Jan. 6, 1931. J. SCHADE 1,787,958

BACK FOR LOOSE LEAF RING BOOKS

Filed Nov. 29, 1929

FIG. 1.

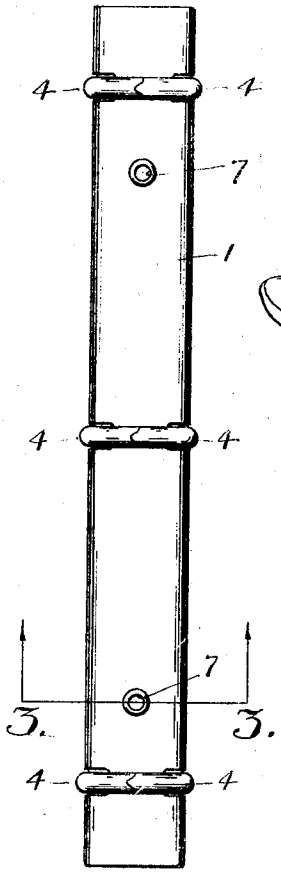


FIG. 2.

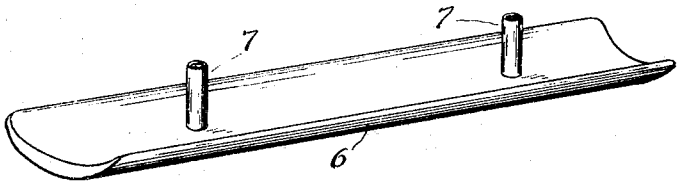


FIG. 3.

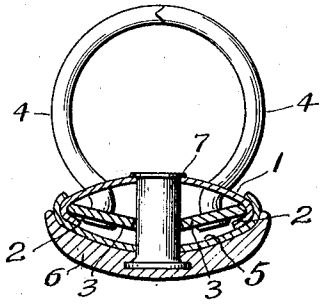


FIG. 4.

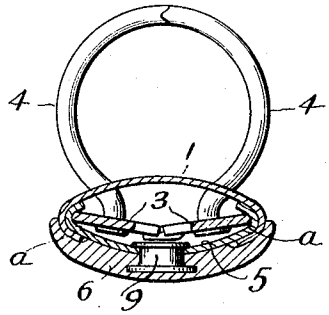


FIG. 5.

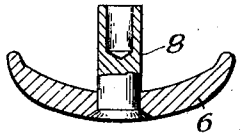


FIG. 6.

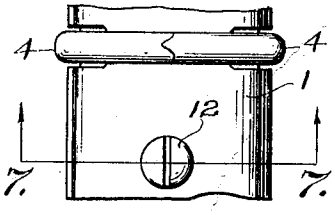
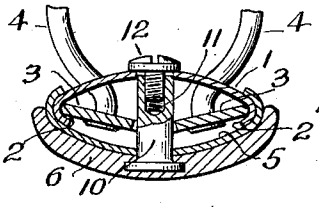


FIG. 7.



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UNITED STATES PATENT OFFICE

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BACK FOR LOOSE-LEAF RING BOOKS

Application filed November 29, 1929. Serial No. 410,393.

This invention relates to book backs for loose leaf books, but is particularly identified with devices of this description which employ arch-shaped prongs that are carried by leaves pivotally connected along their inner edges and confined as to the outer edges within a spring plate, these prongs being complementary parts of rings which latter are formed when the prongs are in closed condition.

A construction like that above described is known as a loose leaf ring binder, and the present invention has nothing whatever to do with the actual loose leaf structure and it is therefore immaterial whether the prong-carrying leaves are confined within a top spring plate or a bottom spring plate.

This application is a continuation in part of application Serial No. 181,641, filed April 7, 1927.

The main object of the invention is to provide a non-metallic book back, suitably shaped in cross-section and of a length and width generally corresponding to the length and width of the book, and made from a suitably shaped pressed or molded material such as vulcanite, papier-mâché, bakelite, celluloid, vulcanized fiber, or other suitable analogous non-metallic material, and the latter is colored and patterned to correspond with the coloring and pattern desired, the book back carrying devices which extend from its inner face and are secured to one of the plates of the loose leaf structure.

In the accompanying drawing

Figure 1 is a top view of the loose leaf structure as it appears when the book back is secured to the top or cover plate of said structure.

Figure 2 is a perspective view illustrating the book back itself with fastening devices extending from its inner face.

Figure 3 is a section at the line 3—3 of Figure 1.

Figure 4 is a section similar to Figure 3 but showing the book back secured to the bottom plate of the loose leaf structure.

Figure 5 is a detail cross-section of the book back showing the securing device extending loosely through the back instead of molded thereto as shown in Figures 3 and 4.

Figure 6 is a broken top view showing the loose leaf structure as it would appear when a modified form of securing the back to the structure is utilized, and

Figure 7 is a section at the line 7—7 of Figure 6.

Similar numerals of reference denote like parts in the several figures of the drawing.

Heretofore loose leaf books of this style have been provided with side covers and a back portion made of leather or other suitable material, the back portion being either integral with the side covers and provided on the inside with a properly shaped metal strip, or the back of the book has been made of a suitably shaped metal strip to which the side covers are attached either by hinge elements or in any other suitable manner. When a book cover has been formed with the back portion consisting of an inside metal plate but covered on the outside with leather, the latter, after constant usage becomes worn and unsightly since the main wear on a book of this sort is on the back. In structures that have been designed to overcome this defect the back has been made of metal which is exposed, the side covers being secured to the metal back in any suitable manner but the metal back becomes tarnished, will mar the surface of a desk and does not present as attractive an appearance as is possessed by a book back which is of the same color and pattern as the side covers.

Referring to Figures 1, 2 and 3, of the drawings, 1 is the top plate of a loose leaf binder, and is made of spring-metal with its lateral edges bent downwardly and inwardly to form pockets 2, and 3 are plates hingedly connected along their inner edges and with their outer edges confined within said pockets, said plates carrying arch-shaped prongs 4 which, when closed, form ring-shaped structures, a bottom plate 5 being usually employed.

The construction above described is a well known form of ring binder and requires no detail description either as to structure or operation.

6 is the back of the book which is an unitary structure, usually concavo-convex in cross-section, and made of any suitable non-metallic material, such as vulcanite, papier-mâché, bakelite, vulcanized fiber, &c., molded or pressed into shape, and preferably colored and patterned to correspond with the color and pattern of the side covers of the book, and this back has a length and width that corresponds to the length and width of the book.

Referring to Figures 2 and 3, 7 are long eyelets whose heads are preferably embedded within the back 6 during the process of molding or pressing, and which project from the inner face of said back, and, in applying the back, these eyelets extend through the plates 3 and through perforations in the top plate 1 and are headed down against the latter so as to unite the back firmly to the loose leaf structure.

Instead of these long eyelets, long hollow rivets 8 may be employed, as shown at Figure 5, and the heads of these rivets as well as the eyelets may be embedded in the back, or they may be separate therefrom and extended loosely through the back as shown in the instance of the rivet at Figure 5.

In Figure 3, the plates 3 are confined within the top plate, but such plates are frequently confined within pockets *a* in the bottom plate, as shown at Figure 4, and the structure of the binder in this respect is immaterial so far as the application of the back is concerned, and in either instance, the back may be secured by long eyelets 7 to the top plate as shown at Figure 3, or by short eyelets 9 through perforations in the bottom plate, as shown at Figure 4, and rivets may be employed in both instances, if desired.

Referring to Figures 7 and 8, a hollow rivet 10 is employed that is interiorly threaded as at 11, and it is headed by means of a screw 12 driven within the rivet so that the head of said screw impinges against the plate associated therewith, in this instance, the top plate 1.

Therefore, the manner of securing the eyelets or rivets to the plates so as to bind the back in position is immaterial, and also it is within the scope of this inventon to employ devices other than eyelets or rivets for the purpose of binding the back as an unitary appliance to the loose leaf structure.

What is claimed is:—

1. A loose leaf book consisting of a loose leaf holding structure that comprises top and bottom plates and separable prongs and resiliently acting members carrying said prongs and housed within one of said plates, and a separate rigid back made of a non-metallic material suitably shaped in cross-section and of a length and width generally corresponding to the length and width of the book, said back carrying fastening devices, and means for securing said devices to the loose leaf structure.

2. A loose leaf book consisting of a loose leaf holding structure that comprises top and bottom plates, separable prongs, resiliently acting members carrying said prongs and housed within one of said plates, and a separate rigid back made of a non-metallic material suitably shaped in cross-section and of a length and width generally corresponding to the length and width of the book, said back carrying fastening devices and one of said plates having perforations through which latter said devices are passed and clinched whereby said back is secured as an unit to said book.

3. In a loose leaf book comprising a leaf holding structure, a separate rigid back made of a non-metallic material suitably shaped in cross-section and of a length and width generally corresponding to the length and width of the book, said back carrying long eyelets and the cover plate of the loose leaf structure having perforations, said eyelets passed through said perforations and clinched whereby the back is secured as an unit to the book.

4. A loose leaf book consisting of a loose leaf holding structure that comprises top and bottom plates, separable prongs, resiliently acting members carrying said prongs and housed within one of said plates, and a separate rigid back made of a non-metallic material suitably shaped in cross-section and of a length and width generally corresponding to the length and width of the book, said back carrying fastening devices and one of said plates having perforations, and means for securing said devices through said perforations to the plate containing them.

In testimony whereof I affix my signature hereto.

JOHN SCHADE.