

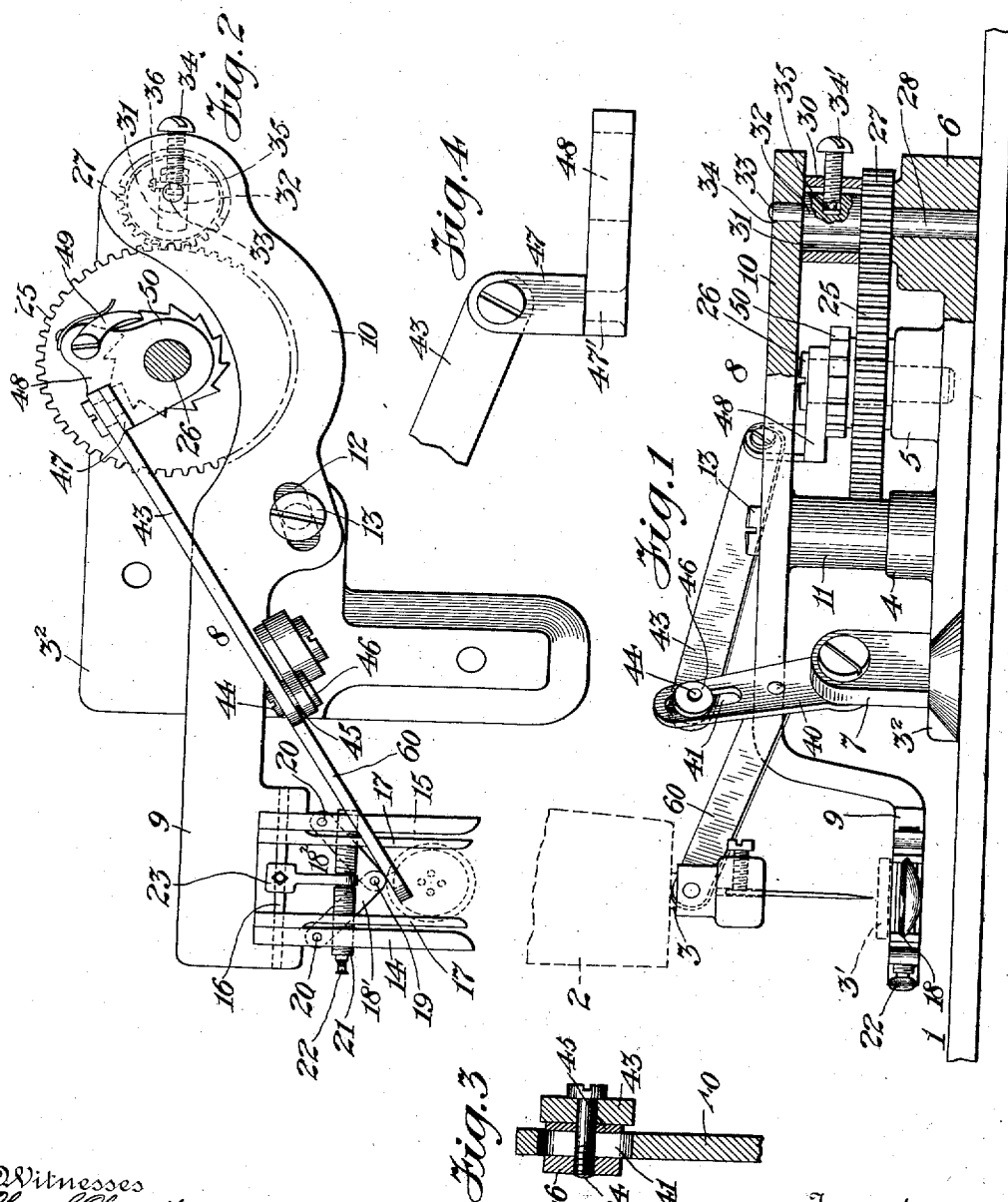
No. 816,815.

PATENTED APR. 3, 1906.

C. E. ONGLEY.

U. S. PATENT OFFICE.
C. E. UNGLEY.
BUTTON SEWING ATTACHMENT FOR SEWING MACHINES.
APPLICATION FILED 1905.

APPLICATION FILED APR. 18, 1905.



UNITED STATES PATENT OFFICE.

CHARLES E. ONGLEY, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO GEORGE S. TERRY AND ONE-FOURTH TO ELLA L. ONGLEY, BOTH OF NEW YORK, N. Y.

BUTTON-SEWING ATTACHMENT FOR SEWING-MACHINES.

No. 816,815.

Specification of Letters Patent.

Patented April 3, 1906.

Application filed April 18, 1905. Serial No. 256,230.

To all whom it may concern:

Be it known that I, CHARLES E. ONGLEY, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Button-Sewing Attachments for Sewing-Machines, of which the following is a specification.

My invention relates to a button-sewing attachment for sewing-machines.

It has for its object to provide a device of this character adapted to be easily and readily attached to or removed from a sewing-machine and embodying advantages in point of perfect operation, simplicity, and inexpensive construction.

In the drawings, Figure 1 is a side view, partly in section, of my device attached to a sewing-machine. Fig. 2 is a plan view of the device removed from the machine. Fig. 3 is a sectional detail view of the means for pivotally connecting the pivoted arm with the adjustable link. Fig. 4 is a detail view of the post for pivotally connecting the adjustable link to the oscillatory pawl-carrying plates.

In all the figures of the drawings illustrating my invention like reference characters indicate corresponding parts.

Referring to the drawings, 1 designates the bed-plate, 2 the arm, 3 the needle-bar, and 3' the presser-foot, of a sewing-machine, all of which parts are of ordinary construction.

The base 3² of my attachment is secured to the bed-plate in any convenient manner, preferably by screws passing through holes therein and into the bed-plate and provided with bosses 4, 5, and 6 and a support 7 on its upper face, the boss 4 having a screw-threaded bore.

The arm 8 consists of a forward depressed forked portion 9 and a rear elevated portion 10, provided with a boss 11 on its under side, adapted to rest on top of the boss 4 and provided with an elongated slot 12 to receive the upper unthreaded portion of a pivot-screw 13, the lower threaded portion of which engages the screw-threaded bore of said boss 4. Jaws 14 and 15 are pivotally and slidably supported between the forks of the arm 8 on a bar 16 and have springs 17 secured to their inner faces provided with grooves 18, facing each other and adapted to receive the edges of a button, and thereby support it.

To properly position the button so that one of the eyes will come under the needle, the forward end of two arms 18' 18², pivoted together at 19, come into contact with the edge of the button, and the rear ends are pivoted to the jaws at 20, so as to move simultaneously therewith. The jaws are moved toward and from each other, so as to accommodate buttons of different sizes, by means of a shaft 21, one end provided with a right-hand screw-thread engaging a screw-threaded hole in the jaw 15 and the other end provided with a left-hand screw-thread engaging a screw-threaded hole in the jaw 14. This shaft is rotated by means of a knob 22 on one end thereof and is held against endwise movement by means of an arm 23, the inner end secured to the bar 16 and the other end provided with a notch engaging a circular groove in the shaft 21. It will be noted that the button is held or clamped at three points in its circumferential edge, one point being at joint of the arms 18' and 18² and at a point in each of the grooves of the springs.

A gear-wheel 25 is fixed on the upper portion of a shaft 26, the lower portion of which engages the bore of the boss 5, and this gear 25 meshes with a gear-wheel 27, secured to the upper end of a shaft 28, the lower end of which engages and turns in the bore of the boss 6.

A disk 30 is secured to the top face of the gear-wheel 27 and is provided with an elongated slot 31, in which a block 32 is located, said block having a pin 33 engaging a hole 34 in the inner end of the arm 8 and being adjusted in said slot to regulate the throw of said arm by means of a screw 34' engaging a screw-threaded hole in the disk 30 and its inner end projecting into the block and having a circular groove 35 therein engaged by a screw 36.

The lower end of an arm 40 is pivoted on the support 7, and its upper end is provided with an elongated slot 41. One end of a link 43 is pivotally and adjustably connected to the upper end of the arm 40 by means of a screw 44, which passes through the slot 41 and through a screw-threaded washer 45 and has a nut 46 on its inner end, and the other end of this link is pivotally connected to a post 47, having a lug 47' engaging and turning in a hole in the plate 48, mounted to os-

cillate on the upper end of the screw 26 and provided with a pawl 49, adapted to engage a ratchet-wheel 50, secured on the upper end of said screw 26.

5 It will be noted that the button is moved in a predetermined path, so as to allow the openings therein to come in the path of the needle, said path being controlled principally by the location of the block 32 in the elongated slot 31.

10 One end of a link 60 is pivotally connected to the needle-bar and the other end pivotally connected to the arm 40.

15 It will be understood that to sew on a button having four holes the link 43 is adjusted to and fixed in the position shown by the drawings, which will cause the pawl on each forward movement to turn the ratchet-wheel the distance of one tooth and through the medium of the gear-wheels turn the disk 30 one-quarter of a revolution, thereby transmitting movement to the arm 8, pivotally connected therewith, so as to successively bring each of the holes under the needle, and that to sew on a button having two holes the link 43 is adjusted inwardly and fixed in the proper position which will cause the pawl on each forward movement to turn the ratchet-wheel the distance of two teeth and through the medium of the gear-wheels turn the disk 30 one-half of a revolution, thereby transmitting movement to the arm 8, so as to bring one and then the other of the holes under the needle.

35 I do not wish to be understood as limiting myself to the precise detail and arrangement of parts shown and described, but reserve the right to all modifications within the scope of my invention.

40 Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a sewing-machine of a button-sewing attachment therefor comprising a gear-wheel, a disk extending from the said wheel having an elongated slot, a block located in said elongated slot, a screw threaded through the disk and engaging the said block in a direction at right angles to the axis of said gear-wheel, means to clamp the screw in position with said disk, an arm pivoted to said block, means connected with the arm to hold a button, and means to rotate the gear-wheel, and thereby move the arm.

55 2. In a button-sewing attachment for a sewing-machine the combination of a gear-wheel, a disk extending from said wheel, a block located in an elongated slot in the disk, means to secure the said block at various distances from the axial line of the gear-wheel, an arm pivoted to said block, adjustable means connected with the arm to hold a button, means to rotate the gear-wheel, a second pivot located to be engaged with an elongated slot in said arm, means to turn the

gear-wheel and thereby revolve the pivot extending from said block, and move the means to hold the button.

3. In a button-sewing attachment for a sewing-machine the combination of a pivot, an arm having an elongated slot in about its central portion that is engaged with said pivot, a gear-wheel located under one end of said arm, means to intermittently rotate said wheel, a block arranged to move with said wheel, a pivot extending from the block, a screw perpendicular to the axial line of the pivot, means carried by the wheel for supporting the screw, means for connecting the screw to said block whereby said block may be adjusted and held at different radial distances from the axial line of the gear-wheel, and means at the other end of the arm to hold a button.

4. In a button-sewing attachment the combination of an arm, means to move an end of the arm in a predetermined path, jaws slidably supported on the arms, springs having grooves attached to the jaws, an arm pivoted to each jaw, a pivot joining the other ends of the latter arms, means to open the jaws and maintain them parallel with each other, and at the same time move the joined end of the latter arms in directions perpendicular to the direction of the movements of the jaws.

5. In a button-sewing attachment the combination of an arm, means to move an end of the arm in a predetermined path, a bar on the arm, jaws slidably supported on the bar, springs having grooves attached to the jaws, an arm pivoted to each jaw, a pivot joining the other ends of the latter arms, a shaft, a right-handed thread on one end of the shaft, and a left-handed thread on the other end thereof, another arm extending from the said bar and engaging a groove of the said shaft.

6. The combination of a sewing-machine and a button-sewing attachment therefor, comprising a needle-bar, a needle connected to the bar, an arm, connections between the bar and said arm to move an end of the said arm so as to carry the openings in a button in the path of the needle in a predetermined way, jaws extending from the arm, grooved springs extending from the jaws, arms pivoted to the jaws so as to hold a button at one point of its circumferential edge, with two points of said edge bearing against the springs.

7. The combination of a sewing-machine, and a button-sewing attachment, comprising a needle-bar, a support, an arm swinging from the support, a link supported on a pivot of the needle-bar and on a pivot on said arm, a boss, a shaft arranged to rotate therein, a gear-wheel supported on the shaft, a ratchet-wheel on the shaft, a plate fastened to the shaft, a spring-actuated pawl on the plate arranged to engage the ratchet-wheel, a post extending from the said plate, a second link pivoted to said post and adjustably pivoted

to the arm, a second gear-wheel meshing with the first gear-wheel, a disk extending from the second gear-wheel, a block located in an elongated slot of the disk, a pivot extending
 5 from the block, means to vary the distance between the axis of the pivot and the second gear-wheel, a second boss, a pivot extending from the latter boss, an arm with an elongated slot engaging the latter pivot, and having a
 10 hole at one end engaging the pivot of the said

block, and an adjustable button-holding device at the other end of the arm.

Signed at New York, in the county of New York and State of New York, this 5th day of April, A. D. 1905.

CHARLES E. ONGLEY.

Witnesses:

CHAS. L. WOLF,
 A. B. BLACKWOOD.

Corrections in Letters Patent No. 816,815.

It is hereby certified that Letters Patent No. 816,815, granted April 3, 1906, upon the application of Charles E. Ongley, of New York, N. Y., for an improvement in "Button-Sewing Attachments for Sewing Machines," was erroneously issued to the inventor, "Charles E. Ongley and George S. Terry and Ella L. Ongley," as owners of said invention, whereas the said Letters Patent should have been issued to *George S. Terry and Ella L. Ongley* as owners of the entire interest in said invention, as shown by the assignments of record in this office; also, in line 7 of the grant and line 3 of the heading of the printed specification the words "one-fourth" should read *one-half*; and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 24th day of April, A. D., 1906.

[SEAL.]

F. I. ALLEN,

Commissioner of Patents.

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