E. BOESCH.

REFLECTOR

No. 187,589 Patented Feb. 20, 1877.

Fig. 1.

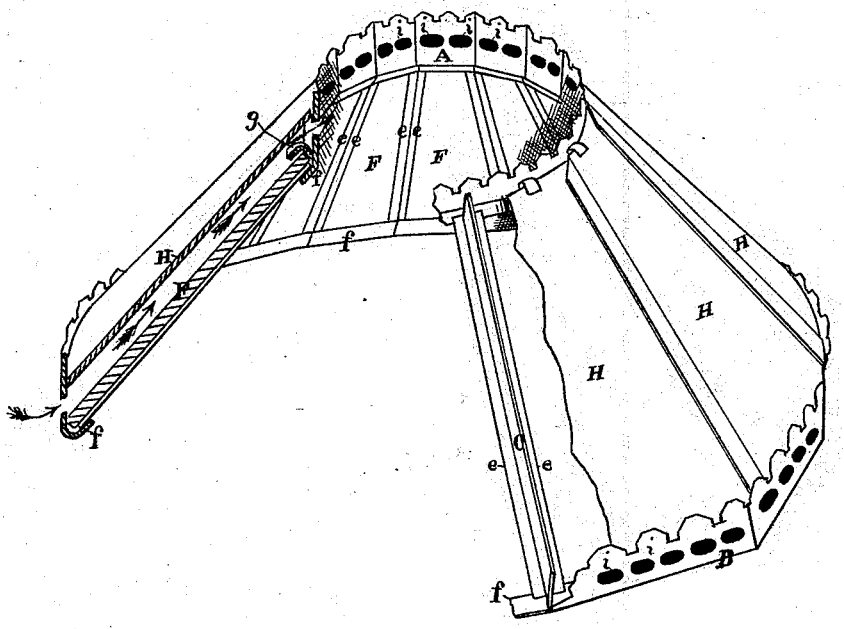
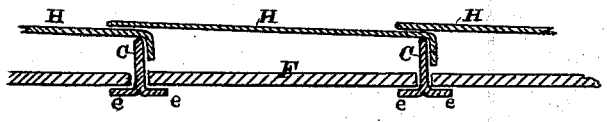


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

EMIL BOESCH, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN REFLECTORS.

Specification forming part of Letters Patent No. 187,589, dated February 20, 1877; application filed December 19, 1876.

To all whom it may concern:

Be it known that I, EMIL BOESCH, of the city and county of San Francisco and State of California, have invented an Improved Reflector; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings.

My invention relates to improvements in that class of reflectors in which silvered glass is used for a reflecting-surface.

My improvements relate to the manner of constructing the frame and mounting the glass sections therein, as hereinafter described.

The frame I make of metal; and it consists of an upper circular vertical rim, A, and a lower vertical rim, B. These two rims I connect by means of ribs or partitions C C, which are placed at suitable distances apart, according to the size of the glass sections or frames to be employed, so that each section will have its own compartment, thus forming what I call a "panel-reflector."

At the inside edge of each partition or rib I make a narrow flange, *e*, and a similar one, *f*, at the bases of the upper and lower rims A and B, so that the edges of each glass section or pane F will rest upon these ledges and be supported around its entire edge. The lower ledges *f* are turned upward, so that their planes will correspond with the plane of the side ledges, thus forming an acute angle between the flange and vertical lower rim, in which angle the lower edge of the glass sections will rest, while the upper edge of each section is fastened by means of a copper plate, *g*, which is soldered to the upper rim A, so as to pass under the upper edge of each section and be bent down over it, thus fastening each section firmly in place.

The back of the reflector I also make in sections. Each section H is somewhat larger than the glass panes or sections, so that it will rest upon the upper edges of two adjacent ribs or partitions. One edge of each section is bent downward, as represented at Fig. 2, so that it will hook over one partition, while the opposite edge is slightly bent, so as to overlap the hooked-down or bent edge of the adjoining section. It will thus be seen that the back of the reflector is formed of overlapping sections, which rest upon the ribs or partitions, thus forming an air-space in each compartment between the back section and the silvered-glass pane.

These back sections are also secured in place by copper tabs, which are bent down over their upper ends, thus preventing them from shifting, while the interlocking or overlapping of their edges holds them firmly in place.

The lower vertical rim B and the upper vertical rim A have holes or apertures *i i i* made in them between the glass sections and the metal back sections, so that air can circulate freely in the space between the two, for the purpose of preventing the glass from overheating; and as the air in this space becomes heated it will rise and pass out of the apertures in the upper rim, while cool air enters through the apertures in the lower rim, thus establishing a circulation of air through each compartment that will effectually prevent overheating. The draft or upward current which is created by this circulation around the upper rim also improves the quality of the light and makes it steady, as it creates an upward air-current from the inside of the reflector. This space also enables me to protect the silvering of the glass from damage, as metal, when in close contact with glass, is apt to sweat and rust, especially when subjected to alternate heat and cold, and this sweat or rust injures the silvering on the glass and destroys its reflecting quality.

It will be seen that each glass section rests upon a flange or rim around its entire edge, so that in case it should be broken by overheating or accident, the pieces will not fall out, but will be retained until they are properly removed by first taking off the back section; and, again, when a glass is broken, it will only be necessary to remove one of the back sections in order to repair it, and this can be done by any person without special tools.

I thus provide a strong, durable glass-surface reflector which is protected from damage, and which is also light and ornamental.

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

1. A reflector-frame consisting of the upper

rim A and lower rim B, connected by the ribs or partitions C C, which are arranged to form cells or compartments, each of which has a ledge, *e f*, entirely around it, upon which the plates or sections of silvered glass F rest and are secured, in combination with a metal back consisting of the overlapping sections H, which rest upon the ribs or partitions *c*, substantially as above specified.

2. A silvered-glass reflector having its frame divided into distinct cells or compartments, in the bottom of which the glass is placed, and provided with a back or cover which is arranged to form a space between said cover and the silvered glass, in combination with apertures *i i* in the lower and upper parts of said cell or compartment, by which a current or circulation of air is established through said space, substantially as and for the purpose described.

In witness whereof I have hereunto set my hand.

EMIL BOESCH.

Witnesses:

FRANK A. BROOKS,

EVERETT E. STACY.