PORTABLE STORAGE TABLE

申请人: CRAFT-n-GO LLC, Simi Valley, CA (US)

发明人: Cynthia Faller, Simi Valley, CA (US); Matthew Faller, Simi Valley, CA (US)

专利权人: CRAFT-n-GO LLC, Simi Valley, CA (US)

申请号: 14/190,094

申请日期: Feb. 26, 2014

国际分类:
A47B 3/00 (2006.01)
A47B 37/00 (2006.01)
A47B 13/00 (2006.01)

摘要:

A table that provides a working surface and storage areas for materials when fully deployed can be folded up and transported either by carrying or rolling on wheels. Foldable and extendable legs may be included to allow the table to be adjusted for the desired height for optimum use. The table includes a pair of partially-enclosed halves that include storage compartments and attachment means allowing for the user to mount and store a variety of preferred implements and materials within the storage areas in accordance with the preferences of the user.
PORTABLE STORAGE TABLE

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

The present invention relates to articles of furniture. More particularly, the invention relates to a collapsible, transportable table for use by hobbyists and craft-makers. The table of the present invention provides a working and display surface when the table is deployed, as well as storage areas for materials and tools, regardless of whether or not the table is being used for a working or display surface, or is configured for storage and transport. The table may include legs that can be folded for storage or transport and adjusted in length.

[0002] 2. General Background and State of the Art

Hobbies such as stamp collecting, scrapbooking and craft making are enjoyed by millions of individuals and families throughout the world. Such activities require a number of working tools as well as a variety of materials and supplies.

Persons engaged in a hobby such as scrapbooking, for example, will have, in addition to the scrapbook itself, photographs, letters, children’s artwork and schoolwork, report cards, recital programs and a variety of other materials which will eventually form the basis of the content in the scrapbook. The scrapbooker also needs scissors, glue, tape, pencils, pens, markers, storage envelopes, rubber bands, paper clips and the like while working on a scrapbooking project.

Traditionally, hobbyists, such as scrapbookers, have packed up their materials and supplies into containers, such as bags, shoeboxes or Tupperware® cases, and carried them to wherever they are doing their work, such as at scrapbooking parties and conventions. While working on a project, the hobbyist often winds up rummaging through various containers to find what they are looking for. After that particular day’s work is done, the hobbyist then has to collect all of the materials and supplies, repack them in the containers, and carry them back to where they are stored. Hobbyists are generally inconvenienced and left to use a lot of their time packing and unpacking their materials and supplies, rather than spending most of their time enjoying the actual time on their hobby.

Storage of the hobbyist’s materials and supplies can present another problem. Depending on the size and number of containers that the hobbyist needs, there are likely to be situations where not all of the hobbyist’s materials and supplies can be easily stored in a single location. If supplies and materials have to be stored in more than one location, it is possible, even likely, that the hobbyist will lose or misplace important materials and supplies needed for a particular project, thus taking away from an otherwise pleasant experience.

Another problem faced by the hobbyist is that depending on where the activities are taking place, the available work area may not be convenient or efficient for the project that is being worked on. For example, some scrapbooking parties may include occasions where as many as several hundred people gather together to scrapbook and there is frequently little or no room to set up on existing tables or work areas. Individuals and families engaged in the same hobby frequently like to work together on their projects, but it may be that there is not enough space for the hobbyists to effectively work together in the area in which they have chosen to work on their projects.

In certain situations, it may be desirable for the hobbyist to have the ability to place the work surface and storage areas on their laps; in other situations, they may wish to be able to place the work surface at various heights, depending on the surroundings.

Once the hobbyist has determined where to set up their work area and working articles, the hobbyist may find that he or she lacks a chair or other furniture to sit on while working.

There exists therefore a need for an article of furniture for hobbyists, craft-makers and the like that provides a working surface in conjunction with storage for the materials and supplies that go with the activity on which work is being performed.

There also exists a need for an article of furniture for use by hobbyists, craft-makers and the like that may be adjusted in height to suit the needs of the user and fit the task at hand.

There also exists a need for an article of furniture for use by hobbyists, craft-makers and the like that is easy to transport.

There also exists a need for an article of furniture for use by hobbyists, craft-makers and the like that is easily stored.

There also exists a need for an article of furniture that can accommodate a wide variety of hobbies and other activities by customizing the areas for storing materials and supplies.

Furthermore, there exists a need for an article of furniture not only provides a working surface and a storage area for supplies, but also one that also includes a chair or other seating apparatus for use by the hobbyist, craft-makers, or the like.

No known articles of furniture, either by themselves or in combination, are seen to anticipate or suggest the article of furniture disclosed and claimed herein.

SUMMARY OF THE INVENTION

Accordingly, it is an object of the invention to provide an article of furniture that includes a secure working area.

It is another object of the invention to provide an article of furniture that includes storage for supplies and materials in conjunction with the working area.

Another object of the invention is to provide an article of furniture that enables a user to vary the size of the working area.

An additional object of the invention is to provide an article of furniture that may be adjusted in height.

Yet another object of the invention is to provide an article of furniture that may be configured for transportation and storage.

An additional object of the invention is to provide an article of furniture that can be reconfigured to a size that fits into a conventional automobile trunk.

It is yet another object of the invention to provide an article of furniture that can be carried by a person.

A further object of the invention is to provide an article of furniture that may be pulled along the ground by a person.

Another object of the invention is to provide an article of furniture that accommodates a wide variety of tasks.
Still a further object of the invention is to provide an article of furniture that enables the easy interchanging of the contents that are stored in the article of furniture.

It is another object of the invention to provide an article of furniture that can be used as a table and includes provision for the inclusion of a seating apparatus.

These and other objectives are achieved by the present invention, which, in a broad aspect, provides the user with a collapsible, portable article of furniture that, when in its fully-deployed configuration, takes on the form of a table having a work surface and several storage compartments. The table of the present invention may also be equipped with folding legs that also include telescoping leg segments that allow the table to be adjusted for a desired height. The table of the present invention also provides a seating apparatus so the user may sit when using the table in its deployed configuration.

The table of the present invention includes a pair of partially enclosed casings that are attached to one another, preferably by a hinge. The two casings are known as the upper casing and the lower casing. The upper casing includes a planar member having a recess in its outer surface. The recess can be left open for the user to apply decals or stickers or alternately can be covered by a clear sheet, preferably constructed of a durable plastic that is attached to the recess by fasteners. Internally, the upper casing contained a recessed area. The interior recess area provides a number of openings or pockets that can be used for storing items, photographs, or similar items. The lower casing includes a planar bottom member and a number of end and side walls attached to and extending from the planar member. When the table is in its folded configuration for transport and/or storage, the end and side walls of the upper casing are in contact with the walls of the lower casing, forming a closed box-like structure. Locking mechanisms secure the two casings together, providing secure storage for materials and supplies.

In the preferred embodiment of the invention, the two casings are rectangular in shape, but they make take on other shapes without departing from the scope of the invention. For example, the corners of the upper and lower casings may be beveled, angled or curved. When the user/owner of the table wishes to use the table of the present invention, the upper casing is moved up and away from the lower casing to a substantially vertical position. In this instance, the lower casing will then be in a horizontal orientation. Locking brackets are used to keep the upper casing secure in its raised position.

On the inner surface of the recess in the upper casing are attached either a number of securing strips of the hook and loop variety, such as Velcro® strips, or a single solid piece of Velcro style fastening, for securing materials or storage containers. Being able to mount a variety of storage containers in this manner enhances the ability of the table of the present invention to be used for a variety of activities according to the preferences of the owner/user, and also means that the purpose for which the table is used may easily be changed simply by changing the nature of the content of the storage containers secured in the upper casing. One embodiment, not shown, is having an optional stiff backing material whose back surface would adhere to the Velcro style fastening of the upper casing and whose front surface would be covered in either a number of securing strips or a solid piece of Velcro, whereby one would be able to place the variety of storage containers on the Velcro of the front surface and the user can remove the entire piece of material from the upper casing and be able to use it elsewhere. This material could be folded in multiple sections to ease its portability once removed from the upper casing.

The lower casing forms a cavity that may be used for storage of materials and supplies. The lower cavity contains either a preformed shell having present individual pockets or the lower cavity contains a set of slotted walls and dividers that will interface with each other and the slotted walls.

The table of the present invention, in addition to providing means for storing and transporting supplies, also provides a working surface on which may be performed a variety of tasks. A planar surface, attached to the lower casing by means of hinges, may be raised and lowered from the lower casing. The planar working surface may be in the form of a single, contiguous piece or may be in the form of two or more separate pieces that can be raised and lowered independently of one another.

When the working surface is in its raised position, access is provided to materials and supplies stored in the cavity formed by the lower casing. In its lowered position, a ledge that extends along a wall of the lower casing supports the working surface.

The table of the present invention may also be equipped with foldable legs attached to the outer surface of the lower casing. The legs may be extended when the table is in use and folded up when the table is in being stored or transported. Each leg also may contain telescoping elements which allow the user to adjust the lengths of the legs and therefore the height of the working surface as desired by the user.

The table of the present invention also includes a carrying handle attached to the outside of one of the casings, which the user may use to transport the table. The table is also equipped with a pulling handle and wheels, which may be recessed within the body of one of the lower casings, that allow the user to roll the table along the ground when the table is in its closed configuration. The pulling handle may be of the telescoping type commonly found in a variety of luggage articles.

The table of the present invention may be constructed of a variety of materials, including molded plastic, metal, or wood.

Further objects and advantages of this invention will become more apparent from the following description of the preferred embodiment, which, taken in conjunction with the accompanying drawings, will illustrate, by way of example, the principles of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing and other objects, aspects and advantages will be better understood from the following detailed description of the preferred embodiments of the invention with reference to the drawings in which:

FIG. 1 illustrates a perspective view of an exemplary article in accordance with the present invention, showing the upper and lower casings closed with the optional legs extended;

FIG. 1A illustrates an exploded perspective view of the top of the upper casing of an exemplary article in accordance with the present invention along with the embodiment of an optional clear protective top layer;
FIG. 1B illustrates a bottom perspective view of an exemplary article in accordance with the present invention, with the article in its closed position, without the optional legs;

FIG. 2A illustrates an exploded perspective view of the bottom of the upper casing of an exemplary article in accordance with the present invention;

FIG. 2B illustrates an exploded perspective view of the bottom of the upper casing of an exemplary article in accordance with the present invention;

FIG. 3 illustrates a perspective view of an exemplary article in accordance with the present invention with the upper casing raised and showing part of the working surface raised;

FIG. 4 illustrates a plan view of the interior of the lower casing of an exemplary article in accordance with the present invention;

FIG. 5 illustrates a bottom view of an exemplary article in accordance with the present invention, showing the optional legs in their folded position;

FIG. 6 illustrates an end view of an exemplary article in accordance with the present invention; and

FIG. 7 illustrates a perspective view of an exemplary article in accordance with the present invention being transported by a user.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT OF THE INVENTION

In the following description of the present invention, reference is made to the accompanying drawings, which form a part thereof, and in which are shown, by way of illustration, an exemplary embodiment illustrating the principles of the present invention and how it may be practiced. It is to be understood that other embodiments may be utilized to practice the present invention and structural and functional changes may be made thereto without departing from the scope of the present invention.

An article according to the present invention takes on the general form of a table and is referred to by the reference numeral 10. As generally illustrated in FIGS. 1, 1A, 1B, 2A, 2A and 3, a table 10 consists of upper casing 12 and lower casing 42. Upper casing 12 is formed from a planar member 13 having an outer surface 14 and an inner surface 15. Front wall 20, rear wall 22, and side walls 24 are mounted to and extend from inner surface 15 to give upper casing 12 its partially-enclosed configuration.

As best illustrated in FIGS. 1, 1A, and 2A, upper casing 12 further includes a recess 16, formed in planer member 13, having a first exterior surface 17 and a second inner surface 18.

A transparent sheet 19, preferably constructed of a clear plastic material, can be attached to first surface 17 of recess 16. Surface 17 is prepared to accept decals and stickers and other personalized items customizing the article to the users preferences. The sheet is prepared by providing a smooth surface which is capable of receiving points, decals and other marking devices Sheet 19 is optionally attached to protect the designs on surface 17.

Optionally Sheet 19 can provide a plurality of thin pockets 21 of various shapes and sizes in which may be stored and displayed pictures, photographs, and the like.

Lower casing 42 is formed from a planar member 44 having an outer surface 46 and an inner surface 48. Front wall 50, rear wall 52, and side walls 54 are mounted to and extend from inner surface 48 to give lower casing 42 its partially-enclosed configuration.

Upper casing 12 and lower casing 42 are joined together by hinge 26, which allows upper and lower casings 12 and 42 to be opened and closed relative to each other. When table 10 is in use, upper casing 12 is moved upward and away from lower casing 42 to allow access to working surface 62 and the materials and supplies stored in table 10. Locking brackets 27 secure upper casing 12 when it is in its raised position.

When table 10 is not in use and is to be transported or stored, upper casing 12 may be secured to lower casing 42 by inserting each locking tongue 39 on upper casing 12 into a locking receptacle 56 and locking ring 58 on lower casing 42. Other such securing means are possible for use.

Upper casing 12 may be used to secure and store some of the supplies and materials that are to be used by the user of table 10. The details of construction of the inside of upper casing 12 are illustrated in FIGS. 2A and 2B. It is an object of this article to have multiple kinds, sizes and shapes of storage devices to be capable of being secured to the inner portion of the upper casing 12. There are several means available to securely mount various storage containers to the upper casing 12 that are covered in this invention. In one embodiment, the attachment means provides a means where there are attached to second interior surface 18 of recess 16 are a number of mounting strips 32, which are preferably constructed of hook and loop material such as Velcro®. A number of containers 36 are mounted on several panels 34, which have also preferably constructed of a hook and loop material such as Velcro, may be mounting strips 33 attached to their back sides. Containers 36 may include storage bags that can be quickly mounted to and/or easily removed from upper casing 12 depending on when the materials they contain are needed. Being able to quickly interchange mounting panels 34 and containers 36 means that the table of the present invention can be easily converted for use from one hobby or activity, such as scrapbooking, to another hobby or activity, such as stamp collecting, without having to materially alter table 10. Thus, an individual can choose the type of container he or she wishes to use in conjunction with a particular hobby or activity, with no material change required to table 10. Other means for securing a wide variety of containers 36 include hooks, seen as 35, bands, snaps, buttons and the like.

In another securement means disclosed by this invention is, shown in FIG. 2B, a solid sheet of a hook and eye material 32A is placed upon surface 18, thereby allowing the user to more customize the location of their containers 36, said containers containing having incorporated thereupon the mating surface of the hook and eye material. In another embodiment, a different means for securing the containers is disclosed whereby the, containers 36 are placed directly upon one side of a sheet of hook and eye material 32B, prior to placing the loaded sheet upon the mating surface of the hook and eye material. This allows the user to have multiple sets of sheets and containers customized to various activities while allowing for a quick interchange between sheets.

Lower casing 42 also provides storage for materials and supplies needed by the user of table 10. As illustrated in FIGS. 3 and 4, lower casing 42 includes a plurality of divided elements 48 bounded by vertical walls 70 and horizontal
dividers 68. These elements are set to incorporate scrapping booking supplies and larger materials not plausibly attached to upper casing 12.

[0062] In addition to providing storage for supplies and materials, the table of the present invention also provides a surface for performing the tasks associated with the activities in which the user engages. Working surface 62, as illustrated in FIGS. 2 and 3, provides a planar surface for the user to perform tasks or display products. Working surface 62 is secured to lower casing 42 by hinges 66 and may be raised to provide access to items held in compartments 70 or lowered to form a working area. Working surface 62 may be a single, continuous surface, or may consist of one or more independently movable surfaces, which, in the horizontal (working) position are supported by wall 70 and dividers 68, which are best illustrated in FIG. 3. As an option, table 10 may also come equipped with a battery-powered light 100 attached to one of upper casing 12 to illuminate working surface 62 under conditions of low light.

[0063] Working surface 62 may be raised and lowered by means of tabs 64. Those skilled in the art will understand that any number of ways exist to provide for raising and lowering working surface 62, such as handles, knob, notches, loops, and the like. One of the advantages of providing a working surface 62 incorporated in table 10 is that it provides a single area for storage and working, so that supplies and materials are conveniently available as needed for the ongoing activities in a single area. When supplies or materials located in compartments 70 are needed, the user simply raises working surface 62, accesses the needed items, takes the items out, and then lowers working surface 62 to its working position.

[0064] If desirable, one or more elements of working surface 62 may be secured in the raised position to upper casing 12 by inserting securing strip 106 through slot 104. Securing strip 106 is preferably a hook and loop attachment material.

[0065] Another key feature of the table of the present invention is that it may include a plurality of foldable and adjustable legs 78, which are best illustrated in FIGS. 3, 5 and 6. Each leg assembly includes legs 78, leg brace 80, leg strut 82, and leg bracket 84 attached to outer surface 46 of lower casing 42. When table 10 is in use, legs 78 are moved away from lower casing 42 to place table 10 in a generally horizontal position. When table 10 is not being used, legs 78 may be conveniently folded so that table 10 can be transported and stored, as seen in FIG. 7.

[0066] Optionally, in addition to being able to extend and fold legs 78, the legs, when extended, may be adjusted in height. Each leg 78 includes an outer tube 88 that fits telescopically over inner tube 90 and may be adjusted to a desired length. Outer tube 88 includes a number of openings 92 through which a spring clip 94 carried by inner tube 90 may be extended to secure the telescoping elements to a desired length.

[0067] Transport of the table of the present invention may be accomplished by either carrying or pulling table 10 along a surface. Carrying handle 72 may be mounted on a wall of either upper casing 12 or lower casing 42. When table 10 is closed and locked, the user grasps carrying handle 72 and lifts table 10 to a desired location. FIG. 7 illustrates another way in which table 10 may be transported by a user 100. Pulling handle 74 is mounted on a wall, preferably a side wall, of either upper casing 12 or lower casing 42. Two or more wheels 76 recessed into surface 46 through side wall 54 enabling a user 120 to roll table 10 along a surface while using pulling handle 74. Wheels 76 may be also be mounted externally to table 10 or recessed.

[0068] The foregoing description of exemplary embodiments of the present invention has been presented for purposes of enablement, illustration, and description. It is not intended to be exhaustive of or to limit the present invention to the precise forms discussed. There are, however, other configurations for articles of furniture not specifically described herein, but with which the present invention is applicable. The present invention should therefore not be seen as limited to the particular embodiments described herein; rather, it should be understood that the present invention has wide applicability with respect to articles of furniture. Such other configurations can be achieved by those skilled in the art in view of the description herein. Accordingly, the scope of the invention is defined by the following claims.

What is claimed is:

1. An article comprising:
   i. a partially-enclosed upper casing having a planar member, said planar member having an inner surface and an exterior surface, a recess formed in said planar member, said recess further having a first surface and a second surface, and a front wall, a rear wall, and two side walls attached to and extending from said inner surface;
   ii. a partially-enclosed lower casing hingedly connected to said upper casing, said lower casing having a planar member, said planar member having an inner surface and an exterior surface, and a front wall, a rear wall and two side walls attached to and extending from said inner surface;
   iii. a plurality of divided elements forming compartments in said lower casing;
   iv. a plurality of planar surfaces each independently movable between a lowered position and a raised position hingedly attached to said rear wall of said lower casing, said planar surfaces configured to be supported by a portion of said divided elements when in said lowered position.

2. The article according to claim 1, where said exterior surface is prepared to receive paints, decals and other markings.

3. The article according to claim 1, whereby the securement means comprise of a;
   i. a plurality of hook and loop strips disposed on said inner surface of said recess;
   ii. a plurality of panels mounted on said hook and loop strips.

4. The article according to claim 1, whereby the securement means comprise of a;
   i. A sheet of hook and loop material disposed on said inner surface of said recess;
   ii. A plurality of panels mounted on said hook and loop sheet.

5. The article according to claim 1, whereby the securement means comprise of a;
   i. A plurality of panels mounted on a sheet of hook and loop material;
   ii. A mating sheet of hook and eye material disposed on said inner surface of said recess.

6. The article according to claim 1, further comprising i. A handle attached to one of said side walls of said lower casing;
ii. A plurality of wheels mounted on another of said side walls of said lower casing.

7. The article according to claim 1, further comprising a plurality of legs movable between a position adjacent said lower casing to a position extending away from said lower casing.

8. The article according to claim 7, wherein each of said plurality of legs includes at least two telescopic sections connected in telescopic relationship.

9. An article comprising:
   i. a partially-enclosed upper casing having a planar member, said planar member having an inner surface and an exterior surface, a recess formed in said planar member, said recess further having a first surface and a second surface, and a front wall, a rear wall, and two side walls attached to and extending from said inner surface;
   ii. a partially-enclosed lower casing hingedly connected to said upper casing, said lower casing having a planar member, said planar member having an inner surface and an outer surface, and a front wall, a rear wall and two side walls attached to and extending from said inner surface;
   iii. a plurality of divided elements forming compartments in said lower casing; and
   iv. a plurality of planar surfaces each independently movable between a lowered position and a raised position hingedly attached to said rear wall of said lower casing, said planar surfaces configured to be supported by a portion of said divided elements when in said lowered position.

10. The article according to claim 9, where said exterior surface is prepared to receive paints, decals and other markings.

11. The article according to claim 10, where said exterior surface is prepared to receive paints, decals and other markings and further comprising a clear transparent plastic sheet shaped to fit onto said first surface of said recess.

12. The article according to claim 10, where said exterior surface is prepared to receive paints, decals and other markings and further comprising a clear transparent plastic sheet shaped to fit onto said first surface of said recess, said plastic sheet having pockets enabling the insertion of thin objects.

13. The article according to claim 9, whereby the securing means comprise of:
   i. a plurality of hook and loop strips disposed on said inner surface of said recess; and
   ii. a plurality of panels mounted on said hook and loop strips.

14. The article according to claim 9, whereby the securing means comprise of:
   i. A sheet of hook and loop material disposed on said inner surface of said recess; and
   ii. a plurality of panels mounted on said hook and loop sheet.

15. The article according to claim 9, whereby the securing means comprise of:
   i. a plurality of panels mounted on a sheet of hook and loop material; and
   ii. a mating sheet of hook and eye material disposed on said inner surface of said recess.

16. The article according to claim 9, further comprising
   i. a handle attached to one of said side walls of said lower casing; and
   ii. a plurality of wheels mounted on another of said side walls of said lower casing.

17. The article according to claim 9, further comprising a plurality of legs movable between a position adjacent said lower casing to a position extending away from said lower casing.

18. The article according to claim 17, wherein each of said plurality of legs includes at least two telescopic sections connected in telescopic relationship.

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