

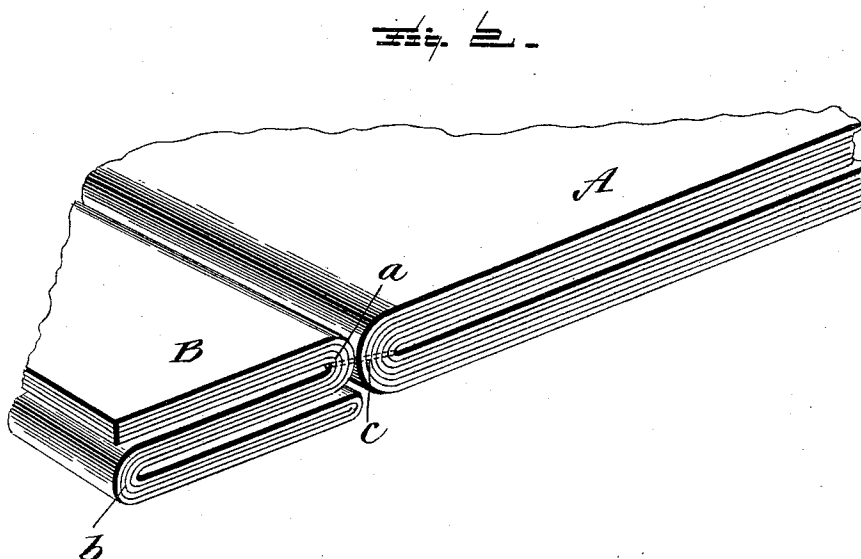
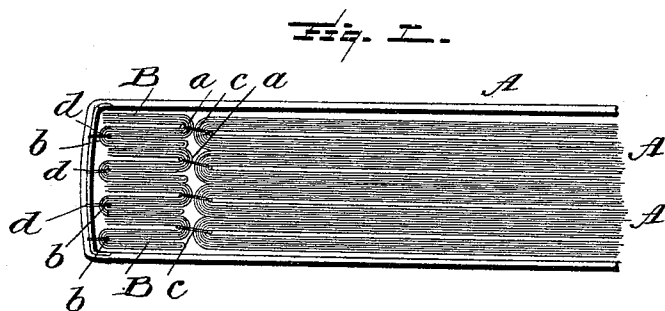
(No Model.)

L. P. ALLEN & J. R. WEBER.

BOOKBINDING.

No. 471,457.

Patented Mar. 22, 1892.



Witnesses

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# UNITED STATES PATENT OFFICE.

LUCIUS P. ALLEN, OF CLINTON, IOWA, AND JOHN R. WEBER, OF QUINCY, ILLINOIS.

## BOOK-BINDING.

SPECIFICATION forming part of Letters Patent No. 471,457, dated March 22, 1892.

Application filed September 10, 1891. Serial No. 405,314. (No model.)

*To all whom it may concern:*

Be it known that we, LUCIUS P. ALLEN, residing at Clinton, Clinton county, Iowa, and JOHN R. WEBER, residing at Quincy, in the county of Adams, State of Illinois, both citizens of the United States, have invented certain new and useful Improvements in Book-Binding, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in books and book-binding; and it has for its object, among others, to provide an improved flat-opening book which will keep its proper shape and form, and which when placed upon end will not allow the leaves to drop forward, and which at the same time shall be neat in appearance, manufactured at small expense, and durable. We form the stubs and sections of the same thickness and durability. In books of this character as heretofore made the stubs were made of cloth or other fabric or of paper attached to the sections of the books, the space between said strips being filled with cloth, candle-wicking, or other material to make the stub of the same thickness as the section. Such constructions are objectionable, and among the objections thereto may be mentioned the stretching of the material composing the filling or of the material of which the stub is made and thus allowing the book to spread, and if the book is placed on end the leaves of the book drop forward at the top, and still another objection is that the ends of the material fray at the ends of the book or between the sections, making a very untidy appearance. Besides they are expensive. We form an independent stub for each section of the book instead of using a continuous stub for all the sections. This stub can be made easier and cheaper than the ordinary stub. It is more easily applied, because each section may be attached to its stub by stitching or sewing independent of all the other sections, and then they are attached to the bands of the book singly as readily as the sections are ordinarily attached to the bands. By our construction of stub no filling is required.

Other objects and advantages of the invention will hereinafter appear, and the novel

features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is an edge view of a book embodying our invention. Fig. 2 is a perspective view, on an enlarged scale, of a portion of one section and its stub.

Like letters of reference indicate like parts in both of the views.

In the drawings, A represents a section of a book, which may be composed of any desired number of leaves, formed by folding the desired number of sheets upon themselves in the usual way.

B are the stubs, each of which is formed, preferably, by using paper of the same quality and thickness as that of which the leaves of the book are formed. For instance, we take, say, six sheets of paper for the leaves and fold it, making twelve leaves. For the stub we take four sheets of the same paper (or other material) of the same length as the section A and fold them in the shape of the letter S flattened, making twelve thicknesses, the same as that of the section A, there being in the stub two folds *a* and *b*. The upper fold, it will be observed, is two-thirds the thickness of the stub, for a purpose which will hereinafter be made apparent. The stub when formed is the length of the section, in width varying with the size of the book, the folds running lengthwise, forming it in the shape of the letter S flattened. Each stub is independent of all the others, as also is each section; but when a number of stubs are placed together in a book they press close to each other, and the raw edges of the stub at the angle attached to the bands are covered by the stub adjoining, which is attached to the adjoining section, so when the book is open it has between the sections a finished appearance. The stub being of the same thickness and quality of material as the sections will not fray or stretch, and the book keeps its proper shape in whatever position it is placed.

The stubs are attached to the sections of the book by stitches *c* through the angles of

the sections and the adjacent angles or folds of the stubs, as shown, thus connecting all the sheets or leaves of one section with its stub. The stubs are attached to the bands of the book by stitching or sewing, as at *d*, through the remaining angle or fold of the stub, as shown, to the bands.

It will be observed that the stitches connecting the sections with the stubs are somewhat inclined instead of extending in a straight horizontal plane. This is caused by the difference in thickness between the upper fold or angle of the stub and the upper and lower face thereof, and is important, as, by the arrangement shown, when the leaves are turned the rounded portions thereof have a bearing upon the adjacent rounded portions of the stubs, and the strain is thus taken from the stitches. There is a freedom of movement of the stitches that aids in the turning of the leaves without straining the stitches. The independent stubs and sections are also important, as each section can be attached to its stub by sewing or stitching independent of the other sections and stubs, and then each stub can be attached singly to the bands.

What we claim as new is—

1. A stub for a flat-opening book, folded at its center and formed into a flattened **S**, the combined thicknesses of the three folds of the stub being equal to that of the section with which it is to be used, as set forth.

2. A stub for a flat-opening book, made of paper folded at its center with the ends together to the same thickness as the section to which it is to be attached and having the form of the letter **S** flattened, as set forth.

3. A book having independent sections and stubs, the stubs being in the form of the letter **S** flattened and each stub unattached to the others, as set forth.

4. A book composed of independent sections and independent stubs in the form of the letter **S** flattened, the stubs being unattached to each other and attached to the sections at one fold and to the bands of the book at the other, as set forth.

5. A book composed of independent sections and independent stubs, each stub having two folds, the stubs being attached to the sections by stitches arranged in an inclined position and to the bands of the book by stitches engaging the band and the outer fold of the stub, as shown and described.

In testimony whereof we affix our signatures in presence of two witnesses.

LUCIUS P. ALLEN.

JOHN R. WEBER.

Witnesses to signature of L. P. Allen:

E. S. HART,

THOS. CAREY.

Witnesses to signature of John R. Weber:

H. R. WHITEHOUSE,

CHAS. E. BEAUMONT.