C204B OR 1,228,389

350/318

F. W. BARNES.

RAY FILTER HOLDER.

APPLICATION FILED DEC. 15, 1916.

1,228,389. Patented June 5, 1917.

Fig. 1

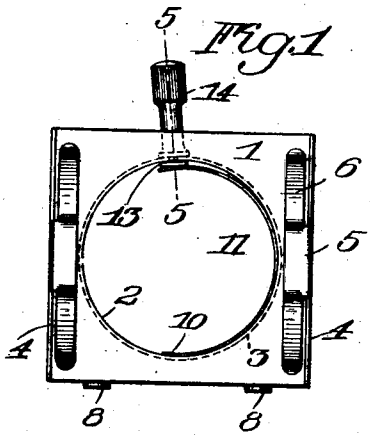


Fig. 2

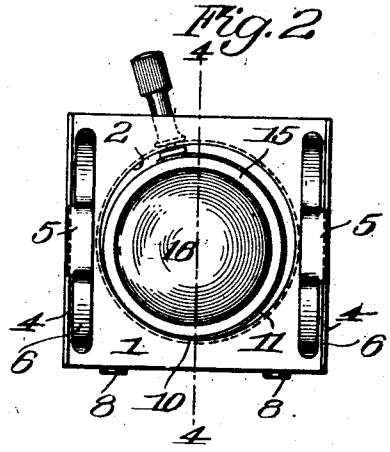


Fig. 3

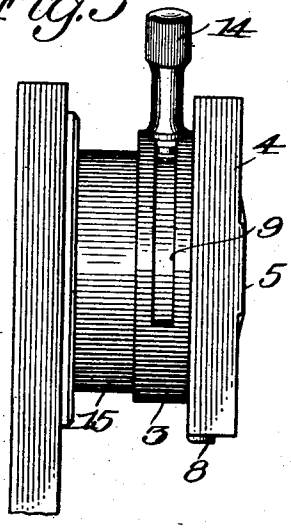


Fig. 4

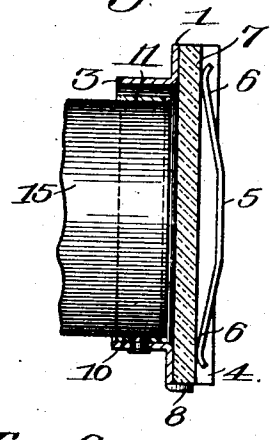


Fig. 5

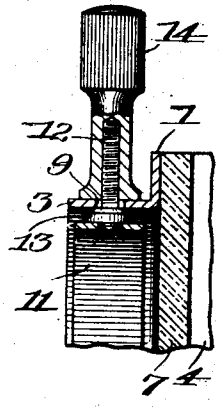
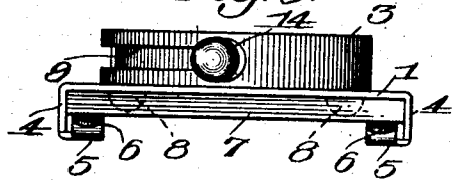


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

FREDERICK W. BARNES, OF ROCHESTER, NEW YORK, ASSIGNOR TO EASTMAN KODAK COMPANY, OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK.

RAY-FILTER HOLDER.

1,228,389. Specification of Letters Patent. Patented June 5, 1917.

Application filed December 15, 1916. Serial No. 137,081.

To all whom it may concern:

Be it known that I, FREDERICK W. BARNES, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Ray-Filter Holders; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference-numerals marked thereon.

My present invention relates to photography and more particularly to photographic ray filters and it has for its object to provide a simple and convenient form of ray filter holder that may be produced at a very low cost and that will be adapted for attachment to lens tubes of different diameters. To these and other ends the invention resides in certain improvements and combinations of parts all as will be hereinafter more fully described, the novel features being pointed out in the claim at the end of the specification.

In the drawings:

Figure 1 is a front elevation of a ray filter holder constructed in accordance with and illustrating one embodiment of my invention;

Fig. 2 is a similar view showing the holder attached to a lens tube;

Fig. 3 is a side view enlarged of the tube and holder;

Fig. 4 is a section taken substantially on the line 4—4 of Fig. 2;

Fig. 5 is an enlarged fragmentary section taken substantially on the line 5—5 of Fig. 1, and

Fig. 6 is a top plan view.

Similar reference numerals throughout the several views indicate the same parts.

My invention contemplates the construction of the major portion of the holder out of a single sheet metal stamping and to this end the body portion consists of a plate 1 having an opening 2 at its center of a size sufficient to accommodate the lens tube of the greatest diameter to be provided for. At the margin of the opening is a rearwardly projecting tubular collar 3 drawn out of the material of the plate. The latter is preferably rectangular and its two lateral edges are flanged forwardly at 4 and thence inwardly at 5 at the center. On the inwardly turned portions 5 are upwardly and downwardly extending extensions 6 constituting spring fingers beneath which the glass filter 7, shown in Fig. 4 can be slipped and held. The filter is inserted from the top and its downward movement is limited by forwardly turned ears 8 at the bottom edge of the plate 1 so that the filter rests on these ears and between the flanges 4, while the fingers 6 press it against the plate and hold it firmly.

The rearwardly projecting collar 3 is provided circumferentially with a segmental slot 9. At a suitable point on the inner surface is riveted or otherwise secured the fixed end 10 of a thin flexible steel strip 11 that normally lies close against and conforms to the inside of the collar, as shown in Fig. 1. The outer free end of the strip carries a threaded post 12 that projects through the slot 9 as a guide and is slidable therein. The base 13 of the post is disposed against the inner surface of the collar while a knurled head or thumb piece 14 screwed onto the post presses against the outer surface of the collar and between these two members the collar is pinched to hold the post and the outer end of the flexible strip 11 at any desired point in the slot.

In operation, the collar 3 is applied over the end of a lens tube as shown in Figs. 2, 3 and 4, 15 indicating the tube and 16 the lens. The cap 14 is then loosened and by means of it the post 12 is moved to the left until the flexible band or strip 11 conforms to and closely hugs the lens tube which is thus gripped between it and the opposite wall of the opening 2. The cap 14 is then screwed down tight and the holder remains affixed securely in front of the lens.

A holder constructed in accordance with my invention is light and may be very cheaply produced, being made out of a single stamping while it will fit an infinite number of lens tubes of different sizes and will remain solidly in position upon any of them.

I claim as my invention:

In a ray filter holder, the combination with an open filter frame comprising a plate having filter holding members projecting from one side and a central tubular collar at the margin of the opening therein extending from the other side and provided

with a circumferential guide slot, of a flexible steel clamping strip adapted to be drawn around a lens tube and having one end secured on the inside of the collar and the other end provided with a post projecting through and slidable in the guide slot and a nut threaded on the post exteriorly of the collar and adapted to be screwed down against the latter to lock the free end of the clamping strip at different points in the guide.

FREDERICK W. BARNES.

Witness:
E. C. MEYER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."