April 21, 1931. H. LANGE 1,801,928

ASHPIT FOR CIRCULATING WARM AIR HEATING STOVES

Filed April 4, 1930

FIG. 1.

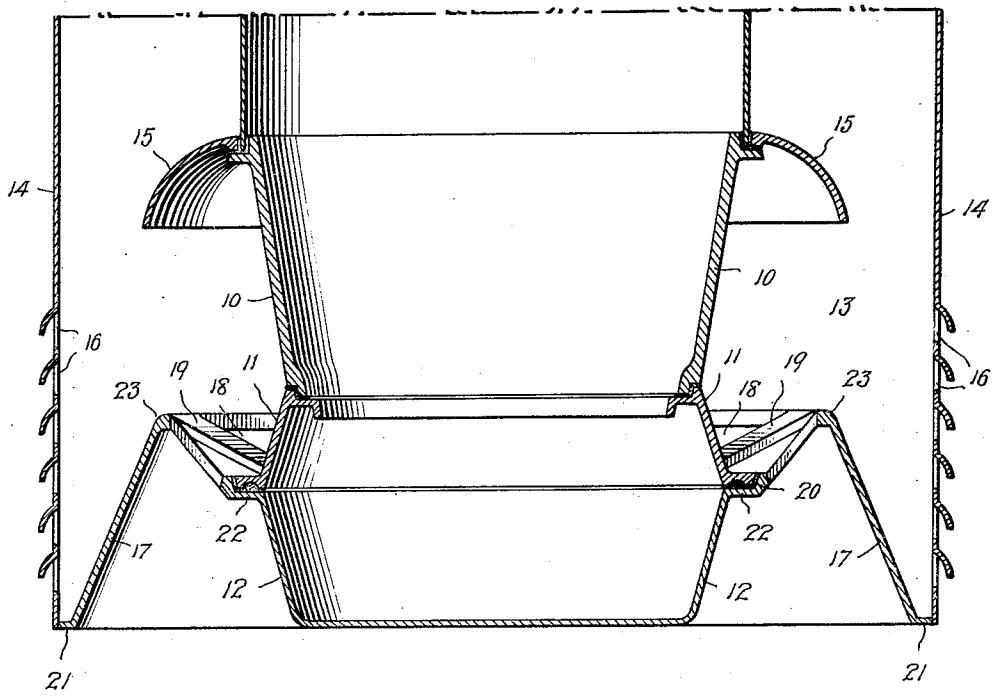
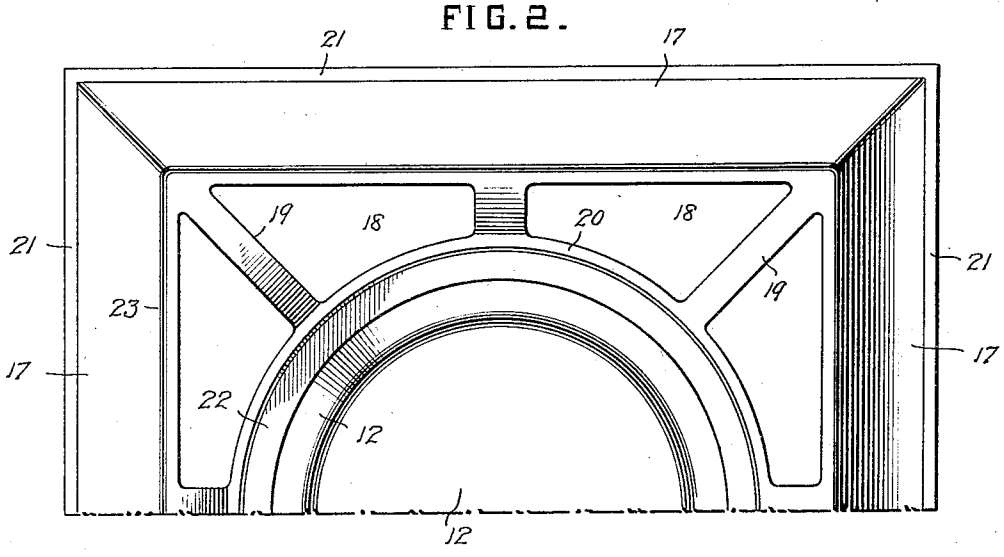


FIG. 2.



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UNITED STATES PATENT OFFICE

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ASH PIT FOR CIRCULATING WARM-AIR HEATING STOVES

Application filed April 4, 1930 Serial. No. 441,615.

The present invention relates to improvements in ashpits for circulating warm air heating stoves, and has for an object to provide an improved ashpit construction whereby the heat will be deflected downwardly toward the floor and to low points about the stove.

In my years of experience in manufacturing circulating heaters, I have found that there exists a general objection to all makes of these heaters because they will not heat the floor as well as the old type of heating stoves that were not encased. The demand for a circulator that would bring about this condition is becoming very strong and although attempts have been made to solve this problem, all such attempts have so far failed of satisfactory results.

It is another object of the present invention to provide an improved ashpit and circulator stove construction whereby the heat from the firepot can be deflected toward the floor in such substantial measure that it will be felt underneath the stove as well as in a limited space adjacent to the stove.

The invention further aims to provide an improved ashpit and circulator heater construction in which the standard form of the heater is retained and in which by a rearrangement of the parts adequate radiation and circulation are provided.

With the foregoing and other objects in view, the invention will be described more particularly hereinafter and will be more distinctly set out in the appended claims.

In the drawing in which like parts are denoted by similar reference symbols throughout the several views

Figure 1 is a fragmentary vertical section taken through an improved stove and firepot constructed according to the present invention and

Fig. 2 is a plan view of the lower section of the ashpit and the deflector member.

Referring more particularly to the drawing, 10 designates the firepot wall, and 11 represents the firepot lining ring which extends below the wall 10 and above the lower section 12 of the firepot or ashpit. The members 10 and 11 are joined together in any appropriate manner and are preferably of conical construction, the wall 10 being an inverted frustum of a cone, while the ring 11 is the frustum or section of an upright cone.

The two walls 10 and 11 thus converge together and form mutual radiating surfaces lying within the air circulator space of the stove which is confined within the outer casing 14. Above and exterior of the firepot member 10 is a hood 15. The air enters through the louvre slots 16 in the wall of the outer casing 14.

In accordance with the invention, a deflector member is provided in the lower portion of the stove between the firepot or ashpit and the exterior casing 14, and this deflector member is comprised of an outer part 17 and an inner part including slots 18 and separating ribs 19 which supports a central ring 20 adapted to fit about the upper flanged portion of the ashpit section 12. While the ring 20 is circular in form to agree with the ashpit construction, as illustrated in Fig. 2, the outer part 17 of the deflector member will be substantially square in order to conform to the shape of the outer casing 14.

The outer part 17 is imperforate and is formed with an outwardly projecting flange 21 at its outer lower edge in order to fit against the casing 14 for closing the lower portion of the air chamber 13. This member 17 extends upwardly and inwardly from the flange 21 to a point above the flange 22 of the lower ashpit section 12.

The inner part of the deflector slopes from this high point 23 downwardly and inwardly toward the ring 20. The slots 18 are thus on substantially the same elevation with the liner ring 11, although both diverge upwardly. Moreover, the slotted portion 18 of the deflector plate is disposed opposite the outer imperforate section 17 thereof and the two members of the deflector plate diverge downwardly from the upper central portion 23.

In the use of the device, the firepot lining ring 11 will reflect the heat from the firepot through the openings 18 and toward the floor. The circulation of air from the outside will take place through the louvres 16 provided in the cabinet walls 14. The sec-

tion above the firepot is of course constructed like any other heater and has not been illustrated. The heat reflected from the lining ring 11 through the openings 18 will encounter the under side of the imperforate member 17 and be deflected downwardly toward the floor and to the space about the stove.

By this construction I secure a direct deflection of the heat from the firepot toward the floor. The new construction of ashpit provides the extension or deflector member on three or four sides whereby to form a separate open air channel next to the firepot. This open channel follows an upward course substantially parallel to the firepot proper. This channel extends very close to the source of the heat as is essential to the successful working of the device.

Another feature of the construction is the creating of two separate channels in the space between the ashpit and the outer casing. In other words, there is an open space next to the firepot for the purpose of deflecting the heat. The solid extension 17 directs the incoming cold air received through the louvres 16 of the outer casing into the air flue with final outlet through the open top register of the heat cabinet.

Having thus described the invention, what is claimed as new is:

1. An improved circulator heater construction comprising a firepot and ashpit having a liner ring, an outer cabinet, and deflector means extending between said cabinet and the ring and having openings opposite the ring for the passage of heat from the ring to be reflected downwardly by said means.

2. In a circular heater, an ashpit and firepot including a lining ring, an outer cabinet for the heater, and deflector means extending between said cabinet and ring and including an outer imperforate part and an inner perforated part extending opposite the ring.

3. A circulator heater comprising a firepot and ashpit unit, a casing surrounding same, and a heat deflector having openings therein and located between said casing and unit and arranged to reflect heat downwardly from said unit, the openings therein being between said deflector and unit.

4. A circular heater comprising a firepot and ashpit unit, a casing surrounding same, and an inwardly inclined heat deflector extending upwardly from the lower edge of the casing and surrounding said unit with its upper edge spaced from said unit.

5. A circular heater comprising a firepot and ashpit unit, a casing surrounding same and having openings therein, and a heat deflector having openings therein and located between said unit and casing and arranged to reflect heat downwardly from said unit, the openings therein being between said deflector and unit.

6. A circular heater comprising a firepot and ashpit unit, a casing surrounding same and having openings therein and an inwardly inclined heat deflector extending upwardly from the lower edge of said casing between the openings in the casing and the unit with its upper edge spaced from said unit.

7. A circular heater comprising an ashpit, a liner ring thereon, a firepot on said ring, a casing surrounding said firepot ring and ashpit, and a heat deflector between said casing and ring and arranged to reflect heat downwardly from said ring.

8. A circulator heater comprising an ashpit, a liner ring thereon, a firepot on said ring, a casing surrounding the firepot, ring and ashpit and having openings opposite to said ring, and a heat deflector between said openings and ring and arranged to deflect heat downwardly from said ring.

9. A circular heater comprising an ashpit, a liner ring thereon, a firepot on said ring, a casing surrounding said firepot, ring and ashpit, an inwardly inclined heat deflector extending upwardly from the lower edge of the casing and surrounding said ring, and ribs uniting said ashpit and deflector.

In testimony whereof I hereunto affix my signature.

HENRY LANGE.