

(No Model.)

2 Sheets—Sheet 1.

R. PEATE.
BOOK SUPPORT.

No. 575,832.

Patented Jan. 26, 1897.

Fig. 1

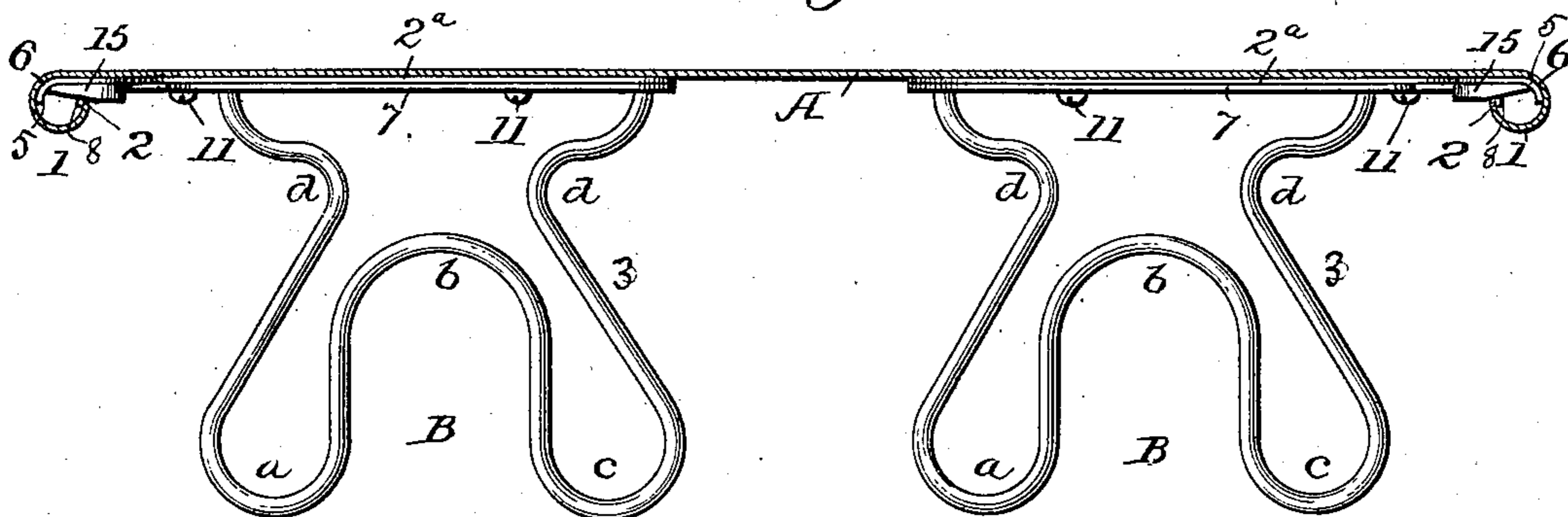


Fig. 2

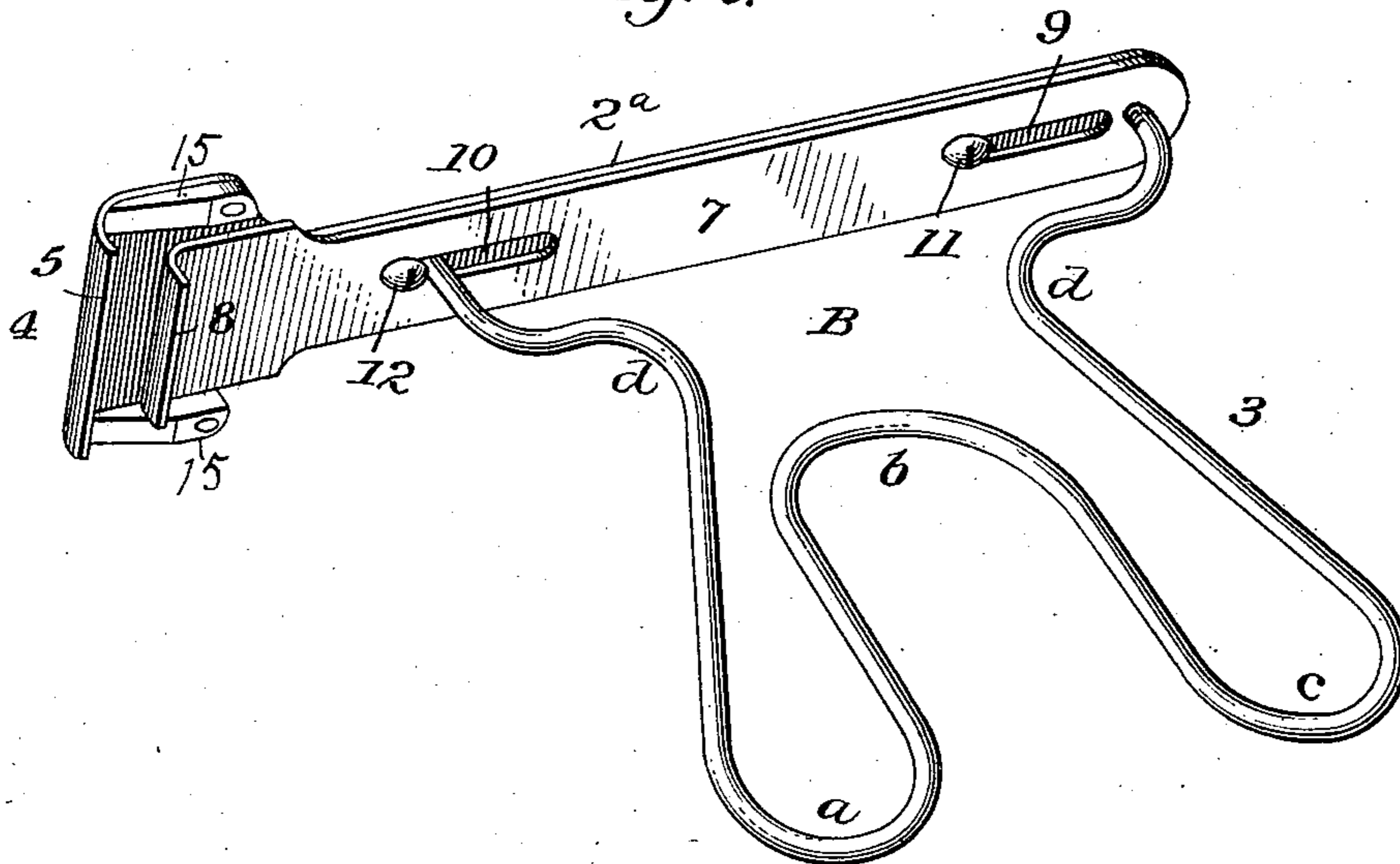
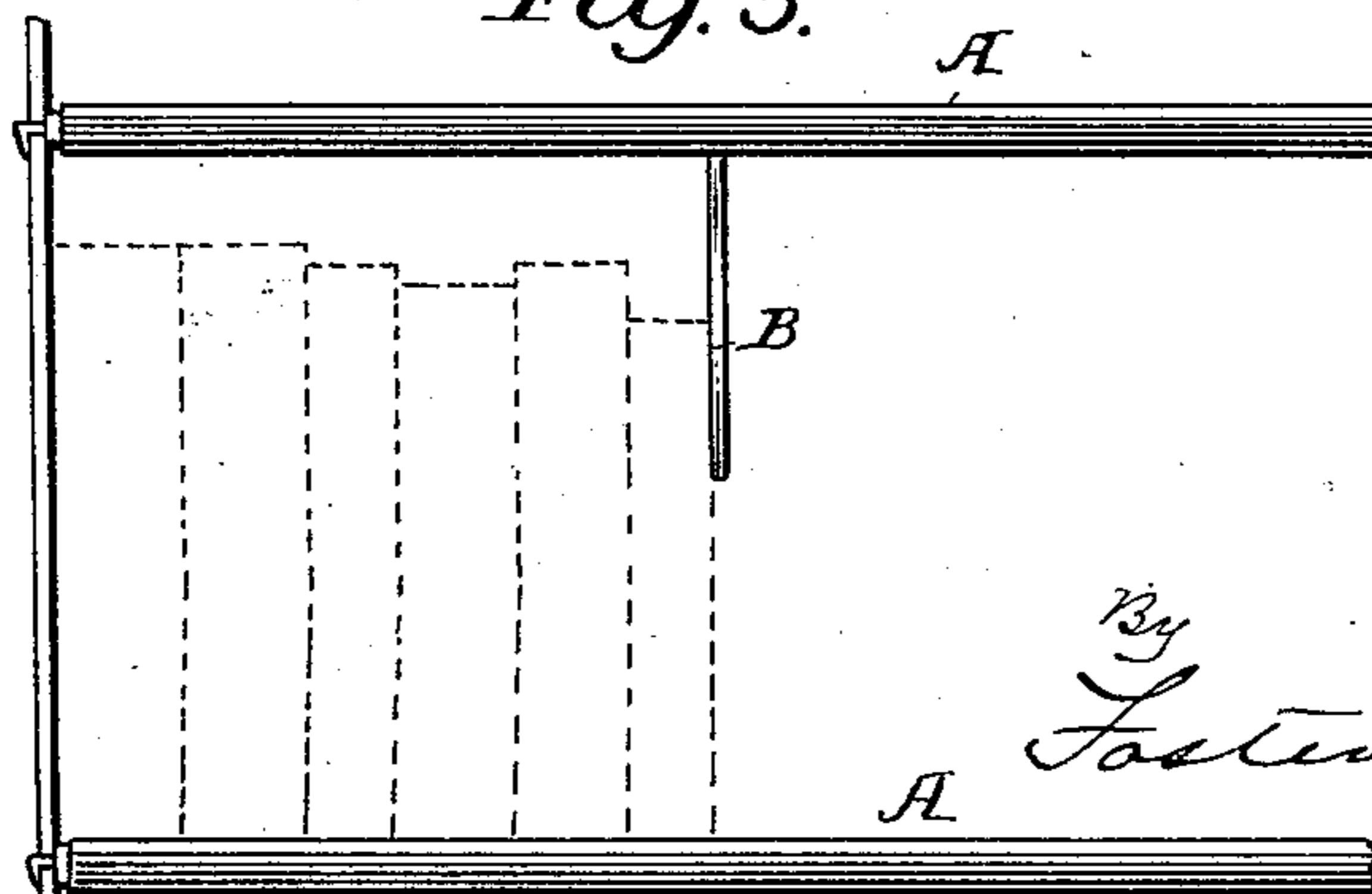


Fig. 3



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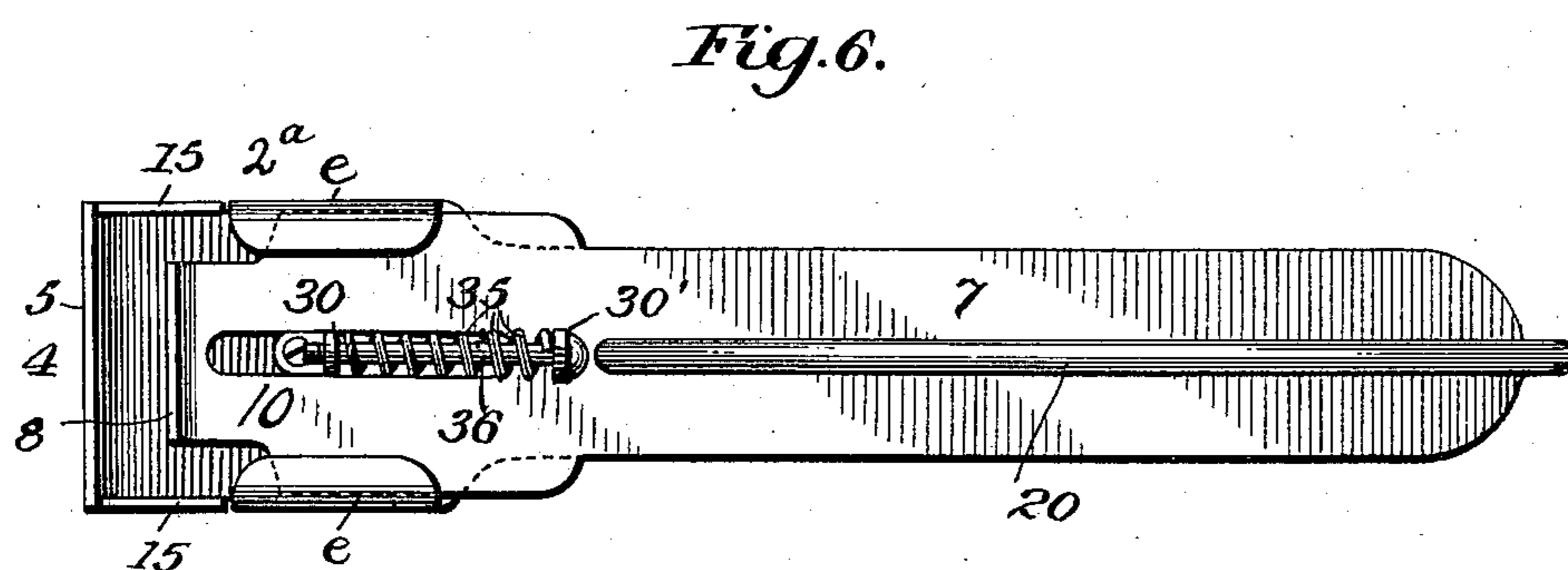
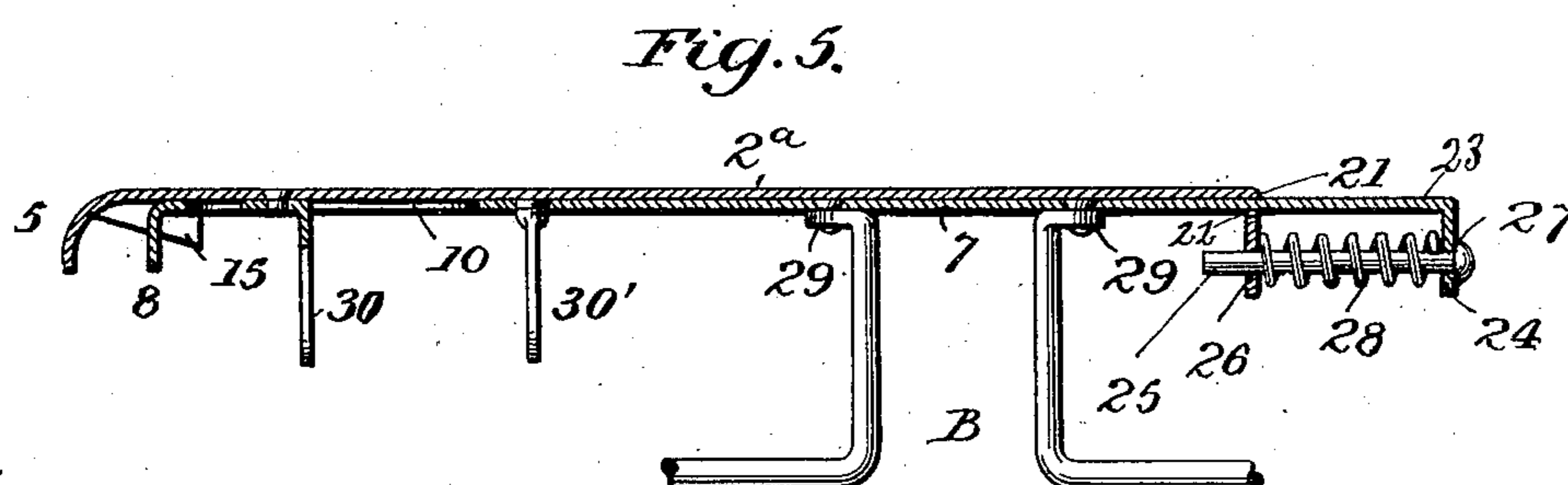
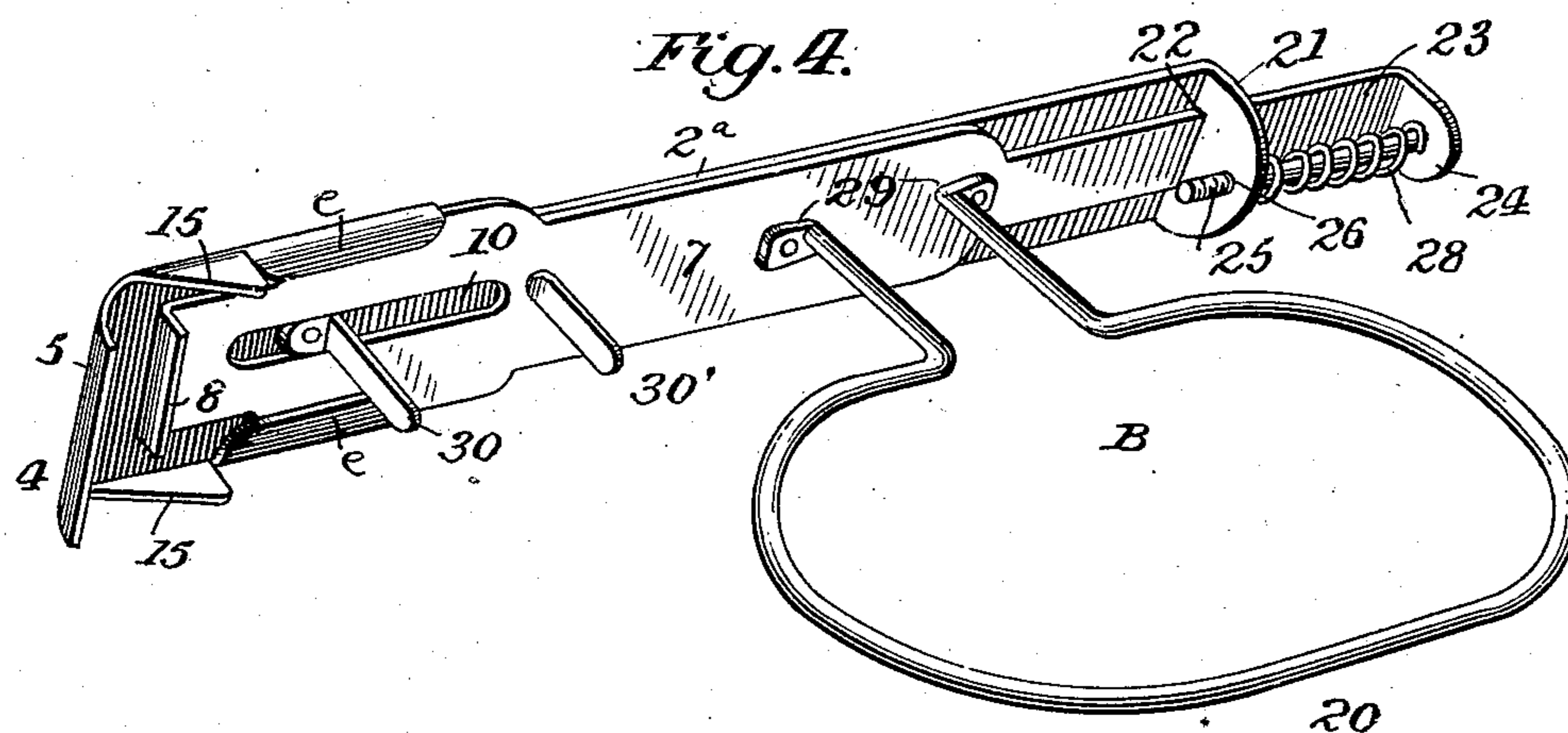
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

RICHARD PEATE, OF JAMESTOWN, NEW YORK, ASSIGNOR TO THE FENTON METALLIC MANUFACTURING COMPANY, OF SAME PLACE.

BOOK-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 575,832, dated January 26, 1897.

Application filed June 27, 1896. Serial No. 597,215. (No model.)

To all whom it may concern:

Be it known that I, RICHARD PEATE, a citizen of the United States, residing at Jamestown, in the county of Chautauqua and 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 book-supports for the shelves of book stacks or cases; and it consists, substantially, in such features of construction, arrangement, and combinations of parts as will hereinafter be more particularly described.

In the stacking of books both in private and public libraries it is desirable that the rows of books be supported in vertical position and compact manner upon the shelves, and while many forms of book-supports have been heretofore devised for this purpose a great deal of inconvenience is still experienced both in the arrangement and manipulation thereof, particularly when the shelves are constructed of metal and very often when the shelves are of wood. In many former instances the support requires to be tightened up against the book-row each time the support is moved up into place, and then whenever it is desired to remove a book from the row special and difficult manipulation of some part of the support is necessary, and very often the entire support has to be removed from its position on the shelf. Other disadvantages also exist with these former devices and which it is the object of the present invention to overcome.

In the accompanying drawings, Figure 1 is a transverse sectional view of a book-shelf and showing in elevation the application of one of my improved book-supports adjacent to and supported in a guide along each edge of the shelf. Fig. 2 is a view in perspective of one form of my improved book-support. Fig. 3 is a front elevation representing the manner in which my improved support serves to maintain the books of a row in compact form upon the shelf. Fig. 4 is a view similar to Fig. 2 and representing a modified form or embodiment of my improved book-support. Fig. 5 is a longitudinal sectional view of Fig. 4, and Fig. 6 is a view looking

at the under side of still another form or embodiment of my invention.

My invention is capable of a great many different embodiments, but for all general purposes I prefer the use of either one of the several forms which I have herein shown and which will hereinafter be specifically described. It is preferable in each and every instance of use that the guide for the support be continuous or unbroken, and it is also desirable that such guide shall occupy a position within the longitudinal edge of the shelf and offer as little obstruction as possible both to the books as well as to the entrance or insertion of the hand for the purpose of adjusting the movable support. Inasmuch, therefore, as my present invention comprises a book-support that is movable longitudinally of the shelf, and one also that is automatic in character, I prefer to form the guide therefor substantially in accordance with the invention covered by former Letters Patent, No. 560,851, granted to James W. Hine on the 26th day of May, 1896. Thus, as shown in Fig. 1, A represents an ordinary metallic book-shelf such as is used in connection with metallic book stacks or cases now in use, and along the edges thereof the said shelf is bent around or turned under at 1 in such manner that the edge 2 is brought in a horizontal plane, and this edge practically constitutes the guide for the sliding or movable book-support, as will hereinafter appear.

As explained in the former Letters Patent referred to, each edge of the shelf is constructed as just described, and the support for the books is held upon and between the guides along the two edges of the shelf. Said construction answers exceedingly well where the shelves are of single width only, since then the distance between guides is not so great and the support can very conveniently be made to reach from one to the other guide; but in those instances where the shelves are of double width to hold two rows of books it would be inexpedient to construct the sliding support of such an increased length, and consequently in the present instance I so construct my improved book-support that but one guide is sufficient therefor, and better provision is also thereby obtained for the sup-

port of separate rows of books on double or two-faced shelves. It will be understood, however, that with single shelves also it is not necessary in the present instance to have
 5 more than a single guide on the shelf, and in this respect the present invention is a further improvement upon the prior invention referred to, as well as upon all others, so far as I am aware.

10 Similarly, as in the former Letters Patent, it is the purpose of the present invention to provide a movable book-support which, when properly adjusted in position, will become securely held against the books in a manner to
 15 prevent them from falling, and in the present case I obtain substantially the same effect and operation of the support either by forming the pendent bearing portion thereof compressible in itself, by which to lock and release
 20 the support upon its guide, or else the said pendent bearing portion is rigid or practically incompressible in itself, and the engagement and release of the support are effected in other ways, all as will more fully hereinafter appear.
 25 In virtue of the construction of the guide or rail 1 along the edge of the shelf it becomes necessary to provide means whereby the support can be readily inserted in position and removed, as well as by which said support
 30 can be moved to different points of the rail or guide and become instantly engaged or held in such position against the weight of a row of books. Different means could be resorted to; but I prefer that the engagement of the
 35 support with the guide or rail shall be effected frictionally, and for this reason have devised the several forms which I am about to describe. Thus in each instance the sliding or movable support is designated at B, and in
 40 each instance also the support includes an arm 2^a, that extends at right angles to the longitudinal guide or rail 1, and which arm lies against the under side of the shelf above the one on which the books are placed.

45 To provide for the proper support of the books, as, for instance, as shown in Fig. 3, any suitable pendent device could be employed, but preferably in the construction shown in Figs. 1 and 2 I employ a pendent portion 3,
 50 bent at *a b c* to constitute a plurality of bearing-points for abutting against the end book of a row. To provide for the attachment and adjustment of this form of my device upon the guide 1, I form the inner end of the arm
 55 2^a preferably with an enlargement 4, and bend or turn the same downward at 5, substantially in accordance with the rounded inner surface 6 of said guide, and then in connection with the said arm I provide some form
 60 of sliding friction device which coöperates with the arm in effecting a frictional engagement of the support with the guide. Any suitable sliding device could be employed, as well as any suitable means for effecting the
 65 automatic action thereof, but with this particular form of support I prefer to use in conjunction with the arm 2^a an auxiliary sliding

arm 7, also preferably spread a little or slightly broadened at its inner end, and being also bent or turned down on the edge at 8, similar
 70 to the bent or turned-down edge of the said enlarged portion of the arm 2^a. I form the said auxiliary arm with a longitudinal slot 9 at or near its outer end and a similar slot 10
 75 at a suitable distance from the other end, and on the under side of the said arm 2^a I provide guiding pins or screws 11 and 12, which project through the said slots 9 and 10, as shown,
 80 and normally the two arms are held under tension with the auxiliary arm moved outward to bring the pins or screws 11 and 12 nearly to the inner extremities of the slots 9 and 10, respectively. While thus arranged and operating, the support will be held upon its guide,
 85 as shown in Figs. 1 and 3, the bent or turned-down edges of the inner ends of the said arms 2^a and 7 bearing against the opposite inner curved sides of the rail or guide 1 and the two arms held frictionally in contact with said
 90 guide. With this particular embodiment of my invention I prefer that the necessary spring tension for thus holding the support in position be derived from the pendent portion 3 of the support, and I therefore construct the same of spring-wire and secure one
 95 end thereof to the auxiliary arm 7 at a point beyond the outer extremity of slot 9, and the other end is passed through the slot 10 of said arm 7 and secured in like manner to the arm 2^a. The said pendent portion 3 being bent inward at the points *d* to exert a tension lengthwise of the arms 2^a and 7, it is obvious that
 100 the tendency of these arms is to move past each other, and which tendency, aided by the strength of the portion 3, is what maintains the desired frictional clutch upon the guide-rail.
 105

To move the support along the rail, it is simply necessary to grasp the pendent bearing portion 3 and compress the same in the hand,
 110 which action moves the arms toward each other from opposite directions and releases engagement of their inner ends with the rail, and then as soon as proper adjustment is made it is simply necessary to let go of the pendent
 115 portion, whereupon the support again engages the rail frictionally, as already explained, by the resilient action of the said pendent portion.

As an additional guide for the conjoint longitudinal movement of the arms 2^a and 7 I bend or turn down the longitudinal edges of the enlarged inner end of arm 2^a at *e*, and the corresponding edges of the wider part of the arm 7 are received and guided thereby in the
 120 manner shown in Fig. 4.
 125

Inasmuch as but one guide is employed in the present instance it is possible that the weight of the book-support would in some cases cause the support to hang and not lie
 130 up as close against the under side of the shelf as desired, and to guard against this contingency I preferably form or provide on the longitudinal edges of the enlarged inner end

of the arm 2^a suitable inclined flanges or wedges 15, which extend transversely to the length of the guide-rail 1 and rest thereon, and when the support is slipped into place upon the rail these inclined flanges or wedges ride upon the edge of the rail 1, and they serve to hold the support in its proper position. Other means could be employed for lifting or elevating the support in close contact with the shelf, but as a simple and convenient means the said inclined flanges or wedges perform the desired function and are preferable for several reasons.

Instead of constructing my improved book-support as above described I sometimes prefer that the pendent bearing portion shall be rigid in itself, instead of elastic or resilient, and in that case I construct the said pendent portion substantially of the form indicated at 20, Figs. 4, 5, and 6, and it then becomes necessary to provide for the automatic action of the arms 2^a and 7 in some other way. I therefore bend or turn down the outer end of arm 2^a, as shown at 21, Figs. 4 and 5, and cut a slot 22 in said turned-down portion or lug, and I form the corresponding end of the auxiliary arm 7 with an extension or tongue 23, which passes through the slot 22 and the end of which is turned down at the end in like manner, as shown at 24. A sliding pin 25 is adjustably secured at 26 to the lug or turned-down portion 21 of arm 2^a, and this pin moves freely in an opening 27, formed in the lug or turned-down portion 24 of the auxiliary arm 7, and a spring 28 surrounds the pin and exerts its tension between the two lugs, the normal tendency being to spread the said arms apart longitudinally or lengthwise of each other. With this form of the device the pendent portion 20 thereof need have no elasticity, and the two ends thereof are attached or secured at 29 to the under side of the auxiliary arm 7. The said arms 2^a and 7 are otherwise the same in construction as in the form or embodiment first described, except that each arm is provided with a pendent finger (indicated at 30 and 30', respectively) and which fingers are for the purpose of grasping to draw the arms together longitudinally to release the engagement with the guide-rail. The finger 30 on the arm 2^a passes through the slot 10 of the auxiliary arm by which to permit the necessary operation.

As a still further embodiment of my invention, reference is made to Fig. 6, wherein the arms 2^a and 7 comprise two simple flat pieces of metal, and the construction thereof is in part the same as in Figs. 4 and 5 and in remainder the same as in Figs. 1 and 2. The slot 9 of Fig. 2 is dispensed with, but slot 10 remains, while the turned-down ends of Figs. 4 and 5 are dispensed with and the pendent fingers remain, and the spring and sliding pin are transferred to between the said pendent fingers. Thus in said Fig. 6, 35 is the spring, and 36 is the pin. It will be understood that

this last construction operates substantially the same as that shown in Figs. 4 and 5.

Various other changes could be resorted to in the construction and arrangement of the several parts and still be within the scope of my invention, and therefore without limiting myself in any particular to the details shown and described,

I claim—

1. In a book case or stack, a shelf having a guide-rail, a pendent book-support extending transversely of the shelf on the under side thereof, and suspended wholly by one of its ends upon the rail, and means for effecting an engagement of this end of the support with the rail, substantially as described.

2. In a book case or stack, a shelf having a single guide-rail at one of its edges only, a pendent book-support extending transversely of the shelf on the under side thereof, and suspended wholly by one of its ends upon the rail, and means for effecting a frictional engagement of this end of the support with the rail, substantially as described.

3. In a book case or stack, a shelf having a guide-rail, a pendent book-support extending transversely of the shelf on the under side thereof and comprising an arm and an auxiliary arm each suspended wholly by one of its ends upon the rail, and means for effecting an engagement of these ends of the arms with the rail, substantially as described.

4. In a book case or stack, a shelf, a guide-rail, a book-support comprising an arm and an auxiliary arm, each supported by and extending at right angles to the said rail, and means for automatically effecting an engagement of one end only of the arms with the rail, substantially as described.

5. In a book case or stack, a shelf, a guide-rail, a book-support comprising a movable arm and an auxiliary arm guided by and extending at right angles to the said rail, and means for spreading the arms apart for effecting a yielding, frictional engagement of the said arms with the rail, substantially as described.

6. In a book case or stack, a single continuous guide-rail constituting a part of the shelf and being carried around to within the edge of the shelf, a pendent book-support extending transversely of the shelf on the under side thereof, and suspended wholly by one of its ends upon the rail, and means for effecting a frictional engagement of this end of the support with the rail, substantially as described.

7. In a book case or stack, a shelf, a guide-rail, a book-support comprising an arm extending transversely of the shelf and supported by one end only upon the rail, and means exerting a lifting action upon the arm to maintain the same in close contact with the under side of the shelf, substantially as described.

8. In a book case or stack, a shelf, a guide-rail, a book-support comprising an arm ex-

tending transversely of the shelf and supported by one end only upon the rail, means effecting an engagement of the arm with the rail, and means exerting a lift to the arm to
 5 maintain the same in close contact with the under side of the shelf, substantially as described.

9. In a book case or stack, a shelf, a guide-rail, a book-support comprising an arm extending transversely of the shelf and supported by one end only upon the rail, and wedges exerting a lift to the arm, substantially as shown and described.

10. In a book case or stack, a shelf, a guide-rail, a book-support comprising an arm extending at right angles to the rail and guided thereby, and formed on its sides with inclined flanges, and bent to conform to the inner surface of the said rail, an auxiliary arm moving
 20 between said flanges and similarly bent at its corresponding end, and means tending to spread said arms lengthwise or longitudinally thereof, substantially as described.

11. In a book case or stack, a shelf, a guide-rail, and a book-support comprising an arm guided by and extending at right angles to the rail and provided on its under side with guide-pins, an auxiliary arm slotted to move on said pins, and a pendent portion compressible as to its length and having the ends thereof
 30 secured to said arms, substantially as shown and for the purpose described.

12. In a book case or stack, a shelf, a single continuous guide-rail formed with the shelf

at one edge, a book-support comprising an arm guided by and extending at right angles to the rail and having one of its ends bent in conformity with the inner curvature of the rail, an auxiliary arm movable with respect to said main arm and having its end bent corresponding to the opposite curved surface of the said rail, and means normally spreading the said arms apart longitudinally, substantially as shown and for the purpose described.

13. In a book case or stack, a shelf, a guide-rail, a book-support comprising an arm and an auxiliary arm guided by and extending at right angles to the rail, and a pendent portion, and means normally tending to spread said arms apart longitudinally thereof, substantially as described.

14. In a book case or stack, a shelf, a guide-rail, a book-support comprising a main and an auxiliary arm, the two being movable with respect to each other, means for effecting an engagement of the said arms with the said rail, a pendent portion to bear upon the books, and wedges for maintaining the said support in close contact with the under side of the shelf, substantially as shown and for the purpose described.

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

RICHARD PEATE.

Witnesses:

J. W. HINE,
 A. MCKENZIE.