

No. 864,024.

PATENTED AUG. 20, 1907.

J. S. McDONALD.  
LOOSE LEAF HOLDER AND TEMPORARY BINDER.  
APPLICATION FILED NOV. 28, 1906.

Fig. 1.

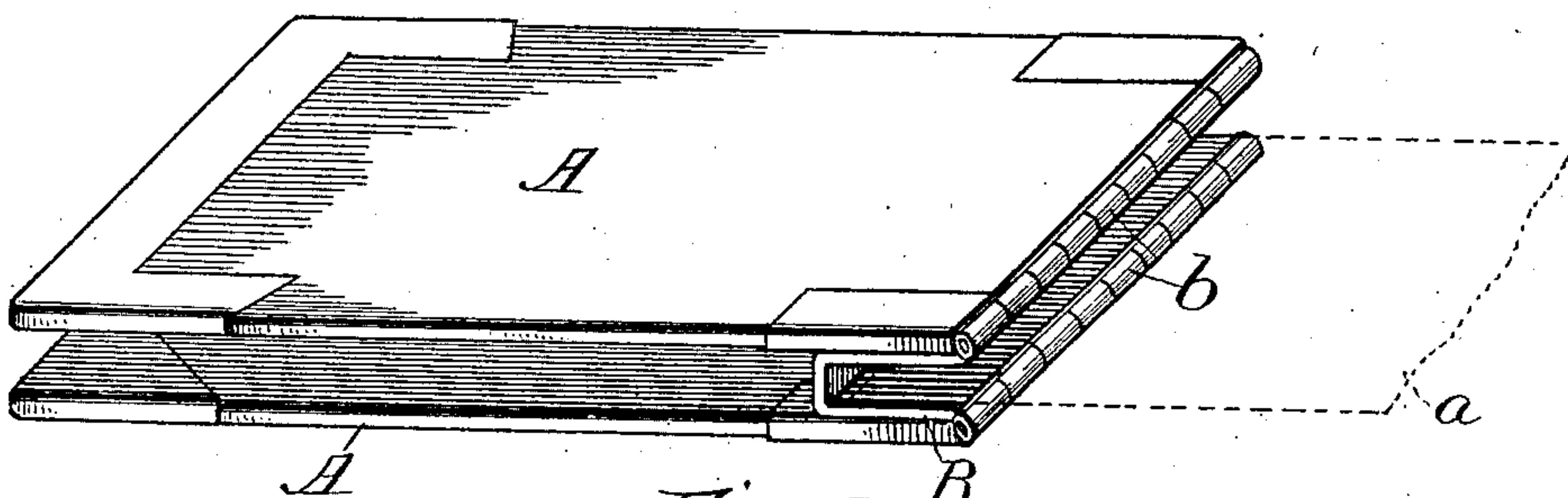


Fig. 4.

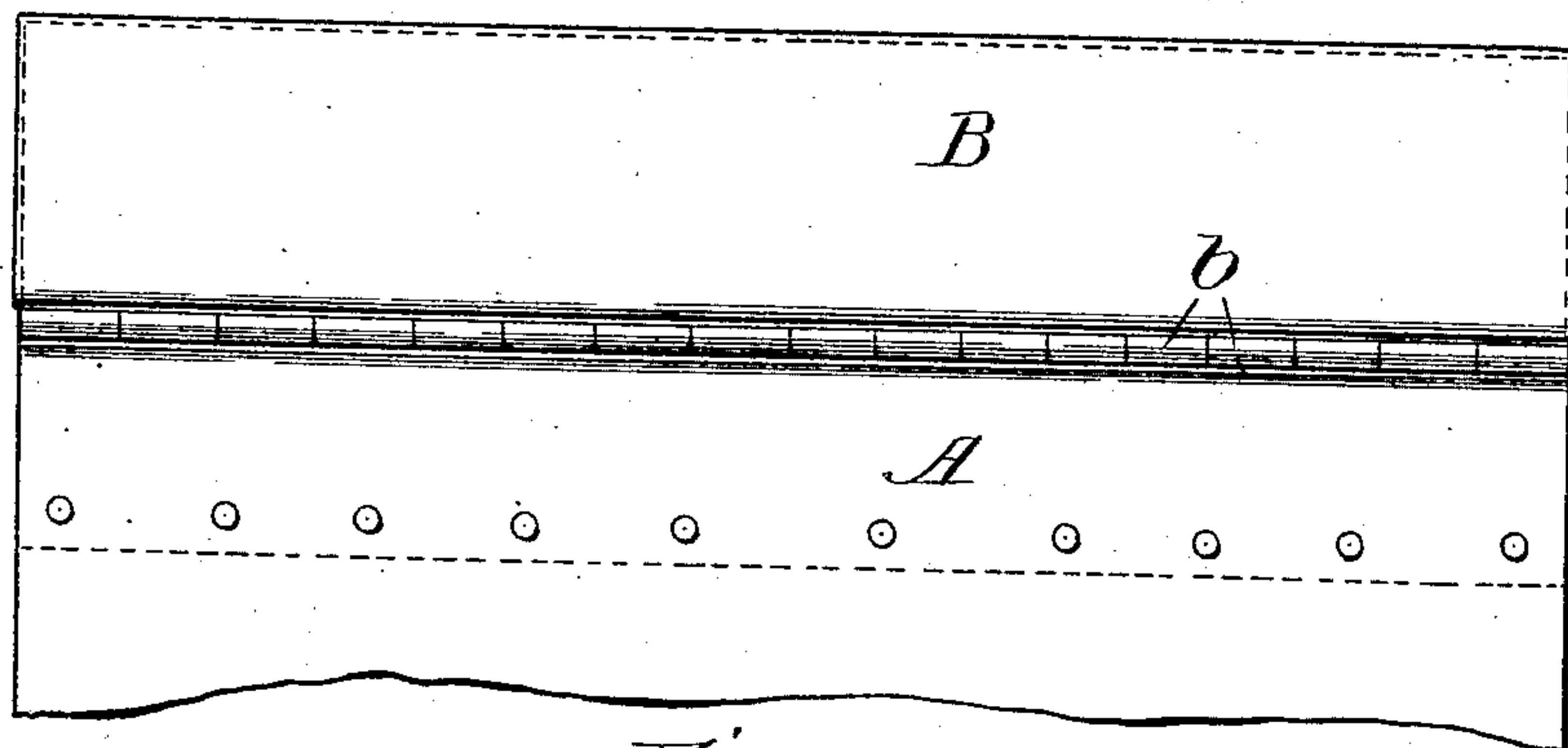


Fig. 2.

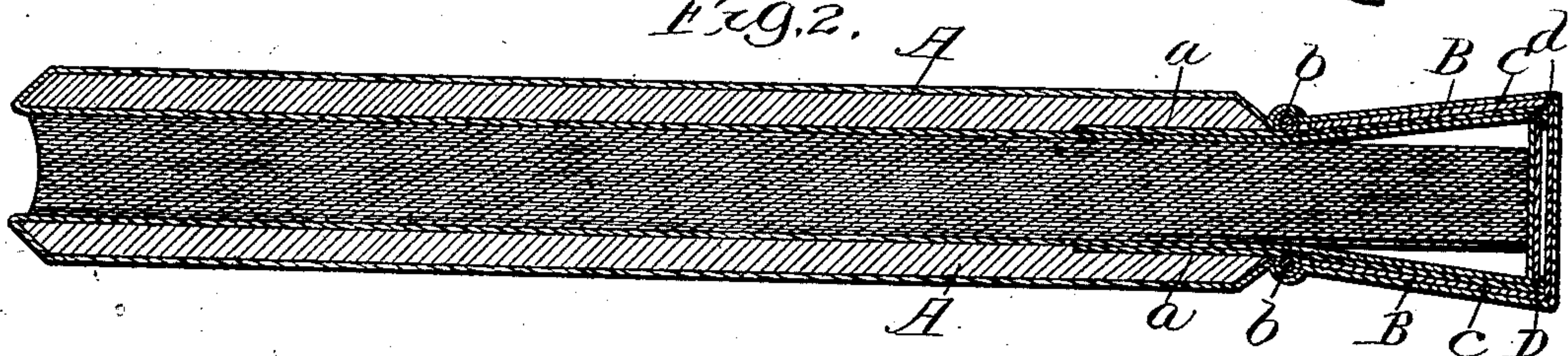
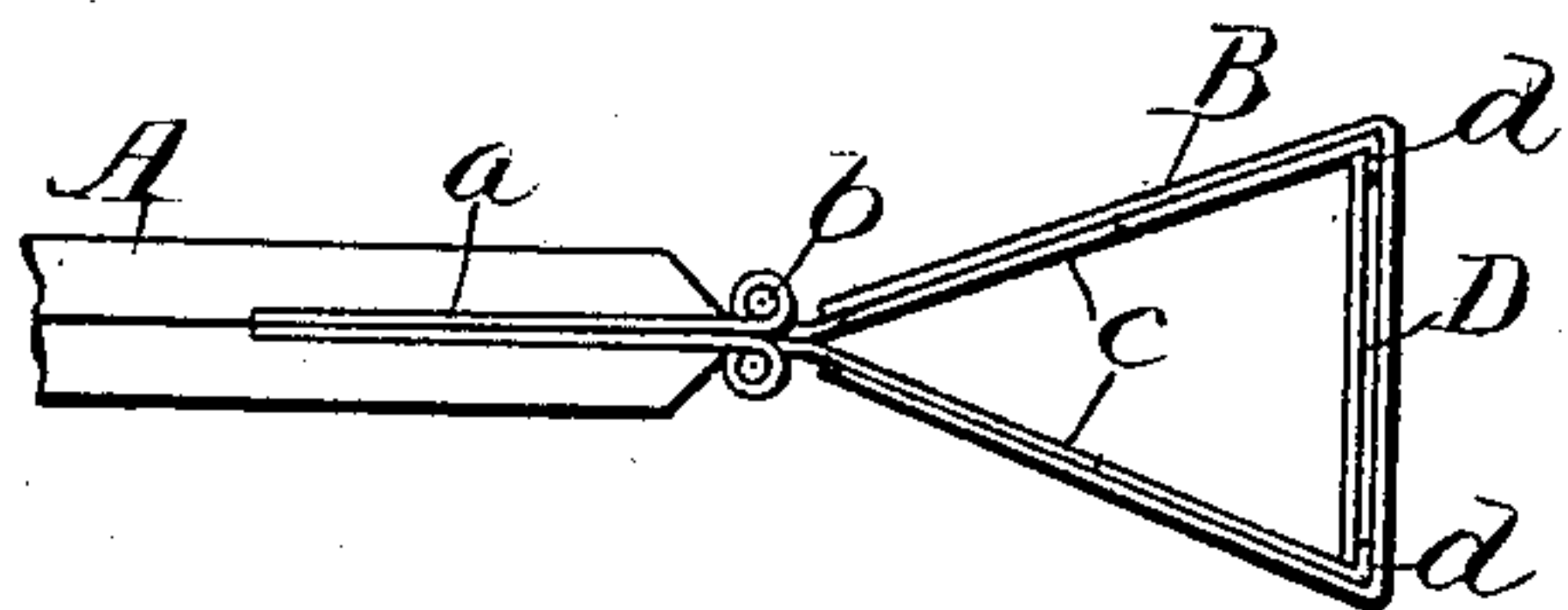


Fig. 3.



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James S. McDonald.  
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Att'y



# UNITED STATES PATENT OFFICE.

JAMES S. McDONALD, OF CHICAGO, ILLINOIS, ASSIGNOR TO J. S. McDONALD COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

## LOOSE-LEAF HOLDER AND TEMPORARY BINDER.

No. 864,024.

Specification of Letters Patent.

Patented Aug. 20, 1907.

Application filed November 28, 1906. Serial No. 345,491.

*To all whom it may concern:*

Be it known that I, JAMES S. McDONALD, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Loose-Leaf Holders and Temporary Binders, of which the following is a clear, full, and exact description.

Heretofore books consisting of two covers, and a spring clamp back for temporarily holding loose sheets, have been made with the hinges between the back and covers consisting, simply, of one or more layers of fabric or leather. In the books of this character the spring clamp of the back comprises a strip of elastic sheet steel, bent, so as to bring its longitudinal edges together, into a triangular shape in cross section. The clamp, thus constructed, is inclosed in the same fabric as the covers, or in fabrics such as the backs of books are usually bound in, and, as any alteration of the edges of this clamp would materially reduce its elasticity, it was considered that there was no other alternative but to make said hinges of this fabric. In operation the edges of the spring-clamp are separated by folding the covers back until they rest against the sides of the clamp to which they are hinged, and then forcing the covers into a parallel position, and doing this is a great strain on the hinges and greatly lessens their durability.

The object of my invention is to provide metallic hinges for the covers, which do not require any alteration of, or in any way affect the elasticity of the spring-clamp, although they are retained by the latter in such manner that they pry open the clamp when the covers are opened in the usual manner, substantially as hereinafter fully described and as particularly pointed out in the claims.

In the drawings:—Figure 1 is a perspective view of a book embodying my invention showing it open. Fig. 2 is a longitudinal section. Fig. 3 is an end view of said spring and the parts constituting my invention. Fig. 4 is a plan view.

Referring to the drawings A, A, represent the covers of a book to which my improvements are applied, and B the elastic sheet steel clamp of the back thereof, which is triangular in cross section. The covers have their rear edges secured by rivets or otherwise to the leaf *a* of sheet metal hinges, which, preferably, coincide in length with that of clamp B, and are so arranged with relation to said clamp that the knuckles *b* thereof come just in front of the meeting edges of the same, and have their axes parallel to said edges. The other leaves *c* of these hinges are inserted between the meeting edges of the clamp, and extend back to the rearwardmost portion of the same, and then have their rear longitudinal edges *d*, *d*, flanged toward each other a slight distance. A sheet metal separating strip or spreader

D is interposed between these rear edges *d* of the leaves *c*, *c*, of the hinge and keeps them separated, and, as shown in the drawings, together with said leaves, form a triangular box, which is inclosed within the embrace of the clamp, and prevents the hinges from pulling out of the embrace of the same when the covers of the book are opened, and the meeting edges of said clamp separated to receive the loose leaf or leaves.

As thus constructed the fabric covering the covers may be extended and made to likewise inclose the clamp and the hinges and the box thereof, or the latter may be inclosed in leather or a different fabric from that covering the covers, according as desired.

In operation, when the covers are bent back to separate the clamping edges of the clamp to permit the insertion of loose leaves, the strain is upon the leaves *c* of the hinge, which being made of metal resists the wear of the same much better than the fabric hinges heretofore in use.

Another advantage resulting from my improved construction is the ease with which my improvements can be applied. All that is necessary, after the rear leaves are inserted between the clamping edges of the clamp is to insert the spreader strip D, to hold the rear edges of said leaves apart. It is possible to make the rear leaves of the hinges and the spreader all in one piece, but this would make it less handy when assembling the parts of the book together, so I prefer the construction hereinbefore fully described.

What I claim as new is:—

1. A temporary loose leaf binder comprising covers, separate sheet metal hinges to which the rear edges of said covers are permanently secured, means for separating the free edges of said hinges, and a metallic spring clamp in the back of the book between the meeting edges of which the rear leaves of said hinges are retained.

2. A temporary loose leaf binder comprising covers; separate sheet metal hinges to which the rear edges of said covers are permanently secured, means for separating the free edges of said hinges and an independent metallic clamp in the back of the book which is substantially triangular in cross-section, and between the meeting edges of which the rear leaves of said hinges are retained.

3. A temporary loose leaf binder comprising covers, a sheet metal clamp in the back of the book which is substantially triangular in cross section, separate sheet metal hinges to which the rear edges of said covers are permanently secured which have their rear leaves form part of a box which is retained within the embrace of said clamp, a means for separating the outer free edges of said hinges.

4. A temporary loose leaf binder comprising covers, a sheet metal clamp in the back of the book which is substantially triangular in cross section, and sheet metal hinges to which the rear edges of said covers are permanently secured, which have their rear leaves inserted between the clamping edges of said clamp, and their rear edges flanged towards each other, and a spreader inserted between and engaging the said flanged edges of said rear leaves.

5. A temporary loose leaf binder comprising covers, a sheet metal clamp in the back of the book which is substantially triangular in cross section, and sheet metal hinges to which the rear edges of said covers are permanently secured, which have their rear leaves inserted between the clamping edges of said clamp, and means for separating the rear edges of said rear leaves apart.

6. A temporary loose leaf binder comprising covers, a sheet metal clamp in the back of the book which is substantially triangular in cross section, and sheet metal hinges to which the rear edges of said cover are permanently secured, which have their rear leaves inserted between the clamping edges of said clamp and means for holding the rear edges of said leaves apart.

7. A temporary loose leaf binder comprising covers, a sheet metal clamp in the back of the book which is substantially triangular in cross section, and sheet metal hinges to which the rear edges of said cover are permanently secured, which have their rear leaves inserted between the clamping edges of said clamp and a flat metal strip for holding the rear edges of said leaves apart.

In testimony whereof I have hereunto set my hand and seal this 23d day of November, A. D. 1906.

JAMES S. McDONALD. [L. S.]

Witnesses:

FRANK D. THOMASON,  
E. K. LUNDY.