

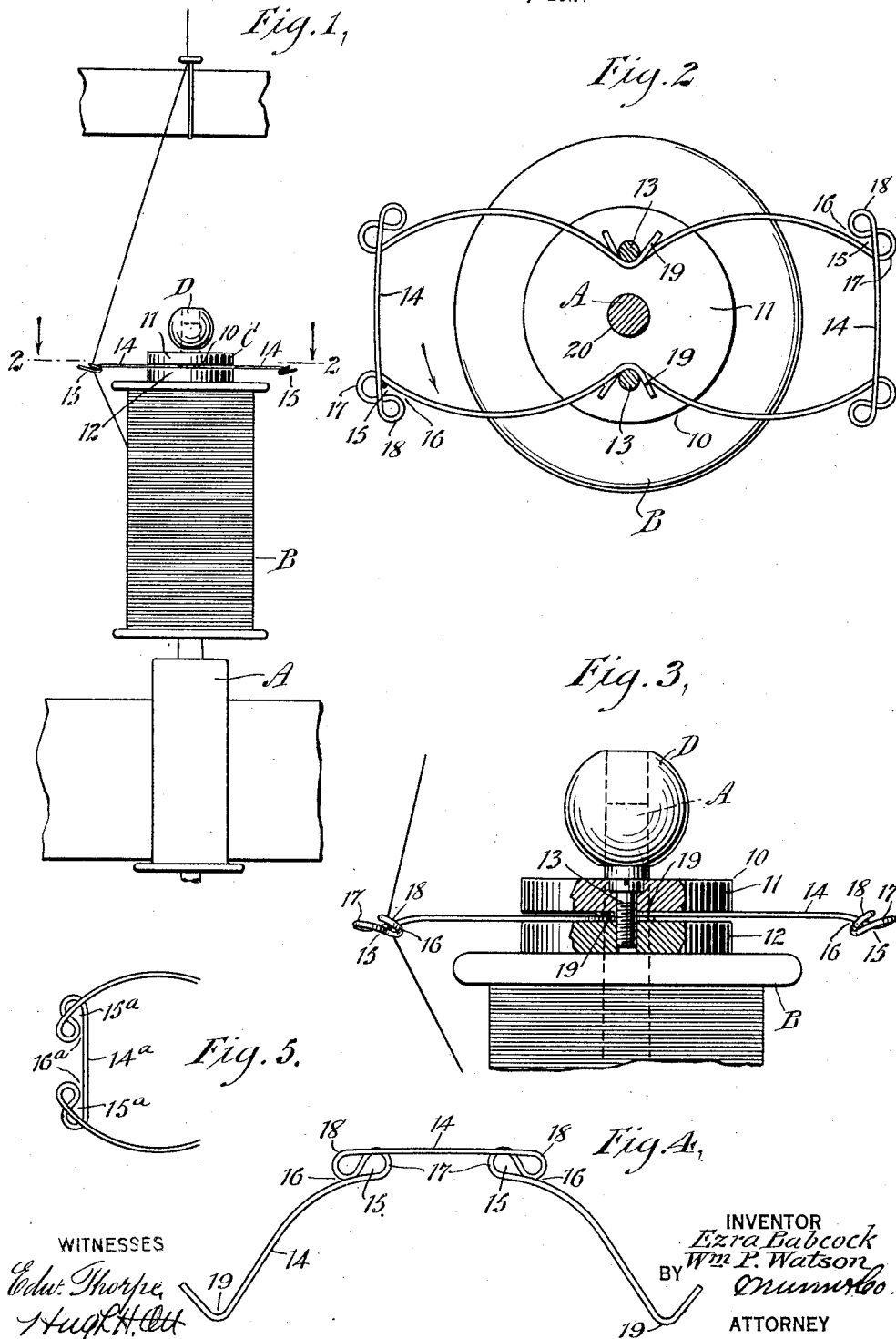
Jan. 3, 1928.

1,655,352

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TENSION FLYER FOR SPINNING MACHINES

Filed March 18, 1927



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TENSION FLYER FOR SPINNING MACHINES.

Application filed March 18, 1927. Serial No. 176,454.

This invention has relation to the art of spinning, and has particular reference to an improvement in a tension flyer for a spinning machine.

Tension flyers now in general use are constructed in such a manner as to require their application in reverse positions for right and left twist machines, thereby necessitating the exercise of caution in applying the same so as to insure the proper engagement of the thread with the flyer. The present invention comprehends as one of its objects, a flyer which is constructed in such a manner as to permit of its application in either direction for operation on either right or left twist machines, thereby, in effect, rendering the same self-threading and eliminating the necessity of the operator exercising caution or care in applying the same.

The invention furthermore comprehends an improved tension flyer which is so constructed as to present an increased number of wearing points for materially increasing the length of life of the device and this without appreciably adding to the cost of production of the flyer.

As a further object the invention embodies an improved tension flyer construction which eliminates sharp points or ends liable to cause injury to the operator, and which affords a safety feature.

As a still further object the invention contemplates an improved tension flyer for spinning machines, the wires and blocks of which may be more readily and expeditiously assembled, the wires being completely formed before application to the block or hub so as to enable unskilled labor removing and associating the wires with the blocks or hubs and obviating the necessity of returning the flyers to a battery for re-wiring.

The invention furthermore comprehends a flyer which is constructed in such a manner as to accommodate the running of the same with practically any thread from two- to fifteen-ply without any change in the size of the wire or block.

Other objects reside in the comparative simplicity of construction of the flyer, the economy with which the same may be produced, and the general efficiency derived therefrom.

With the above recited and other objects in view, reference is had to the following specification and accompanying drawings in

which there are exhibited certain examples or embodiments of the invention which are in no way intended as limitations upon the scope of the appended claims as it is to be clearly understood that variations and modifications which properly fall within the scope of said claims may be resorted to when found expedient.

In the drawings—

Figure 1 is a fragmentary view of a spinning machine equipped with a tension flyer constructed in accordance with the invention.

Fig. 2 is an enlarged sectional view through the flyer taken approximately on the line 2—2 of Fig. 1;

Fig. 3 is a fragmentary enlarged side view of the flyer applied, with parts broken away to disclose the underlying structure;

Fig. 4 is a view of one of the wires removed from the block or hub;

Fig. 5 is a plan view of a slightly modified adaptation of the leg construction of the flyer.

Referring to the drawings by characters of reference, A designates a spindle upon which is mounted the bobbin B carrying the thread to be spun. The tension flyer designated generally by the reference character C, includes a block or hub 10 consisting of a pair of superposed sections 11 and 12, connected in any suitable manner to permit of advancement of the same toward each other to set up a clamping action therebetween. The said connection, as illustrated, consists of a pair of screws 13 which extend through one block section and have a threaded anchored connection with the other block section. The leg or legs 14 are constructed from a length of wire or equivalent material bent intermediate its ends to provide a pair or plurality of thread guides 15 which open in opposite directions whereby to respectively serve for right and left twist machines without reversal of the flyer on the spindle. The thread guides are preferably in the nature of substantially 8 shaped eyes, one loop of which is sufficiently spaced from the remainder of the leg to provide an entrance mouth 16 which facilitates the engagement of the thread within the guide and practically renders the flyer self-threading. Preferably one of the loops 17 of the 8 shaped eye is intersected by a portion of the leg so that the remaining eye 18 together with the intersecting portion of the leg and

the oppositely extending portion of the leg, define the thread guide 15. The free ends of the leg 14 are provided with hooked terminals 19, and said free ends are adapted to be arranged between the block or hub sections 11 and 12 with the hooked terminals embracingly engaging the shanks of the screws 13 as illustrated, the inherent normal tension of the legs which tends to separate the free ends serving to initially position and retain the same in place, until the block or hub sections are forced into clamping relation by the screws 13. It is of course understood that the block or hub sections 11 and 12 are formed with concentric axial openings 20 to accommodate the spindle A, and that the usual mill nut D is applied to the spindle after the flyer is positioned thereon, to rest upon the bobbin B.

In practice, it is preferable to employ two legs 14 so that the flyer presents a pair of thread guides for right-hand twist machines, or a pair of thread guides for left-hand twist machines irrespective of the manner in which the flyer is positioned on the spindle. This increases the number of wearing points on the legs, thereby increasing their life and usefulness in addition to reducing to a minimum the necessity of re-wiring. It will be further observed that the legs are completely formed prior to their application to the blocks or hubs, thereby facilitating re-wiring and eliminating the necessity of employing skilled labor for this purpose, so that the flyers may be re-wired at the mill without requiring their return to the factory, as is now generally practiced. It will be further observed that due to the fact that the free ends are disposed wholly within and protected by the hub or block sections, the possibility of cutting or injuring the hands of the operators is eliminated.

In the form of the invention illustrated in Fig. 5, the wire constituting the leg 14^a is bent reversely to form the S shaped eyes constituting the thread guides 15^a, so that the entrance mouths 16^a are disposed in confronting relation to each other instead of disposed in a direction pointing away from each other as in the other form of the invention.

What is claimed is:

1. A tension flyer for spinning machines, including a leg constructed from a length of wire bent intermediate its ends to provide a plurality of eyes presenting thread guides opening in opposite directions whereby the

flyer may serve for either right or left twist machines without reversal on the spindle.

2. A tension flyer for spinning machines, including a leg constructed from a length of wire bent intermediate its ends to provide a plurality of eyes disposed eccentric to the axis of rotation of the flyer, said eyes presenting thread guides having entrance mouths opening in opposite directions to permit of the use of the flyer for either right or left twist machines without removal of the same on the spindle.

3. A tension flyer for spinning machines, including a leg constructed from a length of wire bent intermediate its ends to provide a plurality of S shaped eyes presenting thread guides opening in opposite directions, whereby the flyer may serve for either right or left twist machines without reversal on the spindle.

4. A tension flyer for spinning machines, including a leg constructed from a length of wire bent intermediate its ends to provide a thread guide eye, and a block or hub including a pair of complementary sections between which the free ends of the leg are received and detachably clamped.

5. A tension flyer for spinning machines, including a leg constructed from a length of wire bent intermediate its ends to provide a thread guide eye having hooked terminals at the free ends, and a block or hub comprising a pair of complementary sections and connecting elements extending axially therethrough at substantially diametrically opposite points eccentric to the axis of the hub, the free ends of the leg positioned between the hub sections with the hooked terminals embracingly engaging the connected elements.

6. In a tension flyer for spinning machines, a leg constructed from a length of wire bent intermediate its ends to provide a thread guide eye, and a hub within the confines of which the free terminals of the leg are positioned.

7. In a tension flyer for spinning machines, a leg constructed from a length of wire bent intermediate its ends to provide a plurality of substantially S shaped eyes, presenting thread guides, one loop of each eye being spaced from the adjoining portion of the leg to define an entrance mouth diverging outwardly.

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