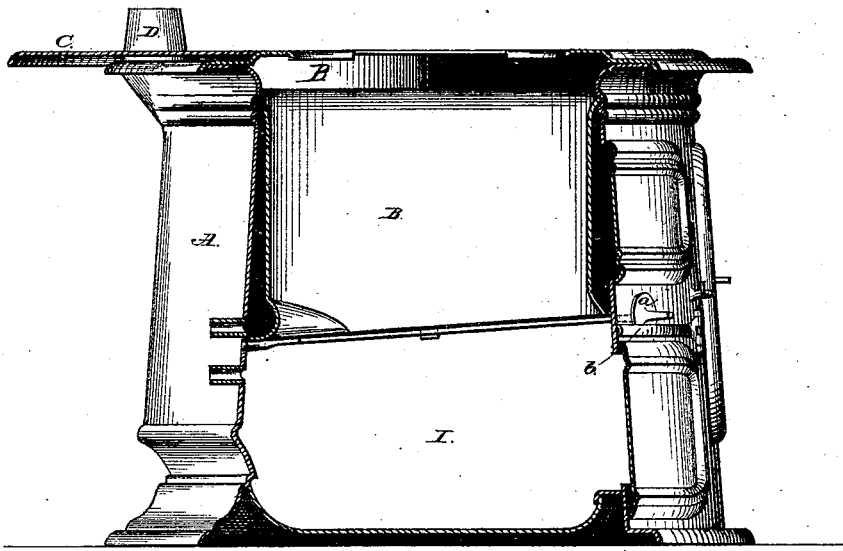


A. RICHMOND.
RANGES.

No. 183,513.

Patented Oct. 24, 1876.

Fig. 1.



Attest:

Allen Tunny.
George W. Meiller

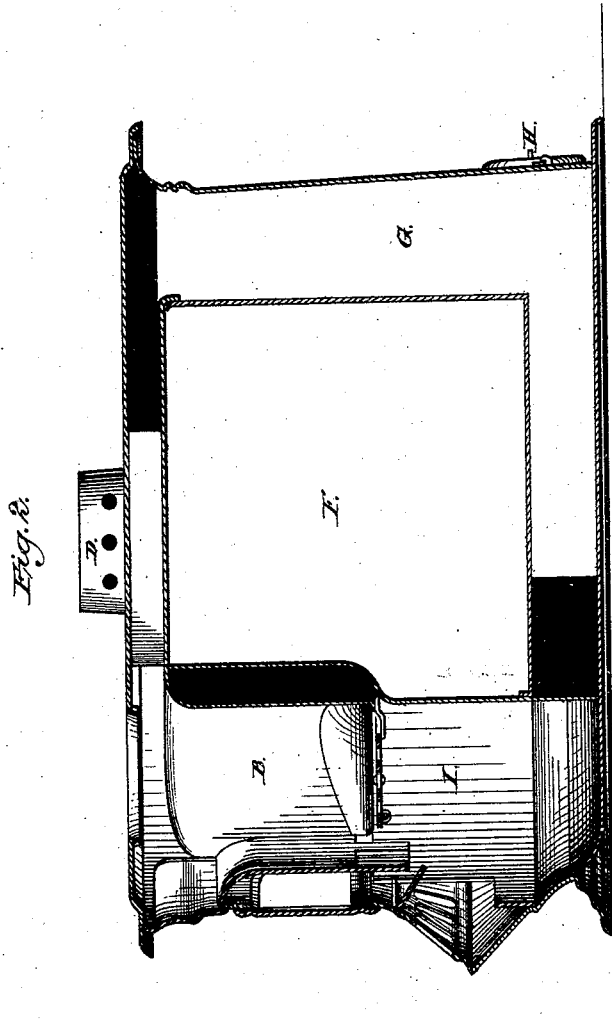
Inventor:

Aspollos Richmond

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Allen Tunny,
George W. Heiler

Inventor:
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Fig. 3.

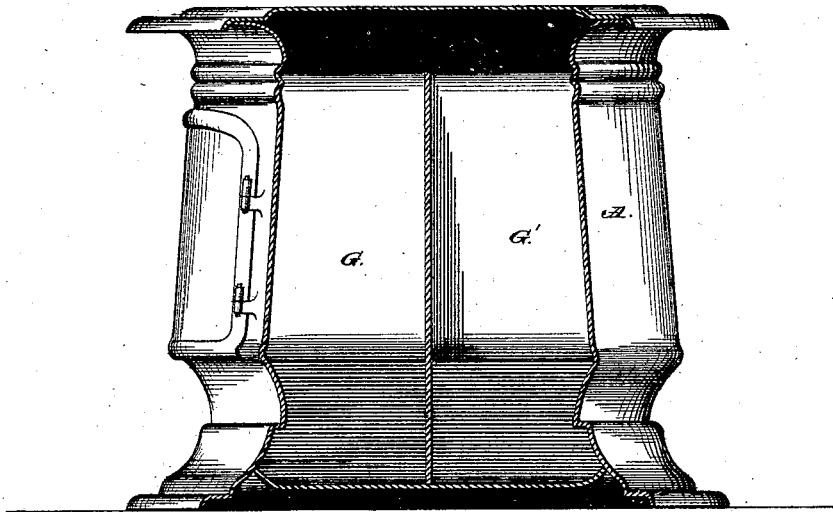
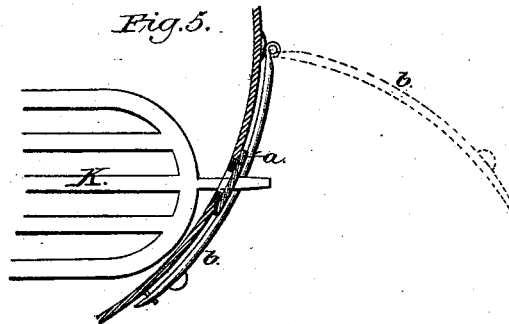


Fig. 5.



Attest:
Allen Tunney,
George W. Neiller

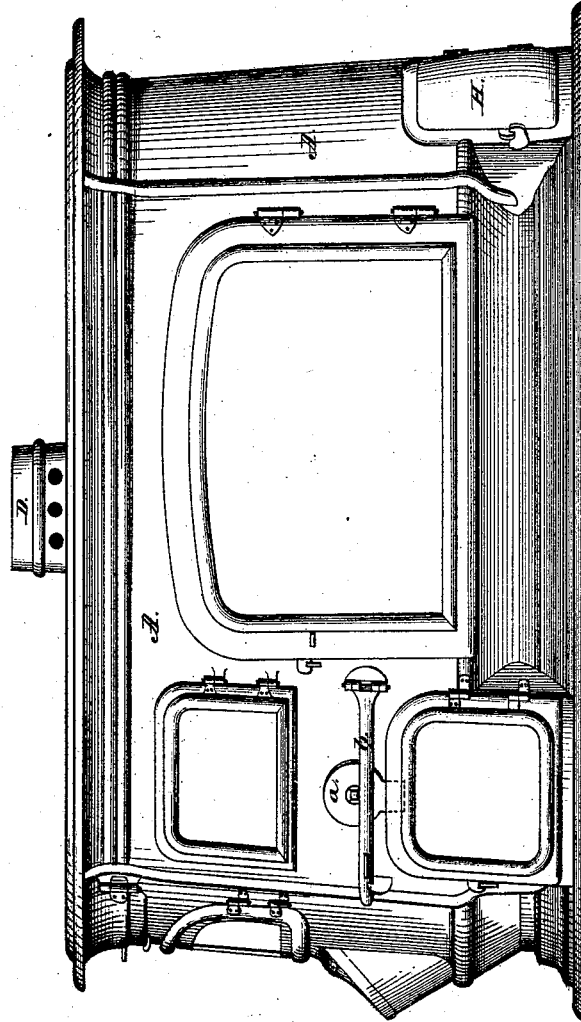
Inventor:
Apollos Richmond

A. RICHMOND.
RANGES.

No. 183,513.

Patented Oct. 24, 1876.

Fig. 4.



Attest:

Allen Tenney.

George W. Miller

Inventor:

Apollo Richmond

UNITED STATES PATENT OFFICE.

APOLLOS RICHMOND, OF BROOKLYN, CONNECTICUT.

IMPROVEMENT IN RANGES.

Specification forming part of Letters Patent No. **183,513**, dated October 24, 1876; application filed July 13, 1876.

To all whom it may concern:

Be it known that I, APOLLOS RICHMOND, of Brooklyn, in the county of Windham and State of Connecticut, have invented a new and useful Improvement in Ranges, which improvements are fully set forth in the following specification, reference being had to the accompanying drawings, in which like letters refer to like parts.

The object of my invention is to utilize and make serviceable in a cooking range or stove the oval form, in order that the fire-box may be of improved size and shape, and that the heat may be better radiated about the oven, so that fuel may be saved; that the oven may be larger than those of corresponding-sized square-corner ranges or stoves, and that the liability of square corners to breakage or cracking, by expansion and contraction and being in the way, may be avoided; that the flues may be increased in size without corresponding increase of weight in the stove; or, in other words, that all waste space in square corners is done away with.

Another object of my invention is to afford an improved method of securing the grate.

In the drawings, Figure 1 is a sectional view of the fire-box and grate-rod and shelf. Fig. 2 is a sectional view lengthwise of the range or stove, showing the flues and place of access thereto. Fig. 3 is a cross-section through the rear flues. Fig. 4 is a side elevation of the range, showing the outer grate-fasteners and one of the rear flue-doors. Fig. 5 shows the end of the grate and cap-piece in which its outer end rests, and the latch holding said cap-piece in place.

A is the body of range of oval outline. B' is a curved flue-strip in the top flue to deflect the products of combustion, and, in connection with a damper to be placed at the rear extensions of the same, to cause them to pass down the side diving-flue farthest from the exit-pipe. B is the fire-box situated at one end. C is a shelf, which is a prolongation of the top of the range, and is flush with it upon its upper surface. Its inner side is concave to receive the convex side of the stove, to which it is attached by screws. D is the hollow oval piece

upon which the stove-pipe is fitted, and the shelf has its inner edge cut away to receive one-half of it. F is the oven. G G' are the flues, to which doors H H' give access. I is the place where the ashes fall from the grate. K is the grate, journaled at the rear, and its outer end held in a removable cap, *a*. This cap is held in place by a latch, *b*.

It is not deemed necessary to letter or describe the remaining parts, as the various doors, hinges, covers, &c.

It will be noticed that the oval form gives large capacity to the rear flues, while avoiding the objectionable angular form. The flue-doors give ready access, so that soft coal can be readily used with this range. The grate, in lieu of the usual nuts and bolts, which often get rusted and fixed, is removably secured, and at its front end is journaled in a cap-piece, which drops as soon as the securing-latch is turned back.

I have already patented as a design the outer rounded form of a range or cooking-stove; but in said design patent no peculiarities of construction or mechanical utilities could be set forth.

I am well aware also that doors are used to give access to flues; but I have never seen them utilized in a range or cooking-stove.

I also know that stove-pipe shelves are common; but I am not aware that this shelf has ever been made a continuance of the stove-top, and secured to it simply by screws.

What I claim as my invention is—

1. The combination, in a range of oval outline, of a fire-box with curved ends and front, an oven with curved sides, a top flue with curved flue-strip, as shown and described, and diving and rising flues, provided with dust-doors, substantially as and for the purposes set forth.

2. The combination of the removable cap *a*, in which the end of grate is journaled, and the latch *b* for securing it in place, all as and for the purposes set forth.

APOLLOS RICHMOND.

Witnesses:

ALLEN TENNY,
GEORGE W. MILLER.