J. S. LEVER.
Book Sewing-Machine.

No. 209,061. Patented Oct. 15, 1878.

FIG. 1.

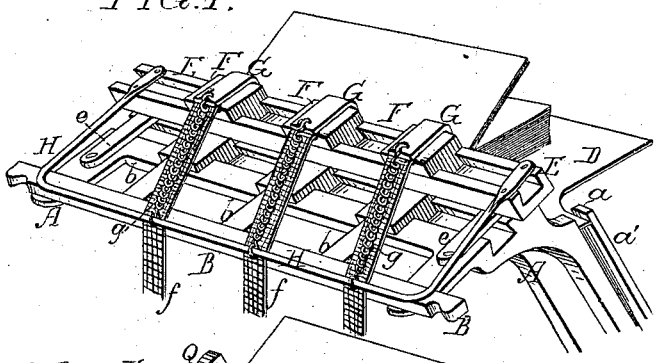


FIG. 2.

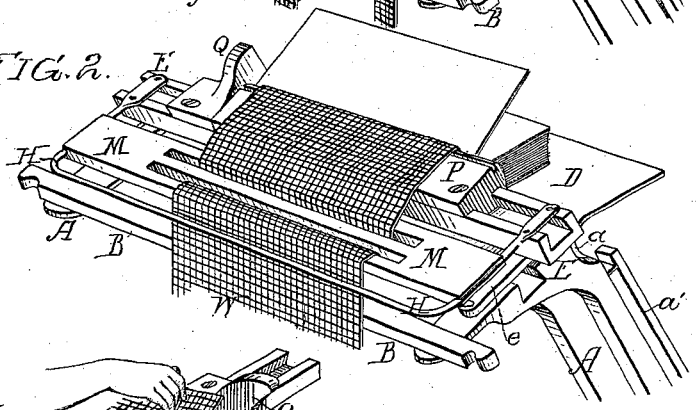


FIG. 4.

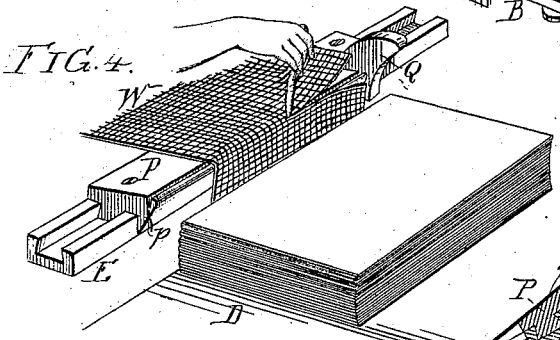
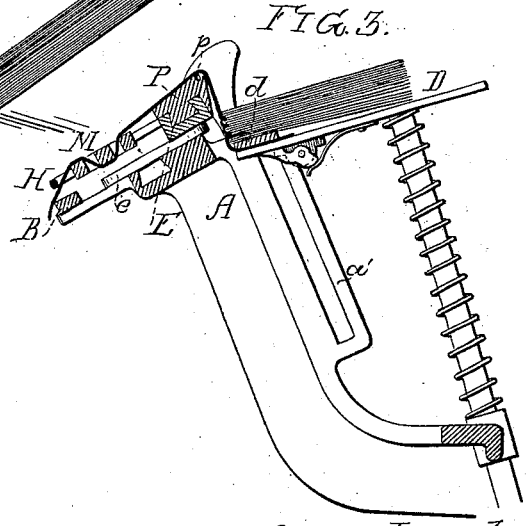


FIG. 3.



Witnesses,
Harry Smith
John M. Diemer.

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James S. Lever
by his Attys. Howson and Sons

UNITED STATES PATENT OFFICE.

JAMES S. LEVER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN BOOK-SEWING MACHINES.

Specification forming part of Letters Patent No. **209,061**, dated October 15, 1878; application filed September 20, 1878.

To all whom it may concern:

Be it known that I, JAMES S. LEVER, of Philadelphia, Pennsylvania, have invented a new and useful Improvement in Book-Sewing Machines, of which the following is a specification:

My invention consists of certain improvements, fully described hereinafter, in book-sewing machines, and especially in the machine which forms the subject of Letters Patent No. 191,426, granted May 29, 1877, to the Novelty Paper Box Company, as assignees of Henry R. Heyl and Hugo Brehmer; the object of my improvements being to render the machine available for securing sections of a book to a binding fabric as wide, or nearly so, as the sections are long, according to the plan described in the reissued Letters Patent No. 8,195, granted to me April 23, 1878.

In the accompanying drawings, Figure 1 is a perspective view of that part of the above-mentioned patented book-sewing machine to which my improvements relate; Fig. 2, a similar perspective view, showing my improvements; Fig. 3, a vertical section of Fig. 2; and Fig. 4, a perspective view, showing the method of cutting the binding-strip after the sections have been sewed.

It has not been deemed necessary to illustrate in the drawings the mechanism for forming, presenting, and inserting the staples in the open book sections or signatures, or the mechanism for operating the same, or the entire clinching mechanism, as these parts of the machine may be the same as those shown in the aforesaid patent granted to the Novelty Paper Box Company.

In Fig. 1, A is the oscillating bracket, which carries at its upper end the clinching devices, as in the said machine; and D, the adjustable table, on which the signatures or sections to be secured to the binding fabric are successively placed, lugs *a* on the opposite ends of this table being adapted to guides *a'* in the arms of the bracket A. B is the bar which carries the clinching devices *b b*, described in the aforesaid patent, three of these devices and a corresponding number of tapes and tape-guides being shown in Fig. 1. The grooved bar E, to which these tape-guides F are secured, is connected to the bracket A immediately above the clinching devices by arms *e*.

The guides F have grooves in their upper surfaces for the reception of the tapes *f*, which are held in position by clamps G, connected by springs *g* to the frame H, the inner ends of the tapes being attached to the table D by the spring-clamp *d*, Fig. 3.

The parts described above are substantially as those described in the aforesaid patent granted to the Novelty Paper Box Company.

In endeavoring to bind books by the patented machine having the above-described parts, I ascertained that tapes *f* were defective features in the binding, for the reason set forth in my above-mentioned reissued patent, and, determining that a strip of open fabric wide enough to extend from end to end, or nearly so, of the sections of the book was superior to the tapes, I made the following improvements in the machine for the purpose of carrying my invention into effect.

I discarded the guide-blocks F and spring-clamps G, and secured to the grooved bar E a plate, P, long enough to form a continuous bearing for a binding fabric which is as wide, or nearly so, as the book-sections are long, which the machine is adapted to sew. At one end of this plate I prefer to arrange a stop, Q, which serves as a guide for the operator in placing each section in a proper position to be stitched; and along the upper edge of the plate, on the side adjacent to the table D, I form a narrow groove, *p*, for a purpose explained hereinafter.

To the opposite ends of the frame H is adapted a slotted bar, M; or separate bars secured to the ends of said frame may be substituted for this slotted bar.

The strip of fabric W, drawn from a roll arranged on the lower part of the machine, is first passed over and under the bars formed by the slots in the bar M, and then over the plate P, the end of the strip being confined to the plate D by the clamp *d*, as shown in Fig. 3. By thus passing the fabric through the slots in the bar M it receives a proper tension, and its uniform bearing on the plate P is assured.

Section after section of the book is secured

to the fabric W by the stapling devices used in the patented machine for securing the sections to the objectionable tapes.

When the number of sections necessary to complete the book had been stitched to the tapes in the original machine, it was usual to cut the tapes with a pair of scissors, the spring-clamps being first removed for that purpose. I dispense with the use of scissors by forming in the plate P the above-mentioned groove *p*, so that when the required number of sections have been secured to the binding fabric W all that is necessary to sever the strip is to draw a knife along this groove in the manner shown in Fig. 4, after which the end of the fabric is released from the clamp *d*, the sections are removed from the table D, the fabric is drawn forward, and its end clamped to the table prior to the securing of another set of sections to it.

I claim as my invention—

1. The combination of the table for supporting the sections, in a book-sewing machine, with a plate or bar, P, having a plane surface long enough to constitute a continuous bearing for a binding fabric which is as wide, or nearly so, as the sections are long, all substantially as set forth.

2. The combination, in a book-sewing machine, of the table D, for supporting the sections, with the plate P, having a groove for guiding a severing-knife, as described.

3. The combination of the plate P and the tension bar or bars M.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAS. S. LEVER.

Witnesses:
HARRY A. CRAWFORD,
HARRY SMITH.