

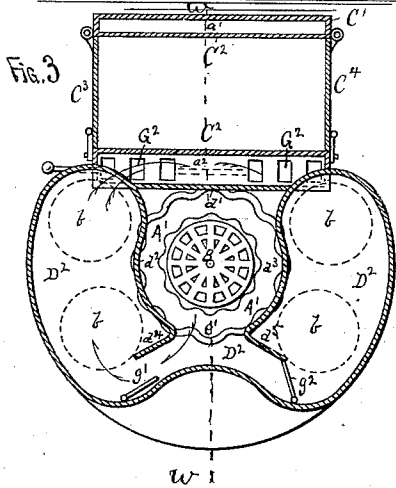
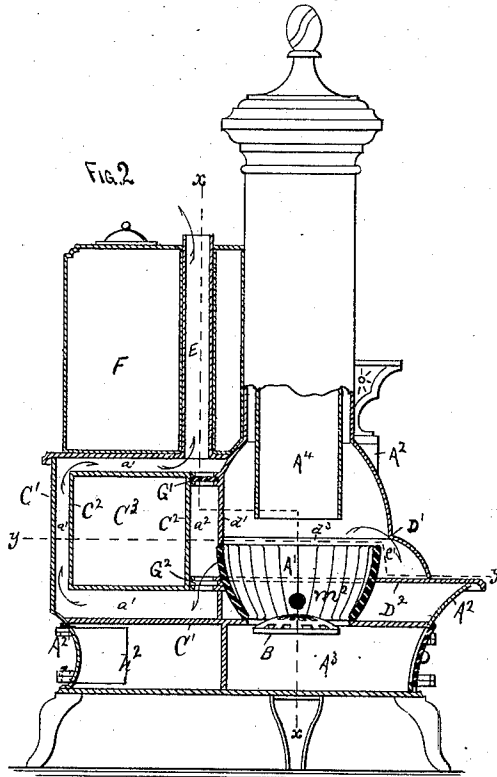
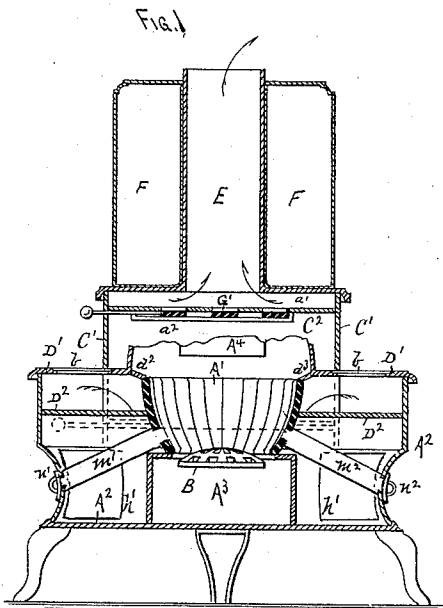
(No Model.)

J. H. NEVINS.

COMBINED SELF FEEDING COOKING AND HEATING STOVE.

No. 334,971.

Patented Jan. 26, 1886.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

JOHN H. NEVINS, OF MINNEAPOLIS, MINNESOTA.

## COMBINED SELF-FEEDING COOKING AND HEATING STOVE.

SPECIFICATION forming part of Letters Patent No. 334,971, dated January 26, 1886.

Application filed January 30, 1885. Serial No. 154,491. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. NEVINS, a citizen of the United States, and a resident of Minneapolis, in the county of Hennepin, in the State of Minnesota, have invented certain new and useful Improvements in Combined Self-Feeding Cooking and Heating Stoves, of which the following specification is a full, clear, and exact description, reference being also had to the accompanying drawings, in which—

Figure 1 is a sectional front elevation on the line *x x* of Fig. 2. Fig. 2 is a sectional side elevation on the line *w w* of Fig. 3. Fig. 3 is a cross-sectional view on the line *y y* of Fig. 2.

This invention relates to combined self-feeding cooking and heating stoves; and it consists in the construction and arrangement of parts, substantially as hereinafter shown and described, and specifically defined by the claim.

In the drawings, *A'* represents the fire-pot, *A<sup>2</sup>* the shell or casing, *A<sup>3</sup>* the ash-pit or base, and *A<sup>4</sup>* the magazine or cylinder in which the stock of coal is placed to supply the fire, all these parts being arranged in the ordinary manner of a self-feeding heating-stove.

*B* is the grate, which is constructed and mounted in the ordinary manner, except that it is formed with a convex upper side or made "crowning" or dome shaped on its upper side, so that when shaken or revolved the ashes and cinders will be crowded out toward the outer edge and fall down into the ash-pit.

Formed upon the rear of the casing of the stove is an oven, consisting of the usual outer shell or casing, *C'*, and inner shell or oven proper, *C<sup>2</sup>*, leaving a hot-air space, *a'*, surrounding it on three sides, and a hot-air chamber, *a<sup>2</sup>*, between the oven *C<sup>2</sup>* and the fire-pot *A'*, while the doors *C<sup>3</sup> C<sup>4</sup>*, leading to its interior, are arranged on the two remaining sides.

On a line level with the top of the fire-pot *A'*, and surrounding the shell *A<sup>2</sup>*, is a flat plate, *D'*, having griddles or pot-holes *b*, the shell *A<sup>2</sup>* running down from this plate *D'* to the bottom plate of the base, as shown.

*D<sup>2</sup>* is another plate parallel with and a short distance below the plate *D'*, and forming a diaphragm connection between the fire-pot *A'* and shell *A<sup>2</sup>*, leaving a space between it and

the plate *D'*, as shown. The pot-holes *b* open down into the space between the plates *D' D<sup>2</sup>*, while on the rear sides this space opens into the hot-air space *a<sup>2</sup>* between the oven *C<sup>2</sup>* and the fire-pot *A'*. A wall, *d'*, shuts off all communication between the rear of the fire-pot *A'* and the hot-air space surrounding the oven, except through the space between the plates *D' D<sup>2</sup>*, and walls *d<sup>2</sup> d<sup>3</sup>* in a similar manner, by connecting the top of the fire-pot with the plate *D'*, shut off all communication between the space between the plates *D' D<sup>2</sup>* and the fire-pot, except at the front part, *e'*, where the walls *d<sup>2</sup> d<sup>3</sup>* are turned off in opposite directions, as shown at *d<sup>4</sup> d<sup>5</sup>*. By these arrangements all the smoke, gas, &c., must pass over the front of the fire-pot through the space *e'*, and thence to either side between the plates *D' D<sup>2</sup>* and into the hot-air space *a<sup>2</sup>*.

I claim a great advantage in bringing the heat to the front before it passes to the sides, as I thereby not only secure all the benefit of the radiation, as in an ordinary heating-stove, but in addition utilize the heat for cooking, &c. It also enables me to burn the fuel more slowly, and thereby gain a saving in quantity of fuel burned.

*g' g<sup>2</sup>* are two dampers arranged to close the space between the ends of the walls *d<sup>4</sup> d<sup>5</sup>* and the shell *A<sup>2</sup>* of the stove, so as to turn the draft to whichever side it may be required. If the dampers are set as shown in Fig. 3, then all the smoke, gas, and their accompanying heat will be turned into and pass beneath the plate *D'* on the left of the fire-pot, so that the kettles or other utensils in the pot-holes on that side will receive the benefit of all the heat, and by reversing the positions of the dampers the heat may be turned in the opposite direction. Then by opening both dampers the heat will be equal on both sides of the fire-pot. By this simple arrangement the heat may be completely and easily controlled and turned entirely beneath either set of pot-holes desired, or equally beneath both.

*m' m<sup>2</sup>* are two small pipes connecting the fire-pot *A'* with the outside air through the lowerside of the shell *A<sup>2</sup>*, through which a supply of air may be fed to the fire, in addition to that passing in the ordinary manner up through

the grate. These pipes  $m' m^2$  will be provided with covers  $n' n^2$ , so that the air can be shut off from them, when desired.

Under some circumstances it may be desirable to feed the fire with air entirely through these tubes and dispense with the usual draft-openings in the ash-pit doors. By the use of these pipes  $m' m^2$ , I am enabled to greatly increase the draft without opening the ash-pit door. Ordinarily, if additional draft is required, the ash-pit door must be partially or wholly opened, which generally permits ashes and dust to escape, besides imparting to the stove an untidy appearance. By the use of the pipes  $m' m^2$ , however, it is never necessary to open the ash-pit door, except to remove the ash-pan, &c., which only occurs generally once every twenty-four hours.

E is the smoke and gas flue, leading from the top of the oven-casing C' up through a water-reservoir, F.

G' is a sliding damper arranged to open and close communication between the hot-air space  $a^2$  and the flue E, and G<sup>2</sup> is another similar damper arranged to open communication between the hot-air space  $a^2$  and the hot-air space  $a'$  beneath the oven. These dampers G' G<sup>2</sup> are shown made in a "register" form, but may be made in any other suitable manner. If the upper damper be opened and the lower damper be closed the heat, gas, &c., will pass directly into the flue E and not heat the oven, and then if the upper damper be closed and the lower one opened the heat, &c., will

all pass around and heat the oven before it escapes by the flue. I claim a great advantage by this arrangement, whereby I am enabled to turn the heat, &c., down beneath the oven C<sup>2</sup> first, and thence over the top, instead of first over the top and thence beneath the bottom, as in the ordinary cooking-stove, as I thereby secure the greatest amount of heat at the lower part of the oven, where it is most required for cooking.

The spaces  $h'$  beneath the plate D<sup>2</sup> and the spaces  $h^2$  beneath the oven C' C<sup>2</sup> may be utilized, if desired, as chambers in which to keep food, dishes, and other articles hot, if desired.

Having described my invention and set forth its merits, what I claim is—

The combination, with the main body of a stove provided with an oven having a flue-space extending around said oven and communicating with the smoke-exit flue, of a fire-pot, plates D' D<sup>2</sup>, the fire-pot communicating on one side with the space between plates D' D<sup>2</sup>, and said space communicating on the opposite side of the fire-pot with the flue-space on one side of the oven, and dampers located in said flue-space above and below this point of connection, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN H. NEVINS.

Witnesses:

LOUIS FEESER, Jr.,  
H. O. RUTHERFORD.