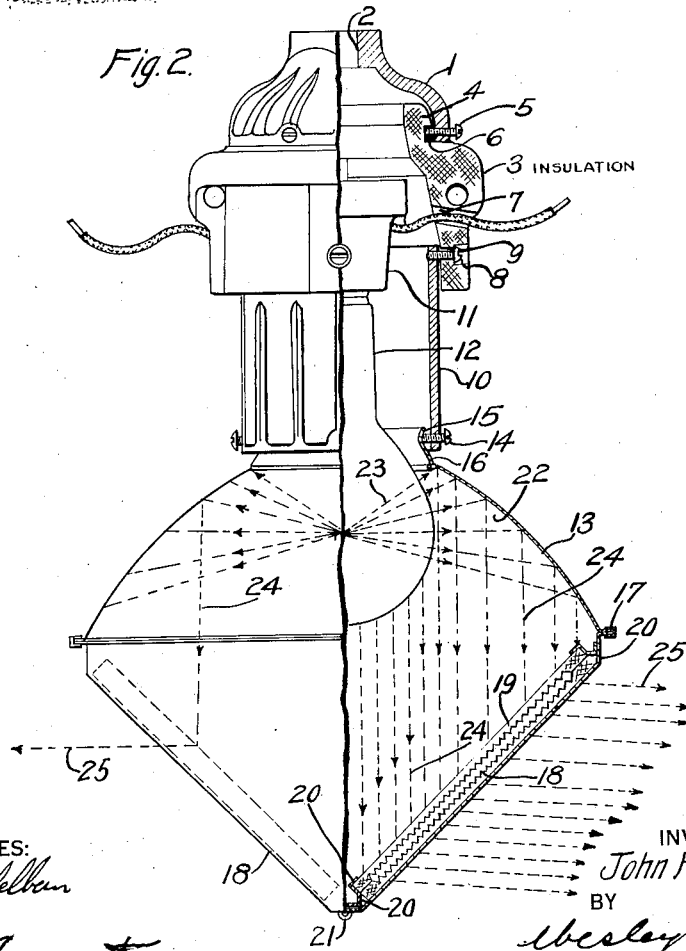
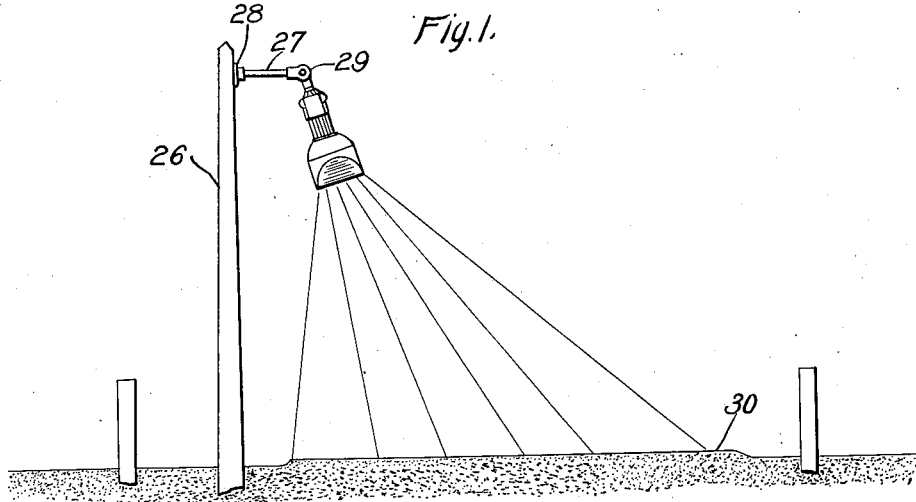


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J. R. TOWNSEND
HIGHWAY LIGHTING UNIT
Filed June 16, 1922



WITNESSES:
Alf Schiefelbusch
W. B. Gaspert

INVENTOR
John R. Townsend.
BY
Wesley C. Barr
ATTORNEY

UNITED STATES PATENT OFFICE.

JOHN R. TOWNSEND, OF SOUTH BEND, INDIANA, ASSIGNOR TO GEORGE CUTTER COMPANY, A CORPORATION OF INDIANA.

HIGHWAY-LIGHTING UNIT.

Application filed June 16, 1922. Serial No. 568,716.

To all whom it may concern:

Be it known that I, JOHN R. TOWNSEND, a citizen of the United States, and a resident of South Bend, in the county of St. Joseph and State of Indiana, have invented a new and useful Improvement in Highway-Lighting Units, of which the following is a specification.

My invention relates to lighting units, more especially to devices for street and highway lighting.

It is among the objects of this invention to provide a street-lighting unit of improved construction which shall be of greater utility and shall have increased efficiency over devices of this character heretofore employed.

It is a further object of this invention to provide a device of this general character which shall be of simple, compact structure, which shall be readily accessible and which shall be adapted to be mounted in position by a simple and inexpensive support.

Street-lighting units embodying silver-plated reflectors heretofore employed have had the reflectors thereof more or less exposed to the weather, which resulted in corrosion and tarnishing thereof and loss of efficiency in reflecting light. Reflectors made of porcelain-enameled steel which are weatherproof, are inefficient, as compared with the standard silver-plated reflector.

My present invention is directed to a lighting unit having an improved reflector system which is protected from the weather in that the reflector is completely protected from the atmosphere, and the general shape and design of the reflector system is such as to provide an efficient and durable lighting unit.

In the accompanying drawing, constituting a part hereof and in which like reference characters designate like parts,

Figure 1 is a view of a street-lighting unit embodying the principles of my invention, which illustrates the effective distribution of the light beams; and

Fig. 2 is a side elevational view, partially in section, of the lamp structure.

Referring to Fig. 2, the lighting unit consists of a metal base 1, having a threaded opening 2, by which it is secured to a mounting bracket. An insulating spacing member 3, having an annular flange 4 adapted to fit into the base 1, is secured thereto by a plurality of screws 5 seating in a corre-

sponding plurality of recesses 6 in the flange 4. The insulator 3 is provided with two openings 7 to take the lead wires in to the socket in the lamp chamber and is further provided with a plurality of countersunk drill holes 8, adapted to receive a plurality of cap screws 9 to secure a tubular housing 10. A porcelain lamp socket 11, adapted to receive an incandescent lamp 12, is secured to the insulator 3 in a suitable manner and is provided with a pair of terminals (not shown) by which the lamp is connected in an electrical circuit.

A combined reflector and hood 13, of a substantially parabolic shape, is secured to the tubular housing 10 by a plurality of screws 14 seating in the annular groove 15 of a sleeve 16, constituting an integral part of the reflector 13, which has an annular flange 17 on the lower edge thereof. The lower portion of the reflector system comprises a pair of refracting surfaces 18 in angular relation to one another. The refractors each consist of a pair of glass plates 19 having prismatic refracting surfaces in co-operative relation to each other. These refractors are mounted in a metal frame 20, which is hinged at the joint 21 to allow access to the inner chamber for removal of the lamp 12.

The reflector 13 has a silver-plated inner surface 22, from which the light beams 23, emitted from the lamp 12, are reflected vertically downward, as indicated by arrows 24, upon the prismatic refractors 18, which bend them in a direction inclined to the horizontal and in opposite directions, as indicated by arrows 25.

Referring to Fig. 1, the lamp unit is suspended from a suitable post 26, by means of a pipe bracket 27, which is fastened to a pole plate 28 and is provided with a swivel 29 to permit moving the unit angularly to cast the light beams on the road-bed 30.

It will be seen from Fig. 2 that the shape of the reflector is effective in casting two beams of light in opposite directions at any desired angle of approximately 10 degrees to the horizontal along the highway. This will permit spacing of the lighting units farther apart, which is a desirable feature in highway lighting. Another advantage is that the light is entirely enclosed by the combination reflector hood which consti-

tutes a chamber, thereby protecting it against the deteriorating effects of the elements.

Although I have described a specific embodiment of my invention, it will be obvious to those skilled in the art that various changes may be made in the details of construction thereof without departing from the principles herein set forth. For instance, the construction for securing the mounting brackets, insulators and reflectors may be modified and the means for mounting may be changed to suit specific requirements. The lamp socket may be formed integral with the insulating spacing member.

I claim as my invention:

1. A street-lighting device comprising a base provided with a lamp socket adapted to receive a lamp, a tubular housing secured to said base and extending vertically therefrom, a combination reflector hood having a reflecting surface adapted to reflect light beams vertically downward and a plurality of units containing refracting surfaces adapted to bend said reflected beams at an angle of approximately 10 degrees to the horizontal in opposite directions.

2. A street-lighting device comprising a base provided with a lamp socket adapted

to receive a lamp, a tubular housing secured to said base and extending vertically therefrom, a combination reflector hood secured to said housing, said reflector hood consisting of a parabolic member having a reflecting surface adapted to reflect the light beams vertically downward and a pair of angularly disposed refractors consisting of a plurality of glass plates having prismatic refracting surfaces in co-operative relation adapted to bend said reflected beams.

3. A street-lighting device comprising a base provided with a lamp socket adapted to receive a lamp, a tubular housing secured to said base and extending vertically therefrom and a combination reflector hood secured to said tubular housing, said reflector hood consisting of a parabolic member having a reflecting surface adapted to reflect light beams vertically downward and a plurality of angularly disposed units containing plates having prismatic refracting surfaces in cooperative relation adapted to bend said reflected beams in opposite directions.

In testimony whereof, I have hereunto subscribed my name this 7th day of June, 1922.

J. R. TOWNSEND.