

# UNITED STATES PATENT OFFICE.

A. HOCK, OF PARIS, FRANCE.

## PROCESS FOR GILDING OR PLATING FIBROUS SUBSTANCES.

Specification forming part of Letters Patent No. **10,637**, dated March 14, 1854.

*To all whom it may concern:*

Be it known that I, ALBERT HOCK, of Rue de Grenelle, St. Germain, Paris, in the Empire of France, a native of Switzerland, have invented or discovered new and useful Improvements in Coating Silk and other Thread or Yarn with Gold, Silver, or other Metal Leaf; and I, the said ALBERT HOCK, do hereby declare the nature of my invention and the manner in which the same is to be performed are fully described and ascertained in and by the following statement thereof—that is to say:

This invention consists of coating silk or other thread or yarn, tapes, or bands with gold, silver, or other metal leaf by first coating a cylinder or roller with the metal leaf intended to be used, and then winding thereon the silk or thread or yarn which is to be coated, after which metal leaf is to be laid onto the surfaces of the silk thread or yarn which has been wound on the cylinder or roller, when, by pressing the metal leaf with dry cotton, the silk or thread or yarn will be coated with the metal leaf.

Having thus stated the nature of my said invention, I will proceed to describe the manner of performing the same.

I prefer to use a cylinder or roller of wood for the purpose of my invention; but I do not confine myself thereto, as other materials may be used, and such cylinder or roller I make of about three and a half inches diameter, or of such size that the metal leaf used will just wrap round the roller or cylinder, so as to avoid waste of the metal leaf as much as possible, and I make such cylinder or roller of a length depending on the length of silk or thread or yarn to be wound thereon; and in order that the gold, silver, or other metal leaf may slightly adhere to the surface of the roller during the process of winding thereon of the silk or thread or yarn, I moisten it slightly, which I find to be best done by subjecting the roller or cylinder for a short time to the action of the vapor of soapsuds. The roller is then to be coated over with the metal leaf. The silk or thread or yarn is then to be wound thereon, taking care that the successive coils thereof around the cylinder or roller shall not come in contact with each other, but that the succeeding coils shall only come near to each other, leaving a

slight space (according to the thickness of the silk or thread or yarn) between the succeeding coils, in order that the metal leaf laid onto the same may be pressed between the coils, and thus coat the surfaces. In order that the silk or thread or yarn may be in a proper state to be coated with metal leaf, the surfaces are caused to be first coated with a suitable adhesive preparation. For this purpose the ordinary gilding mixture is preferred. The silk, whether organzine, train, or twist, or the yarn or thread of waste silk or cotton or other fiber, is wound off one reel or swift onto another reel, and in doing so it is caused to pass into a bath of gilding mixture, so as to become well covered with the same, and in rising out of such bath the silk or thread or yarn is caused to pass and be drawn through a slit made in a piece of cloth, by which the silk or thread or yarn will be wiped and the excess of gilding mixture will be removed. The winding onto the reel is to be conducted so as to keep the successive coils therein separate to prevent them adhering. The silk or thread or yarn is now allowed to dry for two days, when it is again in like manner to be unwound from the reel and to be passed again through the gilding mixture and wiped as it rises out thereof, and it is in this state to be wound onto the roller or cylinder on which the metal leaf has been previously spread, as above described, taking care, as before stated, that the succeeding coils are a small distance apart. Metal leaf is now to be laid over the roller or cylinder and over the silk or thread or yarn thereon, and such metal leaf is to be pressed between the coils with cotton. The silk or thread or yarn on the roller or cylinder is then allowed to dry, and when dry it may be wound off onto a reel or roller or bobbins, and in doing so it may be passed in contact and rub against smooth surfaces of steel or other material suitable for burnishing or polishing the surfaces. In some cases the metal leaf is in like manner only applied to parts of the silk or thread or yarn, leaving other parts uncoated, and in some cases leaves of different metals are applied at different parts of the same silk or yarns or thread, or different colors of the same metal may be used, by which means very varied and beautiful effects may be produced

when weaving or otherwise working up such coated silk or thread or yarn into or on fabrics.

Having thus described the nature of my said invention and the manner of performing the same, I would have it understood that what I claim is—

The process, substantially as herein described, of coating silk (whether organzine,

train, or twist) and thread or yarn (of silk-waste and thread) or yarn of cotton or other fibers or mixtures thereof with gold, silver, or metal leaf.

A. HOOK.

Witnesses:

T. BASSET,

W. S. CHASE.