

(No Model.)

3 Sheets—Sheet 1.

E. W. PERRY, Jr.
TRIPOD OR SUPPORT FOR CAMERAS.

No. 517,360.

Patented Mar. 27, 1894.

Fig. 1.

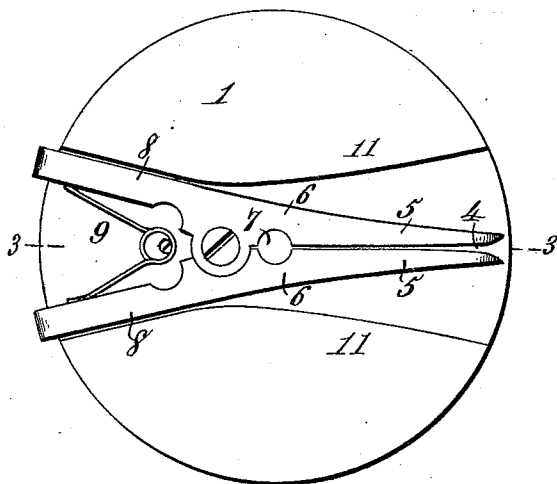


Fig. 2.

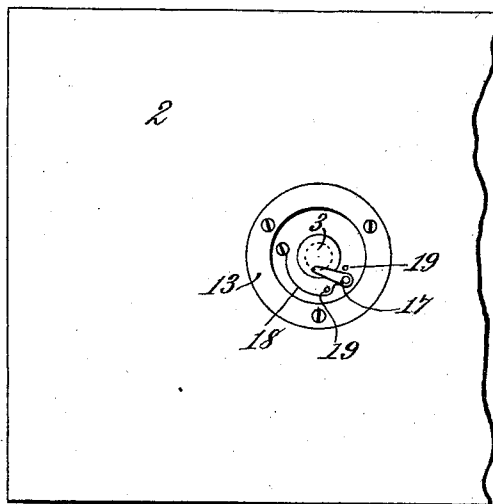


Fig. 3.

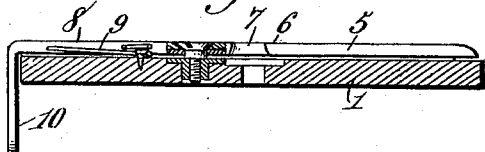


Fig. 4.

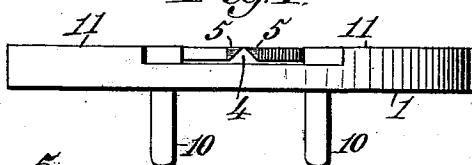


Fig. 5.

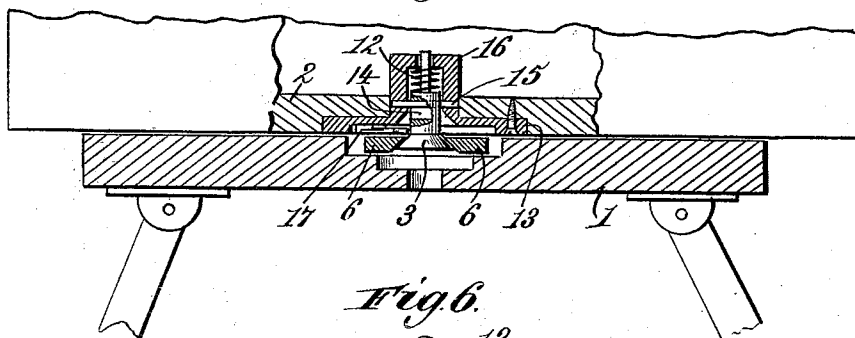
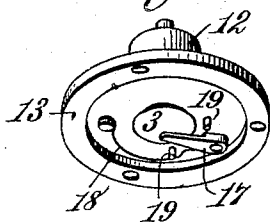


Fig. 6.



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Fig. 7.

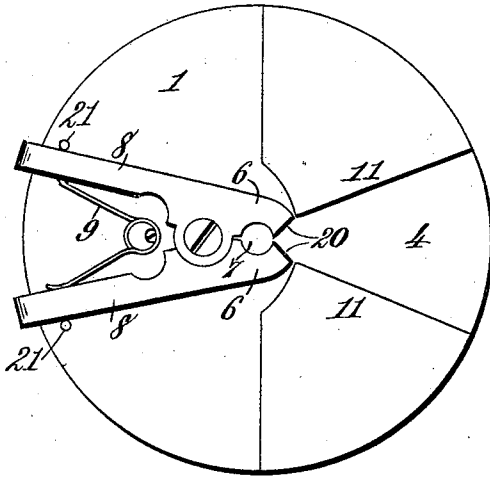


Fig. 8.

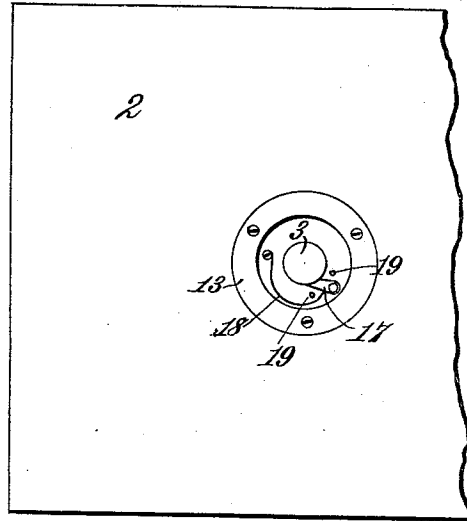


Fig. 9.

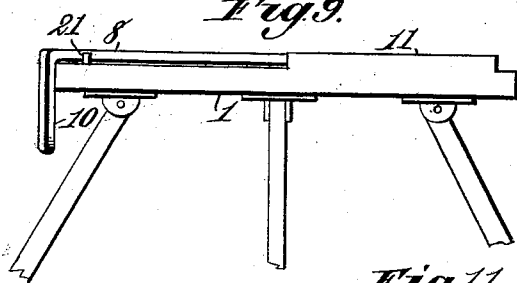


Fig. 10.

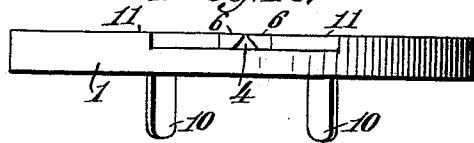
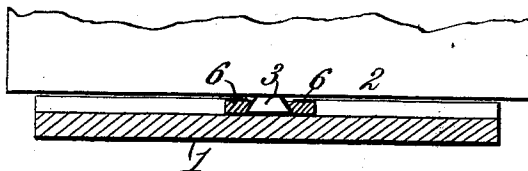


Fig. 11.



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Fig. 12.

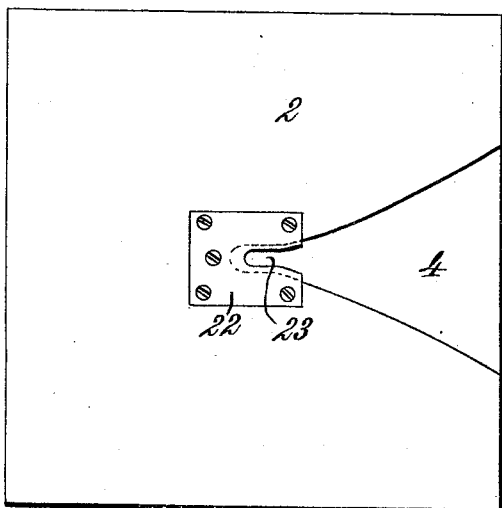


Fig. 13.

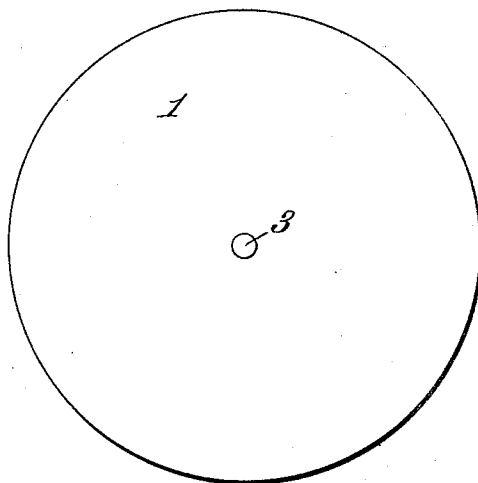


Fig. 14.

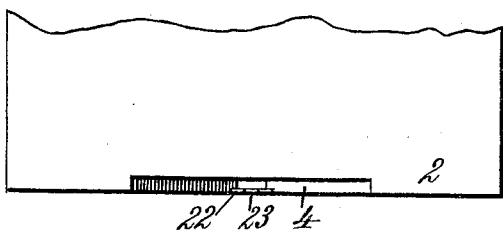


Fig. 15.

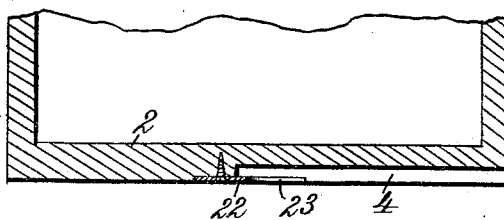
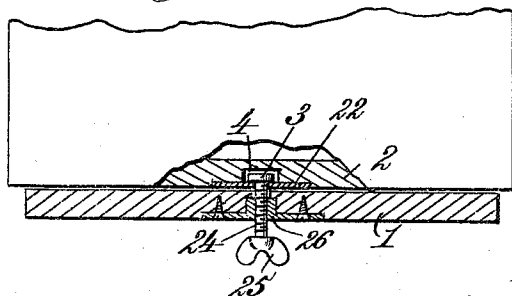


Fig. 16.



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UNITED STATES PATENT OFFICE.

ENOCH WOOD PERRY, JR., OF NEW YORK, N. Y.

TRIPOD OR SUPPORT FOR CAMERAS.

SPECIFICATION forming part of Letters Patent No. 517,360, dated March 27, 1894.

Application filed June 1, 1893. Serial No. 476,208. (No model.)

To all whom it may concern:

Be it known that I, ENOCH WOOD PERRY, JR., a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Tripods or Supports for Cameras, &c., of which the following is a specification.

My invention relates to certain improvements in devices for detachably connecting a photographic camera or similar object to its supporting stand or tripod; and has for its principal object to provide, on the tripod-top or platform or on the bottom or under side of the camera-box, a guide-way extended from an outer edge of the tripod-top or the camera bottom inward to a central point and adapted to quickly guide into position a clamping pin, screw, button or other approved fastening for detachably securing the camera-box to the tripod or stand.

The invention has for another object to provide, preferably on the camera-box, an improved clamping button that can be pressed inward and latched substantially flush with the camera bottom when the camera is to be used apart from a tripod.

The invention consists in the features of construction and novel combinations of parts for effecting with great ease, and without loss of time, a secure detachable connection between a camera-box and its supporting stand as hereinafter more fully set forth.

In the annexed drawings illustrating the invention—Figure 1 is a plan of the platform or top of a tripod or camera supporting stand having mounted thereon a clip composed of pivoted spring-pressed jaws adapted to clasp a pin or button on the bottom of the camera box, said jaws being extended to the edge of the tripod top or platform and adapted, when open, to serve as a guide-way for the pin or button and direct it quickly and unerringly into position. Fig. 2 is a plan of the under side of a camera bottom with pin or button and latching device. Fig. 3 is a vertical longitudinal section on the line 3—3 of Fig. 1. Fig. 4 is an edge view or elevation of the tripod top at the entering end to the guide-way and clip. Fig. 5 is a central transverse vertical section through the camera bottom and tripod top showing the button engaged by the jaws of

the clip and exhibiting portions of the tripod legs. Fig. 6 is a perspective of a thimble-bearing in which the button may be mounted and which is provided with a spring latching device for securing the button in a retracted position when the camera is to be used apart from the tripod. Fig. 7 is a plan illustrating a modification of the guide-way and the clip jaws. Fig. 8 is a plan showing the button unlatched. Fig. 9 is a side elevation of Fig. 7. Fig. 10 is a front elevation of the same. Fig. 11 is a central transverse vertical section of the tripod top with camera-box in position. Fig. 12 shows the under side of the camera-box provided with a guide-way and slotted bearing plate for a clamping pin or button mounted on a tripod or stand. Fig. 13 is a plan of tripod top, and attached clamping button or pin. Fig. 14 is a partial elevation of a camera-box at the entering end of its guide-way. Fig. 15 is a central longitudinal section of the camera-box bottom and its guide-way and bearing-plate. Fig. 16 is a central transverse vertical section of the tripod top, camera-box bottom and modified fastening devices illustrated in the four preceding figures.

Referring to the drawings, the numeral 1 designates a tripod top or platform and 2 the bottom of a camera-box.

A clamping pin, screw, or button 3, of some suitable character, is usually employed for making detachable connection between a photographic camera and its supporting stand or tripod. This pin, screw, or button may be mounted either upon the tripod top or platform or on the bottom of the camera-box. As the pin, screw or button on one of these parts and the receiving clip or fastening device on the other part are concealed from view on bringing the camera and tripod together, it is frequently very difficult to make a quick and accurate connection. For the purpose of obviating this difficulty, I provide either on the tripod top or platform or on the bottom of the camera-box a guide-way 4 extended from an outer edge of the tripod top or the camera bottom, as the case may be, inward to a central point where the pin, screw or button is to be received and secured. This guide-way 4 is made to extend from the edge of the tripod top or edge of the camera bottom to the center so that by affording a

more extended surface for entrance of the pin, screw or button it may be unerringly guided or directed into position without difficulty or unnecessary loss of time. According to the preferred construction, illustrated in Figs. 1, 3 and 4, the guide-way 4 is formed between the forwardly elongated arms 5 of a clip composed of pivotal jaws 6, preferably mounted on the tripod top or platform. This guide-way 4 leads to a circular socket or recess 7 formed in the pivotal jaws of the clip. Arranged between and bearing on the rear arms 8 of the pivotal clip-jaws 6 is a spring 9 that normally throws said arms outward and thus causes the clip to be closed firmly onto the clamping pin or button 3, Figs. 2 and 5, after the camera-box has been placed in position. The rear arms 8 of the clip may be extended downward to form handles 10 by which the clip jaws may be manipulated. The tripod top 1 may be centrally channeled or provided with blocks 11 at opposite sides of the clip to serve as stops for the clip jaws and to make a substantially flush surface for the bottom of the camera-box to rest on.

In connecting the camera to its tripod or supporting stand the operator will grasp the handles 10 and compress them against the action of the spring 9 so as to open the clip-jaws and spread the forwardly extended arms 5 apart. These arms 5 extend to the edge of the tripod top or platform and when thus spread apart will form a guide-way 4 having converging sides extending from the extreme edge of the top 1 to the centrally located socket or clip recess 7 where the pin, screw or button 3 is to be received and secured.

As shown in Figs. 4 and 5 the inner sides of the arms 5 and clip-jaws 6 are preferably under cut or beveled to correspond with a similarly beveled or under cut surface of the button head 3, Fig. 5. While the arms 5 are held open or apart the sense of touch will enable the button 3 to be readily entered into the guide-way 4 between said arms and be thereby quickly guided or directed without fail to the clip socket or recess 7 which will be closed onto the button by the tension of the spring 9 so soon as the clip handles 10 are released. The diameter of the beveled head of the pin or button 3 is a little greater than the diameter of the socket or recess 7 in the clip-jaws so as to give the clip a firmer grasp. By again compressing the clip handles 10 the button 3 can be lifted out of engagement with the clip jaws whenever it is desired to disconnect the camera from the tripod or supporting stand. The pin or button 3 is preferably mounted in a thimble 12, Figs. 5 and 6, having a counter sunk flange 13 through which it may be secured to the bottom of a camera-box. As shown in Fig. 5 the shank of the pin or button may be provided with a slot 14 of sufficient size to permit a vertical play of the button on a transverse supporting pin 15 that is passed through said slot and se-

cured in the sides of the thimble. By means of a spring 16 arranged in the thimble 12 the button 3 is normally forced outward so that the button-head will be caused to protrude in position to enter the guide-way 4 and be engaged in the socket 7 of the clip. When, however, it is desired to use the camera separate from a tripod a level supporting surface may be obtained on the under side of the camera-box bottom by forcing the button 3 inward and securing it by a spring latch 17 mounted in the centrally counter sunk portion of the thimble flange. The latch 17 is pivoted at one end as shown in Figs. 2 and 6, and, by the pressure of a spring 18, is held against the shank of the button 3, as shown in Fig. 5, while the button remains projected in operative position. By pressing the button back into the thimble 12, the beveled surface of the button head will act as a cam to force the latch 17 aside, against the action of the spring 18, until the button is fully depressed and then the spring 18 will carry the latch 17 across or onto the face of the button and fasten it in retracted position. On opposite sides of the pivoted latch 17 are stop pins 19 to limit the latch movements.

In Figs. 7, 9, 10 and 11 I have illustrated a modification of the guide-way for the pin or button. By this modification the elongated forwardly extended arms of the clip-jaws 6 are dispensed with and the guide-way 4 is formed between the opposing sides of the blocks 11 that may be attached either to the tripod top or to the camera-box bottom. In this construction the forward shortened ends of the clip-jaws 6 may be beveled in converging lines 20, Fig. 7, approximately coinciding with the inclination of the opposite sides of the guide-way. The form of the pin or button 3 Figs. 8 and 11, to be used with this guide-way, may be the same as hereinbefore described. The blocks or walls 11, forming the opposite sides of the guide-way 4, need not be extended any farther than is necessary to provide a continuous guide-way from the edge of the tripod top to the button receiving socket or recess 7 of the clip jaws. At the outer sides of the clip arms 8 may be placed stop pins 21, Fig. 7, to limit the outward movement of said arms.

The guide-way 4 and the clip 6, or some other device for engaging the pin or button 3, may be arranged on the under side of the camera-box bottom, if preferred. Such construction is shown in Figs. 12, 14, 15 and 16. By referring to Figs. 12 and 15 it will be seen that the guide-way 4 is extended inward from one edge of the camera-box bottom to a central point in the under side thereof. For the purpose of engaging the pin or button 3, Figs. 13 and 16, a bearing plate 22 is countersunk into and secured to the under side of the camera-box bottom across the inner or narrow end of the guide-way 4, as shown in Fig. 12. The forward central portion of this bearing plate 22 is provided with an open ended slot

23 which is more narrow than the inner end of the guide-way 4 and of just sufficient width to permit the passage of the shank of the pin or button 3, the head of which is confined in the narrow part of the guide-way immediately above the bearing plate when the camera-box and tripod are brought together and connected. In this form of construction the pin or button 3 is preferably provided with a screw threaded shank 24 having a handle 25 fixed to one end, and the said screw shank is arranged to work in a stationary nut 26 secured to the tripod top or platform. After the head of the pin or button has been guided into position in the inner or narrow portion of the guide-way 4, with the shank 24 in the open ended slot 23 the pin or button should be turned by means of its handle 25 in the proper direction to cause the screw shank 24, working in the nut 26, to draw down the head of the pin or button into clamping engagement with the bearing plate 22 at opposite sides of the slot 23 therein. The tripod or part 1 to which the pin or button is attached, and the camera-box, or part 2 having the guide-way and bearing plate, are thus quickly connected and may be as easily detached whenever desired.

I would have it understood that the guide-way and the clip or bearing plate, or analogous fastening, may be located on either of the parts to be connected, whether the tripod top or the camera-box bottom, while the pin or button will be mounted on the other one of said parts.

The guide-way 4, whether formed by the arms of the clip 6 as shown in Fig. 1, or directly in the tripod top as in Fig. 7, or in the bottom of the camera-box as in Fig. 12, should in either case intersect or be extended from the edge of the part in or on which it is located and thus afford a ready entrance for the pin or button on the other part so that the camera-box can be quickly and firmly engaged or connected with its supporting stand or tripod without any delay or troublesome manipulation of fastening devices. The guide-way 4, leading from the outside edge of the tripod top or camera-bottom to the center, may be of any width, depth or form but is preferably V-shaped or provided with converging sides as shown.

Although the guide-way 4 and clips 6, Figs. 1, 5, 7 and 11, are preferably located on the tripod top, and the button 3 and its thimble 12 on the camera these positions may be reversed as already indicated. The button 3 may be retained in its thimble 12 in a variety of ways other than that shown in Fig. 5, as by a pin fixed to the shank or stem of the button and working in slots in the thimble walls, or a fixed collar on the button stem engaged in a recessed portion of the thimble, or otherwise.

What I claim as my invention is—

1. The combination with the top of a tripod or stand and the under side of a camera

or other object, of a guide-way extended from the outer edge of one of said parts inward to a central or approximately central point and adapted to quickly guide a pin or button mounted on the other part into engagement with a clip or fastening device on the part provided with said guide-way, substantially as described.

2. The combination with a camera or other object, a supporting stand, a pin or button on one of said parts, and a clip on the other part to engage said pin or button, of a guide-way extended inward from the outer edge of the part to which the clip is attached, for guiding the said pin or button quickly into engagement with the clip, substantially as described.

3. The combination with a camera or other object, a supporting stand, and a pin or button on one of said parts, of a clip composed of pivoted jaws mounted on the other one of said parts and having arms extended to the outer edge of said part and forming a guide-way to direct the pin or button into position to be clamped by the clip, substantially as described.

4. The combination with a camera or other object, a supporting stand, and a pin or button attached to one of said parts and provided with a beveled head, of a clip composed of spring-pressed jaws mounted on one of said parts and provided with a socket or recess to receive said pin or button and having arms extended from said socket to the outer edge of the part supporting the clip to form a guide-way for directing the pin or button into position to be clamped by the clip, the under side of the said socket and guide arms being beveled to correspond with the head of the pin or button, substantially as described.

5. The combination with a camera or other object, a supporting stand, a pin or button on one of said parts, and a fastening device on the other part to engage said pin or button, of a guide-way having inwardly converging sides and extended from the outer edge of the part to which the fastening device is attached inward to a central or approximately central point to guide the pin or button into engagement with the fastening device, substantially as described.

6. The combination with a camera or other object, and a supporting stand or tripod, of a longitudinally movable pin or button mounted in the under side of the camera or like object and adapted to protrude below the same or be pressed inward and flush with the bottom of the part to which it is attached, a fastening device on the top of the tripod or stand to engage the protruding pin or button, a guide-way extended from the outer edge of the tripod top or stand to guide the pin or button quickly into engagement with said fastening device, and a spring latch to hold the pin or button in a depressed position flush with the camera bottom when the camera or like object is to be used apart from the tripod, substantially as described.

7. The combination with a camera or other
object, and a supporting stand or tripod, of a
longitudinally movable pin or button mount-
ed in the under side of the camera or like ob-
5 ject and provided with a spring by which it
is normally protruded, a clip composed of
pivoted spring-pressed jaws mounted on the
tripod top or stand and adapted to engage the
pin or button, a guide-way extended from the
10 other edge of the tripod top inward to guide
the pin or button quickly into engagement

with the clip, and a latch to secure the pin or
button in a depressed position when the cam-
era or like object is to be used apart from the
tripod, substantially as described. 15

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit-
nesses.

ENOCH WOOD PERRY, JR.

Witnesses:

FREDK. A. ESCHBACH,
GEORGE F. ESCHBACH.