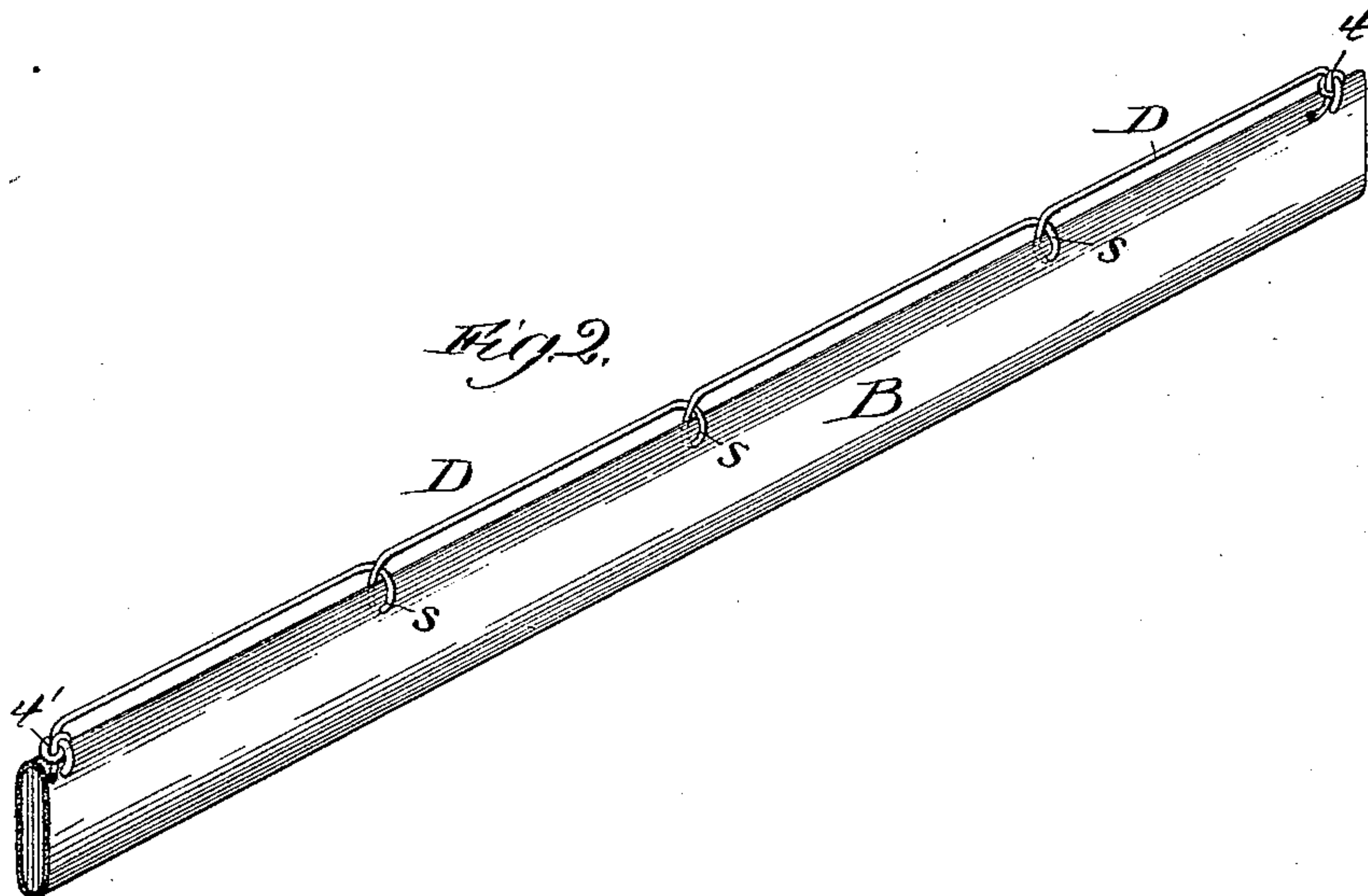
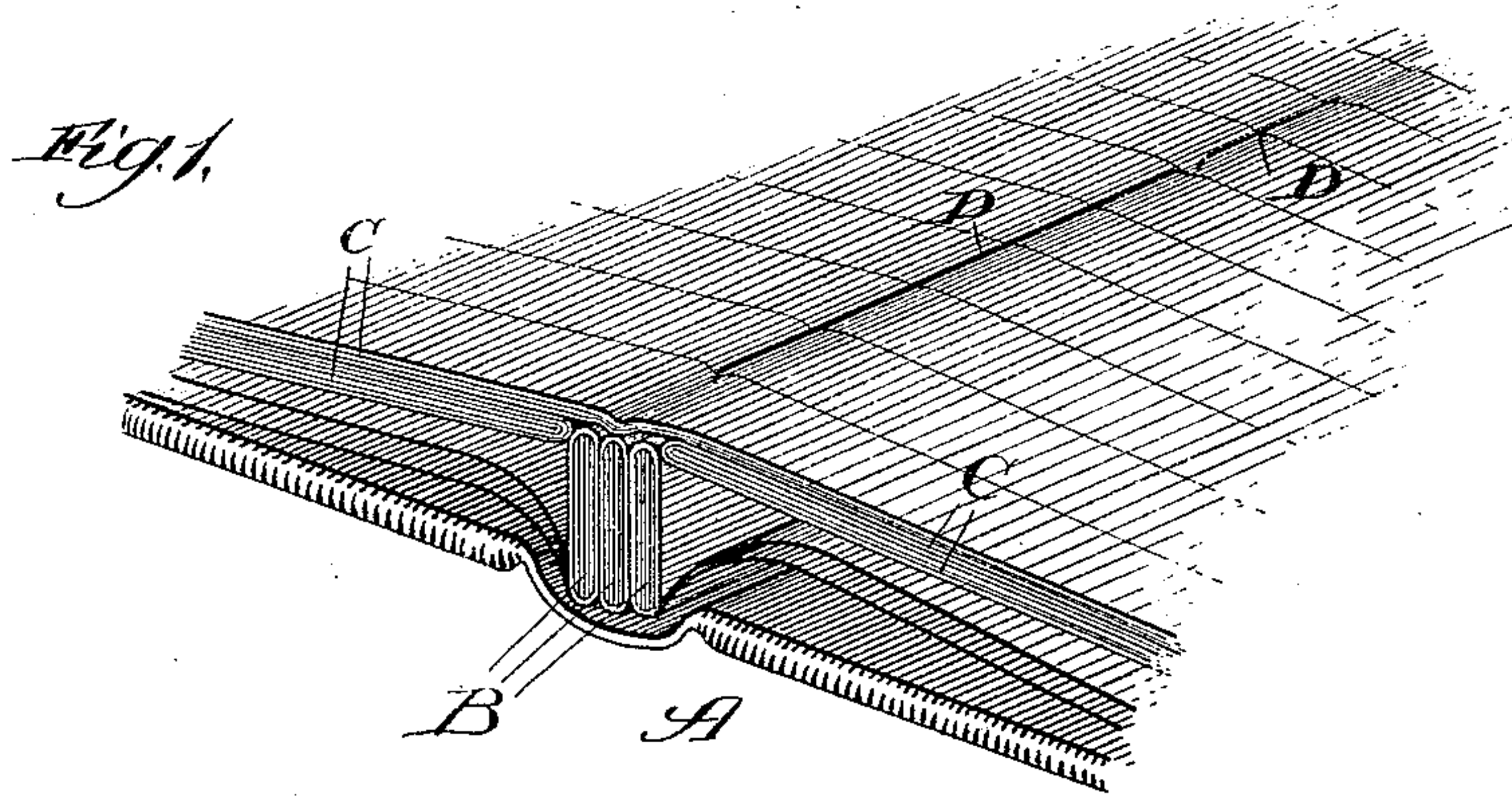


(No Model.)

N. LULL.  
BOOK BINDING.

No. 436,042.

Patented Sept. 9, 1890.



Witnesses:

*Edw. C. Dayland,*  
*J. W. Dyrenforth,*

Inventor:

*Newton Lull,*  
*By Dyrenforth & Dyrenforth,*  
*Attys.*



# UNITED STATES PATENT OFFICE.

NEWTON LULL, OF CHICAGO, ILLINOIS.

## BOOK-BINDING.

SPECIFICATION forming part of Letters Patent No. 436,042, dated September 9, 1890.

Application filed May 3, 1890. Serial No. 350,504. (No model.)

*To all whom it may concern:*

Be it known that I, NEWTON LULL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Book-Binding, of which the following is a specification.

My improvement relates to the character of binding heretofore employed for books of various kinds, but particularly for blank-books and account-books, the object being to cause the leaves when the book is open to lie flat throughout their whole extent. For this purpose it has been customary to employ a series of stubs secured to the back of the book and secure the leaf-sections to the outer edges of these stubs by stitching or by some other form of flexible connection. In practice each stub is formed of about the thickness of a leaf-section, by which is meant a group of leaves formed by doubling a suitable number of sheets upon themselves. In some cases the stubs, or "guards," as they are sometimes called, are made flexible, and in some cases they are made rigid. This general character of binding is commonly applied to large and heavy blank-books and account-books. As the leaf-sections are generally secured to the stubs by means of stitches passing through the leaf-sections at the angle of folding and thence through the stubs, it is obvious that the connection is necessarily frail, so that the leaf-sections in the ordinary handling of the books are liable to become detached by the breaking or wearing of the thread. As books of this class have heretofore been made the refastening of detached leaf-sections or the substitution of new ones was a matter of considerable difficulty, and without taking apart and rebinding the book it was impossible to attach the loose section by means of stitching corresponding with that originally employed.

The object of my present invention is to overcome this difficulty; and it consists in securing each leaf-section separately to its corresponding stub by stitches passed at intervals vertically through the angle at the fold of the leaf-section and then transversely through the stub near its upper edge and back through the angle at the fold of the leaf-section.

In the accompanying drawings, Figure 1 is

a broken perspective view of a book bound in accordance with my invention, and Fig. 2 a perspective view of a single stub illustrating the mode of stitching.

In practice I employ stubs of the rigid type in contradistinction to the flexible type, though obviously my mode of stitching may be employed with either type of stub.

A is the back of the book, and B B the stubs secured thereto in any well-known way. As shown in the drawings, and as I prefer to make these stubs, each is formed of an internal layer of card-board or stiffened fabric having Manila paper wound about it, and the whole is provided with an external covering of muslin or other fabric. This construction affords the rigidity which is desirable, while the fabric covering gives a firm hold to the stitching. Of course the thickness of each stub should correspond approximately with that of its leaf-section. The stubs may be employed in any desired number according to the size of the book; but all the stubs are independent of each other, aside from the fact that they are fastened to a common back.

C C are the leaf-sections, corresponding in number with the stubs and each fastened independently to its stub by means of the stitching D. The course of this stitching is clearly illustrated in Fig. 2. At the initial and terminal ends it is secured by a knot *tt'*, and at intermediate points the thread is looped through the section and stub, as shown at s. The stitching may of course be done either with wire or thread.

In original manufacture it is preferable to secure the leaf-sections to their corresponding stubs before grouping the latter and securing them to the back; but in the event of the replacement or substitution of a leaf-section the stitching is done in the same manner that it was originally done without requiring the detachment of the stub from the group.

Aside from the specific advantage named, my book has the merit of exceptional simplicity in point of manufacture, coupled with as high a degree of strength and durability as can be attained with this general character of binding.

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

1. The combination, with the back A of a book, of the stubs B, secured thereto, leaf-sections C, and stitching passing down through the angles of the leaf-section and transversely through the outer margins of the stubs and securing each leaf-section and its corresponding stub together independently of the remaining leaf-sections and stubs, substantially as described.
2. In combination with the back A of a book, the fabric-covered stubs B, secured thereto, leaf-sections C, and stitching D, having the initial and terminal knots  $t t'$  and intermediate loops  $s$  passing through the angles of the leaf-sections and transversely through the outer margins of the stubs and securing each leaf-section to its corresponding stub independently of the remaining leaf-sections and stubs, substantially as described.

NEWTON LULL.

In presence of—

J. W. DYRENFORTH,

M. J. FROST.