F. S. HASBROUCK.
Book-Binding.

No. 207,806. Patented Sept. 10, 1878.

Fig1.

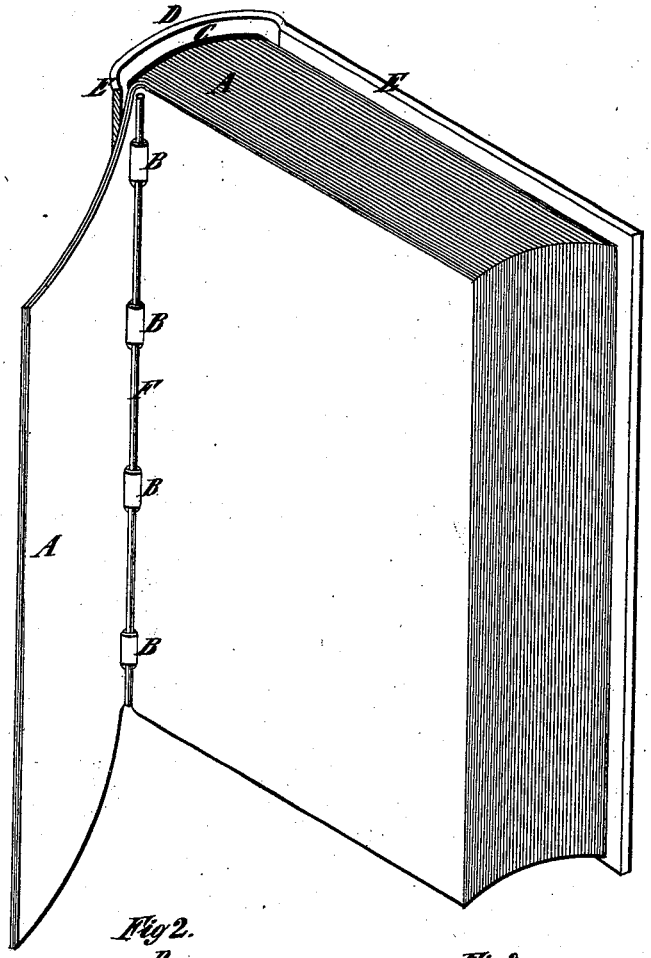


Fig2.

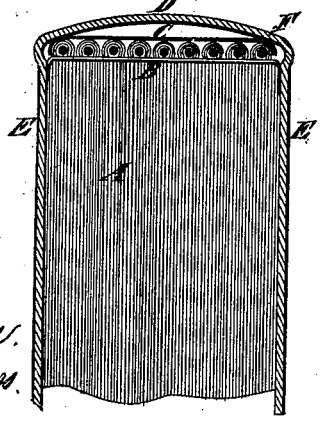
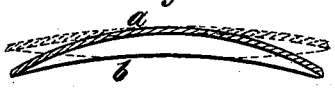


Fig3.



Witnesses:
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UNITED STATES PATENT OFFICE.

FREDERICK S. HASBROUCK, OF WEST BRIGHTON, NEW YORK.

IMPROVEMENT IN BOOK-BINDING.

Specification forming part of Letters Patent No. **207,806**, dated September 10, 1878; application filed June 18, 1878.

To all whom it may concern:

Be it known that I, FREDERICK S. HASBROUCK, of West Brighton, in the county of Richmond and State of New York, have invented certain new and useful Improvements in Book-Binding, of which the following is a specification:

Though generally applicable for all kinds of books, my improvements are especially intended for use in press-copying books.

The object sought to be attained is to admit of the yielding of books without injury when subjected to great strain, as in a press, or being opened wide or dropped.

One of my improvements consists in the combination, with the leaves or folios of a book, of needles arranged within the same, and elastic cords or straps passed transversely through notches or mortises in the leaves or folios over the said needles and permanently attached to the covers, whereby the yielding of the book at all points is provided for, the opening thereof facilitated, and its durability increased.

Another improvement consists in the combination, in a book, of a series of leaves or folios, needles arranged within the same, elastic binding cords or straps passed transversely through notches or mortises in the leaves or folios over said needles and permanently secured to the cover, and a back independent of and detached from said leaves or folios, and made of or comprising elastic material.

In the accompanying drawing, Figure 1 is a perspective view of a partly-opened book embodying my invention and having one cover removed. Fig. 2 is a transverse section of the back part of the same, and Fig. 3 is an edge view of a modified form of binding-strap.

Similar letters of reference designate corresponding parts in all the figures.

A designates a number of folios of leaves folded and laid inside one another. B designates binding cords or straps, securing the several folios together to form a book. These cords or straps are to be made of india-rubber or other suitable elastic material.

I have shown the back edges of the folios notched at intervals for the reception of the said cords or straps, and as furnished in the middle with needles F, made of metal or other suitable material, across which the cords or straps pass, and so secure the folios together.

The advantage of combining the needles with these elastic binding cords or straps is that they afford provision for opening books embodying them quite wide without incurring injury, and also obviate much of the damage which is entailed from straining a book, because in all cases they may yield, and the straps may slide with but little friction over the needles to the place where the yielding is most needed, whereas in books bound as heretofore this advantage is not attained.

If desirable, I may employ binding-straps of the kind illustrated in Fig. 3, and consisting of a bow-shaped back piece, *a*, and a thinner cross-piece, *b*, for uniting the ends of the former. These may be made of india-rubber, or, indeed, of steel, if desirable. The needles F will fit behind the part *b*.

On the opening of a book having these binding-straps the latter flatten out, or the parts *b* bow outward and permit the book to be opened flat, no matter how large.

D designates the back, forming part of the cover of the book. It is shown as independent of and detached from the leaves or folios, and made preferably of india-rubber, hard or soft, or other elastic material, but, if desirable, rendered elastic by the insertion within it of steel springs. It may be secured to the side pieces, E, of the cover in the usual or any other suitable manner; and the ends of the elastic cords or straps B may be fastened to it by means of an adhesive substance, by sewing, riveting, or otherwise. The elasticity of this back enables the book to be opened or strained to a great extent in any way without receiving injury, because it can yield under the strain, and subsequently resume its former position.

These improvements are especially applicable to press-copy books, because they provide so completely for the yielding of the book that it cannot be injured by the strain exerted by the press.

Some of the improvements may be embodied in pamphlets or binders.

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

1. In a book, the combination, with a series of leaves or folios, of needles arranged within the same, and elastic binding cords or straps passed transversely through notches or mortises in the leaves or folios over the said needles and permanently attached to the covers, substantially as specified.

2. In a book, the combination of a series of leaves or folios, needles arranged within the same, elastic binding cords or straps passed transversely through notches or mortises in the leaves or folios over said needles and permanently attached to the cover, and a back independent of and detached from said leaves or folios, forming part of a cover, and made of or comprising elastic material, substantially as specified.

F. S. HASBROUCK.

Witnesses:
EDWIN H. BROWN,
THOMAS E. BIRCH.