No. 649,380. Patented May 8, 1900.

B. D. WIGHT.

FABRIC WINDING MACHINE.

(Application filed Mar. 31, 1899.)

(No Model.)

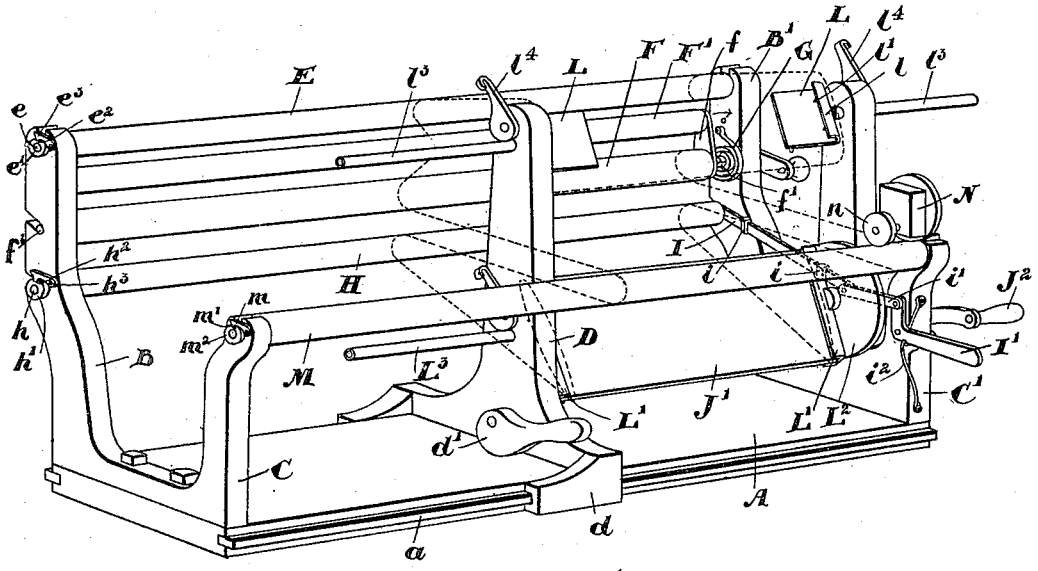

Fig. 1.

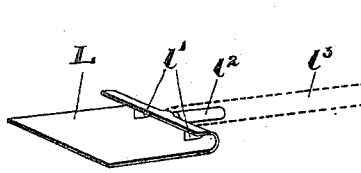

Fig. 5.

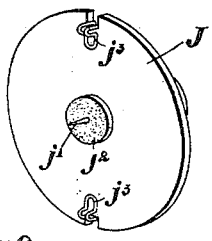

Fig. 6.

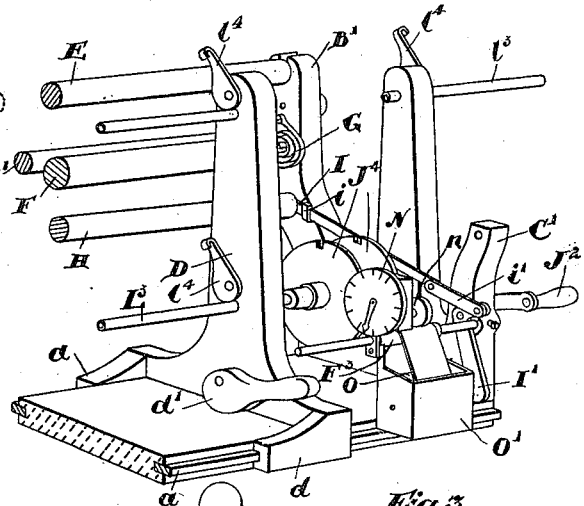

Fig. 3.

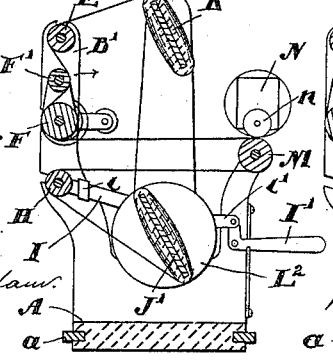

Fig. 2.

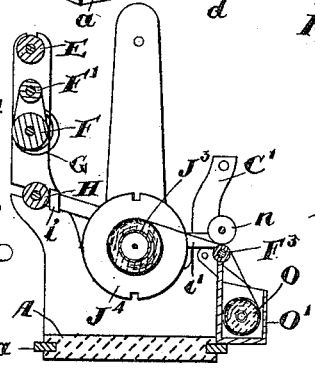

Fig. 4.

Witnesses.

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UNITED STATES PATENT OFFICE.

BRINTON DOUGALL WIGHT, OF NAPINKA, CANADA.

FABRIC-WINDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 649,380, dated May 8, 1900.

Application filed March 31, 1899. Serial No. 711,262. (No model.)

To all whom it may concern:

Be it known that I, BRINTON DOUGALL WIGHT, clerk, of the village of Napinka, in the county of Winchester, in the Province of Manitoba, Canada, have invented certain new and useful Improvements in Fabric-Winding Machines, of which the following is a specification.

My invention relates to improvements in fabric-winding machines; and the object of the invention is to devise a machine which will wind evenly and smoothly such fabrics as cloth of various kinds, ribbons, braids, &c., of any marketable width and to any desired tension; and it comprises the structure to be hereinafter described, and particularly pointed out in the claims.

Figure 1 is a perspective view of my fabric-winding machine. Fig. 2 is a cross-section through Fig. 1. Fig. 3 is a view of an alternative form of my invention designed for the winding of the ribbons and applied to the same standards. Fig. 4 is a cross-section through Fig. 3. Fig. 5 is a detail of the cloth-board holder. Fig. 6 is a detail of the ribbon-bolt holder.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is the base of the machine.

B B′ are the rear standards, and C and C′ the front standards.

D is the adjustable central standard, which is provided with the side-grooved guiding-blocks d, which slide upon the guideways a at the sides of the base.

E is the top roller, which is provided with a suitable spindle e, having an end collar e' at one end. The collar e' has a notch e^2, which is engaged by the dog e^3. The dog e^3 may be removed, so as to enable the roller to turn in its bearings. When engaged by the dog, of course such roller remains stationary.

F and F′ are the tension-rollers. The roller F′ is journaled at the ends in the arms f, attached to the spindle f' of the roller.

G is a helical spring attached at one end of the frame and secured at the other end to the spindle of the roller. The normal tendency of the spring is to force the roller F′ in the direction indicated by arrow.

H is the lower roller, provided with a spindle h, having an end collar h'. The collar h' is provided with a notch h^2, which is engaged by a dog h^3. The opposite end of the spindle of the roller H is journaled in the bar I, which is supported in suitable guideways i on the standard and is connected by a link i' to a crank-handle I′, which is held in position by a spring-catch i^2. By manipulating the handle I′ the roller H may be adjusted to or from the tension-rollers F and F′, so as to cause the web passing off the cloth-board hereinbefore referred to to move laterally toward one side or the other, and thereby keep it straight, this depending of course upon the angle of set of the roller H. The lever T′ is held in position by the hand of the operator and is intended to be moved up and down as the cloth is wound.

J is the cloth-board upon which the web of cloth K is placed. The cloth-board is supported at the ends in the holding-plates L, each of which is provided at the end with a curved overhanging lip l, which passes over the outside edge of the board. Inside the lip is situated the spicular projections l', as indicated. A stem l^2 is also provided for each plate L centrally on the end and projecting the opposite direction to that of the plate. The stem l^2 fits within the hollow spindle l^3. There are two sets of plates and hollow spindles provided at each end of the cloth-board, and such cloth-board is held in position by the spicular projections indenting into the end and the lips overhanging the ends of the cloth-board. The two hollow spindles l^3 are supported in the standards D and C′ and are adjustable longitudinally therein, their longitudinal displacement being prevented by the cam-fingers l^4 l^4. When it is wished to take a smaller cloth-board in, the cams l^4 may be thrown onto their shorter diameters, thereby permitting the spindles l^3 to be adjusted, so as to bring the holding-plates L closely together. To accommodate longer boards, of course the standard D may be adjusted on its guideways, such standard being, however, secured in position by the cam-handle d', which is brought so that its longer diameter presses against the base. The cloth-board J′, upon which the cloth is rewound, is supported in similar end plates L′ and is also provided, preferably, with one end disk L^2 in order to

guide the cloth onto the board. The hollow spindles L^3 are also provided, into which the stem l^2 extends.

M is the front-guiding roller, which is supported in suitable bearings on the standards C and C′ and may be held stationary or allowed to rotate, as desired. To hold such roller stationary, a dog m is provided, which is designed to engage with a notch m' in an end collar m^2 on the spindle of the roller.

The course of the cloth from the board J, containing the wound web, to the board J′, upon which the web is rewound, is indicated in Fig. 2, being as follows: from the cloth-board J over the roller E, around the tension-rollers F′ and F, along horizontally over the roller M and around same, and thence over the roller H to the cloth-board J′. The normal tendency of the tension-rollers F and F′ is to exert a pressure upon the cloth in the direction indicated by arrow, thereby serving to keep such cloth taut, so that it will wind evenly upon the cloth-board J′. The roller H may be adjusted at one end, so that in case the cloth is running unevenly as to its edge upon the cloth-board J′ the incline of the roller may be changed from time to time by the handle I′, so as to direct the cloth evenly upon the board J′, as hereinbefore explained.

A measuring device N, provided with a contacting roller n, exerting a pressure upon the roller M, is provided to measure the cloth as it passes from one cloth-board to the other. As the internal construction of the measuring device forms no feature of my invention, I do not describe it.

In order to wind the cloth upon the board J′, of course the end spindle to which the board is connected is provided with a crank-handle J^2.

In order to wind ribbons and laces, I preferably provide a round core J^3 upon the lower spindles l^3, such round core being provided with end disks J^4. I also provide a suitably-arranged roller F^3. The bolt of ribbon O is placed on a suitable spindle in the receptacle O′ and rewound upon the core J^3 by turning the crank-handle J^2. In order to insure the core being held stationary, I provide in the center of the disks J^4 the spicular projection j', surrounded by a circular disk of sponge-rubber j^2.

In order to wind lace, I provide two pairs of spring-clips j^3 j^3, diametrically-opposite each other, in which the end of the board is placed. The spicular projections j', together with the spring-clips j^3, correspond substantially to the form of the spicular projections l' and lips l, respectively, described as the means for holding the cloth-board upon the plate L.

It will be readily seen from this description that by unloosening the cams l^4 and moving the longitudinal spindles l^3 outwardly the cloth may be readily taken out of the machine.

What I claim as my invention is—

1. The combination with the holding-roller for the wound fabric, of the winding-spindles provided with end plates having suitable holding spicular projections and gripping-lips and the intermediate guiding-roller journaled stationary at one end and having the other end adjustably journaled and means for varying the adjustment as and for the purpose specified.

2. The combination with the holding-roller for the wound fabric, of the winding-spindles provided with end plates having suitable holding spicular projections and gripping-lips, the intermediate guiding-roller journaled stationary at one end and having the other end adjustably journaled, the bar supported upon suitable guideways having one end forming a journal for the guiding-roller, the operating crank-handle the link connecting it to the bar and the spring for holding the crank-handle in position as and for the purpose specified.

3. The combination with the holding-roller for the wound fabric, of the winding-spindles provided with end plates having suitable holding spicular projections and gripping-lips, the top guiding-roller, the tension-rollers between which the cloth passes, the forward guiding-roller, the rear guiding-roller adjustable at one end and the cloth-board upon which the fabric is rewound as and for the purpose specified.

BRINTON DOUGALL WIGHT.

Witnesses:
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W. ARMS.