Aug. 22, 1933. C. D. TRUSSELL 1,923,646

COVER FOR BOOKS, BINDERS, OR SIMILAR ARTICLES

Filed May 20, 1932

Fig. 1.

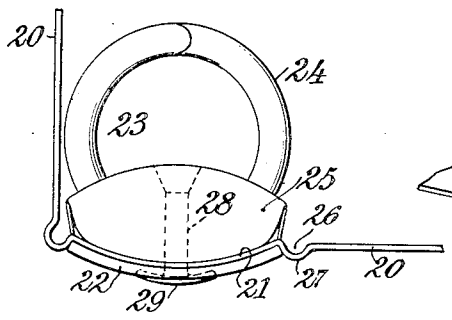


Fig. 2.

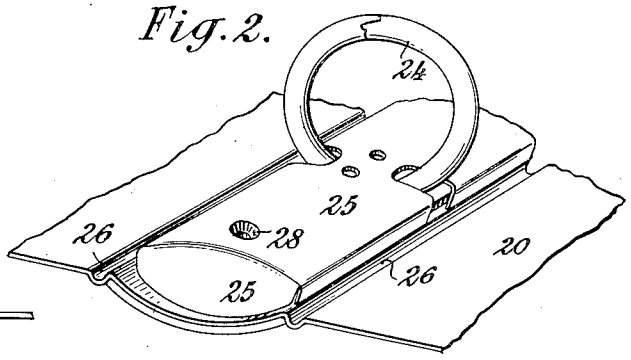


Fig. 3.

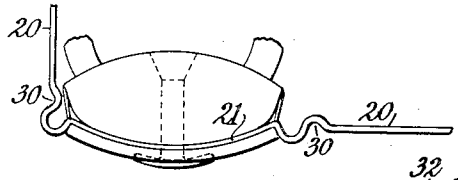


Fig. 4.

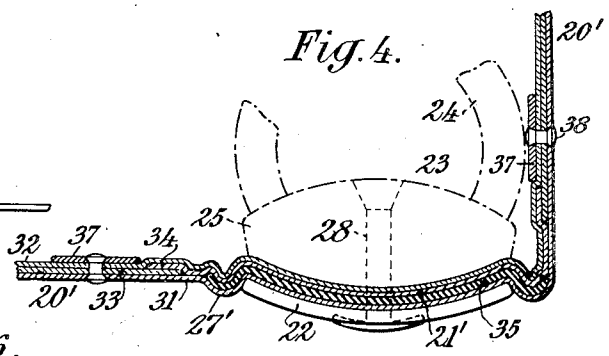


Fig. 6.

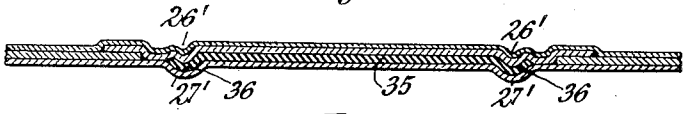


Fig. 8.

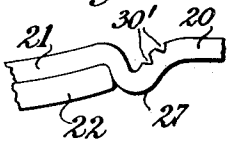


Fig. 5.

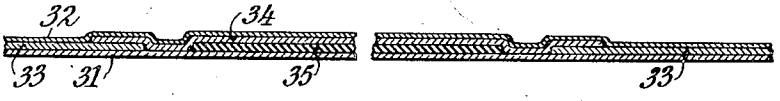
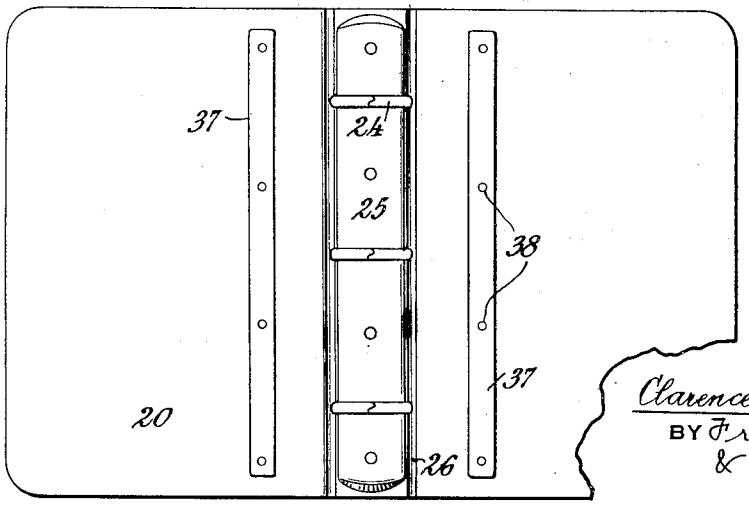


Fig. 7.



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COVER FOR BOOKS, BINDERS, OR SIMILAR ARTICLES

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Application May 20, 1932. Serial No. 612,411

8 Claims. (Cl. 129—24)

This invention relates to improvements in the covers of books, binders, or similar articles, and is especially adapted for use as a cover of a loose-leaf binder of the ring type.

It is an object of the invention to provide a cover which may be firmly secured between a relatively rigid binding plate and the article on which the cover is to be used, and at the same time cover, or partly cover, the edges of the binding plate in such manner as to produce an attractive finish and prevent the plate from scratching a desk, table, or other article of furniture on which the binder is used.

In the drawing illustrating preferred forms of the invention:—

Figure 1 is an end view of a loose-leaf binder of the ring type having the invention embodied therein, portions of the covers being indicated as having been cut off and one cover being represented in open position and the other in closed position.

Fig. 2 is a perspective view of a fragmentary portion of the binder illustrated in Fig. 1.

Fig. 3 is an end view corresponding with that of Fig. 1, the invention being embodied in modified form.

Fig. 4 is a cross sectional view of a binder having the invention embodied in accordance with a second modification, the metal leaf-attaching structure being represented in broken lines.

Figs. 5 and 6 are sectional views through layers of material used in the construction of the binder cover illustrated in Fig. 4 at different stages in the process of making the cover.

Fig. 7 is an inside view of an open binder disclosing an additional feature of improvement which is also included as a part of the showing in Fig. 4.

Fig. 8 is a fragmentary edge view through the portion of a binder at which the side portion of the cover joins the back portion, and illustrates a modified manner of weakening the cover material along the zone relied upon to serve as a hinge-like connection.

As represented in Figs. 1 and 2 the invention comprises a cover having the usual side portions 20 and back portion 21, the latter being firmly bound between an outer binding element or back plate 22 and the rear surface of the back plate of a leaf-attaching structure 23 consisting of the usual leaf-engaging rings 24 mounted in a supporting structure 25.

Leaf-attaching mechanisms of the above-described character are well known in the prior art and do not as such constitute any part of the invention herein to be claimed.

The cover construction comprising the side elements 20 and back element 21 is unique in that it is internally grooved as at 26 to provide a pair of externally-disposed ridges 27 along the zones at which the sides 20 join the back 21. The binding plate 22 is set in the recess between the ridges 27 and is of a width substantially equal to the width of the recess so that the edges of the plate 22 are closely flanked by the ridges.

In the form of the invention illustrated in Figs. 1 and 2, the cover is represented as comprising a single piece of material. It should be of a tough, flexible character of a consistency such as to receive and hold an impression in order that, after it has been grooved to form the channeled portions at 26, the resulting ridges 27 will maintain their forms throughout the natural life of the binder. Cover stock of such character made of fibrous material and rubber composition and having an attractive appearance resembling leather is readily obtainable as a commercial product.

The binding plate 22 may be constructed of hard rubber, metal, or other appropriate material, and the thickness of the binding plate may be so apportioned to the dimensions of the ridges 27 that the edges of the plate will be well protected so that the resulting structure will present a very neat and attractive appearance and the edges prevented from coming into contact with the hands of the user of the binder or with articles of furniture which might be marred or scratched thereby.

The metal structure may be secured to the binding plate by fastenings of any appropriate character, such, for example, as by means of rivets 28 passing through the binding plate, cover and the back of the metal structure, and headed at the opposite ends. The outer ends 29 of the rivets may be nicely rounded, polished and countersunk so as to gradually merge into the surface of the surrounding portion of the plate.

By a proper selection of the material of the binding plate 22 it may be caused to have either a polished or a dull finish adapted to harmonize with the material of the cover.

The thickness and character of the material of which the cover is constructed may be such that the channeled portions 26 may be sufficiently flexible to serve as hinge-like joints between the side portions 20 of the cover and the back portion 21.

The modification illustrated in Fig. 3 differs

from the one illustrated in Figs. 1 and 2 only in that additional grooved portions 30 are provided along the outer margins of the channeled portions 26 to increase the flexibility of the hinge-like joints between the cover portions 20 and the back portion 21.

In Fig. 4 the invention has been illustrated as applied to a ring type binder having a cover of the well-known built-up construction, and in Figs. 5 and 6 are represented fragmentary sectional views of layers of material which have been assembled together and partly prepared for use as a cover of the character of the one illustrated in Fig. 4.

The construction represented in Fig. 5 comprises a layer of leather, cloth, paper, or other appropriate covering material 31, a layer of suitable lining material 32, interleaved boards or layers of stiffening material 33 to form the body portions of the sides of the cover, a layer of reinforcing material 34, and an inserted layer 35 of a tough, flexible material adapted to receive and hold an impression, this layer being of a width such as to extend to the margins of the back portion of the cover and serve as a means of maintaining the form of internal grooves or channels impressed into the cover as a means of producing external ridges along the zones where the side portions of the cover are hinged to the back portion.

In Fig. 6 the laminated structure of Fig. 5 is indicated after the channels 26' have been impressed in the inner surface of the cover construction to produce the ridges 27'. The form of these ridges will be retained by the grooved or channeled portions 36 at the opposite margins of the layer 35 of the back portion of the cover construction.

In Fig. 4 the cover construction of Figs. 5 and 6 is represented in association with a ring structure 23, 24, 25, and a binding plate 22. The cover is indicated as being clamped between the ring structure and the binding plate by means of a rivet 28. In this form of the invention the hinge-like connection at each side between the side elements 20' of the cover construction and the back element 21' may comprise portions of the covering material 31, lining material 32, and reinforcing material 34 intermediate the slightly-spaced edges of the boards 33 and inserted back element 35.

It will be apparent that the built-up construction may be modified as to the character, quality, arrangement and number of layers used, but it is important that it include in the back portion at least one layer of material adapted to receive and hold the impressions relied upon to produce the ridges 27'. In this respect the material of the layer 35 of the built-up cover construction of Figs. 4, 5 and 6 must conform with that used in making the one-piece cover construction 20, 21 of Figs. 1, 2 and 3. Various materials adapted to serve the purpose may be found on the market. One very satisfactory material is produced by the United States Rubber Company and sold under the trade name "Laflex".

In Fig. 8 is illustrated a portion of a binder similar to the one illustrated in Fig. 1, of which the cover 20, 21 differs from the covers previously disclosed in that zones of weakness are produced along the outer margins of the grooved portions of the cover which form the beads 27 by cutting or otherwise producing V-shaped grooves 30' in the inner surface of the cover material. These grooves 30' of V-shaped form in cross-section weaken the cover material along the outer margins of the beaded portions so that the cover may bend along these grooved zones and relieve the beaded portions from a bending action to which they would be subjected when the covers are opened and closed, if zones of weakness formed by grooving or otherwise were not provided.

In Figs. 4 and 7 is illustrated an ancillary feature of the invention which may be used as a means of preventing the covers from being dented or otherwise distorted at the points where they come in contact with the sides of the leaf-attaching rings 24. This feature of the invention may comprise strips of leather, relatively hard rubber, or other appropriate material 37, which may be secured to the inner surfaces of the cover sides in any suitable manner as by means of rivets 38. It is not essential that the strips 37 be continuous; all that is important is that they are so positioned, as indicated in Figs. 4 and 7, as to come in contact with the rings and distribute the pressure over appreciable portions of the cover sides.

The invention is not intended to be limited to the forms herein selected for purposes of illustration, but should be regarded as covering modifications and variations thereof within the scope of the appended claims.

What is claimed is:—

1. A cover for a book, binder, or similar article, comprising a back portion and side portions connected therewith by means of hinge-like joints, the cover being formed along such joints with external ridges forming a recess in the back portion, an outer back plate of stiff material set in and approximately filling the space between said ridges, and fastening means clamping said plate to the back portion of the cover.

2. A cover, as defined by claim 1, of which the cross-sectional form of the bottom of the recess in the back portion is convex and of which the outer back plate is curved about a longitudinal axis to conform with the curvature of the back portion.

3. A cover for a book, binder, or similar article, comprising a back portion and side portions, the cover being internally channeled along opposite sides of the back portion to produce a pair of externally-disposed ridges, a binding element stiffer than the cover material, set in the space between said ridges and having its opposite margins flanked thereby, and means for clamping the back portion of the cover between said binding element and the article on which the cover is used.

4. A cover, as defined by claim 3, of which the channeled portions which produce the ridges along the sides of the binding element, serve as flexible hinge-like joints between the back and side portions.

5. A cover, as defined by claim 3, having weakened portions parallel with the channeled portions, to form flexible hinge-like joints about which the side portions may be bent.

6. A loose-leaf binder having a cover which consists of a single piece of tough, flexible material of a consistency such as to receive and hold an impression, said cover being internally channeled along narrow zones lying between its back portion and its side portions, to form a pair of external ridges along the margins of the back portion, a loose-leaf, binding mechanism having a back plate with a convex outer surface to seat against the inner surface of the back portion, a binding plate with a concave inner surface to seat against the outer surface of the back

portion and of a width approximately equal to said back portion, and means for securing the cover between said plates with the edges of the binding plate flanked by said ridges.

7. A built-up cover for a book, binder, or similar article, comprising covering, lining, stiffening and reinforcing materials, said cover being internally channeled along the zones lying between its back portion and its side portions to form a pair of external ridges along the margins of the back portion, a binding element stiffer than the cover material. set in and approximately filling the recess between said ridges. and fastening means for securing the back portion of the cover between the binding element and the cover-attaching portion of the article on which the cover is to be used.

8. A built-up cover, as defined by claim 7, the reinforcing material in its back portion being a layer of tough, flexible material of a consistency adapted to receive and hold an impression, said layer being extended into the channeled zones so as to serve as a means of preserving their channeled form.

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