UNITED STATES PATENT OFFICE.

OTTO KREBS, OF PITTSBURG, PENNSYLVANIA.

PROCESS OF TRANSFERRING PHOTOTYPES TO LITHOGRAPHIC STONES.

SPECIFICATION forming part of Letters Patent No. 383,308, dated May 22, 1888.

Application filed November 15, 1887. Serial No. 255,253. (No specimens.)

To all whom it may concern:

Be it known that I, OTTO KREBS, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Processes of Transferring Phototypes to Lithographic Stones; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it.

My invention relates to a process of transferring phototypes to lithographic stones; and it consists in printing an image by means of a photographic negative upon a plate which has been suitably prepared to receive the image, then taking an impression from the plate upon a sheet of paper which has been saturated in a solution of gelatine, chloride of calcium, glycerine, chromate of alum, and water, and then the impression so taken on the paper from the plate is transferred to a lithographic stone, all of which will be more fully described hereinafter.

A photograph is taken of the object the image or likeness of which is to be transferred to the lithographic stone. A plate of any suitable material is then taken and coated upon one side with a solution of the proper consistency, composed of albumen, soluble glass, and filtered water. The plate is dried after having been coated with this solution, and is then washed for about thirty minutes with filtered water and again left to dry. After having been dried the second time the plate is exposed to a heat of about 45° Reaumur for a suitable length of time, and is then given a second coat with a solution of gelatine, bichromate of potash, bichromate of ammonium, alum, and filtered water, and is again exposed to a temperature of 45° Reaumur to become heated. The plate thus prepared is exposed to the light under the photographic negative, and after having remained exposed to the light passing through the negative a sufficient length of time to make the desired impression the plate is again washed with water containing ammoniac and alum. The plate is then removed to a lithographic press and inked in with a roller in the usual manner. The ink used for this purpose consists of wax, tallow, resin, mastics, varnish, and lamp-black. A sheet of paper of suitable size is then saturated in a solution of ten parts of gelatine, five parts of chloride of calcium, two parts of glycerine, five parts chromate of alum, and water enough to give the solution the proper consistency. After the paper has been dried it is moistened in a weak mixture of water and tannin to harden it and prevent it from sticking. The sheet of paper is then placed upon the plate in the lithographic press and the image on the plate impressed upon the paper. The impression thus obtained is transferred to a suitably-prepared lithographic stone, and the work on the stone is dampened with water containing a little muriatic acid, and then the stone is covered with a thin solution of gum-arabic, and left to dry an hour or two, when it is inked with printer's ink, and is ready for the lithographic press to be printed from in the usual manner.

The preparation of the plate is conceded to be old, and no invention is claimed for this part of this process.

I claim—

The process of transferring phototypes to lithographic stones, consisting in first taking a photograph of the object; second, printing the photographic image of the negative upon a plate which has been suitably prepared; third, taking an impression from the plate upon a sheet of paper which has been saturated with a solution of gelatine, chloride of calcium, glycerine, chromate of alum, and water, and, fourth, transferring the impression from the prepared paper to the lithographic stone, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

OTTO KREBS.

Witnesses:
T. F. LEHMANN,
F. ENGLISH.