May 8, 1951 A. MOSS 2,552,205

SUPPORT FOR PHOTOGRAPHIC CAMERAS

Filed Aug. 2, 1948

FIG. 1

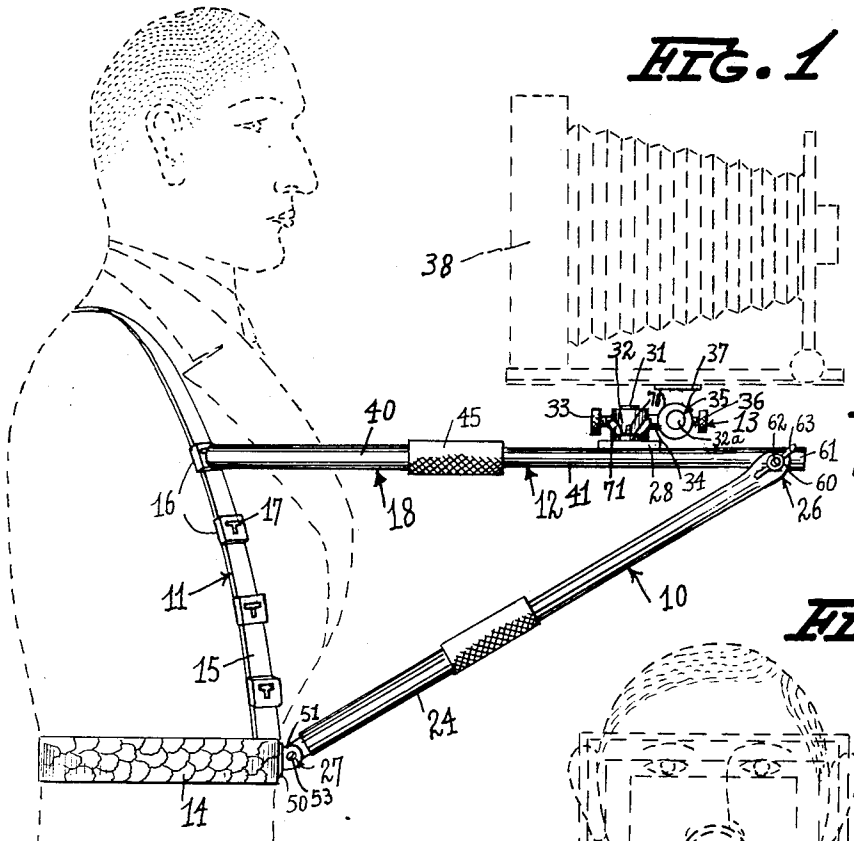


FIG. 5

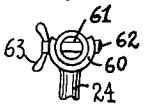


FIG. 2

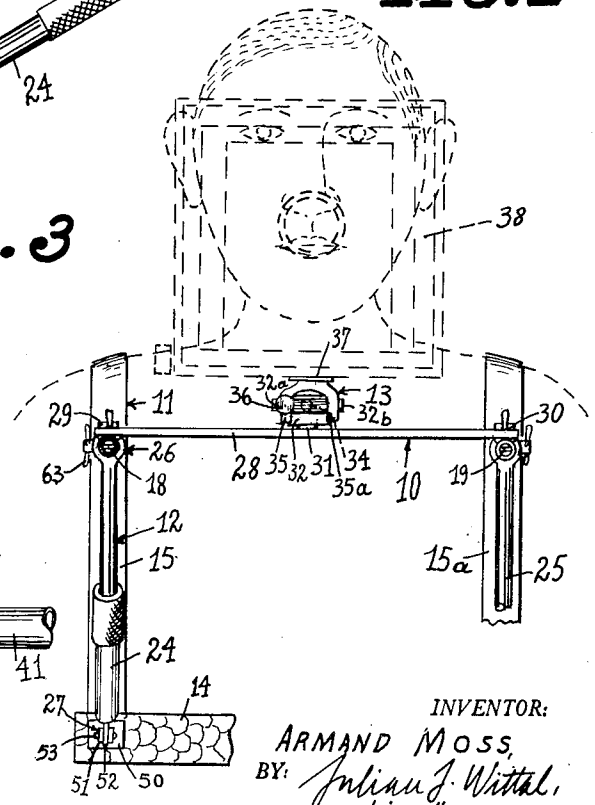


FIG. 3

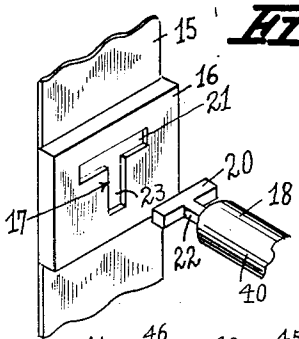
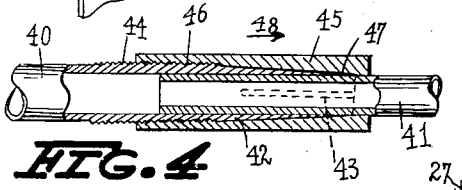


FIG. 4



INVENTOR:
ARMAND MOSS,
BY: Julian J. Wittal,
his attorney.

Patented May 8, 1951 2,552,205

UNITED STATES PATENT OFFICE

2,552,205

SUPPORT FOR PHOTOGRAPHIC CAMERAS

Armand Moss, Brooklyn, N. Y.

Application August 2, 1948, Serial No. 41,919

7 Claims. (Cl. 95—86)

1

This invention relates to supports for photographic cameras, on the body of the user, and has for its main object to provide a device of this type which will support a camera in a predetermined position in a rigid unchanging manner without any outside aid, leaving both hands of the user free.

Another object of this invention is to provide a device as characterized hereinbefore, which may be set in various positions as desired, and which may remain in such positions, in the manner indicated, leaving entire freedom for the hands of the user once the device has been set.

Still further objects of this invention will be apparent as the specification of the same proceeds, or will be pointed out therein, and, among others, I may mention: to provide a device as characterized hereinbefore which will be simple in construction, adjustable not only as to the position of the camera, but also adjustable for various builds of the users, which will be demountable and adapted to be stored in a small space, and which it will be easy and quick to assemble and use.

In the drawings forming a part of this specification and accompanying the same:

Fig. 1 is a side view of my novel camera support indicating the same as applied to a person and supporting a camera, both the camera and the person being indicated by dotted lines;

Fig. 2 is a front view of the device, portions of the same being broken away, the person on which it is applied and the camera being indicated by dotted lines;

Fig. 3 is a perspective detail showing one method of securing the upper adjustable bars of my device in two side straps, forming a part of my device in various positions;

Fig. 4 is a sectional detail showing one method of telescopically adjusting and securing in various positions the arms forming a part of my device, and

Fig. 5 shows a fragmentary detail.

Referring now to the drawings, more in detail by characters of reference, the numeral 10 indicates my device in general, the same being formed of three main portions, namely: a harness portion to be adjustably secured on the body of the user, and generally indicated by the numeral 11, a forwardly projecting adjustable rigid frame portion, generally indicated by the numeral 12, and a pivotally adjustable support or carrier proper for the camera, generally indicated by the numeral 13.

2

The harness portion 11 is composed of a belt 14 adapted to be adjustably secured on the waist of the wearer, such adjustable securing means being well known in this art and are not shown in the drawings. On the forward left hand and right hand sides of the belt 14 are secured the two respective shoulder straps 15 and 15a, being adjustably secured to said belt in the rear thereof, as it also will be obvious to those versed in this art. A plurality of plates 16 are secured on the straps in a spaced apart manner, one above the other, said plates being hollow bodies and having a T-shaped slot 17 provided in their fronts. The frame portion 12 of my device will be composed of two substantially horizontal forwardly projecting upper arms 18 and 19, the inner ends of which are formed in a T-shaped hook 20, adapted to be inserted into selected hollow plates 16 through the upper horizontal portions 21 of the slots 17, then permitted to drop downwardly whereby their stem portions 22 will engage the vertical slots 23 and the bars 18 and 19 will be thus secured on the straps 15 and 15a in desired positions and in a removable manner. Both forwardly projecting upper, generally horizontal, bars 18 and 19 are telescopically adjustable as to length by means to be described presently.

Inclined bars 24 and 25 support the forward ends of the respective upper bars 18 and 19 in a removable manner as indicated at 26, the rear ends of each inclined bar being permanently secured, in a pivoted manner, on the belt 14 as indicated at 27. The inclined bars 24 and 25 also are adjustable as to length in a telescopical manner similar to the upper bars 18 and 19. A cross bar 28 is secured in a removable manner on the upper projecting bars 18 and 19, as indicated at 29 and 30, and it will carry, preferably at its center, the pivotally adjustable camera supporting member 13.

The supporting member 13 may have a vertical pin portion 31, secured on the cross bar 28 by any appropriate means, well known in this art. A sleeve 32 is provided, rotatable on the pin 31 and adapted to be secured in any of its positions, as by the screw 33. An arm 34 projects from the sleeve 32 having the opposite transverse pins 32a and 32b at its forward end and rotatable sleeves 35 and 35a are arranged on pins 32a and 32b, one of them being adapted to be secured in any of its positions, as by the screw 36. The camera receiving element 37 is carried by a vertical member secured on sleeves 35 and 35a, and the camera may be removably secured thereon by any of the

means well known to those versed in this art, as many of such means are used at present to secure cameras on their supports.

It will be seen that by very simple means, the frame member 12 may be adjusted to various heights and various inclinations with reference to the horizontal, as necessary for its various adjustments, and in this manner the height of the camera may be regulated. The camera, indicated in an imaginary manner at 38, may be adjustable as to its horizontal and vertical angular positions, through the member 13, as also will be obvious.

When the screw 33 is released, the camera may be turned on a vertical axis through the sleeve 32 rotating on the pin 31 after which it may be secured in its horizontally adjusted angular position by the use of the screw 33. Similarly, the camera may be rotated on a horizontal axis by rotating the sleeves 35 and 35*a* on the horizontal pins 32*a* and 32*b*, the final position, again, being adapted to be secured by the screw 36.

In Fig. 4 I illustrate one method of telescopically adjusting the bars 18 and 19, and 24 and 25, respectively, the figure showing this device as applied on the bar 18, and, obviously, the other three applications will be identical.

The bar 18 will be composed of two tubular members 40 and 41, the second one preferably being narrower and telescopically slidable in the first one, which, in this case, is the inner one, carrying the T-shaped hook device at its inner end. The forward end 42 of the same is formed with a conically reduced outer surface and will show a desired number of slots or incisions 43 therein. The tube 40 shows exterior screw threads 44 for a desired length to the rear of the conical termination 42, and sleeve 45 is threaded thereon by the interior screw threads 46 in its rear part, while the front part 47 of the same is formed with a forwardly narrowing conical portion adapted to cooperate with the cone 42 at the end of the tube 40.

As has been mentioned, tube 41 is telescopically slidable in the tube 40 and it will be seen that when the sleeve 47 will be turned so as to move forwardly, as indicated by the arrow 48, it will release the cone 42 and permit the front end of the tube 40 to spread, whereby the inner tube 41 may be moved inwardly or outwardly in tube 40 and the length of the bar member 18 will be adjusted in this manner. After such adjustment, sleeve 45 will be moved inwardly opposite to the direction shown by arrow 48, obviously by turning the same in a reverse direction, whereby its conical portion 47 will tightly engage and compress the cone 42 at the forward end of the tube 40, narrowing the slots 43, and in this manner causing the outer tube to tightly engage the inner tube and prevent its sliding motion so that the inner tube is locked in the outer tube.

The pivoted engagement 27 of the lower, inclined, bars with the belt 14 may be provided by a plate 50 being secured on the belt 14 and having the apertured ears or flanges 51 between which is arranged, in a slidable manner, a plate like termination 52 of the respective frame bar element 24 or 25, said plate 52 carrying a pin 53 rotatable in the apertures of the ears 51.

The removable securing 26 of the forward ends of the inclined bars 24 and 25 preferably may be provided for by a trough shape termination 60 at the end of each inclined bar in which may rest the forward end 61 of the respective upper bar, a bolt 62 passing through the parts provides a pivoted connection between them which may be secured in any position by the wing nut 63. Upon removing the nut the parts may be released from one another.

The removable securing of the cross bar 28 on the upper frame members 18 and 19 also may be provided for by any appropriate means, well known in this art. In the one shown in the drawings, a screw 70 is indicated secured into and upwardly projecting from the respective frame members 18 and 19, the cross bar 28 having appropriate holes by which it may be dropped over said screws 70, each screw being provided with a wing nut 71 by which the respective end of the cross bar 28 may be secured to the respective frame upper member or may be released therefrom.

My invention normally will be in a knocked-down, disassembled condition. The cross bar 28 will be removed from the upper frame members by releasing wing nuts 71, as will be obvious, whereupon the upper frame members 18 and 19 will be unhooked from the respective plates 16, and then the lower inclined frame members 24 and 25 will be released with their securing troughs 60, so that my device now is in four disassembled portions, being the cross bar 28, with the camera carrier 13, the two upper bars 18 and 19 and the harness, formed of the belt 14, straps 15 and 15*a* and the inclined lower frame members 24 and 25 thereon. The harness, with the said two frame members, may now be rolled into a small elongated shape along which may be placed the two upper frame members and the cross member 28 so that my whole device in a knocked-down position will be in the shape of a small rolled package and may be stored or carried in such condition in an appropriate bag.

When it is desired to use my camera support, first the belt 14 and straps 15 and 15*a* may be secured on the body of the wearer in an adjustable manner, whereupon the two upper frame members 18 and 19 will be arranged and the front ends of the inclined frame members 24 and 25 and then their T-shaped ends 29 will be hooked into the slots 17 in plates 16. Now the cross bar 28 will be secured in its position by the use of the screws 70 and wing nuts 71, and, finally, the camera will be secured on the carrier plate 37 by any of the usual methods.

It will be seen that after such arrangement, the camera is rigidly and firmly resting on my support, and both hands of the user are free to adjust it to any desired position for which purpose the upper frame members 18 and 19 may be unhooked and may be hooked into new positions in other plates 16, and the camera may be angularly arranged both horizontally and vertically by the use of the sleeves 32, 35, and 35*a*, and the respective set screws 33 and 36, as will be obvious.

My support may be adjusted as to its forward projecting by the telescopical means on the frame 12 controlled through the sleeves 45, as has been described hereinbefore, and such adjustment also may be needed when the angular position of the frame is changed by hooking the T-shaped devices into other plates 16.

While I have shown a preferred embodiment of my invention, it is to be understood that changes and variations may be resorted to in the elements, construction, and combinations of my invention, and I reserve my rights to such changes and variations as are within the spirit of this

specification and the scope of the claims hereunto appended.

What I claim as new and want to protect by Letters Patent of the United States, is:

1. A camera support comprising, in combination, a belt adapted to be secured about the waist of the user, a separate strap over each shoulder depending at the two sides of the front of the body of the user with their lower ends secured at the two sides of the front of said belt, a forwardly projecting upper arm for each strap, the rear ends of said arms being secured on the respective straps, an inclined lower arm for each upper arm substantially in the plane of the respective strap, the rear ends thereof being secured at the two sides of the front of the belt their forward ends being secured to the forward ends of said upper arms thereby supporting the same, a rigid cross member, its ends being supported on said upper arms, and a camera carrying member proper on said cross member.

2. In a camera support, as set forth in claim 1, the rear ends of said upper arms being removably secured on said straps, and means thereon whereby said upper arms may be secured in a plurality of positions, one above the other, said upper arms being adjustable as to length, the rear ends of said lower inclined arms being pivotally secured on said belt, and means to adjust the length of said lower inclined arms.

3. In a camera support, as set forth in claim 1, the rear ends of said upper arms being removably secured on said straps, and means thereon whereby said upper arms may be secured in a plurality of positions, one above the other, the forward ends of respective upper and lower arms being removably secured to one another, and said cross member being removable.

4. In a device, as set forth in claim 1, means to adjust said camera carrying member angularly on a horizontal and on a vertical axis with reference to said cross member.

5. In a device, as set forth in claim 1, a vertical pin on said cross member, a first element in said carrier member rotatable on said pin, a horizontal pin on said first element, a second element in said carrier member rotatable on said horizontal pin, and a camera receiving element proper adapted to receive a camera secured thereon and being carried by said second element.

6. A camera support comprising a belt adapted to be secured about the waist of a user, a separate strap adapted to be positioned over each shoulder of the user and depend at opposite sides of the front of the body of the user, the lower end of each strap being secured to the belt, duplicate pairs of forwardly projecting interconnected arms, one of each pair of arms being carried by one of said straps and the other of said pair of arms being carried by said belt, a cross member connecting said pairs of forwardly projecting arms, and means for supporting a camera on said cross member.

7. A camera support comprising a belt adapted to be secured about the waist of a user, a separate strap adapted to be positioned over each shoulder of the user and depend at opposite sides of the front of the body of the user, the lower end of each strap being secured to the belt, duplicate pairs of forwardly projecting interconnected arms, each pair of said forwardly projecting arms comprising a first arm adjustably secured to a shoulder strap and a second arm pivotally secured to said belt at one end and pivotally secured to said first arm at its opposite end, a cross member connecting said pairs of arms, and means for supporting a camera on said cross member.

ARMAND MOSS.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
817,207	Wheeler	Apr. 10, 1906
1,018,771	Neuburger	Feb. 27, 1912
1,993,485	Paul	Mar. 5, 1935