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METHOD OF REDUCING THE EXTENSION OF WIRE ROPES

Filed April 16, 1930

Fig. 1.

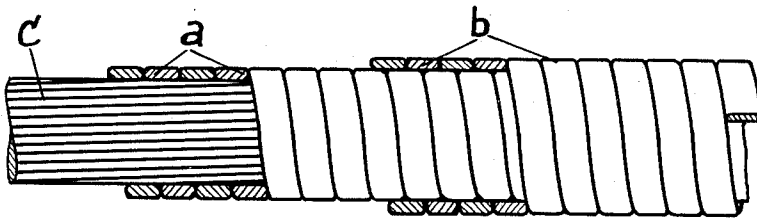
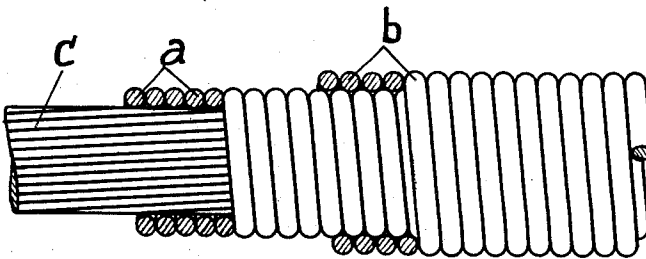


Fig. 2.



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UNITED STATES PATENT OFFICE

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METHOD OF REDUCING THE EXTENSION OF WIRE ROPES

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The stretching of wire ropes used in bridge-building gives rise to great difficulties especially with bridges of wide span. In the erection and suspension of bridges, account must be taken of the sinking caused by stretching after the suspension of the roadway girder.

The extension of wire ropes formed of wires or wire strands which are stranded together consists of the extension of the material of the wire in the longitudinal direction, and further extensions which originate for instance in the stretching of the screw-form of the wires, and the closer pressing of the wires on the rope-core, with which a diminution in the diameter of the rope is involved. In order to reduce the extension due to the load on the rope, according to the present invention, the wire ropes are subjected to the tensile stress later coming into question by a stretching process in a suitable apparatus, and in this stretched condition, are tightly wrapped round with one or more bandages in the form of wires or bands of the hardest, not brittle material, which run helically round the rope. After the removal of the tensile stress the rope retains a substantial portion of the extension in consequence of the measures taken, and when the rope is again loaded the portion of the extension concerned cannot again arise.

Two constructional examples of these bandages are illustrated in Figures 1 and 2 of the accompanying drawings. Figure 1 shows a double wrapping of the stretched wire rope *c* with flat wires *a*, *b* (or ribbons of iron or steel), and Figure 2 one with round wires.

What I claim is:

1. A method of reducing the extension of wire ropes formed of stranded wires or wire strands consisting in subjecting the wire ropes to tensile stresses by applying forces thereto and while they are thus subjected to tensile stresses tightly wrapping the ropes with a helical wire bandage, as set forth.

2. A method of reducing the extension of wire ropes formed of stranded wires or wire strands consisting in subjecting the wire

ropes to tensile stresses by applying forces thereto, which tensile stresses are equal to those which will subsequently normally arise in the rope, and while they are thus subjected to tensile stresses tightly wrapping the ropes with a helical wire bandage, as set forth.

In testimony whereof I have signed my name to this specification.

GEORG ZAPF.