L. R. SEREINSKY.

MOVING PICTURE MACHINE.

APPLICATION FILED JULY 21, 1917.

1,318,610. Patented Oct. 14, 1919.

Fig. 1.

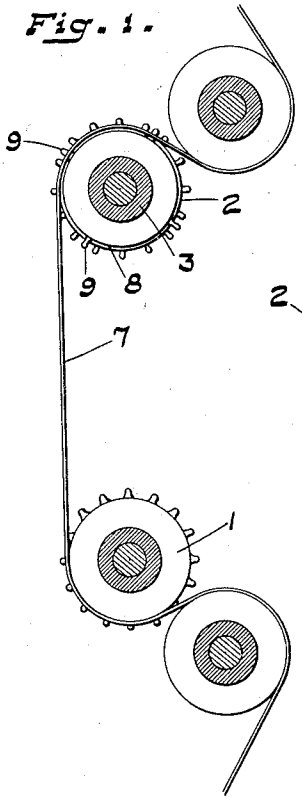


Fig. 2.

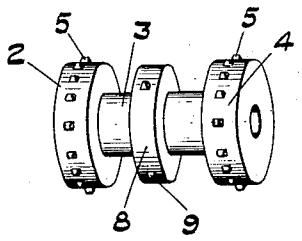


Fig. 3.

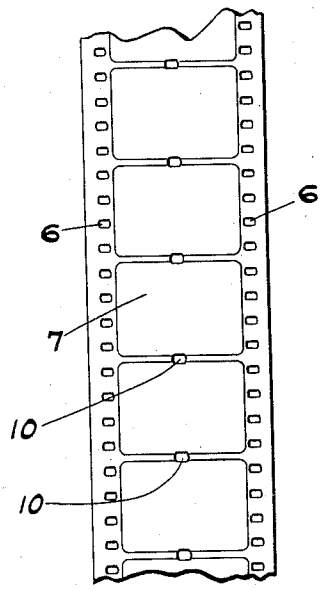


Fig. 4.

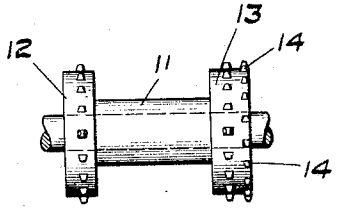
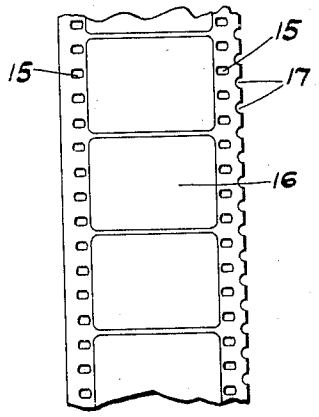


Fig. 5.



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MOVING-PICTURE MACHINE.

1,318,610. Specification of Letters Patent. Patented Oct. 14, 1919.

Application filed July 21, 1917. Serial No. 181,996.

To all whom it may concern:

Be it known that I, LOUIS R. SEREINSKY, a citizen of the United States, residing at Indianapolis, Marion county, and State of Indiana, have invented and discovered certain new and useful Improvements in Moving-Picture Machines, of which the following is a specification.

My invention relates to moving picture machines and its object is to provide means whereby only safety films having a certain formation may be employed upon machines of a certain type, and which films may also be used on standard machines.

In the moving picture machine art, two classes of machines with respect to their compliance with fireproof conditions are employed. In standard machines which are of comparatively large and expensive construction, the requirements as to rendering the same safe against fire are carried out by suitable housings, insulations and other protective means conforming to the fire underwriters' requirements, and in this class of machines it is not required that safety or non-inflammable films be used. In the other class of machines, which are usually of smaller size and ordinarily of a portable type and in which it is impracticable to comply with the requirements as to exterior fireproofing means, it is required under the rules of the fire underwriters that such machines use safety or non-inflammable films and that the machines be so made that only safety films of a certain non-standard form can be used thereon, and so that the standard film cannot be used on these machines. These conditions render it impossible to use the special film on standard machines.

The object of my invention is to provide means whereby only a film of the safety, non-inflammable type may be used by providing special complementary means on the safety film and on the machines whereby such parts will be keyed to one another, whereby only a film so made can be employed on this special machine, and whereby if a film not so formed is used upon the machine, it cannot be used or will be destroyed by the action thereof, and whereby the special, safety film may be employed on standard machines. Of course, the safety film of special form and the keying means on the machine may be advantageously employed in the large standard machines and enable the protective housing to be dispensed with.

With this object in view, my invention is embodied in preferable form in the construction and arrangement hereinafter described and illustrated in the accompanying drawings.

In these drawings, Figure 1 is a sectional diagrammatical view illustrating a film and the driving sprockets therefor; Fig. 2 is a perspective view of a hub sleeve carrying one set of driving sprockets and illustrating one form of that part of my invention which is applied to the machine; Fig. 3 is a plan view of a part of a film having the other feature of said form of my invention; Fig. 4 is a plan view of a modified form of that part of the invention which is applied to the machine, and Fig. 5 is a plan view of part of a film intended to be used in connection with the arrangement shown in Fig. 4.

Referring to the drawings 1 indicates a driving sprocket of a pair of sprockets near one end of the flat stretch of film roll of standard width and 2 indicates a similar sprocket adjacent to the other end thereof. The sprocket 2 is mounted on a hub sleeve 3 carrying at the other end thereof a sprocket 4. The teeth 5 of these driving sprockets are adapted to engage holes 6 formed in the borders of a film 7, in the usual manner, for the purpose of driving the film.

Mounted on the hub 3, preferably in the center thereof, is a wheel 8 having sprocket teeth 9, which sprocket teeth project at least beyond the surfaces of the wheels 2 and 4 and preferably extend as far as the teeth 5, and beyond the plane of the film when the latter is in driving position.

The film 7, in my invention, is made of some suitable noninflammable, safety material, such material being well known in this art and the composition of which it is unnecessary to here set forth. Formed at intervals in the body of this film and at the boundaries between the successive pictures on the film and in alinement with the teeth 9 of the member 3, are apertures 10. These openings are adapted to receive the said teeth 9 as the sprocket wheels are driven and they thus permit said teeth to project freely through the film and permit the driving openings 6 on the borders of the film to freely engage the driving teeth 5 of the

wheels 4. The safety film and the non-safety machine are thus keyed together.

When, however, a film unprovided with the apertures 10 is attempted to be used upon a machine having the wheel 8, the teeth 9 thereof will ride against the film and either rupture and destroy the same or force the film away from the driving sprocket teeth 5 so as to prevent the operation of the film.

In Figs. 4 and 5, a modification of the keyed, interfitting arrangement of safety film and non-safety machine is shown in which 11 is a hub sleeve carrying driving sprockets 12 and 13, on one of which sprockets or on both, if desired, is formed outside of the main sprocket teeth, auxiliary teeth 14. The driving teeth of the sprockets are adapted to engage the usual driving wheels 15 formed in the border of the film 16. The film 16 is of non-inflammable material and along one or both of its outer edges in the border portions of the film it is provided with recesses or scallops 17 adapted to receive and fit the teeth 14 on the driving sprockets. By means of this arrangement when a safety film of the form shown in Fig. 5 is employed in connection with a machine of the construction shown in Fig. 4, the recesses or scallops 17 will freely fit the teeth 14 and the driving openings 15 are permitted to freely engage the sprocket teeth on the wheels 12 and 13. However, should it be attempted to employ a film unprovided with the recesses 17 on a machine of the type shown in Fig. 4, the teeth 14 would ride on the under surface of the border of the film and force the film out of engagement with the driving teeth of the sprockets, 12 and 13, thus rendering it impossible to drive the film.

The above constructions in addition to keying the safety film to the special machine also enables a film of such width and other dimensions and form to be employed as to render it possible to be used on standard machines.

It will be seen that the auxiliary recesses for the additional, longer teeth are out of alinement with the standard sprocket engaging recesses, thus permitting the usual size and spacing of these standard driving openings to be employed, thereby enabling the usual cut out and pasting operations frequently required, to be performed with the same facility as in the standard film, permitting the full strength of the recessed margins to be retained, and also enabling the recesses for the long teeth to be added to a standard film by merely running the same through a suitable cutting machine.

By the term "standard" as used in the claims below it is intended to refer those sprocket wheels, films and openings now commonly in use on the ordinary machine, such openings in the standard films being in two rows on opposite sides of the picture and in alinement and equally spaced.

Having thus described my invention, what I claim is:

1. In moving picture machines, the combination with film driving sprocket teeth, a film having standard openings to receive said teeth, of additional projecting means on the machine adapted to prevent the use of a film of standard form, the film having recesses out of longitudinal alinement with the driving sprocket openings and adapted to receive said additional projecting means.

2. In moving picture machines, the combination with standard driving sprocket wheels, and auxiliary teeth outside of the line of the sprocket teeth, of a non-inflammable film having driving holes in its border portions to engage the sprocket wheel teeth and having recesses in the edge of the film beyond said driving holes to receive the said auxiliary outside teeth.

3. A film for motion picture machines having a set of standard openings and an additional set of recesses on the edge of the film, all such recesses and openings being adapted to receive sprocket wheel teeth of motion picture projectors.

In witness whereof, I have hereunto set my hand and seal at Indianapolis, Indiana this 15th day of February, A. D. nineteen hundred and seventeen.

LOUIS R. SEREINSKY. [L. S.]

Witnesses:
H. P. DOOLITTLE,
M. L. SHULER.