

RAISEABLE COVER/TABLE FOR MODULAR FURNITURE

DESCRIPTION



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FIELD OF THE INVENTION

This invention relates generally to modular furniture and in particular to box-like components which are connected side-by-side.



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BACKGROUND OF THE INVENTION

Many attempts have been made to provide consumers with easy to integrate furniture in the form of components, which are interconnected to serve as floor storage units, shelving and cabinets.

It is desirable for the manufacturer of furniture to offer a system that can satisfy different needs and which can also be easily changed after it has been set up (i.e. at a later time) or recycled. However, most known modular furniture suffers from disadvantages. One disadvantage is the lack of versatility available in the furniture combinations as a result of modular components which are identical in size, shape and construction. Another related problem is the use of expensive mechanical fasteners, or on the other hand awkward, flimsy attempts at interlocking the modules without mechanical fasteners.

This invention solves these and other problems in a manner not disclosed in the known prior art.

Systemind™ is modular furniture formed from components of varying size and configuration which can be connected together to form different furniture combinations. Each component or module is a box-like piece. The modules can be fitted with individual covers.

Each module further serves as a neat storage box, with materials that can blend with the interior design. This has turned the mundane fixed platform into lively modular boxes that allows customers to create their own living style.

SUMMARY OF THE INVENTION

This invention extends the Systemind Platform configuration by providing a raiseable cover/table as one of its module options (also called "table-in-box").

This invention is a new box furniture having an inner space for storage purposes, a removeable cover with legs that can serve as a table top in an operative position, and an inoperative position in which the cover/table is inserted into the interior of the box to form a compact and substantially peripherally closed unit.

The cover/table can be raised manually and hedged into an open operative position for use as a table. No mechanical fasteners or complicated interlocking elements are needed.

When no longer required to serve as a table, the cover/table will be lowered into the Systemind Platform. This results in a flushed, level surface with the other components of Systemind Platform.

It is an important aim of this invention to provide a modular furniture component which is simple and inexpensive to manufacture and which can be readily broken down for shipping and storing and is easily assembled. Another aim is to provide a component which can be combined with other components with a minimum of effort to produce a variety of combination structures.

The novel features which are considered as characteristic for this invention are set forth in the appended claims. However, this invention is not limited to its current form, but can be modified without departing from the spirit thereof. Further, while the invention has been illustrated and described as embodied in article of furniture, its principles of construction and use can be applied to other modular structures.

DETAILED DESCRIPTION OF THE DRAWINGS

See Figure 1.

This invention is a module of Systemind Platform. Systemind Platform comprises of sleek-fitting modular platform boxes for small homes and offices. These can be configured differently for various purposes, such as a raised platform, bed, table, bench, step, etc, while providing neat storage boxes. The top cover of a normal Systemind module is hinged on one side, can be lifted easily, and stays open until the user has placed or retrieved the items inside. This top cover is made of solid wood, tiles or any materials that can blend with the interior design.

For both aesthetic and practical reasons, it is beneficial if the configuration of similar height modules provides a level surface for functional uniformity. The modules of varying size can be connected together to form different combinations of functional furniture.

See Figure 2.

This invention extends the Systemind Platform configuration by providing a raiseable cover/table as one of its module options.

The cover/table can be raised manually with the aid of suction cups or retractable knobs, and hedged into an open operative position for use as a table. When no longer required to serve as a table, the cover/table will be lowered into the Systemind Platform. This results in a flushed, level surface with the other components of Systemind Platform. The cover/table can be made distinguishable or indistinguishable from other Systemind Platform modular components as desired.

This invention considers the need for legroom when a person seated on the platform uses it as a table. The raising of the cover/table can be done without any mechanical devices. This invention allows configuration for various purposes such as a raised platform, bed, table, bench, or a step.

See Figure 3.

This shows the invention by itself. The top surface is meant to provide a level flushed surface. The substantially stiff lid provides a plane surface for supporting loads thereon. The cover/table legs fit neatly into the inner space of the box.

See Figure 4.

This illustrates the operation of the cover/table. To put the cover/table in its operative position, it is first vertically raised till the legs are clear of the box. The cover/table is then rotated 90 degrees (either clockwise or anti-clockwise). It is then lowered onto the ledges at the four inner corners of the box. Thus firmly seated, it can be used as a table for writing, dining or other activities requiring a raised surface. Further, a person can sit on the lower height closed covers of the adjoining modules/boxes (all four sides) and slip his/her legs into the inner vacant space of the invention. This gives a comfortable seated position.

See Figure 5.

This shows the cover/table in its operative position, with its legs on the inner ledges of the invention. The legs become structural elements, designed for stability of the cover/table and ensuring torsional stiffness. They unite mechanical/static and aesthetic advantages. The ends of the legs can be roughened for better grip on the ledges.

Moreover, the cover/table top can be completely detached from the box and be stacked in a separate location.

See Figure 6.

This shows the details of one leg and its corresponding ledge on which it is to rest in the operative position. Each leg can be matched to any of the ledges.

See Figure 7.

This shows various views of the invention. The plan view shows the hidden relative positions of the ledge and the legs in kept/inoperative position. Section A-A shows the cover/table into its inoperative position. Section B-B shows the raised cover/table, rotated 90 degrees, in its operative position.

See Figure 8.

This shows the cross-sectional sideviews of three adjacent modules of this invention. The outer unit on the left has its cover lowered into the inoperative position. The middle and right units have their covers raised to the operative position, with their legs resting on the inner ledges of these two units.

In the upper illustration, the middle and right units have legs of equal lengths. This gives a bigger, flushed or level, table-top surface. In the lower illustration, the middle unit has shorter legs. This gives a simple 3-tiered stepped structure.

More units can be added to the right of this set, further building up the bigger table-top or the stepped structure.

See Figure 9.

This shows plan views of the box and inverted cover/table showing how the relative positioning and dimensions of the box's inner ledges and cover/table's legs accomplishes the operative (raised and supported) and inoperative (closed) functions.

In the upper illustration, the inverted cover/table, if flipped over (*out of the page and back onto the box*), will find the ends of its legs meeting the inner ledges of the box. With the legs thus resting on the ledges, this results in the cover/table's raised position.

In the lower illustration, the inverted cover/table is rotated 90 degrees (either clockwise or anti-clockwise) before flipping over (*out of the page and back onto the box*). This time, its legs will slot neatly into the recess of the box. With the legs thus fully enclosed inside the box, this results in the cover/table's inoperative position.

DESCRIPTION OF PREFERRED EMBODIMENTS

It will be understood that, although the cover/table shown in the figures is substantially square, its shape can be modified to rectangular or other less common shapes.

This invention can be used to supplement existing modular furniture arrangements without difficulty. It can be combined with furniture that is not based on the invention's frame of Systemind Platform.

In the preferred embodiment it has been found that a square cover/table unit size of approximately 20 cm to 80 cm is suitable for most uses. The legs can be approximately 15 cm to 50 cm.

RAISEABLE COVER/TABLE FOR MODULAR FURNITURE

CLAIMS

We claim as our invention:

1. An article of furniture, which is a new optional addition to modular furniture combination, comprising of:

a. a box-like unit made up of four vertical fixed sides and a base, and a detachable lid, that has:

i. a flat horizontal outer load-bearing face that when placed in non-operative position provides a flush surface with other adjacent modular units, and

ii. a flat horizontal inner face allowing enclosed storage and protection of the contents in the box, and

ii. four vertical legs that supports the lid in its operative position and yet can be inserted into the box for concealment in its non-operative position,

a. load-bearing ledges at the four inside corners of the box that can support the ends of the four legs in their operative positions:

2. In terms of functionality, a modular furniture component as defined in claim 1, in which:

a. **Flexibility of the same unit** of Systemind® Platform providing a lowered level (flush) surface or a raised unit top serving as a table. This is thus a multiple-purpose furniture unit.

b. The **fully modular** design allows easy re-configuration, e.g. having several adjacent raiseable cover/tables for a larger table surface, or cover/tables with differing lengths of legs for a stepped structure.

3. In terms of design, a modular furniture component as defined in claim 1, in which:

a. **No moving parts** needed to achieve the dual function. Unique design of the legs and positioning of the inner ledges for raised position allows just a quick 90-degree rotation/swivel to enable lowering or raising of cover/table. This enables easy maintainability and robustness of the unit.

b. The cover/table is **fully detachable** from the box unit. It consists of a square lid with four legs of equal length. This simple yet functional design

ensures easy replacement of the cover/table if damaged and low-cost manufacturing.

c. **No need for fasteners** to secure the cover/table in the raised position. The inner ledges are dimensioned and positioned to firmly support the raised cover/table. The only degree of freedom is upwards, i.e. the cover/table is to be lifted clear of the Systemind Platform box before rotating. This ensures firm support of the cover/table in the raised position and maximum inner storage space.