No. 882,212. PATENTED MAR. 17, 1908.

E. SCOTT.

HEATING STOVE.

APPLICATION FILED FEB. 25, 1907.

Fig. 1.

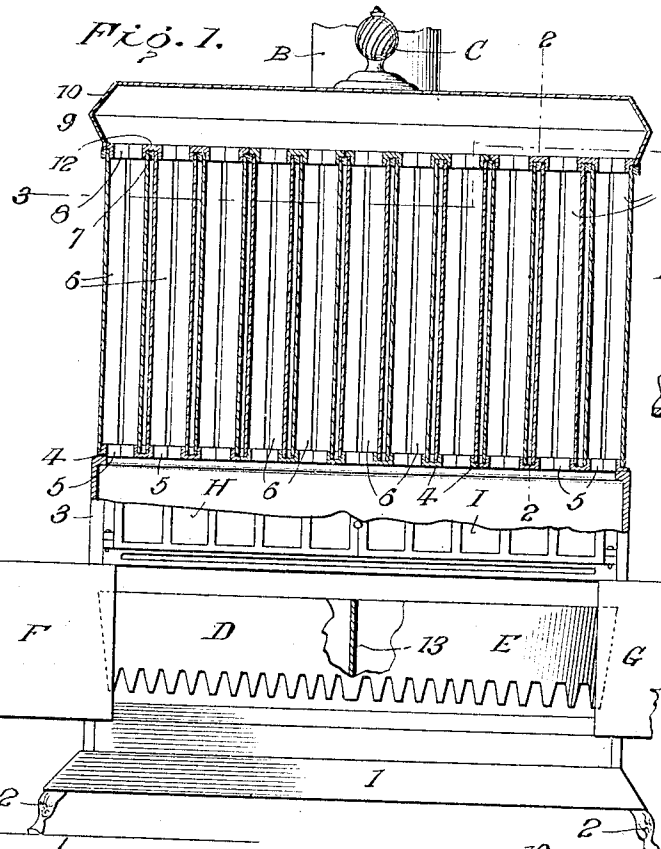


Fig. 4.

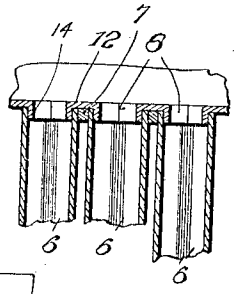


Fig. 2.

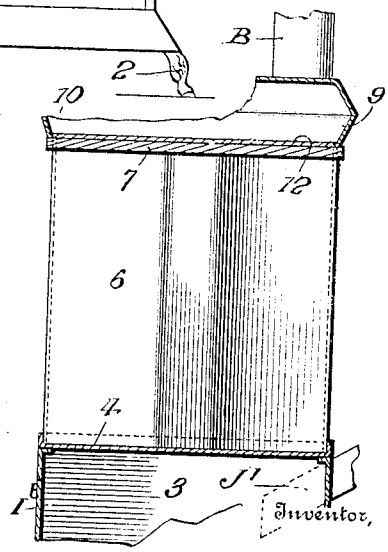
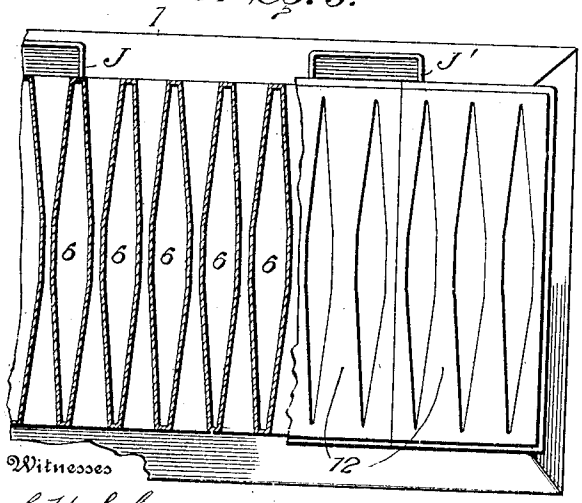


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

ELWOOD SCOTT, OF MARION, INDIANA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE SCOTT STOVE AND FURNACE COMPANY, OF CAMBRIDGE CITY, INDIANA.

HEATING-STOVE.

No. 882,212. Specification of Letters Patent. Patented March 17, 1908.

Application filed February 25, 1907. Serial No. 359,134.

To all whom it may concern:

Be it known that I, ELWOOD SCOTT, a citizen of the United States, residing in Marion, in the county of Grant and State of Indiana, have invented certain new and useful Improvements in Heating-Stoves, of which the following is a full and accurate exposition of the construction and operation thereof, when taken in connection with the accompanying drawing, being such as will enable others to construct and operate the same with absolute exactitude.

My invention relates to heating stoves having a double fire-pot, or fuel chamber, a lower combustion chamber, and upper discharge chamber, and a series of oblong flues connecting the interior of the combustion chamber with the interior of the discharge chamber; and the objects of my invention, among other things, are, first, to provide a stove having a maximum amount of radiating surfaces; second, to afford facilities for heating a room with a minimum amount of fuel; third, to provide means for maintaining either one or two separate and distinct fires in a single stove, depending on the amount of heat required; and fourth, to provide a stove which will be neat and attractive in appearance, strong and durable in construction, light in weight, easily operated and controlled, and which can be sold at a comparatively low price.

I attain the above, and other specific and subsidiary objects, by the construction visualized most clearly in the accompanying drawings, in which—

Figure 1 is a vertical transverse section through a stove embodying my improvements, the lower part of the stove being in elevation; Fig. 2 is a vertical longitudinal section taken between two of the flues; Fig. 3 is a view partly in plan and partly in horizontal section, with the upper discharge chamber removed; and Fig. 4 is a detail of the mode of securing the flues.

Referring now to the drawings in detail, which I will describe as briefly and as compactly as I may: The letter A designates the floor line for my stove.

The numeral 1 designates the base of the stove, or bottom plate; and the numeral 2 denotes the stove legs, which are of ordinary construction.

Numeral 3 denotes a rectangular body having two sides and two ends which rise vertically as shown, with the lower edges resting on and secured to the edges of the base 1 in any preferred manner.

Covering the top of the body 3 and connected to the upper edges of the sides and ends thereof is the lower plate 4. Located equidistant apart and extending across and through the plate 4 are a plurality of slots 5, each having an upturned flange therearound, as indicated in the lower portion of Fig. 2. In this instance there are twenty of said slots in the plate 4, although the number may be varied as desired, and the plan of said slots will depend on the shape of the flues in cross section hereinafter described.

The numerals 6 designate a plurality of oblong flues, which are preferably formed of sheet metal, and I prefer that they be flat or oval in cross section, substantially as shown in the drawings. The lower ends of said flues 6 are adapted to rest on the upper face of the plate 4, each fitting around one of the flanges extending up around the slots 5, as shown in the lower portion of Fig. 2, where they may be secured in any well known manner, as for instance in the same manner in which the upper ends of said flues are secured as will presently be described.

7 designates the top plate, having slots or apertures 8 for the reception of the upper ends of the flues, which ends are flush with the upper surface of the plate.

The upper ends of the flues 6 are clamped within the slots of plate 7 by means of a plate 12 formed in a plurality of sections. The sections of said plate overlie plate 7 and the ends of the flues, and have apertures bounded by depending flanges 14, which latter fit snugly within the ends of the flues and clamp the same against the sides of slots 8 in plate 7. The joints of all of said parts should be made air-tight, by means of cement or the like (not shown).

Rising from around the outer edges of the plate 7 are the sides and ends, integrally connected together, forming the walls of the discharge chamber. Said walls which are designated by the numeral 9, are connected at the top and covered over by a lid 10, forming the top of the discharge chamber of the stove, thereby completing the inclosing of

the discharge chamber, and also forming the top of the stove proper. Opening out of the discharge chamber is the draft or discharge pipe B, to provide means for the escape of smoke and odors rising from the fuel.

The letter C designates an urn or other conventional ornamentation, which rises from the center of the top 10 to which it is secured.

Located in the lower portion of the body 3 is a fire-pot which I prefer to form into two distinct portions, indicated by the letter D and E, respectively, which parts are separated by a removable partition 13, whereby one or both portions may be used at one time, or they may be used separately. Said partition is held in place by cleats located on each side.

The letters F and G designate doors leading to and underneath the fire pot. And letters H and I designate doors leading into the combustion chamber above the fire pot.

Magazines or chutes J and J′ are provided which open into the respective fire-pots D and E, from the rear of the stove, or if desired said magazines may extend into the fire-pots from other points, being variously located as desired.

Operation: From the above it will have become notably apparent that a fire may be maintained in either of the fire-pots D or E, or in both, as desired, and as the heat therefrom rises it will collect in the chamber below the plate 4, and from there it will pass up the several flues 6, and thence into the discharge chamber at the top, the surplus together with the smoke and gases passing out through the pipe B. By this it will be observed that a great amount of radiating surface is provided, by reason of the heat having to pass through so many flues by which the heat is transmitted to the room.

The radiated heat passing out into the room from around each of the flues, the natural currents of air in the room assisting in circulating the air around and between the flues, which would not be the case if the spaces between the flues were not open at each side, thereby more quickly disseminating the warm air and heating the room more quickly and with less fuel than it has heretofore been possible to do. It will be apparent that the shape of the flues 6 is such as to cause the heat to be radiated out into the room.

It is to be understood that various changes may be made in the details of construction herein shown without departing from the spirit of my invention or sacrificing any of its many advantages, my intention being to be broadly protected in the general principles herein involved.

Having now fully shown and described my invention and the best manner for its construction to me known at this time, what I claim and desire to secure by Letters Patent of the United States, is—

1. In a heating stove, the combination with a combustion chamber and a discharge chamber, and a plurality of upright radiating flues extending between and communicating with said chambers, of means for securing said flues in position, consisting of a plate having apertures snugly receiving the flues at one end, and a clamping plate extending across the same ends of the flues and provided with flanges which inclose apertures in said plate and fit tightly within the ends of the flues, clamping the latter against the margins of the apertures in the first-named plate.

2. In a heating stove, the combination with a combustion chamber and a discharge chamber, and a plurality of upright radiating flues extending between and communicating with said chambers, of means for securing said flues in position, consisting of a plate having apertures snugly receiving the flues at one end, and a clamping plate extending across the same ends of the flues and provided with flanges which inclose apertures in said plate and fit tightly within the ends of the flues, clamping the latter against the margins of the apertures in the first-named plate, said clamping plate being constructed in sections, each section clamping the ends of a plurality of the flues.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

ELWOOD SCOTT.

Witnesses:
WILSON D. LETT,
ROBERT L. SMITH.