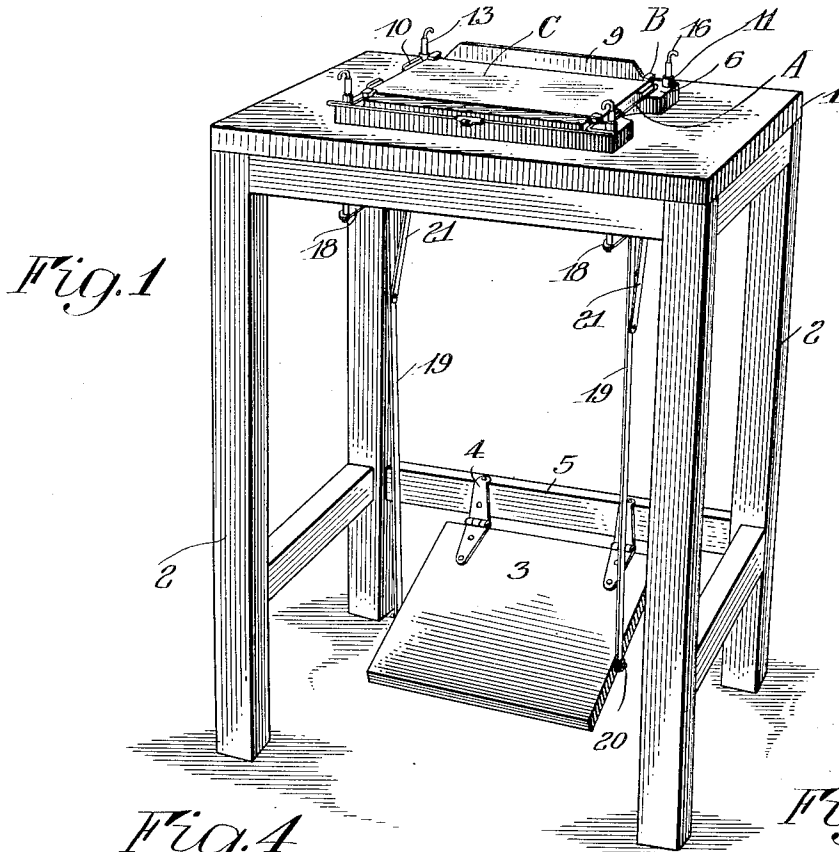
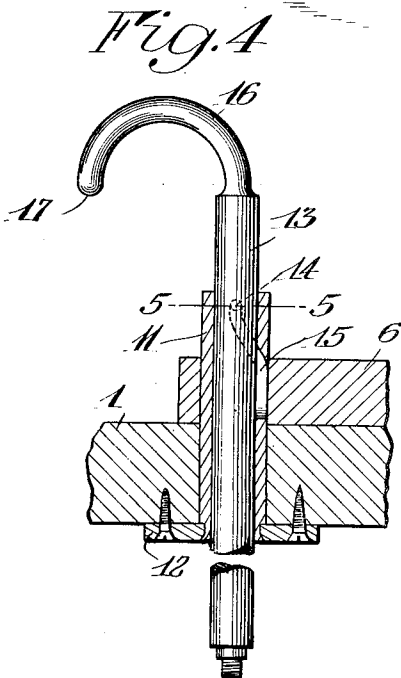
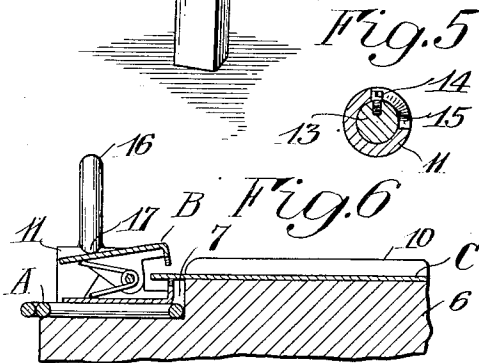
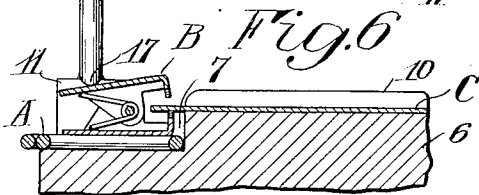
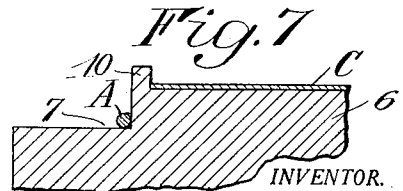


1,365,975.

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LOADING DEVICE FOR CUT FILMS.
APPLICATION FILED AUG. 2, 1920.

Patented Jan. 18, 1921.
2 SHEETS—SHEET 1.



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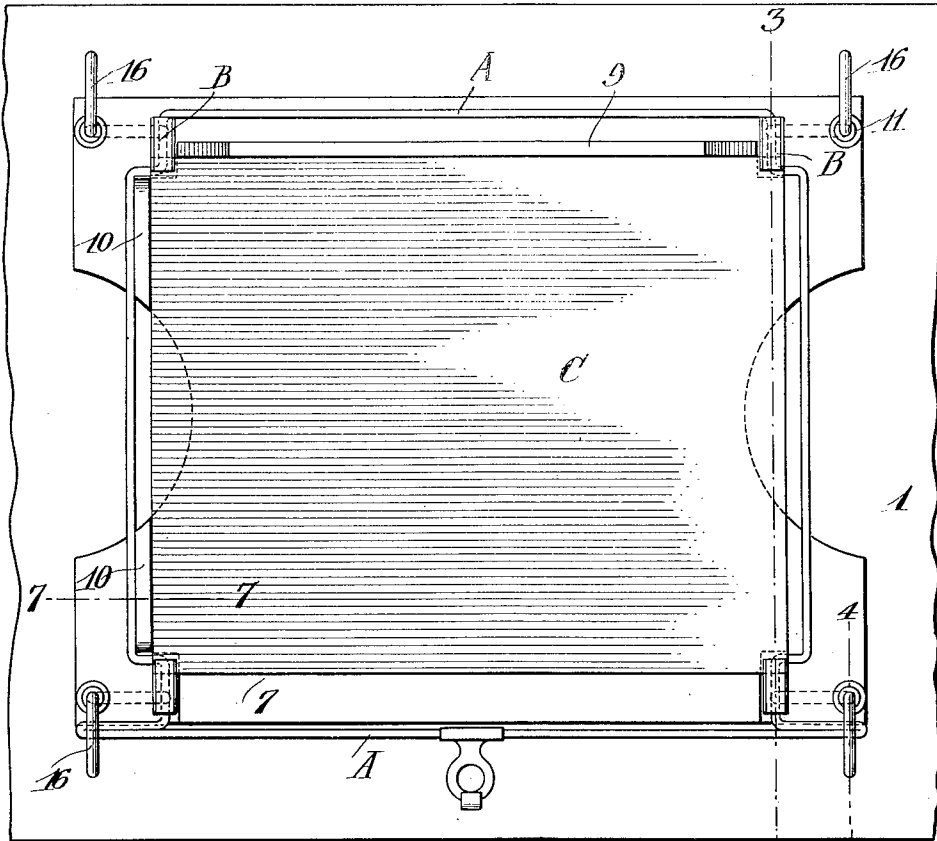


Fig. 2

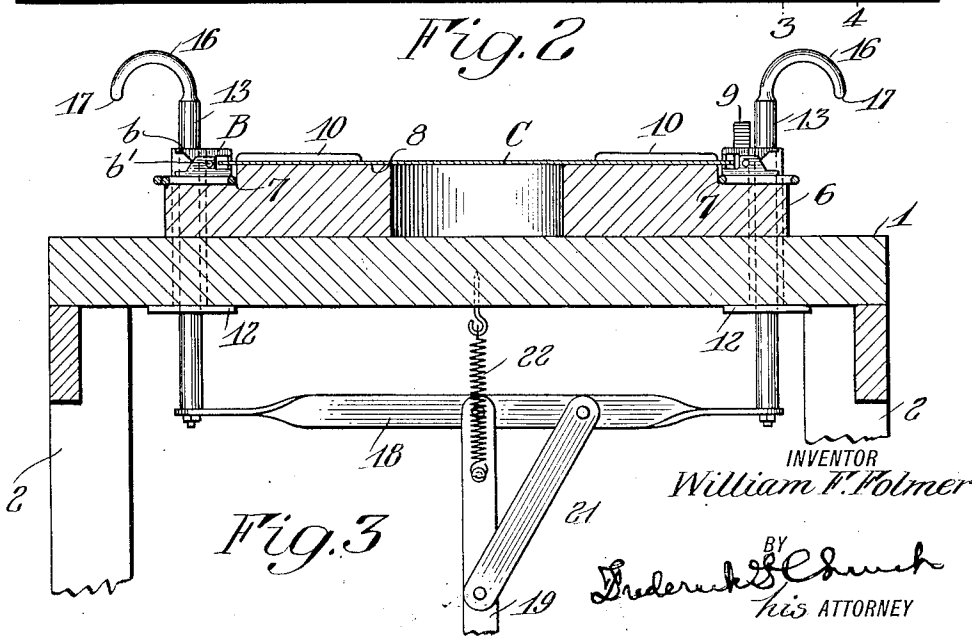


Fig. 3

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LOADING DEVICE FOR CUT FILMS.

1,365,975.

Specification of Letters Patent.

Patented Jan. 18, 1921.

Application filed August 2, 1920. Serial No. 400,845.

To all whom it may concern:

Be it known that I, WILLIAM F. FOLMER, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Loading Devices for Cut Films; 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 the developing, washing, drying and similar treatments of cut films or flexible sensitive sheets. For such purposes these films are usually mounted in frames in which they are retained by spring clamping devices engaging them at their corners and released by pressure. My invention has for its object to provide a simple, efficient and convenient machine in which such frames may be rapidly loaded with ease and precision. 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 perspective view of a machine constructed in accordance with and illustrating one embodiment of my invention, the parts being in normal position;

Fig. 2 is an enlarged plan view of a fragment of the table showing the bed;

Fig. 3 is a section on the line 3—3 of Fig. 2;

Fig. 4 is an enlarged section on the line 4—4 of Fig. 2;

Fig. 5 is a section on the line 5—5 of Fig. 4;

Fig. 6 is an enlarged fragmentary section corresponding to Fig. 3 but showing the releasing element in engagement with the clamping device, and

Fig. 7 is an enlarged fragmentary section on the line 7—7 of Fig. 2.

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

A cut film carrier of the type that the machine of my present invention is adapted to act upon is shown in the patent to F. W. Barnes *et al.* No. 1,151,153 of August 24, 1915 and though illustrated herein, it is

therefore not necessary to describe it in great detail. Referring more particularly to Figs. 2 and 3, A indicates the wire frame and B spring clips at the corners thereof having spring jaws pivoted at *b'* and adapted to be released by pressure on the arm *b* of the jaw. The cut film sheet is indicated at C and in both of the figures referred to, is being held at its corners by the clips, it being noticed that the film occupies a different plane from that of the wire frame.

In the practice of my present invention, as shown in the present embodiment thereof, I provide a table 1 supported at convenient height on legs 2 between which is a treadle 3 hinged at 4 to a rear rail 5 connecting the legs. Supported on the table is a bed plate 6 the edges of which are rabbeted at 7. The frame A lies in this rabbet by which it is properly positioned with reference to the relatively elevated plane surface 8 of the bed upon which the film C is laid to lie in the plane of the jaws of the spring clips or fastening devices B. Gage flanges 9 and 10 on intersecting sides of the bed serve as guides by which the operator may quickly and accurately position the sheet in that plane so that its corners will unerringly cooperate with the fastening devices. Therefore, the frame A having been first applied to the bed, the spring jaws of the fastening devices B are opened and the sheet C placed against the gages. The jaws are then released and allowed to clamp the sheet at its four corners after which the sheet is removed with the frame and the operation repeated with another frame.

The principal feature of my invention is the provision of means in no respect interfering with access to the bed and free manipulation of the frame and sheet which means simultaneously opens or releases the fastening devices B through operation of the foot treadle 3 and in the present instance, such means consists as follows:

At each corner of the bed plate 6, I provide as best shown in Fig. 4, a tubular socket or bushing 11 extending through the bed and table 1 and secured by a collar 12 to the bottom of the latter. In this socket reciprocates vertically a plunger 13 the shank of which, as shown in Fig. 5, is provided with a laterally projecting pin 14 occupying a spiral groove 15 in the wall of the socket. At the upper end of the plun-

ger is a hook or lateral arm 16 having an offset engaging portion 17. The lower ends of the plungers on one side of the bed are connected in pairs by cross heads 18 each cross head, in turn, being connected at its center to a pull rod 19 the lower end of which is pivoted at 20 to one side of the treadle board 3. The connection of the cross head to the pull rod is preferably made rigid by a brace 21 and springs 22 connecting the upper ends of the pull rods to the under side of the table 1 normally hold the treadle and the rest of the mechanism, including the plungers 13, in an elevated position.

In this normal elevated position the offset engaging portions 17 of the releasing elements or plungers are turned away from the bed and frame A as shown in Figs. 1, 2 and 3 so that the whole element is arranged outside of the outline of the frame and does not interfere with the insertion or removal of the latter with reference to the bed. When the treadle 3 is depressed and the pull rods drawn down, the plungers 13 are also depressed and in their downward movement, they are also caused to rotate by reason of the coöperation of the pins 14 with the spiral cams or grooves 15. This brings the engaging portion 17 over or into alinement with the releasing portions b of the fastening devices B on the frame and the continued downward movement causes the said offset engaging portions 17 to engage and release these fasteners all simultaneously in the manner shown in Fig. 6. When the treadle is released and the parts are raised by the springs 22, the releasing elements 13, in rising, are rotated back to their normal cleared position.

In using the machine, it is obvious that the frame A is placed in position on the bed followed by the sheet C for the positioning of which the operator uses both hands, but in the meantime, he has depressed the treadle with his foot so that the jaws B are open at the time the sheet C reaches its position and it therefore passes into the jaws so that the subsequent release of the treadle leaves the sheet clamped in place and the frame and sheet may be removed.

I claim as my invention:

1. In a device of the character described, the combination with a table provided with gages for positioning a sheet holding frame, and its contents with the fastening devices thereof in definite positions, of a plurality of separate releasing elements on the table arranged outside of the outline of the frame and means for operating them into contact with the fastening devices.

2. In a device of the character described, the combination with a table provided with

gages for positioning a sheet holding frame and its contents with the fastening devices thereof in definite positions, of a plurality of separate releasing elements mounted on the table and normally positioned outside of the outline of the frame and means for simultaneously operating them inwardly and downwardly into contact with the fastening devices of the frame.

3. In a device of the character described, the combination with a table provided with gages for positioning a sheet holding frame, and its contents with the fastening devices thereof in definite positions, of a plurality of separate releasing elements on the table arranged outside of the outline of the frame and each consisting of a vertically reciprocatory member having an offset engaging portion rotatable into position to engage a fastening device on the frame and means for operating said elements.

4. In a device of the character described, the combination with a table provided with gages for positioning a sheet holding frame and its contents with the fastening devices thereof in definite positions, of a plurality of separate releasing elements on the table arranged outside of the outline of the frame and each consisting of a rotatable plunger having an offset engaging portion and means for operating the plunger to carry the said engaging portion laterally and downwardly into engagement with the fastening devices of the frame.

5. In a device of the character described, the combination with a table provided with gages for positioning a sheet holding frame, and its contents with the fastening devices thereof in definite positions, of a plurality of separate releasing elements on the table arranged outside of the outline of the frame and each consisting of a rotatable plunger having an offset engaging portion and a laterally projecting pin on its shank, a spirally ground socket in the table for each plunger to receive the pin and rotate the plunger into alinement with a releasing device of the frame when the plunger is depressed and a treadle beneath the table having connections for the simultaneous operation of all of the plungers.

6. In a device of the character described, the combination with a table provided with gages for positioning a sheet holding frame and its contents with the fastening devices thereof in definite positions, of a plurality of separate releasing elements on the table arranged outside of the outline of the frame and a treadle beneath the table connected to actuate all of the releasing elements simultaneously.

WILLIAM F. FOLMER.