J. D. ARMITAGE.

THREAD OR CORD AND METHOD OF PREPARING THE SAME.

APPLICATION FILED JULY 11, 1914.

1,184,912. Patented May 30, 1916.

Fig. 1.

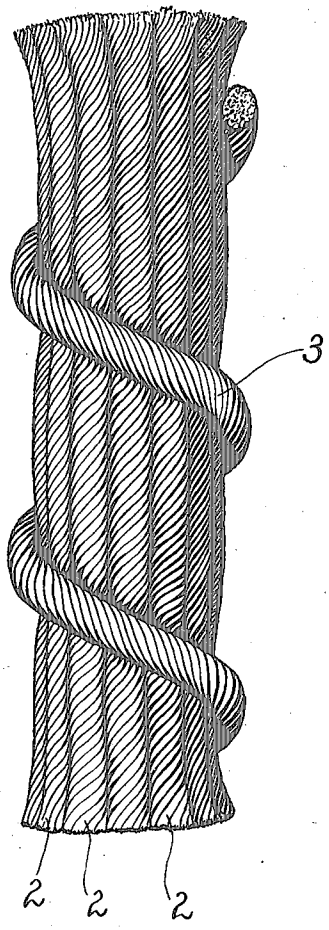
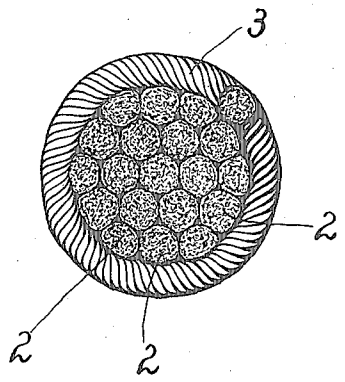


Fig. 2.



Witnesses:
Chas. W. La Rue
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UNITED STATES PATENT OFFICE.

JOSHUA D. ARMITAGE, OF NEW YORK, N. Y.

THREAD OR CORD AND METHOD OF PREPARING THE SAME.

1,184,912. Specification of Letters Patent. Patented May 30, 1916.

Application filed July 11, 1914. Serial No. 850,427.

To all whom it may concern:

Be it known that I, JOSHUA D. ARMITAGE, a citizen of the United States, and a resident of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Improvement in Thread or Cord and the Method of Preparing the Same, of which the following is a specification.

This invention relates to threads or cords made up of a number of strands and commonly employed in the weaving of fabrics.

The object of my improvement is to provide a thread or cord of the class specified wherein the strands thereof are laid in parallelism and maintained in that relation until the fabric has been woven therewith.

A further object of my improvement is to provide a thread having greater tensile strength and wearing quality than the usual thread of the same weight.

To these ends my improvement comprises features illustrated in their preferred embodiment in the accompanying drawing wherein—

Figure 1 is an elevation, to a greatly exaggerated scale, of my improved thread and Fig. 2 is a cross sectional view to a similar scale, of what is shown in Fig. 1.

Heretofore, in threads made up of a multiplicity of strands twisted together, in a given part of the thread certain strands appear on the surface and in another part of the thread other strands appear on the surface. One result of such necessarily haphazard arrangement of strands is that some strands are longer than others, and when the completed thread is subjected to tension the strain falls upon the shorter strands or upon those having the most devious course through the thread. These strands therefore break first and their breakage is followed by the breakage of those next shorter, or by those for other reasons under the next higher strain, to the eventual rupture of the whole thread. Furthermore in the ordinary twisted thread made up of a multiplicity of strands a portion of the twist originally put into the individual strands is lost in the twisting of those strands together to form the thread. Also it is difficult or at least undesirable, to put into the individual strands the necessary extra twist to compensate for untwisting in twisting the thread as a whole. Furthermore, the amount of the twist of the thread as a whole is variable and cannot always be predetermined with accuracy.

All these objectionable features are obviated in my improved construction. By assembling the strands in parallelism, preferably a predetermined uniform twist may be given to the strands severally and an equal tension applied thereto whereby said strands will be of equal length. Then said strands are maintained in said uniformity of twist, length and tension and in parallelism by winding a strand of soluble material helically therearound preferably in a direction opposite to that in which the parallel strands are severally twisted.

In the drawing is shown a plurality of parallel strands 2, 2 each twisted to the right and bound together into a thread or cord of circular cross-section by a retaining strand 3, wound helically therearound from right to left. Preferably said parallel strands 2, 2 are of equal size, but in some cases they may vary in size, and preferably said retaining strand 3 is of uniform size with the parallel strands but said retaining strand may in some cases be smaller or larger if desired.

I have found that artificial silk is a desirable material for use as the retaining strand which after the fabric is woven may be dissolved away, thus leaving the fabric of a weight commensurate with the parallel strands only. By this means the strands of the threads accommodate themselves to their environment in the woven fabric with great facility and conduce to a smoothness and closeness of weave not attainable with twisted threads.

I claim:

1. A thread of circular cross-section comprising a plurality of strands in parallelism, and a retaining strand of soluble material wound helically therearound.

2. A thread of circular cross-section comprising a plurality of strands severally twisted in the same direction, and a retaining strand of soluble material wound helically therearound in a direction opposite to that in which the said parallel strands are severally twisted.

3. The method of forming thread which consists in assembling in parallelism a plurality of strands, and then binding the same together into a thread by helically winding therearound a retaining thread of soluble material.

4. The method of forming thread which

consists in assembling in parallelism a plurality of strands severally twisted in the same direction, and then binding the same together into a thread by helically winding therearound in a direction opposite that in which the strands are severally twisted a retaining thread of soluble material.

Signed at New York, in the county of New York and State of New York, this ninth day of July, 1914, before two subscribing witnesses.

JOSHUA D. ARMITAGE.

Witnesses:
H. M. YOUNG,
MARY F. THEAKER.