G. H. W. CURTIS.

Overseaming Attachment for Sewing-Machines.

No. 220,964. Patented Oct. 28, 1879.

Fig. 1.

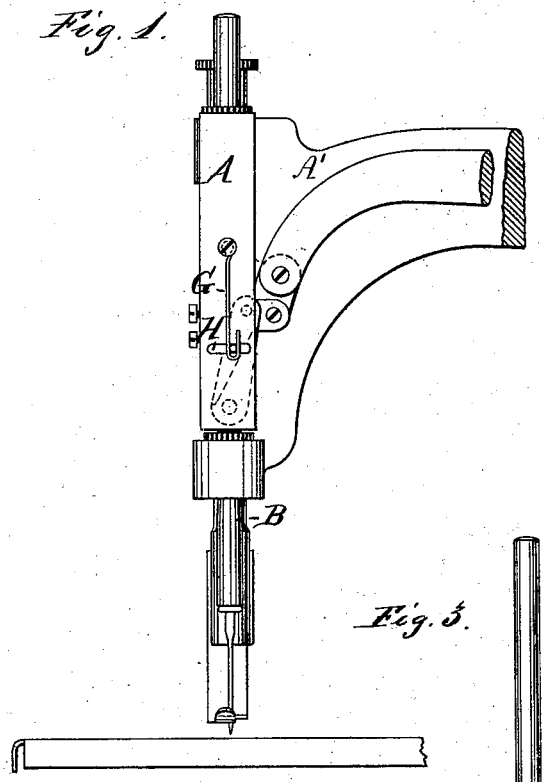

Fig. 2.

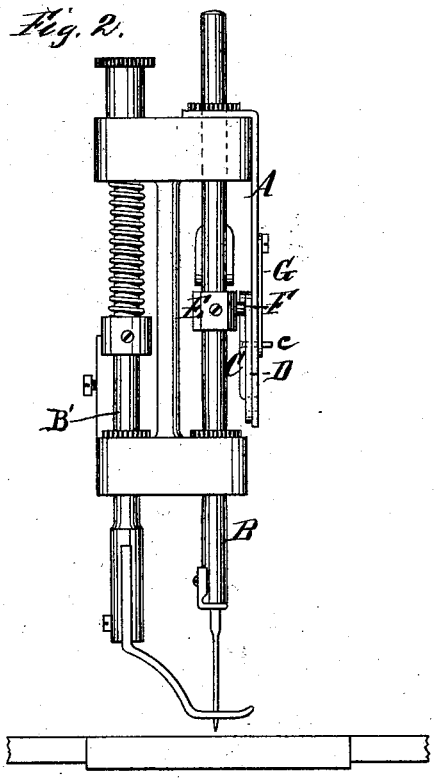

Fig. 3.

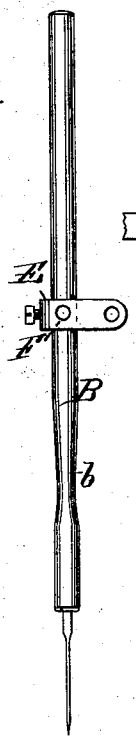

Fig. 4.

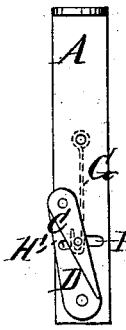

Fig. 5.

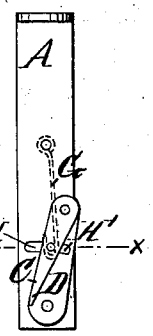

Fig. 6.

Fig. 7.

Witnesses.
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UNITED STATES PATENT OFFICE.

GEORGE H. W. CURTIS, OF BROOKLYN, N. Y., ASSIGNOR TO WHEELER & WILSON MANUFACTURING COMPANY, OF BRIDGEPORT, CONN.

IMPROVEMENT IN OVERSEAMING ATTACHMENTS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **220,964**, dated October 28, 1879; application filed March 1, 1879.

To all whom it may concern:

Be it known that I, GEORGE H. W. CURTIS, of Brooklyn, county of Kings, State of New York, have invented a new and useful Improvement in Overseaming Attachments for Sewing-Machines, which is fully set forth in the following specification, and illustrated in the accompanying drawings, in which—

Figure 1 is a side view of the head of a sewing-machine with my invention applied thereto. Fig. 2 is a front view thereof. Fig. 3 is a view of the needle-bar made use of by me. Figs. 4 and 5 are back views of the switch-plate, showing the switch in different positions. Fig. 6 is a top view of the throat-plate, and Fig. 7 is a cross-section of the supporting-plate, switch-plate, and switch, taken on the line *x x* of Fig. 5.

My invention relates to that class of devices or attachments which are applied to sewing-machines to adapt them to overseam the edges of fabrics or to stitch button-holes; and it has for its object the production of a cheap and efficient attachment, which may be readily applied to many of the various sewing-machines employing a straight needle-bar with but little change, said attachment being adapted to perform the service above stated in a complete and economical manner.

To this end my invention consists in the peculiar construction and combination of a needle-bar, switch, switch-plate, spring, and supporting-plate, as hereinafter described, and specifically pointed out in the claim.

Referring to the accompanying drawings, in which like letters designate like parts in all of the figures, A′ is the head, B the needle-bar, and B′ the presser-bar of a sewing-machine, which may be of any ordinary or suitable construction. I have shown, however, in the drawings my improvements applied to the Wheeler & Wilson No. 8 machine, to which it is specially adapted.

The needle-bar B, which slides in suitable bearings in the head of the machine, is cut away on opposite sides at the point *b*, where it works through the lower bearing, to admit of a lateral movement being given to the same during its vertical reciprocation. This reciprocation is imparted to the needle-bar from the operating-cam, in the usual manner, by the needle-lever, connected at its forward end to the said needle-bar by the collar E, rigidly secured thereto, said collar E being provided with the pin F, which is adapted to operate the switch C and switch-plate D, the latter being pivoted, near its lower end, to the supporting-plate A, secured to the head of the machine.

As shown in the drawings, plate A is formed of a piece of sheet metal, having its upper end bent over at a right angle to its side, and being provided in such bent portion with an aperture, which is so formed relative to the other portions that it may be passed over the needle-bar and rigidly secured in place by means of the oil-cup screw at the upper bearing of the needle-bar. This supporting-plate A is provided with a curved slot, H, through which and the slot H′ in the switch-plate projects a pin, *c*, fixed to the switch C, which is pivoted to the upper end of the switch-plate D.

To the front side of the supporting-plate A is secured a spring, G. This spring G engages the pin *c*, fixed to the switch C, and serves to press said switch against the pin F on collar E, and thus effect the lateral movement of the needle-bar, and also to throw and retain the point of said switch in such positions that the opposite sides thereof will be engaged by the pin F at each alternate upward movement of the needle-bar.

The needle-bar B is, as before described, cut away or flattened on opposite sides at the point *b*, to admit of the lateral displacement of the same in its lower bearing. This displacement is, however, only for a sufficient time to enable the point of the needle to enter the cloth; after which, as the whole or rounded part of said needle-bar reaches the lower bearing, said needle-bar is returned to its original vertical position, so that the needle will correctly engage the hook or shuttle beneath the bed-plate of the machine.

In order to admit of the lateral movement of the needle-bar, the needle-hole J in the throat-plate I is elongated, as shown in Fig. 6, and the hole in the presser-foot is also similarly formed.

The operation is as follows: Just before the needle enters the material, pin F on collar E

strikes switch C on the right side, pressing needle-bar B over to the right, so that the thread is carried off the material and down through the button-hole, when the loop is formed and taken up by the rotating hook, or its equivalent, as usual. As needle-bar B rises, pin F comes up on the left side of switch C and pushes switch-plate D over to the right, and spring G on supporting-plate A throws the point of switch C to the left. Pin F on collar E strikes switch C on the left side, pressing needle-bar B over to the left, so that the thread is laid over and upon the material the distance of the lateral play of the needle before it enters the material. The pin F next ascends on the right side of switch C, and pushes switch-plate D over to the left, and, repeating the movements previously explained, the needle's next descent is through the button-hole, this alternate movement off and on continuing indefinitely.

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

The combination of the needle-bar B, cut away on opposite sides, as described, and provided with collar E, carrying pin F, with the switch C, switch-plate D, spring G, and supporting-plate A, substantially as and for the purpose set forth.

GEORGE H. W. CURTIS.

Witnesses:

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JOHN W. RIPLEY.