

June 17, 1924.

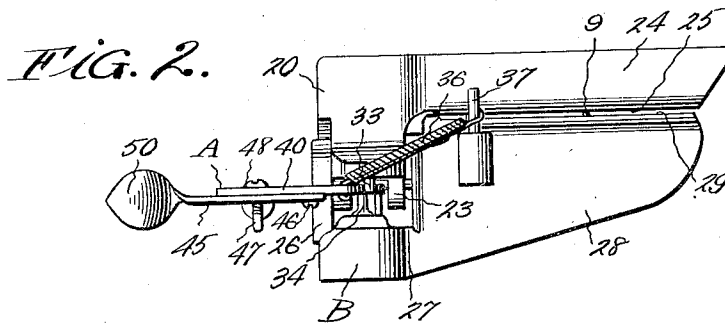
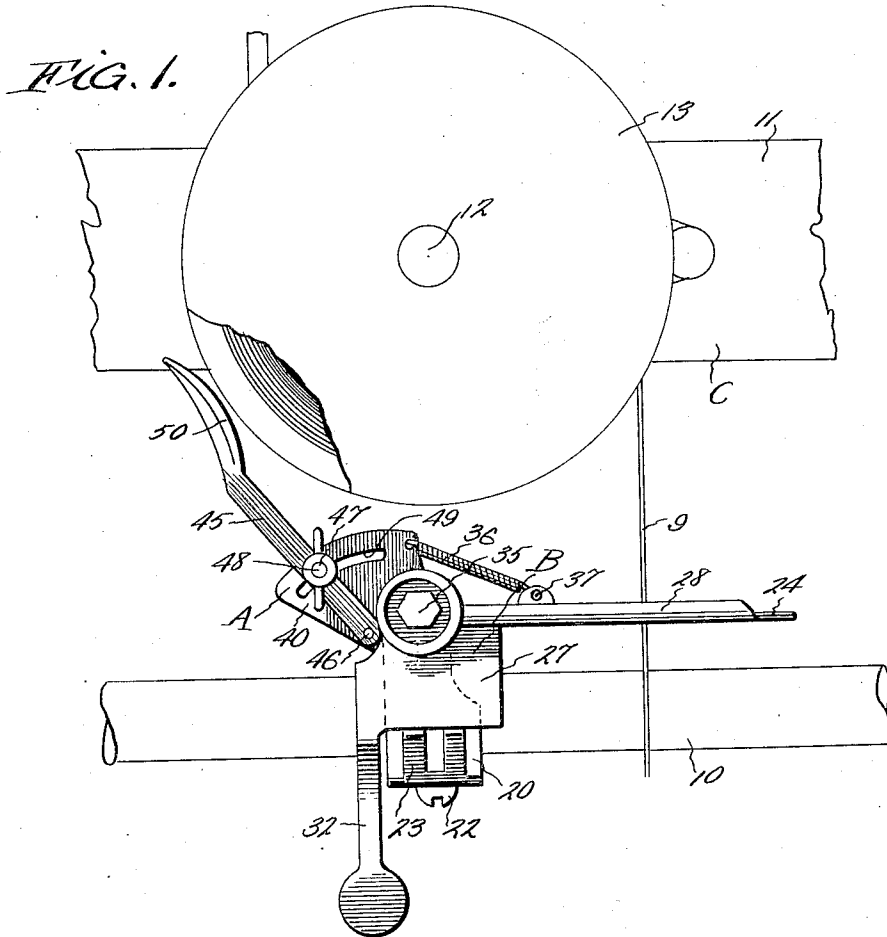
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J. S. VICKERS

SPOOLER GUIDE TRIP

Filed Sept. 17, 1923

2 Sheets-Sheet 1



Witnesses:

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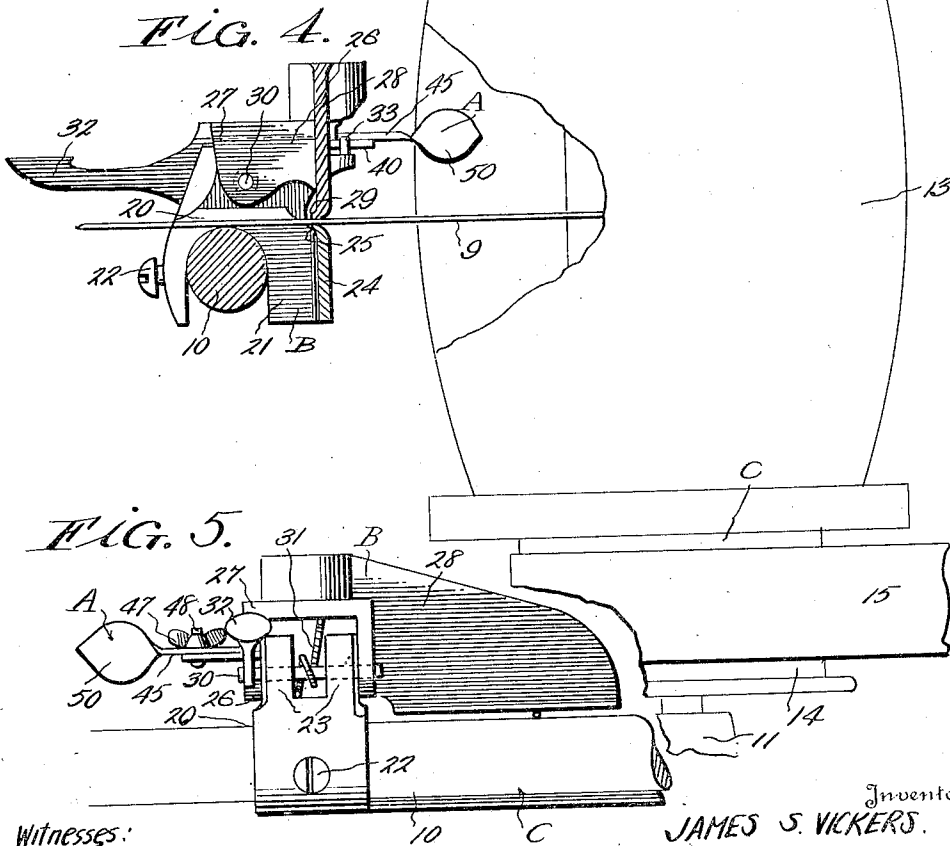
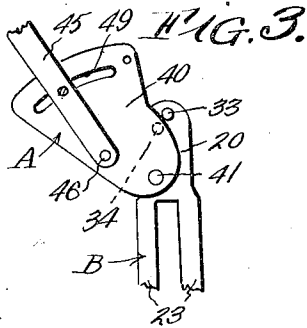
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SPOOLER GUIDE TRIP

Filed Sept. 17, 1923

2 Sheets-Sheet 2



Witnesses:

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UNITED STATES PATENT OFFICE.

JAMES S. VICKERS, OF ALEXANDER CITY, ALABAMA.

SPOOLER-GUIDE TRIP.

Application filed September 17, 1923. Serial No. 663,244.

To all whom it may concern:

Be it known that I, JAMES S. VICKERS, a citizen of the United States, residing at Alexander City, in the county of Tallapoosa and State of Alabama, have invented certain new and useful Improvements in a Spooler-Guide Trip, of which the following is a specification.

This invention appertains to spooling machines and the primary object of the invention is the provision of an improved device for automatically preventing the overwinding of spools placed upon the machine, and thereby effectively eliminating all waste.

Another prime object of the invention is to provide an automatic tripping device for the spooler guide, so as to operate the guide and sever the thread or yarn leading to the spool, when a predetermined amount of thread or yarn has been wound upon the spool.

A further object of the invention is to provide novel means for adjusting the trip, whereby the trip can be caused to operate when different amounts of thread or yarn have been wound upon the spool.

A still further object of the invention is to provide a novel spool guide tripper of the above character, which will be durable and efficient in use, one that will be simple and easy to manufacture and one which can be placed upon the market and incorporated with a spooling machine at a small cost.

With these and other objects in view, the invention consists in the novel construction, arrangement and formation of parts, as will be hereinafter more specifically described, claimed and illustrated in the accompanying drawings, in which drawings:

Figure 1 is a plan view of the improved trip incorporated with a spooling machine, only a fragment of the spooling machine being shown.

Figure 2 is a rear elevation of the spooler guide and automatic trip, the upper edge of the trip and guide being shown lowermost.

Figure 3 is a fragmentary plan view of the guide showing the same connected with the lower half or jaw of the guide.

Figure 4 is a transverse section through the yarn guide and spooling machine, the trip being shown in edge elevation, and

Figure 5 is a front elevation of the im-

proved trip incorporated with the guide, the guide and trip being shown connected to the traverse bar of the spooling machine.

Referring to the drawings in detail, wherein similar reference characters designate corresponding parts throughout the several views, the letter A generally indicates the automatic trip for the spooler guide B, the automatic trip and guide being shown on a fragment of a spooling machine C.

The spooling machine C is of course of the usual or any preferred construction and only a sufficient part of the machine has been shown to illustrate the use of the improved trip. The machine C includes the traverse bar or rod 10, the spindle base 11, the spindle 12 for receiving the spool 13. The spindle 12 has mounted thereon in the usual way the drive pulley 14 around which is trained the drive belt 15.

The spooler guide B comprises the base block 20 on which is formed the traverse bar engaging clamp 21 and as shown the clamp 21 carries an adjusting screw 22 for impinging against the said bar or rod. The base 20 supports a pair of upstanding pivot ears 23 and a laterally extending guide and cutting blade 24, the upper edge of which is provided with a cutting edge 25. The pair of pivot ears 23 receive a pair of companion pivot ears 26 formed on the upper section 27, which carries the relatively broad guide and cutting blade 28, which has a cutting edge 29 formed on its lower surface. The pairs of pivot ears 23 and 26 receive a pivot pin 30 around which is coiled an expansion spring 31 having its terminals engaging the sections 20 and 27 respectively and this spring normally urges the guide and cutting blades 24 and 28 into cutting engagement with one another. The upper section 27 has formed thereon the forwardly extending thumbpiece 32, which permits the rocking of the upper blade 28, so as to separate the blades 28 and 24 from one another.

In accordance with this invention, the lower section 20 is provided with a stop pin 33, which serves as means for limiting the swinging movement of the trip A, as will be hereinafter more fully described. The upper section 27 carries a depending pin 34, which serves as means for engaging the upper surface of the trip for normally pre-

venting the closing of the jaws 24 and 28, as will be hereinafter also more fully described. The trip pin 34 can be eccentrically mounted on the terminal of a suitable bolt 35 carried by the upper section 27 if so desired.

The improved trip A comprises a substantially triangular-shaped trip plate 40 the narrow end of which is rockably mounted upon a suitable pivot pin or the like 41 carried by the lower section 24. This trip plate 40 is normally urged into contact with the stop pin 33 by means of a contractile coil spring 36, which has one terminal connected to the inner edge of the trip plate 40 and its opposite end connected to a supporting pin 37 formed on the upper blade or guide 28. When the trip plate 40 is in engagement with the stop pin 33, the same will normally lie directly below the trip pin 34 carried by the upper section 27, which will normally hold the jaw 28 separated a sufficient distance from the jaw 24 to permit the thread or yarn 9 to pass therebetween and around the spool 13. It is obvious that when the trip plate 40 is sprung away from the trip pin 34 against the tension of the coil spring 36 and out of the path of the said trip pin, that the jaw 28 will be forcibly moved into contact with the jaw 24 by the spring 31, thus severing the thread or yarn 9 and prevent the further winding up thereof on the spool 13.

In order to bring about the automatic tripping of the trip plate 40, a trip lever 45 is pivotally secured upon the trip plate 40 by means of a pivot pin 46 and the trip lever is normally held against swinging movement on the trip plate 40 by means of a winged nut 47 threaded upon a bolt 48 carried by the lever 45. This bolt 48 extends through an arcuate slot 49 formed in the trip plate and it is obvious that by tightening up of the nut 47, that movement of the trip lever 45 in relation to the trip plate 40 will be precluded. The outer end of the trip lever 45 is provided with a head 50 for engaging the yarn, on the spool 13, for a purpose, which will be hereinafter more fully set forth. It can be seen however, that when the yarn or thread has been wound upon the spool 13 to such a point that the same will engage the trip head 50 of the lever 45, that the trip plate 40 will be rocked and moved away from the trip pin 34 thus allowing movement of the jaw 28 and the severing of the threads.

It can be seen that by adjusting the position of the trip lever 45 on the plate 40 through the medium of a slot 49 and bolt 48, that various amounts of thread or yarn can be wound upon the spools as desired by the operator of the spooling machine.

In operation of the improved device, the thread or yarn 9 is slipped between the

jaws 24 and 28 while the operator presses down upon the thumb piece 32. The pressing down on the thumb piece 32 will of course move the jaw 28 away from the jaw 24 and the pin 34 from out of the path of the trip plate 40. The spring 36 will now move the trip plate 40 on its pivot into engagement with the stop pin 33 and in the path of the pin 34, which will prevent the closing of the jaw 28. The trip lever 45 is now adjusted in relation to the spool and trip plate 40, so that the desired amount of thread or yarn can be wound upon the spool 13 and the machine is set in operation.

Now as stated, when the desired amount of thread or yarn has been wound upon the spool the thread will engage the head 50 and thus rock the trip plate and permit the closing of the jaw 28 and the severing of the thread. The spool 13 will now have to be moved from the machine by the operator and it is obvious that no more than the desired amount of thread can be placed upon each spool, thus eliminating all waste.

Changes in details may be made without departing from the spirit or the scope of this invention.

What I claim as new is:

1. In a spooling machine, a spindle, a spool mounted upon the spindle, a thread guide mounted upon the spooling machine including a pair of pivoted jaws arranged to receive the thread therebetween, and means including a trip plate for engaging the thread on the spool for automatically operating the jaws for severing the thread, when the desired amount of thread has been wound upon the spool.

2. In a spooling machine, the combination with a spindle, a spool mounted upon the spindle, a traverse rod, a thread guide mounted upon the traverse rod including a pair of pivoted jaws arranged to receive the thread therebetween, spring means for normally urging the jaws into engagement with each other, means for normally holding the jaws separated against the tension of said spring means, and automatic means for releasing said jaw separating means to permit the jaws to engage one another and the severing of the thread, when the desired amount of thread has been wound upon the spool.

3. In a spooling machine, the combination, a spindle, a spool mounted upon the spindle, a traverse bar, a thread guide mounted upon the traverse bar including a pair of pivoted jaws, for receiving the thread therebetween, a spring for normally urging the jaws into engagement with one another for severing the thread, a pivoted trip plate associated with the guide for normally holding the jaws separated against the tension of said spring means, and means for operating the trip plate from the spool

when the desired amount of thread has been wound upon the spool for permitting the closing of the jaws to sever said thread.

4. The combination with a spooling machine including a spindle, a traverse rod, a spool mounted upon the spindle, and a thread guide including a pair of pivoted jaws mounted upon the traverse rod for receiving the thread therebetween, resilient means for normally urging the blades into engagement with each other, means for manually rocking the blades against the tension of said spring means, of an automatic tripping device for the guides comprising a trip plate pivotally secured to one of said jaws, a trip pin carried by the other jaw and arranged in the path of the trip plate for normally preventing the closing of the jaws and a trip lever carried by the trip plate arranged to engage the thread on the spool, when the desired amount of thread has been wound upon the spool for rocking the trip plate and moving the same from out of the path of the trip pin, as and for the purpose specified.

5. The combination with a spooling machine including a spindle and a traverse bar, a spool mounted upon the spindle, a guide for the thread to be wound upon the spool mounted upon the traverse bar including an upper and lower section pivotally connected together, guide and cutting jaws connected to the sections for receiving the thread therebetween, a stop pin carried by one section, a trip pin carried by the other section, and spring means for normally urging the jaws of the sections into engagement with one another, of an automatic trip comprising a pivoted trip plate secured to the section carrying the stop pin and arranged in the path

of the trip pin, the trip pin being arranged to engage the trip plate, when the trip plate is in one of its positions for normally holding the jaws separated from one another, resilient means normally urging the trip plate into engagement with the contact pin and in the path of the trip pin, and an adjustable trip lever carried by the trip plate and arranged to engage the thread on the spool, when the desired amount of thread has been wound thereon.

6. The combination with a spooling machine including a spindle, a traverse bar, a spool upon the spindle, and a thread guide for the thread to be wound upon the spool including a pair of pivotally connected sections, means rigidly securing one of the sections to the traverse bar, a pair of laterally extending guide and thread cutting blades formed on the sections arranged to receive the thread therebetween, resilient means for normally urging the blades toward one another, means for normally holding the blades separated, and means for actuating the blade separating means for permitting the closing of said blade to sever the thread including a trip plate for engaging the thread upon the spool when the desired amount of thread has been wound upon the spool, and means for permitting the adjusting of said trip plate relative to the spool, so that different desired amounts of thread can be wound upon the spool.

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

JAMES S. VICKERS.

Witnesses:

O. C. THOMAS,
J. H. PETERS.