

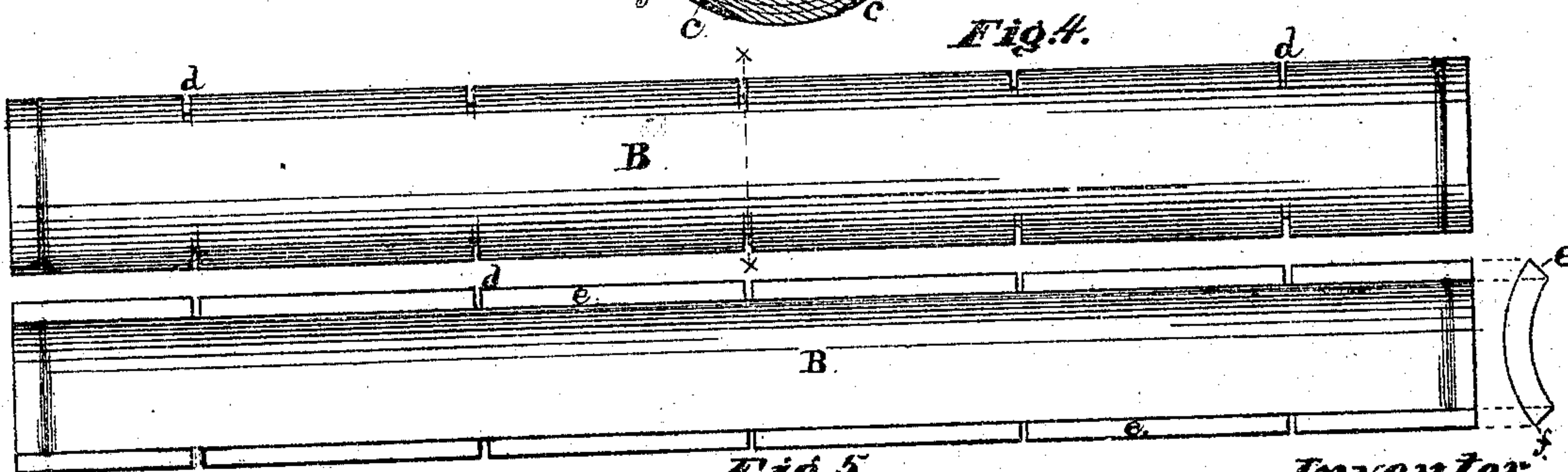
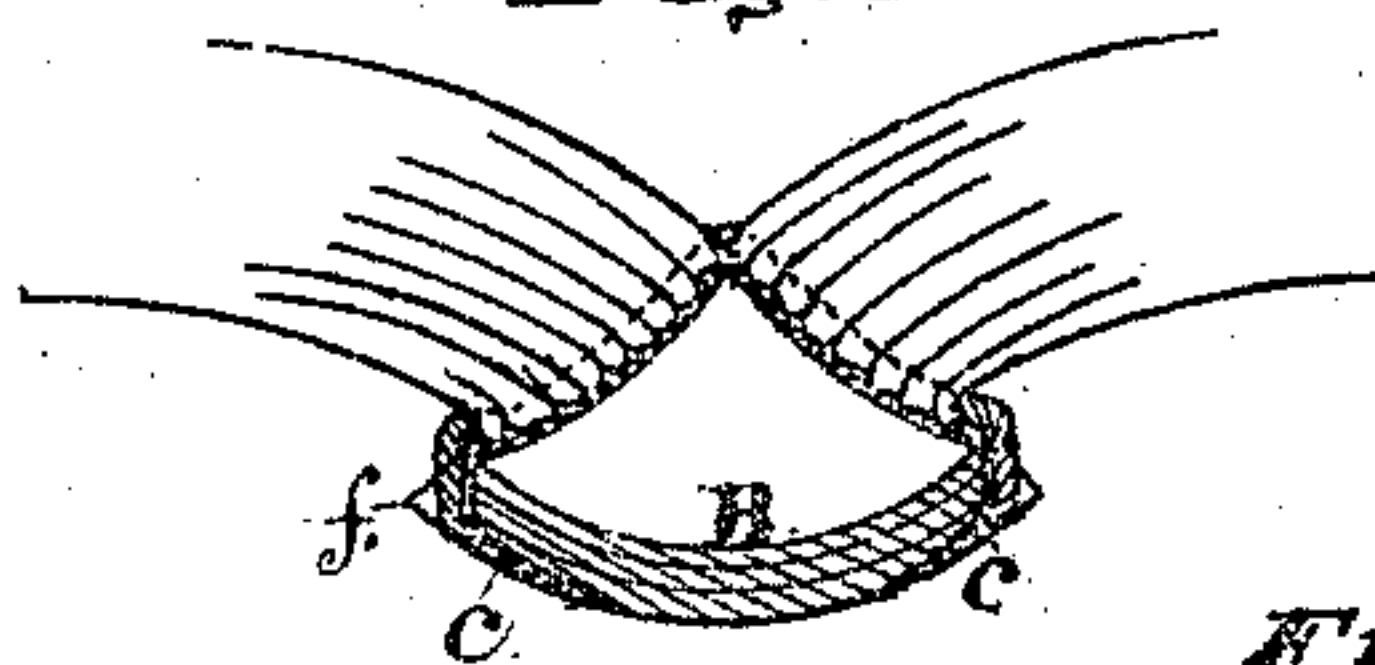
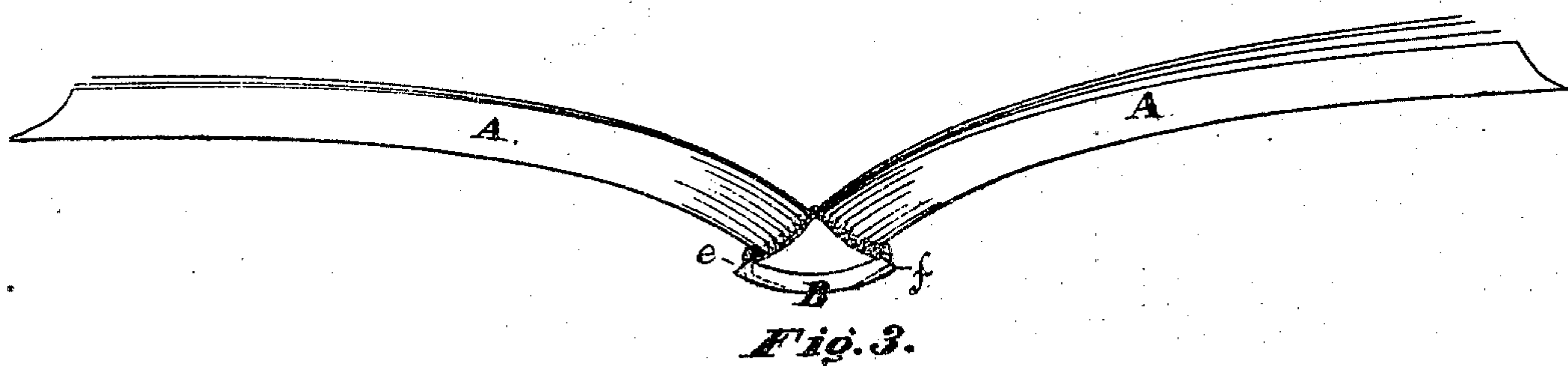
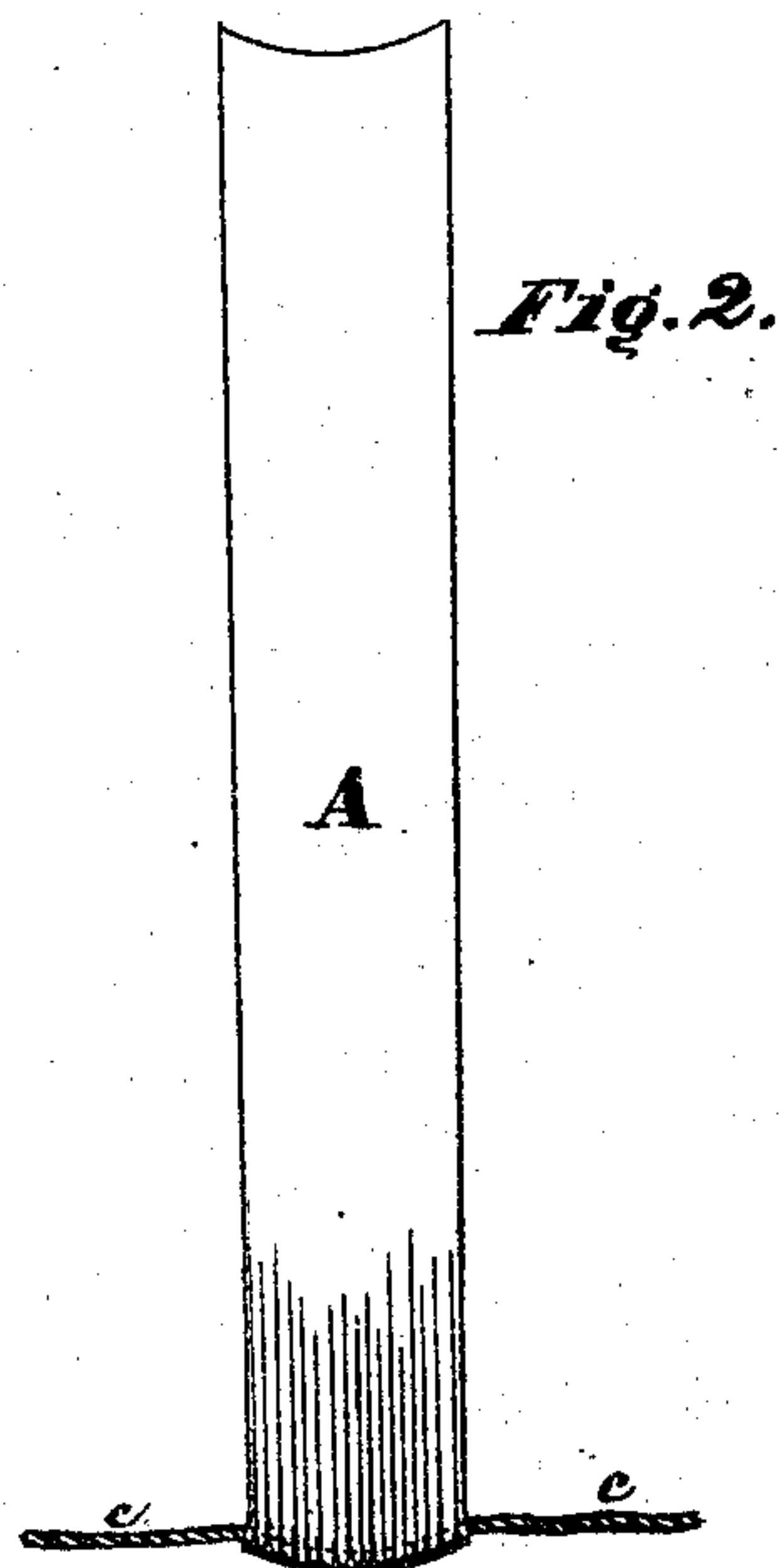
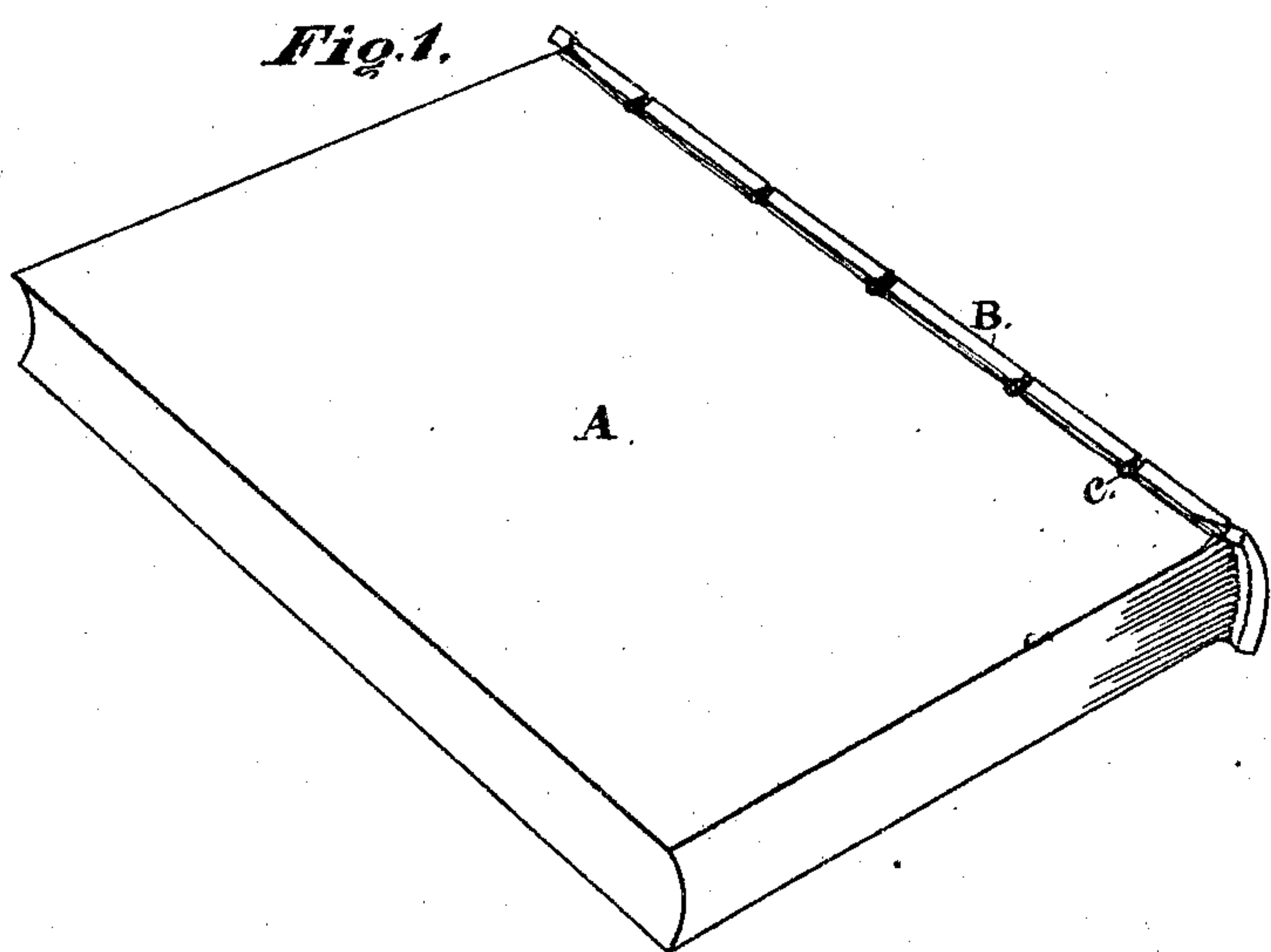
(15.)

IRA REYNOLDS.

Book Binding.

No. 122,965.

Patented Jan. 23, 1872.



Witnesses.

W. Bradford.
H. L. Brine.

Inventor.

Ira Reynolds.
by John J. Halsted.
his attorney.

UNITED STATES PATENT OFFICE.

IRA REYNOLDS, OF DAYTON, OHIO, ASSIGNOR TO REYNOLDS & REYNOLDS.

IMPROVEMENT IN BOOK-BINDING.

Specification forming part of Letters Patent No. 122,965, dated January 23, 1872.

To all whom it may concern:

Be it known that I, IRA REYNOLDS, of Dayton, in the county of Montgomery and State of Ohio, have invented certain Improvements in the Manufacture of Books; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

My invention consists in a spring-back book, made complete, with all its fastenings, independent of any cover, as hereinafter set forth.

A leading object of my invention is a further improvement upon the style of book described in my patent No. 98,191, dated December 21, 1869, and which might be used either with or without a cover, or be readily applied to a removable cover, so that a single cover would answer for a large number of account or other books; and by my present invention I can construct a coverless book of any size and adapted for every purpose, even up to the largest-sized ledgers and day-books, which open lengthwise; whereas my former method was more peculiarly adapted for small memorandum or receipt books of the class opening crosswise.

Figure 1 shows one of my books in perspective. Fig. 2 is an end view of the same before its back piece has been applied. Fig. 3 is an end view, and also a cross-section in the line *x x* of Fig. 4, with the back piece applied. Fig. 4 is a plan view on an enlarged scale of the outer or convex face of the back piece ready to be applied; and Fig. 5 shows a plan of the inner face of the same, and also a cross-section.

A is the body of paper which composes the book proper, and which may be stitched or fastened in any well-known manner. B is a strip of stiff pasteboard or other appropriate material, made and to be applied to the back in the following manner: It is made, as will be seen, slightly broader than the thickness of the book, and, preferably, slightly curved transversely, as shown. At suitable intervals, corresponding with the location of the cords or bands *c*, which are usually employed in book-binding to secure a book to its cover, I cut or saw nicks or slits *d* to receive such cords, tapes, or bands, which I then glue or fasten secure-

ly in such nicks or slits, the opposite ends of each band or cord pointing toward each other over the back piece B, instead of, as heretofore, pointing in the opposite direction. By these means the back piece is readily made a permanent part of the book without being pasted to the surface of its back, and freely permits the book, however many leaves it may contain, to be readily opened and kept open without strain to the fastenings and without effort. The cords are so sunken into the slots and back piece as to leave the surface flush. The slots are cut deep enough in the edge of the back piece to permit the pull of the cord when putting on the back to be in the same line or plane with the face of the book. The curvature given to the back gives its edge a slight inward inclination or bevel, as seen at *e*. This bevel may, if desired, be somewhat increased by cutting. It will now be seen that my book is ready for use, and that its strength is sufficient to hold it together. To give it, however, a neat finish, and to adapt it the better to be preserved, it may have its outer or most exposed leaf made of paper stronger and thicker than that forming the body of the book, and its rigid back may, if desired, be neatly surfaced or lined. My book, thus made, is adapted to receive, if desired, a removable cover of any kind, inasmuch as the projecting ledge *f* will hold a clasp or clasps, or maintain the book within a cover having a C-shaped spring-back. When made with special reference to its use with a removable cover which clings to the back, I make the ribs or ledges *c* of such shape as is best adapted to the purpose. By my present mode of construction I dispense with the necessity of apparatus for compressing or molding the sheets at the back to form a projecting ridge, as the excess of the width of the strip beyond the thickness of the back itself affords any ridge that may be wanted. It will be seen also that by this method I can make blank and other books of any size, and that they will lie flat when opened. I likewise get an advantage in avoiding any pull of the cords or bands upon a cover when opening, such cords, in the old mode of making and binding, always tending, by the direction of the pull and strain upon them, to tear a book from its cover. Moreover, when one of my improved books is protected

within my patented cover above mentioned, the spring-back of the cover actually clamps and holds the cords or bands at the points where they are turned backward over the back piece, and therefore lends its aid to protect and save the back. As one cover may answer for scores or hundreds of books, and by my present improvement I can construct banking and counting-house books, ledgers, &c., of any number of pages, the great value and economy of this invention will be apparent when, as is well known, the permanent covers, as now made, frequently cost from three to five times as much as the rest of the book, and because of such cost for a cover the books are usually

made very much larger than is convenient for use. By my invention they may be made of any convenient thickness and bulk, and when filled removed from the cover, one after the other for years, and filed away for future reference.

I claim—

A book which dispenses with the ordinary side-covers and has the body of the book secured directly to the back piece B, substantially as herein shown and set forth.

IRA REYNOLDS.

Witnesses:

JOHN J. HALSTED,
W. BRADFORD.