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J. ANNICQ

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SPOOL SUPPORT OR CORE FOR THE DYEING AND FOR THE
TREATMENT OF TEXTILES ON SPOOLS
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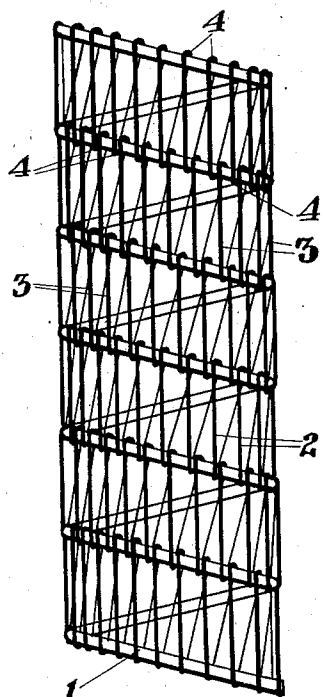


Fig. 3

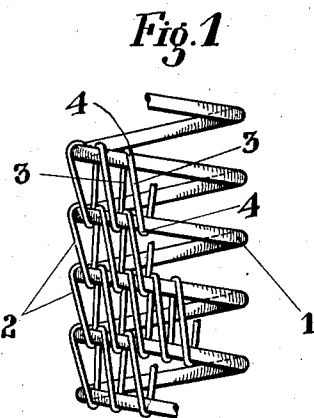


Fig. 1

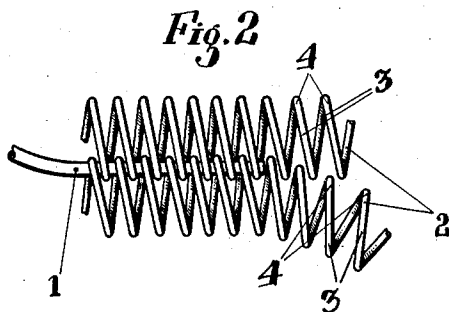


Fig. 2

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UNITED STATES PATENT OFFICE

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SPOOL SUPPORT OR CORE FOR THE DYE-
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TEXTILES ON SPOOLS

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2 Claims. (Cl. 242—118)

The present invention relates to spool supports or cores for the treatment, for example the dyeing, of textiles, e. g., yarns and piece goods, which supports consist of a helical spring, the convolutions of which pass through links arranged in relatively staggered manner so that the links form a kind of metallic sheath permitting the spring to contract. Such a spool support or core is known wherein the links, of elongated form, are all independent of each other and constitutes each an individual unit which can freely float from right to left and inversely, on account of the turns of the spring, according to the play allowed between successive links.

With the object of avoiding harmful movements and to ensure a perfect uniformity of the external surface of the core, the links are, according to the present invention, formed by one and the same wire, worked along the length of the helical spring in the form of regular turns each of which constitutes a link, the turns of the spring being engaged with and covered by these continuous-piece links in a manner permitting the turns of the spring to approach towards and to recede from each other, but without transverse or lateral displacement of the links or covering turns. This arrangement applies to all forms of support (conical, cylindrical or the like), the wire of which the links are made being able, as is known, to remain uncovered or to be covered with an adequate protecting coat (ribbon, fabric or the like).

The invention is independent of the process or the method employed for the manufacture of the links and their mounting on the spring support; it suffices that each of the links of the long, regular cylinder or tube which the links form is traversed by two consecutive turns of the spring and that each turn of this spring passes through two series of links arranged in staggered manner.

In the accompanying drawing, like characters of reference indicate like parts in the several views, and:

Fig. 1 is a large scale fragmentary view in elevation showing a portion of a spool constructed in accordance with this invention;

Fig. 2 is a fragmentary schematic view illustrating the manner of assembling the parts;

Fig. 3 is a side view of a complete spool forming this invention.

As here shown the invention is formed from two continuous lengths of wire. One of these wires is of less diameter than the other, and this smaller wire is bent to provide a series of successive loops having straight sides 3 and bends 4 at the junction of the sides, the bends being of small radius. As formed in this manner a sort of wire tape is constructed which is highly flexible

and may be bent into a spiral form consisting of a series of convolutions. In this condition the bends 4 at one edge of the strip or tape will overlap the bends 4 at the other edge thereof. The other wire 1 is of helical form and this wire passes through the overlapping bends of the wire 2 so that the strip or tape is maintained in its helical condition. It is to be observed that under these conditions the loops have no tendency to gather at one particular place on the heavy wire helix, but due to being made from a continuous length of wire they maintain uniformly spaced relation.

In Fig. 1 each turn of the spring support 1 passes through two superposed series of substantially flat turns 2 of the cylinder formed by a single wire, covered or not, suitably coiled on itself; the turns 2 are arranged in zig-zag form and staggered one set relatively to the next, that is to say one turn of the spring passes through the upper turns of one set and through the lower turns of the upper set, and so on. This is clearly brought out in both figures of the drawing. As has been said previously, each link or turn 2 is crossed by two successive turns of the spring 1 (Fig. 1).

Having now fully described my said invention, what I claim and desire to secure by Letters Patent, is:

1. A skeleton core forming a spool for supporting textile yarns and the like and comprising a single strand of wire bent to form a multiplicity of continuously connected loops having relatively long straight side portions and relatively narrow bends at the ends of said sides, said multiplicity of loops being disposed in a helical form having a series of convolutions wherein the ends of the loops of each convolution overlap the oppositely disposed ends of the loops in the next adjacent convolution, and a second wire extending helically through the overlapping end portions of the loops.

2. A skeleton core forming a spool for supporting textile yarns and the like and comprising a single strand of wire bent to form a multiplicity of continuously connected loops having relatively long straight side portions and relatively narrow bends at the ends of said sides, said multiplicity of loops being disposed in a helical form having a series of convolutions wherein the ends of the loops of each convolution overlap the oppositely disposed ends of the loops in the next adjacent convolution, and a second wire extending helically through the overlapping end portions of the loops, said second wire being of greater diameter than the first wire and the second wire being of spring metal.

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