July 14, 1925. 1,546,332

L. C. WALTERS

SUPPORT FOR SURGICAL ACCESSORIES

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Fig. 1

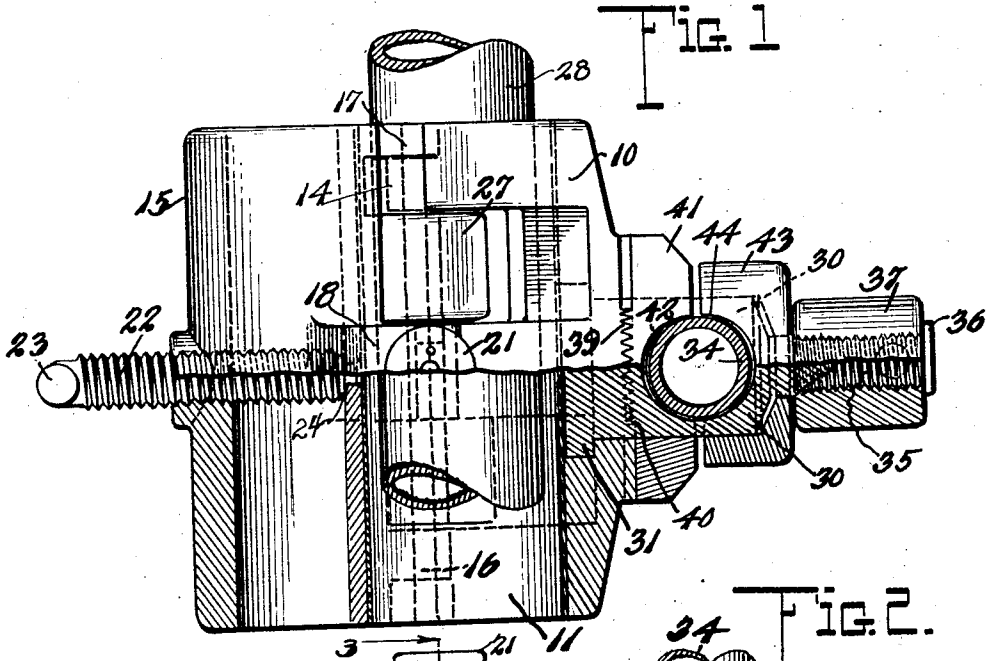
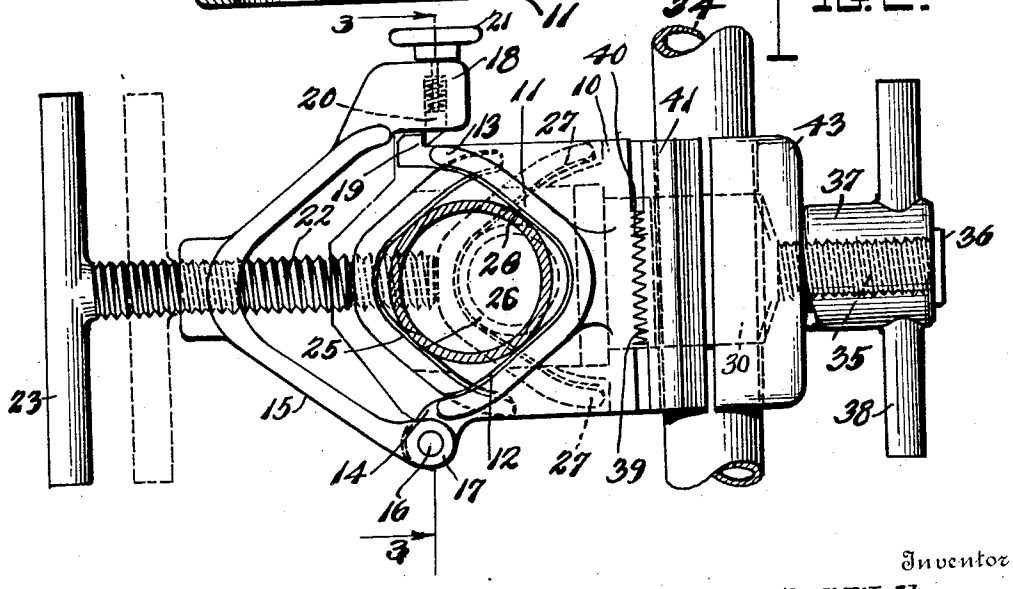


Fig. 2.



Inventor
L. C. Walters:

Witness:
C. W. Wagner.

By Robb, Robb & Hill
Attorneys.

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Fig. 3.

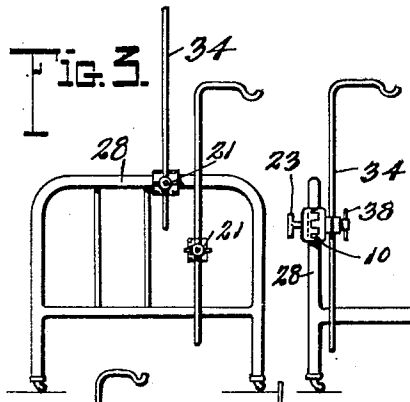


Fig. 4.

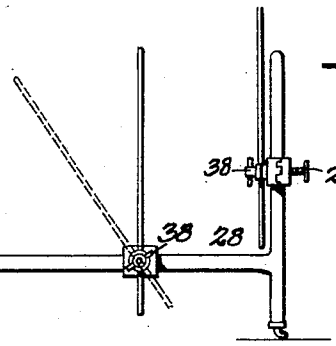


Fig. 5.

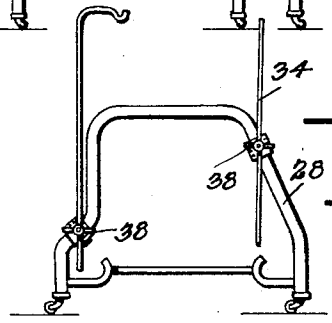


Fig. 6.

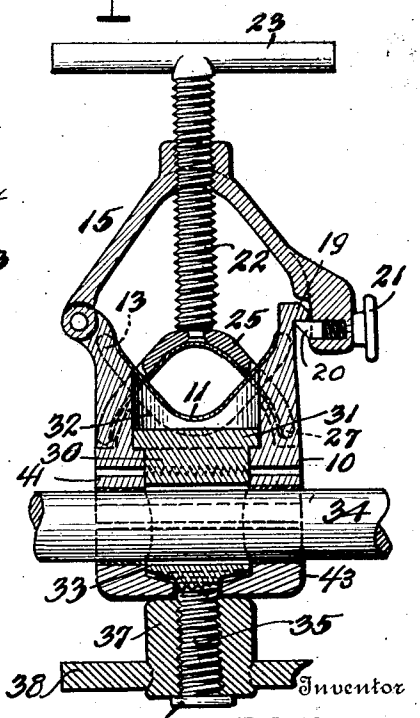
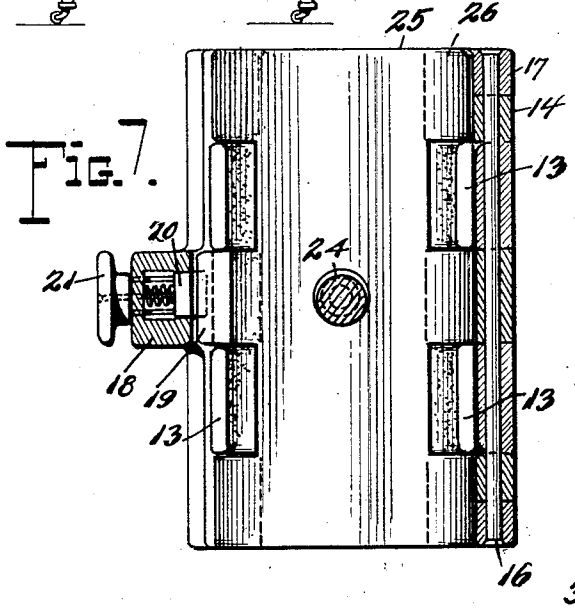


Fig. 7.



Inventor

L. C. Walters

Witness:
C. H. Wagner.

By Robb, Robb & Hill

Attorneys.

Patented July 14, 1925. 1,546,332

UNITED STATES PATENT OFFICE.

LOUIS C. WALTERS, OF IRVINGTON, CALIFORNIA, ASSIGNOR TO REID BROS. INC., OF SAN FRANCISCO, CALIFORNIA.

SUPPORT FOR SURGICAL ACCESSORIES.

Application filed July 31, 1923. Serial No. 654,848.

To all whom it may concern:

Be it known that I, LOUIS C. WALTERS, a citizen of the United States, residing at Irvington, in the county of Alameda and State of California, have invented certain new and useful Improvements in Supports for Surgical Accessories, of which the following is a specification.

This invention relates to a support for surgical accessories, and particularly to a construction embodying a member adapted to be clamped to a bed frame or other support and carrying an adjustably mounted member designed to removably support a surgical device or other appliance. In previous constructions designed for this purpose the clamping members were not adapted for quick application to a supporting frame but required considerable manipulation in their application and adjustment, while the carrying member for the surgical accessory was limited in its degree of rotary adjustment to predetermined set positions, and consequently the field of such adjustments was restricted. This invention is particularly designed to permit a quick and ready application of the clamping member to the supporting frame in various positions and a free rotative adjustment of the carrying member which is essential in the practical application of the present invention used for the purpose of supporting liquid receptacles and various surgical accessories convenient to a bed side or operating table, and it is also designed to be used for the support of extension apparatus in the treatment of fracture, diseases and deformities of the joints. In such applications of the invention it is often desirable to position the carrying member at various angles in a vertical plane so that a fine degree of adjustment is found desirable.

The invention has for an object to provide a novel construction in which the clamping member is formed with means for rapid and easy attachment to a supporting frame and the carrying member mounted thereon for free rotative adjustment at any desired angle in a vertical plane.

A further object of the invention is to provide an improved form of clamping means for the support comprising an attachable latching yoke carrying a clamping member cooperating with a similar member upon the body of the support.

Another object of the invention is to provide means for supporting a standard so that it is adapted for linear and rotative adjustment and for clamping in these adjustments by the operation of a unitary device.

Other objects and advantages of the invention will be hereinafter set forth and the novel features thereof defined by the appended claims.

In the drawings:—

Figure 1 is a plan view of the invention mounted upon a horizontal frame, with parts in section;

Figure 2 is a side elevation thereof;

Figure 3 is a detail elevation showing the support mounted in different positions upon the end frame of a bed;

Figure 4 is a similar view showing further applications of the support;

Figure 5 is an elevation showing the support applied to the frame of an operating table;

Figure 6 is a section on line 6—6 of Figure 1; and

Figure 7 is a similar view on line 7—7 of Figure 2.

Like reference numerals refer to similar parts throughout the several figures of the drawing.

In the form of the invention herein disclosed, the body 10 of the support may be of any desired material or configuration and is provided at its outer face with a clamping surface or member 11 having a lining 12 to prevent abrasion of the surface to which it is applied and terminating in a series of fingers 13. This body is provided at one side with pivoting lugs 14 upon which the latching yoke 15 is mounted by means of the pivot pin 16 extending through ears 17 on the yoke and the pivot lugs 14 of the body. This latching yoke carries at its free end connecting means 18 of any desired character adapted to engage a keeper 19 upon the body 10. These attaching means may comprise a spring pressed bolt 20 adapted to be withdrawn from engagement with the keeper 19 by a head 21 connected

thereto. This bolt in the closing movement of the yoke forms means for its automatic connection as it rides over the keeper and engages the inner face thereof as shown in Figure 2. The yoke is interiorly threaded intermediate its ends to receive a clamping screw 22 provided with any desired form of handle 23 and having a swiveled connection at 24 with the clamping member 25 which cooperates with the member 11 to embrace the supporting frame 28 or relatively fixed object to which the device is applied.

The clamping member 25 is provided with finger portions 27 which are disposed at opposite sides of the portions 13 so that the fingers are interlaced as the clamp is adjusted and any lateral movement of one clamping member relative to the other is thereby prevented. The clamp 25 is provided with a protecting lining 26 similar to the lining 12 upon the clamp 11. This structure permits the quick and direct application of the clamp to a bed frame or other support by simply swinging the yoke in position until the clamping member thereby engages such frame and effecting a final adjustment by the threaded bolt mounted in the yoke.

The body of the support is adapted to carry means for mounting a vertically disposed standard or rod to permit its free rotative adjustment, and a desirable construction for that purpose consists of a bolt member 30 having a head 31 mounted in a recess 32 of the body and having an elongated aperture 33 through which the carrying rod or standard 34 passes. Extending from this member is the bolt proper at 35 suitably headed at 36 to retain the clamping nut 37 having the usual operating handle 38. The body 10 of the support is formed with a roughened or serrated face 39 which cooperates with a similar face 40 upon the clamping sleeve 41 to form a toothed locking engagement for the rotative adjustment of the rod 34. The clamping member 41 is formed with a curved face 42 to engage said rod and a complemental clamping member 43 is mounted upon the bolt member 30 and formed with a clamping face 44 to engage said rod. Upon adjustment of the nut 37 it will be seen that the clamping members 41 and 43 are brought into engagement with the rod to retain the same against longitudinal or linear movement while the member 41 is forced into locking engagement by its toothed relation with the body to retain said rod in its rotative adjusted position. The structure thus forms a unitary means for clamping the rod against any movement and permits a fine degree of adjustment between the parts which are set in position by a simple limited turn of the clamping nut.

In the operation of the invention the support is adapted to be very quickly applied and securely clamped by opening the yoke carrying one of the clamping members and passing the same around a relatively fixed support upon which it is desired to mount the device. The latching of the yoke brings the clamping member into position in contact with the supporting frame and only a very limited movement of the adjusting screw is necessary to firmly secure the parts. This screw is provided with an extended area of adjustment so that the support may be clamped to frames of different cross section or size and is shown by dotted lines in Figure 2 as embracing a frame of one diameter and in full lines as embracing a frame of larger diameter. The clamping member carried by the yoke is thus adjusted relative to the size of the frame to which it is be applied and can then be immediately latched in position thereon.

The invention also provides means by which the standard or carrying rod may be adjusted vertically and also in a rotative relation to the support by the operation of a single member which clamps the rod against longitudinal movement and also against any rotative movement while the mounting for rotative adjustment permits a fine degree thereof so that the position of the rod may be delicately adjusted relative to the patient in order to support the surgical accessory in the exact position desired.

While the details of the invention have been specifically shown and described, still changes and alterations may be made therein without departing from the spirit thereof as defined by the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:—

1. In a support of the class described, a body portion provided with an elongated clamping face having spaced diverging fingers projected from opposite sides thereof, a yoke pivotally mounted at one side of said body and adapted to be secured at the opposite side thereof, an adjustable screw mounted in the yoke, and an elongated clamping plate upon the screw having diverging side fingers disposed at opposite sides of the plate to overlap the clamping face and intermesh with the first mentioned fingers.

2. In a support of the class described, a body portion provided with an elongated clamping face having spaced diverging fingers and a circular recess at its base, a cooperating elongated clamping plate having diverging side fingers disposed in parallel planes, means for adjusting the cooperating plate to overlap the clamping face and intermesh with the first mentioned fingers, a bolt member having its head disposed in said recess for rotative movement, and an

independent clamping device carried by said bolt member for adjustably supporting an article.

3. In a support of the class described, a body portion provided with a clamping face, a swinging yoke member pivoted to said body and provided with a screw carrying a cooperating face, means for supporting a carrying member mounted for rotative adjustment upon said body, opposite clamping devices for said carrying member, and unitary means for retaining said opposite clamping devices in relation to each other and to the body portion.

In testimony whereof I affix my signature.

LOUIS C. WALTERS.