(No Model.)

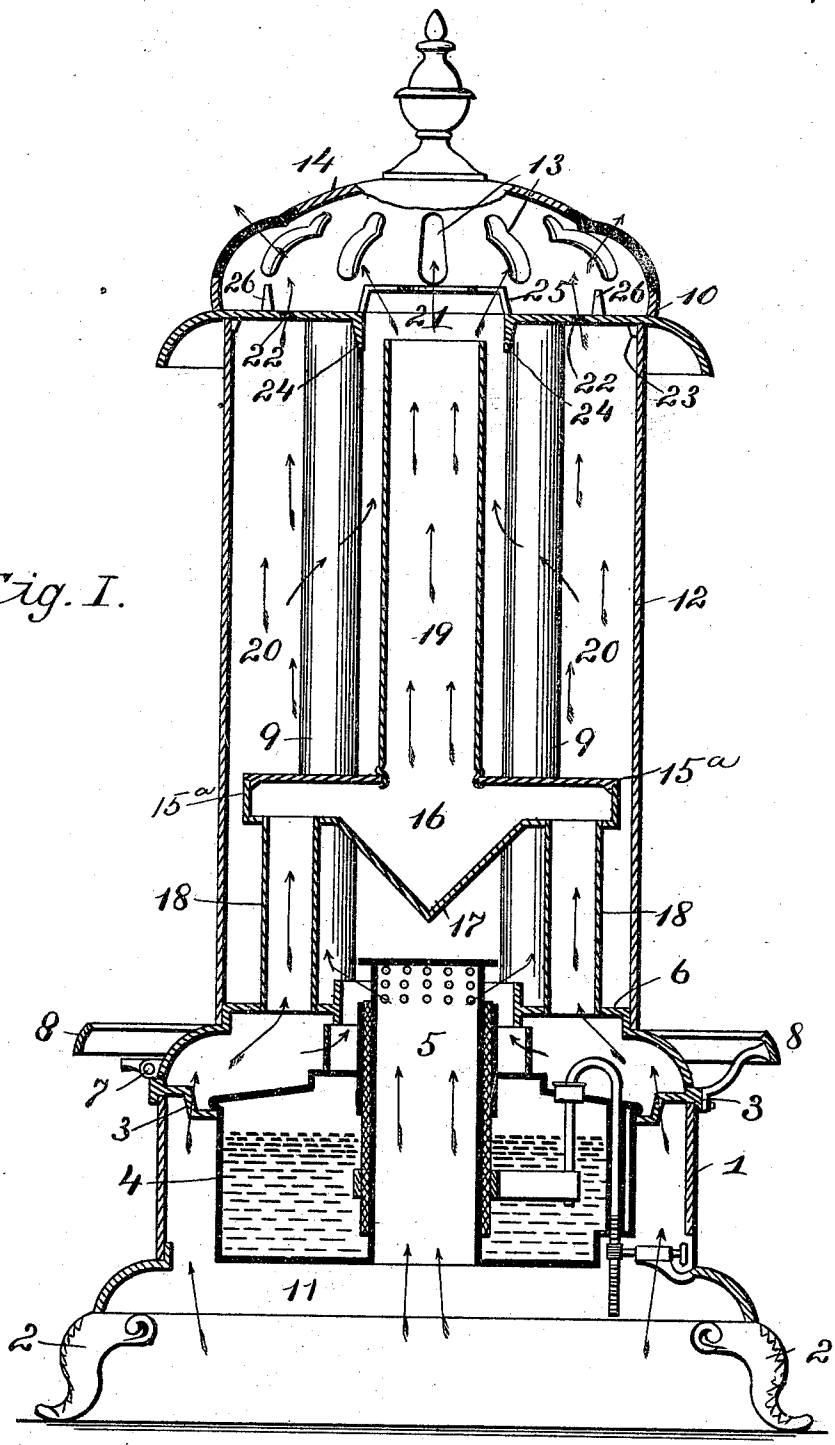
2 Sheets—Sheet 1.

W. MASTERS.

OIL HEATER.

No. 513,404. Patented Jan. 23, 1894.

Fig. I.



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(No Model.) 2 Sheets—Sheet 2.

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OIL HEATER.

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Fig. II.

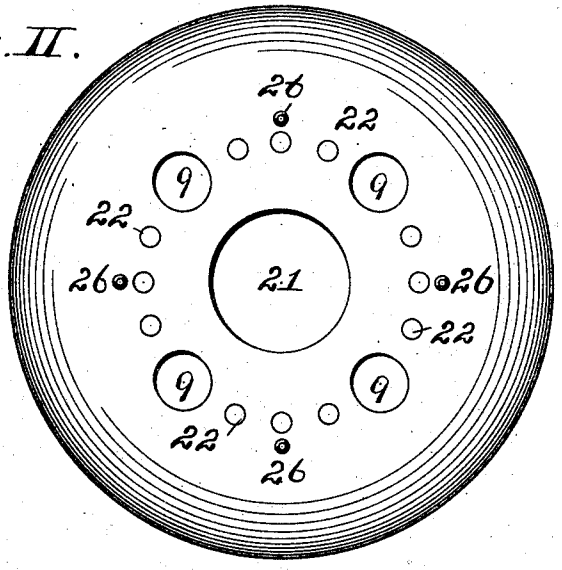


Fig. III.

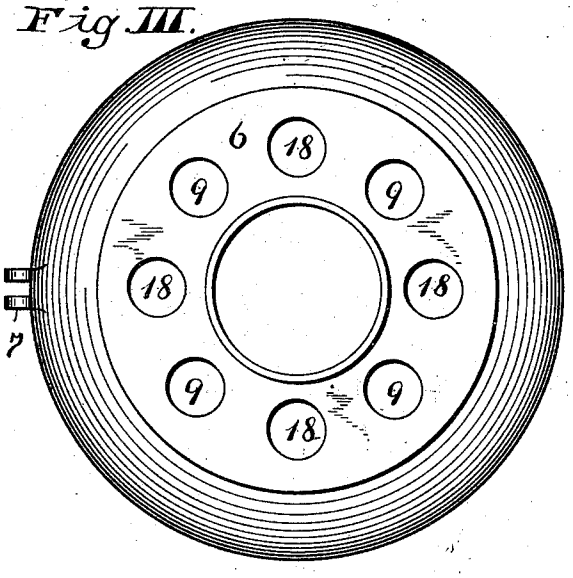


Fig. IV.

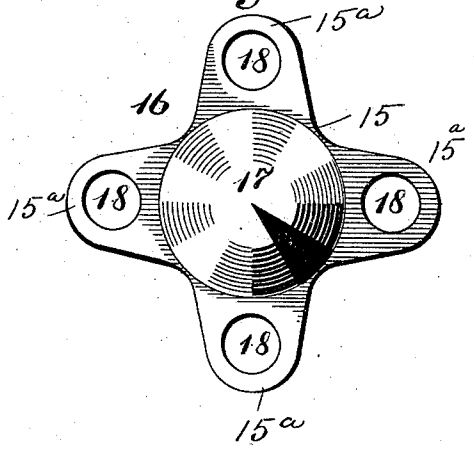
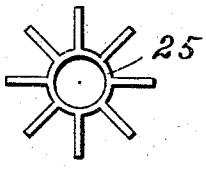


Fig. V.



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THE NATIONAL LITHOGRAPHING COMPANY,
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UNITED STATES PATENT OFFICE.

WILLIAM MASTERS, OF KANSAS CITY, MISSOURI.

OIL-HEATER.

SPECIFICATION forming part of Letters Patent No. 513,404, dated January 23, 1894.

Application filed February 1, 1893. Serial No. 460,540. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MASTERS, of Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Oil-Heaters, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to certain new and useful improvements in oil or gas heaters; and my invention consists in certain features of novelty hereinafter described and pointed out in the claim.

Figure I, represents a vertical, longitudinal section of my improved stove. Fig. II, is a top view of the top plate. Fig. III, represents a top view of the base plate. Fig. IV, represents a bottom view of the heat and flame deflector. Fig. V, represents a crab or spider which is placed over the central flue at the top of the stove.

Referring to the drawings: 1, represents the base supported by legs 2, said base being provided with lugs 3, for supporting the reservoir 4, having the usual Argand or Rochester burner 5.

6, represents the base plate hinged to the base as shown at 7; and 8, represents the ordinary fender.

9, represents a series of vertical tubes extending from the base plate 6, to the top plate 10, passing through each of said plates; thus forming a passage-way for the fresh air from the outside through the bottom chamber 11, of the base through the drum 12, in which said tubes are located, said top and bottom plates 6 and 10, forming the top and bottom of said drum. The air, after being heated in its passage through the tubes 9, passing out through apertures 13, in the cap or cover 14.

15, represents a hollow head having arms 15^a extending between the vertical tubes, a chamber 16, and a cone shaped downward extension 17. The head 15, is supported within the drum 12, a short distance above the burner 5, with the cone shaped extension 17, located directly over the center of the burner; said cone shaped extension forming a deflector for deflecting the flame and heat which pass upward from the burner. The head 15 and chamber 16, are connected with the chamber 11, in the base by means of a series of short supporting tubes 18 alternating with the vertical tubes beneath the arms of the head, by which means air may be admitted from the chamber 11, through the tubes 18, into the chamber 16, where it is heated and passes out through a central vertical tube 19, connected with the head 15, said tube extending nearly to the top 10, of the drum; but leaving a sufficient space surrounding its uppper end for the free escape of the heated air and for the commingling of the mixed air from the burner and from the chamber 11, the heated air from the burner passing up through an annular space 20, outside of the tubes 9, and between said tubes, thus heating the air within the tubes and at the same time heating the walls of the drum, giving a large radiating surface, a portion of the heated air passing out through a central aperture 21, in the top plate, and a portion through openings 22, in said plate.

By the construction shown the heated air is contracted in the passage-way from the central chamber 16, out through the central tube 19. It will be observed that in this device the main body of the heated air is discharged in compact form through the central tube so as to bring the strongest heat to bear upon any article placed on the support 25, the tube 19, being of less diameter than the chamber 16. As the heated air passes up through the tube 19, it being hotter than the surrounding air, the tube 19 acts as an injector by drawing the surrounding air through the annular space around the upper end of the tube. Therefore, practically, all the heated air is passed up through the central opening in the top of the drum; so that by placing any article over the same it will be heated very rapidly.

23, represents an annular flange on the top of the plate 10, which comes in contact with the inner side of the drum, and holds the top plate in position.

24, represents an annular flange fitting down on the inner side of the tubes 9.

25, represents a crab which rests on the top plate 10, over the central aperture 21; and 26, represents lugs extending up on a level with the

top of said crab, on which a vessel may rest if desired, after the top 14, has been removed.

I claim as my invention—

The combination of the base, having a chamber for a heating device, through which air is supplied, the base plate surmounting the base, the drum supported on the base-plate, the top plate, supported on the drum, having a central opening, the vertical air tubes extending from the base plate to the top plate, the head having arms extending between the vertical tubes, a heating chamber, and a central vertical tube extending to a point adjacent to the central opening, and short vertical air tubes alternating with the vertical air tubes beneath the arms of the head; substantially as described.

WILLIAM MASTERS.

Witnesses:
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F. E. MULLETT.