F. K. JELLA & F. M. BROWNING.

DEVICE FOR REPAIRING FILMS.

APPLICATION FILED NOV. 20, 1912.

1,095,874.

Patented May 5, 1914.

3 SHEETS—SHEET 1.

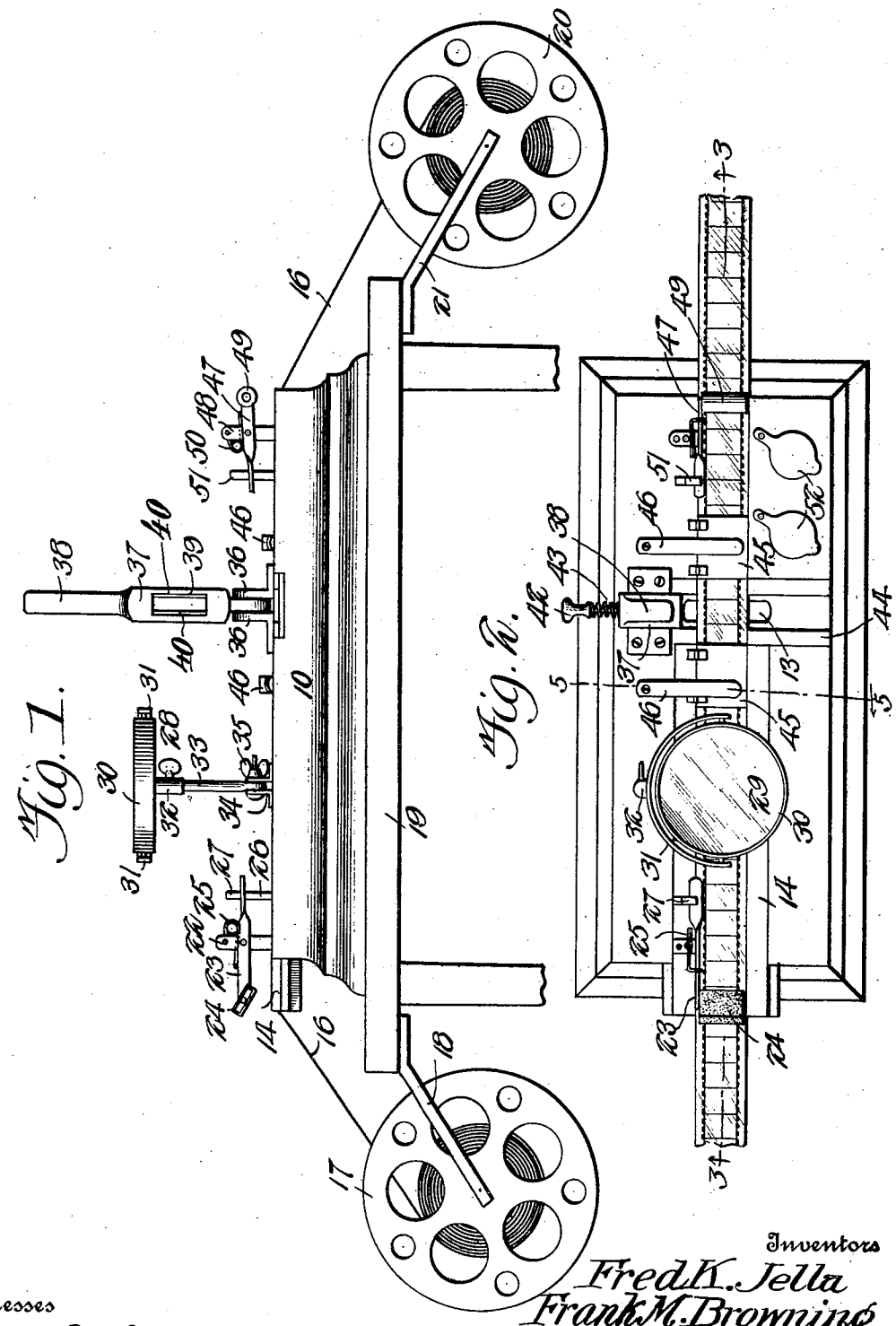


Fig. 1.

Fig. 2.

Witnesses

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3 SHEETS—SHEET 2.

Fig. 3.

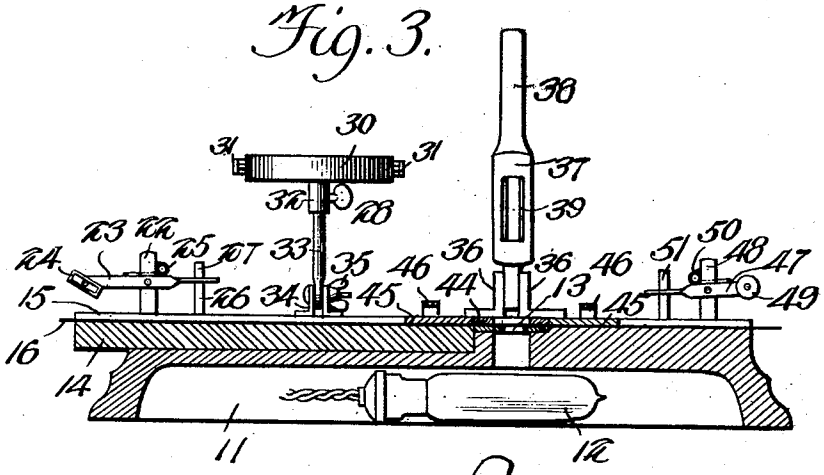
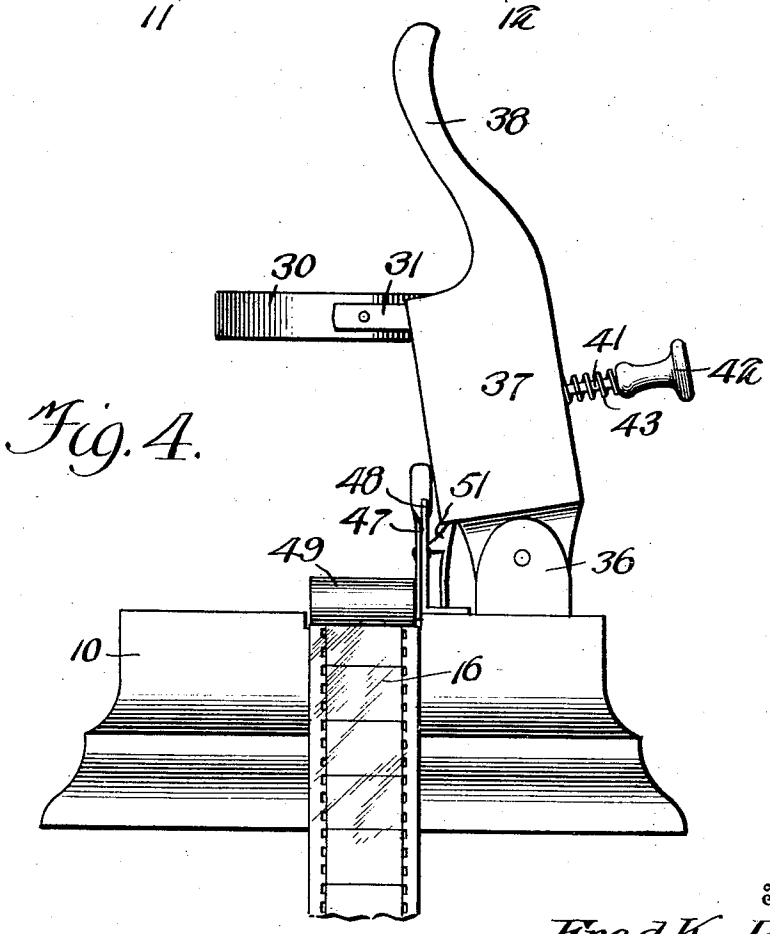


Fig. 4.



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3 SHEETS—SHEET 3.

Fig. 5.

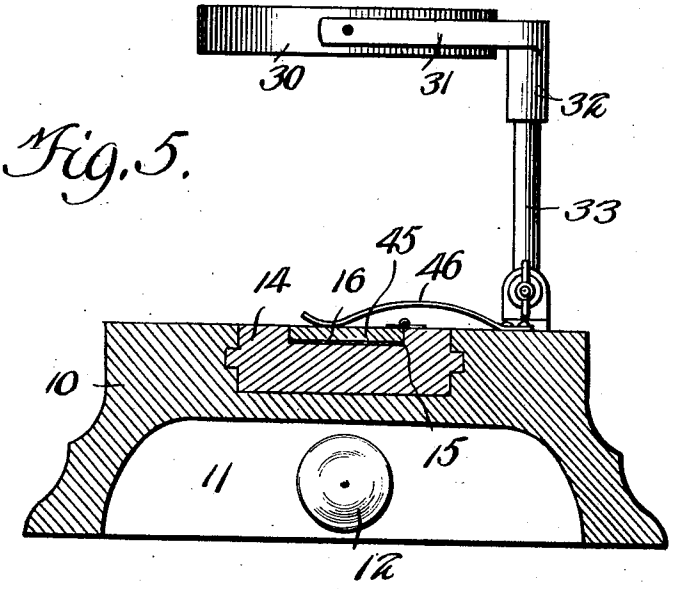
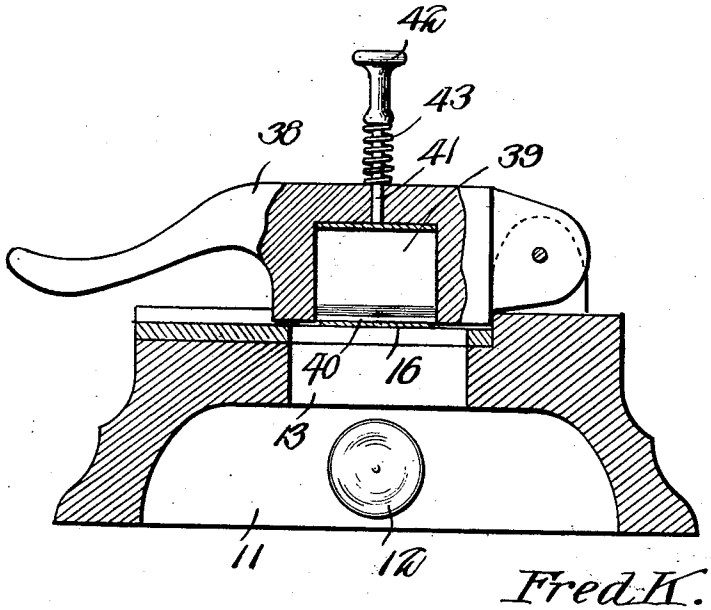


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

FRED K. JELLA AND FRANK M. BROWNING, OF LAWRENCE, KANSAS.

DEVICE FOR REPAIRING FILMS.

1,095,874. Specification of Letters Patent. Patented May 5, 1914.

Application filed November 20, 1912. Serial No. 732,535.

To all whom it may concern:

Be it known that we, FRED K. JELLA and FRANK M. BROWNING, citizens of the United States, residing at Lawrence, in the county of Douglas and State of Kansas, have invented new and useful Improvements in Devices for Repairing Films, of which the following is a specification.

The invention relates to motion picture apparatus, more particularly to picture vehicles and elements, and has for an object to provide a device for repairing a film by cutting away broken or defective parts in order that the cut ends of the film can be suitably connected and the film reused.

In the further disclosure of the invention reference is to be had to the accompanying drawings, constituting a part of this specification, in which similar characters of reference denote corresponding parts in all the views, and in which—

Figure 1 is a side elevation of the device; Fig. 2 is a fragmentary plan view; Fig. 3 is a vertical longitudinal sectional view taken on the line 3—3 in Fig. 2; Fig. 4 is an end view; Fig. 5 is a vertical transverse sectional view taken on the line 5—5 in Fig. 2; and Fig. 6 is a fragmentary vertical transverse sectional view showing the cutting member.

Referring more particularly to the views, use is made of a base 10 having the under side thereof grooved to form a compartment 11 adapted to receive an electric light 12 arranged immediately beneath an opening 13 in the base, the said base 10 being grooved to receive and support a bed plate 14, the said bed plate being correspondingly grooved to form a guideway 15 in the bed plate and through which a film 16 is adapted to be advanced, the said film being initially supported on a primary reel 17 journaled on suitable brackets 18 secured to a table 19 with an end of the film, after the same has been advanced along the guideway 15, wound upon a secondary reel 20 journaled on brackets 21 secured to the table 19, the mentioned primary and secondary reels 17 and 20 being preferably arranged in the vertical plane of the guideway 15 in order that the film 16 can be properly advanced along the guideway.

An upright 22 is secured to the bed plate 14, and mounted to swing thereon is an arm 23 carrying a pad 24 movable on the arm 23 so that the flat under side of the pad will engage the upper face of the film when the same is advanced along the guideway 15, a spring 25 being mounted on the upright 22 and engaging the arm 23 to normally hold the pad 24 in contact with the film, a spring-like securing member 26 being supported on the bed plate 14 and provided with an inclined head 27 adapted to engage an end of the arm 23 to normally retain the pad 24 out of engagement with the film in the guideway 15.

A magnifying member 28 is supported on the base 10 and comprises a magnifying glass 29 encircled by and secured in a frame 30 mounted to swing on curved arms 31 of a bracket 32 revoluble on a supporting rod 33 which is mounted to swing between brackets 34 secured to the base 10, a thumb screw 35 being provided for mounting the supporting rod to swing upon the brackets 34, thus permitting of adjusting the inclination of the supporting rod relatively to the base 10, it being further seen that the bracket 32 can be swung horizontally and the frame 30, carrying the glass 29, can be swung in a plane perpendicular to the plane in which the bracket 32 swings.

As mentioned heretofore, the base 10 is provided with the opening 13, the said opening being arranged in the base so that when the film is advanced from the primary reel 17 to the secondary reel 20, the film will pass over the opening so that in looking down upon the base the film will be readily transparent in view of the provision of the electric light 12 immediately below the opening 13. Mounted to swing on brackets 36 secured to the base 10 is a cutting member 37 including a handled cutter bar 38 having a vertically movable blade 39 mounted thereon, the said blade being substantially U-shaped to present a plurality of spaced cutting edges 40, with the distance between the cutting edges substantially equal to the width of a picture on the film 16, a rod 41 being arranged to extend vertically from the blade 39 and provided with a knob 42, an expansible helical spring 43 being arranged to encircle the rod 41 with an end of the spring abutting against the knob 42 and another end of the spring abutting against the cutter bar 38 to normally retain the cutting blade 39 above the lower edge of the cutter bar 38. Pads 44 are mounted on the base 10 at the entrance to the opening 13 in the base, the said pads being adapted to

receive the cutting edges 40 of the blade 39 when the blade is moved into cutting position to cut a portion from the film 16.

Locking blocks 45 are mounted to swing on the base 10 and bed plate 14 and when in lowered or locked position lie within the plane of the film 16, the said locking blocks being engaged by flat springs 46 curved as shown in Fig. 5 to exert a downward pressure upon the locking blocks when the same are in locked position and also retain the locking blocks in unlocked position when the same are thrown upwardly from the base, the said locking blocks being provided on both sides of the cutting member 37 and adapted, when in locked position, to lock the film in cutting position. An arm 47 is mounted to swing on an upright 48 supported on the base 10, the said arm having journaled thereon a roller 49 which, when in lowered position, will engage the film at one end of the base, the said arm 47 being engaged by a spring 50 secured to the upright 48 to normally hold the roller in engagement with the film, a securing member 51, similar to the securing member 26, being supported on the base 10 and adapted to be engaged by an end of the arm 47 for holding the roller 49 out of engagement with the film 16. Suitable openings are provided in the base 10 and normally closed by covers 52, one of the said openings being adapted to contain a fluid which will soften the emulsion of the film and the other being adapted to contain a mucilaginous substance employed in splicing and severing ends of the film.

In the use of the device described, the film 16 is advanced along the guideway 15 in the manner mentioned heretofore, the pad 24 being in lowered position and engaging the film in order to remove any particles of dust thereon as the film is advanced along the guideway. Now when the film passes beneath the magnifying glass 29 any defects in the film can be readily seen and the film is then further advanced along the guideway until the defective portion thereof registers with the opening 13 in the base 10. The cutting member 37 is now swung downwardly and the locking blocks are also swung into locked position to lock the film in cutting position, after which the operator, still exerting a downward pressure on the handle of the cutter bar 38, presses downwardly on the knob 42, thus moving the roller 49 into engagement with the film to sever the defective portion therefrom. When this has been accomplished the fluid in one of the openings normally covered by one of the covers 52 is applied to the severed ends of the film to soften the emulsion thereon and the mucilaginous substance in one of the heretofore mentioned openings is then applied to the film, after which the ends are connected to splice the film, it being readily seen that when the film is spliced in the manner mentioned, the splice will not be apparent to the casual observer when the pictures on the film are projected upon a screen in view of the fact that a single picture is removed from the film when the same is found defective so that the rapid operation of the film in the moving picture machine will prevent the eye of the observer from detecting that one of the pictures on the film has been removed. A roller 49 is provided in order to prevent the film from being loosely wound upon the secondary reel 20, and if desirable the roller can also be formed of a cleaning material which will further clean the film and remove any particles of dust or dirt thereon, prior to winding the film upon the secondary reel.

From the foregoing description it will be seen that in the use of a device of the character described, the film is first cleaned, then carefully inspected and if defective portions are found in the film, the same are easily and quickly removed from the body of the film in a simple and expedient manner.

Having thus described our invention, we claim:

1. In a device of the class described, the combination with a base, of a bed plate thereon and provided with a guideway adapted to receive a film, a handled cutting member mounted to swing on the base and adapted to extend transversely thereto and engage the film, and a vertically movable cutter blade carried by the cutting member and adapted to transversely cut the film.

2. In a device of the class described, the combination with a base, of a bed plate thereon and provided with a guideway adapted to receive a film, a cutting member mounted to swing on the base and movable thereon to engage the film, a cutter blade operable on the cutting member, and a spring for normally holding the cutter blade in inoperative position, the said cutter blade being movable vertically on the cutting member to cut the film transversely of its length.

3. In a device of the class described, the combination with a base adapted to receive a film, of a cutting member mounted to swing on the base, a handle on the cutting member for moving the same into position to engage and clamp the film to the base, the said cutting member having a recess, a double edged cutter blade movable in the recess of the cutting member, a shank carried by the cutter blade, a knob on the shank, and a spring interposed between the knob and the cutting member and encircling the shank to normally hold the cutter blade within the recess and out of cutting engagement with the film.

4. In a device of the class described, the combination with a base recessed to form a compartment, of a bed plate carried by the base and extending longitudinally thereto, the said bed plate being adapted to project from one end of the base to a point beyond the medial portion of the base and adapted to receive a film, a plurality of spring-engaged clamping members adapted to engage and clamp the film, a cutting member interposed between the clamping member and movable to engage the film, and a cutter blade carried by the cutting member and movable thereon to engage and cut the film.

In testimony whereof we affix our signatures in presence of two witnesses.

FRED K. JELLA.
FRANK M. BROWNING.

Witnesses:
GERTRUDE STANDING,
J. B. WILSON.