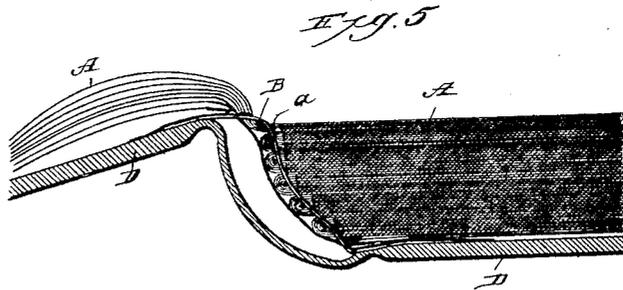
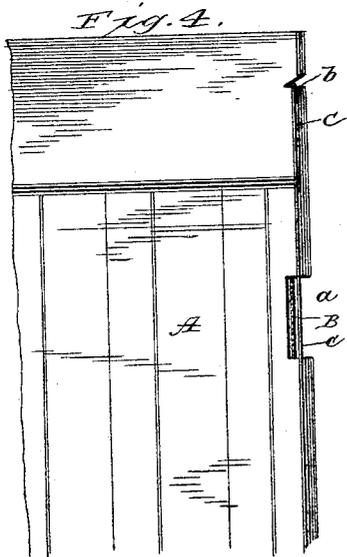
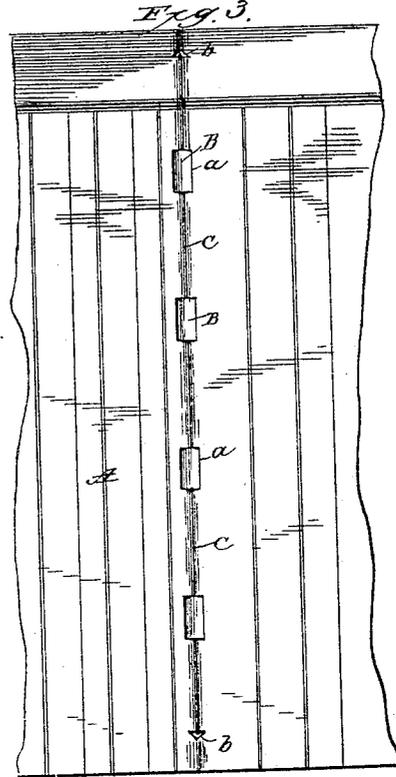
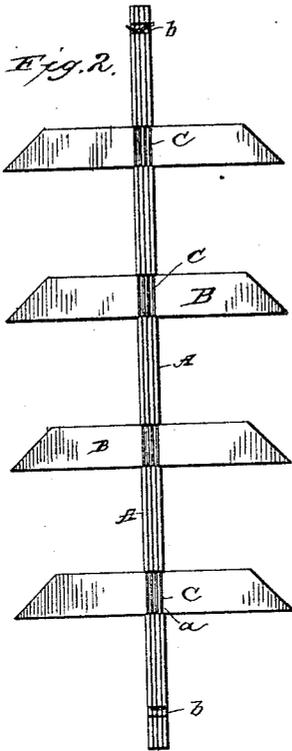
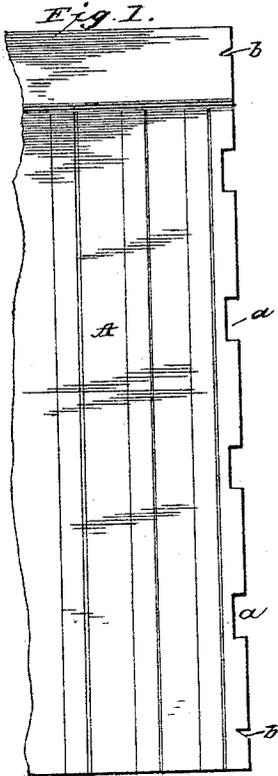


(No Model.)

P. W. NELSON.
FLAT OPENING BLANK BOOK.

No. 454,373.

Patented June 16, 1891.



WITNESSES:
E. D. Smith
A. M. Kelly

INVENTOR
Peter Wallace Nelson
 BY
Louis Feesser & Co
 HIS ATTORNEYS

UNITED STATES PATENT OFFICE.

PETER WALLACE NELSON, OF ST. PAUL, MINNESOTA.

FLAT-OPENING BLANK-BOOK.

SPECIFICATION forming part of Letters Patent No. 454,373, dated June 16, 1891.

Application filed August 9, 1890. Serial No. 361,555. (No model.)

To all whom it may concern:

Be it known that I, PETER WALLACE NELSON, of St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Flat-Opening Blank-Books; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon.

My present invention relates to the binding of books, and it has particularly to provide a blank-book the leaves of which may be opened flat, so that the making of entries may be facilitated without breaking the binding at the back; and to this end it consists in certain improved constructions and combinations of parts, all of which will be hereinafter more fully described, and the novel features of the invention pointed out in the claim at the end of this specification.

In the drawings, Figure 1 is a view of a signature; Fig. 2, a rear view showing series of signatures forming a portion of a book; Fig. 3, a front view of a signature open; Fig. 4, a longitudinal, and Fig. 5 a cross-sectional, view of a portion of a book complete.

Similar letters of reference in the several figures indicate the same parts.

In carrying out my invention I first cut the signatures or folded leaves indicated by the letter A and cut a series of notches or recesses *a* through all of the leaves into the interior or center of the signature, as many notches or recesses being formed as may be necessary to properly secure the signatures to the back or cover depending therefor on the length of the book, and their depth is slightly greater than half the thickness of the signature. Instead of sewing the signatures together at the center by cords or thread, as usual, I insert in each of the notches *a* on the rear side of them strips B of strong flexible material—such as parchment or leather—and

fasten the latter in place by cords C, extending down the center fold of the signature or leaves and passing outside of the strips B, as shown in Fig. 2, holding the latter securely in position. The ends C are preferably passed down inside the center fold at one signature and up inside another, either the adjoining one or one more removed, and the ends secured together at the top or bottom, suitable notches *b* being provided at the ends for their passage from one to the other on the rear side, as shown. The ends of the strips B are connected to the cover or back D in any suitable manner, preferably by being glued to the inner sides, as shown.

It will be understood that either double leaves can be fastened to the back, as indicated, or signatures composed of several leaves, and I prefer, of course, the latter, as less labor is required in making the book.

By the construction shown the whole signature is permitted to come forward when the book is opened, permitting the leaves to lie flat, as in Fig. 3. It will be noted, also, that there are no cords passing down the backs of the signatures, but that one end serves to bind two or more leaves or signatures to each other, and also serves as the means for connecting to the cover or back by the strips B.

I claim as my invention—

The combination, with the leaves or signatures having notches or recesses in their rear sides and the strips of flexible material in said recesses, of the cords passing down the central folds of each signature or sheet behind the strips of flexible material and united at the ends, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

PETER WALLACE NELSON.

Witnesses:

H. B. FARWELL,
W. F. BUSSE.