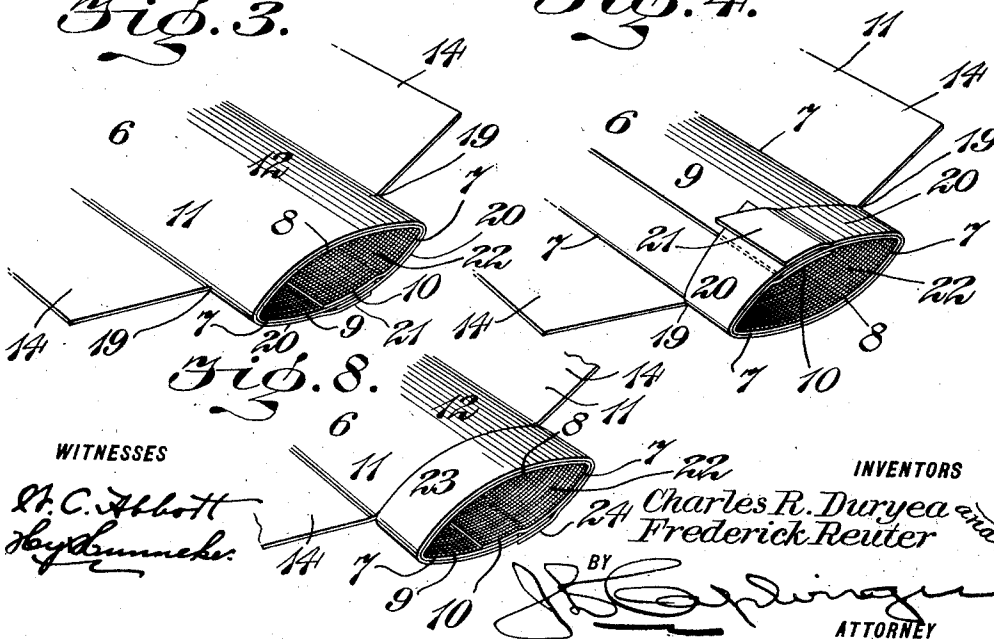
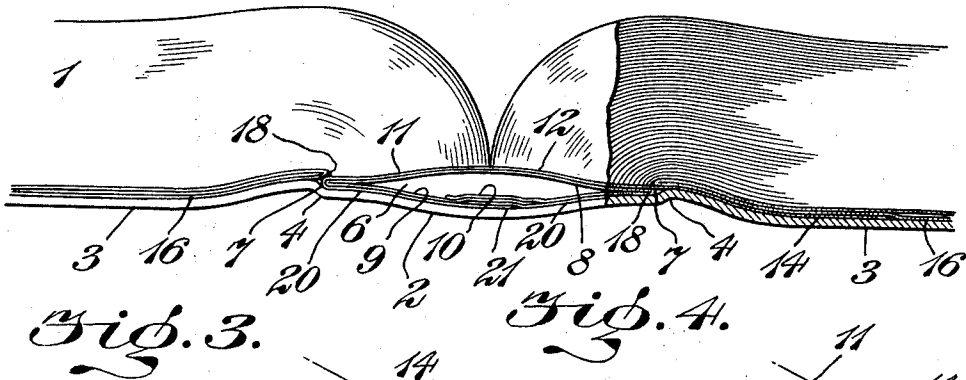
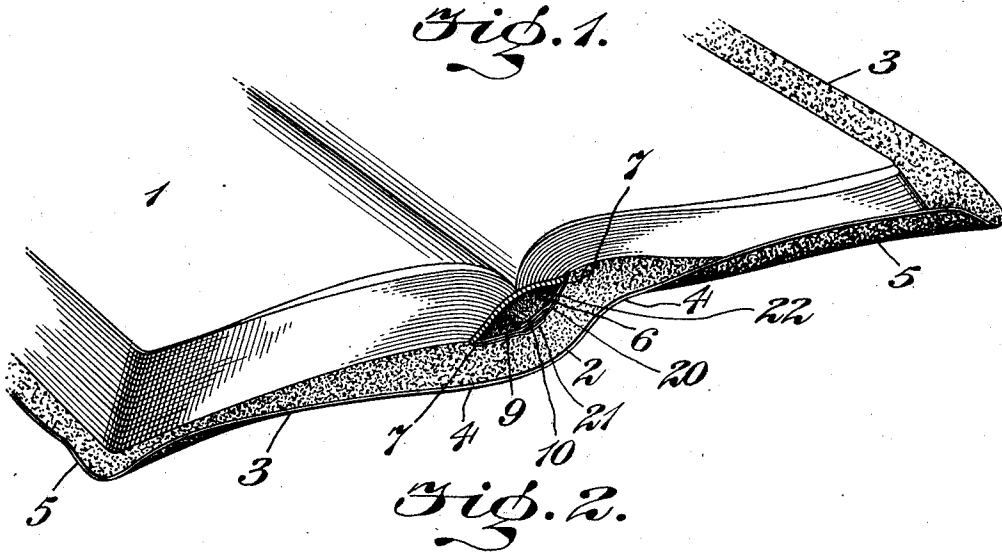


C. R. DURYEA & F. REUTER.
 BINDING FOR BOOKS.
 APPLICATION FILED MAR. 8, 1910.

998,283.

Patented July 18, 1911.

2 SHEETS—SHEET 1.

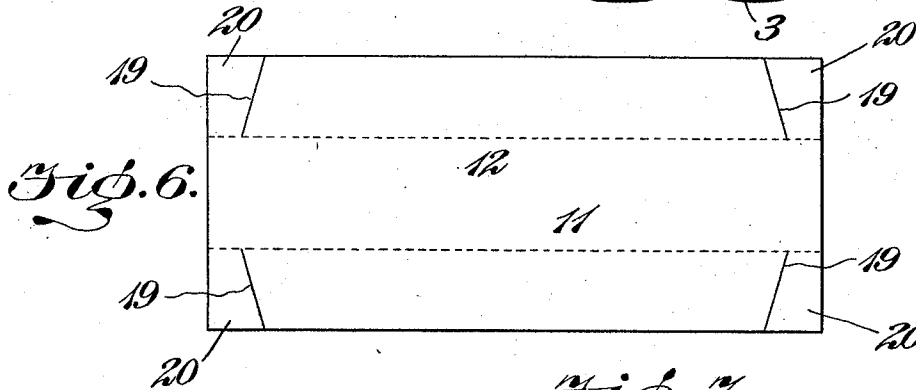
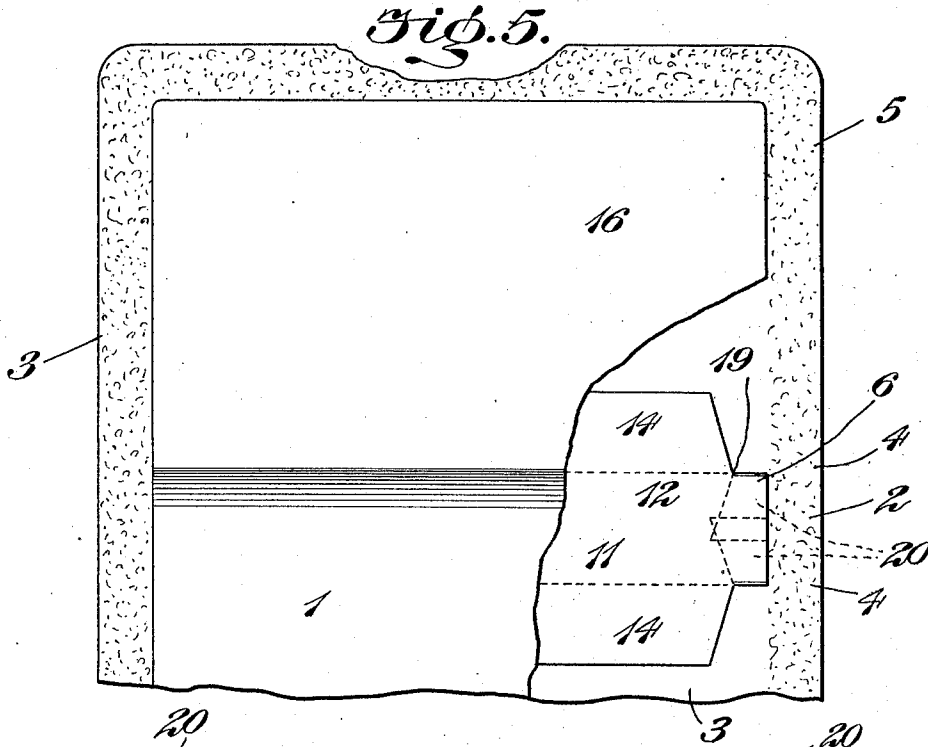


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2 SHEETS-SHEET 2.



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UNITED STATES PATENT OFFICE.

CHARLES R. DURYEA, OF AMITYVILLE, AND FREDERICK REUTER, OF NEW YORK, N. Y.

BINDING FOR BOOKS.

998,283.

Specification of Letters Patent.

Patented July 18, 1911.

Application filed March 8, 1910. Serial No. 548,080.

To all whom it may concern:

Be it known that we, CHARLES R. DURYEA and FREDERICK REUTER, both citizens of the United States, and residents, respectively, of Amityville, Suffolk county, New York, and of the city, county, and State of New York, have invented certain Improvements in Bindings for Books, of which the following is a specification.

10 This invention relates to certain improvements in bindings for books, and more particularly in that class of such bindings, of which the structure shown and claimed in the patent of Charles R. Duryea, No. 951436, 15 dated March 8, 1910, is a type, wherein a substantially tubular binding strip or member is interposed between the back and the binding edges of the sheets or signatures in such a manner as to afford a strong and secure connection between the body portion of the book and the back and sides of the binding while affording such flexibility as is requisite to permit the book to be opened in substantially flat form, and the object of the 25 invention is to provide a binding of this general character of a simple and comparatively inexpensive nature having a novel and improved construction and arrangement of such binding strip or member and of the 30 means for securing the same in position, whereby great strength and durability is conferred upon the binding without materially interfering with the desirable flexibility at the back of the book.

35 The invention consists in certain novel features of the construction, and combinations and arrangements of the several parts of the improved binding, whereby certain important advantages are attained, and the 40 structure is rendered simpler, less expensive, and stronger, and otherwise better adapted and more convenient for use, all as will be hereinafter fully set forth.

45 The novel features of the invention will be carefully defined in the claims.

In order that our invention may be the better understood we will now proceed to describe the same with reference to the accompanying drawings, wherein—

50 Figure 1 is a fragmentary perspective view showing a portion of a book provided with a binding embodying our improvements; Fig. 2 is an enlarged fragmentary end view, illustrating the improved binding as seen in Fig. 1, the right hand side of the 55 view being shown in section for more ef-

fective illustration of certain features of construction which will be hereinafter referred to; Fig. 3 is a fragmentary perspective view showing one end portion of a binding strip or member for use in our improved binding as shown in Figs. 1 and 2; Fig. 4 is a view similar to Fig. 3, but illustrating the binding strip or member viewed the other side up; Fig. 5 is a fragmentary view showing the inner surface of the side or cover of a book provided with our improved binding, the leaves or signatures being broken away adjacent to one end of the back for better illustration of the binding strip or member; 60 Fig. 6 is a view showing the outline of the blank from which the reinforcement for the binding strip or tube shown in Figs. 3 and 4 is produced; Fig. 7 is a view similar to Figs. 3 and 4, but illustrating a slightly different formation of the binding strip or member comprised in our invention, and 65 Fig. 8 is a perspective view showing another slightly different formation of the binding strip or member. 70

In these views we have shown our improvements embodied in a book having limp or flexible sides or covers integrally joined with a limp or flexible back, such as are commonly provided for Divinity Circuit 75 Bibles, and the like, but, while our invention is especially well adapted for employment in connection with books of this type, we do not desire to be understood as limiting ourselves to such use of the invention, since it will be apparent that the invention may also be embodied, with good results, and without material departure from its principles and spirit, in books having bindings of other styles or types. 80

Referring first to Figs. 1 to 6, 1 represents the body portion of the book comprising sheets or signatures gathered in the usual manner, and 2 represents the limp or flexible back of the binding, while 3, 3 represent the flexible sides or covers integrally connected with opposite longitudinal edges of the back 2, and capable of being freely flexed at the joints 4, 4 afforded by their connection with such back at the ends of the body portion 105 of the book. 5 represents the circuit commonly provided around the margins of the flexible sheet from which the back and sides or covers are produced, the same being extended beyond the body portion in such a manner as to afford protection for the exposed edges thereof in a well known way. 110

6 represents a connecting or binding strip or member, herein shown made in elongated tubular form, having inner and outer plies or sides 8 and 9 adapted to be laid flush one upon the other, and connected along opposite edges of the strip or member by bent parts 7, 7, which afford flexible joints between the meeting edges of such oppositely arranged inner and outer sides or plies, and adapted to be positioned, in the completed binding, adjacent to the junctions of the lateral edges of the back with the sides or covers, as clearly shown in Fig. 2 of the drawings. As illustrated herein, the tubular binding or connecting strip or member 6 is formed from an elongated piece or strip of pliant, flexible material, such as tough paper, muslin, or the like, folded to produce the inner and outer plies 8 and 9, and joints 7, 7 therebetween, as above described, the opposite edges of the piece or strip of material from which such tubular member 6 is produced being lapped flush one upon the other along the central part of one of such plies or sides, as shown at 10 upon the drawings, and being securely held in relation by means of glue, cement or some equivalent attachment.

In connection with the tubular binding or connecting strip or member 6 we provide a reinforcement 11 of muslin, or other suitable material, which may be conveniently formed from a blank or strip such as is indicated in outline in Fig. 6 of the drawings, being substantially equal in length with the tubular connecting strip or member 6, and being glued or cemented or otherwise secured along its central part to one of the sides or plies thereof, and being of such width that its opposite lateral portions are adapted to project beyond the joints 7, 7 at opposite edges of member 6, being free from the same, so as to afford flanges or extensions projecting along and beyond the opposite edges of such flattened tubular member 6. Such reinforcement is herein shown as applied upon the inner side or ply 8 of the member 6, at the surface opposite to the joint 10 between the lapped edges of the strip from which such member 6 is produced, and in practice, this reinforcement 11 has its central portion 12 glued or cemented upon the binding edges of the sheets or signatures comprised in the body portion of the book, so that its opposite flanges or extensions 14, 14 are caused to project at the ends of such body portion, in position to be glued or cemented down upon the inner surfaces of the sides or covers 3, 3 and to be covered over and concealed by the end papers 16, 16 applied above them. By this arrangement of the parts, it will be seen that the flanges or extensions 14, 14 of the reinforcement 11 are extended across the flexible connections at 4, 4 between the back 2, and sides or

covers 3, 3 of the binding, and afford extremely strong and secure connections 18 between the opposite ends of the body portion of the book and said sides or covers of the binding, so that separation of the body portion from the binding is more effectively guarded against and prevented during ordinary use of the book.

It will be evident that the flexible joints or parts 7, 7 at opposite edges of the tubular connecting strip or member 6 are exposed to much greater strains and wear at top and bottom of the book than at intermediate parts of the back of the book, and since it is often desirable to produce the member 6 from paper, for purposes of economy, or to afford greater flexibility, more particularly in small or thin books, we have shown means for reinforcing such joints 7, 7 at the bottom and top of the book without materially increasing the thickness of the intermediate or central part of said tube or member 6. As illustrated in Figs. 1 to 6, such auxiliary reinforcement at the extremities of the member 6 is attained by slitting the opposite edges of the sheet or blank from which the reinforcement 11 is produced, adjacent to its opposite ends, as seen at 19 upon the drawings, aligned narrow flaps or projections 20, 20 being thereby produced at opposite ends of such sheet or blank and adapted, when the reinforcement is glued or cemented upon the surface of member 6, to be passed around and glued or cemented upon the opposite side or surface thereof, so as to encircle and reinforce the opposite open ends of the tubular member to prevent it from being broken or torn during use of the book. Ordinarily these flaps or projections 20 are sufficiently long to permit their extremities to be lapped and cemented one upon the other as shown at 21.

The employment of the member 6 made in separable plies 8 and 9, affords great flexibility of the back of the book such as is desirable in Bibles and other similar books wherein it is desirable to assure flat opening, and we prefer to so color the inner surface of the tube 6, as to conform with the color of the binding as indicated in Figs. 1, 3 and 4 at 22, so that such inner surface shall not detract from the appearance of the book when the same is opened. Since Bibles are ordinarily bound in black bindings we have indicated the inner surface of said tubular member 6 as colored black. Such black coloration effectively conceals the gap between the plies 8 and 9 of said member 6 when the book is opened.

From the above description it will be evident that the improved book binding constructed according to our invention is of an extremely simple and comparatively inexpensive nature, and is particularly well adapted for use by reason of the strength and security

of the attachment afforded between the back and sides or covers and the body portion of the book, and of the flexibility attained in the back which permits the book to be opened in substantially flat form, and it will also be obvious from the above description that the improved binding is susceptible of some change without material departure from the principles and spirit of the invention, and for this reason we do not desire to be understood as limiting ourselves to the precise formation and arrangement of the several parts herein set forth in carrying out our invention in practice. For example, although the location of the joint between the edges of the strip from which member 6 is produced at the central part of one of the plies or sides 7 and 9 affords substantially equal strength of the connections between such plies at both ends of the body portion of the book, such location is not essential to our invention, nor is it essential that such edges be positively connected prior to the introduction of the member between the body portion and back of the binding. Consequently, said member 6 may be formed as shown in Fig. 7, from a piece or strip of material bent to produce two plies and joined along one edge only, the connection of the free edges of such material being effected by the application of the adjacent flange 14^a between the binding edges of the signatures and the adjacent side or cover, during the binding of the book. Nor is it essential that the reinforcement 11 be slit as shown in Figs. 2, 3, 4, 5 and 6, to produce the auxiliary reinforcements at the ends of the member 6^a. Where desired, such slits may be omitted as indicated in Fig. 7, and the flanges 14^a, 14^a may then be extended the full length of the member 6. Such auxiliary reinforcements may also be produced from separate narrow strips 23, 23 of muslin or the like, extended around the open ends of the tubular member 6 as indicated in Fig. 8 without departure from our invention, the extremities of such narrow separately formed strips 23 being lapped and secured together as indicated at 24.

Having thus described our invention, what we claim and desire to secure by Letters Patent is:

1. A book having a body portion, a flexible back and covers, and an expansible connecting member, including separable plies interposed between the inner surface of the flexible back and the rear surface of the

body portion, and a reinforcing member connected to one of the plies of the expansible member, having flexible wings projecting beyond the margins thereof, and secured to the covers, and adapted to hold the connecting member in position.

2. A book having a body portion, a back and covers, and an expansible connecting member including separable plies interposed between the inner surface of the back and the rear surface of the body portion and flexible wings carried by said expansible member and projecting beyond the margins thereof at opposite sides of the body portion, and secured to the covers.

3. A book having a body portion, a back and covers, and an expansible connecting member including separable plies one of which is secured to the inner surface of the back, a reinforcing strip secured to the other ply of the connecting member and having flexible wings projecting beyond opposite margins thereof and secured to the covers, the central portion of said reinforcement affording connection between said connecting member and the rear surface of the body portion.

4. A book having a body portion, a back and covers and an expansible connecting member including separable plies interposed between the inner surface of the back and the rear surface of the body portion and reinforcing means affording a connection between the connecting member and the covers, said reinforcing means having a portion thereof extended around the expansible member.

5. A book having a body portion, a flexible back and covers, an expansible connecting member, including separable plies, interposed between the inner surface of the back and the rear surface of the body portion, and a reinforcing strip of tough material carried by one face of the connecting member and having edge portions projecting beyond the sides of the connecting member for attachment to the covers, said edge portions of the strip being slitted to produce flaps, which embrace the expansible member.

In witness whereof we have hereunto signed our names in the presence of two subscribing witnesses.

CHARLES R. DURYEA.
FREDERICK REUTER.

Witnesses:

J. D. CAPLINGER,
W. E. LAWSON.