

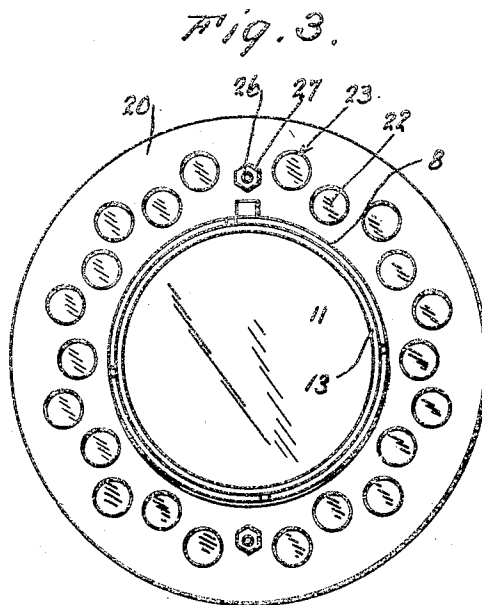
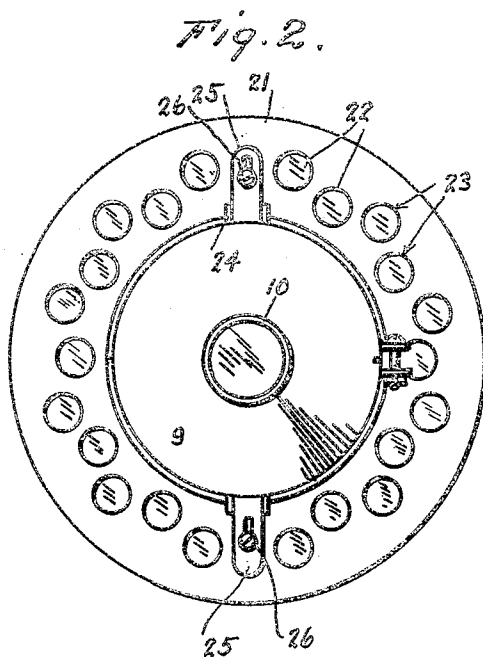
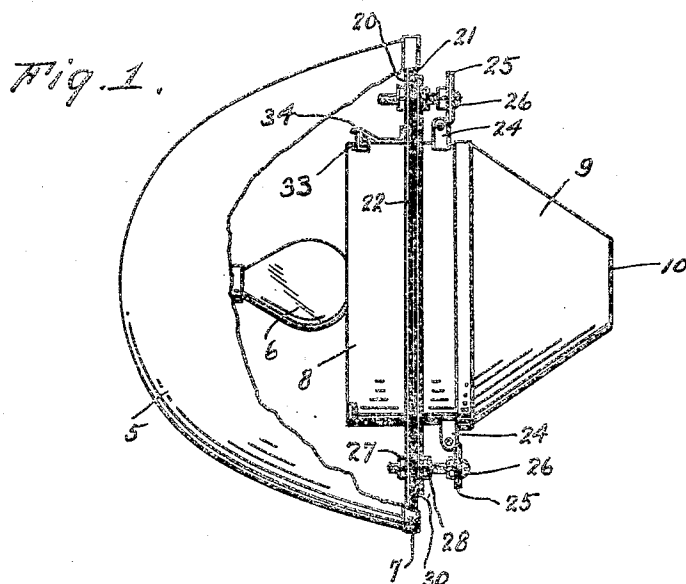
Aug. 30, 1932.

P. E. BRICKER
HEADLIGHT ATTACHMENT

1,874,432

Filed Aug. 7, 1931

2 Sheets-Sheet 1



Inventor

Poul E. Bricker

By *Oliver A. Bricker*
Attorney

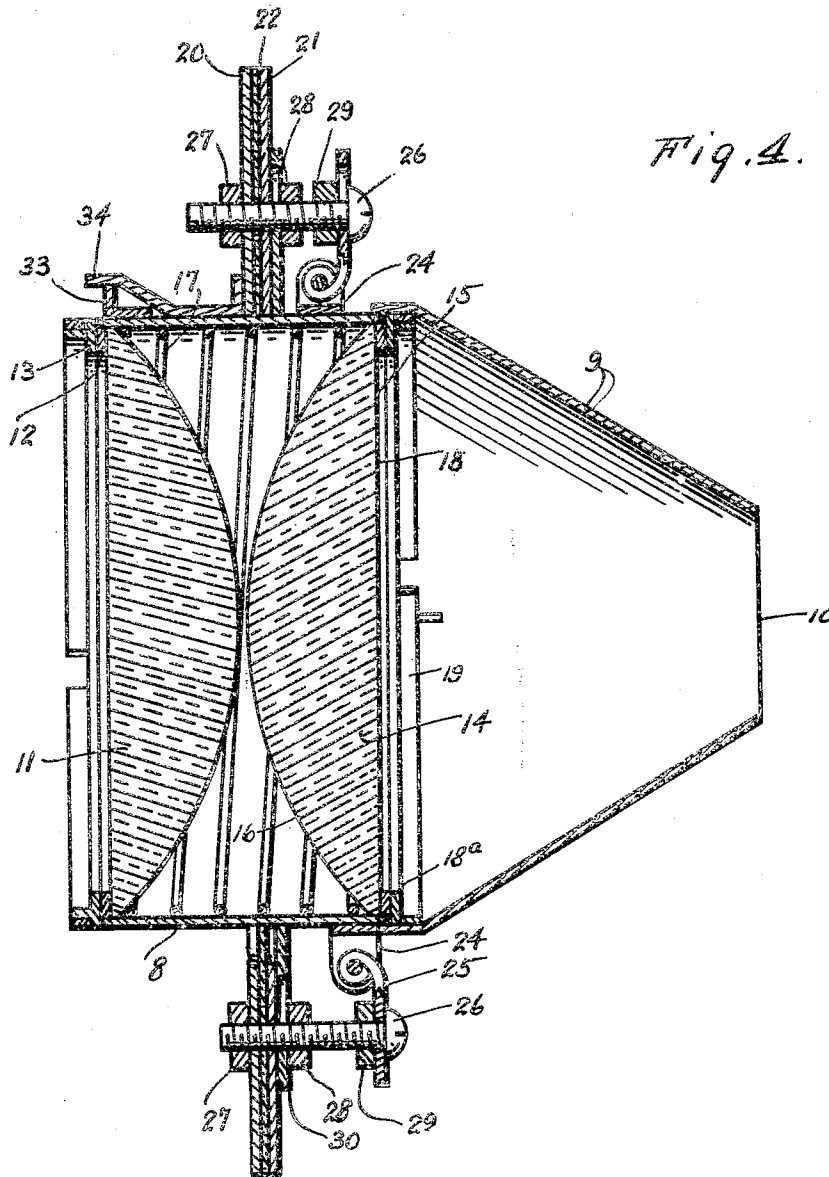
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Inventor

Paul E. Bricker

By *Glenn A. Bricker*
Attorney

UNITED STATES PATENT OFFICE

PAUL E. BRICKER, OF MICHIGAN CITY, INDIANA

HEADLIGHT ATTACHMENT

Application filed August 7, 1931. Serial No. 555,835.

This invention relates to an improved attachment for automobile and motor vehicle headlights.

The principal novelty is predicated upon a mechanical attachment for the casing of a bulb equipped headlight structure wherein said attachment is especially constructed and developed to modify the light beam to provide a beam having intensified illuminating properties.

In carrying the inventive conception into actual practice, I have selected a simplified and systematic arrangement of parts calculated to fulfill the requirements of a structure of this class in a dependable, efficient and satisfactory manner.

Other features and advantages will become more readily apparent from the following description and drawings.

In the drawings:

Figure 1 is a view in side elevation showing the attachment in its operative position.

Figure 2 is a front elevation of the attachment per se.

Figure 3 is a rear elevation thereof.

Figure 4 is a detail sectional view showing the parts sufficiently enlarged to disclose the specific construction and arrangement.

In the drawings, the numeral 5 in Figure 1 designates a parabolically shaped casing provided with suitable reflecting means, and provided as is usual with a centralized incandescent bulb 6. In accordance with the present invention, the casing has a marginal retaining channel 7 to accommodate the annular mounting for the light beam rectifying attachment.

The attachment as seen in Figure 4 comprises a tubular cylinder 8 provided at its front with a conical beam concentrating shell 9. This shell is of truncated conical form and the truncated apex 10 constitutes the restricted exit for the light beam. This is arranged in co-axial alinement with the focal center of the bulb.

The numeral 11 designates an inner plano-convex magnifying lens having its plane sides disposed inwardly and its convex side outwardly. The numeral 12 designates a packing ring and 13 a snap-in abutment and

retaining element. The companion lens 14 is arranged in reverse order and is of a symmetrical form having its flat side 15 disposed outwardly and its convex side 16 disposed inwardly. Thus, the crown portion of the convex faces of the two lenses is disposed in close proximity to each other.

A coil spring 17 is arranged within the cylinder and pressed against the lenses for holding them in place against the abutment elements. The elements for the lens 14 include a retaining ring 18^a and a split resilient retaining member 19, the latter being arranged within the inner end portion of the concentrating shell 9.

The mountings for the lenses, cylinder and shell are made up of three parts. The numerals 20 and 21 designate complementary annuli and an intervening transparent annulus 22. These annular members 20 and 21 are formed with registering holes 23 which co-operate with the transparent annulus 22 in forming windows. These are marginal windows which indicate the actual large diameter of the headlight casing in order to distinguish the headlights, spotlights or special courtesy lights, etc.

The numerals 24 designate the U-shaped clips to which hinged leaves 25 are pivoted and the leaves carry retaining bolts 26 having fastening nuts 27, 28 and 29. The numerals 30 designate slotted lugs carried by the cylinder through which the bolts pass. Thus the bolts serve to assemble the parts in the relationship disclosed in Figure 1.

The numeral 33 designates a stay or maintenance element carried by the cylinder and co-operable with an adjacent spring keeper 34 carried by the annulus 20. These parts 33 and 34 co-operate in maintaining the proper focal center with respect to the mounting.

Practical experience in the use of the attachment reveals its adaptability as a practical attachment for present day headlight constructions. The double acting reversed arrangement of magnifying glasses mounted in the cylinder and co-operating with the truncated conical deflector and concentrating member 9 provides an arrangement which succeeds in providing the desired concen-

trated intensified illuminating properties for the projected headlight beam.

I shall not however, attempt to disclose theoretically the exact projection of light rays developed by the addition of this attachment, for these factors will be evident to students learned in this particular line of endeavor.

The main features to be observed are these. I have found it practical to use a pair of duplicate magnifying lenses and arranging these in reversed contact order in a suitable holder, preferably an open-ended cylinder of the type represented by the numeral 8. These lenses must be positioned in proper co-axial alinement with respect to the bulb in the main headlight casing and preferably co-operate with a concentrating projecting shell.

The specific type of mounting utilized is of course like that shown in Figure 4 but may vary as occasion requires. The principal idea is to employ a mounting susceptible of supporting the attachment in proper position in the headlight casing and providing the mounting with circumferentially spaced windowlight to serve as indicators representing the actual diameter of the main headlight-casing for safety recognition purposes.

I claim:

In combination with a head lamp including a lamp bulb, a cylinder of much smaller diameter than the front end of the head lamp and having both ends open, a mounting encircling the cylinder at substantially the middle portion of the cylinder and having its periphery connected with the front of the head lamp for supporting the cylinder in the head lamp with its inner end close to the bulb, a pair of lenses in the cylinder each formed with a flat outer face and a convex inner face, the flat faces being arranged adjacent the ends of the cylinder, a conical member having its large end connected to the outer end of the cylinder with its small end open for preventing glare when the rays of light are passing through the lenses, means for longitudinally adjusting the cylinder in the mounting, and said mounting having a plurality of window forming openings therein, said openings being arranged in a substantially annular row in the mounting, whereby some of the rays of light from the bulb will pass through said openings.

In testimony whereof I affix my signature.

PAUL E. BRICKER.