Dec. 5, 1933. I. RASANEN 1,938,462

MOVABLE STOVE

Filed Jan. 22, 1932

Fig. 1.

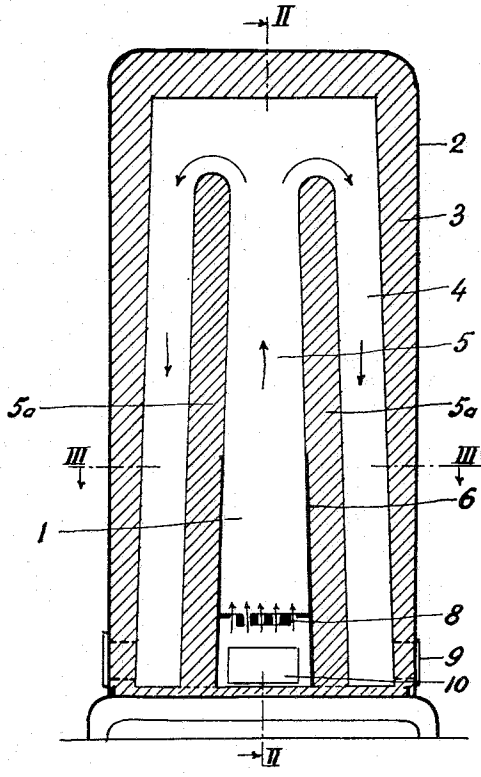


Fig. 2.

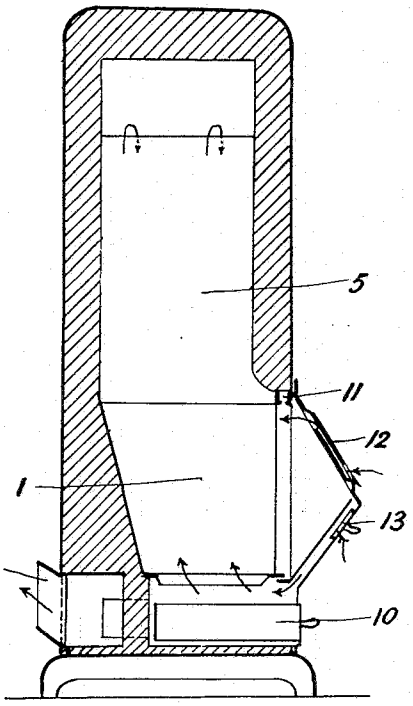


Fig. 3.

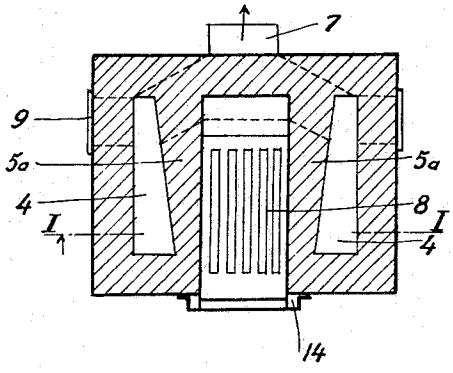
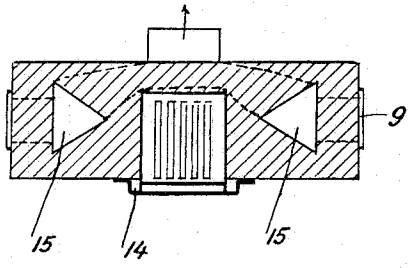


Fig. 4.



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MOVABLE STOVE

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Application January 22, 1932, Serial No. 588,190, and in Finland October 15, 1931

2 Claims. (Cl. 126—75)

The present invention relates to a stove made of cast material and resting on any suitable support permitting the transportation of the same when required. The stove is used for the heating of rooms, but the same may also be modified so that it may be used to heat water for central heating plants or simply to obtain hot water.

In the accompanying drawing Fig. 1 is a vertical sectional view of the stove along the line I—I of Figure 3. Fig. 2 is a vertical sectional view of the stove along the line II—II of Fig. 1. Fig. 3 is a horizontal section along the line III—III of Fig. 1. Fig. 4 is a horizontal section of a modification of the stove.

The stove is made by casting or moulding of some refractory and rapidly hardening material using forms to obtain a furnace and necessary flues. The stove is surrounded by a shell 2 of sheet iron.

The stove 3 thus cast or moulded comprises a combustion chamber 1, a vertical flue 5 situated between two walls 5*a* ending at the top a certain distance from the inner top surface of the stove and behind these walls vertical flues 4 leading to the smoke flue 7 at the bottom of the stove. The stove further comprises the usual soot clean out door 9 and ash pan 10. Above the latter the grate 8 is situated. The walls 6 of the combustion chamber may be made of cast iron.

The front of the stove may be constructed either vertical and provided with the usual fire door or the front of the combustion chamber may be enlarged and preferably provided with a fire door 12 of the shape shown in Fig. 2. This door has double walls between which atmospheric air enters chiefly through the air opening 13 passing through openings in the lower portion of the door above the ash pan and through openings in the top portion of the inner wall of the door into the furnace. Further the sides of the door and its top edge may be provided with air canals 14 and 11 respectively. By using such fire doors the air entering the grate is preheated while simultaneously the outside wall of the door is cooled. This construction of the fire door is important particularly in connection with the stove according to this invention as the door becomes very hot and the ordinary single plate door would scarcely be sufficiently resistant.

The fuel that is placed on the grate 8 may consist of wood, coal or coke and the hot gases from the combustion chamber 1 rise to the top portion of the stove and thence flow around the top edges of the furnace walls 5*a* and down through the flues 4 to the flue 7. The comparatively thin inner walls as well as the outside walls of the stove become very hot through the influence of the hot gases in the wide flues especially if the outside walls are made in vertical direction downwardly tapering as shown in Fig. 1, this being caused by the fact that the smaller mass of the base portion of the tapered walls becomes heated by the downwardly flowing less hot gases just as much as the upper more massive walls of the stove by the hotter gases. The whole stove is thus uniformly heated.

The stove is used such as it is for heating purposes. The stove may also be used as an auxiliary stove in which case the same is placed in front of an ordinary fireplace or the like and connected to the latter and in this instance the dimensions of the stove may be smaller. Fig. 4 shows such a modified embodiment of the stove. The side flues 15 corresponding to the flues 4 of the above described stove are triangular in section with the point of the triangle directed towards the combustion chamber so that this portion of the inner wall is rapidly heated. The flues 4 and 15 may also have any other suitable shape.

The stove is used for the heating of rooms.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is:

1. A movable heating stove comprising a hollow body having a supporting base, a top, and provided with an inner wall, said inner wall forming with said body a combustion chamber and a flue rising therefrom, said inner wall terminating short of the top and being spaced from one lateral outside wall of the stove and forming a downwardly directed flue therebetween communicating with the top of the first named flue, and a chimney flue leading from the bottom of the stove and with which the lower end of the second named flue communicates, said lateral outside wall being tapered downwardly in thickness.

2. A movable heating stove comprising a hollow body having a supporting base, a top, and provided with a pair of inner walls, forming with said body a centrally arranged combustion chamber, a flue rising from the combustion chamber, said inner walls each forming one side of the combustion chamber and terminating short of the top, and walls being spaced from one lateral outside wall of the stove and forming a downwardly directed flue therebetween communicating with the top of the first named flue, and a chimney flue leading from the bottom of the stove and with which the lower ends of the second named flues communicate, said lateral outside walls being tapered downwardly in thickness.

ISAK RÄSÄNEN.