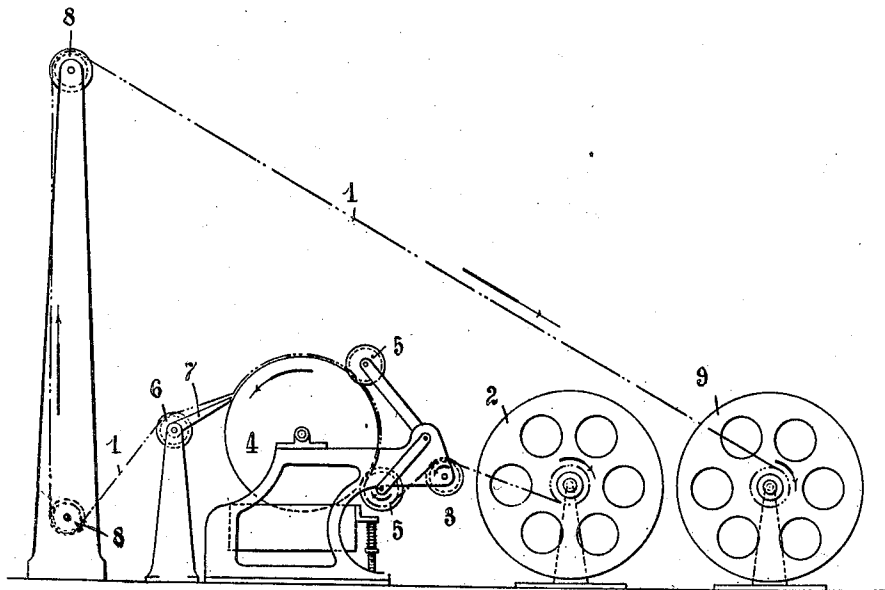


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PREPARING KINEMATOGRAPHIC FILM SUPPORTS.
APPLICATION FILED JULY 13, 1909.

988,981.

Patented Apr. 11, 1911.



Witnesses:

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HENRY DANZER, OF PARIS, FRANCE.

PREPARING KINEMATOGRAPHIC-FILM SUPPORTS.

988,981.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HENRY DANZER, a citizen of the French Republic, residing at Paris, in the Department of the Seine and Republic of France, have invented certain new and useful Improvements in Preparing Kinematographic-Film Supports, of which the following is a specification.

The present invention refers to the formation of the surface of bands or ribbons made of plastic material, but more particularly to the formation of the surface of bands or supports used for kinematographic films. The formation of the surfaces of these bands consists of a depolishing or a repolishing, and are for the purpose of removing scratches and faults of all kinds, as well as for facilitating the adherence either of the coat of emulsion to be applied or the layer of colored ink in the case of photoglyptic printing. The depolishing and the repolishing of the bands made of plastic material is effected by means of a method based on a principle which consists in impregnating a depolished surface with a solvent and then in applying thereto the film or band to be depolished. The solvent used will depend on the material to be dissolved, for example, acetone in the case of celluloid.

This process is of general application and according to the case to which it is applied is effected by soaking a sheet of ground glass, for example, in acetone and immediately after applying the film or band of celluloid, care being taken to assure a very intimate contact between the two. The celluloid will be superficially dissolved and will be molded exactly to the depolished surface. The acetone will be very rapidly absorbed by the celluloid and will then be almost immediately evaporated. The film or band of celluloid will then be removed and its surface will exactly reproduce the depolish of the glass. The same process is gone through for repolishing with the exception that a perfectly polished surface is substituted for the depolishing surface.

When it is necessary to depolish ribbons of great length, such as kinematographic bands or supports, it will be preferable to employ an arrangement permitting a continuous working. For this purpose a machine continuously carrying out all the above mentioned operations, is here given for the sake of example and has been designed more

particularly for depolishing or repolishing kinematographic band supports for films.

This machine is diagrammatically shown in side elevation in the accompanying drawing.

In this machine, the band 1 to be depolished is situated on a reel 2, from where it passes over a roller 3 and is pressed against the depolishing cylinder 4 by means of pressure rollers 5. The band is then removed from the cylinder by means of the roller 6 and the separating blade 7; it then passes over rollers 8 on to the reel 9, onto which it is wound.

The depolishing cylinder 4 is situated on a horizontal shaft rotated by any suitable means whatsoever. The lower portion of this cylinder 4 dips into a trough 10 containing acetone. This trough is arranged so that the height at which it is situated can be adjusted. The soaking of the cylinder can be effected, for example, by means of a pad or the like dipping into the trough and also coming into contact with the surface of the cylinder 4. The rotary movement successively brings the soaked portions of the cylinder 4 into contact with the surface of the band 1 to be depolished and also automatically assures the separation of the depolished band from the cylinder; the depolished band is then wound on to the reel 9.

In order to be able to use the same machine also for repolishing the bands, it will suffice to substitute a polished cylinder for the depolishing cylinder 4.

By combining the above described processes of depolishing and repolishing, it is possible completely to remove faults and scratches of all kinds on the surfaces of kinematographic band-supports or other bands of any plastic materials. Nevertheless for kinematographic purposes the use of films completely depolished disadvantageously affects the projection; as a matter of fact the rays of light emitted by the condenser are partly diffused in all directions by the depolishing, thereby occasioning a considerable loss of light; furthermore owing to the diffusion of the light, the black portions of the picture assume to a certain degree a grayish tinge, thereby decreasing the contrasts and consequently affecting the beauty of the projections. For the purpose of overcoming this disadvantage it is preferable instead of depolishing the sup-

port on both sides only to depolish it on one side, on the side for receiving the coat of emulsion for the purpose of facilitating the adherence of the latter, the polishing surface being left uncoated. The depositing of a layer of gelatin on the said depolished surface, owing to the slight difference between the indices of refraction of both substances, almost entirely suppresses the effect of the depolishing to such an extent that the film will appear almost absolutely transparent to the naked eye.

By forming on the surface of the depolishing or polishing cylinders signs, drawings or marks whatsoever in relief or in intaglio, polished or depolished, corresponding signs, drawings or marks will be formed on the bands treated and will stand out as a polished surface on an unpolished surface on the surface of the said bands or vice-versa. For example, it is thus possible to print on a polished band a name or a mark which can be repeated all along the edges and will stand out as polished or depolished.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:

1. The process of producing on a kinematographic film support a suitable surface

for receiving a new emulsion, which consists in moistening the surface of a moving element with a volatile film-solvent, causing successive portions of the film to travel in contact with said moistened surface for a suitable length of time to soften each portion and enable it to conform closely to said surface, and then continuously stripping the film from said moving element and carrying it through the air a sufficient distance to permit said solvent to evaporate.

2. The process of depolishing a celluloid kinematographic film support, which consists in moistening the depolished surface of a moving element with acetone, longitudinally moving said film support so that successive portions of it come in contact with said surface to cause a slight dissolving of the contiguous face of said support and a molding of it to said depolished surface, and then continuously stripping said film support from said moving element and evaporating said solvent.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY DANZER.

Witnesses:

GAIUS DANZER,
MERIN CRESPIN.