

T. J. HUGHES.

GAS STOVE.

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965,463.

Patented July 26, 1910.

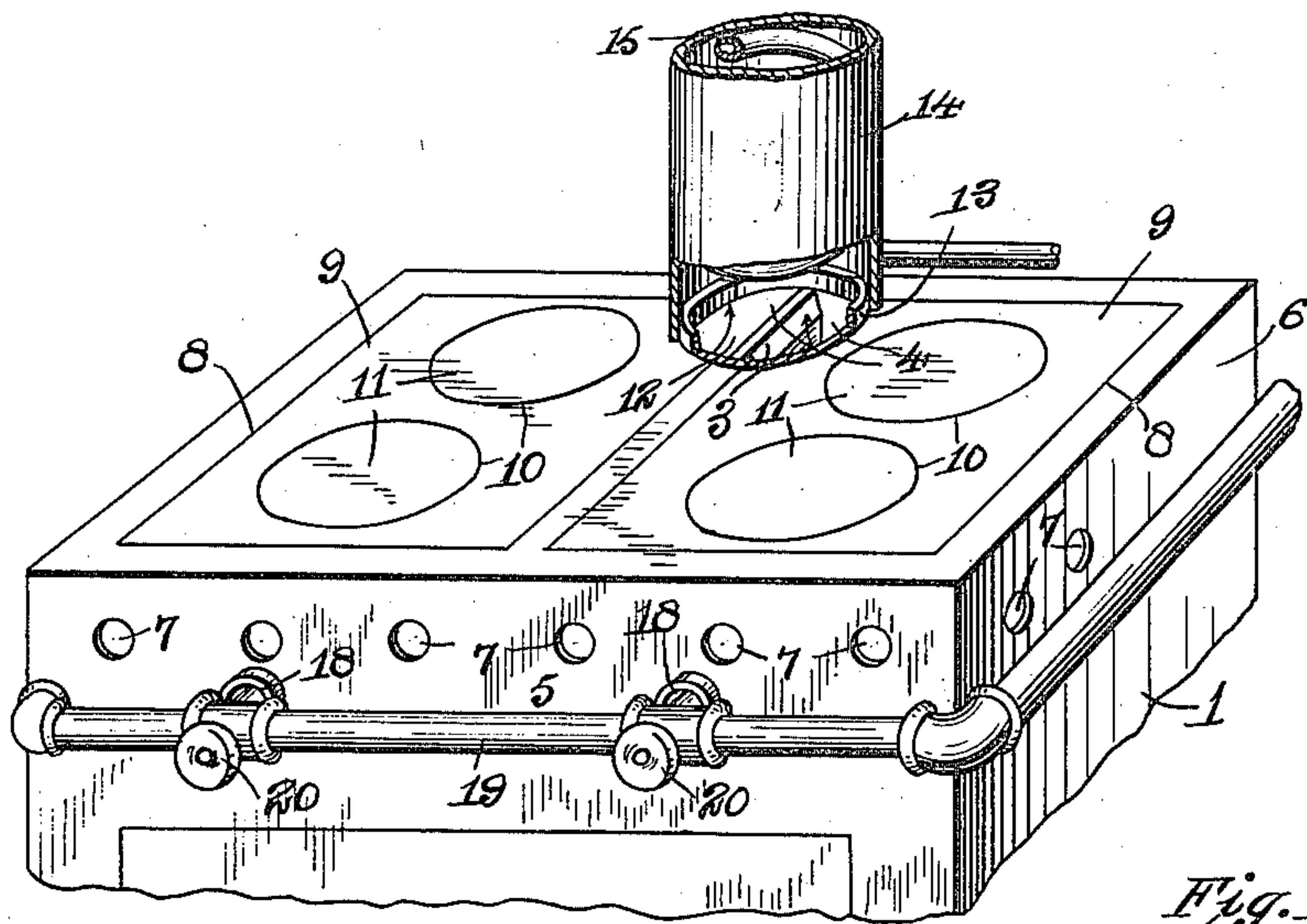


Fig. 1.

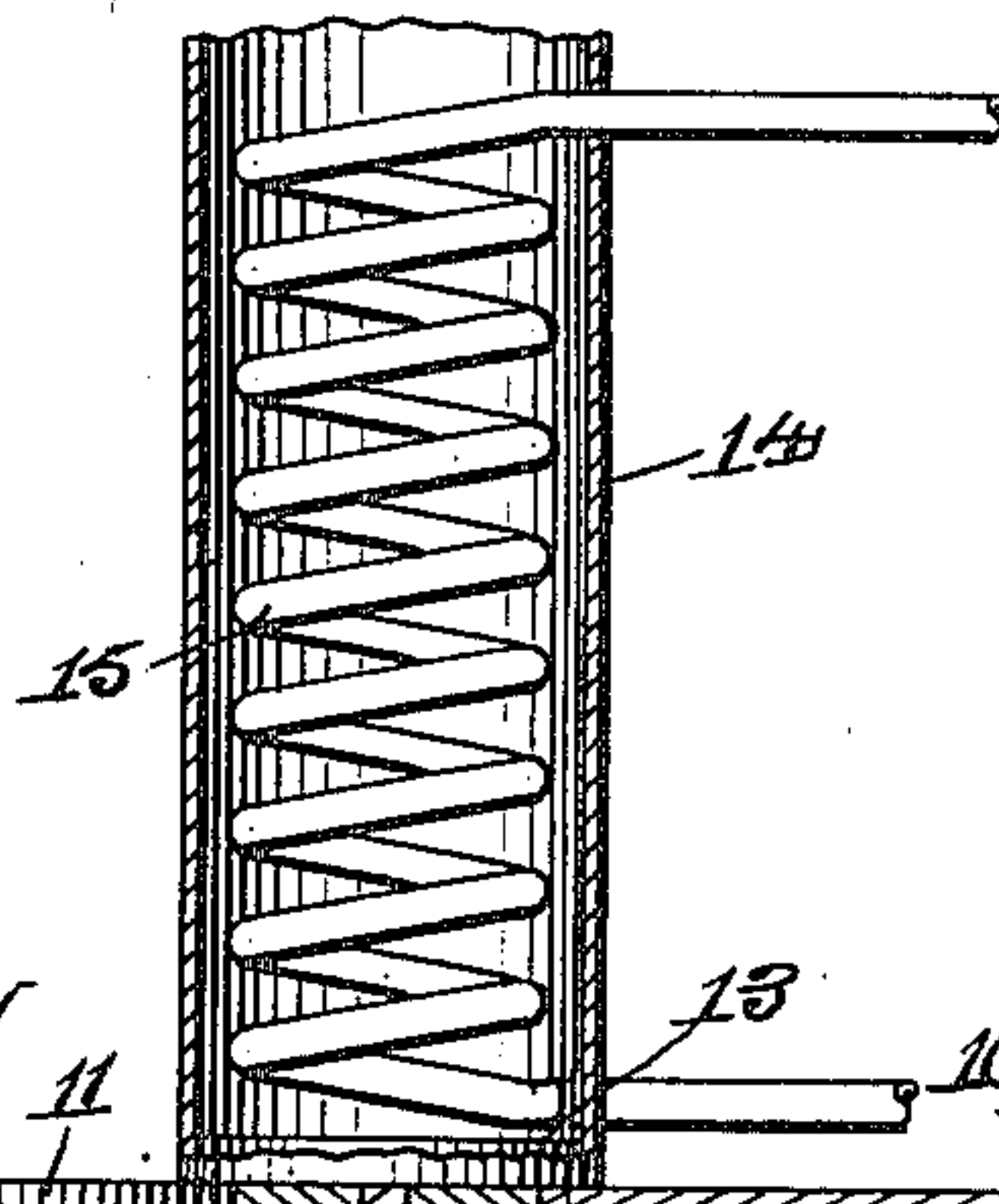


Fig. 2.

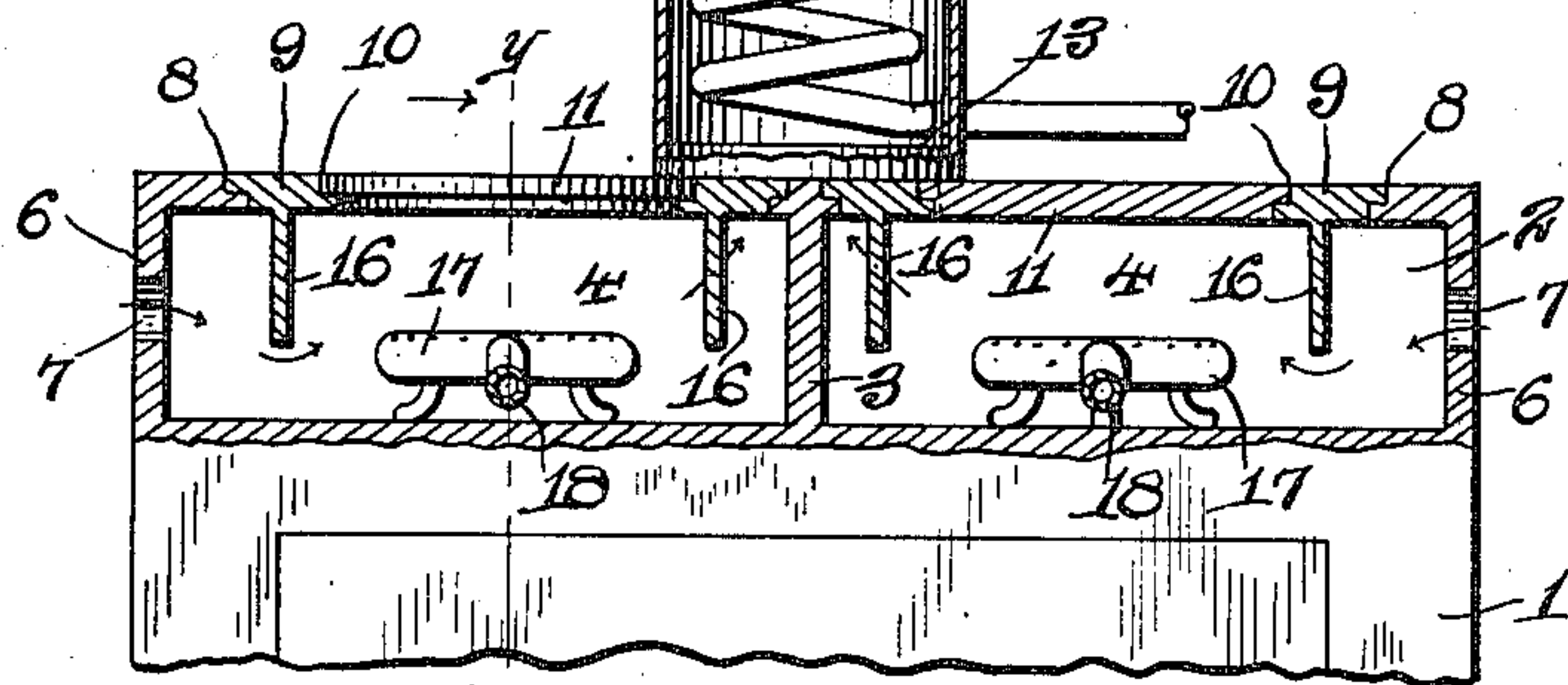


Fig. 3.

Witnesses:

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Inventor:

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# UNITED STATES PATENT OFFICE.

THOMAS J. HUGHES, OF CHICAGO, ILLINOIS.

## GAS-STOVE.

965,463.

Specification of Letters Patent. Patented July 26, 1910.

Application filed February 10, 1910. Serial No. 543,108.

*To all whom it may concern:*

Be it known that I, THOMAS J. HUGHES, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Gas-Stoves, of which the following is a specification.

My invention relates to gas-stoves or ranges and has for its object the production of a stove of such character wherein, when in operation, the heat generated at the burners embodied therein will be preserved and confined and utilized to a maximum extent before being exhausted.

A further object is the production of a stove of the character mentioned wherein the obnoxious products of the combustion taking place at the burner, when the former is in operation, will be prevented from being exhausted into the atmosphere of the room.

Other objects will appear hereinafter.

With these objects in view my invention consists in a gas-stove characterized as above mentioned and in certain details of construction and arrangement of parts all as will be hereinafter fully described and particularly pointed out in the appended claims.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a perspective view of the upper portion of a gas-stove embodying the preferred form of my invention, Fig. 2 is a vertical section taken partially on the line  $x-x$  of Fig. 3, and Fig. 3 is a vertical section taken on substantially the line  $y-y$  of Fig. 2.

Referring now to the drawings 1 indicates the body of the stove in the upper end of which is formed the burner or heating chamber 2. 3 indicates a central vertical longitudinally extending partition which divides the chamber 2 into two independent burner compartments 4. The lateral walls of the chamber 2 except the front wall 5 and the forward ends of the side walls 6 are imperforate, said front and side walls being provided with spaced ventilation openings 7. The upper side of each of the compartments 4 is provided with a preferably rectangular opening 8 in which is removably supported as shown a plate 9 bearing two, preferably circular, openings 10. Similarly supported in said openings are lids 11. Formed centrally in the top of the stove adjacent the

rearward edge thereof is a circular opening 12 which, as clearly shown in Fig. 1, communicates with the rearward ends of both the compartments 4. An upwardly extending flange 13 is preferably formed at the surrounding edge of said opening. Having its lower extremity engaging said flange is an upwardly extending discharge pipe 14 whose upper extremity communicates with the outside atmosphere. Arranged within said pipe at the lower end thereof is a pipe coil 15 upwardly through which a current of water may be forced. Provided upon the under side of each of the plates 9 adjacent the longitudinal edges thereof are longitudinally extending depending flanges 16 substantially co-extensive in length therewith. The rearward end portions of the innermost of said flanges are cut away, as clearly shown in Fig. 3, in order to permit of a free passage from the compartments 4 to the opening 12.

Arranged within each of the compartments 4 directly below the foremost opening thereof is a burner 17 of any ordinary or preferred form. The feed pipes 18 of the burners 17 project forwardly from the latter through the front wall 5, the same being connected in the usual manner at their forward ends to a manifold 19 which is connected with any suitable source of fuel supply. A suitable cock 20 governs the fuel passage leading to each of the burners 17.

With an arrangement as set forth, upon the burners being lighted, the products of combustion, by reason of the rearwardly directed draft created through the stove and which draft is occasioned because of the relative arrangement of the inlet openings 7 and the outlet opening 12, will be carried from the source of their formation at the forward ends of the compartments 4 rearwardly therethrough, through the opening 12, and thence upwardly to exhaustion through the pipe 14, such course being indicated by arrows in the several views. By reason of the flanges 16 the heated products of combustion will be so confined and directed as to effect the heating of the operative portions of the stove, that is, those which are used for heating purposes, the same serving also as a means of directing the heated gases toward the opening 12. Because of this confinement and direction of the gases, a single burner in each of the compartments 4 has been found adequate to heat



the entire interior thereof. After this utilization in the compartment 4, said gases upon entering the pipe 14, are again utilized to heat water circulating through the coil 15.

5 Hence with the arrangement described, the products of combustion will be utilized to a maximum extent, and the same will be prevented from escaping into the atmosphere of the room.

10 While I have shown what I deem to be the preferable form of my device I do not wish to be limited thereto as there might be various changes made in the details of construction and arrangement of parts described  
15 without departing from the spirit of the invention comprehended within the scope of the appended claims.

Having described my invention what I claim as new and desire to secure by Letters  
20 Patent is:

1. A gas-stove comprising an imperforate bottom; upwardly extending lateral walls forming a heat chamber, said walls, except at the forward end of said stove, being im-  
25 perforate; a longitudinally extending partition dividing said chamber into two independent compartments; a cover for each of said compartments; longitudinally extending depending flanges provided upon the  
30 under side of each of said covers adjacent the longitudinal edges thereof, the rearward

end of each of said covers being provided with an opening; a discharge pipe communicating with said openings; and a burner arranged in each of said compartments, sub- 35  
stantially as described.

2. A gas stove comprising an imperforate bottom; upwardly extending lateral walls forming a heating chamber, said walls, except at the forward end of said stove, being 40  
imperforate; a longitudinally extending partition dividing said chamber into two independent compartments; a cover for each of said compartments; longitudinally extending depending flanges provided upon the 45  
under side of each of said covers adjacent the longitudinal edges thereof, the rearward end of each of said covers being provided with an opening and the inner of said flanges on each cover being discontinued at 50  
its rear end to afford free access to said openings; a discharge pipe communicating with said openings; and a burner arranged in each of said compartments, substantially 55  
as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOMAS J. HUGHES.

Witnesses:

A. A. OLSON,  
JANET E. HOGAN.