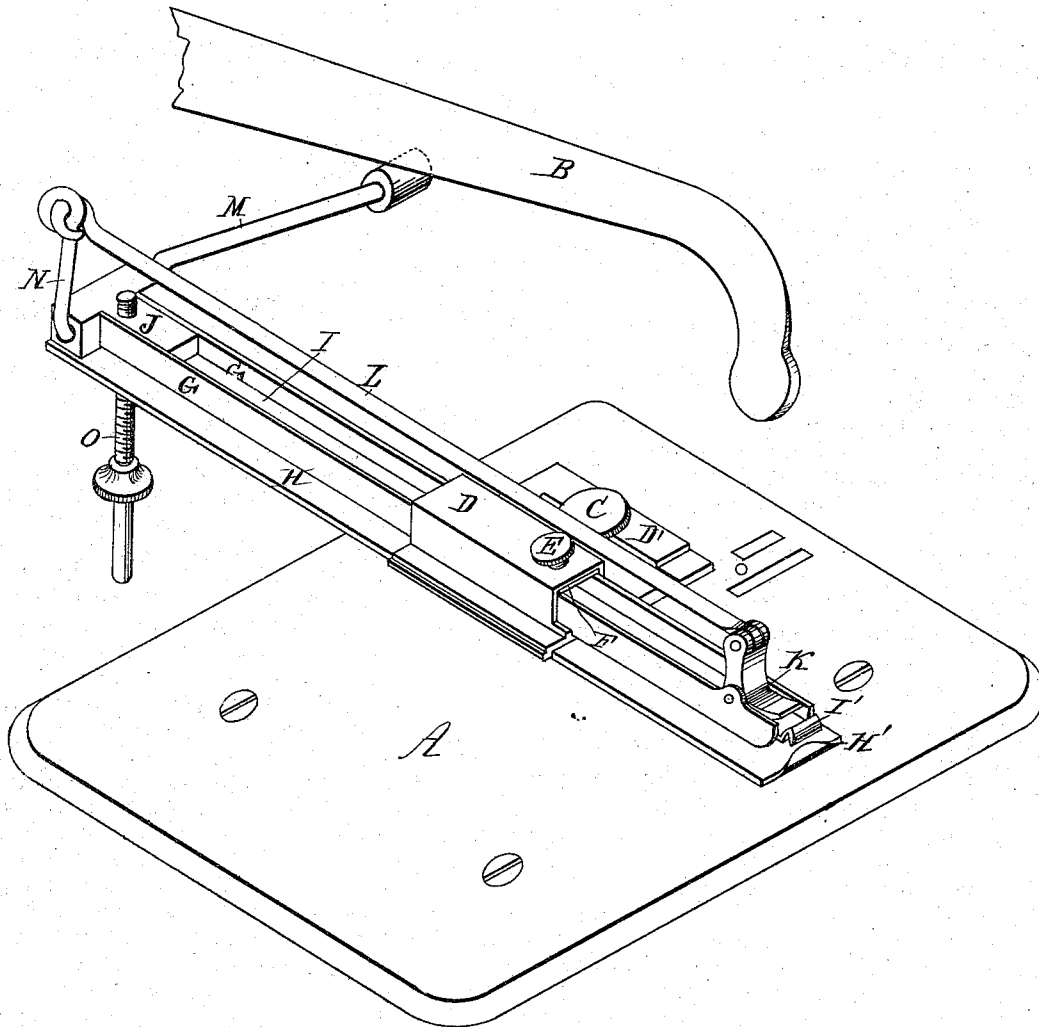


A. STEWARD.

Tuck-Markers for Sewing-Machines.

No. 157,649.

Patented Dec. 8, 1874.



Witnesses.

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AURELIUS STEWARD, OF BRIDGEPORT, CONNECTICUT.

## IMPROVEMENT IN TUCK-MARKERS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **157,649**, dated December 8, 1874; application filed September 2, 1874.

*To all whom it may concern:*

Be it known that I, AURELIUS STEWARD, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain Improvements in Tuck-Markers, of which the following is a specification:

The nature of my invention consists in constructing a marker or creaser, which is used upon a sewing-machine in the operation called tucking, in such a manner as to be convenient in its management, silent, yet effective, in its operation, and especially so as to be durable when operating at very high rates of speed, as when machines are driven by steam-power.

The accompanying drawings, which form a part of this specification, show my tuck-marker in perspective, full size, attached to the cloth-plate of a Wheeler & Wilson sewing-machine, as in use, with parts lettered as follows:

A shows the cloth-plate of the sewing-machine; B, the needle-arm of the same; C, a thumb-screw; D D', the gage; E, a set-screw; F, the gib; G and G', side rails; H H', the blade-plate; I I', a notched spring; J, the frame; K, the rocking-foot; L, the connecting-rod; M, the operating-lever; N, the short lever; O, the screw-post.

For convenience in construction, the side rails G and G', blade-plate H H', and notched spring I I' are made in separate pieces, of a size and shape shown in the drawings, and all attached by riveting or otherwise to the frame J, thus securing these parts together. That part of the frame J to which the side rails and the notched spring are attached is made thinner vertically than the part to which the blade-plate is secured, in order that the side rails and notched spring may stand apart from the blade-plate far enough to allow, when in operation, the fabric to be inserted between their forward ends, as hereinafter described. The parts of the gage D and D' may also be made separately, and connected together by screws, or otherwise, being when completed, however, equivalent to one piece, as represented in the drawings, the part D having an aperture through it longitudinally, through which the notched spring I I' and the side rails G and G' may be passed before those parts are secured to the frame J; and the

part D' having a groove in its under side, beneath the part D, of suitable size to receive the blade-plate H H', and through which it may slide freely. Through a screw-hole in the part D of the gage I insert the set-screw E, and connect with the end thereof a thin square metal plate or gib, one edge of which is shown at F, the point of the set-screw passing through a hole in the center of the gib, and secured by riveting—not so as to prevent the set-screw from being easily turned, but sufficient to prevent its being removed. This gib extends over the edges of the side rails G and G', that, by turning the set-screw, the side rails may be clamped between the gib and the portion of the gage opposite, and the creasing portion of the instrument thus held in any required position. To support the rear end of the tuck-marker, and for the purpose of adjusting it, as hereinafter described, the screw-post O is screwed into a hole in the frame J, the lower end of the screw-post standing upon the frame of the sewing-machine. (Not shown in the drawings.) The gage D D' is secured to the cloth-plate A of the sewing-machine by means of the thumb-screw C, which passes through a slot, as shown in the drawings. The blade-plate is turned up at the forward end, reduced in thickness to form a blade having a moderately-sharp edge, and shaped, as shown at H', to act in connection with the notch formed upon the forward end of the notched spring, as seen at I', in forming, when in operation, a crease in the fabric, in a manner now common in tuck-markers. Passing through a hole in the frame J, or otherwise pivoted to that part, is the operating-lever M, which, when intended for those machines having a vibrating needle-arm, is constructed in the shape plainly shown in the drawings, its upper end being provided with a roller to diminish the friction caused by its contact with the needle-arm of the machine. For those machines, however, which have no vibrating arm, the lever M is extended further forward, nearly parallel with the side rails G and G', its forward end coming in contact with the needle-bar, and provided with a slot, through which the needle may pass to keep the lever in position, the slot being of sufficient length to allow the instrument to be adjusted from

front to back to produce any width of tuck desired. The operating-lever M also extends through the frame J, where it is again bent upward to form the short lever N, which short lever is connected by a joint at its upper end with the connecting-rod L.

Between the side rails G and G, near their forward ends, is pivoted the rocking-foot K, which rocking-foot is also, at its upper end, jointed to the other end of the connecting-rod L.

It will be seen, then, that as the operating-lever M is depressed by the needle-arm or needle-bar, motion will be communicated through the short lever and the connecting-rod to the rocking-foot K, causing it to act upon the notched spring, forcing the notch I' down upon the blade H', to form a crease in the fabric, as before stated.

It is evident that whatever pressure may be exerted by the rocking-foot upon the notched spring will be exerted in an opposite direction upon the side rails G and G, for which reason the side rails are placed edgewise that they may withstand completely whatever strain is exerted upon them.

The notched spring is so formed that, if free, the notched end would stand much higher than when confined in its place, that it may, when forced down upon the fabric in the manner described, and permitted to recoil, by acting upon the rocking-foot and the connecting mechanism, raise the operating-lever to its first position. Now, when in its movement, the needle-arm B is at its lowest point, its under surface is in a horizontal position, and hence the downward movement of the operating-lever will always be the same; but when the tuck-marker is set forward, as is necessary in making wide tucks, it will be seen that the upward movement of the needle-arm, where it comes in contact with the operating-lever, is much greater. In order, then, that the reaction of the notched spring may be sufficient whatever position on the machine the tuck-marker may be placed in, the under side of the rocking-foot is made curvilinear in form, that, as it is thrown back, the point of its contact with the notched spring will be nearer the pivot upon which it vibrates, thus short-

ening the leverage, and thereby imparting, in all cases, sufficient sweep to the operating-lever, to hold it with a light but constant pressure against the needle-arm. It will, therefore, be seen that there is at no time any slack or lost motion in any of the parts between the needle-arm B and the notched spring, and as the notched spring vibrates but a short distance, the notch I' does not meet the blade H' or the interposing fabric with any shock, the result being that the machine may be run at the highest speed attainable in practical work with no perceptible noise of the tuck-marker, and the least possible injury to the sewing-machine.

When in use, the tuck-marker is attached to the machine in the manner described, and the gage set in such proximity to the needle as to produce the proper width of tuck. The side rails and connected parts may then be slid forward or back through the gage, until the notch and blade are in a position to produce the crease for the succeeding tuck at the proper distance from the first, and these parts secured in place by tightening the set-screw E. The fabric being inserted beneath the side rails and above the blade-plate, if the pressure upon the fabric is either too great or insufficient to produce a perfect crease, the notch may be made to exert the proper amount of pressure upon the blade by slightly elevating or depressing the rear end of the tuck-marker by means of the screw-post O.

I claim—

1. The combination of the rocking-foot K, side rails G and G, notched spring I I', connecting-rod L, short lever N, and operating-lever M, all constructed and operating substantially as described.

2. The combination, with the frame J, side rails G and G, blade-plate H H', and notched spring I I', with its operating mechanism, of the screw-post O, for regulating the pressure of such notched spring upon the projecting lip of the blade-plate H H', as and for the purposes specified.

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Witnesses:

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CHARLES H. DIMOND.