

Sept. 24, 1940.

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2,216,031

PANORAMIC REFLECTOR FOR CAMERAS

Filed Sept. 17, 1938

Fig. 1.

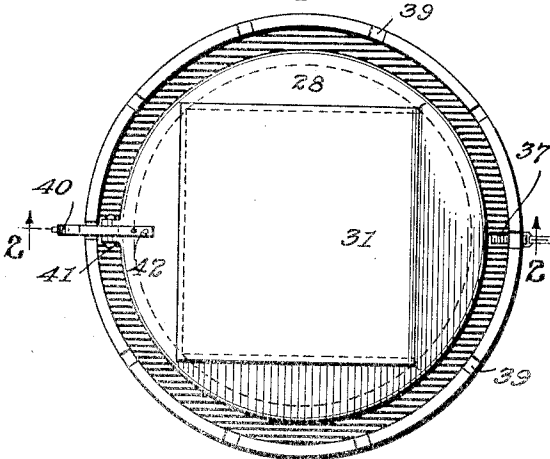
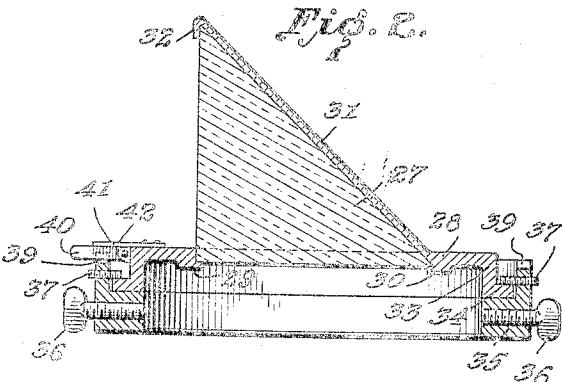


Fig. 2.



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2,216,031

PANORAMIC REFLECTOR FOR CAMERAS

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Application September 17, 1938, Serial No. 230,368

2 Claims. (Cl. 88—1)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

This application is made under the act of March 3, 1883, as amended by the act of April 30, 1928, and the invention herein described and claimed, if patented, may be manufactured and used by or for the Government of the United States of America for governmental purposes without the payment to me of any royalty thereon.

This invention relates to photography and it is more particularly concerned with the provision of an attachment for a camera which will enable the production of photographs or composite photographs representing a perspective of objects in a complete circular area around the camera.

Such photographs have many uses and they are especially useful in devices for making quick and accurate locations of forest fires. In my co-pending application Serial No. 230,369 (issued as Patent No. 2,159,199, May 23, 1939), contemporaneously filed herewith, I describe a novel device for utilizing these photographs for the above-mentioned purpose.

This invention is also useful in determining the locations and extent of areas commonly referred to as "blind spots," from various points by means of which the situs of a fire lookout tower can be established having the minimum percentage of "blind spot" areas.

The following description considered together with the accompanying drawing will disclose this invention more fully and further objects and advantages thereof will be apparent.

In the drawing:

Figure 1 is a plan view of an embodiment of my invention and Figure 2 is a section along the line 2—2 of Figure 1.

Referring with more particularity to the drawing in which like numerals designate like parts, a prism 27 of the ordinary 90° type is mounted on a disc 28 having a hole into which one of the shorter sides of said prism is mounted, substantially as shown. Shoulders 29 and 30 prevent the prism from slipping through the hole in the disc 28. An opaque shield 31 covers the hypotenuse side and the two end faces of the prism with a slight overlap 32 on the vertical side. This arrangement holds the prism rigidly in place. The disc 28 is annularly double flanged, namely downwardly and then outwardly, the flanges being designated by the numerals 33 and 34. Said disc is rotatably mounted on a flanged collar bracket 35, substantially as shown. Said bracket 35 is provided with set screws 36 so that it could be removably attached to the lens barrel of a camera. Pins 37 are horizontally mounted

through the flange member 38 of said bracket 35 slidably registering with the top of the flange member 34 for the purpose of keeping the disc 28 seated on the bracket 35. The flange member 38 is also provided with a plurality of notches 39 in annular spaced relation and they are adapted to selectively engage an arm 40 hingedly mounted on the bracket 41 attached to the disc 28. A flat spring 42 is secured to the top of disc 28 and is disposed in cantilever fashion over and in contact with arm 40. This arrangement is for the purpose of holding the arm 41 in the notches 39 without danger of it slipping out.

In using my invention it is necessary to take a series of photographs, one for each position of the arm 40 in the notches 39. After development, the non-overlapping triangular sections of each photograph are assembled into a composite circular photograph. The number of photographs which are necessary to be taken in order to get a complete circular set depends upon the choice of focal lengths and film size employed in the camera.

The resulting composite photograph renders a reproduction of a perspective of objects in a complete circular area around the camera. The objects closest to the camera appear closest to the edge of the picture, while those farthest from the camera are reproduced nearest the center. The exact center of the photograph represents infinity. The picture presented by such a photograph is one which can not be seen naturally by the unaided eye since the human visual angle does not ordinarily exceed an arc of about 120°. Such pictures are normally employed by viewing them from the edge toward the center.

Having thus described my invention, I claim:

1. A device comprising an annular recessed collar bracket adapted to be removably secured on the lens barrel of a camera, a flanged disc rotatably mounted in the recess of said bracket and having an aperture therethrough, means for holding said disc in said recess, a 90° prism mounted on said flanged disc with one of its two perpendicular sides coincident with said aperture, a light excluding shield disposed over the end faces and hypotenuse side of said prism, a plurality of spaced notches around said bracket, and an arm hinged to said disc adapted to fall in any one of said notches for securing said disc in predetermined rotative positions with respect to said bracket.

2. A device of the character described comprising a collar adapted to be secured about the lens barrel of a camera, a disc rotatably mounted on

said collar, said collar having a lip extending around the rim of said disc, a triangular prism having one side thereof mounted through said disc so as to pass light entering from the adjacent side of the prism and deflected from the hypotenuse side into the barrel of the camera, a light excluding shield disposed over the end faces and hypotenuse side of said prism, means for securing said disc on said collar in a rotatable position, a plurality of circumferentially-spaced notches on said lip, an arm hinged to said disc adapted to fall in any one of said notches for securing said disc in predetermined rotative positions with respect to said bracket. 5

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