

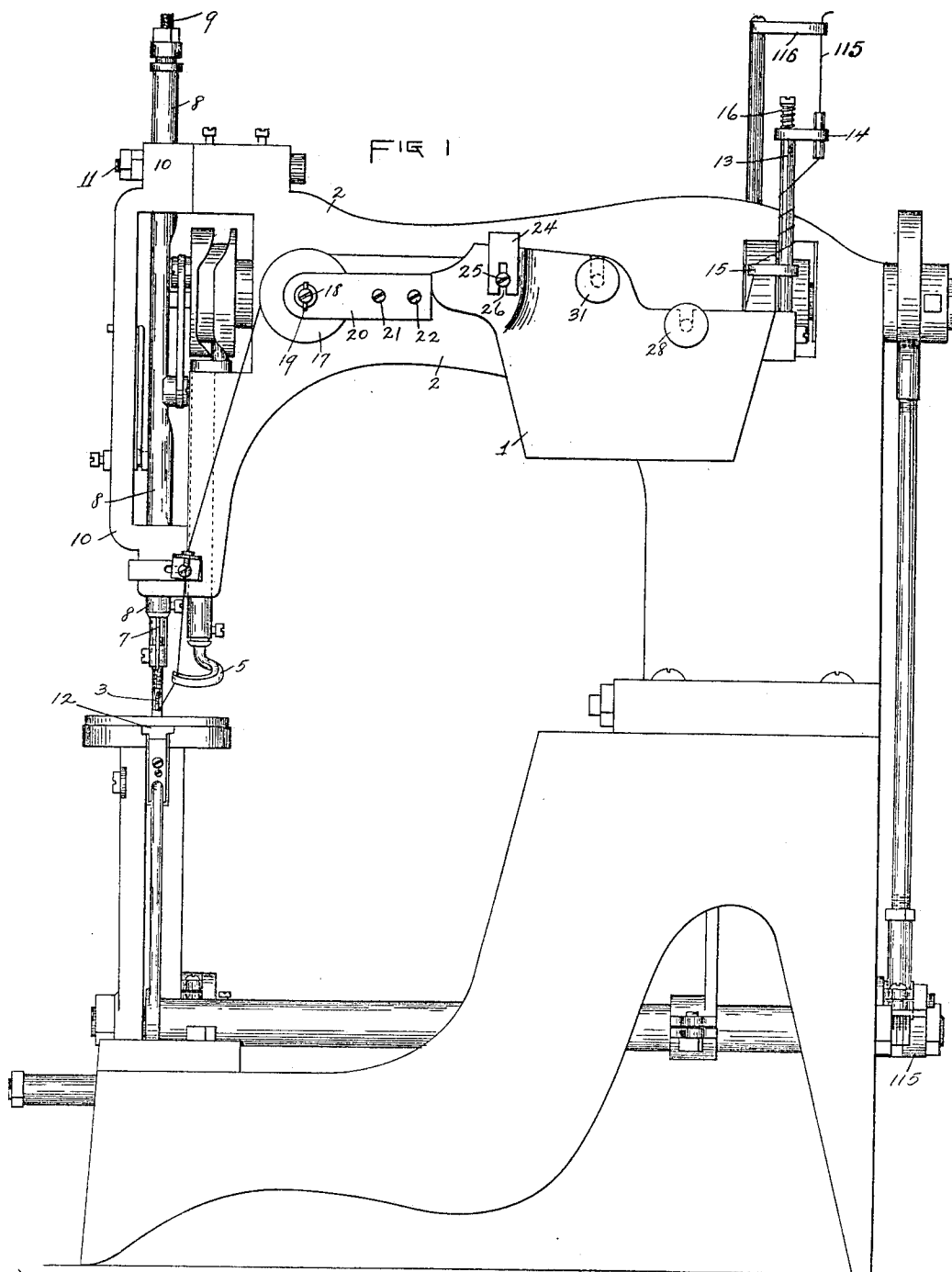
No. 819,065.

PATENTED MAY 1, 1906.

M. D. HEBERT.  
WAXED THREAD SEWING MACHINE.

APPLICATION FILED MAR. 13, 1905.

3 SHEETS—SHEET 1.



WITNESSES

St. Booth.  
E. M. O'Reilly

INVENTOR

Shadow D. Hebert  
By Mosher & Curtis  
attys.

No. 819,065.

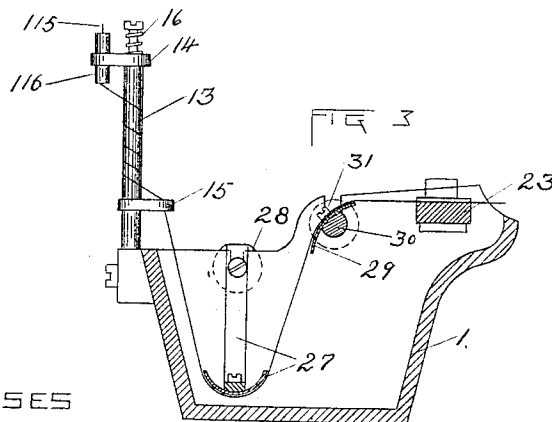
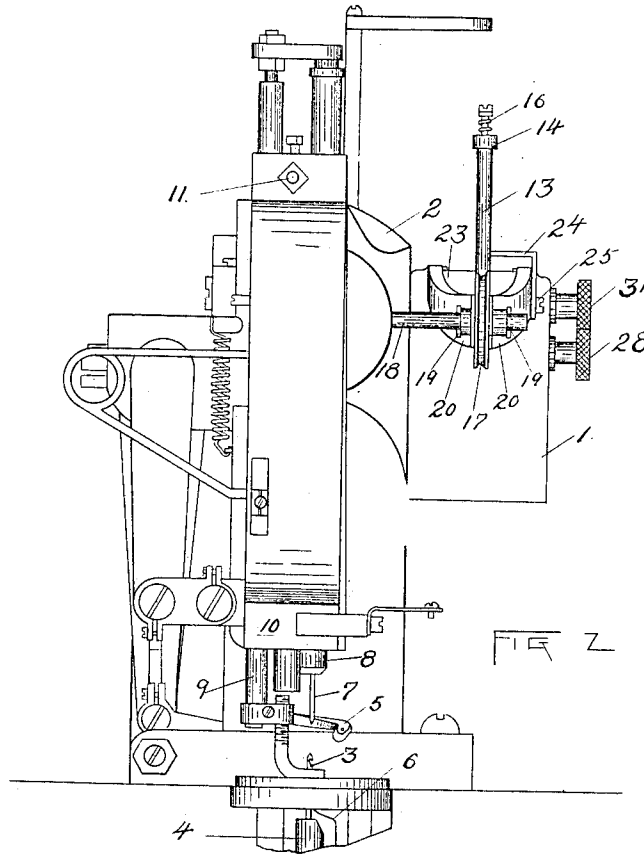
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3 SHEETS—SHEET 2.



WITNESSES

J. L. Fuller.  
J. Donabach.

INVENTOR

Mador D. Hebert,  
By Mosher & Curtis  
Attys.

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3 SHEETS—SHEET 3.

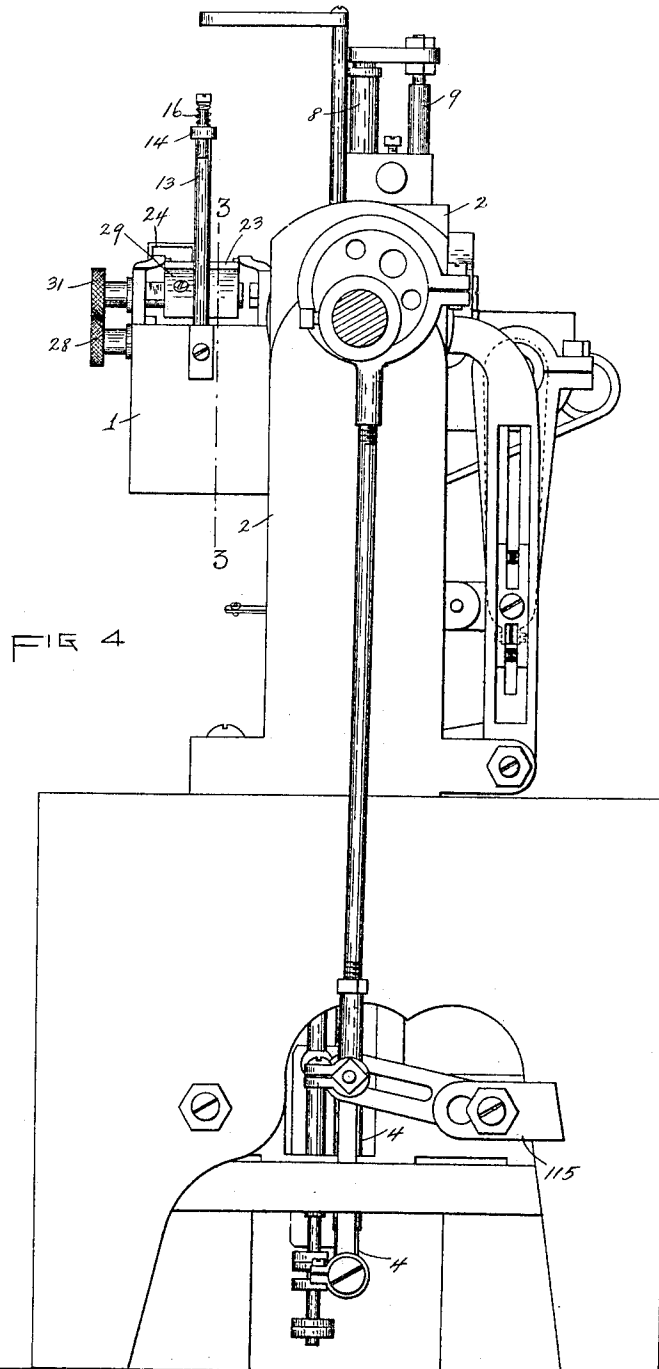


FIG 4

WITNESSES

*J. C. Broth.*  
*E. M. O'Reilly.*

INVENTOR

*Madison D. Hebert.*  
*By Mosher & Curtis.*  
*Atty's.*

# UNITED STATES PATENT OFFICE.

MADOR D. HEBERT, OF GLOVERSVILLE, NEW YORK.

## WAXED-THREAD SEWING-MACHINE.

No. 819,065.

Specification of Letters Patent.

Patented May 1, 1906.

Application filed March 13, 1905. Serial No. 249,875.

*To all whom it may concern:*

Be it known that I, MADOR D. HEBERT, a citizen of the United States, residing at Gloversville, county of Fulton, and State of New York, have invented certain new and useful Improvements in Waxed-Thread Sewing-Machines, of which the following is a specification.

The invention relates to such improvements; and it consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings, and the reference characters marked thereon, which form a part of this specification.

Similar characters refer to similar parts in the several figures therein.

Figure 1 of the drawings is a view in front elevation of my improved sewing-machine. Fig. 2 is a view in elevation of the left-hand end of the same as seen in Fig. 1 with the lower portion broken away. Fig. 3 is a vertical longitudinal section taken through the tar-cup on the broken line 3 3 in Fig. 4. Fig. 4 is a view in elevation of the opposite end of the machine from that shown in Fig. 2.

My invention relates to improvements in machines for sewing leather, as in making heavy leather gloves, and the particular type of machine to which these improvements particularly relate is known in the trade as the "Boston machine."

The principal object of my invention is to improve the tension mechanism of such a machine and to facilitate the operation and improve the product of the machine.

Particular objects of the invention will be pointed out in connection with the following description.

This type of machine being well known in the art, I shall only briefly refer to its general features of construction and operation.

The machine is adapted for forming a chain-stitch with a single thread, which is waxed or tarred by being drawn through a tar-cup 1, mounted upon the arm 2 of the machine. The needle 3, which is fixed upon a needle-bar 4 beneath the throat-plate and is reciprocated in a vertical line, is formed with a barb or hook to which the thread is fed when the needle is in its uppermost position by the feed hook or arm 5, which is vibratory in a horizontal plane and is provided in its end with an eye to carry the thread. The loop or stitch of thread thus fed to the

needle is drawn down through the fabric as the needle descends. At each successive upward movement of the needle through the leather or fabric the last previously-formed loop or stitch is left projecting below the fabric and the new loop is drawn down there-through as the needle next descends, the previously-formed loop being prevented from engaging the hook or beard of the needle by means of the cast-off 6. Simultaneously with each downward movement of the needle an aperture is formed by a downward movement of the awl 7 through the fabric at the point where it is intended the needle should pass at its next upward movement, and before such next upward movement of the needle occurs the position of the fabric is shifted by means of the feeding mechanism, so as to bring said aperture in line with the needle. The awl-bar 8 and the foot-bar 9 reciprocate vertically in a face-plate 10, pivotally mounted at 11 upon the arm or head of the machine, to which face-plate swinging movements are imparted corresponding substantially in time and amplitude with the reciprocating movements of the feed 12.

The general features of construction and manner of operation of the parts thus far described are well understood, so that further description of the same at this point is deemed unnecessary; but they will be referred to more particularly in connection with the various features of novelty, which will be hereinafter pointed out.

The tar-cup 1 is located between two tensions which act upon the thread as the same passes to and from said cup. The tension which acts upon the thread before it enters the cup consists of a vertical spindle 13, around which the thread is passed a sufficient number of times to secure the necessary resistance to its movement. Guides are provided in the arms 14 and 15 to receive said thread in passing to and from said spindle, one of said arms, preferably the arm through which the thread passes to the spindle, being rotatable upon the spindle, so that the thread can be wound one or more times around the spindle by simply rotating said arm, which is frictionally held in position by means of the coil-spring 16. The tension which acts upon the thread after the same leaves the tar-cup comprises a grooved wheel 17, partly or wholly around which the thread may pass, which wheel is rotatively mounted upon a spindle or stud 18 on the arm of the machine,

whereon it is loosely confined between two pins 19, inserted through the stud or spindle. The rotative movement of this wheel is frictionally retarded by engagement with the opposite sides thereof of the arms of a friction-yoke 20, which can be drawn together by means of the screw 21 to exert any desired pressure upon the sides of the wheel. This yoke is held from rotative movement by the pin 22, projecting from the arm of the machine, upon which pin the yoke is mounted. In leaving the tar-cup the thread passes through a slitted felt block 23, inserted in an upwardly-open bearing in the cup and held to its seat in said bearing by engagement with the overhanging presser or clamp 24, secured to the side of the cup by means of a screw 25, inserted through a slot 26 in the shank of the clamp, by means of which slotted connection the clamp can be adjusted to bear down upon the felt block adjacent to the slit therein with any desired degree of pressure, whereby said felt block can be made to engage the thread passing through the slit therein with any desired degree of force to accomplish the removal of the surplus tar or wax from the thread. In passing through the tar-cup the thread is immersed in the tar or wax by means of a depressor 27, mounted in an upwardly-open bearing in the side of the cup, within which it is secured by the thumb-screw 28. As the thread leaves the tar or wax and before it reaches the felt block it passes over a scraper 29, which is a sheet-metal plate fixed upon a block 30, mounted in an upwardly-open bearing in the side of the cup and held therein in adjusted position by means of the thumb-screw 31. By loosening the thumb-screw 31 and rotating the block 30 the scraper-plate can be caused to engage the thread at any desired angle thereto.

The thread 115 in passing to the tension 13 is guided thereto by a thread-guide 116, located opposite and just above the upper end of the tension-spindle, which spindle is mounted upon the tar-cup at its lower end. By means of the thread-guides 14 and 15 the thread is led to and from said tension in lines parallel with the tension-spindle, and the upper guide 14 being revoluble upon the spindle near its outer end adjustment of the tension can be accomplished by simply rotating said thread-guide 14 without unthreading the same. By causing the thread to be thus

wound around the spindle a greater or less number of times the twist of the thread can be so regulated as to counteract and compensate for the untwisting effect which the drawing of the thread over and through the scrapers 29 and 23 tends to produce.

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

1. In a machine of the class described, a tension for the thread comprising a spindle around which the thread is adapted to be wound mounted at its inner end upon a suitable support; and a thread-guide offset from and rotatively mounted upon the outer end of said spindle whereby adjustment of the tension can be accomplished by rotating said guide without unthreading the tension.

2. In a machine of the class described, a tension for the thread comprising a spindle around which the thread is adapted to be wound mounted at its inner end upon a suitable support; a thread-guide offset from and rotatively mounted upon the outer end of said spindle; and a thread-guide mounted upon a suitable support and projecting opposite the outer end of said spindle.

3. In a machine of the class described, the combination with the tar-cup and thread scraper; of a tension for the thread in advance of the tar-cup comprising a spindle around which the thread is adapted to be wound mounted at its inner end upon a suitable support, and a pair of guides for the thread in passing to and from said spindle, one of said guides being rotatively mounted upon the outer end of said spindle.

4. In a machine of the class described, the combination with the tar-cup and thread-scraper; of a tension for the thread in advance of the tar-cup comprising a spindle around which the thread is adapted to be wound mounted at its inner end upon a suitable support, and a pair of guides for the thread in passing to and from said spindle, one of said guides being rotatively mounted upon the outer end of said spindle; and means for frictionally holding said movable guide in adjusted position upon the spindle.

In testimony whereof I have hereunto set my hand this 6th day of March, 1905.

MADOR D. HEBERT.

Witnesses:

WILLIAM WEBB,  
WILLIAM L. WELSH.