The present invention relates to a frictional tension regulating device for textile bobbins and more particular-ly to an improved form of the bar brake mechanism disclosed in the patent to Mann 2,105,543 issued March 1, 1938.

In the Mann patent cited there is disclosed a pen-dulous antifriction bobbin holder with means for con-trolling rotation thereof in the form of a curved bar brake. The bar is hingedly clamped to the creel board above the bobbin holder, and bears frictionally on the surface of the yarn package mounted on said holder to maintain a suitable tension on the yarn as it is unreeled from the package.

It is an object of the present invention to provide a novel, simplified form of bar brake and mounting means therefor, which is efficient in operation and economical in construction.

It is another object to provide such a device in which the mounting means for the bar brake is formed to serve as a wrench for adjusting the attachment of the bobbin holder to the supporting creel member.

It is another object to provide such a device in which the upper end of the bar brake has a quick detachable pivotal attachment to the mounting means.

It is another object to provide such a device in which the bar brake serves as a handle for the wrench con-stituted by said mounting means.

It is another object to provide such a device in which the mounting means for the bar brake serves as a dust excluding cap for the bobbin holder.

Further objects and advantages will be apparent from the following description taken in connection with the accompanying drawings in which:

Fig. 1 is a side elevation, partly broken away and in section of a preferred form of applicant's bar brake and mounting means as used in conjunction with a pendulous bobbin holder;

Fig. 2 is a sectional view of applicant's mounting means and dust cap, taken substantially on the line 2--2 of Fig. 1; and

Fig. 3 is a detail in side elevation of the bar brake and mounting means as viewed from the left in Fig. 1.

In Fig. 1 of the drawing there is illustrated a creel frame member 1 in the form of a channel bar. It will be understood that this member, here shown in section, extends lengthwise of the spinning frame to act as the support for a plurality of bobbin holders in the conven-tional manner. The lower surface of the creel mem-ber 1 is substantially flat and is drilled or slotted for the reception of a bolt 2, the stem of which engages a nut 3 seated in the creel member. The lower end of the bolt 2 is formed with a head 4 having a spherical surface on which a bobbin holder 5 is rotatably mounted by means of balls 6. A bobbin 7 is detachably mounted on the holder 5 and is adapted to carry a wound yarn package 8 which is thus pendulously hung from the creel member 1 with freedom for rotation and some universal motion. Since the structure so far disclosed is now conventional, further description thereof is deemed unnecessary.

The bolt 2 is formed with a shoulder 9 spaced from the head 4, and has a smooth flattened or "double D" section above the shoulder. A cup-shaped mounting member and dust cap 11 having a central opening 12 slidably conforming to the flattened section of the bolt 2 is mounted on said bolt against the shoulder 9 where it loosely surrounds and protects the upper end of the bobbin holder 5. The upper surface of the mounting member 11 is flat and is clamped against the lower sur-face of the creel member 1 when the bolt 2 is threaded into the nut 3.

The mounting member 11 is formed with laterally ex-tending ears 13, which ears are traversed by horizontal bearing openings 14. A bar brake member 15 has an end portion 16 bent at right angles to the length of the bar and arranged to be journaled in one of said openings 14 whereby the bar is hinged to the mounting mem-ber 11 for radial movement toward and from the axis of the bobbin 7. The lower end of the bar brake is bent as shown at 17 in Fig. 1, so as to bear frictionally under the effect of gravity on the outer surface of the yarn package 8.

The free end of the bent portion 16 of the bar brake 15 protrudes beyond the ear 13 of the mounting mem-ber 11 and has a radial projection 18 formed thereon as by means of a press operation. The ear 13 has a slot 19 traversing the ear and extending radially from the bear-ing opening 14, said slot being formed to freely permit passage of the projection 18 therethrough when the bar brake is inserted in the support member. The projection 18 and slot 19 are so oriented that they are brought into registry when the bar brake is raised to approximately a horizontal position.

In the operation of the device, the bobbin holder 5 is assembled by first placing the mounting member 11 on the bolt 2, and then threading said bolt up into the nut 3 in the creel member 1, the bolt being conveniently tight-ened by using the mounting member as a means for rotating the bolt similarly to a wrench. A bar brake 15 is then inserted in one of the openings 14 in the mounting member 11, while in a raised position to permit the projection 18 to traverse the slot 19 in which raised position it forms a convenient handle for finally tightening-up the bolt 2. As the bar brake is lowered, the projection 18 moves out of registry with the slot 19 and thereafter prevents displacement of the bar brake from the holder 11.

It will be understood that the quick detachable connection for the bar brake permits instant replacement of the bar brake without disturbing the mounting of the bobbin holder, and allows the use of more than one bar brake in unusual circumstances, if so desired.

Although but one form of the invention has been shown and described in detail, it will be understood that changes may be made in the form and arrangement of the parts without departing from the spirit of the invention.

I claim:

1. A spinning frame creel member, fastening means non-rotatably secured in said creel, a bobbin for holding a cop of yarn or the like, a pendulous rotary support for the bobbin including a bolt member having one extremity threaded and engageable with said fastening means and a bearing mounted on the other extremity of said bolt member, shoulder means provided on said member adjacent said bearing, said member having a non-circular portion intermediate said threaded extremity and said shoulder, a combination mounting member and dust cap slidably journaled on such non-
3. A device as set forth in claim 1 in which the mounting member is formed with a laterally extending ear traversed by a horizontal bearing opening, said bar brake having said end bent at a right angle and journalled in said bearing opening.

4. A device as set forth in claim 3 in which said ear is formed with a slot extending radially from the bearing opening, and said one end of the bar brake has a radial projection slidably traversing said slot and emerging beyond said ear when the bar brake is inserted in said bearing, said slot and projection being so oriented that they are brought into registry when the bar brake is raised above a substantially horizontal position.

References Cited in the file of this patent

UNITED STATES PATENTS

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2,445,542 Strozinski July 20, 1948