

1,152,316.

Patented Aug. 31, 1915.

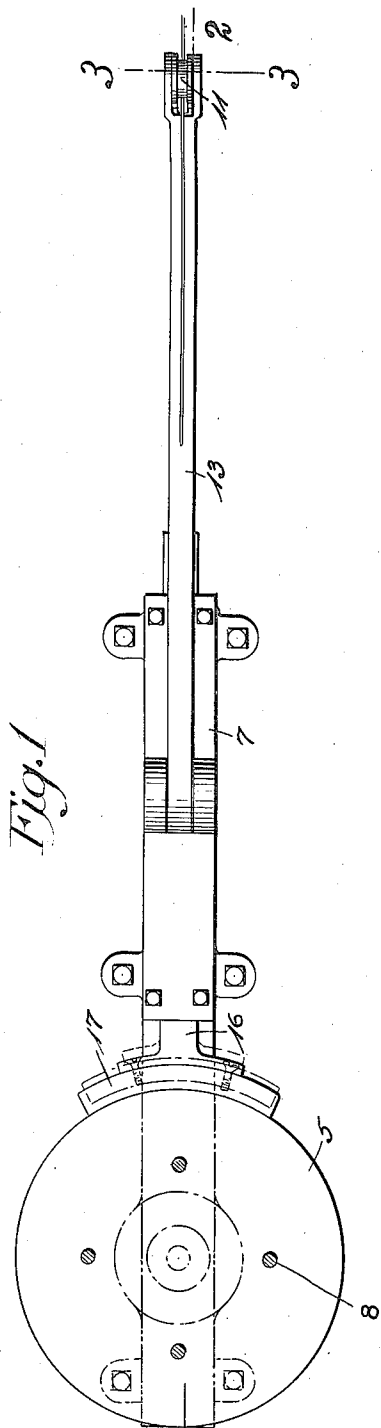


Fig. 1

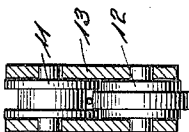


Fig. 3

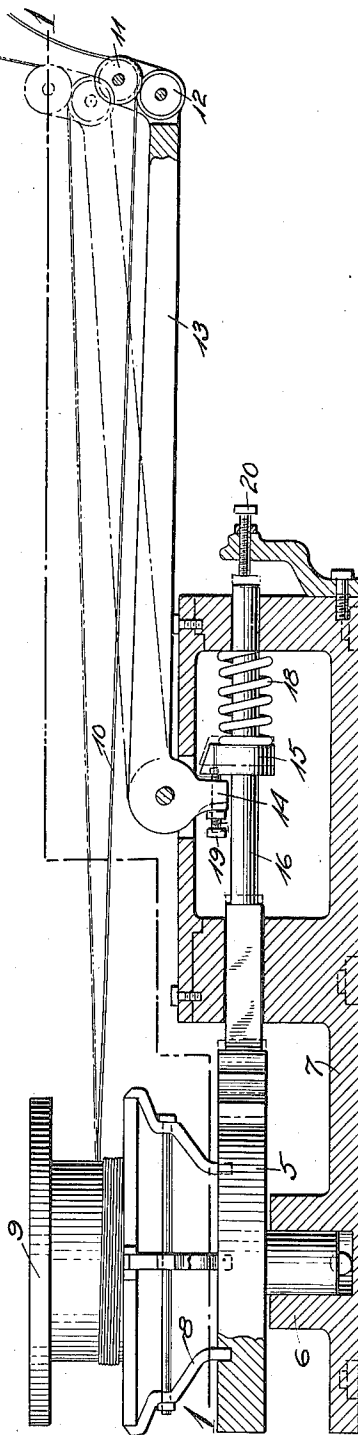


Fig. 2

WITNESSES

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TENSION CONTROL.

1,152,316.

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Application filed October 28, 1914. Serial No. 868,979.

To all whom it may concern:

Be it known that I, MANSON C. HATTON, a citizen of the United States, and a resident of Upland, in the county of San Bernardino and State of California, have invented a new and Improved Tension Control, of which the following is a full, clear, and exact description.

My invention relates to tension devices for controlling the winding or unwinding of wire or cable from reels or bobbins whereby the wire on the reel will not become slack and will not tangle.

The object of the invention is to provide a simple, strong and efficient device which is automatic in its action and which can be adjusted to control its action within the desired tension limits.

With the above and other objects in view, the nature of which will more fully appear as the description proceeds; the invention consists in the novel construction, combination and arrangement of parts as herein fully described, illustrated and claimed.

In the accompanying drawings, forming part of the application, similar characters of reference indicate corresponding parts in all the views, and Figure 1 is a horizontal section of my invention on line 1—1, Fig. 2; Fig. 2 is a longitudinal section on line 2—2, Fig. 1; and Fig. 3 is a transverse section on line 3—3, Fig. 1.

The tension in my device is controlled by a brake adapted to engage the platform carrying the reel, and the movement of which brake is controlled by the cable or wire which is wound or unwound on the reel.

Referring to the drawings, 5 represents the platform of the winding cable rotatably mounted in a suitable bearing 6 of the frame 7. Carried by the platform 5 is a reel clamp 8 carrying the reel 9 from which the wire or cable is to be unwound. The wire 10 leading from the reel to the winding mechanism is made to pass between a pair of guide rollers 11 and 12 mounted at one end of the arm 13, the other end of which arm is pivoted to the frame 7. The arm 13 at the pivoted end is provided with a toe 14 projecting into the frame.

Facing the toe 14 of the arm 13 is a collar 15 provided on a rod 16 mounted to slide in the frame 7 transversely of the axis of the platform 5. The end of the rod 16 at the platform carries a friction shoe 17 adapted to engage the lateral surface of the plat-

form under the action of a spring 18 provided on the rod. The toe 14 of the arm 13 carries a set screw 19 adapted to engage the collar 15 when the arm 13 is moved on its pivot, whereby the spring 18 is compressed, and thus the friction shoe 17 is disengaged from the platform 5. The sliding movement of the rod 16 is limited by a set screw 20 facing the end of the rod. By the adjustment of the set screw 19 on the toe 14 an initial movement can be given to the arm 13 before the same engages the collar 15, that is, before the platform 5 is disengaged from the brake. The purpose of this initial movement to be given to the rod is to obtain a certain tension of the wire to be unwound from the reel 9 before the brake is released from the platform.

The dotted line of the brake and the arm controlling the same, shown in Fig. 2, illustrates the device when under proper tension, which tension, as stated, may be controlled by means of the set screw 19. It will be noted that a slight reduction in tension the wire 10 will cause the arm 13 to drop under the force of gravity, and thus the spring 18 expanding will bring the brake into engagement with the platform 5.

From the accompanying description, taken in connection with the accompanying drawings, the advantage of the construction and operation of the device shown will be readily understood by those skilled in the art to which the invention pertains, and while I have described the principle of operation, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative and that such changes may be made as are within the scope of the appended claims.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. In a device of the class described, a reel-carrying platform mounted to rotate, a sliding rod, a shoe carried by said rod, a spring on the rod moving the rod with the shoe against the platform, a pivotally mounted arm having guide rolls; said rolls being adapted to be engaged by the member mounted on the reel, and adjustable means carried by the arm and adapted to engage the rod when a proper pull is exerted on the member carried by the reel, whereby the spring carried by the rod is pressed and,

therefore, the shoe is disengaged from the platform.

2. In a device of the class described, a reel-carrying platform mounted to rotate, a
5 sliding brake engaging the platform, an arm having means for engaging the member to be unwound from the reel, and adjustable means between said arm and the brake, for
engaging and forcing the brake away from
10 the platform when a proper pull is exerted on said member to be unwound.

3. In a device of the class described, a reel-carrying platform mounted to rotate, a brake for the platform, resilient means

normally tending to maintain the engage- 15
ment of the brake with the platform, and an arm engaging the material to be unwound, said arm having adjustable means adapted to engage and force the brake away from the
platform when the material is unwound 20
from the reel.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MANSON C. HATTON.

Witnesses:

A. B. CHONNING,
N. L. HAMER.