

(No Model.)

W. M. KINNARD.

BOOK BINDING.

No. 379,649.

Patented Mar. 20, 1888.

Fig. 1.

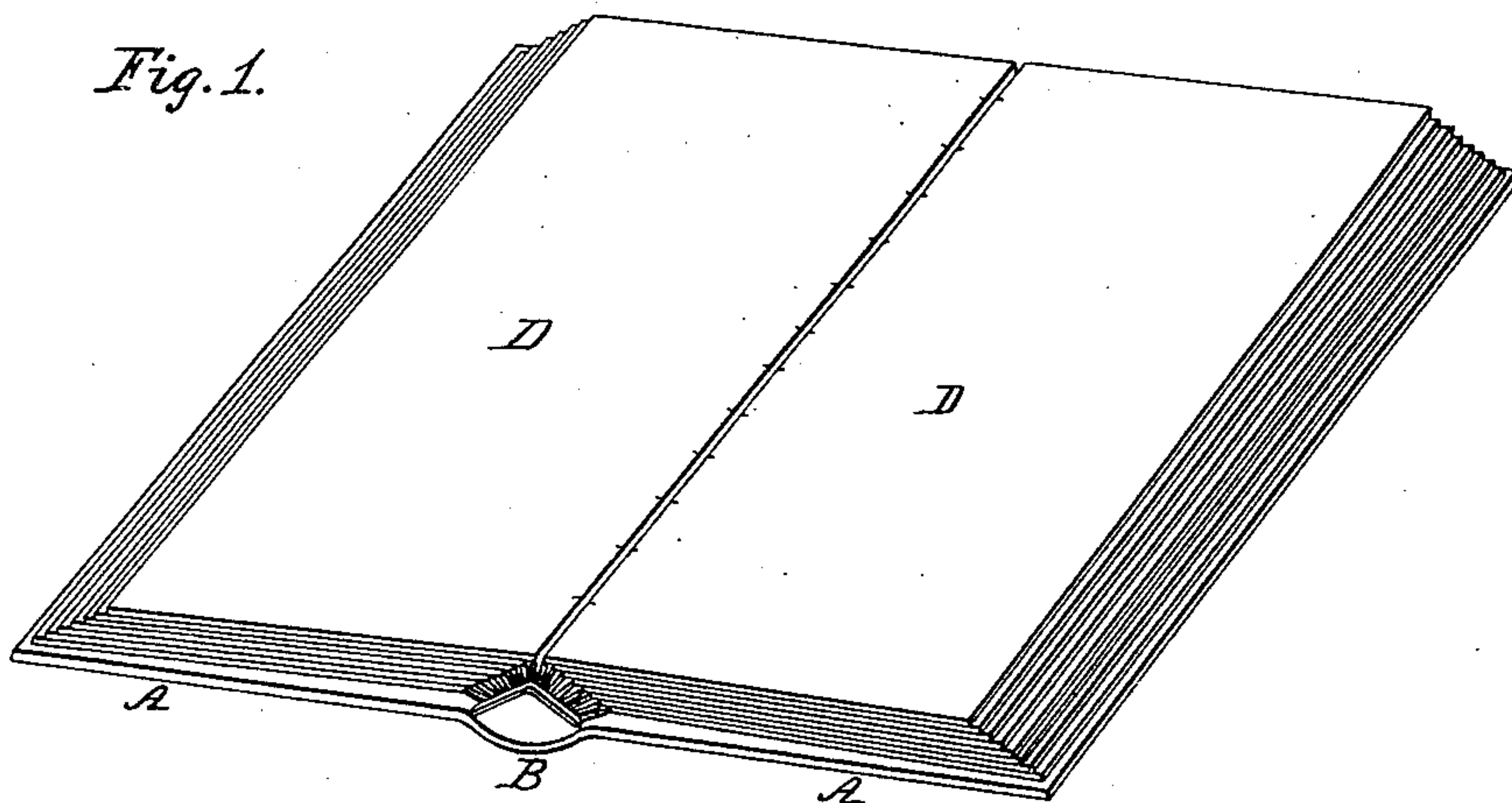


Fig. 2.

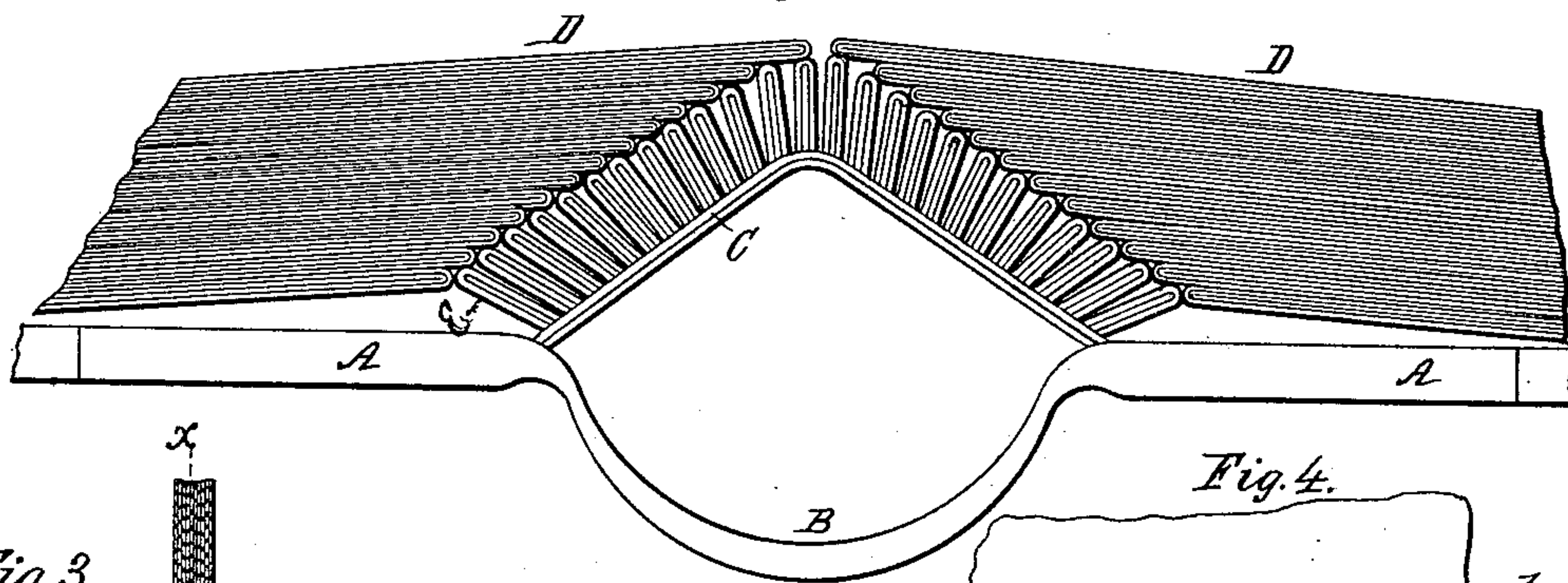


Fig. 3.

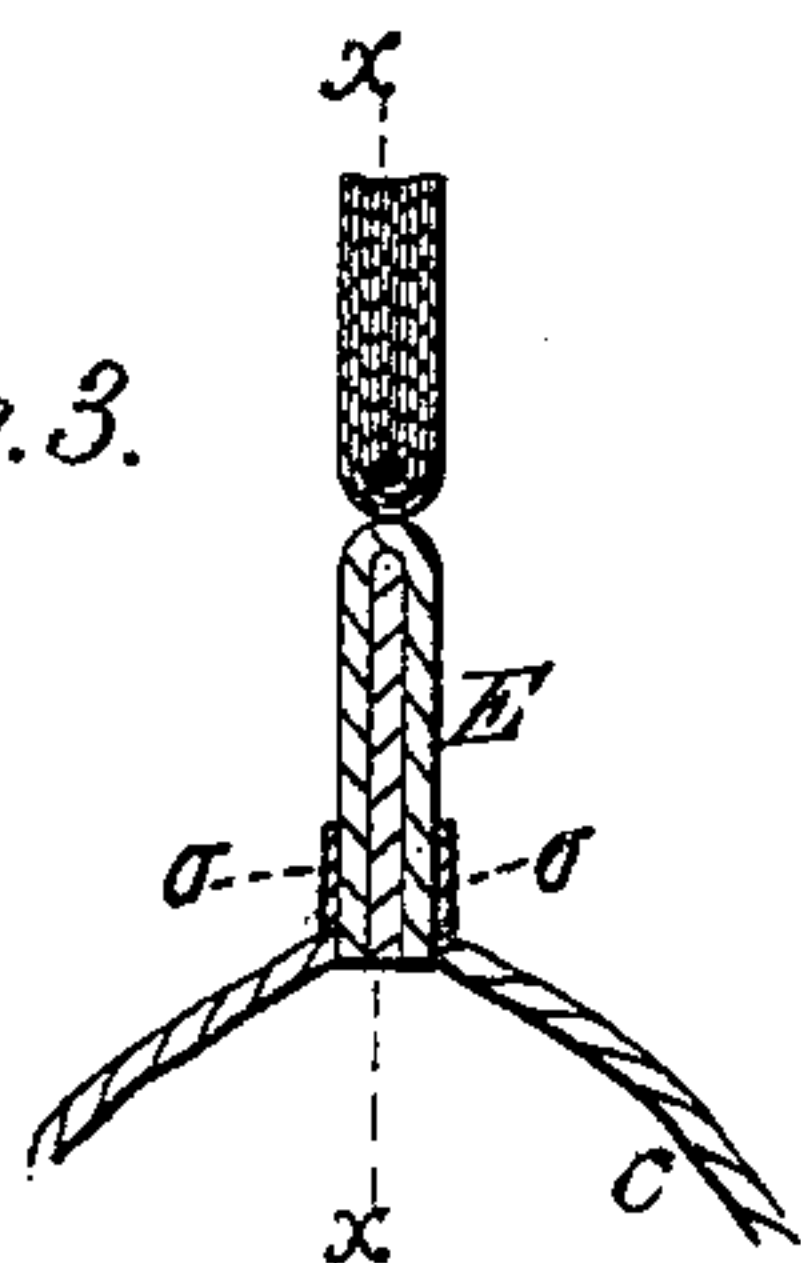


Fig. 6.

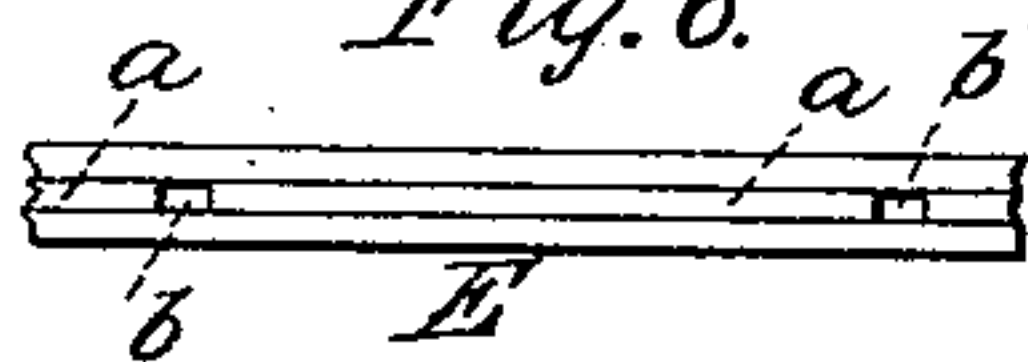


Fig. 5.

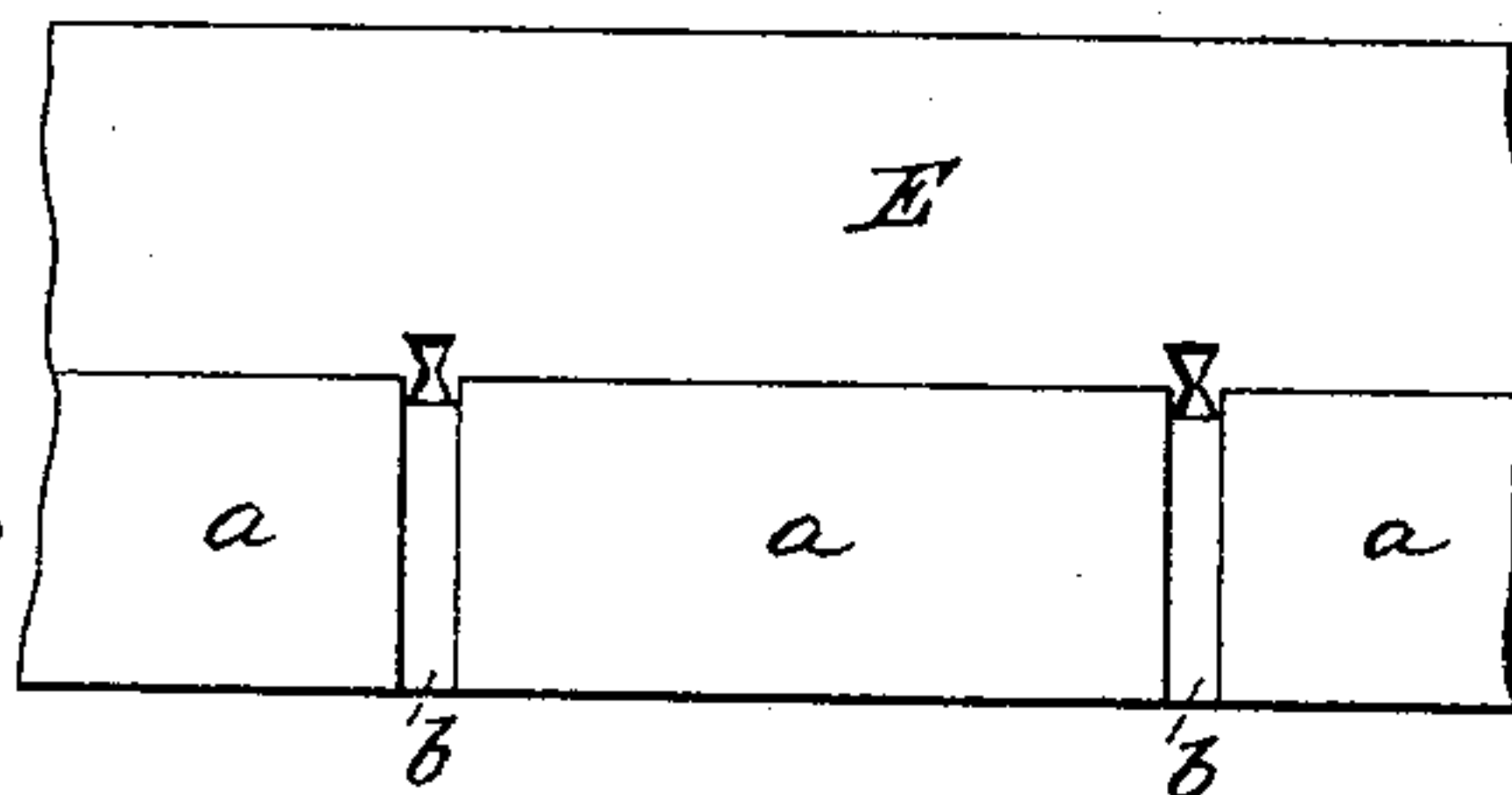
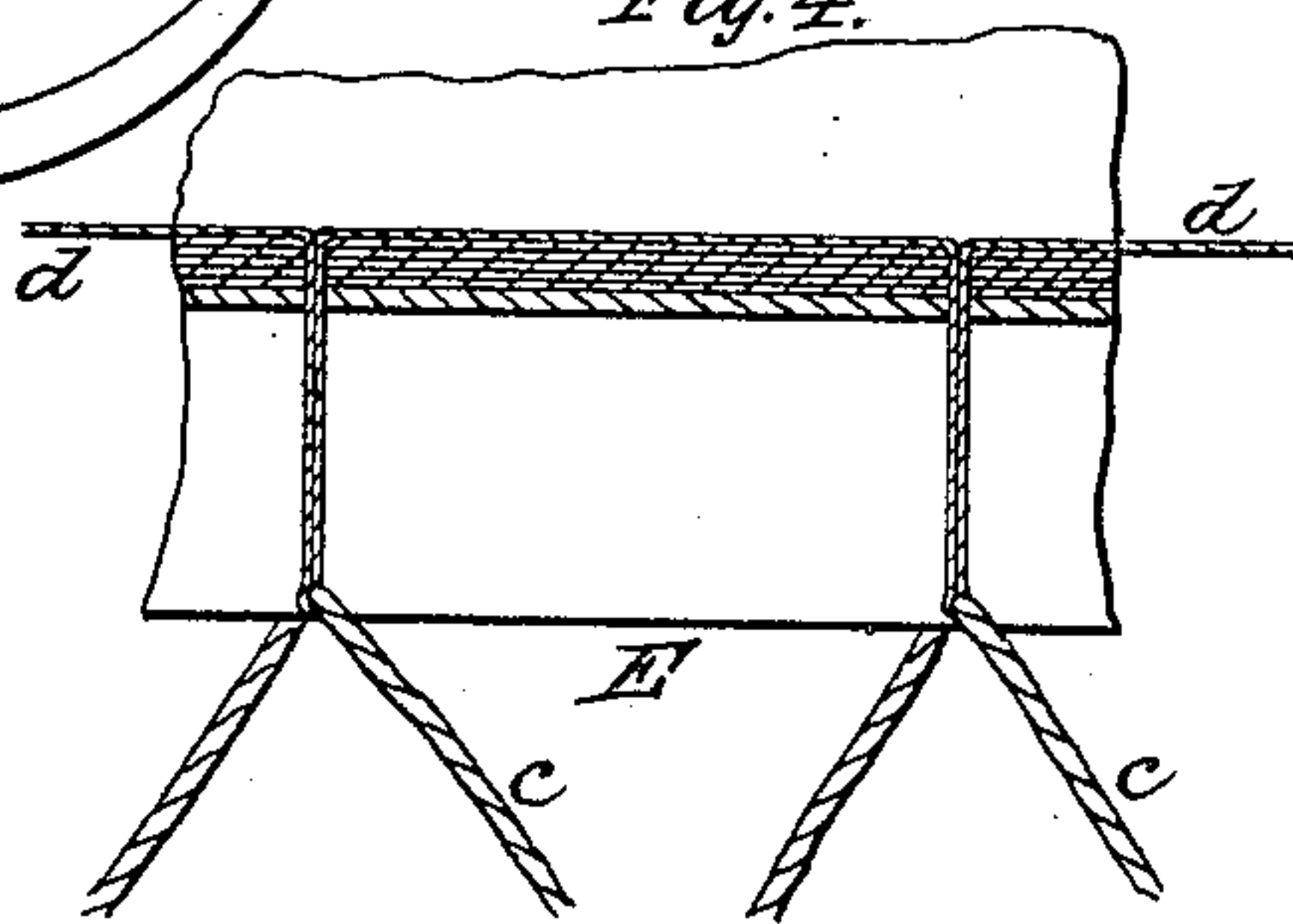


Fig. 4.



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UNITED STATES PATENT OFFICE.

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BOOK-BINDING.

SPECIFICATION forming part of Letters Patent No. 379,649, dated March 20, 1888.

Application filed June 15, 1887. Serial No. 241,330. (No model.)

To all whom it may concern:

Be it known that I, WILL M. KINNARD, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Book-Binding, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates more particularly to blank books, such as ledgers, journals, &c., though it is applicable to books of all kinds.

The object of my invention is to enable the leaves of the book when opened at any place to lie perfectly flat, for greater convenience either in reading, writing, or ruling in said books; and it has for a further object the more secure binding of the book to its cover. Its novelty will be herein set forth, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of my improved book opened at the middle. Fig. 2 is an enlarged end elevation of the middle portion of the book opened at the middle. Fig. 3 is an enlarged detail view in sectional end elevation of one of the binding-stubs and a section of the book secured thereto. Fig. 4 is a sectional side elevation through the line *xx* of Fig. 3. Fig. 5 is a plan view of a portion of one of the binding-stubs open. Fig. 6 is a bottom plan view of a portion of one of the binding-stubs.

The same letters of reference are used to indicate identical parts in all the figures.

A represents the usual or any suitable covers of the book, B its back, and C the binding-strap. The sections or signatures D of the book, instead of being secured directly to the binding-strap and the binding-cords, are secured to interposed binding-stubs E, glued or otherwise firmly secured to the binding-strap C. These stubs are preferably constructed as follows: Each stub is composed of a piece of leather, canvas, or other suitable material, folded upon itself and glued together, with spacing-strips, *a*, of paper or other material, interposed between the folds, and with spaces *b* between their adjacent ends, as seen in Figs. 5 and 6. These spaces form passages through the stubs for stitching-threads, as hereinafter

explained, and notches are cut in the bottom of the stub, registering with the passages *b*, for the passage of the binding-cords *c*.

The sections or signatures of the book, each composed of any desired number of pages and folded in the usual manner, are attached to the binding stubs and cords in the following manner:

The stitching-cord *d*, Fig. 4, secured at one end, passes along the crease of the section, down through the first of the passages *b*, through the stub, is knotted around the binding-cord registering with said passage, is passed back up through the same passage and perforations, extends along the crease to the next passage, thence extends down through said passage, is knotted around the binding-cord registering with said passage, and thence up through the same passage and perforations, and so on to the end of the section. At the end of the section it is passed from the bottom of the stub to the bottom of the adjacent stub, up through the end passage in the same, and thence along the section, as before explained. In this way it will be seen that all of the sections are secured together and to their respective stubs and the binding-cords by one continuous stitching-thread, and that by tying or knotting the stitching-thread to the binding-cords the accidental breaking or cutting of the stitching-thread at any point of the book would not affect the stitching-thread at any other point, or loosen the same to allow it to be pulled out. By the use of the interposed strips *a* and the formation of the passages *b* between their ends ample room is afforded for the stitching-cord, which is thus prevented from bulging out the sides of the stubs, as might be the case if no such strips were employed to form passages. If necessary, narrow strips may be secured to the outside of the binding-stubs along their bottoms, to give the desired shape and thickness to the back of the book, as shown at *o o*, Fig. 3. When the sections are all thus bound together, the book is ready to be secured to the binding-strap and covers, which is done in the usual or any suitable manner.

The construction of the stubs may be varied to suit the ideas of the book-maker, and it will be readily seen that by their use and interposition between the sections and binding-

straps the sections or signatures of the book open and turn on hinges, as it were, and the leaves will lie perfectly flat, wherever the book is opened.

5 It is evident that my invention is equally applicable to books which do not have spring-backs and in which the back of the book serves as a binding-strap, and may also be used in flexible books and in books which have no
10 distinct binding-strap.

Having thus fully described my invention, I claim—

1. The combination, with the sections of a book and its binding-cords, of binding-stubs
15 interposed between said sections and binding-cords, and the stitching-thread passed through perforations in said binding-stubs and tied around the binding-cords, substantially as and for the purpose set forth.

20 2. The combination, with the sections of a book and its binding-cords, of binding-stubs interposed between said sections and binding-

cords, and a continuous stitching-thread passed through perforations in said binding-stubs and tied around the binding-cords, substantially as
25 and for the purpose set forth.

3. The combination, with the sections of a book, the binding-strap, and binding-cords, of the binding-stubs interposed between the sections and the strap and cords, the stubs being
30 glued or otherwise firmly secured to the strap, and the sections secured to the stubs and cords by a stitching-thread passed through perforations in said stubs and tied around the binding-cords, substantially as described, and for the
35 purpose set forth.

4. The binding-stubs E, each having interposed strips *a*, arranged with spaces between their adjacent ends to form passages *b* for the stitching-thread, substantially as described.

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