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PROCESS FOR PRODUCING FILMS OR PELLICLES DETACHABLY SECURED TO A PAPER BACKING OR THE LIKE.

APPLICATION FILED JUNE 29, 1914.

1,170,506. Patented Feb. 8, 1916.

Fig. 1

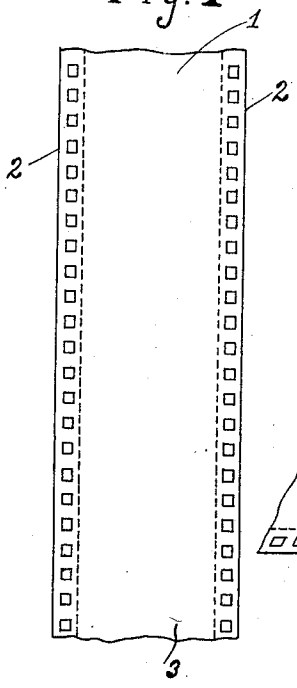
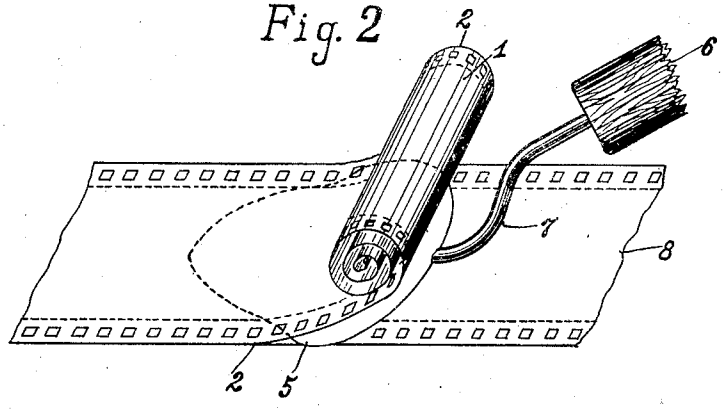


Fig. 2



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PROCESS FOR PRODUCING FILMS OR PELLICLES DETACHABLY SECURED TO A PAPER BACKING OR THE LIKE.

1,170,506. Specification of Letters Patent. Patented Feb. 8, 1916.

Application filed June 29, 1914. Serial No. 848,066.

To all whom it may concern:

Be it known that we, JULES BLONDEL and ALEXIS CHOPIN, citizens of the Republic of France, and residents in Rueil, Department of Seine-et-Oise, France, have invented certain new and useful Improvemnts in Processes for Producing Films or Pellicles Detachably Secured to a Paper Backing or the like, of which the following is a specification.

This invention relates to an improvement in the process described in our previous Patent No. 1,105,243 of July 28, 1914, for the manufacture of photographic plates or films for cinematographic or other purposes, with a base of gelatin and more specially relates to the manufacture of cinematographic films with perforated edges of the type commonly in use in apparatuses for taking and projecting pictures.

According to the former patent, the film material, preferably gelatin is only held upon its support by the adherence of the edges during the entire period of the photographic operations, so as to prevent the penetration of liquids between the body of the film and its support, this latter possessing insulating portions corresponding to the edges. It is further set forth that the edges are finally cut around the plate or film when the operations are finished.

In the practical application of the process to the manufacture of cinematographic films, certain difficulties have been experienced, because the margins of the band which are entirely made use of for receiving the usual perforations, cannot be detached, when the operations are finished, from the support to which they strongly adhere; moreover, it is impossible to effect these perforations in the body of the band, without opening a passage for liquids underneath the film, and lastly, the use of double edges is troublesome and complicates the operation.

In accordance with our present invention and for the special application of the process to cinematographic films, the supporting parts destined to receive the margins of the gelatin film are rendered partially adhering, that is to say, they are given an adherence just sufficient to hold the film upon its support during the photographic operations, while permitting said film to be completely detached therefrom by a slight strain when the operations are completed. This partial adherence can be obtained in various ways according to the nature of the insulating material and of the support employed. For instance, when the insulating material is wax and the support is paper, the insulating material is partially removed from the corresponding parts of the support either by rubbing or by heating in such a manner that there only remains a trace of it on the support, sufficient to hold the film of gelatin during the operations.

When some other material than wax forms the insulating material or the support is other than paper, the parts of the support corresponding to the edges of the film may be coated by means of a brush dipped in an acid such as acetic acid for instance. This latter method effects a certain action upon the transparency of the gelatin and deteriorates the same at the edge of the band, but without any drawback in practice, because the pictures on the film are always away from the marginal parts of the band. The partially or semi-adherent parts being thus formed upon the support, the film material or gelatin is deposited upon the same, likewise also the emulsion. Then, they are cut into strips in the middle of the said parts in order to produce the edges in which there are then formed the perforations in the usual manner. The taking of pictures and the photographic processes are the same as with ordinary films. When the operations are finished, it is only necessary to separate the photo-type film or reproduction from its support. To this end, there may be introduced at one of the ends of the band between the film and its support, a little angular piece curved, blunt and flat; on pushing in this piece, the body of the film tends itself to carry along the margins, this separation being still further facilitated by the edges of the angular separator.

One way of carrying our process into practice is illustrated in the accompanying drawing, in which:—

Figure 1 is a front view of the film adhering at the edges to its support. Fig. 2 shows part of the film separated from its support by the angular separator.

As shown in Fig. 1, the film 1 is adhering at its perforated edges 2 to a support. Fig. 2 shows a tool or angular separator 5 having a grip 6 and a connecting piece 7, in the act

of separating the film 1 adhering with its perforated edges 2 to the perforated support 8 for the same, while the middle part of the film 3, is not adhering to said support.

Having now particularly described and ascertained the nature of our said invention, we declare that what we claim is:

1. Method of making cinematographic films having perforated edges consisting in coating the support for the gelatin film with a non-adhesive material, then treating near the edges thereof with a neutralizing agent for the non-adhesive material between support and film in such a manner that not more than a mere weak adherence of the film to the support is produced at its edges, sufficiently weak to admit of its being easily stripped from the support.

2. Method of making cinematographic machines having perforated edges, consisting in coating the support for the gelatin film with a non-adhesive material, then treating near its perforated edges with acetic acid adapted to deteriorate the non-adhesive emulsion between support and film to such a degree that no more than a mere weak adherence of the film to the support at its edges is produced sufficiently weak to admit of its being easily stripped from the support.

In testimony whereof we affix our signatures in presence of two witnesses.

JULES BLONDEL.
ALEXIS CHOPIN.

Witnesses:
CHAS. P. PRESSLY,
EDWARD WOLF.