(No Model.)

J. H. JOHNSON.

BINDING FOR BOOKS.

No. 353,562. Patented Nov. 30, 1886.

Fig. 1.

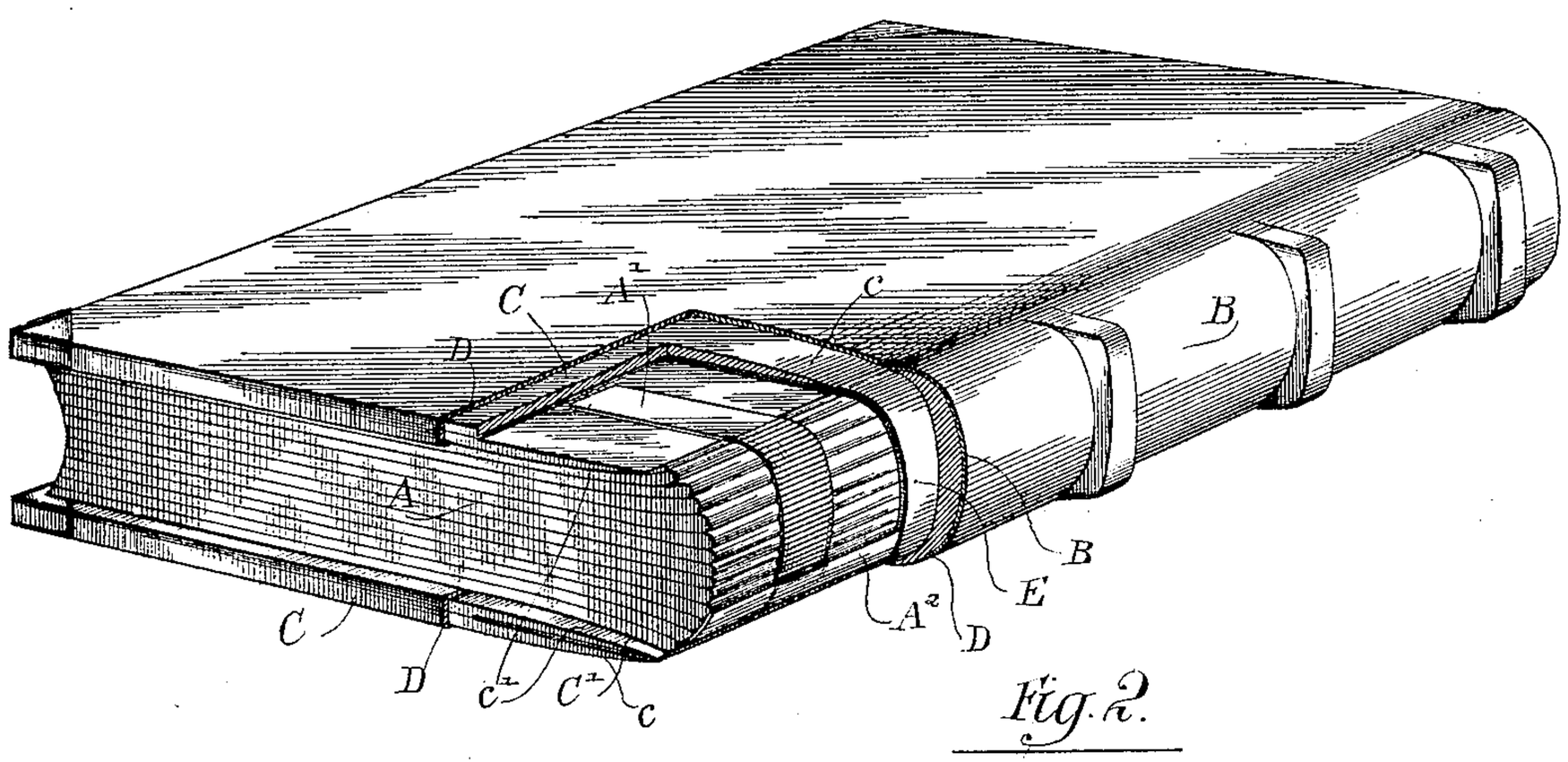
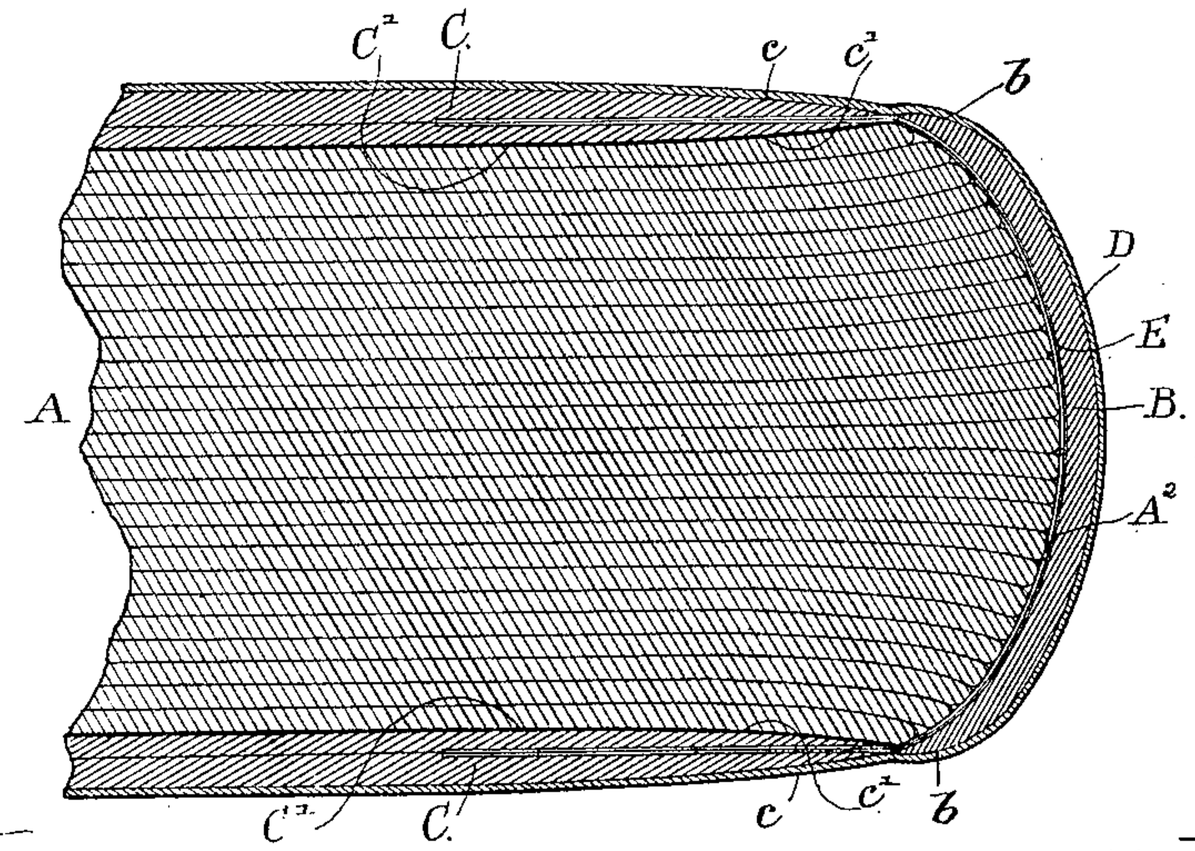


Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN H. JOHNSON, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO CYRUS J. WARD, OF SAME PLACE.

BINDING FOR BOOKS.

SPECIFICATION forming part of Letters Patent No. 353,562, dated November 30, 1886.

Application filed June 8, 1886. Serial No. 204,452. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. JOHNSON, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Bindings for 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 thereon, which form a part of this specification.

The object of this invention is to provide an improved construction in book-bindings; and it consists in the matters hereinafter described, and pointed out in the appended claims.

The improvement herein described is more particularly intended and adapted for use in connection with that class of bindings known as "spring-back," or those employed for blank books, and in which the cover-back is curved and comparatively rigid, and the leaves are flexibly united at the back of the book and adapted to separate from the cover-back when the book is opened, so that the exposed pages will lie approximately flat. I have herein illustrated my invention in connection with a spring-back binding in which the covers are connected with the cover-back by the leather which covers the outer surface of said back, and with the flexibly-joined leaves composing the strapped book by the straps or flaps thereof, which are secured beneath flaps or "flies" upon the covers in the usual manner. In the particular construction shown in the drawings an additional sheet of cloth or other flexible material is secured to the inner surface of the back and to the covers, in order to give greater strength to the hinged joints between the parts, as will hereinafter fully appear.

In spring-back bindings as heretofore usually constructed the rear edges of the covers have been located at some distance from the edges of the cover-back, so as to form flexible strips or sections between the covers and back, which sections are usually made of greater width than the thickness of the board composing the cover, so that the latter may open freely. In the improved construction herein illustrated the back edges of the lids or covers are placed close to the adjacent edges of the cover-back and the adjacent marginal portions of the back, and the covers are tapered or beveled to thin edges at their meeting line, the covers being beveled upon both sides of the slit or incision by which the flies are formed, so that no abrupt shoulders or edges are present at the inner margins of the covers, and the latter may be opened freely by the bending of the flexible material uniting them. One important advantage of this construction is that by its use a binding may be made in which the strapped book, the lids, and cover-back are all closely united with each other, so that the binding is made very strong and durable, while at the same time the leaves are caused to open more flat than heretofore, as will hereinafter fully appear.

I have herein shown my invention as applied to a spring-back book; but the same principles of construction may be employed in bindings of other kinds—such, for instance, as are used for printed books.

The invention may be more readily understood by reference to the accompanying drawings, in which—

Figure 1 is a perspective view of a spring-back book, having parts of the binding broken away to more clearly show the construction thereof. Fig. 2 is a transverse section of the book shown in Fig. 1, taken upon a plane parallel with its end.

As shown in the said drawings, A is the strapped book.

B is the cover-back, herein shown as made of tar-board.

C C are lids or covers, and D is the outer covering of the binding.

The book A is provided, as shown in the drawings, with the usual straps, A′, having projecting ends for attaching the book to the covers, and with a sheet, A^2, of cloth or leather or other flexible material, glued to the connected back edges of the sheets and extended at the sides of the back to form flaps, which, together with the end portions of the straps A′, are inserted and glued between the main parts of the lids C C and the flies C′, to fasten the book in the covers. The cover-back B is secured to the covers C C by the covering D, which extends over and is pasted to the back and covers in the usual manner.

The particular binding herein shown is provided with an additional sheet, E, of flexible material, which is pasted upon the inner face of the back D, and the marginal portions or flaps of which are secured in the covers C C, beneath the flies C′ thereof, together with the straps A′ and the sheet A², thereby giving a stronger connection between the back and covers than would otherwise be obtained.

The covers or lids C C are beveled or tapered upon their outer surfaces at their marginal parts adjacent to the cover-back, as shown at *c c*, and are also similarly beveled upon their opposite inner faces, as indicated at *c′ c′*, the taper or bevel both upon the inner and outer surfaces of the cover being extended to the slit or opening by which the flies C′ are formed, so that the said flies and the edges of the main parts of the cover are both brought to thin or acute edges. The back B is also tapered or beveled at its margins, so as to form sharp or thin edges, as indicated at *b*, the beveling of the back being usually accomplished by cutting away the material at the outside thereof. In connecting the parts of the binding the edges of the back and cover are brought close together, spaces being left between them sufficient only to permit the proper bending of the covering D and sheet E (when the latter is used) when the book is opened. By beveling the cover and back in the manner described it is obvious that the lids of the book may be opened freely in the usual manner, notwithstanding the shortness of the flexible joint or hinged connection between the lids and the book.

A principal advantage of the construction described is that the binding is thereby made much stronger, owing to the fact that the strapped book, the lids, and the cover-back are all closely united with each other, so that the several parts are held firmly in their relative positions, and liability of rupture of the strappings and detachment of the book-body from the lids by rough handling is avoided, while the requisite flexibility in the joints is at the same time secured.

One important advantage derived from beveling the back and covers in the manner above stated is that when the book is opened to expose the leaves adjacent to the lids said leaves will lie more nearly flat than when a construction is employed in which the covers are provided with thick inner edges, it being entirely obvious that in a binding constructed as proposed by me the leaves adjacent to the open lid will at such time be bent over the comparatively slight elevation formed by the doubling of the relatively thin material connecting the lid and back, instead of over the thick inner edge of the lid; or, in other words, when one of the lids is opened or thrown back the inner surface of said lid will be only slightly raised above the exposed surface of the body of the book, so that the leaves adjacent to the cover will lie approximately flat. The close connection between the lids and back obtained by the construction herein shown, furthermore, obviously operates to hold the lids close to the back, and to thereby enable the exposed leaves adjacent to the lids to be opened more flat than would otherwise be possible.

In bindings other than those known as "spring-back" bindings—such, for instance, as are used for printed books—the binding is usually connected with the lids by joints formed at the outer surface of the lids, the folded and connected back edges of the leaves being expanded or spread by hammering, backing, or "blocking," so that the leaves will properly open or bend over the edge of the covers in opening the book.

The construction herein shown, and above described, may obviously be applied to bindings of the kind last above referred to, any backing or hammering outwardly of the folded parts of the leaves at the back of the book obviously, in such case, being unnecessary, by reason of the absence of any abrupt edges or shoulders at the inner margins of the covers.

I have herein shown the flies C′ as located at the inner surfaces of the covers and formed by leaving the thicknesses or layers of board composing the covers unconnected at their inner parts, in the usual manner. As far as the features of construction embodying my invention are concerned, however, the fly may be formed by separating the layers of board forming the cover at a point midway of the thickness of said lid, or even nearer the outer than the inner surface of the lid, according to the thickness or stiffness of the material used or other circumstances—as, for instance, in a very thick lid the fly may be formed either at the inner or outer face of the lid by means of a board or layer of proper thickness to be easily bent or lifted for the application of paste or glue and the insertion of the straps beneath it, while in the case of a thinner lid the boards or layers composing the latter may be separated midway of the thickness of the lid, whereby two flaps of equal thickness are formed, which may be bent outwardly, or away from each other, for the insertion of the straps.

The improved results obtained by the employment of the covers or lids beveled to thin edges and connected with the back, as described, obviously exist as well when the lids and back are connected in the usual manner by means of the covering D alone as when the sheet E is also used; and my invention, therefore, is not restricted to the construction in which said sheet is present. An important advantage is gained, however, by the employment of said sheet E, inasmuch as better and stronger joints between the back and lids, beveled as described, are thereby formed; and a construction embracing said sheet E is therefore made the subject of a specific claim herein.

It is obvious, furthermore, that in the construction of a book in which the lids are beveled or tapered in the manner described the necessary flexible connections between the book-body and the lids may be made by other

means than by the use of the straps herein shown as applied for this purpose.

I claim as my invention—

1. The combination, with the strapped body of a book, of a cover-back having thin edges, and lids or covers flexibly joined to the back, in close proximity thereto, and united with the body by straps or other flexible connections inserted and secured beneath flies upon the lids, the said lids having acute edges adjacent to the cover-back, formed by beveling or tapering the marginal parts of the lids upon both sides of the latter, substantially as described.

2. The combination, with the strapped body of a book, of a cover-back having thin edges, lids or covers secured to the body by straps or other connecting parts inserted beneath flies upon the lids, the rear margins of said covers being beveled upon both sides, to form acute edges, an outer cover, D, flexibly uniting the back and lids, and an inner sheet, E, secured to the inner surface of the cover-back and inserted at its edges beneath the flies of the lids, substantially as described.

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

JOHN H. JOHNSON.

Witnesses:

C. CLARENCE POOLE,

THOMAS J. SOLON.