

(No Model.)

J. W. FOSTER.  
MACHINE FOR WINDING THREAD.

No. 527,602.

Patented Oct. 16, 1894

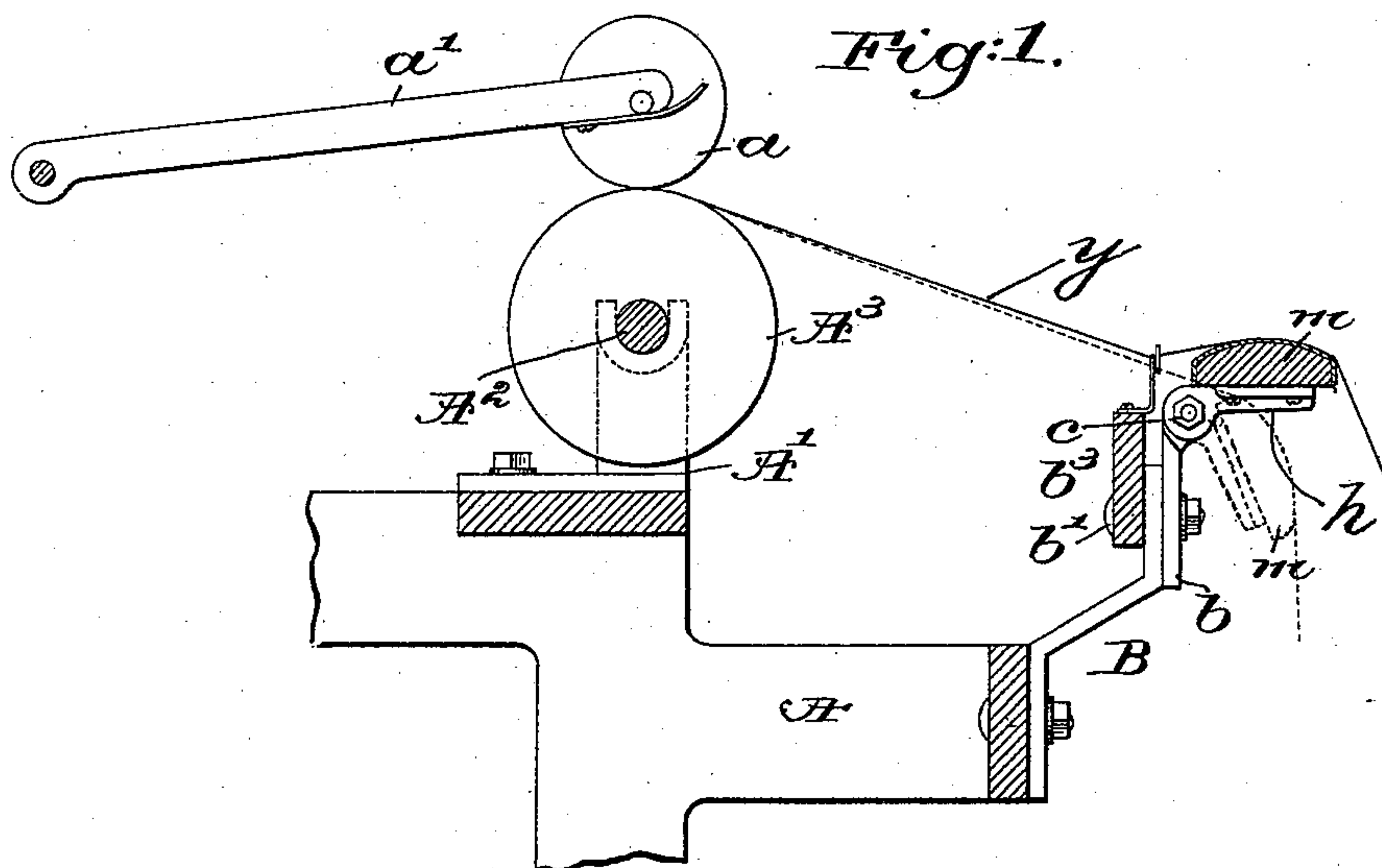
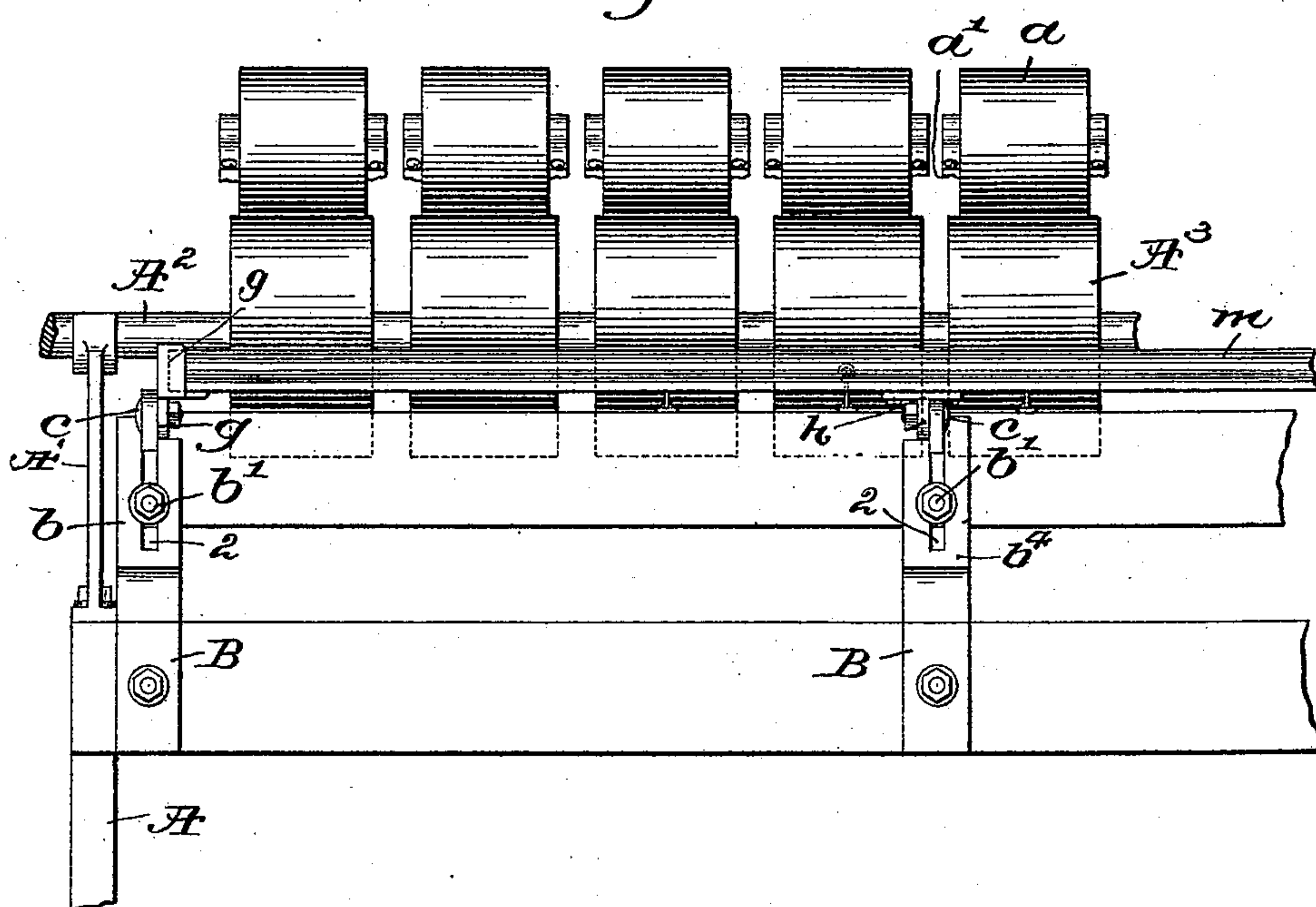


Fig: 2.



witnesses.

Fred S. Grumbaf.  
Edward F. Allen.

*Inventor.*

John W. Foster  
by Crosby & Gregory attys

# UNITED STATES PATENT OFFICE.

JOHN W. FOSTER, OF WESTFIELD, MASSACHUSETTS, ASSIGNOR TO THE  
FOSTER MACHINE COMPANY, OF SAME PLACE.

## MACHINE FOR WINDING THREAD.

SPECIFICATION forming part of Letters Patent No. 527,602, dated October 16, 1894.

Application filed December 16, 1892. Serial No. 455,332. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. FOSTER, of Westfield, county of Hampden, State of Massachusetts, have invented an Improvement in  
5 Machines for Winding Yarn or Thread, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention has for its object to provide for quickly adjusting the tension on the yarn going to the spool or other yarn-receiver being rotated by contact with a winding drum.

In accordance with this invention, the rail  
15 or bar, over which the yarn is drawn on its way to the point where it is to be wound, is so mounted as to be readily turned in the arc of a circle and thus expose more or less of the surface of the rail or bar to be acted upon by  
20 the yarns.

Figure 1, in vertical section shows a sufficient portion of a "drum winding frame" to enable my invention to be understood; and Fig. 2, a view of Fig. 1, looking from the right.

25 In the drawings, A represents part of the frame-work, it having suitable bearing stands A' for the shaft A<sup>2</sup> having the drum A<sup>3</sup> on which rest the spools, tubes, or spindles on which are to be wound in masses a, the yarn  
30 y coming from any suitable supply, said spools, tubes, or spindles being mounted in lever-like arms a', bifurcated or made yoke-shape at their front or bearing ends to receive and support said spools, tubes, or spindles,  
35 as shown.

The parts so far described are and may be all as usual in drum winding machines.

The frame A has at its front side suitable stands B on which are adjustably mounted  
40 the supports b, b<sup>4</sup> said supports being held in place by bolts b' extended through slots 2 and through a rail b<sup>3</sup> provided with a series of guides b<sup>5</sup>.

45 The supports b, b<sup>4</sup>, have pivotally mounted upon them, preferably by suitable bolts c, a series of carriers. Of these supports, the one

marked b, (it being supposed that there are two such supports for each tension-bar m,) has carriers g, which are recessed at one side to receive the ends of tension bar m, that form  
50 of carrier being considered desirable.

The tension-bar m is supported between its ends by means of one or more carriers h mounted on the supports b<sup>4</sup>, the carriers h being slightly changed in shape from the car-  
55 riers g, inasmuch as the carriers h fit the bottom of the tension-bar rather than its ends. The tension-bar m has its top surface rounded, and it will be covered preferably with some suitable friction surface.  
60

By loosening the nuts in the bolts c, the bar may be adjusted into any desired position, and be left in such position, either as shown in full lines, or as in dotted lines, it being remembered that the more nearly hori-  
65 zontal the top of the tension bar, the greater the friction and tension, and vice versa.

The tension bar will be adjusted from time to time according to the work being done and the tension required on the yarns being  
70 spooled.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

A tension device for drum winding frames, 75 the same consisting of a rail or bar having a rounded friction surface, supports, bar-carrying arms and adjusting devices to adjustably pivot or connect the said bar-carrying arms with the supports b, whereby, by adjust-  
80 ing the arms, the surface of the bar may be put and held in position to enable the bar to exert more or less friction and tension on the threads being wound, substantially as described.  
85

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN W. FOSTER.

Witnesses:

G. W. GREGORY,  
M. J. SHERIDAN.