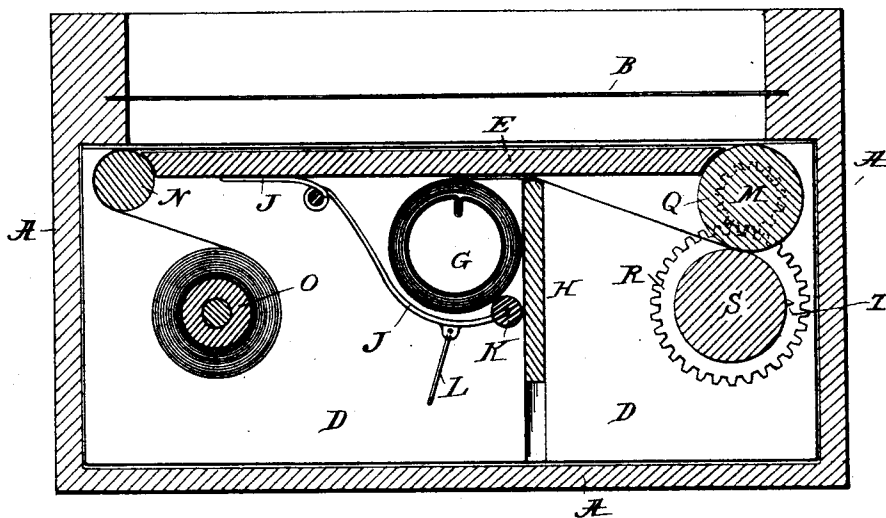
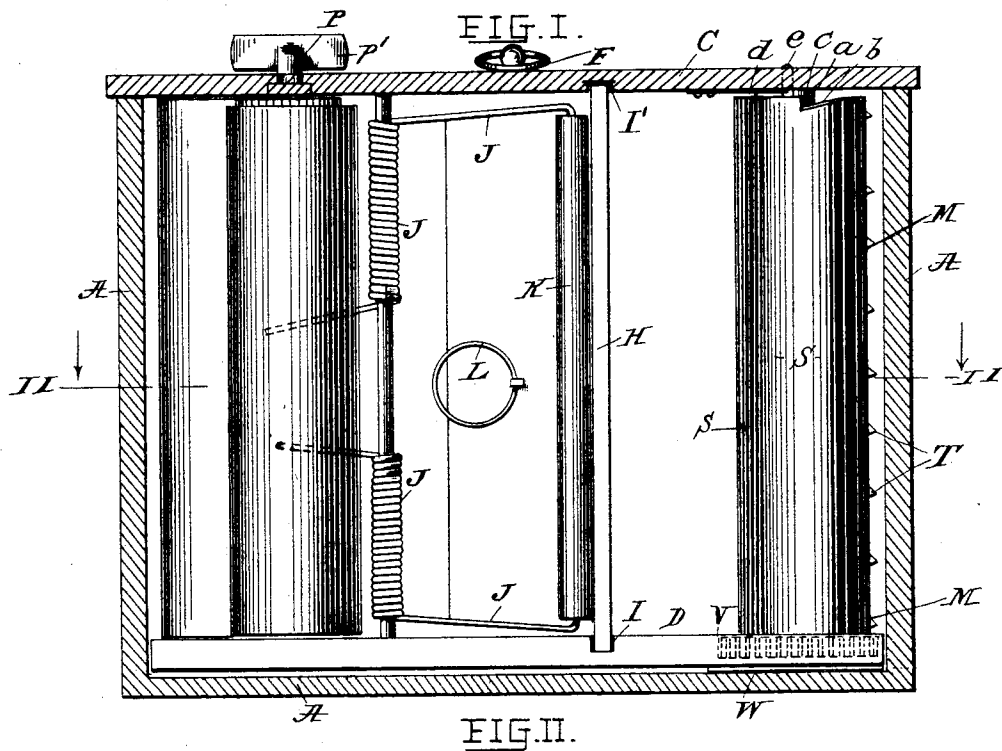


(No Model.)

E. B. BARKER.
PHOTOGRAPHIC ROLL HOLDER.

No. 536,178.

Patented Mar. 26, 1895.



WITNESSES:

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PHOTOGRAPHIC ROLL-HOLDER.

SPECIFICATION forming part of Letters Patent No. 536,178, dated March 26, 1895.

Application filed November 19, 1894. Serial No. 529,255. (No model.)

To all whom it may concern:

Be it known that I, ERASTUS B. BARKER, a citizen of the United States, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Photographic Roll-Holders, of which the following is a specification.

My invention relates to improvements in photographic roll-holders of the class adapted to contain and manipulate a flexible film of sensitized material.

Generally stated, the invention relates to improvements in the means whereby the film is punctured to indicate the dividing line between exposures, and to means for visually and also audibly giving notice to the operator that the desired amount of unexposed film has been carried over the supporting table, ready for a new exposure.

Referring to the drawings herein:—Figure I, illustrates the operative parts of the roll-holder, as seen from the rear, the back of the case being removed. Fig. II illustrates a sectional view on the line I, I of Fig. I, looking in the direction of the arrows.

A is the case or box of the roll-holder. It may be made of such shape, material and size as desired.

B is the usual exposure slide.

C and D and the table E are all rigidly fastened together and constitute a frame which supports the rollers and other devices, about to be referred to. This frame slides endwise into the outer casing A, as usual in roll-holders of this class, and is provided on the part C (which, in effect constitutes one of the sides of the case, when the parts are assembled) with a pull ring F, whereby the said frame and the other parts may be removed.

G is a roll of sensitized film.

H is a partition easily removable from slide-ways I, I', in which it moves.

J, J are springs provided with a pad K, and also with the ring L, whereby they may be pulled upwardly for the insertion of the roll of unexposed film, between the springs and pad K, and the table E of the holder.

The partition H is removed during the act of inserting a fresh roll of the film, and it is then returned to position.

M is a guide roller, about which the film passes, and from it, it is stretched across the table E, thence around another roller N, to the take-up roller O, which is actuated by a spindle P and thumb-nut P', as usual. A suitable stop pawl and other usual appliance are employed in connection with this take-up roller, which need not be explained at length, since they are now well understood.

The roller M is provided with a pinion Q at one end, which meshes into a pinion R upon the puncturing roller S.

The puncturing devices are prick-points T, which are arranged in a single row, longitudinally of the roller S.

A special feature of my invention consists in the relation between the pinions Q and R. They have respectively such number of teeth that the roller S will be caused to make one complete revolution, and its points T caused to puncture the film when the requisite amount of the film has been passed over the table, to exactly cover it; and it will be observed that, if desired, the relation between the pinions Q and R may be such that more than one row of prick points T will be required upon the roller S, and also that the roller S may be much smaller than shown, or larger, as preferred, or that the size of the rollers may be changed, and the prick-points made longer. This, in many instances is desirable to save space within the roll holder, since the prick-points can be located at the extreme ends of the roller S, thus leaving all the intermediate space free for other uses.

It will be borne in mind that the roller S is not driven by the impact of the film against it, but, on the contrary by the pinion Q meshing into the pinion R. I prefer, however, that the rollers S and M should run somewhat close to each other, because thereby, the film will be kept flat and smooth and the operation of the apparatus will be made more uniform and reliable, and if the roller M is made of hard material, such as wood, it is desirable to have slight depressions, made in it, into which the prick-points T may pass during the act of puncturing the paper.

In order to reduce the size of the roll-holder, I prefer to set the pinions Q and R, within a recess V within the plate D of the frame, and

I support the shafts or axes of these two rollers in a brass plate W, which is fastened on the outside of the plate or piece D.

Referring now to the devices which automatically give visual and audible evidence that the proper amount of fresh film has been carried over the table E, attention is directed to Fig. I.

a is the axis of the roller S, at the end opposite the pinion, and this end of the roller S is formed on an incline, as shown at *b*, thus practically making a circular or face cam of this end of the roller, the shoulder or fall of which occurs at *c*.

d is a small plate spring fastened to the board C of the frame, which has a small brass stud *e*, attached to its free end. This spring is in engagement with the cam *b, c*, at all times, and as the roller S is revolved under the action of the face cam, the stud *e* is gradually elevated projecting more and more beyond the surface of the board C. When, however, the roller S is so far revolved as to bring the spring *d* opposite the fall or shoulder of the cam, as at *c*, then the spring drops, carrying the brass stud *e* down with it. The fall of the spring makes a clicking sound, and also the fact that the stud *e* has dropped may be visually ascertained.

Having described my invention, I claim—

1. The combination in a roll-holder of a guide roll driven by the adhesion of the film, and another roller provided with prick-points

set close to the guide roller, so as to bear upon the paper, and so geared to said guide roller, that the film will be punctured when an amount sufficient for a single exposure has gone over the guide roller, for the purposes set forth.

2. The combination in a roll holder of a guide roller and another roller provided with prick-points geared to said guide roller, so that the film will be punctured when an amount sufficient for a single exposure has gone over the guide roller, and an indicator placed at the outside of the roll-holder and operated by the said puncturing roller, for the purposes set forth.

3. The combination in a roll-holder of a guide roller, driven by the adhesion of the film, and another roller provided with prick-points geared to said guide roller, so that the film will be punctured when an amount sufficient for a single exposure has gone over the guide roller, and an incline on the end of the puncturing roller, which automatically operates an indicator exposed at the outside of the roll-holder, for the purposes set forth.

Signed at New York, in the county of New York and State of New York, this 16th day of November, A. D. 1894.

ERASTUS B. BARKER.

Witnesses:

J. H. HEATH,
S. C. CRAMPTON.