Dec. 11, 1956 J. CHASIN 2,773,542

SUPPORT DEVICE FOR PHYSICALLY HANDICAPPED

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Fig. 1.

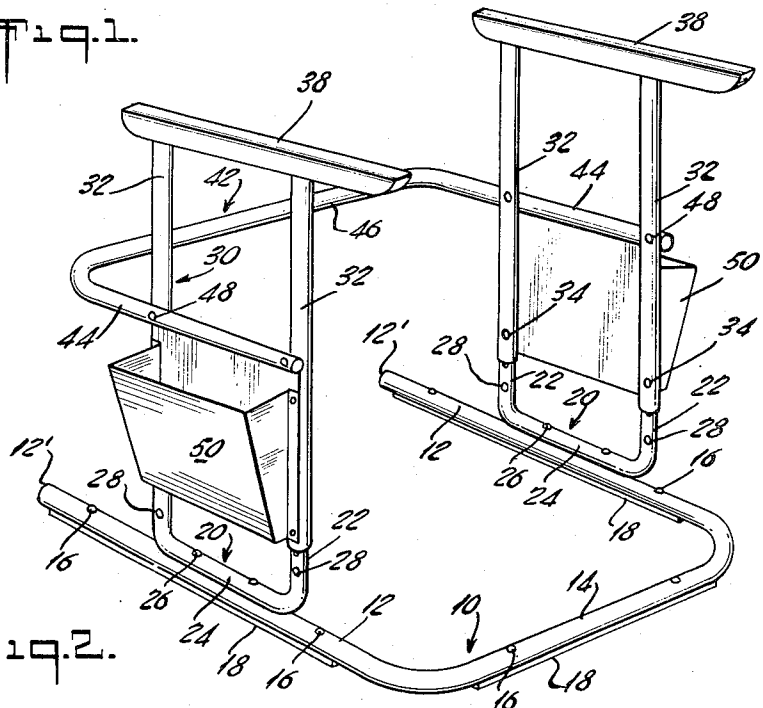
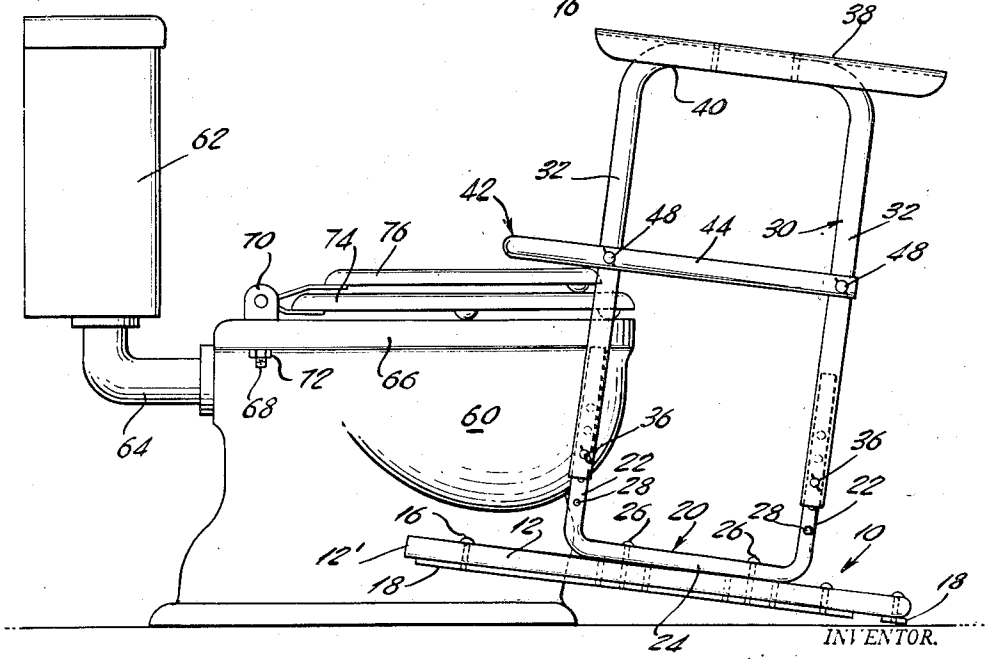


Fig. 2.



INVENTOR.
JOSEPH CHASIN
BY
William R. Liberman
ATTORNEY

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Fig. 3.

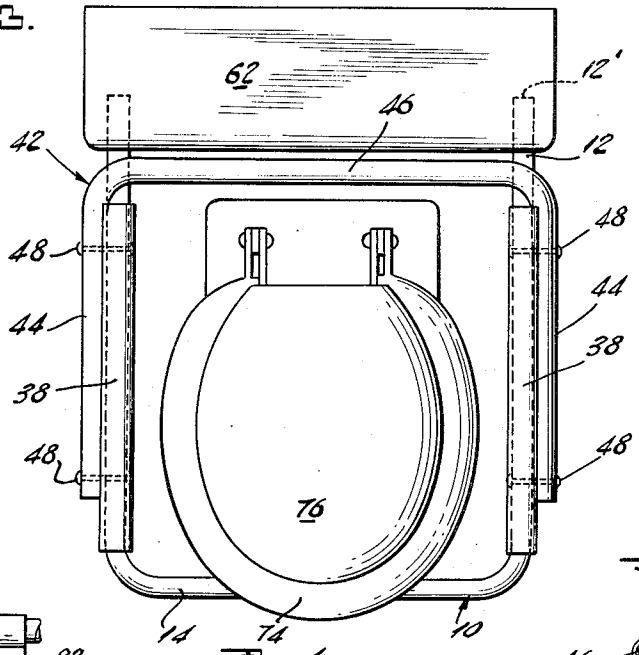


Fig. 5.

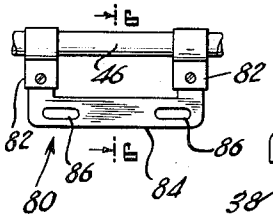


Fig. 6.

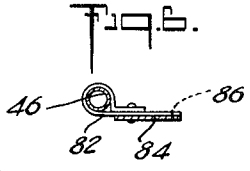
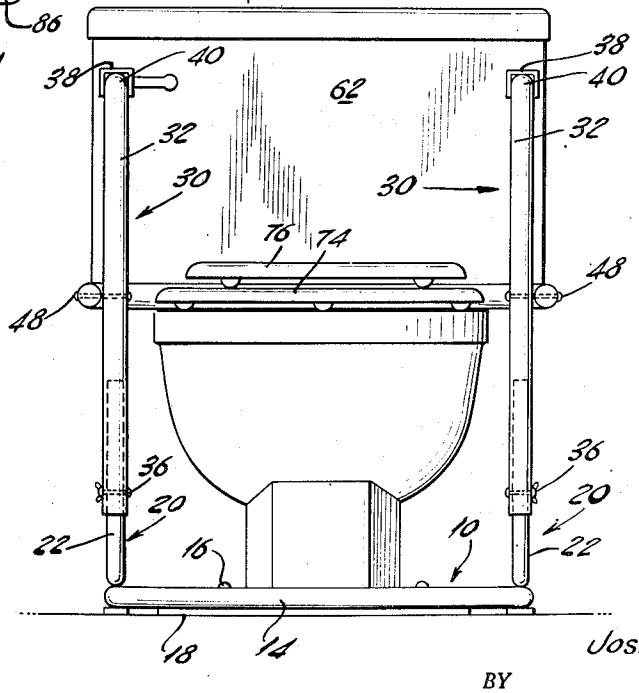


Fig. 4.



INVENTOR.
JOSEPH CHASIN

BY
William R. Liberman
ATTORNEY

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2,773,542

SUPPORT DEVICE FOR PHYSICALLY HANDICAPPED

Joseph Chasin, New York, N. Y.

Application March 18, 1953, Serial No. 343,071

7 Claims. (Cl. 155—1)

The present invention relates to an improved support device for the physically handicapped and inexpert, and it relates more particularly to an improved support device to assist the physically handicapped and inexpert in the use of commodes and similar articles.

Physical therapists, Doctors, Rehabilitation Centers, The Veterans' Administration and others working with the disabled, the physically handicapped, the aged and the infirm have long recommended the use of hand grip supports at the commode. Such supports are not only a safety factor but they very often make possible the use of the commode by the patient without the aid of an attendant. The use of these supports are indicated in cases of heart conditions, arthritis, paraplegia, paralysis resulting from stroke, muscular dystrophy, multiple sclerosis, cerebral palsy, Parkinson's Disease, amputees, polio, old age infirmities and temporary illnesses, to mention but a few.

Usually, when supports at the commode are required by a patient, the solution is either a permanent and costly railing built into the tile work of the bathroom, or a poorly designed makeshift device, or, too often, no support at all because of the trouble involved in getting a railing designed and made up. Furthermore, the conventional supports, when used in the home toilet, are generally unslightly and detract greatly from the appearance of the room.

It is thus a principal object of the present invention to provide an improved support device for the physically handicapped, the disabled, the inexpert, the aged and the infirm.

Another object of the present invention is to provide an improved support device to assist the physically handicapped and inexpert in the use of commodes and similar articles.

Still another object of the present invention is to provide an improved support device for use with a commode to assist the physically handicapped in transferring from a wheelchair or crutches to a commode.

A further object of the present invention is to provide an improved support device for assisting the physically handicapped in the use of a commode, which device is of simple and rugged construction and possesses an attractive appearance.

A still further object of the present invention is to provide a support device for the physically handicapped, which device is highly portable and may be employed with a commode without any attachment thereto, or the device may be removably secured to the commode for greater rigidity.

Another object of the present invention is to provide a support device of the aforesaid nature which is adjustable, simple to assemble, and collapsible to permit its easy storage and transportation.

The above and further objects of the present invention will become apparent from a reading of the following description taken in conjunction with the accompanying drawings, wherein

Figure 1 is a perspective view of an improved support device in accordance with a preferred embodiment of the present invention;

Figure 2 is a side elevational view of the improved device illustrated as being applied to a conventional commode;

Figure 3 is a top plan view of the improved support device illustrated in operative position as employed with a conventional commode;

Figure 4 is a front elevational view thereof;

Figure 5 is a detail plan view of a mechanism for removably securing the support device to a commode; and

Figure 6 is a sectional view taken along line 6—6 of Figure 5.

The present invention broadly contemplates the provision of a support device for the physically handicapped comprising a substantially U-shaped horizontal base member having side legs, a cross leg and a rearwardly directed open end, a substantially U-shaped frame member disposed above said base member and having side legs, a cross leg, and having a forwardly directed open end, and a pair of laterally spaced vertically extending members secured to the respective side legs of said base member and said frame member.

In accordance with a preferred embodiment of the present invention, a transversely extending, upwardly directed vertical lower U-shaped member is mounted on each of the side legs of the base member. Downwardly directed, corresponding upper U-shaped support members formed of tubular material slidably engage the lower U-shaped member whose legs telescope the legs of the upper support member. The leg portions of the lower support members are provided with a plurality of vertically spaced, laterally extending holes, and each of the leg portions of the upper support members is provided with a laterally extending hole which may be brought into alignment with a selected set of the holes in the lower leg portions and secured in position by means of suitable bolts and wing nuts, thereby to permit adjustment of the support device. The frame member is secured in a horizontal position to the side legs of the upper support member at a level below the cross member. Suitably formed arm rests are mounted on the cross arms of the upper U-shaped support members. The various members forming the approved structure are collapsibly assembled by means of bolts and wing nuts. In order to permit a rigid, semi-permanent installation of the support device, a rearwardly extending securing member is mounted on the cross arm of the frame member and is provided with laterally spaced openings permitting its fastening to a toilet bowl by means of the toilet seat hinge posts.

Reference is now made to the drawings and more particularly to Figures 1 to 4 thereof, which illustrate a preferred embodiment of the present invention, the method of applying the same to a commode and its position in use. The numeral 10 generally designates a rearwardly directed U-shaped base member having side legs 12 and a cross leg 14. It should be noted that when the direction of a U-shaped member is referred to, it is meant to designate the direction in which the free ends of the side legs are pointed. Secured to the underface of the base member 10 by means of suitable fasteners 16 are non-skid footings 18 formed of strips of rubber or other similar material thereby minimizing the possibility of lateral or transverse movement of the support device while in use. Mounted on each of the side legs 12 of the base 10 is a lower support member 20 of U-shaped configuration and upwardly directed, and provided with vertically ex-

tending side legs 22 and a cross leg 24 removably secured to the respective base side legs 11 by means of suitable fasteners 26. The lower support members 20 are parallel, and disposed intermediate the ends of the corresponding base side legs 12, and each of the support side legs 22 has a plurality of vertically spaced lateral diametric openings 28 formed therein, the corresponding openings 28 in each leg 22 being at substantially the same horizontal level.

A pair of upper vertical support members 30 are provided, each being substantially U-shaped downwardly directed, and formed of a tubular material whose inner diameter is substantially equal to the outer diameter of the material forming the lower support members 20. The support members 30 have side legs 32 having lateral diametric openings 34 formed therein adjacent the lower ends of the side legs 32 which openings 34 are of substantially the same diameter as the openings 28 in the lower support side legs 22. Furthermore, the lower support side legs 22 slidably telescope the upper support side legs 32 and are adjustably locked at the desired level by means of bolts and wing nuts or other suitable fasteners 36 which pass through the openings 34 and selected openings 28. A pair of downwardly directed channel shaped arm rests 38 are supported on and embrace the cross legs 40 of the upper support member 30 and extend along and project beyond the ends of the cross legs 40.

A reinforcing and stiffening frame member 42, likewise of U-shaped configuration and forwardly directed, is provided with side legs 44 connected by a cross leg 46. The frame member 42 is horizontally disposed, and removably connected to the upper supports 30 by means of wing nuts and bolts 48 passing through aligned openings in the upper support side legs 32 and the frame member side legs 44, which are in contact with side legs 21 at points substantially intermediate the ends thereof. It should be noted that the frame cross leg 46 is slightly forward of the free ends 12' of the base side legs 12 and the forward ends of the frame side legs 44 extend just forward of the support front side legs 32. Supported in the side legs 32 of the upper support 30, directly below the frame member 42, are receptacles or pockets as 50 which may be used as magazine or book racks, or for any other desirable purposes. The improved support device may be made of any suitable material. However, for reasons of portability, the base and frame members 10, 42, and the support members 20, 30 are preferably formed of tubular members of a light metal such as aluminum or magnesium.

In Figures 2 to 4 of the drawings, the improved support device is shown applied to and used with a conventional commode including a bowl 60 and a flush tank 62 connected thereto by a pipe elbow 64. The bowl 60 is provided with an upper flange 66 having a pair of laterally spaced vertical holes formed in the rear portion thereof and engaging depending threaded shanks 68 of hinge posts 70, which are secured by nuts 72. Rotatably connected to the hinge posts 70 in the usual manner are a toilet seat 74 and a lid 76. In locating the improved support device in its proper operable position in relation to the commode, it is tilted upwardly, as illustrated in Figure 2, around the cross leg 14 of the base 10 until the frame cross leg 46 clears the closed lid 76, and is then pushed to the position shown in Figures 3 and 4 of the drawings and permitted to come to rest with the frame cross leg 46 positioned just to the rear of the bowl 60 at the level of the flange 66. It is apparent that access to the commode is unimpeded, and suitable reinforced arm rests provided.

For such cases where a spastic condition exists or where the movement of a heavy person might be conducive to unsteadiness of the support device, a supplementary fitting 80 is provided to firmly anchor the frame to the hardware of the commode. The fitting 80 includes a pair of laterally spaced brackets 82 hingedly engaging

the frame cross leg 46 and supporting between them a flat strip 84 having a pair of laterally spaced slots 86 formed thereon. In securing the support device to the commode, the level of the frame members 42 is adjusted as earlier described, so that the strip 84 is at substantially that of the top of the bowl 60. The hinge posts 70 are removed by disengaging the nuts 72 from the threaded shanks 68, the strip 84 placed on the bowl flange 66 with the slots 86 registering with the holes in the flange 66, and the hinge posts 70 replaced and the nuts 72 relocated and tightened, thereby securing the support device in a fixed position and obviating the possibility of its shifting or tilting.

While there have been described and illustrated preferred embodiments of the present invention, it is apparent that numerous alterations and omissions may be made without departing from the spirit thereof.

I claim:

1. A support device for the physically handicapped consisting of an open-ended and continuous U-shaped base member having a front cross leg and rearwardly directed side legs, non-skid elements affixed to and extending along the underfaces of said side legs, the bottom surface of said non-skid elements lying along a common, substantially horizontal plane, a pair of laterally spaced upright legs mounted on the rear portions of said side legs, a horizontal cross member secured to and extending between said upright legs at points between the ends thereof and being vertically adjustable relative to said base member, and forwardly directed arm rest members mounted on said upright legs above said cross member.

2. A support device for the physically handicapped consisting of an open-ended and continuous U-shaped base member having a front cross leg and rearwardly directed side legs, non-skid elements affixed to and extending along the underfaces of said side legs, the bottom surfaces of said non-skid elements lying along a substantially common horizontal plane, a pair of laterally spaced substantially parallel U-shaped side members having cross legs affixed to said base member side legs and having upwardly directed front and rear legs, a cross member secured to and extending between said upwardly directed rear legs at points above the bottom thereof, and arm rest members mounted on said side members above said cross-member.

3. A support device in accordance with claim 2, wherein said cross member is of U-shaped configuration and is vertically adjustable relative to said base member.

4. A support device in accordance with claim 2, wherein said arm rest members are vertically adjustable.

5. A support device for the physically handicapped, comprising a horizontal, open ended U-shaped base arm having rearwardly directed side legs, non-skid elements affixed to and extending along the underfaces of said side legs, the bottom surface of said non-skid elements lying along a common, substantially horizontal plane, a vertical support mounted on each of said base member side legs and including a lower U-shaped member having upwardly directed front and rear legs and a cross leg connected to a corresponding base member side leg, and an upper U-shaped member having a cross leg and downwardly directed front and rear side legs secured to the corresponding side legs of said lower U-shaped member, said upper and lower U-shaped members being vertically adjustable relative to one another, means for locking said U-shaped members in said predetermined relative positions, and a substantially horizontal cross arm supported by and between said rear side legs and above said U-shaped base member, the front of said device being substantially unimpeded above said base member in a direction toward the rear of said device.

6. A support device in accordance with claim 5, including arm rests mounted on the cross legs of said upper U-shaped support members.

7. A support device in accordance with claim 5, where-

in said side legs of said vertical support U-shaped members are telescopically interconnected.

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