J. McCLOSKY.

Sewing Machine.

No. 48,345. Patented June 20, 1865.

FIG. 1.

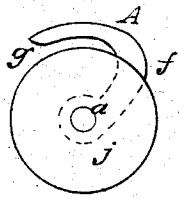


FIG. 6.

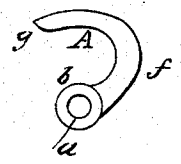


FIG. 2

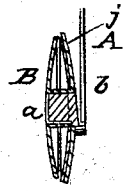
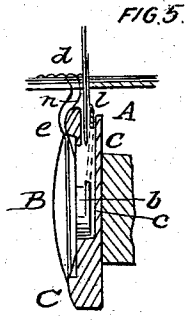


FIG. 5.



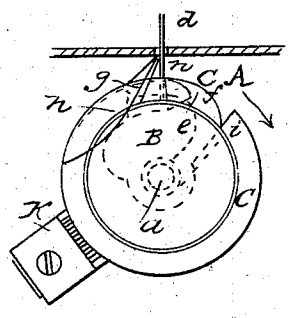


FIG. 4.

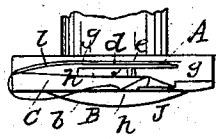
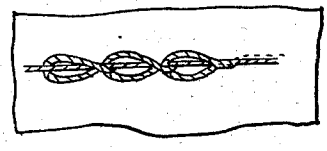


FIG. 7



WITNESSES

J. W. Coombs

L. Hollins Jr

INVENTOR

John M. McCloskey

UNITED STATES PATENT OFFICE.

JOHN McCLOSKEY, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND SAML. B. BALLOU, OF SAME PLACE.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. **48,345**, dated June 20, 1865.

To all whom it may concern:

Be it known that I, JOHN MCCLOSKEY, of city, county, and State of New York, have invented a new and useful Improvement in Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention consists in a novel device by the placing of which in proper relation to the rotating hook and the bobbin of what is known as the "Wheeler and Wilson sewing-machine" (without any alteration of the parts of the machine from the usual construction) the enchaining of the loops of the needle-thread is effected, and when a thread is used in the bobbin a locked chain-stitch is produced, or by the omission of thread from the bobbin a simple chain or tambour stitch is produced by the machine.

Figure 1 is a side view of the thread-enchaining device in the form which I prefer, detached from the machine. Fig. 2 is a vertical axial section of the bobbin and a back view of the thread-enchaining device. Fig. 3 is a side view of the needle, the rotating hook, and bobbin, with the thread-enchaining device in place, showing, also, a part of the cloth-plate in section. Fig. 4 is a top view of the rotating hook, the bobbin, and the thread-enchaining device, and a horizontal section of the needle. Fig. 5 is an axial vertical section of the rotating hook and thread-enchaining device, and a back view of the bobbin and needle, representing, also, a part of the cloth-plate in section. Fig. 6 is a side view of a modification of the thread-enchaining device. Fig. 7 represents the locked chain-stitch hereinbefore mentioned as it appears on the under side of the cloth.

Similar letters of reference indicate corresponding parts in the several figures.

The thread-enchaining device consists of a flat hook, A, made of a thin piece of sheet metal, having firmly secured to it a pivot, *a*, which fits easily into the eye of the bobbin B. This pivot *a* is made with a shoulder, *b*, of such thickness that when the said pivot is inserted into the eye of the bobbin from the back or inner side, and the bobbin inserted into the central cavity in the face of the rotating hook C, the said hook A may enter the groove *c*, provided in the hook for the entrance of the needle *d*, and the outer surface of the said hook A may be behind the line of movement of the needle, so that the needle may pass between the said hook A and the tongue or nose *e* of the rotating hook, as shown in Figs. 4 and 5. The said hook is made with a blunt point, *g*, which is set in the reverse direction to the point of the rotating hook, and for some distance back from this point it is made of the form of an arc, the external profile of which has a radius nearly corresponding with that of the external circular profile of the rotating hook C. The back of the said hook is rounded off, as shown at *f* in Figs. 1, 3, and 6, and the length from the point *g* to the back *f* is such that when the point *g* is in contact with the back of the throat *h* of the rotating hook the back *f* is opposite to the heel *i* of the rotating hook. In the example of the hook A (shown in Figs. 1, 2, 4, and 5) a thin metal disk, *j*, conforming to the exterior of the bobbin B, is attached to the pivot *a;* but in the example shown in Fig. 6 this disk is dispensed with, and I may here remark as far as I have experimented I have found that the hook A works equally well with or without the said disk.

In the application of my thread-enchaining device to the Wheeler and Wilson or rotating hook and bobbin sewing-machine no change whatever is required in the construction of the machine. The pivot *a* is placed in the eye of the bobbin, and the hook A and bobbin placed together in the central cavity of the rotating hook C, the point of the hook A being slipped through the groove *c* and behind the nose of the rotating hook, and the hook A and bobbin are secured in place by means of the well-known bobbin-ring in the same manner as the bobbin is ordinarily secured.

When the machine is set in operation the friction between the rotating hook, the bobbin, and the shoulder *c* or disk *j* of the rotating hook, as the case may be, causes the point *g* of the hook A to remain in contact with the back of the throat *h* of the rotating hook C, and causes the hook A to rotate with the hook C.

In the operation of the machine the loops of the needle-thread are extended by the rotating hook C in the same manner as in the Wheeler and Wilson machine without the enchaining de-

vice or hook A; but as that side of the loop (marked *l* in Figs. 4 and 5,) which passes over the inner side or back of the bobbin escapes past the heel of the rotating hook and the bend of the loop escapes from the brush *k*, pad, or other loop-check, the said side *l* of the loop, instead of being drawn upward on the outer side of the needle, as it is when the hook A is not applied, slips over and passes behind the hook A, as shown in Figs. 3, 4, and 5, and is thereby conducted behind the needle in such manner as to surround the new loop *n*, which has just been carried through the cloth by the needle, and as the first-mentioned loop is drawn up toward the cloth by the extension of the new one by the rotating hook, the first-mentioned one is drawn tightly around the new one. In this way the loops are enchained together on the under side of the cloth, as shown in red color in Fig. 7.

When a locking-thread is used in the bobbin B the said thread (shown in blue color in Figs. 3, 5, and 7) passes through each of the loops of the needle-thread in the same manner as it does when the hook A is not used, and forms, when using said hook, the locked chain-stitch represented in Fig. 7. If the thread be omitted from the bobbin, the enchaining of the loops of the needle-thread produces a chain or tambour stitch.

It will thus be understood that the simple application of the hook A to the Wheeler and Wilson machine enables that machine to produce two other stitches differing from each other and from the lock-stitch produced by the said machine without the hook A, each loop of either of the stitches thus formed by my improvement having the threads once crossed, as shown on the drawing, Fig. 7.

I am aware of the invention of Boecke, English Patent No. 3,190 of 1860. This I disclaim; but

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

The hook A, constructed and applied to operate substantially as herein described, in combination with the rotating hook C, bobbin B, and needle, for the purpose herein set forth.

JOHN McCLOSKEY.

Witnesses:
J. W. COOMBS,
GEO. W. REED,
C. RICE.