

UNITED STATES PATENT OFFICE.

GEORGE JONES, OF ROCHESTER, NEW YORK.

PHOTOGRAPHIC ROLLER-HOLDER.

SPECIFICATION forming part of Letters Patent No. 470,054, dated March 1, 1892.

Application filed April 1, 1891. Serial No. 387,252. (No model.)

To all whom it may concern:

Be it known that I, GEORGE JONES, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented a new and useful Photographic Roll-Paper Holder, of which the following is a specification.

This invention relates to roll-paper holders for photographic cameras, and it is an improvement on the device of this class for which an application for Letters Patent of the United States, Serial No. 362,531, was filed by me on the 20th day of August, 1890, said application having been patented April 21, 1891, No. 450,794. One part of the invention covered by said application consisted in an endless belt mounted upon two rollers and forming a holder adapted to receive the film after exposure, a receiver of this form being for various reasons deemed preferable to a single roller. My present invention contemplates an improved construction and arrangement of the said receiver, comprising the endless belt and the rollers carrying the same, whereby the said receiver may be swung out of the camera-case and converted into a reel, from which the film may be unwound conveniently and without danger of being injured.

With these ends in view the invention consists in the improved construction, arrangement, and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a longitudinal sectional view of that portion of the camera-casing which contains my invention. Fig. 2 is a transverse sectional view taken on the line 2 2 in Fig. 1. Fig. 3 is a perspective view showing the end of the camera-casing with the receiver swung out into position for unwinding the film.

Like numerals of reference indicate like parts in all the figures.

The casing of the camera, which is designated by 1, is constructed with a chamber or compartment 2 for holding the roll 3 of film. Said compartment contains a hinged and spring-pressed plate 4, adapted to bear against the roll of film for the purpose of producing the required degree of tension. The compartment 2 is composed of the horizontal shelf 5 and the vertical partition 6, at the upper

edge of which are arranged transverse cylindrical rods 7 of glass, metal, or other suitable material, ordinary glass rods being preferred, 55 owing to their cheapness and superior qualities for the purpose intended, which is simply to prevent injury to the film by friction in passing over the said rods.

8 designates a partition arranged transversely in the camera-box, over which the film passes and in front of which it is exposed. At the upper and lower edges of said partition are arranged transverse rods 9 of glass, metal, or other suitable material, preferably 65 the former, and for the same purpose as the rods 7 above described.

10 designates a shaft arranged transversely between the compartment 2 and the upper end of the partition 8 and carrying disks 11, 70 having projecting pins 12 for the purpose of marking the film, the circumference of the disks 11 being equal to the length of the piece of film required for each exposure, so that it may be known by the marks formed by the pins 12 exactly where to cut the film. 75

At the lower rear corners of the camera-box are hinged a pair of arms 13, to which are pivotally connected a second pair of arms 14, the latter being pivoted to the inner sides of 80 the former. The ends of the arms 14 are provided with bearings for a pair of shafts 15 and 16, the former of which is tubular and each of which carries a drum or roller, (designated, respectively, by 17 and 18,) and upon 85 which is mounted an endless belt 19, to which the end of the strip of film is to be attached and which forms the film-receiver. The tubular shaft 15 of the drum 17 has a screw-threaded portion, as shown at 20, adapted to 90 be engaged by the correspondingly-screw-threaded portion of rod 21, which may be passed through the said tubular shaft and through perforations 22 in the arms 13. The ends of the rod 21 work in bearings 23 in the 95 sides of the camera-box, and one end of said rod is provided with a handle 24, by means of which it may be conveniently manipulated.

The operation of this invention and its advantages will be readily understood from the foregoing description, taken in connection with the drawings hereto annexed. The film is adjusted by placing the roll 3 in the compartment 2 and passing the end over the rods

7 7, under the disks 11, over the upper rod 9, in front of the partition 8, under the lower rod 9, and to the endless belt 19, which is provided with a flap, to which the end of the film is suitably attached. It will be seen that by turning the handle of the rod 21 the drum 17 may be rotated, thus winding the film after each exposure. When the roll of film has been used up, the rod 21 may be removed by simply unscrewing, and the arms 13, carrying the drums 17 and 18, may then be swung out of the casing to the position shown in Fig. 3 of the drawings, the sliding cover of the casing having been previously removed.

10 The pivoted arms 14, carrying the shafts 15 and 16, are thus transformed into a reel, from which the film may be very readily unwound without necessitating the rotation of the drums. The liability of injuring the film is thus greatly lessened and the labor of unwinding it may be more easily and rapidly performed.

The cylindrical rods, preferably of glass, over which the film passes from the roll to the reel may be seated or arranged in any suitable convenient manner and they will serve to prevent the film from being torn or otherwise injured while it is being wound upon the roll.

30 Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a photographic camera, a film-receiver comprising a pair of pivoted arms, shafts journaled in the said arms and carrying drums or rollers, and an endless belt connecting said rollers, substantially as set forth.

2. In a photographic camera, a film-receiver comprising a pair of arms pivoted to the camera and arranged to swing out of the same, drums or rollers journaled in said arms, an endless belt, and means for retaining said arms in position within the camera-box, substantially as set forth.

45 3. In a photographic camera, a film-receiver comprising a pair of pivoted arms, drums or rollers journaled in said arms and connected by an endless belt, and a rod extending through the tubular shaft of one of the rollers and suitably connected with said shaft, said rod being provided with bearings in the sides of the camera-box, substantially as set forth.

50 4. In a photographic camera, a film-receiver comprising a pair of arms hinged within the

camera-box, arms pivoted to the ends of said 55 hinged arms, rollers or drums mounted on the said pivoted arms and connected by an endless belt, and a rod adapted to be extended through and connected with the tubular shaft of one of the rollers and having bearings in 60 the sides of the camera-box, substantially as set forth.

5. In a photographic camera, a film-receiver comprising a pair of arms hinged within the camera-box, arms pivoted to the ends of said 65 hinged arms, a tubular shaft and a solid shaft mounted in the said pivoted arms and having drums or rollers connected by an endless belt, the hinged arms being provided with perforations registering with the ends of the tubular 70 shaft, a rod adapted to be extended through and connected with the tubular shaft, and bearings in the sides of the camera-box for the ends of said rod, substantially as set forth.

6. The combination, with the camera-box, 75 of arms hinged within the same, arms pivoted at the free ends of said hinged arms, drums journaled in the ends of said arms, an endless belt passing over the said drums, and a rod adapted to be passed through the tubular 80 shaft of one of said drums, through corresponding perforations in the hinged arms, and through suitable bearings in the sides of the camera-box, means for connecting said rod with the tubular shaft of the roller through 85 which it passes, and a handle at one end of said rod, substantially as set forth.

7. In a film-receiver, the combination of the arms hinged to the camera-box, the arms pivoted to said hinged arms, the drums journaled in said pivoted arms and connected by an endless belt, one of said drums being provided with a tubular shaft having an internally-screw-threaded portion, a rod having a correspondingly-screw-threaded portion 95 adapted to be extended through said shaft and through corresponding perforations in the hinged arms, and suitable bearings for the ends of said rod in the sides of the camera-box, substantially as set forth. 100

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

GEORGE JONES.

Witnesses:

DEMET W. ROSS,
SETH F. JONES.