

# UNITED STATES PATENT OFFICE.

H. H. DAY, OF JERSEY CITY, NEW JERSEY.

## IMPROVEMENT IN PREPARING GUTTA-PERCHA FABRICS IN IMITATION OF PATENT-LEATHER.

Specification forming part of Letters Patent No. 5,543, dated May 2, 1848.

### *To all whom it may concern:*

Be it known that I, HORACE H. DAY, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in the Manufacture of Fabrics Similar to Patent-Leather and other Flexible Polished Fabrics; and I do hereby declare the following to be a full and exact description thereof.

My invention consists in the forming of flexible fabrics with a bright gloss, adapted to all the various purposes for which patent-leather, japanned cloth, and other similar manufactures have been heretofore used, and free from the liability to crack, peculiar to most fabrics of this nature, and at about half the cost.

The first part of my invention consists in coating the surface of gutta-percha in sheet, and fabrics made entirely of gutta-percha with varnish, whereby I give it a luster and finish resembling japanned leather and other similar substances.

The second part of my invention is the combining cloth, canvas, felting, leather, and other fibrous material with gutta-percha and varnish for the production of fabrics adapted to dash-boards and other purposes for which heavy japanned leather has heretofore been used.

In the manufacture of patent japanned leather, canvas, and glazed cloths, now and heretofore in common use, it has been the practice and part of the necessary process to form the body with which the fibrous fabric is coated of Japan varnish to impart a smooth surface to the article, and then finish the surface, after successive dryings, until a fine luster is obtained. This process, which is done by hand with a brush, is both tedious and expensive, while the large body of varnish thus applied is liable to crack and peel off when in wear. My invention removes, to a great extent, all these objections, and produces a fabric at once elegant, durable, and cheap. If the cloth to be varnished requires to be figured or embossed, it is passed through the rollers for that purpose before receiving the finishing-coat of varnish. The machinery used for embossing is the common machinery used for embossing cloth or other fibrous substances, and consists mainly of two rollers and their side frames and running-gear.

To form the first part of my invention I take

of gutta-percha, in the clean, ground, and masticated state, either pure or with coloring-matter mixed, and cover a glazed cloth with one or more coats of this substance until the desired thickness is obtained. The best means of doing this is by the process well known to manufacturers of india-rubber, called "spreading" with the heated calenders by successive layers or coats. These layings or coatings are repeated until the desired thickness is obtained. The fabric is now ready for the second process or coat. This is accomplished by reducing a portion of gutta-percha to a soft paste or semi-fluid state by mixing therewith any of the known menstruums or solvents of gutta-percha, and combining therewith an equal portion, by weight, of Japan varnish, such as is used to form patent-leather. These are well mixed together by the india-rubber-grinding mill and spread with cold rollers upon the body of gutta-percha. This is left to dry for a few hours, when it is to be calendered, and is then ready for japanning. In this last or finishing process the same course is pursued as in finishing patent-leather. The article is then subjected to a high degree of heat in close ovens to dry the polishing or facing coat and blend the two laminae together. I proceed to finish my fabric by applying a thin coating of oil-varnish—such as is commonly used in the manufacture of patent-leather—using any such as will answer the purpose, and finish the fabric by drying the varnish in an oven, or exposed to the sun, when the fabric is ready to be peeled off from the muslin on which it is formed, and is ready for use. I would remark here that the gutta-percha may be first made up into articles—such as shoes, bottles, saddles, harness—indeed into all articles of a flexible character, and the finishing coat be applied with a brush, and submitted to heat to impart to them the required gloss.

The second part of my invention is made by spreading with machinery before mentioned cloth of cotton, flax, silk, or other suitable fibrous substances with one or more coats of gutta-percha, and in the forming of dashes and other similar stock, I use as a bottom, inside, or foundation a coarse cotton burlap, which is coated with gutta-percha, then a piece of fine cloth—such as common muslin coated with gutta-percha—and stuck fast to the foundation, rolling through heated rollers.

When this is done I proceed to apply the top or finishing coat of gutta-percha preparatory to the finishing process. In applying this I sometimes use a cement of gutta-percha, or gutta-percha compounds, to the two plies of cloth before mentioned to prepare the surface of the cloth for the hard pasty mass of gutta-percha which is to form the body or smooth surface of my fabric. This hard paste is then rolled upon the fabric through the calenders before mentioned when it is to be treated and finished according to the manner described for the first part of my invention.

Having described my invention and the best means known to me of preparing the same, I hereby declare that I do not claim any particular way of combining gutta-percha with cloth, or of combining these or either of them with

varnish. I intend to use any such as will best answer the purpose; nor of preparing or manufacturing gutta-percha; nor do I claim the invention of embossing or figuring gutta-percha by pressing or molding.

What I do claim as my invention, and desire to secure by Letters Patent, is—

The finishing or treating of cloth or other articles made wholly or partly of gutta-percha, and cloth or fabrics made of these, with Japan varnish, such as is generally used in the manufacture of patent-leather, substantially as herein described.

HORACE H. DAY.

Witnesses:

A. D. WYCKOFF,  
FREDK. WAGNER.