

(No Model.)

W. W. NEEL.
METHOD OF SEWING BOOKS.

No. 384,211.

Patented June 5, 1888.

Fig. 1.

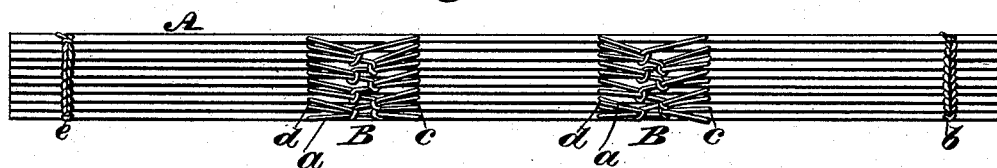


Fig. 4.

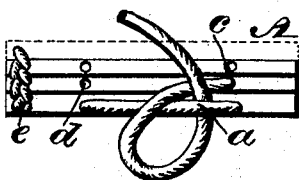


Fig. 3.

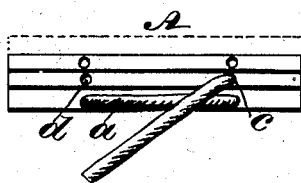


Fig. 2.



Fig. 5.

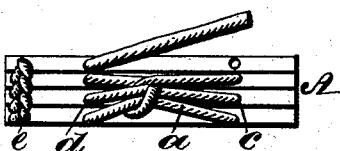


Fig. 6.



Fig. 7.

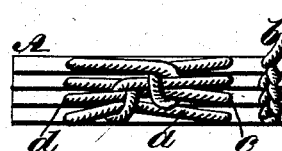
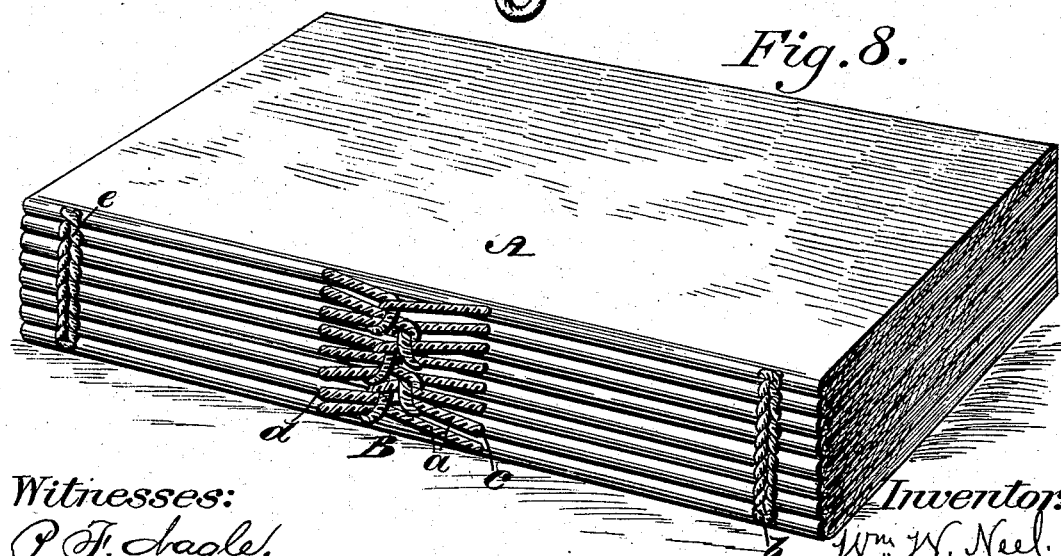


Fig. 8.



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UNITED STATES PATENT OFFICE.

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METHOD OF SEWING BOOKS.

SPECIFICATION forming part of Letters Patent No. 384,211, dated June 5, 1888.

Application filed May 24, 1887. Serial No. 2 9,309. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. NEEL, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in the Method of Sewing Signatures, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists in the method of sewing together the signatures of books, as herein-after fully set forth and claimed, whereby the book may be opened without the liability of breaking the connection of the back.

Figure 1 represents a view of the body of a book, taken from the back thereof, embodying my invention. Figs. 2 to 7, inclusive, are enlarged views representing various steps of book-binding embodying my invention. Fig. 8 represents a perspective view of the book, Fig. 1, on an enlarged scale.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A represents the signatures of a book, and B the binding thereof.

In carrying out my invention I pass the binding-thread, knotted at its end, through the first signature at the back thereof near its end to the inside, and then along the same, passing it out through the back, so as to form the long loop *a* on the back thereof. In the present case two such loops *a* are formed on the back of said signature in Fig. 1 and one loop in Fig. 8. The thread is then passed on the inside of the signature to the end thereof, and again through the signature to the back thereof and knotted, as at *b*, after which it is passed through the adjacent signature and passed into the latter and run along the same until it reaches the point *c*, where it is passed outwardly and over and around the thread of the loop *a* of the first signature, as shown in Fig. 4, and again passed into the second signature, as at *d*, whereby the two signatures are connected, it being noticed that the thread forming the loop of the second signature, after passing through the loop of the first signature, is passed over the thread as passed out of the opening *C* before entering the second signature at *d*. The same operation is repeated so as to connect the two signatures at the other loop of the first signature, and the

thread is next passed out the back of the second signature and passed through the knot on the end of the thread of the first signature at *b* from the under side. The thread is then passed into the third signature and run along the inside thereof toward the place of connection of the first and second signatures and passed outwardly, and then run through and interlaced with the two loops of said signatures, whence it is again passed into the third signature and tightened, thus firmly binding the three signatures. The thread is run along the inside of the third signature, then passed out of the same, and interlaced with the remaining loops of the first and second signatures, after which it is run to the end of the signature, passed out of the same, and knotted with the thread at the end of the second signature, and then passed into the fourth signature, after which the manipulation is similar to that hereinbefore described, excepting that the thread is interlaced with the loops of the second and third signatures, (see Fig. 6,) it being noticed that as the threads are alternately run to the right and left in adjacent signatures the interlacing of the thread with the loops is alternately to the right and left, (see Figs. 7 and 8,) so that the signatures are firmly connected and the body of the book securely bound, the book being also adapted to be opened to full extent without liability of breaking.

I do not limit myself to interlacing the loop of one signature with the loops of two adjacent signatures. As is evident, I may interlace the loops of contiguous signatures or the loops of three or more signatures, the latter, however, not being desirable, as it causes considerable strain on the thread.

I am aware that it is not new to connect the adjacent signatures of a book by interlaced or looped threads; but I am not aware that it is old to make such connected loops as herein described. Neither is it old to form said loops and connect the same by means of a continuous thread passing from the end of one signature to the end of the same, then entering the next signature at the adjacent end, and while being passed along the second signature looped with the loops of the first, whereby said signatures are secured together. Neither is it old to connect a series or number of signatures at their

ends and at intermediate points thereof, as herein described.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The method of sewing signatures, consisting in passing the thread in at the back of the signature, then carrying the thread along the interior thereof, and then passing it out to the back, returning it to the interior at a point on the back beyond its point of exit, thus forming a loop on the back of the signature, then carrying the thread along the interior of the signature, and then passing it out through the back of the said signature and into the back of the next signature, then along the interior thereof, and then out, interlocking it with the loop on the first signature, then into the back of the said second signature in such a manner as to form a loop on the back thereof, then carrying it along the interior of the second signature, and then out, and after knotting the thread with the thread at the adjacent end of the first signature passing it into the back of the third signature, then forming a loop on the back thereof interlocking with the loop on the back of the first signature, substantially as described.

2. The method of sewing signatures, consisting in passing the thread in at the back of the

signature near one end thereof, then carrying the thread along the interior of the signature toward the center, passing the thread out to the back and returning it at a point on the back beyond the point of exit, thus forming a loop on the back of the signature, then carrying the thread along the interior of the signature and passing it out near the other end, then passing the thread into the interior of the next signature and along the same, then out and interlocking it with the loop on the first signature, then into the second signature in such a manner as to form a loop on the back thereof, and then passed out, and, after knotting it with the thread at the adjacent end of the first signature, into a third signature, forming a loop on the back thereof in a similar manner, interlocking with the loop of the first signature, then forming loops in a similar manner on the backs of other signatures, the loop of each signature interlocking with those of the last two signatures, and the threads at the ends of each signature being knotted with the threads of the adjacent ends of the previous signatures, substantially as described.

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