

(No Model.)

F. E. SCHUBERT.
SPRING BACK FOR BOOKS.

No. 402,485.

Patented Apr. 30, 1889.

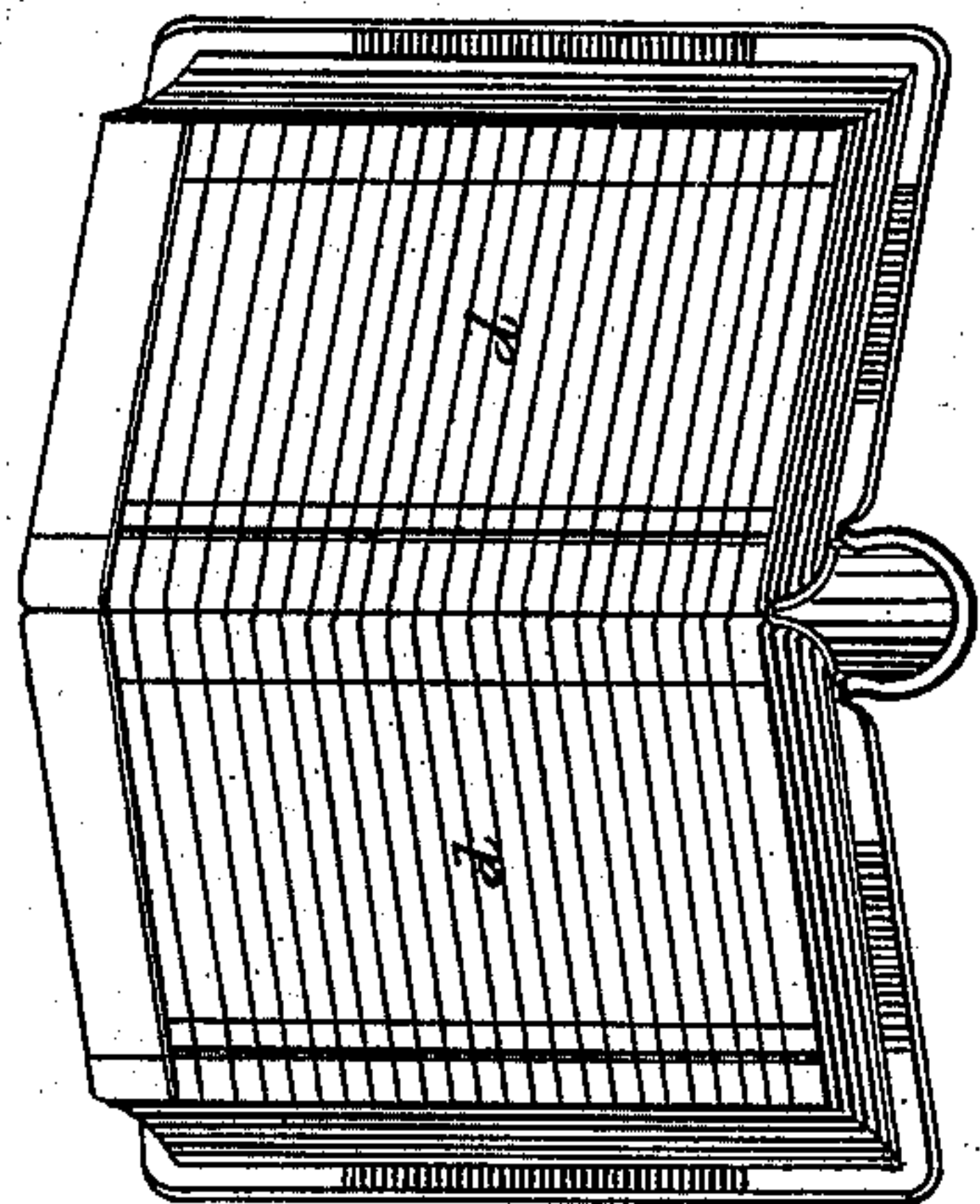


Fig. 4.

Fig. 7.

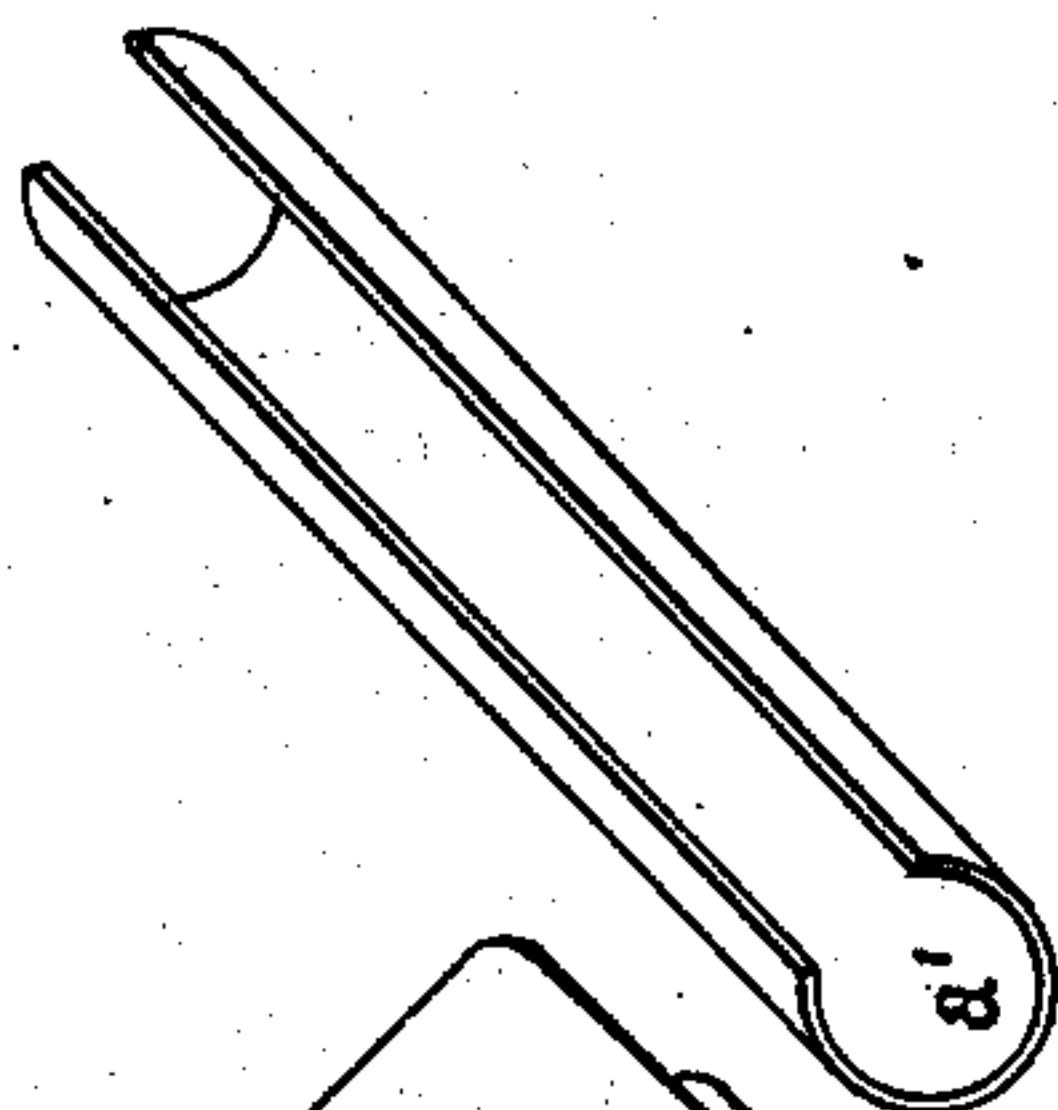
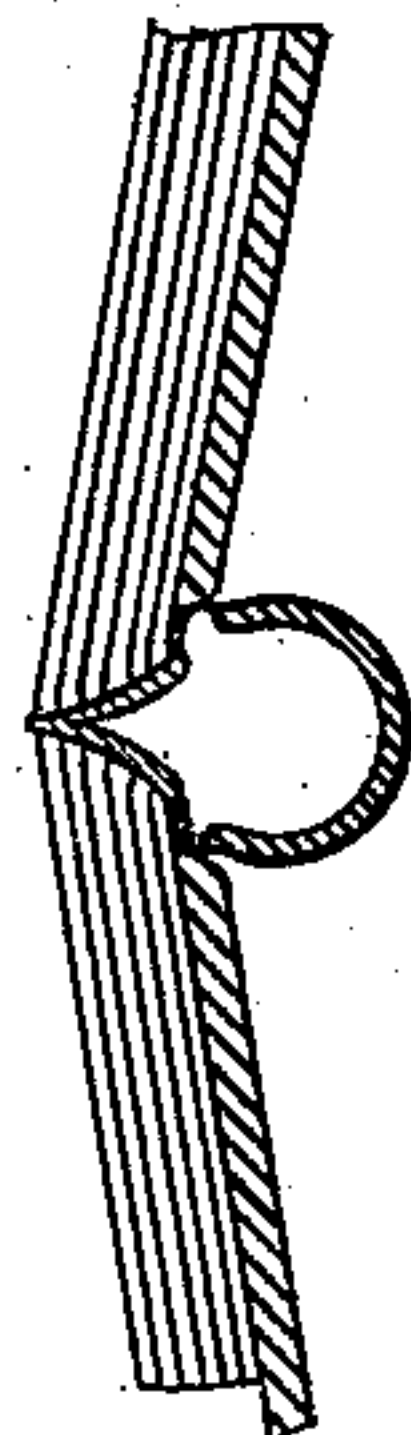


Fig. 3.

Fig. 6.

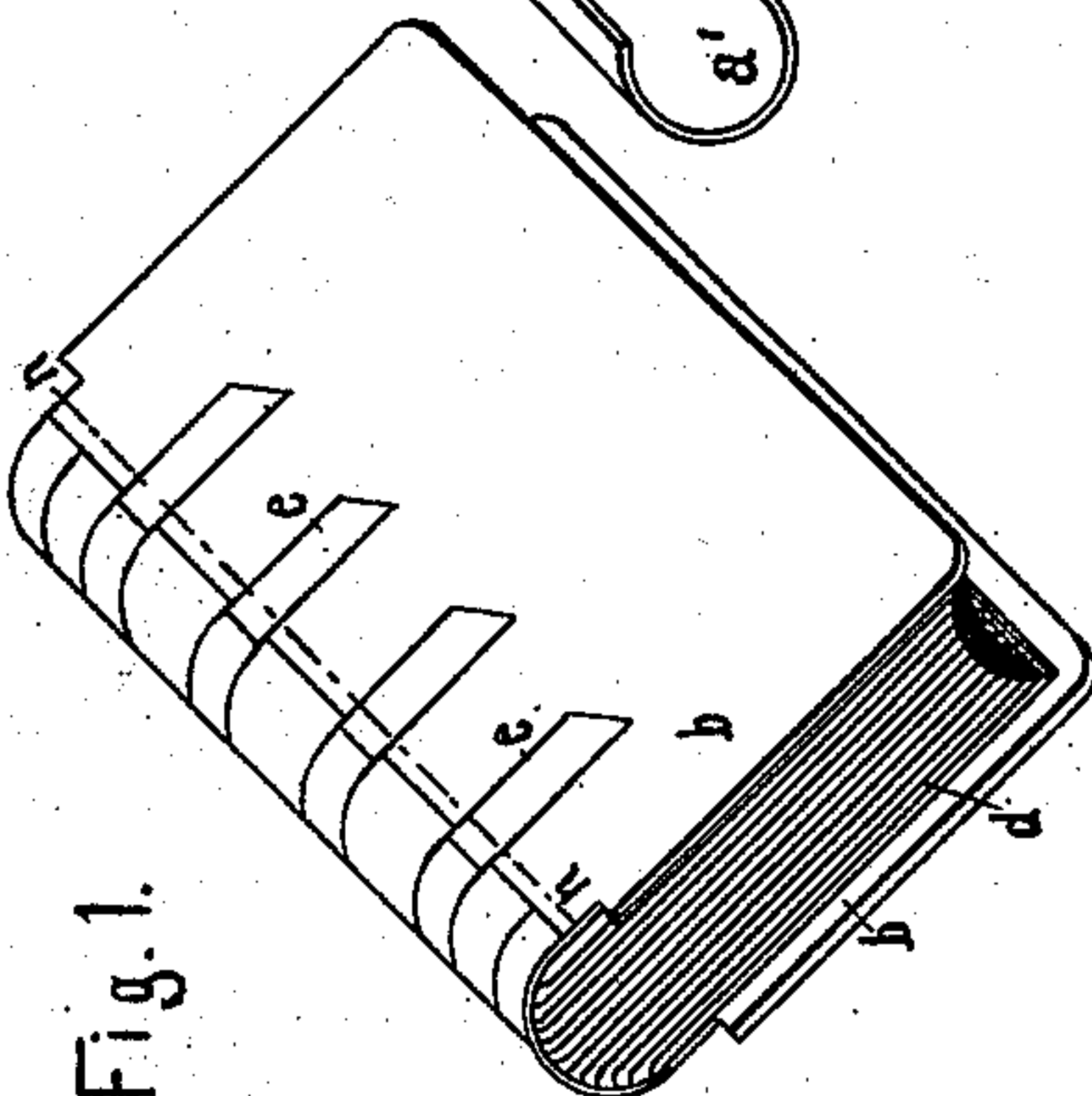
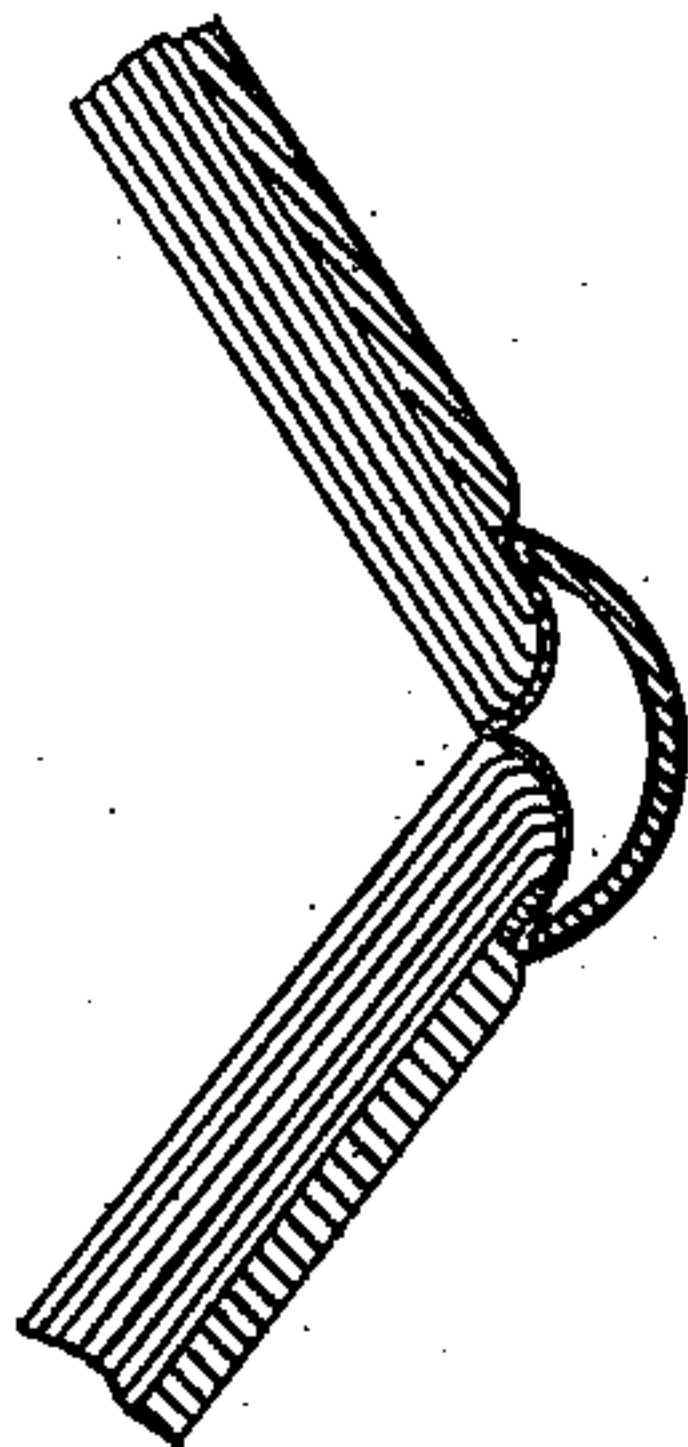
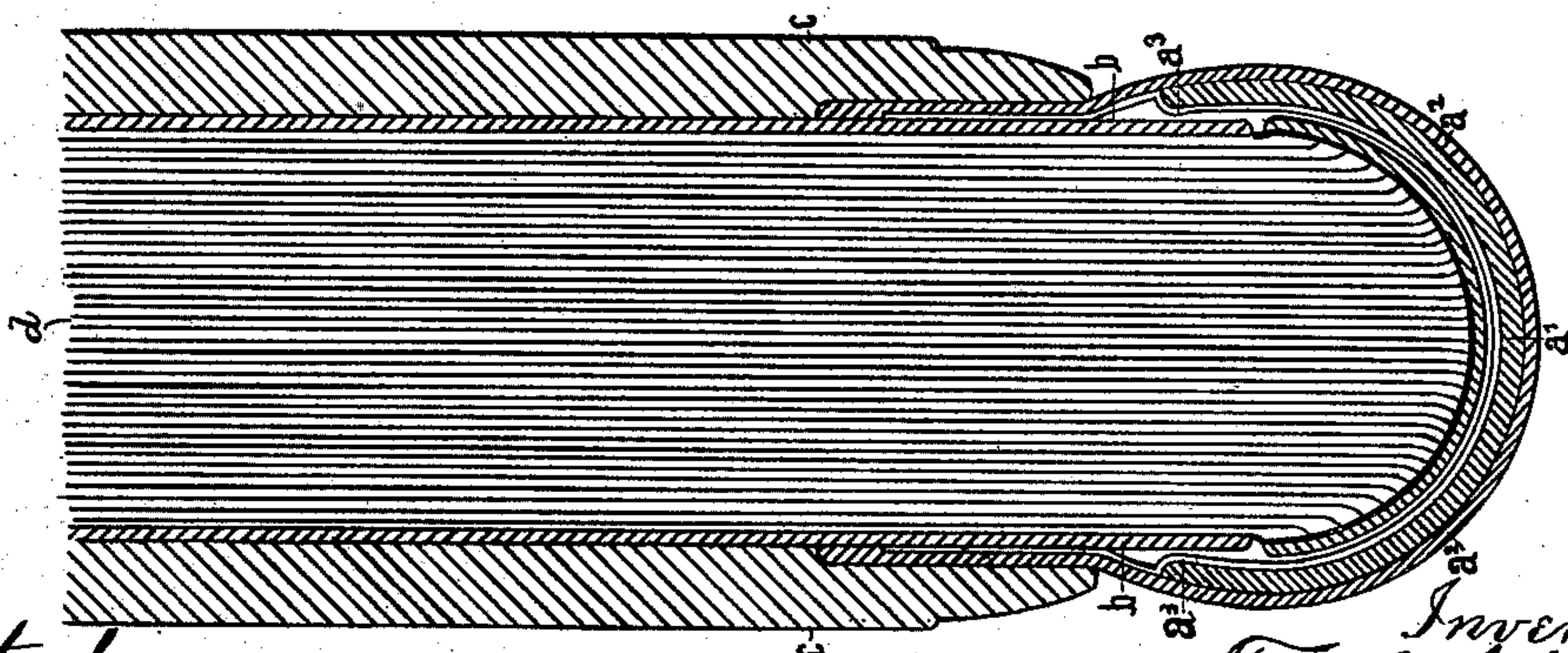
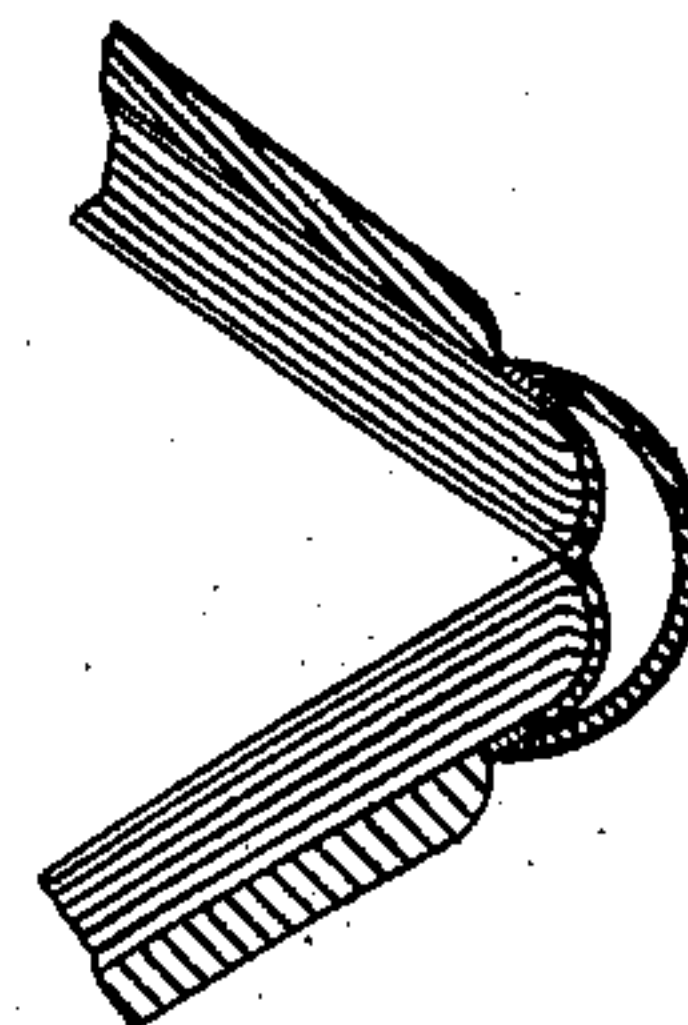


Fig. 1.

Fig. 2.

Fig. 5.



Attest
H. S. Knight,
C. Arthur.

Inventor:
Fritz E. Schubert
By Knight Bros
Attys

UNITED STATES PATENT OFFICE.

FRITZ E. SCHUBERT, OF ZURICH, SWITZERLAND, ASSIGNOR TO CARL
FREIDRICK SCHUBERT, OF SAME PLACE.

SPRING-BACK FOR BOOKS.

SPECIFICATION forming part of Letters Patent No. 402,485, dated April 30, 1889.

Application filed December 26, 1888. Serial No. 294,632. (No model.)

To all whom it may concern:

Be it known that I, FRITZ E. SCHUBERT, a citizen of Switzerland, residing at Zurich, Switzerland, have invented a new and useful
5 Improvement in Spring-Backs for Books, whereof the following is a specification.

My invention relates to spring-backs for books, especially of account-books and the like; and its object is to impart to the said
10 backs a higher and more permanent degree of resilience than is attainable by materials in use for this purpose at present.

Heretofore the inner portion of spring-backs has ordinarily been made by gluing together
15 several layers of thin pasteboard. Spring-backs thus prepared are, however, too stiff at the beginning, so that the books provided therewith can only be opened with difficulty and not without straining them, while after
20 some time of use the backs become slack, and then do not any more answer their purpose to keep the leaves of the opened book flat. Metallic fittings combined with such
25 backs either increase their stiffness or they soon become useless by rusting or bending out of shape or breaking. In view of obviating these defects I make the spring-backs with a core or inner layer consisting in a piece of hide so prepared, without tanning, as to pre-
30 sent the required degree of resilience, and formed previous to its application in an arc of a circle corresponding to the shape of the back, but preferably of somewhat smaller radius than the back is to have when the book is closed. The method of preparing the said
35 cores is partly analogous to the ordinary method of treating hides for tanning. It consists in slackening a raw hide in lime, in unhairing and washing it, in beating or rolling the
40 same, so as to make its thickness uniform, and in steeping it in an infusion of bird's dung, (preferably pigeon-dung.) After another cleansing operation, pieces of the required size are cut from the hide, stretched
45 in wet state on cylindrical molds, and allowed to dry. Spring-back cores are thus obtained which possess that lasting and unvarying re-

siliency which has ever been a desideratum in book-binding. They are light in comparison to their power of returning to their original form when bent out of the same. They
50 are cheap, and by their employment the binding of books is facilitated.

In the annexed drawings, Figure 1 shows in transverse section an account-book having its
55 back provided with the described core. Fig. 2 is a perspective view of the book without spring-back and outer portion of cover. Fig. 3 is a like view of the new core ready for application; and Fig. 4, a like view of the finished
60 book in open state, showing how the resilient back operates to make the leaves lie flat. Figs. 5, 6, and 7 are sections representing the manner in which the core allows the spring-
65 back to yield when the book is being opened and causes the back to assume the original form of the core when the book is entirely open.

In Fig. 1, a' is the core, a^2 its covering of leather, cloth, or the like, and a^3 the lining.
70

d , Figs. 1 and 2, are the leaves of the book, stitched to the flexible strips e , which are glued to the pieces of pasteboard, b , forming the inner layers of the two covers.

c are the outer layers of the cover, attached
75 by the lining a^3 and the covering a^2 to the spring-back and glued to the inner layers, b .

I claim as my invention.

1. A spring-back for books, having an inner layer or core consisting in a resilient piece
80 of untanned hide formed in an arc of a circle, substantially as described.

2. An article of manufacture consisting in a resilient piece of untanned hide formed in an arc of a circle and adapted to be used as a
85 core for the spring-back of a book, substantially as set forth.

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

FRITZ E. SCHUBERT.

Witnesses:

EMIL SCHMID,
RUDOLF TOBLER.