March 11, 1947. W. W. SYFERT 2,417,141

BINDER POST

Filed April 17, 1943

Fig. 1.

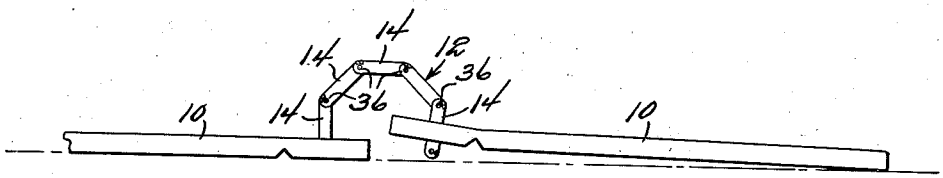



Fig. 2. Fig. 3. Fig. 4.

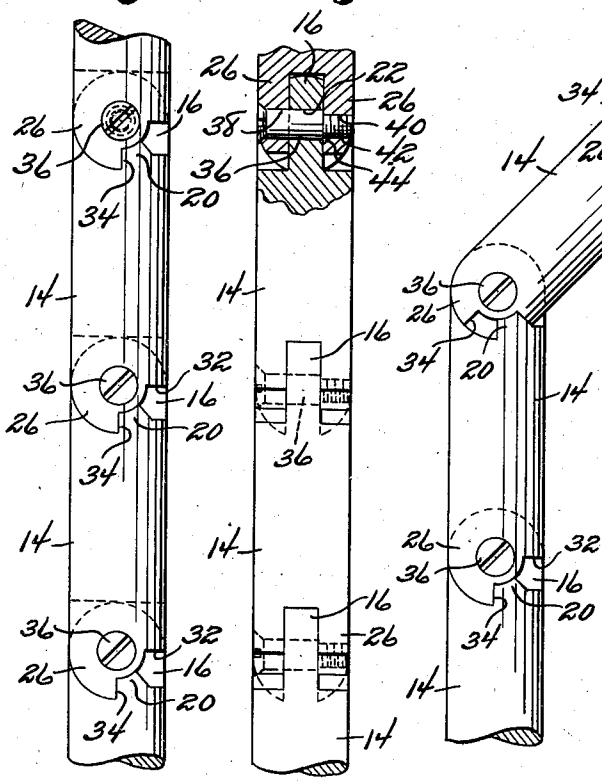






Fig. 5. Fig. 6.




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Patented Mar. 11, 1947

2,417,141

# UNITED STATES PATENT OFFICE

2,417,141

## BINDER POST

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Application April 17, 1943, Serial No. 483,420

1 Claim. (Cl. 129—41)

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My invention relates to loose-leaf binders, and has among its objects and advantages the provision of an improved flexible binding post so designed as to permit the pages of the book to be opened flatly adjacent the hinge, and in which the post is so designed as to restrain the pages from lateral shifting.

In the accompanying drawing:

Figure 1 is a diagrammatic view illustrating the binding post applied to two covers such as are employed in loose-leaf binders.

Figure 2 is a fragmentary view of a portion of a binding post made up of a plurality of hingedly connected links.

Figure 3 is a similar view but with the structure rotated 90 degrees about its axis and a portion of one hinge structure broken away.

Figure 4 is a view illustrating the manner in which the link sections may be pivoted predetermined distances in one direction.

Figure 5 is a view of one of the links, and

Figure 6 is a view of the link of Figure 5 rotated 90 degrees about its axis.

In the embodiment of the invention selected for illustration, Figure 1 illustrates binder covers 10 which are hingedly connected by a post 12. Two such posts are employed for each book or binder. The post 12 comprises hingedly connected links 14, two of which are respectively connected with the covers 10.

In Figures 5 and 6, the link 14 is provided with a web 16 at one end, which web is provided with a rounded end 18 and is located in a plane common to the axis of the link. All the links 14 are circular in cross section and of the same diameter. Two shoulders 20 are provided at the end of the link 14 adjacent the web 16. These shoulders are located on opposite sides of the web 16. An opening 22 is provided in the web 16 concentrically of its rounded end 18.

The other end of the link 14 of Figures 5 and 6 is provided with a slot 24 extending inwardly from that end and of such proportions as to loosely receive the web 16 on an adjacent link. This end of the link 14, because of the slot 24, has two fingers 26 which are curved at 28, and each finger is provided with a notch 30 terminating in two shoulders 32 and 34.

Figure 3 illustrates a pin 36 which extends loosely through the opening 22 in the web 16. The fingers 26 on each link 14 are provided with coaxial openings 38 and 40, the pin 36 being unthreaded with respect to the opening 38, but the pin having a shank 42 threaded into the opening 40. The pin 36 is of considerably larger diameter

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than the shank 42 to provide a shoulder 44 having frictional engagement with the inner face of one finger 26 to frictionally restrain the pin from accidental rotation.

In operation, the links 14 are so formed as to each have a pivotal movement extending through 45 degrees. When two adjacent links are coaxially arranged, the shoulders 34 on one link lie in engagement with the shoulders 29, but when either link is pivoted 45 degrees relatively to the other, the shoulders 32 engage the shoulders 29 to restrain the links from further pivotal movement in that direction. Thus the links may each be pivoted from a coaxial position to one at an angle of 45 degrees to its connected link.

One of the links 14 may be fixedly attached to one cover 10, while the link 14 at the other end of the post may be loosely connected with the other cover.

Because of the curved ends 28, the links 14 are devoid of sharp corners and projections which might interfere with turning of the leaves when the post is bent from its straight alignment. The post is easily pivoted to the open position of the book, and the post restrains the leaves from lateral shifting, which is an objectionable feature in connection with strings, springs and the like.

Without further elaboration, the foregoing will so fully explain my invention, that others may, by applying current knowledge, readily adapt the same for use under various conditions of service.

I claim:

In a connector for a loose leaf binder having a pair of covers, said connector being composed of a series of articulated links, means rigidly securing the first link of said series to one of said covers, means loosely connecting the last link of said series to the other of said covers, each link consisting of an elongated member of circular cross section, the articulated portions of adjacent links consisting of a male element extending from an end of each link and having a curved end and a pivot opening, curved shoulder portions on each link on opposite sides of said male member, a lug portion on each link on opposite sides of said male member and terminating each of said shoulder portions, a pair of spaced fingers extending from an adjacent end of an articulated link and adapted to engage the sides of said male member, said fingers having aligned apertures of different predetermined diameters, one of said apertures being threaded, a pivot pin having stepped cylindrical portions, one of said portions being threadedly secured in said threaded aperture and the other of said portions pivotally engaging

said male member pivot opening for pivoting together adjacent links, said fingers being provided with notches straddling said lugs for limiting relative pivotal movement between adjacent links, the ends of said fingers having curved portions corresponding to and slidably engaging the curved shoulder portions on opposite sides of said male member.

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