

(No Model.)

W. E. A. INNES.
SPOOL HOLDER.

No. 577,258.

Patented Feb. 16, 1897.

Fig. 1.

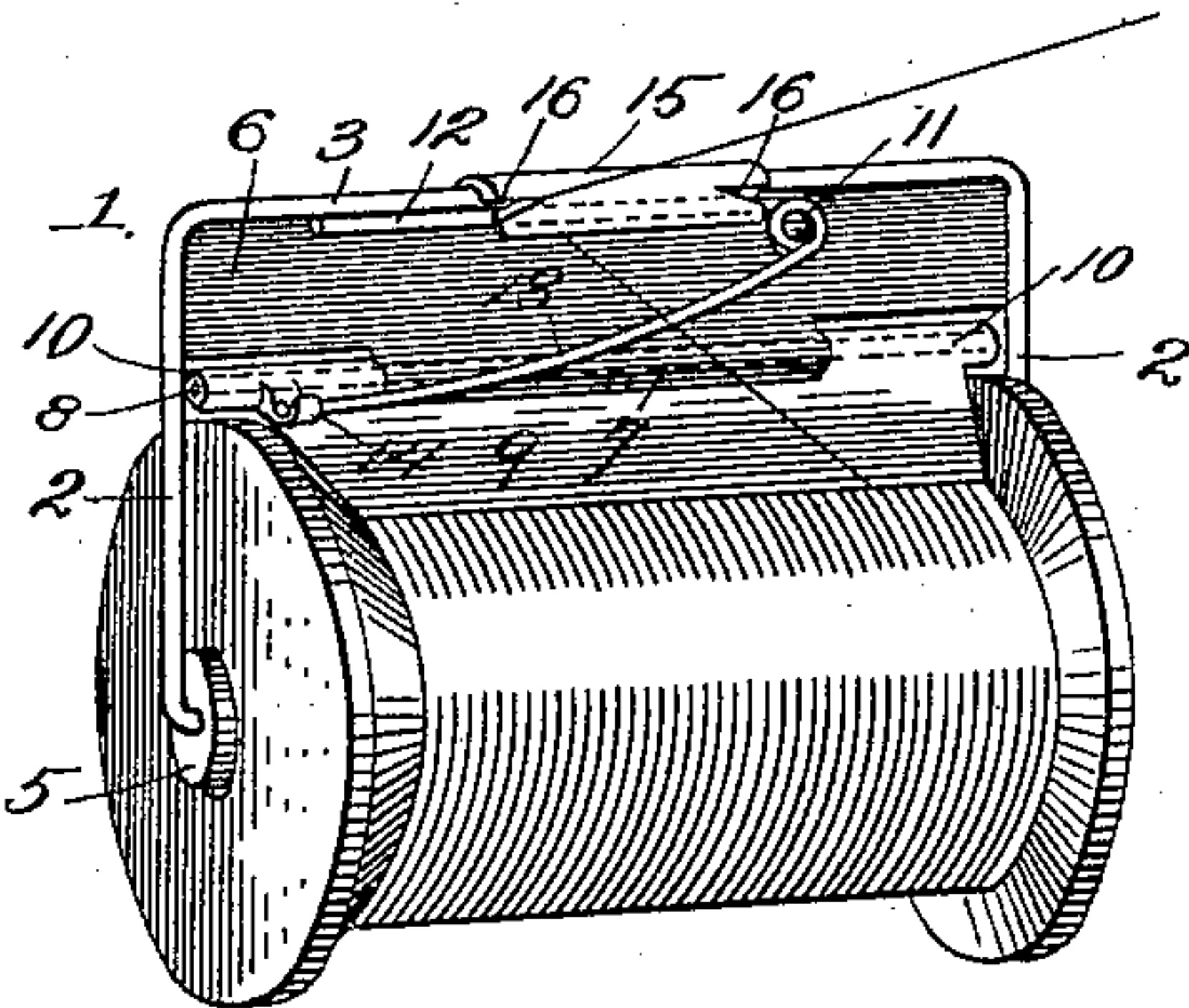


Fig. 2.

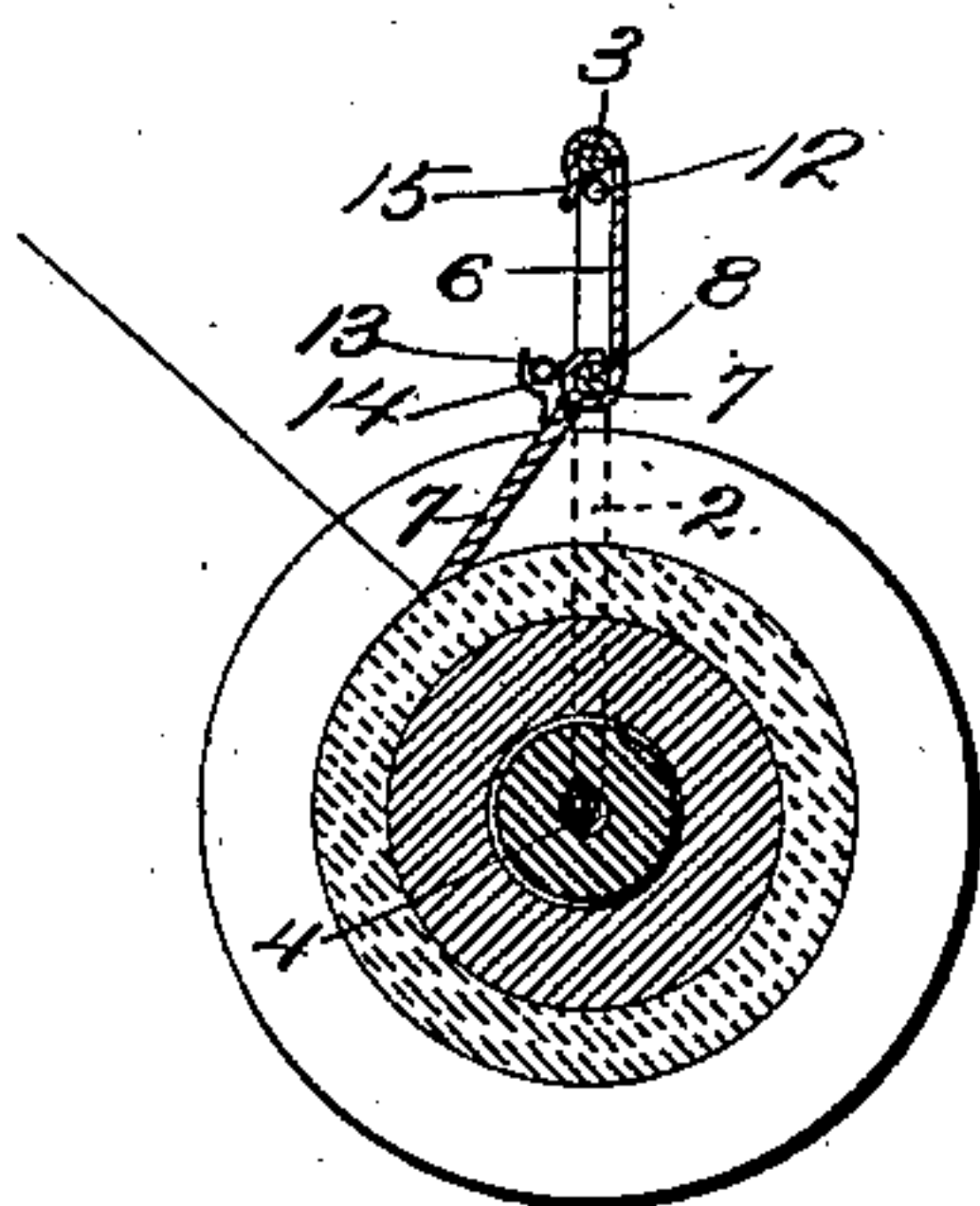


Fig. 3.

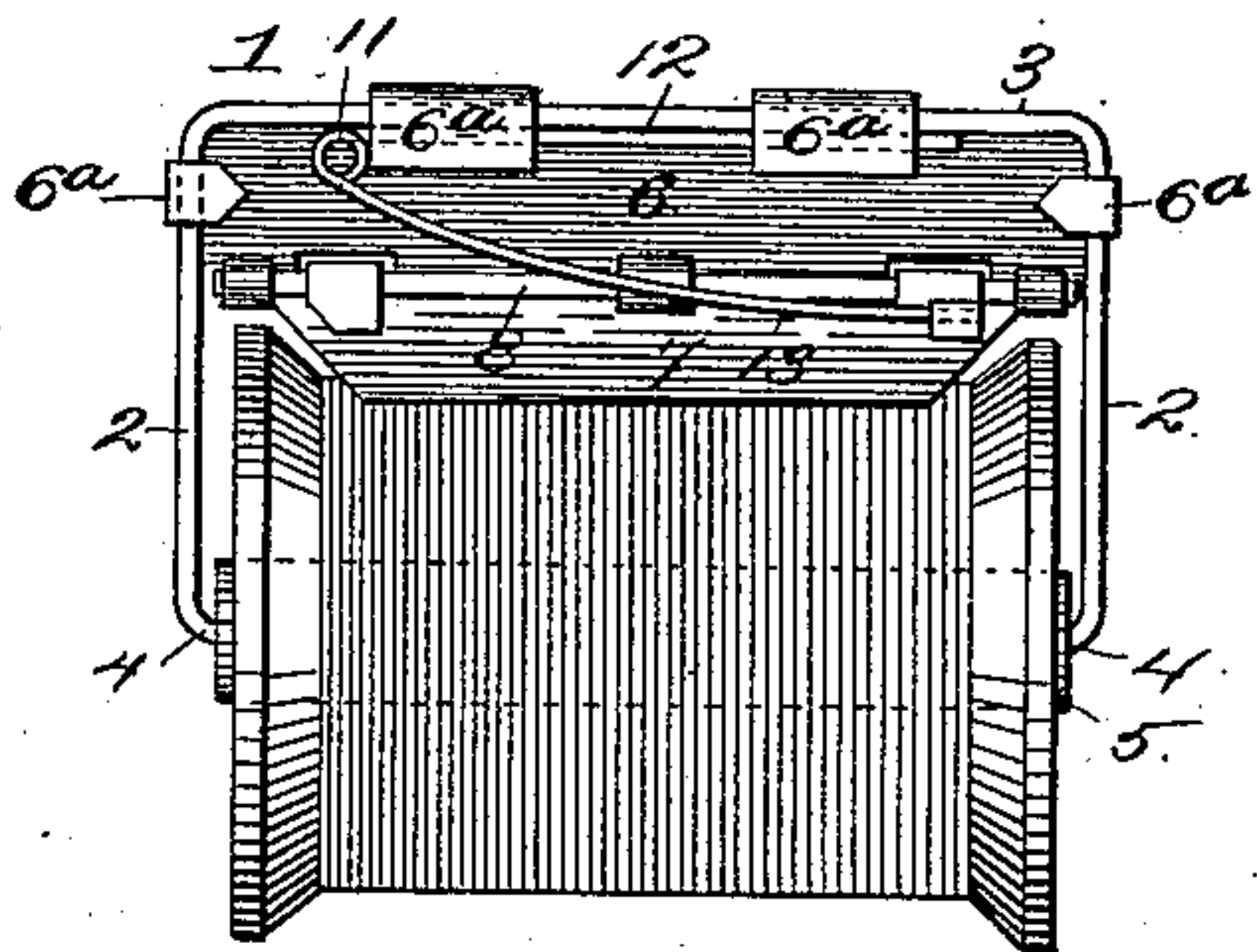
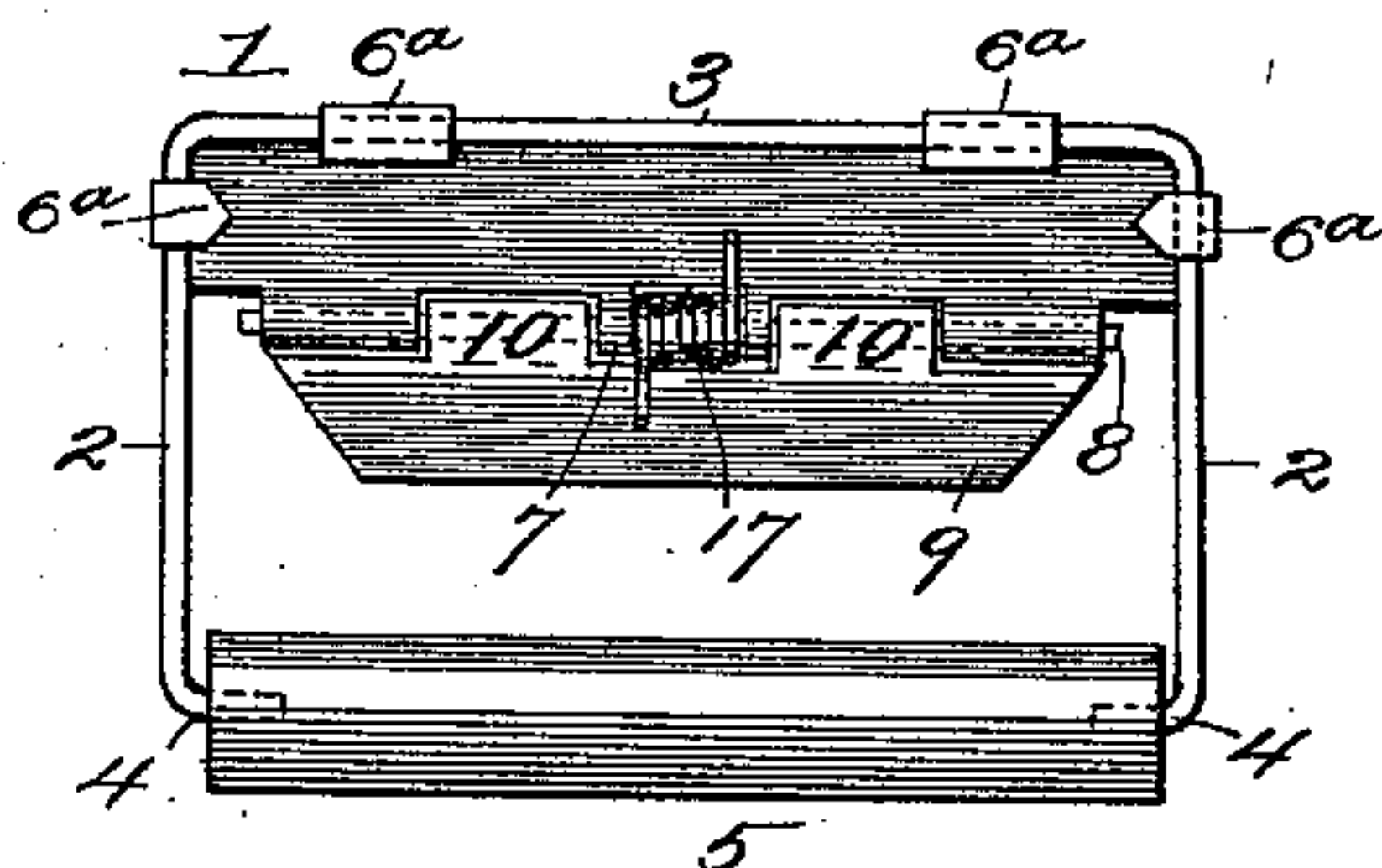


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM E. A. INNES, OF PUEBLO, COLORADO.

SPOOL-HOLDER.

SPECIFICATION forming part of Letters Patent No. 577,258, dated February 16, 1897.

Application filed April 15, 1896. Serial No. 587,644. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. A. INNES, of Pueblo, Pueblo county, Colorado, have invented certain new and useful Improvements in Spool-Thread Tensions and Cutters, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to spool-thread tensions and cutters, and my object is to produce a simple and inexpensive device of this character which is positive and reliable in action.

To this end the invention consists in certain novel and peculiar features of construction and combinations of parts, as will be hereinafter described and claimed.

In order that the invention may be fully understood, I will proceed to describe it with reference to said accompanying drawings, wherein—

Figure 1 represents a perspective view of a spool of thread provided with a tension and cutting device embodying my invention. Fig. 2 is a cross-section of the same. Fig. 3 is a side elevation of a spool of thread with a tension and cutter embodying a slightly-modified construction. Fig. 4 is a similar view of a holder or cutter detached from the spool and of a still further modified form of construction.

In the said drawings, 1 designates a spring-wire frame comprising the vertical arms 2, the bridge or top bar 3, connecting said arms, and the inwardly-projecting trunnions 4 at the lower ends of said arms, upon which is rotatably mounted an antifriction-roller 5.

6 designates a plate which is secured in the upper portion of said frame by solder, as illustrated in Fig. 1, or by metallic tongues or extensions 6^a, as shown in Figs. 3 and 4, which are bent to embrace tightly the said frame and thereby hold the plate firmly and reliably in position. Said plate, in Fig. 1, at its lower edge is bent to form the longitudinal loop or eye 7, which embraces and carries a pivot-pin 8, and 9 designates a follower of size and configuration to engage the thread upon the spool between the ends of the latter, and said follower is provided at its upper edge with loops or eyes 10, which are pivotally or loosely mounted upon the pivot-rod 8. This con-

struction constitutes a hinge relation between the plates 6 and 9.

11 designates a spring provided with one arm 12, soldered to the upper part of the frame or held at such point firmly and reliably by means of the bent tongues 6^a, as shown in Fig. 3, and the downwardly-depressed arm 13, which is clamped or may be detachably secured in a loop or lug 14, projecting outwardly from the follower-plate at a suitable point. By this arrangement it is obvious that the follower is always held downwardly with a yielding pressure.

15 designates an extension or tongue of the plate 6, preferably, which is bent forwardly and then downwardly over the top bar of the frame and is notched and sharpened at its opposite ends, as shown at 16, to afford a convenient surface upon which the thread may be cut.

To mount the device in operative position relative to a spool of thread, the arms 2 are sprung farther apart and the roller 5 detached therefrom. Said roller is then slipped into the bore of a spool of about equal length and is then reengaged with said arms. When in this position the follower naturally assumes the position shown in the drawings and bears with a yielding pressure upon the thread. In case it be desired now to obtain a thread of any desired length the vertical arms 2 of the frame should be grasped between the thumb and fingers of one hand, the end of the thread grasped by the other and drawn out to the required length, the spool in this operation rotating freely. Immediately the pull upon the thread ceases, however, the friction of the spring-actuated follower 9 upon the thread stops or arrests the rotatable movement of the spool, so that the momentum acquired thereby cannot feed a longer thread than the operator desires to obtain. All that is necessary now to detach the thread is to bring it to the position shown in Fig. 1, in engagement with one of the cutting-surfaces or notches 16 and pull upon it to sever it from the remainder of the thread. This obviously leaves a strand upon the spool of only about an inch in length, which cannot become entangled with other thread should the spool be placed in a basket or other re-

ceptacle where thread in quantity or spools of thread are kept, and this extension also provides a convenient gripping-point when a further quantity of thread is required from the spool. The cutting-plate 15, however, is not absolutely necessary, as the follower 9 is sufficiently sharp to easily cut the thread if brought to bear against it with sufficient power.

Referring now particularly to Fig. 4, it will be noticed that instead of the spring 11 I employ a coil or hinge spring 17, which occupies registering recesses in the opposing edges of the plate 6 and the follower, and is mounted upon the hinge-rod, said spring having its opposite ends bearing against the plate 6 and the follower and holding the latter against the thread upon the spool with a yielding pressure. The follower in every instance is of sufficient width to maintain its frictional relation with the thread upon the spool until the entire quantity has been used up.

From the above description it will be apparent that I have produced a spool-thread tension and cutter which is extremely simple and inexpensive of construction and which is efficient in operation.

Having thus described the invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. In a spool-thread tension, the combination of a spring-wire frame provided with trunnions oppositely disposed, an antifriction-roller journaled upon said trunnions, to carry the spool, a flat plate secured to the frame and provided with a pivot-rod, a follower hinged upon said rod, and a spring exerting its pressure against said plate and against said follower, and thereby holding the latter into frictional engagement with the thread wound upon the spool.

2. In a spool-thread tension, the combination of a spring-wire frame provided with oppositely-disposed trunnions at one side, an antifriction-roller journaled upon said trunnions, and carrying the spool, a plate secured rigidly and immovably upon said frame, a follower hinged to said plate and provided with a lug, and a spring carried by said plate and bearing against said lug, substantially as shown and described.

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

WILLIAM E. A. INNES.

Witnesses:

L. M. YEAGER,

JNO. O. ALBERT.