

PUBLISHED
MAY 4, 1943.
BY A. F. C.

H. NERWIN
SUNSHADES
Filed June 23, 1941

Serial No.
399,283

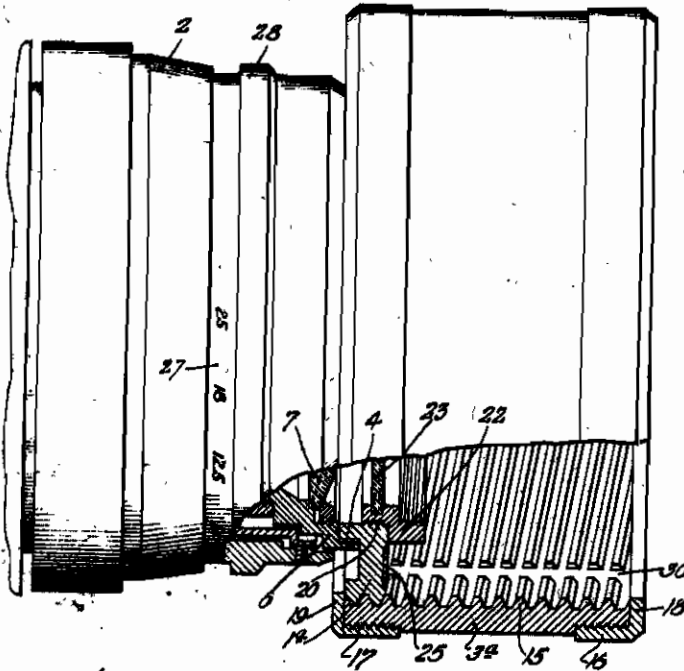


Fig. 1

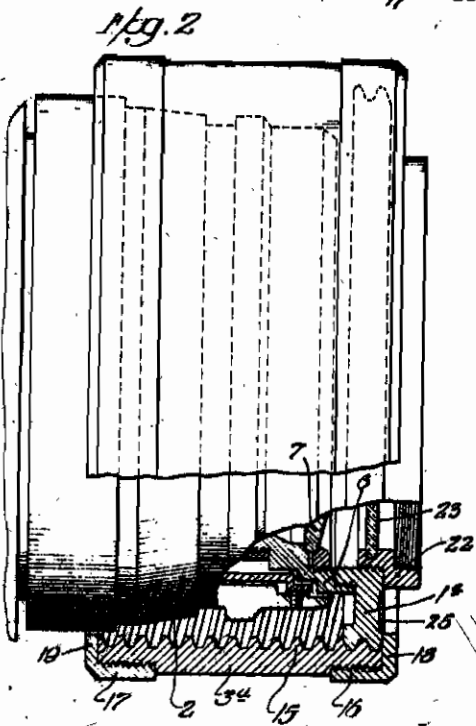


Fig. 2

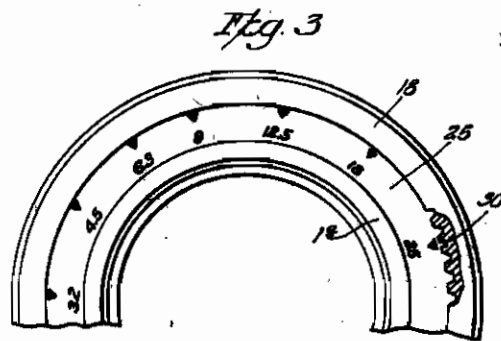


Fig. 3

Inventor.
Hubert Nerwin
Singer, Eckert, Stearns & Carlberg
Attys.

ALIEN PROPERTY CUSTODIAN

SUNSHADES

Hubert Nerwin, Dresden-Belck, Germany; vested
in the Alien Property Custodian

Application filed June 23, 1941

This invention relates to improvements in sunshades for the lenses of photographic and motion picture cameras, and is a division of my United States patent application Serial No. 260,738, filed March 9, 1939.

Sunshades of this type consist usually of a tubular member which is removably attached to the lens mount or on the front wall of the camera casing. When the camera has been used and is to be folded together or packed away in its carrying case it is necessary to remove the sunshade from the camera.

It is the principal object of the invention to provide a sunshade which needs not be removed from the camera when the same is to be folded together or packed away. According to the invention the sunshade is provided with a telescopic tubular member of such a size that it may be moved from its extended operative position axially rearwardly over the lens mount, so that it surrounds the lens mount in its inoperative position.

Another object of the invention is to provide the sunshade with a supporting member adapted to be secured to the front end of the lens mount and on which the tubular member is adjustably secured so as to be supported by said member in operative and inoperative position.

Another object of the invention is to provide an adjustable sunshade whose projection beyond the lens is adjustable in accordance with the setting of the variable diaphragm of the lens.

Other objects of the invention will become apparent from the following description with reference to the accompanying drawing which illustrates a few embodiments of the invention.

In the drawing:

Figure 1 is an elevation view, partly in section of a photographic objective provided with a sunshade, in extended or operative position.

Figure 2 illustrates the sunshade in its inoperative position on the photographic objective, and

Figure 3 is a front view of the sunshade illustrated in Fig. 1 with a portion broken away.

Referring to Fig. 1, the sunshade comprises a supporting ring 1^a adapted to be secured to the lens mount 2, and a tubular member 3^a, which is adjustably secured to the outer circumference of the supporting ring 1^a.

The supporting ring 1^a has an annular flange 4 projecting from its inner circumference and provided with an exterior thread adapted to screw into a corresponding interior thread provided at the front end of the mounting ring 6 for the front lens 7 of the photographic objective.

A tubular member 3^a is connected with the outer circumference of the supporting ring 1^a by means of a thread 15. Preferably a multiplex thread 15 having a high pitch is employed, so

that the tubular shade member 3^a can be moved by a relatively short rotative movement from its extended operative position, illustrated in Fig. 1 to its retracted inoperative position illustrated in Fig. 2.

The ends of the tubular member 3^a have rings 16 and 17 respectively attached thereto, each of which is provided with an inwardly extended flange 18 and 19 respectively, which form stops for limiting the axial movement of the tubular member 3^a with respect to the supporting ring 1^a.

In order to adapt the sunshade for the attachment of a color filter or polarizing filter, the supporting ring 1^a is provided with an interior thread 20 for receiving an exteriorly threaded mounting ring 22 in which a filter 23 is secured.

It is also possible to provide the light filter with a mounting ring which is clamped between the outer end of the tubular member 3^a and the flange 18 of the ring 16, in which cases the ring 18 holds the mounting ring in position.

When the aperture of the lens diaphragm is reduced then the conical light beam of the objective is also reduced with respect to a point located at a predetermined distance from the picture plane. Therefore, a sunshade having a certain diameter and a certain axial length would be absolutely correct only for a predetermined aperture of the lens diaphragm. It appears obvious, that if the sunshade is correctly dimensioned for the full aperture of the lens system, that the axial length of the sunshade could be longer when the aperture of the lens diaphragm is reduced.

The present invention lends itself admirably for adjusting the axially movable shade-forming tubular member 3^a in accordance with the setting of the diaphragm aperture, so that the front end of the sunshade can be adjusted to such a position that it just permits the passage of the conical light beam. In order to adjust the extension of the sunshade in accordance with the setting of the lens diaphragm the outer end face of the supporting ring 1^a is provided with a diaphragm scale 25 (Fig. 3) and the rotatable tubular member 3^a is provided with an index which may be brought opposite any scale division of the scale 25. When the lens diaphragm is adjusted to a certain aperture, which is indicated by the diaphragm scale 27 on the diaphragm adjusting ring 26 of the lens mount 2, the sunshade may be adjusted to its most favorable position by rotating the tubular member 3^a until its index, formed in the present instance by an axial groove 30 on the inner wall of the tubular member 3^a, is brought opposite a similar scale division of the scale 25 on the supporting ring 1^a.

HUBERT NERWIN,