May 9, 1933. H. TOLCHINSKY 1,908,083

BOOKBINDING

Filed Oct. 17, 1931

Fig. 3.

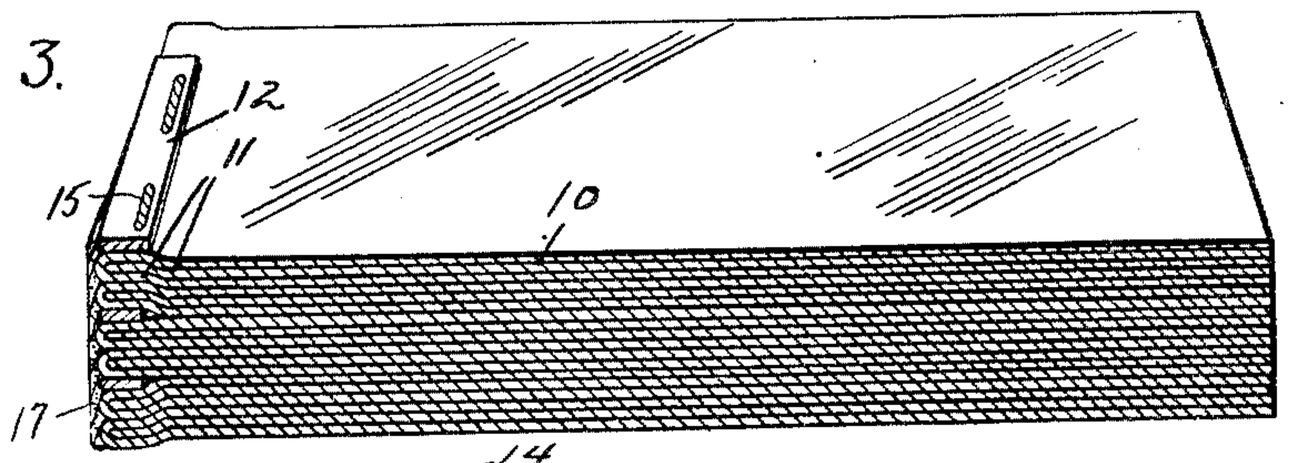
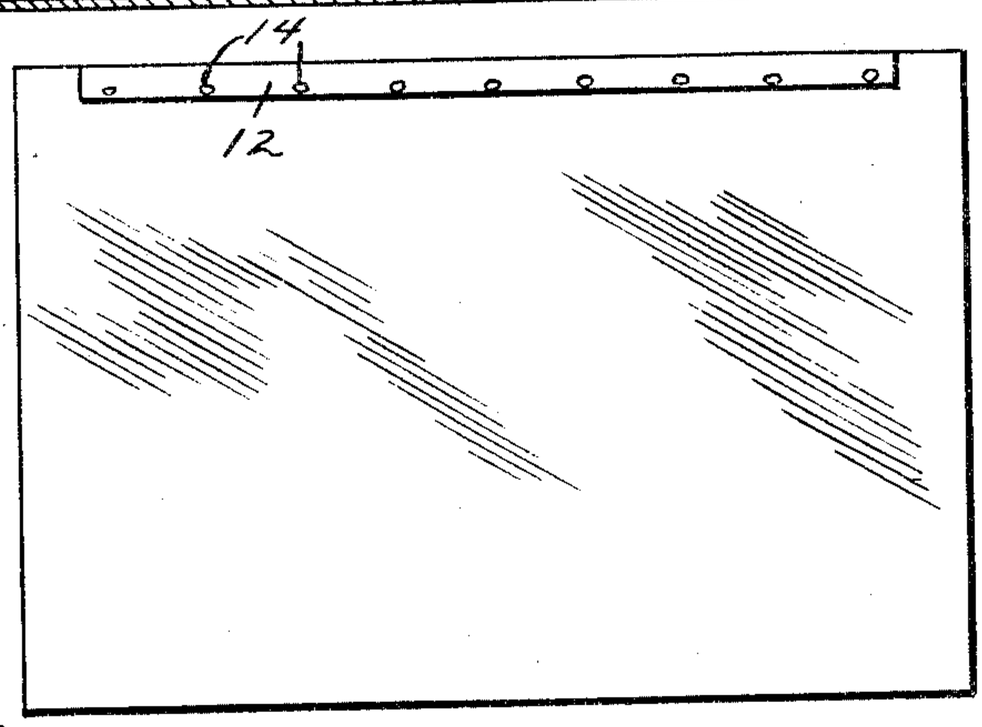


Fig. 4.



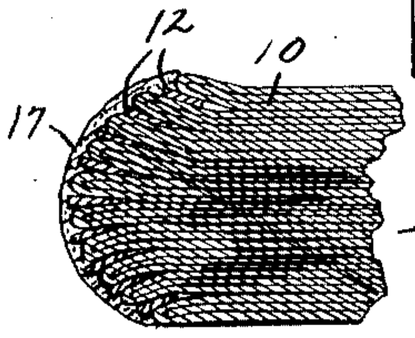


Fig. 5.

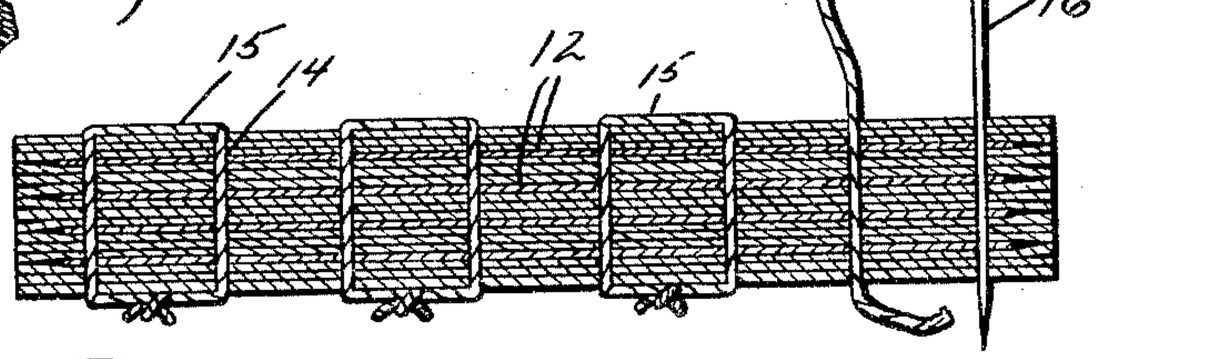


Fig. 2.

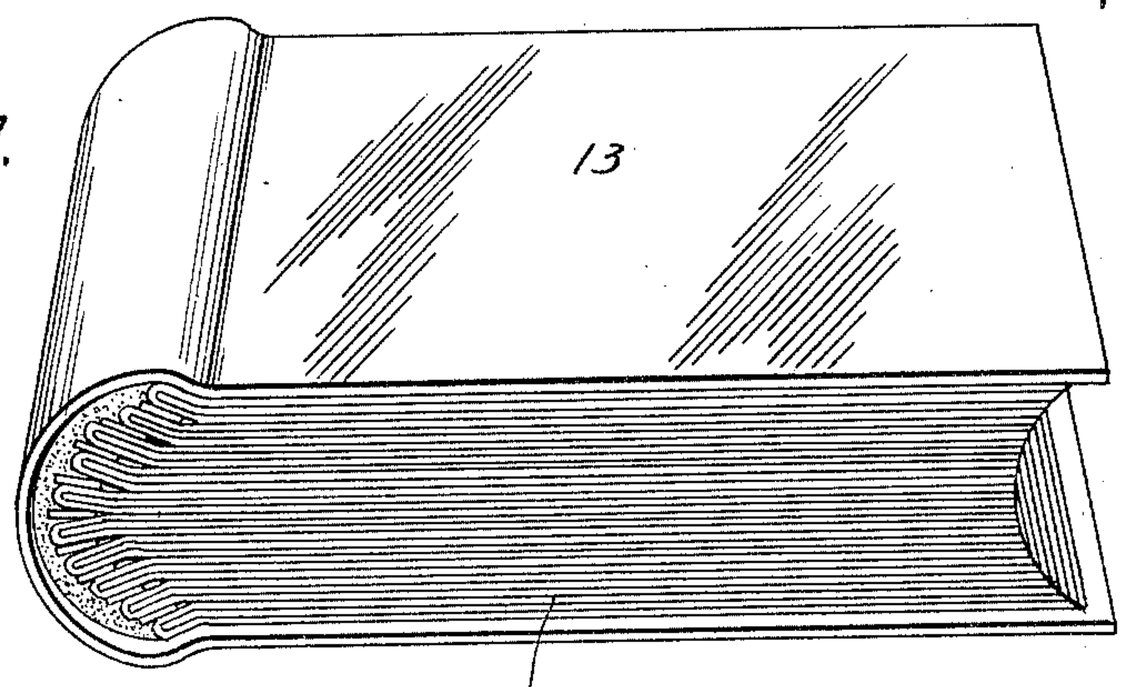


Fig. 1.

Inventor
Hyman Tolchinsky
by Orwig & Hague Attys

Patented May 9, 1933 1,908,083

UNITED STATES PATENT OFFICE

HYMAN TOLCHINSKY, OF DES MOINES, IOWA

BOOKBINDING

Application filed October 17, 1931. Serial No. 569,402.

The object of my invention is to provide a book binding of simple, durable and inexpensive construction so arranged that the individual leaves cannot readily be torn loose from the book at the point where the binding cords pass through them, and at the same time to provide a binding in which the back of the book can be readily and easily formed into a rounded contour.

My invention consists in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawing, in which:

Figure 1 shows a perspective view of a book having a binding embodying my invention.

Figure 2 shows a detail sectional view taken through a part of the book at the point where the binding cords pass through, and illustrating the manner in which the binding cords are applied to the book.

Figure 3 shows an enlarged detail view partly in section illustarting the arrangement of the reinforcing strips within the book sections, and the relative position of the binding cord openings.

Figure 4 shows a plan view of one of the book sections showing the manner in which my reinforcing strip is applied thereto, and the manner in which the same is perforated for sewing; and

Figure 5 is a longitudinal sectional view showing the manner in which the back edge of the book is rounded after the gluing and sewing operations have been completed.

Referring to the accompanying drawing, it will be seen that the book is made up of a number of book sections, each section comprising a number of leaves folded at their longitudinal center and arranged one within the other. The leaves are indicated by the numeral 10, and a completed book section by the numeral 11.

Adjacent to certain of the book sections and close to the doubled edge thereof I paste a reinforcing strip of material 12. This material may be either tough paper, fiber, tape or the like, and is of substantial thickness for purposes hereinafter made clear, and shorter than the width of the leaves. The book cover is indicated generally by the numeral 13.

The book sections are formed with openings 14 extended through the reinforcing strips 12, and the openings in all of the book sections are arranged in alinement. Then the binding cords 15 are inserted through the openings 14.

In Figure 2 I have illustrated one method of binding the book sections together, which consists in providing a needle 16 and passing the cord 15 through the eye of said needle, then passing the needle through one of the openings 14 and drawing the cord through in the usual manner and simultaneously through all of the book sections. The free ends of the cords of two adjacent openings are tied together in the manner shown in Figure 2. Suitable mechanism may be provided for mechanically inserting the cords. Thus means is provided whereby the leaves may be secured and firmly bound together.

In practical operation the sections of a book are first opened up and the reinforcing strips inserted. They may if desired be glued in place. Then the openings 14 are punched, preferably by a needle in the individual book sections. Then the book sections are placed together in the ordinary manner and the binding cords applied and drawn tight. Then flexible glue 17 is added to the back of the book.

In the drawing I have illustrated the book sections formed of a series of smaller sections by folding the opposite edges of a group of leaves upon themselves. However, it will readily be seen that my improved construction may be applied in a similar manner to book sections formed of a series of individual sheets, the reinforcing strips being inserted between sections having a predetermined number of sheets, thus enabling the book binder to trim a portion from the back edge of a worn book and rebind the same, if he so desires.

On account of the extra thickness of the reinforcing strips 12 at the point where they

are inserted, the back and front edges of the book can very readily and easily be rounded by pressing upon the side edges of the book adjacent to the back, and the binding cords 15 hold the book in this rounded position.

In practice a sufficient number of reinforcing strips should be added so that the entire thickness of the back edge of the completed book will be substantially equal to the arcuate length of a circular segment the chord, of which is equal to the entire thickness of the book before the strips are applied, thereby permitting the back edge of the book to be formed into the proper curve, as illustrated in Figure 1, without placing excessive strain on the binding cord or increasing the tendency of the binding cords to be pulled loose from the leaves.

Furthermore, when the book is opened and pressure applied to the leaves, which tends to tear them out of the book, this pressure is opposed by the reinforcing strips and the pressure of the cords is thereby distributed throughout a considerable area of the reinforcing strips, instead of being centered at the point where the cord goes through the leaves, and this makes a very strong and rugged construction.

These reinforcing strips on account of their thickness and toughness perform the double function of aiding in preparing the book with the rounded back, and at the same time distribute the strains upon the leaves over a wide area to prevent a leaf from being torn out.

I claim as my invention:

1. An improved book binding comprising in combination a series of book sections formed of folded leaves, a series of reinforcing strips inserted between certain of the sections adjacent to the folded edges thereof and extended longitudinally of the book sections at the back thereof, and binding cords passed through all of the book sections and the inner edges of said reinforcing strips, said reinforcing strips being narrow and of substantial thickness so that they will aid in permitting an operator to form a rounded contour for the back edge of the book.

2. An improved book binding comprising in combination a series of book leaves, a series of narrow strips inserted between groups of said book leaves and adjacent to the back edge thereof, binding cords passing through all of said book leaves near the inner edges of said strips to bind the leaves and strips together.

3. An improved book binding comprising in combination a series of book sections, a series of narrow reinforcing strips inserted between certain of the sections adjacent to the back edge of the book and extended longitudinally with the book sections, and binding cords passing through all of the book sections and the inner edges of said reinforcing strips, sufficient reinforcing strips being added so that the entire thickness of the back edge of the completed book will be substantially equal to the arcuate length of a circular segment, the cord of which is equal to the thickness of the completed book, whereby the back edges of the book sections may be reinforced, and whereby the rounding of the back edge of the book may be easily accomplished.

HYMAN TOLCHINSKY.