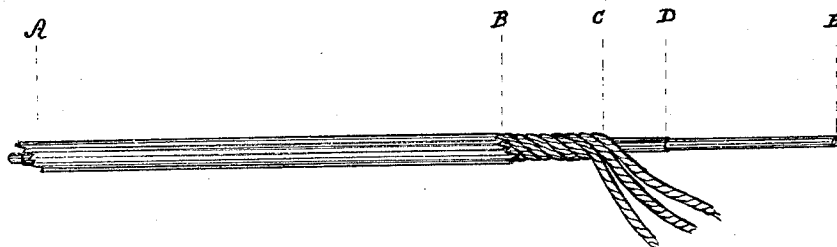


CHARLES ROWLAND & N. F. ENGLISH.
Improvement in Wire-Thread for Sewing Leather.
No. 114,204. Patented April 25, 1871.



Witnesses
A. F. English
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UNITED STATES PATENT OFFICE.

CHARLES ROWLAND, OF WASHINGTON, DISTRICT OF COLUMBIA, AND
NATHAN F. ENGLISH, OF HARTLAND, VERMONT.

IMPROVEMENT IN WIRE THREAD FOR SEWING LEATHER.

Specification forming part of Letters Patent No. 114,204, dated April 25, 1871.

To all whom it may concern:

Be it known that we, CHARLES ROWLAND, of Washington, in the District of Columbia, and NATHAN F. ENGLISH, of Hartland, in the county of Windsor and State of Vermont, have invented certain Improvements in Waxed Wired Thread for Sewing Boots, Shoes, Harness, &c., of which the following is a specification.

Our invention relates to the construction and manufacture of a new stitching material for sewing boots, shoes, harness, saddles, belts, trunks, water-hose, water-buckets, &c., to be used as a substitute for the ordinary waxed shoe-thread, and such other fastening materials as only hold the sewed parts together by virtue of the adhesiveness of the thread in the awl-hole, after the exposed fiber is worn through on the part subject to abrasion.

Smooth wire has been tried both in Europe and America as a stitching material, but the wire unavoidably kinks, the stitch made thereby draws, the leather, canvas, &c., is cut with it, and the awl hole is not filled with it. Roughened and corrugated wire has also been tried, but with unsatisfactory results.

Our waxed wired thread presents a number of prominent and novel utilitarian features.

The wire by which the thread and coatings are surrounded may be of any desired metal or combination of metals, though we prefer soft annealed iron, steel, or copper wire, or copper in combination with aluminum, known as "aluminum bronze."

The chemical coatings will be of any suitably-prepared substances of a resinous or gummy character, and the thread of any proper fibrous or textile material.

In preparing the "waxed wired thread" for use we first coat the wire with the adhesive wax or gum. This process is effected by means of a machine we have originated to accomplish the objects of heating the wire and wax or gum, supplying and applying said wax or gum, of paste-like consistency, to the warmed wire in proper quantity.

Secondly, we supply and apply the fibrous material, of the requisite number of strands, from reels, to said adhesive coating on the wire.

The third or finishing chemical coating upon

the fibrous strands, thus put on, may be applied by means of the aforesaid machine, or, as the process of machine-sewing is going on, by being put into position to receive said coating, as the wire, thus covered with the first coating and fiber, passes on to a sewing-machine intended to sew the waxed wired and other threads, (now in process of completion by us, and for which we purpose soon to apply for a patent;) or it may be applied by hand, by the machine or custom workman, as occasion demands.

When put upon the market for sale the waxed wired thread will be accompanied by a waxen or gummy cake, of any suitably-prepared chemical substance or substances, for the aforesaid purpose of a finishing coating.

In sewing with the waxed wired thread we may use the wire end (the chemical and fibrous coatings gradually tapering off to said point or end) as an admirable substitute for the needle or bristle.

It is obvious that the wire with the chemical coat alone thereon may be used, but experiment has demonstrated this to be an inferior plan.

The article may be manufactured of various colors, sizes, and qualities, adapted to the various purposes for which it is intended.

The accompanying drawing exhibits a magnified view of the waxed wired thread, its interior being constructed as represented between B and E.

The part from A to B exhibits the said finished waxed wired thread; from B to C the outer waxing removed and showing the fibrous part of the thread; from C to D the inner stratum of waxen material, to fasten the wire D E to the fiber B C; from D to E the wire projecting from the center of the waxed wired thread.

Having thus stated the nature of our invention, what we claim is—

As a new article of manufacture, a thread composed of the central core of wire, with the various coatings of wax and fibrous material arranged as described, and to be used as and for the purposes herein set forth.

CHARLES ROWLAND.
NATHAN F. ENGLISH.

Witnesses:

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