

United States Patent Office.

BENJAMIN F. DUDLEY, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 108,337, dated October 18, 1870.

IMPROVEMENT IN FINISHING COPPER PLATES.

The Schedule referred to in these Letters Patent and making part of the same.

To all persons to whom these presents may come :

Be it known that I, BENJAMIN F. DUDLEY, of Boston, of the county of Suffolk and State of Massachusetts, have made a new and useful invention having reference to the Finishing of Plate-Copper; and do hereby declare the same to be fully described as follows:

To finish a plate of copper by my process, it is first to be heated to a temperature of about 100° Fahrenheit, and, while so heated, the surface to be finished is to be covered with one or more layers of a composition of alcohol, shellac, and pigment, such as Venetian red, the proportions of the ingredients being one pound and a half of the shellac and four pounds of the pigment to one gallon of alcohol, the whole being properly incorporated.

After the plate has been so treated, it is to be rolled, or have its surface so covered condensed by hammering or rolling it, or running the plate between rollers, or by supporting the plate on a proper surface, and rolling over and upon the covered side or surface of it a steel roller, borne down upon the surface with a due degree of force.

Next the surface so rolled or condensed is to be treated with one or more layers of oil or grease, well rubbed upon or into it, until a good polish is obtained, the whole being subsequently wiped as nearly dry as possible.

Were it not for the heating of the plate, the process

could not be carried on to advantage, as the composition would either peel from or come off the plate during the condensing of the composition, and the forcing it into the pores of the plate, or it would subsequently be liable to easily separate from the plate.

Copper plates so finished are an improved merchantable article or manufacture, their surfaces, so treated, being rendered very smooth, and protected from oxidation.

I do not confine my process to the precise temperature, as hereinbefore stated, to which the plate is to be raised and kept during the application of the composition to it, as such may be varied or increased often to advantage.

I claim as my invention—

1. The above-described process of finishing a copper plate, the same embracing the employment of heat, the composition, and means, as set forth, or the equivalent thereof, for condensing the composition and forcing it into the pores of the metal, and finally treating the condensed surface with oil, all substantially as specified.

2. As an improved manufacture, a copper plate, finished by the process as above explained.

BENJAMIN F. DUDLEY.

Witnesses:

L. N. MÖLLER,
J. R. SNOW.