J. G. R. O'HARA.

FILM GUIDE.

APPLICATION FILED AUG. 15, 1917.

1,308,443. Patented July 1, 1919.

Fig. 1

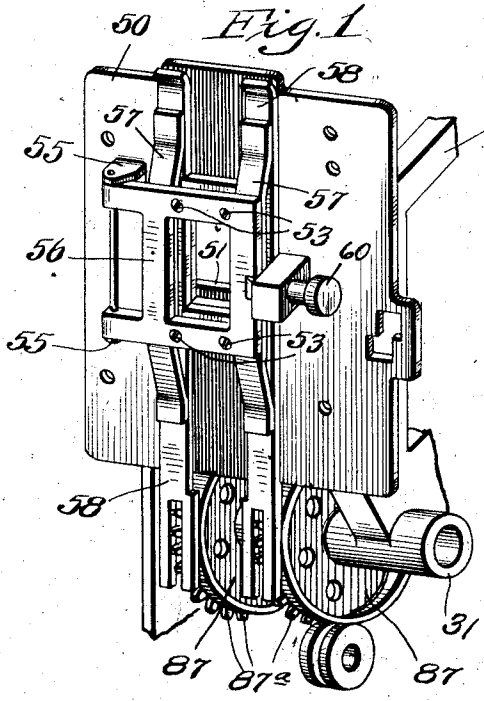


Fig. 2

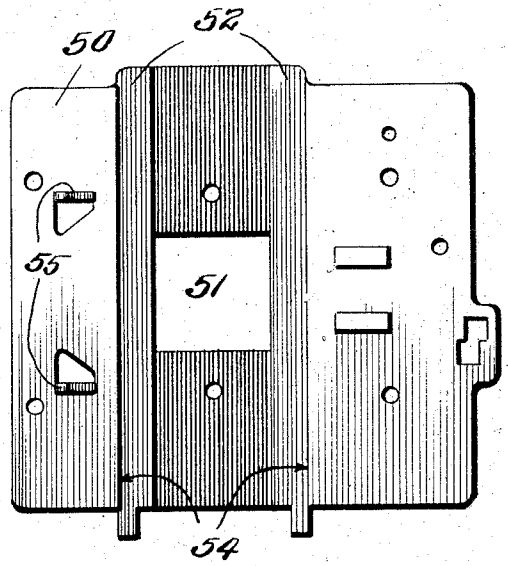


Fig. 3

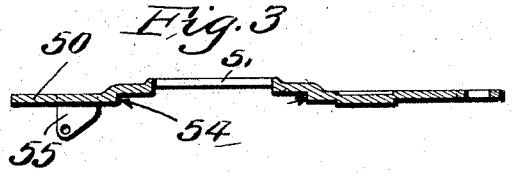


Fig. 4

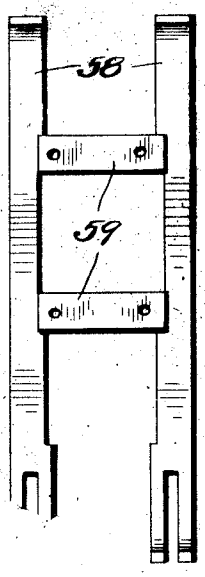


Fig. 5



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By G. P. Comwell Atty.

UNITED STATES PATENT OFFICE.

JOSEPH G. R. O'HARA, OF ST. LOUIS, MISSOURI, ASSIGNOR TO EDUCATIONAL MOTION PICTURE MACHINE AND FILM COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF MISSOURI.

FILM-GUIDE.

1,308,443. Specification of Letters Patent. Patented July 1, 1919.

Original application filed September 18, 1916, Serial No. 120,731. Divided and this application filed August 15, 1917. Serial No. 186,377.

To all whom it may concern:

Be it known that I, JOSEPH G. R. O'HARA, a citizen of the United States, residing at the city of St. Louis, State of Missouri, have invented a certain new and useful Improvement in Film-Guides, of which the following is a full, clear, and exact description, such as will enable others, skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to the moving picture art and particularly to a form of film-handling apparatus for projecting machines of the type illustrated in my copending application, Serial No. 120,731, filed September 18, 1916, of which this application is a division. In the parent application, I have illustrated and described a motion picture projecting machine which is designed with the purpose of rendering the use thereof entirely safe with respect to ignition of the film from the light source, to render the apparatus particularly light, simple and strong so as to contribute to its portability and facility of use and to adapt it to certain special conditions of platform and demonstration work wherein it may be desired to stop the film for projection of a particular view for an indefinite period of time, or to run the film backward through the machine so as to review a portion thereof.

The subject-matter of the present application comprehends the mechanism for handling and guiding the film at the exposure aperture.

It has for its objects the provision of an extremely simple and positive film-handling and guiding mechanism having the fewest number of parts and capable of manufacture at a minimum cost.

In this connection, it is my purpose to form the apparatus to the greatest possible extent of die stampings, which arangement contributes to the cheapness of manufacture, and to the strength and stability of the structure.

It is also my purpose to provide a structure wherein the film may be run backwardly through the machine without requiring any adjustment of the guiding portions.

Other and further objects will be obvious or pointed out hereinafter, reference being had to the accompanying drawings, in which

Figure 1 is a perspective view illustrating the film-guiding mechanism;

Fig. 2 is a rear elevation of the film-guiding plate;

Fig. 3 is a cross section of the same substantially on line 5—5 of Fig. 2;

Fig. 4 is a rear elevation of the presser track bars;

Fig. 5 is a side elevation of the same.

Referring to these illustrations in detail by the reference numerals applied, let it be understood that 10 designates a portion of the frame of the projecting machine, which frame may be of the general type illustrated in my copending application above referred to. This frame is provided with suitable bearing portions 31 in which are operably mounted film-actuating drums or sprockets 87, the same being arranged for coöperation with the film by the provision of teeth 87^a which engage the film in the customary and conventional fashion. A suitable actuating mechanism, which may be of the form illustrated in the copending application above referred to, is employed to give the proper movement to the drums 87 to feed the film.

The film is arranged for support upon suitable reels, which may be of the conventional form, or as illustrated in my copending application above referred to. Mounted on the frame 10 intermediate the film-handling reels is a tracker plate or film-guiding plate 50. This plate is punched and pressed into suitable form to provide a view aperture 51 with a film track member 52 at each side thereof. These track members are outset somewhat beyond the plane of the portions of the plate intermediate them, and their lateral extremities are defined by guiding shoulders 54 formed by portions of the plate which are set out beyond the plane of the track members, said guiding shoulders being spaced apart a distance such as to just accommodate the width of the film. Ears 55 are struck out rearwardly from a lateral portion of the tracker plate to provide mountings for the presser gate.

The presser gate includes a rigid carrier 56 which is hinged on the ears 55. This carrier has a central view aperture which registers in rear with the aperture 51 of the

tracker plate when the gate is in clamping position, and said carrier provides a support and mounting for pressure springs 57, one of which is mounted at each side of the aperture. These springs are shaped so that their extremities extend forwardly some distance from the carrier 56, and bear against pressure bars 58, one mounted at each side of the gate aperture. The mounting of the pressure bars upon the gate is by means of screws 53 seated in the transverse members 59 which are integral with the bars 58, the said screws fitting slidably in holes in the gate member so as to accommodate the movement of the gate and bars toward and from each other. The disposal of the bars 58 is such as to overlie the track portions 52, and to abut the shoulders 54 when the gate is closed. The lower extremities of the bars 58 extend downwardly below the lower margin of the plate 50, and into engagement with the intermittent feeding drum 87, the said lower portions of the bars being slotted to accommodate the passage of the teeth of the intermittent feeding drum while the adjacent portions of the bars make contact with the curved faces of the drum. The pressure bars 58, as above stated and illustrated in Fig. 4, are integrally connected by transverse members 59 which are displaced rearwardly from the plane of the front or bearing surfaces of the bars, as best seen in Fig. 5. A latch 60 is mounted on the tracker plate on the side of the view aperture opposite to the ears 55, and is so disposed as to coöperate with the carrier 56 to hold the gate closed and the springs 57 slightly flexed so as to exert a constant spring pressure upon the pressure bars 58 to hold them against the film.

It will be readily observed that this apparatus is characterized by extreme simplicity and strength of construction, and that, as it has no parts requiring nice adjustments in order to do accurate work, it may be easily and safely operated by comparatively inexperienced persons. Moreover, the construction as claimed hereinafter, forms an effective film-handling mechanism composed of the fewest and simplest parts, and which may be manufactured and assembled at a minimum cost.

The construction also is such as to permit the running of the film past the view aperture in either direction, to guide and hold the same positively and accurately so as to prevent mutilation and scratching thereof, to afford the film the greatest possible protection from mechanical injury, and to permit the rapid and facile insertion and removal of the film.

I am aware that the device illustrated and described, although what at present I believe the best form in which the invention may be embodied, is susceptible of various changes, alterations and modifications not specifically referred to or disclosed, but comprehended nevertheless within the spirit of the invention and the scope of the appended claim.

What I claim is:

In a motion picture machine, a tracker plate provided with a view aperture, portions of said plate to the sides of said apertures being compressed with respect to the face of the plate to form continuous parallel film tracks, a presser gate hinged to said plate to one side of said opening and film tracks, said presser gate being provided with an opening which coincides with the view aperture in the tracker plate, pressure bars positioned beneath the side portions of the presser gate and adapted to engage the edges of the film positioned on the film tracks, cross bars connecting said pressure bars, screws loosely positioned in said presser gate and seated in said cross bars, and flat springs interposed between the sides of the presser gate and the pressure bars.

In testimony whereof I hereunto affix my signature in the presence of a witness, this 10th day of August, 1917.

J. G. R. O'HARA.

Witness:
M. P. SMITH.