

PATENT SPECIFICATION

386,887

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COMPLETE SPECIFICATION.



Improvements in or relating to Telemeter Attachments for Photographic Cameras.

We, ERNST LEITZ G.M.B.H., a Company organised under the Laws of Germany, of Optical Works, Wetzlar, Germany, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to a telemeter attachment for a photographic camera whereby the distance of the object to be photographed can be accurately determined for focussing purposes, and has for its object to provide an attachment which will fit conveniently into the available space on the camera and will enable the number and size of the apparatus projecting from the surface of the camera to be reduced to a minimum.

The telemeter attachment according to the present invention comprises in combination a telemeter of the short-base type having two reflecting elements disposed respectively at the ends of the base, and a telescopic view-finder for indicating how much of the object viewed will appear in the photograph located between the reflecting elements of the telemeter. The view-finder may comprise two lenses so mounted in or adjacent to openings in the telemeter casing as not to obstruct the path of the rays between the two reflecting elements of the telemeter.

According to a further feature of the invention a reflecting prism is so mounted on the casing of the telemeter that it can be moved in front of the observing window of the telemeter or can be moved away therefrom, whereby the telemeter may be viewed either in a direction at an angle to the optical axis of the camera or in a direction parallel to such axis. Conveniently the reflecting prism is carried by a housing pivoted to the telemeter casing, and, whilst the prism may be fixed in the housing, it is preferably rotatably mounted therein, so that when the prism has been swung in front of the observing window it can be rotated about the optical axis of the telemeter.

A preferred construction according to the invention is illustrated by way of example in the accompanying drawings,

[Price 1/-]

in which

Figure 1 is a plan view of a roll film camera with the telemeter attachment in position thereon, and

Figure 2 is a partial vertical section on a larger scale showing the mounting of the reflecting prism.

In this construction the telemeter is contained within a casing A suitably mounted on the top of the camera B. The casing A has three windows C D E in one of its walls and two windows F G in the opposite wall the windows C and F being opposite to one another, as also the openings D and G. The line joining the windows C and F constitutes the optical axis of the telemeter, and a partially silvered thin glass plate H is so mounted within the casing A as to intersect this optical axis at an angle of 45°. A glass prism J is mounted in the casing A close to the window E in such a manner that it can be rotated about a vertical axis. Thus an observer looking through the observing window F can see the object to be photographed through the unsilvered part of the plate H and the window C and will also see a further image of the object by reflection at the plate H and the prism J through the window E. By rotating the prism J the observer can bring the two images into coincidence, and the extent of the rotation of the prism J will indicate the distance of the object. Preferably the objective mount of the camera is mechanically interconnected with the prism J, so that movement of the objective mount for focussing purposes is transmitted to the prism, the correct focus thus being obtained by observing in the telemeter.

Two lenses K and L are respectively mounted in or close to the windows D and G and together constitute a telescopic view-finder for the camera, by which the size of the photographed image of the object can be determined. The view-finder is thus located between the reflecting elements H J of the telemeter but the arrangement is such that the view-finder and the telemeter do not interfere with one another.

Pivoted on the top of the telemeter

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casing A near the observing window F is a bracket M which serves to carry a prism N. The prism N is supported in a mount O rotatably held by a shaped split sleeve P, which screws into a ring Q formed on the end of the bracket M. Normally the bracket M and the prism N occupy the position shown in chain line in Figure 1, but can be swung out into the full-line position, in which the prism lies in front of the observing window F. The prism N and its mount O can also be rotated within the sleeve P. This arrangement renders it possible to look into the telescope either directly or from any direction at right angles to the optical axis of the telescope by reflection in the prism N.

Alternatively the prism N may be fixed in the bracket M instead of being rotatably mounted therein. This simple arrangement will permit viewing through the telescope either directly or from one chosen direction at right angles to the optical axis of the telescope.

We are aware that sighting telescopes have been employed in association with telemeters of ordinary construction for surveying or other purposes in order to enable the telescope to be rapidly trained on to the object whose range is to be measured, and that it has been proposed to mount such a sighting telescope between the reflecting elements of the telescope.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. A telescope attachment for a photographic camera, comprising in combination a telescope of the short-base type having two reflecting elements disposed respectively at the ends of the base, and a telescopic view-finder for indicating how much of the object viewed will appear in the photograph located between the reflecting elements of the telescope. 45

2. A telescope attachment for a photographic camera as claimed in Claim 1, in which the view-finder comprises two lenses so mounted in or adjacent to openings in the telescope casing as not to obstruct the path of the rays between the two reflecting elements of the telescope. 50 55

3. A telescope attachment for a photographic camera, as claimed in Claim 1 or Claim 2, in which a reflecting prism is pivotally or otherwise mounted on the casing of the telescope so that it can be moved in front of the observing window of the telescope or can be moved away therefrom, whereby the telescope may be viewed either in a direction at an angle to the optical axis of the camera or in a direction parallel to such axis. 60 65

4. A telescope attachment for a photographic camera as claimed in Claim 3, in which the reflecting prism is rotatably mounted in a housing pivoted to the casing of the telescope. 70

5. A telescope attachment for a photographic camera, substantially as described and as illustrated in the accompanying drawings. 75

Dated this 11th day of July, 1932.
KILBURN & STRODE,
Agents for the Applicants.

[This Drawing is a reproduction of the Original on a reduced scale.]

FIG. 1.

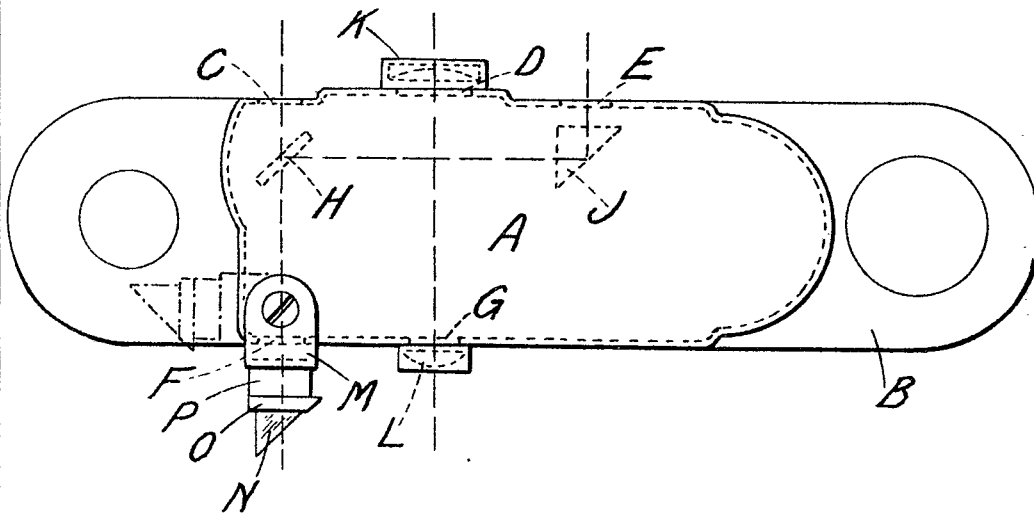


FIG. 2.

