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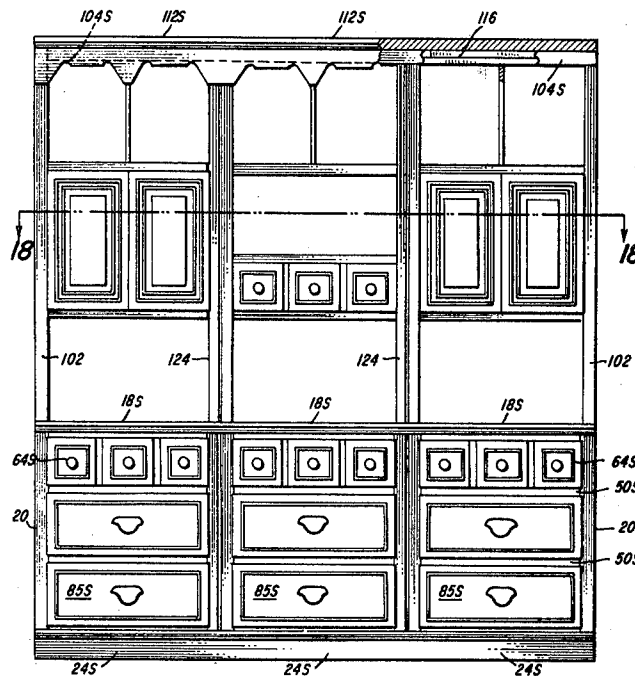
[54] **FURNITURE CONSTRUCTION AND METHOD OF MAKING**
17 Claims, 19 Drawing Figs.

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[51] Int. Cl. **A47b 47/04,**
A47b 47/00
[50] Field of Search. **312/107,**
108, 111, 257, 330

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ABSTRACT: The furniture construction of this invention utilizes a pair of "basic components," each of a predetermined length (e.g., 24 and 32 inches), which can be precut and inventoried for making a large variety of furniture pieces. Each furniture piece includes a preassembled front rectangular frame formed of top, bottom and side members having grooves formed along their rear faces for receiving the respective front edges of a top support member, shelves, dust bottoms and side panels. Precut tops, back, cross frame members, dust bottoms, drawers, door frames and panels and the like are fastened together to form a structurally complete furniture piece, and various precut decorator components are fastened thereto so that the appearance of the resulting individual furniture pieces may be selectively altered as desired. Longer integral base furniture pieces, such as chests, dressers and the like are made in various lengths with precut and inventoried basic components and other basic parts. Similarly, top components having varying lengths corresponding to the lengths of such longer integral base pieces are assembled from precut basic components and parts so that they can be superimposed on the base pieces as hutches, china cabinets and the like.



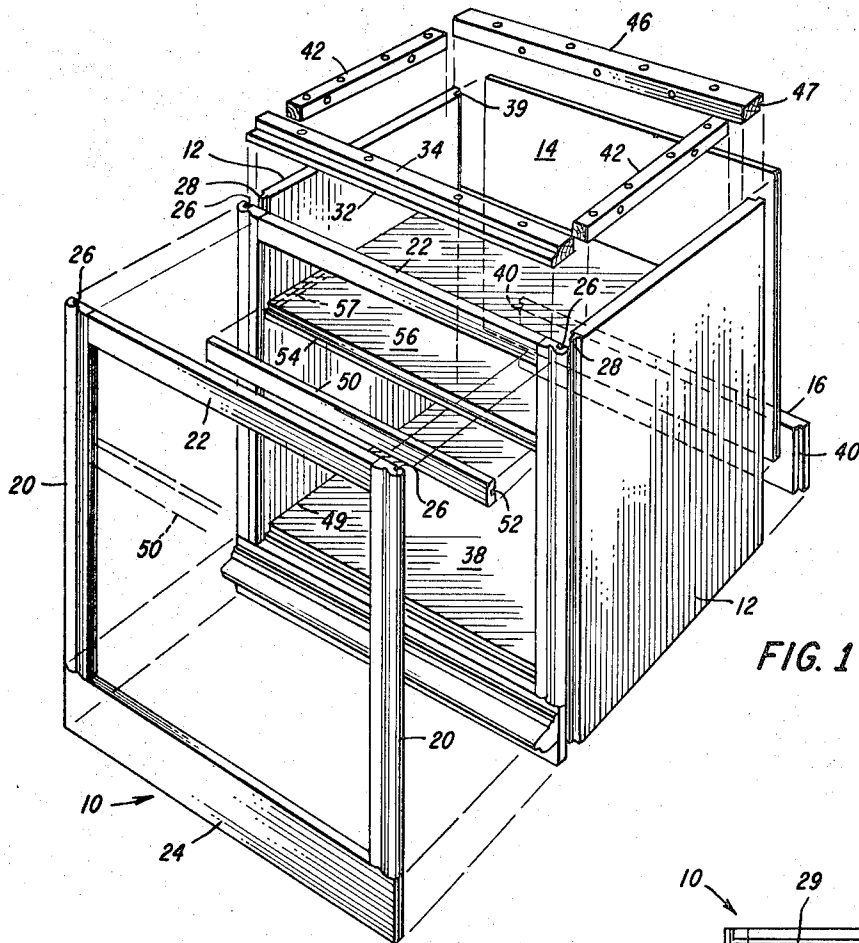


FIG. 1

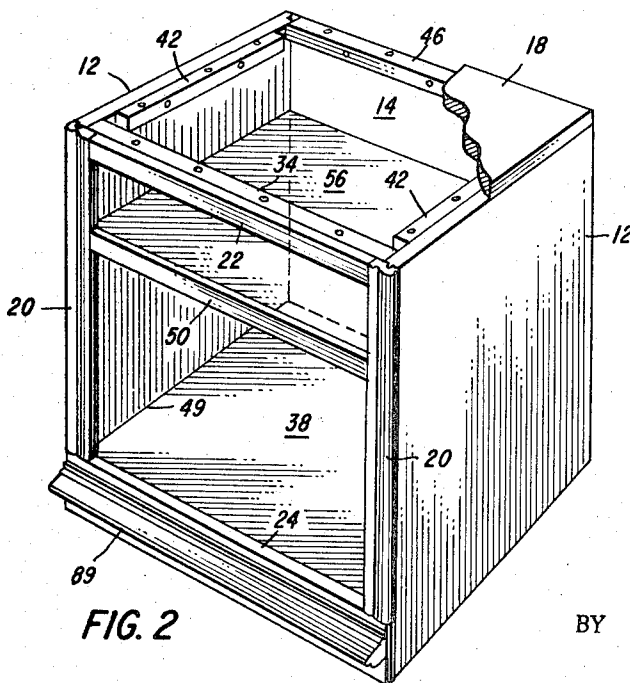


FIG. 2

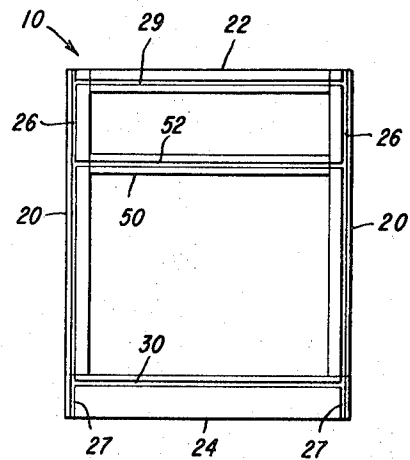
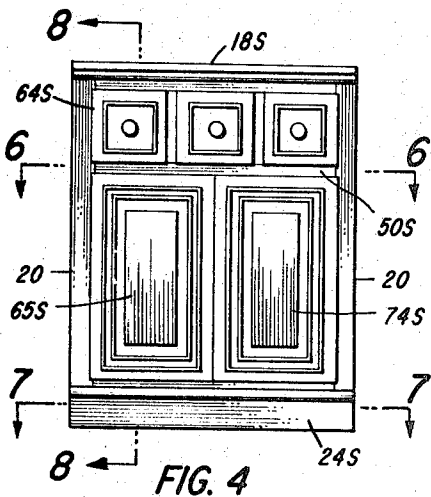
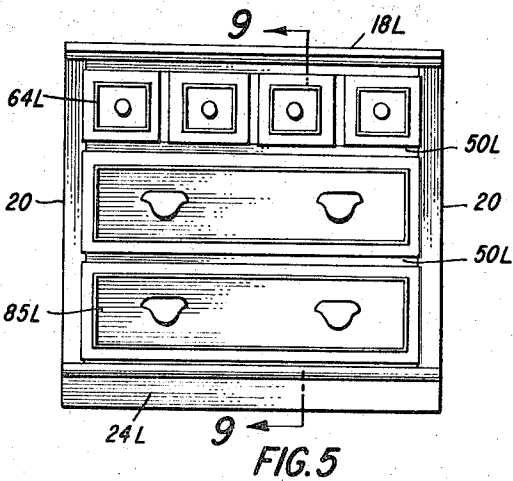
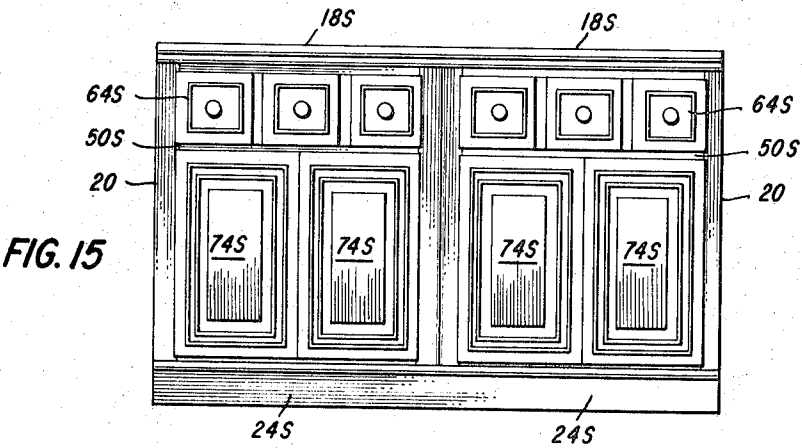
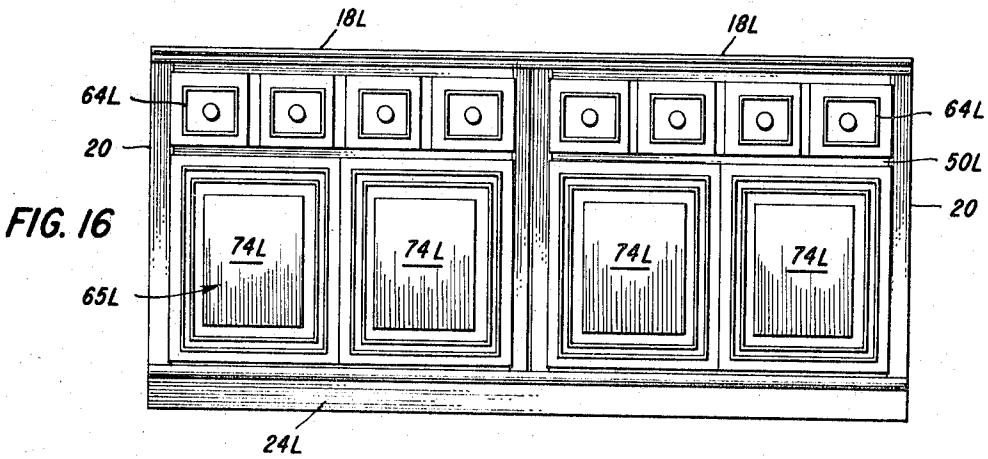


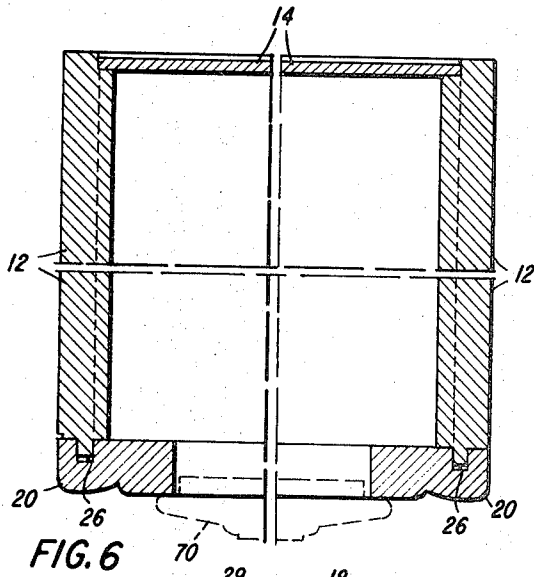
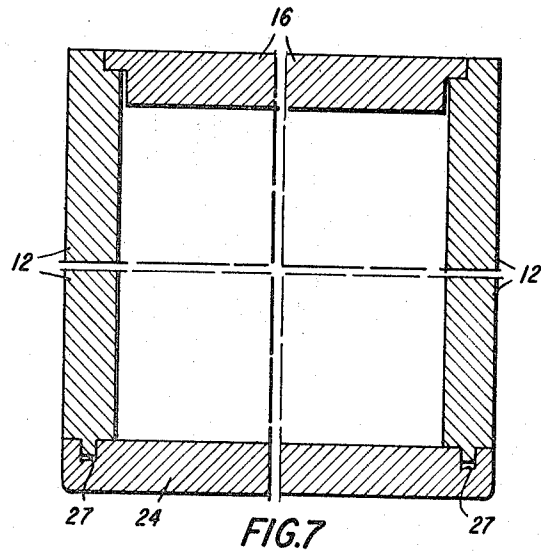
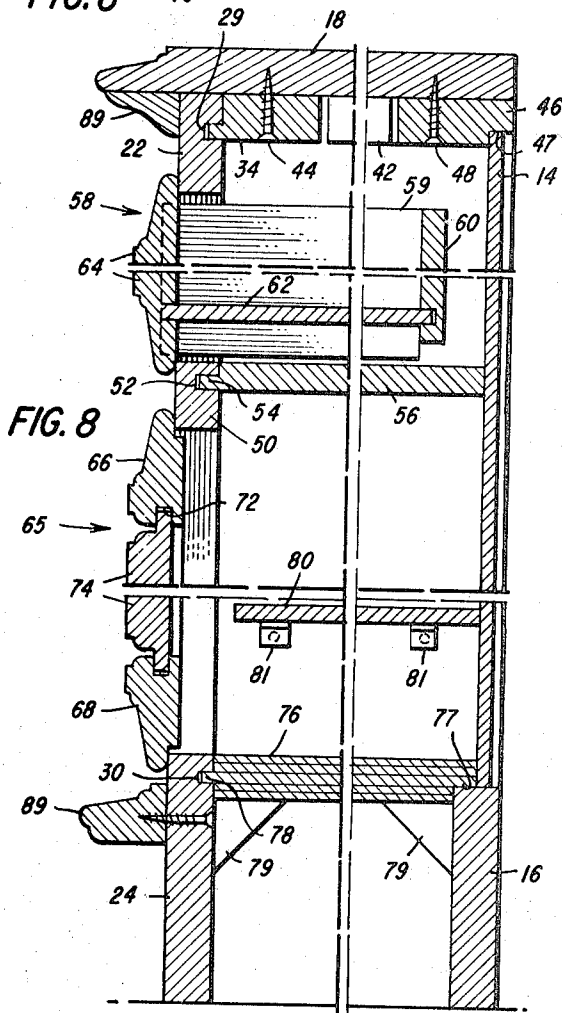
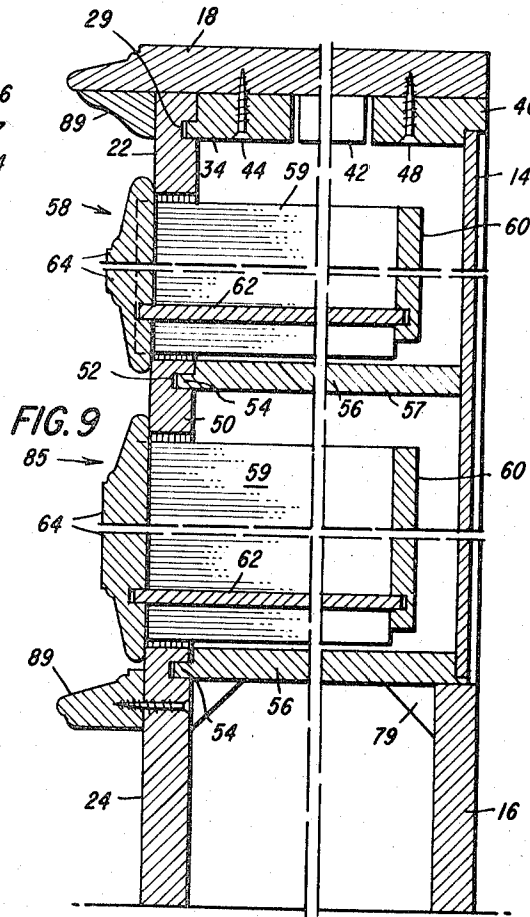
FIG. 3

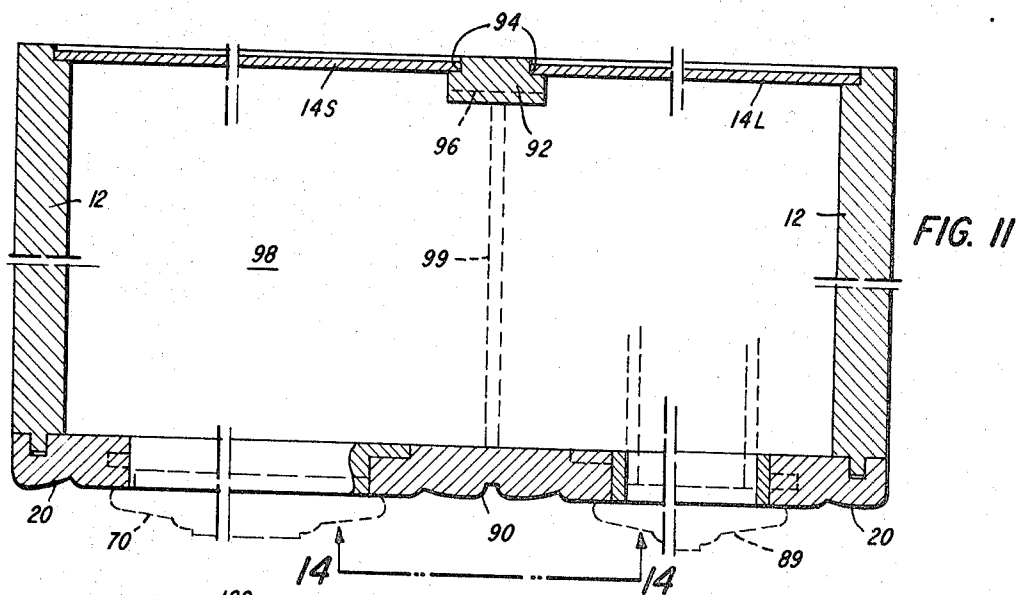
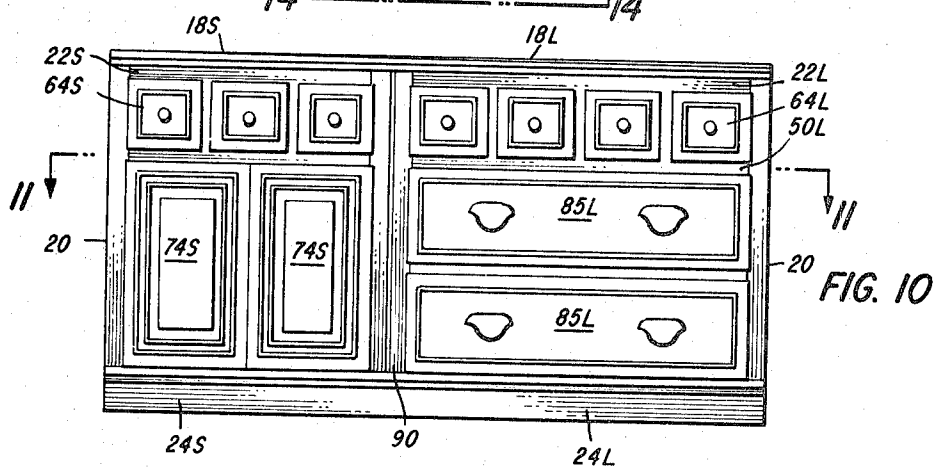
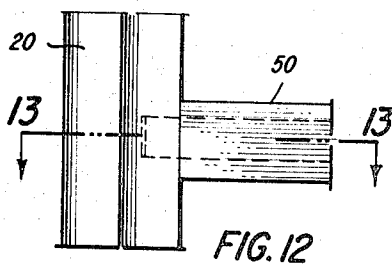
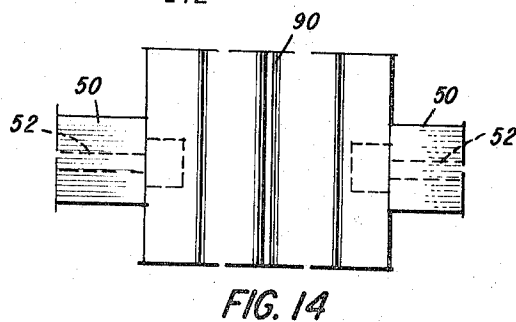
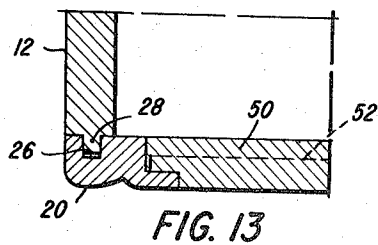
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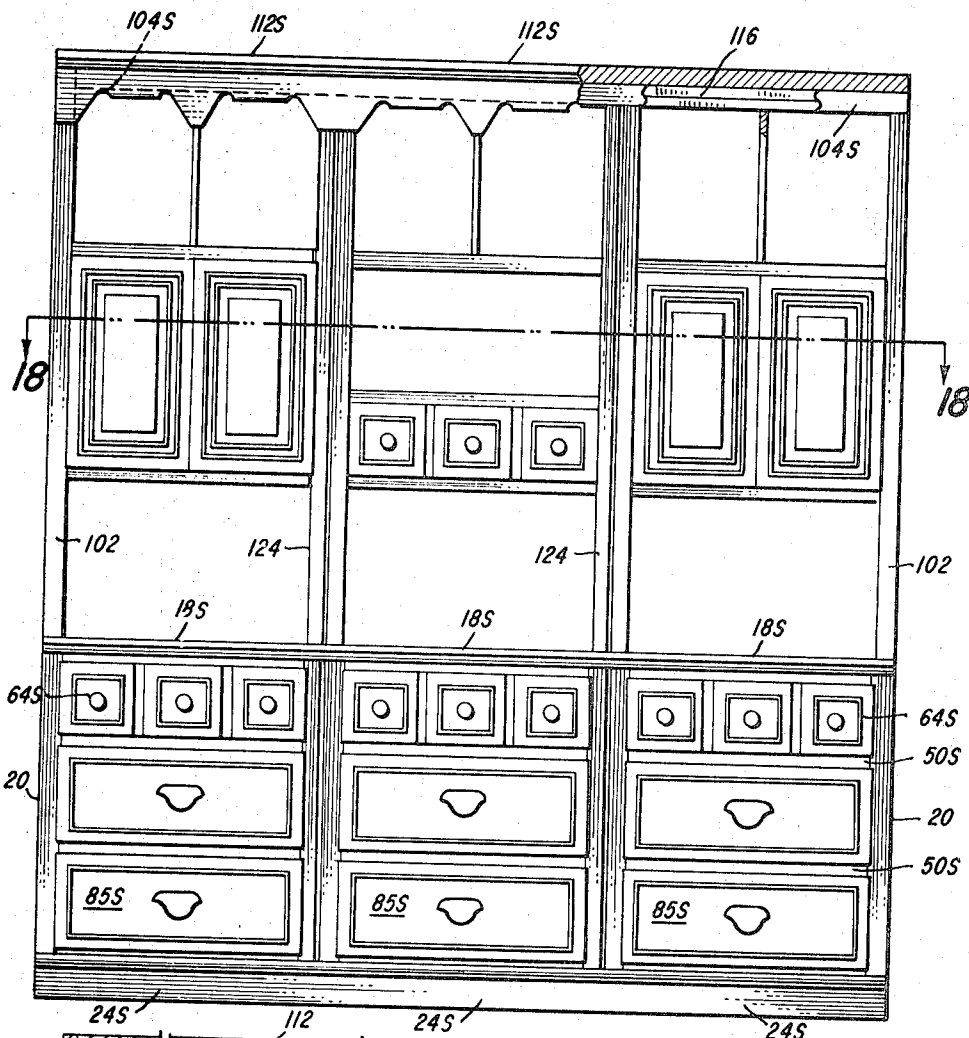


FIG. 17

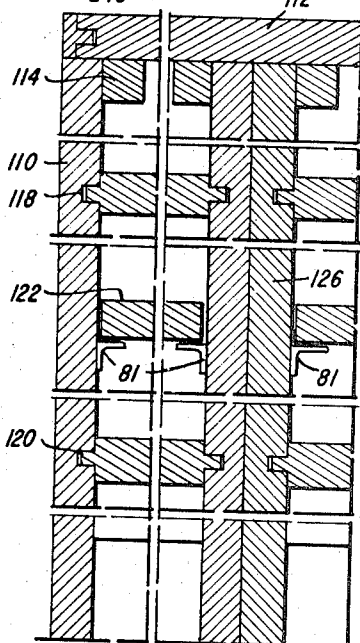


FIG. 19

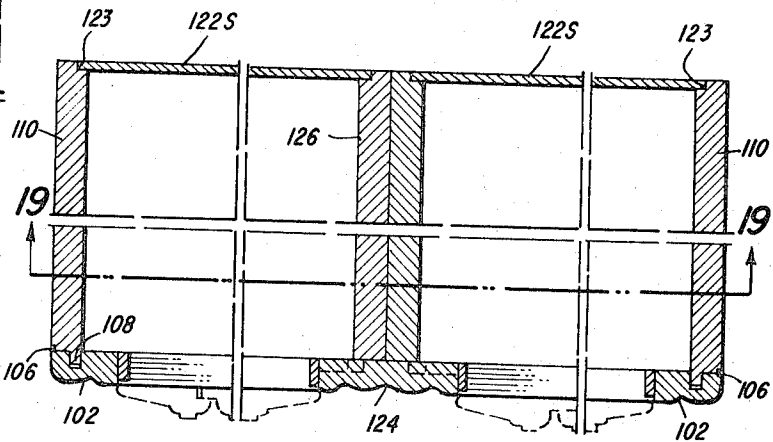


FIG. 18

FURNITURE CONSTRUCTION AND METHOD OF MAKING

The present invention relates to wooden furniture construction and particularly relates to an improved construction for fine quality furniture pieces such as chests, dressers, hutches and the like and an improved method for making the same. The invention also relates to the formation of various furniture pieces of different length and good appearance from precut parts common to small and large furniture pieces.

The art of constructing quality furniture has not substantially changed for many years in spite of the many recognized and longstanding problems associated therewith. One problem is that economy of manufacture with prior prevailing industry practice requires a substantial number of orders, usually at least 100, for particular piece or line of furniture, before cutting the wood parts for the same. Normally, additional parts are also cut at that time such that 25 to 50 percent more furniture pieces can be made than ordered, thereby providing a capability of filling subsequent orders for like furniture pieces without an additional cutting and at reduced costs. This procedure, however, necessarily causes a long delay between the time an initial order is taken and the initial cutting of the furniture, as well as the additional time delay for assembly and finishing of the furniture for delivery.

Further, after filling initial furniture orders, the manufacture usually has a large inventory of finished furniture pieces which require storage until subsequent orders are received. This creates additional and costly problems in providing sufficient storage space for the sizable numbers of various furniture pieces manufactured in this manner. Moreover, the financial investment in these completed and stored furniture pieces is increased by the substantial cost of assembling and finishing the component parts, using relatively skilled and costly labor. Not only may this investment be tied up in inventory for long periods of time, but it may be partially or wholly lost if the specific pieces of furniture should go out of style.

Another shortcoming of prior prevailing industry practice is that the various component parts, such as the cross frames, side panels, tops, dust bottoms, etc. are fastened together on a semihandcraft basis and then provided with a backing to form a sufficiently rigid furniture piece. This assembly procedure requires a relatively high degree of labor skill and craftsmanship as additional trimming, cutting and adjustment of each furniture piece is necessary in order to finally align and assemble the various parts so as to form a good furniture piece without defects which detract from the appearance and quality of the finished furniture.

The construction of larger, generally longer quality furniture pieces such as double chests, triple dressers and the like, which are made in generally accepted standard lengths such as 48, 56, 64 and 72 inches, is accomplished by a procedure similar to the previously described method of manufacture and assembly. Since cuttings and assembly are made for each different furniture size and type required it will be seen that the prior method of manufacturing such furniture pieces requires the assembly of parts cut specifically for each piece of the several types and sizes. This further complicates both the cutting and assembly procedures, so as to require a relatively higher degree of labor skill with further increased manufacturing and inventory costs.

Also, furniture made according to prior prevailing practice often cannot economically be made with the desired uniformity and rigidity of construction.

In one aspect of the present invention, a novel furniture construction has been developed wherein the component parts of each piece can be precut with mass production techniques and inventoried, or even partly preassembled for storage, whereby basic component and preassembled parts may be easily and quickly finally assembled upon receipt of an order for any of various different end pieces. These advantages are accomplished while still producing a furniture construction of high quality and aesthetically pleasing appearance, at reduced manufacturing cost.

Specifically, each such furniture piece comprises a generally rectangular front frame which can be preassembled and stored in a minimum of space. Whereas, in usual furniture construction, the side panels, top, dust bottoms, etc. are assembled one to the other, to form a semirigid piece which requires trimming and aligning of the various parts to provide a proper fit, and a backing for rigidity, in the present invention, and preassembled rectangular front frame hereof provides a rigid subassembly to which the side panels, top, and other precut component parts thereof are secured. Mass production techniques are used for cutting and parts forming the front frame, side panels, tops, backs, dust bottoms, cross framing, etc. including the connecting joint portions thereof. The unique front frame assembly hereof facilitates rapid and ready assembly of each of these mass produced parts to make the desired furniture piece of high quality while using a lower degree of labor skill than heretofore required in the manufacture of the like high quality furniture.

To join the various parts to the assembled frame subassembly, the rear face portions of the front frame are rabbeted and extend substantially about the periphery of the frame for receiving tenons formed along the front edges of the side panels, top support frame member, and the lowermost dust bottom or shelf. As an additional feature hereof, hinged doors or drawers can be incorporated into this basic assembly according to the type of furniture piece specified. The doors comprise rectangular frame members formed from precut, inventoried parts which are adapted to receive inset decorator panels while the drawers are formed of precut, inventoried pieces having decorator fronts. Where drawers are specified, the inner faces of the side panels are grooved to receive the lateral edges of dust bottoms and one or more cross frames are joined to the side rails of the front frame to form exposed front frame portions between the drawers.

In accordance with another aspect of the present invention, it has been found that longer furniture pieces, for example, double chests, triple dressers and the like are usually manufactured in lengths which have been generally accepted as the most desirable, functional and aesthetically pleasing. Concomitantly, it has been found that such longer pieces may be formed of parts common to shorter furniture pieces such as night tables, chests and the like. To illustrate, smaller furniture pieces, such as chests, are usually manufactured in lengths of 24 and 32 inches, while larger pieces, such as double chests, are commonly manufactured in lengths of 48 and 56 inches (a few are 40 and 64 inches long). Still larger pieces, such as triple dressers, are generally manufactured in lengths of 64 and 72 inches. A furniture group in a particular style, such as a bedroom set, most often requires several different length furniture pieces, each of which would usually be formed to one of the aforementioned lengths. In accordance with the previous practice, this would necessitate cutting and assembling various parts of different sizes for the different length furniture pieces.

To provide furniture pieces in the various desirable and generally accepted lengths noted above, the present invention provides two basic furniture components having different lengths which per se may form a pair of individual furniture pieces. The parts forming the basic furniture components can also be employed to form integral longer furniture pieces of various types having the foregoing generally desirable and accepted lengths. To accomplish this, the basic furniture components are provided lengths of 24 and 32 inches. The longer integral furniture pieces may be provided in the generally accepted lengths of 48, 56, 64 and 72 inches and these from parts common to two or more like basic furniture components or combinations of different length basic components. This eliminates the cutting of parts to a wide variety of lengths which are individually useful only in a specified length of the various length furniture pieces as well as particular problems associated with assembling larger components as discussed earlier. For example, current methods provide for cutting individual tops in lengths of 48, 56, 64 and 72 inches for each longer length piece to be assembled. In accordance with the

present invention, only tops having lengths of 24 and 32 inches need be cut to form furniture pieces having such lengths.

Significantly, only the component parts forming the two basic components need be present and inventoried and from these parts, integral furniture pieces ranging in lengths from 24 to 72 inches or longer in increments of 8 inches can be formed. This, of itself, greatly reduces inventory and problems associated with inventory control as parts common to the two lengths of basic furniture components are employed to form the larger pieces. By the present furniture construction, a minimum financial investment is tied up in inventory as fewer parts need be retained in inventory since the furniture components may be readily assembled and finished to the various foregoing lengths from common parts.

Specifically, to form the longer furniture pieces, component parts of two or more of the basic furniture components are assembled employing common precut connecting pieces which join the frame members of the associated components to form an elongated frame member having the desired length. Other precut component parts corresponding to size to the two or more basic components employed such as the tops, backs, side panels and the like are then joined to the elongated frame and this entire integral assembly is then finished. The component parts of two or more of the basic furniture components in various combinations may thus form larger unitary elongated quality furniture pieces of selected lengths, and this is accomplished by precutting and storing substantially only the parts forming the two basic furniture components.

The decor and functional features of the longer furniture pieces may be readily altered to provide the appearance of custom made furniture. To achieve this, longer pieces having wholly drawers or wholly drawer/cabinet combinations may be assembled while retaining the commonality of parts discussed previously. Where combinations of drawers and drawer/cabinet components are employed, one or the other may be provided on either side of the longer piece as desired. Additionally, a wide variety of decorator pieces may be provided to further achieve a custom appearance while still forming the longer pieces of parts common to the basic components. The basic components thus described comprise base furniture pieces or components. In accordance with the present invention, top components having similar lengths may be combined with such base components to form hutches, china cabinets and the like. The component parts of the tops having vertical dimensions are cut preferably in two different sizes while the parts thereof having lengthwise dimensions are cut such that the lengths of the finished top components correspond in length to the two base components. Thus commonality of the lengthwise extending parts of the top components is achieved similarly as the base components thereby providing integral tops coextensive in length with the lengths of the variously combined base components forming the integral longer base furniture pieces.

Accordingly, it is a primary object of the present invention to provide an improved furniture construction.

It is another object of the present invention to provide a furniture construction having a preassembled rigid front frame to which the remaining component parts may be readily and easily secured.

It is yet another object of the present invention to provide a furniture construction characterized by the formation of various optimal length furniture pieces from standardized component parts.

It is still another object of the present invention to provide a furniture construction characterized by the formation of two basic individual furniture pieces having predetermined lengths and elongated integral furniture pieces having optimal lengths equal to the various combinations of lengths of the individual pieces, the elongated pieces being formed from component parts common to the two basic individual pieces.

It is a further object of the present invention to provide a furniture construction comprised of standardized component

parts forming varied optimal length, essentially custom made furniture pieces wherein a minimum number of parts are employed thereby minimizing the stock inventory required; wherein a wide selection in furniture size and decor is afforded; wherein a low degree of labor skill is required to cut and assemble the parts forming the furniture pieces; and wherein the finished pieces comprise quality furniture manufactured at low cost.

It is still a further object hereof to provide a furniture construction having the foregoing characteristics wherein such basic components comprise base furniture pieces such as chests and the like in combination with basic top components having lengths corresponding to the lengths of the base pieces; and wherein longer integral tops are formed from parts common to the basic top components for superposition on like length elongated base pieces whereby hutches, china cabinets and the like are formed.

Further objects and advantages of the present invention will become more apparent upon reference to the following specification claims and appended drawings wherein:

FIG. 1 is an exploded perspective view of the component parts of a basic furniture component constructed in accordance with the present invention;

FIG. 2 is a perspective view of the assembled basic component shown with portions broken out for ease of illustration;

FIG. 3 is a rear elevational view of the front frame of the basic furniture component;

FIG. 4 is a front elevational view of a completed basic furniture component having a drawer/cabinet combination;

FIG. 5 is a front elevational view of a second completed basic furniture component having a different length and wholly drawers;

FIGS. 6 and 7 are horizontal sectional views taken about on lines 6-6 and 7-7, respectively, of FIG. 4;

FIGS. 8 and 9 are cross-sectional views taken about on lines 8-8 and 9-9 of FIGS. 4 and 5, respectively;

FIG. 10 is a front elevational view of a unitary elongated furniture piece formed of parts common to the first and second basic furniture components;

FIG. 11 is a horizontal cross-sectional view thereof taken about on line 11-11 of FIG. 10;

FIG. 12 is a fragmentary front elevational view of the side and cross frame joint;

FIG. 13 is a horizontal cross-sectional view thereof taken about on line 13-13 of FIG. 12;

FIG. 14 is a fragmentary front elevational view of the front intermediate member joining standard parts of the basic furniture components;

FIGS. 15 and 16 are front elevational views of integral elongated furniture pieces formed of the parts common to the respective first and second basic furniture components;

FIG. 17 is a front elevational view of an integral elongated base furniture piece formed of the standard parts common to three of the first basic components and supporting top components also constructed in accordance with the present invention;

FIG. 18 is a fragmentary horizontal cross-sectional view taken about on line 18-18 of FIG. 17 with portions broken out for ease of illustration; and

FIG. 19 is a vertical cross-sectional view thereof taken about on line 19-19 of FIG. 18 with portions broken away for ease of illustration.

Referring now to the drawings and particularly to FIGS. 1-3, there is shown a basic assembly for each of the base furniture components of the present invention comprising a front rectangular frame, generally indicated at 10, a pair of side panels 12, a back 14 including a back support member 16, and a top 18 (FIG. 2). Front frame 10 includes a pair of side rails 20 and top and bottom frame members 22 and 24, respectively. The lower ends of rails 20 butt the upper end edges of bottom frame member 24 and are preferably glued thereto. The opposite ends of top frame member 22 butt the inner upper end edges of side rails 20, and are secured thereto as by glued

tenon and route joints. The front faces of rails 20 and frame members 22 and 24 comprise peripheral portions of the exposed front of the finished furniture piece and the front faces of rails 20 may be cut to form a decorative pattern as desired. The rear faces of side rails 20 are vertically rabbeted or grooved, as at 26 (FIG. 3), and rearwardly facing end portions of bottom frame member 24 are also vertically grooved as at 27 to form continuous vertical grooves with side rail grooves 26 for the full height of frame 10, these latter grooves 26 and 27 being adapted to receive tongues 28 formed along the forward edges of side panels 12. Horizontally extending grooves 29 and 30 are formed in respective rear faces of top and bottom frame members 22 and 24 and respectively receive the tongue 32 formed along the forward edge of a front top support member 34 and the tenon 36 formed along the forward edge of a bottom panel 38 which may be either a dust bottom or shelf as hereinafter described. The rails 20 and top and bottom frame members 22 and 24 thus form a rigid frame to which the remaining component parts of the basic furniture unit are joined.

To assemble the basic furniture unit, side panels 12 are secured to frame 10 by inserting and preferably gluing tongues 28 in grooves 26 and 27. The rear edges of panels 12 are rabbeted as at 39 and back support member 16, which is also rabbeted as at 40, is secured, preferably by glue, to the lower rear edges of panels 12 forming half lapped glued joints therewith. Front top support member 34 is secured to frame 10 by inserting and preferably gluing tongue 32 in groove 29 and lateral top support members 42 are suitably secured along the inner upper edges of side panels 12 as by screws, not shown, threading into the inner faces of panels 12. Top 18 is secured to frame 10 and panel 12 as by screws 44 (FIGS. 8 and 9) which thread upwardly through lateral and front top support members 42 and 34, respectively, into the undersurface of top 18. A rear top support member 46 is secured as by screws 48 to the undersurface of top 18 along the rear edge thereof. Member 46 is rabbeted along its rear face as at 47 to receive the upper edge of back 14 forming a lap butt joint therewith. The bottom panel 38 is secured to the foregoing assembly by inserting its tongue 36 into groove 30 with the lateral edges of bottom panel 38 being received in horizontal grooves 49 formed on the inner faces of side panels 12. A cross frame member 50 is secured between rails 20, preferably by glued tenon and route joints, and a groove 52 is formed coextensively in the rear face of crossmember 50 for receiving the tongue 54 of an intermediate dust bottom 56. The inner faces of side panels 12 are provided with horizontal grooves 57 to receive the lateral edges of dust bottom 56.

The parts of the base furniture component are thus assembled and an upper drawer, as will now be described, is provided for and is preferably a standard component of each of the furniture pieces described hereinafter. Referring particularly to FIGS. 8 and 9, cross frame member 50 is spaced from top frame member 22 as to leave an opening in the front of the furniture unit for receiving an upper drawer, generally indicated 58. Drawer 58 comprises side panel members 59, a back member 60, a drawer bottom 62, and a drawer front 64 having a front decorative face. Drawer 58 may be assembled in the usual manner with lower portions of the front, side, and back members being horizontally grooved to receive the front, lateral and rear edges of drawer bottom 62, these joints being glued. Front and back members 64 and 60 respectively may be vertically grooved adjacent their lateral edges and the front and rear edges of side panels 59 are inserted into such grooves and glued.

The furniture unit thus assembled may be adapted as desired to comprise a furniture piece having the standard upper drawer in combination with either lower drawers or a lower cabinet having door panels with appropriate shelving. The portion below cross frame 50 may thus comprise a cabinet (FIGS. 4 and 8) having a pair of doors, generally indicated at 65, pivoted for swinging movement outwardly of the furniture piece for access into the cabinet below upper

drawer 54. As seen in FIGS. 4, 6 and 8, the doors may be pivotally secured to the side rails 20 by hinges (not shown), each door comprising a rectangular frame having top, bottom and side frame members 66, 68 and 70 respectively. The inner edges of the door frame members are grooved as at 72 and receive the outer tongue portions of decorator panels 74. The frame members 66, 68 and 70 of each door are joined one to the other to form corner joints, preferably glued plane miter butt joints. When the lower cabinet portion is provided, bottom panel 38 comprises a finished shelf 76 having a tongue 78 projecting from its front edge for insertion into groove 30 of bottom frame member 24. The rear edge of shelf 76 is rabbeted as at 77 to overlie back support member 16, suitable support fillets 79 being provided as desired. One or more shelves 80 may be provided within the cabinet as desired and supported on brackets 81 fastened to the inner faces of panels 12.

The finished furniture piece comprised of the basic assembly shown in FIGS. 1 and 2 may include wholly drawers 85 and, in this form, an additional cross frame member 50 (FIG. 9) is suitably secured at its opposite ends to rails 20. An additional dust bottom 56 engages in the horizontal grooves formed along the inner faces of side panels 12 with the front edge tongue 54 of the additional dust bottom 56 engaging in groove 52 formed along the inner face of additional crossmember 50. In this form, the bottom panel 38 comprises a dust bottom 56, as shown in FIG. 9, having a tongue 54 projecting from its front edge for insertion in groove 30 of bottom frame member 24. In this instance, the rear edge of lower dust bottom 56 rests on back support member 16 and support fillets 79 are provided as desired. These lower drawers 85 are constructed similarly as upper drawer 58 and detailed description thereof is believed unnecessary. In either of the furniture pieces comprised of entirely drawers or the drawer/cabinet combination, various decorator pieces 89 are applied to the cross and bottom frame members and to the underside of the overlying front edge of top 18.

Significant features of the present invention provide that the lengthwise extending horizontal component parts of the basic furniture assembly as illustrated in FIG. 1 including such parts as comprise the drawers and/or doors and shelves therefor are cut to two different predetermined standardized lengths to form two different lengths of basic furniture components, either of which may form a furniture piece comprising wholly drawers or the drawer/cabinet combination, thus varying the decor and functional aspects thereof; that the predetermined lengths are chosen such that the various parts of two or more of either of the basic components may be joined to form integral elongated furniture pieces having either wholly drawers or the drawer/cabinet combination or a combination of both and in lengths which have been found to be generally common and functionally and aesthetically acceptable; that the elongated furniture pieces are formed of lengthwise longitudinal extending parts common to the basic furniture components and are thus precut to only two-length dimensions which meets the parts requirements for the longer furniture pieces in all the various lengths thereof; and that the component parts forming the vertical depthwise extending dimensions, such as the side panels, front rails and side drawer panels, are cut to a single vertical dimension whereby the same are common to both the different length individual basic furniture components and all elongated furniture pieces regardless of length. It has been found that variations in length between the most commonly accepted and aesthetically pleasing various furniture pieces, such as night tables, chests, dressers, triple dressers, and the like, are whole multiples of 8 inches. For example, chests and dressers having respective lengths of 56 and 72 inches are quite common and, in this instance, the difference in length is 16 inches which is a multiple of two times 8 inches. Chests on the order of 48 and 56 inches in length are also commonly accepted and it is seen that the difference in length is exactly 8 inches. Rather than manufacturing individual furniture pieces to these lengths, it has been found

that the basic furniture components can be formed to two different lengths equal to predetermined whole multiples of 8 inches with combinations of two or more basic furniture components forming the longer unitary furniture pieces in the various common and generally acceptable furniture lengths, for example, 48, 56, 64 and 72 inches. In accordance with the present invention, the longitudinally extending parts are cut to form furniture components having lengths of 24 and 32 inches. Thus, the top, bottom and cross frame members 22, 24 and 50, respectively, forming the front frame 10 of each component, tops 18, backs 14, back supports 16, front and back top supports 34 and 46, respectively, dust bottoms 56, shelves 76, and the longitudinally extending parts of the drawers and doors, including the backs 60, bottoms 62, and front members 64 of the drawers, and the top and bottom door frames 66 and 68, respectively, and the door panels 74 are each cut to two lengths to form basic furniture components 24 and 32 inches in length. All of these parts may be precut and stocked in two different lengths while those pieces forming the vertically extending depthwise dimensions of the furniture pieces are precut and stocked in but one length. Thus, the two different length furniture components may form useful furniture pieces per se, such as night tables, small chests and the like, while the parts thereof are common to and may be employed in manufacturing longer furniture pieces in selected lengths, as will now be described. To maintain consistent notation, like parts cut to two different lengths are indicated by like reference numerals and such numerals followed by the letter notation S or L respectively indicate that such parts are cut for use with either the smaller or larger basic furniture components.

Referring now to FIGS. 10 and 11, there is shown a unitary elongated furniture piece assembled from the parts forming the basic furniture components. As clearly shown in FIG. 10, the left-hand portion of the unitary furniture piece is comprised of parts forming the basic furniture component having a length of 24 inches while the larger right-hand portion of the unitary piece is comprised of parts forming a basic furniture component having a length of 32 inches. It is a significant feature hereof that the unitary elongated furniture piece is comprised of parts common to the basic furniture units.

Accordingly, a rectangular elongated front frame assembly is formed comprised of parts forming the frames of the two different length basic components. In forming this elongated front frame, a pair each of top and bottom frame members 22 and 24, having lengths corresponding to the lengths of the different length basic components employed, i.e., upper members 22S and 22L and lower members 24S and 24L, are each joined at like ends to a side rail member 20 to form a pair of different length openside frames. An intermediate vertically extending frame member 90 is joined at opposite ends along opposite edges thereof to the opposite free ends of each pair of the top and bottom frame members 22S, 22L and 24S, 24L, respectively, to thereby form a unitary, generally rectangular elongated frame assembly. Certain of the other standard parts of the two basic components may then be secured to the elongated frame assembly in a manner similarly as such parts would be secured to the individual furniture piece.

For example, cross frame members 50S and 50L are joined at opposite ends to the side rails 20 and intermediate frame member 90, respectively. The tongues 28 of two of the standard side panels 12 are then inserted into grooves 26 of side rails 20. A vertically extending back support member 92 is spaced behind front member 90 and rabbeted along its outer lateral edges as at 94. The back support members 16S and 16L corresponding in length to the lengths of the basic components employed to form the unitary elongated piece are secured at opposite ends to the rear edges of side panels 12 as before and the opposite lowermost edge portions of back support member 92, respectively. Horizontal grooves 96 are provided in the front and back faces of members 92 and 90 respectively intermediate their ends for receiving an elongated dust bottom 98, the lateral edges of which engage in grooves 57 formed along the inner faces of side panels 12 as before.

Partitions 99 extend between front and back support members 90 and 92 above and below dust bottom 98 separating the furniture piece into two compartments. The remaining component parts of the basic components are then assembled to complete the longer unitary furniture piece. That is, the tongues of the top support members 34S and 34L are inserted in the grooves 29 formed in the rear faces of the top frame members 22S and 22L, respectively, and the lateral top support blocks 42 are secured along the upper inner edge of side panels 12 whereby tops 18S and 18L which correspond in length to the lengths of the basic components employed to form the longer piece are secured in endwise juxtaposition to the foregoing assembly. The top rear support blocks 46S and 46L are suitably secured as by gluing or stapling to the associated side panels 12, back support member 92, and blocks 46, the edges of backs 14S and 14L engaging in the rabbets formed along the edges of the back support member 92, the rear edges of side panels 12 and the rear edges of support blocks 46.

It will be seen that this elongated furniture piece may be provided entirely with drawers or with the drawer/cabinet combination in either of the basic components forming such piece. For example, in FIG. 10, the smaller basic component is provided with the drawer/cabinet combination while the larger component has wholly drawers, the drawer/cabinet and wholly drawer combinations being provided the longer furniture piece in a manner similarly as provided individual furniture pieces and comprised of like parts.

It will be seen that other and various combinations of basic components may be provided employing essentially a similar construction. For example, a unitary elongated furniture piece is shown in FIG. 15 wherein the component parts comprising two of the smaller basic components (with the exception of a side panel and frame member of each component are assembled to form a longer piece, such as a chest, 48 inches in length, the intermediate support members 90 and 92 being located medially of the piece. In FIG. 16, component parts comprising two of the larger base components (with the exception of a side panel and frame member of each component) are assembled to form a unitary elongated furniture piece 64 inches in length, the front and back support members 90 and 92 also being located medially of the furniture piece. In FIG. 17, there is shown a base of a hutch 72 inches in length and comprised of the component parts of three of the smaller basic components (with the exception of the side panels and side frame members of the intermediate component and a side panel and frame member of each of the end components). The end components are joined on the intermediate component by a pair of vertical support members 90 joining the inner ends of the top and bottom frame members 22S and 24S of the intermediate unit. In this instance, a pair of back vertical supports 92 are provided separating the three backs 14S and the three lower back support members 16S.

In FIG. 17, the hutch top, generally indicated at 100, comprises three basic top units, unitarily assembled similarly as the base components with each top component having a length corresponding to the length of the base component illustrated in FIG. 4. It will be understood that basic top components are provided in lengths corresponding to the lengths of each base component, i.e., both basic components shown in FIGS. 4 and 5, for superposition on like length bases and that integral elongated tops in lengths corresponding to the lengths of the elongated base furniture pieces may be assembled from parts common to two or more of the basic top components.

Specifically, each top component comprises a front frame including side frame members 102 having decorator front faces similarly as side frame members 20, and an upper frame member 104 joined at opposite ends to the upper ends of side frame member 102 preferably by glued lap butt joints. The rear faces of the frame members are rabbeted as at 106 and the side frame rabbets receive the tongues 108 formed along the forward edges of top side panels 110 securing the latter to the frame as by glue. A top rectangular cover piece 112 over-

lies the upper ends of side panels 110 and is secured thereto by side support blocks 114, preferably screwed to side panels 110 and the underface end portions of top piece 112. A top piece support member 116 having a tongue formed along its forward edge is screwed to piece 112 with the tongue engaging in the upper frame rabbet whereby cover piece 112 is secured to upper frame member 104.

The inner faces of side panels 110 are grooved as at 118 to receive tongues 120 formed along the lateral edges of a plurality of shelves 121 spaced vertically along the height of top 100. Doors 65 in this instance identical to the doors 65S employed with the smaller base component may be pivotally mounted to side frame members 102 by means, not shown, whereby a cabinet in the top may be formed. A back 122 for each top component is provided and may be secured to side panels 110 by stapling and gluing the lateral edges thereof to the rear edge rabbeted portions 123 of side panels 110.

To form an elongated top corresponding in length to any one of the elongated base furniture pieces previously described thereby forming a hutch and the like, selected parts common to the individual top components are assembled as before omitting those common parts forming the juxtaposed sides of the top component. Accordingly, a rectangular front frame assembly is formed comprising elements of the frame parts forming the frames of the basic top components. In the illustrated form, the parts of three basic top components are combined to form a top 72 inches in length and a pair of upper frame members 104S are joined at their ends to the end rails 102 and at their opposite ends to a pair of horizontally spaced intermediate vertically extending top frame members 124. A third upper frame member 104S is secured at its opposite ends to the upper ends of vertical frame members 124 whereby an elongated open bottom frame is formed.

An intermediate side panel 126 comprising a pair of laminated panels is formed behind each front frame member 124 and is suitably secured to the rear face of intermediate members 124, the lateral faces of panels 126 and side panels 110 being grooved to receive the opposite ends of shelves 122. End top pieces 112 are suitably fastened to the associated side panels 110, to intermediate panels 126, and to top support members 116. A central top piece 112 is secured to the intermediate panels 126 and to the central top support member 116. End backs 122 are secured to the rear edges of side panels 110 and intermediate panels 126 with the intermediate back 122 being secured to the rear edges of panels 126. It will be understood that the foregoing is representative of the top construction, that two or more of like or different length top components may be joined such that the overall length of the elongated top equals the overall length of the elongated base furniture piece, and that, with this construction, the elongated tops are formed of parts common to the basic top components with the exception of members 124 and 126 which are common to all elongated top pieces.

Thus, it is seen that the objects of the invention are fully accomplished in that there is provided a novel furniture construction comprised of parts precut by mass production techniques to form a front frame assembly which affords basic rigidity to the furniture piece and to which the remaining component parts are readily and easily assembled thereby effecting economies in furniture manufacture heretofore unrealized. Additionally, basic furniture components having two different predetermined lengths can be formed from inventoried parts cut to two different sizes to provide relatively smaller length furniture pieces such as night tables, chests and the like. Moreover, the basic furniture components are provided in predetermined lengths of 24 and 32 inches such that elongated unitary furniture pieces, for example, dressers, large chests and the like, may be formed in the generally accepted lengths for such pieces, i.e., 48, 56, 64, and 72 inches, from parts common to the basic furniture components thereby economizing in the manufacture of such larger pieces by standardizing the parts and assembly thereof and reducing overall stock inventory to substantially the common parts. The

rigidized front frame construction is also employed in forming the elongated furniture pieces thus accruing the advantages of such construction to the elongated furniture pieces as well as to the individual basic pieces. To complete a furniture group or line, tops formed to like lengths as the basic components are assembled for superposition on such basic components. Unitary tops corresponding in length to the elongated base components are formed from parts common to the basic top components for superposition on like length base components to form hutches, china cabinets and the like whereby like advantages in top construction are obtained similarly as in the base component construction.

I claim:

1. Wooden furniture construction comprising first and second furniture components, the parts of each of said components including a front frame having vertically spaced substantially horizontally extending upper and lower frame members and a pair of horizontally spaced substantially vertically extending side frame members, at least one of said side frame members of each component being joined at opposite ends to a like end of the upper and lower frame members of the associated component, forming a pair of open sided generally rectangular frame sections, a pair of side panels for each of said components, at least one of each said pair of side panels being joined along a front edge portion thereof to said one side frame member of the associated frame section, opposite ends of the other side frame member of each of said component being securable to the opposite free ends of the upper and lower frame members of the associated frame section to form a pair of closed rectangular front frames, the other side panel of each component being securable along a front edge portion thereof to the other side of the associated frame section, a top for each component, each said tops being securable to the upper frame member and side panels of the associated component whereby a pair of individual furniture pieces may be formed from the parts comprising the first and second components, an intermediate part, the opposed free ends of the upper and lower frame members defining the open side of each frame section being securable to said intermediate part to form a closed elongated rectangular front frame, said tops being securable to the associated upper frame members of the elongated frame and to said one side panels whereby an elongated integral furniture piece may be formed from the parts comprising the first and second furniture components and said intermediate part.

2. A furniture construction according to claim 1 wherein the lengths of said first and second furniture components are equal.

3. A furniture construction according to claim 1 wherein the lengths of said first and second furniture components are unequal.

4. A furniture construction according to claim 1 wherein said first component has a length equal to a whole multiple of a predetermined length lying within a range of 6 to 10 inches, said second component having a length equal to the length of said first component plus a length lying within said range of predetermined lengths.

5. A furniture construction according to claim 1 wherein said first and second furniture components are about 24 and 32 inches in length.

6. A furniture construction according to claim 1 wherein said intermediate part comprises a vertically extending front frame member, the opposed free ends of the upper and lower frame members of each frame section being securable to respective upper and lower end portions of said intermediate frame member.

7. A furniture construction according to claim 1 wherein said intermediate part comprises portions of the parts forming a third furniture component, such parts including vertically spaced substantially horizontally extending upper and lower frame members and horizontally spaced substantially vertically extending side frame members, opposite end portions of said side frame members being securable to like end portions

of said upper and lower frame members to form a closed rectangular frame, a pair of side panels securable along their front edge portions to the respective side frame members and a top securable to the upper frame member and side panels of the third component whereby a third individual furniture piece may be formed from the parts comprising the third component; said intermediate pair including a pair of intermediate substantially vertically extending horizontally spaced front frame members, said part portions of the third component including the upper and lower frame members securable at opposite ends to respective upper and lower end portions of and between said intermediate frame members, the opposed free ends of the first and second upper and lower frame members being securable to the respective upper and lower end portions of said intermediate frame members, said third top being securable to the associated third upper frame member whereby an elongated integral furniture piece may be formed from the parts comprising first, second and third furniture components and said intermediate frame members.

8. A furniture construction according to claim 1 wherein said upper, lower and side frame members of each of said individual furniture pieces have rabbets formed along their rear face portions for forming a substantially continuous groove about the associated frame, said side panels of each piece having tenons formed along their front edges and engageable in said side frame rabbets, a top support member for each said furniture piece having a tenon formed along its front edge and engageable in the associated upper frame rabbet, means for securing said tops to corresponding support members, means for connecting said tops to the upper edge portions of the associated side panels, a bottom panel for each furniture piece having a tenon formed along its forward edge and engageable in the associated lower frame rabbet, a cross frame member for each said furniture piece and securable at opposite ends to the associated side frame members intermediate their respective ends, a drawer disposable in the upper portion of each said furniture component and supportable by said cross frame member, a back support member securable at opposite ends to the lower rear edge portions of said side panels of each said furniture piece, and a back for each furniture piece and securable to at least two of the associated back support member, side panels and top.

9. A furniture construction according to claim 1 wherein said upper, lower and side frame members of said elongated furniture piece have rabbets formed along their rear face portions, each of said one side panels having a tenon formed along its front edge and engageable in the associated one side frame member, a top support member for each frame section having a tenon formed along its front edge and engageable in the associated upper frame rabbet, means for securing said tops to corresponding support members in end-to-end relation to form an elongated top for said elongated furniture piece, means for connecting said tops to the upper edge portions of the associated one side panels, a bottom panel for each component having a tenon formed along its forward edge and engageable in the associated lower frame rabbet, a cross frame member for each component securable at opposite ends to the associated side frame member and said intermediate part, and a drawer disposable in the upper portion of each furniture component and supported by the associated cross frame member, said intermediate part including at least one rear frame part, a back support member for each component securable at opposite ends to the associated side panel and said rear frame part, a back for each component and securable to at least two of the associated back support member, side panel, top and rear frame part.

10. A furniture construction according to claim 1 wherein the furniture components comprise base furniture components, first and second top furniture components having lengths equal to the lengths of the corresponding first and second base furniture components, the parts of each of said components including a front frame having a pair of horizontally spaced substantially vertically extending side rails for

forming front exposed portions of the top component and a transversely extending top frame member having at least one end thereof fastened to the upper end portion of one of said rails, a pair of side panels for each of said tops, at least one of each pair of side panels being joined along a front edge portion thereof to said one rail member of the associated top component, the upper end portion of the other of said rails being securable to the opposite end of said top frame member of the associated top component, the other of said side panels of each top component being securable along a front edge portion thereof to the other of said side rails of the associated top component, a top cover piece for each of said tops being securable to the top frame member and side panels of the associated component whereby a pair of tops may be formed for superposition on length base furniture pieces from the parts comprising the first and second top components, an intermediate part, the opposite ends of the transverse top frame member of each top component being securable to said intermediate part adjacent its upper end to form a unitary front frame, said top cover pieces being securable to the top frame members and to said one side panels whereby an elongated integral furniture top is formed from the parts comprising the first and second top furniture components and said intermediate part for superposition on the like length integral base furniture piece.

11. A furniture construction according to claim 8 wherein said first component has a length equal to a whole multiple of a predetermined length lying within a range of 6 to 10 inches, said second component having a length equal to the length of said first component plus a length lying within said range of predetermined lengths.

12. A furniture construction according to claim 11 wherein said first and second furniture components are about 24 and 32 inches in length.

13. A furniture construction according to claim 9 wherein said first component has a length equal to a whole multiple of a predetermined length lying within a range of 6 to 10 inches, said second component having a length equal to the length of said first component plus a length lying within said range of predetermined lengths.

14. A furniture construction according to claim 13 wherein said first and second furniture components are about 24 and 32 inches in length.

15. A furniture construction according to claim 1 wherein said elongated integral furniture press is formed from parts comprising the first and second furniture components and said intermediate part exclusive of said other side frame members and at least one of the other side panels of said first and second components.

16. A furniture construction comprising a plurality of discrete parts for forming a plurality each of first and second furniture pieces, each of said first furniture pieces having a length equal to a whole multiple of a predetermined length lying within a range of 6 to 10 inches, each of said second furniture pieces having a length equal to the length of a first furniture piece plus a length lying within said range of predetermined lengths, at least a portion of the parts for forming at least two of said pieces forming a unitary elongated furniture piece, the latter having a length substantially equal to the length of said two pieces, each of said first and second furniture pieces having a front frame including vertically spaced substantially horizontally extending upper and lower frame members and a laterally spaced substantially vertically extending side frame member, means joining like end portions of said upper and lower frame members of each piece to the opposite end portions of its associated side frame member to form a pair of open sided frames, an intermediate frame member, means joining the other ends of said upper and lower frame members to opposite ends of said intermediate frame members respectively to form a substantially rigid elongated closed frame, side panels and a top formation and means securing said side panels and top formation to said elongated frame; said side panels, said upper and lower frame members and said side

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frame members comprising the parts for forming said first and second furniture pieces or said elongated unitary furniture piece.
17. A furniture construction according to claim 16 including cooperative securing means carried by said side panels and

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said side frame members for directly joining said side panels and said side frame members and means adjacent the rear face of said top frame members securing said top formation to said top frame members.

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,550,981 Dated December 29, 1970

Inventor(s) Robert Cohen

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

In Column 2, line 8, "and" should read --the--. Column 2, line 11, "and" should read --the--. Column 2, line 18, cancel "the". Column 2, line 23, before "top" insert --a--. Column line 22, "to" first occurrence should read --in--. Column 3, line 73, cancel "to" first occurrence. Column 5, line 58, "aide" should read --side--. Column 7, line 50, "openside" should read --opensided--. Column 8, line 4, "than" should read --then--. Column 9, line 58, "from" should read --form. Column 10, line 29, "end" should read --and--. Column 10, line 33, after "side" insert --frame member--. Column 11, line 62 (Claim 9), "supported" should read --supportable--.

Signed and sealed this 26th day of October 1971.

(SEAL)
Attest:

EDWARD M. FLETCHER, JR.
Attesting Officer

ROBERT GOTTSCHALK
Acting Commissioner of Patent