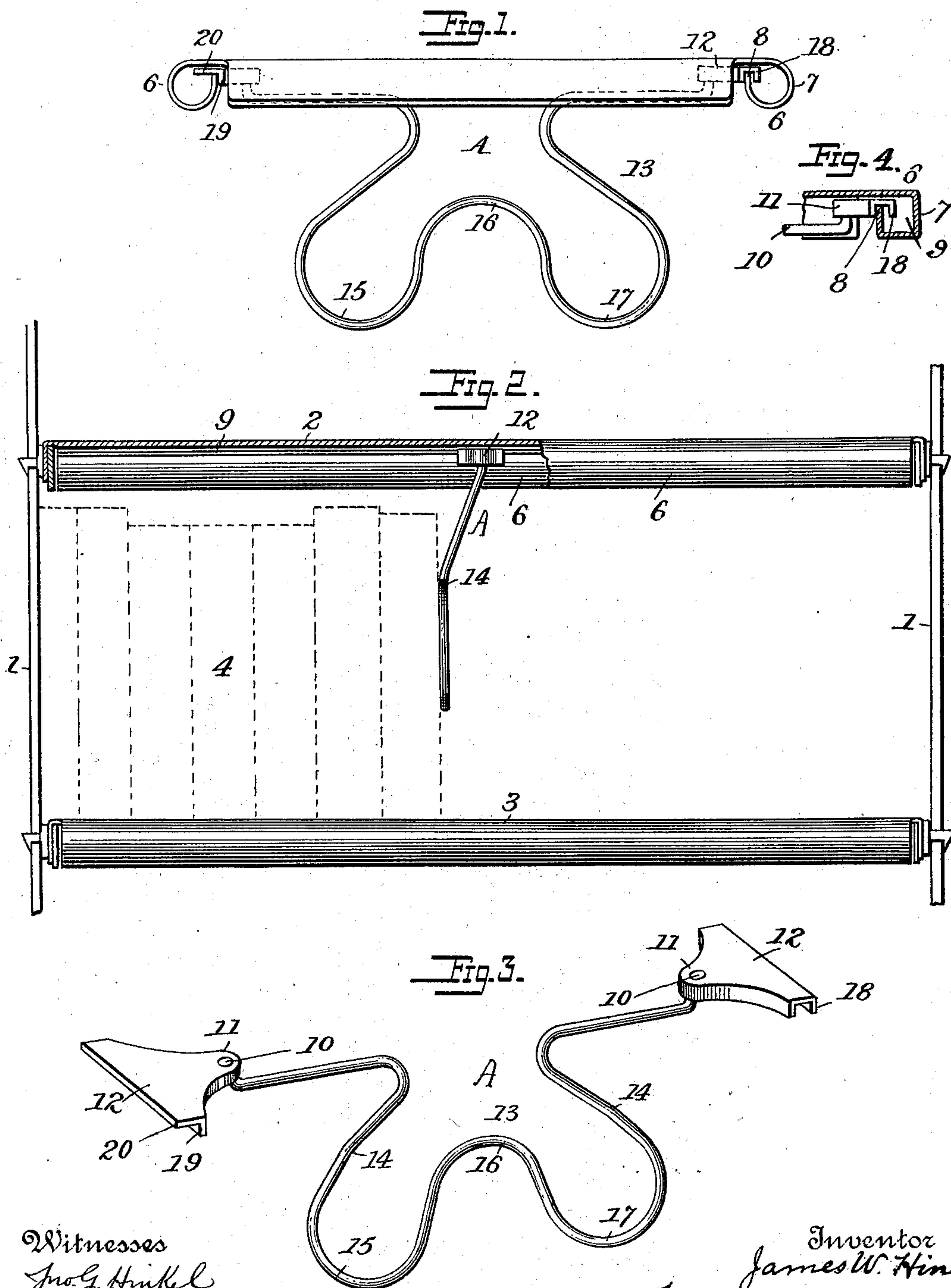


(No Model.)

J. W. HINE.
BOOK SUPPORT.

No. 560,851.

Patented May 26, 1896.



Witnesses
Jno. G. Hinkel
E. Everett Allen

Inventor
James W. Hine
By J. Foster & Freeman
Attorneys

UNITED STATES PATENT OFFICE.

JAMES W. HINE, OF JAMESTOWN, NEW YORK.

BOOK-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 560,851, dated May 26, 1896.

Application filed April 19, 1894. Serial No. 508,136. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. HINE, a citizen of the United States, residing at Jamestown, Chautauqua county, State of New York, have invented certain new and useful Improvements in Book-Supports, of which the following is a specification.

This invention relates to certain new and useful improvements in sliding or movable book-supports for the shelves of book stacks or cases; and it consists, substantially, in such features of construction and combinations of parts, as will hereinafter be more particularly described.

With many forms of book-shelves as ordinarily constructed it is impossible to maintain the books in their proper upright positions upon the shelves, excepting perhaps when the shelves are filled to their utmost capacity, and thus in offices, as well as in both public and private libraries, the books present a very irregular and unsightly appearance, besides not being at all compact, and rendering it quite difficult in the search for a particular book to read the titles. Furthermore, when a shelf contains or supports only a few books the latter are very liable to be either knocked from the shelf or else become easily displaced in such manner as to necessitate long searches therefor, this last being more particularly the case when open stacks or shelving is employed. There have been some former attempts made to remedy the disadvantages above mentioned, some of which are perhaps more or less successful in a way, but yet being quite cumbersome and complicated and occupying considerably more room than can many times be spared from book-shelves of limited capacity. Again, with many former devices or book-supports they require that particular nicety of adjustment and fitting which for all practical purposes render them undesirable in a great measure, and then again they are not as readily manipulated whenever or after one or more books are removed from the shelf for whatever purpose desired.

The object of the present invention is to overcome all of the disadvantages incident to the uses of book-supports as heretofore constructed, and to provide for the perfect

positioning of the books upon a shelf, as well as for their compactness while in position.

A further object of the invention is to immediately compensate for the loss of support which a row or stack of books encounters in the removal of one or more books from the shelf, all substantially as will hereinafter more fully appear when taken in connection with the accompanying drawings, in which—

Figure 1 is an end elevation of a book-shelf and book-support embodying my invention, and Fig. 2 is a front elevation showing a row of books supported upon the lower shelf and indicating the book-support in position against the books to maintain them in compact vertical position. Fig. 3 is an enlarged view in perspective, showing the general shape and construction of the book-support proper when detached from the shelf; and Fig. 4 is a sectional view in detail, showing a modification in the construction of the supporting guide-rails for the movable or sliding support.

Before proceeding with a more detailed description of my invention I desire to state that a book-support constructed in accordance therewith is readily adapted for use upon any of the ordinary shelves at present employed in book stacks or cases and does not require any material alterations whatever in fitting or applying the same. On the other hand, in the manufacture or original construction of the well-known metallic book stacks or cases now in almost universal use in public libraries the shelves may be adapted to receive the supports in a manner hereinafter appearing. Whether the supporting-guides for the sliding or movable support be constructed with the shelf or separate therefrom I am not limited to the particular construction hereinafter specifically employed, since various means for guiding and suspending the support could of course be resorted to. Then, again, instead of suspending the said support from upper guides I might reverse the position thereof and have the same project upwardly from the lower shelf, in which case the support would not be a "suspended" one in the strict acceptation of the term.

With regard to the book-support proper of my invention the same exerts a certain bear-

ing and leverage between the supporting points thereof and the row of books operated against, so that the greater the weight or falling tendency of the books the greater will be the resistance offered against it, while at the same time whenever it is desired to detach the support or move it along its guides, either to tighten up the books or to remove a book, it can be effected both easily and quickly, as will hereinafter be more particularly described.

Reference being had to the drawings, 1 1 represent the side or end uprights of an ordinary book case or stack, 2 the upper shelf thereof, and 3 the lower shelf, these shelves, in so far as their general construction and support are concerned, being of ordinary construction.

My improved book-support is represented as a whole at A, Figs. 1 and 3, while, as shown in Fig. 2, a row of books is indicated at 4.

In order that the book-support may be properly held in position so as to be moved along in either direction lengthwise of the shelves and row of books, I preferably form with or attach to the upper shelf along its inner and outer edges suitable rails or guides 6 6, which may be of any desired construction. Preferably, when formed with the shelf and when the latter is of metal, the shelf itself is bent or turned downwardly at 7 and then upward and around, so as to bring its edge in a horizontal plane at 8, leaving a space 9 between such edge and the main body of the shelf, as shown. The said edges 8 8 constitute the rails upon which the support A is held, and the spaces 9 9 permit of the movement of the said support, as will be clear. While I preferably turn the edges of the shelf in the rounded manner shown in Fig. 1, it is evident that the same could be bent rectangularly—such, for instance, as is shown in the detail, Fig. 4. Other forms or shapes could also be resorted to with equal effect for the purpose desired.

When my invention is to be applied to any of the ordinary forms of metallic or wooden shelves already constructed and in use, it is evident that the guide-rails are easily formed from separate strips of metal and which are quite as easily secured or fastened in place along the edges of the shelf.

The improved book-support proper is preferably constructed of spring metal, as wire, and the ends or extremities 10 10 thereof are riveted or suitably formed onto or secured to the inner projecting portions 11 11 of two sliding brackets 12 12, which rest upon and are held in place upon the guide-rails 8 8, substantially as shown in Fig. 1. The said book-support proper is sprung in two directions—that is to say, the central portion 13 thereof is sprung at 14, so as to exert the desired pressure against a row of books and to permit sufficient bearing to keep the books in position, while the said central portion is also sprung between its ends in the direction of its length, so as to exert the desired pressure between the rails or guides and be thereby

firmly held in place. By virtue of the bent or curved nature of the support three separate bearing-points 15, 16, and 17 are secured against the book at the end of the row, and it is evident that the books will be compactly held in place from the construction explained. I am not limited to the particular construction of the central bearing portion of the support, however, since various shapes and modifications thereof could be adopted and which would be clearly within the scope of my invention.

One of the brackets 12 (the one at the right) is formed or provided with two depending guide-flanges 18, between which its rail 8 enters or extends, while the other one of said brackets is provided with only a single depending flange 19, which bears against the inner surface of its corresponding rail, the horizontal portion 20 of the bracket resting upon the upper edge of its rail. From this construction it will be seen that by grasping the entire central portion of the holder and compressing the same together the extremities of the sprung portion will be drawn inwardly, thus facilitating either the entire removal of the support from between its rails or simply the sliding or movability thereof along the rails in either direction.

I desire it to be further understood that in some instances I may use only a central guide-rail for the sliding or movable book-holder A, and also that in other instances I may dispense with one of the brackets 12 and have one end or extremity of the holder held against its corresponding rail by the force or tension of the sprung portion 13 alone. Thus my invention is capable of many modifications or changes, all of which are intended to be embraced herein.

Without limiting myself to the precise details of construction and arrangement shown and described, I claim—

1. In a book case or stack, a shelf, a book-support sliding lengthwise of the shelf, and continuous guides for the support, said support being compressible transversely of the shelf and exerting a tension between its guides, and having a vertically-disposed resilient bearing portion projecting in advance of the position of the support upon said guides, substantially as described.

2. In a book case or stack, a shelf, a book-support sliding lengthwise of the shelf, and continuous guide-rails for said support, the said rails being turned under and brought upward beneath the shelf and within the outer edges thereof, substantially as shown and for the purpose described.

3. In a book case or stack, a shelf, guides arranged thereon, brackets engaging said guides, and a bearing intermediate the brackets adapted to yield in the direction of its movement under pressure and to exert a tension upon the brackets transversely of said line of movement, substantially as described.

4. In a book case or stack, a shelf having

continuous longitudinal guides, and a book-support exerting a tension between the guides, the said support being provided at one end with a double-flanged bracket and at the other
5 end with a single-flanged bracket, the two brackets fitting the guides substantially as shown and for the purpose described.

10 5. In a book case or stack, a shelf, a book-support sliding lengthwise of the shelf, and continuous guides for the support, said support being bent forwardly of its position upon

the guides, thence downwardly, and also being bent to exert a tension between the guides, substantially as shown and described.

In testimony whereof I have signed my
15 name to this specification in the presence of two subscribing witnesses.

JAMES W. HINE.

Witnesses:

E. EVERETT ELLIS,
JNO. G. HINKEL.