L. M. CHORIER.

PROCESS OF APPLYING AND TREATING STRANDS WITH VISCOSE, AND THE ARTICLE.

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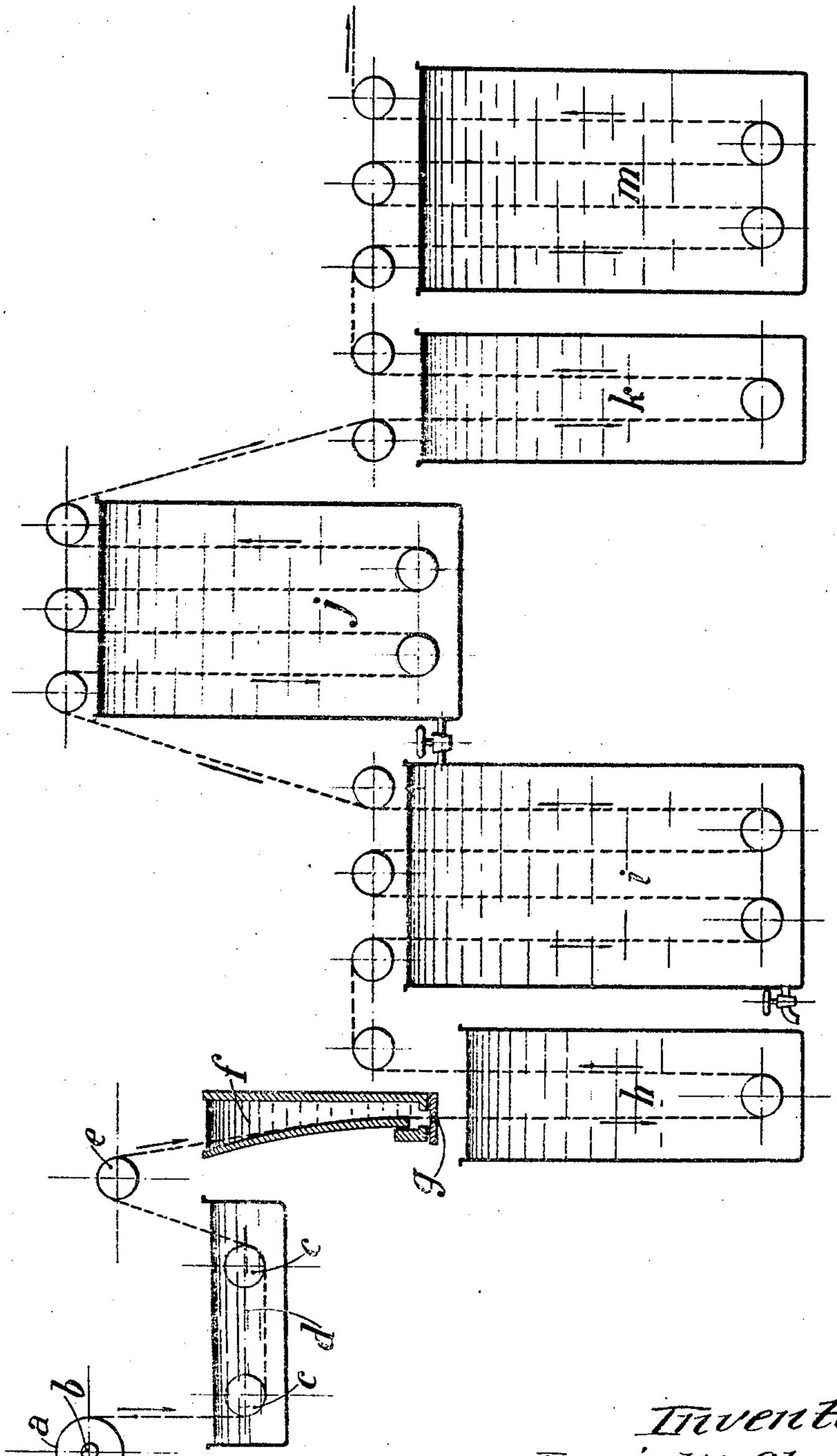
912,812. Patented Feb. 16, 1909.



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PROCESS OF APPLYING AND TREATING STRANDS WITH VISCOSE, AND THE ARTICLE.

No. 912,812. Specification of Letters Patent. Patented Feb. 16, 1909.

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To all whom it may concern:

Be it known that I, LOUIS MARIE CHORIER, engineer, citizen of the French Republic, residing at Paris, France, have invented a certain new and useful Process for Applying and Treating Strands with Viscose, and the Article, of which the following is a specification.

This invention relates to a dressing for thread of cotton, flax, jute, ramie, hemp, &c., and to a process for applying said dressing to these materials.

The ordinary dressings, for thread of cotton, flax, jute, &c., and more especially for materials intended for lace-making and the like, contain as their agglutinant principle generally starch, dextrin, gelatin or wax. Such dressings have but slight resistance especially to the action of water, and cannot withstand in any way the ordinary dyeing baths, so that it is necessary to die the material before applying the dressing thereto with the consequence that the range of dye is restricted to a limited number of shades or colors.

Now according to this invention a dressing is employed which consists of a coating of viscose applied directly to a thread of cotton, even raw or unbleached, flax, hemp, &c., in such a manner as to envelop the material completely with a sheath-like covering that may be transparent or dull as desired and which constitutes a fixed dressing which can withstand not only the action of water and heat, but also the action of all chemical agents. The improved dressing may be bleached and be dyed any color or shade, even the most delicate. It even allows the bleaching agent and the dye to penetrate completely throughout the dressed material. The improved dressing also imparts a homogeneous and brilliant surface which also heightens the gloss or brightness of the colors. It also imparts a stiffness and an appearance similar to that of animal hair, which renders the product capable of retaining the finest goffering or embossing. Finally the strength of the original thread is increased considerably and the adhesion of the dressing is such that it appears to be integral with the material to which it is applied, and from which it cannot be separated.

The viscose employed for the purpose of this invention may be produced in any desirable way, it preferably consisting in the combination of caustic soda and disulfid of carbon upon cellulose. An aqueous solution thereof contains a greater or less quantity of dissolved cellulose according to the uses to which it is to be applied.

The accompanying drawing shows an apparatus for carrying out the new process according to my invention.

The improved process for the application of the improved dressing or coating of viscose on the said threads, consists substantially in causing the thread to pass in succession through water, viscose, a chemical bath (preferably a solution of any salt of ammonia) a solution of sea salt or chlorid of sodium including the ordinary constituents, acid baths (preferably a 3 per cent. solution of hydrochloric acid), and finally washing the thread &c., in water.

A suitable arrangement and operation of apparatus for carrying out the improved process is as follows: The thread to be dressed is wound, is carried on a reel *a* rotating on its axis *b* and is unwound therefrom and led to small rollers *c c* which are immersed in water in a trough *d*. The thread passes thence to a pulley *e* whence it is led to and immersed in a trough *f* containing viscose in which the thread is guided to an adjustable draw-hole *g* from which it issues coated with a uniform layer of dissolved cellulose which is precipitated or fixed immediately upon the thread by means of a suitable chemical bath *h* composed preferably of an ammoniacal salt having a coagulating action. When the coagulation has been effected, the thread is caused by means of grooved rollers to enter and pass to and from in successive and systematic baths *i j* of salt water containing 20 per cent. of sea salt, wherein it is freed from the impurities accompanying the viscose. The thread then enters and travels to-and-fro in an acid bath *k* (for instance of 3 per cent. by hydrochloric acid) in which the xanthate of cellulose constituting the viscose, is redecomposed or regenerated into an insoluble form of the cellulose which was originally dissolved. Finally the thread after having been thus dressed, is passed into water *m* which frees it from an excess of acid. The thread is

then ready for bundling into hanks or skeins, bleaching, dyeing, and drying by the usual methods.

From the foregoing description it will be understood that a thread is produced having a sheet-like covering or envelop of viscose which is directly applied to the thread without the use of adhesive material, and the individually coated threads fully enveloped with viscose are employed in weaving a fabric.

Having thus described and ascertained the nature of my invention, I declare that what I claim is:

1. The herein described process consisting in fully enveloping an individual thread with a coating of viscose by passing the thread through a quantity of the viscose and a draw-opening to regularly apply the viscose around the thread, and then passing the coated thread through baths for fixing, coagulating and washing the same.

2. An article of manufacture consisting of an individual thread sheathed with a coating of viscose.

3. As an article of manufacture, a viscose filament provided with a core thread.

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

LOUIS MARIE CHORIER.

Witnesses:
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