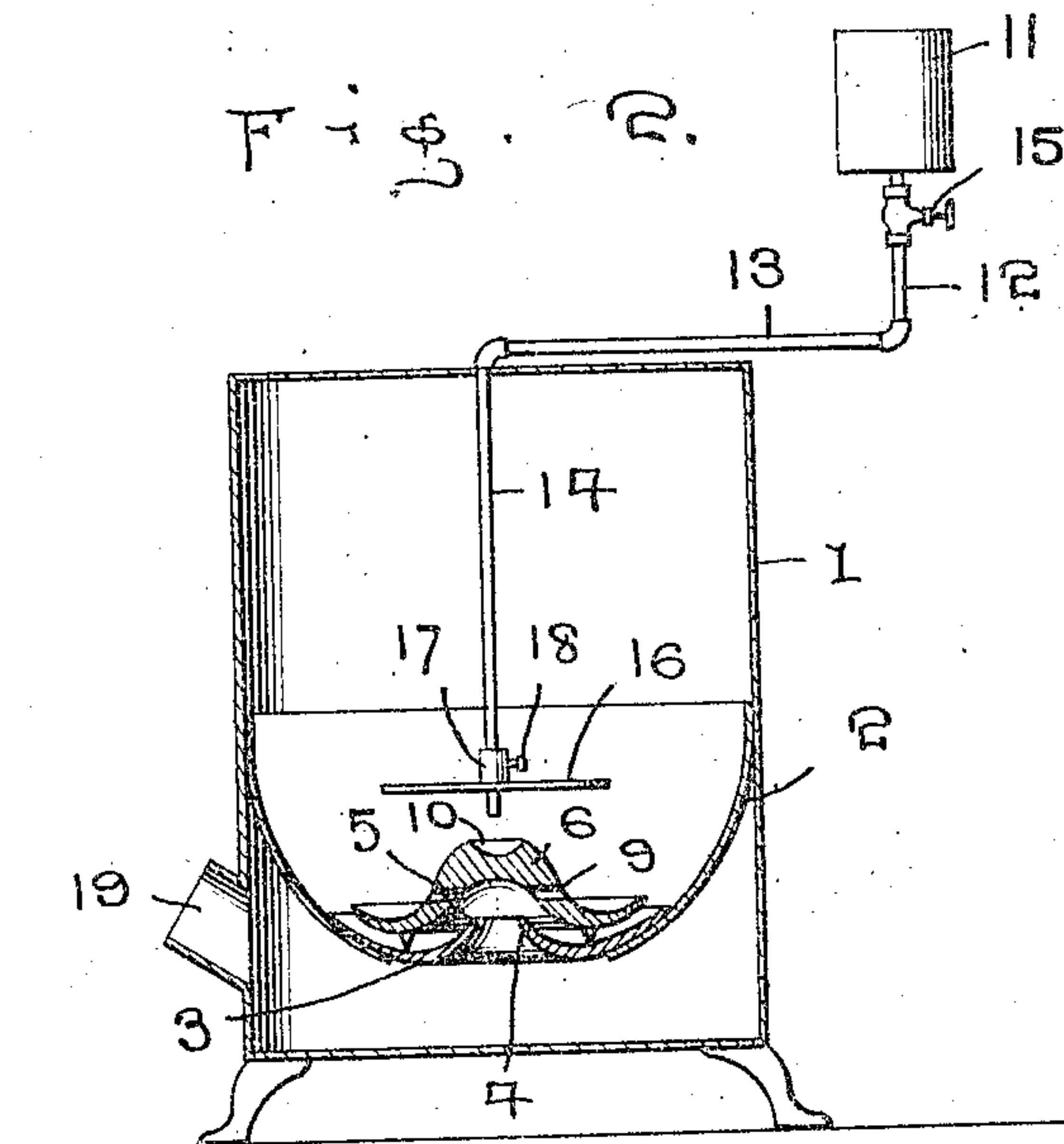
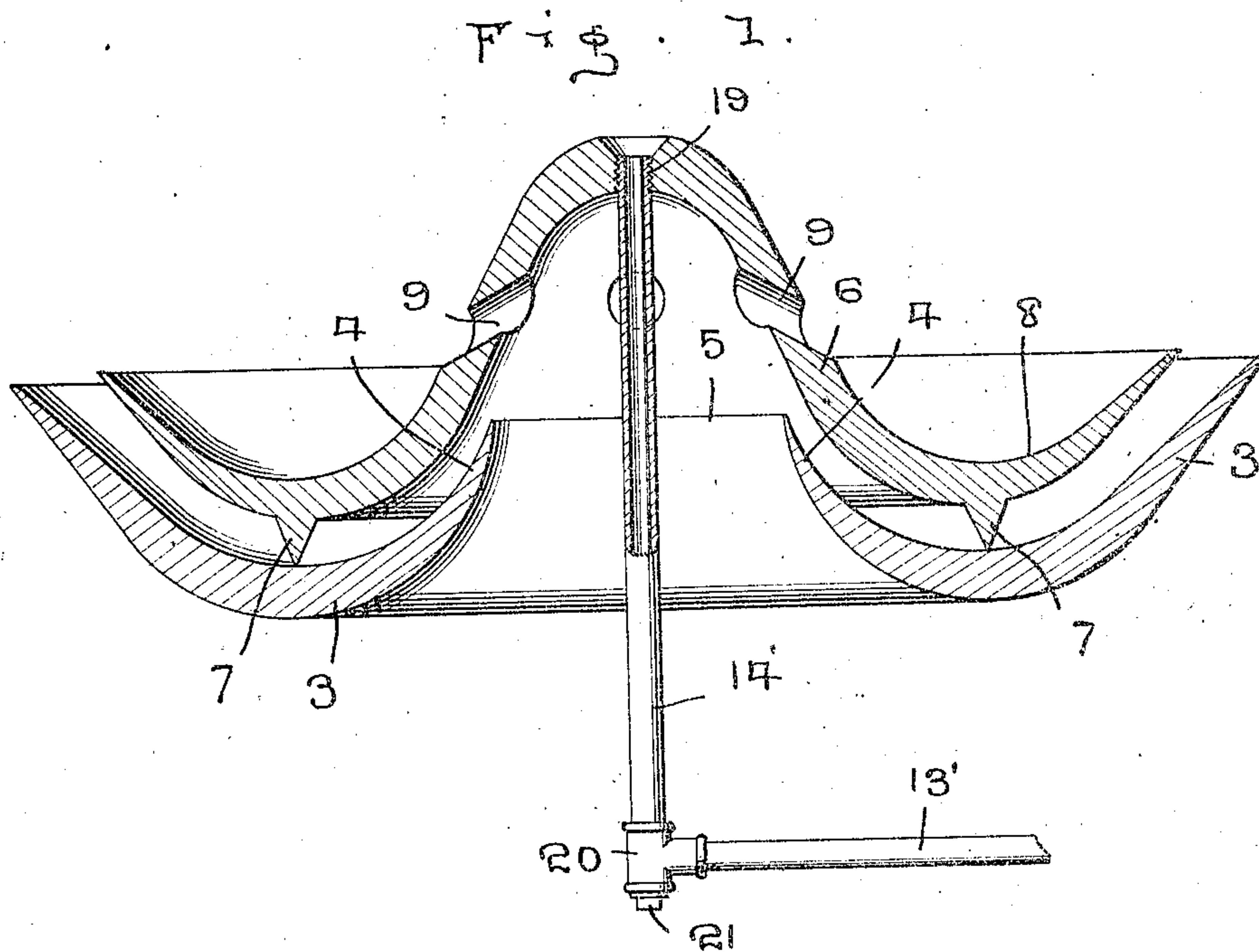


982,167.

C. W. WRIGHT.
OIL BURNER.
APPLICATION FILED JAN. 21, 1910.

Patented Jan. 17, 1911
2 SHEETS—SHEET 1.



WITNESSES:

Thomas Riley
M. Newcomb.

INVENTOR
C. W. Wright

BY

W. J. Fitzgerald & Co.
Attorneys

C. W. WRIGHT.

OIL BURNER.

APPLICATION FILED JAN. 21, 1910.

982,167.

Patented Jan. 17, 1911.

2 SHEETS—SHEET 2.

FIG. 3.

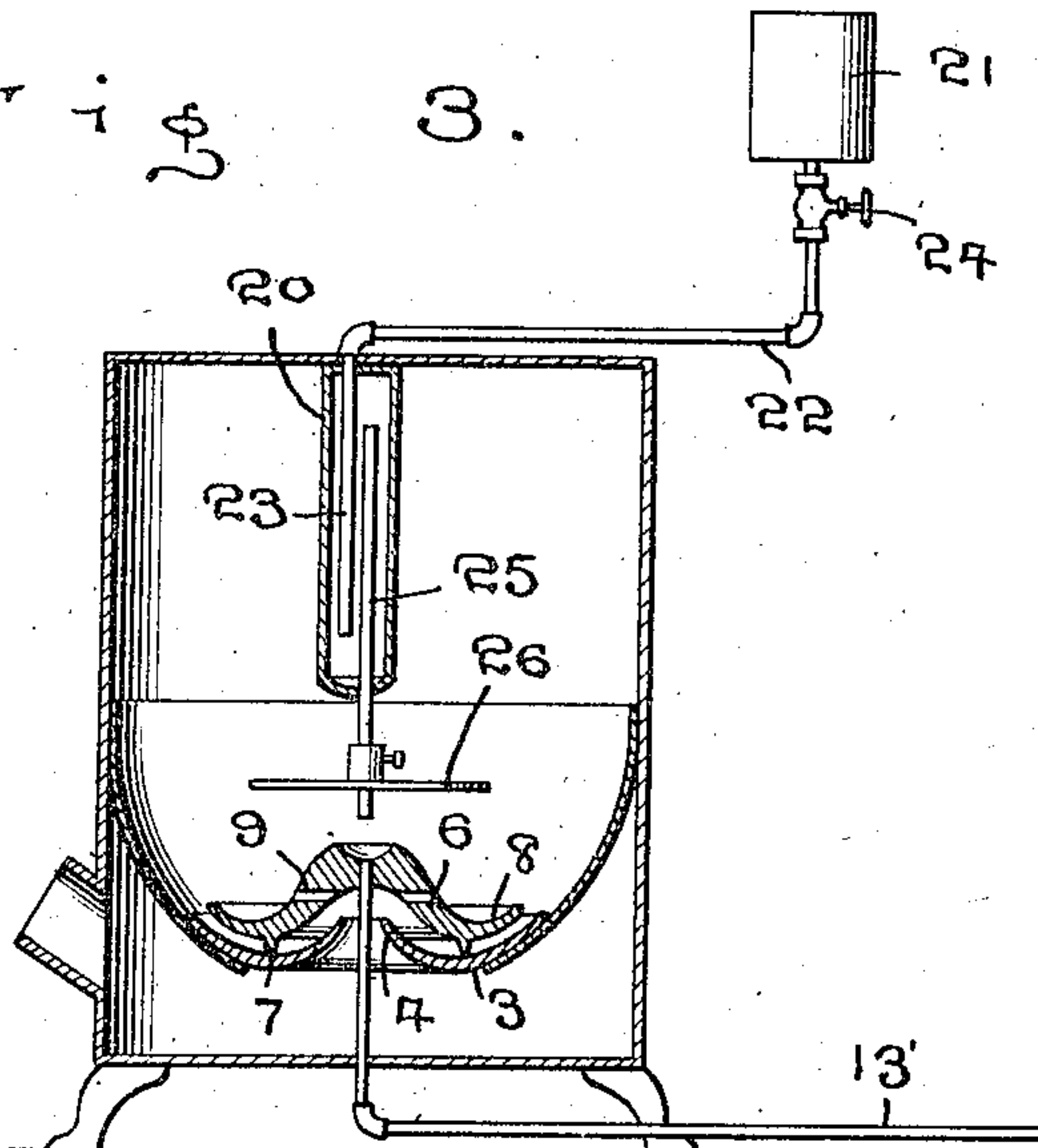


FIG. 5.

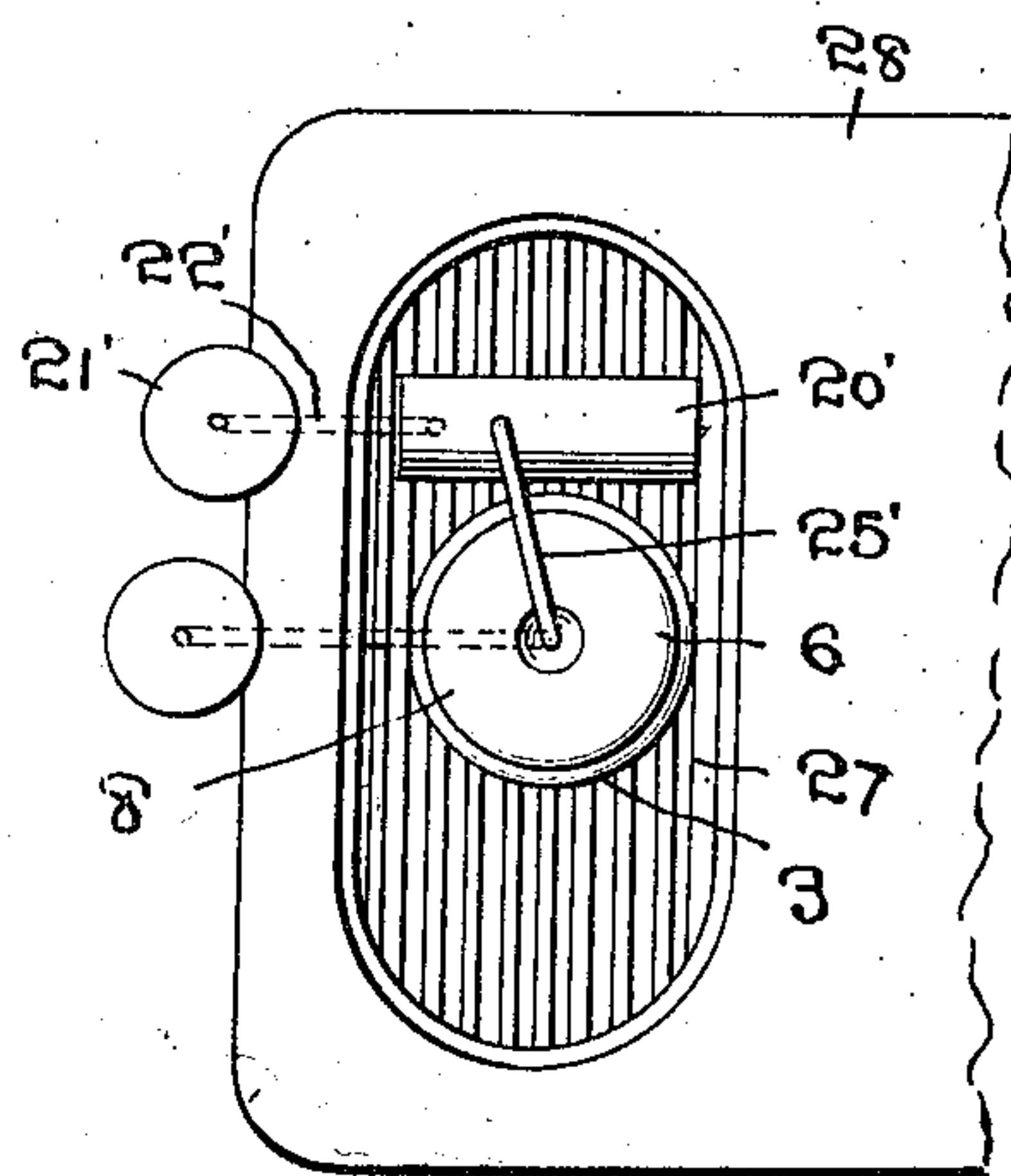
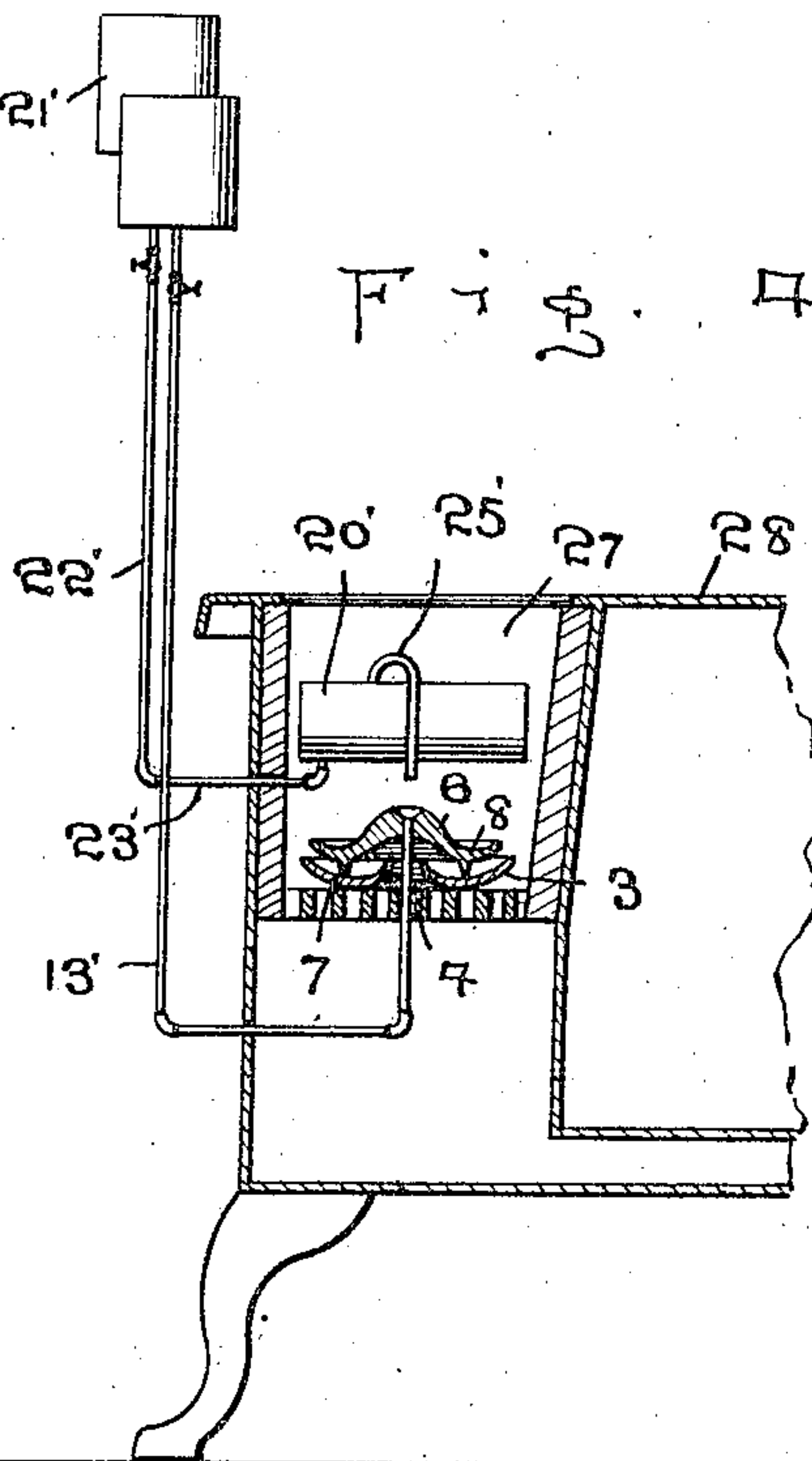


FIG. 4.



WITNESSES:

Thomas Riley
H. J. Jacobi

C. W. Wright

BY W. J. Fitzgerald & Co.
Attorneys

UNITED STATES PATENT OFFICE.

CHARLES W. WRIGHT, OF HOBART, OKLAHOMA.

OIL-BURNER.

982,167.

Specification of Letters Patent.

Patented Jan. 17, 1911.

Application filed January 21, 1910. Serial No. 539,341.

To all whom it may concern:

Be it known that I, CHARLES W. WRIGHT, a citizen of the United States, residing at Hobart, in the county of Kiowa and State of Oklahoma, have invented certain new and useful Improvements in Oil-Burners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to new and useful improvements in oil burners and more particularly to that class in which crude oil is used for heating and cooking purposes and my object is to provide a burner through which the maximum heat will be produced at a minimum fuel consumption.

A further object is to provide a burner in which air is thoroughly commingled with the burning oil, thus effecting a higher temperature and a still further object is to provide means for the introducing of steam to the burner.

A still further object is to provide a burner of a simple, economical and effective construction in which oil is perfectly and, under economical feed, positively consumed without smoke or odor.

Other objects and advantages will be hereinafter referred to and more particularly pointed out in the claims.

Referring to the drawings forming a part of this application, Figure 1 is a section of the oil tray and base plate showing the oil fed from the bottom. Fig. 2 is a section of the stove with an oil tray and plate showing the oil fed to the tray from the top. Fig. 3 is a modification showing a section of a stove with a burner and steam supplying means as applied. Fig. 4 is a still further modification showing a burner as applied to a cook stove with the steam supplying means, and, Fig. 5 is a top plan view of the device as shown in Fig. 4.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 indicates a stove of any preferred form having mounted therein adjacent its bottom a fire pot 2 and seated in said drum is a burner comprising a base plate or receiving tray 3 having a substantially vertical collar

4 and an opening 5 in the central portion thereof and having its edges bent upwardly to form a trough. A substantially cone shaped oil tray 6 somewhat smaller than said receiving tray is seated on said tray through the medium of lugs 7 carried by the oil tray and the ends thereof are bent upwardly to form an annular trough 8.

Passing transversely through the sides of the dome of the substantially cone shaped tray 6 are the air inlet openings 9 and a cavity 10 in the upper central portion of said dome is adapted to receive oil fed from the reservoir or tank 11 through the intermediate pipes 12 and 13 and central feed pipe 14. On the vertical pipe 12 adjacent the reservoir is a valve 15, the purpose of which is obvious and a flame deflector 16 is slidably mounted on said central feed pipe 14 through the medium of collar 17 and adjusting screw 18, whereby said deflector may be raised or lowered according to the size of flame given off from the burner. A draft inlet 19 adjacent the bottom of said stove is adapted to receive air currents which pass through opening 5 of the receiving tray 3 and through the air inlet openings 9 to the surrounding flame, thereby aiding the combustion and causing a rising of temperature at a minimum fuel consumption. Some of the air currents passing through the opening 5 will meet the concave under surface of the cone shaped tray 6 and be turned off through the space left between the oil tray and the receiving tray, thereby passing to the outer edges of said trays aiding the combustion of oil that may have flowed to that portion thereof.

It will be seen that I have used the upward draft, with which all stoves are supplied, and converted the same into a downward draft through the burner, the air passing through the openings 9 and that passing through the space between the trays uniting to cause the flame to burn and give off an extraordinary amount of heat.

As shown in Fig. 2, I feed the oil to the burner through the overhanging central feed pipe 14 which drops oil to the concavity 10 where it is lighted, some of the oil running over the dome to the annular trough 8, the air passing through the openings and over the edge of the tray commingling with the oil

and aiding in the combustion thereof, but I do not limit myself to this form of overhanging oil feeding pipe and may use the form shown in Fig. 1, in which case the central feed pipe 14' is passed through the opening of the receiving tray 3, one end thereof engaging a threaded opening 19 leading to the concavity in the dome in said tray 6. Oil is fed from the reservoir to said central feed pipe 14' through the intermediate pipe 13', a T joint 20 connecting the intermediate and central feed pipes and a plug 21 is inserted in one end of the T, the purpose of which is to allow the cleansing of the adjacent pipes when it is so desired. It will be seen that in this last referred to form, the central feed pipe passes through the air space which will naturally keep said pipe cool and thereby prevent the corrosion of the metal, which might occur in the other form, but to prevent any corrosion of the metal in either form, I prefer to have the pipe sections adjacent the burner made of brass or copper.

As disclosed in Figs. 3, 4 and 5, I have provided some slight modifications wherein steam is allowed to be fed to the burner, thereby greatly aiding the combustion and increasing the heat within the stove. As shown in Fig. 3, I use the heating stove as shown in Fig. 2 and the form of burner used in Fig. 1, and within the upper portion of the stove, I have provided a cylindrical boiler 20, which is filled with water from a reservoir 21 through the medium of pipes 22 and 23. Said pipe 23 enters said boiler from its upper portion and extends a considerable distance within so that when the valve 24 is opened and water is allowed to flow to said boiler from the reservoir, it will be but a short while before the level of the water will reach the end of said pipe 23, while an additional pipe 25 is inserted through said boiler from its bottom and extends almost to the top thereof. The free end of said additional pipe extends within a short distance above the burner and carries thereon a deflector 26. After the burner has been lighted, water is allowed to flow from the reservoir to the boiler and it will be seen that within a short while the water will become heated to a boiling point, when the steam arising therefrom will be carried through the outlet pipe 25, which extends to the upper portion of said boiler, and allowed to play upon the burner, in which case the heat will be increased and said steam united with the escaping carbon, thereby furnishing additional oxygen for its consumption. The result is obvious.

As shown in Fig. 4, a still further modified form of steam supplying means has been provided. In this case, I have shown the

form of burner, as disclosed in Fig. 1 applied to a grate within a fire box 27 of a cook stove 28. Here I have shown a substantially cylindrical boiler 20' immediately above said burner adapted to be filled with water from a reservoir 21' through the medium of the pipes 22' and 23', said pipe 23' entering the boiler from the bottom thereof. An additional pipe 25' leading from the upper portion of said boiler curves downwardly and extends within a short distance above said burner, whereby it will be seen that as the water within the boiler becomes heated to a boiling point, the steam arising therefrom will pass outwardly through the pipe 25' and be allowed to commingle with the burning oil on the burner, the result of which is obvious.

It will be seen that I have shown a burner of simple, economical and effective construction in which a minimum amount of oil is consumed in producing a maximum amount of heat and it will further be seen that I have provided a device that will positively consume all oil without smoke and odor. It will still further be seen that I have provided efficient means for the introduction of steam to the burner.

What I claim is:—

1. A burner comprising an oil tray provided with a dome in the central portion thereof, a receiving tray of plate-like formation below said oil tray having an opening in its central portion, said oil tray having a concavity in its upper central portion and air inlet openings in said dome, and an oil feeding pipe leading to said concavity.

2. A burner comprising an oil tray having a dome-like central portion and provided with lugs in the bottom thereof, a receiving tray having an enlarged central opening, said oil tray being seated on said latter tray through the medium of said lugs, fuel supplying means for the burner, and air supplying means comprising ports in the dome-like portion of said oil tray, said ports being inclined downwardly from their inner to their outer ends, for the purpose described.

3. A burner comprising an oil tray having its central portion formed dome-like, said tray being also provided with lugs on the bottom thereof, a receiving tray below said oil tray, said oil tray being seated on said latter tray through the medium of said lugs, and fuel supplying means for said oil tray, said oil tray being also provided with air inlet ports in the dome thereof, for the purpose described.

4. A burner comprising an oil tray, the central portion of which is formed dome-like and said dome-like portion being provided with air inlet ports, said tray being also pro-

vided with lugs on the bottom thereof, a receiving tray having a central opening therein, said oil tray being seated on said latter tray through the medium of said lugs, and
5 a fuel supplying pipe for said oil tray, said tray having a cavity in the upper portion of the dome thereof, to which said pipe leads.

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

CHARLES W. WRIGHT.

Witnesses:

E. R. PHIPPS,

G. W. DILL.