

UNITED STATES PATENT OFFICE.

XAVIER KARCHESKI, OF BELLEVILLE, NEW JERSEY, ASSIGNOR TO
SOLOMON D. McMILLAN, TRUSTEE.

IMPROVEMENT IN COLORING PAPER IN THE WEB.

Specification forming part of Letters Patent No. **149,318**, dated April 7, 1874; application filed
October 6, 1873.

C.

To all whom it may concern:

Be it known that I, XAVIER KARCHESKI, of Belleville, New Jersey, have invented certain Improvements in Coloring Paper and other materials, of which the following is a specification:

My invention, in its application to the manufacture of paper, consists in submitting paper in the web before it is dried, first, to a bath of vegetable size containing ultramarine or other coloring matter, and then to a bath of animal size, which may or may not contain coloring matter, and in removing the superfluous sizes by scraping, and in drying the product upon the heated cylinders of the paper-machine, so that the complete operation of manufacturing paper which is both sized and colored is conducted with only one drying process, irrespective of whether the paper is more or less hard sized or enameled; and, further, so that earthy matter contained in the colored vegetable size is distributed upon a web composed solely of paper-pulp, filling its pores and cavities, and thus producing a smooth, evenly-colored surface, upon which the animal size is subsequently deposited in a thin pellicle.

The details of the mode of sizing referred to will be found fully described in my application filed July 28, 1873, for improved process of hard sizing paper and other materials.

The colored vegetable size, which is first administered to the fabric operated upon, con-

sists of bleached rosin dissolved by heat in the least possible quantity of alkalies and water, with the addition to the solution of a quantity of colorless earth and soap and ultramarine or other coloring matter.

The animal size consists of a solution of glue, alum, tallow, or other soap, colorless earth, a trace of chloride of sodium, and, if desired, ultramarine or other coloring matter.

The coloring matter should be ground with the colorless earth, and then mixed with the size. This mode of coloring paper prevents the presence of blotches and spots, which almost invariably appear upon the surface of paper which is blued or colored in the pulp.

While my process is especially valuable in connection with the manufacture of paper, it may be usefully applied to sizing and coloring other materials, such as cloth and leather. It produces an even tone of color, whatever may be the fabric operated upon, and it involves but one drying operation for both coloring and sizing.

I claim as my invention—

The described process of treating paper or other material, first, with a vegetable size containing colorless earth and a coloring matter, and then with an animal size, substantially as and for the purpose set forth.

Witnesses: XAVIER KARCHESKI.

ASA FARR,
EDW. E. QUIMBY.