Dec. 8, 1953 R. A. LITTLE 2,661,993

SECTIONAL FURNITURE

Filed Oct. 6, 1948 2 Sheets-Sheet 1

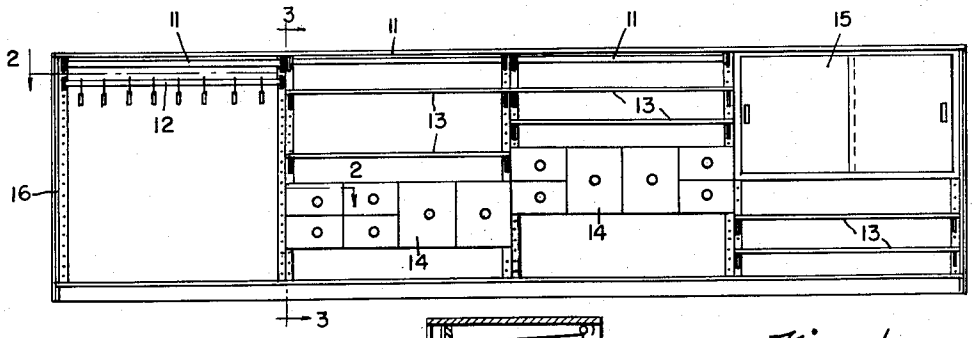


Fig. 1

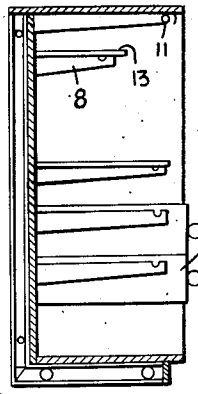


Fig. 3

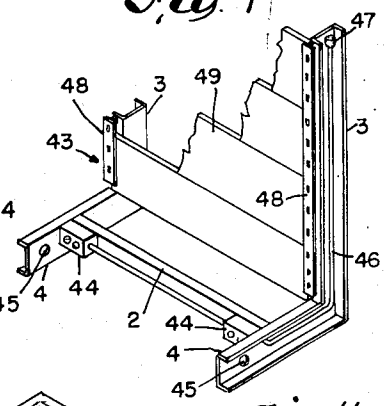


Fig. 11

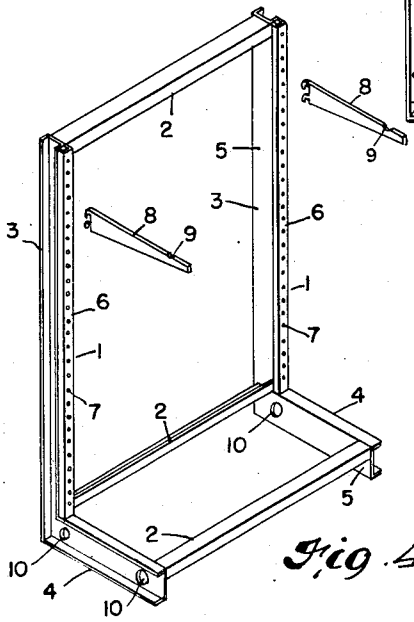


Fig. 4

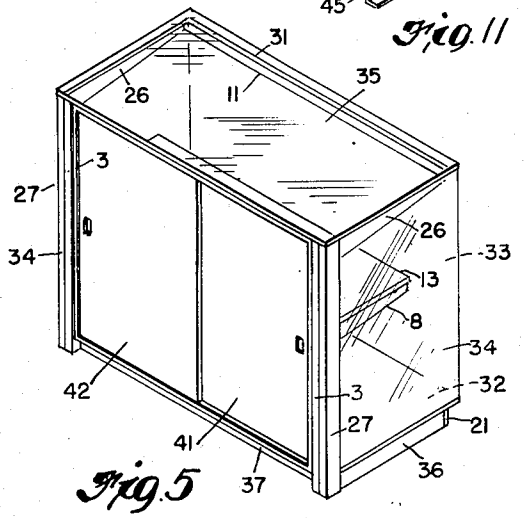


Fig. 5

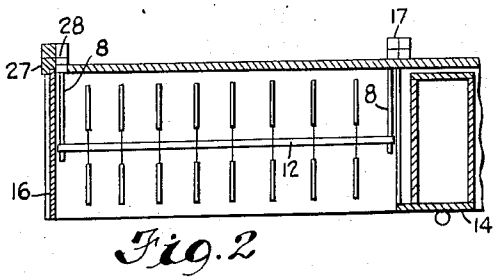


Fig. 2

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SECTIONAL FURNITURE

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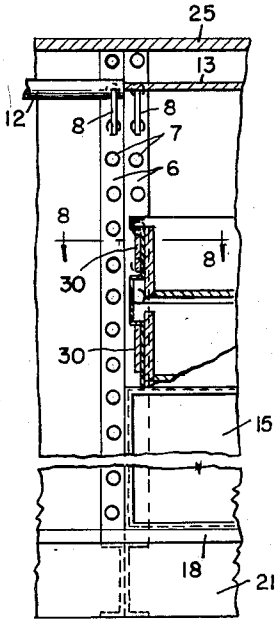


Fig. 7

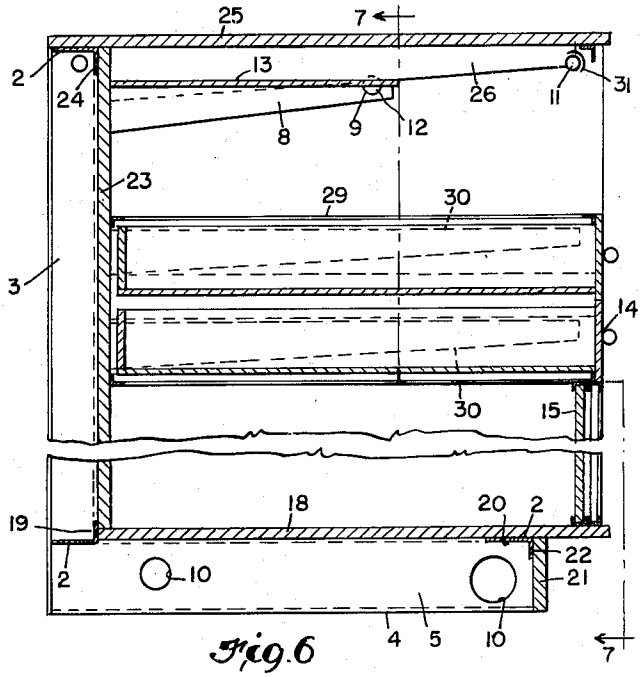


Fig. 6

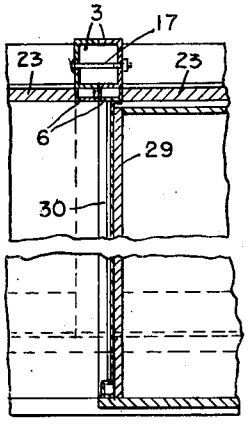


Fig. 8

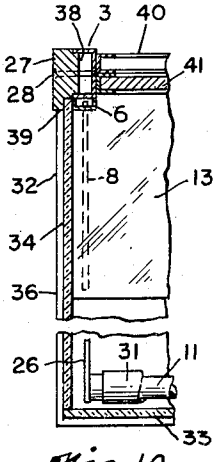


Fig. 10

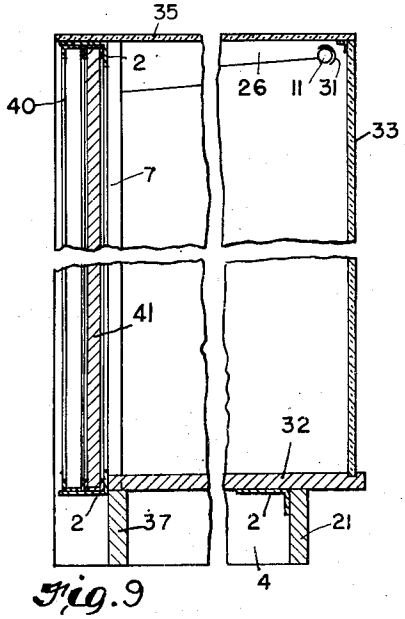


Fig. 9

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Patented Dec. 8, 1953 2,661,993

UNITED STATES PATENT OFFICE

2,661,993

SECTIONAL FURNITURE

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Application October 6, 1948, Serial No. 53,091

4 Claims. (Cl. 312—107)

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The present invention, while relating generally as indicated to furniture and the method of making the same, is more especially concerned with a novel form of frame fixture and its manner of use as the basic unit about which an article of furniture is constructed. Typical examples of articles of furniture utilizing one or more of such frame fixtures are exemplified by the term "store fixture" which includes showcases, counters, back fixtures and various other cabinets having drawers, bins, shelves, compartments, hang rods and the like therein for the storage and display of merchandise. Such frame fixtures are, in addition, suitable for use in the construction of storage facilities for goods in warehouses, stock rooms, tool rooms, etc.

One of the disadvantages of currently used furniture of this character is its immobility and inflexibility to accommodate variation or alteration as occasioned by expansion or diversion of the business with which it is used. At the present time, most such furniture is so constructed that complete replacement or rebuilding thereof at great expense and delay is required in order to provide for a greater amount of one kind of space and a lesser amount of another kind of space.

Accordingly, one of the principal objects of this invention is to provide furniture which is so constructed that it may be quickly and inexpensively modified, added to or subtracted from to meet changing demands in the amount of space required.

Another object of this invention is to provide a frame fixture and cooperating filler units of module such that it is possible to connect several frame fixtures together and insert therein any one of several different sizes and types of filler units as desired.

Still another object of this invention is to provide a frame fixture of such form that the various filler units are removably supported therein by cantilever brackets whereby to allow greater flexibility and design freedom and provide a visual continuity across two or more successive frame fixtures. In other words, the structure is such that there are no intermediate partitions between adjacent frame fixtures which would preclude the use of a filler unit extending continuously across a plurality of frame fixtures.

Other objects and advantages of the invention will become apparent as the following description proceeds.

To the accomplishment of the foregoing and related ends, said invention then comprises the

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features hereinafter fully described and particularly pointed out in the claims, the following description and the annexed drawing setting forth in detail certain illustrative embodiments of the invention, these being indicative, however, of but a few of the various ways in which the principle of the invention may be employed.

In the drawing:

Fig. 1 is a front elevation view of a typical article of furniture using several frame fixtures and having several different filler units supported therein;

Figs. 2 and 3 are horizontal and vertical cross section views taken substantially along the lines 2—2 and 3—3, Fig. 1, respectively,

Fig. 4 is a perspective view of a preferred form of frame fixture;

Fig. 5 is a perspective view of a glass showcase having sliding doors in the rear thereof;

Fig. 6 is a vertical cross section view of a unit similar to that of Fig. 1 but on an enlarged scale;

Fig. 7 is a fragmentary vertical cross section view taken substantially along the line 7—7, Fig. 6;

Fig. 8 is a horizontal cross section view taken substantially along the line 8—8, Fig. 7;

Fig. 9 is a vertical cross section view of the showcase illustrated in Fig. 5, taken along a plane substantially parallel to the ends thereof;

Fig. 10 is a fragmentary horizontal cross section view of one end portion of the showcase illustrated in Figs. 5 and 9; and

Fig. 11 is a fragmentary perspective view of another form of frame fixture.

Referring now to the drawings and first more particularly to Fig. 4, the frame fixture in its preferred form comprises a pair of L-shaped members 1 secured in spaced and parallel relation by means of the angle iron braces 2, which have their opposite ends welded or otherwise secured to the L-shaped members 1. Each of said L-shaped members 1 comprises channel members 3 and 4 which are secured to one another in right angle relation, as shown, as by welding for example. The webs 5 of said members 1 preferably face one another, as shown.

Secured to the front flange of each vertical channel member 3 is a standard 6 having a series of openings 7 therethrough for receiving the hooked ends of the bracket members 8. Said bracket members are of various lengths and forms for supporting thereon any of the filler units to be described. The bracket members 8 in Fig. 4 are adapted to support thereon filler units consisting either of a shelf or a hang rod,

there being formed a groove 9 on each bracket for receiving such hang rod. Longer brackets are, of course, required for supporting wider shelves and some of the other filler units, such as drawers, bins, sliding door units, electric light fixtures, etc.

The horizontal channel members 4 are each formed with chases 10 through the webs 5 thereof, whereby each frame fixture may be prewired at the factory and so equipped with connecting couplings, not shown, that when several frame fixtures are connected to one another electric circuits therethrough are automatically established.

In Figs. 1, 2 and 3 there is shown one form of back fixture which comprises four frame fixtures secured to one another and having supported thereon by suitable brackets, various filler units, viz., fluorescent light tubes 11 with the wiring therefor, coming up through the vertical channel members 3 and forwardly along the brackets, a hang rod 12, shelves 13, drawers 14, and sliding doors 15, all of which are supported by brackets projecting forwardly from the standards 6 in a manner either previously described or to be described.

For convenience, the width of each frame fixture is 4'0'' and the height thereof from the top of the floor which is supported on the horizontal channel members 4 to the upper ends of the vertical channel members 3 is a multiple of 7''. With such an arrangement, the finished outside width dimensions of each of the filler units is 4'0'' or a multiple thereof and the height of each filler unit is 7'' or a multiple thereof. By making the filler units readily removable, it can now be seen that they can be variously shifted to substitute one for another and thereby accommodate desired changes in the storage facilities. Furthermore, either or both of the end panels 16 may be removed at will and additional frame fixtures added or one or more frame fixtures removed. Thus, it is apparent that great flexibility is provided whereby the storage facilities may be readily altered, added to or subtracted from. For convenience in moving the frame fixtures and the filler units supported thereby, the horizontal channel members 4 may be provided with caster rebates, not shown.

For a clearer understanding of the structure illustrated in Figs. 1, 2 and 3, reference will now be made to Figs. 6, 7 and 8. In constructing a desired article of furniture, as many frame fixtures as required are connected to one another, as by means of bolts 17 or the like through the adjacent vertical channel members 3. A floor 18, if required, of width equal to the width of one frame fixture or coextensive with the width of several adjacent frame fixtures is mounted on the horizontal channel members 4, the flanges 19 and 20 of the two lower cross braces 2 and the upper flanges of the channel members 4 serving as convenient supporting means through which nails, screws or the like may pass should it be desired to securely mount the floor 18 in place. Floor 18, as illustrated in Fig. 6, preferably overhangs the forward ends of the channel members 4. The floor 18 will, of course, be formed with notches to clear the standards 6.

Below the floor 18 and in front of the channel members 4 is a base 21 which may be conveniently secured to the flanges 22 of the cross brace 2.

The back panels 23 are each preferably fitted between the standards 6 and the lower edge thereof may rest on the floor 18, as shown, or may, if desired, extend therebelow to the floor of the building. The flange 24 of the upper cross brace 2 and the flange 19 of the lower cross brace 2 provides a convenient means for attaching the back panel to the frame fixture.

The end panels 16, as illustrated in Fig. 2, are mounted adjacent the standards 6 at each end of the assembly and may be secured to the ends of the floor 18. The top panel 25 is supported by the vertical channel members 3 and the cross brace 2 thereacross and by the upper ends of the panels 16. In the case of furniture comprising two or more frame fixtures the intermediate portions of the top panel 25 are supported by brackets 26 which extend forwardly from the upper ends of the standards 6. To provide an ornate appearance and to hold the end panel 16 in place a vertical strip 27, see Fig. 2, is secured to the vertical channel member 3 by suitable bolts 28 or the like. The detailed structure of such strip 27 is set forth in the description relating to Fig. 10.

The structure thus far described essentially comprises an open front cabinet without any intermediate obstructions between the opposite ends including as the framework thereof several frame fixtures with floor, end, rear, and top panels mounted thereon.

The brackets 26 for supporting the top panel 25 are provided at the forward ends thereof with a socket fixture for receiving a fluorescent light tube 11, the wiring for lighting said tube running rearwardly along the brackets 26 and thence downwardly along the vertical channel members 3 to the wiring chases 10. Surrounding a portion of such tube 11 is a shield or reflector 31. In Fig. 1 several of such lights 11 are provided and, if desired, suitable dust covers may be supported by the forward ends of the brackets 26.

As previously mentioned, the brackets projecting forwardly from the standard 6 may be adjusted vertically for supporting thereon any one of several filler units, such filler units being of width equal to one or more frame fixtures and of height in the case of drawer sub-frames, for example, equal to or a multiple of the height modulus, which in this case has been indicated as being 7''.

Filler units such as the hang rods 12 and the shelves 13 simply rest on the brackets 8 which project forwardly from the standards 6. As shown in Fig. 6, the brackets 8 are so made that either a shelf 13 or a hang rod 12 may be selectively supported thereon.

In the case of filler units such as the drawers 14, the drawers themselves will be slidably mounted in a separate sub-frame 29 having grooves formed in the opposite ends thereof for slidably receiving the brackets 30 which project forwardly from the standards 6. With such construction, the filler unit, including the drawers slidable therein, may be readily removed and a different filler unit inserted in its place. The brackets 30 are adjustable vertically along the standard 6 to accommodate various filler units of different heights. Filler units including bins or trays therein will be similarly constructed whereby the entire filler unit may be removed at will.

When sliding doors 15 are located, as shown in Fig. 1 they are likewise supported by brackets 30. Such sliding doors 15 may be mounted in a box-like sub-frame structure and divided into bins or tray compartments or have suitable shelfing therein.

Referring now to Figs. 5, 9 and 10, there is

shown therein a typical glass showcase in which one frame fixture is used as the basic framework. In this case, the upper surface of the floor 32 is rabbeted to receive the lower edges of the front and end pieces 33 and 34. The vertical edges of the pieces 33 and 34 are joined by suitable trim, molding or connecting fixtures such as are commonly used for such purpose. Over the upper ends of the vertical channel members 3 is a glass plate 35 suitably secured to the other glass plates 33 and 34. As in the case of the previously described units a lamp 11 and shield 31 are supported by the brackets 26 which extend forwardly from the standards 6. Also projecting forwardly from the standards 6 are the brackets 8 on which a glass shelf 13, for example, is adapted to be supported.

Along the front, sides and back of the showcase ar the base strips 21, 36 and 37, respectively, the latter of which extends between the webs of the horizontal channel members 4.

The rear corners of the showcase are formed by strips 27, as clearly shown in Fig. 10, which are each provided with a reduced extension 38 fitting into the space between the flanges of the channel member 3 and a flange 39 overlying the outside of the rear portion of the end piece 34 to hold the same in place against the side of the standard 6. The strips 27 are held in place as by the bolts 28.

Mounted between the webs of the vertical channel members 3 and the upper and lower cross braces 2 is a frame 40 which has formed therein a pair of tracks for the sliding door panels 41 and 42.

While the showcase illustrated in Figs. 5, 9 and 10 is shown as comprising a single frame fixture, the same may readily be expanded by simply removing the strip 27, end piece 34 and base 36 from one end thereof and connecting a second frame fixture thereto.

In Fig. 11 is illustrated a pre-wired fixture 43 in which the cross-brace 2 across the horizontal channel members 4 has electrical outlet boxes 44 secured thereto, said members 4 being provided with holes 45 for jumpers (not shown) from one frame fixture to the next. Extending from one of the boxes 44 rearwardly along one of the horizontal channel members 4 and upwardly along the corresponding vertical channel member 3 is an electrical conduit 46 provided with a receptacle 47 at its upper end for enabling convenient plugging in of the previously described lamp 11 or other device.

A further feature of the frame fixture illustrated in Fig. 11 is the provision of standards 48 on the members 3 which form grooves with the latter for slidably receiving boards or panels 49. Said panels 49 may be of any desired form, for example either in one piece or in several pieces of tongue and groove, spline, or like construction. In any event, panels 49 of appropriate color and design may be readily inserted thereby dispensing with laborious redecoration of the walls of the rooms in instances where the fixtures cannot accommodate such removable panels or redecoration of the panels in instances where the panels constitute irremovable rear walls of the fixtures.

The above-described structures are to be regarded as merely typical, it being understood that they may be variously modified as far as trim is concerned to appeal to individual tastes with regard to the aesthetic features thereof. The principal features of the structures illustrated are that with a single form of L-shaped frame fixture and several different filler units, it is possible to erect many different combinations which may be readily modified as previously indicated. Although the brackets herein disclosed include hooks thereon for adjustable connection thereof to the standards it will be apparent that other means of so connecting the brackets may be employed.

Other modes of applying the principle of the invention may be employed, change being made as regards the details described, provided the features stated in any of the following claims or the equivalent of such be employed.

I therefore particularly point out and distinctly claim as my invention:

1. In an article of furniture, the combination of a series of endwise abutting L-shaped frame fixtures detachably connected to one another, said frame fixtures as thus connected together constituting the basic unit about which an article of furniture may be constructed, each of said frame fixtures comprising a pair of horizontally and vertically extending members with cross braces therebetween holding the same in parallel spaced relation, vertically adjustable and removable brackets disposed above said horizontal members and projecting horizontally from said vertical members, filler units removably supported at their opposite ends by said brackets, each of said filler units being of a width substantially equal to the width of one or more of said frame fixtures whereby said filler units and brackets may be shifted to various positions and L-shaped frame fixtures may be added or subtracted to change the amount of space for filler units or the nature of said filler units.

2. An L-shaped frame fixture for furniture of the character described, comprising a pair of L-shaped members of channel shaped cross section opening in opposite directions so that, when two or more of said frame fixtures are attached together in endwise abutting relation, closed L-shaped conduits are defined therebetween, cross braces extending between said members holding the same in spaced apart parallel relation, a perforated standard on one flange of one of the legs of each of said members, and two of said cross braces being of angle cross section with the flanges thereof disposed flush with the ends and one of the flanges of said members.

3. In an article of furniture, the combination of a series of endwise abutting L-shaped frame fixtures detachably connected to one another, said frame fixtures as thus connected together constituting the basic unit about which an article of furniture may be constructed, each of said frame fixtures comprising a pair of horizontally and vertically extending members with cross braces therebetween holding the same in parallel spaced relation, vertically adjustable and removable brackets disposed above said horizontal members and projecting horizontally from said vertical members, filler units removably supported at their opposite ends by said brackets, each of said filler units being of a width substantially equal to the width of one or more of said frame fixtures whereby said filler units and brackets may be shifted to various positions and L-shaped frame fixtures may be added or subtracted to change the amount of space for filler units or the nature of said filler units, a top panel supported by the upper ends of said series of frame fixtures, end panels secured adjacent the outside of the horizontal and vertical members of those frame fixtures which are disposed at the ends of the series thereof, and means se-

curing said end panels as aforesaid whereby said top panel is additionally supported by the top edges of said end panels.

4. In an article of furniture, the combination of a series of endwise abutting L-shaped frame fixtures detachably connected to one another, said frame fixtures as thus connected together constituting the basic unit about which an article of furniture may be constructed, each of said frame fixtures comprising a pair of horizontally and vertically extending members with cross braces therebetween holding the same in parallel spaced relation, vertically adjustable and removable brackets disposed above said horizontal members and projecting horizontally from said vertical members, filler units removably supported at their opposite ends by said brackets, each of said filler units being of a width substantially equal to the width of one or more of said frame fixtures whereby said filler units and brackets may be shifted to various positions and L-shaped frame fixtures may be added or subtracted to change the amount of space for filler units or the nature of said filler units, a top panel supported by the upper ends of said series of frame fixtures, end panels secured adjacent the outside of the horizontal and vertical members of those frame fixtures which are disposed at the ends of the series thereof, means securing said end panels as aforesaid whereby said top panel

is additionally supported by the top edges of said end panels, a floor supported by said horizontal members, said floor being formed with grooves extending forwardly from said vertical members and another groove connecting the forward ends of such first-named grooves, said end panels having their lower edges disposed in such first-named grooves respectively, a front panel having its lower edge disposed in said another groove, means for securing the side edges of said front panel and the front edges of said end panels to one another and to said fixture, said vertical members and two of said cross braces defining a rear opening of rectangular form, and a door frame fitted into such rear opening.

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