UNITED STATES PATENT OFFICE.

ALEXANDER PINDIKOWSKY, OF LONDON, ENGLAND.

PROCESS FOR THE PRODUCTION OF STENCILS OF WIRE-NETTING.

1,064,166. Specification of Letters Patent. Patented June 10, 1913.

No Drawing. Application filed January 13, 1911. Serial No. 602,518.

To all whom it may concern:

Be it known that I, ALEXANDER PINDIKOWSKY, a citizen of the United States, residing at 63 South Lambeth road, London, S. W., England, have invented a certain new and useful Process for the Production of Stencils of Wire-Netting, of which the following is a specification.

It has been previously proposed to produce stencils for drawing or painting purposes with the assistance of photographic reproductions by the application of a sensitive film on a reticulated material, which consisted of a texture of any suitable description and the picture was produced on this layer by means of photographic reproduction in such manner that the parts of the film not exposed to light could be removed by washing to leave only the reticulated material so that the stencil could be used for the purpose required. The stencils produced in this manner were of a fragile nature and as they were made of a gauze fabric had the disadvantage that they only offered a slight mechanical resistance so that the stencil was of use for only a limited period.

The novelty of the present invention consists in the production of a stencil wholly of metal, that is, a stencil in which not only the texture consists of metal but also the particles filling the texture so that a strong stencil is obtained which can be employed for the production of any required number of copies.

In carrying the invention into effect a piece of wire gauze or net of the required fineness of mesh is employed which is coated or filled with a sensitive solution consisting of glue, gelatin or other suitable substance rendered sensitive to light by the addition of bichromate of ammonia or like substances. A positive of the required design is then produced by photographic reproduction upon the prepared surface in any suitable manner as, for example, by the production of a contact print. The parts of the sensitive film unaffected by the action of light are then removed by washing, thus exposing the gauze or net. In order to clean the metal thus exposed the stencil is dipped into a solution of zinc chlorid or other similar substance, as used for the purposes of tinning or soldering. The stencil when cleaned is dipped into a bath of molten zinc or solder composed of any suitable metals so that the latter adheres to the cleaned parts of the gauze or net of the stencil. It is necessary, however, to first treat the sensitive film which has been affected by the action of the light and forms the design on the stencil before the latter is placed into the hot zinc or solder. This treatment advantageously consists in warming the stencil over an open fire so that to a certain extent the film is charred.

The stencil after dipping in the hot bath of zinc or solder is supported so as to permit the superfluous metal to drain away and when the zinc or solder has hardened the sensitive film forming the design is washed away by means of acetic acid or other suitable clearing reagent, so that a stencil wholly of metal is obtained of which the meshes are filled with particles of zinc or other metal. The stencil is now complete and can be used in any suitable manner for example, it is possible, by means of the stencil, to apply color on a ground provided under this by means of rollers and presses.

What I claim as my invention and desire to secure by Letters Patent is:—

1. A process for the production of stencils of wire netting consisting in coating the wire netting with a sensitive solution, said sensitive solution covering and filling the meshes of the wire netting, reproducing a photograph on the sensitive layer thus formed, removing the soluble parts of the sensitive layer after the production of the photograph, coating the wire netting with solder at the parts from which the sensitive layer has been removed, and then removing the insoluble portion of the sensitive layer from the wire netting.

2. A process for the production of stencils of wire netting consisting in coating the wire netting with a sensitive solution, said sensitive solution covering and filling the meshes of the wire netting, reproducing a photograph on the sensitive layer thus formed, removing the soluble parts of the sensitive layer after the production of the photograph, treating the parts of the wire netting from which the soluble parts of the sensitive layer have been removed with a solution of zinc chlorid, coating the wire netting with solder at the parts from which the sensitive layer has been removed, and then removing the insoluble portion of the sensitive layer from the wire netting.

3. A process for the production of stencils

of wire netting consisting in coating the wire netting with a sensitive solution, said sensitive solution covering and filling the meshes of the wire netting, reproducing a photograph on the sensitive layer thus formed, removing the soluble parts of the sensitive layer after the production of the photograph, coating the wire netting with solder at the parts from which the sensitive layer has been removed, and then removing the insoluble portion of the sensitive layer from the wire netting by means of a reagent.

4. A process for the production of stencils of wire netting consisting in coating the wire netting with a sensitive solution, said sensitive solution covering and filling the meshes of the wire netting, reproducing a photograph on the sensitive layer thus formed, removing the soluble parts of the sensitive layer after the production of the photograph, treating the parts of the wire netting from which the soluble parts of the sensitive layer have been removed with a solution of zinc chlorid, coating the wire netting with solder at the parts from which the sensitive layer has been removed, and then removing the insoluble portion of the sensitive layer from the wire netting by means of a reagent.

In testimony whereof I have hereunto signed my name to this specification in the presence of two subscribing witnesses.

ALEXANDER PINDIKOWSKY.

Witnesses:

ADOLF STRAUSS-COLLIN,

LIONEL ERNEST BUSSEY.