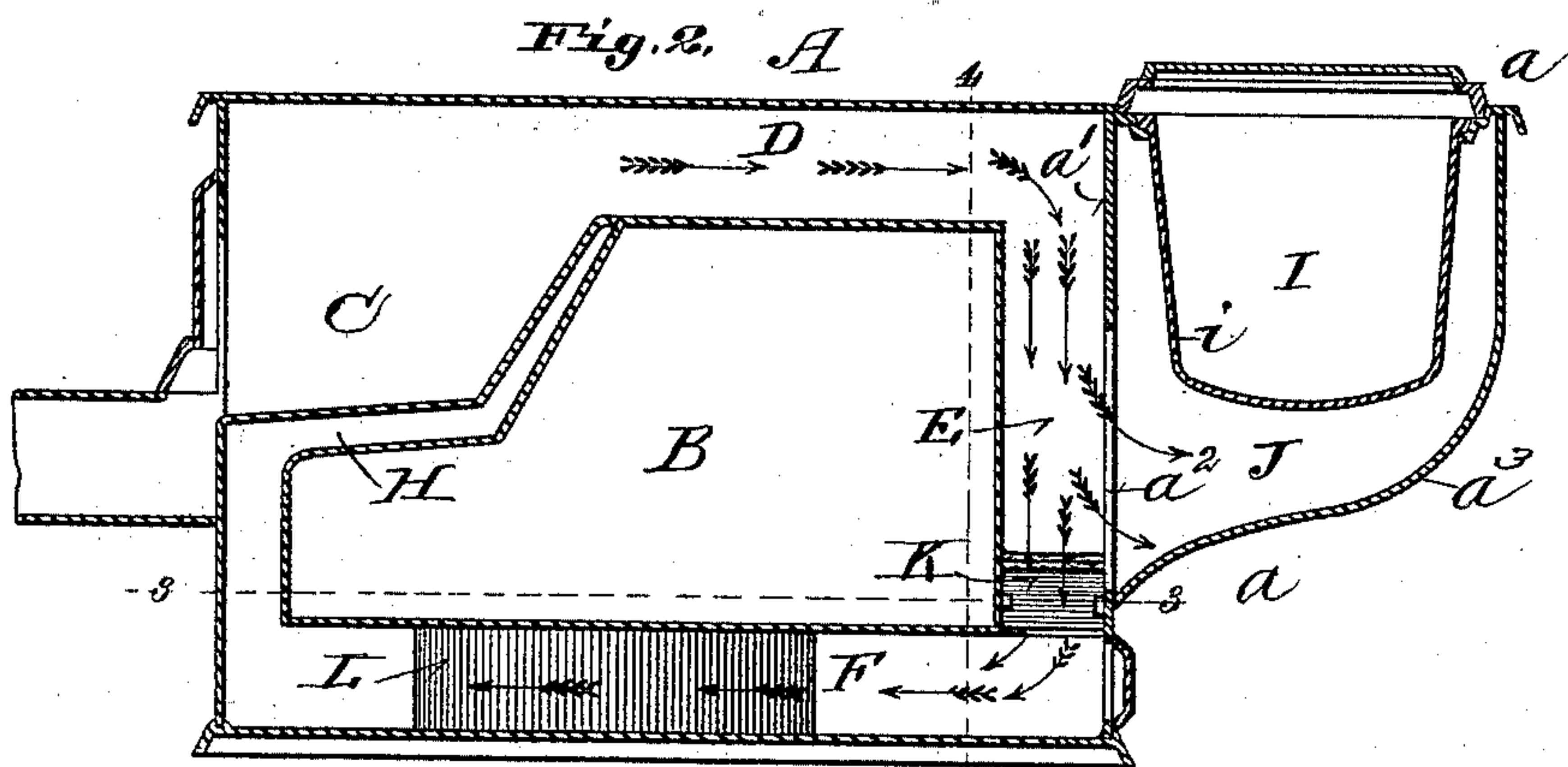
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2 Sheets—Sheet 2.

G. F. FILLEY.  
RANGE.

No. 497,271.

Patented May 9, 1893.



Attest:  
A. Bonville  
Chas. H. Hoke

Inventor:  
Giles F. Filley  
By C. D. Moody  
his atty



# UNITED STATES PATENT OFFICE.

GILES F. FILLEY, OF ST. LOUIS, MISSOURI.

## RANGE.

SPECIFICATION forming part of Letters Patent No. 497,271, dated May 9, 1893.

Application filed February 8, 1892. Serial No. 420,731. (No model.)

*To all whom it may concern:*

Be it known that I, GILES F. FILLEY, of St. Louis, Missouri, have made a new and useful Improvement in Ranges, of which the following is a full, clear, and exact description.

I have heretofore made an improvement in cooking ranges, described in a pending application for Letters Patent of the United States therefor, filed November 28, 1891, Serial No. 413,426, whose object is the more equable heating of the oven and other parts of the range, and consisting partly in the means whereby the heat, in a single or sheet flue range is conducted more evenly from the fire place over the oven, and delivered more evenly into the flue beneath the oven, and partly in a provision for applying the heat more advantageously to the oven bottom. In the construction referred to no hot water reservoir is shown.

In the present construction a reservoir is employed, and the improvement consists mainly in the means whereby, in a sheet flue range, the heat is applied more evenly and effectively to the reservoir, as well as more evenly to the oven of the range, than hitherto has been practicable, substantially as is hereinafter set forth and claimed, aided by the annexed drawings, making part of this specification, in which—

Figure 1 is a view in perspective of the improved range, the near side wall thereof being removed and portions of the remainder of the construction being broken away to exhibit the interior; Fig. 2 a vertical, longitudinal section of the range, on the line 2—2 of Fig. 3 which in turn is a horizontal section on the line 3—3 of Fig. 2; and Fig. 4 a vertical cross section on the line 4—4 of Fig. 2. In the last two named figures portions of the plates are broken away.

The same letters of reference denote the same parts.

The improvement under consideration is adaptable to many of the varieties of sheet flue ranges. The form exhibited is substantially similar to that shown in the application above referred to, and excepting as its construction is varied or supplemented by the embodiment therein of the present improvement the range, A, is of a familiar type.

B represents the oven, C the fire place, D

the flue leading from the fire place above the oven, E the sheet-flue, F the bottom flue beneath the oven, G the escape flue, and H a blind flue at the front end of the oven. The range is extended, at *a*, to receive the reservoir I. The end-plate, *a'*, of the range has an opening, *a<sup>2</sup>*, in it to enable more or less of the heat which enters the sheet flue E to pass into the space, J, within the extension *a*, for the purpose of heating the reservoir therein. Said opening, *a<sup>2</sup>*, extends substantially throughout the width of the flue E, and, in a vertical direction, from a point above the level of the lower end of the reservoir, downward and preferably well down to the level of the oven bottom at which point the shell, *a<sup>3</sup>*, of the extension *a* is joined to the main portion of the range. At or in the vicinity of the lower edge of said opening the deflector, K, is arranged within the sheet flue. This deflector serves, so far as the oven is concerned, the same purpose as in the construction referred to; that is, to divide the heat current which descends through the sheet flue and direct its portions respectively toward the front and the back of the range. But in the present construction it serves an additional purpose, namely, to direct the heat to better advantage against the reservoir. For if the heat were allowed to pass downward through the sheet flue in the ordinary manner it would concentrate more at the center of the flue, and in such event the heat is applied if at all to the central portion of the reservoir. But when means such as the deflector mentioned are employed the heat, instead of drawing away from the front and back of the stove into the central portion of the sheet flue, is applied evenly throughout the width of the sheet flue and in consequence evenly throughout the opening, *a<sup>2</sup>*, against the reservoir beyond, and resulting from this the reservoir is more readily heated. The deflector also, and irrespective of its acting to divide the heat current, serves to check the descending heat-current and to influence a portion of it to pass through the opening *a<sup>2</sup>* into the space J.

In connection with the parts thus far described the flue strip, L, extending from one side of the escape flue and into the flue F, curving round toward the front and toward



the fire place end of the stove, is employed in substantially the same manner as in the construction above referred to. That is it serves to direct the heat which passes downward through the opening, *k*, at the back of the deflector to better advantage beneath the oven, and substantially as explained in the application above named. Thus by combining the described deflector with the sheet flue, and in the vicinity of an opening such as described leading into the space containing the reservoir, several desirable results are simultaneously accomplished in a sheet flue range: the heat is applied more evenly in the upper part of the construction, more evenly to the oven, and more effectively to a hot water reservoir, than hitherto has been attainable, and all in a simple and economical manner. In carrying out this improvement I desire not to be restricted to any special form of extension, *a*, or reservoir *I*, nor to any special relative arrangement of said reservoir and the end-plate, *a'*, of the range, so long as said end plate is so constructed, and the reservoir so made and arranged, as to expose the reservoir to the heat descending through the

sheet flue *E*, and it is possible to carry out the improvement when the front wall, *i*, of the reservoir and the end-plate *a'*, are substantially one and the same part.

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I claim—

In a range the end *a'*, forming one wall of the rear flue *E*, and having an opening *a''*, to enable the products of combustion to pass into the space under the water reservoir, the deflector *K*, arranged in said flue at the lower edge of said opening, and the bottom flue *F*, having therein the curved flue strip *L*, for deflecting the products of combustion evenly over the under side of the oven, and the escape flue *G*, all in the combination as described, whereby the products of combustion in their escape from the fire box are led under the reservoir and are distributed evenly under the oven, and finally pass out of the escape flue.

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Witness my hand this 23d day of January, 1892.

GILES F. FILLEY.

Witnesses:

V. G. FILLEY,  
C. D. MOODY.