Sept. 10, 1935. W. V. FOULIS ET AL 2,014,322

COLLAPSIBLE LENS HOOD FOR PHOTOGRAPHIC CAMERAS

Filed Nov. 22, 1934

Fig. 1.

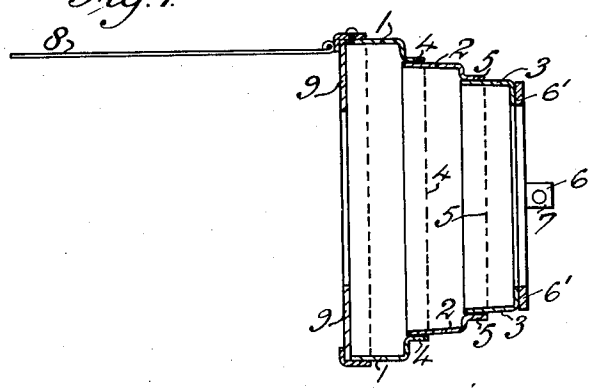


Fig. 2.

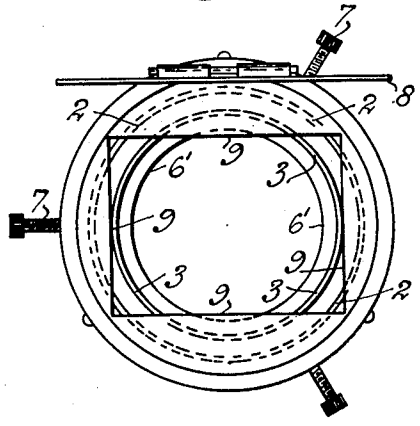


Fig. 3.

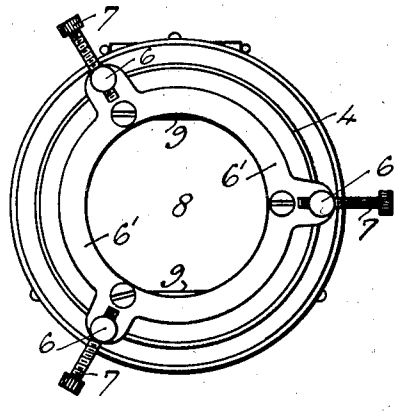
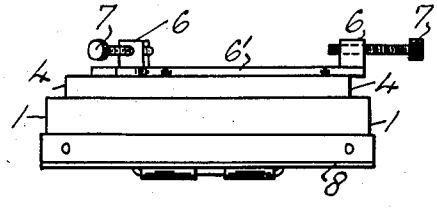


Fig. 4.



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COLLAPSIBLE LENS HOOD FOR PHOTOGRAPHIC CAMERAS

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In Great Britain October 20, 1933

3 Claims. (Cl. 88—1)

This invention relates to a collapsible lens hood for shielding a camera lens when photographing against the light.

According to the invention a lens hood is formed of a plurality of telescoping sections whose inner surfaces are light absorbing, and is provided with spacing means serving to prevent damage to the light absorbing surfaces when collapsing and extending the hood.

Preferably the sections are cupped by being provided with inwardly projecting flanges at one end, and said flanges being adapted to ride over the outer surface of the next smaller section, and thus prevent contact between the inner surface of a big section and the outer surface of a smaller section. The sections are so formed and connected that they telescope solely upon surfaces external of the light absorbing surface formed conjointly by the inner surfaces of the sections, the light absorbing surfaces thereby being enabled to maintain an unrubbed highly efficient light absorbing finish.

The preferred form of lens hood according to the invention is illustrated in the accompanying drawing in which Figure 1 is a sectional elevation, Figure 2 a front view, Figure 3 a back view, and Figure 4 a side view showing the hood collapsed.

Referring to the drawing, the lens hood comprises three metal rings **1**, **2**, and **3**, the rings **2** and **3** of which taper from left to right of the drawing. The rings **1** and **2** are cupped by being provided with flanges **4**, **5**, the internal diameters of which are such that they will readily ride over most of the exterior surface of the rings **2**, **3** respectively, but are just smaller than the largest diameters of said rings so that the hood may be pulled out to the form shown in Figure 1 where the flanges **4**, **5** are jammed against the outer surfaces of the rings **2**, **3**, giving a substantially rigid structure, or collapsed to the size shown in Figure 4 where the depth of the device is only very little more than the depth of the ring **1** with its flange **4**. The smallest section **3** is provided with an end piece **6'** screwed thereto, the end piece having lugs **6** through which pass screws **7** which serve to attach the hood to the lens mounting of the camera. The lugs **6** serve to limit the collapsibility of the hood, by abutting against the flange **4** when the hood is collapsed. If desired, however, the end piece may be dispensed with and the lugs may be riveted directly to the section, the screw heads then serving to limit the collapsibility. The front of the hood is provided with a lid **8** which is hinged stiffly so as to be capable of opening to, and being maintained at, any desired position and thus if desired cast a shadow over the inside of the hood.

In the front of the ring **1** is mounted a mask **9** having for example a rectangular opening, which mask is rotatable independently of the hood, and which ensures that the cone of light entering the camera is of such shape that internal reflections are substantially eliminated. The mask is formed of metal provided with a fibrous backing, or entirely of fibrous material.

The interior of the rings and of the lid **8** and the whole of the mask **9** are blackened or similarly rendered light absorbent, and it will be seen that by reason of the cupping of the rings by the flanges **4**, **5**, the light absorbent surfaces remain untouched by the telescoping of the hood.

Means other than the screws **7** may obviously be employed to fasten the hood to the camera, or the hood may be formed as a fixture on the camera.

What we claim is:—

1. A lens hood for cameras and the like, comprising a plurality of telescoping sections having outer surfaces and light absorbing inner surfaces and each section being provided at one end only with an inwardly extending flange part slidably engaging the contiguous section only on the outer surface thereof, the slidably associated outer surfaces and flanges being the only parts having sliding engagement whereby the light reflecting inner surfaces are entirely free from rubbing or sliding contact.

2. A lens hood for cameras and the like, comprising a plurality of telescoping sections having outer surfaces and light absorbing inner surfaces, rims on said sections formed by cupping said sections, said rims slidably engaging respectively contiguous sections only on the outer surfaces thereof, the engagement of said rims with said outer surfaces maintaining the light absorbing surfaces free from sliding or rubbing contact with each other or any other surface during sliding of said rims on said outer surfaces, thereby to prevent damage to the light absorbing surfaces when collapsing and extending the hood.

3. A lens hood for cameras and the like, comprising a plurality of tubular sections of truncated conical shape and of progressively decreasing size, said sections having outer surfaces and light-absorbing inner surfaces and being cupped to provide inwardly extending rims which have sliding contact only with the outer surfaces of adjacent sections for spacing the inner surface of one section from the outer surface of the next adjacent section, said rims and said outer surfaces being the sole contacting surfaces between adjacent sections having sliding or rubbing contact, and said rims having an inner diameter less than the maximum outer diameter of the next smaller section to prevent the complete separation from each other of said sections.

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