No. 798,404. PATENTED AUG. 29, 1905.

C. A. M. FLAMANT.

METHOD OF MANUFACTURING PLAITED FABRICS.

APPLICATION FILED AUG. 17, 1903.

FIG. 1.

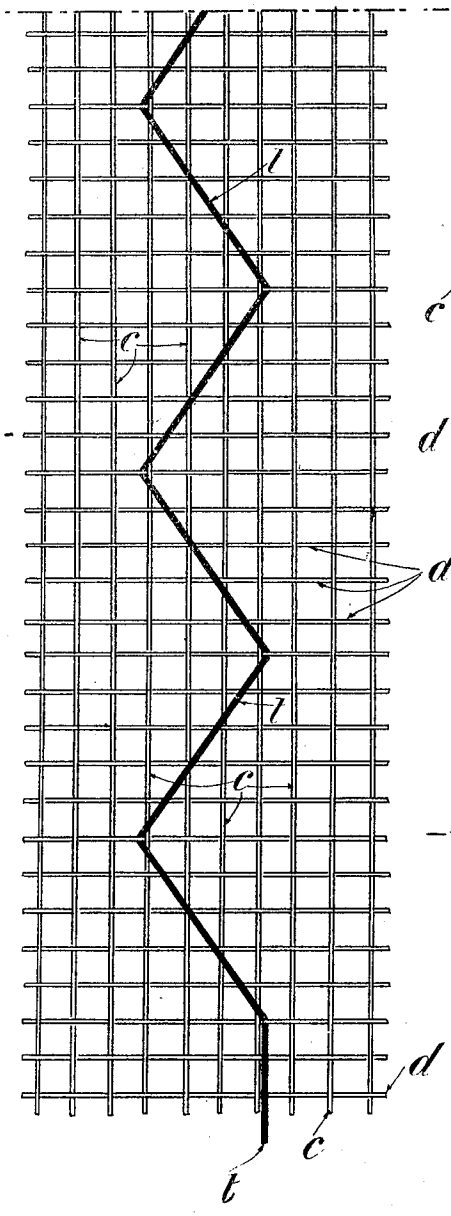


FIG. 2.

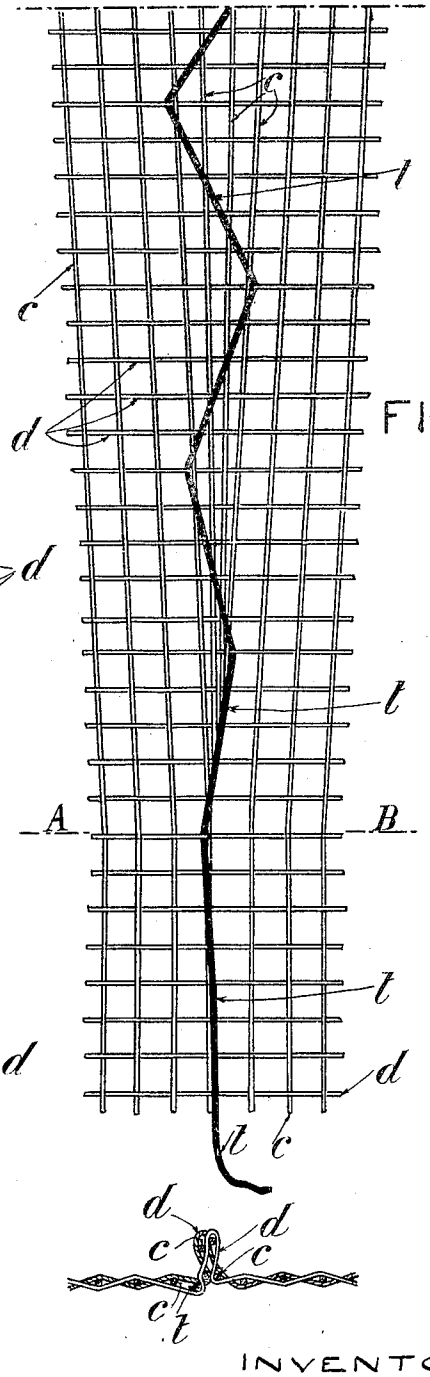


FIG. 3.

WITNESSES

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METHOD OF MANUFACTURING PLAITED FABRICS.

No. 798,404. Specification of Letters Patent. Patented Aug. 29, 1905.

Application filed August 17, 1903. Serial No. 169,802.

To all whom it may concern:

Be it known that I, CHARLES AUGUSTE MAXIMILIEN FLAMANT, a citizen of the Republic of France, and a resident of 5 Rue Ambroise-Thomas, Paris, in the Republic of France, have invented a certain new and useful Improved Method of Manufacturing Plaited Fabrics, of which the following is a specification.

This invention relates to a method of manufacturing a plaited fabric which enables a very large surface of fabric to be plaited by a single operation, producing undeformable folds or "plaits," the said method consisting in inserting in the fabric during the weaving and by well-known means of weaving "plaiting-threads" disposed according to the directions to be taken by the plaits on the fabric, then in exerting after weaving a longitudinal and simultaneous pull on the whole of the plaiting-threads while the fabric is fixed in position in the longitudinal direction.

In the accompanying drawings, Figure 1 represents, on an enlarged scale, a piece of fabric containing a movable or plaiting thread. Fig. 2 represents the same piece of fabric during the formation of the plaits, and Fig. 3 is a horizontal section on the line A B, representing the fabric after it has been plaited.

The main warp-threads are indicated by the letter *c*, the weft-threads by the letter *d*, and the movable warp-thread by the letter *t*. In the example illustrated four warp-threads lie between the two lines of points of connection of the movable thread. If, for instance, the lower end of the movable thread *t* is pulled, the said thread will tend to become straight, as indicated in Fig. 2, and the warp-threads underneath it will thus be moved together and caused to ruck up on the opposite surface of the material, the weft-threads remaining held by the said warp-threads and caused to form loops or curves. The lower part of Fig. 2 represents the fabric after the plait has been formed. In the upper part of the said figure the plait is still in course of formation. Fig. 3 indicates the positions of the threads in the plaited material. When the plaits have been formed, it is only necessary to cut off the ends of the plaiting-threads which extend out of the fabric.

I am aware that fabrics plaited by this means are known and described in the United States Letters Patent No. 686,230, and I do not claim a plaited fabric of this kind; but what I claim as new is the improved method of manufacturing this kind of plaited fabric, as will be hereinafter described.

To manufacture this kind of plaited fabrics by my method, one inserts during the weaving the plaiting or movable threads in the positions according to which it is desired to produce the plaits, and before removing the fabric from the loom a portion of a certain length will be left without being woven—that is to say, having only warp and plaiting threads. The weaving will then be continued for a length of from five to ten centimeters, so as to form a "fag end," uniting all the threads. In the same manner a fag end and an unwoven portion can be provided at the beginning of the cloth when the weaving is started. The material is then dyed, finished, or otherwise treated, as usual. Thereupon it is stretched lengthwise on a suitable support, frame, table, or the like, so that the two ends remain free. A roller or beam is then arranged at each end of the cloth or at one end only, the other one being fixed, and the respective fag end is fastened thereto after all the main warp-threads have been cut in the unwoven space, so that only the plaiting-threads are connected to the roller. It will then only be necessary to revolve the roller so as to exert a pull on the plaiting-threads, and all the plaits will be formed simultaneously. In order to cut easily in the unwoven portion all the main warp-threads, these latter will be separated from the plaiting-threads before forming the fag end, a band will be inserted between the two kinds of threads, and this band will then be fastened above the plaiting-threads. The plaiting-threads being thus neatly separated from the main warp-threads it will be easy to cut the latter.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A method of manufacturing a plaited fabric which consists in inserting in the fabric "plaiting-threads" during the weaving, in providing at the ends of the piece of fabric a woven part or "fag end" separated from the body of the piece by an unwoven part, in cutting the lon-

gitudinal threads in the unwoven part excepting the plaiting-threads, in fixing then the fag end on a roller or beam and finally in causing the roller or beam to be turned in order to exert a simultaneous longitudinal pull only on the plaiting-threads, substantially as described and for the purpose set forth.

In witness whereof I have hereunto set my hand in presence of two witnesses.

CHARLES AUGUSTE MAXIMILIEN FLAMANT.

Witnesses:
ANTOINE LAVOIS,
AUGUSTUS E. INGRAM.