

UNITED STATES PATENT OFFICE.

SAMUEL BENSON AND HENRY K. BENSON, OF BLOOMFIELD, NEW JERSEY.

IMPROVEMENT IN THE ART OF ORNAMENTING METALLIC FOILS.

Specification forming part of Letters Patent No. **219,140**, dated September 2, 1879; application filed October 22, 1878.

To all whom it may concern:

Be it known that we, SAMUEL BENSON and HENRY K. BENSON, both of Bloomfield, in the county of Essex and State of New Jersey, have invented a certain new and useful Improvement in Ornamental Facings for Tin and other Foils, which improvement is fully set forth in the following specification.

The object of our invention is the production on tin and other foils of an ornamental facing similar to the figuring on what is known as "watered" or "moire-antique" silk and other similar goods; and this we accomplish by inserting a single sheet of foil between two sheets of plain, ribbed, or figured cloth, of cotton, silk, or other material, and then passing the sheets of cloth having the foil between them through rollers. Each sheet of the cloth thus leaves its imprint on the foil, and by the varying "creep" of the surface of the cloth and foil, one or the other, a peculiar effect is produced on the foil, similar to the "watering" on watered silk or moire-antique goods.

In carrying out our invention, we take two pieces of cloth, either plain or ribbed, but preferably without design of any kind, and inclose between them a sheet of the foil, which is then run through rolls. On removing the cloth from the foil a peculiar watered design is found to be produced, which bears no resemblance to the imprints of the materials which produced it, which design is constantly varied in appearance by the creep of the goods, and can be further changed by varying the pressure of the rolls.

By the use of cloth on both sides of the foil there is also an economic advantage, as the rollers can be used for lead, tin, silver, or gold foil alternately, whereas the use of the rollers on the baser metals without the protection of the fabric would prevent their ready use for silver or gold, as they would become "lead-

or "tinned" to such an extent as to affect gold or silver foil when made on such unprotected rollers.

We are aware that sheets of lead, tin, &c., have been given a frosted appearance by interleaving a pack of metal sheets with tissue-paper, and this whole pack run several times between the rollers; that a sheet of tin-foil has been placed upon ornamental silk fabric, between pieces of vulcanized rubber, and the whole passed between rollers; and that it has also been proposed to lay woven fabric on one side of a plate of metal and then pass the plate and woven fabric between rolls; but none of these will produce the effect exhibited in our invention, which shows foil with the watered appearance on both sides, and neither of the plans referred to is capable of producing watered or moire-antique foil.

What we claim as new is—

1. As an improvement in the art of ornamenting metallic foils, placing a single sheet or thickness of foil between two sheets or thicknesses of fabric, and, without the presence of any other sheets or coverings, passing the same between plain-surfaced pressure-rollers, in virtue of which a more or less watered or moire-antique appearance is imparted to the surfaces of the foil.

2. As a new article of manufacture, metallic foil having watered or moire-antique appearing surfaces, produced by placing a single sheet or thickness of foil between two sheets or thicknesses of fabric, and, without the presence of any other sheets or coverings, passing the same between pressure-rollers.

SAMUEL BENSON.
HENRY K. BENSON.

Witnesses:

LOUIS LIND,
CHARLES H. NASH.