Dec. 23, 1952 O. N. SIMMONS ET AL 2,622,806

FLOOR FURNACE IN PARTITION SPACE

Filed July 15, 1949

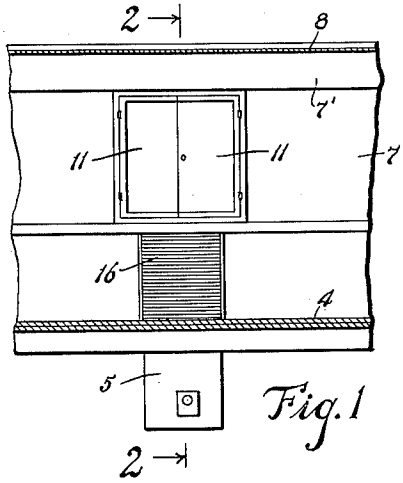


Fig. 1

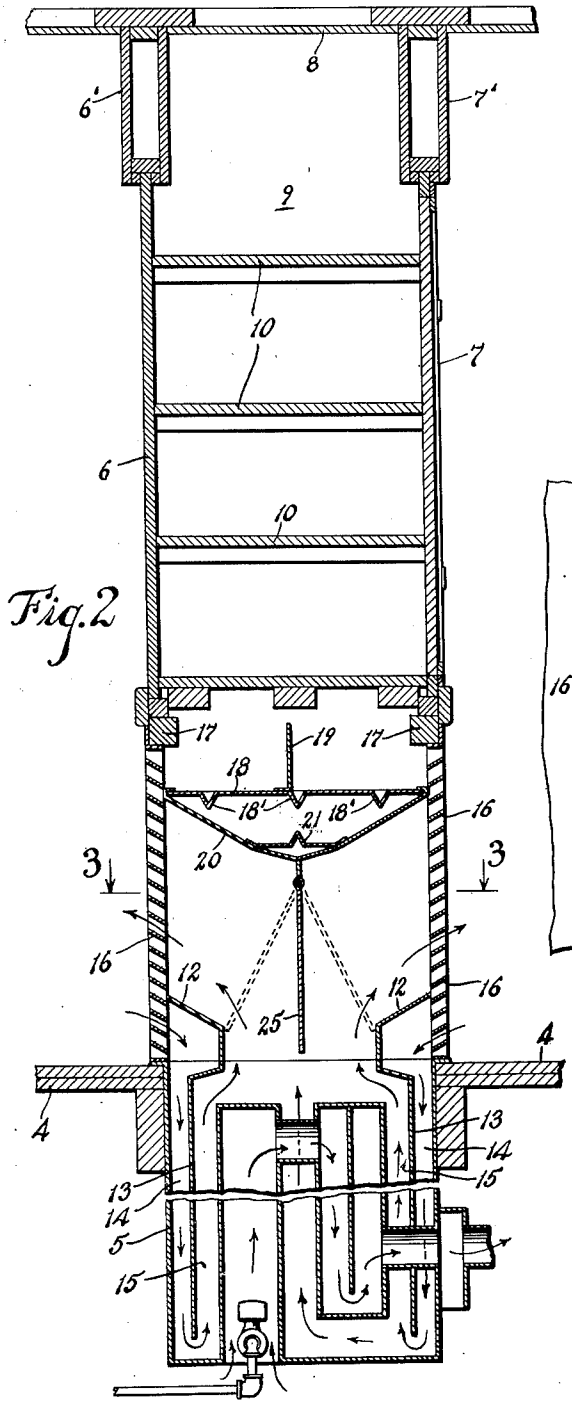


Fig. 2

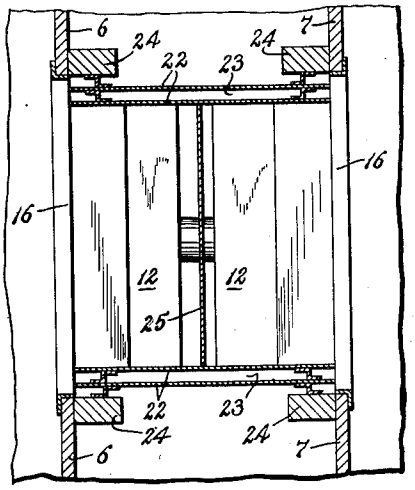


Fig. 3

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Patented Dec. 23, 1952 2,622,806

UNITED STATES PATENT OFFICE

2,622,806

FLOOR FURNACE IN PARTITION SPACE

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Application July 15, 1949, Serial No. 104,934

1 Claim. (Cl. 237—53)

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This invention relates to floor furnaces in partition spaces, and more particularly it relates to a floor furnace placed below the floor but under the area above which are two spaced walls providing closet, cabinet, water heater, or other space between said walls and above the floor furnace, a special head assembly being provided for the floor furnace which makes it adaptable for heating two rooms, at opposite sides of said spaced walls.

In order to explain our invention, we have illustrated one practical embodiment thereof on the accompanying sheet of drawings, which we will now describe.

Figure 1 is a fragmentary wall or face view, showing the doors to the space above the furnace and the head assembly, the grill in one wall being shown, and the furnace proper below the floor;

Figure 2 is an enlarged vertical sectional view, taken on the line 2—2 of Fig. 1; and

Figure 3 is a cross sectional view, taken on the line 3—3 of Fig. 2.

Referring now in detail to the drawings, a floor is designated 4, below which is a floor furnace, designated as a whole 5, with arrows indicating the flow of cold air into the furnace and upwardly therefrom into the space above said furnace.

Above the floor are two spaced walls or partitions, designated 6 and 7, with ceiling panels 6' and 7' adjacent the ceiling 8, as shown in section. This construction, of course, can be of any desired type or plan, providing the space 9, between said walls, in which we have shown shelves 10, 10, with hinged doors 11, 11, affording access thereto. This space can be utilized for any purpose desired, and has been used for water heater.

By providing a head assembly for the floor furnace, we have made it possible to utilize this space above the floor and to heat the two rooms on opposite sides of said walls.

Wing portions, as 12, 12, substantially in the form shown in section in Fig. 2, are provided above the floor furnace proper, with extensions, as 13, 13, in the furnace, to provide down passageways, as 14, 14, for cold air, and up-flow passageways 15, 15, arrows indicating the movement of air. The wing portions 12, 12 rest against two wall grates, designated 16, 16, set in the opposite walls, between the floor and frame members, as 17, 17, and made removable above the floor, as will be understood from the sectional showing thereof.

In the upper part of said head assembly, is a horizontal member 18, having strengthening ribs 18' formed therein, with an upstanding division web 19, shown thereon. Under said horizontal

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member 18 is a bowl-like member 20, secured to the member 18 at its opposite sides, as shown, with a strengthening insert member 21 therein. These members are secured at their opposite ends to double end walls, as 22, 22, shown in Fig. 3, and spaced to provide insulation air space 23, therebetween, said end walls being secured to the structure studding designated 24, 24.

Depending from said head assembly just described, is a swinging member 25, which can be moved to either side, as indicated in light broken lines, or allowed to hang straight, as shown in full lines. This member is for directing the heated air from the furnace to either side, or to both sides, as indicated by the arrows, as will be clear from the showing in Fig. 2.

Thus we have provided a very practical and economical furnace construction and arrangement in which air from the rooms is directed down into the furnace to be heated and redirected upwardly and out at either or both sides into the rooms at opposite sides of the walls 6 and 7, but best of all, we have provided the space above the furnace which can be used for cabinet, closet space, water heater space, or for other purposes, with closet spaces at the opposite ends of the space between the walls and at opposite ends of the furnace area.

The most important feature of our invention, however, is the placing of a floor furnace down through the floor of a closet space, with grates in openings through the closet walls, adjacent the floor, into the rooms at opposite sides of said closet, or through one wall if only one closet wall is available for outlet for heated air. The provision of what we have called a head assembly, above the floor furnace proper, and made a part thereof, furnishes the means for directing cold air from the room down into the floor furnace and of directing the heated air upwardly through said head assembly, and out through the grate or grates into the rooms at opposite sides of the closet walls. The head assembly also includes a swinging damper or deflecting member 25 for directing the heated air into either or both rooms at opposite sides. Said head assembly also furnishes a separation or insulation of the furnace-containing part of the closet space from the upper closet space used for storage purposes, as before referred to.

We do not limit our invention to the details of construction and arrangement here shown and described for explanatory purposes, except as we may be limited by the hereto appended claim.

We claim:

In house construction, two spaced walls between two rooms to form space for closets, cabinets and the like between said rooms, the floor in said space being open to receive a floor furnace structure, and said walls, at the floor, having grates set therein and forming outlets from said space into the rooms at the opposite sides of said closet space, a floor furnace structure set in said floor opening below the floor level and having wing portions at opposite sides, set adjacent the inner opposite sides of said grates, toward the lower edge thereof to direct cold air from the rooms through the lower portions of said grates down into said furnace structure to be heated and directed upwardly into the space between said grates and into the rooms at the opposite sides of said closet space, the floor in said closet space being above the grates, and a head assembly in the upper part of the space between said grates having a swinging member and movable to direct upward movement of heated air to one side or the other, or to hang vertically to divide said heated air in opposite directions through said grates.

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