

No. 752,666.

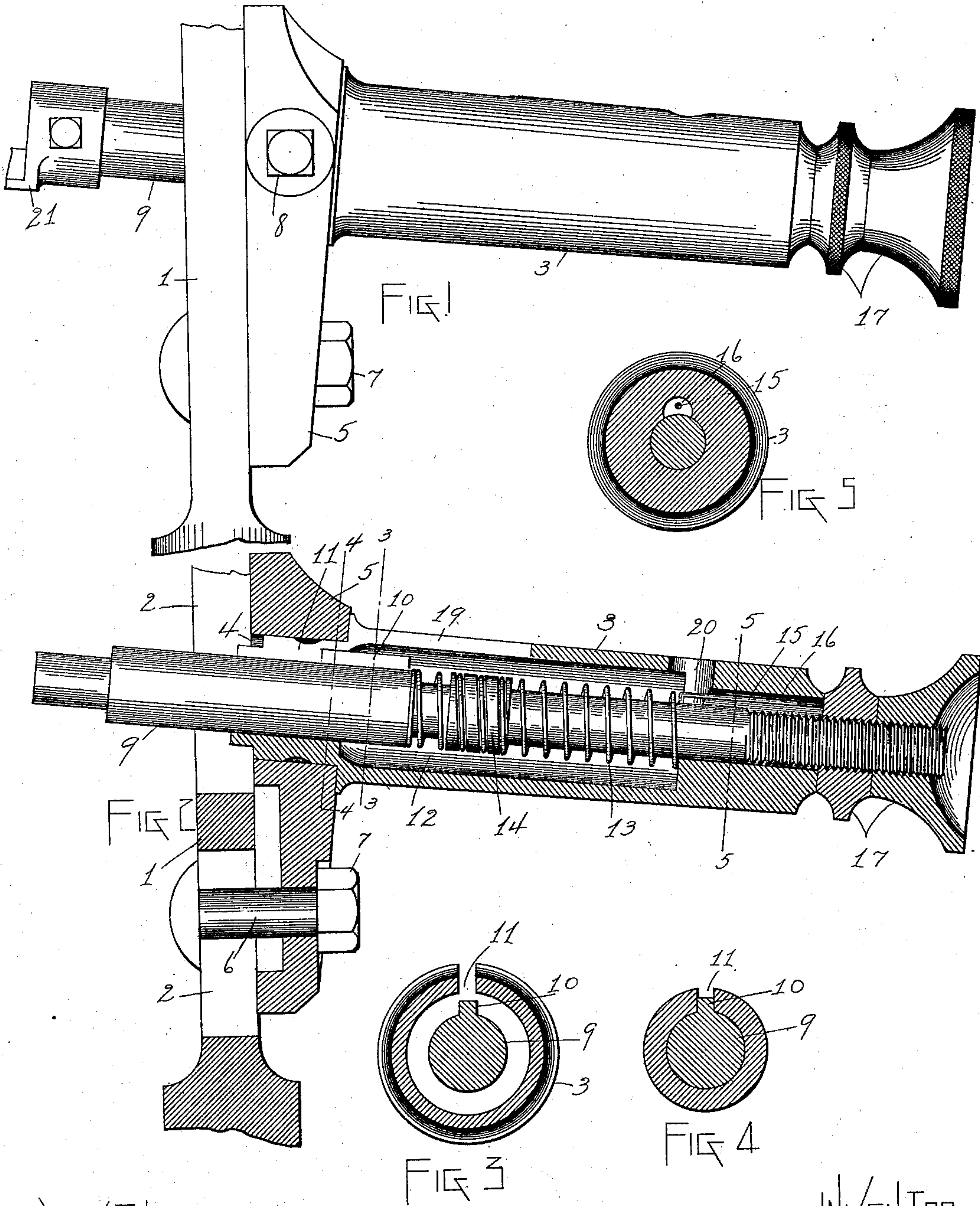
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BUR WHEEL SUPPORT FOR KNITTING MACHINES.

APPLICATION FILED OCT. 24, 1903.

NO MODEL.



WITNESSES

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BUR-WHEEL SUPPORT FOR KNITTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 752,666, dated February 23, 1904.

Application filed October 24, 1903. Serial No. 178,329. (No model.)

To all whom it may concern:

Be it known that I, ROBERT W. GORMLY, a citizen of the United States, residing at Troy, county of Rensselaer, and State of New York, have invented certain new and useful Improvements in Bur-Wheel Supports for Knitting-Machines, of which the following is a specification.

The invention relates to such improvements; and it consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings, and the reference characters marked thereon, which form a part of this specification.

Similar characters refer to similar parts in the several figures.

Figure 1 of the drawings is a view in side elevation of my improved bur-wheel-supporting mechanism as applied to the feed-stand of a circular-knitting machine. Fig. 2 is a central vertical longitudinal section of the same. Fig. 3 is a cross-section of the same, taken on the broken line 3 3 in Fig. 2. Fig. 4 is a cross-section of the same, taken on the broken line 4 4 in Fig. 2. Fig. 5 is a cross-section of the same, taken on the broken line 5 5 in Fig. 2.

The object of the invention is to cheapen the construction and facilitate the adjustment of bur-wheel supports.

Referring to the drawings, wherein the invention is shown in its preferred form, 1 represents a feed-stand or bracket of the well-known type employed in circular-knitting machines, the same being provided with a vertically-elongated slot 2. The barrel 3 is open at its inner end, which is cylindrical in form and rotatively supported in an aperture 4 in the attaching-plate 5, whereby the barrel is secured to the feed-stand by means of a bolt 6, inserted through an aperture in said attaching-plate through the slot 2 in the feed-stand and provided with a nut 7, said bolt being capable of slide movements longitudinally of said slot when the nut is loosened to provide for vertical adjustment of the barrel upon the stand. The barrel can be secured in any desired position of rotative adjustment

by means of a screw-bolt 8, inserted through the attaching-plate 5 into engagement with the cylindrical periphery of the barrel. The inner end of the barrel is provided with a suitable bearing to receive and form a slideway for the bur-wheel-supporting spindle 9, inserted therethrough, which spindle extends throughout the length of the barrel, projecting therefrom at its opposite ends. In the preferred construction (shown in Fig. 2) the spindle-bearings provided at opposite ends of the barrel are formed by the barrel-wall itself without the use of interposed bushings. Rotative movement of the spindle 9 within the barrel is prevented at certain times by means of a spline or feather 10 on said spindle adapted to fit a slideway groove or slot 11, offset from and opening into the bore of the barrel where the same forms a bearing at its inner end for the spindle. Between its ends the bore of the barrel is enlarged to form a chamber 12 of a size adapted to permit rotative movement of the feathered portion of the spindle when the same is withdrawn thereinto. The spindle is thus permitted to have its usual longitudinal reciprocating movements under the control of the spring 13, inclosed within the chamber 12, bearing at its outer end upon the barrel-wall at the outer end of the chamber and at its inner end upon an offset 14 on the spindle, which offset is provided with a spiral groove, whereby the same is adapted to receive the coils of the spring and permit the same to be screwed thereon. The outer end 15 of the spring is projected into an aperture 16 in the barrel and serves to secure the spring against rotary movement. The spring-induced movement of the spindle is limited by the stop-nuts 17 in the usual manner. The spindle can be withdrawn against the force of the spring 13 in the usual manner and can be held so withdrawn by imparting to the spindle a partial rotary movement sufficient to bring the feather 10 out of line with the slideway 11, causing said feather when the spindle is released from the control of its actuating-spring to engage the barrel-wall at the inner end of the chamber, which forms a stop therefor. The tension of the spring 13 can be varied as desired by withdrawing the spindle sufficiently to

bring the feather 10 into the chamber 12 and then rotating the spindle to cause the spring to be screwed upon or unscrewed from the offset 14 to any desired extent, the spring being prevented from rotating with the spindle by means of its offset end 15.

I have shown the barrel provided with an inspection-aperture 19 adjacent to the slideway 11 to facilitate the insertion of the feather in the slideway and with an inspection-aperture 20 adjacent to the aperture 16 to facilitate the insertion of the offset end 15 of the spring therein in assembling the parts of the device.

The bur-wheel (not shown) is mounted upon the inner end of the spindle in the usual manner by means of the bracket 21. (Shown partly broken away.)

What I claim as new, and desire to secure by Letters Patent, is—

1. In a bur-wheel support for knitting-machines, the combination with a barrel; of a bur-wheel-supporting spindle capable of reciprocating slide movements through said barrel; means whereby the spindle is at certain times held against rotary movements within the barrel; and a spindle-actuating coil-spring secured against rotary movement within the barrel and having a screw connection with said spindle whereby the tension of said spring can be varied by rotary movement of the spindle.

2. In a bur-wheel support for knitting-machines, the combination with a barrel having spindle-bearings at its opposite ends and an enlarged chamber intermediately thereof, and provided with a longitudinal slideway opening into said chamber and offset from and opening into the bearing at the inner end of the barrel; of a bur-wheel-supporting spindle extending through the barrel and capable of reciprocating slide movements in said bearings, said spindle having an offset fitting said offset slideway in the inner end of the barrel and withdrawable into said chamber; and a spindle-actuating coil-spring secured against rotary movement within the barrel and having a screw connection with said spindle, whereby the tension of said spring can be varied by rotary movement of the spindle when its offset is withdrawn into said chamber.

3. In a bur-wheel support for knitting-machines, the combination with a supporting-plate provided with a cylindrical aperture; of a barrel having a cylindrical inner end rota-

tively mounted in said aperture in the supporting-plate; said barrel being provided with spindle-bearings at its opposite ends, and intermediately thereof with a chamber; a bur-wheel-supporting spindle extending through said barrel, fitting and capable of longitudinal sliding movements in the bearings at the opposite ends of the barrel; a spindle-actuating spring located in the chamber in said barrel; a stop to limit the spring-induced action of the spindle; means whereby the spindle is held from rotative movement in the barrel; and means for locking the barrel in selected positions of rotative adjustment in the aperture in said plate.

4. In a bur-wheel support for knitting-machines and in combination, a barrel; a bur-wheel-supporting spindle capable of endwise movements through the barrel; a spindle-actuating spring interposed between an abutment on the outer end of the barrel and an abutment on said spindle and having a screw connection with one of said abutments, whereby the tension of said spring can be varied by a relative rotary movement between the spring and the abutment with which it has screw connection.

5. In a bur-wheel support for knitting-machines, the combination with a supporting-plate provided with a cylindrical aperture; of a barrel having a cylindrical inner end rotatively mounted in said aperture in the supporting-plate, said barrel being provided at its outer end with a spindle-bearing, and in an integral portion thereof at its inner end with a spindle-bearing and a longitudinal slideway offset from and opening into said bearing; a bur-wheel-supporting spindle extended through said barrel, fitting and capable of longitudinal sliding movements in the bearings at the opposite ends of the barrel; said spindle having an offset fitting said offset slideway in the inner end of the barrel whereby the spindle is held from rotative movement in the barrel, and means for locking the barrel in selected positions of rotative adjustment in the aperture in said plate.

In testimony whereof I have hereunto set my hand this 21st day of October, 1903.

ROBERT W. GORMLY.

Witnesses:

FRANK C. CURTIS,
E. M. O'REILLY.