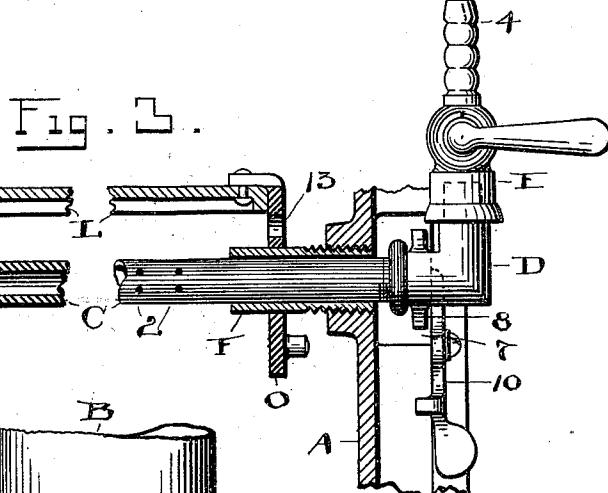
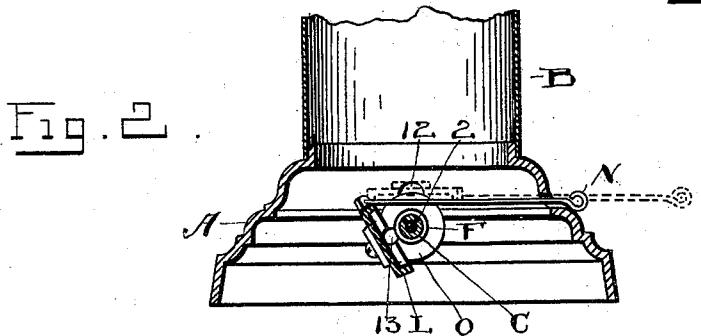
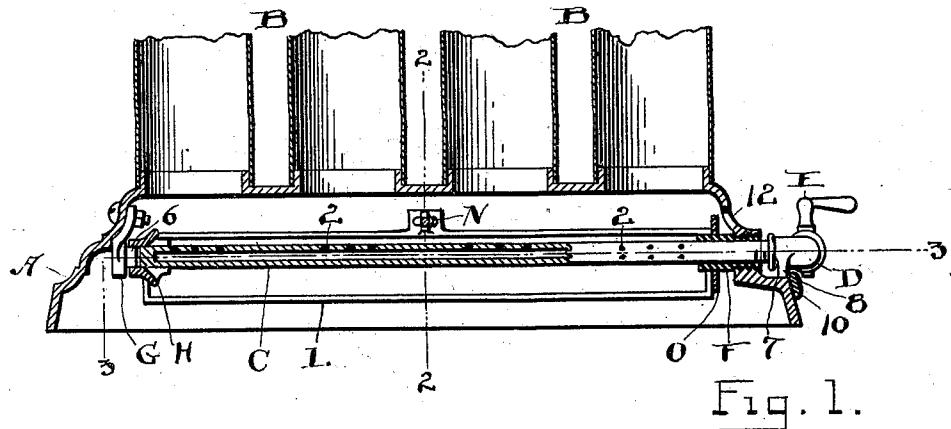


(No Model.)

C. WHITTINGHAM.
GAS HEATER.

No. 554,355.

Patented Feb. 11, 1896.



ATTEST.

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CHARLES WHITTINGHAM, OF CLEVELAND, OHIO, ASSIGNOR TO THE CLEVELAND FOUNDRY COMPANY, OF SAME PLACE.

GAS-HEATER.

SPECIFICATION forming part of Letters Patent No. 554,355, dated February 11, 1896.

Application filed February 12, 1895. Serial No. 538,152. (No model.)

To all whom it may concern:

Be it known that I, CHARLES WHITTINGHAM, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Gas-Heaters; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in gas-heaters; and the invention consists in a burner substantially as shown and herein described.

In the accompanying drawings, Figure 1 is a vertical central sectional elevation of my improved burner, showing also the lower portion of the heating-pipes connected therewith. Fig. 2 is a cross-section of the burner corresponding to line 2 2, Fig. 1. Fig. 3 is a horizontal plan view of Fig. 1, enlarged and looking down from line 3 3 thereon. Fig. 4 is an end elevation.

A represents the base of the heater, and B the radiating-tubes.

C is the burner tube or pipe. This tube has the usual small perforations 2 for the escape of the gas, and an elbow or joint D is affixed at its inner end and is plugged at the opposite end. The elbow D carries a valved joint E, constructed at its end 4 to attach flexible or rubber tubing leading to the gas jet or burner, and the parts C, D, and E are united as one piece, so as to be removable and operative together. I have found in the use of gas-burners that there is constant tendency in the perforations 2 to get clogged and obstruct the flow of gas, and that they require frequent cleansing. Obviously if the tube

C were not removable it would be difficult to approach said holes 2 to insert an instrument, like a wire or needle, to clean them out. I have therefore overcome this difficulty and rendered cleansing easy for any unskilled person by making the tube C and the parts D and E conveniently detachable. To this end there is inserted a short sleeve F at one end in the base A through which tube C is inserted, and at the opposite end is a hanger G, fixed to base A and having a hub or boss 6 on its inside. A flaring head H is sleeved to turn on this hub, and the plugged end of the tube C rests normally in this head against

hub 6 without other means of support. The flare of said head serves as a guide to direct 55 the free end of the tube C to its place when it is being put back after removal for cleaning. Then to hold said parts C, D, and E in place I have formed a flat surface 7 on the base beneath joint or coupling D and a 60 straight-edged lug 8 on said coupling to rest on said flat surface 7, and the counterweighted or gravity latch 10, pivoted on base A, bears against the outside of lug 8 and keeps said parts in their places. In this way tube C is 65 retained in working position and the elbow E and joint D are held horizontally by reason of the lug 8 and the bearing-surface 7 therefor.

Another feature of the invention is the deflector L. (Shown in cross-section, Fig. 2.) 70 This deflector is secured at its outer end to head H and at its inner end to head O, turning on short tube or sleeve F. The relation of the parts when the deflector is not in use is seen in full lines in Fig. 2, and in dotted 75 lines therein as when it is in use. The use is temporary and only at the moment of lighting to confine the gas that may escape before ignition occurs and to facilitate instantaneous lighting at all points in the tube. 80 Hence the deflector is made rotatable in its bearings, and by handle-rod N may be drawn into horizontal position over gas-tube C, there to remain only until lighting occurs and then to drop back again by gravity. To facilitate lighting, the base A has a lighting-hole 12 and the head O a corresponding hole 13 which comes opposite hole 12 when the deflector is raised for lighting.

Having thus described my invention, what 90 I claim is—

The burner described, consisting of the deflector L, the bearings F and G carrying said deflector and the deflector having a rotating support H on said bearing G, in combination 95 with burner-tube C supported removably in its bearings and adapted to be covered by the said deflector, said tube C projected into the rotatable support H, substantially as described.

Witness my hand to the foregoing specification this 21st day of December, 1894.

CHARLES WHITTINGHAM.

Witnesses:

H. T. FISHER,
M. G. NORTON.