March 26, 1929. T. O. MOORE 1,707,171

ILLUMINATING DEVICE

Filed Jan. 18, 1927

Fig. 1.

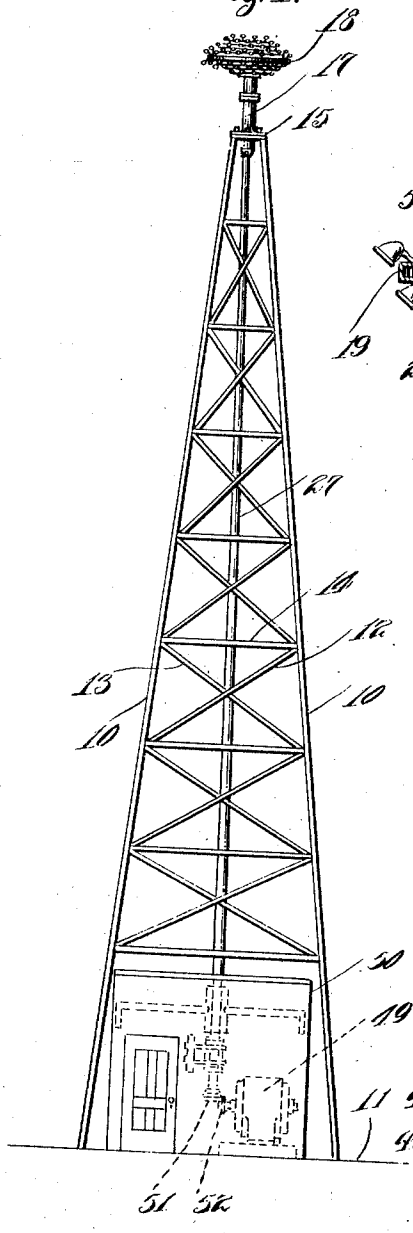


Fig. 2.

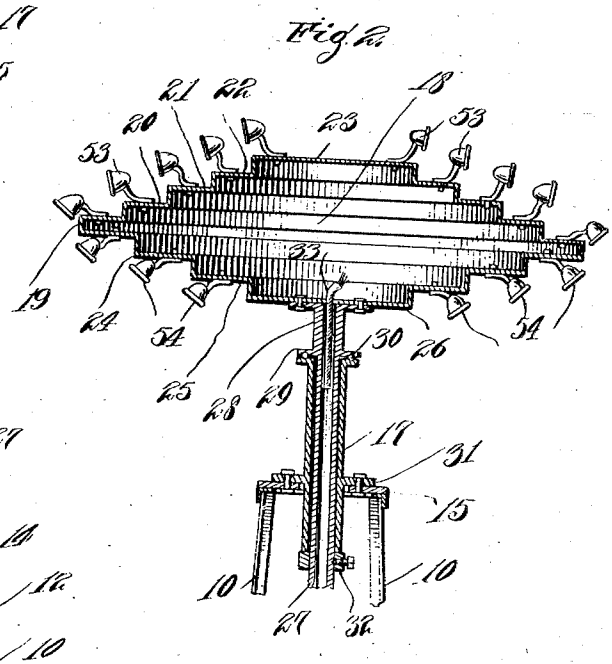
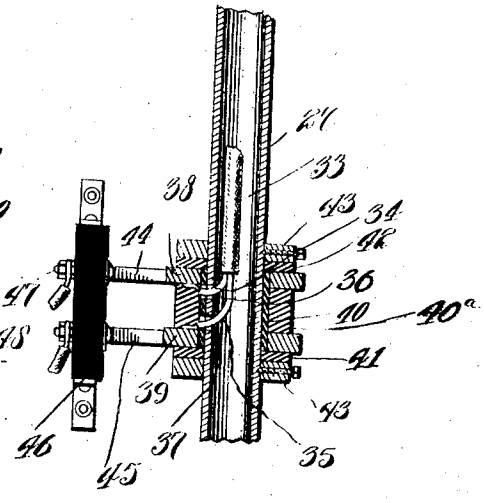


Fig. 3.



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UNITED STATES PATENT OFFICE.

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ILLUMINATING DEVICE.

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This invention relates to an outdoor illuminating device.

It has been proposed in attempting to illuminate space or streets with high powered search lights to project intense and concentrated rays in a definite direction but such devices fail of their purpose due to the fact that the rays must be directed over a small area with the concentrated rays being located too far from the area adapted to be lighted.

It is the object of the present invention to provide an illuminating device having a plurality of rows of lamps arranged on a rotating table with each row disposed in stepped relation with adjacent rows so that the illumination will cover a considerable area without concentrating the light rays on a particular spot.

Another object of the invention is the provision of an illuminating device provided with elevated rows of lamps with each row disposed in stepped relation with adjacent rows, the whole being adapted to be revolved for maintaining a prescribed area of illumination, the device being particularly adapted for use in aviation and for lighting great areas in the outdoors.

This invention will be best understood from a consideration of the following detailed description, in view of the accompanying drawings forming a part of the specification; nevertheless it is to be understood that the invention is not confined to the disclosure, being susceptible of such changes and modifications which shall define no material departure from the salient features of the invention as expressed in the appended claims.

Figure 1 is a view in elevation of the device constructed according to the principles of my invention,

Figure 2 is a fragmentary vertical section of the rotating table equipped with lamps, and

Figure 3 is a fragmentary vertical section showing the collector rings and contacts of the rotating shaft.

Referring more particularly to the drawings 10 designates a corner post of a tower which is braced by diagonally disposed brace bars 12 and 13 and horizontal bars 14, the post being sunk in a concrete foundation 11. A top plate 15 is secured to the upper end of the tower.

A sleeve 17 has a flange 31 secured to the top plate 15. A sleeve 28 forming the upper end of the shaft 27 has a flange carried by ball bearings 30 mounted on the flanged upper end of sleeve 17. The flanged upper end of sleeve 28 is secured to a rotating table 18 of stepped formation.

The table may be hollow and formed of metal or the same may be constructed of wood. In such a case a veneer is employed. The table has a central platform 19 of annular shape upon which rise a plurality of platforms 20 to 23 inclusive with each succeeding platform being of lesser diameter to provide a plurality of annular stepped surfaces. Beneath the central platform are arranged a plurality of platforms 24 to 26, inclusive, of progressively decreasing diameter to form annular stepped surfaces.

The sleeve 12 projects through the top plate and is engaged at the lower end thereof by a collar 32 secured to the shaft 27.

Running longitudinally of the hollow shaft 27 is an electric conduit 33 having wires 34 and 35 included therein with the upper ends of the wires connected to the lamps 53 and 54. The wire 34 is connected to a collector ring 38 while wire 35 is connected to a collector ring 39, wire 34 passing through a perforation 36 in the shaft while wire 35 passes through a perforation 37 in said shaft. An insulating sleeve 40 embraces the shaft 27 adjacent the collector rings 38 and 39 and a second insulating sleeve 40^a embraces the sleeve 40 and is located within the collector rings 38 and 39. A pair of collars 43 on opposite sides of the collector rings 38 and 39 aid in maintaining the collector rings and insulating sleeve in position. Insulating washers 42 are located between the collars 43 and the respective collector rings 38 or 39.

A brush 45 engages ring 38 and is connected to a wire 47 carried by an insulating bar 46. A brush 45 engaging the ring 49 is connected to a wire 48 also mounted on the insulating bar 46.

At the base of the tower and mounted on the foundation 11 is a power plant 50 having an electric motor 49 therein adapted to drive a gear 52 in mesh with a gear 51, gear 51 being at the lower end of shaft 27 and secured thereto. The wires 47 and 48 and likewise the motor 49 are connected with any suitable source of current.

An inspection of the rotating table 18 will disclose a horizontal platform 19 of annular formation and above which are located a plurality of stepped platforms or surfaces which progressively decrease in diameter towards

the uppermost platform 23. A similar group of stepped platforms 24, 25 and 26 are formed below the platform 19. All of the platforms are of annular formation. Electric lamps 53 are mounted on each of the platforms 20 to 23, inclusive, and adjacent the periphery of the annular surface of the platform. Lamps 54 are secured to the underneath platforms 24 and 25 and are arranged in circular formation adjacent the periphery of each platform. By such a construction any number of lamps, depending upon the size of the platform, the number of the platforms and the motor for driving the shaft and platform may be employed for illuminating purposes. The tower is of such a height that it will be placed well above the surface which is adapted to be illuminated in order to prevent both undue concentration of the light rays in any particular point of observation while the rotating table carrying the beams in a circular manner about the tower will very effectively distribute the illumination over a great area.

The device is particularly useful for aviation fields and for illuminating outdoor spaces where night work must be accomplished or for illuminating amusement parks and highways.

I claim:

1. An illuminating device comprising a tower, a table rotatably mounted on the tower, a sleeve secured to the upper end of the tower, a shaft secured to the table for supporting the same and provided with a flange, said sleeve having a flange adapted to support the flange on the shaft, said rotatable table consisting of a plurality of sections of gradually increasing diameters and located upon opposite sides of a central section of the greatest diameter, and lamps secured to the peripheries of the sections and tilted at angles so that light rays will be projected downwardly.

2. An illuminating device comprising a supporting member, a table rotatably mounted on the supporting member, said table consisting of a plurality of sections, one of the sections being centrally disposed with the sections upon opposite sides of the centrally disposed section gradually decreasing in diameter from the central section to the outermost section, lamps secured to the sections adjacent their peripheries, and means for rotating the table.

3. An illuminating device comprising a supporting member, a table rotatably mounted on the supporting member, said table consisting of a plurality of sections, one of the sections being centrally disposed with the sections upon opposite sides of the centrally disposed section gradually decreasing in diameter from the central section to the outermost section, lamps secured to the sections adjacent their peripheries, means for rotating the table, the lamps mounted on the sections at one side of the central section projecting outwardly and in opposite directions to the lamps mounted on the sections at the other side of the central section.

THOMAS ORR MOORE.