March 3, 1964 E. A. SÖVIK, JR 3,123,416

ARTICLES OF FURNITURE

Filed July 7, 1961 2 Sheets-Sheet 1

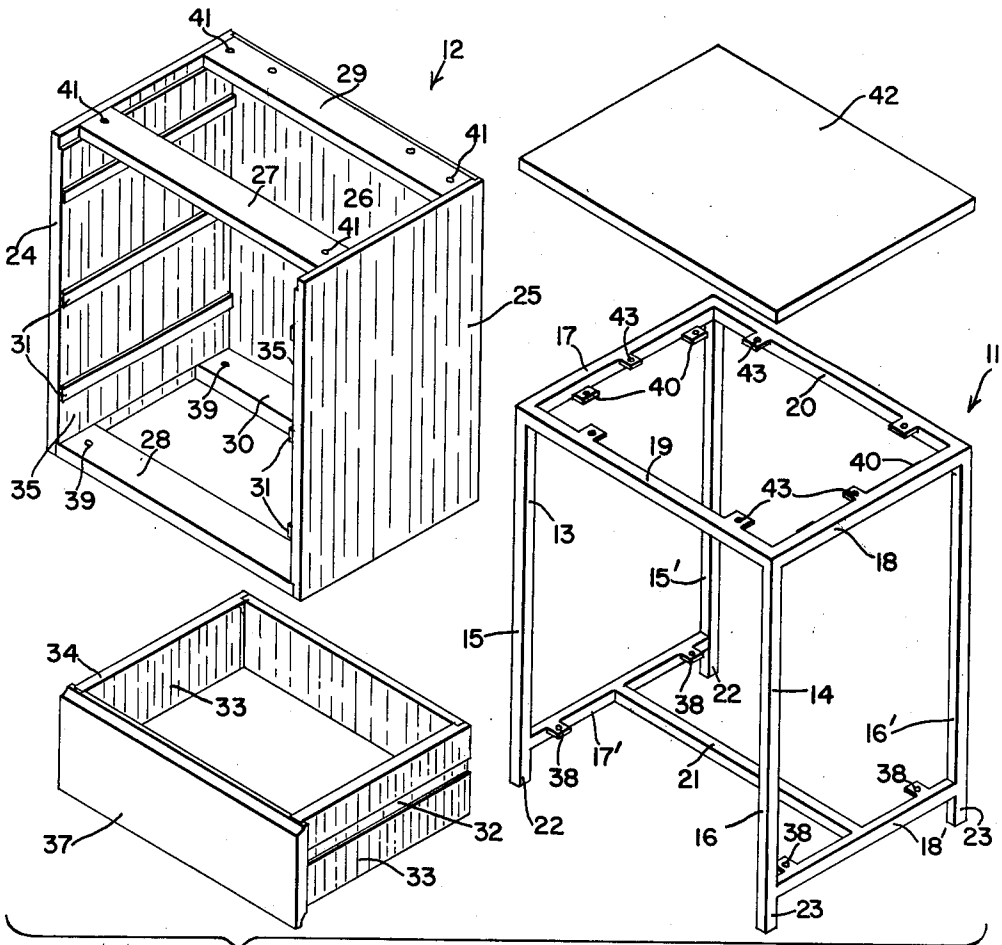


Fig. 2

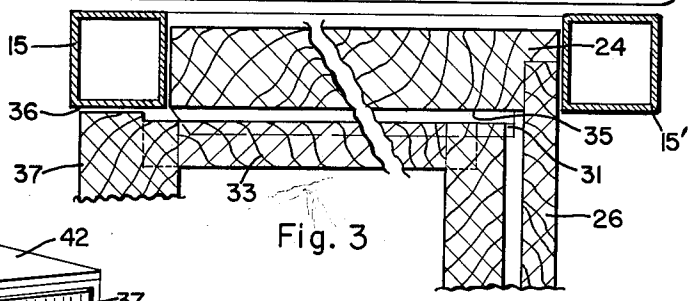


Fig. 3

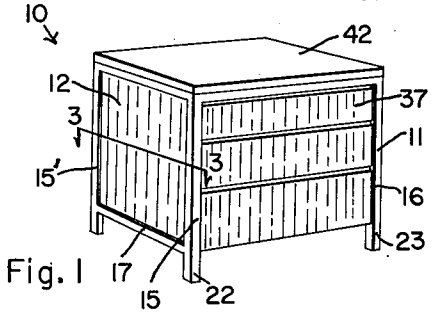


Fig. 1

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ARTICLES OF FURNITURE

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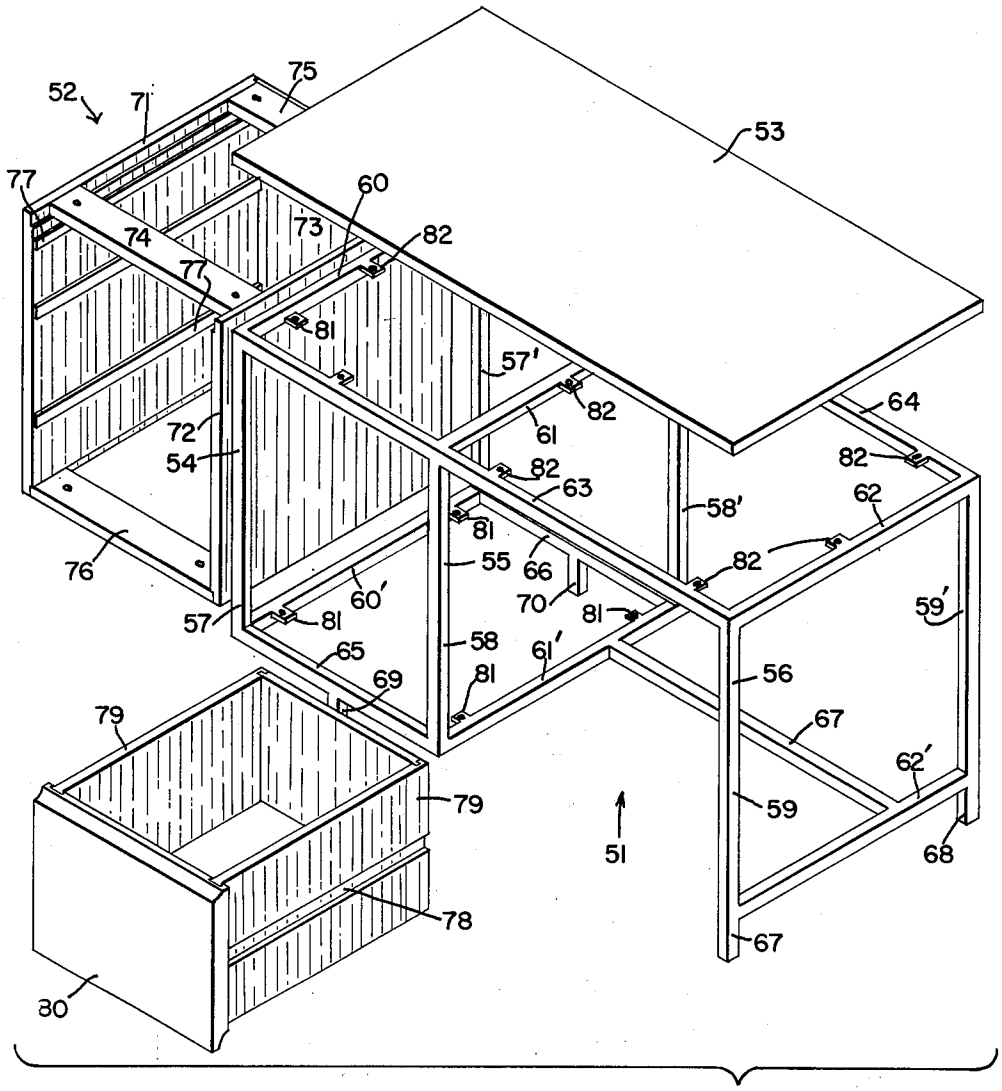


Fig. 5

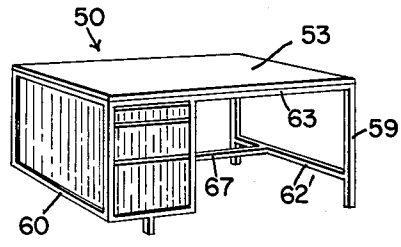


Fig. 4

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ARTICLES OF FURNITURE

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6 Claims. (Cl. 312—195)

This invention relates to furniture and more particularly it has reference to structure embodied in articles of furniture such as chests of drawers, cabinets, desks and the like.

One of the objects of this invention is to provide such an article of furniture which will be sturdy in construction, pleasing in appearance and adapted to be manufactured at a minimum cost.

Another object is to provide such an article of furniture formed of sub-assembly units which can be readily assembled so as to provide an article which will be structurally strong yet neat and pleasing in appearance.

A further object is to provide a furniture article of the type described having a rigid, unitary metal skeletal structure within which is detachably secured a wooden boxlike unit.

These and other objects and advantages reside in certain novel features of construction, arrangement and combination of parts as will hereinafter be more fully described and pointed out in the appended claims.

Referring to the drawings:

FIG. 1 is a front perspective view of an article of furniture embodying the invention.

FIG. 2 is an exploded view of same, on a larger scale, showing the sub-assemblies or units before assembly.

FIG. 3 is a horizontal sectional view, on an enlarged scale, taken on line 3—3 of FIG. 1.

FIG. 4 is a front perspective view of a modified form of the invention.

FIG. 5 is an exploded view of same.

Throughout the several views of the drawing, corresponding reference characters indicate corresponding parts.

One preferred embodiment of the invention is shown in FIGS. 1–3 wherein the invention is embodied in an article of furniture such as a chest of drawers 10 comprising the metallic skeletal structure 11 within which is mounted the wooden boxlike unit 12. The skeletal structure 11 is formed by the two closed rectangular frame members 13 and 14 having, respectively, the vertical sides 15, 15′ and 16, 16′ and the horizontal parts or portions 17, 17′ and 18, 18′. The frame members 13 and 14 are held in spaced relation by girder means such as the upper girders 19 and 20, connecting the corresponding upper corner portions of the frame members, and the lower girder 21 connecting the lower portions of the frame members 13 and 14, as clearly shown in FIG. 2. This construction provides a sub-assembly or unitary structure which is rigid and very sturdy. Preferably, all parts of the skeletal structure 11 are formed of lengths of square steel tubing which are welded together to provide a strong, light-weight construction. The vertical sides 15, 15′, 16 and 16′ of the frame members may be extended below the horizontal parts or portions 17′ and 18′ to form the supporting legs 22 and 23.

The boxlike unit 12 is preferably made of wood and has the two end walls 24 and 25 and the back wall 26. The brace bars 27, and 28 connect, respectively, the upper and lower front portions of the end walls 24 and 25 while the brace bars 29 and 30 connect, respectively, the upper and lower rear portions of the end walls. Mounted in corresponding spaced relation on the inner surfaces of the end walls 24 and 25 are the drawer guide strips 31 which

are adapted to be slidably received by the grooves 32 formed in the sides 33 of the drawer 34. The various parts of the boxlike unit may be secured together by any suitable means, such as glue or screws.

The vertical and horizontal dimensions of two opposite sides of the unit 12, such as the end walls 24 and 25, are slightly less than the corresponding dimensions of the aligned rectangular openings in the frame members 13 and 14. Accordingly, in the assembling operation, the boxlike unit 12 is slid into the rectangular openings in the frame members 13 and 14 and fits snugly therein. The overall length of the unit 12 is less than the distance between the outer surfaces of the sides 15, 16 and 15′, 16′ so that the outer surfaces of the end walls 24 and 25 are positioned between the planes of the inner and outer surfaces of the sides 15, 15′ and 16, 16′. This construction provides a recessed panel effect at the ends of the article of furniture, as shown in FIG. 1. The inner surfaces 35 of the end walls 24 and 25 are preferably co-planar with the inner surfaces 36 of the sides 15, 15′ and 16, 16′, as shown in FIG. 3. With such an arrangement of parts, the front side 37 of drawer 34 will fit snugly between the two side members 15 and 16 and so present a pleasing appearance, as shown in FIG. 1, and also provide maximum width for the drawer.

The boxlike unit 12 is supported on the horizontally positioned lower parts 17′ and 18′, of the frame members, and the connecting girder 21. The unit 12 is detachably secured within the skeletal structure 11 by means of inwardly projecting apertured lugs 38 which are secured to the horizontal portions 17′ and 18′ of the frame members and receive screws, not shown, which are threaded into openings 39 in brace bars 28 and 30. Additional lugs 40 are similarly carried by horizontal portions 17 and 18 to receive screws for engagement with openings 41 in the brace bars 27 and 29.

A top member 42, formed of wood or other suitable material, rests on top of the skeletal structure 11 and is substantially coextensive therewith. Means for detachably securing the top member 42 to the skeletal structure 11 are provided by the inwardly projecting apertured lugs 43 which are carried by the frame and girder portions 17, 18, 19 and 20 so that the upper surfaces of the lugs are co-planar with the upper surfaces of said frame and girder portions. Screws, not shown, pass through the apertured lugs 43 and are threaded into the top member 42.

While the boxlike unit 12 is shown and described as carrying a plurality of drawers, it is to be understood that other structural arrangements may be built into the unit. Thus, for example, shelves may be installed, a door may be provided to close the front of the unit or various combinations of these and other structural arrangements may be made. It is apparent, therefore, that the invention, embodying a rigid, unitary skeletal structure and the unitary boxlike unit or insert, may be utilized advantageously to produce various types of furniture, such as chests of drawers, cabinets and desks, for example.

In FIGS. 4 and 5, the invention is shown as applied to a desk, indicated generally at 50, and embodying the skeletal structure 51, the boxlike unit 52 and the top member 53. The skeletal structure comprises the three closed, rectangular frame members 54, 55 and 56 which are vertically positioned and spaced apart with the openings of the frame members in alignment. The frame members 54, 55 and 56 are formed, respectively, by the vertical sides 57, 57′, 58, 58′, 59, 59′ and the connecting horizontal parts or portions 60, 60′, 61, 61′, and 62, 62′. The upper corner portions of all three frame members are connected by the longitudinal girder means 63 and 64, the latter partially shown. The lower corner portions of

the first and second frame members 54 and 55 are connected by the girder means 65 and 66 and the lower portions 61' and 62', of the respective second and third frame members 55 and 56, are connected by girder 67 which is positioned inwardly from the planes of the other girder means so as to provide leg room for a person seated at the desk.

The frame members 54, 55 and 56 and girder means 63, 64 and 65 are preferably made of square steel tubing which is welded together so as to provide an exceedingly sturdy, unitary, skeletal structure. The vertical sides 59 and 59' are preferably extended below the horizontal portion 62' so as to provide supporting legs 67 and 68 and additional supporting legs 69 and 70 may be welded to the girder means 65 and 66, respectively.

The boxlike unit 52 is formed with the end walls 71 and 72 and the back wall 73. The upper portions of the end walls are connected by the front and rear brace bars 74 and 75 while the lower portions of the end walls are connected by a front brace bar 76 and a rear brace bar, not shown. The inner surfaces of the end walls carry the drawer guide strips 77 which slidably receive the grooves 78 formed in the sides 79 of the drawer 80. The various parts of the boxlike unit are preferably made of wood or the like and may be fastened together by any suitable means, such as glue or screws.

The vertical and horizontal dimensions of two opposite sides of the unit 52, such as end walls 71 and 72, are slightly less than the corresponding dimensions of the openings in the first and second frame members 54 and 55 so that, in assembly, the unit 52 may slide endwise into, and snugly fit, the openings in the first and second frame members. When assembled, the unit 52 is positioned within the structure formed by the frame members 54 and 55 and the connecting girder means so that the end walls 71 and 72 rest, respectively, on the horizontal portions 60' and 61'. The boxlike unit 52 may be detachably secured to the skeletal structure by means of apertured lugs 81, carried by portions 60, 60' and 61, 61', and adapted to receive screws which are secured to the adjacent brace bars 74, 75 and 76.

The top member 53, made of any suitable material such as wood, rests on top of the entire skeletal structure, formed by the three frame members and girder means, and its dimensions are substantially the same as those of the top portion of the skeletal structure. The top member 53 is detachably secured to the skeletal structure by means of screws passing through apertures formed in lugs 82 carried by the top parts of the skeletal structure.

The interior of the boxlike unit 52 may be constructed to support a plurality of drawers, as shown, or it may be provided with any other desired structure, such as shelves, vertical dividers or the like. While the invention is shown as applied to a so-called single-pedestal desk, it is obvious that it may be embodied equally well in a double-pedestal desk.

From the foregoing, it will be apparent that the objects of the invention have been attained and that an improved construction has been provided for articles of furniture of the types specified. The skeletal structure, which is preferably made of square steel tubing, is a unitary, self-rigid construction which is unusually sturdy but relatively light in weight. The boxlike unit, which is preferably made of wood, is also a rigid, unitary structure. The sub-assemblies, comprising the skeletal structure the boxlike unit and the top, are especially adapted for mass production and utilization of assembly-line procedures in producing articles of furniture. The various articles of furniture embodying the invention are exceedingly sturdy in construction and capable of being manufactured at a minimum cost, while still being neat and pleasing in appearance. Hence, such articles of furniture are extremely well adapted for use in institutions such as dormitories, hotels or the like.

While two slightly different embodiments of the invention have been shown, it is to be understood that various other modifications may be made. Thus, for example, the two frame members may be positioned with one in front of the other so that the boxlike unit can be slid into the skeletal structure from the front or rear. In all forms of the invention, there is provided a rigid skeletal structure having lower portions underlying and supporting the boxlike unit when it is positioned therein. Various other modifications can obviously be made without departing from the spirit of the invention as pointed out in the appended claims.

I claim:

1. An article of furniture comprising a metallic skeletal structure having two substantially similar frame members vertically positioned and spaced apart, each frame member having two spaced vertical sides and a horizontal portion connecting the upper portions of the sides, girder means connecting the aligned upper corner portions of the frame members and horizontally positioned lower parts connecting the lower portions of the sides to thereby provide a rigid skeletal structure, a boxlike unit, a plurality of drawers slidably mounted within said unit, at least two of the opposite sides of the unit having vertical dimensions which are slightly less than the vertical distance between said horizontal portion and said part and horizontal dimensions which are slightly less than the distance between adjacent vertical sides of a frame member, said unit being positioned snugly within the skeletal structure and carried by said lower parts, a top member covering the unit and coacting means carried by the unit and structure for detachably securing the unit and top member to the skeletal structure.

2. An article of furniture comprising a metallic skeletal structure having two closed frame members vertically positioned and spaced apart with the openings of the members in aligned relationship, said openings being substantially the same in dimension and shape and bordered by straight sides, girder means connecting the respectively adjacent top and bottom portions of the frame members to thereby form a rigid, unitary skeletal structure, a boxlike unit comprising two end walls, a back wall and brace means connecting the respectively adjacent top and bottom portions of the end walls, the vertical and horizontal dimensions of two opposite sides of the boxlike unit being slightly less than the corresponding dimensions of said openings in the frame members, said boxlike unit being positioned within said skeletal structure with the unit carried by the underlying lower parts of the frame members, a top member covering the unit and means on the upper and lower portions of the skeletal structure and said brace means for detachably securing the unit and top member to said skeletal structure.

3. The article of furniture described in claim 2 wherein the outer surfaces of the end walls of the boxlike unit are positioned between the planes of the inner and outer surfaces of the vertical sides of the frame members and the top member covers the upper portion of the skeletal structure.

4. An article of furniture comprising a metallic skeletal structure having two closed rectangular frame members vertically positioned and spaced apart with the openings of the members in aligned relationship, girder means connecting the respectively aligned top corner portions of the frame members, and additional girder means connecting the aligned lower portions of the frame members to thereby provide a rigid skeletal structure, a boxlike unit comprising two end walls, a back wall and front and rear brace bars connecting the respectively aligned top and bottom portions of the end walls, a plurality of drawers slidably mounted within said unit, said boxlike unit being positioned within said skeletal structure and supported by the bottom portions of said frame members and the connecting girder means, the vertical and horizontal dimensions of the end walls being slightly less

than the corresponding dimensions of the openings in said frame members, a top member secured to and covering the top portion of said skeletal structure and means carried by the skeletal structure and at least one of said brace bars for detachably securing the unit to the skeletal structure.

5. The structure described in claim 4 wherein the frame members are formed of square tubing and the boxlike unit has the inner surfaces of its end walls substantially co-planar with the inner faces of the vertical sides of the frame members and the outer surfaces of its end walls spaced inwardly from the plane of the outer faces of the vertical sides of the frame members.

6. A desk or the like comprising a unitary, metallic skeletal structure having three closed rectangular frame members vertically positioned and spaced apart with the rectangular openings in the frame members in alignment, girder means connecting the aligned upper corner portions of all the frame members and the lower corner portions of the first and second frame members, other girder means spaced inwardly from the first named girder means and connecting the lower portions of the second and third frame members, a boxlike unit comprising two end walls,

a back wall and braces connecting the top and bottom portions of the end walls, the vertical and horizontal dimensions of the end of the unit being slightly less than the corresponding dimensions of the openings in said frame members, said unit being positioned within the skeletal structure formed by the first and second frame members and supported on the lower portions thereof, means for detachably securing the unit to the skeletal structure, a top member covering the skeletal structure formed by all said frame members and connecting girder means, and means for detachably securing the top member to the skeletal structure.

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