

Nov. 12, 1929.

L. F. PARR

1,735,211

BOOK BINDER

Filed April 23, 1927

Fig. 1.

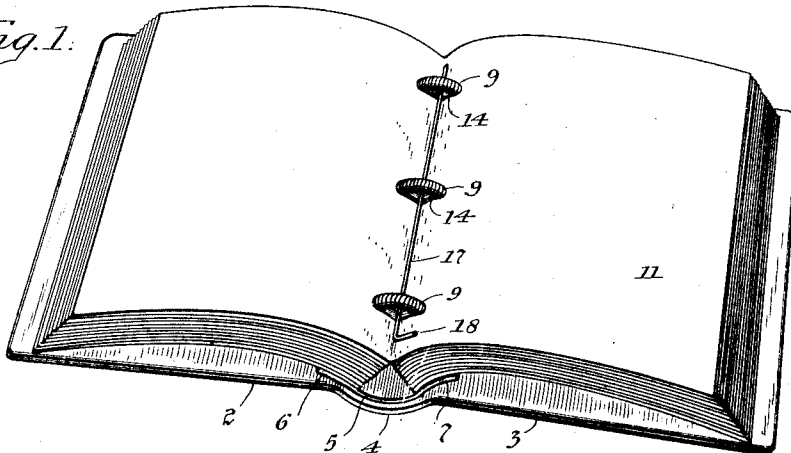


Fig. 2.

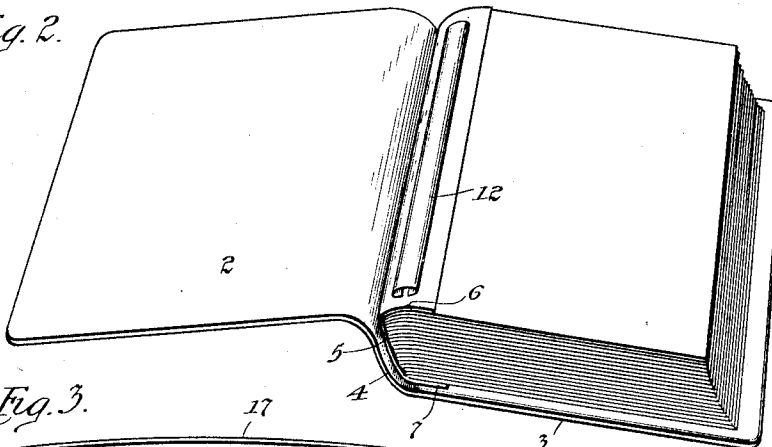


Fig. 3.

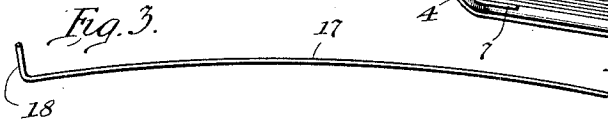


Fig. 5.

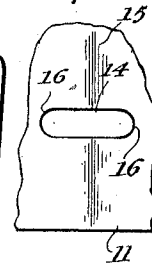


Fig. 7.

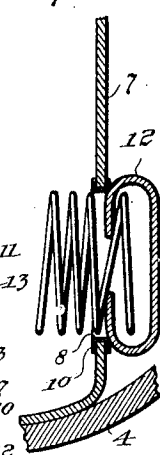


Fig. 4.

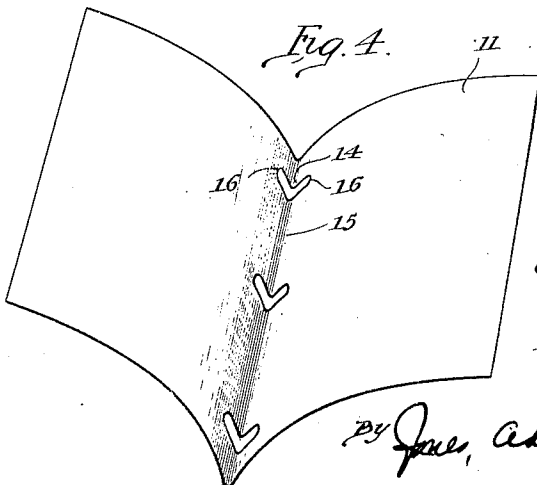
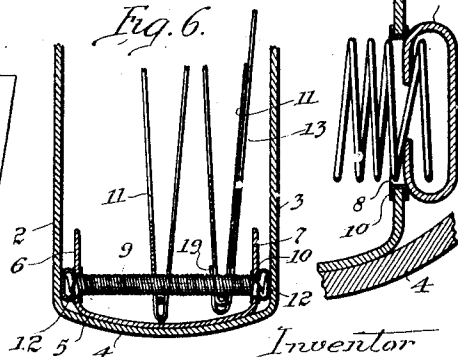


Fig. 6.



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UNITED STATES PATENT OFFICE

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BOOKBINDER

Application filed April 23, 1927. Serial No. 186,011.

My invention relates to an improved flexible binding post of the coil spring type.

More specifically, my invention has reference to a binding post of this type, which is simple and efficient, and which permits ready insertion and removal of loose leaves, as well as their retention without tearing or otherwise mutilating them.

A further object of my invention is to provide a flexible coil spring binding post adapted for use in a loose leaf book wherein the pages are provided with open U-shaped slots, permitting the pages to be inserted into the book and over the springs, to allow the latter to lie within the slots. This arrangement affords a durable structure, which prevents the paper being torn or cut by the individual convolutions of the coil as the spring expands.

It is obvious, therefore, that the open U-slots in the leaves allow a practical application of the flexible coil spring as a binding post.

The ends of the coil springs may be held by slidable grooved bars which are easily placed in position and which function securely to hold the coil springs.

Further objects and advantages of my invention will be apparent from the following detailed description, when taken in connection with the accompanying drawings forming a part thereof.

In the drawings:

Figure 1 is a perspective view of a book in open position to illustrate an embodiment of my invention;

Fig. 2 is a similar view with the cover only of the book open to illustrate the end holding means for the coil springs;

Fig. 3 illustrates the removable locking means for the loose leaves;

Fig. 4 illustrates in perspective a view of a folded loose leaf particularly adapted for use with my invention;

Fig. 5 illustrates the manner of cutting the open U-slots at the fold of each leaf;

Fig. 6 is an enlarged sectional detail view illustrating the manner in which the springs lie in the U-slots and cooperate with the removable locking means to hold a double and a single page in position; and

Fig. 7 is an enlarged detailed sectional view illustrating the manner of locking the ends of the coil springs against displacement.

A book embodying my invention is illustrated in Figs. 1 and 2 and comprises covers 2 and 3 attached in any suitable manner to a back 4. A binder strip 5 of U-shaped formation may be fastened to the interior of back 4. The ends 6 and 7 of binder strip 5 may be flexible and are provided with a plurality of reinforced openings 8 to receive the ends of a plurality of coil springs 9 constituting the flexible binding posts of the device herein disclosed. Openings 8 may be reinforced by suitable eyelets 10, or the like, as illustrated in Figs. 6 and 7.

One or two convolutions of the ends of coil springs 9 may extend beyond openings 8. These extending convolutions may be received by grooved bars 12, preferably of channel formation whereby when the bars are placed over the ends of coil springs 9, the latter are securely held against displacement. When the covers of the book are opened, as illustrated in Fig. 1, the springs 9 will expand. These slidable bars 12 engaging the ends of the springs in the manner above described, allow considerable flexibility on the part of the springs, so that the book may be readily opened and closed and the pages inserted or removed without the ends of the springs being accidentally disengaged.

Any suitable type of leaf may be employed herein, but I prefer using a leaf 11 which is folded, as illustrated in Fig. 4, so as to constitute in reality a double leaf having open U-slots 14 at the fold 15. Any number of slots 14 may be provided depending on the number of springs employed. These slots 14 may be cut into the paper after it is folded. Ends 16 of the slots are preferably semi-circular so as to permit the spring to fit therein and prevent the spring from tearing the edges when the book is open and the springs expanded.

Removable locking means are provided to hold the leaves in position in the book. This means may take the form of a bowed wire 17 constituting a flexible spring adapted to be inserted under the coil springs 9, as illus-

trated in Fig. 1. The bow in the wire 17 binds the same against the fold 15 and also springs 9, whereby to prevent its displacement and also to securely hold the leaves in position. To facilitate the insertion or removal of wire 17, I prefer turning one end upwardly, as illustrated at 18, which permits the fingers to more readily grasp the wire.

When it is desired to insert a single page 13 in the book, the inner end may be folded to form a flap 19, as illustrated in Fig. 6. The slots 14 are then cut into the fold and placed over the spring. It is preferable, however, to use a single page leaf in conjunction with a double page leaf and to turn the flap 19 under and about the fold of this double leaf. Bowed wire 17 bearing against the double leaf will press against the fold of the single page leaf and prevent the removal of the single page leaf until the bowed wire 17 is again removed.

Any number of wires 17 may be furnished for a single book. Usually a number of leaves 11 relating to the same subject matter are assembled together in pamphlet or sectional form, one within another, in books of this type. In such a case, a single wire 17 will hold these leaves in the book. I find that these books are largely used by various trades as price books. If minor additions are to be made to the subject-matter of any section and it is not desirable to revise any of the double leaves 11, a single leaf 13 may be readily inserted by providing the fold 19 at its inner end so that it may pass down and under the folds 15 of one or any number of double leaves 11.

An important advantage of the arrangement disclosed is that any number of leaves may be removed without disturbing the others which are fastened in the book. The U-slots 14 allow the arbitrary removal of any leaf by the withdrawal of wire 17 holding it in place. The end bars 12 ordinarily do not require displacement, inasmuch as removal or replacement of the leaves or sections occurs between the flaps 6 and 7 of the binder strip 5.

I also find that coil-spring binding posts allow maximum flexibility in the opening and closing movement of the book. Both covers 2 and 3 readily open the entire distance, the leaves on each side of the place where the book opens following, so that their pages lie flat and are opened to full view.

Without further elaboration, the foregoing will so fully explain the gist of my invention, that others may, by applying current knowledge, readily adopt the same for use under varying conditions of service, without eliminating certain features, which may properly be said to constitute the essential items of novelty involved, which items are intended to be defined and secured to me by the following claims.

I claim:

1. In a device of the class described, the

combination with a plurality of coil spring binding posts, a plurality of folded leaves having open slots therein at the folds for insertion over said posts, and a thin spring-like member of bowed formation for lying under said posts and within said folds of said leaves whereby to hold said leaves in position.

2. A binding post system for a loose leaf book comprising a plurality of coil springs and a bar having a slot therein for engaging the end convolutions of said coil springs.

3. In a loose leaf book, a flexible binding post consisting of a coil spring, a plurality of folded leaves having U-slots therein at the folds through which said coil spring passes, and a wire of bowed formation for lying under the coil spring and within said folds of said leaves whereby to hold said leaves in position.

4. In a device of the class described, the combination with a plurality of binding posts consisting of flexible coil springs, a binder strip having apertured ends through which said coil springs are adapted to pass, and a bar for each binder strip end having provisions for receiving the end convolution of each spring whereby to lock the springs against displacement.

5. In a device of the class described, the combination with a plurality of binding posts comprising flexible coil springs, a binder strip having apertured ends through which said coil springs are adapted to pass, and a bar for said binder strip having provision for receiving the end convolutions of each spring whereby to lock the springs against displacement, of leaves having their inner edge folded and provided with open slots therein insertible over said coil springs, and a spring wire for engagement under said coil springs and within the inner folded edge of each of said leaves whereby to removably lock said leaves in position.

In witness whereof, I have hereunto subscribed my name.

LOUIS F. PARR.