

(No Model.)

B. F. FOWLER & F. T. HIGGINS.
REFLECTING CAP FOR BURNERS.

No. 557,795.

Patented Apr. 7, 1896.

Fig. 1.

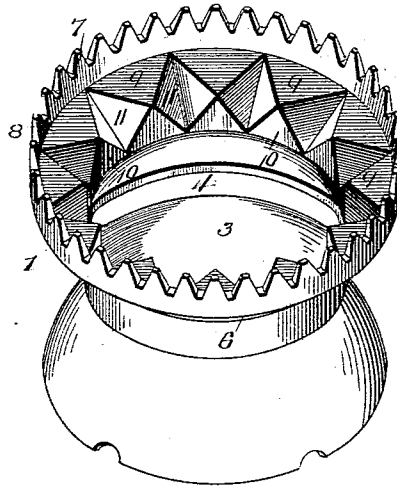


Fig. 2.

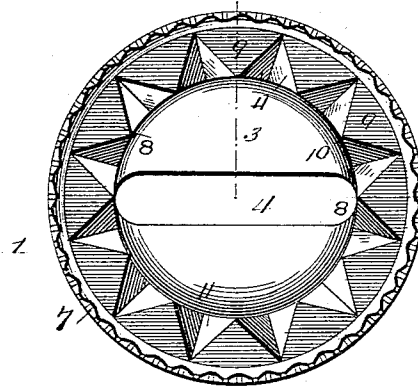
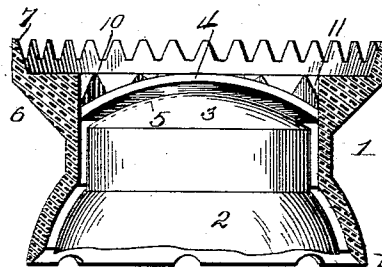


Fig. 3.



Witnesses

Jos. A. Stack

By their Attorneys

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UNITED STATES PATENT OFFICE.

BENJAMIN F. FOWLER AND FRED T. HIGGINS, OF MINNEAPOLIS,
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REFLECTING-CAP FOR BURNERS.

SPECIFICATION forming part of Letters Patent No. 557,795, dated April 7, 1896.

Application filed December 18, 1894. Serial No. 532,228. (No model.)

To all whom it may concern:

Be it known that we, BENJAMIN F. FOWLER and FRED T. HIGGINS, citizens of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and useful Reflecting-Cap for Burners, of which the following is a specification.

Our invention relates to a reflecting-cap for burners; and the object in view is to provide a device adapted to be used in connection with a lamp or other burner to reflect those rays of light which are usually lost by striking the burner and contiguous portions of the lamp and diffuse the same, thus increasing the apparent brilliancy of the light.

Further objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a cap embodying our invention. Fig. 2 is a plan view of the same. Fig. 3 is a vertical section of the cap applied in the operative position to a lamp-burner.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

The cap is provided with a bell-shaped or conical lower portion, which is adapted to be fitted over a burner 2, the size of the bell-shaped or conical portion being such that its inner surface is spaced from the surface of the burner. The cap is partly closed at the top by an upwardly-convexed shield 3, provided with an opening or slot 4, which is adapted to aline with the corresponding opening 5 in the burner, said opening 4 being larger than the opening in the burner to provide for the upward passage of heated air between the flame and the sides of the opening. The object of this arrangement is to utilize the heat which is radiated from the burner by conducting it upward to the flame and thus raising the temperature of the fuel at the point of combustion. This adds to the brilliancy of the flame by causing a more perfect combustion.

Surrounding the shield at the top of the cap is an upwardly-flared rim 6, terminating in an

annular flange 7, around which may be seated a chimney of any ordinary or preferred construction, and within said rim is an annular series of pyramidal projections 8, each having a plurality of reflecting-faces. In the construction illustrated the projections are four sided or faced, each face being triangular, and the upper faces 9 thereof being in a common horizontal plane. The vertical inner faces 10 of the projections terminate at their lower edges at the periphery of the shield 3, and the side faces 11 are arranged at right angles to each other and approximately at angles of forty-five degrees to the radii of the cap. A radius extending from the apex of one of the pyramids is shown in dotted lines in Fig. 2. The effect of this construction is to reflect the rays from the flame upwardly and outwardly and thus diffuse that portion of the light which falls within the circumference of the rim and add it to the light which is given off in rays which are not obstructed.

The cap is constructed of glass or other material susceptible of a high polish in order that the reflecting-surfaces may be capable of reflecting the light effectively.

It will be understood that in practice various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described our invention, we claim—

1. A cap for burners having a fixed combustion-point, said cap being provided with an annular series of pyramidal projections arranged in the plane of the flame, each projection having a horizontal upper face and angularly-disposed side faces arranged approximately at angles of forty-five degrees with the radii of the cap, substantially as specified.

2. A cap for burners having a cavity to receive the burner, said cavity being partly closed at its top by a shield having an opening to register with the opening in the burner to which the cap is applied, and provided above the plane of said shield with an upwardly-flared rim terminating in an upstanding flange 7, and an annular series of pyramidal projections 8 disposed within said flared

rim and having upper inner and lateral reflecting-faces, substantially as specified.

3. As a new article of manufacture, a reflecting-cap for burners having a bell-shaped or conical lower portion 2, an upwardly-convexed shield 3 provided with an opening to register with the wick-tube of a burner, an upwardly-flared rim 6 terminating in a flange 7, and an annular series of pyramidal projections 8 arranged within said rim and having upper, inner, and lateral flat reflecting-faces

intersecting to form the apices of the projections, said cap being of integral construction, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

BENJAMIN F. FOWLER.

FRED T. HIGGINS.

Witnesses:

HENRY R. HIGGINS,

E. A. HOTCHKISS.