

J. S. BERARD.
TENSION REGULATING DEVICE FOR SPINDLE BANDS.
APPLICATION FILED JUNE 12, 1907.

941,183.

Patented Nov. 23, 1909.

Fig. 1.

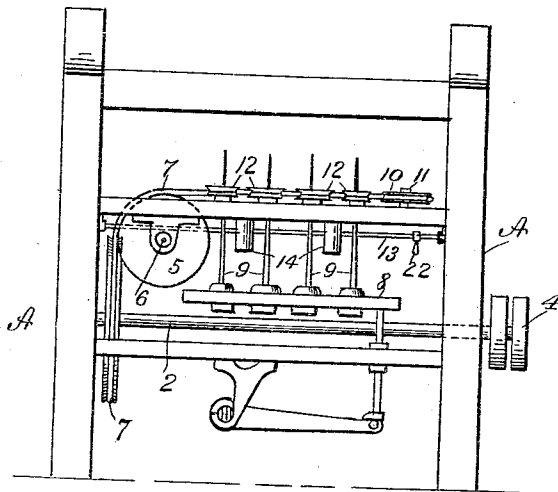


Fig. 2.

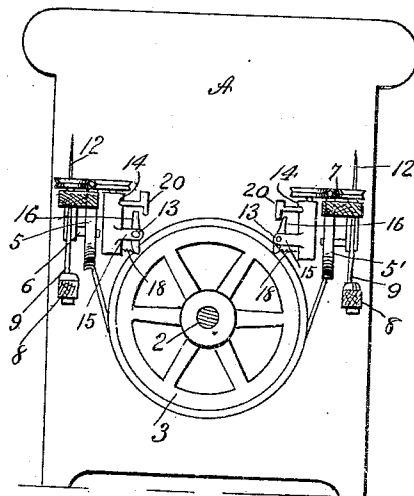


Fig. 3.

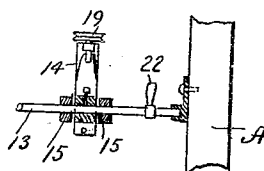


Fig. 5.

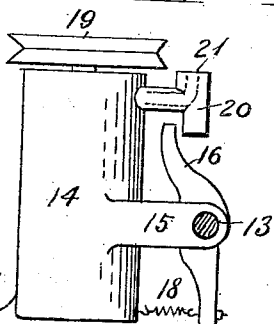
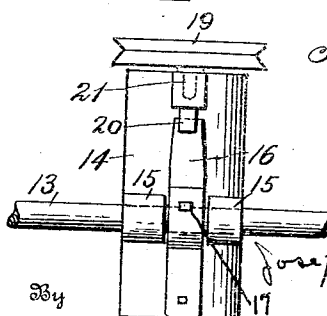


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

JOSEPH SIMEON BERARD, OF FALL RIVER, MASSACHUSETTS.

TENSION-REGULATING DEVICE FOR SPINDLE-BANDS.

941,183.

Specification of Letters Patent.

Patented Nov. 23, 1909.

Application filed June 12, 1907. Serial No. 378,562.

To all whom it may concern:

Be it known that I, JOSEPH SIMEON BERARD, a citizen of the United States of America, and a resident of Fall River, in the
5 county of Bristol and State of Massachusetts, have invented new and useful Improvements in Tension-Regulating Devices for Spindle-Bands, of which the following is a specification.

10 My invention relates to an improvement in spindle driving devices, and its object is to provide means for driving the spindles or revolving rings without the necessity of using the ordinary cylinder.

15 The invention consists of many novel features of construction and combinations of parts to be hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1
20 is a side view of a frame showing my invention applied thereto; Fig. 2 is an end view with one end of the frame removed; Fig. 3 is a detailed sectional view; Fig. 4 is an end view of the tightener; and Fig. 5
25 is a side view.

A represents a frame and 2 is a driving shaft mounted on the frame. A grooved wheel 3 is journaled on the shaft 2 and is driven by a fly wheel 4 on the shaft. A
30 shaft 6, extending transversely of the machine, is provided with grooved wheels 5 and 5' on both sides of the machine over which a rope 7 is adapted to pass which travels over the grooved wheel 3. The rope
35 7 extends to the far end of the machine, passing over grooved wheels 10 mounted on pins 11. The rope passes around the wheels 10 and returning along the other side of the machine and over the wheel 5' to the
40 grooved wheel 3. Mounted on the rail 8 are spindles 9, and mounted on the spindles are whirls or rings 12, which are adapted to be engaged by the rope 7 for rotating them. Shafts 13 are journaled in the frame and
45 mounted on the shafts are tighteners 14. The tighteners are connected to the shaft by arms 15 and fastened to the shafts 13 are levers 16 by thumb screws 17, the levers being received in the forked ends of the arms
50 15. Springs 18 connect the lower ends of the levers with the tighteners 14. Mounted on the tighteners 14 are whirls 19, which

are adapted to be held against the rope 7, causing an engagement of the whirls or rings 12 on the spindles with the rope where-
55 by the whirls or rings 12 are rotated. The springs 18 cause the whirls 19 to be held against the rope causing sufficient friction to drive the whirls 12. A lug or projection 20 is formed on the tighteners, which is
60 adapted to be engaged by the lever 16 when it is desired to release the tighteners from the rope and stop the whirls 12. An oil duct 21 is formed in the lug or projection 20 for
65 conveying oil to the different parts of the bolster (not shown) inside of the tightener. A handle 22 is connected to the shaft 13, whereby the lever 16 is caused by the rota-
70 tion of the shaft to engage the lug or projection 20 causing the tighteners to be tipped rearwardly and thereby loosening the rope and preventing the rotation of the whirls 12.

It is evident that more or less slight changes might be resorted to in the form and arrangement of the several parts de-
75 scribed without departing from the spirit and scope of my invention, and hence I do not wish to be limited to the exact construction herein set forth, but:

Having fully described my invention, what
80 I claim as new and desire to secure by Letters Patent, is:—

1. In a spindle driving device, the combination with a frame, of spindles, a driving band or rope, shafts journaled in the frame,
85 tighteners mounted on the shafts and adapted to engage the band, whereby the band is caused to engage the spindles for revolving them and means on the shafts adapted to engage the tighteners for moving them si-
90 multaneously out of contact with the driving band.

2. In a spindle driving device, the combination with a frame, of spindles, whirls
95 mounted on the spindles, a drive rope adapted to engage the whirls, shafts journaled in the frame, tighteners mounted on the shafts and adapted to engage the rope causing the spindles to be rotated, levers on the shafts
100 adapted to engage the tighteners for moving them simultaneously out of contact with the rope.

3. In a spindle driving device, the combination with a frame, of spindles, whirls

mounted on the spindles, a drive rope adapted to engage the whirls, shafts journaled in the frame, tighteners mounted on the shafts and adapted to engage the rope causing the
5 spindles to be rotated, levers mounted on the shafts, lugs on the tighteners, and means for rotating the shafts for causing the levers

to engage the lugs for moving the tighteners simultaneously out of contact with the rope.

Dated this tenth day of June, 1907.

JOSEPH SIMEON BERARD.

Witnesses:

ALFRED J. BERARD,

JULES T. PINEAU.