This invention relates to a book hanger support and particularly to a continuous wire constructed support of that sort for hanging books, documents, stacked sheets and the like from the back binding thereof.

Generally described, the present invention, without limitation in scope of coverage found in the claims, is constructed from a single, flexible, continuous piece of wire or the like bent in several places and upon itself to form all the necessary elements to attach to the back binding of a book and to permit same to be hung from this support. The main body of the wire extends substantially straight for insertion between the pages and adjacent the inside back of the binding and the top portion of said body is bent upon itself to form a top loop with the bottom end portion thereof bending and running substantially perpendicular to the upper edge of a book's pages thereby placing the bottom portion in substantial parallel engagement with the pages edges. The terminal end of the bottom of the loop then bends from one side of the body and extends across said body to the other side terminating near said book binding. As is seen hereinafter, this basic construction has several alternate forms of terminating the end of the upper loop. The bottom of said body bends to form a bottom loop foot or hook-like portion which hooks around the bottom of the binding.

A primary object of this invention resides in the presentation of a hanger which may be formed complete by bending a single, elongated piece of wire rod or the like in a few simple bends. Along with the above object resides the advantage of a hanger which has no separate parts and which may be easily attached to the book or detached therefrom simply by a snap-like insertion thereon.

A further object is found in the inexpensive form of construction which allows the device to be fabricated at low cost in small or large quantities.

An additional object is found in the flexible loop formation of the top hanger loop causing the hanger to be positioned under tension so that it is securely mounted on the book.

Other and further objects and advantages of my invention will be found in the following specification taken in conjunction with the accompanying drawings, in which:

Fig. 1 is a side elevation view of the preferred form of my hanger with dotted lines showing an adjustment.

Fig. 2 is a side elevation view of the other side of the embodiment shown in Fig. 1, and in position on the rear of a book shown by the fragmentary portion.

Fig. 3 is a front end elevation view of the device in Fig. 2 with the central portion thereof broken away. Fig. 4 is a top plan view of the device in Figs. 2 and 3. Fig. 5 is a front end elevation view of a modified form of the embodiment in Fig. 1 with the lower portion broken away.

Fig. 6 is a side elevation view of the modified form in Fig. 5 looking from the left hand side of the page and with dotted lines showing an adjustment.

Fig. 7 is a front elevation view of still another modified form of my invention with the lower portion broken away. Fig. 8 is a side elevation view of the device in Fig. 7 looking from the left hand side of the page.

Fig. 9 is a top plan view of the form in Fig. 7.

Referring to the preferred embodiment shown in Figs. 1 through 4, the book hanger designated generally at 10 is constructed from an elongated, preferably solid, slightly flexible piece of rod or wire stock 12 with a body portion 14 having a top portion 16 and a bottom portion 18. Top portion 16 is formed into a hanging and support loop 19 by bending the upper terminal end 20 of wire body 14 on the body 14 in an arc of not quite 270° so that the end 20 extends from back to front beyond the body 14 and with loop 19 offset on one side from the longitudinal axis of body 14. The body 14 and loop 19 is bent near end 20 thereof to form an engagement and flexible tension loop portion consisting of a first bend to form a cross portion 22 behind the body 14 which is bent around the body 14 into a recess or groove 23 and thence bending to form front protruding portion 24 having another terminal bent portion 26 depending downwardly therefrom to the terminal end.

The bottom portion 18 of body 14 is bent to form a hook-like portion or attaching foot 28 formed by a U-shaped or 180° loop bend 30 at the bottom of body 14 which extends then into another bend of 180° perpendicular there to at 32 with a terminal bend therein terminating by a 90° bend at 34 in the exposed terminal end 36.

As is seen in Figs. 2, 3, and 4 the device 10 is mounted on and attached to any conventional book or document group 37 by parting the pages 38 preferably in the center thereof and inserting the entire body 12 between the pages 38 and against the inside back of the binding 40. Hook or foot 28 is attached by hooking around the bottom of the binding 40 to position bend 30 under the binding 40 and loop 32 in front of the binding 40. Then the top portion 19 is sprung, somewhat in "snap-like" fashion, in the manner of the indication from dotted lines in Fig. 2 to the full lines (or from the full lines in Fig. 1 to the dotted lines) to place the body 14 under tension with the downwardly depending end 20 hooked in front of the binding 40 and with loop 19 tending in the direction of the front of the book. In this position, the device 10 is forced under tension into engagement with the binding 40 and may be provided with a hanging chain 42. In this position body 14 is confined in groove 23.

In the modified form of Figs. 5 and 6 the loop 50 at the top portion 51 is formed with a closed more than 180° bend end 52 which encircles the body 12 and being substantially straight along portion 54 which is flexible from full line position to dotted line position in Fig. 6 for purpose of tensioning as discussed in connection with the embodiment in Fig. 1. The end 52 is slidable along the body 14. The hook or hook bottom end 56 is formed the same as that in the embodiment of Fig. 1 but is formed on the same side of body 12 as the loop 50 rather than on the opposite side. The positioning of this form is substantially the same as that in Fig. 1 but in position the loop 50 protrudes rearwardly from the binding 40 rather than forwardly therefrom as in the case of the Fig. 1 form.

The modified form in Figs. 7 and 8 is very similar to that of Fig. 1 except that the loop 60 bends at the bottom edge 62 thereof in front of the body 12 rather than to the rear thereof and therefore a cross portion 64 extending transversely across the body 12 is free to move in front of the body 12 bending forwardly to form portion 66 and a depending end 68 which hooks in front of the binding 40 in manner similar to the form of Fig. 1. A groove 70 is formed in portion 64 to receive body 12. This embodiment has the same foot or hook bottom 34 as in the embodiment of Fig. 1 and it functions in the same manner.
While I have gone into considerable detail and presented three different variations of the same invention, each being only a slightly different, and it is hereby stated that this is in no way a limitation on the scope of coverage or breadth of my invention, nor are these to be construed as the only three ways of constructing same since the invention resides in the basic construction of my device and other and further changes may be made, or various alterations, modifications, elimination, changes, substitutions, and the like effected without departing from my invention as defined in the interpretation of the appended claims.

I claim:

1. In a book supporting device of the class described adapted for attachment on the binding of said book and to be constructed from a single piece of resilient elongated material entirely by bending same, a resilient elongated body portion adapted to be inserted into the inside of a book between the pages thereof adjacent the back binding, a resilient top support portion formed on said body by bending said body material on itself more than 180° around to a line transverse to said longitudinal axis of said body to form a loop offset at one side from the longitudinal line of said body, a terminal end portion of said loop being bent to form a member curved around said body movably confining said body therein and thereby said loop in movable, flexible engagement with said main body portion, said loop having a bottom portion thereof positioned to engage resiliently a portion of the book binding, a foot formed on the bottom end of said body portion for engagement with the bottom edge of said binding to hold therceto at least in one direction of movement of said body member, said loop being of springy, distortable material to yield so that said loop is bendable to force said bottom portion into engagement under pressure with said foot fastened in position, whereby said device is positioned under tension on said book to support same when hung thereby.

2. In a book supporting device of the class described for attachment on the binding of said book and adapted to be constructed from a single piece of resiliently elongated material entirely by bending same, an elongated body portion adapted to be inserted into the inside of a book between the pages thereof adjacent the back binding, a bendable, resilient top support portion resiliently formed on said body by bending said body material on itself more than 180° around to a line transverse to said longitudinal body axis to form a loop offset from the longitudinal line of the body, a terminal end portion of said resilient loop portion being engageable with said body and being bent first across the back of said body from one side to the other, thence forwardly of said body from behind to in front of said body, thence downwardly in a depending end portion, said end portion thereby being engageable with but free of said main body portion for movement relative thereto, a foot formed on the bottom of said body portion for attachment to the bottom edge of said binding, said foot being engageable with said body and the said binding edge to engage same and hold and limit in one direction of pull, the top loop being resiliently bendable through the relative movement by the end between said end portion and said body to tension said loop with the depending end portion outside of said binding and with said book binding displaced by engagement with said book, said depending end of said top loop fastening in front of the edge of said binding, whereby said device is securely positioned on said book, and said book may be supported by same.

3. In a book supporting device of the class described for attachment on the binding of said book and to be constructed from a single piece of resilient elongated material entirely by bending same, an elongated body portion adapted to be inserted into the inside of a book between the pages thereof adjacent the back binding, a resilient top support portion resiliently formed on said body by bending said body material on itself more than 180° around to a line transverse to said longitudinal axis of said body to form a loop offset at one side from the longitudinal line of said body, a terminal end portion of said resilient loop being bent to form a transverse portion movably engageable with said main body portion, said transverse portion having a recess formed therein into which said body fits and in which said body is held to resist transverse movement thereof, said bottom of said loop being for flexible and tensioned engagement with the edge of said book, said transverse portion extending in front of said body for a distance and then bending outwardly thence to terminate in a downwardly depending end, said end portion thereby being engageable with but free of said main body portion for movement relative thereto when positioning on a book, a foot formed on the bottom portion of said body for attachment on the bottom of said binding, said foot being engageable with said book bottom to prevent movement of said body in one direction, said loop being resiliently flexible and distortable by the movement of said bottom portion thereof when positioned on a book, with said bottom portion bearing under pressure on said book, said terminal end portion extending around the upper edge of said binding and downwardly therealong, whereby said device is securely positioned on said book.

4. The device in claim 2 wherein a recess is formed in said transverse portion into which said body fits and is held to resist transverse movement.

References Cited in the file of this patent

UNITED STATES PATENTS

1,254,655 Applegate .................. Jan. 22, 1918
1,665,641 Reese ......................... Apr. 10, 1928
2,664,612 Winkleman .................. Jan. 5, 1954