A. H. CARROLL.

Bobbin-Supporter for Spooling-Machines.

No. 206,085. Patented July 16, 1878.

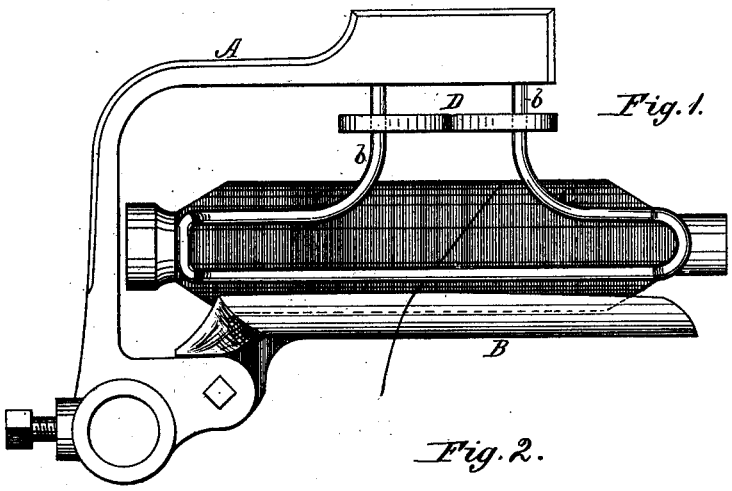


Fig. 1.

Fig. 2.

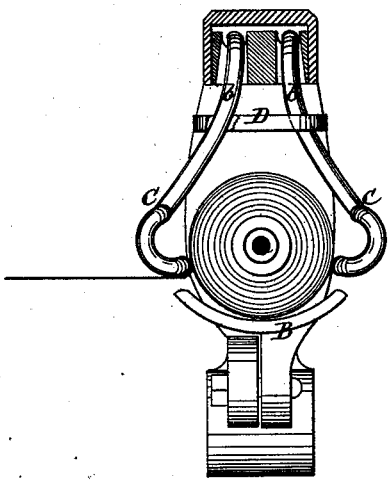
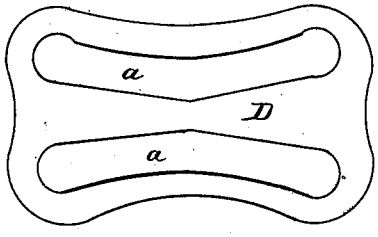


Fig. 3.



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ALBERT H. CARROLL, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN BOBBIN-SUPPORTERS FOR SPOOLING-MACHINES.

Specification forming part of Letters Patent No. **206,085**, dated July 16, 1878; application filed June 8, 1878.

To all whom it may concern:

Be it known that I, ALBERT H. CARROLL, of Baltimore city, State of Maryland, have invented a new and useful Improvement in Bobbin-Supporters and Tension Devices for Yarn-Spooling Machines; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention is an improvement upon the bobbin holder or supporter forming the subject of Patent No. 159,053.

In that device two loosely-suspended lips or wire arms embrace the bobbin (which rests horizontally in a concave bed) and also bear against its opposite sides, and adjust themselves to it as it diminishes in size by the unwinding of the yarn. The function of said arms is to hold the bobbin steady by preventing jumping or lateral movement of the same, and by producing the requisite friction secure a more uniform tension on the yarn; but the tension and draft are not regular and uniform to the required degree, owing chiefly to the fact that the pivoted pendent arms aforesaid are independent in their movement and action. In fact, their operation is often very irregular, and in consequence the yarn is often caused to break and the end is lost on the spool at the expense of loss of time and labor.

It has been ineffectually sought to remedy the difficulty by increasing the size and weight of the bobbin-holding wires or arms, also by the use of springs arranged to press on the same; but the objection of independent action of the arms still remained.

My invention consists in connecting the arms or wires, and also increasing their pressure on the bobbin, by means of a self-adjusting weight, which is applied as shown in accompanying drawing, in which—

Figure 1 is a side elevation of a bobbin-holder provided with my improvement. Fig. 2 is an end view with part of the frame of the holder in section. Fig. 3 is a plan view of the slotted weight.

A indicates the goose-neck frame of the device; B, the horizontal concave support for the bobbin, and C the wires or arms which are loosely attached to and pendent from part A.

My improvement consists in applying the weight D to the arms C. Said weight is a metal plate having two lengthwise and inwardly-curved slots, *a a*. The branches *b b* of one of the wire arms C pass through one slot *a*, and the branches of the other arm through the other slot, so that the weight D is supported upon the arms and at the same time left free to adjust itself on the vertical part *b b* thereof. The weight connects the arms C, so that the lateral movement of one causes a like movement of the other and increases the pressure exerted on the sides of the bobbin. It is obvious that the gravitating tendency of the device D will cause it to slide down on the arms C as fast as the size of the bobbin is diminished by the unwinding of the yarn.

The mechanical result is that the action of the arms C is made much more regular and uniform than heretofore, and the tension on the yarn corresponds, so that two important functional results are obtained—first, the yarn not being so liable to break, there is little loss by reason of lost ends and waste of yarn; second, the expense of spooling is less, since the yarn is wound more tightly and uniformly on the spools, and hence the latter will hold more yarn and require less doffing on spooler and machines following it in use.

What I claim is—

In combination with pivoted arms or wires for holding a bobbin in the manner described during the spooling operation, a weight attached to said arms or wires to connect them and adjust itself downward thereon, as described.

ALBERT H. CARROLL.

Witnesses:
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