

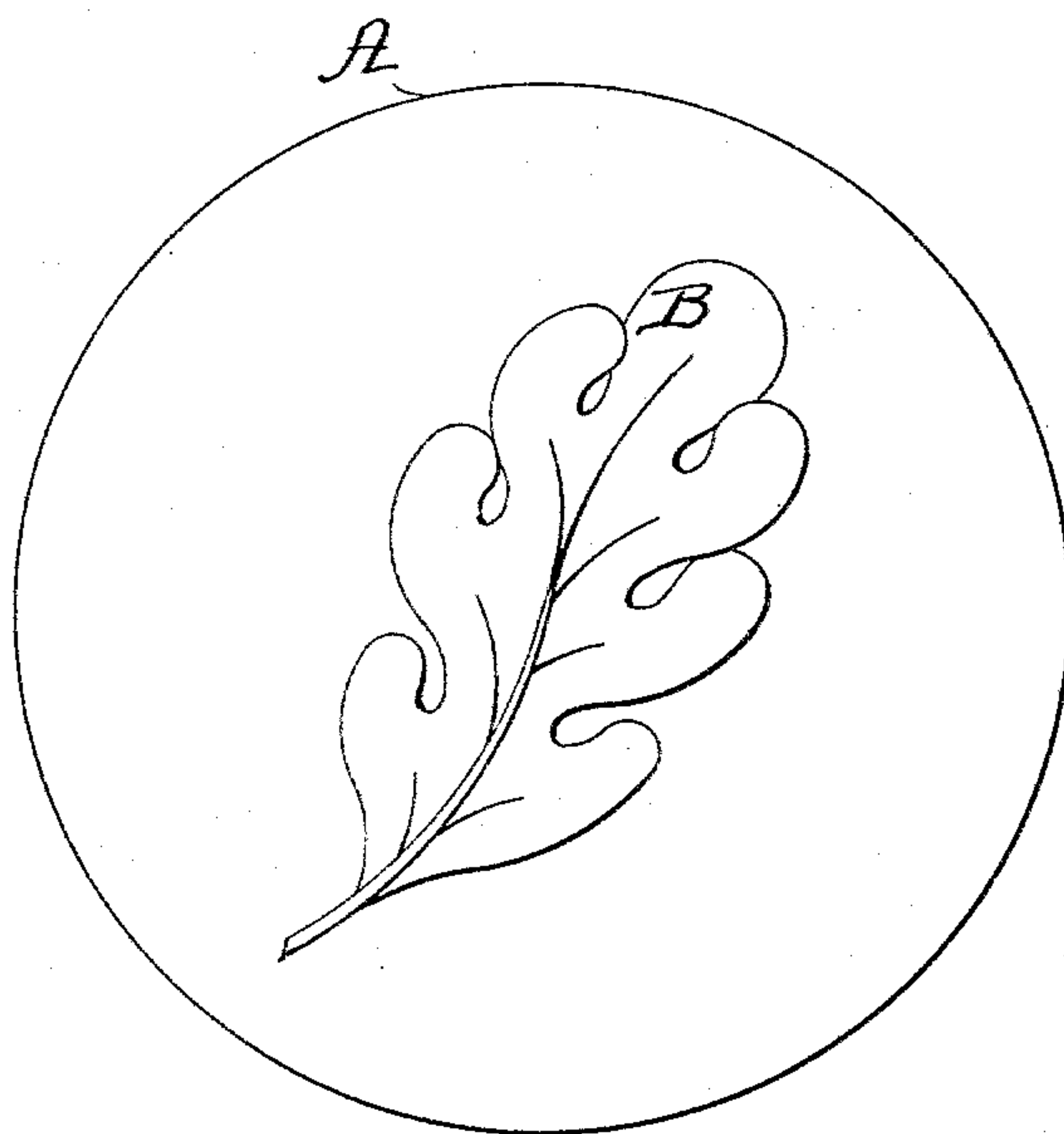
(No Model.)

F. RHIND.

ORNAMENTED METALLIC SURFACE.

No. 384,282.

Patented June 12, 1888.



WITNESSES,
S. J. Roby,
Benton Allen.

Frank Rhind.
INVENTOR.
per Geo. L. Cooper, Atty.

UNITED STATES PATENT OFFICE.

FRANK RHIND, OF MERIDEN, CONNECTICUT, ASSIGNOR TO EDWARD MILLER
& COMPANY, OF SAME PLACE.

ORNAMENTED METALLIC SURFACE.

SPECIFICATION forming part of Letters Patent No. 384,282, dated June 12, 1888.

Application filed May 31, 1887. Serial No. 239,726. (No model.)

To all whom it may concern:

Be it known that I, FRANK RHIND, a citizen of the United States, residing at Meriden, county of New Haven, and State of Connecticut, have invented an Improved Ornamented Metallic Surface, of which the following is a specification.

The object of my invention is to produce a raised polished pattern in brilliant colors on a ground or surrounding surface relatively low and unpolished, and usually of the original color of the metal or alloy; or the ground may be raised and brilliantly colored, while the pattern is lower and less polished.

In the accompanying drawing, A designates a circular sheet of metal, as brass; B, an ornamental design thereon.

My invention is put in practice as follows: The sheet of metal, vase, or other article, as A, is first burnished, buffed, or otherwise brought to as high a polish as is desired. It is then attached to the positive wire of a battery or dynamo and covered with a light deposit of plumbum peroxide. By this means may be imparted to polished surfaces of metals all the richest colors of the rainbow. Peroxides of other metals than lead may be deposited in similar manner and with like effect. Colors may also be produced on a metallic surface by immersion in a soda or similar solution without the aid of electric energy; but these colors are usually inferior in brilliancy to those produced by the deposition of metallic peroxide. So much of the surface of the sheet, vase, or other article as it is desired to have ornamented with this deposit is then covered with any well-known resist. This is usually done by hand and with great care, the beauty of the subsequent result depending in great measure on

the artistic skill here displayed. The article is then etched in the usual manner by immersion in a dilute acid. The deposited metal and the buffed or polished surface of the original metal are thus removed, leaving a dead or frosted finish on those parts of the article not covered by the resist. The resist is then removed and the article protected, if desired, by a lacquer coating. The result is a pattern either in relief or intaglio, the higher surface covered with any or all of the colors of the spectrum, the remaining surface having a dead or frosted finish.

I am aware that articles of metal have heretofore been ornamented by first electroplating them in the usual manner by attaching them to the negative pole of a battery, thereby producing a monochromatic surface, next covering a portion of such surface with a resist, then etching away from the uncovered surface the deposited metal and a portion of the original metal beneath. The result of these operations is the production of an article having a dead or frosted surface of one color with a pattern thereon in another single color. My invention, however, produces on a surface like that above described a brilliant irised pattern.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

As an article of manufacture, a sheet, vessel, or other article of metal having a portion of its surface covered by a polished irised pattern in relief; the remaining surface being relatively low and having a dead or frosted finish, substantially as described.

FRANK RHIND.

Witnesses:

GEO. L. COOPER,
S. J. ROBY.