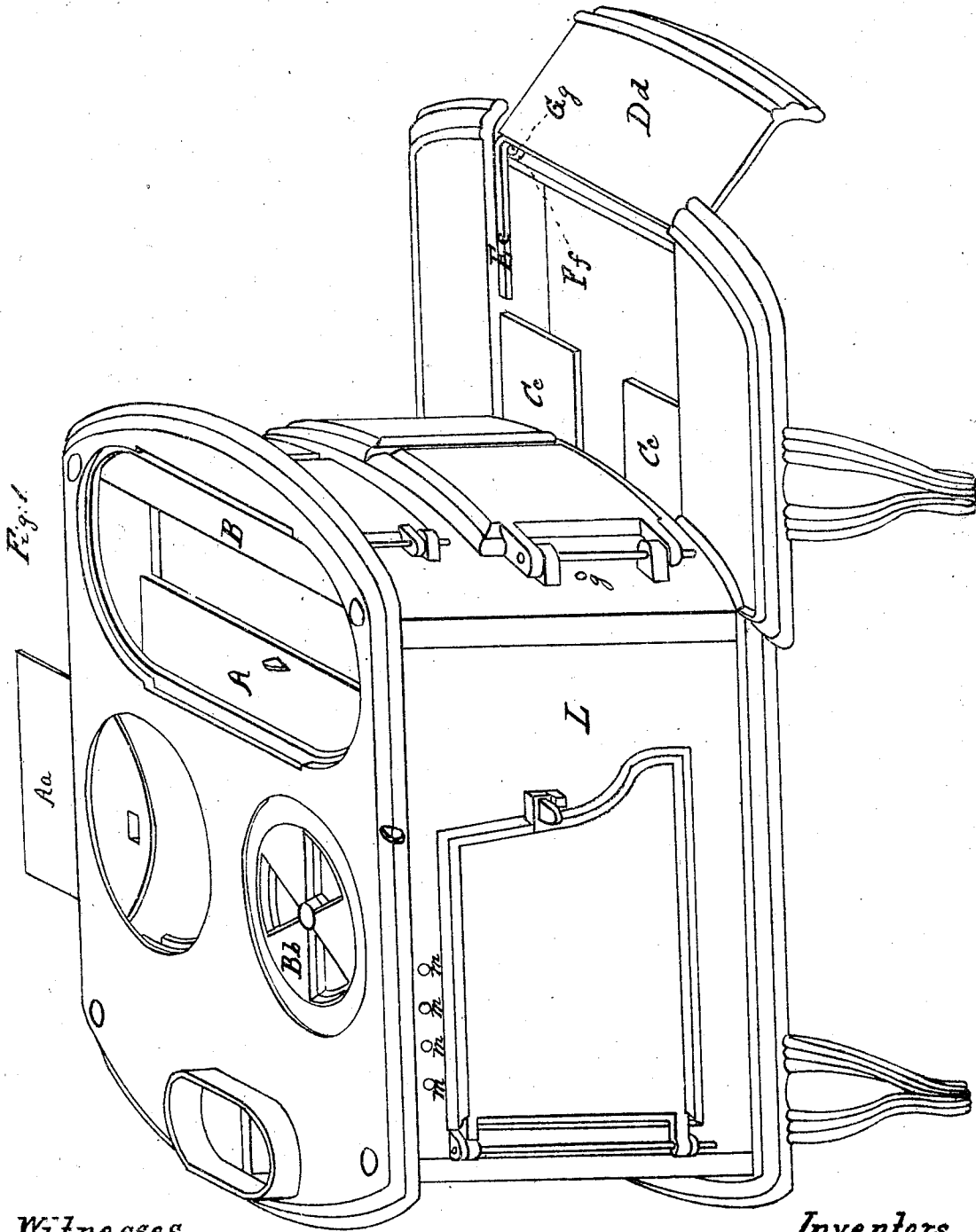


# Adams & Peckover.

## Cooking-Stove.

N<sup>o</sup> 73942

Patented Feb. 4, 1868



Witnesses.

J. Corfette  
James Moore

Inventors.

Federal, C. Adams  
Joseph Peckover

# Adams & Peckover Cooking-Stove.

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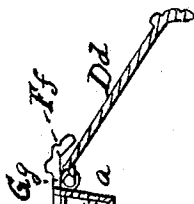
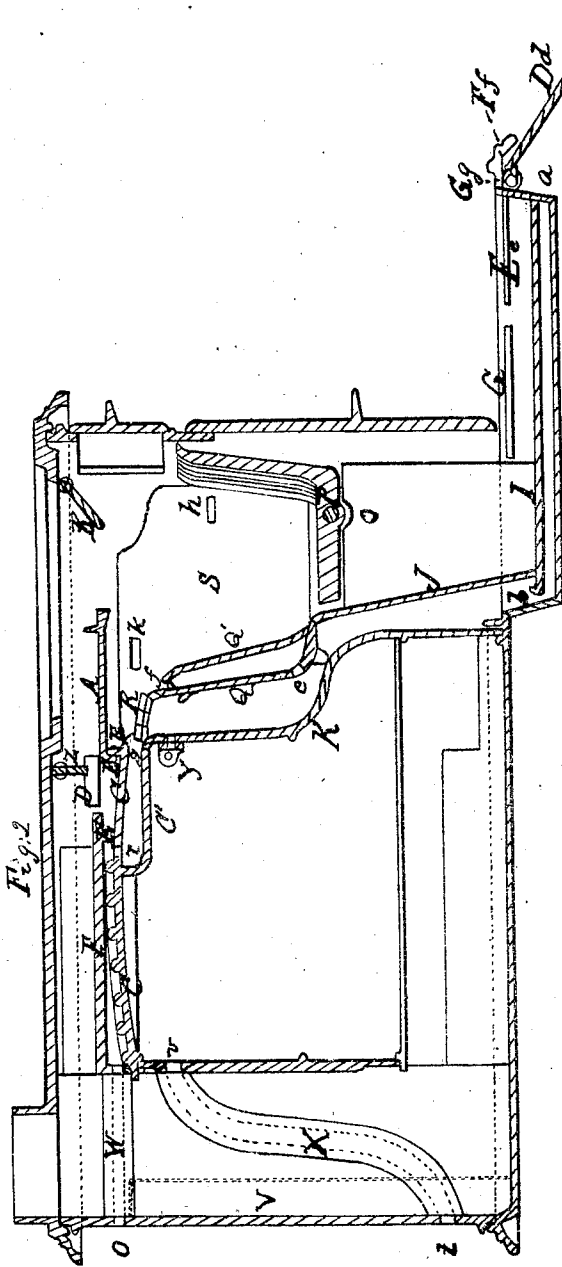


Fig. 4

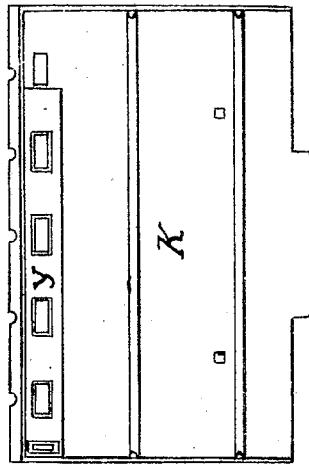


Fig. 3

Witnesses.

J. F. Crossette  
James Moore

Inventors.

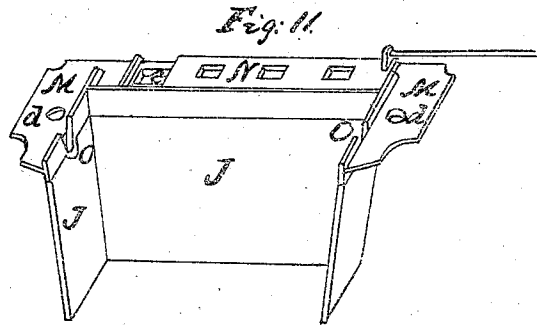
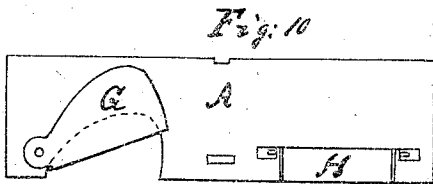
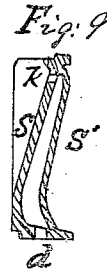
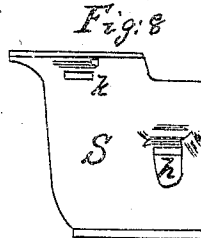
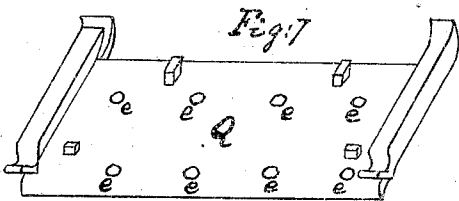
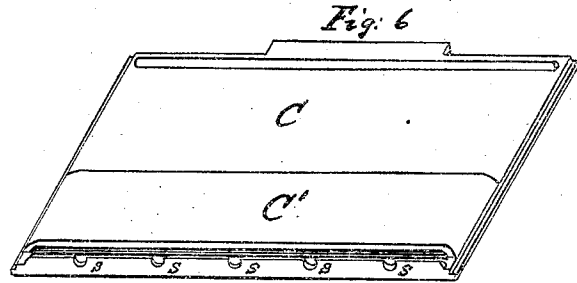
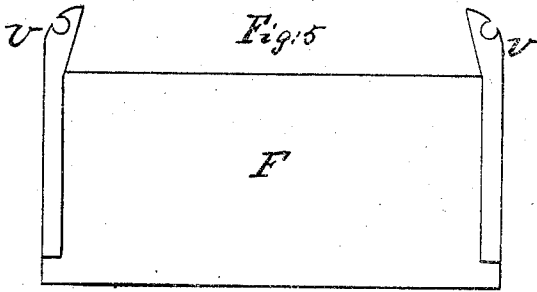
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Witnesses.

James Corsette  
James Moore

Inventors.

Federal C. Adams  
Joseph Peckover

# United States Patent Office.

FEDERAL C. ADAMS AND JOSEPH PECKOVER, OF CINCINNATI, OHIO.

Letters Patent No. 73,942, dated February 4, 1868.

## IMPROVEMENT IN COOKING-STOVES.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that we, FEDERAL C. ADAMS and JOSEPH PECKOVER, both of Cincinnati, Hamilton county, Ohio, have invented certain new and useful Improvements in Cooking-Stoves; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of a stove containing our improvements.

Figure 2 is a longitudinal sectional view through the centre of the same.

Figure 3 is a front view of the back plate of the stove, marked T, fig. 2.

Figure 4 is a rear view of the front oven-plate, marked K, fig. 2.

Figure 5 is a top view of the plate, marked F, fig. 2.

Figure 6 is a bottom view of the top oven-plate, marked C, fig. 2.

Figure 7 is a rear view of the fire-back, marked Q, fig. 2.

Figure 8 is a side view of the end plates of the fire-chamber, marked S, fig. 2.

Figure 9 is a sectional view of the same plates.

Figure 10 is a top view of the adjustable cover, marked A, fig. 2.

Figure 11 is a view in perspective of the plate, marked J, fig. 2, with the open-grate frame and register.

By the front or rear view of any plate is designated the view of such plate, when in its place, as it would appear when looking toward the front or rear of the stove. Parts of the stove are designated by capitals, while apertures for the admission or discharge of air are designated by small letters. Like letters represent like parts in all the figures.

The nature of our invention consists in an apparatus for concentrating the flame and gases of wood or coal-burning stoves for the purpose of facilitating their consumption by the application of atmospheric air; also, in a variety of devices for the admission, supply, and regulation of the supply of atmospheric air for the purpose of supplying oxygen to the concentrated smoke and gases, and thus effecting their combustion; and also in other improvements in the general construction of the stove.

The device for concentrating the smoke and gas, (and the term "gas" will be hereafter used as designating with brevity, all the unconsumed products liberated by the combustion of the fuel,) consists of a plate marked A, figs. 1, 2, and 10, projecting over the fire-chamber throughout its entire length, as shown in fig. 1. It may be made plain, as in fig. 1, in which case it is arranged to slide back and forth upon the top oven-plate C, and under the lugs D in the side plates, the length of the movement forward and backward being regulated by stops E E E on the plate A, the top oven-plate C, and the plate F above it; or it may be made stationary, in which case it can be provided with sliding doors, as at G, fig. 10, or with hinged doors, as at H, fig. 10, for the introduction of fuel. If desired, the space above the fire-chamber may be further contracted by the hinged flap or guard-plate B, figs. 1 and 2.

The office of the plate A, either alone or in connection with the flap B, is obviously to contract the space above the fire-chamber to a long and comparatively narrow orifice, through which the gas must ascend, being thus measurable concentrated and ready for the direct application of air introduced to supply it with oxygen and effect its combustion.

The devices for admitting and heating air are as follows: The plate below the ash-pan is doubled by the introduction of a false bottom, I, fig. 2, forming a shallow chamber to which air is admitted through a series of holes along the front edge, one of which is shown at *a*. Upon this false bottom is placed the plate J, figs. 2 and 11, so constructed and located as to leave a space between it and the front and side oven-plates K and L, figs. 1 and 2. Air enters all portions of this space, from the space under the false bottom already described, through a narrow slot, *b*. Upon the plate J is mounted the open-grate frame M, fig. 11, which closes the spaces between the plate J, and front oven and side plates, but in which are apertures, *c*, opened and closed by a register, N, and apertures, *d d*, the office of which will be described hereafter. In the frame M are depressions, O, figs. 2 and 11, to receive lugs upon the grate P, fig. 2. The air which is allowed to pass through the register N, enters the space between the front oven-plate K and the double fire-back Q, figs. 2 and 7. Some of it will pass through the apertures *e e e e* into the space between the two plates Q and Q' forming the double fire-back, and be thence delivered by apertures *f* at the top, and the remainder will pass up the space behind the fire-back,

between it and the front oven-plate, to the register R, fig. 2, through the apertures of which it is delivered under the plate A. This register, however, is not essential, and it may be omitted; in which case, the air will pass through the slotted opening which the register now covers.

The ends of the fire-chamber are formed of plates, S, figs. 2, 8, and 9, which are also made double, either in whole or in part, as shown in fig. 9, by plates S and S'. There is a space between these end plates, whether single or double, and the side plates of the stove, into which air is introduced through the aperture *g* in the front of the stove, and from which it is discharged through aperture *h* in the plate S, figs. 2 and 8. The double portion or flue does not extend so far forward as the aperture *h*. Into this flue formed by plates S and S', fig. 9, air enters through apertures *d* *d*', fig. 11, in the grate-frame and corresponding apertures *d'* *d'*', fig. 9, in the bottom of the flue, passes up through the space between the flues, and is discharged through aperture K, figs. 2, 8, and 9, under plate A.

Another chamber for the admission of air is formed by the plate F, figs. 2 and 5, placed over the top oven-plate C, figs. 2 and 6, and forming a space between the two, as shown in fig. 2. To this space air enters through apertures *m m m* in the side of the stove, through openings *n* in the rear and top of the stove, from all of which it is conducted by tubes U U, fig. 5, to the space between the plates. It is admitted, also, through apertures O O O in the rear of the stove, fig. 3, into a chamber, V, shown in fig. 3, and by dotted lines in fig. 2, from which it is delivered by the flue or pipe W into the space between the plates, above described. Having entered this space from either or all of these sources, the air passes downward through aperture *r*, fig. 2, into a chamber formed by the plate C' on the lower side of the oven-top C, figs. 2 and 6. Thence it passes through the aperture S to the register R, from the openings in which it is delivered below the plate A.

Air may also be admitted through the oven, entering from the rear of the stove through the S-shaped pipe X, figs. 2 and 3, in the back flue-strips, having an entrance-aperture at *t*, in the back plate of the stove, and an exit-aperture *v*, into the back plate of the oven. From the oven, the air is delivered through the register Y, figs. 2 and 4, into the space between the front oven-plate K and the double fire-back Q, and is thence discharged through register R.

A hinged damper or check-plate, Z, is used to regulate the draught. The outer end or journal of this plate is cone-shaped, so that when turned it may be thrust outward and wedged in the hole which serves as a bearing, thus retaining it in place in any position.

The improvements in the construction of the stove consist in the application to a cooking-stove of the sliding lid A *a*, fig. 1, sliding under the top plate, or of the register-lid B *b*, fig. 1, by the use of which the heat to be applied to the cooking-utensils may be regulated or shut off altogether without the necessity of removing or replacing the entire lid. Also, in the sliding hearth-plates C *c* C *c*, figs. 1 and 2, which slide laterally under the bottom plate; and, in the rolling hearth-plate D *d*, which is drawn forward upon the slides E *e*, until the hinges F *f* engage the sockets G *g*, when the front of the plate is allowed to drop down out of the way.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The horizontal concentrating plate A, stationary or movable, and with or without fuel-doors, substantially as and for the purposes described.
2. The flap or guard-plate B, whether stationary or movable, substantially as and for the purposes described.
3. The spaces between the fire-back and sides and the front oven and side plates, in combination with the plate A, substantially as described.
4. The chamber above the top oven-plate and below the top flue formed by plates C and C', substantially as and for the purpose described.
5. The hollow or double fire-back Q, substantially as described.
6. The air-chamber under the grate and ash-pot formed by the false bottom I, substantially as described.
7. The chamber between the front oven-plate and fire-back, in combination with the open-grate frame and plate A.
8. The hollow side plates S S', substantially as described.
9. The register R, in combination with the fire-back and front oven-plate, substantially as described.
10. The register N, in combination with the open-grate frame, substantially as described.
11. The sliding lid A *a*, in combination with a cooking-stove, substantially as described.
12. The rolling hearth-plate D *d*, operating substantially as described.
13. The hearth-plates E *e*, sliding laterally under the bottom plate, substantially as described.

FEDERAL C. ADAMS,  
JOSEPH PECKOVER.

Witnesses:

J. F. CROSSETTE,  
JAMES MOORE.