Feb. 28, 1967 C. T. ROBERTS 3,306,658

CONTOURED BODY REST

Filed March 8, 1966

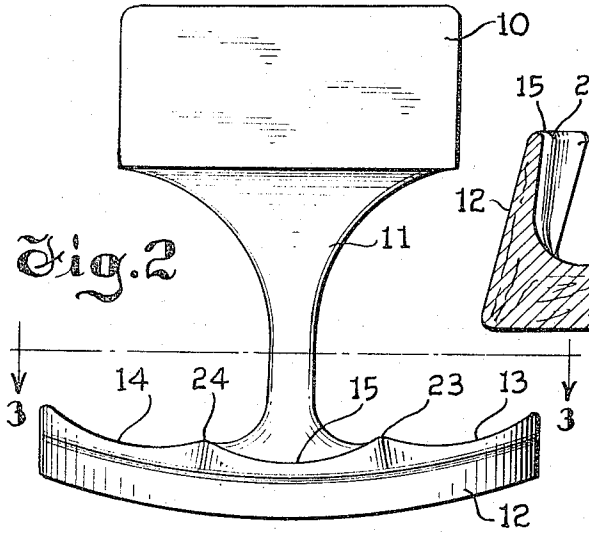


Fig. 2

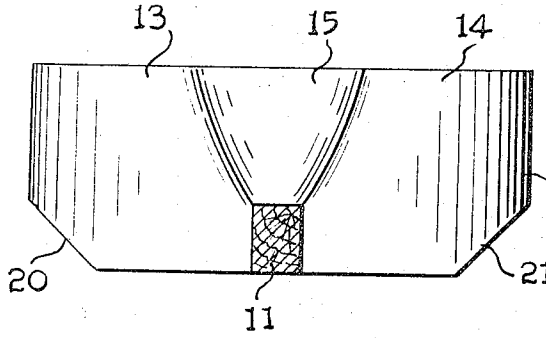


Fig. 3

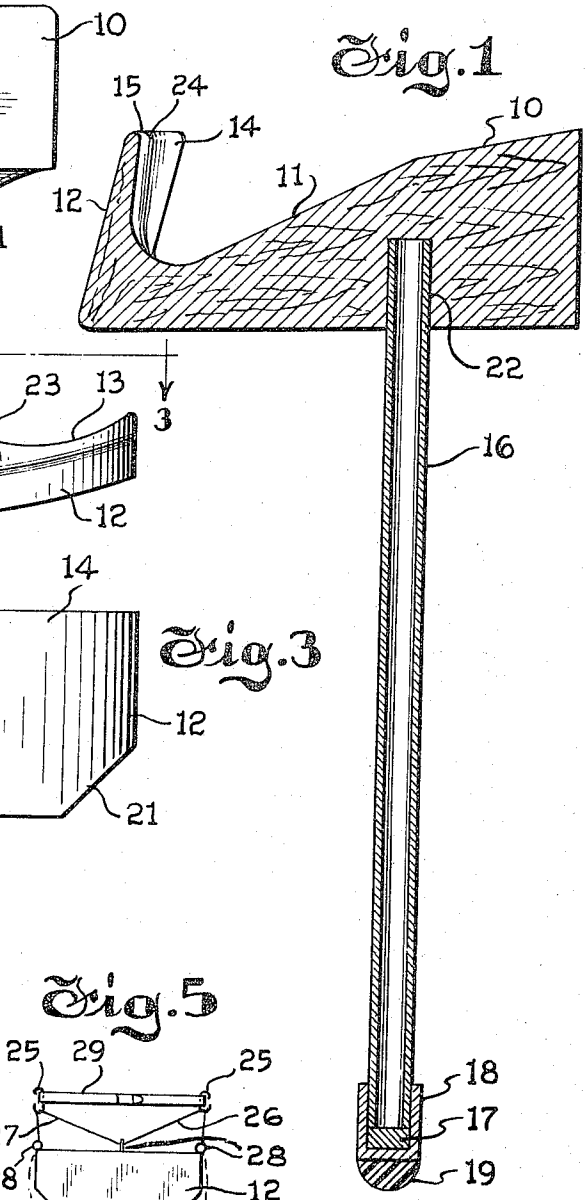


Fig. 1

Fig. 4

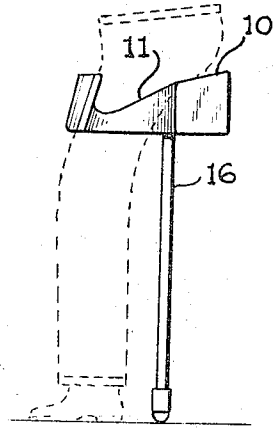
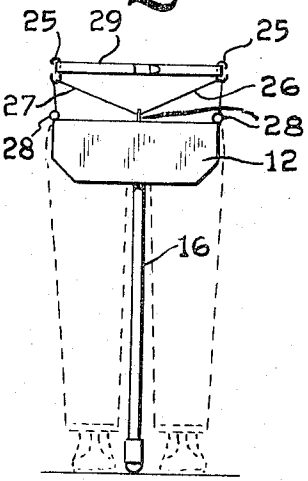


Fig. 5



INVENTOR

Charles T. Roberts

By Ralph R. Pittman

Agent

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CONTOURED BODY REST

Charles T. Roberts, 1705 W. 6th St., Little Rock, Ark. 72201

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This application is a continuation in part of my earlier filed pending application Serial No. 431,515, filed February 10, 1965, now abandoned. This invention relates to body rests or props adapted to embrace a portion of the body when leaned upon by operators while carrying out activities requiring movement in a radial as well as rotary direction over a limited area. One such an operator is a dentist engaged in the practice of his profession.

The duties of a practising dentist may require from time to time the concurrent use of both hands and one foot (for speed control of engine) along with physical movements with respect to the patient between positions at the rear of the patient's head for operating upon the upper teeth and positions laterally in front of the patient for operating upon the lower teeth. Such activities, when carried out from a standing position as is now common practice, necessarily result in an imbalance in the weight carried by one leg relative to that of the other, and this imbalance may even result in bodily deformity, particularly of the hip and thigh.

A variety of body props, rests or supports have been heretofore suggested, including some forming a part of the dental chair. None of the prior art devices show or suggest a light, simple and inexpensive device so formed as to embrace the body of the user and thereby be frictionally attached thereto in response to a wedging action when a portion of the weight of the user is applied to the support from a leaning and standing position.

The present invention is not a seat, being adapted only for use in a standing position, in which the user may maintain stability while moving between a plurality of positions in each of which substantially all body weight may be carried by and divided between one leg of the user and the body prop.

An object of the invention is the provision of a light, inexpensive, compact and sturdy body rest which will effectively carry a portion of the weight of the user's body when leaned upon.

Another object is the provision of a single-leg body prop having body engaging portions formed to wedge the body of the user, in response to the application of body weight on the prop, into close, tight body contact with certain pre-selected body contours of sufficient contact area to removably affix the prop to the body by virtue of the maintenance of bodily weight thereon, so that many tasks normally requiring movements while standing may be accomplished from a resting position and without the use of any sort of attaching harness.

A further object is to provide a single-leg body rest embodying a swivel component for facilitating rotary movements of the occupant.

A yet further object is the provision of a body rest which includes a contoured body-engaging member for closely fitting an anterior portion of the occupant's body, including the upper thigh portions and the trunk inguinal portions, without preventing the forward and lateral movement of either lower limb.

With these and other objects in view, which will appear as the description proceeds, my invention resides in the novel form, combination and construction of its components, and the appended claims will define the scope of the invention.

A preferred embodiment of the invention is shown in the accompanying drawings, in which:

FIG. 1 is a side elevation of the invention, shown in section;

FIG. 2 is a plan view;

FIG. 3 is a sectional view taken along the line 3—3 of FIG. 2;

FIG. 4 is a side elevational view illustrating the device fitted to the body of an occupant; and

FIG. 5 is a front elevational view of a modification of the invention.

Referring first to FIGS. 1, 2 and 3, the invention is comprised of a single tubular leg **16**, having mounted at the upper end thereof a saddle including a posterior, generally horizontally extending shelf portion **10** and an anterior upstanding plate portion **12**, generally rectangular in shape, spaced forwardly therefrom and joined rigidly thereto by a neck portion **11**, the anterior plate portion extending equidistantly outward from each side of the neck portion **11**. The upper surface of the neck portion **11** slopes downward from the upper surface of the shelf portion **10** to a position spaced from and below the upper surface of the upstanding plate portion **12**, and the respective ends of the neck portion **11** merge in coaxial tapering relationship at its respective junctions with the anterior upstanding plate portion **12** and the posterior shelf portion **10**.

The form of the saddle is such that, when a user stands astride a body rest having a leg of proper length and imposes some weight upon the posterior buttocks-engaging portion **10** (illustrated at FIG. 4) the lower torso-portion and upper thigh portions of the occupant are overlaid by and frictionally embraced between the anterior plate portion **12** and the shelf portion **10**. This results from the engagement of the anterior upper thigh portions within the upwardly extending concavities **13** and **14** and the engagement of the upwardly and divergently extending ridges **23** and **24** with the inguinal depressions of the occupant, thus firmly fitting the lower anterior trunk portion of the body to the contours of the upstanding plate portion **12** as the body slides downwardly in the saddle.

In order to assure continuous fitted contact of the body prop as the occupant moves about, it is essential that a substantial area of the lower trunk portion be overlaid by the upstanding trunk-engaging plate portion **12**, and I have found that the height of the plate portion should be preferably not less than one-fourth of the width or transverse dimension of the plate portion.

To further facilitate the contoured fitting above described, the upstanding plate portion **12** is preferably formed to slope slightly rearward from its lower edge, and the shelf portion **10** formed to slope slightly in a forward direction, and a central recess **15** is provided in the trunk-engaging plate portion above the lower outer end of the neck portion **11**.

In the event some measure of freedom of oblique forward movement of one or the other of the occupant's legs is desired, as, for example, the operation of a foot-controlled device, the respective lower corners of the upstanding plate portion **12** may be beveled as indicated by the numerals **20** and **21**.

The leg **16** extends upwardly into the opening **22** in the saddle, this opening being located at or near the center of gravity of an occupant in a normal resting position in the saddle. To facilitate rotary movement of the saddle and user, the lower end of the leg **16** is provided with a swivel construction comprising the socket **18**, into which the leg **16** loosely extends, and a bearing plate **17** at the bottom of the socket **18** upon which the leg **16** may

freely turn. A non-slip cushion tip **19** is adhered to the lower surface of the socket **18**.

In the event movement is desired over a very large area, the body rest may be modified by the addition of a harness arrangement for mechanically attaching the body rest to the person of a user, as illustrated in FIG. 5. The attachment utilizes a three-point suspension arrangement which includes a pair of straps or flexible cords **26** and **27**. One end of each strap is fastened to the screw-eye **28**, the latter being positioned at the rear center point of the posterior portion **10**, and the other end of each strap is fastened to the screw-eyes **28** at the respective outer ends of the anterior plate portion **12**. A belt **29**, to which is attached a pair of hooks **25**, extends around the waist of the occupant, and the straps extend upwardly and convergently along either side of the occupant from their points of attachment to the saddle and in engagement with the hooks. With this organization, only unhooking of the straps is required to free the body rest from the occupant.

The invention herein can of course be used by persons other than dentists, being advantageous for all operators whose activity requires bodily movement, and it will also be understood that the description and drawing herein are intended to be illustrative rather than limiting.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. A single leg body rest for occupancy by the user in a semi-standing position comprising a generally I-shaped saddle and a single leg attached to said saddle for carrying a weight imposed thereon, said saddle having a posterior buttocks-engaging forwardly and downwardly sloping shelf portion, an anterior upstanding body-engaging plate portion spaced forwardly therefrom, a centrally positioned neck portion having a downwardly sloping upper surface joining said posterior portion to said anterior portion, said upstanding body-engaging anterior portion extending outwardly at and from the forward end of the downwardly sloping neck portion and having substantially the same height as said posterior shelf portion, the rearwardly facing surface of said body-engaging portion inclining rearwardly from its lower edge and having a pair of spaced rearwardly facing concavities and a pair of spaced upwardly and divergently extending rearwardly facing ridges positioned between said concavities for registering respectively with the upper thigh and trunk inguinal portions of an occupant astride said saddle.

2. The structure defined in claim **1**, wherein said anterior upstanding body-engaging portion is a generally rectangular plate having a ratio of width to height of about four.

3. The structure defined in claim **1**, wherein said leg has swivel means associated therewith.

4. The structure defined in claim **1**, wherein the upstanding body-engaging plate portion is beveled at its respective lower corners.

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FRANK B. SHERRY, *Primary Examiner.*

F. K. ZUGEL, *Examiner.*