(Model.)

2 Sheets—Sheet 1.

A. URBAHN.

ORNAMENTAL LOOPED CORD AND FABRIC WOVEN THEREFROM.

No. 267,285. Patented Nov. 7, 1882.

Fig: 1

Fig: 2

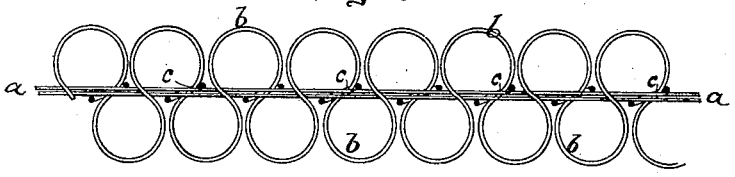


Fig: 3

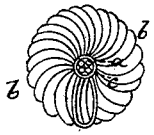
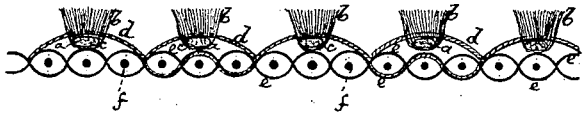


Fig: 4



Witnesses:
Henry R. Parker
John C. Tumbridge.

Inventor:
Alwill Urbahn
by his attorneys
Briesen & Betts

(Model.) 2 Sheets—Sheet 2.

A. URBAHN.

ORNAMENTAL LOOPED CORD AND FABRIC WOVEN THEREFROM.

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Fig: 5

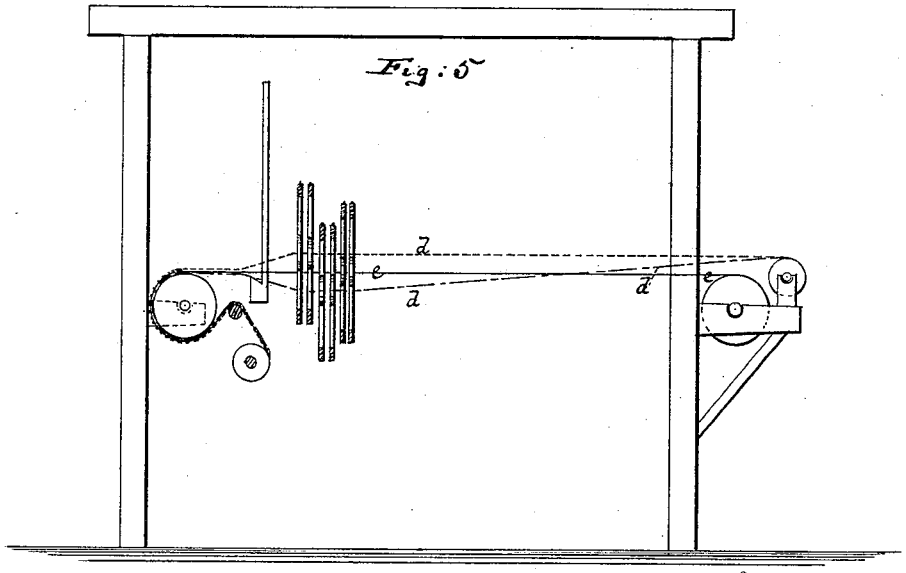


Fig: 6

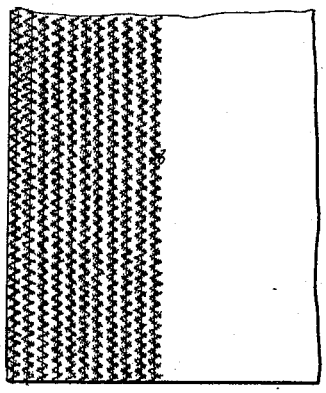
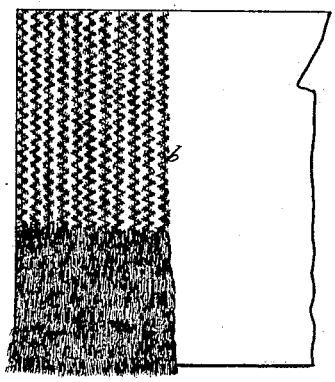


Fig: 7



Inventor:
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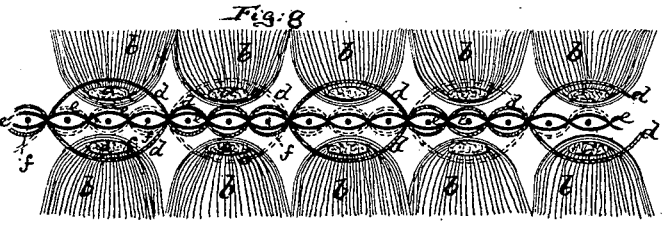
Fig: 8



UNITED STATES PATENT OFFICE.

ALWILL URBAHN, OF PATERSON, NEW JERSEY, ASSIGNOR OF ONE-HALF TO ABRAHAM G. JENNINGS, OF BROOKLYN, NEW YORK.

ORNAMENTAL LOOPED CORD AND FABRIC WOVEN THEREFROM.

SPECIFICATION forming part of Letters Patent No. 267,285, dated November 7, 1882.

Application filed February 3, 1882. (Specimens.)

To all whom it may concern:

Be it known that I, ALWILL URBAHN, of Paterson, in the county of Passaic and State of New Jersey, have invented an Improvement in Ornamental Looped Cord and Fabrics Woven Therefrom, of which the following is a specification.

Figure 1 is a side view of the improved ornamental looped cord made by me, showing the single coils of the enveloping-thread somewhat enlarged to render their position on the core quite clear. Fig. 2 is a diagram showing the relative position of the parts that enter into said cord; Fig. 3, a cross-section thereof. Fig. 4 is a sectional diagram of a woven fabric, showing my improved ornamental looped cord incorporated therein. Fig. 5 is a diagram of the loom, showing how the looped cord is woven into a fabric thereon. Figs. 6 and 7 are diagrams showing the woven fabric in top view. Fig. 8 is an enlarged sectional diagram showing a modification of the woven fabric.

This invention consists, first, in a new ornamental looped cord of a character resembling chenille, which is produced by winding loosely around a non-twisted core, of cotton or other material that may be quite inexpensive, silk yarn or other enveloping material, and tying the same on the straight core by thread or yarn wound around the core and silk in opposite direction to that in which the silk is wound, or (with preferably a varying speed or angle) in the same direction. By this means a puffy braid-like spiral structure is obtained which conceals the inner core, has great beauty, combined with lightness, discloses to the eye only the expensive binding of silk, or its like, in attractive form, and is of great advantage in the manufacture of ornamental cordings, braids, bindings, and also as a surface-covering of woven fabrics.

The invention consists, secondly, in combining the ornamental looped cord above mentioned with the ordinary warp and woof threads of a woven fabric in such a way as to produce on the surface of the latter rows of the said looped cord, which are tightly woven to the body, inseparable therefrom, and which, when brushed or combed by gig or other brushing apparatus that has sufficient power to tear the fibers of the enveloping yarn, will produce a fur-like surface on the fabric from which the projecting fibers cannot be readily detached.

In the accompanying drawings (with special reference to Figs. 1, 2, and 3) is shown the ornamental looped cord of which I have spoken. This cord is composed of one or more straight inner threads, *a*, that are laid parallel to each other, and constitute what I term the "core of the cord." This core may be made of cotton threads or other comparatively-inexpensive material, although, of course, if desired, it may be made of the most expensive material, and instead of constructing this core *a* of threads or fibers placed lengthwise, the core may itself be a thin cord of suitable substance. Around this core *a* is loosely wound, so as to produce a covering of loosely-projecting loops, *b*, a thread or yarn of silk or other material. (Shown in exaggerated proportions in Fig. 2.) This covering-thread is held fast to the core by another binding-thread, *c*, that is drawn tightly around the core and around portions of the enveloping thread or yarn, so as to hold each loop of the latter, where it is nearest to the core, tied to the latter, as is more clearly indicated in Fig. 3, and yet leave the enveloping-thread projecting in loops that would appear in cross-section to be eccentrically laid around the core, the loops being disposed in such order as to produce a spiral coil around the core. It will be seen that this binding-thread *c* is wound around the core in the opposite direction to that in which the enveloping-thread forming the eccentrically-projecting loops *b* is wound, thus insuring the proper fastening of the silk thread to the core. The binding-thread may also be wound in the same direction as the enveloping-thread, but preferably with a different speed or angle, to produce coils around the core that will fasten each loop of the enveloping-thread.

The ornamental looped cord which I have thus far described is in itself of great use in the arts. It is a structure somewhat resembling chenille, with the difference that its loops are tied onto the straight core in a manner which makes them absolutely irremovable

from the latter, and in which the core is not twisted with the binding-thread in the act of tying the enveloping-thread thereto. This looped cord so constructed is made on a machine which forms the subject of another application filed by me at the same time with this, (Serial No. 51,805,) or on any other analogous machine, and when produced on such machine it is wound around spools that can be conveyed to suitable places for use. When, however, the looped fabric *a b c* is to be used in producing the woven fabric, of which I shall hereinafter speak, it is wound around bobbins that are fit to be placed into the shuttles of a loom.

The woven fabric shown in Figs. 6 and 7, and by section in Fig. 4, of which the surface is wholly or partly composed of the looped cord *a b c*, above described, is made as follows, to wit: The looped cord *a b c* takes in a loom the place of a shuttle-thread, the same loom having other common shuttle-threads for the foundation of the fabric. The same loom has two sets of warps, *d* and *e*, as indicated in Fig. 5. The set of warps *e*, in connection with the ordinary shuttle-threads, serves to produce in the usual way the plain or ordinary foundation fabric, the warps *d* being also interwoven in said foundation fabric, a suitable portion thereof—say one-half—being lifted at proper intervals by the heddles or harness of the loom to form an opening or shed through which the shuttle containing the cord *a b c* is thrown, after which such raised portion of the warp *d* is again lowered and may become a part of the lower warp until its turn again comes to be raised.

In practice I find that by lifting or forming a separate shed for the reception of the cord *a b c* from the warp *d* or from a portion thereof, after every three lifts or sheds of the common warp *e*, the cord *a b c* will be properly placed in contiguous rows on the surface of the fabric; but other proportions of spacing may be employed.

It will be clear from Fig. 4 of the drawings, and also from the foregoing description, that the looped cord *a b c* is firmly fastened by the warp-threads *d*, and by them and the common shuttle-threads that hold the latter is interwoven with the fabric itself, the said warp-threads *d*, that hold it fast, being entirely obscured from view in the ample folds of the enveloping-loops of the cord. When a fabric thus constituted has been finished it may be exposed to the action of a gig, or of a strong brush, to tear the outer loops of the enveloping-yarn of the cord, and to brush them or comb them in one direction, thus producing the fur-like structure which is indicated in the lower part of Fig. 7.

Fig. 8 shows a diagram of a fabric having the same construction as that shown in Fig. 4, with the difference only that cords *a b c* are applied in Fig. 8 to both sides of the fabric. In Fig. 8 the letter *d* shows the warp that holds the cords *a b c* to the fabric. The letter *e* represents the ordinary warp, and the letter *f* the ordinary shuttle-thread. The same letters apply to the fabric shown in Fig. 4.

Instead of placing the cord *a b c* in the shuttle it may be used as a part of the warp, in which case but one shuttle-thread would be required.

I claim—

1. An ornamental looped cord constructed of a straight inner core, *a*, an enveloping-yarn wound loosely around said core in the form of a series of eccentrically-projecting loops, *b*, arranged in spiral order around said core, and the binding-thread *c*, wound tightly around the core, but not intertwisted therewith, and partly around said enveloping-yarn and holding each loop to the core, substantially as specified.

2. A woven fabric constructed of looped cords *a b c*, having eccentric loops on straight untwisted cores, and of two sets of warp-threads, *d e*, and ordinary shuttle-threads, *f*, the said cords *a b c* being bound to the body of the fabric by the warp-threads *d*, substantially as described.

This specification signed by me this 7th day of December, 1881.

ALWILL URBAHN.

Witnesses:
WILLY G. E. SCHULTZ,
JULIUS HÜLSEN, Jr.