

UNITED STATES PATENT OFFICE.

HENRY S. CROOKE, OF NEW YORK, N. Y.

ORNAMENTAL METALLIC-FOIL WRAPPER.

SPECIFICATION forming part of Letters Patent No. 263,321, dated August 29, 1882.

Application filed April 5, 1880. (No specimens.)

To all whom it may concern:

Reit known that I, HENRY SUYDAM CROOKE, of the city, county, and State of New York, have made an invention of a new and useful Article of Manufacture of Ornamental Metallic-Foil Wrappers; and I do hereby declare the following to be a full, clear, and exact description of the same.

The object of my invention is to produce, and my invention consists in, as a new article of manufacture, tin-foil wrappers having burnished letters, words, marks, numbers, or designs on a frosted or silvery-white ground, or the reverse, and thus rendered distinct by reason of the contrast of the surrounding ground, as will be fully hereinafter described and claimed. The material used by preference as the basis for the manufacture is tin and its alloys with lead, and the material is reduced to the condition of foil by the customary means and processes employed in the manufacture of rolled burnished tin-foil, which means and processes, being well understood, need not be described. I prefer that the surface of the foil shall be commercially pure tin, while the body or core is of lead or of an alloy of tin and lead, the surfaces being welded together in the process of rolling.

According to one process of producing my new manufacture, the metallic foil, when produced as above stated, is subjected to the action of a pair of hard rollers, the surfaces or bodies of which are etched or matted, and the rollers are held together with sufficient force to mat the tin-foil subjected to their action, the practical effect of which is to impart to the tin-foil a dead silvery-white surface, resembling frosted silver. The matted rolls which I prefer for this operation are of steel or chilled iron, and their bodies or faces ground throughout, and they are then etched by means of weak muriatic acid or some other acid or mixture of acids that will effect the desired result, or are finely roughened in some other way. The foil is stripped from the surface of the matting-rolls, and then subjected to the action of a pair of embossing-rollers, the surfaces of whose bodies are the counterparts of the main portion or ground of the foil to be produced. The rollers are pressed together with the requisite force to indent their cut surfaces into the tin-foil. The foil produced

by the above operation is not only embossed in the pattern or design, but the surfaces of both the projections and indentations on the design present a silvery-white matted surface. The sheets of foil thus matted and embossed are then passed between a pair of rollers, one of which is plain, smooth, and hard, and the other of which has in relief on its surface any desired letter or letters, word or words, mark or marks, number or numbers, or design or designs, preferably in steel, which, coming in contact with the matted and embossed foil, are impressed in its surface, leaving the same bright or burnished similar to the brightness of ordinary tin-foil, the ground or rest of the surface of said tin-foil being silvery white in comparison.

According to another mode of proceeding the foil in the burnished condition in which it exists when the metal has been reduced by rolling in the usual manner is passed between two smooth rollers, a strip of good Manila paper from which the desired letter or letters, mark or marks, figure or figures, word or words, or design or designs is or are cut out being placed on one side of the tin-foil, whereby the latter has imparted to it, where the paper comes in contact with it, a dead matted silvery-white surface or ground, those portions of the tin-foil against the cut-away part of the paper remaining burnished and bright, like ordinary burnished tin-foil. The two rollers are pressed together with the requisite force for this purpose.

According to another mode of proceeding, the tin-foil in the burnished condition in which it exists when the metal has been reduced by rolling in the usual manner is passed between two rollers. In the surface of one of these rollers, which is preferably hardened steel, is or are sunk by cutting, punching, or engraving any desired letter or letters, word or words, number or numbers, mark or marks, or design or designs, the counterpart of that to be produced burnished or bright on the surface of the foil, and the rest of the surface of which roller is cut or engraved with a fine grained or lined pattern or design, the counterpart of that to be produced upon the ground or surface of the tin-foil that is not to be left bright or burnished, and said roller is kept dry. The other of these rollers is made of paper—that is, with a metal

shaft surrounded by a body of paper, which is kept moist, so that the tin-foil will be pressed by the engraved surface of the roller into the same. The tin-foil issuing from between these rollers will have upon its surface the projections and indentations of the design upon the roller, being a silvery-white surface, while those portions of the tin-foil that have not been acted upon by the sunken, etched, cut, punched, or engraved letter or letters, word or words, mark or marks, number or numbers, or design or designs will be bright or burnished. The two rollers are pressed together with the requisite force necessary to produce the effect above described.

The paper-roller above described may be kept dry; but in such case the result will not be so perfect.

It is obvious that the tin-foil, after having had a silver-white surface imparted to it, can have the letters, words, marks, numbers, or designs burnished on said surface by dies and type.

The new manufacture produced by either of these operations possesses the peculiarities of letters, words, numbers, marks, or designs burnished or bright like ordinary tin-foil upon a ground of silvery white. This manufacture is a superior article from which to make wrappers for tobacco and other articles, and it is not only highly ornamental, but is also impervious to air, water, and grease.

It is obvious that the ground or surface of the tin-foil may remain bright or burnished, while the letters, words, marks, figures, or designs may have a silvery-white surface. In this case the portions of the hard roller, last above mentioned, corresponding with the desired letters, words, marks, figures, or designs intended to be produced upon the tin-foil should be left in relief with their surfaces cut or engraved with a fine grained or lined pattern or design, as above described, and the rest of the surface of the roller should be sunk or cut away.

I do not claim herein either the method or means described for producing my said new article of manufacture, as I intend to make separate applications for Letters Patent of the United States for so much of said methods and means as is of my own invention; but

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

As a new article of manufacture, metallic-foil wrappers having burnished or bright letters, symbols, or designs upon a silvery-white surface or ground, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

HENRY SUYDAM CROOKE.

Witnesses:

WALTER BETTS,
ALBERT J. DALTON.