

A. WIETING.
Cooking Stove.

No. 125,367.

Patented April 2, 1872.

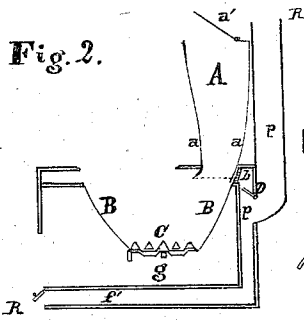


Fig. 3.

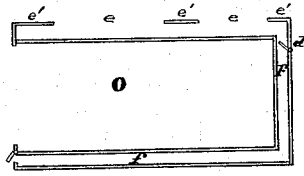


Fig. 1.

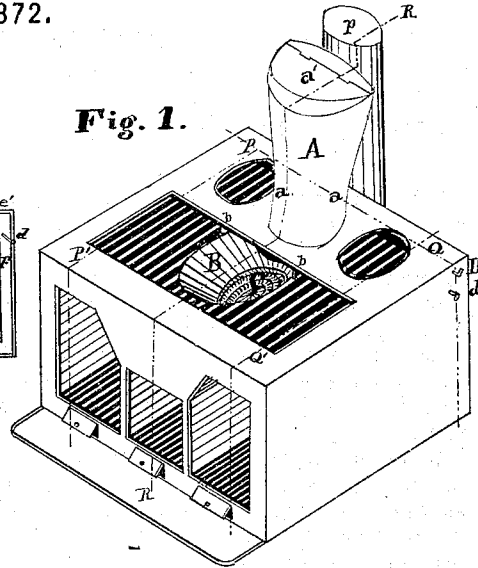


Fig. 4.

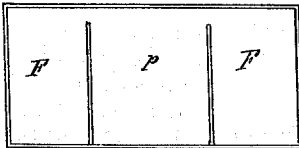


Fig. 6.

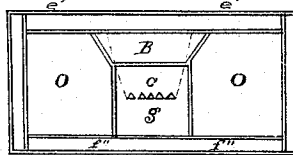


Fig. 5.

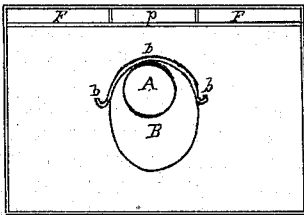


Fig. 7.

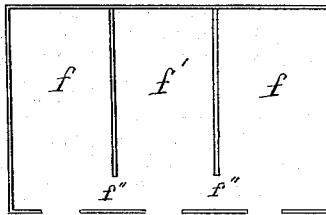
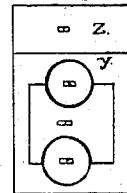


Fig. 9.



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UNITED STATES PATENT OFFICE.

ARCHIBALD WIETING, OF FORT PLAIN, NEW YORK, ASSIGNOR TO ELIZABETH WIETING, OF SAME PLACE.

IMPROVEMENT IN COOKING-STOVES.

Specification forming part of Letters Patent No. 125,367, dated April 2, 1872.

Be it known that I, ARCHIBALD WIETING, of Fort Plain, county of Montgomery, State of New York, have invented a new and Improved Cooking-Stove; and I declare the following to be a full, clear, and exact description of same, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawing which forms a part of this specification.

My invention relates to certain improvements in that class of stoves known as self-feeding stoves; and my invention consists—first, of improvements in the feeder; second, of improvements in the fire-pot; third, of improvements in the grate; fourth, the arrangement of collar at the top of the pot; fifth, of a device for changing the position of the pot-holes in the upper plate.

In the drawing, Figure 1 is an isometric projection of a stove with the lids removed. A is the feeder, reduced in size at *a a*, provided with lid *a'*. B is the fire-pot, circular at bottom and oblong at the top. *b* is a collar which prevents the fuel from burning when it is not utilized, and serves to drive the heat forward. C is the grate. D is a damper to close off the draught into the top of the exit-flue, and thence into pipe *p*. *d* are dampers in descending flues on both sides of the stove adjacent to the exit-flue. Fig. 2 is a section by a plane along the line R R, in which A is the feeder, reduced at *a a*; lid, *a'*; fire-pot, B; collar, *b*; grate, C; ash-box, *g*; exit-flue and pipe-hole, *p p*; damper, D; and horizontal flue, *f'*. Fig. 3 is a section along line P P' and Q Q', showing kettle-hole *e* in top plate *e' e'*; damper *d* in descending-flue F; bottom horizontal flue *f*. Fig. 4 is section on line P Q, in which similar letters represent similar parts. Fig. 5 is section along the plane of the top of the fire-pot. Fig. 6 is a section along P' Q', showing ovens O O, fire-box, grate, ash-box, and horizontal connecting-flue *f''*. Fig. 7 is a section on plane of hearth, showing the arrangement of the horizontal flues. Fig. 9 shows a device for changing the positions of the kettle-holes by means of the movable pieces *y z*.

First, I propose to make the feeder A similar in general shape to a boot-leg, large at the top, reduced in size at *a a* near the bottom, so

as to be out of the way in cooking, and to provide a lid or lids, *a'*, at the top, to close off all draught through the fuel in the feeder and thus prevent its ignition. I pitch the lower end of the feeder forward, making its back surface to be the continuation of the back of the fire-pot against which it rests, and to correspond laterally in curvature with the top of this part of the pot, so that the fuel in the feeder will be sure to replace that which is consumed at the base of its column. I terminate the bottom of the feeder in a circle, ellipse, or other suitable form.

Second, I make the pot elliptical or oblong at the top, in order to give sufficient room for the fuel to burn in front of the feeder A and yet economize space in the stove or range, presenting, at the same time, the greatest radiating surface to the ovens at its sides. I make it gradually smaller from the top downward, terminating it at the bottom in a circle where the grate is located, making the linear elements extending from top to bottom either curved or straight. This serves to carry all slate, cinders, and ashes onto the grate beneath the pressure of the feeding-column. I lay stress upon the peculiar shape of the pot, being, in connection with the feeder, the form best adapted to insure certainty of feeding itself, and economy of fuel, heat, and space.

Third, the grate is made thus, viz.: The outside ring S, the solid button *t* in its center, and the bar connecting the two, are cast in one piece; and at the front end of this bar is a projection downward, provided with a hole to receive the poker in shaking the grate. The middle ring *s* is cast separately, as is also the bar, which, extending beyond the larger ring at both ends, sets into receptacles and supports the grate. In putting this grate together the separate bar is placed beneath the large ring and button, perpendicular to their connecting-bar. The second or middle ring *s* is then placed on top and the two firmly riveted together, bringing the top surfaces of the rings and button into the same horizontal plane. The cross-sections of each of the rings and of the button are triangular, as shown, presenting a flat surface downward. The upper surfaces are all roughly serrated, so that when a poker is inserted in the hole and shaken sidewise the

outer movable ring and the inner movable button break up and crush any cinders or slate by rasping the substance against the middle stationary ring. In a large grate, instead of serrating the inner surface of the outer ring, I propose to cast ribs upon it, which, projecting downward and toward the middle ring, serves the same purpose, and admits of the draught coming up through from below. If necessary, I form the middle ring and button in like manner.

I know that a grate has been made with rings and button moving in a similar manner, but possessing different relative positions, and in which the middle ring presents but one rasping surface, which is on the same conical surface with that of the button; therefore, I do not claim broadly the use of the outer movable ring and middle stationary ring with the movable button, but limit myself to the device shown and described.

In attaching the feeder A to a stove or range I do not propose to limit myself to the shape or size of its top, but to vary it so as to suit the stoves and ranges now in use. I extend the top of the back portion of the fire-pot up to the top plate of the stove, carrying this extended portion around to the sides of the feeding-column. This serves to prevent the fuel from burning behind the column, where it is not utilized, and drives the heat forward and around over the ovens. I propose sometimes

to dispense with this extension, and place, instead, a collar, *b*, extending from the top of the pot to the top plate of the stove, to serve the same purpose. When it is desired to change the positions of the kettle-holes I effect it, as shown in Fig. 9, by simply transposing the two pieces *y* and *z*. These pieces are each rectangular, and the piece *y* carries the kettle-holes with it. By removing the piece *z* the carrier *y* can be slid or shifted into its place, and the piece *z* transferred to the other end of the carrier.

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

1. In a stove or range, the combination of the feeding device A, fire-pot B, grate C, and collar *b*, when the same are constructed and arranged and operate substantially in the manner set forth.

2. The collar *b*, situated and operating as described.

3. The rectangular carrier-piece *y* with removable pieces, as shown, and rectangular removable piece *z* for changing the position of the kettle-holes, operating in the manner substantially as shown and described.

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