

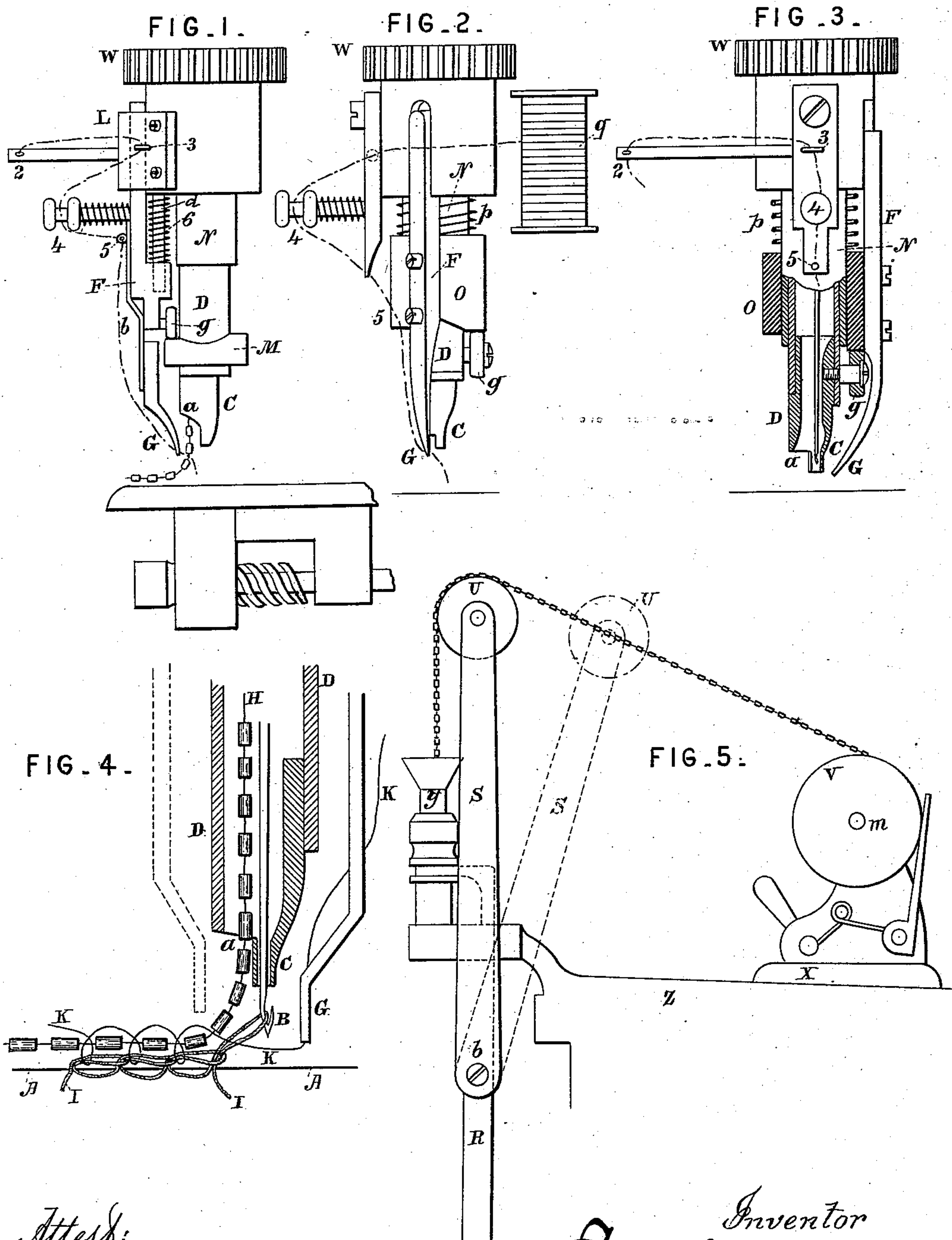
(No Model.)

E. CORNELY.

MACHINE FOR FIXING CORDS TO TEXTILE FABRICS.

No. 376,860.

Patented Jan. 24, 1888.



Attest:  
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# UNITED STATES PATENT OFFICE.

EMIL CORNELY, OF WASHINGTON, DISTRICT OF COLUMBIA.

## MACHINE FOR FIXING CORDS TO TEXTILE FABRICS.

SPECIFICATION forming part of Letters Patent No. 376,860, dated January 24, 1888.

Application filed November 11, 1886. Serial No. 218,556. (No model.)

*To all whom it may concern:*

Be it known that I, EMIL CORNELY, of Washington city, in the District of Columbia, and a resident of Paris, in the Republic of France, have invented a new and useful Improvement in Machines for Fixing Cords or Similar Articles to Textile Fabrics, which is fully set forth in the following specification.

In Letters Patent No. 311,644, of February 3, 1885, the method of fixing cords or similar articles to textile fabrics has been fully described, which consists in winding a thread around the cord and around the stitch of the seam by means of a revolving thread-carrier.

The object of the present invention is to impart to said revolving thread-carrier an ascending motion while it passes over the cord and a descending motion while it passes its thread under the point of the needle-hook.

To understand fully this invention it must be remarked that the beauty of the work depends to a great extent upon the tightness of the seam to which the cord is secured, and when said seam is made by means of a hook-needle said tightness is obtained by adjusting the needle in a very close position to the material; but as the revolving thread-carrier must lay its thread under the point of the needle its position must be a very low one for this operation, and when again it passes over the cord of a certain thickness its position must be a higher one at that moment. It is therefore necessary that the revolving thread-carrier should have an ascending and a descending motion during its revolution.

Figures 1, 2, and 3 represent the mechanism for producing said motion. Fig. 4 represents the mechanism for producing the stitches, the same as represented in Letters Patent No. 311,644 and with the same letters of reference. Fig. 5 represents the passage of the cord or of a string of beads from the spool to the needle-bar.

In Fig. 4, A represents the cloth; B, the needle-hook; C, its nipple; D, the nipple-tube; G, the revolving thread-carrier; H, the cord, which is represented as a bead-string upon which the beads are fixed in spaces; I, the chain-stitch; K, the thread of the revolving thread-carrier.

At Fig. 1 the revolving thread-carrier G is

secured to its carrier F by means of a spring, b, so that the thread-carrier during its rotation can be pressed lightly against the nipple C and its cording-guide a. The bearer F is not secured to the wheel W, but can freely slide within the guide L, which is secured to wheel W. The wheel W is turned by means of the mechanisms described in Letters Patent No. 262,742, of August 15, 1882. The bearer F is also guided in its vertical movement by means of the guide-rod d. A friction-roller, g, is secured to the bearer F and bears against a cam-disk, M, which is secured upon the nipple-tube D. By means of the vertical up and downward motion of the nipple-tube D and the peculiar shape of cam M, the bearer F, and consequently its thread-carrier G, while revolving with the wheel W, are alternately raised and lowered at such moments of their revolution that they rise while passing over the cord, and that the spring 6 on rod d will press them downward when the thread-carrier lays its thread under the point of the needle, as represented in Fig. 4.

Figs. 2 and 3 represent another arrangement for the same purpose. The friction-roller g is secured to the nipple-tube D. A cylindrical cam, O, is adjusted upon the tube N, and is pressed downward against the roller g by the pressure of spring p. The thread-carrier G and its holder F are secured to the cylinder O, and the holder F extends into a recess in wheel W, to participate in the rotation of the latter. The up-and-down motion of the nipple-tube D and the peculiar shape of the cam on cylinder O cause the latter to rise and fall at the proper moment, as described above. It is evident that in this arrangement, also, the cam may be secured to the nipple-tube D, as represented in Fig. 1, and the friction-roller to the cylinder O, to produce the same result. The thread is passed from the spool 9 through thread-carriers 2 and 3 into the take-up 4, and thence through the guide 5 into the eye of the thread-carrier G.

In Fig. 5 I have represented an arrangement for guiding the bead-string to the hollow needle-bar y, through which it passes downward through the central tube of the machine. V represents the spool on which the stringed beads are wound, and which turns on pin m.



The string passes over the guiding-roller U down into the hollow needle-bar *y*. The pin of the guiding-roller U is secured to the lever S, which is pivoted at *b* to the head-plate R.

5 When the needle-bar *y* is to be taken out of the machine, the lever S is turned aside, as represented in dotted lines, Fig. 5, so as not to stand in the way of the needle bar. Z represents the head of the machine, to which the  
10 spool-holder *x* is secured.

For the sake of greater clearness I would observe that the bead-strings referred to consist of beads strung upon a thread and spaced or held the proper distance apart by means of  
15 a second thread. Such bead-strings have long been manufactured by means of an apparatus consisting of a spacer, by which the beads are automatically spaced or set the proper distance apart, a tube through which the string passes,  
20 and one or more revolving thread-carriers for winding the holding-thread.

It will be evident that the revolving thread-carrier having a rising-and-falling motion is applicable also to machines winding a thread  
25 around the chain-stitch, as described in Letters Patent No. 222,445, of June 8, 1880, and No. 262,742, of August 15, 1882. When a thick thread is employed on the revolving thread-carrier, the cording-seam which is ob-  
30 tained will be so thick that the revolving thread-carrier must rise to pass over it, and it must again descend to lay the thread under the needle.

Having now fully described my said invention, what I claim is—  
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1. In a sewing or embroidering machine, the combination, with the stitch-forming mechanism, of the revolving thread-carrier and means for imparting thereto a rising-and-falling motion in each revolution, substantially as  
40 described.

2. The combination, with the stitch-forming mechanism and the mechanism for laying a cord or like article on the fabric, of a thread-carrier for binding said cord to said seam by  
45 means of a second thread, and means, as specified, for lifting said carrier when passing over the cord and depressing it when laying its thread under the point of the needle, substantially as described.  
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3. The combination, with sewing mechanism and cord-delivering mechanism, of the thread-carrier, means for rotating the same, a cam, and an anti-friction roller for raising and lowering said carrier at proper points in its revolution, substantially as described.  
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4. The combination, with the removable hollow needle-bar, of a guide-roller above the same and a pivoted support for said roller, whereby it may be moved to one side, substantially as described.  
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In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

EMIL CORNELLY.

Witnesses:

ROBT. M. HOOPER,  
DAVID T. S. FULLER.