

UNITED STATES PATENT OFFICE.

ROBERT SCHORR, OF WÜRTEMBERG, GERMANY.

METHOD OF PRODUCING COLORED IMPRESSIONS.

SPECIFICATION forming part of Letters Patent No. 446,004, dated February 10, 1891.

Application filed September 18, 1889. Serial No. 324,345. (No specimens.)

To all whom it may concern:

Be it known that I, ROBERT SCHORR, a resident of Schwäbisch-Hall, Würtemberg, Germany, have invented an Improvement in the Method of Producing Colored Impressions, of which the following is a specification.

The object of my method is to produce colored impressions by photography and to do away with the inaccuracies which now occur in the lithographic process.

My method consists, briefly stated, of photographing the picture to be printed and developing the negatives thereof to different intensities, according to the strength of the color to be employed in the printing, and transferring such colored impressions upon the stone or zinc plate by the usual method of points.

The method of multiplying pictures now in use for lithographic work is to employ a lithographer to make a water-color drawing of the picture to be printed, and then to transfer the picture disintegrated into separate colors upon lithographic stones for printing purposes. The disadvantage of this system is that there are often very gross mistakes in such reproductions, owing to the inaccuracies of execution of the lithographer.

By my method I take a number of photographs of the picture to be produced and develop the negatives to different intensities by length of exposure to the light. These negatives of different intensities, which are to form the basis for the color-plates, are so developed that they can be adapted to a stronger or fainter color, as the case demands. From the above-described negatives as many photographs on glass are taken as there are color-plates required for the picture. These photographs are called "dia-positives," as they appear positive on the opposite side of the glass negative. These dia-positives are now retouched by means of a brush or pencil corresponding to the single colors employed in the reproduction of the picture and corresponding to the plates made by hand by the lithographers. The next step is to transfer these plates to the stones or zinc plates; but as they are negatives—that is, what is white in the picture would appear black on the stones—a direct transfer cannot be performed. To avoid this dif-

ficulty I rephotograph the dia-positive color-plates, and thus produce negatives which can be transferred upon the stone or zinc plates by any of the usual modes of transferring such negatives, as by means of points, which consists in placing between the negative and the stone or zinc plate, which is covered with a sensitive coating of chrome, a thin membrane of gelatine uniformly perforated with points and lines, and exposing the same to the light, whereupon the picture on the negative appears in dots and lines upon the stone (photolithograph) or upon the zinc plate (autotype) and is ready to be etched. The etched stone or zinc plate is supplied with color by means of a roller, such color being rolled in, and is now ready for printing. By printing the different colors upon each other the reproduction of the picture in its natural colors is produced.

The advantages of my method are to multiply the production of pictures by the process of lithography or book-printing without employing a lithographer, thus eliminating any possible error and producing an exact representation by photography. Further, my method can be employed either in lithography or by the aid of zinc plates.

Therefore, having described my invention, what I claim is—

The herein-described method of producing a multiplication of pictures in their original colors by lithography or book-printing, which consists in photographing the picture, producing therefrom a series of negatives of varying intensity, then producing from these negatives by photography a series of dia-positives of varying intensities, (upon glass,) then touching up the said dia-positives with the color corresponding to the intensity of the plate, then reducing the dia-positives to negatives by photography, and finally transferring the same upon the lithographic stone or zinc plate and printing one color upon another until the picture is produced in colors, substantially as and for the purposes set forth.

The foregoing specification of my invention signed by me this 2d day of September, 1889.

ROBERT SCHORR.

Witnesses:

THEODORE ABENHEIM,
B. RUPMAN.