UNITED STATES PATENT OFFICE.

J. JULIUS SACHS, OF MANCHESTER, COUNTY OF LANCASTER, ENGLAND.

METHOD OF PRODUCING ROLLER-SURFACES FOR PRINTING, STAMPING, OR EMBOSSING.

SPECIFICATION forming part of Letters Patent No. 297,017, dated April 15, 1884.

Application filed July 1, 1880. (No specimens.) Patented in England July 4, 1879, No. 2,724.

To all whom it may concern:

Be it known that I, JOSEPH JULIUS SACHS, a subject of the Emperor of Austria, and residing at Manchester, in the county of Lancaster, England, have invented certain Improvements in the Production of Surfaces for Printing, Stamping, or Embossing, of which the following is a specification.

My invention relates to improved methods of producing roller-surfaces for printing, stamping, or embossing, whereby the ordinary process of engraving is dispensed with.

The invention consists in covering the roller with chrome gelatine, placing around it a curved or flexible pattern adapted to transmit light to certain parts and prevent the transmission to others, exposing the roller to light and revolving it to present each portion to the light, and removing the soluble parts of the chrome gelatine. The pattern is thus transferred to the roller; but it is not yet fixed in it. For this purpose an etching or other suitable process can be employed.

In carrying out my invention I cover the roller with chrome gelatine or an equivalent material, and I take a pattern or design produced by photography or otherwise upon translucent paper, or upon glass made of a circular or curved shape, or upon any other suitable translucent materials, or a pattern or design upon other paper or material produced with oil colors or translucent agents, and place such pattern or design of paper, glass, or other material round the roller, preferably with the face toward the roller, and expose it to the action of electric or other light, the roller being caused to revolve, so as to present each portion in succession to the action of the light. The parts of the chrome gelatine or similar substance upon which the light acts are rendered insoluble, while the other parts not acted upon by the light remain soluble, and may be washed away or otherwise removed, if required, after which I apply to the surface an alcoholic or other suitable solution of perchloride of iron or similarly-acting agent; or I may apply the perchloride of iron or its equivalent to the surface without the process of washing. The insoluble parts of the chrome gelatine act as a resistant, and the soluble parts are etched, and the roller may then be prepared for use as a printing, stamping, or embossing surface in the ordinary manner.

Having now described my invention and the manner in which the same is or may be carried into effect, I would observe, in conclusion, that no claim is made herein to preparing surfaces for printing and similar purposes by coating with chrome gelatine, exposure to light under a suitable pattern, washing, and etching, except with respect to rollers when the mode explained or its substantial equivalent is employed; but

What I do claim, and desire to secure by Letters Patent, is—

In the preparation of metal rollers for printing, the improvement consisting in covering the roller with chrome gelatine, placing around it a curved or flexible pattern adapted to transmit light to certain parts and prevent the transmission to others, exposing the roller to light and revolving it to present each portion to the light, and removing the soluble portions of the chrome-gelatine coating, substantially as described.

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

J. JULIUS SACHS.

Witnesses:
FREDK. C. DYER,
CHAS. MILLS,
Both of 47 Lincoln's Inn Fields, London.