

No. 782,649.

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J. GODDARD.
CAMERA.

APPLICATION FILED NOV. 18, 1904.

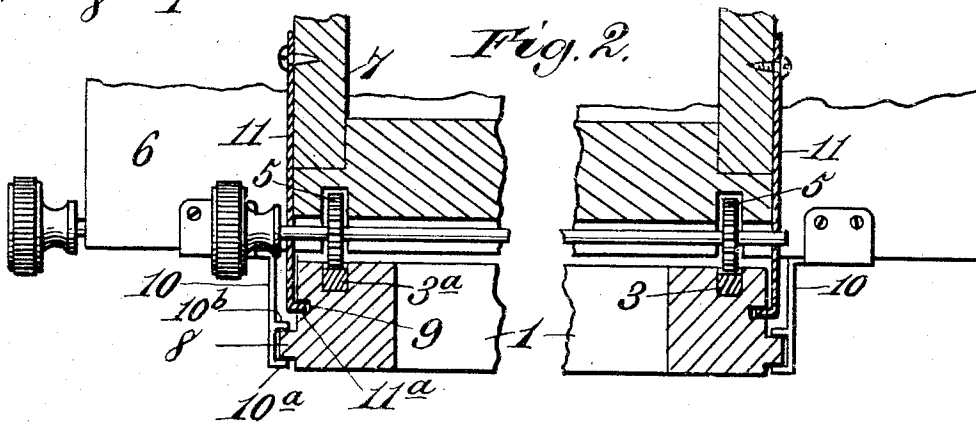
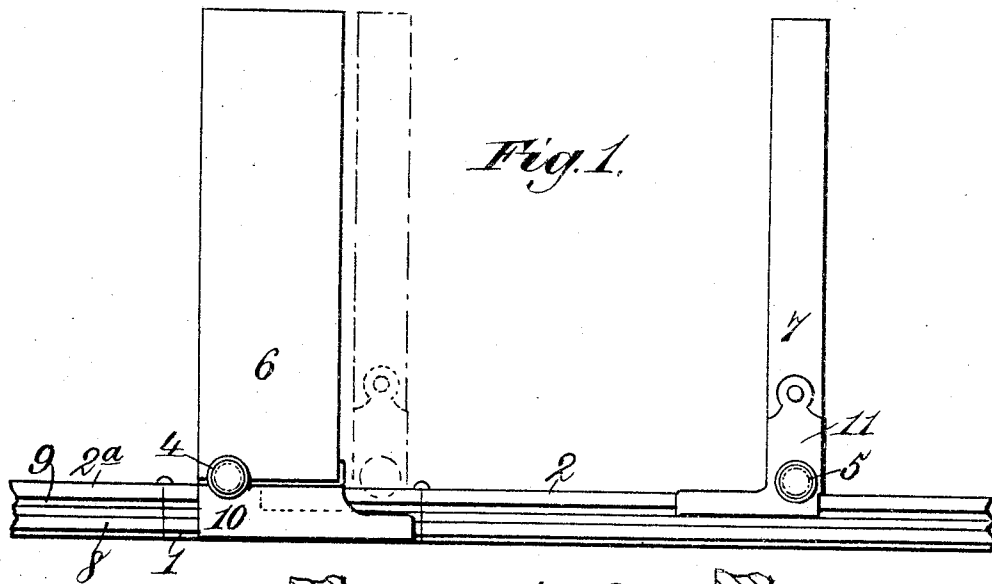
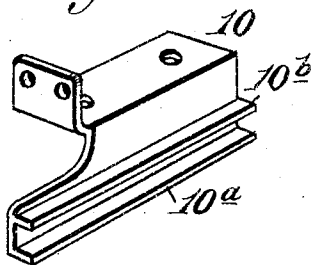
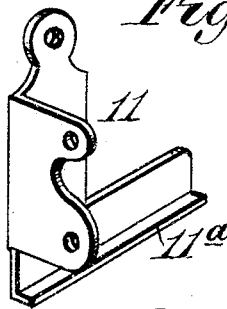


Fig. 3.



Witnesses.
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Fig. 4.



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UNITED STATES PATENT OFFICE.

JOSEPH GODDARD, OF ROCHESTER, NEW YORK, ASSIGNOR TO SENECA CAMERA COMPANY, OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK.

CAMERA.

SPECIFICATION forming part of Letters Patent No. 782,649, dated February 14, 1905.

Application filed November 18, 1904. Serial No. 233,279.

To all whom it may concern:

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

My invention relates to improvements in cameras, and is particularly intended for embodiment in connection with folding extension-cameras.

The invention has for its object to provide novel means whereby the camera-box and the lens-front may be firmly supported in different positions of extension of the camera apparatus along the folding extensions or beds, whereby also the camera-box and lens-front may be nested closely or compactly together upon the camera-base when the camera is not in use and folded up for shipment or convenient carrying about from place to place.

In cameras of the folding extension class it is essential that the camera-box and lens-front when in extended position shall be firmly supported, necessitating elongated feet by which they are slidably connected to the front and rear extension sections or beds. This has heretofore generally necessitated a camera-base or central section of otherwise unnecessary width, because of the fact that the nearest point to which the camera-box and lens-front could be brought together for nesting was determined by the length of the feet thereof, no provision having been made for these feet passing each other to enable a nesting together of the box and lens-front in closer relation. An arrangement for overcoming the above has been proposed in which the front and rear sections or beds are provided with a plurality of grooves on each side and another arrangement has been proposed in which the front and rear sections or beds are provided on each side with superposed tracks, the said grooves of the first arrangement or the said tracks of the second arrangement being such that when the box and lens-front are adjusted together upon the camera-base the feet of one may pass inside of the feet of the other. I pro-

vide a more simple and satisfactory arrangement for accomplishing this result by a novel manner of connecting the camera-box and lens-front to the front and rear sections or beds in sliding relation thereupon, insuring a firm support for the camera-box and lens-front, avoiding looseness or wobbling, economizing in the cost and time of production, and affording a more satisfactory arrangement than the plurality-groove contrivance.

With the stated objects in view my invention consists in a camera having the features hereinafter described and claimed, reference being made to the accompanying drawings, illustrating the invention, in which—

Figure 1 is a side elevation illustrating the camera-box and lens-front in extended position in full lines and the said front in dotted lines nested up against the camera-box. Fig. 2 is a cross-sectional view. Figs. 3 and 4 are detail views of the camera-box and lens-front feet.

In the said drawings the reference-numeral 1 designates a camera-base or central section, and 2 2^a designate the front and rear folding sections or beds, which are suitably hinged to the central section or camera-base. The said central section and front and rear sections or beds are provided with racks 3 3^a, with which the rack-pinions 4 5, mounted for rotation on the camera-box 6, and lens-front 7 are adapted to engage in such manner that upon rotation of such pinions the said box and camera-front may be moved toward and from each other upon the central section or the front and rear sections or beds.

The base or central section 1 and the beds or front and rear folding sections 2 2^a at each side thereof is provided with a tongue 8, arranged at a point slightly removed from the lower edge thereof, said tongues forming tracks for the feet of the camera-front. The said central, front, and rear sections are each further provided in each of their side faces at a point above the tongues 8 with a groove 9, said grooves 9 forming runways for the feet of the lens-front. The said grooves 9 are preferably arranged approximately cen-

trally of the side faces of the said sections; but the position of the said grooves in the sides of the sections can be varied as desired.

The reference character 10 denotes the feet 5 for the camera-box, which depend therefrom and are suitably connected thereto and are of the necessary length, and the said feet 10 are formed with inwardly-extending flanges 10^a, which work against the under sides of the 10 tongues 8. Said feet 10 are also provided with inwardly-extending shoes 10^b, which may be suitably connected to the feet or formed integral therewith, and the said shoes 10^b ride upon the upper faces of the tongues 8. The 15 position of the flanges 10^a with respect to the shoes 10^b and in connection with the foot 10 form what may be termed "channels" for the tongues 8, and the size of the tongues 8 is such that they fit closely the said channels, 20 but at the same time permit of a sliding movement when the camera-box is moved to various positions, and by forming the tongues in such a manner and in connection with the flanges 10^a and shoes 10^b when the camera- 25 box is adjusted it is firmly supported, consequently avoiding objectionable vibration or wobbling of the box.

The reference character 11 denotes the feet 30 for the lens-front, which depend therefrom and are suitably connected thereto and are of the necessary length, and the said feet 11 are formed with inwardly-extending shoes 11^a, which may be suitably connected to the feet or formed integral therewith, and the said 35 shoes 11^a engage and travel in the grooves 9. The size of the shoes 11^a of the feet 11 is such that said shoes 11^a fit closely the grooves 9, but at the same time permit of a sliding movement when the lens-front is moved to various 40 positions, and by such an arrangement—that is, by employing the feet 11 with the shoes 11^a in connection with the grooves 9—the lens-front may be adjusted and firmly supported. Consequently objectionable vibration or wab- 45 bling is avoided.

The arrangement of the parts is such that when it is desired to fold the camera into a compact space for transportation or convenient carrying about the lens-front and camera-box may be moved to position upon the 50 central section or camera-base, as shown in dotted lines, Fig. 1. In the illustrated example of my invention the feet of the lens-front pass inside the feet of the camera-box, so that the two may be nested together in 55 close relation.

By my invention I provide a novel construction and arrangement of parts whereby the desired result is secured in a simple, economical, and satisfactory manner. 60

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

1. A camera embodying a camera-bed having each of its sides provided with a tongue 65 and a groove at a point removed from the tongue, a camera-box and a lens-front, each provided with feet, the feet of one of said parts having shoes and flanges engaging respectively the upper and lower faces of the 70 tongues, and the feet of the other of said parts having shoes engaging in the said grooves.

2. A camera embodying a camera-bed having each of its sides provided with a tongue and a groove, said tongue arranged at a point 75 removed from one edge of its respective side and said groove independent of the tongue, a camera-box and a lens-front, each provided with feet, the feet of one of said parts having shoes and flanges engaging respectively the 80 upper and lower faces of the tongues, and the feet of the other of said parts having shoes engaging in the said grooves.

In witness whereof I have hereunto set my hand in presence of two subscribing witnesses. 85

JOSEPH GODDARD.

Witnesses:

F. K. TOWNSEND,
S. D. FRENCH.