

(No Model.)

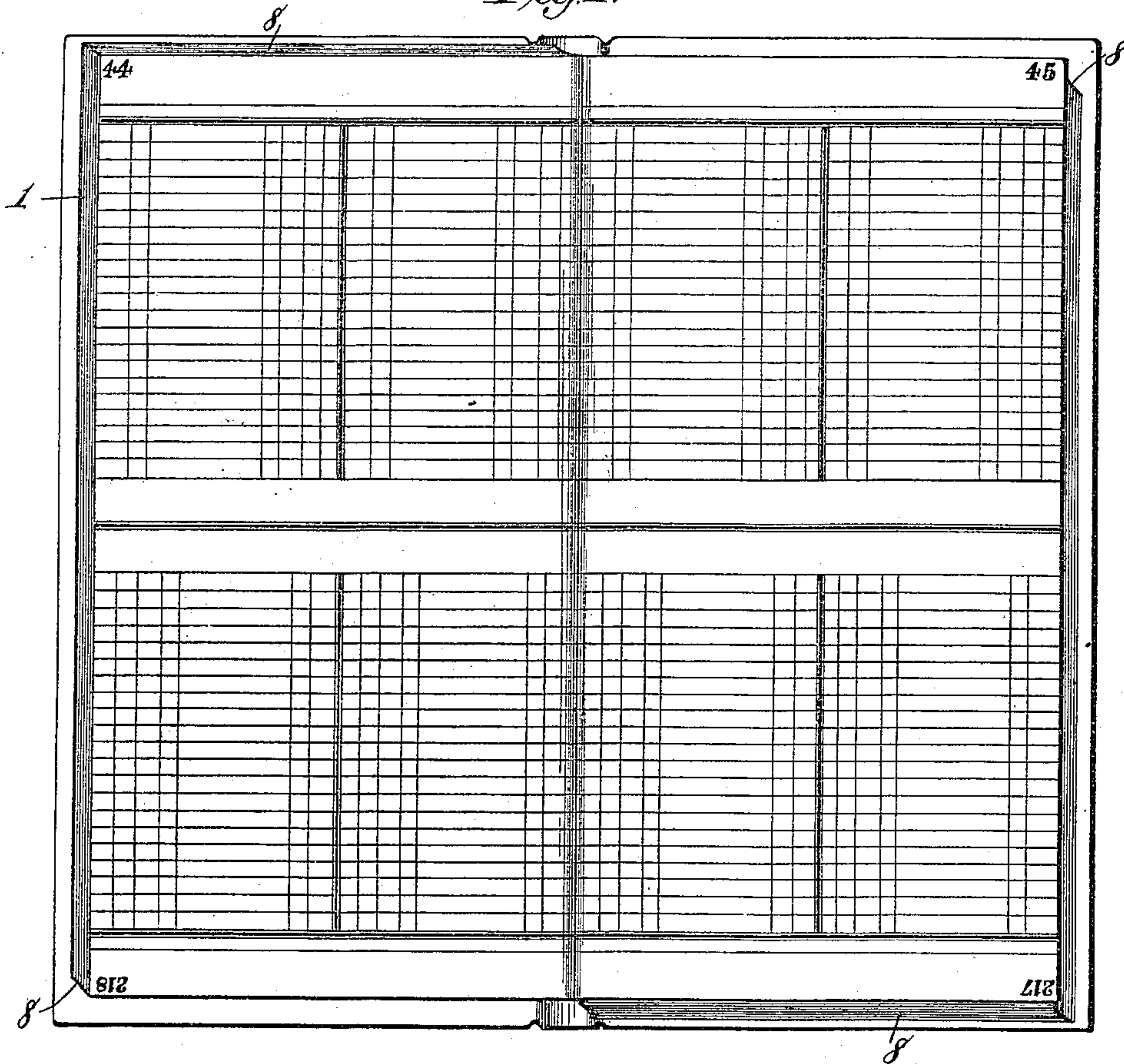
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A. C. FLETCHER.  
BOUND VOLUME OF BOOKS.

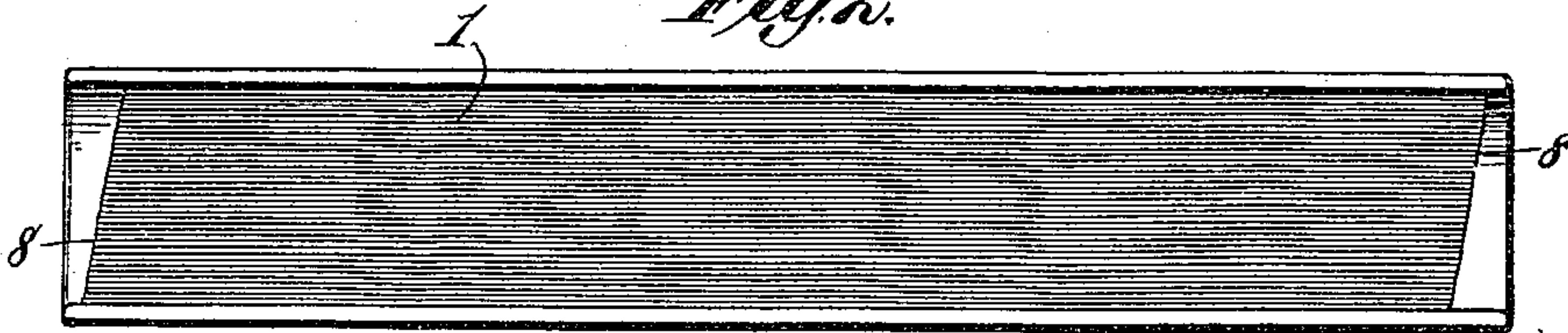
No. 426,790.

Patented Apr. 29, 1890.

*Fig. 1.*



*Fig. 2.*



Witnesses:  
*John C. Smith*

*J. A. Matherford*

Inventor:

*Addison C. Fletcher*

By

*James L. Norris*

*Atty.*

(No Model.)

A. C. FLETCHER.  
BOUND VOLUME OF BOOKS.

4 Sheets—Sheet 2.

No. 426,790.

Patented Apr. 29, 1890.

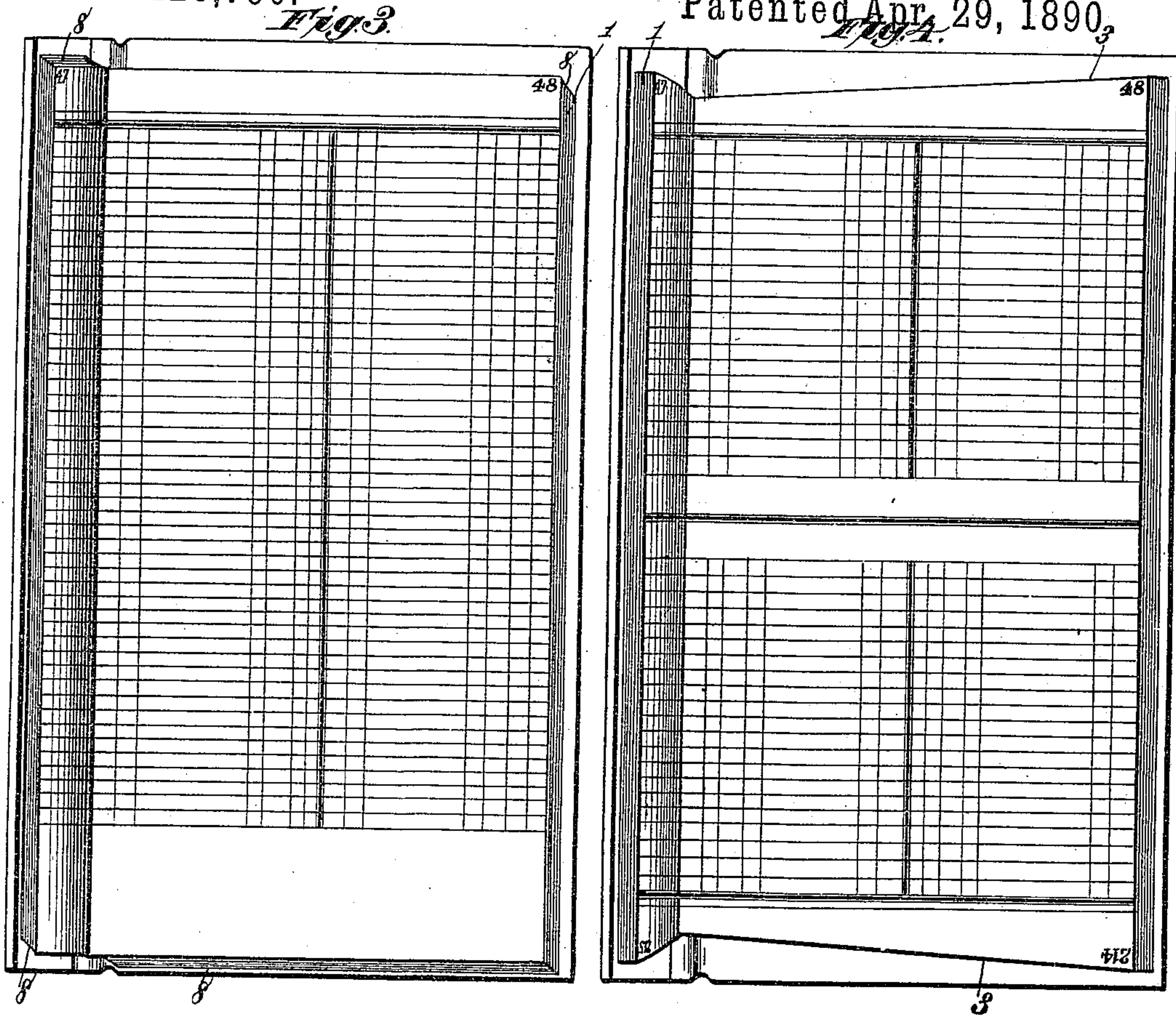
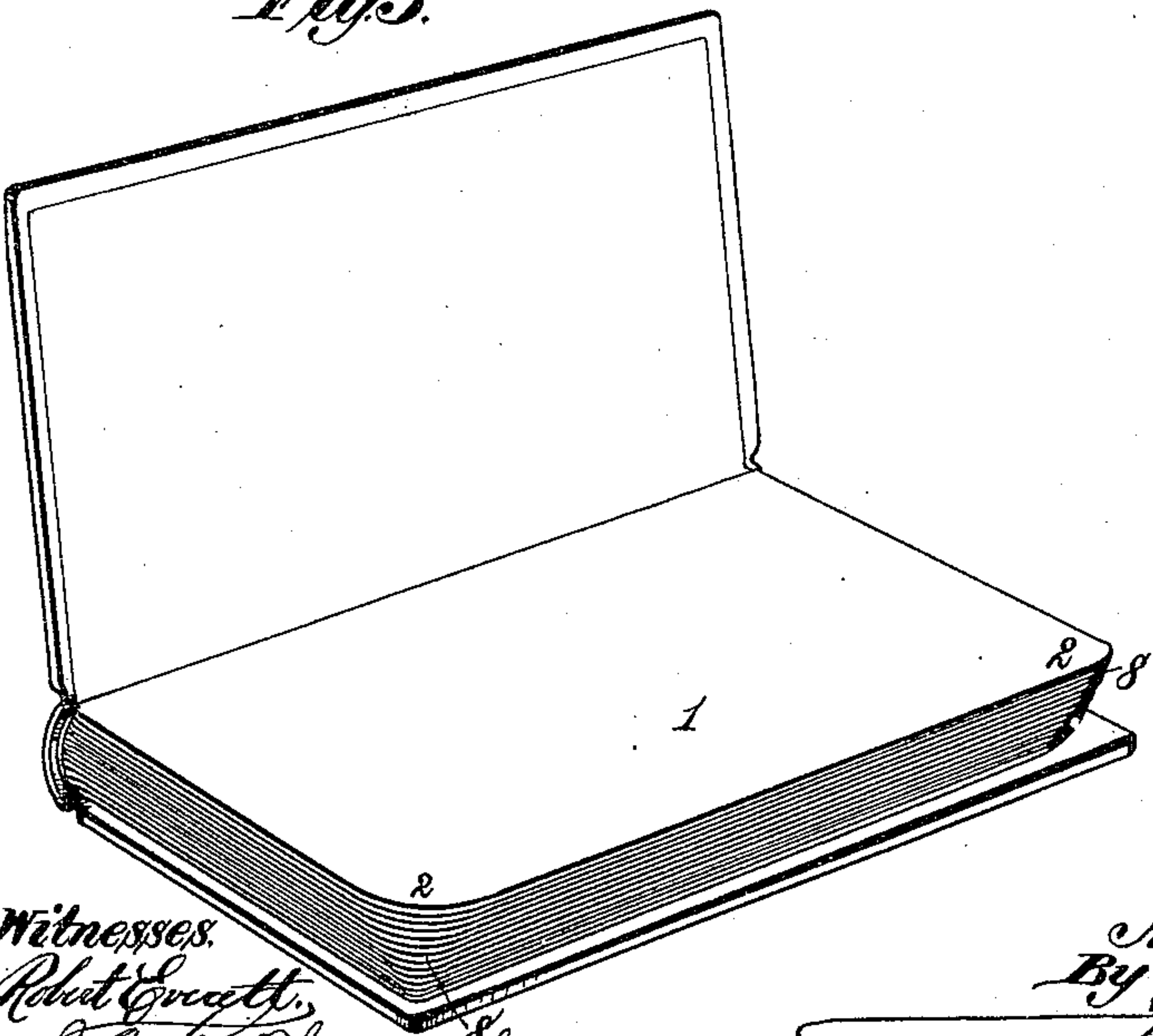


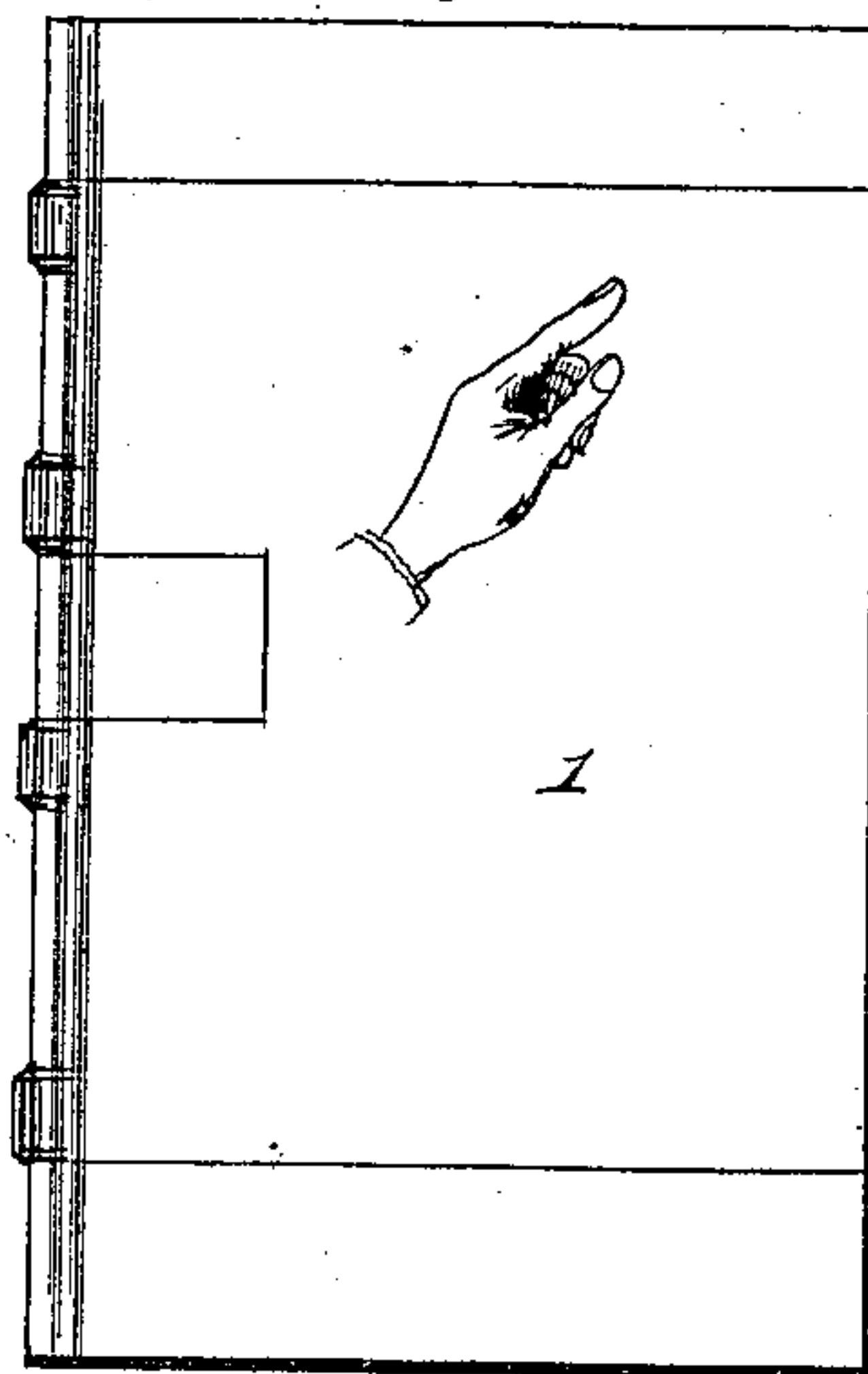
Fig. 5.



Witnesses.

Robert G. Smith,  
J. A. Tupperford.

Fig. 6.



Inventor.

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By James L. Norris.

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(No Model.)

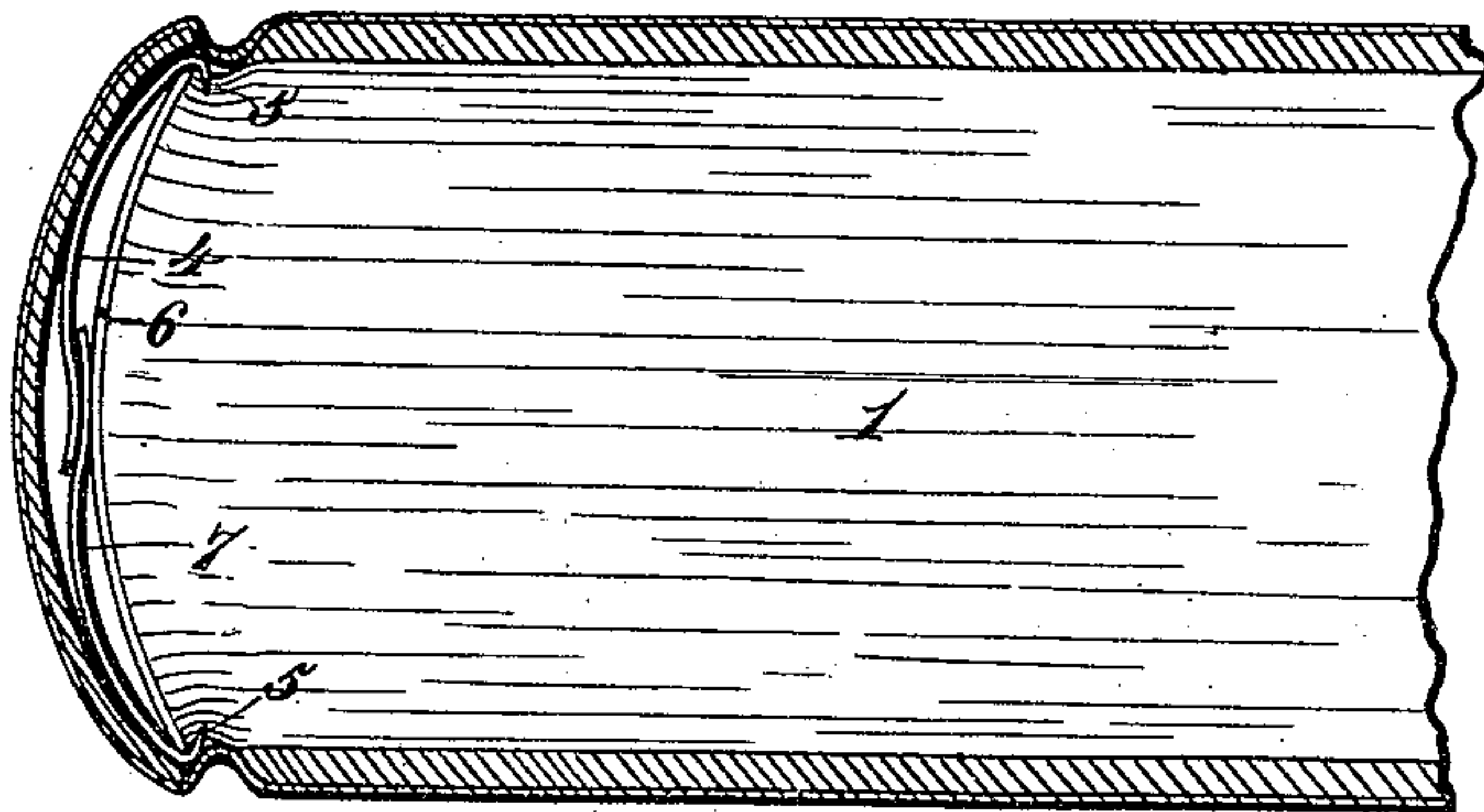
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A. C. FLETCHER.  
BOUND VOLUME OF BOOKS.

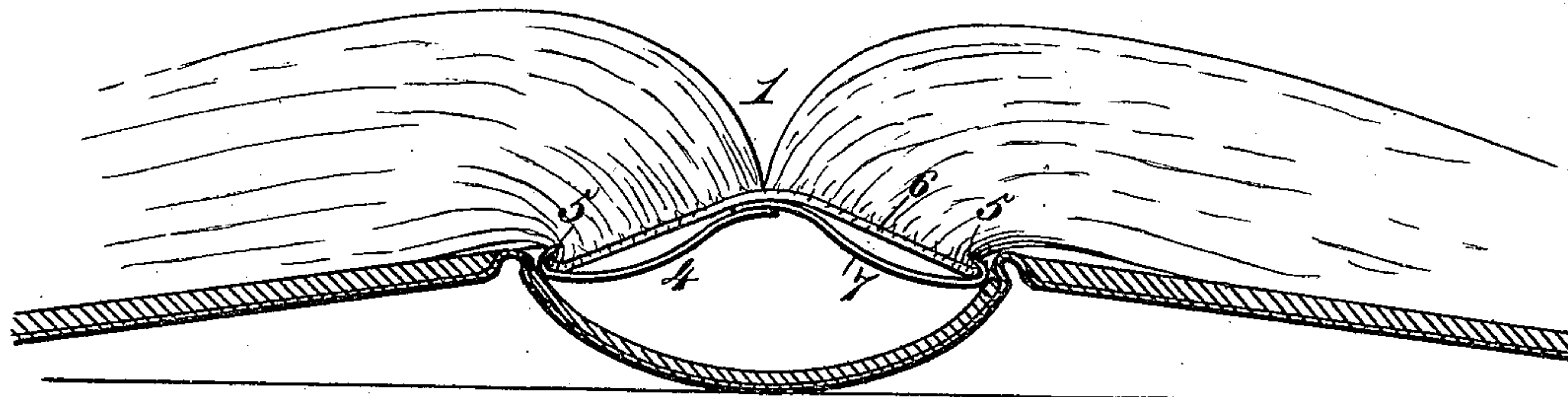
No. 426,790.

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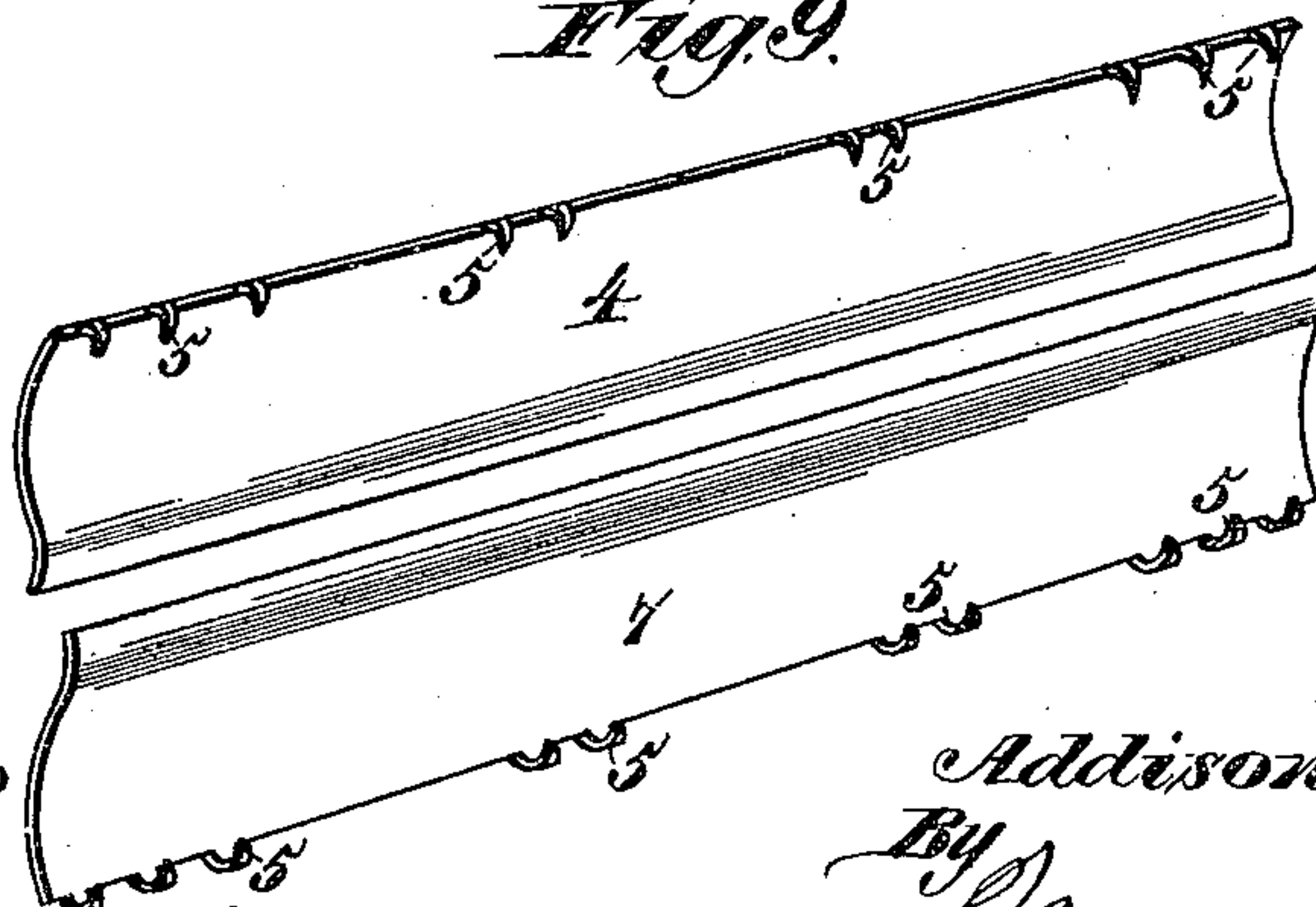
*Fig. 7*



*Fig. 8*



*Fig. 9*



Witnesses.  
*Robert G. Smith.*  
*J. A. Rutherford.*

Inventor:  
*Addison C. Fletcher.*  
By *James L. Norris.*  
Atty.

(No Model.)

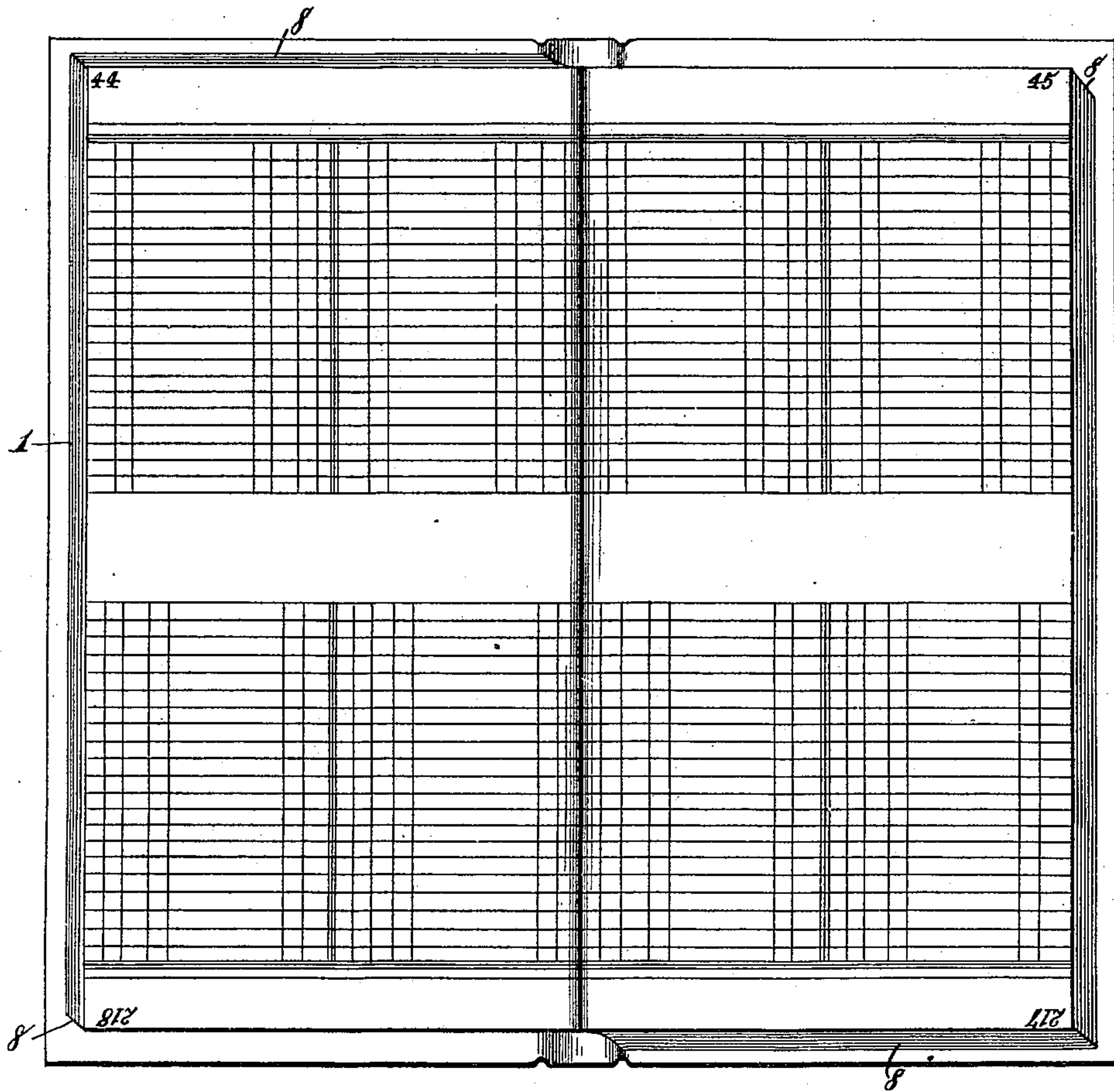
4 Sheets—Sheet 4.

A. C. FLETCHER.  
BOUND VOLUME OF BOOKS.

No. 426,790.

Patented Apr. 29, 1890.

*Fig. 10.*



*Witnesses:*  
*Robert G. Smith.*  
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# UNITED STATES PATENT OFFICE.

ADDISON C. FLETCHER, OF NEW YORK, N. Y.

## BOUND VOLUME OF BOOKS.

SPECIFICATION forming part of Letters Patent No. 426,790, dated April 29, 1890.

Application filed December 12, 1889. Serial No. 333,465. (No model.)

*To all whom it may concern:*

Be it known that I, ADDISON C. FLETCHER, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Bound Volumes of Books, of which the following is a specification.

My invention relates to the construction of bound volumes of books of various kinds, whether the same contain printed matter or are compiled in blank for use as account-books, diaries, ledgers, or other purposes.

It is one purpose of my invention to provide a simple and wholly inexpensive construction, whereby the person reading, consulting, or making entries in a book of any character, whether the same be a blank-book or a printed publication, shall be enabled to separate and turn the pages with ease and accuracy and without turning up the corners of the leaves. This feature of my invention also contemplates a construction whereby the leaves may be turned in opposite directions by simply reversing the book, the entries being carried consecutively from the upper half of one page to the similar portion of the ensuing page, and so on throughout the volume, the latter being then turned end for end to bring the blank or unused lower portions of the several pages into a position for receiving entries, while the series of half pages upon which entries have been previously made in consecutive order are inverted or turned upside down, in which position they form a base of support for the hand and wrist of the writer or book-keeper, who fills the consecutive halves of the pages with his entries, using the lower blank halves as a base of support for the hand and wrist.

It is a further purpose of my invention to provide a blank-book having a novel tabulation or arrangement of the page-lining, the same being divided transversely of said pages in such manner as to constitute either one single book or, if desired, a volume divided at any suitable point by a transverse blank space with or without a lining centrally arranged in said space, thereby dividing the said pages by spaces, whereby the tabulation upon one side of said space may be used as one book and that upon the other side either as another book or as a continuation of the first volume,

the pages being numbered upon one side of said space in one direction and upon the other side in the opposite direction.

It is also one purpose of my present invention to provide and combine with a book of any description simple means whereby the book when opened at any point shall remain open without the imposition of weights or any other like devices. This feature of my invention comprises, also, a novel and simple construction and combination of parts whereby the backing shall be supported and arched upward upon opening the book, the elastic supporting devices be lapped to slide or move transversely one upon the other as the book opens and closes and exerting a spring-pressure upon the backing whereby the latter is raised as the book opens and sustained in its raised position and the leaves are allowed to lie naturally upon the outspread covers.

To enable others skilled in the art to practice my said invention I will describe the same in detail, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of a blank-book suitable for accounts or other entries represented as opened to illustrate the tabular arrangement or paging. Fig. 2 is an edge elevation of the book represented as closed, illustrating the method or form of trimming the top edges of the leaves. Fig. 3 is a plan view of a book partly open, showing a modified system of tabulation. Fig. 4 is a similar view showing a modified method or form of trimming the top edges. Fig. 5 is a perspective view showing a modification for trimming the end edges. Fig. 6 is a plan view of a book closed, showing the manner of indicating the direction in which the book is to be opened. Fig. 7 is an end elevation of a volume showing the manner of attaching the elastic sustaining devices. Fig. 8 is an end elevation showing the book opened and illustrating the action of the sustaining devices. Fig. 9 is a detail perspective of the elastic sustaining devices detached, each being a duplicate or counterpart of the other. Fig. 10 is a plan view of the blank-book showing the division of the pages by a transverse space.

In the said drawings the reference-numeral 1 denotes any form of book, whether the same be bound up in print, in blank form, or as a



ruled ledger or account-book. My invention contemplates both forms of compilation, and is adapted to either one in many of its features.

5 Referring to Figs. 1 to 5, inclusive, the reference-numeral 1 designates the body of the book or other bound volume, composed of separate consecutive sheets, each containing two pages. In accordance with my inven-  
10 tion I provide each one of these consecutive pages at or near the middle or central portion with any suitable indication of division—such as a transverse blank space—of suitable width, either with or without a cen-  
15 tral transverse lining or ruling, whereby I form two substantially similar sections or divisions upon each of the pages. I number these sections or divisions consecutively as to the upper half portions or divisions, the nu-  
20 merical designations running in regular order from the beginning to the end of the book.

By examining Fig. 1 it will be seen that in making entries upon the upper halves of the pages, as, for example, upon those portions  
25 numbered as pages or half-pages 44 and 45, the similar lower portions of said pages form a broad base of support for the wrist and hand of the user or the book-keeper. When these portions have been filled in the natural  
30 order in which they are numbered—that is to say, proceeding from the beginning toward the end of the book, as is usual in paging other books—the book is reversed or turned  
35 end for end to constitute the rear end the beginning, and the lower page-sections are filled consecutively from the rear to the beginning.

After having made whatever entries are required to fill the space inclosed by the series  
40 of half-pages whereof the numerals 44 and 45 form a part, as an illustration, and having proceeded upon the first series of half-pages from the beginning of the volume to the end, the volume is simply turned end for end,  
45 whereby the paging-divisions shown in Fig. 1 at the bottom of said figure and numbered thereon as the two hundred and seventeenth and two hundred and eighteenth half-pages are brought into position to receive the en-  
50 tries of the operator in the same consecutive order as in the other series of half-pages, save that under my invention the second series of half-pages read from the rear of the volume toward the front, while the first se-  
55 ries read from the front toward the rearward portion of the volume.

To facilitate turning the leaves I adopt the construction shown in Figs. 2, 3, 4, and 5, in which I show the edge of the book trimmed  
60 obliquely or in a plane forming an angle of less than ninety degrees with the leaves, as shown in Figs. 1 and 2, whereby the superimposed sheets are readily separated from those upon which they are laid. The thinner  
65 the paper may be of which the leaves are formed the more acute will be the angle, or, in other words, the greater will be the ob-

liquity of the plane upon which the "overhang" is formed. This rule also prevades  
70 the several forms shown and described, inasmuch as the angularity of the converging ends shown in Fig. 4 increases in proportion to the increased thinness of the paper, while the angle of the overhang shown in Figs. 1,  
75 2, and 5 becomes more acute as the leaves grow thinner. As a modification of this construction, I may bevel off the angles 2 of the book, as shown in Fig. 5, whereby I secure the same result, and whereby, also, the separation of the leaves is facilitated, inasmuch  
80 as the overhang of the superimposed leaves is located at the end angle or corner and entirely at that point instead of being distributed over the entire end of the book. These bevels of both descriptions are made at re-  
85 verse angles or in substantial parallelism with each other, as clearly shown in Figs. 2 and 5, to permit the reversal of the book end for end, whereby the second series of half-sheets or half-pages are rendered ac-  
90 cessible. I may, however, trim the edges of the leaves in the manner shown in Fig. 4 by simply forming an angle of less than ninety degrees at the points 3, which are the  
95 usual points of contact of the fingers in turning the leaves, or, in other words, converging the end edges of the leaves toward the point where they unite with the backing, the angle of convergence being comparatively small.

Referring now to Figs. 7, 8, and 9, the nu-  
100 meral 4 denotes a plate formed of suitable sheet metal, preferably of spring metal, provided with hooks, catches, or other suitable devices 5, whereby said plate during the pro-  
105 cess of manufacture of the book is attached or connected therewith by rigidly connecting the series of teeth 5, projecting from one edge of said plate, with the backing 6 of the book before the cover or backing is attached, the arrangement being such that the free edge of  
110 said plate shall lie closely against the said backing 6, while a second and similar plate 7 is attached in like manner to the opposite edge of the backing 6, and the free margin of this second plate overlaps and slides freely  
115 upon the margin of the other plate, both having an elastic lifting and sustaining action upon said backing when the book is opened, whereby the backing is raised, as shown in Fig. 8, and the leaves are parted and caused  
120 to lie open at any point, preserving the binding, promoting the durability of the book, and adding greatly to the convenience of the person using the book.

It should be noted that the divided pages  
125 are numbered consecutively in opposite directions, the first series, as denoted by pages 44 and 45 in Fig. 1, being initiated and continued in the direction indicated by the hand upon the outside cover in Fig. 6, which de-  
130 notes the direction in which the leaves are naturally turned with reference to the overhang in Figs. 2 and 5. This overhang, whether it be formed at the end, as in Fig. 2,



or at angles in Fig. 5, has precisely the same function, inasmuch as it gives a favorable position to the superimposed leaves to enable the operator to lift and separate them, and as the separation proceeds from the higher or more projecting angle of the overhang, down to the less prominent angles or edges, the numbering or paging will follow in the same direction.

It should be noted that I may employ the overhang 8, or the modified overhang shown in Fig. 5, either separately or conjointly, and I may unite with the same the divergent trimming shown in Fig. 4. I may also use any one or more of these features of construction separately or in combination with any one or more of the others mentioned.

Heretofore and prior to my invention a copy-book has been used in which the pages have been divided in such manner that the upper portions thereof may be used consecutively from the beginning to the end, while the other portions below the dividing-line are used in the opposite direction, the book being reversed for such purpose. In this instance, however, there is no dividing transverse space forming a marginal separation between the upper and the lower halves of the book. It does not, therefore, make a practical separation between the two portions of the pages, whereby the book can serve, practically, as two books—as, for example, a day-book and ledger, or other similar purposes. This blank margin is indispensable in all cases where the book is adapted to the uses proposed in this specification. It will readily be seen that in footing the columns, and for other purposes, its presence is essential, for without it the reversely-paged duplex tabulation is worthless.

In the drawings I have shown the blank-book divided by a transverse blank space and a lining centrally arranged in said space in Figs. 1 to 5, inclusive; and in Fig. 10 I have shown the blank-book divided by a transverse blank space without a central lining.

What I claim is—

1. A bound volume in which the leaves are trimmed or arranged with their end edges lying in a plane forming an angle with the plane of the leaves of less than ninety degrees, substantially as described.

2. A bound volume having its pages marked to form equal upper and lower divisions, said leaves being so formed and arranged as to present their ends in two parallel planes which form angles of less than ninety degrees with

the plane of the said leaves, substantially as described.

3. The combination, with a bound volume, of independent elastic sustaining devices interposed between the backing and the binding and adapted to aid in opening the volume and to support the binder when the volume is opened, substantially as described.

4. The combination, with a bound volume, of elastic plates interposed between the backing and the binding and adapted to be placed under tension by opening the book, the edges of the said plates overlapping each other, substantially as described.

5. The combination, with a bound volume, of elastic sustaining-plates, having attachment at their edges to the backing, and having their free edges overlapping and exerting an elastic and constant tension upon the middle portion of the backing, substantially as described.

6. A bound volume having its edges or the ends of its leaves trimmed off at angles less than ninety degrees with the plane of the leaves, said angles being reversed at the opposite ends, substantially as described.

7. A bound volume having a reverse bevel upon opposite edges of the leaves, whereby a double reverse overhang is formed to facilitate the separation of the leaves, substantially as described.

8. In a blank-book, a series of pages divided by a transverse blank space from the beginning to the end of the volume, the pages upon opposite sides of said space being numbered in opposite directions and the ends of the leaves being beveled or cut in parallel planes and at angles less than ninety degrees with the plane of the leaves, substantially as described.

9. A book having its pages divided by a blank space running transversely to said pages, said space being divided centrally by a ruling, also transverse to the pages, the leaves upon one side of said space being numbered in one direction and upon the opposite side of said transverse space in the opposite direction, and the ends of the leaves being trimmed in parallel planes forming less than an angle of ninety degrees with the plane of said pages, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

ADDISON C. FLETCHER.

Witnesses:

JAMES L. NORRIS,

JAMES A. RUTHERFORD.