

(No Model.)

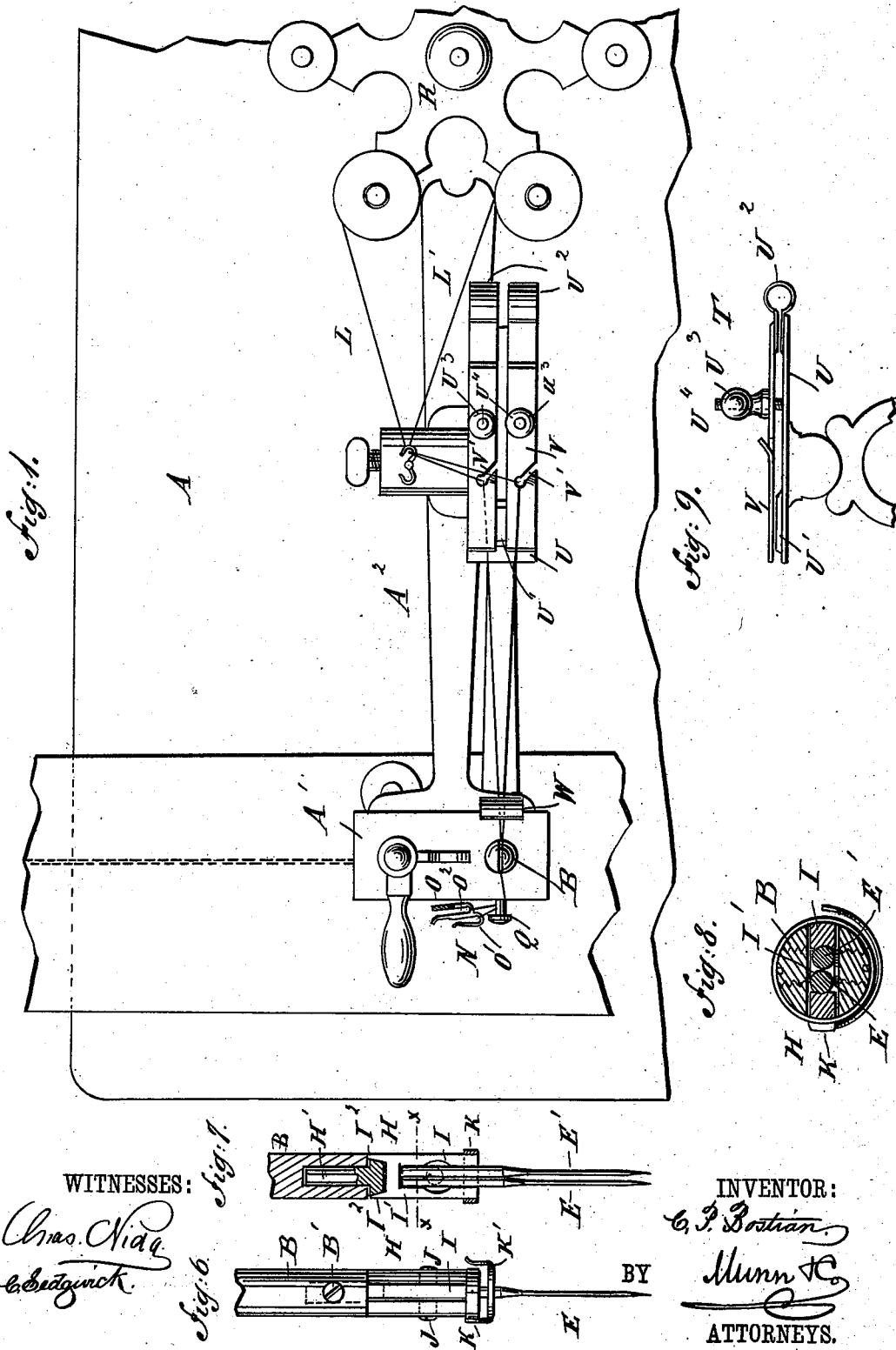
2 Sheets—Sheet 1.

C. P. BOSTIAN.

SEWING MACHINE.

No. 382,794.

Patented May 15, 1888.



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Fig. 2.

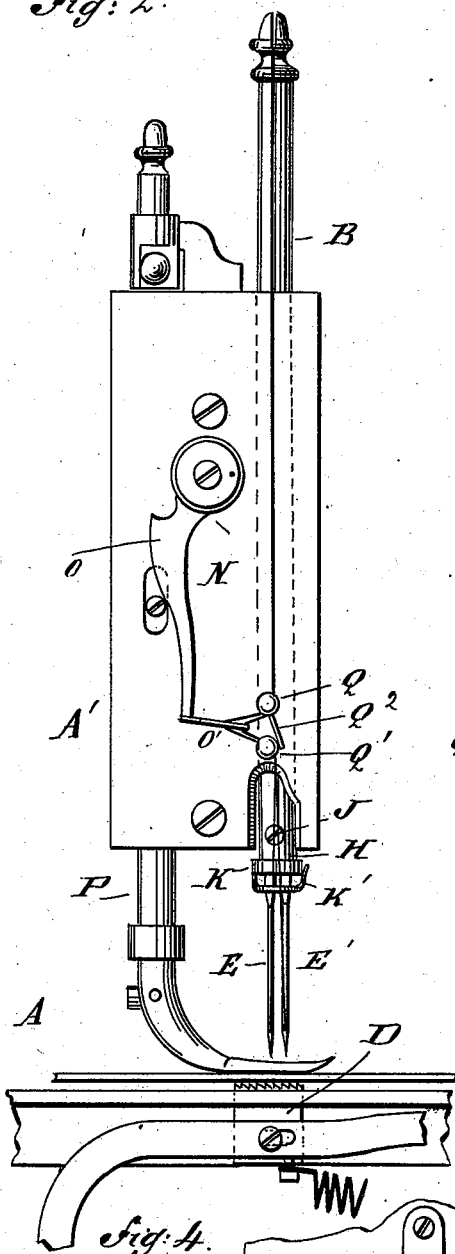


Fig. 3.

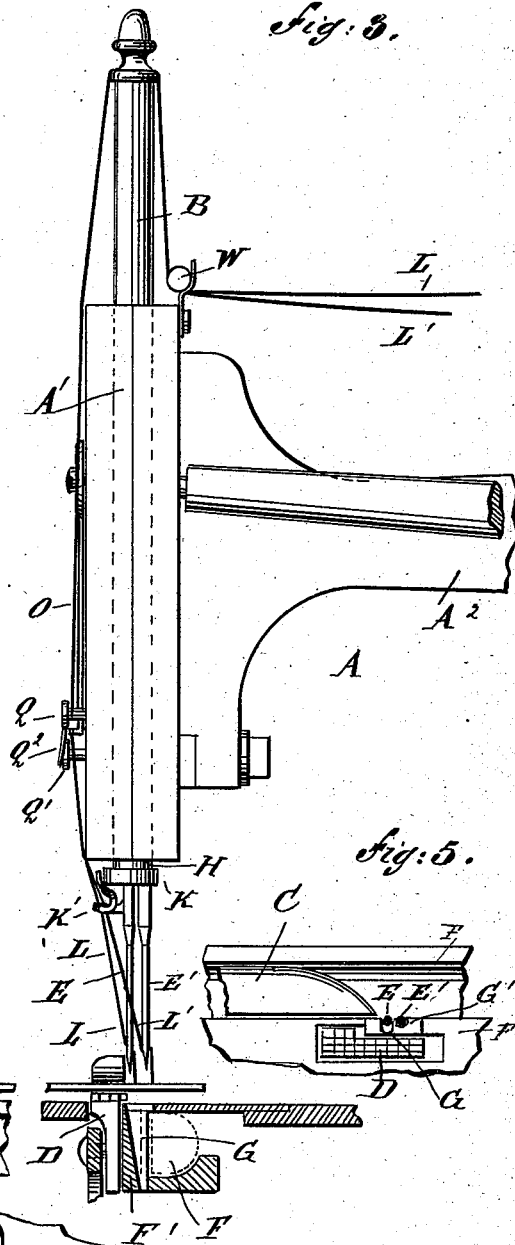


Fig. 5.

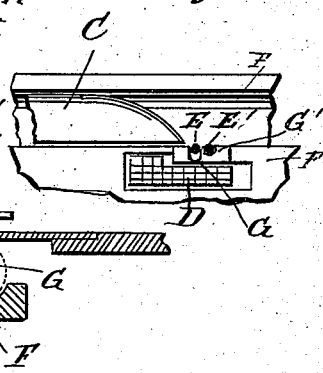
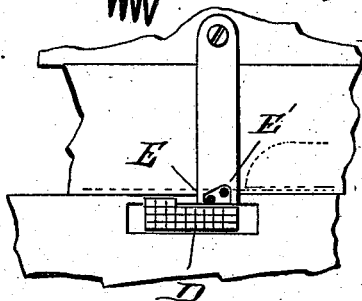


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES P. BOSTIAN, OF MILTON, ASSIGNOR TO HIMSELF, JOHN F. MECKLEY, OF WATSONTOWN, AND CHARLES H. DOUGAL, OF MILTON, PENNSYLVANIA.

SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 382,794, dated May 15, 1888.

Application filed March 23, 1887. Serial No. 332,093. (No model.)

To all whom it may concern:

Be it known that I, CHARLES P. BOSTIAN, of Milton, in the county of Northumberland and State of Pennsylvania, have invented a new and Improved Sewing-Machine, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved sewing-machine for making simultaneously a double row of stitches with two needles and one shuttle.

The invention consists in the construction and arrangement 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 letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of part of a sewing-machine provided with my improvement. Fig. 2 is a front elevation of the same. Fig. 3 is a side elevation of the same with the bed-plate and shuttle-race in section. Fig. 4 is a plan view of the bed-plate and feed-bar with the needles in section. Fig. 5 is a plan view of the shuttle-race with the needles in section. Fig. 6 is an elevation of the lower part of the needle-bar. Fig. 7 is a sectional elevation of the same. Fig. 8 is a sectional plan view of the same on the line *xx* of Fig. 7, and Fig. 9 is a side elevation of the tension device of the needle-threads.

The sewing-machine A, of any approved construction, is provided with the usual mechanism for operating the needle-bar B, the shuttle C, and the feed-bar D.

As any of the well-known forms of sewing-machines can be used with my improvement, and as the various devices now in use for operating the needle-bar, the shuttle, and the feed-bar can be employed, I do not further describe them, for they are not very essential to my improvement.

My improvement consists, principally, of the one shuttle C, used in connection with the two needles E and E', secured on the needle-bar B and set in a line at an angle of about forty-five degrees to the shuttle-race F. The

points of the two needles are thrown together in the shuttle-race F by means of the slots G and G', formed in the wall F' of the said shuttle-race F, and of which slots the slot G' is straight and in line with the shuttle-race, while the other slot, G, is inclined and is in line at its lower end with the shuttle-race and the lower end of the other slot, G'.

It will be seen that when the needles E and E' move downward they pass through the cloth opposite each other; but the point of the needle E, passing into the inclined slot G, is bent inward, and when in its lowest position is in line with the point of the other needle, E', and also in line with the shuttle-race F, and when the shuttle C now moves forward it passes through the loops of thread formed by both needles and locks both loops by its shuttle-thread simultaneously and in the same manner as an ordinary loop of one needle-thread.

Instead of using the wall of the shuttle-race for guiding the needles E and E' in the straight slot G and in the inclined slot G', I may use a separate piece having a straight slot and an inclined slot secured to the under side of the bed-plate, but in close proximity to the shuttle-race. One of the needles, preferably the needle E, may be removed, and the machine then operates as an ordinary single-stitch sewing-machine.

The needles E and E' are supported in the socket-piece H, having a reduced end, H', fitting into a socket or central aperture in the lower end of the needle-bar B. The socket-piece H is provided with a slot, into which fits a frame, I, having a central recess, I', into which the needle ends are placed alongside of each other and held securely by a set-screw, J, screwing through the socket-piece H upon the ends of both needles. The frame I is also provided with two prongs, I'', which fit in recesses formed on the socket-piece H, and thus prevent a sidewise motion of the upper part of the frame I, which is held in place in the socket-piece H at its lower end by a ring, K, fitting over the socket-piece H and the frame I and having a downwardly-extending eye, K', through which pass the needle-threads L and L' before entering the eyes of the needles.

The threads L and L' before entering the eye K' are acted upon by the take-up N, which is located in front of the head A', and consists of the spring-lever O, actuated by the up-and-down movement of the presser-bar P and provided at its lower end with two eyes, O' and O², placed alongside each other, and through which pass the respective threads L and L', which, before entering the eyes O' and O², pass over a pin, Q, and after leaving the eyes O' and O² pass over a similar pin, Q', before entering the eye K' on the needle-bar B. A spring-bar, Q², extends from one pin, Q, to the other pin, Q', and prevents the threads L and L' from slipping off the said pins Q and Q'.

The bobbin-carrier R is located on top of the arm A² of the sewing-machine A, and between it and the head A' is located the tension device T. (Shown in Figs. 1 and 9.) This device consists of the bottom plate, U, provided on its front end with a cross-bar, U', and its rear end with two bent springs, U², each of which supports a spring-plate, V, held in contact at its front end with the cross-bar U' by means of a nut, U³, screwing on a bolt, U⁴, and against the top of the said plate V. Each bolt U⁴ is secured to the bottom plate, U, and passes upward through a slot in the said spring-plate V. Each of the plates V is provided with an eye, V', between the nut U³ and its front end. The threads L and L' from the respective bobbins on the carrier R are led to an eye placed near the tension device T and then passed, respectively, to the eyes V' of the spring-plates V. The threads are then led from the under sides of the spring-plates V toward the front and passed between the said spring-plates and the cross-bar U', the tension being regulated by the nut U³. The threads then pass from the tension device to a roller, W, held on the head A', and then pass through a slot in the top of the needle-bar B and then down to the take-up N, as before described.

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

1. The combination, in a sewing-machine, with the needle-bar, a race, a shuttle, and an operating mechanism, of two needles carried by the needle-bar and at an angle to the width of and both entering the same race, and mechanism for bringing the points of the needles into position within the race for the single shuttle to take both loops, substantially as set forth.

2. The combination, in a sewing-machine, with the needle-bar, the shuttle, the race, a slot having vertical walls, a slot having an inclined

wall, the slots being at their bottoms in a plane parallel with the inner wall of the race, below the needle-bar, and an operating mechanism, of the two needles carried by the needle-bar and set at an angle to the width of the race, whereby the inclined wall of the slot will throw the point of one entering needle into line with the other needle and the race, substantially as set forth.

3. In a sewing-machine, a socket-piece provided with a slot and a transverse set-screw entering the slot, the needle-carrying frame within the slot and having a needle-receiving recess in the path of the set-screw, and means for securing the said needle-frame within the slotted socket-piece, substantially as set forth.

4. In a sewing-machine, the slotted socket-piece having a transverse set-screw entering the slot and recesses at opposite sides of the upper end of the slot, the needle-carrying frame having a recess in its upper end to form prongs which enter the said recesses in the socket-piece and a needle-receiving recess in the path of the set-screw, and the ring surrounding the lower end of the socket-piece and frame, substantially as set forth.

5. In a sewing-machine, the slotted socket-piece, its needle-clamping set-screw, and the needle-carrying frame within said slot and having a needle-receiving recess in line with the set-screw, the ring surrounding the lower end of the socket-piece and frame, substantially as set forth.

6. The combination, with the needle-bar of a sewing-machine having a socket in its lower end and a set screw, and the operating mechanism, of the socket-piece having a reduced upper end entering said socket and provided with a vertical slot and a transverse set-screw, the needle-carrying frame having a vertical needle receiving recess in line with said transverse set-screw, and the ring surrounding the lower end of the socket-piece and frame, substantially as set forth.

7. In a sewing-machine, the take-up N, consisting of the spring-lever O, pivoted at its upper end to the front of the head and operated from the presser-bar, the two eyes O' O², placed alongside of each other at the lower end of said lever, the pins Q Q' on the head, one above the other at opposite sides of the eyes, and the spring Q², extending from one pin to the other, substantially as set forth.

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Witnesses:

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