

(No Model.)

R. SIMON.

SILK FABRIC AND METHOD OF PREPARING TRAM FOR THE SAME.

No. 348,063.

Patented Aug. 24, 1886.

Fig. 1.

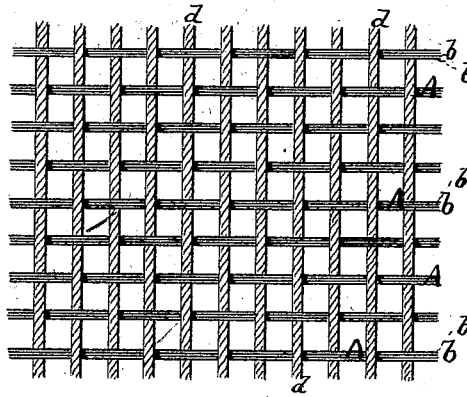


Fig. 2.



Fig. 3.

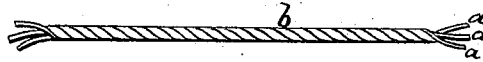
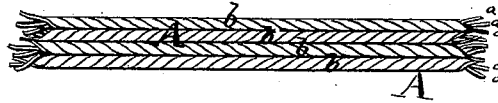


Fig. 4.



Witnesses:
A. Schehl.
Harry M. Smith

Inventor.
Robert A. Simon
by *Brienen & Steele*
Attorneys.

UNITED STATES PATENT OFFICE.

ROBERT SIMON, OF WEEHAWKEN, NEW JERSEY.

SILK FABRIC AND METHOD OF PREPARING TRAM FOR THE SAME.

SPECIFICATION forming part of Letters Patent No. 348,063, dated August 24, 1886.

Application filed March 20, 1885. Serial No. 159,546. (No specimens.)

To all whom it may concern:

Be it known that I, ROBERT SIMON, a resident of Weehawken, in the county of Hudson and State of New Jersey, have invented an Improvement in Silk Fabrics and Method of Preparing Tram for the Same, of which the following is a full, clear, and exact description, reference being made to the accompanying drawings, in which—

Figure 1 is a diagram illustrating the character of my silk fabric. Fig. 2 is an enlarged cross-section of one of the raw-silk threads used in the fabric. Fig. 3 is a side view of the raw-silk thread. Fig. 4 is a side view of the tram or filling which is used in the fabric.

This invention relates to a new silk fabric in which the tram or filling is composed of series of twisted raw-silk threads, each raw-silk thread lying parallel with the other in the tram, which tram, therefore, consists of series of disconnected, but separately twisted, raw-silk threads.

I find that a fabric in which the raw-silk threads, after having received their separate twist each by itself, are placed side by side, instead of being, as heretofore, united by further twisting into a complete tram, is more economical to produce, less liable to break in folding, and more even, because of the capacity of the separate raw-silk threads in the tram to adapt themselves to the pressure of the warp-threads and of the batten.

In preparing the tram for my improved fabric I proceed as follows: I first twist a raw-silk thread. This means that I take a series of cocoon-threads, which in cross-section have the form shown in Fig. 2, and these series of cocoon-threads, *a a*, which, as they are drawn from the cocoons, will adhere together, are then twisted together, as in Fig. 3, so as to produce a raw-silk thread, *b*. A number of these twisted raw-silk threads *b b* are then doubled and twisted again preparatory to dyeing; but after dyeing the second twist is taken out again, as far as practicable, by untwisting the doubled threads, leaving the singly-twisted raw-silk threads substantially parallel to one another, as in Fig. 4, and near to each other. A filling or tram, *A*, thus prepared is wholly composed of parallel singly-twisted raw-silk threads, which take the place of the

ordinary twisted tram. The finer the size of the tram the more valuable are the goods, and as my construction provides for a finer tram than any heretofore proposed, I produce a superior fabric at less cost than the ordinary fabric. Considerable cost is also saved, because the fine tram-threads have never to be worked together after dyeing, and need not be singly worked.

When I say "parallel" in this specification, I mean, in connection with the raw-silk threads, that the second twist given them before dyeing is taken out.

In producing a silk fabric with my improved tram *A* therein I interlock the warp-threads *d* with the compound tram-threads *A* by means of the ordinary mechanism.

I claim—

1. A silk fabric in which each tram *A* consists of separately-twisted single raw-silk threads *b*, that lie substantially parallel to one another in the tram, as specified.

2. The method herein described of preparing trams for silk goods, which method consists in first separately twisting each raw-silk thread, in then doubling a number of such raw-silk threads, twisting the doubled threads, dyeing the same, and then taking the second twist, but not the first, out of said threads after dyeing, substantially as described.

3. In the art of making silk fabric, the improvement consisting in twisting raw-silk threads separately, doubling a number of them, twisting and dyeing the doubled threads, and then untwisting the same to form the tram or filling for the fabric, the twist given the raw-silk threads separately being allowed to remain, substantially as described.

4. In the art of making silk fabric, the improvement consisting in twisting raw-silk threads separately, doubling a number of them, twisting, dyeing, and untwisting the doubled threads, and interlocking the tram thus formed with warp-threads to form the fabric, the twist given the raw-silk threads separately being allowed to remain in the tram after dyeing and weaving, substantially as described.

ROB. SIMON.

Witnesses:

JOHN CUTOIR,
B. WHILLDIN.