E. G. DANN.

BOOK HOLDER.

APPLICATION FILED DEC. 18, 1909.

995,442. Patented June 20, 1911.

3 SHEETS—SHEET 1.

Fig. 1.

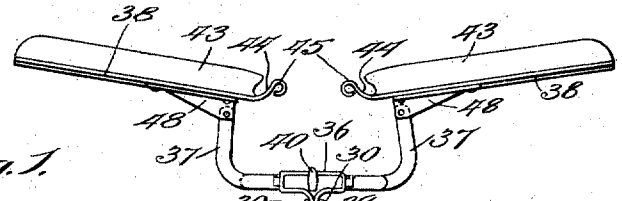


Fig. 15.

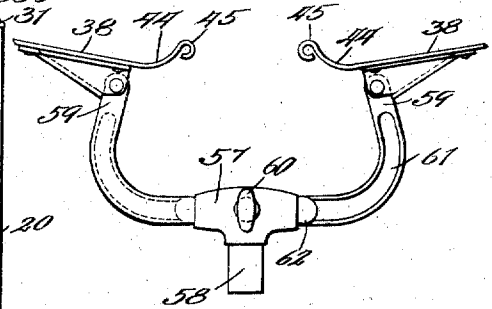


Fig. 6.

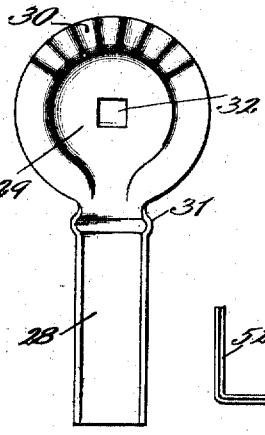
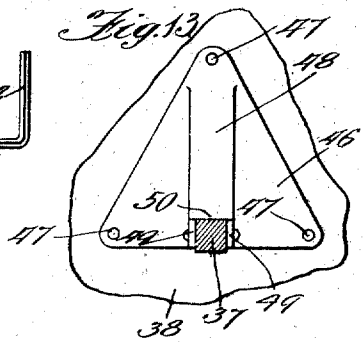


Fig. 13.



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3 SHEETS—SHEET 2.

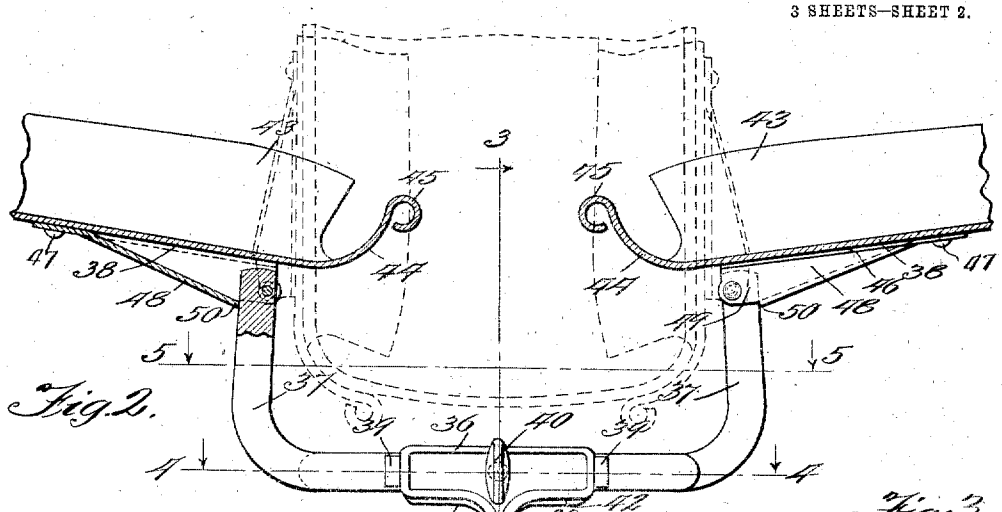

Fig. 2.

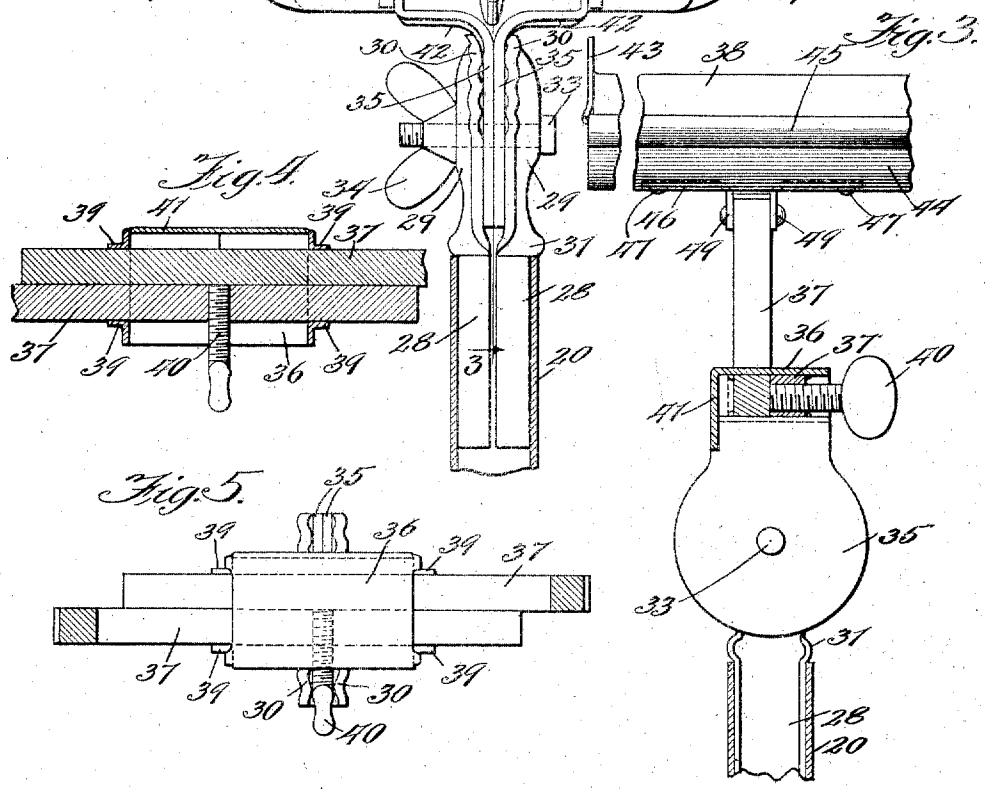

Fig. 3.

Fig. 4.

Fig. 5.

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APPLICATION FILED DEC. 18, 1909.

995,442.

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3 SHEETS—SHEET 3.

Fig. 7.

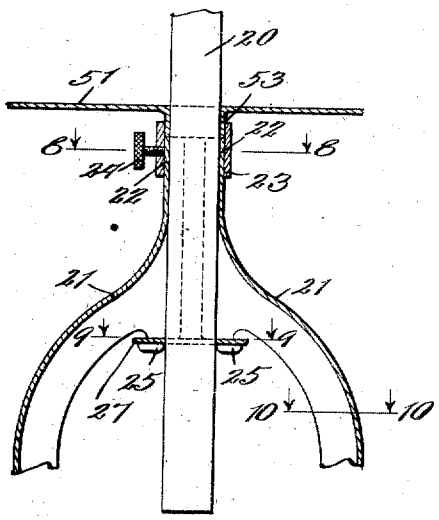


Fig. 8.

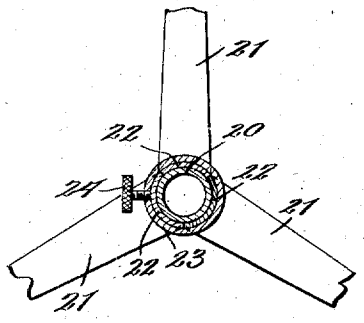


Fig. 10.

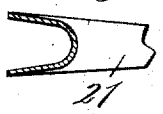


Fig. 11.

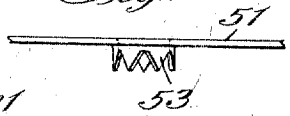
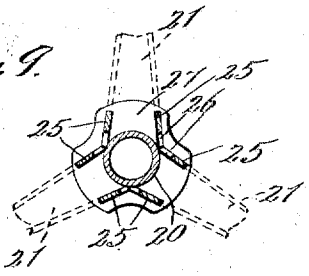


Fig. 9.



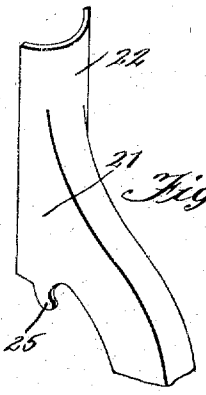
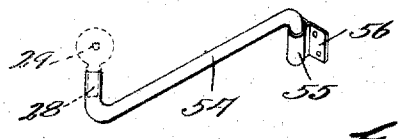


Fig. 12.

Fig. 14.



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UNITED STATES PATENT OFFICE.

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BOOK-HOLDER.

995,442. Specification of Letters Patent. Patented June 20, 1911.

Application filed December 18, 1909. Serial No. 533,853.

To all whom it may concern:

Be it known that I, ERNEST G. DANN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Book-Holders, of which the following is a specification.

My invention relates to a book-holder for holding a dictionary or other large book in such a manner that the book may be opened and closed without removal from the holder.

The invention has for one of its principal objects to provide a book or dictionary stand or holder which may be constructed entirely of metal, and preferably to a large extent of sheet metal and tubing.

Another primary object of the invention is to construct the folding leaves of the device which sustain the book when open and which lie against the covers of the book when closed, so that the weight of the book itself holds these leaves in their upright or closed position, thus eliminating the springs which are usual devices of this general character and which have always proven a constant source of trouble.

Another object of the invention is to provide a device of this sort which by simple manipulation may be adjusted to books of different thicknesses, in which the height of the device may be varied and in which the book-supporting leaves may be set at different angles.

A further object of the invention is to provide a new and improved device of this character consisting of a few simple parts which can be cheaply manufactured, and which can be easily assembled and taken apart, so that the shipment of the device is facilitated.

The invention has for further objects such other new and improved constructions, arrangements and devices in book-holders as will be described in this specification and particularly set forth in the claims appended thereto.

While I prefer to construct the device entirely of metal and largely of stamped sheet metal, as will hereafter appear, the several parts of the device, some or all of them, might be made of different material. The form and proportions of such parts might likewise be changed without departure from my invention.

The invention is illustrated in a preferred embodiment, and certain modifications thereof are suggested in the accompanying drawings, wherein—

Figure 1 is an elevation of the preferred form of device looking from the back. Fig. 2 a fragmentary vertical section view thereof. Fig. 3 a sectional view taken on line 3—3 of Fig. 2, looking in the direction of the arrows. Fig. 4 a sectional plan taken on line 4—4 of Fig. 2. Fig. 5 a similar view taken on line 5—5 of Fig. 2. Fig. 6 a view in elevation of one of the parts forming the rotatable head. Fig. 7 a fragmentary sectional view taken through the lower part of the stand to illustrate the construction of the legs. Fig. 8 a sectional plan on line 8—8 of Fig. 7. Fig. 9 a similar view on line 9—9 of Fig. 7. Fig. 10 a similar view on line 10—10 of Fig. 7. Fig. 11 a fragmentary view illustrating the construction of the shelf. Fig. 12 a perspective view of the upper portion of one of the legs. Fig. 13 a fragmentary view of one of the leaves showing the construction of the hinge. Fig. 14 a view in perspective of a desk or table bracket to take the place of the floor stand shown in the preceding figures, and Fig. 15 a view in elevation illustrating a modified construction of the means providing for the adjustments of the leaves.

Like characters of reference indicate like parts in the several figures of the drawings.

Referring first to Figs. 1 to 13 inclusive of the drawings, 20 indicates a tubular standard which is sustained upon the three legs 21 which are preferably stamped or otherwise formed from sheet metal and are removably attached to the standard 20 at any point upon the same, thereby providing for varying the height of the stand. The legs 21 terminate at the top in curved or sleeve-like portions 22 which embrace the standard, and are clamped thereto by the collar 23 which has the threaded opening for the set-screw 24. The lower ends of the sleeve-like portions 22 are formed with the hooks 25 which extend into slots 26 in a disk 27, which latter has the central opening through which the standard extends.

It will be understood that the legs are hooked into the disk 27 before their upper ends are engaged by the collar 23. This arrangement, obviously, is such that any weight placed upon the standard tends to increase the grip between the standard and its supporting legs.

In the upper end of the standard is rotatably mounted a head composed of two half sleeves 28 terminating in the convexed disks 29, the upper edges of which have a fluted conformation 30. Ribs 31 engage the upper edge of the tubular standard. The two members forming the head are preferably stamped out of sheet metal.

The disks have the central perforations 32 and are clamped together by the bolt 33 and wing-nut 34. The disks 29 are designed to clamp between them the ends 35 of a yoke member 36 which is designed to provide a slide-way for the brackets 37 to which are hinged the book-sustaining leaves 38. The yoke member is preferably formed of a single strip of sheet metal bent so as to form a sort of box, the ends of which have openings through which extend, from opposite directions, the brackets 37. The parts of the yoke forming the ends of the box or slide-way may be formed with the lugs 39, constituting guides and bearings for the brackets. The back of the yoke is preferably left open and the ends of the brackets are secured together at any relative adjustment, and to the yoke by means of the set-screw 40 which extends through a threaded perforation in one of the brackets, and bears against the other bracket. A finished appearance may be given to the front of the yoke by forming the same with the part 41 which is bent down as shown particularly in Figs. 3 and 4, so as to close the yoke at this side. The ends 35 of the sheet of metal forming the yoke are preferably in the form of disks of the same diameter as the disks 29 between which they are clamped. The disks 35 are formed with the ribs 42 which are engaged by one or other of the corresponding pairs of radial grooves at the edges of the disks 29, when the latter are clamped upon the disks 35. By this means the book-sustaining leaves may be given any desired inclination by adjusting the position of the yoke. It will be seen that when the disks 29 are clamped together by means of the bolt 33 and wing-nut 34, the half sleeves 28 will have a tendency to spread a trifle, the purpose of which is to cause them to bear against the inner surface of standard 20, sufficiently to prevent the book-holding portion of the device from being too easily slipped out of the standard. The frictional engagement of the half sleeves with the standard is not, however, intended to be enough to prevent the book and its supporting means from being turned on the standard.

The brackets 37 are preferably made of simple metal bars bent to the form shown.

The book-sustaining leaves, I prefer to make of single pieces of sheet metal, with their forward edges 43 turned at right angles to the planes of the leaves so as to form a rest for the edges of the book. The leaves are hinged to the brackets inwardly of the inner or adjacent margins of the leaves, and these inner or adjacent margins are formed with the preferably curved off-set portions 44, terminating, preferably in the beads or rolled portions 45. This construction of the leaves enables me to entirely do away with the spring devices ordinarily used in dictionary holders to hold the leaves against the covers of the book when the book is closed. In my device the weight of the book, the back of which bears against the off-set portions 44, keeps the leaves in upright position and closely pressed against the covers of the book when the latter is closed. Obviously, the weight of the book, when the book is open, is so distributed as to keep the leaves outspread. By eliminating the springs which are usual to devices of this class, my improved form of book-holder is simplified in its construction, and its operation made much more positive and accurate. The device likewise becomes much more durable, as in the ordinary form of dictionary holders it is the springs which are always getting out of order and becoming worn out.

While I prefer to construct the leaves of sheet metal, it is obvious that the same principle of construction might be applied to leaves constructed from other material. The leaves 38 are hinged to the brackets 37, preferably by means of the sheet metal hinge plates 46 secured to the leaves 38 by rivets 47, and which are formed with the raised or off-set portions 48 terminating in the ears 49, between which, on each of the plates, extends the end of one of the brackets 37. The edge 50 of the raised portion 48 forms a stop which comes against the bracket 37 so as to limit the opening movement of the leaf. If desired, the stand may be provided with a shelf 51 consisting of a single sheet of metal with its ends turned up as shown at 52, the shelf having the central opening for the standard 20. In order to keep the shelf from tilting the metal is not entirely cut away when the opening for the standard is made, but instead, portions of each, 53, are struck up by stamping, and these portions are extended between the standard 20 and the collar 23, as is best shown in Fig. 7.

The operation of the device, as above described, is as follows: The device is adjusted for books of different widths by making a proper adjustment between the brackets 37.

The book, considering it as open, may be held horizontally or may be tilted up at any desired angle by means of the adjustment effected between the disks 29 and the disks 35. The book may be turned freely on the stand, but the frictional engagement between the half sleeves 28 and the inner surface of standard 20 is sufficient to do away with the necessity of any stop or fastening means between the head and the standard. When the book is to be used, it may be opened at any page and its weight will hold it open. The closing of the book causes the back of the binding to bear against the beads 45, and this closes the leaves 37 against the covers of the book. In its closed position the book is, therefore, sustained upon the curved or off-set portions 44 of the leaves. When the stand is to be shipped it may be packed into very small compass by detaching the legs from the standard, removing the shelf 51 from the standard, and likewise the rotating head supporting the leaf brackets. The brackets themselves may be removed from the yoke, if desired. When the book is opened the rolled portions 45 of the leaves bear against the back of the binding and keep it from sagging. These rolls or beads provide curved surfaces at the edges of the leaves which come into contact with the back of the binding of the book. By this construction the shifting between the edges of the leaves and the back of the book, when the book and leaves are opened and closed, takes place easily and without injury to the binding of the book.

In Fig. 14 I have shown a substitute for the standard. In this case the book-holding portions of the device (the head consisting of the half sleeves 28 and the disks 29 alone being shown) are sustained on a bracket 54 consisting of a piece of bent tubing, one end of which carries the head 28—29 and the other end of which extends into the socket 55 of a bracket 56, adapted to be attached to a desk or table.

In Fig. 15 I have shown a modified construction of head adapted to be used either with the standard 20 or with the bracket 54. This head consists of a hollow malleable casting 57 having a shank 58, which extends into the tubular standard or desk bracket, the brackets 59 extending from opposite sides through the perforation in the casting and being held at different adjustments by means of the set-screw 60 which is threaded through the casting. One of the brackets preferably has the groove 61 and the other is formed so as to fit into this groove. The bracket primarily engaged by the set-screw 60 has two or more grooves 62 which receive the end of the set-screw at different inclinations of the device. The form of leaf and hinge is the same as above described.

I do not limit myself to the particular constructions, arrangements and devices shown and described as modifications might be devised which would come within my invention.

I claim:

1. In a book-holder, the combination with supporting means, of a pair of brackets, a pair of book-supporting leaves pivoted to said brackets, a bracket-holding device on said supporting means for sustaining said brackets consisting of a single piece of metal bent so as to form a slide-way for the ends of the said brackets and with its ends brought together at right angles to said slide-way; a clamping device which clamps the ends of said bracket-holding device; and means for holding said brackets at different relative positions in said bracket-holding device.

2. In a book-holder, the combination with supporting means, of a pair of brackets, a pair of book-supporting leaves pivoted to said brackets so that they lie in planes at substantially right angles to the plane of said brackets, a bracket-holding device on said supporting means for sustaining said brackets consisting of a single piece of metal bent so as to form a slide-way for the ends of the said brackets and with its ends brought together at right angles to said slide-way; a clamping device which clamps the ends of said bracket-holding device; and means for holding said brackets at different relative positions in said bracket-holding device, the adjacent edges of said leaves being curved toward the book which they support, and being formed with rounding edges which engage the back of the binding of the book, substantially as described.

3. In a book-holder, the combination with a standard having a socket, of a pair of book-holding leaves, means to which said leaves are pivoted comprising a substantially flat disk-like member, a pair of clamping disks which engage said disk-like member from opposite sides, clamping means extending centrally through said clamping disks, and half sleeves on said clamping disks which extend into said socket so as to be rotatable therein, substantially as described.

4. In a book-holder, the combination with a socket, of a pair of dished clamping disks having half sleeves extending into said socket, a bracket-holding device consisting of a single piece of metal bent so as to form a slide-way and with its ends brought together so as to be clamped between said clamping disks, brackets which are adjustably mounted in said bracket-holding device, and book-holding leaves pivoted to said brackets.

5. In a book-holder, the combination with a socket, of a pair of dished clamping disks having half sleeves extending into said

socket, a bracket-holding device consisting of a single piece of metal bent so as to form a slide-way and with its ends brought together so as to be clamped between said clamping disks, brackets which are mounted in said bracket-holding device so as to be adjustable to and from each other, and book-holding leaves pivoted to said brackets so that the planes which the leaves assume are at substantially right angles to the plane of the brackets, the adjacent edges of said leaves being curved inwardly toward the book which they support, substantially as described.

6. The combination with a standard, of detachable legs for the same, a shelf formed with a perforation and with projections extending downwardly from said perforation, and a collar which binds the legs to the standard and provides a space into which said projections on the shelf are received, substantially as and for the purpose described.

7. In a book holder, the combination with a standard having a socket, of a pair of bookholding leaves, means on which said leaves are mounted comprising a substantially flat disk and a rotatable head consisting of two half sleeves which extend into the socket of the standard and are formed with dished disks adapted to clamp between them the disk on the means on which the leaves are mounted, and a screw extending centrally through said disks and thumb nut adapted to draw said dished disks together and to spread said half sleeves within said socket for the purpose described.

8. In a book holder, the combination with a standard having a socket, of a pair of bookholding leaves, brackets to which said leaves are hinged, a yoke in which said brackets are slidably mounted so as to adjust the leaves for books of different widths, said yoke consisting of a piece of sheet metal bent so as to form a slide-way for the brackets and with its ends lying one against the other and projecting from said slide-way, a pair of half sleeves which extend into the socket in the standard and are formed with dished disks adapted to engage the projecting ends of the yoke on either side, and a bolt extending through said disks provided with a thumb nut whereby the disks may be clamped against the projecting ends of the yoke so as to hold the leaves at any desired angle.

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