

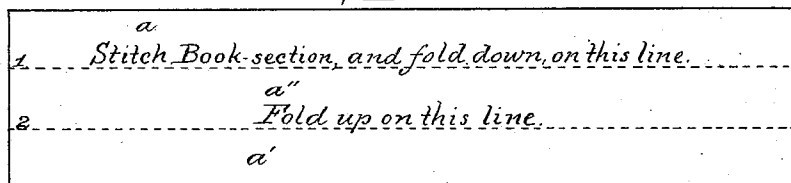
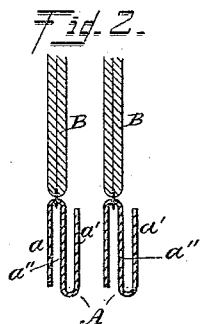
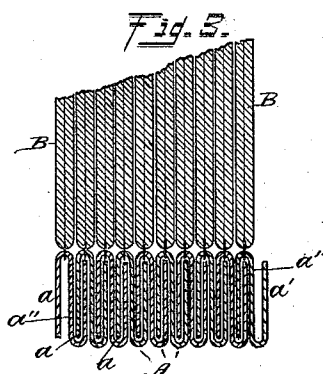
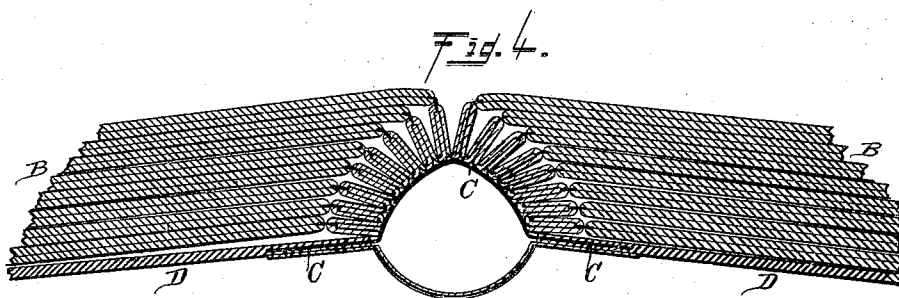
(No Model.)

D. W. LANDVOIGT.
BOOK BINDING.

No. 459,294.

Patented Sept. 8, 1891

Fig. 1. *A*



D. W. Landvoigt
Inventor

By

O. B. Gallatin

Attorney

Witness
B. W. Lacy.
Herbert Gallatin.

UNITED STATES PATENT OFFICE.

DORUS W. LANDVOIGT, OF WASHINGTON, DISTRICT OF COLUMBIA.

BOOK-BINDING.

SPECIFICATION forming part of Letters Patent No. 459,294, dated September 8, 1891.

Application filed April 18, 1891. Serial No. 389,489. (No model.)

To all whom it may concern:

Be it known that I, DORUS W. LANDVOIGT, a citizen of the United States, residing at Washington, in the District of Columbia, have
5 invented certain new and useful Improvements in Book-Binding; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to
10 make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

On account of their greater weight and the
15 rougher usage to which they are necessarily subjected, blank and account books require stronger and more durable binding than ordinary printed books, and in order to obtain the necessary strength for large books when
20 bound in the ordinary style, the binding is of such character that it renders the volume stiff and inflexible to such a degree that it is difficult to open it far enough to permit free and convenient access to the inner or adjoining
25 edges of adjacent leaves. To remedy this difficulty there have been devised what are commonly known as "flexible-back" books, in which the folded leaves are stitched along the folds to prepared ribs or stubs, (called
30 "guards,") which are then bound together and the cover applied thereto in any preferred manner. The lines of stitching by which the folded leaves or book-sections are attached to the guards form flexible connections or hinges,
35 which permit the leaves to open freely and to lie down flat when opened.

My invention relates particularly to this class of flexible-back books; and it consists in the peculiar construction of the guards, in the
40 manner of connecting the several guards together, in the manner of connecting the folios or book-sections to the guards, and in the manner of binding the guards and applying the cover, all as will be hereinafter fully described, and particularly pointed out in the
45 claims.

In the accompanying drawings, which illustrate my invention and form a part of this specification, Figure 1 represents a flat or face
50 view of one of the guards, showing its shape before being folded. Fig. 2 represents, in transverse section, two guards and their at-

tached book-sections, showing the manner of folding the guards. Figure 3 is a transverse section of a series of guards and book-sections, showing the manner of putting the
55 guards together; and Fig. 4 represents in transverse section an open book constructed according to my invention.

In this description the term "book-section" 60 refers to the number of folded leaves attached to one guard, which number may vary with the thickness of the paper or the thickness of the guard, it being, of course, understood that each section should correspond in thick- 65 ness with the thickness of the guard to which it is attached.

A designates the guard, which is formed of a strip of any suitable fabric or material possessing the requisite strength and flexibility, 70 or of two or more fabrics laid upon each other and pasted together, according to the thickness desired for the particular work to be done. These guards run the whole length of the book, and when folded and ready to be
75 put together should be from three-eighths to one-half inch in width. They are therefore cut out, as indicated in Fig. 1, in straight strips nearly three times the width desired for the folded guard. The strips so cut are
80 folded longitudinally, as indicated in Figs. 2 and 3, the two edges being folded in opposite directions on lines 1 2 somewhat less than one-third the width of the entire strip from each edge, so as to make the two folded portions a 85 a' substantially equal to each other and somewhat less in width than the width of the center portion a^2 .

B designates the book-sections, each made up of a suitable number of double or folded 90 sheets, each section being stitched along the line of its fold to one of the guards along the line of one of its folds, as indicated in the drawings. The book-sections B being stitched upon the guards A and the latter properly 95 folded, they are put together by hooking the folded edges of the adjacent guards into or over each other, as indicated in Fig. 3 of the drawings, this operation being continued to any desired extent or until the required thick- 100 ness is reached. The interhooked edges are glued as they are put together, so that each individual guard is held and supported by those adjacent to it on both sides, the outer

ones being glued or otherwise fastened to the covers when the latter are put on.

The guards and sections being put together, as described, to make up a book, the latter is prepared for the covers in the following manner: A strip C, of cloth or leather, (preferably the latter,) of a width somewhat greater than the thickness of the book, is glued or otherwise fastened against the back edges of the guards A, (see Fig. 4,) with its edges projecting out at both sides. This holds the guards together and prevents them from opening or being pulled out. Now when the cover D, which is of ordinary construction, is put on the back edges of the sides are split open and the edges of the strip D are inserted into said openings and secured therein. This unites the guards with the cover and securely holds the parts together.

In putting up light work the strip D may be dispensed with, the guards in such case being sewed together at their back edges and backed with cloth or paper in the usual manner.

Owing to the extreme simplicity of my guards and the ease and facility with which they are put together, the cost of books made in this way is reduced to a minimum, while at the same time the maximum of strength and durability is attained.

It is to be observed that these guards require no special preparation, being cut from sheets of prepared material and simply folded, and that they can thus be produced at much less expense than those in which a special construction and preparation are involved; and herein lies the chief importance of my invention.

Having now described my invention, I claim—

1. The guard for flexible-back books hereinafore described, the same consisting of a strip of flexible material folded longitudinally, the two edges being folded in opposite directions toward the central part, substantially as shown and described.

2. In a flexible-back book, the combination, with the folded leaves grouped and arranged in sections, as described, of a series of guards A, formed of flexible strips folded longitudinally, the two edges of each guard being folded in opposite directions toward the central part, the adjacent folds of adjoining guards being hooked into each other and fastened together, substantially as shown and described.

3. In a flexible-back book, the combination, with the folded leaves grouped and arranged in sections, as described, and with the cover, of a series of guards A, formed of flexible strips folded longitudinally, the two edges of each guard being folded in opposite directions toward the central part and the adjacent folds of adjoining guards hooked into each other and fastened together, and a flexible strip C, fastened to the back edges of the folded guards and to the sides of the cover, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

DORUS W. LANDVOIGT.

Witnesses:

H. J. MCGOWAN,
E. A. HOLL.