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(54) **Modular construction for making furniture pieces and other structural elements having overlapping shelves**

(57) A modular construction for making furniture pieces or other constructional elements comprises overlapping shelves, which are supported by uprights having upright portions of different size and decreasing from the bottom to the top thereof.

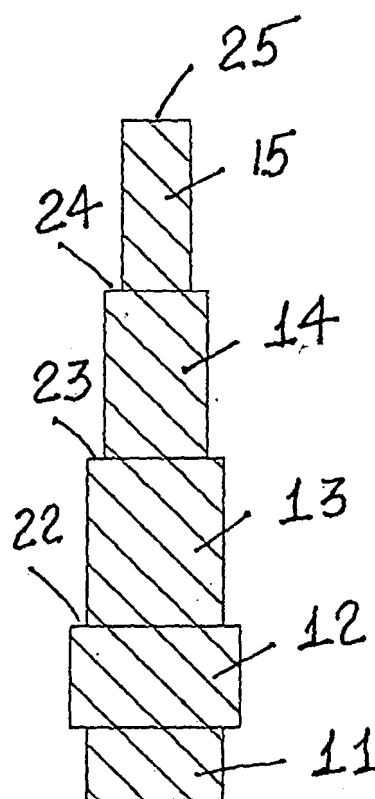


fig. 1

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Description

BACKGROUND OF THE INVENTION

[0001] The present invention relates to a modular construction for making furniture pieces and other structural elements, having overlapping shelves.

[0002] This construction, in particular, provides that the shelves or panels thereof are supported by supporting uprights having different diameters or size, decreasing from the bottom to the top thereof.

[0003] The present invention is particularly adapted for making structures including a plurality of overlapping shelves or plates for making couvettes, scaffolds, exhibiting devices, furniture components and articles in general.

SUMMARY OF THE INVENTION

[0004] The main object of the present invention is to provide such a shelf construction which is very stable and has a very high mechanical strength.

[0005] Another object of the present invention is to provide such a construction or structure which can be easily assembled and disassembled, without using assembling tools or fixing and anchoring elements as those which are conventionally used for making prior like structures including uprights and overlapping shelves or plates.

[0006] Another object of the present invention is to facilitate the arrangement and stability of the constructional elements forming the inventive construction or structure.

[0007] According to one aspect of the present invention, the above mentioned objects are achieved by a modular construction having the features claimed in the main claim.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] Further characteristics and advantages of the modular construction according to the present invention will become more apparent hereinafter from the following detailed disclosure of a preferred, though not exclusive, embodiment thereof, which is shown in the figures of the accompanying drawings, where:

Figure 1 is a cross-sectioned side view of one of the supporting uprights or pins, included in the modular construction according to the present invention; and Figure 2 is a further side elevation view of a modular construction including a plurality of shelves or plates which are respectively supported by supporting uprights including contours supporting pin elements, having a variable size which decreases from the bottom to the top thereof.

DESCRIPTION OF THE PREFERRED EMBODIMENT

[0009] With reference to the number references of the

above mentioned figures, the modular construction according to the present invention can be used for making furniture pieces, scaffolds and structural elements including a plurality of overlapping shelves or plates, and including a plurality of supporting uprights or pins 10.

[0010] Each upright 10 comprises a bottom lug or foot 11, and, above said foot, a plurality of different diameter or size portions, the size thereof decreases from the bottom to the top thereof.

[0011] Above said element 11 are provided a plurality of constructional elements 12, 13, 14 and 15 having a diameter or size which progressively decreases from the bottom to the top.

[0012] Said upright 10 is accordingly provided, in addition to the bottom foot 11, with structural portions of step-like configurations, indicated by the reference number 21, 22 and 23, designed for operating as supporting and stabilizing elements for the shelves or supporting plates 31, 32 and 33.

[0013] The latter can be threaded from the top to the bottom and comprises a plurality of cavities 31', 32' and 33' so designed and sized as to be easily engaged and supported at each element 21, 22, 23 and 24.

[0014] Said plates or shelves are shown in figure 2 indicated by the reference numbers 31, 32, 33 and 34.

[0015] Said shelves or plates comprise, with respect to the bottom and middle shelves, a plurality of holes 31', 32' and 33' allowing said shelves to be engaged, in a calibrated manner, in the uprights 10 having a step-like configuration.

[0016] As is clearly shown in figure 2, each upright 10, in addition to the element 11 designed for operating as a supporting foot element, comprises a plurality of steps 22, 23 and 24 on which bear a corresponding plurality of plates or panels 31, 32 and 33 which are all provided with corresponding holes which are designed based on the cross sections of the elements 13, 14 and 15 forming each portion of the respective upright 10.

[0017] In this connection it should be pointed out that the top shelf or plate 34 is unperforated, and comprises a housing and stabilizing recess 25' in which is engaged the top part of the upright 10 portion 15.

[0018] As is clearly shown in figure 2, the shelves or plates 31, 32 and 33 are engaged in the contoured portions having dimensionally differentiated sections of the upright 10.

[0019] More specifically, said shelves or plates 31, 32 and 33 bear on the step elements 22, 23 and 24 of each upright 10.

[0020] Since the holes 31', 32', 33' of the shelf elements 31, 32 and 33 are correspondingly contoured and sized, and since said holes have a size which decreases from the bottom to the top, by mutually engaging in said uprights said shelves or plates 31, 32 and 33, as above disclosed, it is possible to provide a stable construction which can be easily modularly expanded.

[0021] The top shelf or plate 34, as already stated, is supported by the top end portion 25' of the upright 10.

[0022] Moreover, said top shelf or plate is unperforated, differently from the lower shelves or plates.

[0023] In this connection it should be pointed out that the above mentioned supporting uprights or pins 10 are made by injection molding plastic materials or by blow molding said plastic materials or by turning method or other any desired making and machining process.

[0024] The used material can comprise, as stated, a plastic material, a brass material, wood or any other desired materials.

[0025] The shelves or plates can also be made by the above disclosed methods and materials.

[0026] The different sections of the uprights 10, which have a variable height, allow to properly locate and stabilizing the shelf plates 31, 32 and 33, in a very simple and accurate manner.

[0027] Moreover, the uprights can have a circular, quadrangular, rectangular, pentagonal, elliptic or any other desired shape cross section.

[0028] The inventive modular construction has been hereinabove disclosed by way of an illustrative and not limitative example.

[0029] Accordingly, the constructional elements constituting the improved construction according to the invention can be subjected to several modifications and variations, all of which will come within the scope of the invention.

Claims

1. A modular construction for making furniture pieces or other structural elements, **characterized in that** said modular construction comprises a plurality of overlapping shelves or plates, supported by supporting uprights having upright portions of different size and decreasing from the bottom to the top thereof.
2. A modular construction, according to the preceding claim, **characterized in that** each said supporting upright comprises a bottom lug or foot element, and, above said foot element, a plurality of different diameter or size portions, the size of which decreases from the bottom to the top thereof.
3. A modular construction, according to one or more of the preceding claims, **characterized in that** above said foot element said construction comprises upright portions having a diameter or size which progressively varies from the bottom to the top, said upright portions being adapted to operate as supporting and stabilizing elements for a plurality of shelves or plates.
4. A modular construction, according to one or more of the preceding claims, **characterized in that** said shelves can be threaded from the top to the bottom and comprises a plurality of cavities so contoured

and sized as to engage and bear on corresponding step elements.

5. A modular construction, according to one or more of the preceding claims, **characterized in that** said shelves or plates comprise, with respect to the bottom and middle plates, a plurality of holes allowing said shelves to be engaged in a calibrated manner in corresponding upright portions having a step-like configuration.
6. A modular construction, according to one or more of the preceding claims, **characterized in that** each said supporting upright, in addition to said foot element therefor, also comprises a plurality of step elements bearing said shelves or plates and including a plurality of holes which are sized and contoured correspondingly respectively to the cross-sections of the element constituting each upright portion.
7. A modular construction, according to one or more of the preceding claims, **characterized in that** said shelves or plates bear on said step element of each said supporting upright.
8. A modular construction, according to one or more of the preceding claims, **characterized in that** said modular construction comprises a top shelf which is supported by a top end portion of said supporting upright.
9. A modular construction, according to one or more of the preceding claims, **characterized in that** said top shelf is unperforated and comprises a plurality of housing recesses for a respective top end portion of a said upright.
10. A modular construction, according to one or more of the preceding claims, **characterized in that** said supporting uprights are made by injection or blow molding plastic materials or by other turning or processing and machining methods.
11. A modular construction, according to one or more of the preceding claims, **characterized in that** said supporting uprights and shelves or plates are made of a plastics material, a brass material, a wood material or any other suitable materials.
12. A modular construction, according to one or more of the preceding claims, **characterized in that** said supporting uprights and bearing shelves or plates are assembled at a plurality of assembling levels.
13. A modular construction, according to one or more of the preceding claims, **characterized in that** said supporting uprights have a circular, quadrangular, rectangular, pentagonal, elliptical and so on cross-section.

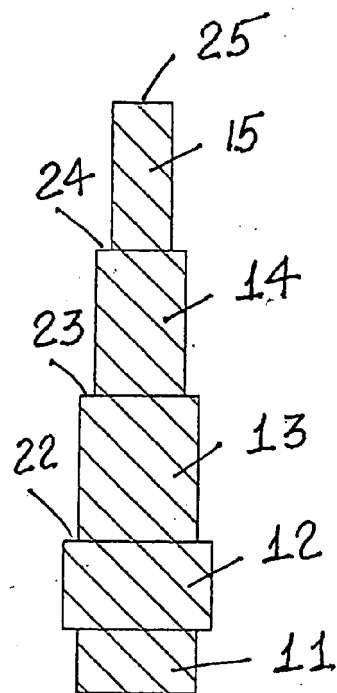


fig. 1

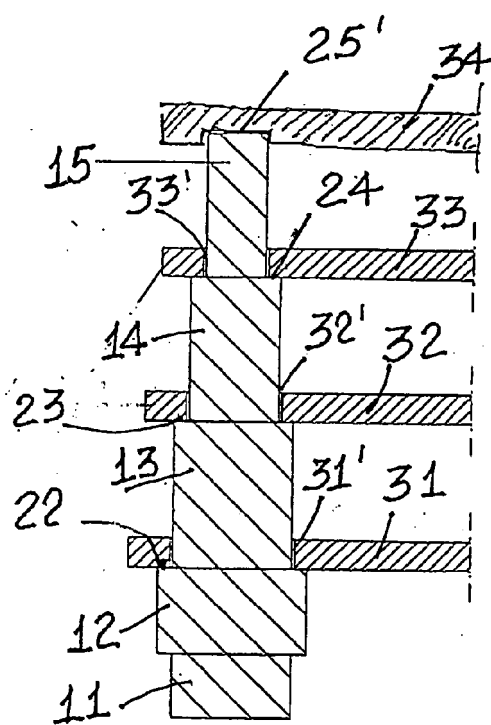


fig. 2