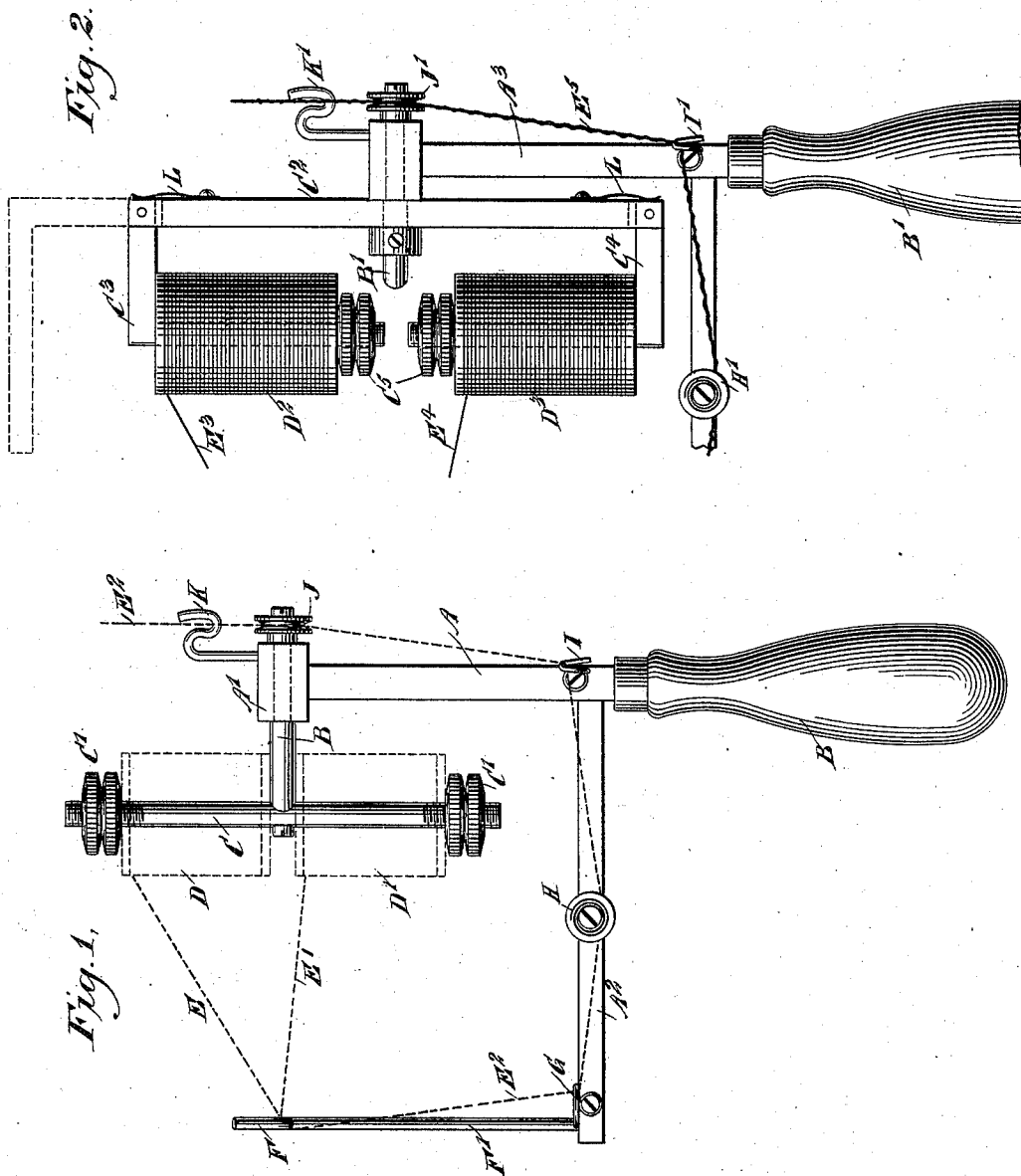


(No Model.)

E. C. GERSTENBERGER,
BOBBIN THREAD TWISTER.

No. 576,444.

Patented Feb. 2, 1897.



WITNESSES:

Edward Thorpe
Rev. J. H. Foster

INVENTOR

E. C. Gerstenberger

BY

Mumford
ATTORNEYS.

UNITED STATES PATENT OFFICE.

EDWARD C. GERSTENBERGER, OF BROOKLYN, NEW YORK.

BOBBIN THREAD-TWISTER.

SPECIFICATION forming part of Letters Patent No. 576,444, dated February 2, 1897.

Application filed September 15, 1896. Serial No. 605,896. (No model.)

To all whom it may concern:

Be it known that I, EDWARD C. GERSTENBERGER, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Bobbin Thread-Twister, of which the following is a full, clear, and exact description.

The invention relates to sewing-machine accessories; and its object is to provide a new and improved twister for rapidly and conveniently twisting threads while filling a bobbin for a sewing-machine with the twisted thread.

The invention consists principally of an arm mounted to revolve and adapted to carry the spools, a fixed eye for gathering the threads from the said spools, and a driving mechanism for the said arm and engaged and driven by the twisted thread wound up by the bobbin.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the figures.

Figure 1 is a side elevation of the improvement, and Fig. 2 is a similar view of a modified form of the same.

The improved bobbin thread-twister illustrated in Fig. 1 is provided with a frame A, having a handle B, adapted to be engaged by the operator to conveniently hold the twister in position while using it for twisting the thread and filling the bobbin for the sewing-machine shuttle.

On the frame A is arranged a bearing A' for a shaft B, on one end of which is removably secured an arm C, extending in opposite directions from the shaft B and adapted to carry the spools D D', filled with the threads E E', respectively, to be twisted into a twisted thread E². The spools D D' are prevented from sliding off the arm C by suitable fastening devices, preferably in the form of nuts C', screwing on the outer threaded ends of the arms C, as shown in said Fig. 1. The threads E E', unwinding from the spools D D', pass through an eye F, arranged a short distance from the spools in alinement with the shaft

B, so that the eye F gathers the two threads E E', and consequently the threads are twisted when the shaft B and the arm C is revolved. The twisted thread E², after leaving the eye F, passes through an eye G, held on the outer end of an arm A², forming part of the frame A, said arm also supporting the rod F', carrying the eye F.

The twisted thread E², after leaving the eye G, passes through a suitable tension device H, and then through an eye I, held on the frame A next to the handle B, and from this eye the thread E² passes once or several times around a pulley J, secured on the outer end of the shaft B. The thread from the pulley J passes through an eye K and then to the bobbin for the sewing-machine shuttle, said bobbin being rotated in the usual manner from the sewing-machine when the bobbin is to be filled with thread, as is well known.

The operation is as follows: The twisted thread E² as it winds up on the revolving bobbin pulls the thread through the eye K, and the thread, by being wound around the pulley J, causes the latter to rotate, so that a rotary motion is given to the shaft B, and as the latter carries the arm C, supporting the spools D D', the latter are revolved and the threads E E' while drawn off from the spools are twisted and pass in this twisted condition through the eyes F G, tension device H, and eye I, around the pulley J and eye K, to the bobbin, as above explained. Thus it will be seen that the twisted thread imparts a rotary motion to the arms carrying the spools having the threads to be twisted and forming the said twisted thread. By the arrangement described the operator is enabled to rapidly and conveniently twist a number of threads to form a strong twisted thread for filling the bobbin of the sewing-machine shuttle.

As illustrated in Fig. 2, the shaft B', journaled in the frame A³, carries an arm C², in the outer ends of which are pivoted the L-shaped arms C³ C⁴, pressed on at their fulcrum ends by springs L, secured to the arms C². The springs L serve to hold the arms C³ C⁴ with their outer members in alinement with each other, as plainly indicated in Fig. 2, the said members carrying the spools D² D³, having the threads E³ E⁴ to be twisted when passing

through an eye F, (not shown,) as above described.

The inner ends of the members of the arms C³ C⁴ carry suitable fastening devices for preventing the spools from sliding off the said members. This arrangement is especially serviceable for larger spools D² D³.

In order to place the spools in position on the arms C³ C⁴, the latter are swung outward, as indicated in dotted lines in Fig. 2, to permit of conveniently removing the empty spools from the outer members or to place filled spools upon the same. The arms are then swung back to their former position and the threads from the spools are run through the gathering-eye F. The operation is the same as described and as above referred to relatively to Fig. 1—that is, the twisted thread, after leaving the eye F, passes through an eye G, (not shown,) then through the tension device H', the eye I', and around the pulley J' on the shaft G', to then pass through the eye K', to be wound up on the revoluble bobbin for the sewing-machine shuttle.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A thread-twister comprising a twisting device and means for actuating the said device through the medium of the twisted thread, substantially as shown and described.

2. A thread-twister provided with a twisting device actuated by the twisted thread and comprising a spool-carrier and a twisting-eye, substantially as described.

3. A bobbin thread-twister, comprising an arm mounted to revolve and adapted to carry the spools, a fixed eye for gathering the threads from the spools, and a driving device for the said arm and actuated by the twisted thread, substantially as shown and described.

4. A bobbin thread-twister, comprising an arm mounted to revolve and adapted to carry the spools, a fixed eye for gathering the threads from the said spools, and a pulley secured on the shaft for the said arm and engaged by the twisted thread formed by the threads from the said spools, substantially as shown and described.

5. A bobbin thread-twister, comprising an arm mounted to revolve and adapted to carry the spools, a fixed eye for gathering the threads from the said spools, a pulley secured on the shaft for the said arm and engaged by the twisted thread formed by the threads from the said spools, and a guiding device for the said twisted thread from the eye to the pulley, substantially as shown and described.

6. A bobbin thread-twister, comprising an arm mounted to revolve and adapted to carry the spools, a fixed eye for gathering the threads from the said spools, a pulley secured on the shaft for the said arm and engaged by the twisted thread formed by the threads from the said spools, a guiding device for the said twisted thread from the eye to the pulley, and a friction device for the said twisted thread between the eye and the pulley, substantially as shown and described.

7. A bobbin thread-twister, comprising a frame, an arm journaled in the said frame and carrying a pulley engaged by the twisted thread, an arm removably secured to the said shaft, and L-shaped arms pivoted on the free ends of the said arm and adapted to carry the spools, substantially as shown and described.

EDWARD C. GERSTENBERGER.

Witnesses:

THEO. G. HOSTER,
JNO. M. RITTER.