

UNITED STATES PATENT OFFICE.

PASCHAL GROGERY CASPIAN, OF PHILADELPHIA, PENNSYLVANIA.

PRINTING-FILM.

SPECIFICATION forming part of Letters Patent No. 383,042, dated May 15, 1888.

Application filed February 17, 1887. Serial No. 227,949. (No specimens.)

To all whom it may concern:

Be it known that I, PASCHAL GROGERY CASPIAN, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Printing-Films, of which the following is a specification.

My invention relates to an improvement in printing-films, designed for use for artistic and decorative purposes, and for printing and the preparation and finishing of drawings, and printing and copying surfaces.

The object of my invention is to produce a printing-film of maximum durability and flexibility, and which shall be insoluble in water.

In order to produce such a film, an impression or matrix is first taken from a relief printing surface or form by means of pressure in any suitable material. I support this matrix or impression, face upward, upon an even surface—such as a plate of metal or glass—which is warmed to a suitable degree. I then prepare a mixture of the following ingredients: Gelatine or isinglass, one ounce; water, three ounces; bichromate of ammonia, twenty grains; glycerine, two drams—this proportion being varied according to the season, using more bichromate in winter and more glycerine in summer. This mixture is melted by heat, and is poured upon or flowed over the matrix or impression, thereby forming a film having a raised printing-surface, which, when set or cooled, is flexible, elastic, and nearly transparent. The film is then exposed to the light

for about two hours, and is then coated with a lacquer of saturated solution of Monsel salt or other solution of iron, after which the film is washed and allowed to dry, when it is ready for use. A printing-film thus prepared is not soluble in water, and hence can be used in rainy and damp weather, an advantage which printing-films of this class have not heretofore possessed.

This film is adapted for use in connection with my improved shadographic-outline machine, No. 227,948, filed February 17, 1887, and is adapted to be formed with straight or waved lines or a stippled raised surface, and adapted for use in shading drawings in various grades of lines.

Having thus described my invention, I claim—

1. A printing film or pellicle having a raised printing surface, composed of gelatine, water, bichromate of ammonia, and glycerine, in about the proportions described.

2. A printing film or pellicle having a raised printing-surface composed of glycerine, water, bichromate of ammonia, and gelatine, and coated with a lacquer of saturated solution of Monsel salt or other solution of iron, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

PASCHAL GROGERY CASPIAN.

Witnesses:

ROBT. MCCURDY,
EDW. A. BUTLER.