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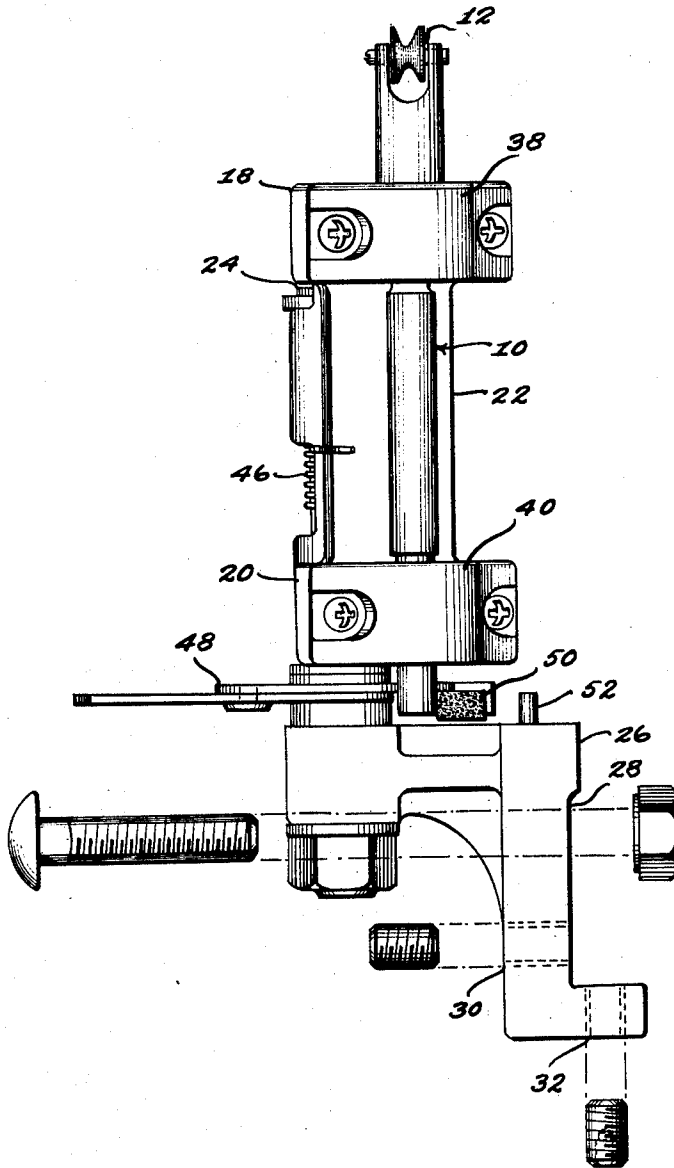
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FALSE TWIST SPINDLE FOR TEXTILE MACHINES

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3 Sheets-Sheet 1

*Fig. 1*



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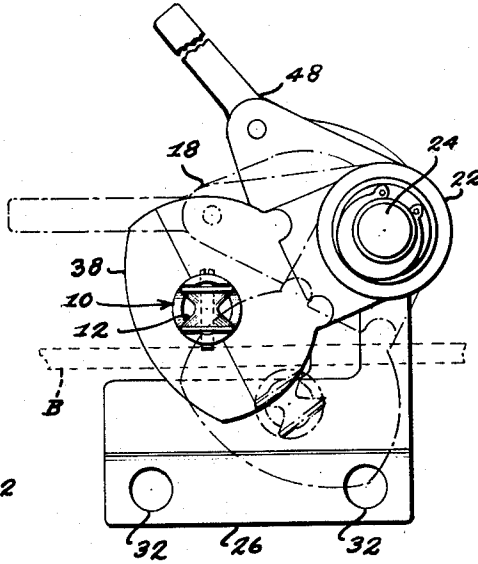
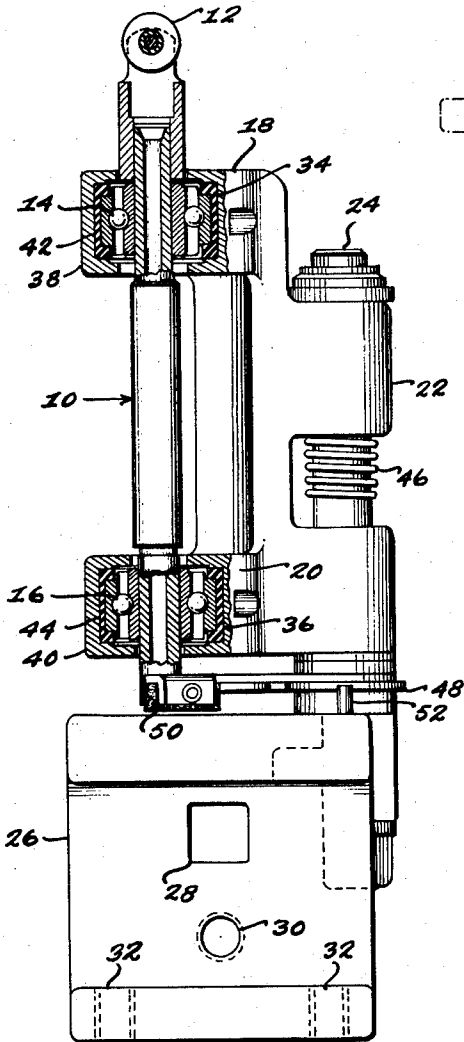
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*Fig. 2*



*Fig. 3*

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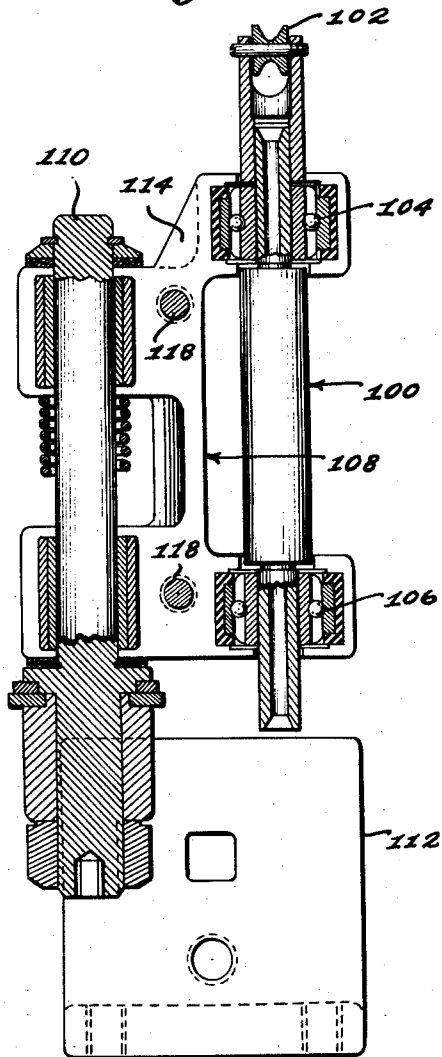
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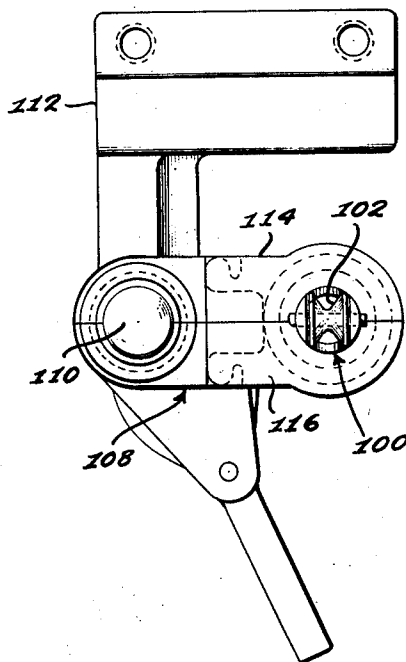
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*Fig. 4*



*Fig. 5*



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**FALSE TWIST SPINDLE FOR TEXTILE MACHINES**

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Application July 30, 1957, Serial No. 675,122

5 Claims. (Cl. 57—77.45)

This invention relates generally to false twisting means for use in yarn processing textile machines, such as up-twisters, and more particularly to an improved false twist spindle arrangement for such machines.

According to the present invention an arrangement is provided by which a spindle tube fitted with false twisting means may be supported advantageously for operation while remaining readily removable for maintenance or replacement without requiring any substantial removal of associated structure and without disturbing the located position of the spindle tube on the machine. As a result, the spindle tube may be put back in place just as readily as it is removed, and the normal maintenance burden is thereby substantially lessened while at the same time providing a particularly effective spindle support.

These and other features of the present invention are described in detail below in connection with the accompanying drawings, in which:

Fig. 1 is a side elevation detail showing a false twist spindle arranged for mounting on a textile machine in accordance with the present invention;

Fig. 2 is a rear elevation detail substantially as seen from the right in Fig. 1;

Fig. 3 is a plan detail corresponding generally to Fig. 2;

Fig. 4 is a front elevation detail showing a modified embodiment of the invention; and

Fig. 5 is a plan detail corresponding generally to Fig. 4.

Referring now in detail to the drawings, Figs. 1, 2 and 3 show an embodiment in which a spindle tube 10, fitted at its upper end with false twisting means 12, is carried at upper and lower bearing units 14 and 16 fixed in spaced relation thereon. The spacing of these bearing units 14 and 16 corresponds with that of parallel arm portions 18 and 20 of a carrying bracket 22 pivotally mounted on a pivot post 24 that is in turn fixed on a mounting bracket 26 arranged to be secured and leveled on a spindle rail (not shown) by a fastening bolt at 28 and set screws at 30 and 32.

The carrying bracket arm portions 18 and 20 are formed with semicircular recesses 34 and 36 at the extending end faces thereof for receiving the spindle tube bearing units 14 and 16, and are fitted thereat with removable cap members 38 and 40 having complementary recesses 42 and 44 formed therein for clamping the bearing units 14 and 16 in place on the bracket arms 18 and 20. The bearing units 14 and 16 may advantageously be arranged for this purpose in the manner disclosed by U.S. Patents No. 2,781,628 and No. 2,781,629, but remain removable simply upon removal of the cap members 38 and 40 without requiring the removal of any further associated structure, as previously mentioned.

Otherwise, the carrying bracket arm portions 18 and 20 have a spacing proportioned to present an intermediate length of the rotatably supported spindle tube 10 for contact with a driving belt such as is indicated at Fig. 3 at B, and the carrying bracket 22 is biased on the pivot post 24 by a torsion spring 46 or the like to pivot so

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as to cause the spindle tube 10 to ride driving belt B when desired; a latching arm means 48 being arranged at the base of carrying bracket 22 on pivot post 24 to provide for latching spindle tube 10 at an inactive position (indicated by full lines in Fig. 3) free of driving belt B, in which position a friction shoe 50 carried by the latching means 48 at the lower end of spindle tube 10 prevents any coasting thereof; and a stop pin 52 being arranged on the mounting bracket 26 to prevent pivoting of carrying bracket 22 beyond the dotted line position shown in Fig. 3 under the bias of torsion spring 46 in the absence of, or in the event of damage to, driving belt B.

The further embodiment illustrated in Figs. 4 and 5 is similarly arranged in that it incorporates a spindle tube 100 carrying upper end false twisting means 102 and spaced upper and lower bearing units 104 and 106 at which it is supported by a carrying bracket 108 pivotally mounted on a pivot post 110 that is fixed on a mounting bracket 112. This further embodiment differs, however, in that the carrying bracket 108 is compositely formed of complementary component halves 114 and 116 arranged to be releasably secured by bolts or the like at 118 so as to assemble in pivotal relation on the pivot post 110 and in clamping relation on the spindle tube biasing units 114 and 116 and thereby allowing disassembly readily at the pivot post 110 as well as the spindle tube 100.

The present invention has been described in detail above for purposes of illustration only and is not intended to be limited by this description or otherwise except as defined in the appended claims.

We claim:

1. A false twist spindle comprising a spindle tube fitted with false twisting means, upper and lower bearing units fixed in spaced relation on said spindle tube, and a carrying bracket for said spindle tube compositely formed with spaced parallel arms and having the components thereof arranged for releasable clamping assembly about said bearing units to support said spindle tube rotatably and determine the axial position thereof on said bracket, the spacing of said bearing units and bracket arms being proportioned to present an intermediate length of said rotatably supported spindle tube for contact with a driving belt.

2. A false twist spindle comprising a spindle tube fitted with false twisting means, upper and lower bearing units fixed in spaced relation on said spindle tube, a carrying bracket for said spindle tube formed with spaced parallel arms having semicircular recesses at the extending end faces thereof for receiving said spindle tube bearing units, and cap members removably secured at the extending end faces of said bracket arms and having complementary recesses formed therein for clamping said spindle tube bearing units in place on said bracket arms.

3. A false twist spindle comprising a spindle tube fitted with false twisting means, upper and lower bearing units fixed in spaced relation on said spindle tube, a pivot post, and a carrying bracket pivotally mounted on said pivot post and compositely formed with spaced parallel arms and having the components thereof arranged for releasable clamping assembly about said bearing units to support said spindle tube rotatably and determine the axial position thereof on said bracket, said spindle tube being rotatably supported and axially positioned on said bracket with the axis thereof spaced in parallel relation with respect to the axis of said pivot post, the spacing of said bearing units and bracket arms being proportioned to present an intermediate length of said spindle tube for contact with a driving belt, and the pivotal mounting of

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said bracket on said pivot post allowing selective shifting of said spindle tube into and out of contact with said driving belt.

4. A false twist spindle as defined in claim 3 and further characterized in that said carrying bracket arms are arranged with semicircular recesses at the extending end faces thereof for receiving said spindle tube bearing units and having cap members formed with complementary recesses removably secured thereat for releasably clamping said spindle tube bearing units.

5. A false twist spindle as defined in claim 3 and further characterized in that said carrying bracket is compositely formed of complementary component halves arranged to be releasably secured upon assembly in pivotal

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relation on said pivot post and clamping relation on said spindle tube bearing units.

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