

D. M. SMYTH

Improvement in Book Binding

Fig. 2.

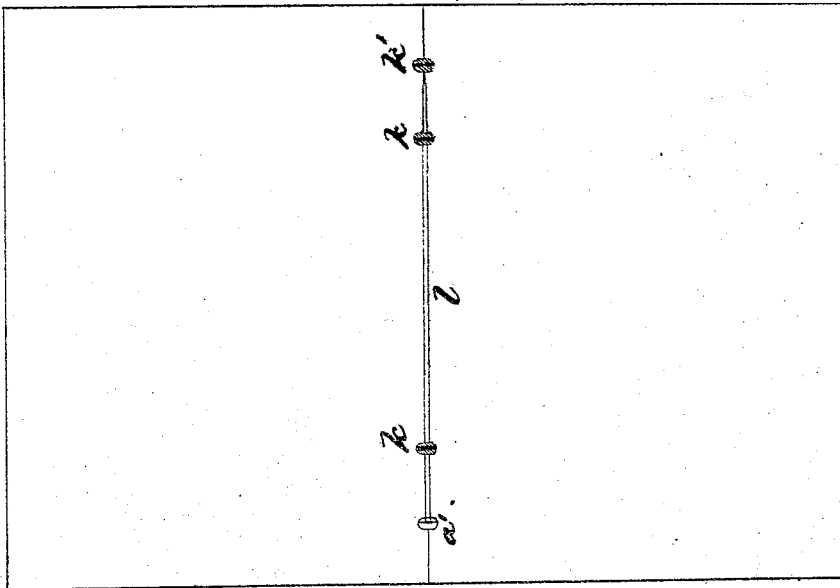


Fig. 3.

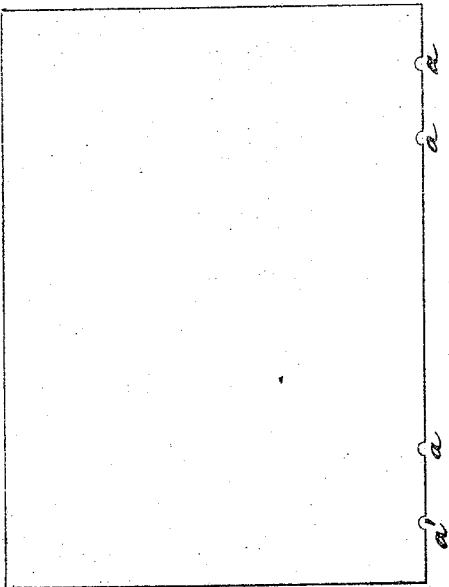
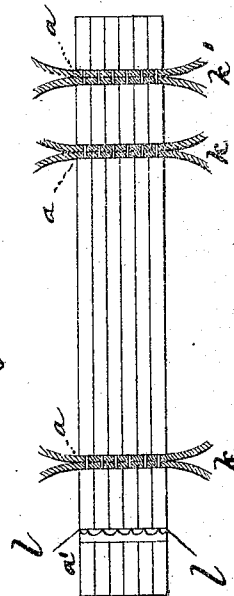


Fig. 1.



Lloyd J. Belt  
H. W. Brockmorton.

*Managers*

D. M. Smyth Inventor  
By asst. Atty. Am. Cr. U. Entine.

# UNITED STATES PATENT OFFICE.

DAVID M. SMYTH, OF ORANGE, NEW JERSEY, ASSIGNOR, BY MESNE ASSIGNMENTS, TO HENRY G. THOMPSON, OF MELFORD, CONNECTICUT.

## IMPROVEMENT IN BOOK-BINDING.

Specification forming part of Letters Patent No. 119,894, dated October 10, 1871.

*To all whom it may concern:*

Be it known that I, DAVID M. SMYTH, of Orange, in the county of Essex and State of New Jersey, have invented a new and useful Method of Sewing or Connecting Sheets of Paper into Books or Pamphlets; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is an elevation of the back of a book, the sheets of which have been sewed or connected according to my said new method; Fig. 2, a plan of such book opened to represent the relations of the several threads; and Fig. 3 is a separate view of a folded sheet with notches cut in the folded edge.

The same letters indicate like parts in all the figures.

The object of my said invention is to sew and unite the several sheets to constitute books or pamphlets by means more efficient than by any method before known.

The folded sheets which are to be connected or sewed together to constitute a book are first cut across at the back or folded edge to form a series of notches, as at *a a a a*, four such being represented in the accompanying drawings, but the number may be varied, and should be, according to the size of the book. These notches in the back edge form holes through the sheets when they are opened out, as in Fig. 2. A strong locking-thread, *k*, (or double thread, by preference,) is passed through each of the holes *a a a a* in one or a series of sheets. Another thread, *l*, termed the "interlacing-thread," is passed from the under surface of the said sheet or series of sheets through the first one of the said holes, which is marked *a'*, and laid along in front of the series of threads *k*; then around the last one of the series, marked *k'*; and then back on the other side of the series of threads *k*; and then again through the hole *a'*; and then the sheet or series of sheets is folded along a line passing through the series of holes *a' a a a*, taking care that in making the fold the series of threads *k k k* shall

be drawn out of the same holes but remaining in the notches. Another sheet or series of sheets is then laid on the pile, the holes *a a a*, as in the first instance, passing onto the threads *k k k'*, and the interlacing-thread *l* is passed, as before, through the hole *a'* along in front of the locking-threads *k k*, around the last one *k'* of the series, back behind the said threads *k*, and then through the said holes *a'*, and so on until the required number of sheets has been put together, and then the ends of the several threads are to be properly secured. In this way the locking-threads will be held in the notches at the folded edge of each sheet or series of sheets by the interlacing-thread, which will be on each side of the intermediate locking-threads, and around the one, *k'*, and through the hole *a'*; and as this interlacing-thread lies in the fold of each sheet or series of sheets, and it passes through the hole or notch *a'* in one sheet or series of sheets to the next, and when the sewing of the books is completed the two ends of the interlacing and of the locking-threads are properly secured, no one sheet or series of sheets can be separated from the others without tearing it or them the whole length along the line of the fold.

This method of sewing or connecting sheets of paper can be worked by means of the machinery described and secured by Letters Patent granted to me and bearing date the 25th day of February, 1868, this application for the method having been filed simultaneous with the application for the said machinery.

What I do claim as new, and desire to secure by Letters Patent, is—

The manner, substantially as herein described, of connecting the sheets constituting a book by means of the interlacing-thread and the series of locking-threads interlocked with each other and with the series of sheets, substantially as and for the purpose set forth.

D. M. SMYTH.

Witnesses:

WM. H. BISHOP,  
A. DE LACY.

(15)