

W. M. Marshall.

Reflector.

N^o 73355

Patented Jan. 14, 1868.

Fig: 1.

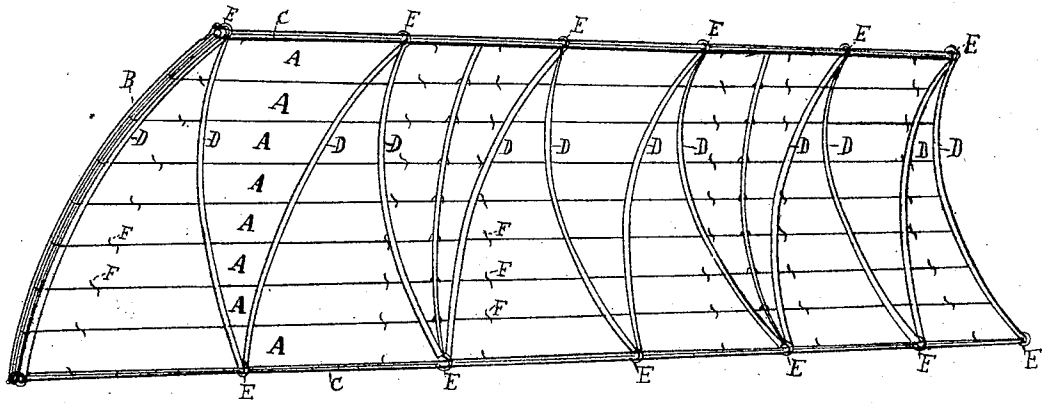


Fig: 2.

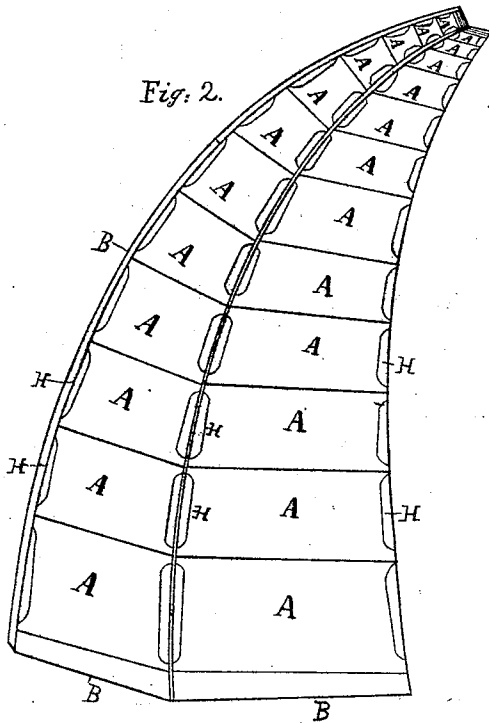
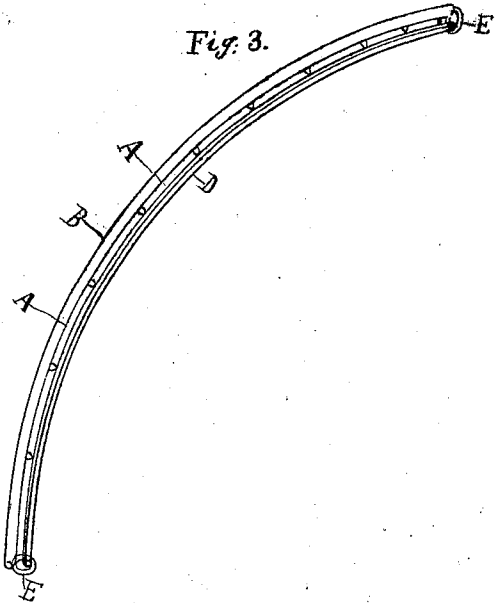


Fig: 3.



Witnesses.

J. B. Alexander.

M. H. Collins.

Inventor:

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United States Patent Office.

WILLIAM MAROT MARSHALL, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 73,355, dated January 14, 1868.

IMPROVEMENT IN REFLECTORS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM MAROT MARSHALL, of Philadelphia, in the county of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Glass Reflectors; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification, in which—

Figure 1 represents, in perspective, one side of an oblong store-window reflector, properly curved.

Figure 2 represents, in perspective, two sections, joined together, of a parabola or a hyperbola reflector, for locomotives and other purposes.

Figure 3 represents a transverse section of fig. 1.

Similar letters of reference denote like parts.

The nature of my invention consists in the construction of reflectors, in the whole, or in sections to be joined together, when made of different plates of reflecting glass, properly united at their edges, and supported either in plane or in curve by wire-frame work in front and back, or by wire-frame work in front, and by pasteboard, wood, or thin metal sheet, or other suitable substance, at the back.

To enable others skilled in the art to make and use my invention, I will proceed to describe my method of construction.

Such reflectors as are used for lighting up store-windows, churches, halls, docks, ferries, depots, &c., I make as follows: I provide for the ground or back, (see B, fig. 1,) a suitable sheet of pasteboard, wood, or metal, and cut it into the shape necessary for the purpose of making a section of the reflector, either for the sides or ends. Upon this I lay lengthways, in successive rows, numerous strips of glass plate, made reflecting by having pure silver precipitated or otherwise attached on the back, (see A A A, fig. 1,) and properly cut to fit. At suitable places (see F F F) in the joints of these plates, I attach to the back, B, small tags, or bits of thin metal or wire, which stand up, with two or more prongs, between the plates A A, and the ends of these prongs are bent over each way, so as to firmly hold the glass plates in place. I then make a suitably strong metal or wire frame, (see C C, fig. 1,) and adapt it in shape to the edges of the back, B. To this frame, at the points E E E, I attach the ends of small flat or round metal wires, (see D D D,) which are first properly bent, to suit the curve to be given to the reflector. This whole framework is then laid over the glass plates, and firmly attached, at the wires C C, to the edges of the back, B. When a sufficient number of these sections are thus made, they may be attached together by the ends, thus forming a complete reflector, of any length or shape required.

Such reflectors as are used for head-lights of locomotives, or similar purposes, I make as follows: I cut out the base or back, B, (see fig. 2,) in a long angular shape, so as to form a section of a parabola or a hyperbola. I then cut the silvered-glass plates into strips, of suitable size and shape, which I lay on to the ground or back, B, and fasten to it by small bits of thin metal, H H H, which, being a part of the back, B, or attached to it, are turned over the ends of the glass plates, thus holding them firmly in place. When a sufficient number of these sections are complete, they may be joined together at the edges, thus forming a complete reflector.

The advantages of my improvement consist, (by means of the wire-frame work in front of the glass, and the little clasps F F or H H,) in preventing the pieces of glass, when broken, from falling out, and in preventing them from falling out entire, as they so often do in reflectors made of glass plates put on with cement. This fault of dropping the glasses from cemented reflectors has rendered them entirely unreliable and useless, so that their manufacture has almost entirely ceased. Such reflectors are the cheapest and most effective reflectors known, if they can be made to hold together, and resist the action of the weather, or the action of motion, as in a locomotive, which I have effectually attained in my improvement.

I am aware that reflectors have been made of numerous bits or strips of glass or silvered glass, which I do not claim as my invention, as it is old.

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. The flexible base, B, of pasteboard, papier-maché, wood, or sheet metal; in combination with the silvered strips of glass, A A, the metal frame C C, and the curved-wire mesh-work D D D, and the metal clasps F F F and H H H, substantially as described.

2. The wire frame C C, the curved-wire mesh-work D D D, and the metal clasps F F F, in combination with the glass plates A A A, and the base, B, when arranged together so as to form a reflector or section of a reflector, substantially as described, and for the purpose set forth.

WM. M. MARSHALL.

Witnesses:

J. B. ALEXANDER,

M. H. COLLINS.