This invention relates to textile machines and particularly to twisting machines in which the spindles are pivotally mounted for swinging movement into and out of contact relative to a driving belt adapted to engage the whirs on said spindles.

An object of the invention is to provide a simple, inexpensive and easily actuated member to move a spindle away from its driving belt where the spindle may be retained in inoperative position and to permit return movement thereof by means of a spring when the member is returned to its initial position.

Another object of the invention is to form the spindle actuating member or lever from a heavy rod or wire bent into shape and pivotally supported in a portion of the spindle supporting bracket.

And finally it is an object of the invention to provide a simple locking means to retain the actuating member against removal from its position within the spindle bracket.

With the above and other objects in view the invention includes the features of construction and operation set forth in the following specification and illustrated in the accompanying drawing.

In the accompanying drawing annexed hereto and forming a part of this specification, I have shown the invention embodied in swinging spindle unit for an enclosed spindle type twisting machine but it will be understood that the invention can be otherwise embodied and that the drawing is not to be construed as defining or limiting the scope of the invention, the claims appended to this specification being relied upon for that purpose.

In the drawing:

Fig. 1 is a front elevation of a complete spindle unit, parts of the spindle, bobbin and its enclosure being broken away; and

Fig. 2 is a plan view of the spindle bracket and the pivotally mounted spindle unit shown in Fig. 1, a part being shown in section to more clearly show the construction.

In the above mentioned drawing there has been shown but one embodiment of the invention which is now deemed preferable, but it is to be understood that changes and modifications may be made within the scope of the appended claims without departing from the spirit of the invention.

Briefly, and in its preferred aspect, the invention may include the following principal parts: first, a fixed bracket, second, a pivotally mounted bolster bracket thereon; third, a spindle unit rotationally mounted within said bolster bracket; fourth, a bent wire lever hinged in a vertical axis within the fixed bracket and having an intermediate portion adapted to engage the pivotally mounted bolster bracket; and fifth, a small wire wrapped around a reduced diameter of the lever formed near the end of the portion forming the pivot for the lever, the ends of the small wire engaging over portions of the fixed bracket and bolster bracket to retain the lever against accidental withdrawal.

Referring more in detail to the figures of the drawing there is shown a bracket 10 secured in fixed position to a portion of the machine frame 15 shown in dotted outline. This bracket 10 is provided with an upwardly and laterally extending arm 11 through which extends a fixed pin 12 forming the pivot upon which a bolster bracket 13 and spindle unit may be mounted for oscillation. On bracket 13 is mounted a bolster 14 and spindle unit the whirl of which is shown at 15.

In the embodiment of the invention shown in the drawing the spindle unit may have its blade 16 enclosed by an inverted cup 17 secured at its periphery to a mounting 18 therefore fixed to the bolster bracket 13. A helical spring 19 surrounding the lower end of the pin 12 serves to normally force the spindle unit on the bracket 13 in a direction to contact its whirl 15 with a driving belt 20 shown in dotted outline only in Fig. 1.

The above constitutes a standard construction for twisting machines and per se forms no part of the present invention. To move the spindle unit on the bracket 13 away from the driving belt 20 and retain it in inoperative position a lever or dent 21 is provided preferably made from a heavy metal rod or wire and bent as will be best seen in the drawing. At one end the wire or rod from which the lever 21 is formed enters a vertical hole formed in the fixed bracket 10, this portion 22 forming the pivot upon which the lever 21 swings. Intermediate its ends the rod or wire 21 has an angularly disposed portion 23 adapted to bear against a side of the bracket 13. The lever 21 is extended downward and forms at its lowermost end a handle portion 24 by means of which the lever 21 may be moved to a position holding the bracket 13 with the spindle whirl out of contact with the belt 20. In this position of the lever 21 the spindle unit is retained in its inoperative position until the lever is moved back to its initial position. As soon as the lever 21 has been moved spring 19 forces the spindle toward the belt so that the whirl 15 will engage against the belt 20.
with a predetermined pressure regulated by the adjustment of the spring 10.

To retain the lever 21 in position within the fixed bracket 10 and to prevent accidental removal therefrom a portion of the end forming the pivot 28 may be reduced in diameter as shown at 29. Disposed around this reduced portion is a looped wire 26 the loop or eye formed within the central portion of this wire being wrapped around and fitting within the reduced diameter portion 29. As the wire 26 is resilient and tends to straighten portions of the loop therein fit against the reduced diameter 28 and prevent removal of the lever. Should it be necessary to remove the lever 21 it would only be necessary to open the loop as by forcing the opposite ends of the wire 26 toward each other.

I claim as my invention:

1. A swinging spindle unit for textile machines comprising in combination, a fixed bracket, a spindle unit supporting bracket pivotally mounted thereon, a lever pivotally supported within said fixed bracket and having an intermediate portion engaging and retaining said spindle unit in inoperative position when said lever is in one position, said lever being extended downward to form an operating handle therefor.

2. A swinging spindle unit for textile machines comprising in combination, a fixed bracket, a spindle unit supporting bracket pivotally mounted thereon, a lever formed from a metal rod bent into shape pivotally mounted at one end to said fixed bracket, an intermediate portion of said lever engaging and retaining said spindle unit in inoperative position when said lever is moved to one position, and spring means to permit said spindle unit to move to its operative position when said lever is moved to another position.

3. A swinging spindle unit for textile machines comprising in combination, a fixed bracket, a spindle unit supporting bracket pivotally mounted thereon, a bent metal rod forming a lever pivotally mounted at one end to said fixed bracket, an intermediate portion of said lever engaging and retaining said spindle unit in inoperative position when said lever is moved to one position, a handle portion formed upon the opposite end of said rod, and means to retain said lever within said fixed bracket.

4. A swinging spindle unit for textile machines comprising in combination, a fixed bracket, a spindle unit supporting bracket pivotally mounted thereon, a bent metal rod forming a lever pivotally mounted at one end to said fixed bracket, an intermediate portion of said lever engaging and retaining said spindle unit in inoperative position when said lever is moved to one position, a handle portion formed upon the opposite end of said rod, and a looped wire engaging a reduced diameter portion of said lever at the pivoted end thereof, whereby said lever is retained in position on the fixed bracket.

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