Nov. 13, 1928.

1,691,208

C. E. PEDERSEN

HEATING STOVE

Filed June 17, 1926

Fig. 1.

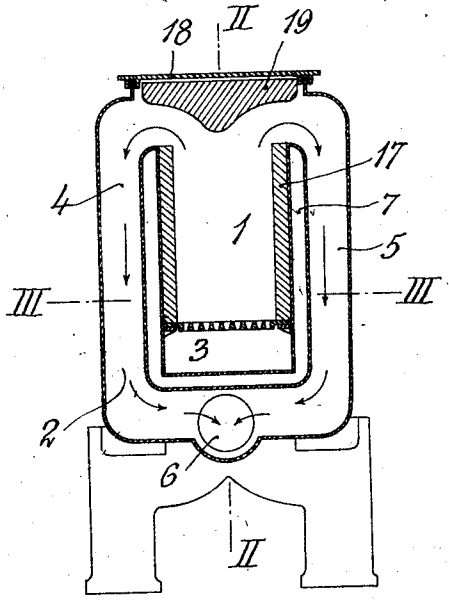
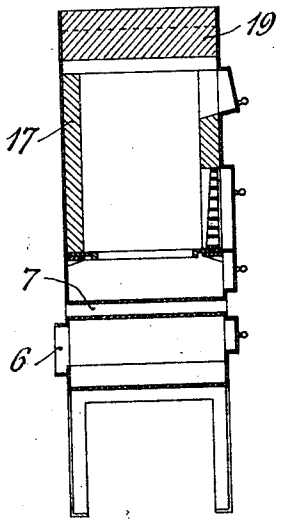


Fig. 2.



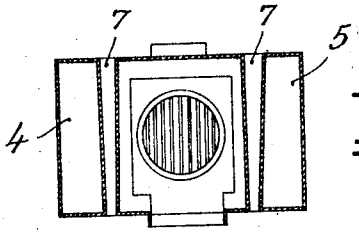


Fig. 3.

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UNITED STATES PATENT OFFICE.

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HEATING STOVE.

Application filed June 17, 1926, Serial No. 116,710, and in Norway November 21, 1924.

My invention relates to cast-iron heating stoves and the object of the invention is to provide a stove of this class having a larger area directly heated by the combustion gases i. e. to increase the heating surface of the stove. For this purpose the fire chest of the stove, which is in known manner surrounded by the exit channels for the combustion gases, is suspended at its top so as to leave open on all sides an air gap between it and the surrounding channels for the combustion gases. Through this air gap the air in the room to be heated is free to circulate from the front side of the stove to its back side or vice versa, the said air gap providing for a considerable increase of the effective heating surface of the stove.

In the accompanying drawings are illustrated a couple of executional forms of the stove in question.

Fig. 1 is a vertical cross section through the stove body parallel to its front and back walls.

Fig. 2 is a vertical cross section of line II—II on Fig. 1.

Fig. 3 is a horizontal cross section of line III—III of Fig. 1.

Referring now to the drawings the fire chest 1 with the grate 2 and the ash chamber 3 is in known manner surrounded by the exit channels 4 and 5 for the combustion gases, said combustion gases passing from the top end of the fire chest down along the sides of the stove to the exit pipe 6, arranged at the lowest part of the stove body. Now according to my invention this fire chest with its grate and ash chamber is suspended at its upper end in such manner that there is formed an air gap or channel 7, passing through from the front side of the stove to its back side. This air gap or channel 7 which seen from the front has a U-shape, surrounds the fire pot with its associated grate and ash chamber, at the bottom and at the sides up to the points where the flues connect with the fire pot, the latter being supported solely from the level of these points or upwardly therefrom. The outer walls of the fire pot and ash chamber form one side wall of the air gap while the opposite side wall of the air gap is formed by the inner walls of the flues 4 and 5 which conduct the combustion gases. The heating surface of the stove is thus increased by the surfaces of said air gap or channel 7, whereby the heating surface of the stove is greatly increased. The fact that the fire chest is freely suspended and therefore may expand and contract independent of the outer walls of the stove, will considerably diminish the danger of cracking the stove by intense heating or sudden cooling.

The fire chest may be lined in the usual way with a fire proof lining 17 and the detachable top piece 18 of the stove may also be provided with a fire proof lining 19, said lining 19 being preferably arranged so as to form a roof forming the upper part of the channels for the combustion channels 4 and 5.

I claim:

1. In a heating stove, a fire pot, flues extending around the sides and bottom of said fire pot and connected to said fire pot adjacent its upper end, said flues being spaced from said fire pot below the points of connection, by a continuously open U-shaped air gap extending under said fire pot and at the sides, from the front to the back of the stove, leaving said fire pot wholly unsupported at the lower part and at the sides up to said points of connection.

2. In a heating stove, a fire pot, flues extending around the sides and bottom of said fire pot and connected to said fire pot adjacent its upper end, said flues being spaced from said fire pot below the points of connection, by a continuously open U-shaped air gap extending under said fire pot and at the sides, from the front to the back of the stove, leaving said fire pot wholly unsupported at the lower part and at the sides up to said points of connection, and a grate and ash chamber carried by said fire pot and solely supported in common with said fire pot by the means by which said fire pot is supported.

In testimony whereof I have signed my name to this specification.

CARL EMIL PEDERSEN.