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J. S. BACHMAN

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TWISTER

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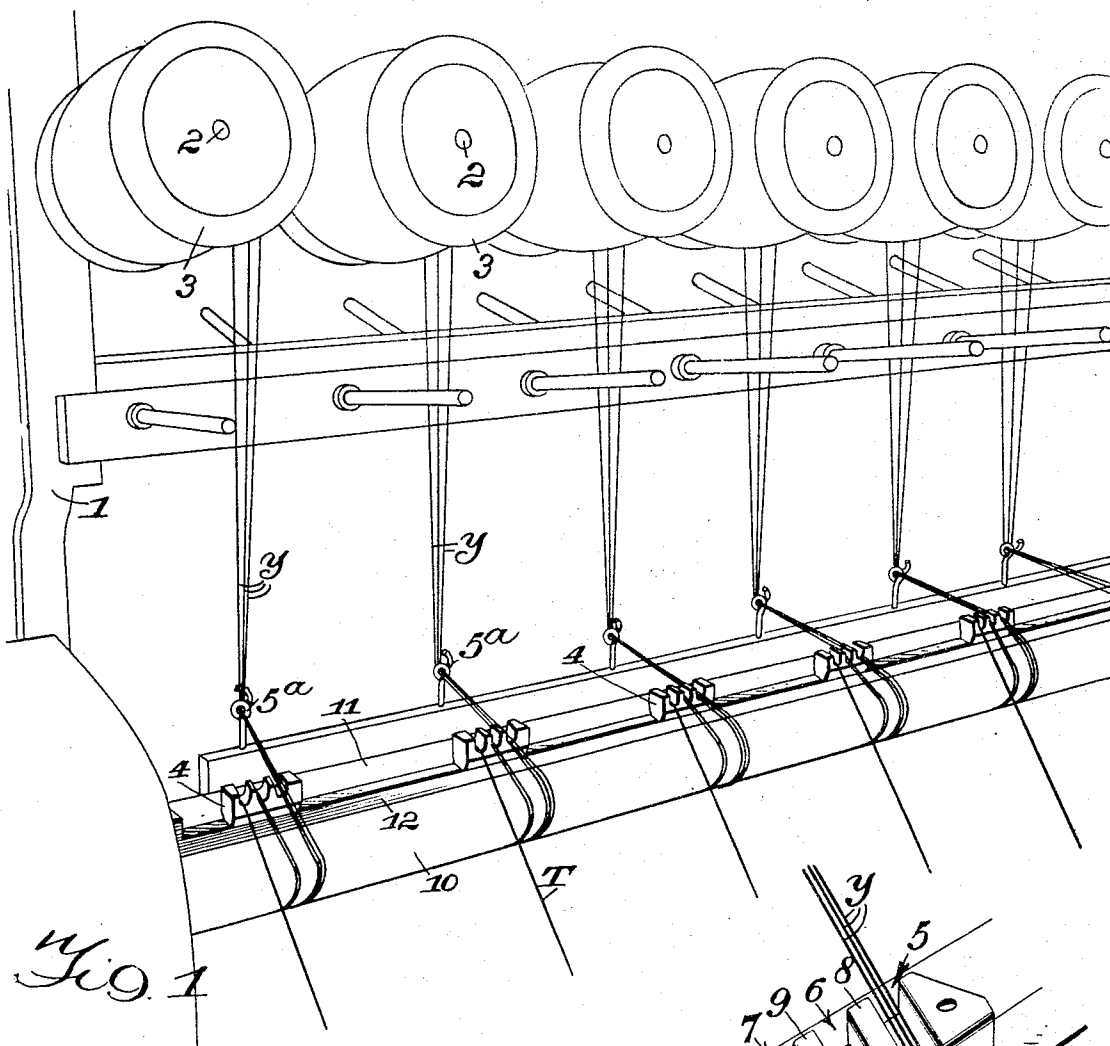


Fig. 1

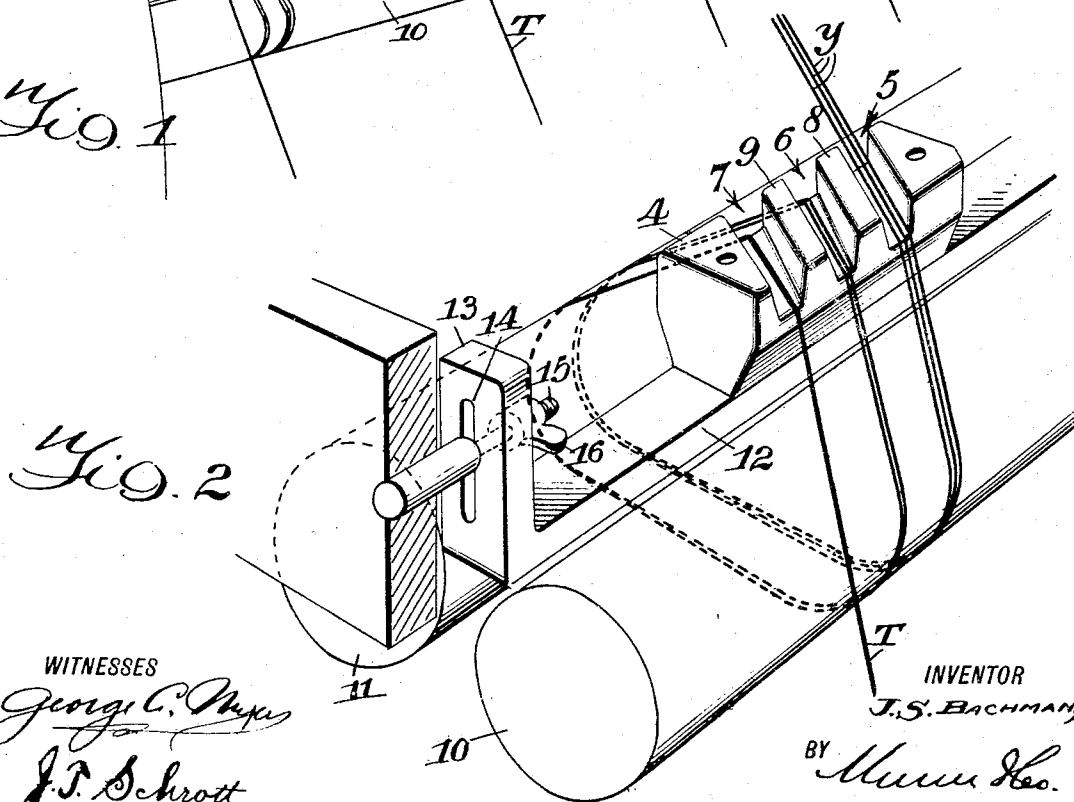


Fig. 2

WITNESSES

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TWISTER.

Application filed March 3, 1923. Serial No. 622,636.

To all whom it may concern:

Be it known that I, JOHN SNELGROW BACHMAN, a citizen of the United States, and a resident of Rome, in the county of Floyd and State of Georgia, have invented certain new and useful Improvements in Twisters, of which the following is a specification.

My invention relates to improvements in twisters, and it consists substantially in the construction, combinations and mode of operation herein described and claimed.

One of the objects of the invention is to provide a separator for keeping the strands of yarn divided while laying the yarn in the operation of twisting the strands into a thread.

A further object of the invention is to provide a separator for the purpose described, mounted upon means which may be adjusted to various elevations above the surface of the twister rolls so that the yarn will "drag" in the groove or grooves of the separator and thereby create a friction which will impose an extra tension on the yarn.

Other objects and advantages will appear in the following specification, reference being had to the accompanying drawing, in which:—

Fig. 1 is a perspective view of a portion of a twister, illustrating the application of the improved strand separator, and

Fig. 2 is a detail perspective view on a somewhat larger scale, illustrating further features of the invention.

This invention is an improvement on the separator for twisters disclosed in my Letters Patent on the same subject matter of invention, granted November 14, 1922, No. 1,435,789. By referring to Fig. 1 of the drawing, it is to be observed that the creel 1 carries a plurality of spindles 2 on which spools 3 of yarn are supported. A certain number (three in the present instance) of strands of yarn are to be twisted or combined into a single thread T and wound on a bobbin such as customarily forms a part of the twister apparatus. The purpose of the invention is to keep the strands of yarn separated, thereby preventing the yarn from running together and tangling.

This is also the purpose of the invention disclosed in the patent referred to, but instead of making the separator of a plurality of pins (as in said co-pending application),

the separator 4 is composed of a solid block of hard wood, hard rubber, porcelain, steel, or other suitable substance. Loops or guides 5 gather or combine the diverging strands 60 y from three of the spools 3 into a single strand which is laid into the first groove 5 of the separator.

As illustrated, the separator has additional grooves 6 and 7 which are defined by the two mid ribs 8 and 9 and the end walls of the block 4. It is very desirable and in fact, essential, that all corners of the separator block with which the yarn is likely to come in contact should be nicely rounded so that all danger of chafing the yarn is entirely obviated. The exposed corners of the various ribs and grooves are so shown on the drawing.

It is to be observed that the grooves and ribs are disposed in slightly diagonal or oblique positions in respect to the ends of the separator block 4 and in respect to the axes of the rolls, this positioning being more in conformity with the natural direction or lay of the yarn as it passes from the guide 5 and from the revolving twister rolls 10 and 11. However, it is not essential that the grooves and ribs be diagonally disposed as they might be run straight across or at right angles with the rolls. The rotational movement of the rolls pulls the single strands of yarn from the spools 3. The rotating spindle (not shown) to which the strands go twists them into a resulting thread T which is wound upon a bobbin carried by said spindle.

In order that the separator block 4 may be adjusted in respect to the rolls 10 and 11, it is suitably mounted upon a bar 12, which, in the present instance, is provided with an up-turned portion 13 at each end, in the slot 14 of each of which the shank 15 of a screw passes through. The screw may be fixed in an adjacent portion of the creel frame. A wing nut 16 threaded on the screw is intended to hold the bar 12 at its adjustments. It is to be understood that the adjustability of the supporting bar 12 is not confined to the use of the particular means illustrated and described since obviously other modes of adjusting the bar may be adopted to serve the purposes of the invention.

The purpose of adjusting the bar 12 vertically, for example above the surface of the rolls 10 and 11, is to cause the yarn to drag

in the grooves of the separator block thereby creating a friction which will impose an extra tension on the yarn as it is being fed over by the revolving rolls so that the resulting thread T may be twisted together tighter.

The separator may be attached to the machine by iron bars or wooden supports, but the manner of attaching would be determined by the particular make of the machine to which the separator is intended to be attached. However, in every case it would be attached to a twisting machine for the purpose of laying the yarn before twisting, and keeping it separated while being fed over the revolving rolls.

While the construction and arrangement of the improved strand separator herein described and claimed, is that of a generally preferred form, obviously modifications and changes may be made without departing from the spirit of the invention or the scope of the claims.

I claim:—

1. In combination with the revolving rolls of a twister, means disposed between the rolls to keep separated strands of yarn wrapped from one roll to the next, and means to adjust the position of the separating means in respect to the rolls.

2. A separator composed of a body hav-

ing a plurality of integral means so disposed as to provide a plurality of channels for receiving, laying and separating yarn as it passes to the rolls of a twisting machine, said means being so made that the channels are disposed obliquely to the axes of the rolls.

3. A separator composed of a block having a plurality of integral ribs defining a plurality of grooves for receiving yarn as it passes to the rolls of a twisting machine.

4. A separator composed of a block having a plurality of ribs and grooves disposed at an angle in respect to the ends of the block to approximately conform to the direction of yarn as it passes over associated twisting rollers through said grooves.

5. A separator composed of a block provided with ribs to define grooves for separating strands of yarn in the formation of a thread, all exposed edges of said grooves and ribs being rounded to prevent chafing the yarn.

6. A separator composed of a body having a plurality of upstanding elements defining grooves for the reception and separation of yarn strands in the formation of thread, means on which said body is supported, and means by which said supporting means may be adjusted to vary the position of the separator in respect to twister rolls.

JOHN SNELGROW BACHMAN.