E. BOUSCAY, Jr.

Sewing-Machine.

No. 127,145 Patented May 28 1872.

Fig. 1.

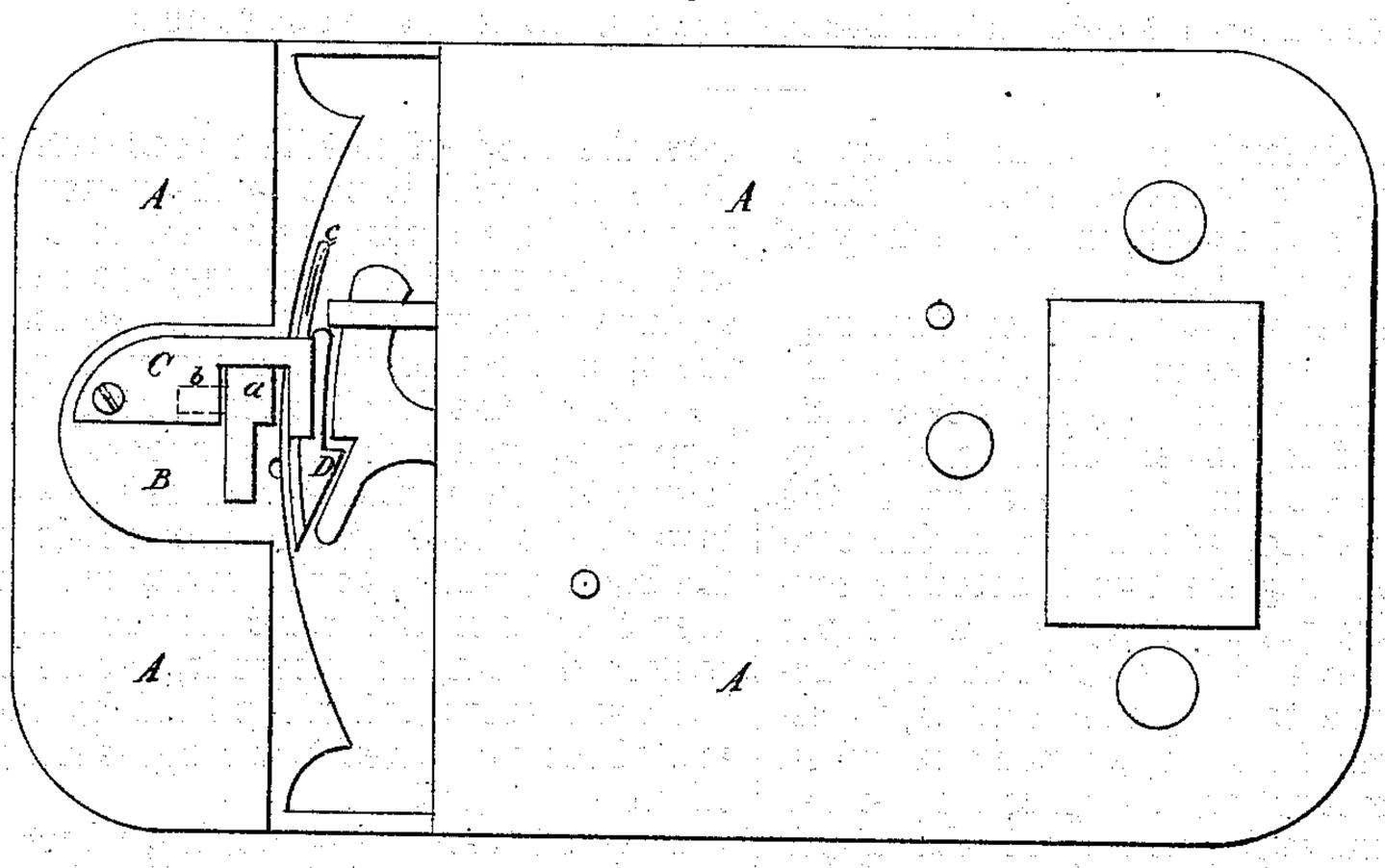


Fig. 5.

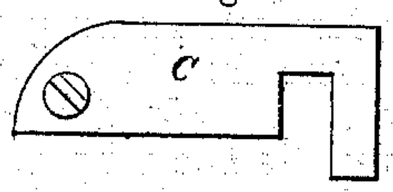


Fig. 6.

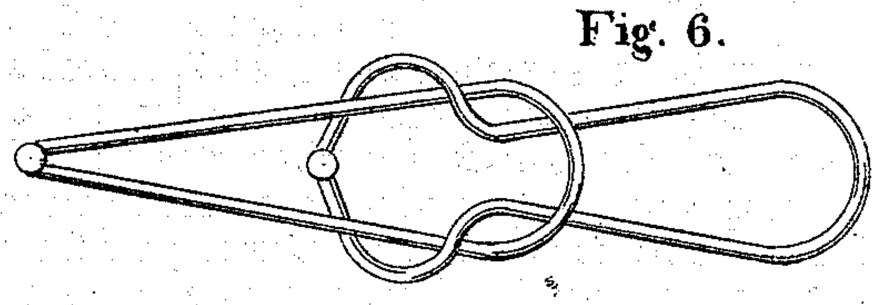


Fig. 2.

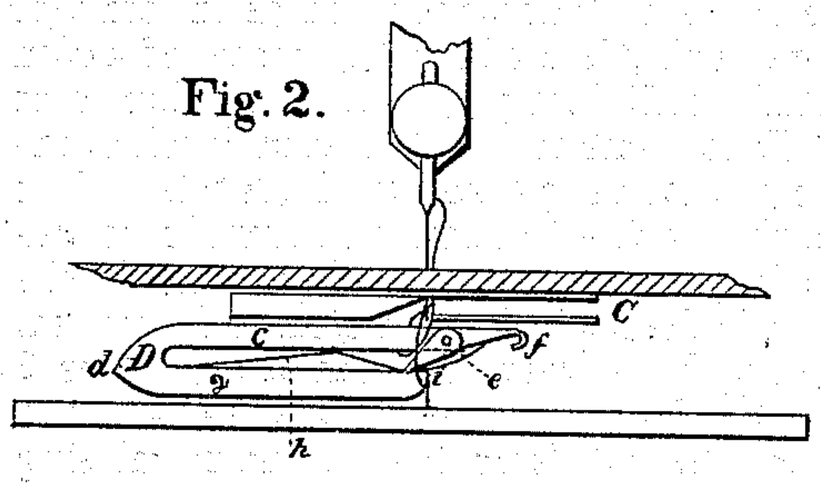
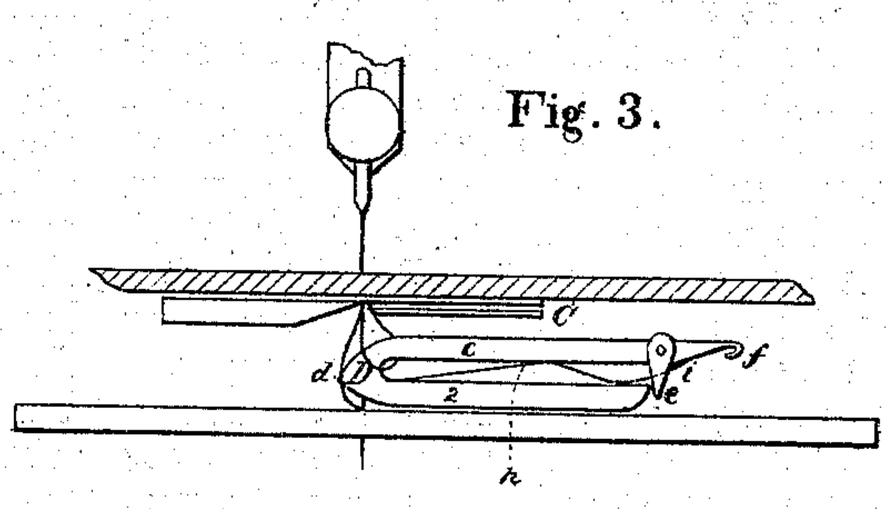


Fig. 3.



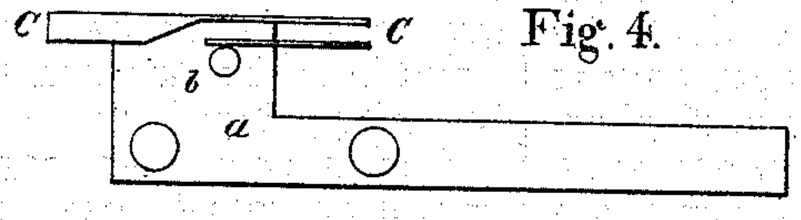


Fig. 4.

WITNESSES:

Frank Baker
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INVENTOR:

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127,145

UNITED STATES PATENT OFFICE.

ELOI BOUSCAY, JR., OF NORWALK, OHIO.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 127,145, dated May 28, 1872.

Specification describing certain Improvements in Sewing-Machines invented by ELOI BOUSCAY, Jr., of Norwalk, in the county of Huron, and State of Ohio.

My invention relates to that class of sewing-machines which use only one thread, and make a stitch called single-thread lock-stitch; and the object of my invention is to simplify and make more certain the operation of the stitch-making device; and my invention consists, first, in uniting the two heretofore separate parts, known, respectively, as looper and looper-driver, and making them substantially one and the same piece; second, in securing the latch in an open position, when required, by means of a depression, either stationary or movable, acting on the upper portion of the latch projecting by the looper for that purpose.

Figure 1 is a plan view of a sewing-machine base embodying my improvements with needle and cloth-plates removed. Fig. 2 is a detail side view of a sewing-machine shuttle-race, containing my looper in its forward portion and in the act of forming a stitch. Fig. 3 is a similar view, with the looper in a position to take a loop from the needle. Fig. 4 is a detail side view of a feeding-bar, showing the pin which raises the latch-opener when required. Fig. 5 is a plan view of my latch-opener as at present used. Fig. 6 is a diagram, illustrating the single thread-woven or lock-stitch as made by my improved looper.

A is a sewing-machine base; B, the recess for needle-plate. C is the latch-opener. *a* is the feed-bar; *b*, in dotted lines, is a pin, projecting out of the side of the feed-bar and under the latch-opener, by means of which the feed in its upward movement, preparatory to feeding the fabric along, raises the latch-opener out of contact with the looper when moving backward, and while the first loop slides on the bar *c* toward the point of the looper D and over the latch *e*, and allows the thread to draw the latch open without any obstruction, as in Fig. 3, in which C is the latch-opener raised, and D the looper, about to take a loop from the needle. When the looper enters the loop of needle-thread the feed-bar drops, and with it the latch-opener C, which is, in itself, a spring, fastened to the base A at the bottom of the needle-plate recess B on a plane level with the top of the looper, and the opener comes in contact with the upper portion of the latch *e* projecting above the looper D, opens the former, and holds it in that position until the loop is drawn past it toward the back end of the looper and into the hook *f*, while, at the same time, the loop then sliding on the bar *c* toward the hook *f*, strikes the latch *e*, closes it, passes over the hook and around the loop held by this hook, and these movements are repeated for each stitch.

The stitch-forming device, which I call a looper, and lettered D, is fully illustrated in Figs. 2 and 3. It is composed of a bar, *c*, and base, 2, united at the left, and forming a point, *d*, similar to a common shuttle-point. The bar *c* is provided with a hook, *f*, and latch, *e*, which is closed over the hook by the loops passing off from the bar *c*. The end of said latch *e* opposite that which comes in contact with the hook *f* is made in the shape of a cam projecting sufficiently through the bar *c* of looper D to come in contact with latch-opener C as the former passes by the latter. This causes the latch *e* to open and remain so until the loop has been drawn up back of the looper into the hook *f*, as heretofore described. The spring *h* between the bar *c* and base 2 has for its object to prevent accidental long loops passing off from the bar from missing the latch, and the guard *i* at the rear of base 2 is to prevent the thread from drawing up suddenly against the bar *c* and opening latch *e* and hold the latter in such a manner as to break the thread.

The latch-opener may be either movable or stationary, as I have used a stationary projection with entire success. Neither do I confine myself to the particular shape of the latch, nor direction in which it opens, as it can open at the side of the bar *c* and embody the same principle.

Having thus described my invention, I do

not claim broadly the mechanism to produce the peculiar stitch herein mentioned; but—

I claim as my invention—

1. A looper, D, composed of two rigidly-connected parts, *c* and 2, the former being provided with a hook, and constructed and operating substantially as described.

2. The combination of the latch *e*, with its heel projecting through the bar *c* of the looper, with a projection operating to open such latch, as described.

3. The movable latch-opener, combined with the looper, and operated by the feeding-device, as and for the purpose set forth.

ELOI BOUSCAY, JR.

Witnesses:

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PETER GRAY.