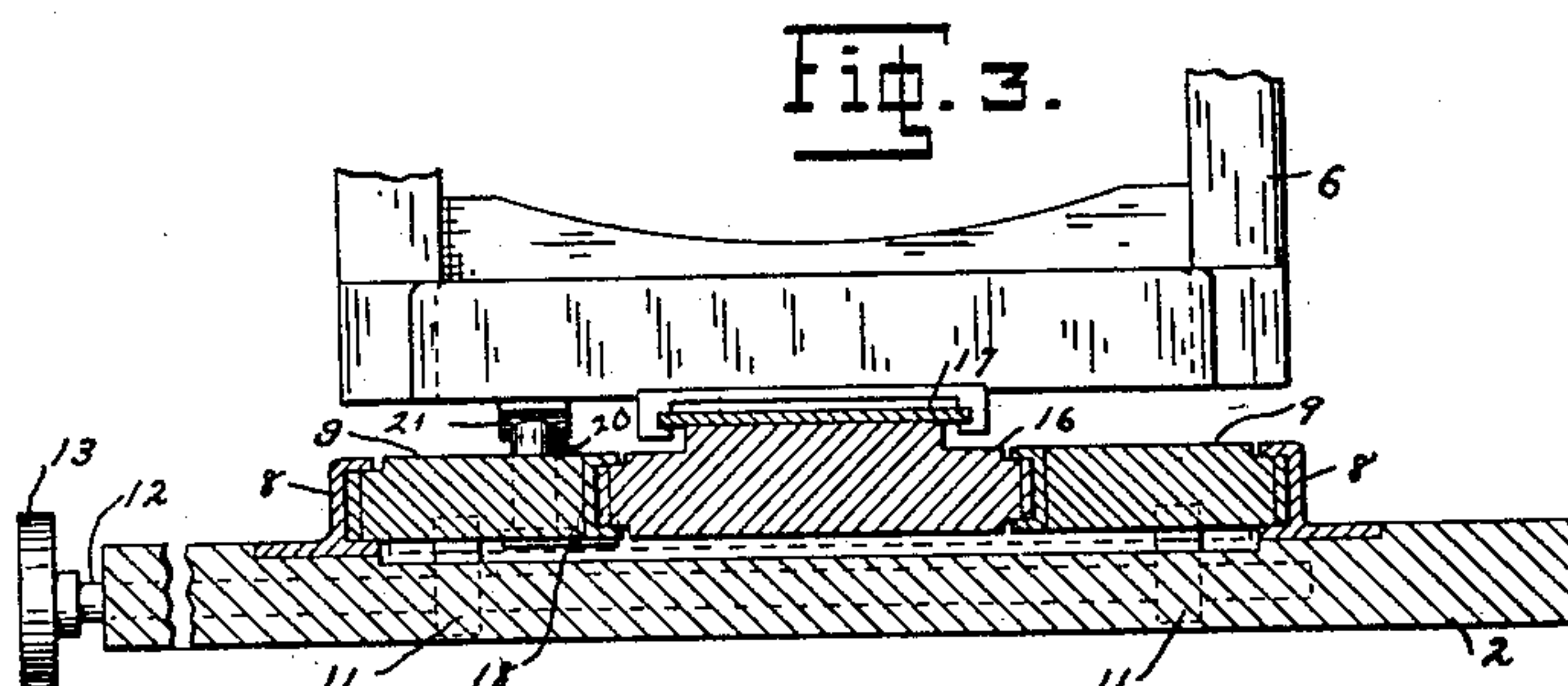
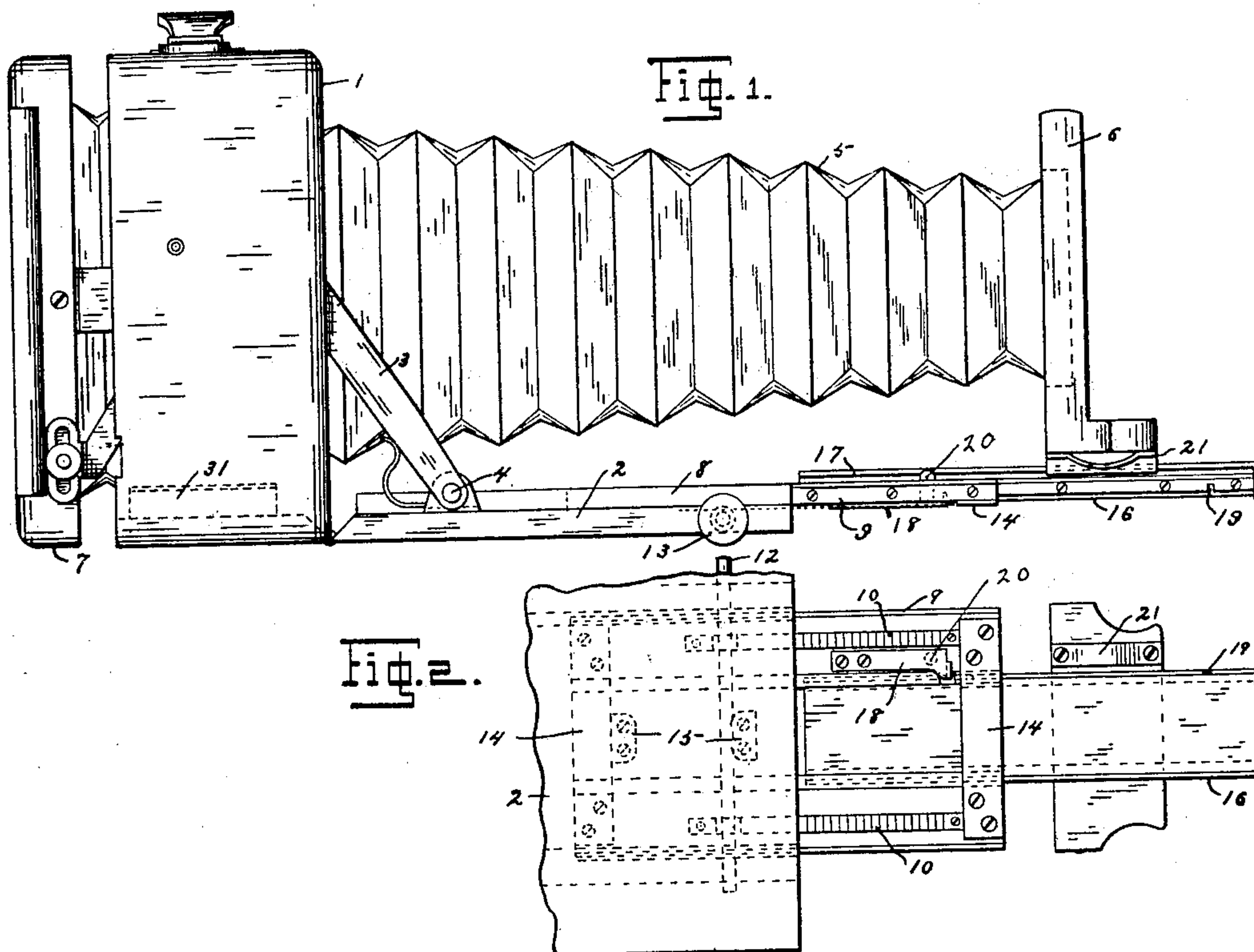


No. 744,024.

PATENTED NOV. 17, 1903.

F. W. BREHM.
PHOTOGRAPHIC CAMERA.
APPLICATION FILED OCT. 18, 1901.

NO MODEL.



WITNESSES:

E. J. Neville
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UNITED STATES PATENT OFFICE.

FREDERICK W. BREHM, OF ROCHESTER, NEW YORK, ASSIGNOR TO
GUNDLACH OPTICAL COMPANY, OF ROCHESTER, NEW YORK, A
CORPORATION.

PHOTOGRAPHIC CAMERA.

SPECIFICATION forming part of Letters Patent No. 744,024, dated November 17, 1903.

Application filed October 18, 1901. Serial No. 79,088. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK W. BREHM, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Photographic Cameras, of which the following is a specification.

This invention relates to photographic cameras, and has particular reference to the bed which is adapted to be adjusted to suit the focus of a wide variety of lenses, the mechanism being such that the adjustment can be quickly made and the bed securely held in any of its adjusted positions.

In the accompanying drawings, forming part of this application, Figure 1 is a side elevation of a camera that is provided with my invention. Fig. 2 is a bottom plan view of the bed and the extensions therefor, as shown in Fig. 1; and Fig. 3 is a sectional view through the forward part of the bed and the extensions, showing a portion of the front.

In the manufacture of a camera for universal use it is necessary to provide it with an extended bed in order that the bellows may be drawn out for use with a long-focus lens. Heretofore this extension has been formed of different sections which have been moved in and out, sometimes by racks and pinions and sometimes without any mechanical means, the sections moving independently of each other. As will hereinafter be shown, I employ different sections for the bed of my camera, but so arrange them that one is carried by and is moved with the other and is also locked in its extreme positions by a means which is secured to the other extension. Other advantages arising from this feature of my invention will hereinafter be made to appear.

In the drawings, in which similar reference characters designate corresponding parts in all the views, 1 represents the camera box or body, to the lower front edge of which is pivoted the door 2. The door is supported when lowered by the braces 3, which are pivoted thereto at one end, as shown at 4, and are secured at their other ends to the inner sides of the box.

5 designates the bellows, 6 the movable front which carries the lens, (not shown,) and 7 the swing-back or bellows-frame.

Mounted upon the upper or inner surface of the door 2 are the slideways 8 of the bed proper, within which moves the first extension 9. This extension or section is preferably slid back and forth by means of racks 10 thereon, with which engage pinions 11, which are mounted on and turn with shaft 12, said shaft being turned by means of a knurled head 13. The extension 9 is made in the form of an open frame, the side pieces of which are engaged by the slideways 9 and are connected together at their ends by the cross-plates 14. To prevent excessive movement of this extension, stops 15 (indicated in dotted lines in Fig. 2) are placed on the upper surface of the door between the plates 14, with which they engage as the extension is moved back and forth.

Formed within the inner edges of the side rails of the extension 9 are ways within which slide the second section or extension 16. This extension is preferably rabbeted along its upper side edges, and a plate 17 is secured to the center, with its edges projecting over the rabbeted portions to form slideways for the camera-front 6. To prevent the extension 16 from being moved too far back in the section 9, the plate 17 is bent downwardly at its end to engage with one of the plates 14. From this description it will be noticed that the camera-front is carried by the second extension.

It has been found desirable to have the second or narrower extension so mounted in the first extension or section that at times it is rigidly connected therewith, so that any movement of the latter by the racks and pinions will also move the second extension, with the accompanying front. This is effected by securing a locking-spring 18 to the lower side of the first section 9, so that it will engage with notches 19 on the edge of the second section. These notches are placed so that they will be engaged when the second extension is in its extreme positions. In order to disengage the spring from the notches, a

pin 20 is secured thereto and is projected upwardly through the first extension, so that it may be depressed by the hand. It is desirable, however, that the second section or extension be automatically released when it is to be used, so that the operator will not have to stop to depress the pin. This is accomplished by placing a cam-plate 21 on the lower part of the front in such a position that when the latter is moved to the end of the second section the cam will automatically depress the pin, and thus release the second from the first extension. By having the second extension move more freely in its ways than the first extension does in the bed proper the front may be moved to depress the pin, as described, after which the second extension, with the front, may be pulled independently of the first extension to its extreme position in its ways, when the spring 18 will lock it to the other section. The racks and pinions may then be employed to extend the two sections and the front farther, if desired, and also to focus the camera. It will thus be seen that a single movement carries the front from its position within the box to the position occupied by the end of the second extension when in its outer position.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a camera, a bed, an extension for said bed carried thereby, a second extension normally locked to the first extension, a camera-front, and means carried by the camera-front for unlocking the said extensions.

2. In a camera, a bed, an extension for said bed which is normally locked against outward movement, a camera-front adapted to be moved on said extension, and means whereby the front automatically unlocks the said extension so that it may be moved outwardly.

3. In a camera, a bed, an adjustable extension for said bed carried thereby, means for moving said extension, a second extension carried by said first extension, means for locking said extensions together, a front for the camera adapted to be moved on the second extension, and means whereby the front automatically unlocks the said extensions.

4. In a camera, a bed, an adjustable extension for said bed carried thereby, a second extension carried by the first extension and normally locked thereto, a camera-front adapted to be moved on the second extension, means connected with said front for unlocking the second extension when the front reaches the

end of its movement on the latter so that the front and the second extension may be pulled forward, and means for moving the first extension and, with it, the second extension and the front to focus the camera.

5. In a camera, a bed, an adjustable extension for said bed carried thereby, a second extension carried by the first extension, a spring-catch secured to the first extension and locking the second extension thereto, a pin projecting from said catch above the said first extension, a camera-front adapted to be moved on the said extension, a cam carried by said front in a position to engage the pin to depress the spring-catch and automatically unlock the extensions so that the front and second extension may be drawn out independently of the first extension, and a rack and pinion for moving the first extension and, with it, the second extension and the front to focus the camera.

6. In a camera, a box or body, a bed closing the front of the box, a bed extension mounted for movement in said bed, a second extension carried by the first extension and locked thereto, the two extensions being normally closed above the bed proper, slideways formed on said second extension, a camera-front adapted to be moved on said slideways while the extensions are closed, racks and pinions for moving the first extension and, with it, the second extension and the front to focus the camera for lenses of medium focus, and means connected with the front for automatically unlocking the second extension so that it may be drawn out with the front to adjust the same for long-focus lenses.

7. In a camera, a bed, an extension for said bed which is normally locked against movement, a camera-front adapted to be moved on said extension, and means connected with the front for unlocking the extension so that it may be moved.

8. In a camera, a bed, an extension for said bed carried thereby, a second extension carried by the first extension and normally locked against movement, a camera-front that is adapted to be moved on the second extension, means connected with said front for unlocking the second extension, and means for moving the first extension.

In testimony whereof I affix my signature in the presence two witnesses.

FREDERICK W. BREHM.

Witnesses:

HENRY H. TURNER,
HARRY M. R. GLOVER.