

W. L. CARTER.
ADJUSTABLE FOLDABLE TRAY SUPPORT.
APPLICATION FILED JAN. 11, 1912.

1,053,357.

Patented Feb. 18, 1913.

Fig. 1.

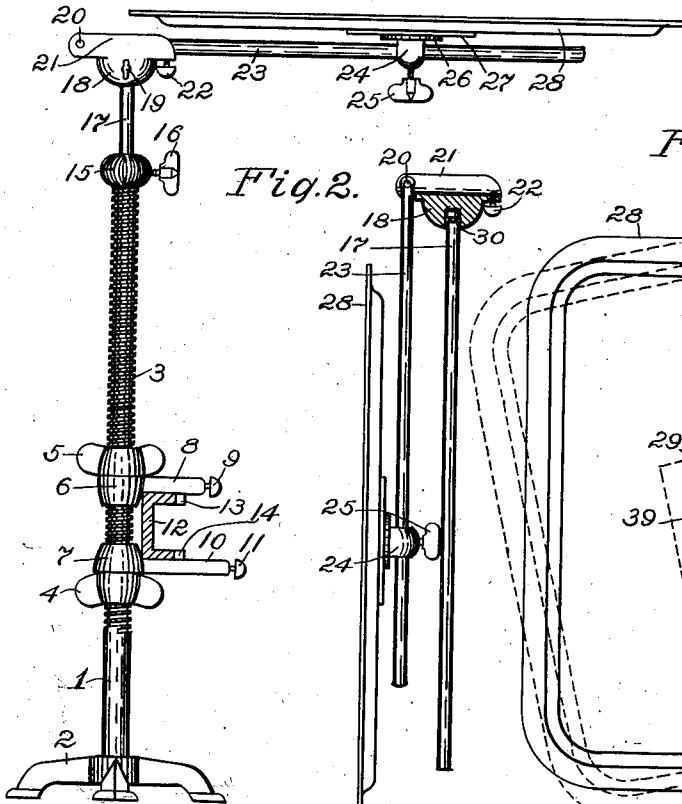


Fig. 2.

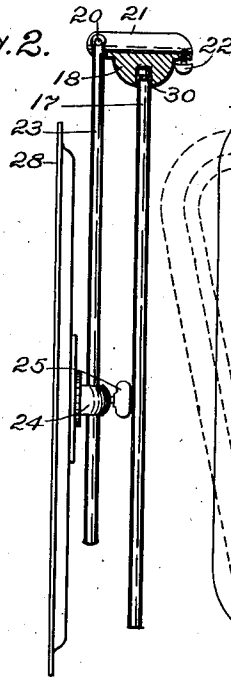


Fig. 3.

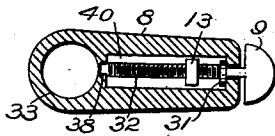
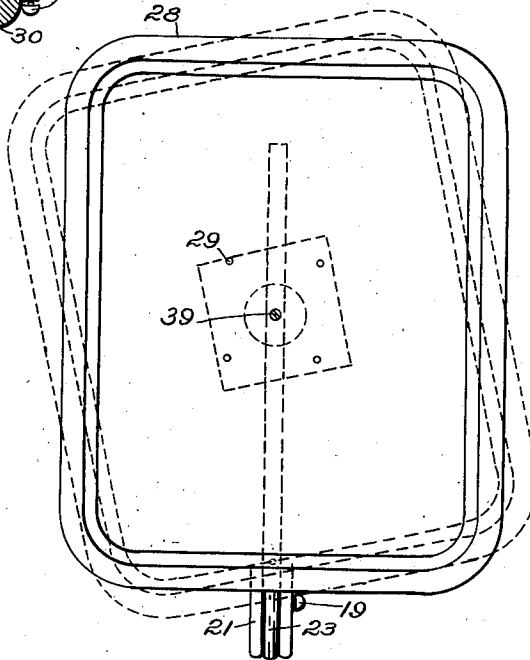


Fig. 4.

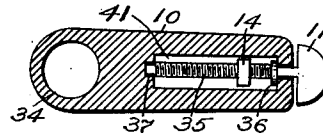


Fig. 5.

Witnesses:

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ADJUSTABLE FOLDABLE TRAY-SUPPORT.

1,053,357.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM L. CARTER, a citizen of the United States of America, and a resident of Waterloo, Blackhawk county, Iowa, have invented certain new and useful Improvements in Adjustable Foldable Tray-Supports, of which the following is a specification.

My invention relates to improvements in adjustable foldable tray supports, and the object of my improvements is to furnish supporting-means for a tray, which shall be convenient for use when attached to the frame of a bedstead, or to a chair or other base, being adjustable in every way, and foldable so as to be brought into small compass when not in use, while being also readily disassembled or assembled, and sanitary in its arrangement, materials and construction. This object I have accomplished by the means which are hereinafter described and claimed, and which are illustrated in the accompanying drawings, in which:

Figure 1 is a side elevation of my improved adjustable foldable tray support, showing it with its tray-supporting arm extended as in use. Fig. 2 is a side elevation of the sliding-upright as disassembled from its base, and with the tray-supporting arm folded over as when not in use, with a part broken away. Fig. 3 is an upper plan view of the adjustable tray. Fig. 4 is an enlarged horizontal section of the upper adjustable clamping-member, while Fig. 5 is a similar view of the lowermost adjustable clamping-member.

Similar numerals of reference denote similar parts throughout the several views.

The hollow cylindrical vertical upright 1 is adapted to receive a sliding-upright 17 telescopically in its center or axial bore, the latter movable vertically, while the former is integral with a fixed base comprising the supporting legs 2. The upper end of the sliding-upright 17 has an annular groove 30 to receive the end of a set-screw 19, the latter passing through a body 18 which is mounted upon the upper end of said upright covering said groove, said set-screw both securing said parts together removably, and also providing means whereby the body 18 may be rotated and then secured in an adjusted position.

The body 18 has integral horizontal parallel and spaced-apart bars or ridges 21, and

a tray-supporting arm 23 has one end pivoted between said ridges at 20 near one end of the latter so as to lie between the ridges in their trough when extended in the position shown in Fig. 1. A set-screw 22 is placed in the opposite end of the trough, with its end adjustable upwardly to bear against the arm 23 when in the trough to adjust its position of height therein.

The numeral 24 denotes a slide movable along the arm 23, with a set-screw 25 passed through it to engage the arm when the latter is in an adjusted position relative to the slide. The slide 24 has a flat integral disk 26 upon which rests a square plate 27 the latter secured to the bottom of a tray 28 by means of rivets 29, while the disk is pivotally connected to said tray by a central pivot 39 projected through the central orifice of the plate 27, permitting of the rotation of the tray above said arm 23. These elements thus permit the tray to be rotated in a parallel plane with said arm 23, and also be rotated about the arm itself to bring it to a desired inclination, while the tray may be moved longitudinally along said arm to a desired extent.

When not in use the slide-upright 17 may be entirely disassembled from its supporting upright 1, and the tray supporting arm 23 turned on its pivot 20 to reverse its position and lie parallel with the upright 17 on the opposite side, or, instead of disassembling the upright-parts 1 and 17, the arm 23 may be in a similar way swung to the side to depend as shown in Fig. 2, thus not necessitating the device to be removed from any base to which it may have been affixed.

In order to properly secure the device removably and adjustably to any suitable fixed base, the following means are employed: The most of the upper part of the fixed upright 1 is exteriorly threaded at 3 to receive the following parts: Interiorly-threaded wing-nuts 4 and 5 are placed on said threaded part with the unthreaded slide-bodies 6 and 7 between them, the latter adapted to slide freely over the outer surface of the threads on account of their smooth cylindrical orifices 33 and 34 fitting loosely said upright. These bodies 6 and 7 have each a projecting integral bracket or finger 8 and 10, respectively, the latter having similar vertical openings or slots 40 and

41. Screws 32 and 35 are rotatably seated in said brackets or clamping-members 8 and 10, respectively, extending along the length of said slots, provided with thumb-pieces at their outer ends at 9 and 11, and having fixed collars 31 and 36 seated in the openings 40 and 41 which prevents the screws from moving longitudinally while not preventing their rotation. Upon the screws are mounted the interiorly-threaded nuts 13 and 14 respectively, which cannot turn in said openings but are movable lengthwise therein when the screws are rotated and which project beyond the surfaces of said members, so as to lie opposite each other on adjacent sides of the members. The upper end of the threaded part 3 of the upright 1 has a cap-body 15 seated removably thereon, and provided with a set screw 16 extending through it and through the part 3 and used to secure removably the slide-upright 17 in a desired vertical adjustment. When it is desired to secure the device to the side-bar of a bed or any similar support such as the channel-bar 12 shown in cross-section in Fig. 1, the members 8 and 10 are adjusted on the upright 1 by sliding them longitudinally thereover so as to embrace the upper and lower surfaces of said bar, the wing-nuts 5 and 4 being then moved properly along said upright to lock the members against the bar. The nuts 13 and 14 are adjusted by turning the thumb-pieces 9 and 11 suitably to shift the nuts to engage the abutting edges of the flanges of the channel-bar or other support, which locks the device securely and firmly in position.

The device is especially designed for attachment to the frame of a bed for the use of invalids, but may be employed for a book-rack, or other purposes when adjusted or secured to other fixed bases.

The parts of my improved device are all made of metal, therefore may be boiled or otherwise disinfected after use in a hospital or sick-room, without injury, which renders the device peculiarly appropriate for use for connection to an invalid's bed.

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

1. In combination, slidably-connected upright-members, means for adjustably securing them together, a body rotatably seated on the top of the uppermost upright-member,

said body having spaced-apart upwardly-directed flanges forming a horizontal trough, an arm pivoted in one end of the trough of said body so as to lie removably therein, and adapted to be swung upon its pivot to depend from said body adjacent to said upright-members, means for adjusting the position of said arm while seated in said trough, and a tray adjustably secured to said arm.

2. In combination, slidably-connected upright-members, means for securing them together in an adjusted position relative to each other, a channeled body on the upper end of the uppermost upright-member, an arm pivoted in one end of said channel to lie therein removably, a tray adjustably secured to said arm, clamping-members adjustably secured on the lowermost upright member, each clamping-member having a screw rotatably but non-longitudinally movably mounted therein, and each screw carrying a non-rotatable but longitudinally-movable nut which form horizontally adjustable clamps.

3. In combination, slidably-connected upright-members, means for securing them together in an adjusted position relative to each other, a channeled body on the upper end of the uppermost upright-member, an arm pivoted in one end of said channel to lie removably therein, a tray adjustably secured to said arm, the lowermost upright-member being exteriorly-threaded, clamping-arms slidably seated on said threaded upright, lock-nuts adapted to secure said arms in an adjusted position on said threaded upright, each clamping-arm having a longitudinal slot, a screw seated in each arm along its slot rotatably but non-longitudinally movable, a nut non-rotatably seated on each screw but being longitudinally movable along the slot in which the screw is mounted, and said nuts projecting beyond the plane of each arm toward each other and each adapted to cooperate with its carrying-arm to form horizontally-adjustable clamps.

Signed at Waterloo, Iowa, this 26th day of Dec. 1911.

WILLIAM L. CARTER.

Witnesses:

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