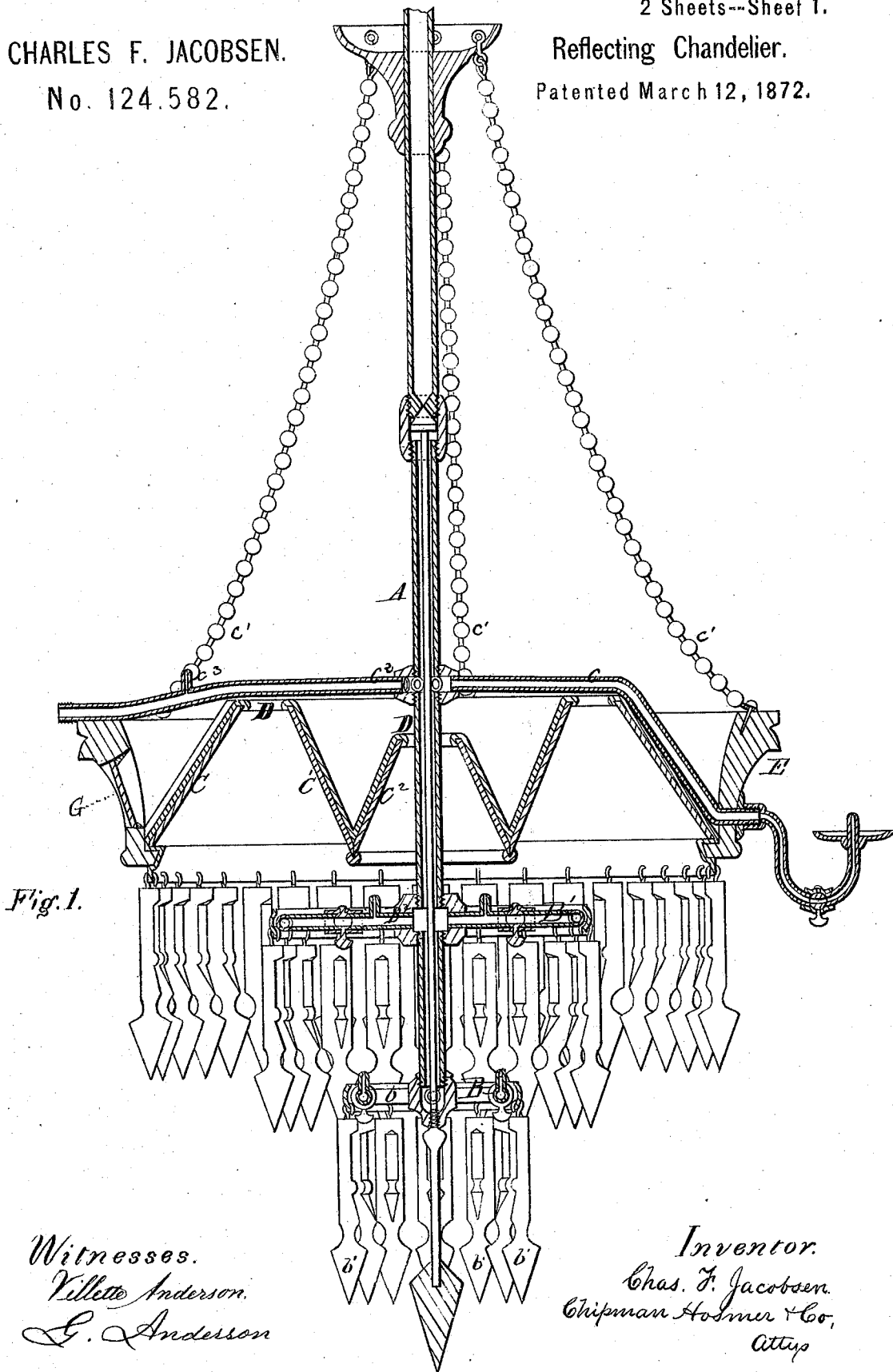


CHARLES F. JACOBSEN.

No. 124,582.

Reflecting Chandelier.

Patented March 12, 1872.



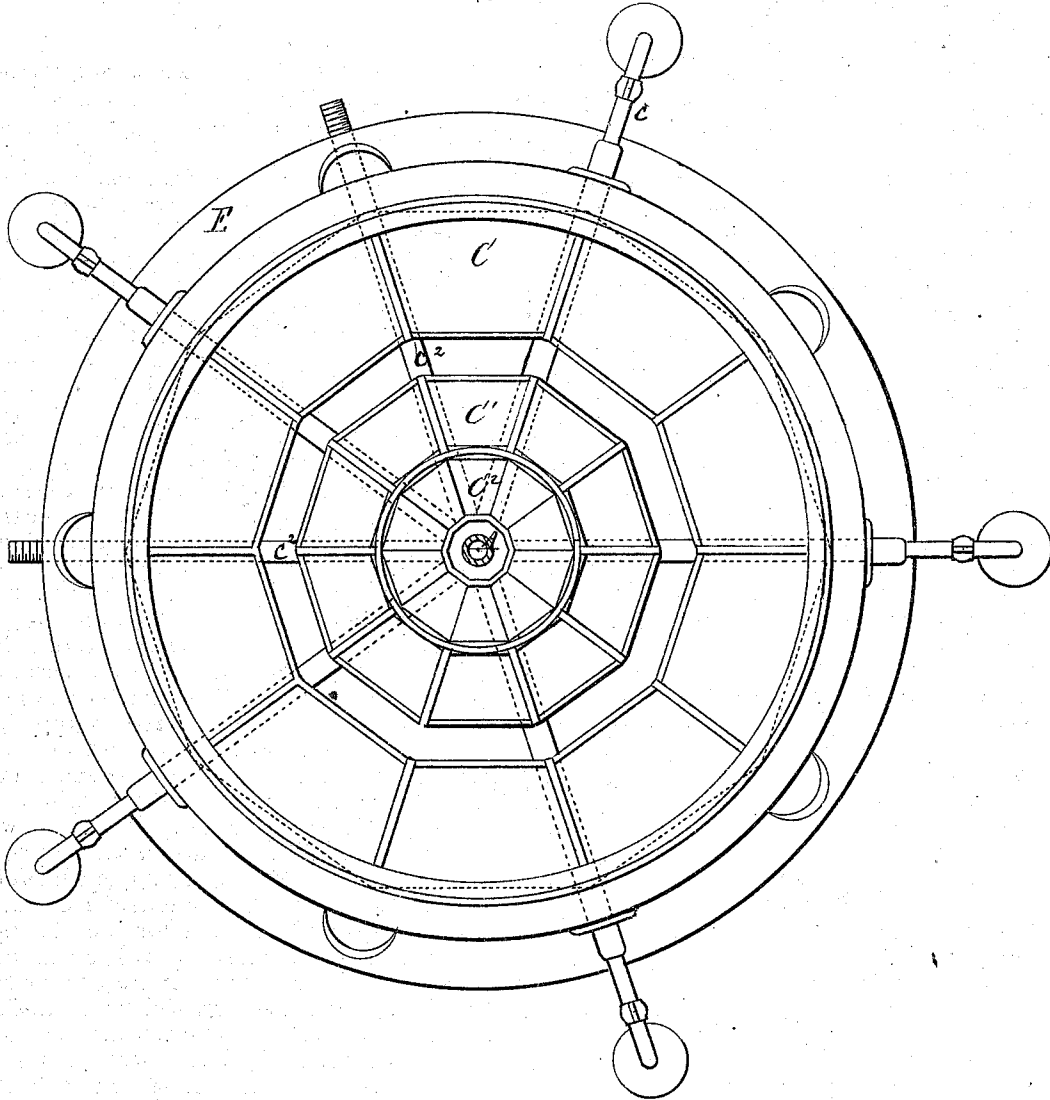
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Fig. 2.



Witnesses.

Villette Anderson

E. Anderson

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CHARLES F. JACOBSEN, OF NEW YORK, N. Y.

IMPROVEMENT IN REFLECTING CHANDELIERS.

Specification forming part of Letters Patent No. 124,582, dated March 12, 1872.

To all whom it may concern:

Be it known that I, CHARLES F. JACOBSEN, of New York, in the county of New York and State of New York, have invented a new and valuable Improvement in Reflecting Chandeliers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a vertical central section of my invention. Fig. 2 is a horizontal section of the same.

My invention has relation to reflecting chandeliers for use in public or private buildings; and it consists, first, in the hereinafter-described construction and novel arrangement of the reflector, which is composed of three or more sections, having the form of truncated polygonal pyramids or cones of different sizes, and placed concentrically one within the other, according to their dimensions. The object of this part of my invention is to produce a large extent of reflecting surface within a limited compass, and to so constitute said reflecting surface that the rays of light shall be reflected outwardly, as well as inwardly and downwardly, to as great a distance and with as much power as may be required. The second part of my invention consists in so constructing and arranging the form or frame which encompasses the reflector that its ornamented exterior surface shall be fully illuminated by means of the lights below it and be displayed to the best advantage. The third part of my invention consists in the arrangement of burners in their relation to the sections of the reflector and to the exterior surface of the encompassing frame, as hereinafter described.

In the accompanying drawing, illustrating this invention, A represents the main tube of the chandelier, through which gas is supplied to the depending burners, and which sustains the various parts of the chandelier. B represents a circular tube surrounding the tube A near its lower end, and attached to it by means of radiating pipes *b*. The tube B is supplied with burners, and, being flanged, has suspended from it a number of glass pendants, *b*. B¹ represents a second circular tube, constructed and arranged in the same manner as the tube

B, but is of greater diameter than the latter, and is placed some distance above it. The radiating pipes B², supporting the ring B¹, are provided with burners so that light may be thrown directly on the innermost reflector. A third circular tube, which should be of less diameter than the tubes B B¹, and be placed above them, may be used to light the reflector corresponding to it. The burner-tubes B B¹ being of different diameters, the flames and upward currents of air will not interfere with each other. These tubes are adapted in size and arrangement to the positions of the sections of the reflector, hereinafter described, so that the light may be thrown fully, clearly, and directly upon the reflecting surfaces. C C¹ C² designate the different reflectors or sections of the compound reflector. These sections are of the form of truncated polygonal pyramids or cones, their reflecting surfaces made of glass coated with the proper material. The glass may be either plane, fluted, or otherwise. The inner and outer reflectors C C², being arranged as upright pyramids, face inwardly and downwardly. The intermediate reflector is arranged as an inverted pyramid, and hence faces outwardly and downwardly. It will be seen that, by this arrangement of the reflecting surfaces, the reflected light is more widely diffused. The frame or base, to which the reflectors C¹ C² are attached, may be cast in one piece. Between the upper edges of the reflectors C C¹ and of the reflector C² and the tube A, spaces D are left for the passage of the currents of air rarefied by the heat of the flame. The reflectors C¹ C² are supported by the pipes *c c* of a spider, which radiates from the tube A. The reflector C is attached to the form or frame surrounding it, which is suspended by chains *c*¹. The precise arrangement for support of the reflectors and encompassing form is not material in this invention. The lower part of the reflector C is provided with a flange similar to flanges on the tubes B B¹. On these flanges a prismatic net-work, gracefully hanging, is suspended, or, instead of said net-work, glass pendants may be used. The object of the prismatic net-work or pendants is to increase the brilliancy of the effect and to soften and diffuse the light. When the chandelier is used in parlors or apartments where a somber light is desirable, clouded

glass may be used for the prismatic network or pendants. E represents a frame or form encompassing the reflectors. This form may be made of wood, glass, metal, or any other material or combination of materials—opaque or transparent. The shape of this form may be either circular or polygonal, with its surface concave and facing downwardly and outwardly. An inverted frustum of a cone approximates the nature of the form. The concave surface of said form is highly ornamented by means of molding, pictures, &c., upon which the light from the burners falls and therefore displays to full view.

The form or ring surrounding the reflectors has heretofore been constructed and arranged as an upright truncated cone or pyramid; consequently, its ornamentation could be only imperfectly observed, if seen at all. Another objection to the old-style form is the liability of dust to accumulate and cloud the picturesque designs upon its face.

The present invention is free from both these objections, and is besides more graceful in its arrangement. The surface of the form may to advantage be provided with glass panels, to be used as reflectors of the light of surrounding burners.

The spider-tubes *c c* are bent down outside the reflector C, and thence extend outwardly through suitable openings in the form, and are provided with burners, and, if necessary, with globes. These burners serve to give additional brilliancy to the surface of the form, as well as to light up the ceiling so as to display the frescoes. Branch tubes *c²* may be extended out above the form when desired for the purpose of illuminating the ceiling. On the outer surface of the reflector C I place silvered glass, either plain or fluted, and thus provide a reflector which will reflect the rays from the burners *c³* of the spider-tubes *c²* to the ceiling.

I sometimes make the inner surface of the form E a reflector for the same purpose.

I have mentioned that the form E may be either opaque, transparent, or semi-transparent. The object in making the form transparent or semi-transparent is to let the light from the spider-tubes *c²* be reflected by the outer reflecting surface of the section C through it so that the pictures or designs upon the form may be well illuminated. When the form is made of wood or other opaque material, I purpose providing it with transparent or semi-transparent panels G, ornamented according to taste.

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

1. The form or frame E, made of transparent or semi-transparent material, or of opaque material with transparent or semi-transparent panels, in combination with the burners *c³*, so disposed as to transmit rays of light through the transparent or semi-transparent panels, as and for the purpose specified.

2. The reflector C, in combination with the transparent, semi-transparent, or glass-paneled form E, and the burners *c³*, substantially as specified.

3. In a reflecting chandelier, the reflectors C C¹ C², constructed and relatively arranged in the manner and for the purpose specified.

4. In a reflecting chandelier, the ornamented form or frame E encompassing one or more reflectors, and upwardly and outwardly flaring so that the lights from below may be cast on its exterior surface, as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

Witnesses: CHAS. F. JACOBSEN.

D. D. KANE,
F. B. CURTIS.