

J. S. GREENE.
 PHOTOGRAPHIC CAMERA.
 APPLICATION FILED OCT. 8, 1920.

1,412,783.

Patented Apr. 11, 1922.
 3 SHEETS—SHEET 1.

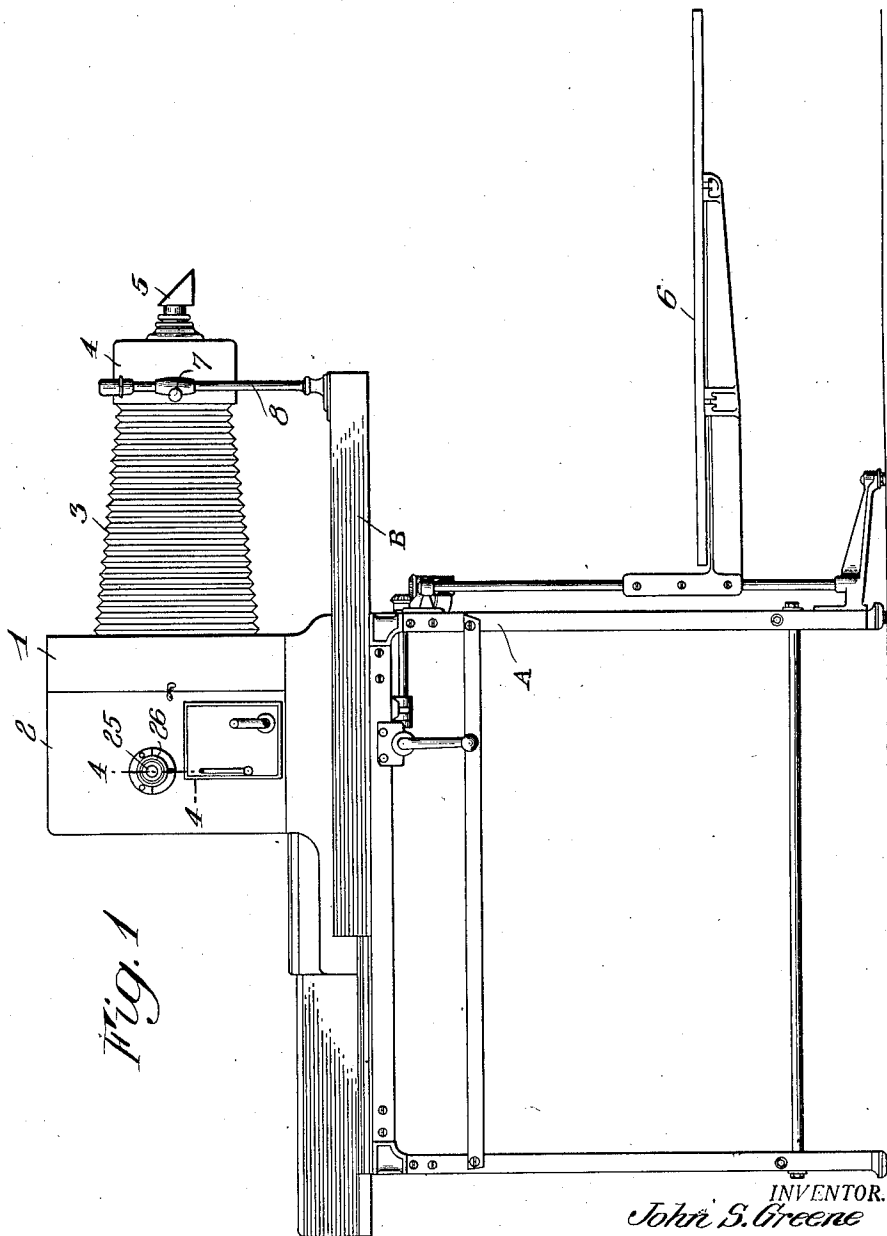


Fig. 1

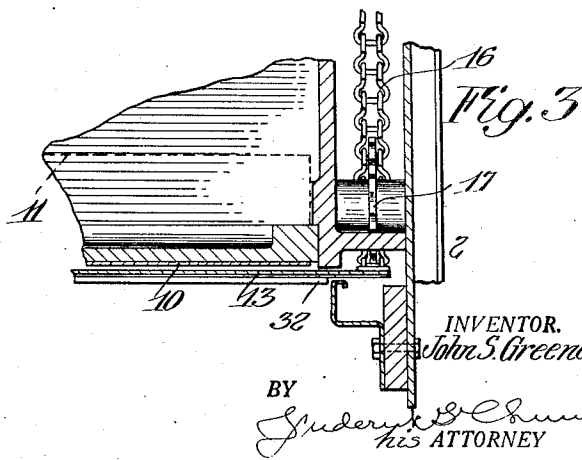
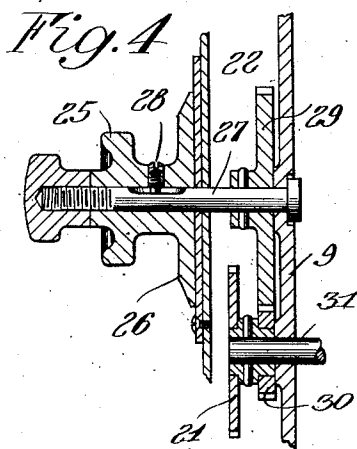
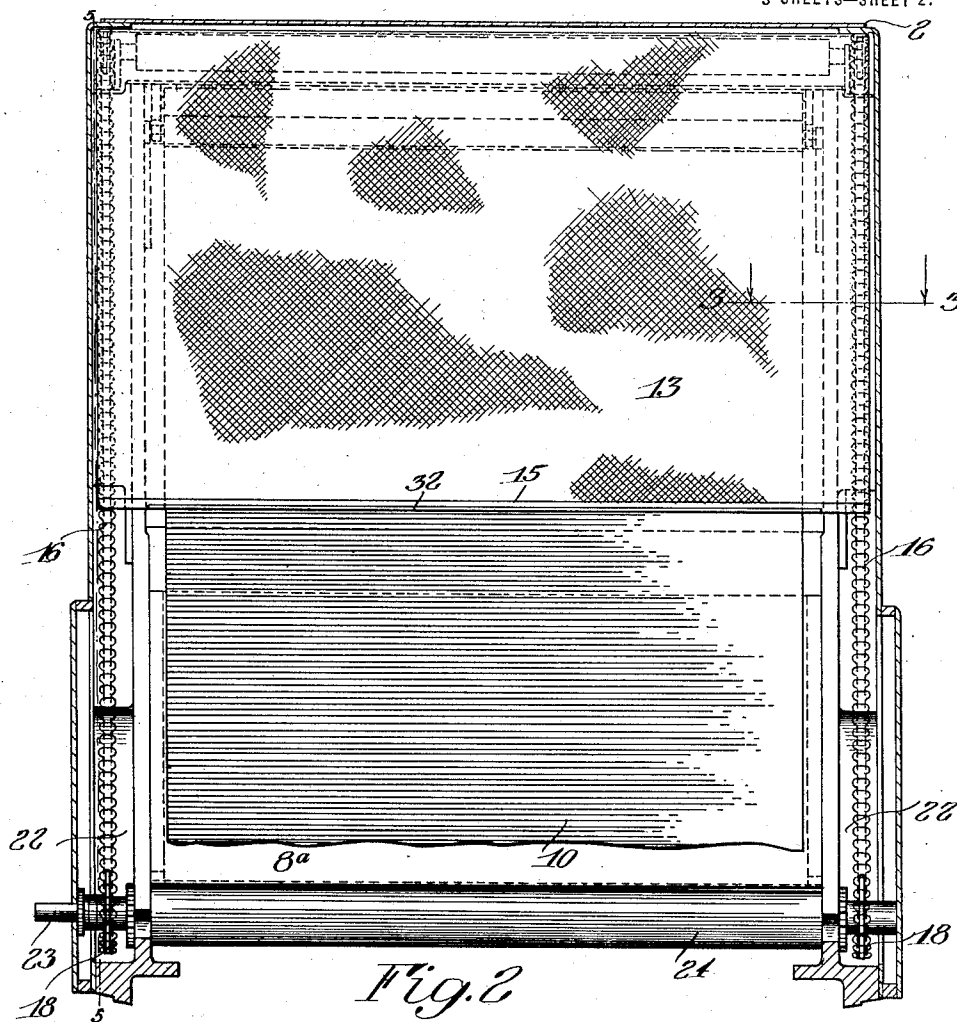
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John S. Greene
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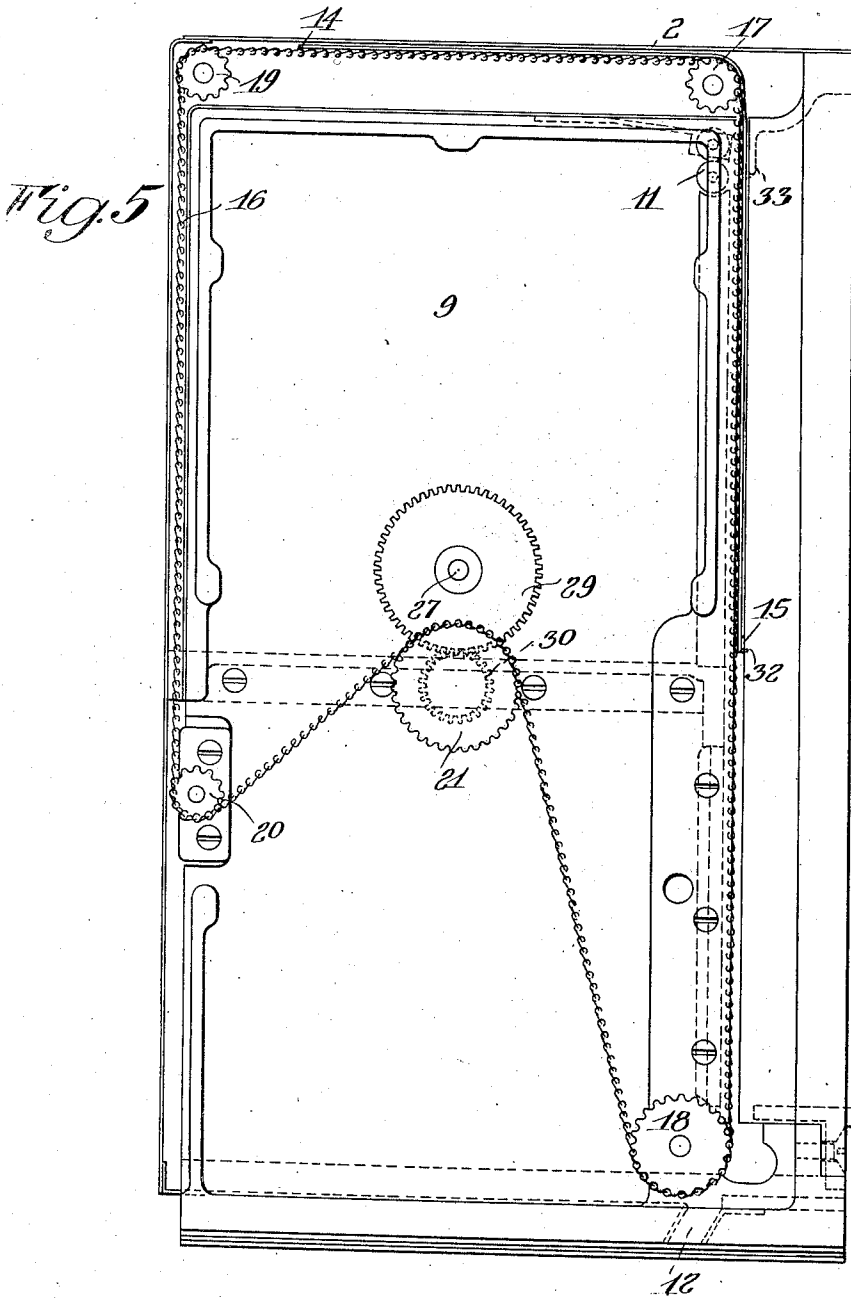


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UNITED STATES PATENT OFFICE.

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PHOTOGRAPHIC CAMERA.

1,412,783.

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To all whom it may concern:

Be it known that I, JOHN S. GREENE, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Photographic Cameras; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference numerals marked thereon.

My present invention relates to photography and more particularly to photographic cameras of the type known as commercial cameras in which prints of objects positioned on the copyholder of the camera are photographed, cut, developed and fixed in the one apparatus and emerge ready for use after drying. The film or sensitive paper is usually fed from a roll and severed according to the surface exposed. For small photographs only a portion of the normal feed is used and the remainder of the strip in the focal plane is masked off for this purpose, heretofore usually by means of a dark slide. My present improvements are directed toward supplanting such dark slide with a curtain adjustable in front of the focal plane to give an infinite number of different sizes of prints that may be made according to the size of the object, or otherwise, without exposing more paper than is required and the invention has for its object to provide a simple, efficient, durable and conveniently operable curtain of this character. To these and other ends the invention resides in certain improvements and combinations of parts, all as will be hereinafter more fully described the novel features being pointed out in the claims at the end of the specification.

In the drawings:

Figure 1 is a side view of a commercial camera provided with a masking curtain constructed in accordance with and illustrating one embodiment of my invention;

Figure 2 is an enlarged fragmentary view, partly in section of the front of the curtain and the film support;

Figure 3 is a fragmentary section on the line 3—3 of Figure 2;

Figure 4 is an enlarged section on the line 4—4 of Figure 1, and

Figure 5 is a section on the line 5—5 of Figure 2.

Similar reference numerals throughout the several views indicate the same parts.

Referring first to general features of the camera as shown in Figure 1, A indicates a table or frame upon which is supported a bed B carrying a camera body comprising a fixed portion 1 and a laterally displaceable portion 2. A bellows 3 connects the forward portion 1 of the body with a front 4 carrying a lens and prism 5 adapted to project an image from an object arranged upon a vertically adjustable copy board 6. The front 4 by means of set screws 7, is adjustable vertically upon guide rods 8 to bring the axis of the lens opposite the center of the entire field of exposure or any lower portion thereof so that a picture may be properly positioned or centered on only the lower half, for instance, of the entire possible field of exposure.

At the front of the portion 2 of the body, which cooperates with the exposure opening at the rear of the fixed portion 1, is a film supporting wall 8^a lying in the focal plane of the camera lens. In rear of the upper portion of this support 8^a is a space or chamber 9 for the roll of film or sensitive paper (not shown) from which the film strips indicated at 10 are drawn between guide rollers 11, down across the face of the support 8^a and issue at 12 through a slot at the bottom thereof and pass into the developing apparatus, all of the foregoing being well known structure.

When the lens is centered with respect to the lower half of the film support 8^a, I mask off that portion of the sensitive material 10 which has been drawn into the upper half of the plane of exposure by means of a flexible curtain 13 as shown in Figures 2 and 5 which curtain may be made of rubber cloth or any of the other materials known to the art. This curtain is carried by means of cross bars 14 and 15 upon an endless carrier 16 in the present form of a chain conveyor which travels upon sprockets 17, 18, 19, 20 and 21. The first two mentioned sprockets are respectively above and below and tangential to the film support 8^a in the focal plane; the sprockets 19 and 20 are above and below at the rear portion of the body section 2 and the sprocket 21 is arranged at a central point, as shown and its engagement with the chain is reversed as compared with the other sprockets. The chains 16, it will

be understood, are arranged one at each side of the body section 2 in narrow chambers shown at 22 in Figure 2 and they encircle the roll holding chamber 9 so that they do not add materially to the required size of the camera body. In the present instance, the sprockets 18 are arranged to turn freely upon the shaft 23 of one of the lower feed rollers 24 that draw the sensitive paper 10 through the field of exposure.

On the exterior of the section 2 of the camera body is an operating knob 25 turning in connection with a dial 26 on a shaft 27 having suitable bearings in the camera walls and to which the knob is secured, in the present instance, by a set screw 28 (Figure 4). Fixed to the shaft 27 is a gear 29 meshing with a pinion 30 on the shaft 31 to which sprocket 21 is also fixed. The latter is the driving sprocket for the chain carrier and when the knob 25 is turned, the carrier and curtain 13 will be moved to an extent indicated on the dial 26. It is unnecessary to carry the curtain through a complete circuit as the carrier has ample length and it is therefore merely raised and lowered by turning the knob in first one direction and then the other. When raised from the position of Figure 5, a projecting flange 32 on the cross bar 15 cooperates with an abutment 33 at the top of the film support to arrest the movement of the curtain after the field of maximum exposure has been completely uncovered.

The curtain is entirely closed to prevent fogging the sensitive material when the camera body is opened up, that is, the section 2 is separated from section 1.

I claim as my invention:

1. In a camera, the combination with a body having an exposure opening in the focal plane of the camera, of a dark curtain adjustable to different positions with reference to said opening, an endless carrier for the curtain and operating means for the carrier on the exterior of the body.

2. In a camera, the combination with a body having an exposure opening in the focal plane of the camera, of a dark curtain adjustable to different positions with reference to said opening, an endless carrier for the curtain comprising a chain and a plurality of fixed sprocket wheels for guiding the same, and a rotary operating means for the curtain on the exterior of the camera arranged to mesh with one of said sprockets.

3. In a camera, the combination with a body having an exposure opening in the focal plane of the camera and a roll holder in the rear of said plane, of a dark curtain adjustable to different positions with reference to said opening, an endless carrier for the curtain surrounding the roll holder, and operating means for the carrier on the exterior of the body.

4. In a camera, the combination with a body having a roll holding chamber, a film support in the focal plane of the camera at the front of said chamber and sprockets above and below said support and at the rear of the chamber, of a dark curtain adjustable in front of the film support, an endless carrier therefor passing over the sprockets and an operating means on the exterior of the body geared to the carrier.

JOHN S. GREENE