

UNITED STATES PATENT OFFICE.

STANISLAS VIGOUREUX, OF PARIS, FRANCE.

IMPROVEMENT IN THE METHOD OF PREPARING THREADS FOR PARTY-COLORED PRINTING AND FOR PROPERLY WEAVING THE SAME.

Specification forming part of Letters Patent No. **54,271**, dated April 24, 1866.

To all whom it may concern:

Be it known that I, STANISLAS VIGOUREUX, of Paris, in the Empire of France, have invented certain new and useful Improvements in the Manner of Preparing Threads for Party-Colored Printing and of retaining them in their proper relative positions for securing a more accurate weaving of the intended pattern or figure; and I hereby declare that the following is a full, clear, and exact description of the same.

The object of my invention is to prevent the stretching of the threads of the warp which are being woven, and the consequent marring of the pattern or design printed on them prior to their being woven in the loom.

In the processes now in use, after the threads of the warp have been printed or colored in the design or pattern desired they are woven in the loom. These threads, being entirely disengaged from and independent of each other, and being, moreover, more or less elastic, do not all preserve the same length, some of the threads stretching more than others. The result of this is that the pattern which has been imprinted upon the threads becomes misshapen, and during the weaving process irregularities are produced in the pattern or design which appear in the woven fabric in the form of veins or bars.

My invention consists in gumming or otherwise securing to the surface of an apron or supporting-cloth all the threads of the warp which are to be imprinted with the design or pattern prior to being woven. The threads of the warp, either before or during the printing process, become gummed or fastened by some sufficiently adhesive material to the apron throughout their whole length in such manner as to prevent their moving or stretching, and they are thus made to adhere firmly to the apron until the moment when they are separated from it in order to be woven with the woof.

Thus by my process the threads of the warp, when wound off the beam, are supported on the surface of an apron made of linen, canvas, paper, or other material, to which surface they are made to adhere by means of gum or other suitable material. The apron and threads move together to receive the design or pattern, which is imprinted on the lat-

ter by either a cylinder or plate. After the impression is made the threads and apron continue to travel together toward the weaving-loom until they arrive at the point where, for the purpose of weaving, the threads are to be crossed by the shuttle, where a blade actuated by a reciprocating motion or other suitable means detaches all the threads from the apron, which latter is led off by itself on a roller.

The adhesion of the threads to the surface of the apron may be caused either by the natural adhesion of the threads when moistened by the coloring-matter received in printing or by putting gum or other suitable adhesive agent on the threads or apron.

In all cases it is preferable that the threads should adhere to the apron throughout their whole length, so that every part of the threads may be firmly held in place. However, in cases of necessity only a certain part of each thread may be made to adhere.

The method which I have described, by causing the threads of the warp to rest upon and adhere to an apron which moves simultaneously with them, prevents the formation of veins, bars, and other like defects which are usually found in fabrics woven with printed warp-threads.

The peculiar characteristics of my invention are, first, the adhesion of the warp-threads throughout the whole or part of their length to the surface of a supporting cloth or apron by gumming or other adhesive means, either before, during, or after the printing of the warp; second, the simultaneous movement of the warp-threads and the apron, to the surface of which they adhere to receive the impression of the design, and then their joint progress to the weaving-loom after the impression has been received; third, the separation, by any suitable detaching instrument, as the weaving progresses, of the threads from the apron at the point where the threads are crossed by the shuttle; fourth, carrying the apron off into a roller after the threads are detached from it.

My method of causing the adhesion of the threads to the surface of a supporting-apron for the purpose of preventing the disfiguring of designs is applicable as well to the threads of the weft or woof as to those of the warp,

to print them or to wind them into hanks, bobbins, &c. It facilitates the printing, and also the reeling by keeping the threads from becoming mixed and tangled with one another.

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

The method herein described of preparing threads for party-colored printing and of retaining them in their proper relative positions for

weaving for the purpose of preventing the marring or disfiguring of designs or patterns.

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

SAS. VIGOUREUX.

Witnesses:

A. BLÉTRY,

A. POLLOK.