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DEVICE FOR ASSISTING INVALIDS INTO AND OUT OF BATHTUBS

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FIG.2.

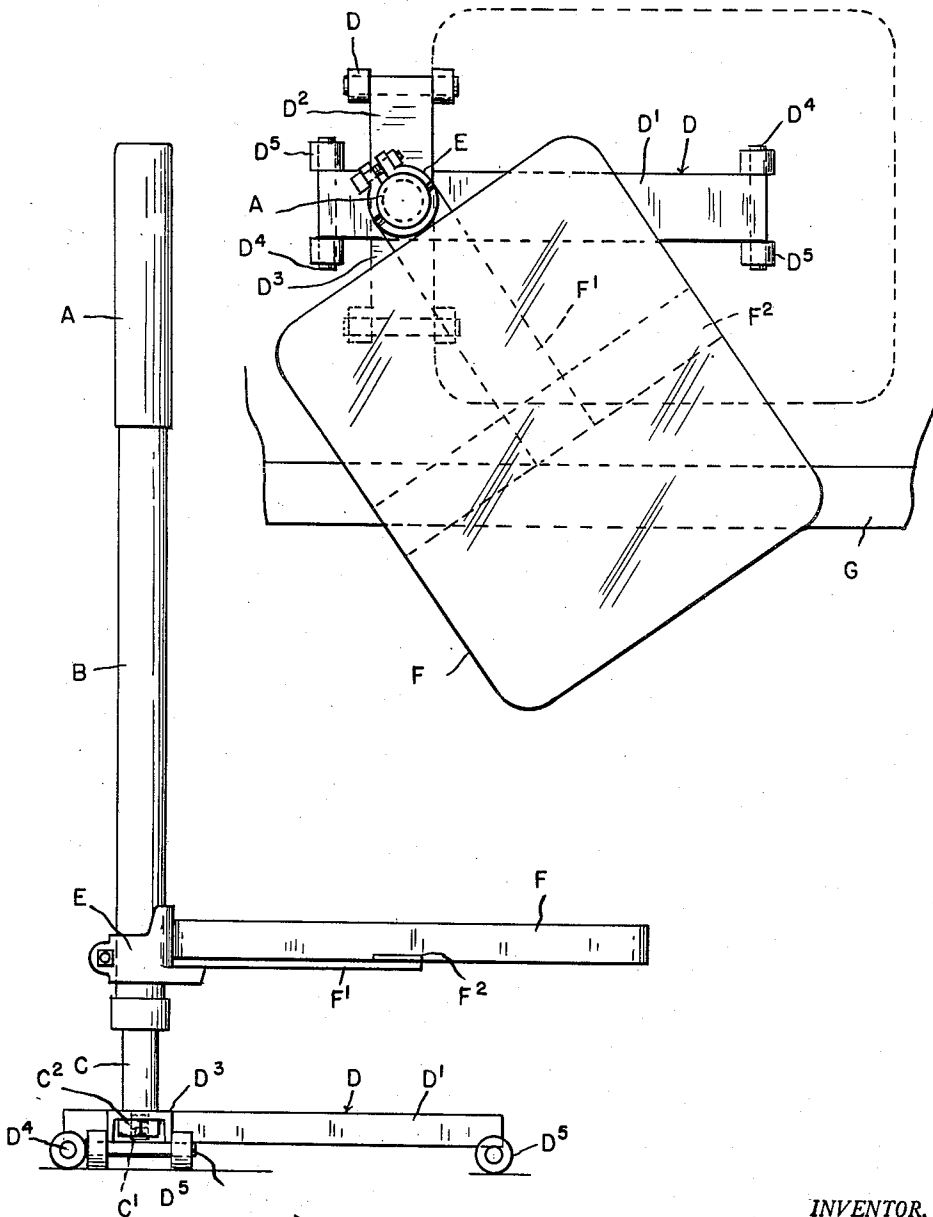


FIG.1.

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DEVICE FOR ASSISTING INVALIDS INTO
AND OUT OF BATHTUBS

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3 Claims. (Cl. 155—36.5)

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The invention relates to means for assisting invalids into and out of bathtubs and has for its object the obtaining of a simple and inexpensive construction of portable device which may be used in connection with any bathtub, and which will enable an assistant with the expenditure of very little effort to help an invalid into and out of the tub.

To this end the invention consists in the construction as hereinafter set forth.

In the drawings:

Fig. 1 is a side elevation of the device; and

Fig. 2 is a plan view thereof as placed in a bathtub showing in full lines the position of the seat for the invalid as overlapping the rim of the tub and in dotted lines a position in which it is stably supported.

My improved apparatus includes as an element thereof a type of fluid operated lifting jack, the construction of which is not a part of my invention and is therefore not illustrated or described in detail. A jack of such construction is manufactured by the Vulcan Manufacturing Co., Inc., of Winona, Minnesota, and is similar to the construction in patents to Nilson 2,146,403, February 7, 1939, and Reissue 21,112, June 13, 1939. Generally described the jack includes a plurality of telescopically engaged tubular members A, B, C, the upper member A constituting an operating member of a pump for forcing fluid into a common chamber within the members B and C, thereby relatively extending the latter members to raise the load. As manufactured the jack is provided with a member clamped upon the tube B which has a hook pivotally attached thereto for engaging the load such, for instance, as the bumper of a motor car. Also the lower tubular member of the jack has a universal pivotal support on a base. In my apparatus I dispense with the pivotal support and rigidly attach the member C to a base member D. This is preferably formed by cross members formed of channel bars including the longitudinally extending member D' and cross members D² and D³ welded thereto. The jack is connected at the point of intersection preferably by threading the lower end portion of the member C, as indicated at C', passing it through an aperture in the member D' and securing it by clamping nuts C². The ends of the members D', D² and D³ have rods or pins D⁴ welded thereto to extend transversely thereof with sleeves D⁵ of resilient material, such as rubber hose, upon the opposite ends of said pins forming supporting shoes. Thus the base may be placed within a bathtub to rest upon the bot-

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tom thereof and the resilient sleeves D⁵ will prevent any scratching or injury to the tub. In place of the lifting hook, I clamp upon the tube B a member E for supporting a seat F. Preferably the member E has welded thereto a metallic plate F' with a cross member F² at the outer end of said plate, to which members the seat F of wood or other suitable material is attached. Thus by reciprocating the member A the member B and seat F may be raised to the desired height above the member C and base D. There is also provision of means (not shown) by which the fluid within the members B and C may be exhausted to lower the seat.

With the construction as above described, it is obvious that a load upon the seat may be stably supported provided that the center of gravity is inside of the supporting area of the base. If, however, the seat is turned (as is possible by the swiveling of the tube B on the tube C) so as to extend laterally outward, the center of gravity will no longer be within a supporting area of the base and, therefore, there will be lack of stability. If the base D is placed within the tub the invalid can be seated only when the seat F is turned outward to overlap the rim of the tub, such as indicated at G. In such position the device would be unstable to support the load. Such unstability may be overcome by using the jack for an additional function viz., a lever arm for holding the base D from tipping. Thus the attendant when he assists the invalid to sit upon the seat F can at the same time take hold of the upper section A of the jack and with comparatively little effort hold this from lateral movement thereby preventing tipping of the base. As soon as the invalid is seated, the seat F is swung inward over the base D which will then afford stable support. The seat with the invalid thereon is lowered by depressing the member A to its limit which opens a valve (not shown) releasing the fluid and lowering the jack. When the invalid is to be removed, the assistant pumps up the jack to raise the seat above the rim of the tub, whereupon the seat may be swung outward over the rim.

The apparatus as above described can be manufactured at very low cost and is light in weight and portable. It thus has a decided advantage over permanently installed seat elevating and lowering mechanisms, which are not only much more expensive to manufacture and install but also form a most undesirable obstruction to the normal use of the bathtub.

What I claim as my invention is:

1. A portable device for assisting an invalid

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into and out of a bathtub, comprising a fluid operated jack of the type including a plurality of telescopically engaged tubes, the uppermost tube constituting an actuating member for relatively extending two other of said tubes; a base of restricted dimensions rigidly attached to the lowermost of said tubes adapted to rest upon the bottom of and within said tub, and a seat for the invalid attached to the upwardly extendable tube adapted to be swung by the relative swiveling of said tubes from a position extending over the rim of the tub to a position within the same where it is stably supported by said base, said jack in the extended position of its telescopic tubes constituting a lever arm by which an assistant may hold said base from tipping when the center of gravity of the load on the seat is outside the supporting area of the base.

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2. The construction as in claim 1 in which said base is formed by cross bars with the jack located above and rigidly secured at the intersection of said bars.

3. The construction as in claim 2 in which said cross bars have resilient shoes at the outer ends thereof for resting upon the bottom of the tub.

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