

(Model.)

M. RYAN.
BOOK BINDING.

No. 379,334..

Patented Mar. 13, 1888.

Fig. 1

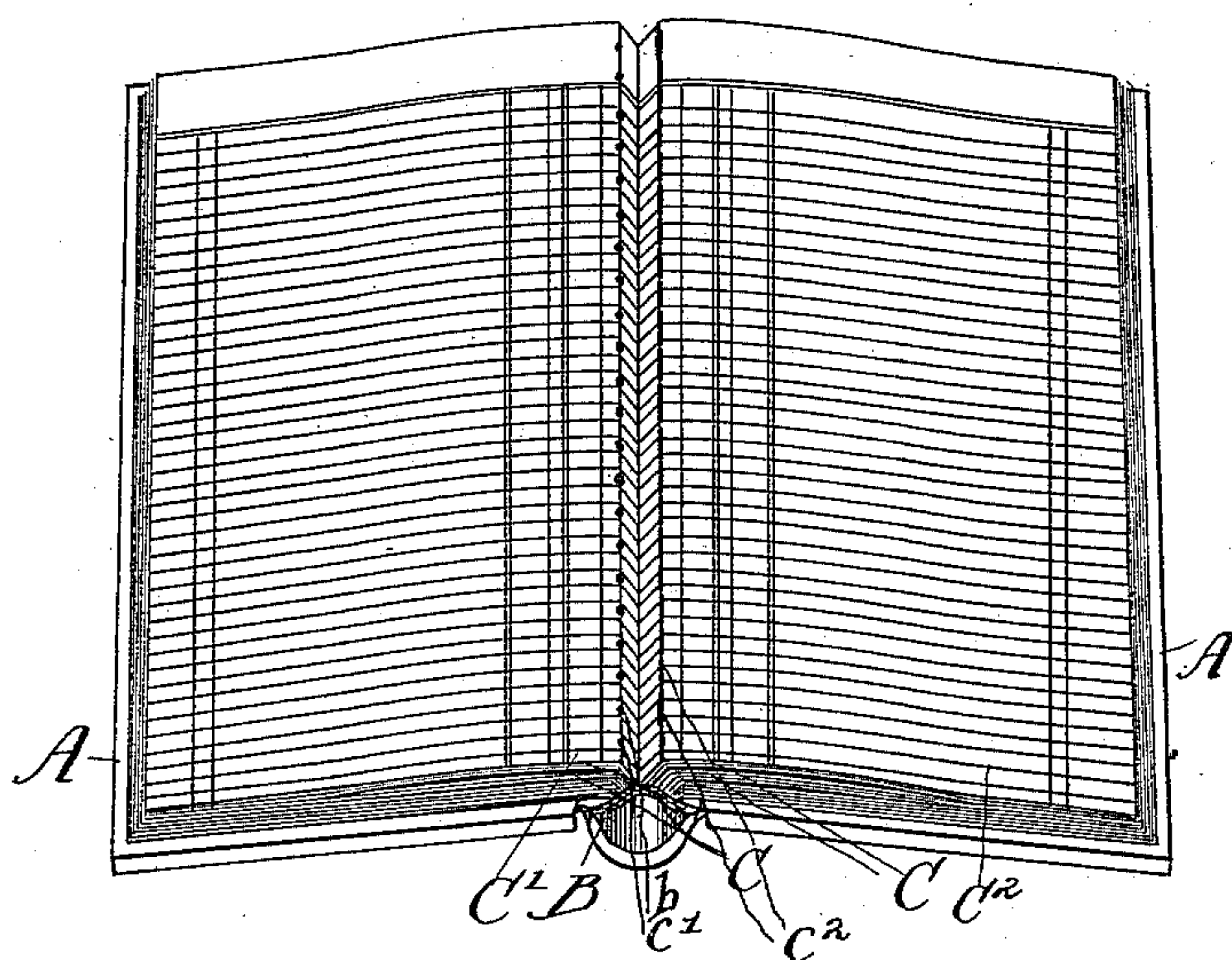


Fig. 2.

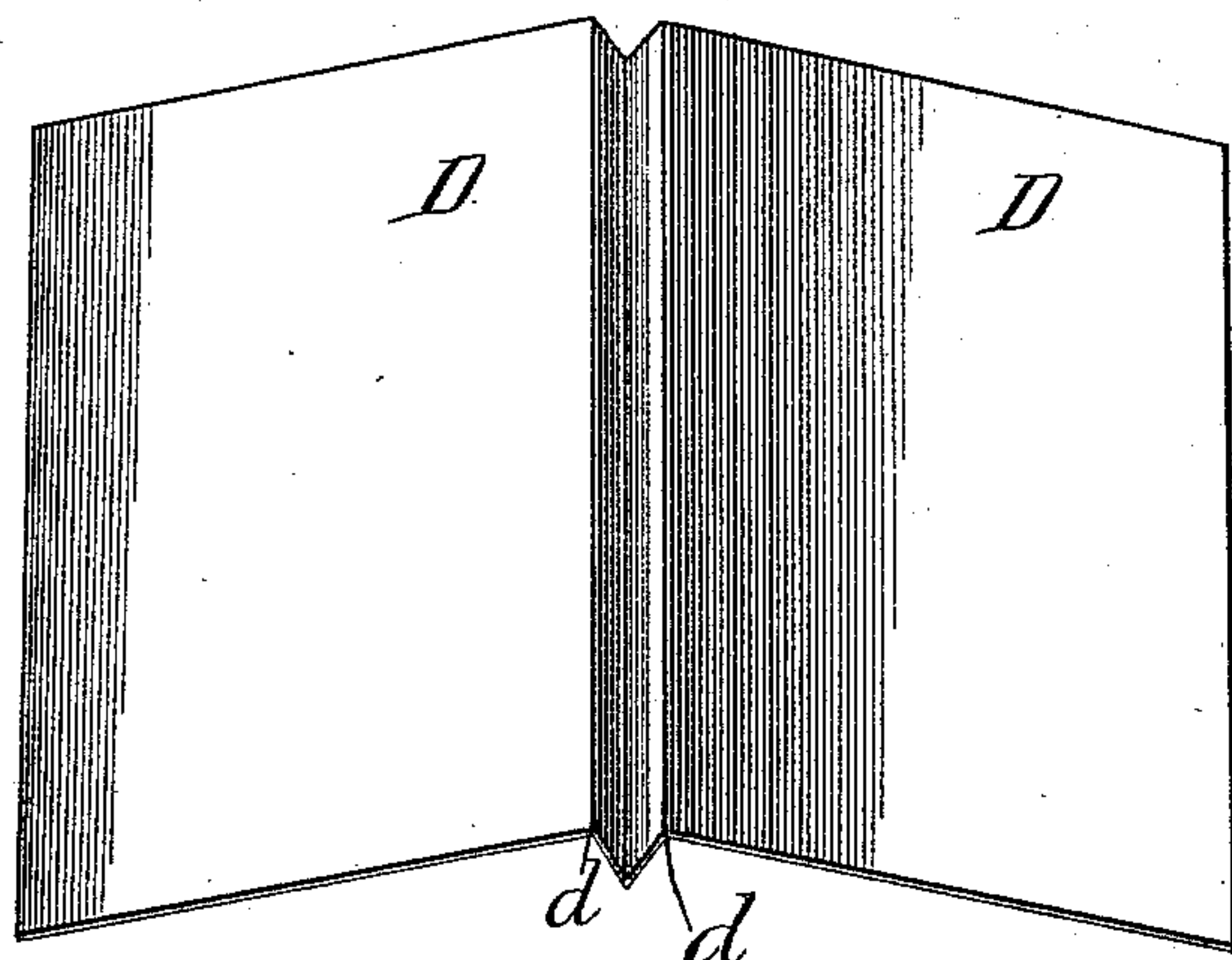
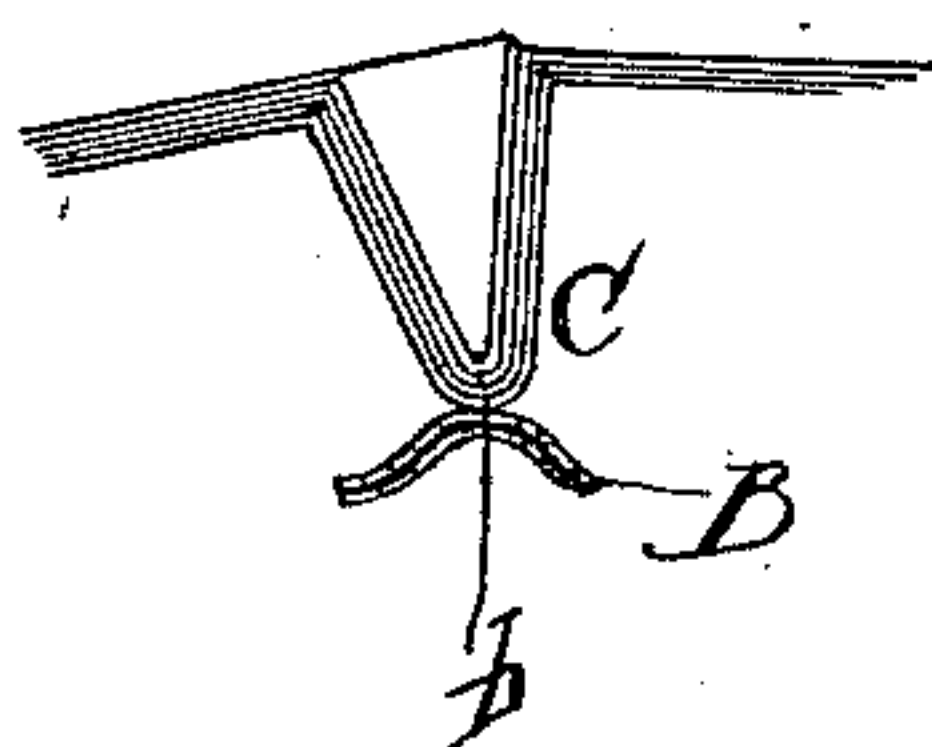


Fig. 3.



Witnesses:

Francis W. Parker.

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UNITED STATES PATENT OFFICE.

MICHAEL RYAN, OF CHICAGO, ILLINOIS.

BOOK-BINDING.

SPECIFICATION forming part of Letters Patent No. 379,334, dated March 13, 1888.

Application filed June 6, 1887. Serial No. 240,428. (Model.)

To all whom it may concern:

Be it known that I, MICHAEL RYAN, a citizen of the United States, residing at Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Book-Binding, which are fully described and claimed in the following specification, reference being had to the accompanying drawings, forming a part thereof.

Figure 1 is a perspective view of an open book in which my device is used. Fig. 2 is a perspective view of a sheet forming two leaves, showing a modification of same. Fig. 3 is a sectional view showing the bunch C attached to the flexible back B and a leaf of one half the bunch turned over upon the other half.

A A are the covers; B, the flexible back; C, a section or bunch of sheets bound to the back at *b*.

C' and C² are the two leaves formed by the middle sheet of the section.

c' are perforations in the leaf C'.

*c*² is the line of stitching by which the leaf

C² is united to the remainder of that half of the bunch C lying beneath it.

D, Fig. 2, is a sheet forming two leaves which have been folded to form the creases *d d*.

The object of my invention is to provide a method of binding books, particularly blank-books and books of record and reference, in such a manner that when a book shall be opened at any point the leaves may fall and lie substantially flat, and the pages thus exposed present as nearly as possible a level surface for convenience in writing and ruling thereon. This object I accomplish by forming a hinge-joint in the leaf at a line parallel to and a short distance from the binding, (which distance would vary according to the size of the book and weight of the paper,) either by a crease made by folding, as shown in Fig. 2, by perforations a short distance apart along the line, as shown in the leaf C' in Fig. 1, which will render the leaf flexible at that point, or by fastening several leaves together at such line by stitching, as shown in the leaf C², Fig. 1, or otherwise. In the latter case I prefer to fasten together the leaves of each half of each bunch or section before

binding, leaving the bunch open at its fold, so that it can be stitched to the back in the ordinary manner of binding. The whole number of leaves in the bunch may be thus stitched together and the bunch bound into the back by gluing, or some such method; but I prefer the method explained above. This device would commonly be used in a book having a flexible back, as shown in the drawings; but its use would not be limited to such a binding.

I am aware that this object has been sought to be accomplished by attaching the leaves—commonly by stitching—to stubs, which are then bound to the back, a hinge-joint being formed at the line of such jointure. Such a method, however, greatly increases the labor and cost of binding, and there is also great danger in such a book that the leaves, being stitched along the line of their fold, will be cut by the thread, and so easily tear away from the stubs. In my device the folding, perforating, or stitching is rapidly done, there being nothing to handle except the one leaf or bunch of leaves, whereas in the method referred to there are both the leaves and stubs to handle and adjust to each other; also, the leaves themselves are bound directly to the back, where they may be secured as strongly as necessary.

I claim—

1. A book composed of sections or bunches of a small number of leaves, in which each section is secured to the back separately and thereby flexibly thereon independently of the others, and in which the leaves are rendered flexible at a line parallel to and at a sufficient distance from the back to allow each to lie flat upon the others when open, substantially as set forth.

2. A book composed of sections or bunches of a small number of leaves, in which the leaves comprising each half of each section are united by a row of short stitches, and thereby perforated and rendered flexible at a line parallel to and a sufficient distance from the back to allow each to lie flat upon the others when open, substantially as set forth.

3. A book composed of sections or bunches of leaves, in which each section is secured to the back separately and thereby flexibly there-

on independently of the others, and in which
the leaves comprising each half of each section
are united by a row of short stitches, and
thereby rendered flexible at a line parallel to
5 and a sufficient distance from the back to al-
low each to lie flat upon the others when open,
substantially as set forth.

In testimony whereof I have hereunto set
my hand, this 3d day of June, 1887, in the
presence of two witnesses, at Chicago, Illinois. ro
MICHAEL RYAN.

Witnesses:

FRANCIS W. PARKER,
CORA L. CADWALLADER.