(No Model.)

I. FINE.

METHOD OF ATTACHING HANGERS TO BOOKS.

No. 439,643. Patented Nov. 4, 1890.

FIG. 1.

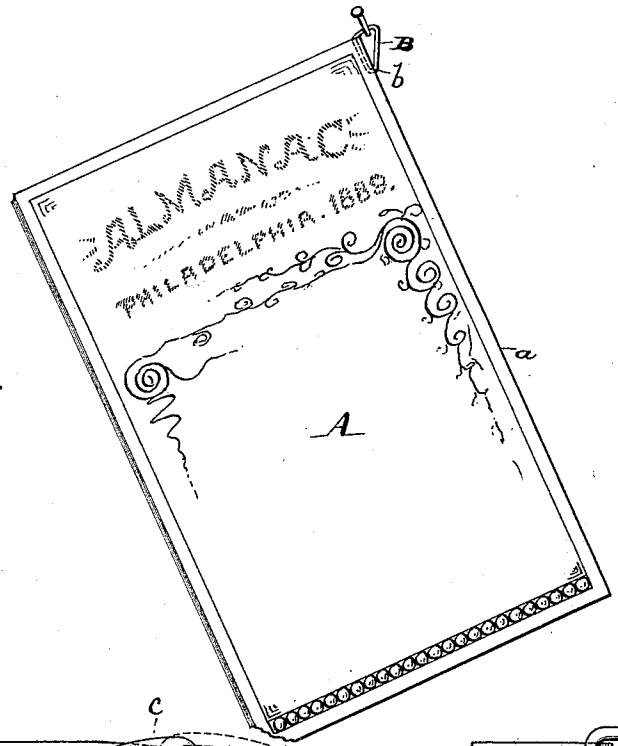


FIG. 2.

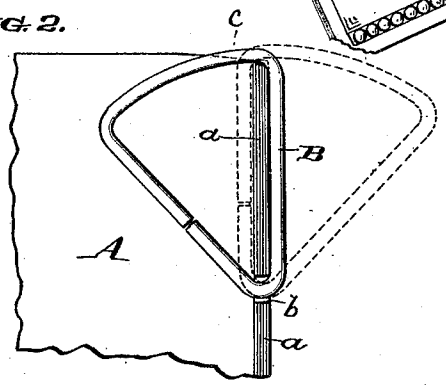


FIG. 5.

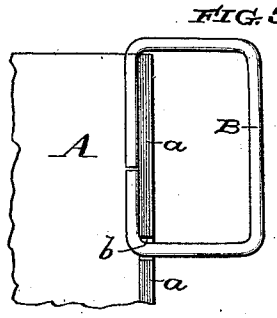


FIG. 3.

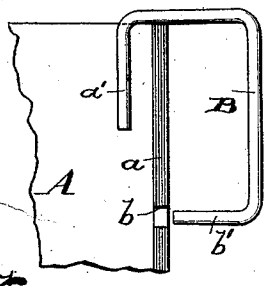
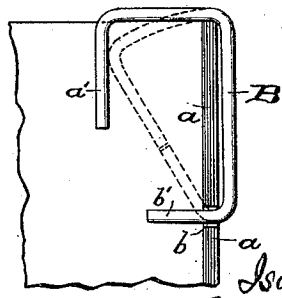


FIG. 4.



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METHOD OF ATTACHING HANGERS TO BOOKS.

SPECIFICATION forming part of Letters Patent No. 439,643, dated November 4, 1890.

Application filed July 14, 1890. Serial No. 358,722. (No model.)

To all whom it may concern:

Be it known that I, ISAAC FINE, of the city and county of Philadelphia and State of Pennsylvania, have invented an Improvement in the Method of Attaching Hangers to Books, &c., of which the following is a specification.

My invention has reference to the method of attaching hangers or supporting-loops to books, &c.; and it consists of certain improvements which are fully set forth in the following specification and shown in the accompanying drawings, which form a part thereof.

The object of my invention is to devise a convenient method of attaching hangers or supporting-loops to books of reference—such as almanacs, railway-guides, &c.—so that the hanger or supporting-loop shall not in any way prevent or interfere with the easy and full opening of the pages of the book for the purpose of reference to them, nor in any way impede the convenient packing of the books in large quantities for purposes of shipment.

Books of reference—such as almanacs, railway-guides, &c.—are usually provided at the upper corner with suitable means for supporting the book upon a pin or hook on the wall. These supporting devices have usually consisted of a piece of wire or other material passed through the faces of the pages of the book at the upper corner and formed into a loop for the purpose of attachment to the pin or hook. Such an arrangement as this is very objectionable, since the wire passing through the faces of the leaves of the book mutilates the cover and leaves and prevents them from being fully opened. Moreover, when the books are packed in large quantities the hangers or loops form projections or lumps on the outside, which seriously interfere with the convenient packing of the articles.

The object of my invention is to overcome these difficulties, and to this end I form the hanger or supporting-loop by inserting a piece of wire or other suitable material through a hole in the folded edge of the book a short distance from the upper edge thereof and forming this wire into a loop extending over the top edge or corner. The loop thus formed passes through the folded edge of the book only and does not pierce the faces of the pages. The loop is loosely supported by the hole through which it passes, and is movable in a plane parallel to the folded pages of the book. When in use for the purpose of supporting the book, the loop is drawn out so as to extend beyond the corner, and when the books are to be packed it is moved in between the pages, and that portion upon the outside fits closely against the edges of the book and does not present any objectionable projections or lumps.

In the drawings, Figure 1 is a perspective view of a suspended book or pamphlet supplied with my improved hanging device. Fig. 2 is a sectional elevation, on an enlarged scale, of the upper corner of the same, illustrating the principles of my invention. Figs. 3 and 4 are similar views illustrating the preferable manner of inserting the wire and bending it into the loop; and Fig. 5 is a sectional side elevation, on an enlarged scale, of the upper corner of a book, illustrating a modification of the shape of the loop.

A is the book.

B is the hanging device, consisting of a piece of wire or other suitable material inserted through a hole *b*, formed in the folded edge *a* of the book a short distance from its upper edge. This wire is extended up over the top of the book and the two ends are bent toward each other to form the loop. This loop is perfectly flat and lies in a plane parallel to the leaves of the closed book, being loosely supported by the hole *b*, so that it may be moved in or out in the plane of the book. I prefer to have the hanger B formed into a triangular shape—such as is illustrated in Figs. 1, 2, 3, and 4—with the apex of the triangle passing through the hole *b*, and the portion *c*, passing over the upper edge, curved. With this construction it will be seen that when the book is to be suspended and the hanger B is pulled out so that the loop projects on the outside of the edge *a*, the portion which is on the inside will lie flat and in contact with the inside of the folded edge *a*. (Shown in Fig. 1 and in dotted lines in Fig. 2.) When it is desired to pack the books in large numbers, the hanging device is pushed in so that the loop projects on the inside of the book and the outside portion of the hanger

fits closely to the outside of the folded edge *a*, as is shown in Fig. 2. In neither case does the hanging device or wire project materially above the upper edge or top of the book. By this means when the book is suspended from the pin C or otherwise there is no obstruction on the inside to the perfect opening of the leaves, and when the books are to be packed there are no projecting edges on portions of the hanger beyond the edge of the book to interfere with the formation of a convenient package, which is a very important feature where very large quantities of the books are to be packed.

A particularly advantageous feature is obtained by making that portion of the loop or hanger which passes over the top or upper edge of the book curved or inclining downwardly, as this serves to slightly pinch the top edge of the book, over which the loop passes, so as to retain the loop or hanger in position when it is pushed in between the leaves for the purpose of packing.

While I prefer the triangular shape referred to, I do not in any way limit my invention thereto, as it is apparent that the hanging device may be made in a variety of shapes, such as circular or elliptical, though in these cases it would not fit so closely to the edge of the book, and consequently I prefer the triangular shape. In Fig. 5, however, the device is shown in a rectangular form, and in this construction it is apparent that the sides of the hanger or loop will fit closely against the folded edge of the book, as in the triangular construction, the lower portion of the hanger sliding through the hole *b*.

While it is immaterial to my invention, broadly considered, in what specific manner the wire is inserted through the hole *b* and formed into the loop extending over the top of the folded edge, I prefer the formation of the triangular loops referred to to accomplish these steps in the particular manner shown in Figs. 3 and 4. The wire is first formed in a rectangular shape with three angles and two short sides. This wire is then placed in the position shown in Fig. 3, with one of the short sides *a'* inserted between the leaves in a position parallel to the folded edge, and with the other short side *b'* in line with the hole *b*. The short side *b'* is then inserted in the hole, as shown in Fig. 4, and the two ends *a'* and *b'* are bent toward each other at an angle, as shown in dotted lines. The bending of the side *a'* serves to impart a slight curvature to the upper portion of the triangle which passes over the top of the edge *a*.

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

1. The herein-described method of attaching hangers to books, which consists in passing the end of a loop of wire through a hole in the folded edge of the book, with a portion of the loop extending up over the top of said folded edge and upon the other side thereof, whereby said loop passes through the folded edge only and does not pierce the faces of the pages.

2. The herein-described method of attaching hangers to books, which consists in forming a piece of wire into a rectangular shape with only three angles and two short sides, then bringing one of said short sides in a position parallel to the folded edge of the book, with the other short side in line with a hole formed in said folded edge, then inserting said short side through the hole, and bending said ends to meet each other, forming a triangular loop passing over the top of the folded edge.

3. The herein-described method of attaching hangers to books, which consists in forming a piece of wire into a rectangular shape with only three angles and two short sides, then bringing one of said short sides in a position parallel to the folded edge of the book, with the other short side in line with a hole formed in said folded edge, then inserting said short side through the hole, and bending said ends to meet each other, forming a triangular loop passing over the top of the folded edge and curving or bending downward, said part passing over the upper edge to pinch it, substantially as and for the purpose described.

In testimony of which invention I have hereunto set my hand.

ISAAC FINE.

Witnesses:
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S. T. YERKES.