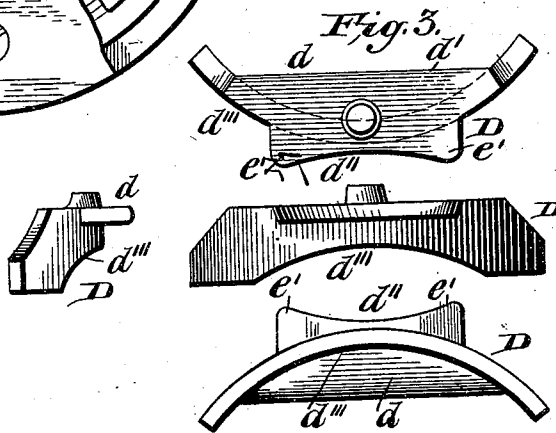
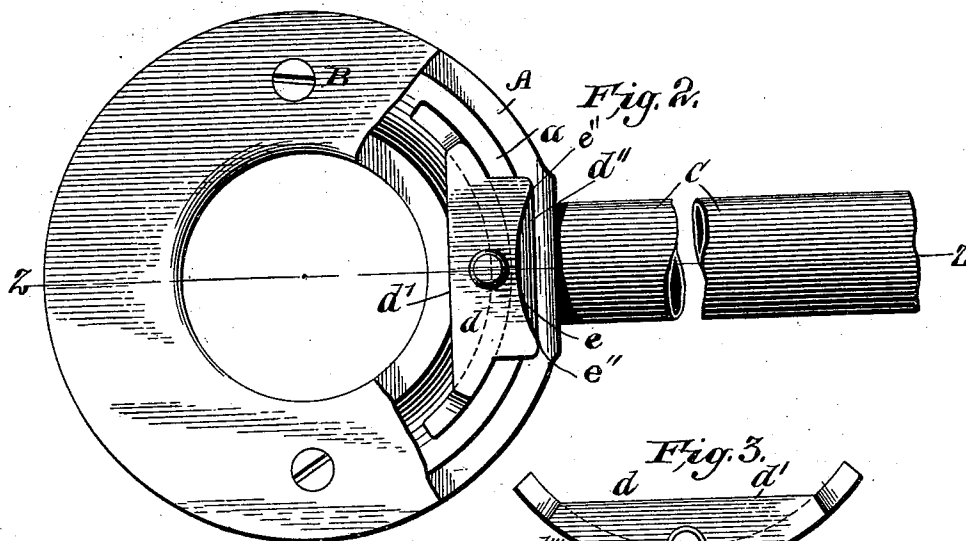
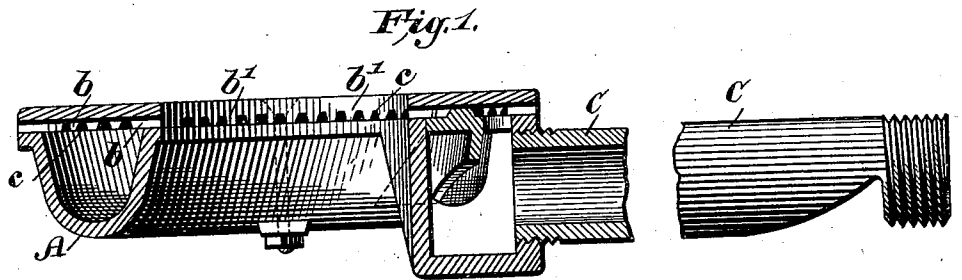


(No Model.)

J. M. MURPHY.
DEFLECTOR PLATE FOR GAS STOVES.

No. 554,528.

Patented Feb. 11, 1896.



WITNESSES:

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JOHN M. MURPHY, OF DANBURY, CONNECTICUT, ASSIGNOR OF ONE-HALF
TO ALBERT F. PIERCE, OF SAME PLACE.

DEFLECTOR-PLATE FOR GAS-STOVES.

SPECIFICATION forming part of Letters Patent No. 554,528, dated February 11, 1896.

Application filed September 13, 1895. Serial No. 562,459. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. MURPHY, residing at Danbury, in the county of Fairfield and State of Connecticut, have invented a new and Improved Deflecting-Plate for Gas-Stoves, of which the following is a specification.

My invention relates to certain new and useful improvements in deflecting-valves for equalizing the force of distribution of gas and other vapors to burners; and it consists substantially of such features of arrangement, construction and combinations of parts as will hereinafter be first described in detail and then specifically pointed out in the appended claims.

One of the greatest difficulties experienced with the burners of gas and similar stoves is the unequal force with which the gas or vapor is fed to the jet-orifices, the result being that in most instances the flame is greatest at the point of entrance of gas to the burner from the supply-pipe. At opposite or intermediate points the flame and heat produced is comparatively moderate or small. This unequal distribution of the gaseous fuel results furthermore in the rapid wearing out of the burner at the point of communication thereof with the supply-pipe, owing to the greater intensity of heat at that point, and besides this a considerable quantity of the gas is wasted without effecting any good result. Furthermore, accordingly as the pressure of gas be greater or less, there is always some variation or fluctuation of the meter caused by the unequal consumption of the gas at the point of issuance from the burner, and this trouble frequently results in the payment by the user for much more gas or fuel than has been actually consumed.

The object of the invention is to provide for the equable distribution of gas and like fuel throughout the entire burner, thereby overcoming the defects above mentioned, substantially as will hereinafter more fully appear on reference to the accompanying drawings, in which—

Figure 1 is a vertical sectional elevation of a vapor-burner having my improvements embodied in connection therewith. Fig. 2 is a top or plan view thereof with a portion of the

burner-top cut or broken off so as to more clearly indicate the interior disposition or arrangement of the equalizing or deflecting-valve. Fig. 3 represents, respectively, a top view, a side view, and a view in perspective of my improved equalizing or deflecting valve.

In carrying my invention into effect I employ preferably the ordinary form of circular or round vapor-burner, the same being composed of a main body constructed with a continuous chamber and closed over the top by a ring or cover which is provided on its under surface with an inner and outer series of radial ribs or projections which create flame-orifices between the ring and main body when said ring or cover is secured in place. The said chamber is provided at any suitable point thereof with an opening into which the gas or vapor supply-pipe is placed or fitted airtight, and it is immediately at the point of communication of this supply-pipe with said chamber that my improved pressure-equalizing or deflector valve is arranged or located.

The said valve is so constructed that a portion thereof extends down before the opening in the chamber in such manner that the force of the current of gas or air entering the chamber from the pipe is immediately broken and a part of such vapor will be caused to first pass under the opposite side of the valve before it can proceed on its course to fill the chamber within the burner.

The said valve is so constructed as to divide or separate the current passing in not only to the right or left, which would be the natural tendency in the normal condition of things, but into separate streams, as it were, thus supplying all of the flame or jet orifices equally and with the same force. The said equalizing or deflector valve is furthermore so constructed at its top as to cause the same quantity of gas or fuel to pass out through the orifices which cross over or pass the same, and by this means the power of flame and intensity of heat is rendered practically uniform or equable throughout.

Reference being had to the accompanying drawings by the letters marked thereon, A represents the burner, which, as shown, is preferably circular or round, and is formed or

constructed with a continuous gas or vapor chamber *a*. The said chamber is closed at the top by means of a ring or lid *B*, the under side of which is formed or provided with a series of ribs or projections *b* and an outer series of the same marked *b'*, the two being concentrically arranged and constituting jet-orifices *c* when the said ring or lid is secured in place, as seen in Fig. 1.

C represents the gas or vapor supply-pipe entering the side of the chamber *a*, the said pipe being supposed to lead from any suitable reservoir or supply.

D represents my improved pressure-equalizing or deflector valve, which, as shown, is located immediately at the point of connection or communication of the supply-pipe with the chamber. This pressure-equalizing or deflector valve is constructed of a top portion or ledge *d*, which is practically straight at *d'* but curved inwardly at *d''*, so as to create a space *e* between the same and the outer wall of the chamber, up through which space sufficient gas may pass and escape to the jet-orifices which pass or lie above said valve. The ends of the curved portion *d''* are formed into lugs or ears *e'*, which are received by correspondingly-shaped recesses *e''* in the upper edge of the outer wall of the chamber *a*, and in this way said valve is securely maintained in place against displacement. The said valve is also provided on its under side with a curved depending flange *d'''*, which follows the general direction of the chamber *a*, and the ends of which flange gradually slope backward toward the top portion or ledge *d*, which it intersects. In use this curved depending flange occupies a position centrally of the chamber *a* (see Fig. 2) with the effect of separating or dividing the incoming current into practically two separate streams; and, as said portion or flange extends down somewhat within the plane of the opening of communication between the chamber-supply pipes (see Fig. 1) it is evident that the operation and result will be such as has hereinbefore been stated to be the cause.

From the foregoing description it is thought the nature and construction of my invention will be fully understood, and I desire to say that immaterial changes can be resorted to in the practice of the invention without departing from the general scope and purposes intended. For instance, the depending portion or flange of the valve is only made curved in order that it may conform in general direction to that of the chamber within which it enters, but it is evident that if the general direction of the said chamber be made straight

in a direct line, said flange may be correspondingly formed.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A pressure-equalizing or deflector plate for vapor-burners the same consisting of an upper ledge or portion, and a depending flange or portion for entering the vapor-chamber of the burner, substantially as described.

2. A pressure-equalizing or deflector plate for vapor-burners the same consisting of an upper portion or ledge straight on one side and recessed or curved inwardly on the other and having a depending flange for extending into the vapor-chamber, of a burner substantially as described.

3. A pressure-equalizing or deflector plate for vapor-burners, the same consisting of an upper portion or ledge having on its under side a curved depending flange for entering and conforming to the general direction of the vapor-chamber of a round or circular vapor-burner, substantially as shown and for the purposes described.

4. The combination in a vapor-burner having a circular vapor-chamber of a pressure-equalizing or deflector plate located, at the point of communication of the said supply-pipe with said chamber and having a curved depending flange entering the chamber, substantially as and for the purposes set forth.

5. The combination in a vapor-burner having a circular vapor-chamber provided around its upper edge with a series of jet-orifices, of a pressure-regulating or deflector plate located at the point of communication of the supply-pipe with said chamber, the said plate having a top or ledge recessed or curved inwardly on one of its edges, and provided on its inside with a curved depending portion or flange entering the chamber substantially as shown and for the purposes described.

6. The combination in a vapor-burner having a circular vapor-chamber, of a ring provided on its under side with an inner and an outer concentrically-arranged set of ribs or projections and a pressure-regulating or deflecting plate, located at the point of communication of the supply-pipe with said chamber, the said plate having a top or ledge recessed or curved inwardly on one of its edges and provided on the under side with a curved depending portion or flange entering the chamber substantially as described.

JOHN M. MURPHY.

Witnesses:

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