

UNITED STATES PATENT OFFICE.

JEAN JACQUES MAGNE, OF LES LILAS, NEAR PARIS, FRANCE.

ISOGRAPHIC PROCESS.

SPECIFICATION forming part of Letters Patent No. 260,584, dated July 4, 1832.

Application filed August 23, 1881. (No specimens.) Patented in France August 23, 1881, No. 144,494; in Belgium August 24, 1881, No. 55,541; in England August 29, 1881, No. 3,762; in Germany September 9, 1881, No. 17,515; in Italy September 30, 1881, XXVI-383; in Canada October 24, 1881, No. 13,595; in Luxemburg November 18, 1881, No. 169; in Spain December 20, 1881, No. 2,079; in Portugal January 25, 1882, No. 725; in Sweden February 1, 1882, and in Austria-Hungary March 11, 1882, No. 8,256 and No. 1,694.

To all whom it may concern:

Be it known that I, JEAN JACQUES MAGNE, of Les Lilas, near Paris, France, have invented a Process for Reproducing all Kinds of Printing, called Isographic Process or Isography; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to a process by means of which all kinds of printing may be reproduced with absolute exactness and without injury to the original. The essential characteristic of the process is the employment of a certain composition which protects the paper from the action of the ink and does not injure the cellulose.

It is well known that acid substances do not produce any effect on fatty substances, and that the latter repel the action of acids, so that if a sheet of paper on which a tracing of fatty ink has been made be imbibed with acid and a lithographic roller passed over it the lines traced are alone inked and the rest of the paper remains intact; but the acid as now employed has a destructive effect on the cellulose of the paper, and would necessarily destroy the original print which it is intended to copy. The process which forms the subject of the present specification is based on the use of a composition or preparation containing acid—sulphuric acid, for instance—for the purpose of neutralizing the action of the printing-ink on the parts impregnated with it, and containing also a substance which at the same time renders the action of the acid on the paper harmless, which action would be destructive were the acid used alone. All alcohols possess this preserving property, and my preparation contains a certain proportion of alcohol mixed with sulphuric acid. The mixture, whether freshly made or not, is applied with a brush, either to the back or front of the image or print to be reproduced. The paper becomes immediately impregnated with the liquid, and is then rapidly washed, either by sprinkling the surface of the paper or by dipping the entire sheet into pure water. The sheet is then carefully extended on a glass plate or on a wooden board previously moist-

ened. The inking-roller is then passed over the paper, and if it be found necessary to pass the roller a second time over the paper the latter should be carefully moistened, on the side containing the drawing or print, with pure or slightly-acidulated water, in order to prevent it adhering to the roller. If this operation, which is in itself extremely simple, be performed by a skillful person, it only remains to remove the excess of acid, which would cause too great a biting of the stone, and then to dry the sheet on a slab of plaster; and when the sheet has acquired the proper degree of humidity it is placed on the stone and subjected to the proper amount of pressure. The impression of the image or print is thus obtained, and the ordinary process of lithography commences. When, in inking, any parts become blurred, which results from the ink being in a too great state of liquidity or from too great a pressure of the roller, (which are faults easily corrected by practice,) the parts thus blurred are washed with a small sponge imbibed with water slightly acidulated, and with a small and somewhat flexible pad well covered with ink the said parts are re-inked, as well as those parts which may have escaped the first inking.

Too copious inking must always be avoided, as it is productive of blurring and is apt to spoil the original. The superfluous ink is removed by slightly pressing a sheet of paper on the inked surface. The ink adheres to the paper and forms thereon a sort of imperfect proof.

If the lines of the original are thickened, in order to reduce them to their proper width it is necessary to have recourse to two operations: first, a second and even a third pressure on stone or paper for the purpose of removing as much ink as possible; second, when dry the original must be washed with a volatile essence, such as petroleum or benzine.

As the ulterior action of the sulphuric acid has always to be guarded against, it is necessary to wash the paper in an alkaline solution containing carbonate of ammoniac or soda.

The paper is then well rinsed and allowed to dry without pressure between two sheets of blotting-paper.

When it is desired to reproduce both sides 5 of a sheet, each side is successively treated, as above described, and then transferred to stone.

When a typographic reproduction is desired the transfer is made onto a plate or surface of 10 any proper material.

What I claim as my invention is—

The method herein described of treating prints to be reproduced, consisting in impregnating them with an acid solution containing alcohol prior to taking the impression, substantially as and for the purpose set forth. 15

JEAN JACQUES MAGNE.

Witnesses:

ROBT. M. HOOPER,

JEAN BAPTISTE ROLLAND.