H. C. MILLER.

POST FOR LOOSE LEAF BINDERS.

APPLICATION FILED AUG. 26, 1912.

1,072,867.

Patented Sept. 9, 1913.

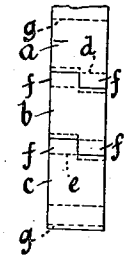


Fig. 1

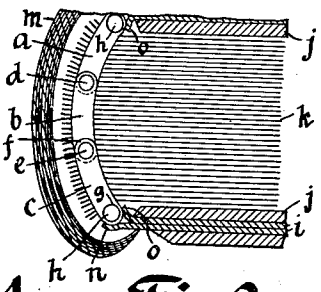


Fig. 2

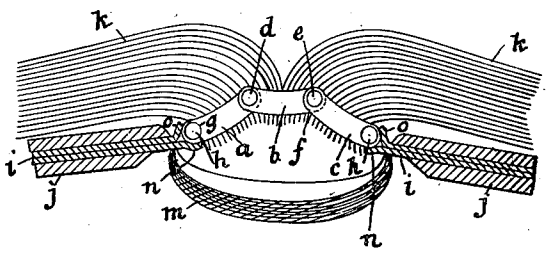


Fig. 3

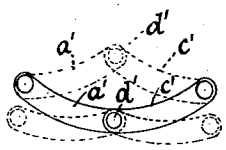


Fig. 4

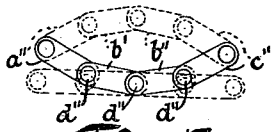


Fig. 5

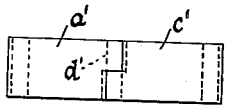


Fig. 6

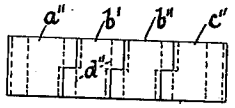


Fig. 7

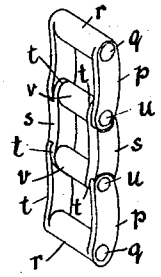


Fig. 8

Witnesses

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# UNITED STATES PATENT OFFICE.

HENRY C. MILLER, OF MILWAUKEE, WISCONSIN.

## POST FOR LOOSE-LEAF BINDERS.

1,072,867. Specification of Letters Patent. Patented Sept. 9, 1913.

Application filed August 26, 1912. Serial No. 717,214.

*To all whom it may concern:*

Be it known that I, HENRY C. MILLER, of Milwaukee, Wisconsin, have invented a Post for Loose-Leaf Binders, of which the following is a specification.

This invention relates to binder-posts for loose-leaf books and in particular for those books which are intended to hold always a fixed number of leaves and which have a spring-back for assisting in holding the book open and shut.

More particularly I aim to provide an improved form of post for the general type of book illustrated in my co-pending application, Serial Number 659,962, filed November 13, 1911. In that application, I disclosed a book having a novel flexible leaf-post, together with projecting lugs on the covers to which the ends of the posts where attached by pintles for causing the posts to bend inwardly when the book is shut and outwardly when it is opened.

The form of post herein disclosed is jointed as distinguished from the continuously flexible form shown in my aforesaid application. It will be found that the jointed form, while it does not supersede the continuous flexible form, has certain advantages in certain situations both in the matter of service and economy; and while I have illustrated it in conjunction with the aforesaid spring-back book or binder, it can also be used wherever a flexible post is desired and independently of my aforesaid invention.

For the better understanding of my invention, I have illustrated in the accompanying drawings several forms in which it may be embodied.

In these drawings Figure 1 is a front view of a three-link post extended; Fig. 2 shows the post in side elevation *in situ* within a book of the kind previously referred to, the book being shown in section and only the back part thereof illustrated, this showing the closed position of the book; Fig. 3 is a similar view showing the open position of the book; Fig. 4 is a side view of a two-link post, the same being shown in full lines in the position which it would occupy in the closed position of the book and in dotted lines in the open position, and also in straight position; Fig. 5 is a similar view of a four-link post showing the same full- and dotted-line positions as in Fig. 4; Figs. 6 and 7 are front views of the two posts shown in Figs. 4 and 5 respectively; and Fig. 8 is a perspective view of a post with open links.

In these drawings each reference letter or character refers to the same part wherever used.

My improved jointed post is made up of a series of links *a*, *b*, and *c*, the middle link *b* being jointed to the end-links *a* and *c* by means of pintles *d* and *e* which pass through lugs *f* formed on both ends of the member *b* and one end of the members *a* and *c*, the adjoining lugs overlapping so as to make the post effectively continuous. The free ends of the end-links *a* and *c* are perforated by holes *g*, through which pass the two pintles *h*, which are secured in sockets on the hinge-plates *i* of the two covers *j* of the book. The leaves *k* of the book are of course provided with perforations through which the post is passed, and a spring-back *m* is provided to press upon the covers to hold them open or shut. As in my aforesaid patent application, lugs *n* and *o* are shown on the opposite sides of the hinge-plates *i*, the function of these lugs being to press against the sides of the end-links *a* and *c* and push them into the concave or convex position when the book is shut or opened. As indicated in Figs. 2 and 3, the links are preferably made with a curvature such that in the closed position of the book they form a continuous circular arc. This however is merely in order to give the book the correct appearance when closed and is not essential, as the links may be made straight as illustrated in Fig. 5. In Figs. 4 and 6 the post is constructed of two links only, *a'* and *b'*, which are of the same form as the links *a* and *c* in Fig. 1, being united directly by a pintle *d'*. In Figs. 5 and 7 the post is provided with four links *a''* *b'* *b''* and *c''*, of the same form, except as to curvature, as the links *a*, *b*, and *c*, and united by pintles *d''*. The links are here shown as straight. Although any number of links may be used, a greater number than four will, it is believed, not be found necessary or desirable, and for books of ordinary size I prefer to use three links, inasmuch as with the aid of the guiding lugs *n* and *o*, the position of each of the three links is more or less definitely determined. For small books the two-link form will be found desirable and has the advantage that books can be made to open flatter in the middle.

In Fig. 8 I have shown a chain form of post which is made up of two three-sided end-links *p*, each provided with a pintle-hole *q* through the middle bar *r* thereof; and any number of pairs of intermediate links *s*, so made that their exterior surfaces are continuous with the exterior surfaces of the end-links and of each other, and having on their ends lugs *t* through which pass the joint-pins *u*. The links *s* are held in position on the pins *u* by means of spacing sleeves *v*. This figure illustrates but one possible form of many of the open-chain pattern that might be devised consistently with my invention.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A binder-post comprising a series of links pivoted together, each of said links being curved to correspond with the curvature of the post as a whole in the closed position of the book.

2. A binder-post comprising a series of pivotally connected links, the two end links being each in the form of a central bar perforated to receive a pintle-rod and two side-portions at right-angles thereto and perforated at their ends; and an intermediate link being also perforated at its ends and united by joint-pins to the end-links.

3. In combination with a binder, a binder-post comprising a series of links pivoted together, the ends of the series being connected to the binder-back; each of the abutting ends of each two of the links being provided with a lug and each pair of abutting lugs interlocking and being connected by a transverse pintle passing through them, whereby the links have a pivotal movement on each other in a plane perpendicular to the binder-back and the leaves are excluded from getting between said abutting ends.

In witness whereof, I have hereunto set my hand in the presence of two witnesses.

HENRY C. MILLER.

Witnesses:
JUSTUS CAHN,
EDWARD C. STADLER.