B. C. MUDGE.

INCANDESCENT BURNER.

APPLICATION FILED DEC. 11, 1913.

1,120,219. Patented Dec. 8, 1914.

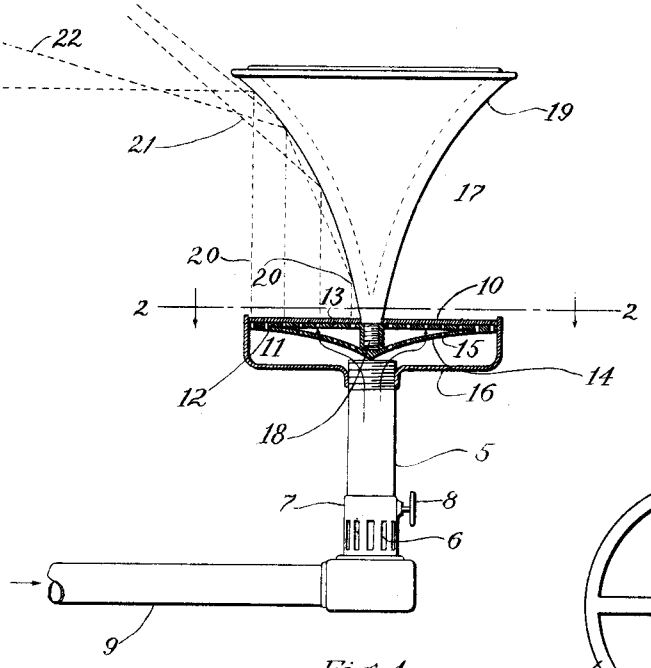


Fig. 1.

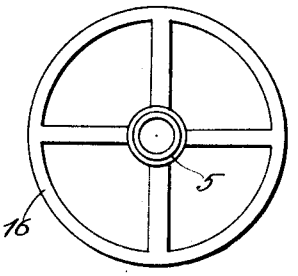


Fig. 3.

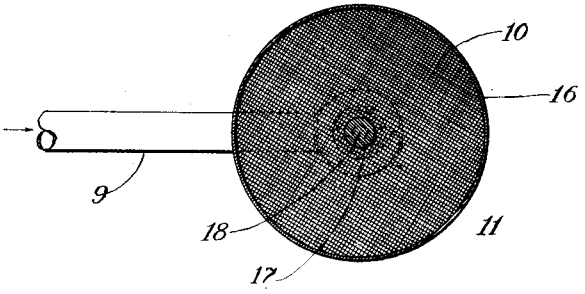


Fig. 2.

Witnesses:
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UNITED STATES PATENT OFFICE.

BENJAMIN C. MUDGE, OF NORTH BROOKFIELD, MASSACHUSETTS.

INCANDESCENT BURNER.

1,120,219. Specification of Letters Patent. Patented Dec. 8, 1914.

Application filed December 11, 1913. Serial No. 805,903.

To all whom it may concern:

Be it known that I, BENJAMIN C. MUDGE, a citizen of the United States, residing at North Brookfield, in the county of Worcester and State of Massachusetts, have invented new and useful Improvements in Incandescent Burners, of which the following is a specification.

This invention relates to a device adapted to be used in connection with gas burners, lamps and the like to improve and render more brilliant the light given out by such burners or lamps.

The object of the invention is to secure the result set forth by utilizing a flat or disk-shaped piece of incandescent material in combination with a reflector, whereby the rays of light from the incandescent material are reflected in different directions so as to illuminate a room, and to illuminate the same by the use of an incandescent material which, being in the form of a flat disk and fully supported, is much less liable to injury by fracture than the form of incandescent material known as a "mantle" now in use.

The invention consists in the combination and arrangement of parts set forth in the following specification and particularly pointed out in the claims thereof.

Referring to the drawings: Figure 1 is a sectional elevation of a burner embodying my invention. Fig. 2 is a sectional plan taken on line 2—2 of Fig. 1. Fig. 3 is an underneath plan of the bracket which supports the incandescent disk.

Like numerals refer to like parts throughout the views of the drawings.

My invention is illustrated in the drawings as attached to a gas burner which is provided with orifices 6 for the purpose of admitting air into the burner 5. These orifices may be varied in size by rotating the sleeve 7 upon the burner pipe 5 and said sleeve can be locked in position by means of a suitable set-screw 8.

A disk 10 of incandescent material is supported upon a holder 11 consisting of a plate 12 provided with perforations 13 and having a downwardly curved extension 14, constituting a deflector. The deflector 14 is provided also with perforations 15. The plate 12 and its deflector 14 are fastened to a bracket 16 which has screw-threaded engagement with the upper end of the burner pipe 5.

Located above the disk of incandescent material 10 is a reflector 17 which is fastened to the holder 11 by means of a screw-threaded stem 18. The sides 19 of this reflector are concavo-conical in formation, being preferably formed upon an angle which will deflect rays of light indicated by dotted lines 20 which pass from the disk 10 to the surface 19 and are reflected therefrom in different directions, as at 21, 22, so that the light obtained from the incandescent disk will be reflected at a variety of angles to more fully and efficiently illuminate the room in which the device is placed.

The general operation of the device hereinbefore specifically described is as follows: Gas is supplied through the pipe 9 to the burner pipe 5 and is preferably mixed in said burner pipe with air entering through the orifices 6. The mixture of air and gas passes out of the burner pipe 5 and upwardly, and is ignited beneath the deflector 14. The flames are deflected by the deflector 14, and said flames pass through the perforations 15 in said deflector and through the perforations 13 in the plate 12, where they impinge upon the incandescent disk 10, bringing the same to a glowing heat. The light from said incandescent disk passes upwardly in rays indicated by dotted lines 20 in the drawings and impinges against the sides 19 of the reflector 17 and is reflected therefrom in a variety of directions at various angles, whereby the room in which the device is placed is fully illuminated.

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

1. A device of the character described having, in combination, a burner, means to support incandescing material in alinement with said burner and a reflector located in axial alinement with and above said incandescing material formed to reflect rays of light thrown thereon from said material, in different directions outwardly therefrom.

2. A device of the character described having, in combination, a burner, a disk of incandescent material in alinement with said burner, means to support said disk, and a reflector located in axial alinement with and above said disk formed to reflect rays of light thrown thereon from said disk, outwardly therefrom at different angles.

3 A device of the character described

having, in combination, a burner, a disk of incandescent material, a holder for said disk provided with perforations adapted to allow flames from said burner to impinge on said disk, means to suspend said holder in alinement with said burner and a reflector adjacent to said disk formed to reflect rays of light thrown thereon from said disk, outwardly therefrom at different angles.

4. A device of the character described having, in combination, a burner, a disk of incandescent material, a holder for said disk provided with perforations adapted to allow flames from said burner to impinge on said disk, a deflector attached to said holder, means to suspend said deflector in alinement with said burner and a reflector adjacent to said disk formed to reflect rays of light thrown thereon from said disk, at different angles outwardly therefrom.

5. A device of the character described having, in combination, a burner, a disk of incandescent material, a holder for said disk provided with perforations adapted to allow flames from said burner to impinge on said disk, said holder having a downwardly extending surface constituting a deflector, means adapted to suspend said holder and deflector in alinement with said burner and a reflector adjacent to said disk, formed to reflect rays of light thrown thereon from said disk, outwardly therefrom at different angles.

6. A device of the character described having, in combination, a burner, a disk of incandescent material, a holder for said disk adapted to hold the same in a substantially horizontal plane in alinement with said burner, said holder provided with perforations adapted to allow flames from said burner to impinge on said disk and a reflector located above said disk and formed with concavo-conical sides adapted to reflect rays of light thrown thereon outwardly therefrom at different angles.

7. A device of the character described having, in combination, a burner, a disk of incandescent material, a holder for said disk adapted to hold the same in alinement with said burner and a reflector located in alinement with said disk and formed with concavo-conical sides adapted to reflect rays of light thrown thereon outwardly therefrom at different angles.

8. A device of the character described having, in combination, a burner, a disk of incandescent material, a holder for said disk adapted to hold the same in alinement with said burner and a reflector with sides converging toward the median axial line of said disk and located entirely on the opposite side of said disk from the side thereof upon which said burner is located, said converging sides adapted to reflect rays of light thrown thereon outwardly therefrom at different angles.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

BENJAMIN C. MUDGE.

Witnesses:
SYDNEY E. TAFT,
ANNIE J. DAILEY.