

UNITED STATES PATENT OFFICE.

FERDINAND HRDLICZKA CSISZÁR, OF VIENNA, AUSTRIA-HUNGARY.

SENSITIVE PHOTOGRAPHIC PAPER.

SPECIFICATION forming part of Letters Patent No. 574,059, dated December 29, 1896.

Application filed June 17, 1895. Serial No. 553,125. (No specimens.)

To all whom it may concern:

Be it known that I, FERDINAND HRDLICZKA CSISZÁR, a subject of the Emperor of Austria-Hungary, residing at Vienna, in the Province of Austria and Empire of Austria-Hungary, have invented certain new and useful Improvements in Preparations for Photographic Purposes and Methods of their Manufacture, of which the following is a specification.

The papers prepared with silver salts, known as "albumen" and "celloidin" paper, and the variously-named gelatin or aristo papers, as well as the arrowroot and algein papers, and the plates, films, and other surfaces prepared with silver salts, generally known, give, when a negative is copied, a degree of brilliancy varying according to the quality of the paper used, which is about the highest when aristo paper is used, yet thin and weak negatives yield only weak impressions upon these papers or preparations.

The object of the present invention is, by combining certain elements with the silver-salt preparations, to make it possible to obtain very clear impressions, with a beautiful white, upon silver-salt papers and preparations from negatives so weak as hardly to seem worth copying, or of which it would seem impossible to take impressions. This is produced by the addition of retarding or weakening substances, such as ferricyanids or chromates, mono, bi, or poly chromates, or of chromic acid to the well-known silver-salt preparations, whereby a chromate, or a bichromate of silver will be formed during the sensitizing of the paper or during the preparation of the emulsion. The final result of the copying, the toning, and fixing of a sensitometer strip of paper or plate prepared in such a manner shows, according to the photometer of Professor Vogel, a very short scale, the practical effect of which is that very thin, contrastless, weak negatives produce brilliant impressions upon the paper or plate.

In order to illustrate the above by an example, I will show the use of the above chemicals with a celloidin or aristo emulsion, although it will be sufficient for an expert to know what has been stated here above, as every addition of the above-mentioned elements will produce brilliancy, and it will only be a question of experience to know how much thereof must be added in order to obtain the different grades of brilliancy, or the right kind to use for preparing the paper or the plate according to the principles of this invention.

I dissolve about one grain of ferricyanid or mono, bi, or poly chromate in ten centimeters water and mix the same with so much alcohol as the solution can contain without clouding. This solution is added drop by drop, while shaking strongly, to the well-known emulsion of collodio-silver chlorid until the brilliancy is acquired which corresponds to the weak thin negative. Experience will soon teach this.

I claim—

1. A photographic paper or plate prepared in the well-known way with the well-known silver preparation for instance, collodio-silver-chlorid emulsion with retarding or weakening substances such as ferricyanids substantially as described and for the purpose set forth.

2. The process of making photographic silver-salt papers consisting in adding to the well-known silver preparations such as collodio-silver-chlorid emulsion, a weakening or retarding substance such as ferricyanids.

In witness whereof I hereunto set my hand in presence of two witnesses.

FERDINAND HRDLICZKA CSISZÁR.

Witnesses:

CHARLES MAX ROSENTHAL,
JOHN KAPKE.