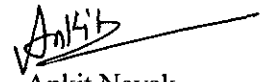


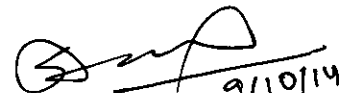
42972/2014

Abstract

The invention relates to convertible luggage trolley which includes vertically placed back rest frame providing support to luggage, foldable tubular horizontal rest frame onto which canvas cloth is mounted providing chair like structure, foldable luggage carrier base for holding luggage on trolley, belts to provide more holding grip to the luggage and the entire structure is designed in such a way that anytime invention can be used as simple luggage trolley by folding horizontal rest frame or can be used as chair by unfolding horizontal rest frame and simultaneously both as chair and luggage carrier by unfolding horizontal rest frame and luggage carrier base.

Applicants & Inventors


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CLAIMS

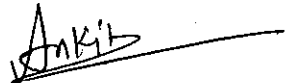
We claim,

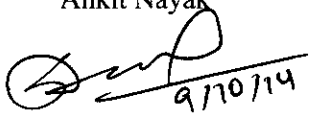
1. A convertible luggage trolley comprising:
 - (i) a foldable 'horizontal rest frame' subassembly
 - (ii) a 'back rest frame' subassembly
 - (iii) a foldable 'luggage carrier base' subassembly
 - (iv) a canvas cloth mounted on horizontal rest frame for seating purpose.
2. A convertible luggage trolley as claimed in claim 1 wherein, foldable horizontal rest frame is shaped in such a manner that it forms two elliptical cross section pipes providing support to canvas cloth meant for seating and to the same two elliptical cross section pipes are attached tubular pipes of smaller diameter with the help of sliding mechanism and can be extended when chair is to be used as chaise lounge to support legs; at the lower side of horizontal rest frame, attached are the two foldable U-shaped frame serving the purpose of legs of chair.
3. A convertible luggage trolley as claimed in claim 1 wherein, two caster wheels mounted on a pivot are attached at the bottom of vertically placed back rest frame through tubular pipes in order to automatically align wheel to the direction of travel.
4. The convertible luggage trolley as claimed in claim 1 wherein, foldable luggage carrier base is attached to back rest frame and provide platform to hold luggage from bottom.
5. The convertible luggage trolley as claimed in claim 1 wherein, horizontal rest frame is folded completely to convert said convertible luggage trolley into hand driven carriage trolley moving on two caster wheels and luggage is placed on vertically placed back rest frame with the help of belt mounted on arms of said back rest frame.

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6. The convertible luggage trolley as claimed in claim 1 wherein, convertible luggage trolley is used as a means to carry luggage pieces and also provide chair shape for seating and both purposes (luggage carriage & seating) can be utilised simultaneously.

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3 NOV 2014

FIELD OF THE INVENTION

The present invention relates to a portable, foldable and convertible luggage trolley designed particularly to carry relatively heavy luggage and/or a considerable number of pieces of luggage. The present invention also relates to a portable, foldable and convertible luggage trolley that can also be converted to a rest chair and can be utilised as portable seating and resting device.

BACKGROUND & THE PRIOR ART

Luggage trolleys are well known in the art for use by travellers to conveniently transport several luggage pieces together. These trolleys are essentially wheeled carts which may be tipped forward to hold luggage on the cart and are pulled by a handle. Some pieces of luggage in the prior art have been provided with wheels and an additional handle to ease transport of that piece. These pieces of luggage have had wheels at one end of the luggage with a handle extendible, by either folding or telescoping, from the other end.

U.S. Pat. No. Re. 28,757, reissued Apr. 6, 1976 and corresponding to original U.S. Pat. Nos. 3,709,513 issued Jan. 9, 1973, and 3,960,252, issued June 1, 1976, both issuing to K.A.I. Cassimally, provide examples of portable luggage cases with an extendable framework which cooperates with the luggage case to form a trolley to receive and retain luggage.

The trolley of U.S. Pat. No. Re. 28,757 and U.S. Pat. No. 3,709,513 includes a framework comprising a handle and a pair of wheels which can be folded into a closed position adjacent the exterior of the sides and one face of a portable case. When unfolded into an open position, the wheels project below the case and the framework projects outwardly therefrom and is locked to form a wheeled trolley.

The trolley of U.S. Pat. No. 3,960,252 discloses a framework which may be stored in a flat condition solely within one face of the portable case and which is easily separable therefrom to allow the case to be carried without the framework, if desired. This structure is affected by providing a telescoping handle which may be folded upon one face of the case to which is attached a pair of pivotal wheel

assemblies which may also be folded into wheel recesses in the case storage face. The entire framework is received by sockets in the case which receives bar-like extensions of the framework.

U. S. Pat 4,505,495 discloses a portable, foldable and convertible luggage trolley which includes first and second base supports joined by a pivot so as to be folded between a nested position and a position in side-by-side coplanar relationship, the first and second base supports carrying first and second sets of wheels.

U. S. Pat 4411343 discloses a portable case having a mechanism capable of converting said case into a trolley. The mechanism is formed from basically two related sets of components, including base members connected to the sides of the case and each capable of extending a forward end beyond one end of the case, and a handle structure having arm members longitudinally slidable in relation to the base members and capable of being pivoted and locked at an angle with respect to the base members. In one embodiment, wheels are supported on the rear of the arm members so as to project downward therefrom when the arm members are pivoted and locked in their trolley position. In other embodiments, wheels are supported near the forward end of the base members. With both configurations, the wheels support the entire case when the locked arm members are tilted forward for trolley use.

Although the above-described luggage trolleys have many advantages, it has been considered desirable to produce a portable luggage trolley that can be used as chair whenever it is required to sit for the purpose of taking rest or for the conditions where sitting position is required. Therefore, the present invention is basically a luggage trolley cum rest-chair to carry and transport the luggage pieces on a robust expandable steel frame with two wheels. Further, the present invention is light in weight as well as higher on strength.

OBJECTIVES OF THE INVENTION:

A primary object of this invention is to provide a portable, foldable and convertible luggage trolley that can be converted to rest-chair whenever required.

Another object of this invention is to provide a convertible luggage trolley as aforesaid wherein the trolley consists of frame onto which wheels are mounted.

Yet another object of this invention is to provide a convertible luggage trolley as aforesaid wherein means are provided for locking the luggage restraining member or carriage in its position generally normal to the second base support.

A further object of this invention is to provide a convertible luggage trolley as aforesaid wherein surface that serves the purpose of chair is mounted on the frame.

Still another object of this invention is to provide a convertible luggage trolley as aforesaid wherein a gripping handle on the frame and facilitate carriage of luggage on the said trolley.

Still further object of the present invention is to provide a convertible luggage trolley as aforesaid wherein folded trolley consumes lesser space and accommodate in train below berth, in aircrafts, in bus and in other means of travel or transport.

With the above and other objects in view that will hereinafter appear, the nature of the invention will be more clearly understood by reference to the following detailed description, the appended claims and the several views illustrated in the accompanying drawings.

SUMMARY OF THE INVENTION

According to the present invention, convertible luggage trolley provide means to carry luggage of passengers travelling. The said convertible trolley is converted to rest chair and can be utilised as chair whenever required.

In one aspect of the invention, convertible luggage trolley carry and transport luggage or pieces of luggage and can be unfolded into a comfortable rest chair providing convenience to a traveller to take rest while waiting for trains on the platforms or other places.

In another aspect of the invention, convertible luggage trolley can be used as a futon in case of other emergencies like medical requirements; ease for travelling with kids and age factors.

In still another object of the invention, luggage safely occupies the space beneath this rest chair. This can also be utilised as a temporary seating arrangement during excursion trips or short visits, ensuring a comfortable and tireless journey.

In further object of the invention, convertible luggage trolley has two wheels and foldable steel frame with canvas cloth for providing rest. It consumes 4'x2' of floor space in open state and can support weight upto 110 kgs. The said convertible luggage trolley comprises one L-shaped steel matt-chromed elliptical tubular frame structure to hold luggage safely.

In still further object of the invention, the frame comprises of two horizontal elliptical cross section hollow pipes with foldable extensions and two pairs of legs that can be folded within the frame along with canvas clothing between them for seating/resting purpose on one side while a small circular cross section tubular frame with collapsible leg frame on the other side to place the luggage. An upper cross tubular member is provided and is used as handle offering swift pulling of the said convertible trolley.

BRIEF DESCRIPTION OF DRAWINGS

Figure 1 depicts the isometric view of complete chair in unfolded situation illustrating complex parts like joints are zoomed out to give more details.

Figure 2 depicts solid model of complete chair along with canvas cloth to give complete picture of the product.

Figure 3 depicts perspective view when convertible luggage trolley is loaded with luggage piece and is solely utilised as trolley

Figure 4 depicts perspective view when convertible luggage trolley without luggage piece or open chair and is solely utilised as trolley

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS:

A convertible luggage trolley constructed in accordance with this invention is generally designated by the reference numeral 24. According to Figure 1, luggage trolley 24 carries passenger's luggage 17 while travelling from one place to another. Also the canvas cloth 16 provided is mounted on steel frame. In an unfolded position as depicted in Figure 1, traveller can take rest while his luggage still can be shelved beneath the canvas cloth 16 or can be mounted on luggage carrier with a secured belt 18.

Horizontal rest frame subassembly 21 with two elliptical cross section pipes referred as main horizontal foldable rest members 2 and an extendable U-shaped frame referred here as 'Extended horizontal foldable rest members' 3 again elliptical in cross section. The said two portions 2 & 3 are connected through two extension joints 12. This subassembly 21 also comprises of two leg frames 5 and 6 referred here as 'Main U frame leg' 5 and 'Extended U frame leg' 6 to provide support to 2 and 3 respectively. These are to be unfolded in case the traveller wants to convert the device into a rest chair. The 'Extended horizontal foldable rest members' 3 can be used if traveller wants to give support to his legs also. Cross member 8 is provided to give lateral support and maintain fix distance and

rigidity between two elliptical cross section tubular members 3. The extension joint 12 provides hinge joint between 2 and 3 and also provide support to 3 in case of fully open condition while traveller taking rest. The two leg frames 5 and 6 are connected to these two horizontal portions 2, 3 of Horizontal rest frame subassembly 21 via two L-shaped joints referred as 'Horizontal frame L-joint' 10 and 'Extended frame L-joint' 11. This complete sub assembly 21 is connected to vertical back rest U-shaped frame subassembly 22 via two J-joints 9. Subassembly 22 comprises of a U-shaped tilted 'Back rest steel matt-chromed tubular frame' 1, Wheel bracket 14, Wheels 15, Handle grip 20, Belt 18 and Hooks 19. The Handle grip 20 is provided in the bottom of horizontal limb of this U-shaped frame and two big sizes Wheels 15 are fixed at the ends of vertical tilted limbs of this U-shaped frame using bearing in Wheel joint 14. This wheel joint bracket 14 on one hand provides fixing to the vertical tilted limbs of this U-shaped frame 1 and on the other hand gives provision of hinge joint and horizontal locking to the luggage carrier sub assembly 23. Luggage carrier sub assembly 23 consists of Luggage U-frame leg 7 which is connected to Luggage foldable carrier 4 through two luggage frame L-joint 13 which provide hinge joint as well as horizontal locking of 7. This luggage carrier subassembly 23 is used to carry the traveller's luggage 17 that can remain secured in its place by tightening luggage belt 18 through hooks 19.

At the time of towing the luggage the traveller tilts the trolley and whole weight of the device comes on wheels and then the wheels allow easy manoeuvrability of this loaded trolley. If traveller wants to stop in between or wants to make his/her hands free then the loaded trolley can rest on the Wheels 15 and Luggage U-frame leg 7.

According to Figure 2, back rest steel matt-chromed tubular frame 1 consists of main horizontal foldable rest members 2 and extended horizontal foldable rest members 3 actually provides frame structure onto which canvas cloth 16 is mounted. The 'Main U frame leg' 5 and 'Extended U frame leg' 6 provide support to main horizontal foldable rest members 2 and extended horizontal foldable rest members 3 respectively. 5 and 6 are to be unfolded in case the traveller wants to convert the device into a rest chair. The Handle grip 20 is

provided in the bottom of horizontal limb of this U-shaped frame to facilitate swift carriage of the loaded trolley. Hooks 19 facilitate grip to the luggage bound with the help of belts. Luggage U-frame leg 7 is connected to Luggage foldable carrier 4 through two luggage frame L-joint which provide hinge joint as well as horizontal locking of luggage U-frame leg 7.

The above disclosure is not intended as limiting. Those skilled in the art will readily observe that numerous modifications and alterations of the device may be made while retaining the teachings of the invention. Accordingly, the above disclosure should be construed as limited only by the metes and bounds of the appended claims.

The invention is naturally not limited in any sense to the particular features specified in the forgoing or to the details of the particular embodiment which has been chosen in order to illustrate the invention. Consideration can be given to all kinds of variants of the particular embodiment which has been described by way of example and of its constituent elements without thereby departing from the scope of the invention. This invention accordingly includes all the means constituting technical equivalents of the means described as well as their combinations.

These and other objects and the advantages of the present invention will no doubt become obvious to those of ordinary skill in the art after having read the following detailed description of the preferred embodiment which is illustrated in the various figures and drawings.

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CLAIMS

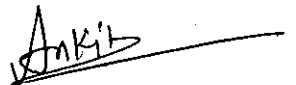
We claim,

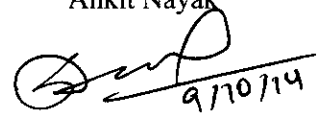
1. A convertible luggage trolley comprising:
 - (i) a foldable 'horizontal rest frame' subassembly
 - (ii) a 'back rest frame' subassembly
 - (iii) a foldable 'luggage carrier base' subassembly
 - (iv) a canvas cloth mounted on horizontal rest frame for seating purpose.
2. A convertible luggage trolley as claimed in claim 1 wherein, foldable horizontal rest frame is shaped in such a manner that it forms two elliptical cross section pipes providing support to canvas cloth meant for seating and to the same two elliptical cross section pipes are attached tubular pipes of smaller diameter with the help of sliding mechanism and can be extended when chair is to be used as chaise lounge to support legs; at the lower side of horizontal rest frame, attached are the two foldable U-shaped frame serving the purpose of legs of chair.
3. A convertible luggage trolley as claimed in claim 1 wherein, two caster wheels mounted on a pivot are attached at the bottom of vertically placed back rest frame through tubular pipes in order to automatically align wheel to the direction of travel.
4. The convertible luggage trolley as claimed in claim 1 wherein, foldable luggage carrier base is attached to back rest frame and provide platform to hold luggage from bottom.
5. The convertible luggage trolley as claimed in claim 1 wherein, horizontal rest frame is folded completely to convert said convertible luggage trolley into hand driven carriage trolley moving on two caster wheels and luggage is placed on vertically placed back rest frame with the help of belt mounted on arms of said back rest frame.

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6. The convertible luggage trolley as claimed in claim 1 wherein, convertible luggage trolley is used as a means to carry luggage pieces and also provide chair shape for seating and both purposes (luggage carriage & seating) can be utilised simultaneously.

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