Mar. 3, 1925. 1,528,239

J. L. BAILLE

SUPPORTING DEVICE FOR OBJECTIVES OF PHOTOGRAPHIC APPARATUS

Filed Oct. 30, 1922

Fig.1

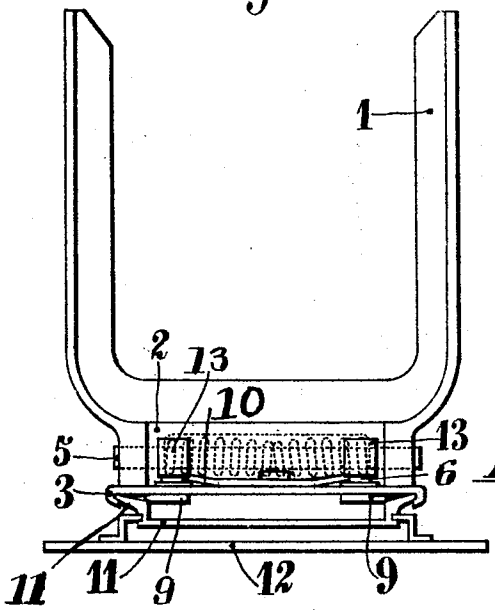


Fig.2

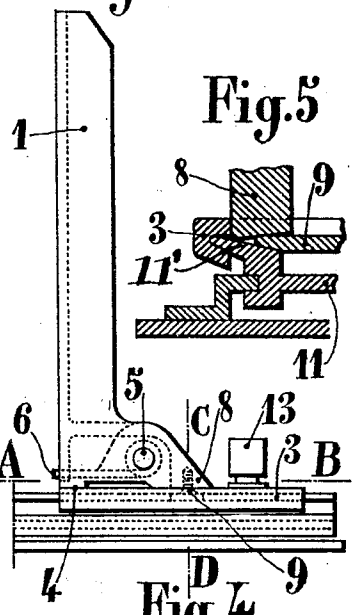


Fig.5

Fig.4

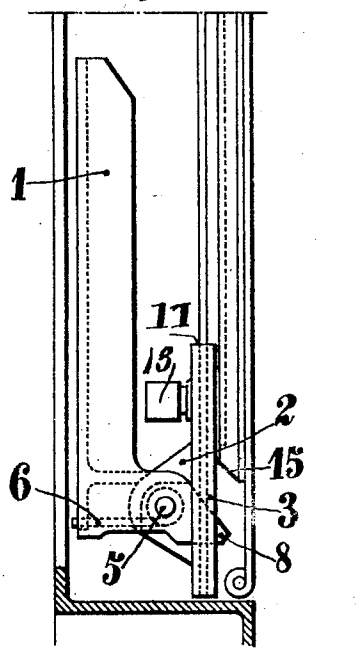
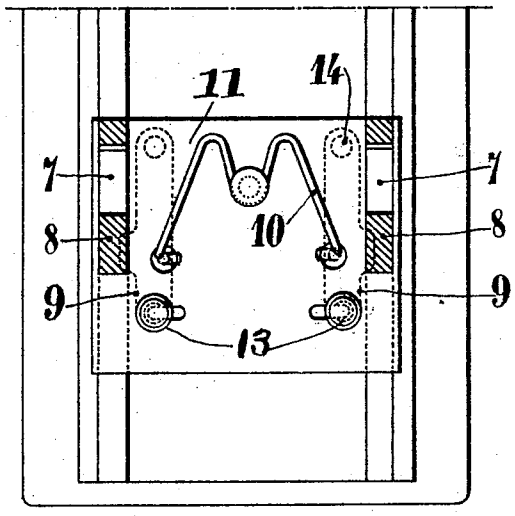


Fig.3



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UNITED STATES PATENT OFFICE.

JEAN LOUIS BAILLE, OF PARIS, FRANCE, ASSIGNOR TO BAILLE-LEMAIRE & FILS, OF PARIS, FRANCE, A COMPANY OF FRANCE.

SUPPORTING DEVICE FOR OBJECTIVES OF PHOTOGRAPHIC APPARATUS.

Application filed October 30, 1922. Serial No. 597,984.

To all whom it may concern:

Be it known that I, JEAN LOUIS BAILLE, a citizen of the French Republic, residing 26, Rue Oberkamps, Paris, France, have invented new and useful Improvements in Supporting Devices for Objectives of Photographic Apparatus, of which the following is the specification.

The present invention relates to improvements in supporting devices for objectives of folding photographic apparatuses.

The said improvements are adapted, on the one hand, to ensure in a perfect manner the rigidity of the connection between the objective support and the folding bed plate of the camera in the required position; on the other hand, to ensure by this rigid connection the exact vertical position of the objective support relatively to the slide, supposed to be horizontal, in the relative chosen position.

These improvements are characterized in that the objective support, which is jointed on an axis integral with the slide-block, has rigorously plane-contact surfaces that can be tightly pressed on the upper surface of the slide-block by the action of a resilient device acting on wedges which, engaging between the rail and the slide-block and the ends of the levers integral with the objective-carrier, determine at the same time the locking of the whole.

The accompanying drawing illustrates, by way of example only, a form of construction of the invention.

Fig. 1 is an elevation of the whole constituted by the folding bed plate and support for the shutter.

Fig. 2 is a side view corresponding to Fig. 1.

Fig. 3 is a sectional plan view according to the axis A—B of Fig. 2.

Fig. 4 is a side view of the whole folded within the photographic apparatus.

Fig. 5 is a partial section according to the axis C—D of Fig. 2, on an enlarged scale.

The device forming the subject-matter of the invention is constituted in the following manner:

The slide 1 carrying the objective is connected by an axis 5 to a support 2 integral with a slide-block 3; the member 1 can rotate about the axis 5 but is always brought backward by two springs 6 wound about the said axis 5; it rests on the slide-block through two perfectly machined heel-pieces 4, so that the rear face of the slide 1 is rigorously at right angles to the upper face of the slide-block 3.

Two openings 7 formed in the slide-block 3 allow the ends 8 of the member 1 to rest on the rails 11 of the slide 11′ secured on the folding bed plate 12 and allow, moreover, the rotation of the member 1 relatively to the member 2, when the slide-block 3 has nearly abandoned the rails 11, in its extreme rear position, in order to bring the said member 1 to the position shown in Fig. 4.

On the other hand, two levers 9, pivoted at 14 on the slide-block 3 can be moved apart by a powerful spring 10, two knobs 13 permitting, on the contrary, to move them towards each other by hand.

The levers 9 are provided on their outer part with a double bevel; the lower bevel can, when the members 9 are moved apart, rest on the inclined edge of the rails 11; the upper bevel tends to lift the ends 8 of the slide 1 carrying the objective, which ends are also bevelled.

When the levers 9, urged by the spring 10, move apart, they come under the ends 8 of the slide 1 and above the inclined edge of the rails 11. From this fact, the levers 9 act as wedges between the two members; they move them apart and, by thus raising the upper member, tightly press the heel-piece 4 against the surface of the slide-block 3 and determine the locking of the slide 1 which supports the objective.

The mechanical play which may exist between the slide 1, the slide-block 3 and the rails 11 is thus entirely taken up and the small obliquity of the levers 9 ensures a perfect locking.

On the other hand, the horizontal position of the slide-block 3 is ensured by the fact that the levers 9 upon their locking raise it and bring its lower edge, throughout its length, in contact with the lower surface of the rail 11.

For bringing the folding top 12 in the vertical position shown in Fig. 4, the slide-block 3 is pushed backward by tightening the knobs 13, until the ends 8 are entirely disengaged from the end 16 of the slide; at

this moment, the folding bed plate can be closed, the members 8 no longer encountering any obstruction preventing the rotation of the slide 1, carrying the objective, about the axis 5.

What I claim as my invention and desire to secure by Letters Patent is:

1. In a folding photographic apparatus, a support for the objective, a slide-block, a joint connecting the support for the objective to the slide-block,—a slideway for the slide-block, abutting means provided on the support for the objective and bearing against the slide-block, situated on one side of the joint, means for tightly pressing these abutting means against the said slide block.

2. In a folding photographic apparatus, a support for the objective, a slide-block, a joint connecting the support for the objective to the slide-block,—a slideway for the slide-block, abutting means provided on the support for the objective and bearing against the slide-block, situated on one side of the joint, opposed bearings provided respectively on the support for the objective and the slideway, situated on the other side of the joint, means for moving these bearings apart.

3. In a folding photographic apparatus, a support for the objective, a slide-block, a joint connecting the support for the objective to the slide-block, a slideway for the slide-block, abutting means provided on the support for the objective and bearing against the slide-block, situated on one side of the joint, opposed bearings provided respectively on the support for the objective and on the slideway, situated on the other side of the joint, wedges fitting between these bearings, means for determining the driving of these wedges.

4. In a folding photographic apparatus, a support for the objective, a slide-block, a joint connecting the support for the objective to the slide-block, a slideway for the slide-block, abutting means provided on the support for the objective and bearing against the slide-block, situated on one side of the joint, opposed bearings provided respectively on the support for the objective and on the slideway, situated on the other side of the joint, wedges fitting between these bearings, levers receiving these wedges, joints connecting these levers to the slide-block, a resilient member tending to move these levers apart, operating knobs secured to these levers.

5. In a folding photographic apparatus, a support for the objective a slide-block, a joint connecting the support for the objective to the slide-block, a resilient member tending to move apart this objective-support and this slide-block, a slideway for the slide-block, abutting means provided on the objective support and bearing against the slide-block, situated on one side of the joint, opposed bearings respectively provided on the objective-support and the slideway situated on the other side of the joint, wedges fitting between these bearings, levers receiving these wedges, joints connecting these levers with the slide-block, an M-shaped wire spring tending to move these levers apart, operating knobs secured to these levers.

In testimony whereof I have signed my name to this specification.

JEAN LOUIS BAILLE.