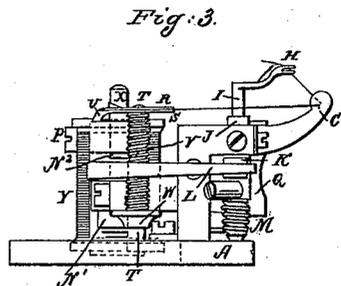
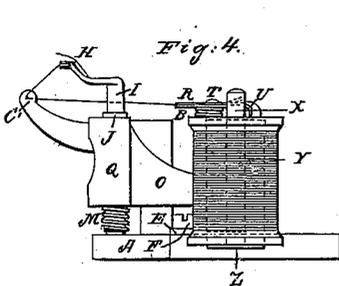
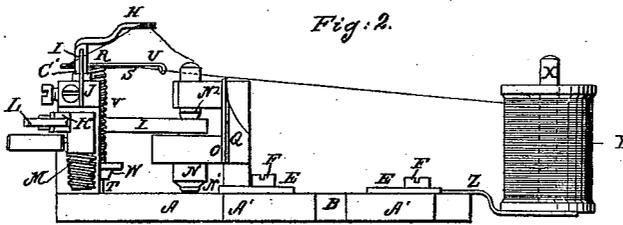
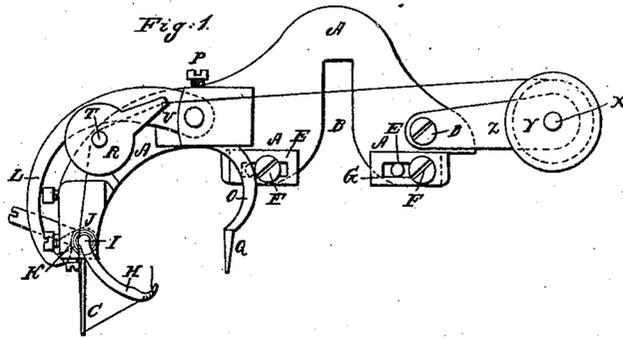


F. ARMSTRONG
Sewing Machine.

No. 63,132.

Patented March 26, 1867.



Witnesses:
J. E. Johnson.
Wm. Park Lake.

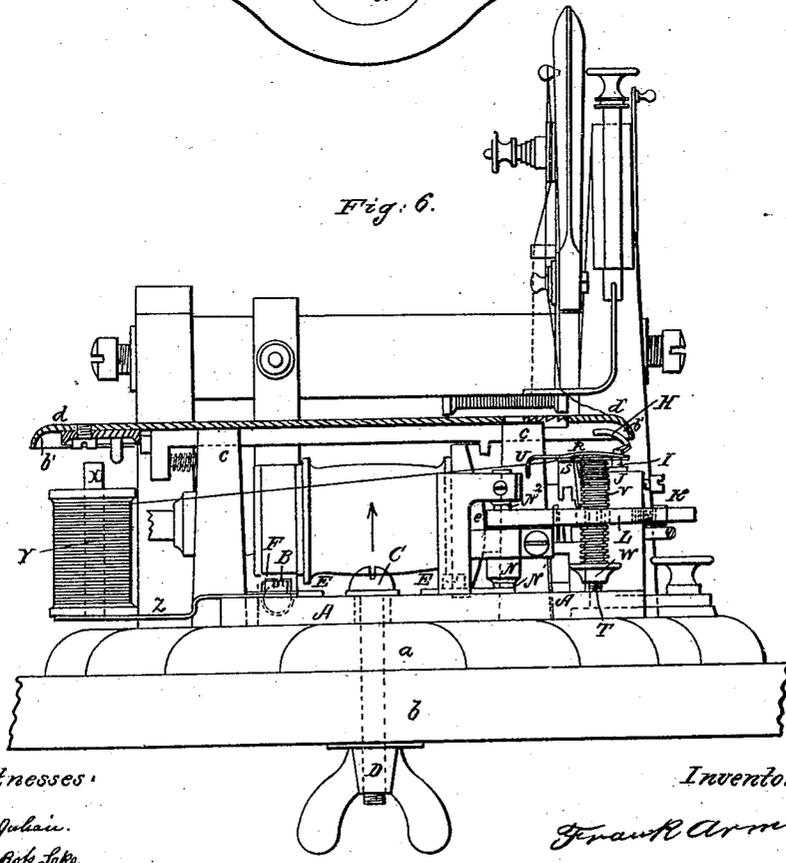
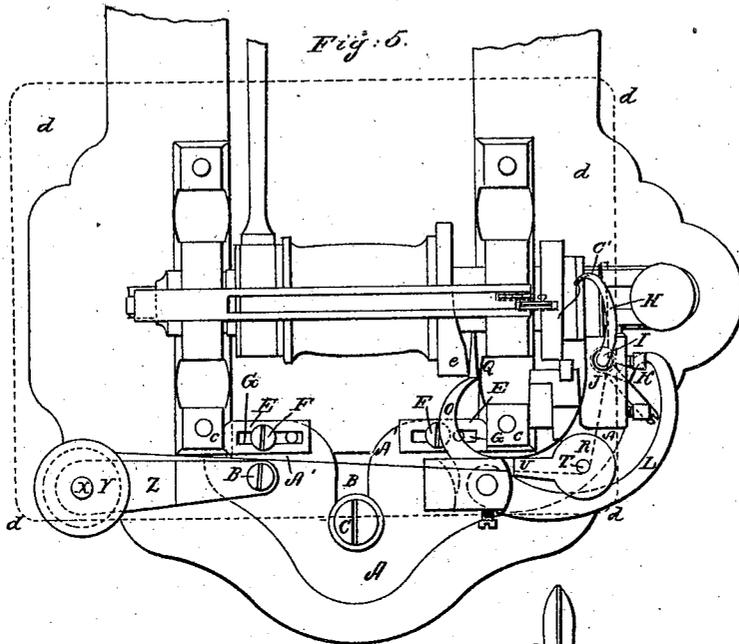
Inventor:
Frank M. Armstrong.

F. ARMSTRONG

Sewing Machine.

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Witnesses:

J. E. Gulian.
Wm. Robt. Lake.

Inventor:

F. Armstrong

United States Patent Office.

FRANK ARMSTRONG, OF WATERBURY, CONNECTICUT.

Letters Patent No. 63,132, dated March 26, 1867.

IMPROVEMENT IN SEWING MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, FRANK ARMSTRONG, of Waterbury, Connecticut, United States of America, temporarily residing in London, England, have invented "an improved Attachment for making a Double-Loop Stitch with a 'Wheeler and Wilson' Sewing Machine;" and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The said invention relates to a certain adjustable device, which, being properly placed and secured upon a "Wheeler and Wilson" sewing machine, will operate in combination with the said machine to produce a "Grover and Baker" or double-loop stitch, and also a three-thread stitch. Devices for this purpose have already been introduced, but these are so constructed that their proper adjustment is exceedingly difficult to accomplish, and they require constant attention on the part of the operator to insure the work being properly performed. My improvements relate chiefly to the novel construction and arrangement of parts of the attachment, whereby it can be readily and accurately adjusted and secured upon a "Wheeler and Wilson" machine without requiring the removal or adjustment of the ordinary ring-slide, cloth-plate, or other parts of the said machine, and also to the peculiar arrangement of an adjustable support for the under-thread spool, in combination with the under-thread carrier and guide whereby the proper tension of the under thread is preserved during the working of the machine, and the said spool can be more readily removed and changed when desired.

Description of the Drawings.

Figure 1 is a plan of the top of my improved attachment.

Figure 2 is a front view of the said attachment.

Figures 3 and 4 are right and left-hand end elevations of the same.

Figure 5 is a plan showing a portion of a "Wheeler and Wilson" sewing machine provided with the said attachment.

Figure 6 is a front elevation of the same.

Like letters indicate the same parts in each of the figures.

The working parts of my improved attachment are supported on a frame, A, of cast iron or other suitable metal. The said frame is constructed with a slot or aperture, B, which is made open at the inner edge of the said frame to allow it to pass under the head of a holding-down bolt, C, which secures the attachment in its place, and which passes through the bed-plate *a* of the machine, and the table or bench *b* upon which the latter is supported. This slot B allows the frame A of the attachment to be drawn from under the head of the holding-down bolt C when the nut D thereof is slightly slackened or unscrewed, and also greatly facilitates the adjustment of the said attachment when the same is replaced upon the machine. A portion, A', of the said frame A is formed to pass easily between the standards *c*, which support the cloth-plate *d* of a "Wheeler and Wilson" machine. This portion A' of the frame A has a certain amount of play between the said standards, and the same amount of play is allowed for the holding-down bolt C between the sides of the slot B in the frame A. Two small adjustable slotted plates E are fitted upon the portion A' of the frame A, and are secured to the said frame by screws, F, which pass through the slots G in the plates E. The said plates are so arranged that their outer ends can be made to bear against the sides of the standards *c*, and the accurate adjustment of the attachment upon the machine is thereby effected with great facility. When this adjustment has been once properly effected the attachment can be removed and replaced as often as desired without further trouble. The under-thread carrier H is so formed that its point is higher than the top of its spindle, I, allowing the ordinary cloth-plate of the "Wheeler and Wilson" machine (which has turned-down edges *b'*) to be employed with the attachment. The spindle I of the under-thread carrier H is supported to work in suitable bearings, J, formed in the frame A, and is provided with a projection or finger, K, for the lever L of the attachment to act upon. This spindle I is also provided with a spiral spring, M, arranged to act in the opposite direction to the lever L. The said lever L is fixed upon an upright pin or axis, N, fitted to work freely upon the bearing N¹ and centre N². The same axis or pin also carries a short arm, O, which, by means of a set-screw, P, is adjusted and secured in any required position upon the axis or pin N. The end of this arm O is provided with a flat web, Q, for the feed-cam *e* on the mandrel *f* of the machine to act upon; and by adjusting the said arm upon its pin or axis

the movement of the under-thread carrier I is regulated. The web Q of the arm O is kept properly in contact with the cam e throughout the revolution of the said cam by the action of the spring M upon the spindle I of the under-thread carrier H. The under-thread tension device consists of two disks or plates, R S, between which the thread is passed, one of the said disks being fast and the other loose on an upright stud, T, secured in the attachment frame A. The loose disk S is forced up against the fixed disk R (which is provided with the guide U) by a spring, V, whose pressure is regulated by a nut, W, fitted on the bottom of the stud T. The spindle X of the under-thread spool Y is supported upon the extremity of an adjustable tongue, Z, of metal, which is secured by a screw, B', upon the end of the attachment frame A farthest from the under-thread carrier H. The said screw B' forms a pivot or centre for the said tongue Z to turn upon. When the detachment is secured upon the machine this tongue Z is so adjusted that the spool Y is under the front edge of the cloth-plate d. The under thread is led from the said spool Y between the plates R S of tension device, and thence through the eye of a guide, C', which is secured upon the attachment frame A near the under-thread carrier H. The said guide C' is so arranged that its eye is a little below the front of the under-thread carrier H, and the thread passes from this eye to the said carrier. When the under spool Y is empty it is brought from under the cloth-plate d by turning the adjustable tongue Z upon its centre B', and can then be easily removed from its spindle X without disturbing the said cloth-plate. When the attachment is properly secured upon a "Wheeler and Wilson" machine, and it is desired to produce a double-loop stitch, the upper or needle thread only of the machine is used with the under thread of the said attachment, but by the employment of the under-bobbin thread of the said machine a three-thread stitch may be formed.

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

1. Constructing the plate A of the attachment with the slot or aperture B, whereby the said attachment can be readily adjusted and secured upon the machine and removed therefrom substantially in the manner set forth.

2. The combination and arrangement of the under-spool support with the said attachment so that when secured upon a "Wheeler and Wilson" sewing machine the under-thread spool Y will be entirely under the front edge of the cloth-plate of the machine, substantially as and for the purpose set forth.

3. The employment, in combination with the slotted plate A, of the adjustable slotted plates E, substantially in the manner and for the purposes described.

4. The employment of the guide C' in combination with the under-thread carrier, tension device and spool, to allow the latter to be arranged under the cloth-plate d, and in the position relatively to said thread carrier and tension device, all substantially in the manner and for the purpose herein set forth.

FRANK ARMSTRONG. [SEAL.]

Witnesses:

T. E. JULIAN,
WM. ROBT. LAKE.