

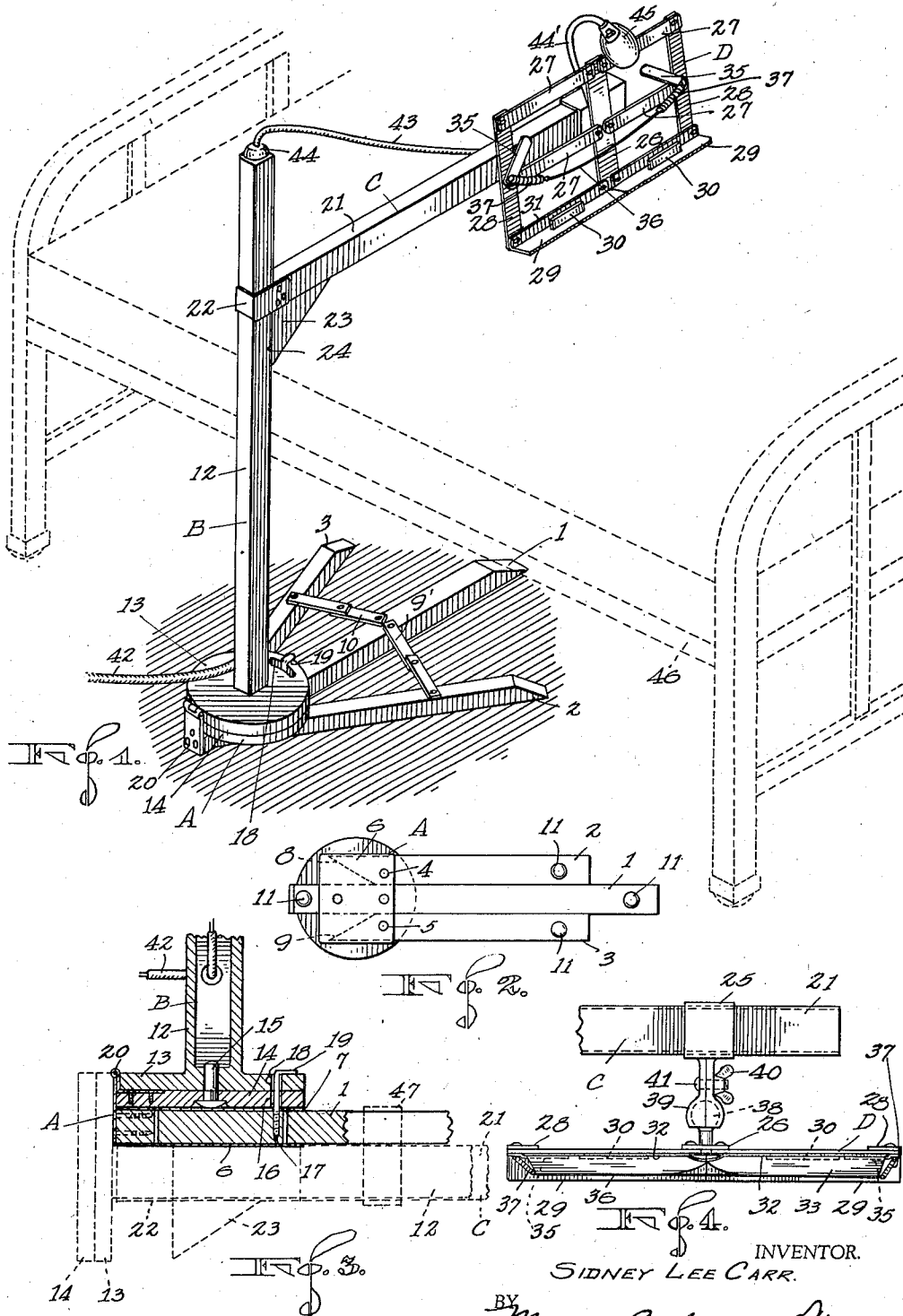
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COLLAPSIBLE UNIVERSAL BOOK SUPPORT

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COLLAPSIBLE UNIVERSAL BOOK SUPPORT

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My invention relates to improvements in collapsible universal book supports, and it consists of the combinations, constructions and arrangements hereinafter described and claimed.

5 An object of my invention is to provide a collapsible universal book support which makes use of a folding base designed to be supported directly by the floor. An upright is hinged to the base and also has freedom of a limited rotative movement about its longitudinal axis. An arm is adjustably carried by the upright and may be raised vertically into the desired position. A collapsible book holder is slidable along the arm and has a universal connection therewith. With this
10 arrangement it is possible for the book holder to be raised to any desired position above the bed, and then to be swung horizontally over the bed into the desired place and finally to be disposed at the desired angular position with respect to the supporting arm. The device may be manipulated by one hand of the operator.

It is possible to dismantle the entire device so that it will occupy very little space when stored away. The book holder is collapsible and carries a light fixture that is designed to throw a light
25 directly onto the book, the light fixture being provided with a shield to prevent the light rays from striking the reader's eyes. An electric light cord extends from the light fixture to the top of the upright and a plug connects this cord with a cord extending up through the upright. The latter cord is passed out through an opening adjacent to the bottom of the upright and leads to an electrical outlet box or the like. The base
35 when folded and swung about its hinge will lie adjacent to the upright, and will extend parallel therewith. The arm may be entirely removed from the upright and placed alongside of the upright in parallel relation. A strap may now
40 be used for holding the parts in folded position.

The device is extremely simple in construction and is preferably made of hollow metal non-circular in cross section so that the various parts will have a sliding arrangement with respect to
45 each other but still be held against rotational movement.

Other objects and advantages will appear in the following specification, and the novel features of the device will be particularly pointed out in the appended claims.

My invention is illustrated in the accompanying drawing forming a part of this application, in which

Figure 1 is a perspective view of the entire device shown positioned adjacent to a bed;

Figure 2 is a bottom plan view of the base shown collapsed;

Figure 3 is a vertical section through the lower portion of the upright and through the base, and illustrates in dotted lines the folded position of the upright with respect to the base; and

Figure 4 is a top plan view of the book holder and a portion of the supporting arm.

In carrying out my invention I provide a folding base indicated generally at A, an upright indicated generally at B, an arm indicated at C, and a book holder D.

I will first describe the base, and this is shown in Figures 1, 2, and 3. The base has a central foot 1 and two side feet 2 and 3. Figure 2 shows
15 the side feet 2 and 3 being pivotally secured at 4 and 5 to a plate 6. The plate is secured to the central foot 1, and a second plate 7 cooperates with the plate 6 for supporting the other ends of the pivot pins 4 and 5. It will be noted from Figure 2 that the inner ends of the feet 2
20 and 3 are cut at an angle as at 8 and 9, and this limits the outward swinging movement of the feet above the pivots 4 and 5. In addition I show links 9' and 10 pivotally connecting the outer
25 feet 2 and 3 with the central foot 1. These links permit the outer feet to be swung into parallel relation with respect to the central foot but limit the outward swinging of the feet 2 and 3 away from the central foot. If desired gliders 11 may
30 be disposed at the under surfaces of the feet, see Figure 2.

The folding base A supports the upright B. Figure 3 shows the upright B as consisting of a column 12 non-circular in cross section, and provided with an integral flange 13 at its lower extremity. The flange 13 is in the shape of a disc and is pivotally secured to a second disc 14 by means of a pin 15. Figure 3 shows the disc 14 provided with an opening 16 for receiving a screw
40 17 and further shows the disc 13 provided with an arcuate slot 18 for also receiving the screw 17. The top of the screw is bent at right angles as shown at 19, and when the screw is disposed in the position shown in Figures 1 and 3 the discs
45 13 and 14 are held against the central leg 1 of the folding base. The arcuate slot 18 is long enough as shown in Figure 1, to permit a slight rocking movement of the upright B about its longitudinal axis for a purpose hereinafter described. The upright in being thus moved
50 through a slight angular distance rotates on the pin 15, and rides upon the disc 14. The disc 14 is also connected to the foot 1 by a hinge 20. When the handle 19 of the screw 17 is swung in-
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to a position registering with the arcuate slot 18, the upright B can be swung about the hinge 20 into the dotted line position shown in Figure 3. The legs of the folding base can also be swung into collapsed position, and this will cause the leg to parallel the upright when the device is folded for storage.

It will be seen that the screw 17 performs the double function of not only limiting the rotational movement of the upright B about its longitudinal axis, but also acts as a securing means for holding the discs 13 and 14 down upon the base A, and therefore the upright B is maintained in a vertical position with respect to the base.

The arm C comprises an elongated hollow member 21 preferably made of metal and non-circular in cross section. A strap 22 slidably connects the member 21 to the upright 12. A projection 23 is carried by the member 21, and this projection has a straight edge 24 slidably contacting with a flat face of the member 12. The weight of the arm C is such as to tend to fulcrum about the strap 22 as a pivot. This will cause the edge 24 to frictionally engage with the adjacent face of the member 12 with sufficient force to hold the arm in adjusted position. The arm may be readily moved vertically along the upright B into the desired position, and will remain in such position.

In Figure 4 I show the arm C slidably carrying a sleeve 25. The sleeve is also non-circular in cross section and conforms with the cross sectional shape of the member 21. This will prevent the sleeve from rotating with respect to the arm C. In like manner the strap 22 has a cross sectional shape similar to the cross sectional shape of the upright 12. This will prevent the arm C from rotating with respect to the upright B.

In Figure 1 I show a book holder D which may be folded when not in use. The holder consists of a central member 26 and pairs of parallel links 27 are pivoted to the central member and extend in opposite directions. Side members 28 are pivoted to the links 27. Book supporting members 29 are pivoted to the bottoms of the center member 26 and the side members 28. These book supporting members 29 carry flanges 30 that are spaced from the rear upturned edges 31 of the book supporting members 29. The space between the flanges 30 and the upturned edges 31 is sufficient to receive the covers 32 of a book 33, see Figure 4. Clips 35 are pivoted to the sides 28 and are designed to engage with the covers 30 of the book. In this way the book is secured to the book holder. The leaves of the book are held against turning by a cord 36 that has its ends connected by coil springs 37 to the side members 28. Figure 4 shows the cord 36 extending across the pages or leaves 33 of the book.

The central member 26 of the book holder D carries a spherical-shaped member 38. This member is rockably received in a split socket 39 which in turn is carried by the sleeve 25, see Figure 4. A wing nut 40 disposed on a bolt 41 may be tightened for causing the two portions of the split socket 39 to frictionally engage with the spherical portion 38 with sufficient force to hold the book holder D in adjusted position, and still permit the holder to be swung into different angular positions.

From the foregoing description of the various parts of the device, the operation thereof may be readily understood.

An electric light cord 42, see Figure 1, extends into the lower portion of the upright B and pro-

jects upwardly through the hollow member 12, see Figure 3. A second electric cord 43 is connected to the electric cord 42 by means of a standard plug 44. This connection is made at the top of the member 12. The cord 43 extends to a flexible light fixture 44' which is carried by the book holder D. The light fixture 44' supports a shield 45 that will direct the light rays down upon the book and still shield the eyes of the reader. The shield is so designed as to permit the heat generated by the light to pass upwardly.

In using the device the base A is swung beneath the disc 14 and then the screw handle 19 is swung to extend at right angles to the slot 18. The feet 2 and 3 of the base are swung into operative position, and then the base is moved beneath a bed 46 to the desired place. The arm C is mounted on the upright B and the sleeve 25 is mounted on the arm. The book holder D is moved into open position, and the book is clamped in place in the manner already indicated. The electric light cord 43 is connected to the cord 42 by the plug 44. The device is now ready for use.

It will be noted that the person lying in bed can, with one hand, swing the arm C horizontally through the desired distance in order to move the book holder D horizontally. This swinging of the arm C is limited by the length of the slot 18. The slot in turn prevents the arm from being swung into a position where it would cause the upright B to overturn the base A. The reader also with one hand can move the book holder along the arm C and can adjust the book holder into the desired angular position by means of the universal joint consisting of the spherical head 38 and the socket 39. If desired the sleeve 25 may be removed temporarily from the arm C and then swung angularly into a different position, and then again mounted on the arm C. This will permit the book holder to depend below the arm C, and when the device is in this position the person can lie flat on his back and look upwardly when reading the book, since the book can be supported in an upside down position. It will be noted that regardless of the position of the book holder the book will be correctly illuminated by the light. The device can also hold a book in any position in which the book would be held by hand. This will permit a person to sit up in bed or to assume other positions, and still be able to read.

When collapsing the device for storage the upright B is swung around into the dotted line position with respect to the base A as indicated in Figure 3. The arm C is likewise placed in parallel relation with the upright and base, and then a strap 47 secures the parts together. When the device is folded for strapping the book holder may be removed from the arm C.

While I have shown only the preferred form of my invention, it should be understood that various changes or modifications may be made within the scope of the claims appended without departing from the spirit of the invention.

I claim:

1. In a device of the type described, a base, a disc having a slot therein and being hinged to the base and swingable into a position to be supported by the base, a second disc rotatably connected to the first disc and having an arcuate slot therein registering with the slot in the first-named disc, an upright carried by the second disc, and locking means carried by the base and

extendible through the aligned slots, said means
being movable for holding the discs from swinging
about the hinge while still permitting the sec-
ond disc to rotate with respect to the first, said
5 means also limiting the rotative movement of
the second disc with respect to the first.

supporting member hinged to the base, an up-
right rotatably supported by the member, and
means for securing the member to the base and
for limiting the rotative movement of the up-
right with respect to the member.

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2. In a device of the type described, a base, a