

No. 815,859.

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A. L. PALIS.
RETINOSCOPE.

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Fig 1.

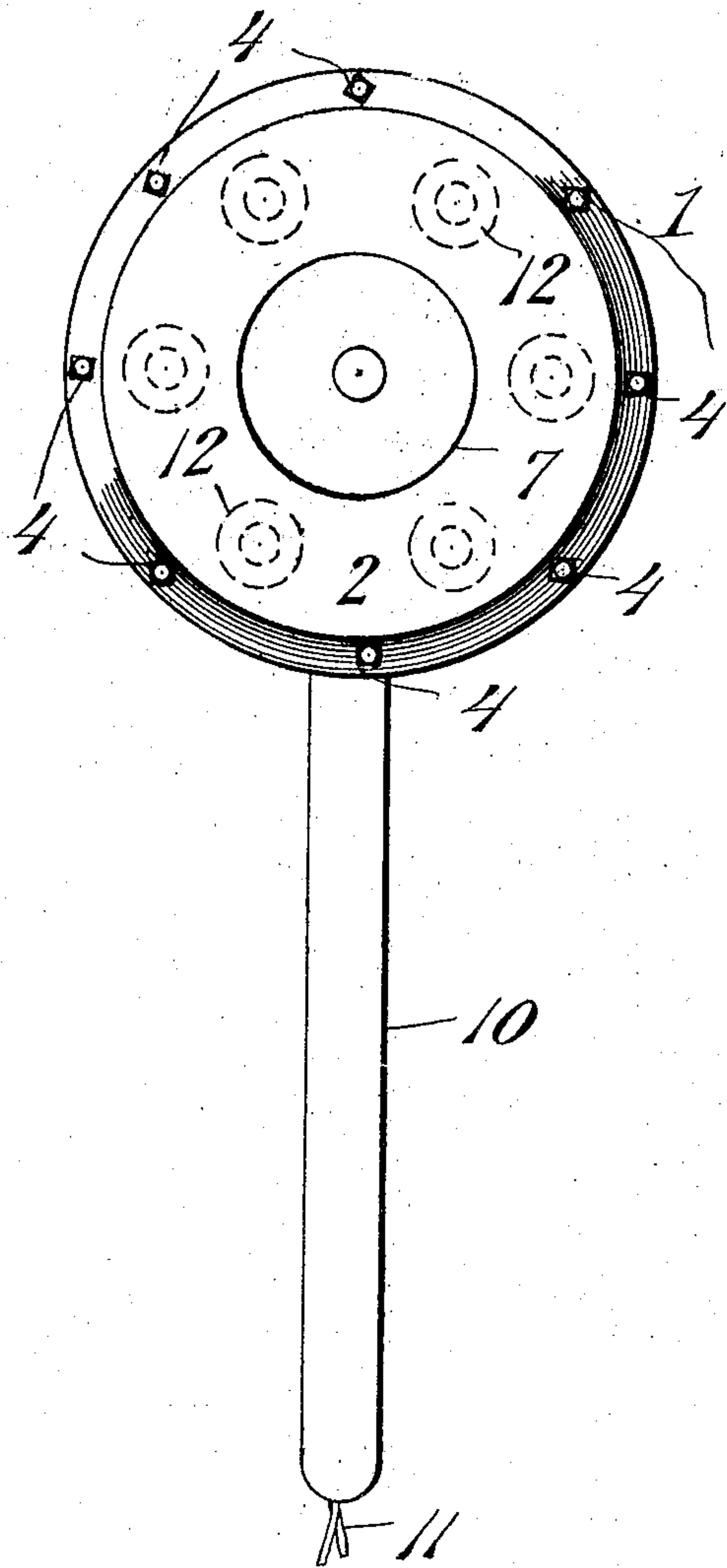
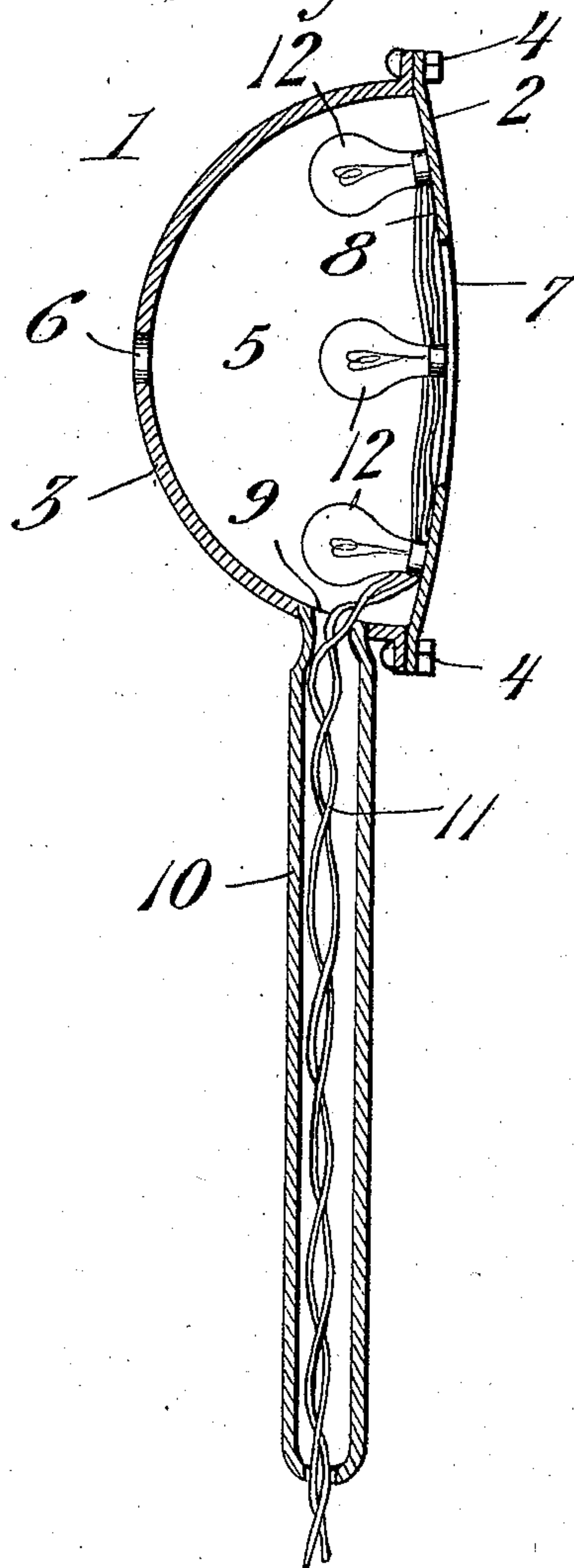


Fig 2.



Witnesses

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To all whom it may concern:

Be it known that I, AUGUST L. PALIS, a citizen of the United States, residing at Upland, in the county of San Bernardino and State of California, have invented new and useful Improvements in Retinoscopes, of which the following is a specification.

This invention relates to instruments of the type known as "retinoscopes," and has for its objects to produce a comparatively simple inexpensive device of this character in which the lamp or lamps will be housed within the body of the instrument and one wherein the rays of light will be reflected in intensified form and in direct lines through the objective opening.

With these and other objects in view the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a rear elevation of an instrument embodying the invention. Fig. 2 is a longitudinal section centrally therethrough on the line 2 2 of Fig. 1.

Referring to the drawings, 1 designates the body or head of the instrument, comprising a back piece or base 2 and a front piece or reflector 3, secured to the base 2 by screws or other fastening members 4 and forming in conjunction with the back piece a chamber 5, there being provided at the center of the front piece or reflector 3 a peep or sight opening 6, disposed in axial alinement with a relatively enlarged objective opening 7, formed centrally in the back piece 2, which latter is of concave or convex form to present an inner concave face 8, while the reflector 3 is of substantially semispherical form to present a continuously-curved inner reflecting-face.

Attached to the body 1 and communicating with the interior thereof through an opening 9 is a tubular handle 10, having electric conducting-wires 11 lead therethrough and connected with a plurality of incandescent lamps 12, attached to the inner face of the base 2 and arranged concentrically around the objective opening 7, it being noted that owing to the lamps being seated upon the concaved face 8 they are pitched at a slight

inclination relatively and with respect to the axial line of the openings 6 and 7, whereby the light-rays refracted from the inner curved face of the reflector 3 will be directed in substantially straight lines through the opening 7 and in highly-intensified condition.

In practice and in the use of the instrument the eye or other object to be examined is properly positioned over the opening 7, through which an intensified light will be directed by the reflector 3 to permit thorough inspection of the object by a person looking through the sight or peep opening 6.

From the foregoing it is apparent that I produce a simple device admirably adapted for the attainment of the ends in view, it being understood that in attaining these ends minor changes in the details herein set forth may be resorted to without departing from the spirit of the invention.

Having thus fully described my invention, what I claim as new is—

1. A device of the class described comprising a curved reflector having a peep-opening, a back piece secured to the reflector and provided with an objective opening, and a lamp arranged upon the inner face of the back piece for directing light to the inner curved face of the reflector.

2. A device of the class described comprising a substantially semispherical reflector having a peep-opening, a back piece attached to the reflector and serving in conjunction therewith to form a chamber, said back piece being provided with an objective opening, and a lamp arranged in the chamber for directing light-rays against the inner face of the reflector.

3. A device of the class described comprising a reflector having an inner continuously-curved reflecting-face, a back piece secured to the reflector and serving in conjunction therewith to form a chamber, said reflector being provided with a peep-opening and the back piece having an objective opening, and a lamp arranged in the reflector for directing light-rays to the curved face of the reflector.

4. A device of the class described comprising a reflector having a continuously-curved inner reflecting-face, a back piece attached to

the reflector and serving in conjunction there-
with to form a chamber, said back piece hav-
ing an inner concaved face and an objective
opening and the reflector being provided with
5 a peep-opening, and a plurality of lamps at-
tached to the concaved face of the back piece
around the objective opening

In testimony whereof I affix my signature
in presence of two witnesses.

AUGUST L. PALIS.

Witnesses:

VERNIE HAYDEN,
R. C. NORTON.