

(No Model.)

D. M. SMYTH.

BOOK SEWING.

No. 314,737.

Patented Mar. 31, 1885.

Fig. 2

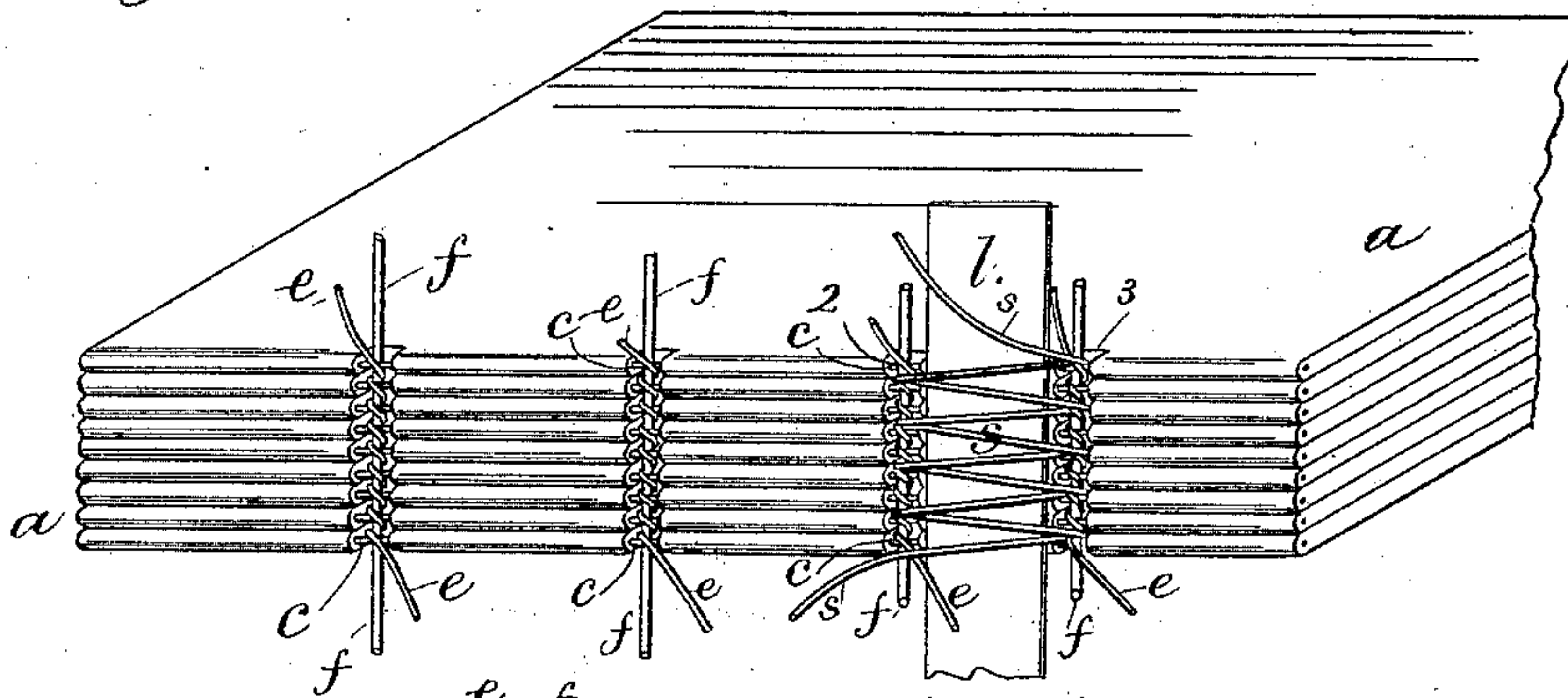


Fig. 3.

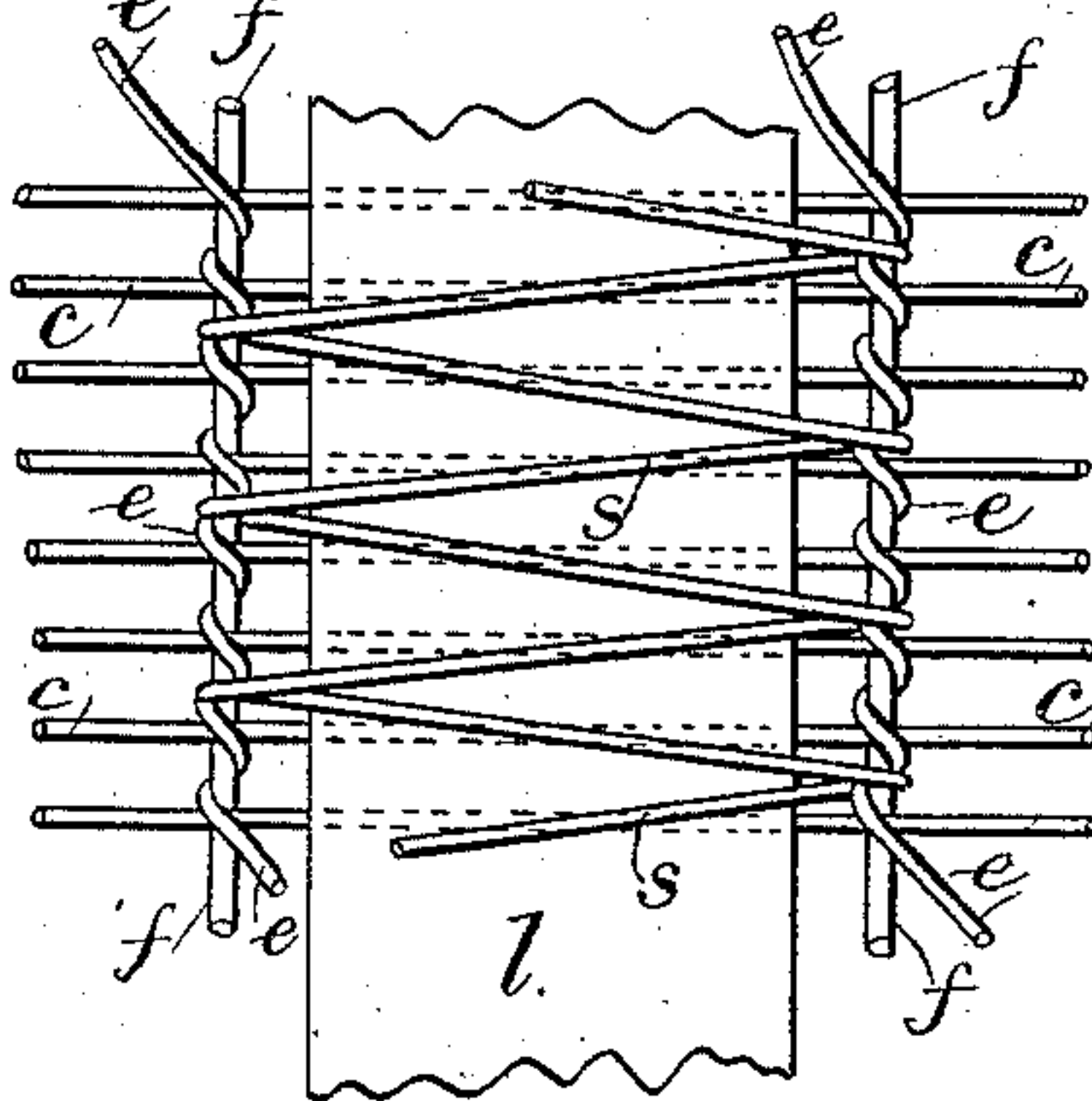
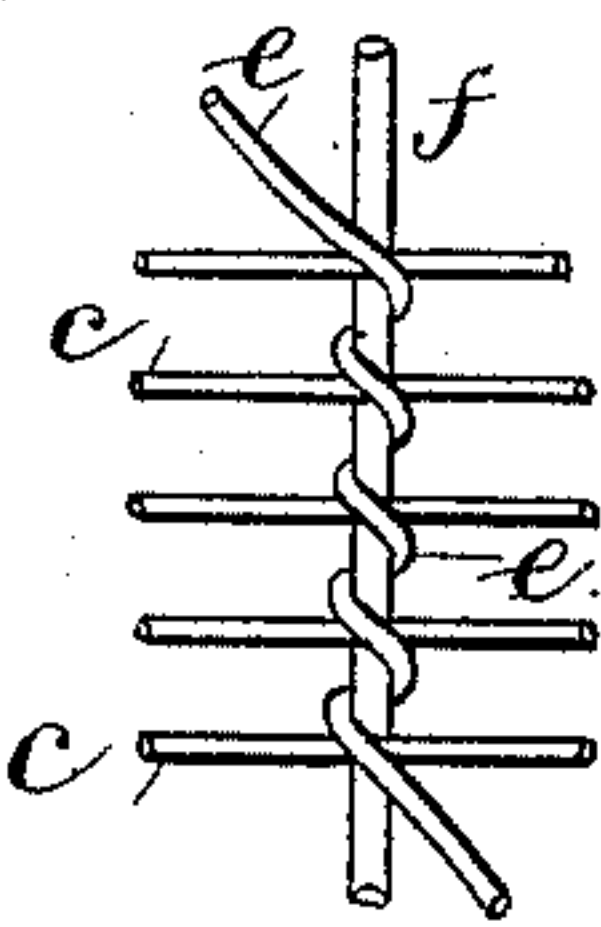


Fig. 4.

Fig. 5.

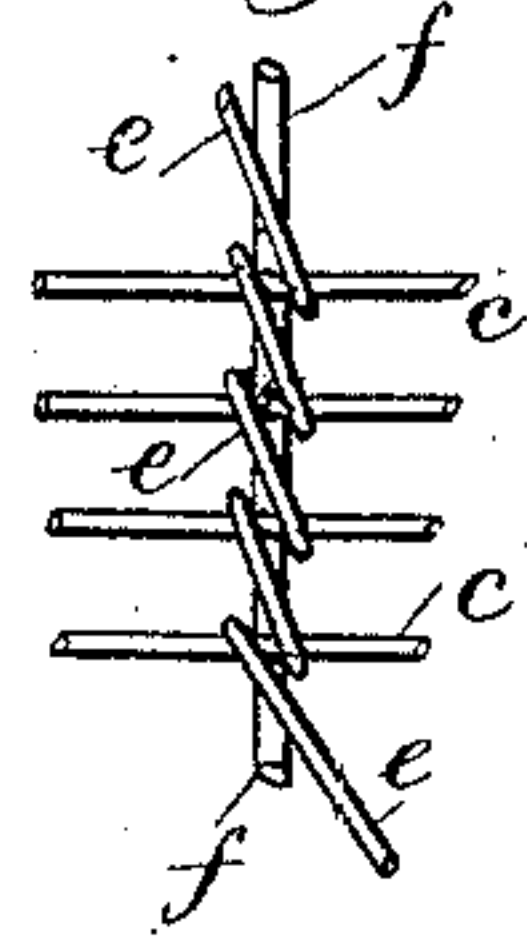
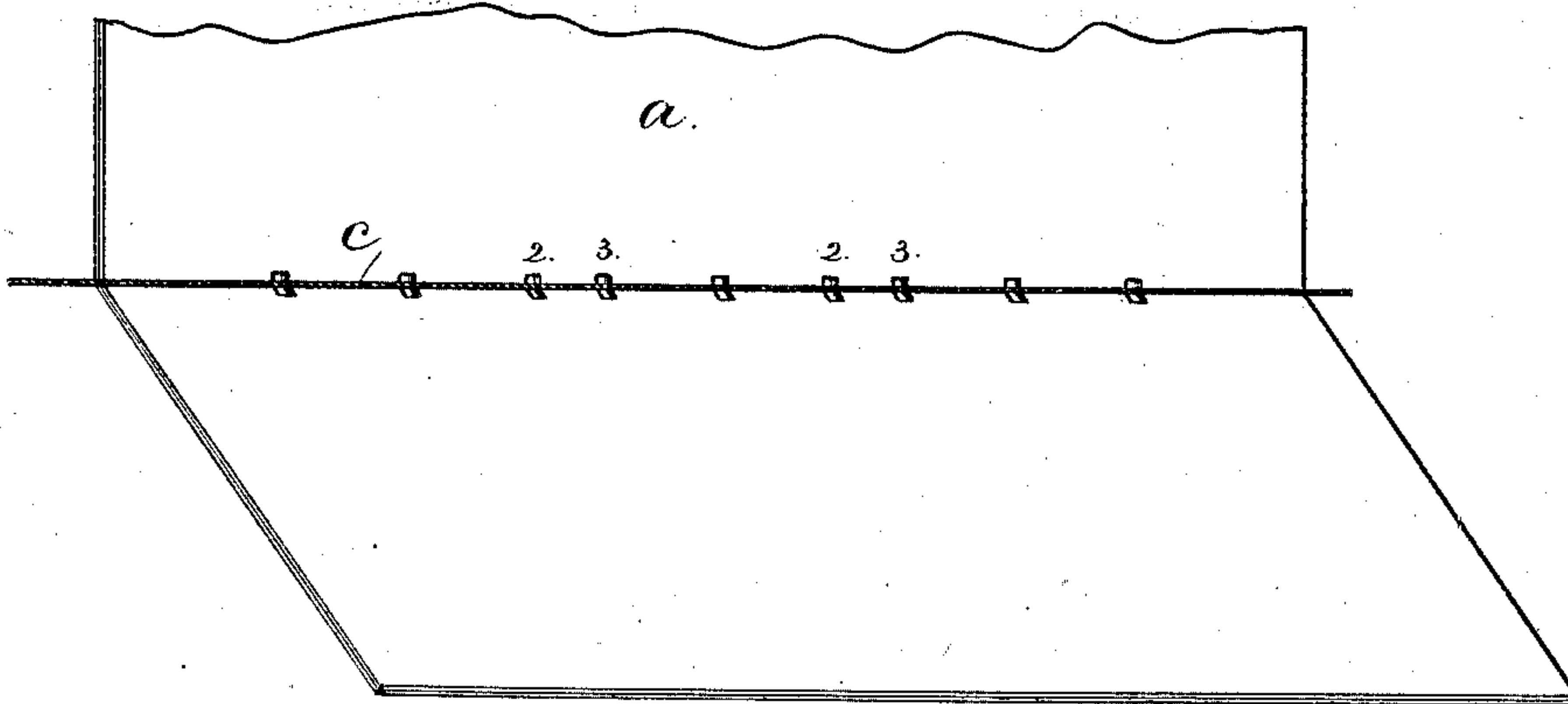


Fig. 1.



Witnesses

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UNITED STATES PATENT OFFICE.

DAVID M. SMYTH, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE SMYTH MANUFACTURING COMPANY, OF SAME PLACE.

BOOK-SEWING.

SPECIFICATION forming part of Letters Patent No. 314,737, dated March 31, 1885.

Application filed October 8, 1883. (No model.)

To all whom it may concern:

Be it known that I, DAVID M. SMYTH, of Hartford, in the State of Connecticut, have invented an Improvement in Book-Sewing, of which the following is a specification.

In Letters Patent No. 269,336, granted to me, there is described a pasted thread laid into the fold of each signature after the latter has been notched or sawed. These threads are intersected by cross threads or cords drawn into the notches beneath the pasted cords.

My present invention relates to the combination, with the aforesaid notched signatures and pasted threads, of cross-threads inter-looped with the longitudinal threads in the signatures, and tapes or strips of parchment across the back of the book, confined to the back edges of the signatures by crossed inter-laced threads. By this means the back is made very elastic, and at the same time greater strength is obtained than heretofore.

In the drawings, Figure 1 is a perspective view showing the fold of the signature with the pasted thread therein. Fig. 2 is a representation of the back, and Figs. 3, 4, and 5 are enlarged views to show the stitches.

The signatures *a a* are to be notched or sawed at the back edges, as usual, and the pasted threads *c* are to be laid into the fold of the signature, as in my aforesaid patent.

The workman takes a volume of signatures, and with a suitable needle interlaces a thread, *e*, across at one or more of the notches in the back. This may be done in the manner indicated in Fig. 5, where the thread *e* is passed under and around each of the threads *c* in succession, after which the cord *f* may be drawn in, or else this cord *f* may be drawn in first and the thread *e* passed beneath the same, and beneath each of the threads *c* in succession, by an overhanding-stitch, as in Fig. 5; but usually the thread *e* will be passed beneath the cord *f* between one signature and the next in succession, as shown in Figs. 3 and 4, by an overhanding-stitch, so that the threads and cords can easily be pulled up with the required tension before the glue or paste is applied to the back. In either form the thread *e* will confine the cord *f* and threads *c* together

and render the book-binding strong and durable. Usually there is more strain upon the middle portion of the book-back than upon the end portions, and greater flexibility is required. I therefore provide one or more transverse tapes or strips of parchment or other suitable material at *l*, of a width corresponding to the distance between the notches 2 and 3 that are sawed across the back, and I make use of an interlacing-cord, *s*, that is looped beneath one of the threads *f* at the notch 3, thence across the strip *l* and beneath the thread *f* in the next signature at the notch 2, and from there to the thread in the notch 3 of the third signature, and so on until all the signatures in the width of the volume have been connected, after which the thread *s* or cord is to be fastened off, and the book subsequently pasted or glued upon the back and finished in the usual manner.

I do not claim transverse looped threads to connect the signature-threads, nor cords combined with the longitudinal signature-threads and the transverse looped threads.

In my present book-sewing the longitudinal signature-threads are pasted in place, as in my patent No. 269,336, and not being connected at the ends are bound together by the transverse looped threads *e*.

I claim as my invention—

1. The combination, with the folded and notched signatures, of threads within the folds of the signatures, the cords *f*, a strip or tape passing across the backs of the signatures, and the cord *s*, interlaced across the said strip and passing beneath the cords *f*, substantially as specified.

2. The combination, with the notched signatures, of the threads *c*, pasted into the fold, the cords *f*, passing across through the notches, the threads *e*, interlaced to bind the cords *f* and threads *c* together, and the tape or strip *l*, and binding-threads *s*, substantially as specified.

Signed by me this 21st day of September, A. D. 1883.

DAVID M. SMYTH.

Witnesses:

CHARLES E. GROSS,
WM. WALDO HYDE.