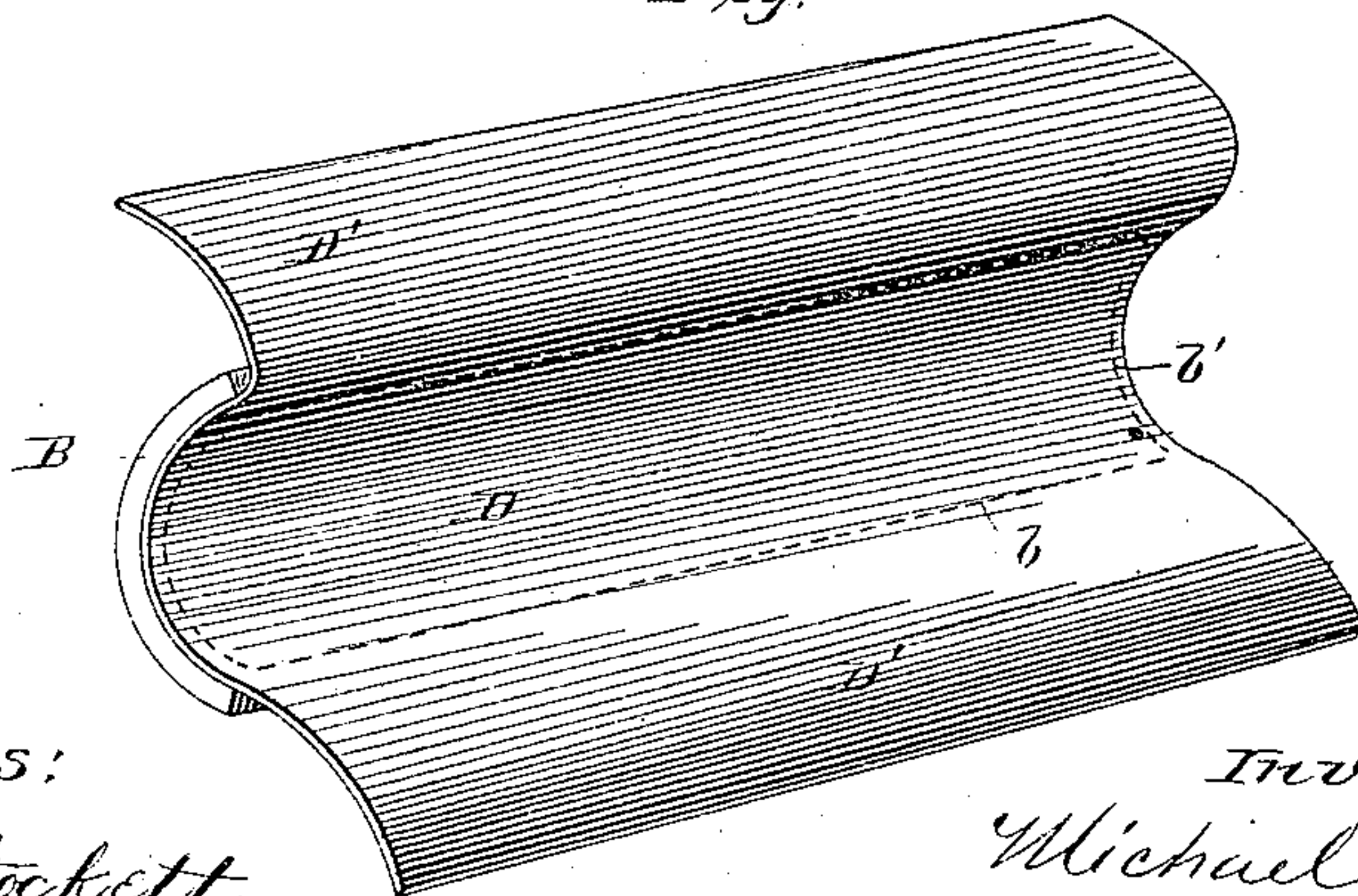
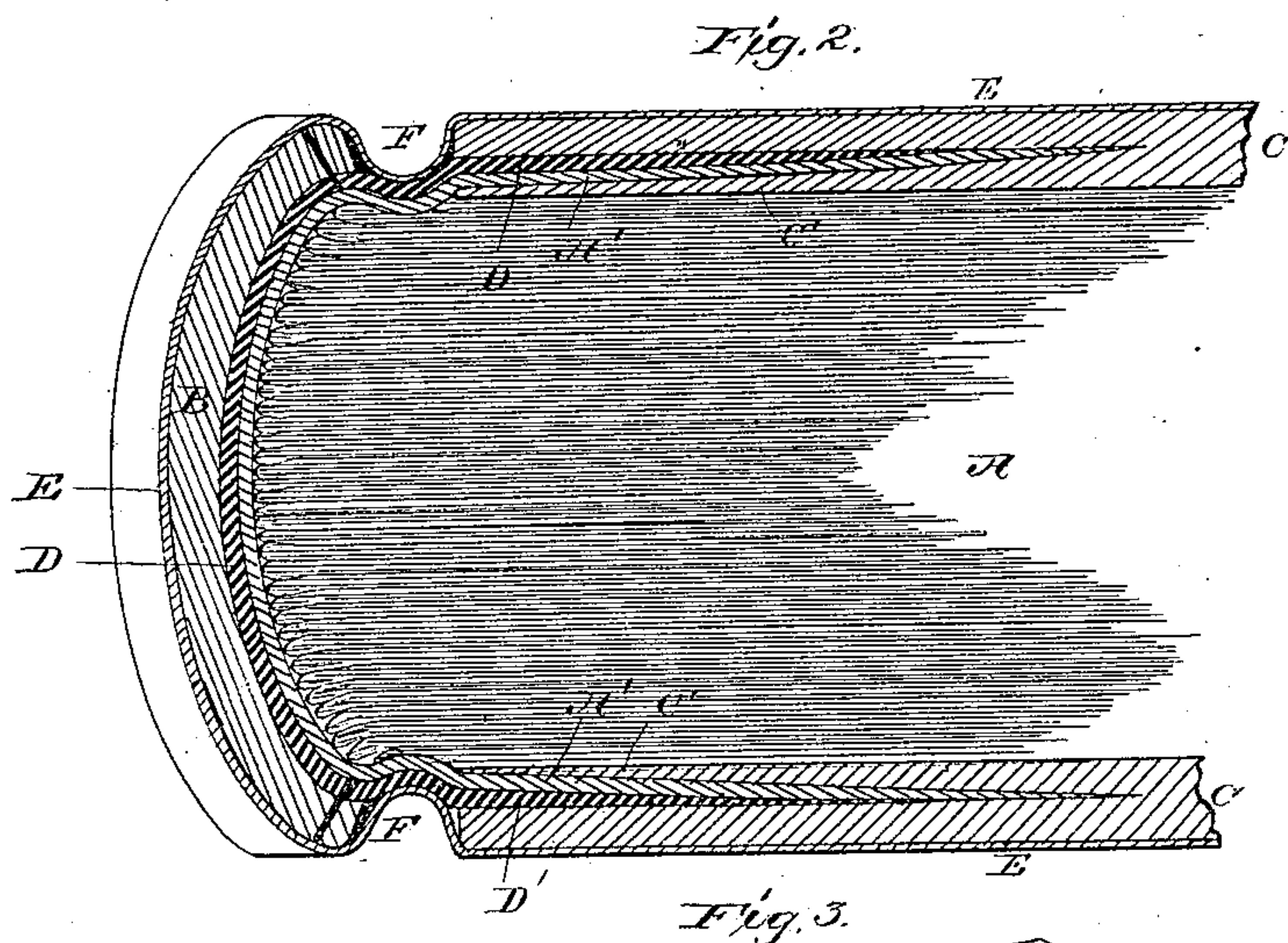
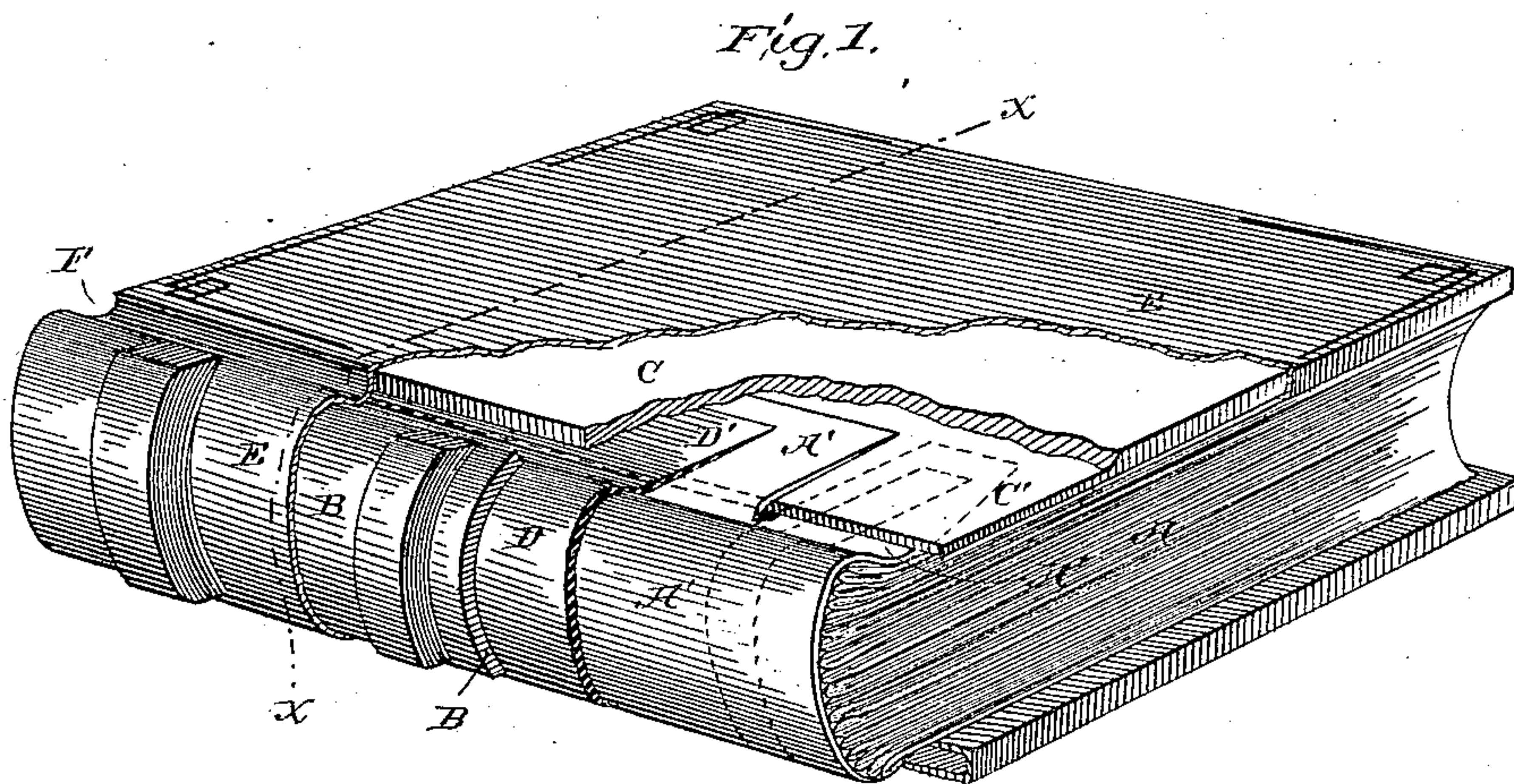


(No Model.)

M. MULQUEEN.
BINDINGS OF BOOKS.

No. 316,051.

Patented Apr. 21, 1885.



Witnesses:
Jno. W. Stockett
C. C. Poole

Inventor
Michael Mulqueen
per W. E. Dayton
Attorney

UNITED STATES PATENT OFFICE.

MICHAEL MULQUEEN, OF CHICAGO, ILLINOIS.

BINDINGS OF BOOKS.

SPECIFICATION forming part of Letters Patent No. 316,051, dated April 21, 1885.

Application filed March 2, 1883. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL MULQUEEN, of Chicago, in the county of Cook and State of Illinois, have invented certain new and
5 useful Improvements in Bindings of Books; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked
10 thereon, which form a part of this specification.

This invention relates to improvements in the binding of blank-books of that class known as "spring-back," or in which the cover-back
15 is convex and rigid, and in which the contained leaves are flexibly united and adapted to spring away from the cover-back when the book is open, so that the exposed pages will lie proximately flat and accessible at their line of junction.
20 tion.

The improvement has for its objects, among others, to increase the strength and durability of the binding and to give a desirable elasticity at the joint between the back and lids,
25 wherein the spring-back books as heretofore bound have been in a measure defective.

To these ends the book illustrated in the accompanying drawings as embodying my invention is provided with a sheet of rubber attached to the inner or concave surface of the
30 tar-board back and extending the entire length thereof, said sheet being wider than the said tar-board back and having its margins fastened, by paste or otherwise, beneath the cover-flies for the whole length or height of said
35 covers, after which the strapped book is inserted and the binding is completed in the usual manner.

In the binding of this class of books as heretofore usually constructed, the strapped book, being the flexibly-joined leaves provided with the flies or flaps, has been first connected with the tar-board lids, and thereafter the tar-board back has been temporarily held in place
40 merely by pasting strips of paper over the joints on both sides, and thereby uniting the tar-board back with the tar-board lids sufficiently to enable the covering-leather or other material to be applied to these parts. In my
45 improvement the additional sheet of rubber is first fastened to the tar-board back, as described, and then said tar-board back is se-

cured to the tar-board covers throughout their entire length or height by means of the extended sides of the added sheet of rubber
55 mentioned. After this has been done, the straps are applied to the lids, and the outer covering and inner lid covers are attached in the usual manner.

Referring to the drawings for a more detailed description of my improvement, Figure 1 is a blank-book of the class referred to, having parts broken away, so as to show the manner of construction contemplated by my improvement. Fig. 2 is a transverse section in
60 the plane xx of Fig. 1, parallel with the end of the book. Fig. 3 is a perspective view of the tar-board back having the additional sheet of rubber which I provide secured thereto preparatory to connecting it with the lids and
70 strapped book.

A is a strapped book. A' are the straps thereof. B is the tar-board back. C C are the tar-board lids. D is the sheet-rubber or other elastic material which constitutes the
75 principal feature of my invention, and E is the outer covering of the book. The sheet D is fastened to the inner or concave face of the tar-board back B, preferably by a line of stitching, $b b$, along each margin of the said back, and by a similar line of stitching, b' , at each
80 end. Said sheet D is materially wider than the tar-board back B, and its extended margins D' form flaps or flies which, properly skived at their edges, are inserted between the
85 main body of the lids C and the uplifted fly C', which form parts of said lids, and are secured to the outer or main portion of the lids by paste or in any other suitable manner. After the back B has been in this manner se-
90 cured to the lids C, the strapped book A is connected with the lids C in the usual manner—that is to say, by having the middle or central sections of the straps A' inserted beneath the flies C', and the end sections of said straps
95 fastened externally to said flies C' after the outer covering has been properly turned over the edges of the lids. The parts being joined, as set forth, the binding of the book is completed in the usual manner.
100

It is obvious that the joints at F will in the construction described be much stronger by reason of the presence of the sheet D, which at these joints F re-enforces the covering-

leather E, and will at the same time be more flexible on account of the elasticity of the rubber, which permits the parts to yield or give when the book is opened. It is also obvious
 5 that when the book is open at or in the sections near the lids the rubber sheet D, connecting the lids with the tar-board back on their inner surfaces, operates to draw the lids down more closely against the back at the joint, and
 10 thereby enables the book-leaves to be opened more flatly, so that the pages are more perfectly accessible at or near their junction. The book provided with this additional part or sheet D, secured as described, and extended from end
 15 to end of the book, will also manifestly be much more durable, and particularly it is plain that the back and lids will maintain their relative positions more perfectly in the continued use of the book than when joined solely
 20 by the covering-leather E, or by such leather and a re-enforcing sheet of paper or press board, which has sometimes been used for the purpose.

I prefer that the sheet D shall be of heavy
 25 rubber—say one-sixteenth of an inch thick, or thereabout, varying with the size of the book. Said substance is preferable because it has a smooth surface, and also because it is both firm and in a degree elastic, so that when the
 30 book is open it will draw the lids forcibly down against the back, while at the same time, upon closing the book, it will contract and lie smooth and snug and not thicken up, so as to cause the book to become loose and
 35 bungling at the joints. The rubber sheet mentioned is preferably placed upon the inner face of the back B, so that the back of the book proper comes in contact with the surface thereof. An important advantage arises
 40 from this construction, for the reason that the stitching upon the back of the book is liable, in case it comes in contact with the hard surface of the interior of the back, as in the usual form of binding, to become abraded and
 45 finally cut by being pressed and moved upon such surface in opening and closing or otherwise handling the book. The rubber sheet presents a soft and yielding surface, into which the projecting line of stitches extending over
 50 the parchment straps (to which the leaves are sewed in the usual method of binding) are al-

lowed to sink, and which will yield, so as to prevent any rubbing or scraping of said stitches.

The presence of the rubber sheet between
 55 the rear edges of the book and the lateral margins of the spring-back also produces an improved result, from the fact that elastic cushions are thereby formed, whereby the amount of force required to expand the spring-
 60 back in opening and closing the book may be lessened, while the said back may at the same time be made of the requisite rigidity to hold the parts firmly in their opened and closed positions. An improved effect is also ob-
 65 tained by the construction shown, in which the rubber sheet is stitched to the edges of the back, the rubber by this means tending to draw the edges of the back inward or together, or so that the material of the back
 70 proper may be made thinner and less rigid, without decreasing the effect as a spring, and the rubber at the same time, by its elasticity, permitting considerable expansion of the back without tendency to weaken or break it, as is
 75 liable to be the case when the material composing the back is made of considerable thickness for the purpose of obtaining sufficient rigidity to prevent the back from opening or spreading too easily. 80

I claim as my invention—

1. The combination, with the back and lids of a spring-back book, of a sheet of rubber connecting the lids and back, substantially as
 85 and for the purpose set forth.

2. The combination, with the back and lids of a spring-back book, of a sheet of rubber secured to the inner concave face of the back and attached at its margins to the lids, substantially as and for the purpose set forth. 90

3. The combination, with the back B and lids C, of a sheet, D, of rubber, attached to the lateral margins of the said back, and secured at its edges to the lids C, substantially as and for the purpose set forth. 95

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

MICHAEL MULQUEEN.

Witnesses:

M. E. DAYTON,

P. W. SNOWHOOK.