UNITED STATES PATENT OFFICE.

LÉON FAVRE, OF NEW YORK, N. Y.

PROCESS OF DECORATING WATCHES.

SPECIFICATION forming part of Letters Patent No. 415,100, dated November 12, 1889.

Application filed December 5, 1887. Serial No. 257,053. (No specimens.)

To all whom it may concern:

Be it known that I, LÉON FAVRE, a native of Switzerland, residing at No. 236 West Forty-fourth street, New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Decorating Watches and other Jewelry Made of Gold or other Metals, of which the following is a description.

This invention relates to a process for applying pictures or representations to metal, as set forth in the following specification and claim. The process is serviceable in reproducing photographs, engravings, and paintings upon metal.

In carrying out the process I prepare a negative of the image or representation to be produced—that is to say, what appears in the original as the right-hand side must appear in the negative as the left-hand side, and vice versa, so that when the image or representation is finally applied to the metal surface the parts of the image or representation will be again in their proper position to correspond to the original. When the negative is finished and properly touched up, I take carbon-paper and sensitize it in any suitable well-known way, as by means of a suitable sensitizing preparation, such as bichromate of potash. The paper when sensitized is dried in a dark place or room. The dry paper is applied to the negative, and the whole is exposed to the light in a photographic press, so that the light shining through the negative will produce a photograph or reproduction of the latter upon the sensitized paper. By means of a photometer it can be ascertained if a good proof has been obtained. A plate or piece of polished metal—such, for example, as gold—is then treated with pumice-stone and water applied by means of a brush until the polish is dimmed. The dimming is confined to the place where the representation is to be applied, which is generally the center of the plate, and care is taken to have the dimming as regular as possible and provided with a soft finish; or, if desired, a dim gilding or dim silvering can be applied to a metal plate, thus also producing an effect as pleasing as the dimming by means of pumice-stone. When the surface is sufficiently dimmed, I cover it with a layer of collodion, and then dip the metal surface or plate in cold water for about five minutes. The carbon-paper proof or print is then also dipped into the same bath, and is then applied to the metal surface which has been treated with collodion. The photograph picture or representation should be placed well in the center of the dimmed surface Then a soft sponge is gently pressed onto the carbon-paper, so as to remove the air-bubbles and excess of water. This treatment continues for about ten minutes, after which the plate, with the picture or representation, is dipped into warm water and at times gently moved or agitated. The carbon-paper is thus dissolved or washed away, leaving the representation on the collodion-film adhering to the metal. I continue the treatment with warm water until all foreign matter has disappeared from the plate, when there remains a perfect representation on the metal surface. I then wash with cold water and leave the representation and plate to become dry. To fix the representation upon the metal surface, a coating of collodion or varnish is applied, which is dried and hardened at a temperature of about 100° centigrade.

My invention will be found very useful in decorating gold watch-cases; but I do not restrict myself to this single use of my invention.

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

The process of applying carbon prints to metallic surfaces, which consists in dimming the surface of the metal, applying to the metal surface an adhesive—such as collodion—applying the carbon print to the adhesive, and washing off or removing the carbon-paper and foreign matter, so as to leave the print adhering to the metal, substantially as described.

LÉON FAVRE.

Witnesses:
STEPHEN E. FOLAN,
GEORGES RIZARD.