F. W. HUPPELSBERG.

Machine for Covering Cord.

No. 200,302. Patented Feb. 12, 1878.

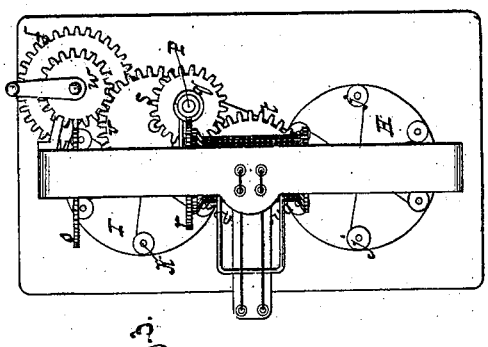

Fig. 3.

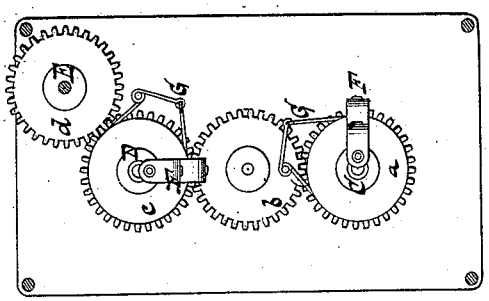

Fig. 4.

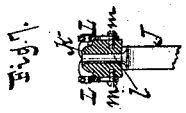

Fig. 7.

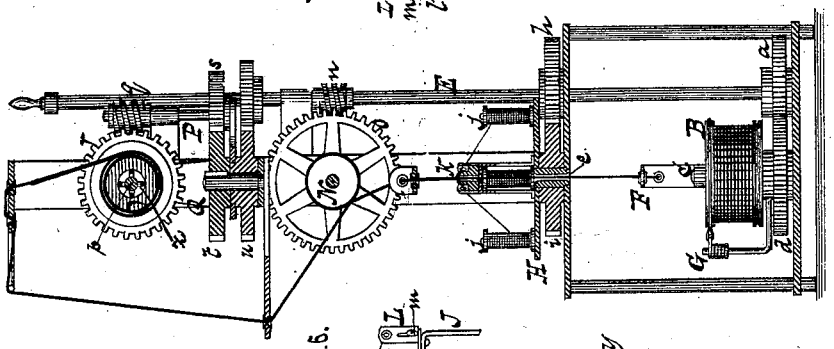

Fig. 2.

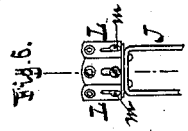

Fig. 6.

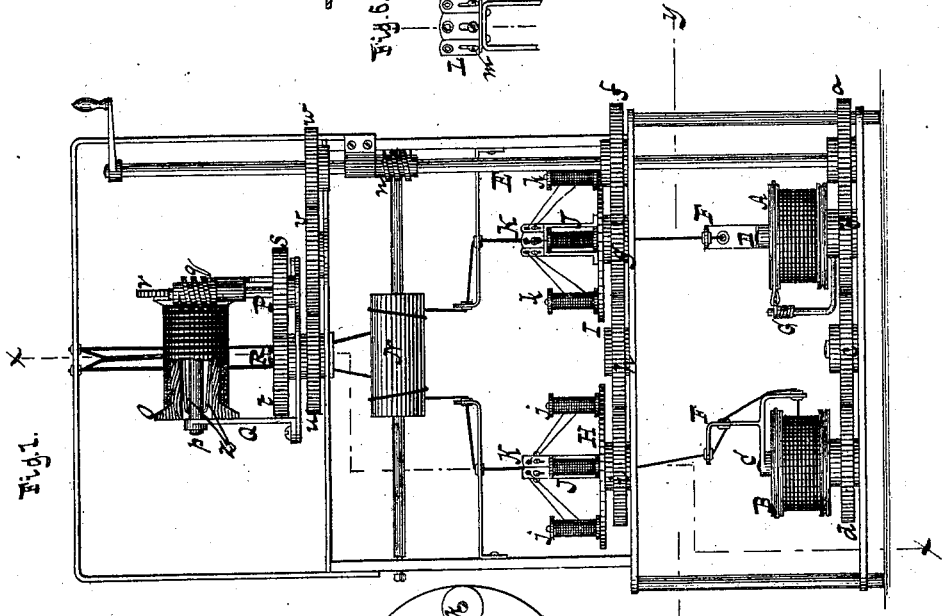

Fig. 1.

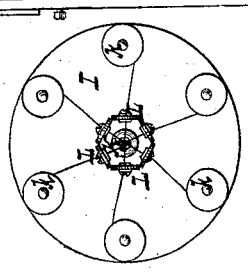

Fig. 5.

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by
Van Santvoord & Hauff
his attorneys

UNITED STATES PATENT OFFICE.

FRIEDRICH W. HUPPELSBERG, OF BROOKLYN, NEW YORK, ASSIGNOR TO STEINBORN & HUPPELSBERG, OF SAME PLACE.

IMPROVEMENT IN MACHINES FOR COVERING CORD.

Specification forming part of Letters Patent No. **200,302**, dated February 12, 1878; application filed January 7, 1878.

To all whom it may concern:

Be it known that I, FRIEDRICH W. HUPPELSBERG, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Machines for Covering Cord, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a front elevation of a machine embracing my invention. Fig. 2 is a vertical cross-section thereof in the line *x x*, Fig. 1. Fig. 3 is a plan or top view of the same. Fig. 4 is a horizontal section thereof in the line *y y*, Fig. 1. Fig. 5 is a top view of one of the covering-disks, on a larger scale than in the previous figures. Fig. 6 is a side view of the laying-head. Fig. 7 is a vertical section thereof.

Similar letters indicate corresponding parts.

This invention relates to that class of machines designed for covering twisted strands of threads for the manufacture of cords, and which, for this purpose, employ a series of spools for carrying the thread to be twisted; an upper series of spools, which carry the covering-thread, and wind it over the twisted threads from the lower spools; and an upper winding-spool, mounted in a revolving frame, for winding up the cord as it is covered.

My invention consists in the combination, with the two spools which carry the strands to be covered, two rotary disks for supporting the spools which carry the covering-threads, and with the upper winding mechanism, of a revolving friction-roller, around which the covered cord passes prior to being acted on by the winding mechanism, as will be more fully hereinafter set forth.

The invention further consists in a peculiar construction of eyes, through which the strands pass onto the cord to be covered, as will be hereinafter set forth, and pointed out in the claims.

In the drawing, the letters A B designate the two spools carrying the cotton or other strands to be covered on my machine. These spools are mounted on spindles C D, which receive a revolving motion from a vertical shaft, E, through cog-wheels *a b c d*, the spindles C D carrying also guides F, through which said strands pass as they are unwound from the spools. With each of the spools A B is combined a brake, G, to prevent the same from moving at a greater rate than the spindles.

The letters H I designate two covering-disks, which receive the strands from the spools A B. These disks are mounted on tubular spindles *e*, (see Fig. 2,) through which the strands pass, and they receive a rotary motion from the vertical shaft E, through gear-wheels *f g h i*. From the upper surface of said disks H I project a series of pins, *j k*, for supporting the spools containing silk or other covering-threads, and to the middle portion of the disks is secured a frame, J, to which, in turn, is secured a laying-head, K, (best seen in Fig. 7.) This head K has a central eye, *l*, and carries a series of guides, L, which have suitable eyes for the passage of the covering-threads, and, being slotted, are secured to the head K by set-screws *m* passing through their slots, so that they are adjustable.

The cores or uncovered strands pass upward through the eye *l* in the head K, while the covering-threads pass from their spools through the guides L, and are twisted around said strands at a point immediately above the head. By making the guides L adjustable I am enabled to apply the covering-threads to the strands with uniformity, or, in other words, I thereby obviate the liability of their being wound on top of each other.

The covered strands are conducted from the head K over a friction-roller, N, which receives a revolving motion from the vertical shaft E by means of a worm and worm-wheel, *n o*, and thence are wound on a spool, O. I mount this spool on a shaft, *p*, to which a revolving motion is imparted by means of a worm, *q*, and worm-wheel *r*, said worm being secured to a spindle, P, which is mounted in a revolving frame, Q, and to which is secured a cog-wheel, *s*, meshing with a stationary cog-wheel, *t*. To the frame Q is secured a cog-wheel, *u*, while both the frame and this wheel are mounted on a fixed spindle, R, to which the stationary wheel *t* is secured. The cog-wheel *u* of the revolving frame meshes with a wheel,

v, which, in turn, meshes with a wheel, *w*, secured to the vertical shaft E. Hence, when motion is given to the shaft E, the frame Q, and with it the spool, is revolved, while at the same time said spool is slowly revolved on its own axis. The two covered strands which are conducted to the spool O, as stated, are thus twisted together to form a cord and wound on said spool at one and the same time.

Between the spool O and its shaft *p* I interpose springs *z*, Fig. 1, so that the spool is susceptible of yielding to any strain to which the strands wound thereon may be subjected.

It may be remarked that a greater number than two of the covering-disks and their concomitant parts can be used without departure from my invention.

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

1. The combination, with the two spools for carrying the strands to be covered, the two rotary disks adapted to support a series of spools containing the covering-threads, and the upper winding mechanism, of the friction-roller N and mechanism for revolving the same, around which roller the covered cord passes prior to being acted on by the winding mechanism, substantially as and for the purpose described.

2. The combination, with the disks adapted to carry the spools containing the covering-strands, of the central laying-head K and its series of guides L, having eyes, said guides being adjustably connected with the laying-head, substantially as and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

F. W. HUPPELSBERG. [L. S.]

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.