

C. C. WEST.
TENSION DEVICE FOR ARMATURE WINDING MECHANISM.
APPLICATION FILED SEPT. 14, 1912.

1,103,718.

Patented July 14, 1914.

2 SHEETS—SHEET 1.

FIG. 1.

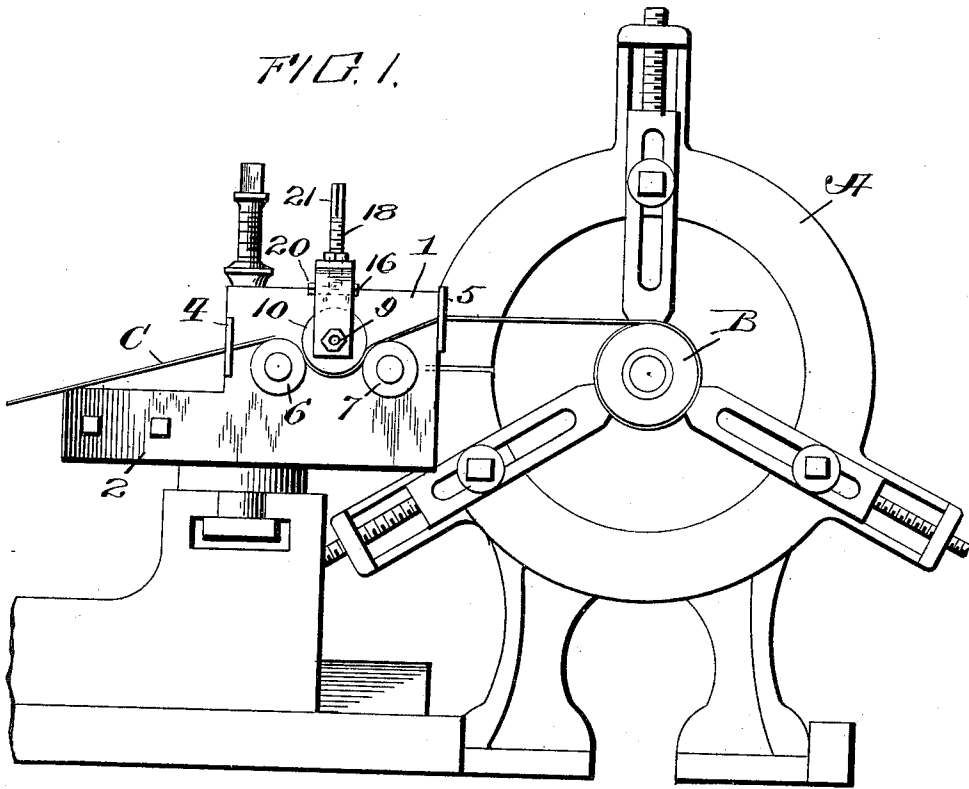
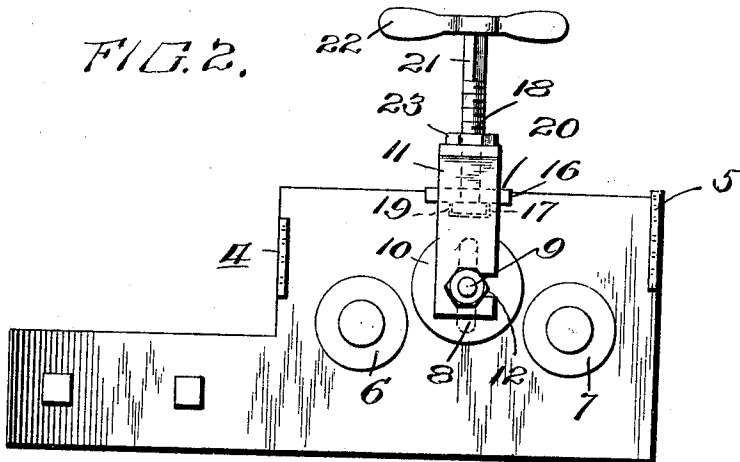


FIG. 2.



Witnesses

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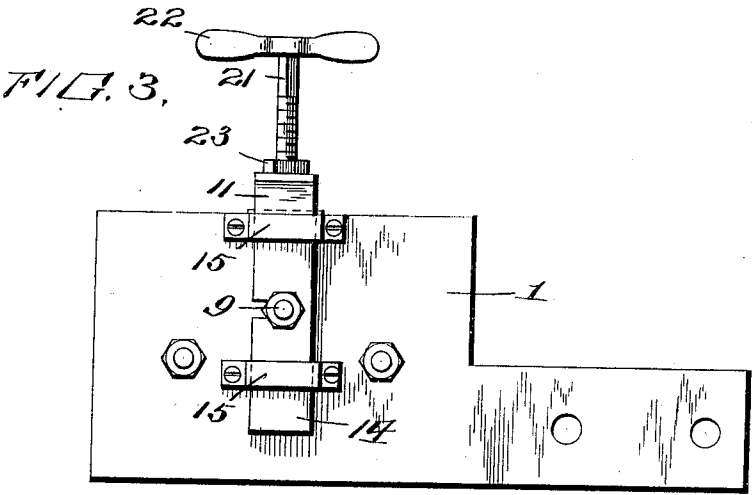


FIG. 4.

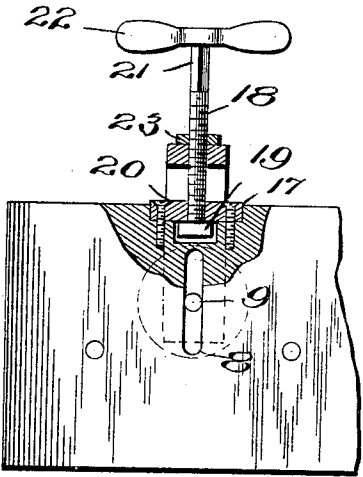
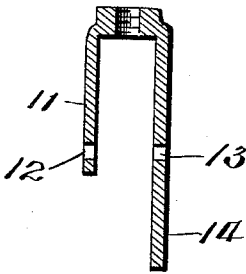


FIG. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

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TENSION DEVICE FOR ARMATURE-WINDING MECHANISM.

1,103,718.

Specification of Letters Patent.

Patented July 14, 1914.

Application filed September 14, 1912. Serial No. 720,436.

To all whom it may concern:

Be it known that I, CHARLES C. WEST, a citizen of the United States, residing at Cairo, in the county of Alexander and State of Illinois, have invented certain new and useful Improvements in Tension Devices for Armature-Winding Mechanism, of which the following is a specification.

My invention relates to devices for regulating the tension of the wire on armature winding machines, and has for its object the provision of a plate adapted to be secured to the machine and provided with rollers adjustably mounted relatively to one another through which the wire is threaded, the adjustment of the tension being secured by means of a screw shaft operatively connected to one of the rollers.

My invention will be described in detail hereinafter and illustrated in the accompanying drawings, in which—

Figure 1 is a view of a conventional armature winding machine showing my improved tension device applied thereto, Fig. 2 is a view of the tension device on a large scale; Fig. 3 a back view of the device; Fig. 4 a detail view of the means for securing the screw shaft to the supporting plate, Fig. 5 a detail view of the inverted U-shaped roller supporting member.

In the drawings similar reference characters will be used to designate corresponding parts throughout the several views.

In Fig. 1 is shown an armature winding machine indicated at A having the mandrel B on which the armature is adapted to be wound, my invention comprising a tension device for regulating the tension of the wire C and consists of a plate 1 having an offset portion 2 that is adapted to be secured as shown to any suitable portion of the frame of the winding machine A.

4 and 5 indicate plates secured to the two terminals of the plate 1 and having a series of holes to permit threading the wire there-through. Revolvably mounted on the plate 1 are two rollers 6 and 7 and the plate 1 is divided with a vertical slot 8 located between and above the axes of the rollers 6 and 7.

9 indicates a shaft mounted in the slot 8 and having a roller 10 rotatably mounted thereon.

11 indicates an inverted U-shaped member

having transverse notches 12 and 13 in its two arms to receive the terminals of the shaft 9 the arm of said U-shaped member that is mounted on the rear side of the plate 1 being elongated below the notch 13 as shown at 14 and being held in slidable engagement with said plate 1 by means of angular clamping members 15 secured to said plate. The upper margin of the plate 1 is formed with a recess 16 and a socket 17 is provided in the plate to receive a screw shaft 18 having its head 19 mounted in said socket and held in position therein by means of a plate 20 secured in said recess by screws or other suitable fastenings. The threaded stem of the shaft 18 engages a threaded opening in the upper end of the U-shaped member 11 and has its upper extremity provided with a key-engaging portion 21 to receive a key 22 for rotating said shaft, and 23 indicates a locking nut mounted on said shaft and adapted to be screwed down against said U-shaped member to hold it in an adjusted position.

As shown in Fig. 1 the wire C is threaded through one of the openings in plate 4, then over roller 6, under roller 10, over roller 7, and then through one of the openings in plate 5. It will be apparent that the tension of the wire may be regulated by moving the U-shaped member 11. When it is desired to increase the tension of the wire the U-shaped member 11 is moved so that the axis of its roller 10 approaches the axes of the rollers 6 and 7 so that the periphery of the roller 10 shall more or less compress the wire against the peripheries of the rollers 6 and 7. By moving the U-shaped member 11 in the opposite direction the compression of the wire is relieved and the tension thereon will be decreased.

Having thus described my invention what I claim is:

A wire tensioning device, comprising a plate provided with a vertical slot, plates secured to the first-mentioned plate and having openings therein through which said wire is adapted to be threaded, rollers journaled on said plate on opposite sides of the slot aforesaid, a shaft slidably mounted in said slot, a roller rotatably mounted on said shaft, the peripheries of said rollers being adapted to engage the wire, an inverted U-shaped member slidably mounted on

the plate and having notches in its arms to
receiye the shaft aforesaid, a threaded shaft
rotatably mounted on the first-mentioned
plate, said U-shaped member being pro-
5 vided with a threaded opening to engage
said threaded shaft, and means to rotate
said shaft.

In testimony whereof I affix my signature
in presence of two witnesses.

CHARLES C. WEST.

Witnesses:

E. E. COMINGS,
GWENDOLYN COMINGS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."