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(54) **ROLLER SEAT, AND CARRIER FOR A VERY-LARGE-CAPACITY TOOL AND MATERIAL HOLDER ALSO MOUNTABLE ATOP A STEP LADDER**

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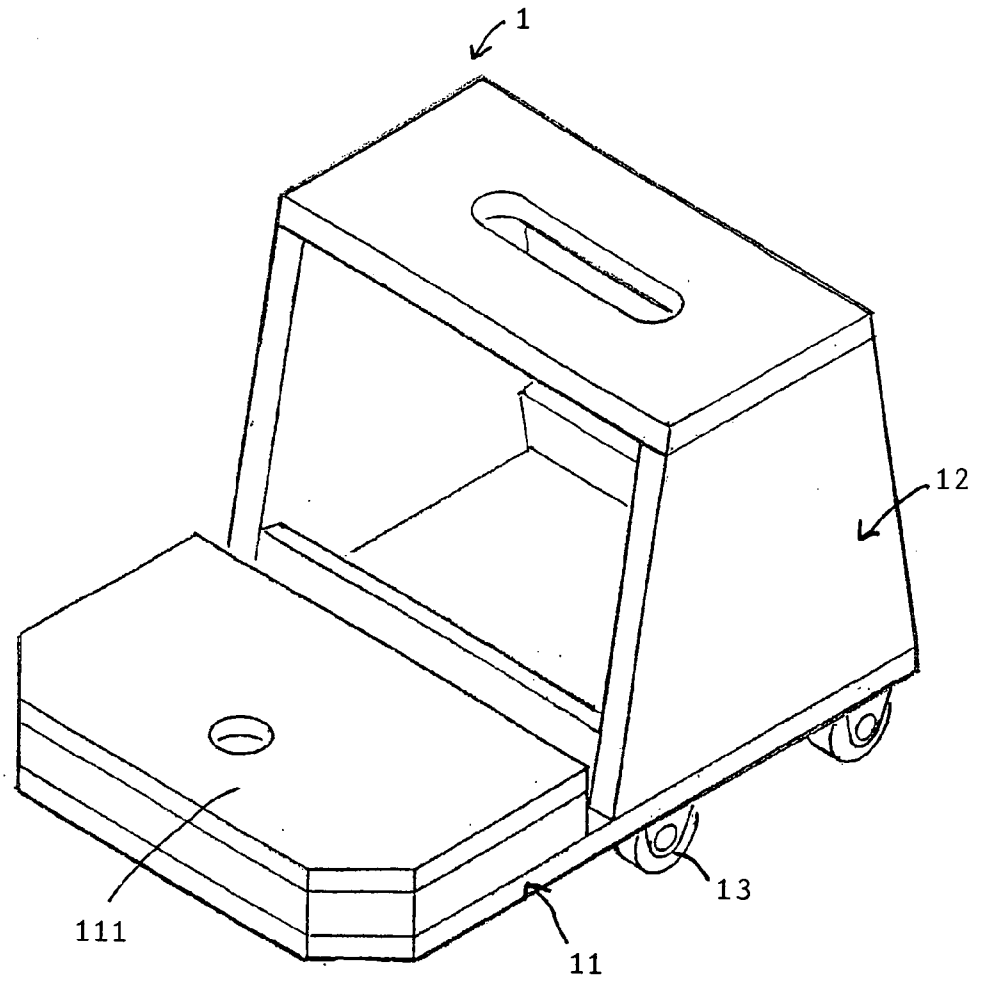
(57) **ABSTRACT**

A combination (i) roller seat and (ii) tool and material carrier is preferably used with a hollow body tool and material holder detachably mountable to the upper region of an open step ladder. The combination roller seat and carrier has a substantially planar base with a structure in the shape of a truncated frustum attached to and extending above the base, this structure occupying a same shape and volume as does a truncated frustaconical upper region of a open step ladder. Wheels to the base permit a person to sit upon the top of the structure while the base rolls upon the wheels, making thereby a roller seat. When the hollow body tool and material holder detachably mountable to the upper region of the open step ladder is alternatively mounted over the structure, the structure serves at least indirectly to hold any tools and materials that are also held by this hollow body holder.



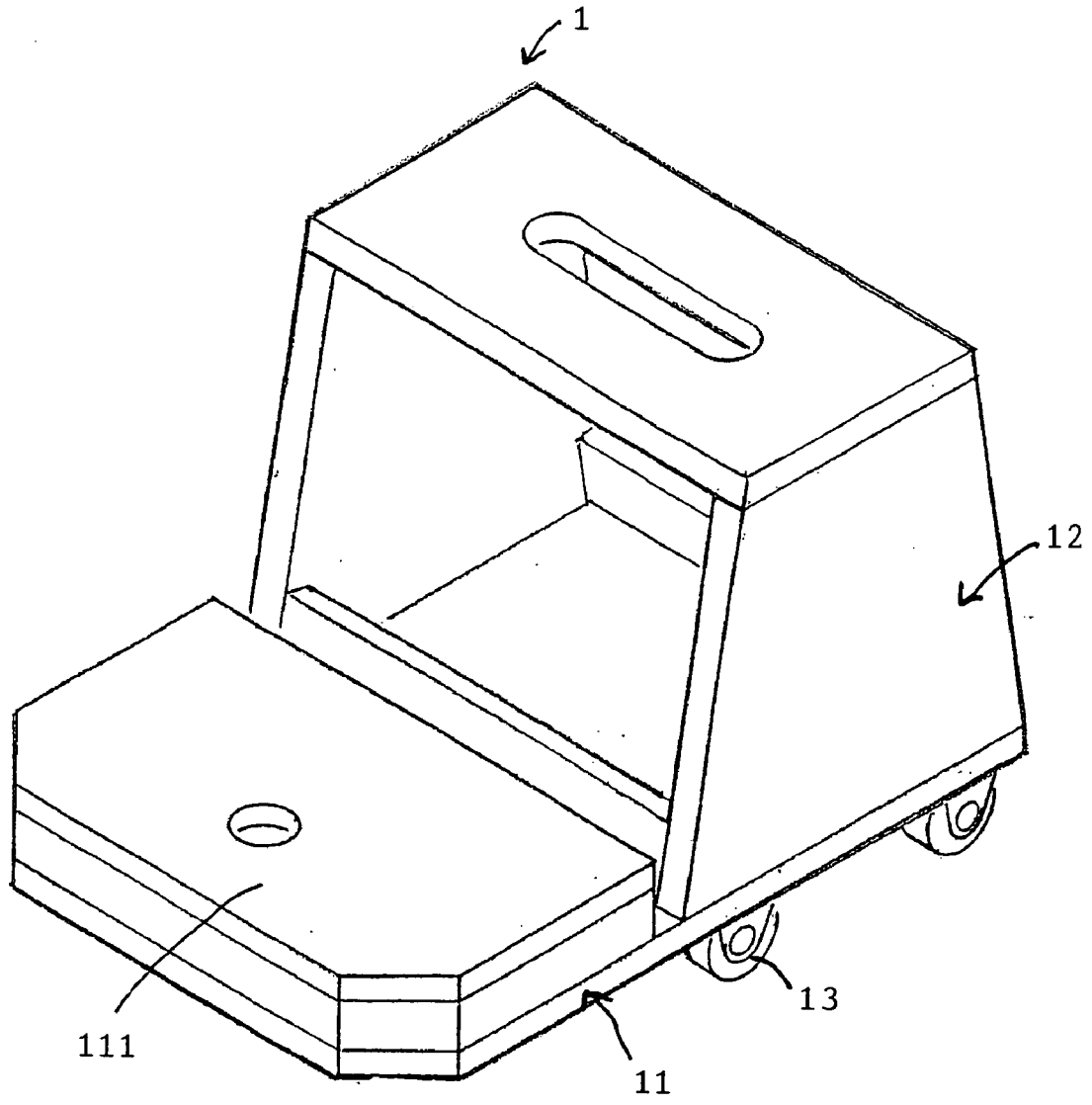


Fig. 1

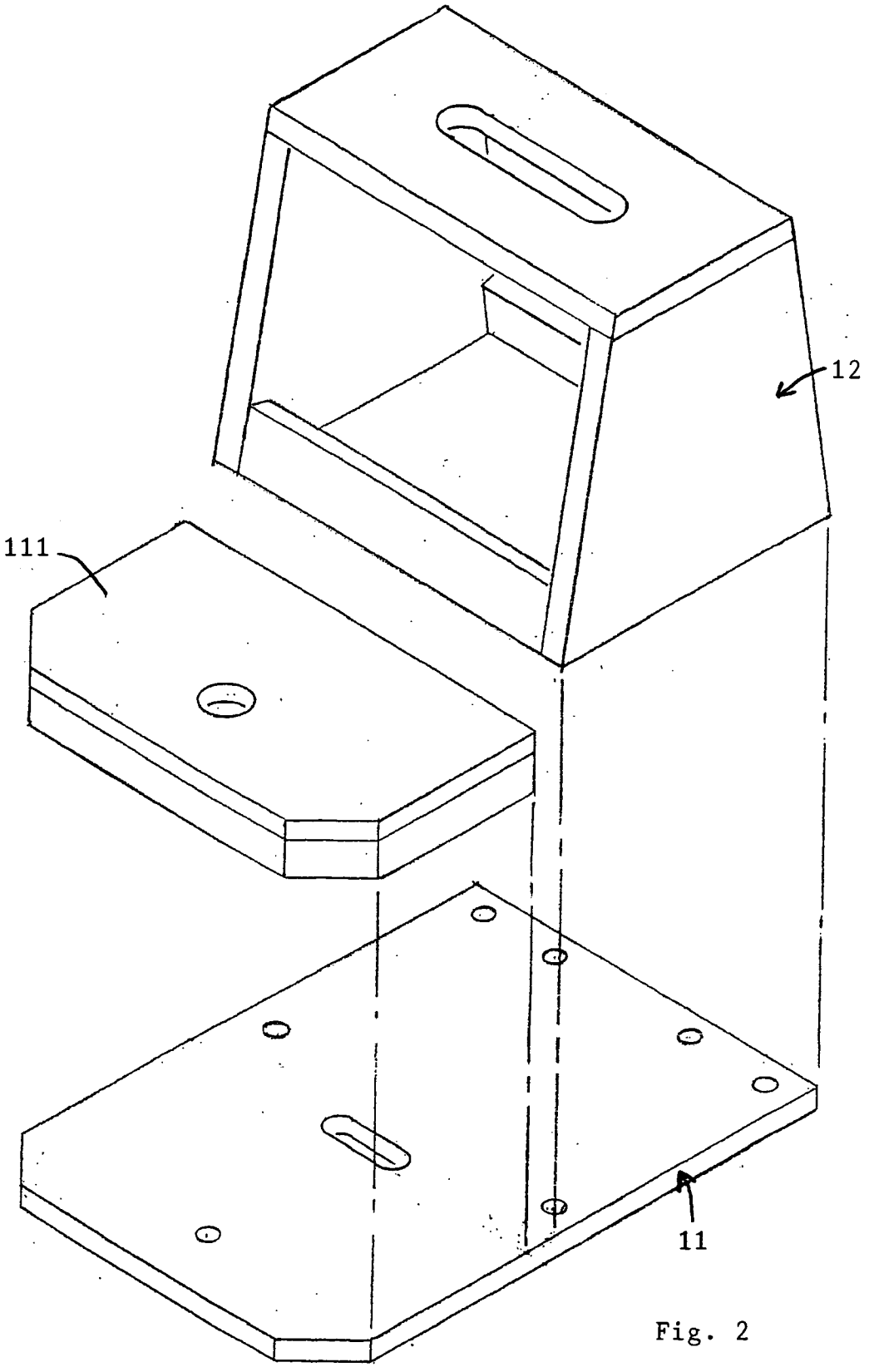


Fig. 2

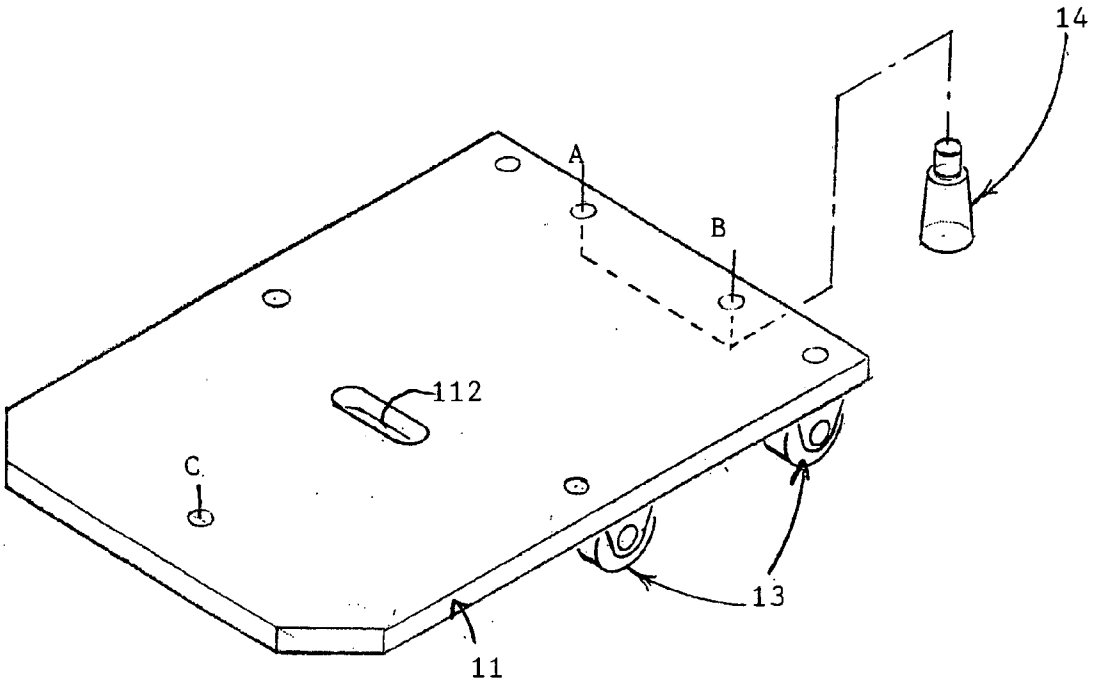


Fig. 3

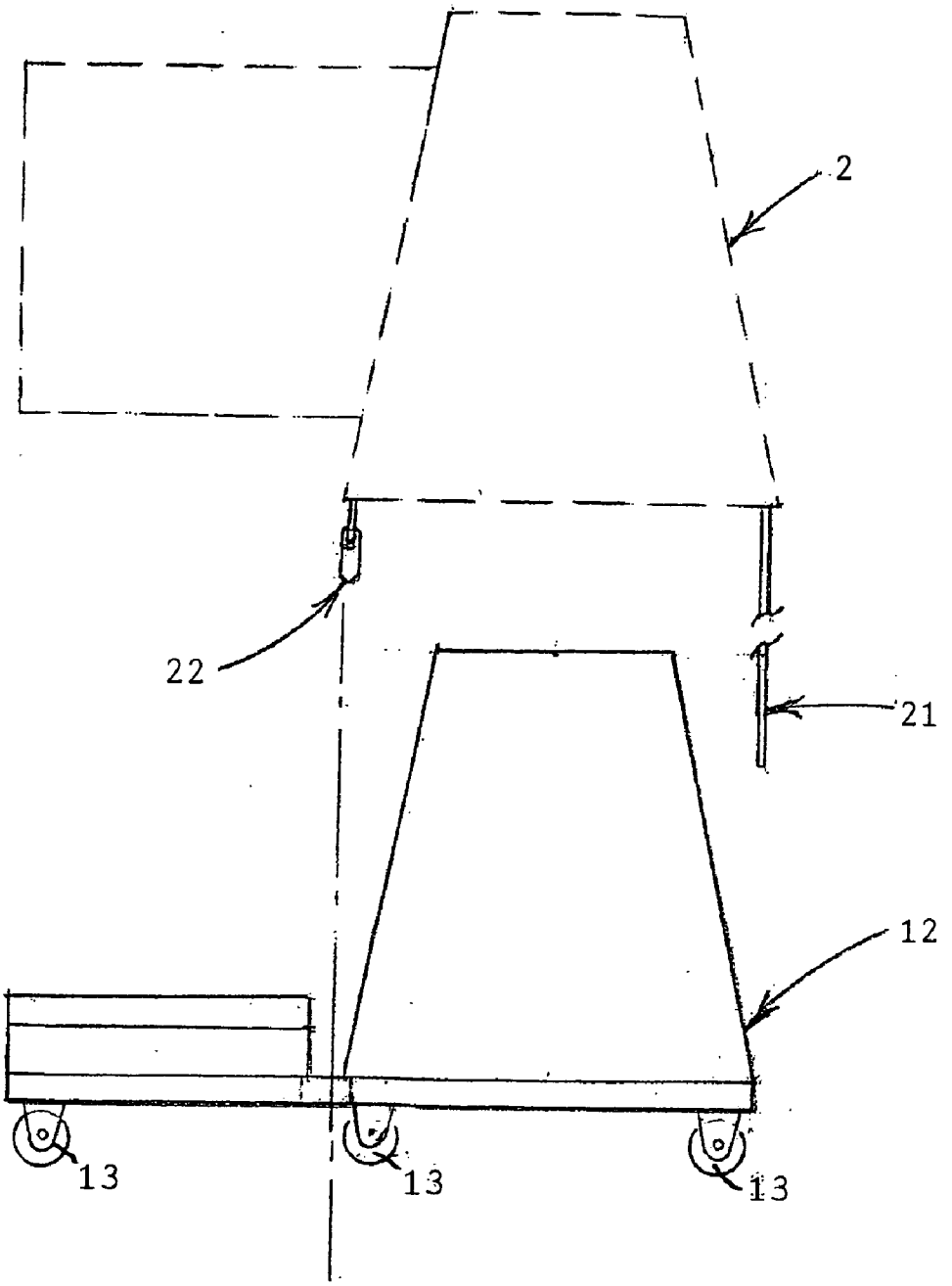


Fig. 4

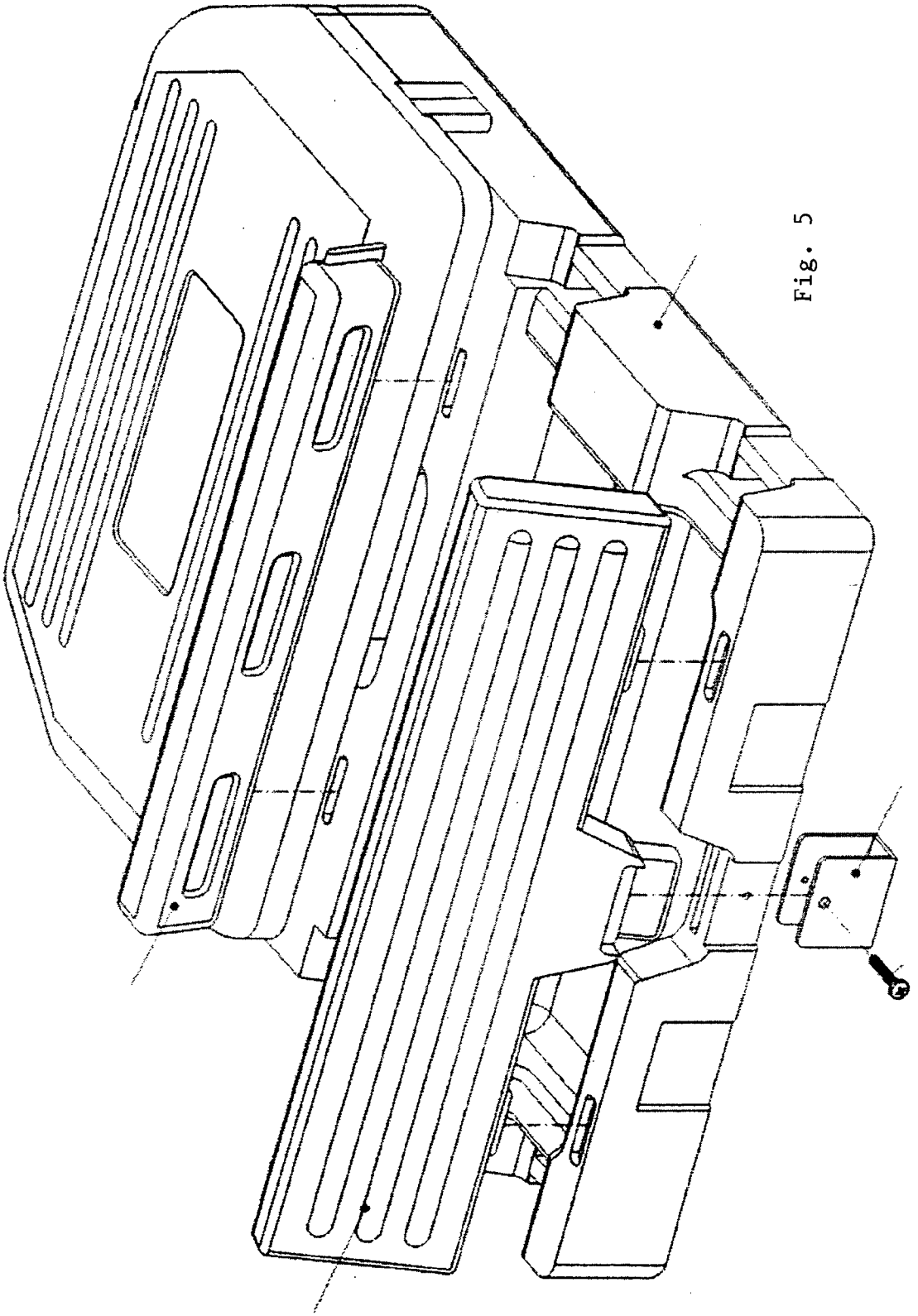


Fig. 5

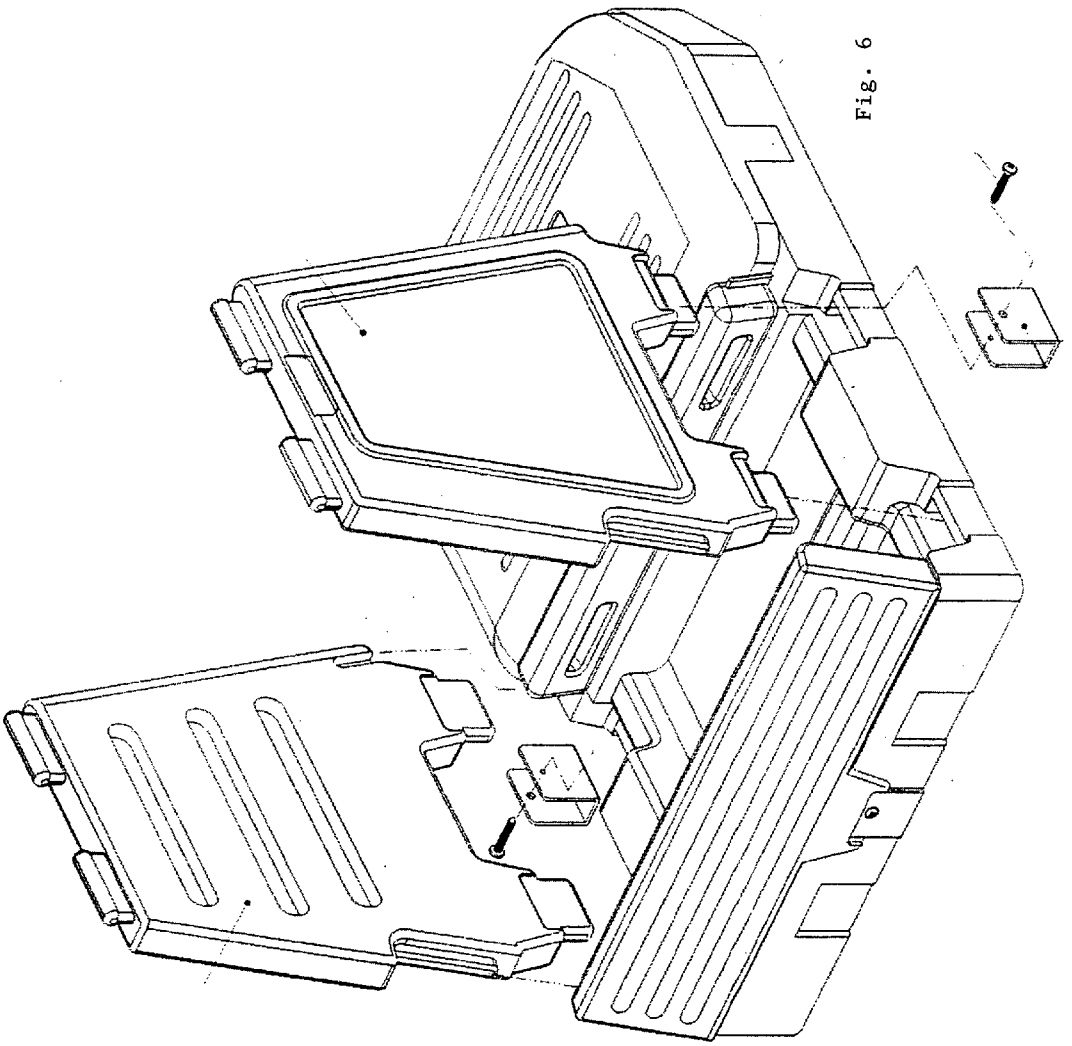


Fig. 6

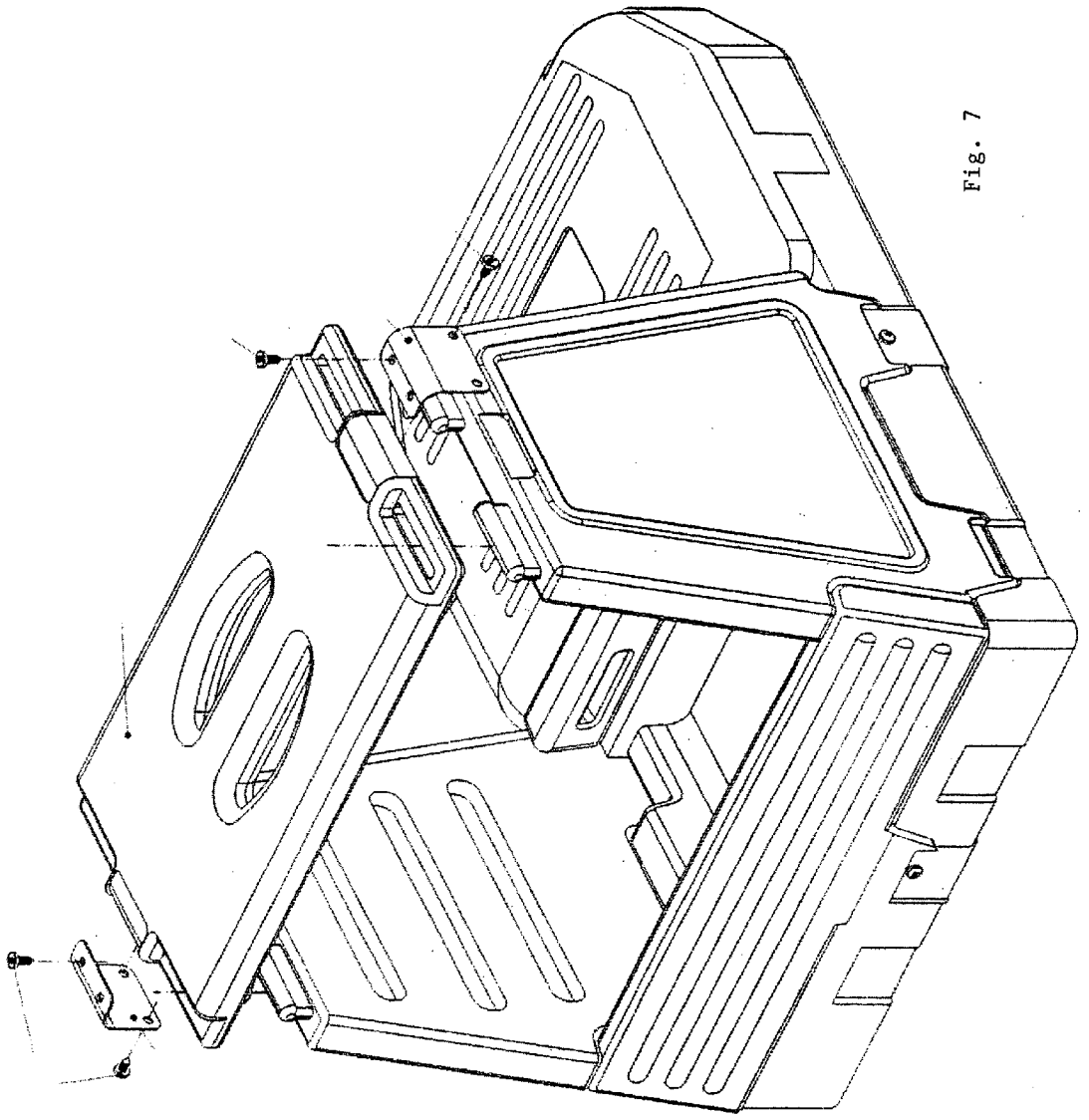


Fig. 7

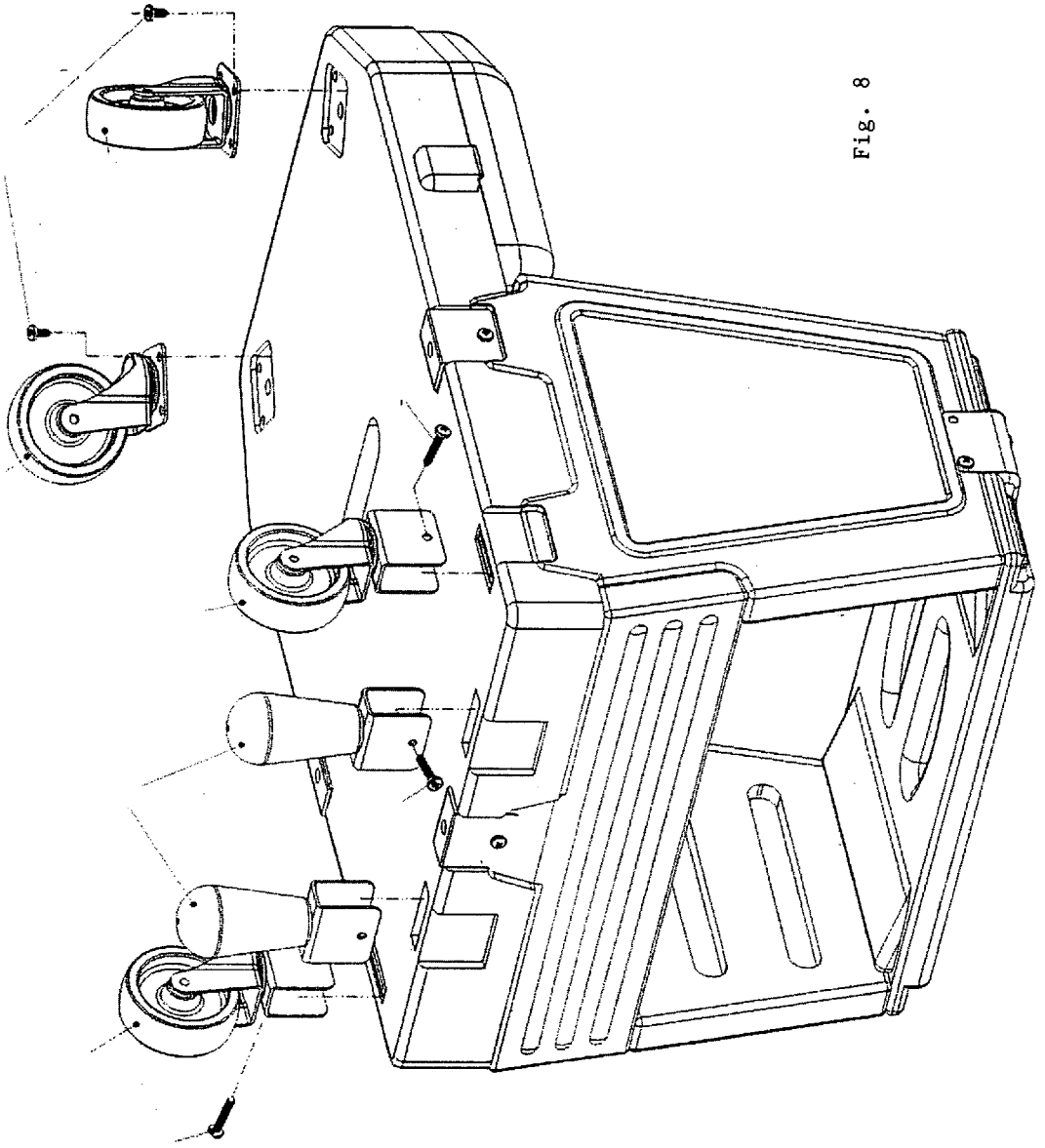


Fig. 8

ROLLER SEAT, AND CARRIER FOR A VERY-LARGE-CAPACITY TOOL AND MATERIAL HOLDER ALSO MOUNTABLE ATOP A STEP LADDER

RELATION TO RELATED PATENT APPLICATIONS

[0001] The present patent application is related as a continuation-in-part to U.S. patent application Ser. No. 09/735,029 filed on Dec. 11, 2000 for a FLEXIBLE TRUNCATED-PYRAMIDALLY-SHAPED TOOL AND MATERIAL HOLDER WITH A DISTENDED PAINT PAIL POUCH FOR REMOVABLE USE ATOP A STEP LADDER now issued as U.S. Pat. No. 6,654,941, and also to Ser. No. 10/074,058 filed on Feb. 11, 2002, for a FREE-STANDING VERY-LARGE-CAPACITY FLEXIBLE MODULAR TOOL AND MATERIAL HOLDER SELECTIVELY MOUNTABLE ATOP A STEP LADDER. Both prior applications are to the same inventor as the present application. The contents of the related predecessor patent and patent application are incorporated herein by reference.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention

[0003] The present invention generally concerns roller trucks and caddys as are commonly used by mechanics and other craftsman to sit upon, and to hold tools and/or materials, during the course of their work.

[0004] The present invention particularly concerns a roller seat that is also a carrier for a very-large-capacity tool and material holder which holder can be, alternatively to being mounted upon the roller carrier, mountable atop a step ladder.

[0005] 2. Description of the Prior Art

[0006] 2.1 Tool Holders Mountable to Ladders and Step Ladders

[0007] The roller carrier of the present invention will be seen to mount, and to be compatible with, a tool holder otherwise mountable to a ladder, and more particularly a step ladder.

[0008] Ladders have been employed since their inception to place a worker into proximity to an elevated surface or article that needs be physically manipulated, such as for purposes of painting, plumbing, wiring etc. Of the several well-known styles of ladders available, a step-ladder consists of (i) a fixed ladder member which is joined to (ii) a supporting member having dimensions and construction similar to that of the fixed ladder portion but designed primarily as a support. The (i) fixed ladder member and the (ii) supporting member are joined by a suitable hinge, transverse to the long axis of both members, such that the ladder member and support member may be opened with respect to one another, forming thereby an essentially A-frame configuration. A top step is usually provided at the external apex of the "A".

[0009] This step ladder provides the ability to elevate ones-self in the absence of a fence, wall or other structure normally required when using a fixed ladder alone. It is to users of the step-ladder which the present invention is directed, but the principles of the present invention, particularly in the aspect of its paint pail pouch, are anticipated to be useful on the other types of ladders as well, and it would be unnecessarily restrictive to view the particular application of the present invention to step ladders as is taught within this specification as being delimiting of the invention.

[0010] One of the problems individuals who find themselves on ladders regularly encounter is that they must prevent themselves from falling from the ladder while performing the task at hand. Additionally, a variety of hand-implements are often required to carry out various tasks to their completion. From a statistical standpoint, the probability of an individual having a mishap varies directly as the number of times an individual goes up and down from the ladder in connection with a job. Therefore, if it were possible to minimize the number of up-and-down trips an individual was required to make in the normal course of carrying out tasks from a ladder, then the probability of a mishap could be accordingly minimized.

[0011] One way to minimize the number of up-and-down trips required to carry out a task is to provide every tool and/or material needed for a given job in close proximity to the location atop the ladder where the worker is situated. However, while the prior art contains many different types of devices aimed at this end, none has been successful in design both so as to be (i) ergonomically effective, and (ii) sufficiently cost-effective of manufacture so as to be widely adopted.

[0012] A review of some of the criteria that a ladder, or step-ladder, tool holder would desirably realize is useful. Flexible and removable, fabric-type, holders seemingly offer a large holding capacity, but these holders tend not to maintain a defined volume, and are subject to collapsing inward. This is adverse in that even a loaded holder should be capable of being slipped into position on or atop a step ladder by use of but one hand, making that the holder must maintain itself open and ready to receive mounting upon the step ladder. Moreover, a holder removed from a ladder mounting should not slump or collapse so completely that held objects such as tools become dislodged.

[0013] An optimally commodious tool holder would seemingly best make good use of every one of the five exterior surfaces of defined by the volume in the shape of a truncated four-sided pyramid at the top of a step ladder. Use of the substantially flat top surface to the step ladder is immediately problematic. Should this surface be left unencumbered so that it may be stood upon, or should it be adapted for holding objects or things?

[0014] Finally, the retention of paint cans and pails both large and small is potentially challenging to flexible fabric holders, especially as these containers and their contents would desirably be held level.

[0015] Attempts to solve these challenges are shown in various issued United States patents.

[0016] U.S. Pat. No. 6,116,419 to Campagna, et al. for a LADDER POUCH shows an elongate, flexible sheet having a first end, a midpoint, a second end, a first side, and a second side. A first engagement structure, such as hook and pile fastening material, is located on the first side of the elongate, flexible sheet between the midpoint and the first end. A second engagement structure, complimentary with the first engagement structure, is located on the second side

of the sheet proximate its second end. Multiple pockets are disposed on or integral with the first side of the sheet. The pockets can be open-mouthed or include covering flaps.

[0017] U.S. Pat. No. 5,988,383 to Armstrong for a LADDER SADDLE DEVICE shows a holder device containing various work implements designed for use by workers who regularly use ladders. The device holds the implements in such fashion as to be ergonomically accessible while maintaining a reduced center of gravity and hence increased stability of the ladder/device combination as a whole. Use of this device is claimed to increase safety while being cost-effective enough in its construction to be readily employed by workers in various crafts and professions.

[0018] U.S. Pat. No. 5,971,101 to Taggart for an ADAPTABLE CARRIER APPARATUS shows a tool and material carrier adaptable for use on a variety of platforms such as four and three legged step ladders, extension ladders, universal or hinged ladders, platform ladders, scaffolding and the like. The carrier is made of a foldable body which conforms to various platform deigns. A multiple strap system having quick lock and release connectors secures the carrier to the various platforms. The front of the body includes a multi-tiered system of pouches and holders for tools and materials. The rear of the body includes additional pouches or holders. The carrier includes a holster for gun shaped tools. An electric cord holder provided with or separately from the carrier holds an electric cord close to the working elevation of the platform. The electric cord holder includes a foldable strap having two portions which are mated when the strap is folded to form an opening smaller than the head of an electric cord to secure the electric cord between the two portions. Modular, task-specific, attachments to the carrier provide additional versatility such as an attachable mud pan and mud knife holder or an attachable butane torch holder.

[0019] U.S. Pat. No. 5,749,437 to Weller for a FREE-STANDING LADDER SUPPORTED TOOL HOLDER concerns a non-obstructive tool holder which holds tools on a free-standing ladder, e.g. a step-ladder. The tool holder is configured so avoid obstruction of normal use of the free-standing ladder. The tool holder has a skirt including a front side sheet, a rear side sheet, a left side sheet, and a right side sheet connected together at sides thereof to form a generally tubular structure having a top opening and a bottom opening. The skirt narrows towards the top thereof. The front side sheet, the rear side sheet, the right side sheet, and the left side sheet each are made of a substantially flat but flexible material. The sides include pockets, and/or other supports, for holding tools. The top opening exposes the top platform of the ladder. A handle extends across the top opening, the bottom of the handle rests on the top platform of the free-standing ladder so that the top platform will remain unobstructed in normal use of the free-standing ladder. In addition, the front side sheet is shortening and includes an elastic portion whereby the use of the ladder is further unobstructed.

[0020] Finally, U.S. Pat. No. 5,647,453 to Cassells for a MULTI-PURPOSE LADDER APRON shows a multi-purpose ladder utility apron having four side panels, each adapted with a plurality of tool and accessory receptacles. The apron further includes a fold up storage tray on the ladder's top providing additional temporary storage space. Closure flaps and straps secure the apron to the ladder whether in its open or closed position such that the subject invention may be secured to the ladder during use, transport and storage and may be quickly removed for laundering. An optional lid is also pivotally attached to the apron and folds out to provide a work shelf. The apron's design accommodates use of the ladder's own fold-down shelf and permits use of all steps without sacrificing storage space for tools and the like. The apron may still further be adapted with a power receptacle so that power tools can easily be interchanged without disengaging the extension cord.

[0021] The prior art in general variously shows ladder-mounted tool holders with various accommodations to holding and supporting various special things, mostly tools and materials. The mode and manner by which an economically-constructed flexible fabric-based tool holder might reliably function both on and off a ladder, and particularly a step ladder, could, however, use improvement.

[0022] 2.2 Roller Seats and Tool Holders

[0023] Various rolling seats and sliders are known for supporting auto mechanics and other tradesman in positions convenient to the work piece during their labors.

[0024] Rolling tool chests and tool holders and the like are also known.

[0025] Finally, tool holders that are specialized to fit onto, or at the tops of, ladders, including step ladders, are known.

[0026] However, to the best knowledge of Applicant these functions are not, insofar as is possible, known to be combined, which is the subject of the present invention.

SUMMARY OF THE INVENTION

[0027] The present invention particularly concerns a roller seat that is also a carrier for a very-large-capacity tool and material holder which holder can be, alternatively to being mounted upon the roller carrier, mountable atop a step ladder.

[0028] The tool holder is removably mountable to the top of a step ladder, and is in the substantial shape of a frustum having an open base. The toll holder serves to hold tools and like implements, and paint cans and like supplies, for use by painters and electricians and other individuals when, in the course of their work, these persons stand on upon the step ladders. In accordance with related inventions, a particular tool holder is both versatile and convenient for each of (1) carrying and (2) organizing and (3) holding various work supplies and work implements by dint of incorporating (a) variably sized and distending pockets, (b) variable numbers of pockets, and/or (c) attachable pockets and/or holders tailored to the particular tools or materials sought to be held.

[0029] Use of this particular advanced ladder-top tool holder is not mandated with the roller seat and carrier of the present invention, but the preferred embodiment of the roller seat and carrier is both (1) compatible with, and (2) complimentary to, this advanced tool holder. Namely, the roller seat and carrier mounts and retains the advanced tool and material holder in both its laden and un-laden state. It rolls, and even supports a seated tradesman, while so doing. The roller seat and carrier has integral storage compartments suitable to hold detachable portions (such as pouches, pockets and tool jigs) and/or materials from the advanced tool

and material holder and, conversely, to offer up stored tools and materials to the holder. All interchange of tools and materials may thus be conveniently done, and at ground level, as opposed to at the top of the step ladder, or to a removed tool holder that is collapsed in a heap. Moreover to the convenient interchange of held items, the advanced ladder-top tool and material holder is readily mountable to, and detachable from, its complimentary roller seat and carrier—expediting work. Finally, contents of a tool and material holder (detachably) mounted to the roller seat and carrier may—in addition to considerable items that may be held and stored upon the roller seat and carrier itself—be conveniently used to support work at ground level.

[0030] Time and motion observations of, in particular, persons working at high and at low elevations on walls—such as dry wallers and carpenters and painters—either have to (1) carry upon their person a sometimes inordinate amount of tools and materials (which is naturally tiring), or else (2) hazard that some tool, or some material, wanted at one position is unfortunately located at another position (necessitating transition, which is also tiring). Weight, volume and flow of materials—particularly consumables—precludes that everything in use should be duplicated (or multiply replicated) at differing heights along the wall. Watching a tradesman (1) gather up in his or her hands tools and parts at one work location, to (2) move to another temporary work location, only to find that (3) something has been forgotten, and must be retrieved from the first location, has been motivation for the present invention. The present invention is directed not only to make it as easy, efficient and effective as possible to (1) re-locate work from, say, three meters atop a step ladder to zero meters and then back to three meters, but, also, to (2) re-locate ongoing work from one location, whether atop a step ladder or not, to another, potentially quite distant location, in one (only) trip. Basically, a toll and material carrier—which may be quite heavy—is off-loaded by a tradesman from step ladder onto the roller seat and carrier of the present invention, and the tradesman folds and carries the ladder while pushing with the feet, or pulling with a cord, the loaded roller seat and carrier. Quite heavy, and extensive, loads may be safely moved in this manner.

[0031] 1. A Combination (i) Roller Seat and (ii) Tool and Material Carrier

[0032] Accordingly, in one of its aspects the present invention is embodied in a combination (i) roller seat and (ii) tool and material carrier for use with a hollow body tool and material holder detachably mountable to the upper region of an open step ladder.

[0033] The preferred embodiment of the combination roller seat and carrier has a substantially planar base with a structure in the shape of a truncated frustum attached to and extending above the base. This structure occupying the same shape and volume as does a truncated frustaconical upper region of a open step ladder. There are wheels to the base.

[0034] By this construction a person may sit upon the top of the structure while the base rolls upon the wheels, making thereby a roller seat.

[0035] Additionally, and independently, an external hollow body tool and material holder otherwise detachably mountable to the upper region of the open step ladder can, alternatively to being so mounted upon the step ladder, be mounted over the structure, making thereby that the structure serves at least indirectly to hold any tools and materials that are also held by this hollow body holder.

[0036] The combination roller seat and carrier preferably includes a planar extension region to the base extending beyond a region where the base attaches the structure in the shape of a truncated frustum. This extension region provides a level surface upon which tools and materials may be placed exclusively of the frustum structure or of any external holder mounted upon the frustum structure.

[0037] The combination roller seat and carrier is preferably useable with a particular type of hollow body tool and material holder detachably mountable to the upper region of the open step ladder which particular type of holder also has an extending pouch capable of holding a paint can. When this paint can holder is mounted to the combination roller seat and carrier the planar extension region to the base is of suitable (i) elevation above the base, (ii) size and (iii) shape so as to support the pouch of the holder and any paint can that is within the pouch.

[0038] Further, the frustum structure to the base is preferably hollow, and open along at least one side surface so that tools and materials can be stored to the interior of the hollow frustum structure.

[0039] Still further, this frustum structure to the base has and defines in it's upper surface a slot through which fingers of the hand may be passed, thus to serve as a handle, at least such times as the holder is not mounted to the frustum structure.

[0040] The combination roller seat and carrier preferably further includes posts extending downwards from the base. These posts serve, in combination with the wheels, to prevent that the combination roller seat and carrier should tip over nonetheless that holder, and any tools and materials held by the holder, be attached to the frustum structure.

[0041] This combination roller seat and carrier may preferably be used with a hollow body tool and material holder having attaching straps, in which case it possesses apertures defined by, and in, any one or ones of the base and the frustum structure. These apertures pass the straps of the holder so as to secure the holder to the frustum structure.

[0042] 2. A Modular Ladder Apron

[0043] In another of its aspects the present invention is embodied in a combination (i) roller seat and (ii) tool and material carrier that both holds and rolls.

[0044] In the preferred embodiment, a substantially planar base has and presents both an upper surface with adjacent first and second regions, and a lower surface.

[0045] A hollow structure in the substantial shape of a truncated frustum is affixed to the planar base in the base's first region. It there serves to suitably holding tools and materials within its hollow interior while presenting a substantially flat upper surface suitable to serve as a seat.

[0046] Meanwhile the bases's second upper surface region is adjacent to the hollow structure, and suitable to support tools and materials.

[0047] Wheels to the base permit that a person may sit upon the top of the structure while the base rolls upon the wheels, making thereby a roller seat. Concurrently, an external hollow body tool and material holder otherwise detachably mountable to the upper region of the open step ladder can, alternatively to being so mounted upon the step ladder, be mounted over the structure, thus making thereby that the structure serves at least indirectly to hold any tools and materials that are also held by this hollow body holder.

[0048] These and other aspects and attributes of the present invention will become increasingly clear upon reference to the following drawings and accompanying specification.

BRIEF DESCRIPTION OF THE DRAWINGS

[0049] Referring particularly to the drawings for the purpose of illustration only and not to limit the scope of the invention in any way, these illustrations follow:

[0050] **FIG. 1** is a diagrammatic perspective view of the preferred embodiment of a combination (i) roller seat and (ii) tool and material carrier in accordance with the present invention.

[0051] **FIG. 2** is an exploded perspective view of the same preferred embodiment of the combination (i) roller seat and (ii) tool and material carrier in accordance with the present invention previously seen in **FIG. 1**.

[0052] **FIG. 3** is a detail perspective view of the base of the preferred embodiment of the combination (i) roller seat and (ii) tool and material carrier in accordance with the present invention previously seen in **FIGS. 1 and 2** with optional anti-tilt bumpers.

[0053] **FIG. 4** is a side plan view of the mating of a hollow body tool and material holder, otherwise detachably mountable to the upper region of an open step ladder, to the preferred embodiment of the combination (i) roller seat and (ii) tool and material carrier in accordance with the present invention previously seen in **FIGS. 1 and 2**.

[0054] **FIG. 5** is a detail exploded view of a body, and two support braces, of a most preferred embodiment of the combination (i) roller seat and (ii) tool and material carrier in accordance with the present invention.

[0055] **FIG. 6** is a detail exploded view continuing from **FIG. 5** and now further showing a left and a right side panel of a most preferred embodiment of the combination (i) roller seat and (ii) tool and material carrier in accordance with the present invention

[0056] **FIG. 7** is a detail exploded view continuing from **FIG. 6** and now further showing a seat of a most preferred embodiment of the combination (i) roller seat and (ii) tool and material carrier in accordance with the present invention

[0057] **FIG. 8** is a detail exploded view continuing from **FIG. 7** and now further showing the rollers of a most preferred embodiment, shown inverted, of the combination (i) roller seat and (ii) tool and material carrier in accordance with the present invention

DESCRIPTION OF THE PREFERRED EMBODIMENT

[0058] The following description is of the best mode presently contemplated for the carrying out of the invention. This description is made for the purpose of illustrating the general principles of the invention, and is not to be taken in a limiting sense. The scope of the invention is best determined by reference to the appended claims.

[0059] 1. Objects of the Invention

[0060] In accordance with the shortcomings contained in the prior art, it is an object of the present invention to provide a convenient device through the use of which building tradesmen may extend the use of a tool and material caddy used atop a step ladder to floor level, thereby to minimize the number of up-and-down ladder trips required to do the same, or like, tasks with the same, or like, tools using the same, or like materials, at both elevated and floor levels.

[0061] It is an object of this invention to provide a means for caddying tools and materials used by building tradesmen from ladder to ladder, and/or to the same ladder as is differently located at different times.

[0062] It is a further object of this invention to provide a means for caddying tools and materials used by building tradesmen which is ergonomically sound, and by which considerable weight of tools and/or materials may supported for rolling transport, and without fear of spillage.

[0063] It is a further object of this invention to provide a rolling seat for building tradesmen, which seat can be used for work or for rest, and to move across a floor to access a work piece or work piece locations.

[0064] It is a still further object of this invention to provide a rolling storage container for building tradesmen, which storage container can be used so store and to move diverse items, particularly as may be interchanged with and/or used to replenish like items held in a tool and material caddy used atop a step ladder.

[0065] The objects of this invention are achieved by providing a a combination roller seat and carrier has a substantially planar base with a structure in the shape of a truncated frustum attached to and extending above the base. This structure occupies the same shape and volume as does a truncated frustaconical upper region of a open step ladder. There are wheels to the base. When a tool and material caddy otherwise used atop a step ladder is placed upon the frustum, all the contents thereof, as well as the contents of the roller seat and carrier itself, are held accessible, and may be transported by rolling. A building tradesman may sit atop the combination roller seat and carrier whether or not the tool and material caddy is affixed, and for moving while sitting proximate to a floor-level work piece in the manner of an auto mechanics creeper if desired.

[0066] 2. Basic Structure and Theory of the Combination Roller Seat and Carrier of the Present Invention

[0067] A preferred embodiment of a combination (i) roller seat and (ii) tool and material carrier in accordance with the present invention is shown in diagrammatic perspective view in **FIG. 1**. The combination roller seat and carrier **1** has a substantially planar base **11** with an affixed structure **12** in the shape of a truncated frustum attached to and extending above the base **11**. This structure **11** preferably occupies the same shape and volume as does the truncated frustaconical upper region of a open step ladder. It is thus suitably compatible to receive, and to mount, tool and material caddy

2 (shown in **FIG. 4**, not part of the present invention) otherwise, and at other times, mounted and used atop a step ladder (not shown).

[**0068**] An exemplary tool and material caddy with which the structure **12** of the combination roller seat and tool and material carrier **1** of the present invention may be beneficially employed is taught in each of U.S. Pat. No. 6,654,941 for a FLEXIBLE TRUNCATED-PYRAMIDALLY-SHAPED TOOL AND MATERIAL HOLDER WITH A DISTENDED PAINT PAIL POUCH FOR REMOVABLE USE ATOP A STEP LADDER, and in U.S. patent application Ser. No. 10/074,058 filed on Feb. 11, 2002, for a FREE-STANDING VERY-LARGE-CAPACITY FLEXIBLE MODULAR TOOL AND MATERIAL HOLDER SELECTIVELY MOUNTABLE ATOP A STEP LADDER, now published. The contents of this related predecessor patent, and patent application, are incorporated herein by reference.

[**0069**] A person may also sit upon this affixed structure **12**, both with and without a tool and material caddy mounted. The structure **12** is hollow as illustrated, and may receive and store items particularly including tools and materials.

[**0070**] There is preferably a level, and normally slightly elevated, extension region **111** on the base **11**. It is in this region that any five gallon pail, or the like optionally held in a pouch of the tool and material caddy **2** (shown in **FIG. 4**, not part of the present invention) will rest when such caddy is mounted upon and used with the combination roller seat and carrier **1**. This extension region **111** is also clearly usable to support anything that may be set upon this region of the combination roller seat and carrier **1**.

[**0071**] The combination roller seat and carrier **1** has wheels **13**, preferably five in number with two pairs under the base **11** in the region of its structure **11**, and one other—hidden in the view of **FIG. 1**—under the extension region **111** of base **11**. The wheels **13** are best visible in the side view of **FIG. 4**.

[**0072**] Thus a person may sit upon the top of the structure **11** of the combination roller seat and carrier while its rolls upon its wheels **13**, making thereby a roller seat. The person may do so even while the hollow body tool and material holder **2** (shown in **FIG. 4**, not part of the present invention) is mounted atop the frustum-shaped structure **11**. Likewise, contents within the hollow frustum-shaped structure **11** can generally be accessed even when this tool and material holder **2** is mounted.

[**0073**] The same preferred embodiment of the combination (i) roller seat and (ii) tool and material carrier **1** in accordance with the present invention is shown in exploded perspective view in **FIG. 2**. All structural components are normally made from molded plastic, and are connected by adhesive and by nuts and bolts (not shown). The base **111** has a nominal dimension of 13½ inches wide by 19 inches long by ¾ inch thick. Other structural members are sized commensurately.

[**0074**] A detailed perspective view of the base **11** of the preferred embodiment of the combination (i) roller seat and (ii) tool and material carrier **13** in accordance with the present invention is shown in **FIG. 3**. As well as the wheels **13**, selected anti-tilt bumpers **14**, normally three in number, are optionally affixed as indicated at bores A, B, and C of base **11**. The bumpers **14** are too short to interfere with the normal rolling motion of the roller seat and carrier **1**, but improve its resistance to tipping over.

[**0075**] The mating of a hollow body tool and material holder **2**—otherwise detachably mountable to the upper region of an open step ladder—to the preferred embodiment of the combination (i) roller seat and (ii) tool and material carrier **1** in accordance with the present invention is diagrammatically shown in **FIG. 4**. Normally, and preferably, a tie down strap **21** proceeds down the outside surface of structure **11**, under the base **11**, and upwards through the hole **112** best seen in **FIG. 3**. It there optionally connects to tie down buckle **22**, optionally securing the hollow body tool and material holder **2** to the roller seat and carrier **1**. Affixation of the strap **21** and buckle **22** may alternatively be by action of complimentary strips of hook-and-loop material respectively affixed to the strap **21** and to the buckle **22**, normally by sewing.

[**0076**] Detail exploded views of a most preferred embodiment of the combination (i) roller seat and (ii) tool and material carrier in accordance with the present invention are shown in **FIGS. 5 through 8**. The most preferred parts, and assembly steps, are illustrated.

[**0077**] The most preferred parts, and associated quantities, include the following: 1. Body (1); 2. Rear Support Brace (1); 3. Right Side Panel (1); 4. Front Support Brace (1); 5. Left Side Panel (1); Seat (1); 7. Rear Wheels with U Clips (2); 8. Front Wheels (2) (attached by short screws); 9. Stops (Tilt Preventers) (2); 10. L Clips (2); 11. U Clips (3); 12. Long Screws (7) and 13. Short Screws (16). The 'L' and the 'U' clips are positioned with their small holes to th« << outside.

[**0078**] Before beginning assembly, and for easier assembly, the following should be noted:

[**0079**] First, each main assembly part has a matching or counter part identified by an embossed letter located on the inside of each main piece.

[**0080**] Second, a power screwdriver is preferably not used when assembling this product as a power screwdriver may strip threads.

[**0081**] Third, assembly should instead be with a hand screwdriver only. Do not over tighten screws.

[**0082**] Fourth, the U-Clips, L-Clips and Seat are snug fitting. The assembler may need to use a mallet or household hammer to tap firmly to secure proper fit.

[**0083**] Fifth, the 'U' and 'L' clip holes should align with the holes in the plastic body. And for these 'U' and 'L' clips, the assembler should make sure each screw enters the small hole first and is threaded straight to and through the larger hole.

[**0084**] Sixth, the seat fits snugly. A rubber mallet may be used to tap the seat over the side panels' interlocking notches.

[**0085**] Seventh, the assembly hardware is located inside the tool compartment during shipment from the manufacturer to the final purchaser, assembler and user.

[**0086**] In assembly sequence, as a first step refer to **FIG. 5**. The rear support brace is attached to the body with a U-clip and a long screw.

[0087] As a next, second, step refer to **FIG. 6**. The Right Side Panel is inserted into the channel grooves of the Rear Support Brace and attached (near its center) to the body with a U-clip and a long screw.

[0088] Further in the second step, the Front Support Brace is set into the two slots (see **FIG. 5**) and into the Right Side Panel channel groove. The Left Side Panel is inserted into the channel grooves of the Rear Support Brace. The Front Support Brace must be in place, and the Left and Right Side Panel **12** grooves will align with the Front Support Brace **11** grooves. The Left Side Panel to is attached the Body with a U-clip and a long screw.

[0089] As a next, third, step refer to **FIG. 7**. The seat is attached by matching corresponding features. A rubber mallet or household hammer is used to tap the seat so the Side Panels' Interlocking Notches "lock" through the Seat's Open Notches. Finally , the seat is secured in place with L-clips and with four (4) short screws provided for each clip.

[0090] In the fourth, and final, step refer to **FIG. 8**. The Rear Wheels are attached with U-clips and long screws. The assembler should make sure each U-clip's small holes are to the outside. The Stops, or Tilt Preventers, are then attached with long screws. The Front Wheels are attached with short screws, which should not be over tightened.

[0091] As a general assembly 'tip', when screws are inserted that should be "driven" straight or they will not align with the second hole. The assembler should start over if the screw is not straight. Crooked screws will not thread properly. As the screw enters the second hole the assembler should apply more pressure to set the screw. Do not over tighten screws. As a further assembly tip, screwdriver should be used that "fits" the screw head for better leverage and easier assembly. All screws should be inserted straight.

[0092] Although a specific embodiment of the invention has been described with reference to the drawings, it should be understood that such embodiments are by way of example only and are merely illustrative of but a small number of the many possible specific embodiments to which the principles of the invention may be applied. Various changes and modifications obvious to one skilled in the art to which the invention pertains are deemed to be within the spirit, scope and contemplation of the invention as further defined in the appended claims.

[0093] For example, the aspect ratios of the combined roller seat and carrier **1** may be changed from those shown in the drawings without departing from the spirit of the invention.

[0094] In accordance with the preceding explanation, variations and adaptations of the flexible truncated-pyramidally-shaped tool and material holder in accordance with the present invention will suggest themselves to a practitioner of the mechanical design arts.

[0095] In accordance with these and other possible variations and adaptations of the present invention, the scope of the invention should be determined in accordance with the following claims, only, and not solely in accordance with that embodiment within which the invention has been taught.

What is claimed is:

1. A combination (i) roller seat and (ii) tool and material carrier for use with a hollow body tool and material holder detachably mountable to the upper region of an open step ladder, the combination roller seat and carrier comprising:

a substantially planar base;

a structure in the shape of a truncated frustum attached to and extending above the base, this structure occupying a same shape and volume as does a truncated frusta-conical upper region of a open step ladder; and

wheels to the base;

wherein a person may sit upon the top of the structure while the base rolls upon the wheels, making thereby a roller seat; and

wherein a hollow body tool and material holder detachably mountable to the upper region of the open step ladder can, alternatively to being mounted upon the step ladder, be mounted over the structure, making thereby that the structure serves at least indirectly to hold any tools and materials that are also held by this hollow body holder.

2. The combination roller seat and carrier according to claim 1 further comprising:

a planar extension region to the base extending beyond a region where the base attaches the structure in the shape of a truncated frustum, the extension region providing a level surface upon which tools and materials may be placed exclusively of the frustum structure or of any external holder mounted upon the frustum structure.

3. The combination roller seat and carrier according to claim 2 for use with a hollow body tool and material holder detachably mountable to the upper region of the open step ladder which holder also has an extending pouch capable of holding a paint can;

wherein the planar extension region to the base is of suitable (i) elevation above the base, (ii) size and (iii) shape so as to support the pouch of the holder and any paint can that is within the pouch.

4. The combination roller seat and carrier according to claim 1

wherein the frustum structure to the base is hollow, and open along at least one side surface so that tools and materials can be stored to the interior of the hollow frustum structure.

5. The combination roller seat and carrier according to claim 1

wherein the frustum structure to the base has and defines in it's upper surface a slot through which fingers of the hand may be passed, thus to serve as a handle, at least such times as the holder is not mounted to the frustum structure.

6. The combination roller seat and carrier according to claim 1 further comprising:

posts extending downwards from the base which posts serve, in combination with the wheels, to prevent that the combination roller seat and carrier should tip over nonetheless that holder, and any tools and materials held by the holder, be attached to the frustum structure.

7. The combination roller seat and carrier according to claim 1 for use with a hollow body tool and material holder having attaching straps, the combination roller seat and carrier further comprising:

apertures defined by, and in, any one or ones of the base and the frustum structure which apertures pass the straps of the holder so as to secure the holder to the frustum structure.

8. A combination (i) roller seat and (ii) tool and material carrier comprising:

a substantially planar base having and upper surface with adjacent first and second regions, and a lower surface;

a hollow structure in the substantial shape of a truncated frustum, this structure affixed to the planar base in the base's first region, this structure suitably holding tools and materials within its hollow interior while presenting a substantially flat upper surface suitable to serve as a seat;

wherein the bases's second upper surface region is adjacent to the hollow structure, and suitable to support tools and materials; and

wheels to the base;

wherein a person may sit upon the top of the structure while the base rolls upon the wheels, making thereby a roller seat; and

wherein an external hollow body tool and material holder otherwise detachably mountable to the upper region of the open step ladder can, alternatively to being so mounted upon the step ladder, be mounted over the structure, making thereby that the structure serves at least indirectly to hold any tools and materials that are also held by this hollow body holder.

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