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E. S. PORTER.

FRAMING DEVICE.

APPLICATION FILED SEPT. 28, 1921.

1,433,475. Patented Oct. 24, 1922.

3 SHEETS—SHEET 1.

Fig. 1.

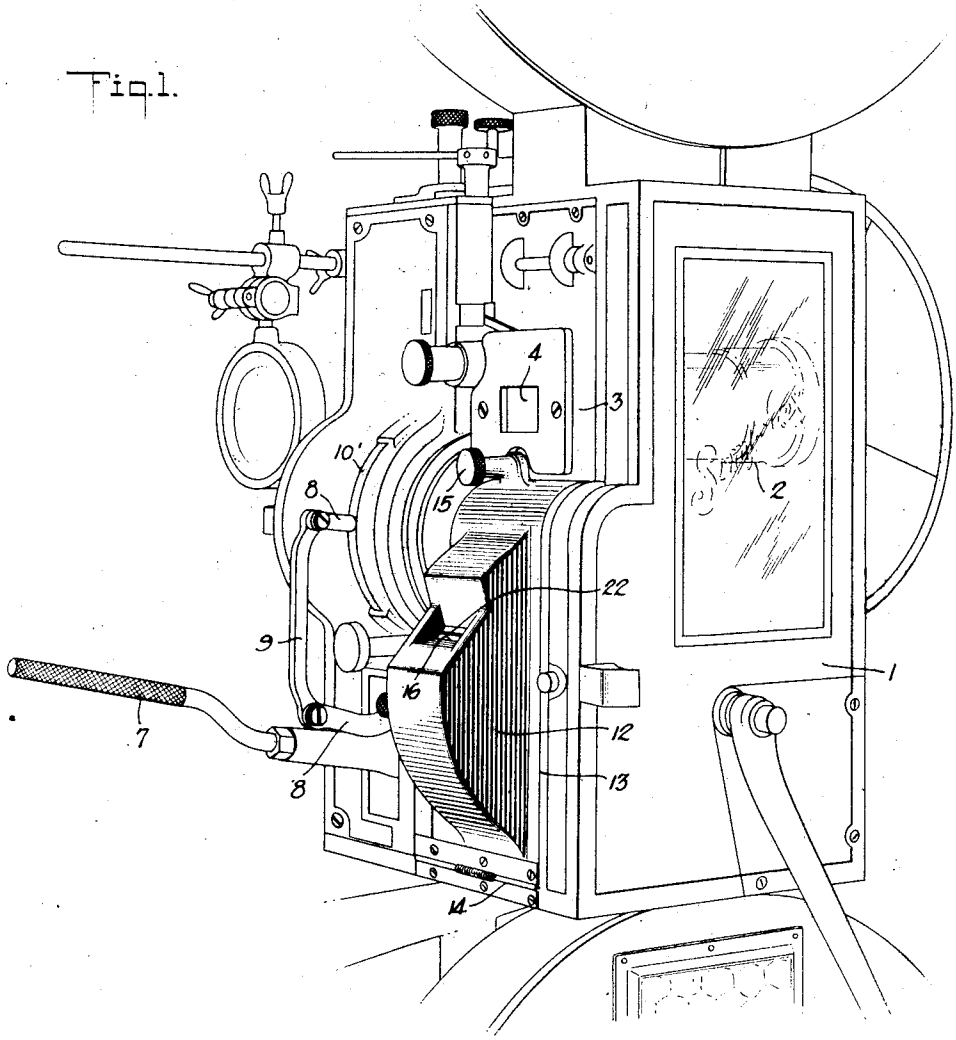
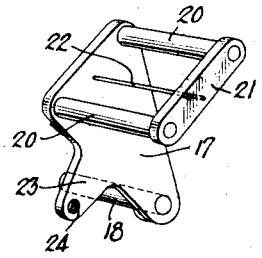


Fig. 6.



WITNESSES

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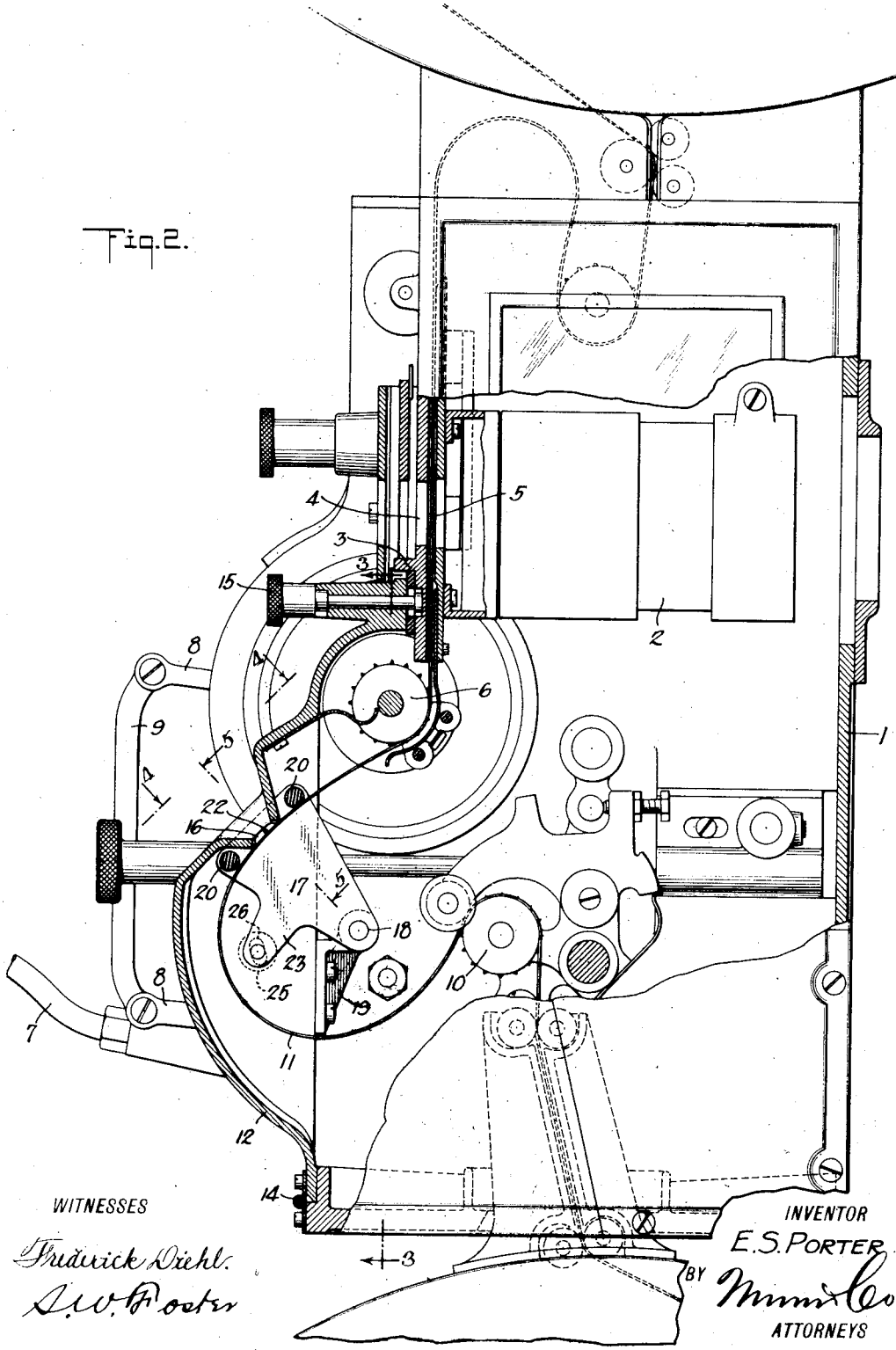
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3 SHEETS—SHEET 2.

Fig. 2.



WITNESSES

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3 SHEETS—SHEET 3.

Fig.3.

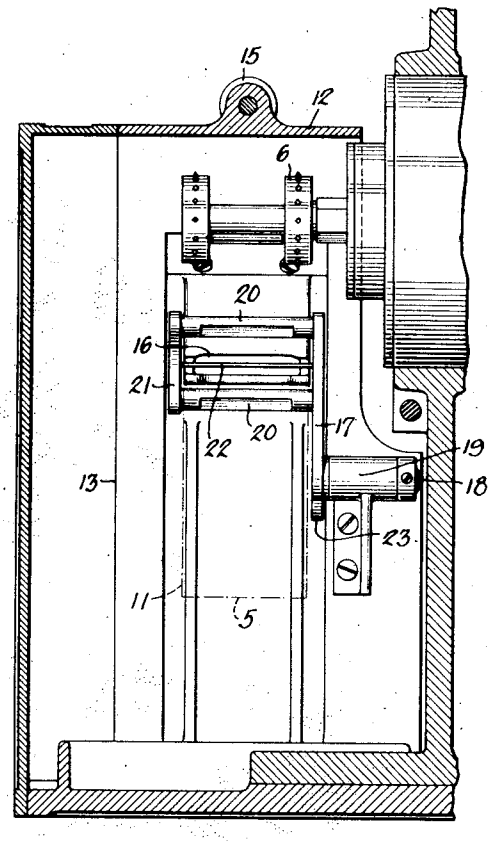


Fig.4.

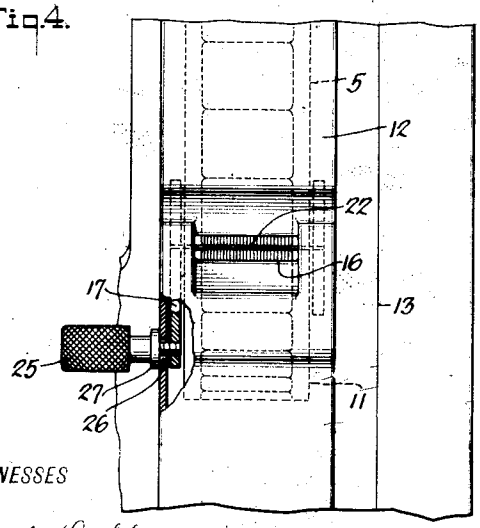
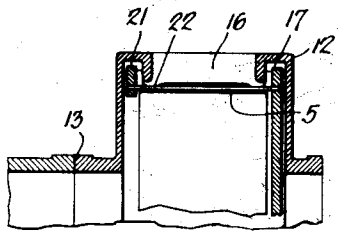


Fig.5.



WITNESSES

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Patented Oct. 24, 1922. 1,433,475

UNITED STATES PATENT OFFICE.

EDWIN STANTON PORTER, OF NEW YORK, N. Y.

FRAMING DEVICE.

Application filed September 28, 1921. Serial No. 503,835.

To all whom it may concern:

Be it known that I, EDWIN S. PORTER, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county of New York, and State of New York, have invented a new and Improved Framing Device, of which the following is a full, clear, and exact description.

This invention relates to improvements in framing devices, an object of the invention being to provide a framing device which is in the nature of a gage registering with the film at a point removed from the aperture of the projecting machine so as to permit a proper framing of the pictures without the necessity of looking through the aperture.

While projecting machines are in operation it is a dangerous matter for the operator to attempt to look through the aperture at the film because the light rays are apt to burn him, and it is the purpose of my invention to provide a gage at a point removed from the aperture and preferably registering with that portion of the film known as the lower loop, which is readily observable at all times, so that the operator can see at a glance whether or not the pictures are properly framed and if they are not, can properly frame them without the necessity of looking through the aperture and avoiding the necessity of framing on the screen which is particularly undesirable in high class motion picture houses.

A further object is to provide a framing device which can be readily attached to projecting machines in common use and which will add materially to the art of picture projection.

With these and other objects in view the invention consists in certain novel features of construction, and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings—

Figure 1 is a perspective view illustrating a type of projecting machine known on the market as the "Simplex machine," showing my invention thereon, the view being in perspective.

Figure 2 is a view in longitudinal section through the projecting machine.

Figure 3 is a view in transverse section on the line 3—3 of Figure 2.

Figure 4 is a fragmentary view in transverse section on the line 4—4 of Figure 2.

Figure 5 is a fragmentary view in transverse section on the line 5—5 of Figure 2.

Figure 6 is a perspective view of my improved gage.

In the accompanying drawings I illustrate a well known type of projecting machine in which 1 represents the casing, 2 the projecting lens holder having the ordinary film trap 3 at the rear thereof and 4 is the aperture exposing the film 5 which is intermittently moved across the same as is common in the art.

6 represents the intermittent sprocket and 7 the framing lever connected by suitable arms 8 and a link 9 with mechanism as shown at 10′, for imparting a partial turning movement to the intermittent sprocket to properly frame the picture or film in the aperture 4. This mechanism is common with machines of the type described and forms no part of the present invention except in that it constitutes the film moving means for framing.

10 represents the lower take-up sprocket and between the sprockets 6 and 10 the film forms the ordinary lower loop as indicated at 11, and this lower loop is accommodated in a housing 12 which constitutes a portion of a door 13, the latter hingedly connected at its lower end as shown at 14, and secured at its upper end by means of a securing device 15.

The housing 12 is made at its upper forward portion with an opening 16 through which the lower loop 11 of film 5 can be seen and in sight of this opening 16 my improved gage 17 is located as will now be described. The gage 17, which is shown in perspective in Figure 6, comprises a plate having a laterally projecting pivot pin 18 at one end which is pivotally supported in a bearing bracket 19 on the projecting casing 1 so that the gage constitutes a part of the casing and does not interfere with the opening and closing of the door 13. At the free end of the plate 17 a pair of laterally projecting rods 20 are secured and support a crossbar 21 and a gage wire 22 is located between the pair of rods 20 and is secured at its ends in the plate 17 and the bar 21. The rods 20 and also the edges of the housing 12 constituting the walls of the opening 16, are re-

cessed so as to provide clearness across the face of the film and only engage the edges of the film, and the wire 22 is so positioned as to be spaced slightly from the face of the film to prevent rubbing.

The gage 17 is made with a finger 23 having a screw threaded opening 24 therein and a set screw 25 projects through a slot 26 in the side of housing 12 and is screwed into the threaded opening 24. This screw 25 has an annular shoulder 27 which bears against the outer face of the housing and serves as a clamp to clamp the gage 17 at the desired pivotal adjustment. The slot 26 permits a sufficient adjustment of the gage 17 and the gage wire 22 to compensate for any contraction of the film.

The operation is as follows: The framing lever 7 is operated to cause a partial rotary movement of the intermittent sprocket 6 to move the film 5 across the aperture 4 until the picture is properly framed therein. The operator then looks through the opening 16 to see if the gage wire 22 exactly registers with the division line between the pictures. If it does not, he adjusts the gage 17 by means of the set screw 25, first releasing the set screw, then imparting a pivotal movement to the gage, and then clamping the gage after the wire is in exact register with the line between the pictures. This movement of the gage, as above explained, is necessary on account of the contraction which takes place in the film. After the gage is once set, it will indicate at all times the proper framing of the pictures. In other words, after the gage is set, it is never necessary for the operator to again look through the aperture 4 to frame the picture. He merely looks through the opening 16 to see whether or not the wire 22 registers with the line between the pictures and when the pictures are not properly framed, he moves the lever 7 and looks through the opening 16, and hence, it is not necessary when a machine is equipped with my improved framing device for the operator to look through the aperture of the projecting machine and thus run the risk of burning himself for he can properly frame by looking through the opening 16 to see the location of the gage wire 22 relative to the film.

Various slight changes might be made in the general form and arrangement of the parts described without departing from the invention, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

I claim:

1. The combination with a motion picture projecting machine, of a framing device located at a point removed from the film aperture of the projecting machine, means for adjusting the film longitudinally, and means for adjusting the framing device to register with the film.

2. The combination with a motion picture projecting machine and means for adjusting the film longitudinally, of an adjustable framing device registering with the film and located at a point removed from the aperture of the machine.

3. The combination with a motion picture projecting machine and means for adjusting the film longitudinally, and means for moving a film across the aperture of the machine to frame the picture therein, of a framing gage located at a point removed from the aperture and registering with the film, said machine having an opening therein exposing the film and the gage.

4. The combination with a motion picture projecting machine having a film aperture therein, an intermittent sprocket below the film aperture, and a lower take-up sprocket whereby the film is looped between said sprockets, of a framing device registering with the lower loop portion of the film and exposed through an opening in the machine casing.

5. The combination with a motion picture projecting machine having a film aperture therein, an intermittent sprocket below the film aperture, and a lower take-up sprocket whereby the film is looped between said sprockets, of a framing device registering with the lower loop portion of the film and exposed through an opening in the machine casing, said gage comprising an adjustable frame, and a wire on said frame adapted to register with the division lines between the pictures of the film.

6. The combination with a motion picture projecting machine, comprising a casing, of a lower loop housing door on the casing having an opening therein, a gage pivotally supported on the casing, and a wire on the gage projecting across the opening in said door and registering with the film.

7. The combination with a motion picture projecting machine, comprising a casing, of a lower loop housing door on the casing having an opening therein, a gage pivotally supported on the casing, a wire on the gage projecting across the opening in said door and registering with the film, and means for moving the gage and securing the same at its position of adjustment.

8. The combination with a motion picture projecting machine, of a lower loop housing door having an opening therein, a framing gage comprising a plate, means pivotally connecting the plate to the casing of the machine, a pair or rods projecting laterally from the plate, a bar supported by the rods, a wire connecting the bar and the plate and

normally positioned across said opening, and means for adjustably securing the plate so as to position the wire in register with the division line between the pictures of the film.

9. The combination with a motion picture projecting machine having an aperture therein in which the pictures are framed, and means for adjusting the film longitudinally of an adjustable gage located at a point removed from said aperture and indicating when in register with the film the framing of the picture in the aperture.

EDWIN STANTON PORTER.