MECHANIC'S SEAT AND STEP STOOL

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ABSTRACT
A combination step stool and mechanic’s seat in the form of a molded plastic, generally parallelepiped configuration includes a seat on one side supported on casters on the opposite side with a step stool surface adjacent the backside of the seat and spaced from a front side surface of the seat which includes a recess tray for tools and implements.
MECHANIC'S SEAT AND STEP STOOL

CROSS REFERENCE TO RELATED APPLICATION

[0001] This is a utility application based upon and derived from prior provisional application Serial No. 60/383,206 filed May 24, 2002 for “Mechanic’s Seat and Step Stool” which provisional application is incorporated herewith by reference and for which priority is claimed.

BACKGROUND OF THE INVENTION

[0002] In a principal aspect, the present invention relates to a molded work seat which may also be utilized as a low-rise step stool.

[0003] When a worker, such as a mechanic, tradesman, or the like is required to assume a seated position in order to perform repair work, the use of a chair may not be convenient or adequate. That is, a typical chair, for example, a folding chair, may have a seat which is elevated relative to the work area. Additionally, such a chair is difficult to move from one place to another. Finally, such a chair typically will not include a means for storage of tools for easy access while using the chair or seat.

[0004] An alternative to a chair is a stool such as a three-legged stool which can be moved from place to place. A stool will typically have many of the disadvantages associated with a chair including the further disadvantage that there is no lateral or back support when sitting on a stool.

[0005] Another alternative is to utilize a creeper seat. Such a seat typically includes a metal frame mounted on a platform which, in turn, is mounted on rollers. The seat is supported by the metal frame. The rollers enable ease of movement of the creeper seat. The platform upon which the frame is mounted allows storage of tools thereon for ease of access. Lisle Corporation, Clarinda, Iowa, has marketed such seats as their Product Nos. 98302 and 98702.

[0006] Such chairs, seats and stools are either cumbersome or have other disadvantages as discussed above. Thus, there has remained a need for an improved seat construction which can be used by a mechanic or other work person and which desirably has alternative utility.

BRIEF DESCRIPTION OF THE INVENTION

[0007] Briefly, the present invention comprises a molded polymeric, step stool and seat which is in the form of a six-sided, rectangular parallelepiped and includes a first wall having casters and a second opposite side wall with a molded work seat. A third transverse sidewall connecting the top edge of the first and second walls defines a flat planar step surface. A fourth transverse wall is generally parallel to and spaced from the third wall and connects the lower edge of the first and second walls defines a floor support surface including optional floor support pads to prevent skidding of the device when it serves as a step stool. The fourth wall may also include a recess shelf for storage of tools and implements. In an additional embodiment, the first wall may include a molded step below the level of the third wall to facilitate stepping to the third wall step surface.

[0008] Thus, it is an object of the invention to provide a combination step stool and creeper seat.

[0009] It is a further object of the present invention to provide a molded polymeric combination step stool and creeper seat which is lightweight, economical, and rugged.

[0010] Yet another object of the invention is to provide a combination mechanic’s step stool and creeper seat which includes a shelf for storage of tools and implements when the device is oriented or positioned as a mechanic’s seat.

[0011] Yet another object of the invention is to provide a mechanic’s creeper seat which may be mounted on casters for ease of mobility.

[0012] These and other objects, advantages and features of the invention will be set forth in the detailed description which follows.

BRIEF DESCRIPTION OF THE DRAWING

[0013] In the detailed description which follows, the drawing is comprised of the following figures:

[0014] FIG. 1 is an isometric view of a first embodiment.

[0015] FIG. 2 is an alternative isometric view of the embodiment of FIG. 1;

[0016] FIG. 3 is an isometric view of an alternative embodiment having an intermediate step for the step stool feature of the device;

[0017] FIG. 4 is an isometric view of another alternative embodiment of the combination seat and step stool wherein the device is oriented for use as a seat;

[0018] FIG. 5 is an isometric view of the seat configuration of FIG. 4 as viewed from the front side or forward side of the seat illustrating in detail the recess shelf for tools and implements;

[0019] FIG. 6 is an isometric view of the seat configuration of FIG. 4 as viewed from the opposite side of the seat depicted in FIG. 4;

[0020] FIG. 7 is an isometric view of the device of FIG. 4 wherein the device has been positioned so as to serve as a step stool; and

[0021] FIG. 8 is a cross sectional view of the device of FIG. 4 taken substantially along the line 8-8.

DESCRIPTION OF THE PREFERRED EMBODIMENT

[0022] FIG. 1 illustrates a combination mechanic’s seat or stool and step stool. The combination is preferably manufactured from a plastic material such as polypropylene formed by a rotational mold process, injection molding, or other molding process. The overall general configuration is that of a parallelepiped, in particular, a rectangular parallelepiped. The molded device may have inclined sides formed with draft angles to facilitate the molding process as well as to improve the aesthetics, balance and utility of the product.

[0023] Referring to FIG. 1, the device is depicted to function as a step stool. FIG. 2 illustrates the device oriented to function as a creeper or mechanic’s seat mounted on rollers or casters. When the item is utilized as a step stool, as in FIG. 1, a top face 10 includes a serrated or patterned surface to prevent slippage. A non-skid pad (not shown) may also be affixed to surface 10. Thus, top surface 10 is a
generally flat, planar surface generally parallel to and spaced from a bottom or lower surface 12.

[0024] A first side surface 14 includes a series of casters or wheels 16 arranged at the four corners of the first side face or side surface 14. As shown in FIG. 2, the side opposite the first side surface 14 comprises a second side surface 17 with a recessed seat 18 molded or formed therein. The recessed seat 18 includes parallel, spaced side ribs 20 and 22 which reinforce the unit and comprise arm rests. A back support 19 is molded between ribs 20, 22. End surfaces 24 and 26 second or bottom surface 12 includes non-slip pads 25, 27. The pads 25, 27 prevent slippage of the device when used as a step stool as depicted in FIG. 1.

[0025] Bottom or third side surface 12 is generally parallel to top surface 10 and also includes a first corner support pad 32 and a second corner support pad 34 so that the surface 12 includes four corner pads 25, 27, 32, 34 which facilitate support of the stool as depicted in FIG. 1 as a step stool.

[0026] As depicted in FIG. 1 when the combination seat and stool is oriented so that the pads 25, 27, 32 and 34 are positioned on the floor, the support surface 10 is elevated above the floor. A person may thus step upon the support surface 10 and thereby utilize the device as a step stool.

[0027] The surface 12 also includes a recessed section 38 beneath the seat 18. The recessed section 38 includes a generally flat shelf 40 for placement of tools and other items to be used by the mechanic who is sitting in the seat 18 and wishes to reach between his/her legs to have access to a tool. As shown in FIG. 2, when sitting on the seat 18, a mechanic may easily move by virtue of the casters 16 engaging a floor surface.

[0028] FIG. 3 illustrates an alternative embodiment wherein the stool is positioned as a step stool and a middle step 50 is formed in the side surface 14. The middle step 50 thus is positioned between two casters 16 and enables the user to ascend to the top surface 10 more easily. The top surface 10 is substructured by side or parallel ribs or ridges 52 and 54 which provide the user of the step stool an indication that they are approaching the side edges of the stool. It is also possible to include such a rib or ridge along the other surfaces or edges of the step stool.

[0029] FIGS. 2-6 illustrate another alternative embodiment of the invention. A first or lower or bottom wall 50 is constructed to receive casters 52 positioned at the four corners of the bottom wall 50. A second opposite sidewall 54 includes lateral molded arm supports 56 and 58 with an intermediate connecting seat 60 and a back support section 62. The back support section includes a hand hold opening 64 to facilitate carrying or movement of the device. A third wall 66 connects the bottom wall 50 and the top wall 54 and provides a step surface 56 as shown in FIG. 7. The step surface 66 includes lateral ribs 68 and 70 which define the opposite sides of the step surface 66 to indicate side margins to a user of the step surface. A fourth wall 72 is bifurcated into an upper wall section 74 and a lower wall section 76. The upper wall section 74 defines the outer margin of the seat 60. A recess tray 78 is formed in the wall 72 between the sections 74 and 76. A recess bore 80 is defined in the back wall 82 of the tray 78 to enhance structural integrity of the seat and step stool construction. Non-slip pads such as pad 84 may be installed at the corners of the surface 72 so that when the step stool is in the configuration illustrated in FIG. 7, that it will be precluded from skidding undesirably. Opposite end surfaces 90 and 92 of the parallelepiped structure form the outer margins and connecting panels which join the other described surfaces of the generally parallelepiped structure comprising the seat and step stool.

[0030] The construction lends itself to molding and subsequent attachment of casters. Further, the device provides utility as a step tool as described and also as a creeper seat or movable mechanics stool which is typically used for example, during vehicle repair or production lines, etc. Variations from the embodiment are considered within the scope of the invention which is limited only by the following claims and equivalents thereof.

What is claimed is:
1. A combination step stool and seat comprising, in combination:
   a six sided, molded plastic generally parallelepiped assembly including a first wall, a second opposite side wall with a molded seat, a third transverse wall between the first and second walls, said third wall comprising a generally flat, planar step surface, a fourth transverse wall spaced from and parallel to the third wall for support of said combination as a step stool, said first wall being positionable at the floor to define a creeper with a top seat, said fourth wall being positionable at the floor as an alternative orientation to define a step stool.

2. The combination of claim 1 wherein the fourth wall includes a recess shelf.

3. The combination of claim 1 wherein the second wall includes at least one rib along the edge of the seat.

4. The combination of claim 1 wherein the first wall includes a molded step.

5. The combination of claim 1 further including casters mounted on the first wall.

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