J. A. DE BOUZEK.

ATTACHMENT FOR CAMERAS.

APPLICATION FILED JUNE 17, 1915.

1,187,045.

Patented June 13, 1916.

2 SHEETS—SHEET 1.

Fig. 1.

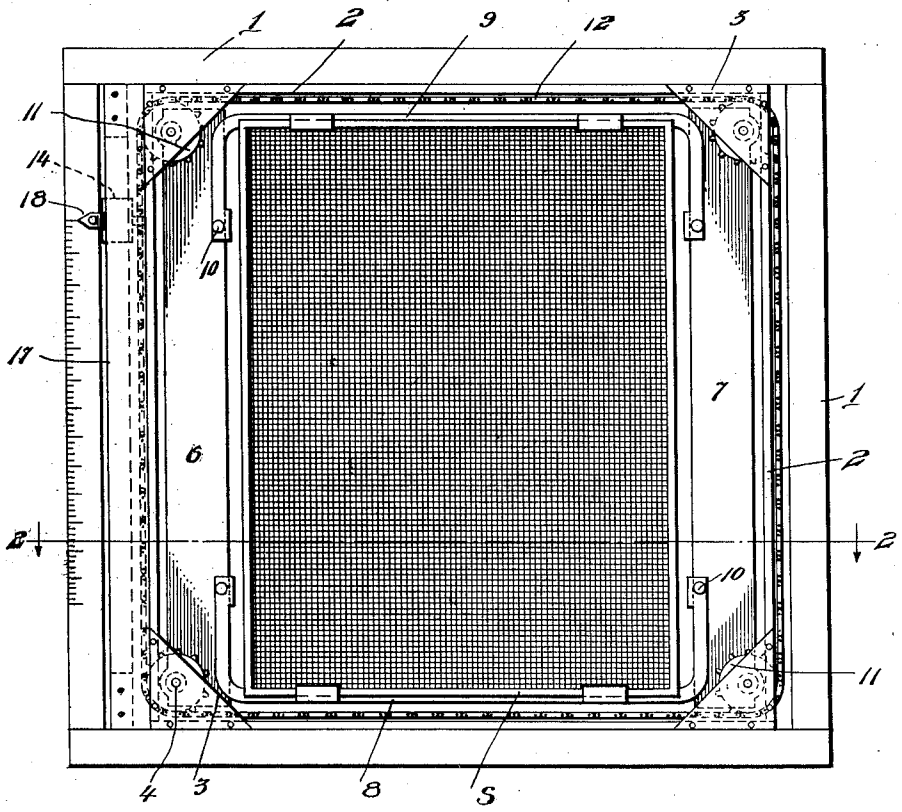
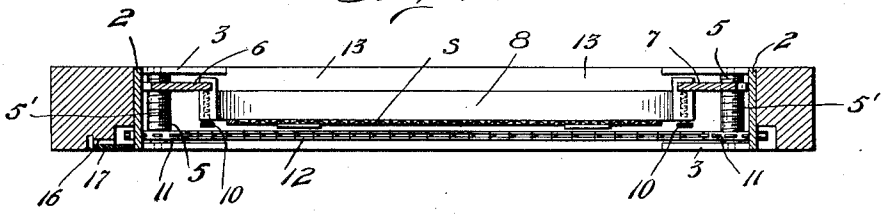


Fig. 2.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

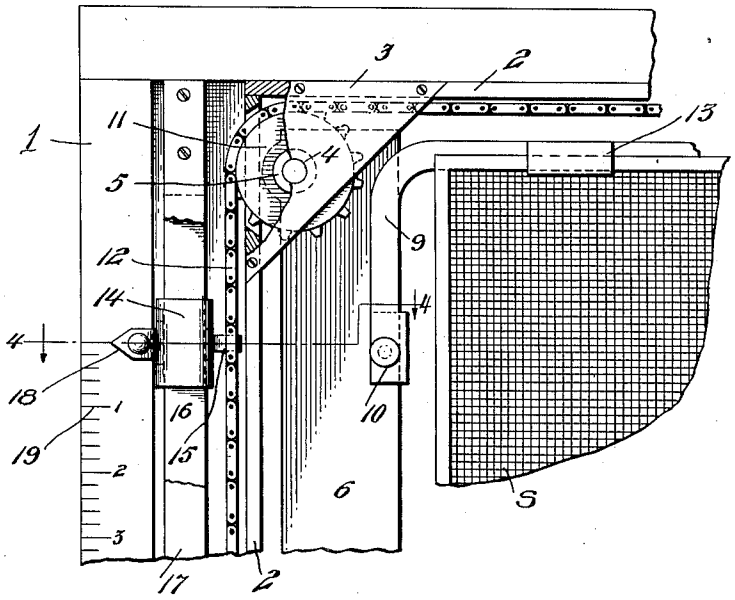


Fig. 4.

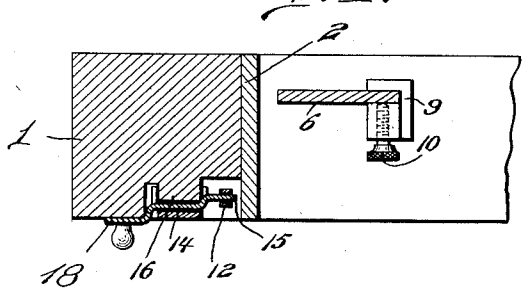


Fig. 5.

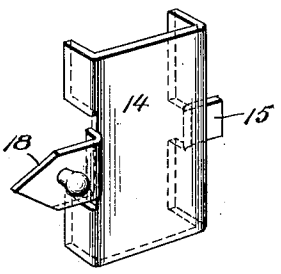
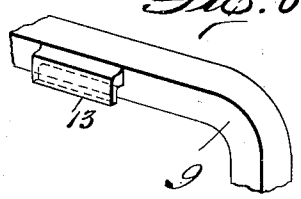


Fig. 6.



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UNITED STATES PATENT OFFICE.

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ATTACHMENT FOR CAMERAS.

1,187,045. Specification of Letters Patent. Patented June 13, 1916.

Application filed June 17, 1915. Serial No. 34,694.

To all whom it may concern:

Be it known that I, JEAN A. DE BOUZEK, a citizen of the United States, residing at Salt Lake City, in the county of Salt Lake and State of Utah, have invented certain new and useful Improvements in Attachments for Cameras; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in photographic cameras and more particularly to screen holders therefor.

The object of the invention is to provide a simply constructed and efficient attachment for cameras for holding a half tone screen in front of a photographic plate during exposure and which is so constructed that the distances between the half tone screen and the photographic plate may be varied or the screen moved entirely out of the way of the plate holder which contains the photographic plate.

Another object is to provide a device of this character which is light in construction, compact in mechanism and absolutely even in its travel parallel to and from the plate.

Another object is to provide such an attachment which can be removed easily and entirely from the camera without re-adjusting its mechanism and which will not easily get out of order.

With these and other objects in view, the invention consists of certain novel features of construction, and the combination and arrangement of parts as will be hereinafter more fully described and claimed.

In the accompanying drawings: Figure 1 represents a front elevation of a plate holder equipped with this improved attachment; Fig. 2 is a transverse section thereof taken on the line 2—2 of Fig. 1; Fig. 3 is an enlarged face view of one corner of the frame; parts thereof being broken away; Fig. 4 is a detail sectional view taken on line 4—4 of Fig. 3; Fig. 5 is an enlarged detail perspective view of the indicator; Fig. 6 is an enlarged detail perspective view of the U-shaped bar 9 showing the clip for attaching the screen.

In the embodiment illustrated, a wooden frame 1 is shown and in which is arranged a metal frame 2 with triangular corner plates 3 shown mounted on the ends of the frame 2 on both faces thereof and which are apertured to form bearings 4 to receive screw shafts 5 one of which is mounted in each corner of the frame. These shafts are revolubly mounted in the corner plates 3 and are provided intermediately of the ends thereof with threads 5′ of a deep pitched pattern. Disposed between the corner plates on the shafts 5 are two metal side bars 6 and 7 which are provided with threaded apertures with which said screw shafts 5 are engaged so that on the turning of these shafts, said bars 6 and 7 are moved transversely of the frame 2 for a purpose to be described. U-shaped end bars 8 and 9 connect the side bars 6 and 7 being preferably detachably secured thereto by set screws 10. Obviously the end bars 8 and 9 may be adjusted vertically on the side bars 6 and 7 to accommodate screens of varying heights, as will be readily understood without further description. Fixed to each of these screw shafts 5 is a sprocket wheel 11 over which an endless chain 12 is designed to pass which travels back and forth on said wheels imparting rotary motion to the wheels and the screw shafts on which said wheels are mounted and thereby causes the bars 6 and 7 with which said shafts have threaded engagement to travel evenly back and forth at all four corners of the frame. Clips 13 are carried by the end bars 8 and 9 two being shown on each bar and which are designed to detachably clamp the screen S to the frame formed by said bars 6, 7, 8 and 9. This chain 12 is designed to be operated by an indicator 14 which is here shown in the form of a clamp having an arm 15 which is shown engaged with one of the links of the chain 12. This indicator is slidably mounted on a guide 16 on the frame 1 and being held in place by a plate 17 and when moved manually thereon the chain is moved in the direction in which the indicator is moved and thereby imparts motion to the shafts 5 for varying the position of the screen carrying frame formed by the bars 6, 7, 8 and 9. This indicator carries a pointer 18 adapted to register with a scale 19 on one side of the frame 1 so as to indicate the position of the screen carrying frame relatively to the plate holder.

The frame referred to carries the half tone screen S which is normally in a receded position in the screen holder and in the operation thereof the plate holder is placed

and clamped securely on the face of frame 1 and the dark slide is removed. The half tone screen is then moved against this photographic plate to any distance and spaced on the outside according to the kind of screen used by means of the indicator 14 which shows the distances traveled by said screen.

After the exposure the indicator is moved until it shows that the screen is in a receded position and the slide is then inserted in the plate holder and taken away for further operation. The use of this structure dispenses with placing the half tone screen against the sensitive plate in a dark holder and is much easier to operate.

From the above description and as shown clearly in Fig. 2 it will be understood that when the bars 6 and 7 are moved into abutting engagement with the sprockets 11 the screen S will be projected outside the frame 1 and may be readily removed without in any way altering or interfering with the mechanism of the camera or of the attachment.

I claim as my invention:

1. In a screen holder the combination of a frame, bars mounted within said frame, means for varying the lateral position of said bars in said frame, and U-shaped cross bars detachably connecting said side bars and having screen engaging clips.

2. In a screen holder the combination of a frame, side bars mounted therein, means for varying the lateral position of said side bars and said frame, U-shaped cross bars connecting said side bars, said cross bars being adjustably clamped to said side bars, and screen engaging clips secured to said cross bars.

3. A device of the character described comprising a frame, triangular corner plates mounted on the ends of said frame on both faces thereof, said corner plates being apertured to form bearings, screw shafts extending transversely of said frame and having their ends revolubly mounted in said bearings, side bars in threaded engagement with said shafts, cross bars connecting said side bars, sprockets fixed to said shafts and disposed between said corner plates, an endless chain passing over said sprockets, an indicator slidably mounted on said frame and engaged with said chain, and a scale disposed on said frame for coöperation with said indicator.

4. A device of the character described comprising a frame, corner plates mounted on the ends of said frame on both faces thereof, screw shafts extending transversely of said frame and having their ends revolubly mounted in said corner plates, a screen supporting frame having its sides in threaded engagement with said shafts, sprockets fixed to said shafts, an endless chain passing over said sprockets, an indicator slidably mounted on the first mentioned frame and having an arm engaged with said chain, a scale disposed on the first mentioned frame, and a pointer carried by said indicator for coöperation with said scale.

5. A device of the character described comprising a frame, corner plates mounted on the ends of said frame on both faces thereof, screw shafts extending transversely of said frame and having their ends revolubly mounted in said corner plates, a screen supporting frame having its sides in threaded engagement with said shafts, sprockets fixed to said shafts, an endless chain passing over said sprockets, a guide mounted on the first mentioned frame, a clamp slidable on said guide and having an arm engaged with one of the links of said chain, a scale disposed on the first mentioned frame, and a pointer carried by said clamp for coöperation with said scale.

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

JEAN A. DE BOUZEK.

Witnesses:
E. A. PETERSON,
CORNELIUS SALISBURY.