Sept. 26, 1950 S. C. REAGAN, SR., ET AL 2,523,447

BACK-SUPPORTING ATTACHMENT FOR BATHTUB HEADRESTS

Filed Sept. 20, 1949 2 Sheets-Sheet 1

Fig. 1.

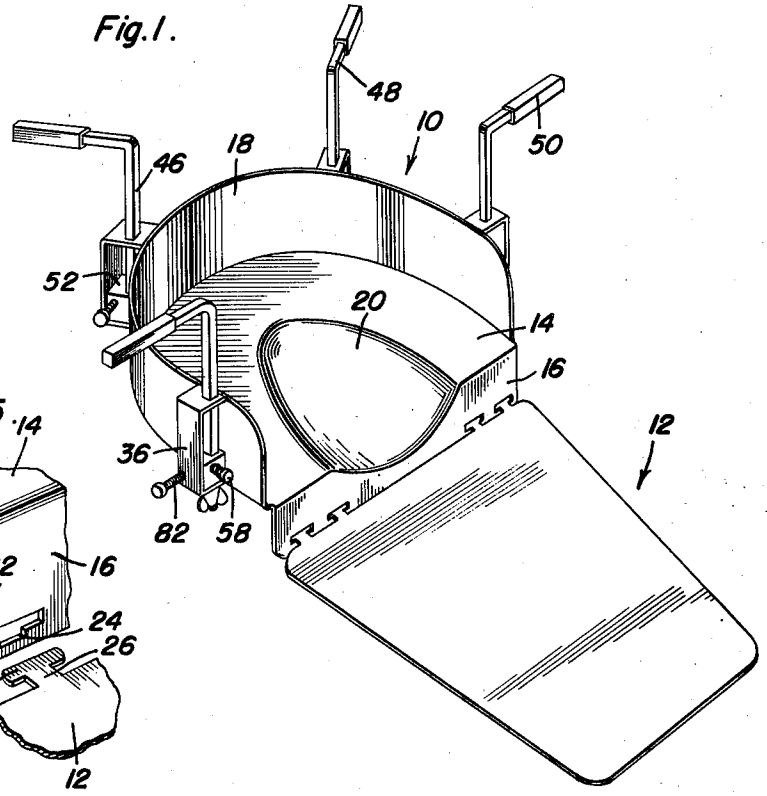
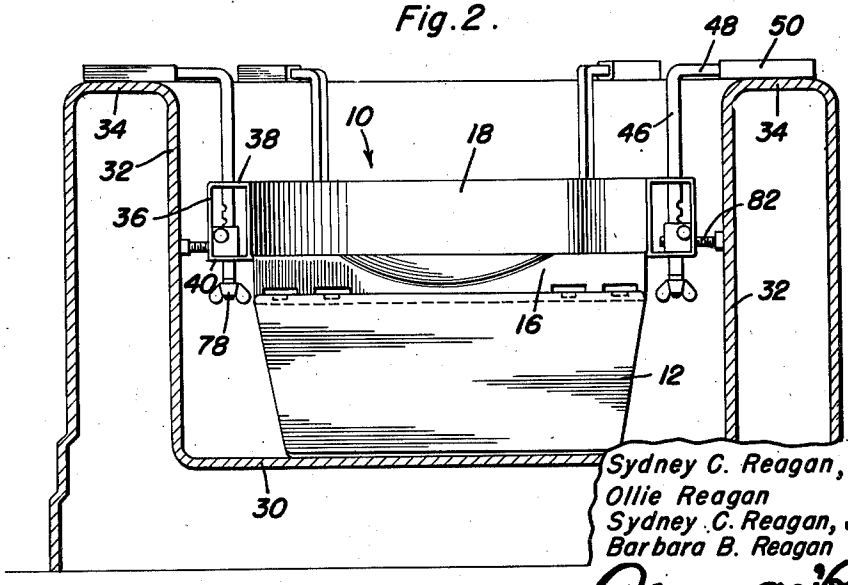


Fig. 5

Fig. 2.



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Filed Sept. 20, 1949 2 Sheets-Sheet 2

Fig. 3.

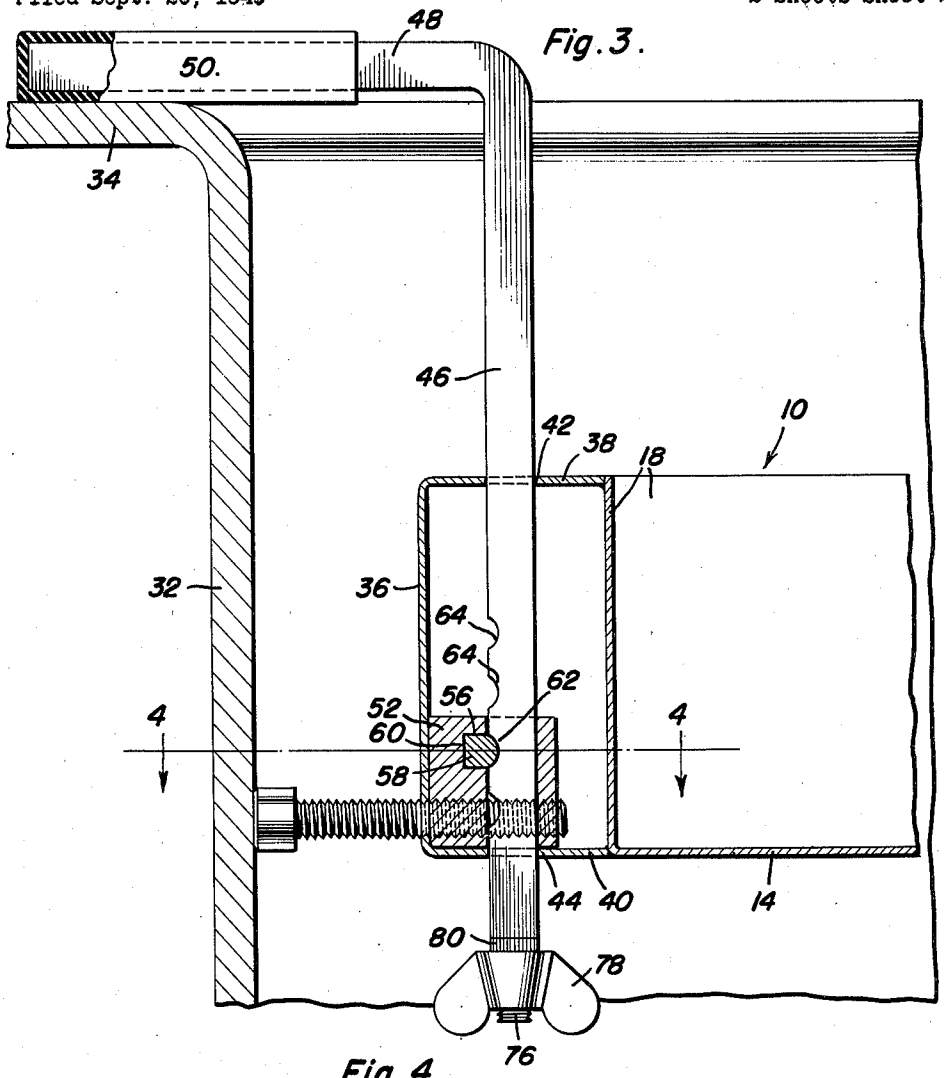


Fig. 4.

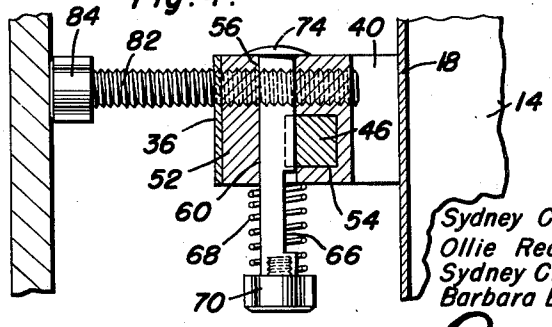
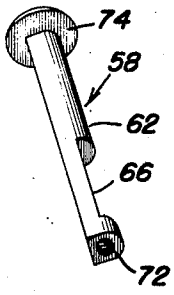


Fig. 6.



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UNITED STATES PATENT OFFICE

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BACK SUPPORTING ATTACHMENT FOR BATHTUB HEADRESTS

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Application September 20, 1949, Serial No. 116,736

6 Claims. (Cl. 4—185)

1

This invention comprises novel and useful improvements in a back supporting attachment for bath tub head rests and more specifically pertains to a back supporting attachment which may be removably secured to and forms an accessory for a bath tub head rest, the read rest and back attachment being specifically adapted for convenient removal but secure engagement with any conventional bath tub.

This invention contains subject matter similar to but representing an improvement over the bath tub head rest disclosed and patented in the prior patent of Sydney C. Reagan, Sr., No. 2,424,786, patented July 29, 1947.

The objects of this invention are to provide a bath tub accessory which may be applied to or removed from a conventional bath tub with facility and celerity without marring the finish or requiring alteration in the structure of the tub, and which is adjustable to comfortably support the head and the back of the user at various elevations and positions.

Further objects of the invention are to provide an attachment wherein the head rest and the back rest are assembled together in a novel and improved manner to facilitate their engagement or disengagement as desired, to provide an attachment of a very simple and inexpensive construction, yet highly efficient for the purposes intended, and to provide an improved adjusting means for regulating both the height of the bath tub head rest and its lateral position with reference to the sides of the bath tub.

These, together with various objects and features of the invention which will later become apparent, are attained by the present invention, a preferred embodiment of which has been illustrated by way of example only in the accompanying drawings, wherein:

Figure 1 is a perspective view of the attachment showing the assembled position of the head rest and back rest;

Figure 2 is a vertical transverse sectional view through a portion of a bath tub showing the invention applied thereto;

Figure 3 is an enlarged fragmentary view of a portion of Figure 2 showing in greater detail the means for adjustably supporting the head rest upon a bath tub;

Figure 4 is a horizontal sectional detail view taken substantially upon the plane of the section line 4—4 of Figure 3 and illustrating further details of the adjusting and locking mechanism of the invention;

Figure 5 is a group perspective fragmentary detail view showing the construction of the novel detachable engaging means for securing the back rest to the head rest; and,

2

Figure 6 is a perspective view of a locking plunger forming a part of the adjusting means.

Referring now more specifically to the accompanying drawings, wherein like numerals designate similar parts throughout the various views, it will be seen that the attachment consists of a head rest element indicated generally by the numeral 10 together with a back rest identified by the numeral 12. Both of these elements may conveniently be formed from inexpensive sheet metal, a suitable plastic or other lightweight but serviceable material.

The head rest 10 consists of a unitary sheet of material contoured to form a substantially flat base 14 having a downwardly turned flange 16 at its front portion, together with an integral upwardly extending marginal wall 18. Centrally and forwardly of the base 14, the latter is provided with a dished-out depression 20 which forms a recess contoured to comfortably receive the head of the user. If desired, a suitable cushioning element could be provided upon the recessed portion 20 and/or the base 14.

Adjacent its lower edge, the depending flange 16 is provided with a plurality of slots 22, which as shown in Figure 5 are each formed with a centrally disposed recess 24 extending downwardly from the lower wall of the slots, each slot being adapted to detachably receive and retain therein a fastener disposed on the upper edge of the back rest 12, this fastener including a neck portion 26 adapted to fit in the recess 24, and a laterally enlarged portion 28 adapted to extend rearwardly of the bottom edge of the slot 22 for retaining the back rest therein in a manner which will be apparent from Figure 1.

The back rest itself may conveniently comprise a single sheet of material and is preferably wider at its top to conform to the width of the flange 16, but tapers toward a relatively narrower base portion which as shown in Figure 2 is adapted to rest upon the bottom portion 30 of a bath tub having side walls 32 and a top wall or rim 34. Suitable cushioning means could be applied to the sides and/or lower edge to prevent marring the enamel finish of a tub.

An improved means is provided for adjustably supporting the head rest and consequently the attached upper end of the back rest from the top wall or rim of the bath tub, and for positioning the side walls of the head rest adjustable laterally with respect to the side walls 32 of the bath

tube in a secure manner. For this purpose, a plurality of U-shaped brackets 36 have their upper and lower leg portions 38 and 40 welded or otherwise rigidly secured to the head rest side wall 18 preferably adjacent the upper and lower edges thereof. These brackets serve the dual functions of strengthening or reinforcing the relatively thin material of the side wall 18, as well as constituting a supporting bracket by means of which the head rest is adjustably mounted in the bath tub. Alternatively, the adjustable fastening brackets and supporting means of the above mentioned patent could be utilized.

The upper leg 38 of the bracket is provided with a preferably square recess and aligned therewith is a similar square recess 44 in the bottom leg 40, a downwardly extending shank portion 46 of a supporting rod having a horizontal arm 48 slidably received through these apertures.

The shank 46 is preferably square in cross section so that the same may be slidably received in the apertures 42 and 44, but is prevented from rotating therein, the horizontal portion 48 being preferably provided with a sleeve 50 of rubber or other cushioning material which will serve to prevent marring of the top wall 34 of the bath tub by the very engagement of the arm 48 thereon, and will further tend to prevent slipping of the arm upon the top of the tub.

Obviously, as many brackets and supporting arms may be provided about the wall 18 and in such positions as may be deemed to be desirable.

In order to adjustably attach the shank 46 of the supporting arm to the bracket 36, a block 52 of any convenient size and shape is welded or otherwise rigidly attached within the bracket and secured to the bottom leg 40 and the side wall 36 thereof. This block 52, as shown in Figure 4, is provided with a square bore or passage 54 for receiving the above mentioned shank 46 therethrough. A transversely extending passage 56 extends laterally through the block 52 and intersects the bore 54 as will be apparent from Figures 3 and 4. It will thus be seen that the shank 46 thus extends into a portion of the passage 56, while a plunger 58, see Figure 6, is slidably received in the transverse passage 56 and likewise extends into the bore 54. This plunger preferably has a flat or milled portion 60 along one side thereof and extending longitudinally of the plunger together with parallel side walls, to prevent rotation of the plunger 54 or transverse passage 60, the plunger having a rounded side of a cylindrical shape as at 62 for locking engagement in correspondingly shaped concave recesses 64 which are longitudinally spaced along the lower end of the shank 46. Adjacent one end, the plunger 58 is provided with a recess or cut-out portion 66 which is adapted to be positioned in registration with the bore 54, so that the shank 46 is free to slide through the bore and through the registering recess 66 without hinderance; but when the curved portion 62 of the plunger is placed in registration with the selected recess 64, sliding movement of the shank 46 is prevented.

Obviously, the locking or fastening plunger may be of any desired shape, within the principles of operation just described.

Preferably, a compression spring 68 surrounds the plunger 58 and has abutting engagement with the above mentioned block 52 and with a removable plunger operating head 70 which may be screw threadedly engaged into a screw threaded aperture 72 in the end of the plunger 58. At its other end, the plunger is preferably provided with an integral enlargement or head 74 which prevents withdrawal of the plunger from the transverse bore 60 under the influence of the spring 68. It will thus be seen by reference to Figure 4 that the spring urges the plunger into its locked position, and that the user may depress the plunger head 70 and cause registration of the plunger and notch 66 with the shank 46 in order to prevent vertical movement of the shank through the block 52 for raising or lowering the head rest relative to the supporting arms.

In order to prevent unintentional withdrawal of the head rest from the supporting arms, and also to constitute an additional adjusting means therefor, the lower, laterally reduced ends of the shanks 46 are externally threaded as at 76, for the reception of wing nuts 78, having square shouldered portions 80 at their upper ends. These portions are adapted to be slidably received in the apertures 44 whereby the wing nuts will support the bracket in the head rest, and whereby the apertures and brackets will prevent rotation of the wing nuts. An important advantage of this construction is that the threads 76 may extend but a small distance along the shank 46, since further adjustment of the shank with respect to the head rest may be effected by the above mentioned plunger and notches 64.

Each of the support brackets is provided with means for adjusting the head rest laterally between the sides of a bath tub, in order to position the head rest with respect thereto. This last feature is desirable since it facilitates the adaptation of the device to different sizes and shapes of tubs and is preferably effected by providing an adjusting screw 82 laterally threaded through a suitable bore through the bracket 36 and block 52, the outer end of the screw having a head 84 of a cushioning and resilient nature, such as rubber or the like, or a rubber covering over the screw head to improve the gripping action and obviate marring of the tub.

As will be readily understood, it is possible to make the shanks 46 of various other polygonal shapes such as square, with correspondingly shaped apertures 42 and 44, and bores 54, it being understood that the recesses 64 may be formed upon each of the faces of the shank 46 to permit the latter from being angularly adjusted within the supporting brackets. By this means, the supporting arms could be appropriately positioned to most effectively adapt the device to be supported upon different shapes and sizes of bath tubs. Further, it is evident that other detachable connections than those shown in Figure 5 could be employed to removably secure the back rest 12 to the head rest 10, whereby the head rest alone may be employed or the same may be used in conjunction with the back rest.

It will be understood that the present device will readily adapt itself to such important features as supporting the head, end or back and shoulders of a user undergoing various medical treatments in the tub; contributing to the ease and comfort of invalids or other bathers; provides a device which may be easily and readily disassembled for cleansing, sterilizing or repairs, and which may be readily adjusted to position the head rest at varying elevations and various lateral positions in a tub.

From the foregoing, the construction and operation together with its obvious advantages will be readily apparent and further explanation is believed to be unnecessary. However, since nu-

merous modifications and changes will readily occur to those skilled in the art after a consideration of the foregoing specification and accompanying drawings, it is not desired to limit the invention to the exact construction shown and described, but all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claims.

Having thus disclosed and described the invention, what is claimed as new is as follows:

1. A bath tub accessory comprising a head rest for supporting the head of a bather, a back rest detachably supported by said head rest and bearing at its lower end upon the bottom of a bath tub, supporting means for mounting the head rest upon the side walls of a bath tub, said head rest having slots therein, said back rest having lugs removably engaged in said slots, said head rest having a downturned flange, said slots being formed in said flange.

2. A bath tub accessory comprising a head rest for supporting the head of a bather, a back rest detachably supported by said head rest and bearing at its lower end upon the bottom of a bath tub, supporting means for mounting the head rest upon the side walls of a bath tub, said last means comprising brackets secured to said head rest supports having arms for engagement with the rim of a bath tub and depending shanks slidable through said brackets, means for adjustably locking said shanks to said brackets.

3. A bath tub accessory comprising a head rest for supporting the head of a bather, a back rest detachably supported by said head rest and bearing at its lower end upon the bottom of a bath tub, supporting means for mounting the head rest upon the side walls of a bath tub, said last means comprising brackets secured to said head rest supports having arms for engagement with the rim of a bath tub and depending shanks slidable through said brackets, means for adjustably locking said shanks to said brackets, said last means comprising recesses vertically spaced in said shank and a laterally slidable plunger in said bracket engageable in said recesses.

4. A bath tub accessory comprising a head rest for supporting the head of a bather, a back rest detachably supported by said head rest and bearing at its lower end upon the bottom of a bath tub, supporting means for mounting the head rest upon the side walls of a bath tub, said last means comprising brackets secured to said head rest supports having arms for engagement with the rim of a bath tub and depending shanks slidable through said brackets, means for adjustably locking said shanks to said brackets, said last means comprising recesses vertically spaced in said shank and a laterally slidable plunger in said bracket engageable in said recesses, said plunger having a notch selectively registrable with said shank to permit free sliding movement of the shank.

5. The combination of claim 1 wherein said supporting means includes means for engaging the side walls of a bath tub and adjusting the head rest laterally thereof.

6. The combination of claim 1 wherein said supporting means includes means for engaging the side walls of a bath tub and adjusting the head rest laterally thereof, said last means including laterally adjustable members, cushions on the ends of said members for engagement with the side walls of a bath tub.

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