Feb. 1, 1955 N. M. MICHAILOVSKY 2,701,298

DRIVING LIGHT SHIELD

Filed May 14, 1952

Fig. 1.

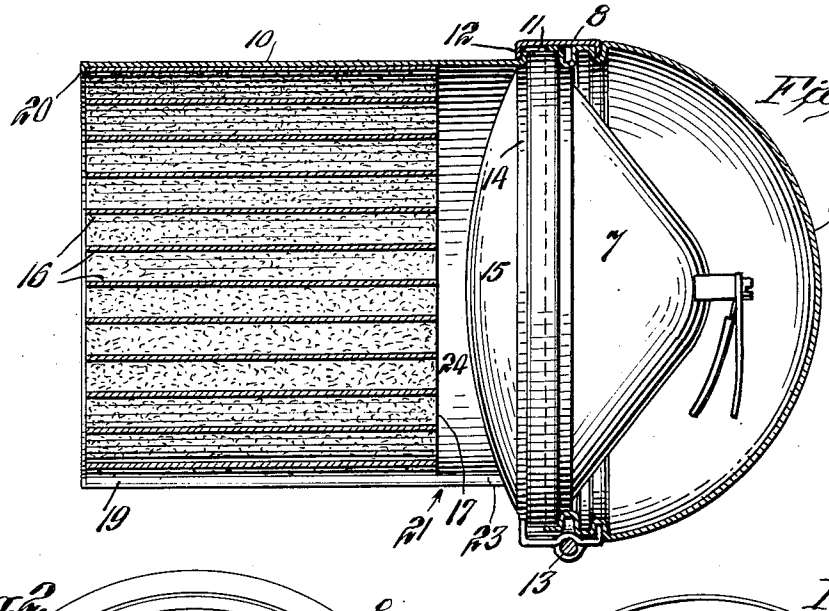


Fig. 2.

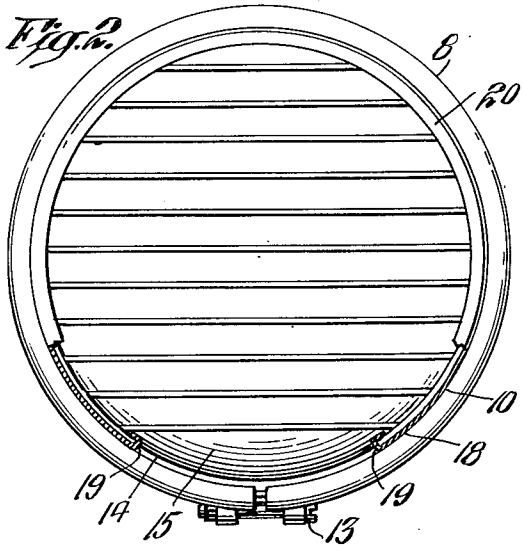


Fig. 5.

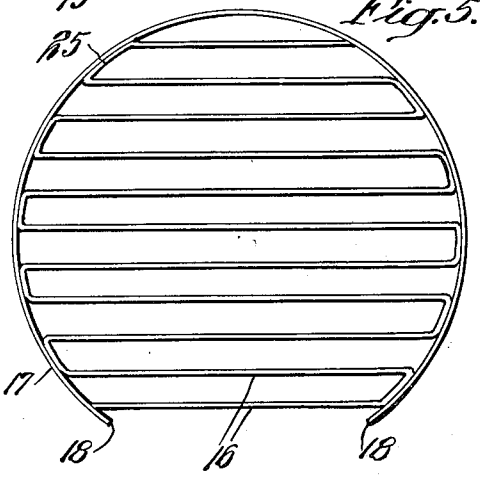


Fig. 3.

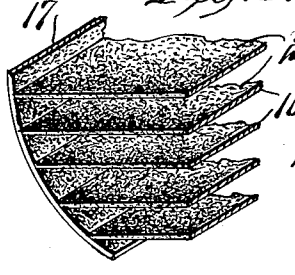
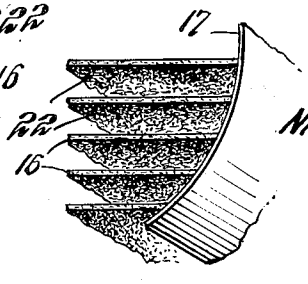


Fig. 4.



INVENTOR.
NICHOLAS M. MICHAILOVSKY

BY Philip S. McLean

ATTORNEY

United States Patent Office

2,701,298

Patented Feb. 1, 1955

2,701,298

DRIVING LIGHT SHIELD

Nicholas M. Michailovsky, Westport, Conn.

Application May 14, 1952, Serial No. 287,726

1 Claim. (Cl. 240—46.31)

The invention herein disclosed relates to driving lights for automobiles and constitutes improvements on Patents 1,713,294 of May 14, 1929, and 2,336,413 of December 7, 1943.

Special objects of the present invention are to provide an effective light for driving in fog, based on the principle of eliminating visibility-obstructing reflections of the stray rays of the headlamps, especially those upwardly directed and which are reflected by the fog back into the driver's eyes, creating the well known milky-white screen effect in front of the car.

Further special objects of the invention are to attain maximum road illumination without creating glare or dangerous or objectionable conditions for drivers of other cars or pedestrians on the road.

Particularly it is a purpose of the invention to provide a light shield which will accomplish these results and which will be attachable to the automobile lamps presently in use.

Further special objects of the invention are to provide a light shielding construction which will be non-reflective when wet, as well as when dry, so that it will be unaffected by rain and wet and will therefore be equally effective during all driving conditions.

Another important object of the invention is to make the light shielding construction self-cleaning and to cause it to keep the lamp to which it is attached, clean and clear for best driving use.

Other special objects of the invention are to provide a light shield of the character indicated which will be of simple, practical, low cost construction and so designed that it may be quickly and easily attached to or detached from the lamp structure.

Other desirable objects attained by the invention are set forth or will appear in the course of the following specification, wherein the various novel features of the invention are set forth and claimed.

Fig. 1 in the drawing is a vertical sectional view of a headlamp having the invention applied thereto;

Fig. 2 is a front elevation with portions of the light shield broken away and shown in section;

Figs. 3 and 4 are broken perspective views of a portion of the light shielding unit showing how the upper and lower and other surfaces are made non-reflective;

Fig. 5 is a front view of the inner, light shield unit removed from the enclosing supporting shell.

In Fig. 1 a headlight of approved design is illustrated, involving a lamp structure **7** of the "sealed beam" type secured by clamp ring **8** in the lamp housing **9**.

The light shield of the present invention is made so as to be attachable by this same split mounting ring.

This is accomplished by providing what constitutes the shell of the light shield, that is, the surrounding part **10**, with an angular flange **11** at the back which can be caught and held behind the flange **12** at the front of the clamping ring **8**.

Then when the screw **13** is tightened to draw the ends of the split clamping ring together, the shell **10** will be positively and firmly clamped over the front of the lamp, with the inner edge of the shell tightly fitting over the shoulder **14** of the lamp lens **15**.

The light shielding is accomplished by a plurality, eleven in the illustration, of flat, generally horizontal, thin shields **16** secured in fixed, parallel, closely spaced relation in a circular shell or frame **17**.

This light shield frame is of a size to slidingly fit within the mounting frame or shell **10** and is shown as open at

the bottom and as having free, extended edges **18** to slide in behind the inwardly turned, hooked lower edges **19** of the outer shell **10**.

These two main parts of the shield are assembled by sliding the circular shield carrying frame **17** into the back, outwardly flanged end of the supporting shell **10** and pushing it forward against the narrow, inwardly turned abutment flange **20** at the front end of the shell.

The parts may then be firmly secured in this relation as by indenting the hooked edges **19** in back of the shield frame **17**, substantially at the point **21** indicated in Fig. 1.

The flat, parallel light shields **16** are spaced closely enough together so that with only a slight downward inclination of the lamp, such as required for driving, the light source will be invisible to an oncoming driver or to a pedestrian on the road, while the road will be fully illuminated.

These shields being substantially parallel with the rays of the main central light beam, divide or break up the light beam into a number of thin, shallow light beams, each shielded in respect to the direct source of illumination.

To prevent back reflection by the fog of upwardly directed rays into the eyes of the driver which would thus interfere with road visibility, the entire shielding unit, including shields **16** and the interior of the frame **17** which carries them, are finished in dull, dead black, and these non-reflective surfaces indicated at **22**, Figs. 3 and 4, are non-reflective when wet as well as when dry, being made so by spraying or dipping and then having cotton floss blown over the wet, painted surface. The rough, fibrous, dead black surface thus provided is non-reflective at all times and under all conditions, making the grille operate solely as a light beam sub-dividing shield, stopping and avoiding light reflecting tendencies.

To overcome any tendencies to accumulate dust or foreign matter on the light shields, ventilating flow of air is effected by leaving the containing shell open at the bottom as indicated as **23**, Fig. 1, and by spacing the grid or grille which constitutes the light shield, forward of the lens, leaving a clear but confined space **24** over the front of the lens, directly in back of the grille.

On forward travel the shields and the face of the lens are swept by streams of air, continuously flushing and cleaning these surfaces. This confined and directed flow of air has the effect of keeping the lens cleaner than it would ordinarily be and rain, sleet and snow add to the washing and cleansing results.

The light shields may be separate sheets of material secured within the frame **17**, as by soldering, brazing or the like, or they made be made from a single continuous strip folded as indicated at **25**, Fig. 5, in zigzag fashion, and secured in that relation within the circular confining frame.

The non-reflecting floss finish on both upper and lower surfaces of the light shield is a great aid in driving in fog. This non-reflecting finish may be most important for the upper side but it is also of importance on the lower side of the shielding surfaces since downwardly directed or reflected stray rays strike the road at a close range and may be reflected by the road upwardly and then again reflected by the fog back into the driver's eyes, to contribute to the "blanket" effect which ordinarily interferes with road visibility. The lower stray light, however, is not as troublesome as the upper, since it loses part of its intensity in double reflection, while the upper stray light is reflected only once. For these reasons the lower shield surface may be left without the special finish described.

With both sides finished the fog light approximates an ideal requirement of a beam being spread horizontally and having sharp cut-off on the upper and lower sides.

While shown mounted by a split clamping ring, it is realized that the light shield may be mounted on the lamp structure in other ways, for example by the solid or continuous headlight mounting rings now employed on cars of conventional design.

What is claimed is:

A light shield for attachment to a conventional driving lamp unit comprising a longitudinally extending cylin-

drical shell having lower longitudinally extending free edges spaced from one another forming a longitudinally extending opening at the bottom of said shell, each of said spaced free edges being turned inwardly forming an internal groove extending longitudinally along each bottom free edge of said shell, said shell having an inwardly turned stop flange means secured at its forward end and an outwardly turned mounting flange secured to the opposite rear end of the shell, a cylindrical frame telescopically engaged in the outwardly flanged back end of the shell and having spaced longitudinal edges at the bottom slidingly engaged in said internal grooves provided along the spaced longitudinal edges of the shell, said frame being secured in the shell with the forward end of the same in abutting engagement with the stop flange at the forward end of the shell, and substantially parallel, light-beam dividing partitions secured in closely

spaced, longitudinally extending relation in said frame and terminating at the rearward end short of the back end of the shell to leave a clear space at the back of the partitions in front of a lamp unit to which the shell may be secured by said mounting flange, with said clear space in front of the lamp open to said longitudinally extended space provided at the bottom of the shell.

References Cited in the file of this patent

UNITED STATES PATENTS

1,434,302	Marcotte	Oct. 31, 1922
1,444,243	Gaspie	Feb. 6, 1923
1,528,279	Tolman	Mar. 3, 1925
1,539,753	McCain	May 26, 1925
2,277,147	Rogers	Mar. 24, 1942