

1,012,472.

Patented Dec. 19, 1911.

2 SHEETS-SHEET 1.

Fig. 1.

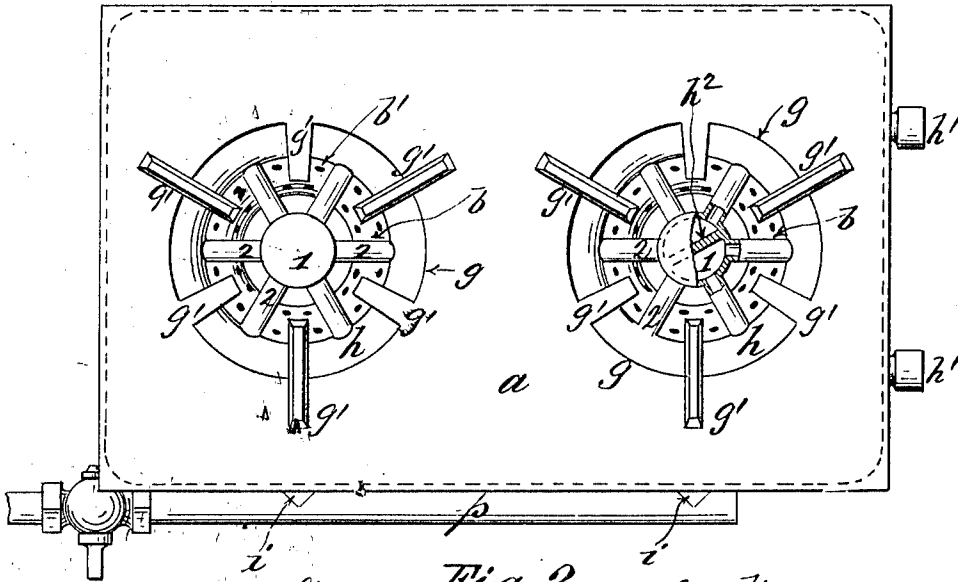


Fig. 2.

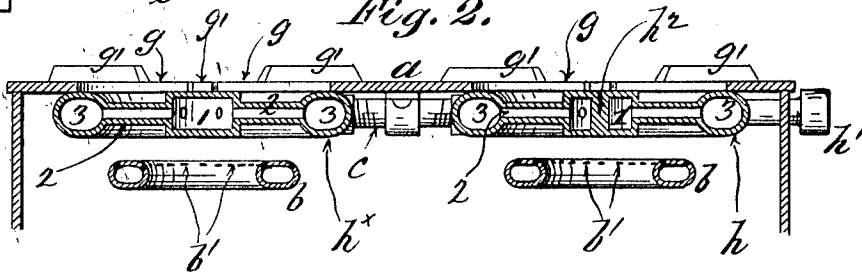
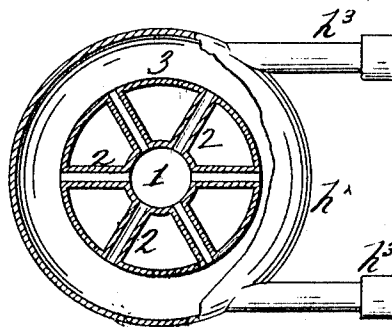


Fig. 3.



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GAS STOVE.
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2 SHEETS—SHEET 2.

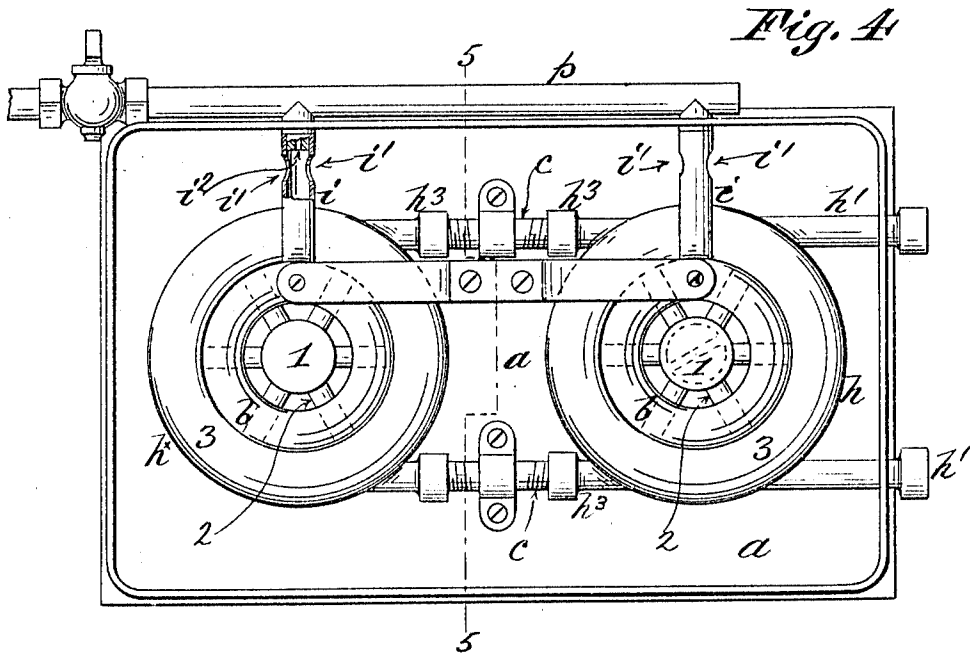
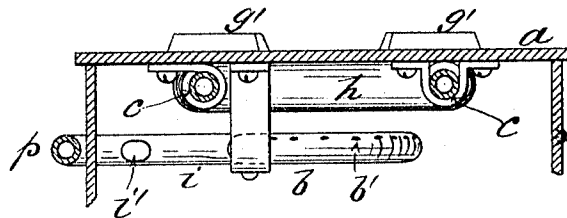


Fig. 5.



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UNITED STATES PATENT OFFICE.

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GAS-STOVE.

1,012,472.

Specification of Letters Patent.

Patented Dec. 19, 1911.

Application filed March 18, 1911. Serial No. 615,272.

To all whom it may concern:

Be it known that I, JOHN STEINMASS, a subject of the Emperor of Austria-Hungary, and a resident of Corona, in the county of Queens and State of New York, have invented certain new and useful Improvements in Gas-Stoves, of which the following is a specification.

My improvements relate to gas stoves or ranges in which the combustion of gas mixed with air is effected underneath suitable open grates or supports for cooking utensils, &c.; and the invention consists in the specific construction and arrangement of parts hereinafter described and claimed.

In the accompanying drawings, Figure 1, is a plan of a two-burner gas stove embodying the essential features of my invention; Fig. 2, is a central longitudinal vertical section; Fig. 3, is a sectional elevation showing the internal structure of the secondary heater h^x ; Fig. 4, is a plan of the under side of the structure shown in Fig. 1; Fig. 5, is a transverse vertical section taken upon plane of line 5—5 Fig. 4.

The top a , of the range or stove is formed with the usual grate openings g , one for each burner b , said grate openings having the radial grate bars g' , or being otherwise formed to support cooking utensils over the openings g . Each burner b , is of any usual or desired construction, being preferably circular and formed with the gas outlets b' . It is connected with the gas main supply pipe p , by means of the usual injector pipe i , formed with openings i' , i'' , for the admission of air, and with the gas jet i^2 , the construction and operation of the parts thus far named being essentially the same as heretofore.

In Figs. 1, 2, 4 and 5 of the drawings I show a duplex arrangement of water heaters, burners, &c., in which a primary heater h , adapted to connect with a hot water reservoir through the medium of inlet and return ducts h' , h'' , is formed with a central partition h^2 , to obviate short circuiting of water therein and insure a proper circulation in and through the secondary heater h^x . The primary heater h , and the secondary heater h^x , are connected by coupling pipes c , the opposite extremities of which are formed with right and left hand screw threads respectively to engage with correspondingly tapped coupling heads h^3 , on the water

heaters h , h^x , as indicated in Figs. 2 and 4. Each of said water heaters h , h^x , is interposed between a gas burner b , and a grate opening g , and grate bars g' .

The heaters are preferably circular in shape, and larger in diameter than the burners b ; and they have a central compartment 1, connected by radial tubes 2, 2, with the annular chamber 3, into which the inlet and discharge ducts open.

The primary heater h , differs from the secondary heater h^x , only in that in addition to the central portion h^2 , it is formed with the inlet and discharge ducts h' , h'' ,—the connection between the two heaters being effected through the medium of the coupling heads h^3 , and coupling pipes c , as will be readily understood by reference to Fig. 4.

It will be seen that the radial tubes 2, 2, overlie the burner b , in each case, and admit of the passage of the products of combustion between them to the grate opening g . Each water heater h , h^x being exposed to direct contact with the flame as the latter passes to the grate, it is obvious that the water in the heater will absorb a large percentage of heat which will cause it to circulate through the whole system of water connections, thereby utilizing heat that would otherwise be lost in the atmosphere. The heat thus collected by the water circulation may be stored and used as wanted for domestic or other purposes by well known means.

What I claim as my invention and desire to secure by Letters Patent, is—

1. In a gas stove of the character designated, the combination of a primary water heater h , and a secondary water heater h^x , both adapted to be interposed between the gas burners and grate-bars, and each formed with a central chamber 1, an annular chamber 3, and radial tubes 2, connecting said central and annular chambers, and pipes connecting the annular chambers 3, 3, of said primary and secondary heaters with each other, the primary heater being also formed with a dividing partition h^2 , in its central chamber 1, and being also formed with inlet and discharge ducts h' , h'' , adapted to connect the said primary and secondary water heaters with a hot water reservoir, as and for the purpose described.

2. In a gas stove of the character designated, the combination of a primary water

heater h , and a secondary water heater h^s , both adapted to be interposed between the gas burners and grate bars, and each formed with a central chamber 1, an annular chamber 3, and radial tubes 2, connecting said
5 central and annular chambers, each heater being also formed with coupling heads h^2 , h^3 , tapped respectively with right and left hand screw threads, and coupling pipes c , c ,
10 connecting the annular chambers 3, 3, of the said primary and secondary heaters with each other and formed with right and left hand screw threads engaging those in the

said coupling heads h^2 , h^3 , the primary heater h , being also formed with a dividing 15 partition h^2 , in its central chamber 1, and being also formed with inlet and discharge ducts h' , h' , adapted to connect the said primary and secondary water heaters with a hot water reservoir as and for the purpose 20 described.

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Witnesses:

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