March 24, 1942. J. E. GRANT 2,277,318

BOOKBINDING

Filed March 14, 1941

Fig. 1

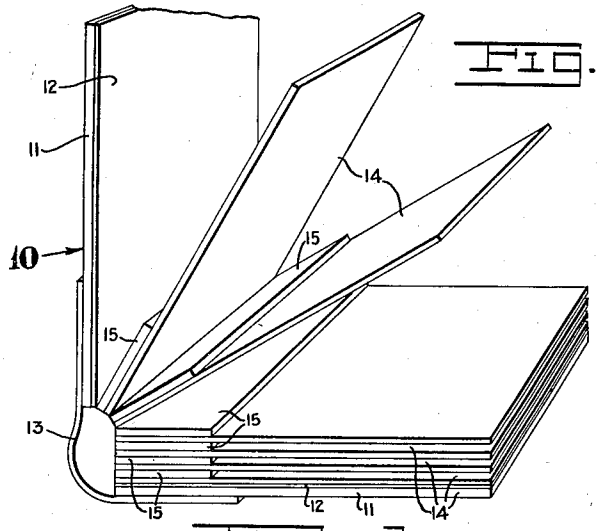


Fig. 2

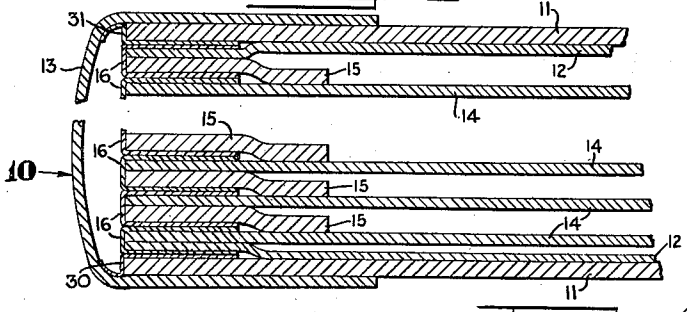


Fig. 3

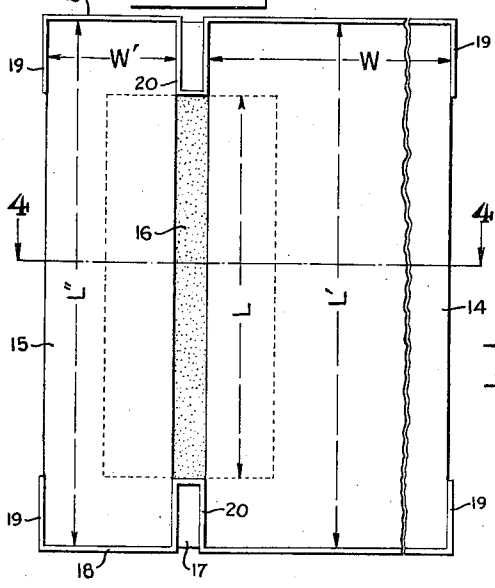


Fig. 4

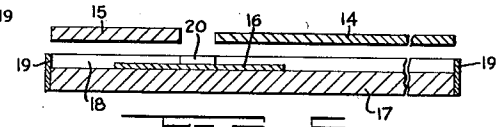


Fig. 5

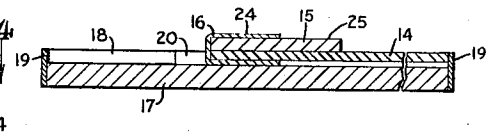
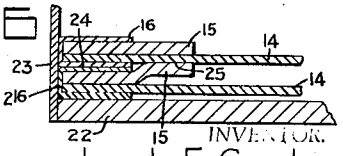


Fig. 6



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UNITED STATES PATENT OFFICE

2,277,318

BOOKBINDING

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Application March 14, 1941, Serial No. 383,270

2 Claims. (Cl. 281—22)

My invention relates to certain improvements in bindings for book leaves and has for its general object the provision of a simple and economically constructed durable binding.

A further object of my invention is to provide a novel binding which provides spaced leaves.

A further object of my invention is to provide a novel apparatus for binding book leaves.

A more specific object of my invention is to provide a binding wherein the leaves are provided at the bound edge with a reinforcement or spacer strip, which is secured to the leaf by a flexible strip in such manner that the strip serves as a hinge connecting the two leaves, thus eliminating the necessity for sewing or kerfing the leaves.

Other objects and advantages of this invention will become apparent to those skilled in the art by the following description, reference being had to the accompanying drawing in which like characters of reference indicate corresponding parts in all the figures.

Fig. 1 is a fragmentary, perspective, view of an open book bound according to my invention.

Fig. 2 is a fragmentary, sectional, elevation of the book in a closed position showing details of construction.

Fig. 3 is a fragmentary plan view of the binding apparatus and showing the spacer-reinforcement strips, tape strips, and leaves.

Fig. 4 is a fragmentary section taken in line 4—4, Fig. 3, showing one step in the method.

Fig. 5 is a view similar to Fig. 4 showing another step in the method, and

Fig. 6 is a fragmentary section showing a plurality of joined leaves.

Referring to the drawing by reference character I have shown my invention as embodied in a book which is indicated generally at 10. As shown the book includes a cover 11 having a cover-lining 12 and an outer binding tape 13. The book also includes a plurality of pages 14 on which spacer and reinforcing strips 15 are mounted. The assembly is secured together by tape strips 16.

The book is preferably assembled in an apparatus shown in Figs. 3 and 4, which includes a base 17 having end flanges 18 thereon. The base also has side flanges 19 which extend a short distance along the sides. Intermediate the end flanges 18 I provide an inwardly directed spacing member 20. The spacers are spaced apart a distance which corresponds to the combined thickness of the leaf 14 and strip 15 so that when the parts are folded from the position shown in Fig. 4 to the finished position shown in Fig. 2 the width of the tape strips 16 will be correct.

In constructing my book, for convenience in assembly the parts are assembled upside down with respect to the position shown in the finished book in Figs. 1 and 2. I first lay a strip of adhesive tape 16 on the base 18 as shown in dotted lines in Fig. 3 and in solid lines in Fig. 4. The length L of this strip in Fig. 3 is such that it fits between the spacers 20. The strip 16 has an adhesive coating 21 on the upper surface thereof as shown in Fig. 4. A page 14 is then inserted as shown in Fig. 4 and moved down so that it engages the adhesive 21.

The page 14 has a length L' which corresponds to the distance between the flanges 18 and the page 14 has a width W corresponding to the distance between the spacer 20 and the flange 19. A reinforcing strip having a length L'' corresponding to the distance between the flanges 18 and a width W' corresponding to the distance between the flange 19 and the spacer 20 as shown in position in Fig. 4 and is brought down onto the adhesive 21 and is secured.

The reinforcement 15 is then folded to the position shown in Fig. 5. The spacers 20 are of such length as shown in Fig. 4 so that this folding may readily occur. The assembly including the page with its reinforcement is then removed and placed on a support 22 as shown in Fig. 6. The support 22 includes a side 23 and the assembly is moved against the side 23 which serves as a guide. A second page is then made in the same manner.

The upper surface 24 of the strip 16 and the upper surface 25 of the reinforcement 17 of the assembly on the support 22 are then moistened with glue and the next assembly is laid upon the first assembly so that the adhesive 24 surface engages the superimposed reinforcing strip 16 and the adhesive 25 surface engages the superimposed page 14. This process of adding assemblies is combined until the desired number of pages have been bound.

To complete the book, the lower cover lining 12 is secured in place on the last page and the reinforcement on this page is omitted. The tape 30, shown in Fig. 2, is secured to the cover 11 and this cover is secured to the cover lining 12. The tape 30 is also secured to the outer binding tape 13 as shown in Fig. 2. At the other side of the book the cover lining 12 is secured in place of the usual page 14 by means of the tape 16 and a tape 31 is applied as shown in Fig. 2. The cover

11 is secured to the tape 31 and to the adjacent cover lining 12, and the tape 31 is then secured to the outer binding tape 13 which extends some distance along the covers 11.

The reinforcement strips 15 provide a spacing means so that the pages 14 are separated thus allowing relatively bulky members to be secured to the pages 14 without undue pressure against the adjacent page.

From the foregoing description it will be apparent that I have invented a novel binding which can be economically manufactured and which is highly efficient for its intended purpose.

Having thus described my invention, I claim:

1. In a book, a plurality of page assemblies, each page assembly comprising a page, a reinforcement of less width than the page, and an adhesive strip of less length than the reinforcement and secured to one face of the page and to the corresponding face of the reinforcement, each reinforcement being folded with its associated strip as a hinge to overlap the adjacent page, said assemblies being arranged so that the adhesive strips have their surfaces in direct engagement, adhesive means connecting the engaged portions of the strips, said reinforcements projecting beyond the strips and engaging the succeeding page and adhesive means connecting the projecting portion of each reinforcement with the succeeding page.

2. In a book, a plurality of page assemblies, each page assembly comprising a page, a reinforcement of less width than the page, and an adhesive strip secured to the page and one face of the reinforcement, said reinforcement projecting beyond said adhesive strip and being folded with said adhesive strip as a hinge to overlap the adjacent page, said page assemblies being arranged with their adhesive strips in direct engagement, adhesive means securing the projecting portions of each reinforcement to the page of the succeeding page assembly.

JOSEPH E. GRANT.