R. H. PEABODY.

Sewing Machine.

No. 102,586. Patented May 3, 1870.

Fig. 1.

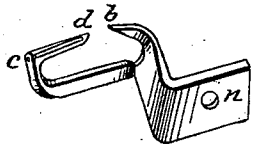


Fig. 2.

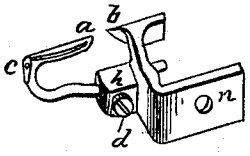
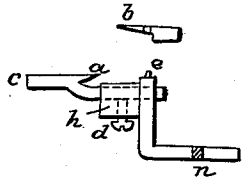


Fig. 3.



Witnesses:
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RUFUS H. PEABODY, OF CHELSEA, MASSACHUSETTS.

Letters Patent No. 102,586, *dated May* 3, 1870.

IMPROVEMENT IN SEWING-MACHINE.

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, RUFUS H. PEABODY, of Chelsea, in the county of Suffolk and Commonwealth of Massachusetts, have invented a new and useful Improvement in Button-hole-stitching Machines; and I do 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.

My invention is applicable to what is called the "Union Button-hole-stitching Machine," manufactured by the "Union Button-hole and Embroidery-machine Company," of Boston, Massachusetts, and consists in a new form and construction of the "under needle and looper" used in said machine.

Figure 1, of the drawings, represents the under needle and looper in one piece, as hitherto constructed and used in said machine.

Figure 2 represents my improved under needle and looper, which is constructed in separate parts, with an adjustable needle-point, *a*, and a looper-point, *b*, made separately, as shown in Figure 3, and riveted or brazed onto the projection *e*, milled thereon for that purpose, the advantage of which is that it greatly facilitates the construction of said loopers.

The needle *a* is grooved on one side from *c* to near the point *a*, and drilled through the back at *c* into said groove; also through the point at *a*, through which holes and groove the under thread passes when the machine is threaded up.

The looper is attached to a lever by a screw at *n*, which lever, being actuated by a cam, imparts a reciprocating motion to said looper and under needle when the points *a* and *b* alternately pass through the loop of the upper needle.

There are two kinds of said machines constructed termed "narrow-gauge" and "broad-gauge" machines.

The distinction is that the "broad-gauge" machine stitches farther into the cloth around the button-hole, as some classes of goods and garments require a deeper and firmer stitch than others.

The broad-gauge machine requires more space between the the needle and looper-points *a* and *b* than the narrow gauge requires, consequently, by the old method of constructing these parts in one inseparable piece, there have to be two kinds, corresponding to the two gauges of machines.

In practical use the under needle is sometimes broken in consequence of the upper needle's getting sprung, or improperly set, and coming in contact with the under needle. When such accident happens to the old form of under needle now in use, it renders useless the looper also, they being inseparable, and an entire new part has to be supplied.

Now, my improvement, as shown in figs. 2 and 3, is designed to obviate, first, the necessity of having two kinds of under needle and looper, adapted, respectively, to narrow and broad-gauge machines; and, secondly, the necessity of throwing away the whole part when the needle-point *a* only is broken.

In my new form of under needle and looper, represented in fig. 2, the needle *a* is constructed of steel wire, suitably formed and finished, and having a straight shank, which passes through the projecting part *h* of the looper, and is held in place by the set-screw *d*. The shank of the needle is left long enough to allow of its being moved, when freed from the set-screw *d*, so as to adjust its point, *a*, to that of the looper *b*, to apply to either narrow or broad-gauge machines; and, in case of accidental breaking of the needle-point, it may be entirely removed, and a new and perfect one substituted for it without changing the looper *b*, and at much less expense and trouble than would be occasioned by the substitution of an entire new needle and looper of the old pattern.

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

An under needle and looper, constructed in separate pieces and parts, said pieces and parts being attached and adjusted to each other, substantially in the manner and for the purposes described.

RUFUS H. PEABODY.

Witnesses:

EUGENE HUMPHREY,

HENRY HYDE SMITH.