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[54] **FOLDING FURNITURE**
7 Claims, 17 Drawing Figs.

[52] U.S. Cl. **312/107,**
312/198, 312/240, 297/118

[51] Int. Cl. **A47b 87/00**

[50] Field of Search. **312/240,**
107, 201, 198; 206/45.11, 16 R, 12; 297/118, 129

[56] **References Cited**

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ABSTRACT: Folding furniture which consists of five pieces, each having the same thickness and width. The first of the pieces has a rectangular configuration, while a second and third of the pieces each have the same square configuration. The fourth and fifth pieces have identical configurations and are rectangularly shaped. The height of the second and fourth pieces is equal to the height of the first piece. The first piece includes first and second broad surfaces which extend for the height thereof. Located adjacent one end of the first piece on a lengthwise side thereof is a hinge which is secured to a first of the peripheral sides of the second piece. In a like manner the third piece is hingedly secured to the side of the second piece which is opposite the first peripheral side of the second piece so that a broad surface of the third piece can be placed flush with the broad surface of the second piece. The fourth and fifth pieces are hingedly secured to each other so that a broad surface of each piece may be placed adjacent a broad surface on the other piece. A hinge secures the surface of the fourth piece that can be placed adjacent the broad surface of the fifth piece to the broad surface of the third piece which is adjacent the hinge between the second and third pieces.

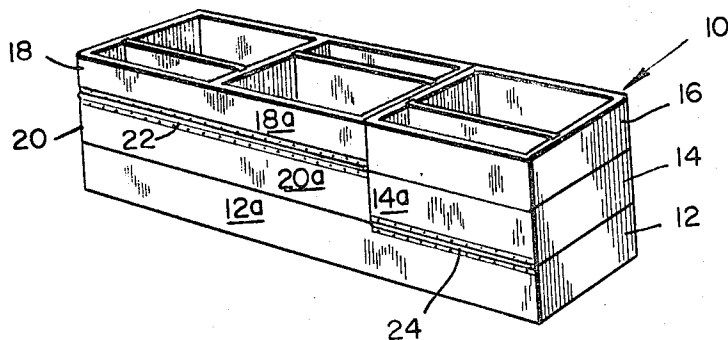


FIG. 1

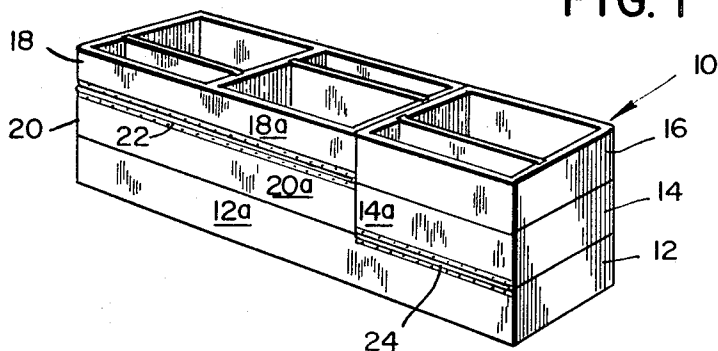


FIG. 4a

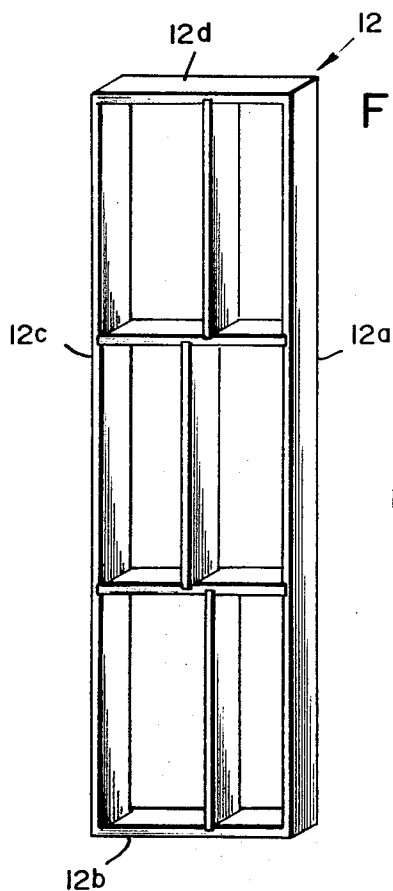


FIG. 4b

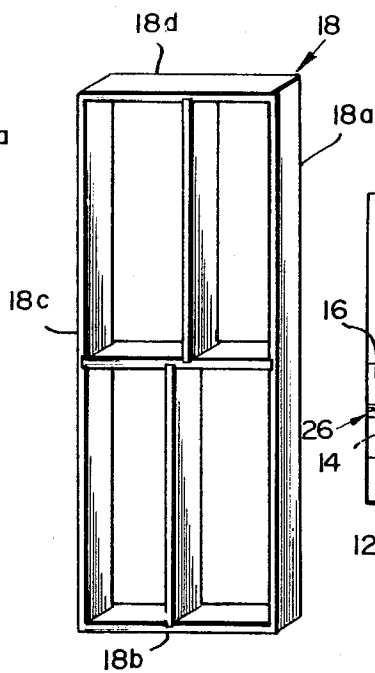


FIG. 4c

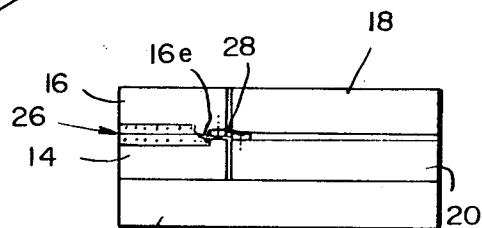
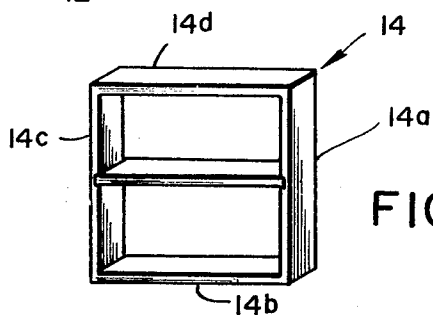


FIG. 2

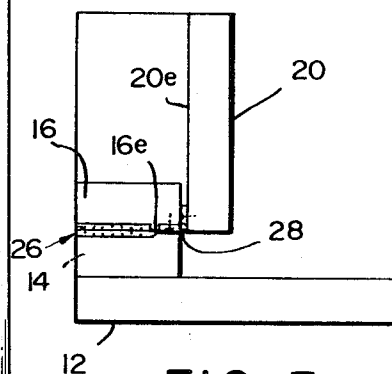


FIG. 3

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FIG. 5a

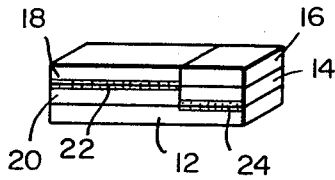


FIG. 5b

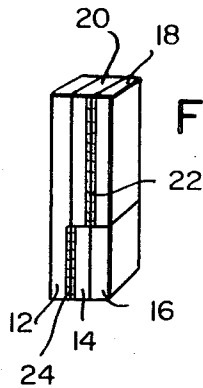


FIG. 5c

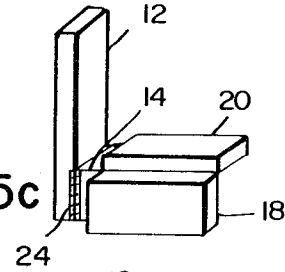


FIG. 6a

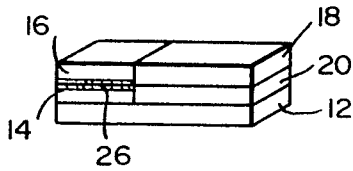


FIG. 6b

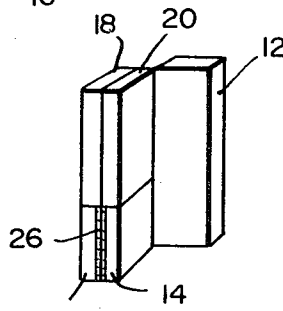


FIG. 6c

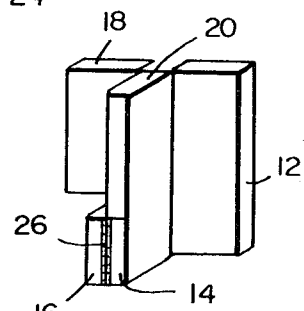


FIG. 7

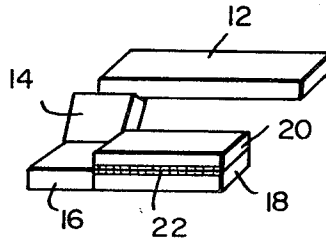


FIG. 8

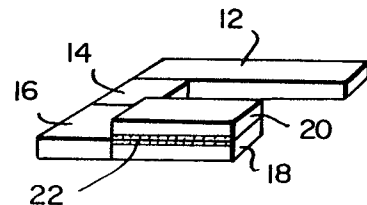


FIG. 9

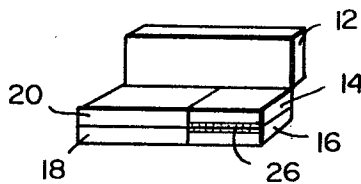


FIG. 11

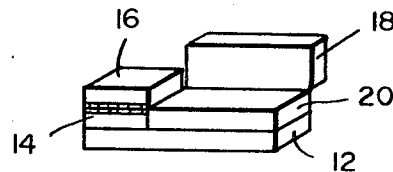
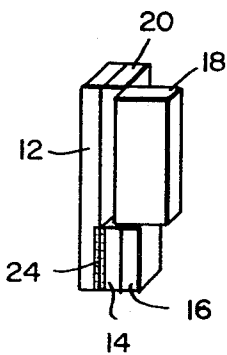


FIG. 10



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FOLDING FURNITURE

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to folding furniture.

2. Description of the Prior Art

There have been many types of folding furniture known in the prior art. The prior art folding furniture was designed so that by suitable manipulations it could assume different configurations which enabled it to be used in a variety of ways. An example of this was a chair which, in one position, had its back perpendicular to the seat and in another position had its back coplanar with the seat so that the chair could then be used to sleep on. Other examples of folding furniture known in the prior art are readily apparent to those skilled in the art.

A major drawback with much of the prior art folding furniture was its lack of versatility. As an example some of this folding furniture could be manipulated so that it would have only two or three different positions and uses. Additionally, much of the prior art folding furniture occupied a large volume when it was folded and not in use. This, of course, was undesirable since in most apartments and houses space is at a premium.

Another drawback of much of the prior art folding furniture was that it was difficult to manipulate. This was because the different parts of the furniture were so heavy that a great amount of strength was required to manipulate the furniture. As a result, quite often a housewife was not able to manipulate the furniture for its intended use.

Still another drawback of much of the prior art folding furniture of the type heretofore described was that it was expensive to make. This limited its use especially when taken into consideration with its limited versatility.

It is readily apparent that if folding furniture could be provided which could overcome the above-mentioned drawbacks heretofore associated with the prior art folding furniture, it would find widespread use. This would be particularly true if the furniture were esthetically pleasing.

SUMMARY OF THE INVENTION

It is therefore an object of the present invention to provide improved folding furniture of the type herein described.

Another object of the present invention is to provide folding furniture of the type herein described which can be manipulated into a plurality of different positions for different uses.

Still another object of the present invention is to provide folding furniture of the type herein described which, when folded, is compact.

Yet a further object of the present invention is to provide folding furniture of the type herein described which can easily be manipulated into different positions.

A further object of the present invention to provide folding furniture of the type herein described which can be manipulated into different positions for different uses, the furniture being light in weight and esthetically pleasing.

A still further object of the present invention is to provide folding furniture of the type herein described which is capable of achieving each of the above objects and which is relatively inexpensive.

Briefly, in accordance with the present invention, the foregoing and other objects are achieved by folding furniture consisting of five pieces having the same thickness and width. The first of the pieces has a rectangular configuration while a second and third of the pieces each has the same square configuration. The height of the second and third square pieces is substantially less than the height of the first piece. The fourth and fifth pieces have identical configurations and are rectangularly shaped. The height of the second and fourth pieces is equal to the height of the first piece. The first piece includes first and second broad surfaces which extend for the height thereof. Located adjacent one end of the first piece on a lengthwise side thereof is a hinge which is secured to a first of

the peripheral sides of the second piece such that the second piece can be placed flush with the first broad surface of the first piece and while in this position have a peripheral side in alignment with the end of the first piece. In a like manner the third piece is hingedly secured to the side of the second piece which is opposite to the first peripheral side thereof so that the third piece can be placed flush with a broad surface of the second piece. The fourth and fifth pieces are hingedly secured to each other so that the peripheral sides of each piece may be placed adjacent and in registry with the peripheral sides of the other piece.

A hinge secures a first of the two broad surfaces of the fourth piece to the broad surface of the third piece which is adjacent the hinge between the second and third pieces. As a result, the broad surface of the fourth piece can be brought into contact with one of the peripheral sides of the third piece which is adjacent the side of the third piece that is hinged to the second piece.

By having the different pieces hinged to each other as above described it is possible for the pieces to be manipulated into a plurality of different positions relative to each other and thus be used in a variety of different ways.

These and other objects and advantages of the invention will be apparent to the reader in the following specification.

This invention, accordingly, consists in the features of construction, combinations of elements and arrangements of parts, which will be exemplified in the folding furniture hereinafter described and of which the scope of application will be indicated in the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. 1 is a front perspective view of an embodiment of the present invention;

FIG. 2 is a rear view of the invention;

FIG. 3 is a rear view of the present invention partly unfolded;

FIGS. 4a, 4b and 4c are front perspective views of three of the different pieces which are utilized in the present invention;

FIGS. 5a, 5b and 5c illustrate the sequence by which one orientation of the present invention is obtained;

FIGS. 6a, 6b and 6c illustrate the sequence by which still another orientation of the present invention is obtained;

FIGS. 7, 8, 9, 10 and 11 illustrate further orientations into which the present invention may be manipulated.

DESCRIPTION OF THE PREFERRED EMBODIMENT

In FIG. 1 of the drawings folding furniture 10, according to the present invention, is seen in its folded condition. Folding furniture 10 includes five pieces having the same thickness and width, with these pieces being shown in FIGS. 4a, 4b and 4c. It is to be appreciated that while the pieces are shown having a hollow construction, this is for illustrative purposes only and the pieces can be solid or partially solid as desired.

A first of the pieces 12 is shown in FIG. 4a and is seen to be rectangular in outline having peripheral sides 12a, 12b, 12c and 12d. Piece 12 is largest of the pieces which comprise folding furniture 10 as will hereinafter be apparent.

Square pieces 14 and 16 are identical to each other in configuration and piece 14 is shown in FIG. 4c. As can be seen from FIG. 4c, piece 14 includes peripheral sides 14a, 14b, 14c and 14d, respectively.

Pieces 18 and 20 are identical to each other and piece 18 is shown more specifically in FIG. 4b. Piece 18 has a rectangular cross section and includes peripheral sides 18a, 18b, 18c and 18d, respectively.

The height of rectangular piece 12 is equal to the height of one of pieces 14 or 16 and the height of one of pieces 18 or 20, as is apparent from FIG. 1.

As can be seen from FIG. 1, the pieces in the folded position are three times the thickness of any one piece and extend for the length of piece 12.

A first hinge 22 enables pieces 18 and 20 to be rotated relative to each other. The hinge extends for the length of sides 18a and 20a of pieces 18 and 20 and may be conventional, as can any of the other hinges used in the present invention.

A second hinge 24 extends for the length of side 14a of piece 14 and for a portion of lengthwise side 12a of piece 12 adjacent one end thereof. Thus, piece 14 may be rotated relative to piece 12 and vice versa.

A third hinge 26 (FIG. 3) extends between sides 16c and 14c of pieces 16 and 14, respectively. The hinge extends for the length of these sides and enables these pieces to be rotated relative to each other.

A fourth hinge 28 extends between a broad surface 20e of piece 20 and broad surface 16e of piece 16. Since the broad surfaces of pieces 16 and 20 are substantially hollow, the hinge may be secured to any part of the rim of these pieces which is located on the broad surface.

Folding furniture 10 as just described can be placed in a number of different positions by suitably being manipulated. As an example, when the folding furniture is in a position seen in FIG. 5a which corresponds to the position seen in FIG. 1, it can then be rotated to achieve the position seen in FIG. 5b and then 5c, in the position of FIG. 5c piece 20 can be used to support a board to provide a desk surface, while piece 12 can be used as a bookcase. A chair may then be used in conjunction with the folding furniture to provide a combination desk arrangement and bookcase.

When the folding furniture is manipulated in sequence as shown in FIGS. 6a, 6b and 6c, the furniture provides (FIG. 6c) a plurality of book shelves which are attached to each other.

When the folding furniture is arranged as shown in the sequence of FIGS. 7 and 8 and as shown in FIGS. 9 and 11, cushions can be used in conjunction therewith and a variety of different shaped sofas are obtained.

The folding furniture can be arranged to assume the position as shown in FIG. 10 and provide compact book shelves.

It will thus be seen that there is provided folding furniture which achieves the several objects of the invention and which is adapted to meet the conditions of direct use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiment set forth, it is to be understood that all matter herein described or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

Having thus described the present invention, there is claimed to be as new and desired to be secured by Letters Patent:

1. Folding furniture comprising:
 - a. five pieces having the same thickness and width,
 - b. the first of the pieces having a rectangular configuration,

the second and third of the pieces having an identical rectangular configuration, the fourth and fifth pieces having an identical rectangular configuration, and

- c. hinged means for securing the different pieces to each other and for enabling the pieces to be manipulated in a plurality of different positions and in one position wherein the third piece rests on the second piece which in turn rests on the first piece, and the fifth piece rests on the fourth piece which rests on the first piece, with the second and fourth pieces and the third and fifth pieces being in alignment with each other.

2. Folding furniture according to claim 1 wherein the height of the third and fourth pieces is equal to the height of the first piece.

3. Folding furniture according to claim 1 wherein the first piece has first and second broad surfaces, two ends and two lengthwise sides, said second piece having first and second broad surfaces and four peripheral sides, said hinged means including a first hinge securing a first of the second piece peripheral sides and a portion of the lengthwise side of the first piece adjacent one end thereof, such that a first broad surface of the second piece can be placed in contact with a first broad surface of the first piece.

4. Folding furniture according to claim 1 wherein said hinge means further includes a second hinge, said third piece having four peripheral sides and two opposed broad surfaces and said second hinge extending between the peripheral side of the second side that is opposite the peripheral side to which the first hinge is attached and a peripheral side of the third hinge such that a broad surface of third piece may be brought in contact and in registry with a second broad surface of the second piece.

5. Folding furniture according to claim 4 wherein said fourth and fifth pieces each include opposed lengthwise sides and first and second broad surfaces, said hinge means further including a third hinge securing lengthwise sides of said fourth and fifth pieces so that a broad surface of the fourth piece and the fifth piece may be brought in contact with each other.

6. Folding furniture according to claim 5 wherein said hinge means includes a fourth hinge, said fourth hinge securing an end of the broad surface of the fourth piece which may be brought in contact with a broad surface of the fifth piece and the broad surface of the third piece which may be brought in contact with the surface of the second piece.

7. Folding furniture according to claim 6 wherein said second and third pieces each have a square configuration and said fourth and fifth pieces each having a rectangular configuration with the height of said third and fifth pieces being equal to the height of said first piece.

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