

UNITED STATES PATENT OFFICE.

WILLIAM ALPHONSO MCGILL, OF OWENSBOROUGH, KENTUCKY, ASSIGNOR
TO HIMSELF AND CORNELIUS THEODORE CAIN, OF SAME PLACE.

ART OF PRODUCING AND TRANSFERRING PICTURE-FILMS TO CELLULOID SHEETS.

SPECIFICATION forming part of Letters Patent No. 368,223, dated August 16, 1887.

Application filed September 23, 1885. Serial No. 177,945. (Specimens.)

To all whom it may concern:

Be it known that I, WILLIAM ALPHONSO MCGILL, of Owensborough, in the county of Daviess and State of Kentucky, have invented
5 a new and Improved Art of Producing and Transferring Picture-Films to Celluloid Sheets, of which the following is a full, clear, and exact description.

My invention relates to the production of a
10 superior quality of photographs; and it consists of a process whereby a picture-film is produced and transferred to a celluloid backing in such manner that the film becomes incorporated with and forms a part of said card or
15 backing, the two parts—that is, the film and the backing—becoming one integral piece.

In carrying my invention into practice I preferably employ a true plate-glass of the desired size for the picture to be produced
20 and transferred. The glass having been selected and properly cleaned, I form a safety-edge of albumen an eighth or one-quarter of an inch wide on the outer edge of the plate, the object of the rim being to prevent the picture-film from washing off during the manipulation of the plate, and the absence of albumen on the other part of the plate being to prevent the picture from adhering too tight.
25 The picture or transparency may be made by the collodio-chloride process, being printed, toned, and fixed as usual; or it may be made by the ordinary wet collodion process through a negative in the manner well understood by photographers; but if made by the latter process the transparency should be flowed with a
30 weak solution of mercury after being fixed in a weak cyanide-of-potassium solution, so that the shadows will be toned and blackened, which process of toning and blackening may
40 be watched from the side of the plate opposite to that upon which the film is placed. After the film is properly toned it is washed and placed to dry. When the film is dry and ready to be transferred to the celluloid card,
45 said card is flowed with a solution consisting of gum-camphor and alcohol, in the proportions of one ounce of gum-camphor to one pint of alcohol. Although not absolutely essential I prefer to flow the card with a five-
50 grain solution of plain collodion—that is, five grains gun-cotton to one ounce solvent, which is allowed to set and dry previous to flowing

with the camphor solution, as above stated. The camphor solution will dissolve the celluloid surface and render it viscid or sticky. 55 The flowed surface of the celluloid card is now applied to the picture-film or transparency, being brought into close contact therewith in order that all air-bubbles may be excluded. In the course of a few hours, or as soon as the
60 parts are sufficiently dry, the celluloid card may be stripped from the plate, taking the picture-film with it, which film will have a smooth surface the same as that of the glass, and when the picture is so stripped from the
65 glass it will be found that the softened celluloid surface will have permeated the picture-film, and that the film and its backing will be in one integral mass. The picture may now be trimmed to any desired size. 70

Pictures produced by the process hereinbefore described possess great beauty of finish, and may be used for any of the purposes to which the ordinary photograph is applied, with the advantage, however, that the celluloid pictures are more permanent, less liable to abrasure or injury, besides being impervious to the action of most acids and alkalis. These pictures are, moreover, unchangeable under atmospheric conditions. 75 80

I am aware that thin sheets of celluloid have been used for supporting the gelatine-bromide film, and also that it is not new to separate or strip the finished negative from the celluloid, the latter being effected by pouring upon the
85 plate, after leveling, a thin layer of plain gelatine solution.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The herein-described process of producing
90 and transferring photographs, which consists in preparing a picture-film or transparency by the collodio-chloride or by the ordinary wet collodion process, in toning and fixing the picture film, drying the same, and in applying thereto a celluloid card that has been
95 flowed with a solution of gum-camphor and alcohol, allowing the card to dry, and stripping it from the glass, substantially as described.

WILLIAM ALPHONSO MCGILL.

Witnesses:

J. THOMAS,
F. V. STIRMAN.