

# UNITED STATES PATENT OFFICE.

STANISLAS VIGOUREUX, OF RHEIMS, FRANCE.

IMPROVED MODE OF PRODUCING MIXED COLORED WOOLENS, &c.

Specification forming part of Letters Patent No. 41,878, dated March 8, 1864.

*To all whom it may concern:*

Be it known that I, STANISLAS VIGOUREUX, of Rheims, in the Empire of France, have invented a new and Improved Method of Producing Mixed Colored Woolen and other Threads; and I do hereby declare that the following is a full, clear, and exact description thereof.

In the spinning of filamentous substances, in order to produce mixed colored thread, each shade or color is dyed separately. The different-colored filaments are afterward united and passed through preparing and spinning machines. Notwithstanding the greatest care to equalize the mixture of the colors, especially when they are opposite—such as black and white—there form and remain in the thread veins or stripes different from the ground.

The object of this invention is to overcome this defect.

The invention consists in dyeing or printing the filaments with "chine" or marks of colors, by any suitable means, upon parts of their length, in sections and in one or more colors, before being made into thread, prior to their being subjected to the operations of mixing by the ordinary machinery, in order to obtain a new kind of mixed thread suitable for manufacturing purposes. If, for example, the filaments are two, four, six, eight, fifteen, or twenty inches long, (more or less,) and if by dyeing, printing, or other means of coloring the color is repeated, say, from inch to inch, or any other regular or irregular distances, it will be understood that after they have been subjected to the various passages in the course of their preparation the resulting threads and fabric will show effects varied according to the length of the portions colored and repeated over the filaments. The result of this method of coloring the filaments in sections is to produce by the ultimate sliding of the filaments over one another, and by the superposition of the colors during the passage of the filaments through the preparing-machines, a conglomeration of colors, and consequently a regular well-blended mixture with different shades of threads.

This method of coloring filaments in sections is applicable to wool, cotton, floss-silk, flax, hair, and to all other textile or filamentous material. and it can be applied to the filaments in any stage of their preparation prior to their formation into threads for the manufacture of textile and other fabrics. If, for example, carded or other wool is to be operated

upon, when the card is used, as in the preparing-machine, the coloring of the filaments in sections may be performed when the wool is in its raw state after washing, and after the grease has been removed, or after the wool has undergone one or several cardings, or when the wool has been submitted to some of the passages through the preparing-machines employed in spinning to obtain the thread. If combed wool is to be operated on, the coloring of the filaments in sections may be effected at any of the preceding cardings of the carded wool, or before or after combing.

The coloring of filaments of any kind may be effected by dyeing or printing by any of the known methods, or by any coloring process whatever that practice may suggest. Thus, as an example of how the printing may be performed in sections on the filaments of combed wool, take slivers of combed wool, place them on bobbins to unroll, and unite in groups in order to draw them out and present them flat to the action of printing-rollers generally employed for printing fabrics. On leaving the rollers the slivers are conveyed upon an endless web or otherwise, to have the impression dried by means of heated pipes, fans, or otherwise.

The shades and effects of the mixture may be varied either by altering the spaces between the colors, or by mixing the filaments colored in sections with white filaments, or with filaments dyed or colored all over, and not in sections.

To hide the shade of the raw material in this method of coloring filaments in sections, the filaments may be dyed, printed, or colored in one or in several colors, or the raw material may be dyed any desired color, and the process before described of coloring in sections may be afterward applied; and

Having now described the nature of the said invention, and in what manner the same is to be performed, I declare that I claim—

The manufacture of mixed colored woolen and other threads from filaments dyed, printed, or colored in sections in the manner hereinbefore described.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

SAS. VIGOUREUX.

Witnesses:

E. GAUME,

E. SHERMAN GOULD.