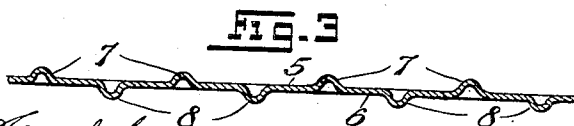
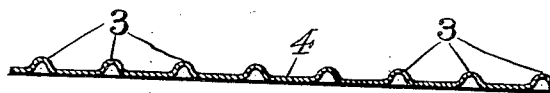
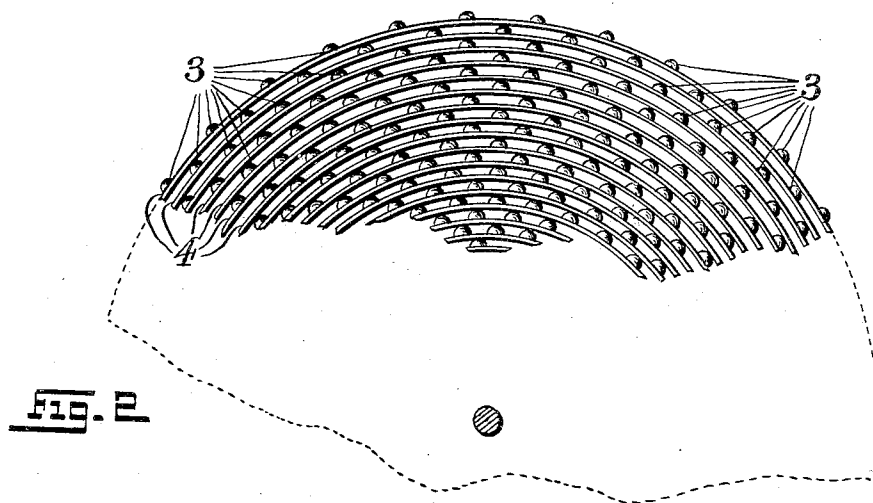
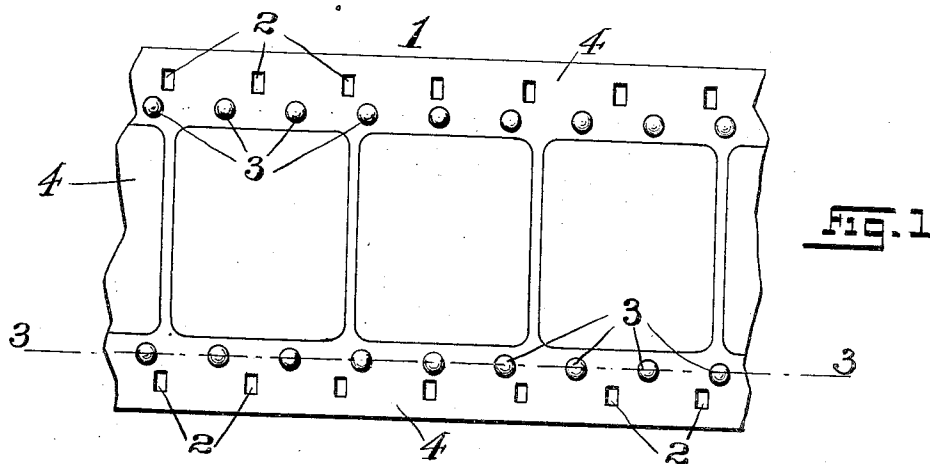


J. A. MacBRIDE,
MOVING PICTURE FILM.
APPLICATION FILED MAY 10, 1915.

1,205,367.

Patented Nov. 21, 1916.



WITNESSES:
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UNITED STATES PATENT OFFICE.

JAMES A. MACBRIDE, OF ARLINGTON, NEW JERSEY.

MOVING-PICTURE FILM.

1,205,367.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAMES A. MACBRIDE, a citizen of the United States, residing at Arlington, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Moving-Picture Films; and I do hereby declare the following to be a full, clear, and exact description of the invention, 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, and to characters of reference marked thereon, which form a part of this specification.

This invention relates, generally, to improvements in photographic films of that class which are to be used in moving picture machines; and the present invention has reference, more particularly, to that class of moving picture films made in the form of long bands or strips adapted, when not in use to be rolled upon reels.

The present invention has for its principal object to provide moving picture films adapted to be rolled upon reels with means serving as a separator, to prevent abrasion of the film-surfaces when rolling the films upon reels, or when unreeling them therefrom, thereby providing reels of films the surfaces of which are always perfect, so that the pictures which are projected upon the screen, will constantly be devoid of what is termed, the "rainy" appearance so often found in pictures of this character.

The present invention has for its further object to provide a picture film of celluloid, or analogous material, having indentations pressed out of the film-support, such indentations forming suitably spaced projections, the supporting portions of which have been reduced to a minimum, so that minute contacting ends are provided which will not damage or destroy the usefulness of portions of the sensitive emulsion, with which the film is provided, as the picture-film is being reeled up or unreeled.

In practice, celluloid or other analogous film-supports are employed for photographic emulsions, and the supports are always made in wide strips or bands which are coated with sensitive emulsion, and then cut or slitted into narrow ribbons or strips of any desired widths. During this cutting or stripping process I purpose at the same time to provide the ribbons or strips, near

their edges, with series of longitudinally extending and intermittently disposed minute indentations which provide small projections having minute contacting supporting ends which will not interfere with the sensitized surface of the film.

Other objects of the present invention not at this time more particularly enumerated will be clearly understood from the following detailed description of the present invention.

With the various objects of the present invention in view, the said invention consists, primarily, in the novel rollable moving picture film of the general character hereinafter set forth; and, the invention consists, furthermore, in the general arrangements and combinations of the several parts thereof, of such arrangement and construction, that only minute contacting portions in the form of series of small raised portions are provided, and that the picture-portions of the film are relieved, and can not be damaged by friction or abrasion, such intermittent arrangement of minute projections alternating with the main surface-portions of the film, thereby relieving the film, while being reeled up or while being unreeled, from any strain, so that it can not break or crack.

The invention is clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a plan view of a portion of a moving picture film, showing one embodiment of the principles of the present invention, said view being made on an enlarged scale and the raised projections being greatly exaggerated; Fig. 2 is a side elevation of fragmentary portions of the novel picture film, represented in rolled relation, to illustrate the separated relation of the rolled portions of the film, whereby abrasion of the surfaces is prevented; and Fig. 3 is a longitudinal vertical sectional representation of the film, said section being taken on line 3—3 in said Fig. 1. Fig. 4 is a similar sectional representation of a moving picture film of a modified construction, but still embodying the principles of the present invention.

Similar characters of reference are employed in all of the said above described views, to indicate corresponding parts.

Referring now to the several figures of the drawings, the reference-character 1 indicates a fragmentary portion of a motion

picture film of the usual form made of celluloid or analagous material which is provided near its marginal edges with the usual arrangement of holes or perforations, as 2, 5 for feeding the strip or band-like film through the usual feeding mechanism employed with motion picture machines.

It has been found in practice that in rolling the long films upon reels, or when passing the same through the exposing or projecting cameras, or otherwise, that the film-surfaces are exposed to friction, whereby the surface may become damaged by abrasion between the contacting surfaces, and to avoid such abrasion it is the purpose of the present invention to reduce the contacting surface-portions to a minimum by an arrangement of longitudinally extending series of minute projections forced out of the film-material, and to concentrate all friction to the marginal portions of the films, and only at minute points where the ends of the small projections contact with the surface of the film, to provide the films at such marginal portions with means in the form of a septum, which will prevent contact, and hence non-abrasion, of the picture-portions of the film.

In Figs. 1, 2 and 3 of the drawings, I have shown one form of separating means, made in the form of suitably disposed small or minute projections 3, near the marginal edge-portions of the film, and projecting above the one surface 4 of the film, so that the adjacent surface-portions of the film when rolled upon a reel, in the manner illustrated in Fig. 2 of the drawings, will not

contact, but will be separated substantially as shown, to thereby positively prevent friction between the picture-portions of the adjacent rolled-up portions of the film, as will be clearly evident, and at the same time providing but minimized points of contact which will not mar, destroy, or otherwise injure the sensitive emulsion-surface of the film-strip, as will be clearly evident.

In lieu of providing the motion picture film with projections, as 3, upon but one of the surfaces of the film, the film may be provided upon its opposite surfaces 5 and 6, with alternately disposed and oppositely projecting raised separating means, as 7 and 8, as clearly indicated in Fig. 4 of the drawings, said means being located at or near the marginal edge-portions of the film, and operating in the same manner and for the same purposes as the separating projection shown and described in connection with Figs. 1, 2 and 3 of the drawings.

I claim:—

A picture-film adapted to be rolled up or unreel, provided at its marginal edge-portions with longitudinally extending series of small intermittently disposed projections forced out of the film-body, said projections having minute contacting end-portions.

In testimony, that I claim the invention set forth above I have hereunto set my hand this 6th day of May, 1915.

JAMES A. MACBRIDE.

Witnesses:

GEORGE D. RICHARDS,
ANTHONY BARBER.