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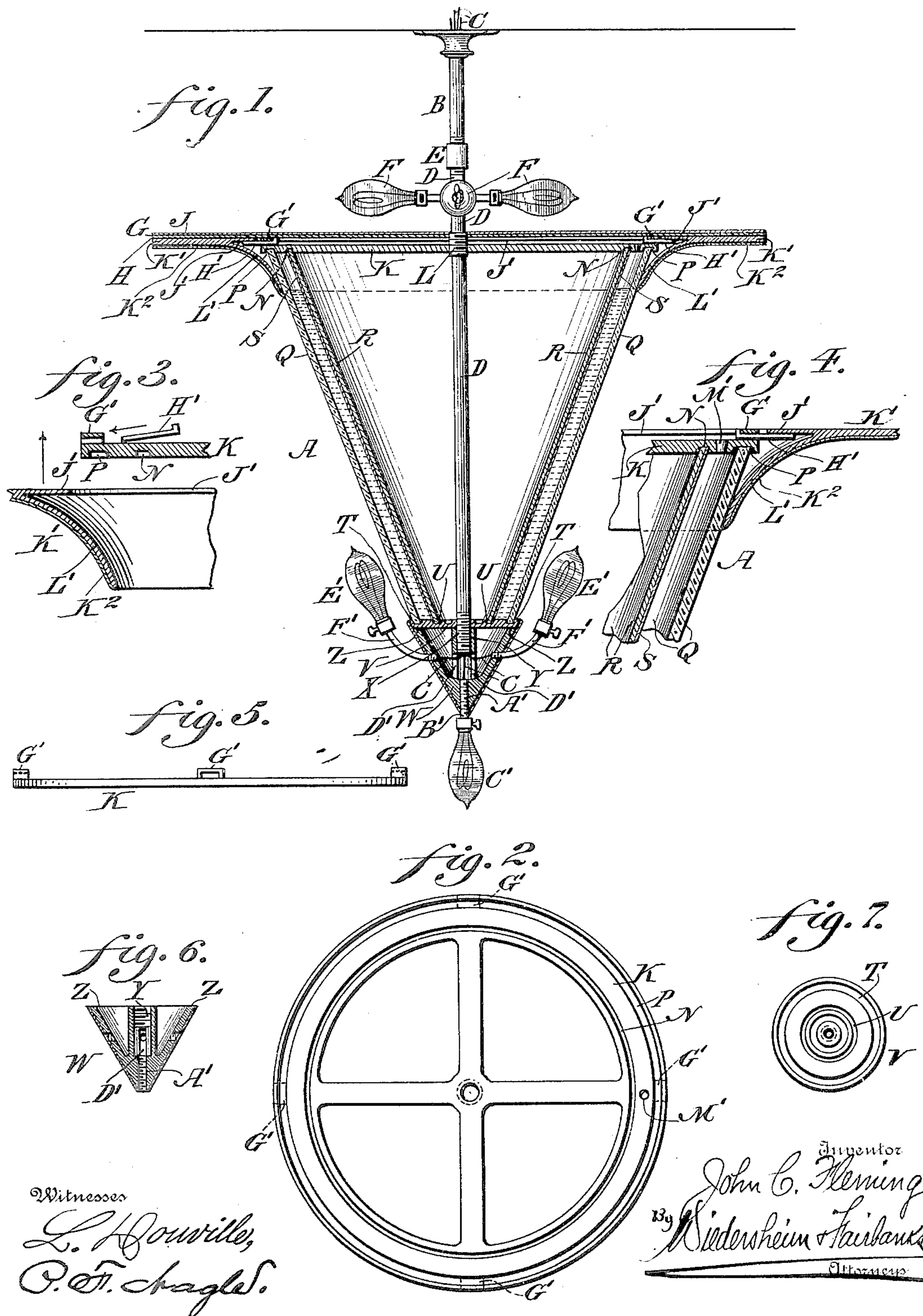
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J. C. FLEMING.

REFLECTOR FOR ELECTRIC OR OTHER LIGHTS.

(Application filed Mar. 2, 1899.)

(No Model.)



UNITED STATES PATENT OFFICE.

JOHN C. FLEMING, OF PHILADELPHIA, PENNSYLVANIA.

REFLECTOR FOR ELECTRIC OR OTHER LIGHTS.

SPECIFICATION forming part of Letters Patent No. 640,374, dated January 2, 1900.

Application filed March 2, 1899. Serial No. 707,453. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. FLEMING, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Reflectors for Electric or other Lights, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to an improved construction of a reflector for electric and other lights whereby I am enabled to intensify the light which would ordinarily be wasted, provision being further made for lighting the ceiling or upper part of the room or apartment in which the reflector may be located.

To the above ends my invention consists of a tube upon which the upper and lower lights are supported, said tube carrying an upper reflector for reflecting light upon the upper portion of a room, and a lower reflecting-plate below which is supported a plurality of concentric cones, the outer of said cones being of glass and the inner of said cones being coated with white enamel or other reflecting medium, the top surface of the upper reflector, as also the bottom surface of the supporting-plate therebelow, being also coated with enamel or similar material.

It also consists of the novel means for enabling the parts to be readily assembled and disconnected for the purpose of inspection or repairs.

It further consists of novel details of construction, all as will be hereinafter fully set forth, and particularly pointed out in the claims.

Figure 1 represents a vertical sectional view of a reflector for an electric or other light embodying my invention. Fig. 2 represents a bottom view of the top plate employed. Fig. 3 represents detached sectional views of the upper reflector and top plate and the locking-bolt therefor, showing the parts in the act of being assembled. Fig. 4 represents, on an enlarged scale, a sectional view of the upper portion of the reflector in assembled position. Fig. 5 represents a side elevation of the plate below the upper reflector. Fig. 6 represents a sectional view of the lower locking device of the reflector in detached position. Fig. 7 represents a plan view of a plate located be-

tween the lower conical locking device and the concentric cones.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates a reflector, the same being suspended from the tube or fixture B, which is secured to the ceiling or upper portion of the apartment in any suitable manner, said tube containing the conductors C, the lower extremities of which appear in the lower portion of Fig. 1, the same being contained within the pipe or tube D, which latter is supported from the pipe B by means of the coupling E, so as to form a continuation thereof.

F designates a plurality of electric or other lighting devices, the same being mounted on suitable supports and being connected in any suitable manner to the conductors C and located above the upper reflector or plate G, the same being secured to the tube D, preferably by means of screw-threads or other similar device, said plate consisting of the body portion H, the upper surface of which is provided with a coating or layer of white enamel J or similar material, whereby the rays of light from the lamps F will be effectively diffused and thrown against the upper portion or ceiling of the room or apartment in which the reflector is located.

K designates a plate which is located beneath the plate G and is of lesser diameter, said plate K being slipped upon the rod D and screwed thereupon at the point L and being provided at its under portion with the inner and outer concentric grooves N and P, in which latter is situated the upper portion of the outer conical shell Q, which latter is preferably constructed of glass or other similar transparent material.

R designates an inner conical shell which is composed of metal or other similar material and has its upper end seated in the groove N, the exterior of said cone R being lined or provided with a coating S of white enamel or other similar material possessed of great reflecting powers. The lower portions of the cones Q, R, and S are seated in the concentric grooves T and U, which are located in the upper surface of the plate V, the latter being supported on the lower locking-cone W and being screwed upon the rod D at X. The un-

der side of the plate V is in contact with the locking-cone W, which has the threaded socket Y, which is screwed upon the lower end of the tube D, the outer walls Z of said cone being in contact with the outer under portion of said plate. The outer surface of the lower locking-cone is provided with a coating of white enamel or other suitable reflecting material and has a threaded socket A' in its lower portion for the reception of the tube B', which carries the light C', to which one of the conductors C leads.

D' designates openings in the socket Y through which certain of the conductors C lead, said conductors being connected to the lamps E', which are supported upon the tubes F', which are secured to the cone W. The top of the plate K is provided with the keepers G', through which pass the bolts H', the ends of the latter passing under the inwardly-projecting flange J' of the upper deflector K', the manner of assembling the parts being clearly understood from Figs. 3 and 4. The under side of the upper deflector K' is provided with a coating K², of white enamel or other suitable reflecting material, which is also placed upon the concave annular shoulder L' in order to evenly distribute the light.

In the space between the concentric cones I pour a suitable liquid, which will assist in the reflection of the light and also make it more agreeable to the eye, said liquid being poured in through the opening M'.

It will be understood that the outer cone can in practice be constructed of plain, corrugated, or fluted glass, as may be expedient. I may also, if desired, dispense with the use of a liquid and paint the inner surface of the outer cone Q with any suitable reflecting material, or, if desired, the outer cone may in some instances be dispensed with.

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

1. A reflector consisting of a plurality of concentric cones a light-reflecting material contained in the space between said cones, upper and lower supporting devices for the latter and an intermediate connecting means for said devices.

2. A reflector consisting of a plurality of concentric cones, the outer of said cones being of transparent material and the inner of said cones being provided with a coating of reflecting material plates common to the upper and lower ends of said cones and a fastening device common to said plates and extending through the inner cone.

3. A reflector, consisting of an upper and lower plate, concentric cones supported therebetween, reflecting material contained in the space between said cones, a connecting device common to said plates and extending through the inner cone, and lights supported adjacent to said reflector.

4. In a reflector, an upper supporting device, lamps mounted thereupon, a reflecting

device mounted on said supporting device underneath said lamps, a plurality of plates located underneath said reflector, a plurality of concentric cones supported between said plates, a liquid contained in the space between said cones, and lamps supported in proximity to the outer of said cones.

5. In a reflector, a tube, a plurality of lights supported thereupon, a reflecting-plate located underneath said lights, a plurality of plates thereunder, concentric cones located between said plates, the space between said cones being filled with a suitable liquid, a supporting-plate secured to the lower portion of said tube, a locking-cone attached to the latter for holding the parts in assembled position, and lights supported upon the lower portion of said tube, said lights being located adjacent to the outer of said cones.

6. In a reflector, an upper plate, having its upper surface coated with reflecting material, a plate thereunder, having grooves in its under surface, a plurality of concentric cones supported beneath said latter plate, a liquid contained in the space between said cones, and lights located adjacent to the exterior of said reflector.

7. In a reflector, an upper laterally-extending reflecting device, lights located above but in proximity thereto, a lower conical reflector, a lower locking-cone for holding the parts in assembled position, and lights located adjacent said conical reflector, in combination with a rod common to said plates and lower cone.

8. In a reflector, a supporting-tube, a coupling for securing said tube to a suitable fixture, lights supported from said tube, a reflector supported on the latter below said lights, a plate located beneath said reflector and provided with annular grooves, a plurality of cones seated in said grooves, the outer of said cones being composed of transparent material and the inner of said cones having a coating of white enamel or similar material, a lower grooved plate for the reception of the lower ends of said cones, a locking device adapted to lock the parts in assembled position, tubes supported upon the lower portion of said locking device and lamps supported upon said tubes, said lamps being located in proximity to said outer cone.

9. In a reflector for electric and other lights, a plurality of concentric cones, plates forming closures for the upper and lower portions of said cones, and means for locking said cones and plates in assembled position.

10. In a device of the character named, a tube, an upper reflector secured thereto, a plate also secured on said tube and located beneath said upper reflector, bolts near the top of said upper plate, and adapted to engage an inwardly-extending flange, a plurality of concentric cones, a plate for closing the lower ends of said cones and a locking-cone adapted to abut against said lower plate and to engage said rod.

11. In a reflector, a plurality of concentric cones, plates closing the upper and lower ends thereof, a rod common to said plates, a locking-cone secured to said rod, a plurality of
5 lamps or lighting devices secured to said locking-cone and wires contained in said inner tube and leading to said lamps.

12. In a reflector of the character described, a plurality of concentric cones, an upper and
10 a lower plate therefor, a tube passing through and engaging said plates, a lower locking-cone having a threaded socket projecting upwardly therefrom and engaging said tube, the
15 outer portion of said cone being adapted to contact with the outer portion of said lower plate, lamps secured to the sides and apex of said lower locking-cone and wires contained in said tube and leading to said lamps, the
20 outer portion of said cone being coated with white enamel or other similar reflecting material.

13. In a reflector, a plurality of cones, plates common thereto, a tube common to said plates, the upper plate having keepers thereon, bolts
25 passing through said keepers, and adapted to contact with an adjacent plate, a reflector supported above the latter and lamps supported upon said tube above said upper reflector.

14. A reflector consisting of a cone, upper and lower plates therefor, a tube common to said plates, a reflector located above said upper plate and a concave annular reflecting-surface adjacent the upper portion of said
35 cone.

15. In a reflector, a tube, an upper reflector supported thereon, a cone supported below said reflector and having an upper concave annular reflecting-surface adjacent thereto,
40 a lower locking-cone having its outer portion provided with a coating of white enamel or other similar material and lamps supported upon the sides and apex of said lower cone.

16. In a reflector, a tube, a cone, supporting devices common to said tube and cone, a lower locking-cone having a threaded socket attached to said tube, lamps projecting from the side and apex of said lower cone, an upper reflector, lamps supported on said tube
50 above said upper reflector and conductors contained in said tube and leading to said lamps.

17. In a reflector for electric and other lights, a plurality of concentric cones, plates

located at the upper and lower portions of
55 said cones, the surface of one of said cones being coated with a suitable light-reflecting material, a laterally-extending reflector located above said upper plate, a rod supporting said plate, lights supported on said rod
60 above said upper reflector, a locking device engaging said rod and lower plate for holding the parts in assembled position and lights suitably supported adjacent the outer of said
65 cones.

18. In a reflector, inner and outer cones having a light-reflecting material in the space between them, upper and lower plates for holding said cones in assembled position, a
70 tube common to said plates, a lower locking-cone, engaging said lower plate and tube, the outer portion of said locking-cone being coated with a light-reflecting material, and lights supported in proximity to said lower and outer
75 cones.

19. In a reflector, upper and lower plates, cones supported between said plates, the surface of one of said cones being coated with a light-reflecting material, means for holding said plates in assembled position, a lower
80 locking-cone forming a continuation of the outer of said cones, and lights supported from said lower cone.

20. In a reflector, inner and outer cones, having a light-reflecting material in the space
85 between them, upper and lower plates, a connecting device therefor located in the inner of said cones, a lower locking-cone, and lights supported in proximity thereto.

21. In a reflector, inner and outer cones, having a light-reflecting material in the space
90 between them, upper and lower devices for holding said cones in assembled position, a tube common to said devices and located in the inner of said cones, and lights suitably
95 supported in proximity to the outer of said cones.

22. A reflector consisting of an upper and lower plate, concentric cones supported therebetween, a liquid contained in the space be-
100 tween said cones, a connecting device common to said plates extending through the inner cone and lights supported adjacent to the exterior of said reflector.

JOHN C. FLEMING.

Witnesses:

E. HAYWARD FAIRBANKS,
WM. C. WIEDERSHEIM.