

### [54] TEXTILE APPARATUS WITH BRAKING ARRANGEMENT

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[58] Field of Search.....57/77.3-77.45, 88, 89, 104, 105

### [56] References Cited

#### UNITED STATES PATENTS

3,488,676 1/1970 Bieniok .....57/77.45

|           |         |                    |          |
|-----------|---------|--------------------|----------|
| 2,433,987 | 1/1948  | Gleitz et al. .... | 57/89    |
| 2,497,881 | 2/1950  | Gleitz et al. .... | 57/89    |
| 2,990,675 | 7/1961  | Rees .....         | 57/89 X  |
| 3,115,743 | 12/1963 | Brodthmann.....    | 57/77.45 |

### FOREIGN PATENTS OR APPLICATIONS

|        |      |                    |       |
|--------|------|--------------------|-------|
| 16,506 | 1895 | Great Britain..... | 57/89 |
|--------|------|--------------------|-------|

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### [57] ABSTRACT

In a yarn processing machine having multiple yarn twisting apparatuses, each apparatus is carried on a bearing plate releasably and adjustably secured to a slide block. Each slide block is mounted on slides projecting laterally from a beam of the machine frame, and a cam mechanism on the slide provides for moving the block to bring a wharve of the yarn twisting apparatus into or out of contact with a driving belt.

**3 Claims, 2 Drawing Figures**

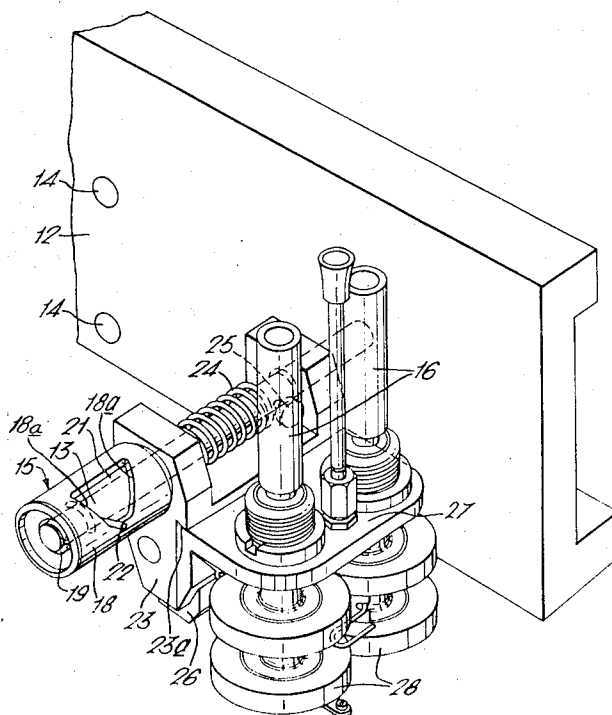
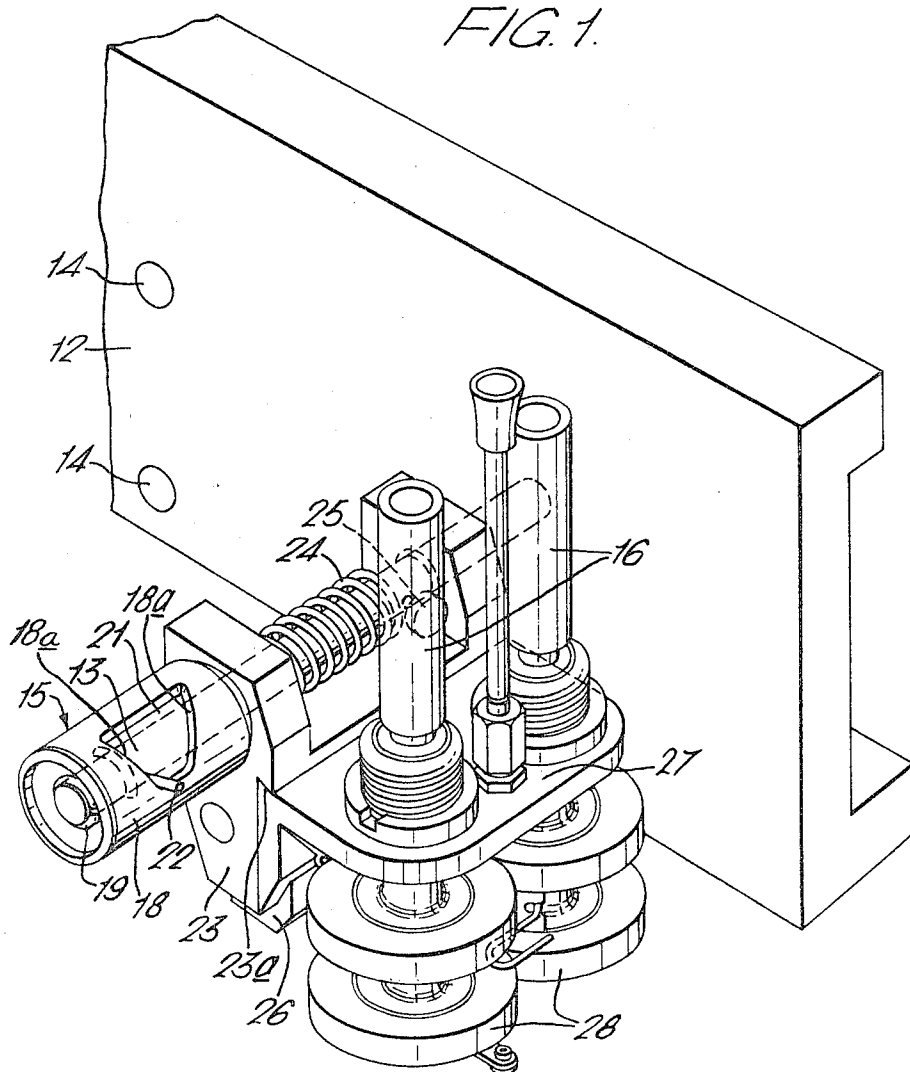
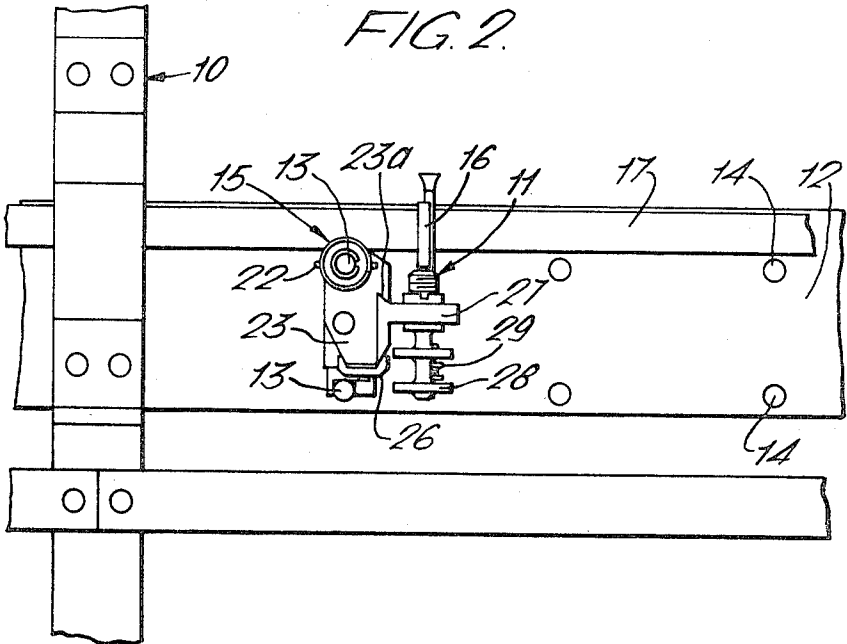


FIG. 1.



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## TEXTILE APPARATUS WITH BRAKING ARRANGEMENT

This invention relates to a mounting for a belt-driven yarn twisting apparatus, such as a false twist spindle driving unit, a friction twisting apparatus, a break spinning apparatus or the like.

Hitherto, such apparatus has been assembled on a mounting bracket which was securable to the machine frame, and the bracket carried a mechanism for moving a driving wharve of the twisting apparatus into and out of contact with a driving belt. Usually, in the case of false twisting machinery, the bracket carried fixed slide rods or a pivot on which a base plate carrying the false twist unit was movable. The present invention is an improvement on such a mounting system whereby the design is simplified thus reducing the cost of the machine.

### SUMMARY OF THE INVENTION

The invention comprises a belt-driven yarn twisting apparatus mounted on a slide or slides projecting laterally from a beam of a yarn processing machine and having a mechanism operable to move the twisting apparatus on the slide or slides so that a wharve or wharves of the twisting apparatus move into and out of engagement with a driving belt. The or each slide may be in the form of a rod fitted into a hole in the beam.

The mechanism operable to move the twisting apparatus may comprise a cam acting against a spring carried on the slide or at least one of the slides.

The apparatus may also have means for adjusting the position of the wharve or wharves relative to the belt so that the wharve or wharves can track correctly on the belt. The apparatus may be a false twisting apparatus and may comprise a roller or rollers mounted in a bearing plate and magnet means also mounted on the plate for holding a false twist spindle in driven and supported contact with the roller or rollers.

The invention also comprises a yarn processing machine having a plurality of yarn twisting apparatuses as hereinbefore described. There may be two slides for each yarn twisting apparatus.

### BRIEF DESCRIPTION OF THE DRAWINGS

One embodiment of a yarn processing machine and a device according to the invention will now be described with reference to the accompanying drawings in which:

FIG. 1 is a perspective view of false twisting device mounted on a beam, and

FIG. 2 is an elevation of part of a false-twist crimping machine incorporating the beam and device shown in FIG. 1.

### DESCRIPTION OF THE PREFERRED EMBODIMENTS

A false twist crimping machine 10 of which part is illustrated in FIG. 2, has a plurality of belt driven false twisting apparatuses 11, of which one is shown mounted on a beam 12. Each device is mounted on two laterally projecting slides in the form of rods 13 which are a press fit in holes 14 in the beam 12, and each apparatus has a mechanism 15 by which a belt engaging wharve 16 of the apparatus can be moved into and out of engagement with a driving belt 17. This mechanism 15 which is more clearly shown in FIG. 1 comprises a cylindrical cam 18 rotatably mounted on one of the

slides 13, its axial movement on the slide 13 being prevented by a circlip 19. A sleeve 21 surrounding the slide 13 and extending inside the cam 18 has a pin 22 which engages the cam surface 18a. The sleeve 21 is attached to a block 23 which is carried on the slides 13 and is urged away from the beam 12 by the pressure of a spring 24 which reacts against a pin 25 in the slide 13. Rotation of the cylindrical cam 18 moves the block 23 on the slides 13.

The block 23 has an undercut or dovetailed face 23a against which a bearing plate 27 with dovetail edges is held by a correspondingly profiled clamp 26, the bearing plate 27 carrying a pair of spindle supporting roller units 28 on parallel axes, each having a driving wharve 16. The plate 27 also carries a magnet (not shown) for holding a false twist spindle 29 against the roller units 28.

Movement of the block 23 by rotation of the cam 18 moves one of the wharves 16 into or out of contact with the belt 17, depending upon which wharve is in use. Thus the bearing plate 27 is removable and replaceable in very simple manner by means of the clamp 26. Its location upon the block 23 is slidably adjustable by loosening and re-tightening the clamp 26, an adjustment which provides for selectively having either one of the wharves 16 in engagement with the belt 17.

Instead of a false twist spindle driving arrangement being mounted on the bearing plate 27, any other belt-driven yarn twisting apparatus may be so mounted, for example friction twisting apparatus or break spinning apparatus. By means of the present invention it is a simple matter to replace one kind of yarn twisting apparatus by another kind on the same machine according to the type of processing which it is desired to perform on the yarn, without the need for using an entirely separate machine for each process. All that is needed is to provide sets of the various kinds of apparatuses all mounted on identical bearing plates 27.

What is claimed is:

1. In a yarn processing machine having a frame, at least one yarn twisting apparatus having a driving wharve, and a driving belt for operating said apparatus by engaging said wharve, a combination comprising a beam forming part of said frame; at least one elongated slide connected directly to and projecting laterally from said beam; first means mounting said yarn twisting apparatus on said slide for displacement longitudinally thereof; and second means for displacing said apparatus on said slide longitudinally thereof between first and second positions in which said driving wharve of said apparatus is respectively in engagement with and disengaged from the driving belt, said second means comprising a cylindrical cam member rotatable on said slide, a cam surface on said cam member, a sleeve carried by said first means surrounding said slide and extending inside said cylindrical cam member, a pin on said sleeve, and spring means biasing said first means in direction to keep said pin and said cam surface in mutual engagement.

2. in a yarn processing machine having a frame, at least one yarn twisting apparatus having a driving wharve, and a driving belt for operating said apparatus by engaging said wharve, a combination comprising a beam forming part of said frame; at least one elongated slide connected directly to and projecting laterally from said beam; first means mounting said yarn twisting apparatus on said slide for displacement longitudinally

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thereof, said first means comprising a slide block movable along said slide, a bearing plate supporting said yarn twisting apparatus, dovetail edges on said bearing plate, an undercut dovetail face on said slide block against which one of the dovetail edges of said bearing plate is locatable, and a profiled clamp releasably engageable with said slide block and with another dovetail edge of said bearing plate, whereby said bearing plate is securable to said slide block in different locations of adjustment relative to said block; and second means for displacing said apparatus on said slide longitudinally thereof between first and second positions in which said driving wharve of said apparatus is respectively in engagement with and disengaged from the

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driving belt.

3. A combination as defined in claim 1, wherein said first means comprises a slide block movable along said slide; a bearing plate supporting said yarn twisting apparatus, dovetail edges on said bearing plate, an undercut dovetail face on said slide block against which one of the dovetail edges of said bearing plate is locatable, and a profiled clamp releasably engageable with said slide block and with another dovetail edge of said bearing plate, whereby said bearing plate is securable to said slide block in different locations of adjustment relative to said block.

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