A lightweight, portable, inflatable cover to protect a vehicle from the elements that can dent and damage a vehicle surface, a tent for summer camping or winter ice fishing a cover or cushion to protect items in transit. Having a multitude of air chambers (26) vertical walls adhered to a top layer and a bottom layer with openings (28) in inner vertical walls allowing air to pass through openings filling air chambers as cover is inflated. An air valve stem (46) an air release screw in plug (32) to inflate and deflate cover. Elastic opening for antenna (40), grasp handles (42), reflector strips for safety with an identification name or number (22). Doors or flaps (11) with large zippers (20), and clear inserts (48). A cord (18) and locking pulley (16) to secure cover to vehicle and grommets (36). Air vents covered with breathable material (25) prevents air lifting, and circulation of air keeps interior of vehicle cooler in the summer and air vents are insulated for winter. The cover, tent, and cushion are easy and quick to set up and take down, and repairing a tear or hole is done with a peel and stick patch and a can of spray sealer.
AUTO-AIRPLANE-TENT-CUSHION INFLATABLE PROTECTION COVER

CROSS-REFERENCE TO RELATED APPLICATIONS


STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

[0002] Not applicable.

REFERENCE TO A MICROFICHE APPENDIX

[0003] Not applicable.

BACKGROUND OF THE INVENTION

[0004] The auto or vehicle covers on the market today are made to keep dust, rain, and sun off auto surface. Though these covers have multi layers these covers are not inflatable, there is no cushion or barrier constructed in the cover to protect the vehicle from the elements such as hail and debris that can dent and damage vehicle surface. These covers have elastic around the bottoms and would not hold the cover secure in a wind and hail storm. These covers do not have reflector strips with a identification name or number or reflective material to warn other drivers during a heavy rain or hail storm that there is an auto parked to avoid a collision either in a parking area or on the road. The present covers do not have openings or flaps on the sides adjacent to the doors for easy reentry into the auto, airplane or vehicle, or vents to allow air to pass out through cover to prevent air lifting and allow free circulation of air under the cover to keep vehicle interior cooler in the summer or by covering vents and or inserting insulation in vents for a winter cover. The present covers do not have an inflation or deflation mechanism, grasp handles, or clear vinyl inserts adjacent to windows allowing one to see outside vehicle.

[0005] The airplane covers on the market today are made to keep the sun from heating the cabin interior and frost or ice off the windows and wings. These covers do not protect the airplane from the elements such as hail, debris that can dent and damage vehicle surface. The covers on the market today fit close to airplane body and do not allow air to circulate around exterior to keep cabin cooler.

[0006] The tents on the market today are not inflatable and do not have a barrier of air for comfort and protection. They are not used for ice fishing and are not as quick to set up as an inflatable tent.

BRIEF SUMMARY OF THE INVENTION

[0007] This invention relates to a type of cushion cover that is portable, inflatable, light weight can be made as a protection cover for auto, airplanes or any vehicle from the elements, or formed in the shape of a camping tent, or as a winter ice fishing tent, or a cover or cushion to reduce jarring, bumping and banging and the elements for items in transit, providing a barrier of air with in the cover. A portable, light weight, inflatable body with multitude of air chambers, solid outer wall, with inner vertical walls with air flow holes, sandwiched between a top layer and a bottom layer, air flow holes allow air to flow through chambers inflating air chambers conforming to a predetermined shape of the outer surface of a vehicle, a shape of a tent or a cushion or any shape desired.

[0008] An air valve stem adhered to air chambers, housed in a pocket and is connected to a compressor or pump that puts into a cigarette lighter, an air pressure tank or an air hand pump or air hose to inflate cover. The pump is reversed to deflate cover or an air release screw in plugs can be used to deflate cover.

[0009] Openings or flaps forming doors, zippers and or snaps and eyes inlayed and adhered to opening or flap to secure opening or flap to cover, allowing reentry into vehicle, clear vinyl inserts adhered to flap or opening adjacent windows. A cord incased in the skirt or bottom of the cover is attached to a locking pulley or ratchet type device to tighten bottom skirt around and under bottom edge of auto, airplane or vehicle, securing cover to vehicle, grommets adhered on sides of cover for an additional tie down such as a tarp strap, bungee cord, ratchet and cord, or cable and lock.

[0010] Pockets for side mirrors and hood ornament, grasp handles for easy handling and elastic opening for an antenna, elastic can be inserted on side comers for ease in adjusting cover over vehicle, and reflector strips for safety with a identification name or number and or reflective material.

[0011] Air vents to prevent vehicle cover from air lifting and allowing air to circulate under the cover keeping vehicle or airplane interior cooler inside during the summer. Flaps or cover can be attached over vents and vents have a zip lock opening on the underside for insertion of insulation for winter to keep out snow and frost and wind.

[0012] The tents is made the same as the cover for vehicles, except the tent has a flat sheet of material for the floor with a flap that covers a hole for ice fishing and the air vents have a closeable awning type cover on the outside. It can be made large enough to accommodate more than one person and a dog.

[0013] This cover can be used as an emergency storm cover or as a permanent protection cover from the elements. It can be made as a full cover or partial cover or as a canopy. This cover is quick and easy set up and take down and repair are made with a peel and stick patch and spray sealer. The cover can be sprayed on the outer surface and under surface with a preserver to keep the polymer soft and pliable.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING

[0014] In the drawings, closely related figures have the same numbers but different alphabetic suffixes.

[0015] FIGS. 1A to 1C shows various aspects of a cross section, side and front view of the inflated cover on an auto, air valve stem pocket with air valve stem coiled up inside pocket, hood ornament pocket, screw in air release plug, air vents, zippers around doors, reflector strips with an identification name or number, skirt with cord and locking pulley, grasp handles, grommet holes, pocket for mirrors, elastic casing for antenna, elastic inserts on side corners, snaps and eyes, and velcroed flaps for front closures.

[0016] FIGS. 2 shows various aspects of a closure with locking pulley, cord, snaps and eyes, velcroed flaps of an opening in the inflated protection cover.
FIG. 3 shows an outer surface with air vents, and an elastic antenna opening.

FIG. 4A show inflated air chambers with an air valve stem, and an air release screw in plug.

FIGS. 4B to 4G shows exploded view of air chambers, with air flow holes, chambers with various degrees of angles forming corners, an air vent with double and triple layer of breathable material with zip lock openings on one end and noninflatable chambers.

FIGS. 5A to 5F shows various aspects of a side, front and rear tail section, cross section of inflated cover on an airplane with air valve stem pocket, snaps and eyes, velcroed flaps for closures, cord and locking pulley located in the front and under each wing and stabilizer, screw in air release plugs, and air vents, and grommets, grasp handles and reflector strips with a identification name or number.

FIG. 6 shows various aspects of a closure, a cord with snap and eye attached to adjoining ends, snap and eyes, and velcroed flaps.

FIG. 7 shows various aspects of an inflatable tent with a zipper around door, clear vinyl window, vents with closeable covers on sides, an air valve stem pocket, air release screw in plugs, and grasp handles and reflector strips with a identification name or number.

FIG. 8 shows various aspects of a cross section and in side of the inflatable tent with air vents on sides and back, grasp handles, air valve stem pocket, air valve stem coiled up inside pocket, air release screw in plug, and snap together ridged frame.

REFERENCE NUMERALS IN DRAWINGS

11 flaps or doors 12 pocket housing air valve stem 13 non inflatable inserts 14 skirt 14a skirt hanging loose 14b skirt easing 16 locking pulley 18 cord 19 zip lock opening 20 large zipper 21 snap 22 reflector strips and ID name or number 23 hood ornament pocket 24 cover 25 air vent 26 air chamber 27 elastic inserts 28 air flow opening 30 air valve stem hose 32 screw-in plug 34 Outer-surface 36 grommet 40 elastic insert for antenna 41 eye 42 grasp handle 44 velcroed flap 46 clear insert 48 ridged frame

DETAILED DESCRIPTION OF THE INVENTION

This is a versatile cover or cushion that is portable, inflatable, light weight, and easy to use. This inflatable cover can be made into the shape of an inflated cover for the protection of the elements for any vehicle FIGS. 1A to 1C, or an inflatable camping tent FIG. 7 and 8, an inflatable cover cushion used to protect items in transit, and an inflatable ice fishing tent FIGS. 7 and 8. The cushion of air cover consisting of material of a light weight polymer such as vinyl to neoprene coated nylon that is impact-resistant to withstand the elements such as hail, and debris, bumps, banging and jarring, heat or cold. Vertical walls adhere to horizontal layers a top layer and a bottom layer forming air chambers FIGS. 4A to 4G, an approximate size ranging from one centimeters to fifteen centimeters high and two centimeters to 20 centimeters wide and two centimeters to 30 centimeters long or what ever size or shape needed to form the shape desired. The air chambers being of different degrees of angle and size with predetermined openings 28 approximate size of the opening 10 percent to 80 percent of the inner vertical wall to allow air flow through-out, filling and inflating chambers with air conforming to a vehicle body FIGS. 1A to 1C or a tent FIGS. 7 and 8 or a flat cushion FIG. 4A or any shape desired. A noninflatable chamber 13 may be incorporated in cover.

The vehicle cover with a skirt 14 is attached at the bottom edge of the cover approximately thirty centimeters to sixty centimeters wide with a casing 14b five to ten centimeters wide at the bottom of the skirt 14 to encase a round cord 18 attached to a locking pulley FIG. 2 or flat cord attached to a ratchet type device to tighten and hold the cord tight around and under bottom edge of vehicle.

Located on the front and top of the cover placed on the hood is a air valve stem pocket 12 with a snap or hook or with velcro to secure cover to pocket containing a coiled up hose 30 with an air valve stem 46 on the end, the hose approximate length from three centimeters to one hundred twenty centimeters long depending on where the air valve stem is placed in the cover, if on top of the hood of an auto or on a larger airplane a longer air valve stem hose 30 is needed. If the cover is made with the air valve stem placed on the side and front on the drivers side a shorter hose can be used. Placing the air valve stem on the hood when air is expelled into the cover will help the cover unroll and it is easy to pull out the sides as the cover inflates. If the air valve stem is placed on the drivers side front, you will have to pull out the front and side of the cover to locate the air valve stem pocket. An air valve stem 46 is used with an air pressure tank or a hand air pump, an air compressor or pump that plugs into a cigarette lighter or an air hose. The pump is used in reversed to deflate cover, or an air release screw in plugs 32 located in front can be used to deflate cover.

A pocket for a hood ornament 23 pockets for side mirrors 38 grasp handles 42 attached on the top surface of the cover for easy handling of the vehicle cover. Elastic opening for antenna 40 constructed with a solid vertical wall between chambers, elastic material adhered to adjoining sides outer-surface and under-surface, with elastic enclosed around antenna and reflective stripes on each side, front, and back for safety with identification name or number to locate your own vehicle.

An opening in vehicle cover in front FIG. 1C or back or side of vehicle to allow ease of installing cover on a vehicle having under flaps over lapping, snaps and eyes or hooks, and velcroed outer flaps over lapping FIG. 2 with a cord and tightening device such as a locking pulley. Elastic insert on each corner and front can be used instead of snaps and eyes. Air vents, FIG. 3 corresponding to and adjacent to a chamber wall with a solid vertical wall between air chambers, a breathable material covering air vents on the outer-surface and under-surface and or additional layers of
breathable material inside air vent opening. Fig. 4E to prevent the elements such as hail and debris from entering through vent that would dent or damage vehicle and to keep the elements out, yet allowing air to pass in or out through air vents from under said cover. Placing air vent openings strategically through-out cover to prevent said cover from air lifting, and circulation of air through air vents would keep interior cooler in the summer. A flap or cover can be attached to cover air vents for winter uses or insulation can be inserted inside air vents Fig. 4E through a zip lock opening 19 inside cover. This cover can be used as a protection cover in transit.

[0030] The cover for an airplane 5A to 5C is constructed and operated the same as the auto inclusive of all parts and procedures 1 through 48 with the exception the cover and cord must be hooked together next to body under each wing and stablizer Fig. 5A, also each wing 5C and stablizer 5B has its own cord and locking pulley to tighten skirt and grommets used with bungee cords or tarp straps to secure cover. This cover can be made in our unit or made up to sections with its own air valve stem to inflate and deflate cover or use screw in plug to deflate cover and attachments to join and connect sections together.

[0031] For the airplane a separate locking pulley 16 located on each wing to tighten the skirt under the wing section. Snaps 21 and eyes 41 or hooks, or straps with buckles can be used, velcroed flows, located in the front or nose of airplane and under each wing securing cover opening together and snap and eye to hook cord together. Air vents, slits or openings 25 strategically placed in the cover preventing it from air lifting and allows air to circulate to keep interior of the cabin cooler, for winter use it is the same as for autos the vents are insulated and or an attachable cover is used to keep snow and frost out and interior warmer. The air valve stem pocket 12 with air valve stem 46 is located on the front and side on an airplane for convenience. This cover can be custom made to individual needs or desires placing the air valve stem hose pocket and air release screw in plugs where ever it would work best for each type of airplane.

[0032] A closure Fig. 6 with eyes and snaps or hooks attached to adjoining ends of exposed cord to reattach cord together, snap and eyes above and under velcroed flows is used in back of the airplane and under the wings and stabilizers to attach cover and cord together so the skirt can be tightened around the bottom of the airplane. Grommets located on the lower edge of the cover, and sides of the airplane to attach bungee cords or tarp straps or cord and ratchet to grommet holes on one side of the airplane and brought under the airplane and attached to the grommets on the opposite side of the airplane to help secure cover to the airplane and grommets located on the cover on the wings and stabilizers are used with bungee cords or tarp straps. This cover can be made in separate sections with separate air valve stem and air release screw in plug, locking pulley, grommets, and snaps and eyes, each section can be attached to adjoining sections. This cover can be used as a protection cover for airplanes or any vehicle in transit.

[0033] The inflated ice fishing-camping tent FIGS. 7 and 8 shows a zipper 20 or snaps and eyes or hooks can be used to secure the door 11 to the tent, flexible clear inserts 48 for a window, side air vents 25 with flaps or covers out side 24 air valve stem pocket 12 with an air valve stem hose 30 coiled up inside to inflate and deflate cover, air release screw in plugs 32 and grasp handles 42. Inside a ridged snap together frame 49 is used to help support the tent and a mat can be used under the flooring material, next to the ground and on top of the flooring material to protect the floor from tears and holes. The cushion can be inflated and used to lay on inside the tent. Reflector strips with a identification name or number adhered on the sides for locating your own tent. This tent is fast and easy to set up and take down, it is warmer in the winter and cooler in the summer.

[0034] The ice fishing-camping tent FIGS. 7 and 8 would have vents with a closeable flap or covers over the out side to prevent the elements from coming back into the tent. A larger camping tent would have more vents with a closeable outer flap or covers that can be tied shut or snapped shut with velcro to help secure the cover or flap down to the tent, or the vents can be open to allow air to circulate on hot days and closed on cold or rainy days to keep heat inside and the elements out of interior. For winter uses and ice fishing the vents have a zip lock opening on the inside to insert insulation in the vents to keep tent warmer inside.

[0035] The cover cushion is made the same as the cover and tent. It can be made into any shape desired as a covering over, under, around any item or vehicle in transit.

[0036] Because my inflatable protection cover is also light and portable, one must get it out of the trunk, or compartment where ever it is stored and place it on the hood or top of the auto or airplane or can be left on the ground. Arrows on the rolled up cover shows which direction to place it on the hood and arrows showing the direction the cover will unroll. Unroll the cover either on the ground or on the hood a few feet towards the back of the auto or airplane or vehicle. The screw in air release plug 32 should be screwed in tight. Locate air valve stem pocket 12 open the cover take out the air valve stem 46 connect air inflation hose from air pressure tank, hand pump, or an air compressor or pump that is plugged into the cigarette lighter, or an air hose, to the air valve stem and release air into the cover to start cover to unroll. Unroll cover pulling sides out, locate brightly colored elastic opening 17 for antenna, open elastic and slip antenna out through opening, elastic will close together around antenna, continue to pull sides down and around auto or airplane or vehicle body place pockets 38 over mirrors. Taking hold of the grasp handles 42 to adjust cover over the top of auto or airplane. Close all openings in front of auto or airplane with snaps into eyes or hooks, close velcroed flows. With the skirt 14a hanging down towards the ground, go to the locking pulley 16 or ratchet and cord 18 unhook the loose end of the cord 18 from above snap, thread through the locking pulley mechanism. Pulling the cord tight thus tighten the cord and pulling the skirt in, around, and underneath edge of the auto or airplane or vehicle. Set the lock on the locking pulley and tie up the cord end to it self next to skirt in a knot for added security.

[0037] For airplanes hook snaps and eyes on cord ends together front, sides and tail close opening, hooking all snaps and eyes. Locate locking pulley in front and underneath the wings FIG. 9, and stabilizers FIG. 5B tighten and lock locking pulley. Air release screw in plugs should be screwed in tight. Proceed to the front or side of auto and side on airplane and continue to expel air through the air valve stem 46 into the cover, by means of an air pressure tank, an
hand air pump or a air compressor or pump that you can plug into the cigarette lighter of the vehicle or air hose and inflate cover completely. Rubber tarp strap or bungee cords, or cord and ratchet can be used to connect grommet on one side of vehicle, underneath and attach to grommets on the opposite side for an additional tie down to secure cover to vehicle or use as a security cable and lock. Large zipper 20 or snaps and eyes or hooks can be used to secure flap or door to cover located around and adjacent to vehicle doors. This door or opening can be used to reenter auto or airplane or vehicle. Once in side vehicle open door or window enough to take hold of the zipper tab and zip flap shut as far as possible and hook snap and eye to hold flap shut.

[0038] When the hail storm has passed by, you may remove hail protection cover by reversing the compressor or pump to deflate cover completely, or unscrew the air release screw in plug 32 deflecting the cover. Next untie cord 18 unlock locking pulley 16, unhook all snaps and eyes, hook cord snap and eye to above snap and eye to keep cord from sliding back in to casing, loosen skirt completely. Go to antenna, open elastic 40 bringing side up, take antenna out of opening. Take hold of the grasp handles 42 on top of the cover and pull cover off of auto or airplane or vehicle. Laying the cover under side up on the ground folding sides to center pushing air out as you fold and rolling the cover up from back to front, this also pushes the rest of the air out through front air release hole. Replace screw in plug, place air valve stem back in pocket, roll cover up and secure with elastic bands around rolled up cover and place in carrying bag. Return to trunk or compartment ready to use for another time.

[0039] This cover may be used as an all year protection cover over auto or airplane or any vehicle keeping interior of vehicle cool in the summer and protected in the winter. A partial cover can be used over airplane cabin area only to keep cabin interior cool. This cover can be used as a protection cover for airplanes or any vehicle in transit.

[0040] Accordingly, the reader will see that the inflated protection cover of this invention, can be put on an auto or airplane or any vehicle by most anyone, because it is light weight, easy to handle, having simple directions and easy to use. Partial inflation of the cover helps the cover quickly unroll and unfold conforming to vehicle body making it easy to handle and cover any vehicle.

[0041] This cover can be made of a light weight polymer such as a vinyl or a vinyl with fibers incorporated or neoprene coated nylon. This cover can be made into a general shape for each type of vehicle body, airplane body, tent, or cushion or custom made for each type of vehicle body, airplane body, tent, or cushion.

[0042] This cover when formed into a tent is easy and quick to set up and take down. The inflation process is the same as for the vehicle cover. Just inflate and set up right, screw or snap together a ridged frame 49 inside the tent for extra support. The tent has inflatable air chambers on top, and around the sides and is adhered to a flat sheet of material forming the floor with a flap that can be opened for ice fishing. A pad or mat can be placed under the floor sheet on the ground and on top of the floor sheet to protect the flooring from tears and keep out moisture from the ground. A hole must be made in the pads for ice fishing. A clear or tinted, flexible vinyl inserts 48 can be adhered and inserted in the door, or sides or on top of the tent as a sky light to allow light to enter the tent.

[0043] For ice fishing tents the vents are filled with insulation to keep the cold wind and snow out providing a warmer tent for winter uses. A flap in the floor is provided in the floor of the tent that can be opened over the hole in the ice for fishing.

[0044] Repairs are easy and quick, just apply a peal and stick on patch and spray with a sealer. A spray on presever applied to the outer surface and under surface of the cover to keep it soft, and pliable. Covers, tents, and cushions can be made with different color combination and designs.

What I claim as my invention is:

1. A cover comprising of a type of structure that has a portable, inflatable body of material having solid vertical walls, and enclosed vertical walls with opening in inner vertical walls sandwiched between an outer surface and an under surface forming a multitude of predetermined air chambers and predetermined inserts, openings and attachments, forming a predetermined design or shape of sufficient size to accommodate use by a human being, mass, animal or vehicle.

2. The cover of claim 1 further including means device to inflate or deflate said air chambers of said cover.

3. The cover of claim 2 wherein a means device such as an air valve stem adhered to said cover and housed in a pocket whereby inflating or deflating said air chamber connected to a pump that is plugged into a cigarette lighter to inflate said chambers and said pump reversed to deflate said cover or said air valve stem connected to an air pressure tank, or hand pump to inflate said cover.

4. The cover of claim 1 further including means device such as a plug to release or contain air in said cover.

5. The cover of claim 1 further including means opening such as a flap or door whereby a human, animal or mass may access.

6. The cover of claim 5 wherein a means device for securing a flap or door to said cover such as a zipper.

7. The cover of claim 1 further including means material whereby to alert, identify and characterize said cover such as reflector strips, name, number, color and designs.

8. The cover of claim 1 further including means grasp handles attached to said cover whereby ease of handling or moving said cover.

9. The cover of claim 1 means openings such as an air vent having solid vertical walls adjoining air chambers covered with a breathable material with predetermined layers on the outer surface and under surface, and underside of said air vent have zip lock openings wherein said air vent allows air to pass out through said cover preventing said cover from air lifting and the elements such as hail, and debris from entering said air vent and coming in contact with vehicle, mass, human being or animal.

10. The cover of claim 1 further including means device to secure said cover to said vehicle or mass.
11. The cover of claim 10 wherein a device such as a locking pulley with a cord attached encased in said cover whereby to secure cover to said vehicle or mass.

12. The cover of claim 1 further includes means elastic material to accommodate antennas and corners of said cover.

13. The cover of claim 1 further includes means closures such as snaps, eyes, velcro to secure openings in said cover.

14. The cover of claim 1 further includes predetermined shape such as a tent or structure whereby a human being, animal or mass may inhabit or use.

15. The cover of claim 14 means device such as a ridged frame wherein to further support said structure.

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