June 10, 1958 R. L. CROWTHER 2,838,355

KNOCKDOWN STORE FURNITURE

Filed March 9, 1954 4 Sheets-Sheet 1

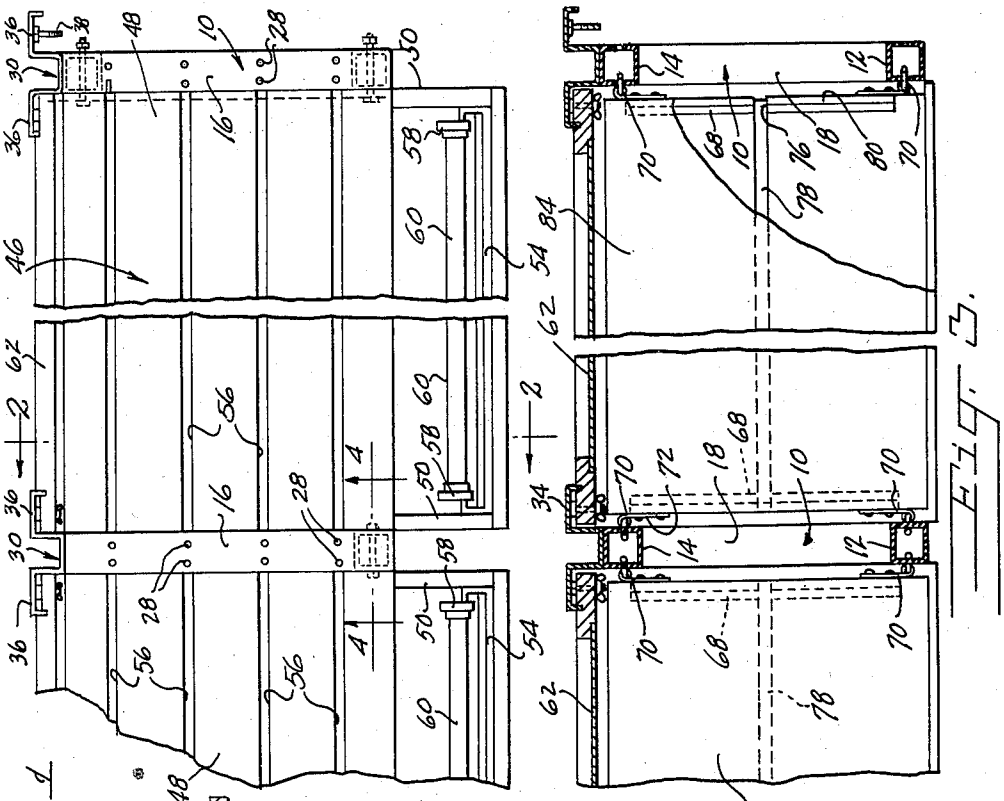


FIG. 1.

FIG. 3.

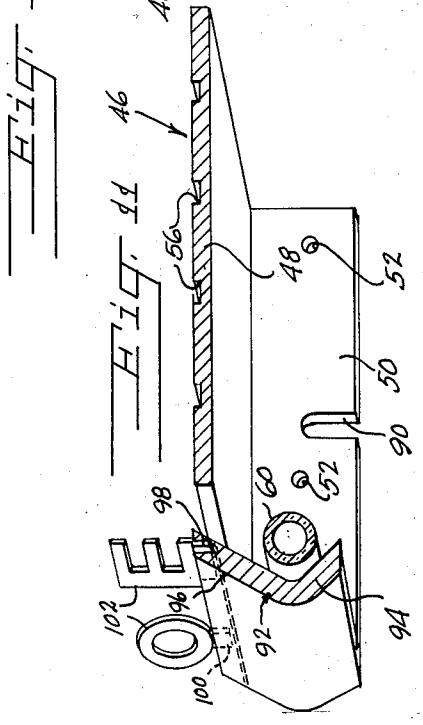


FIG. 11.

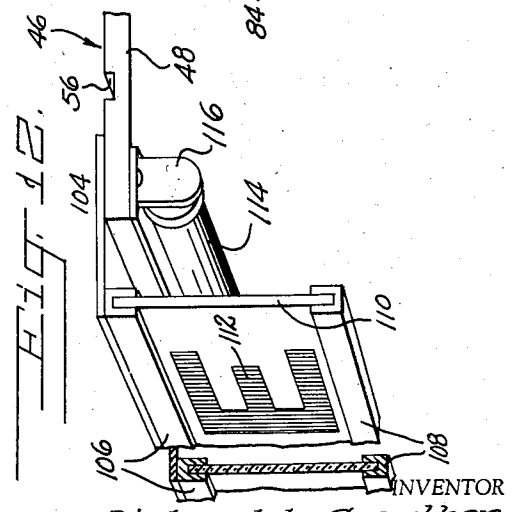


FIG. 12.

INVENTOR
Richard L. Crowther

BY
McMorrow, Berman + Davidson
ATTORNEYS

June 10, 1958 R. L. CROWTHER 2,838,355

KNOCKDOWN STORE FURNITURE

Filed March 9, 1954 4 Sheets-Sheet 2

Fig. 2

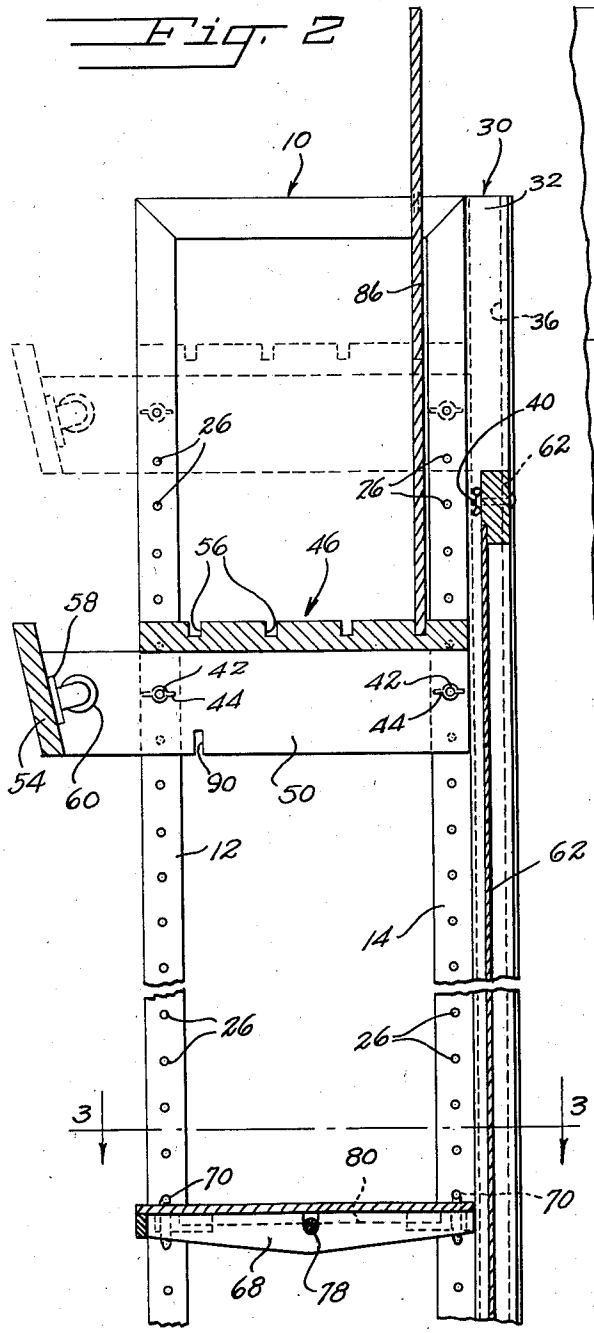
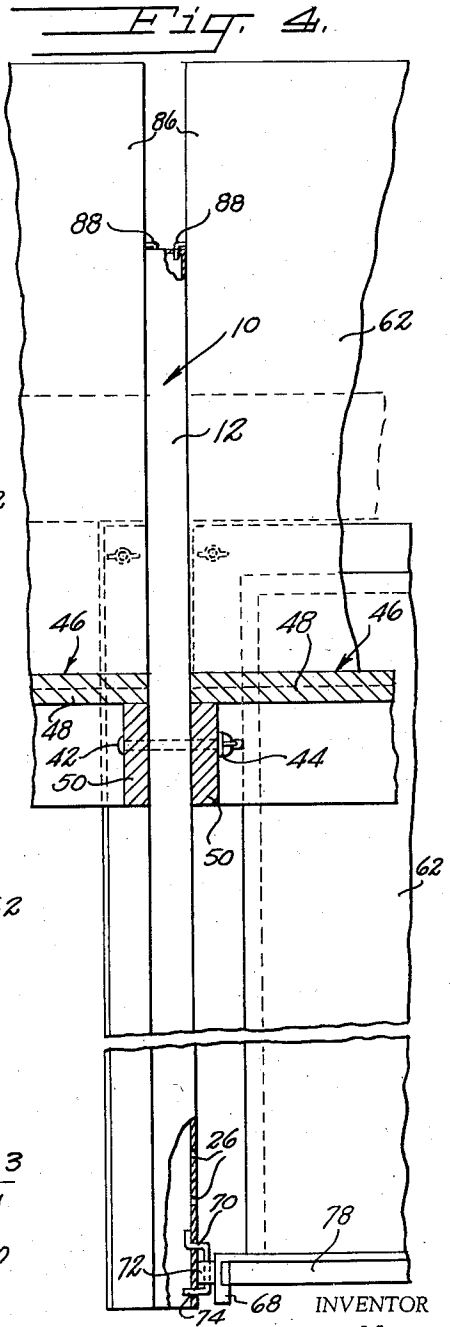


Fig. 4.



INVENTOR
Richard L. Crowther,

BY
McMorrow, Berman + Davidson
ATTORNEYS

June 10, 1958 R. L. CROWTHER 2,838,355

KNOCKDOWN STORE FURNITURE

Filed March 9, 1954 4 Sheets-Sheet 3

Fig. 9.

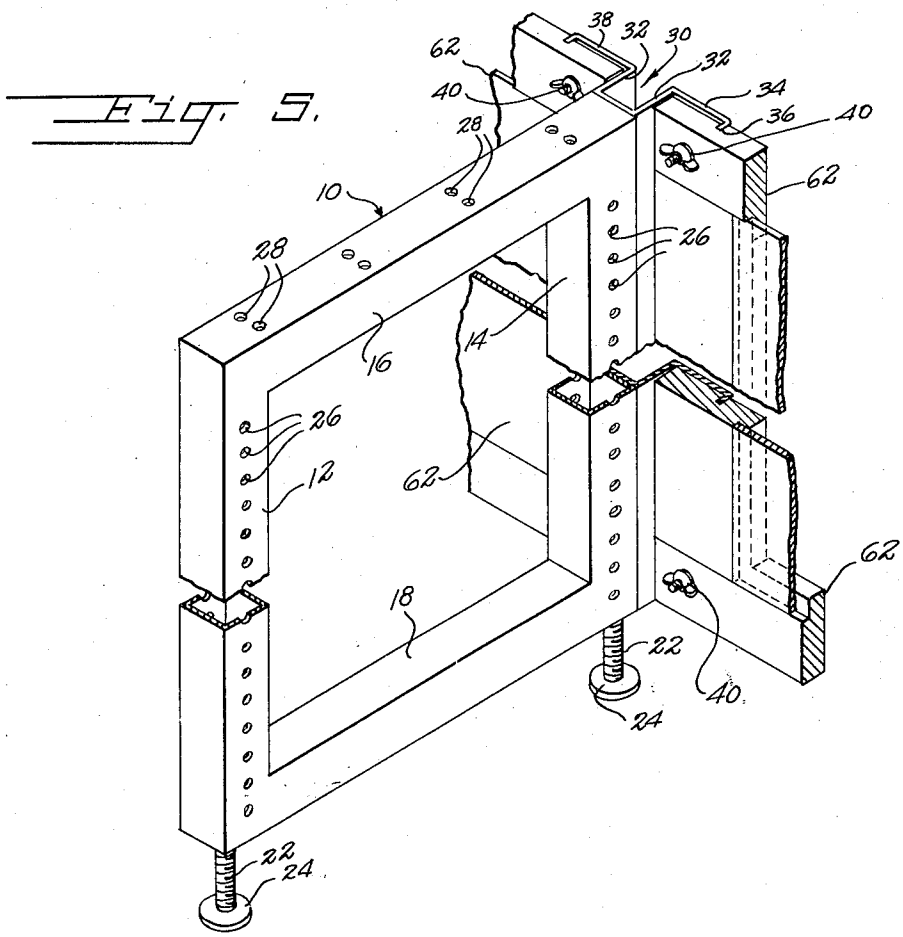
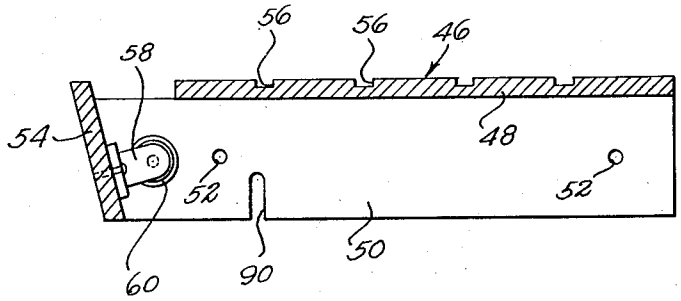


Fig. 10.



INVENTOR.
Richard L. Crowther.

BY

McMorrow, Berman & Davidson
ATTORNEYS

June 10, 1958 R. L. CROWTHER 2,838,355

KNOCKDOWN STORE FURNITURE

Filed March 9, 1954 4 Sheets-Sheet 4

Fig. 6.

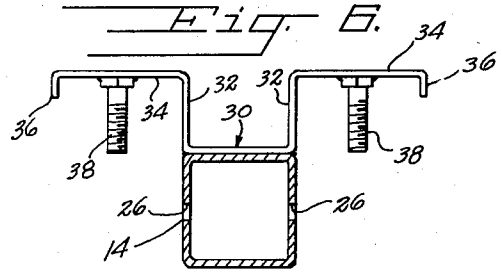


Fig. 9.

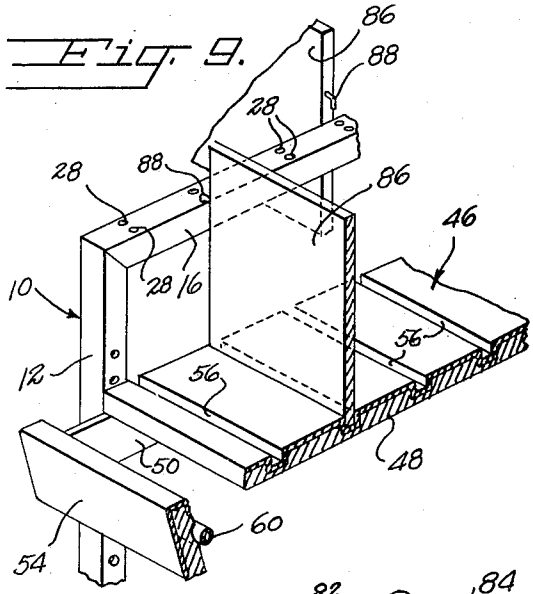


Fig. 13.

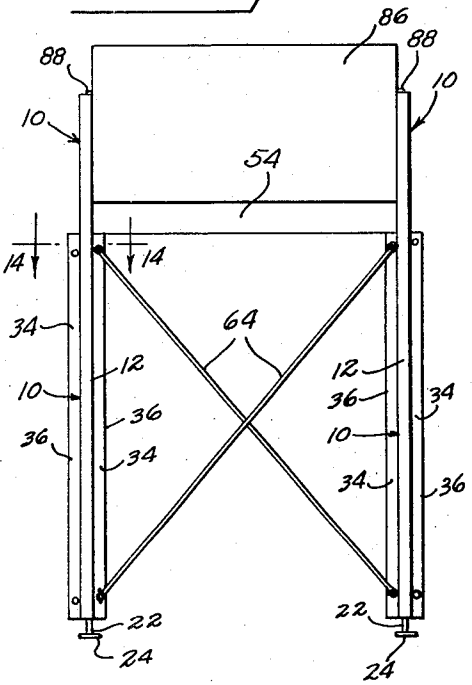


Fig. 8.

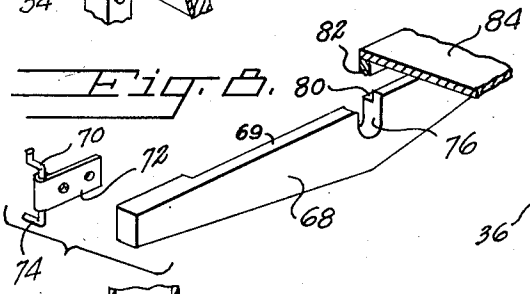


Fig. 7.

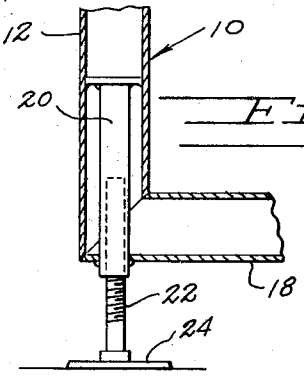
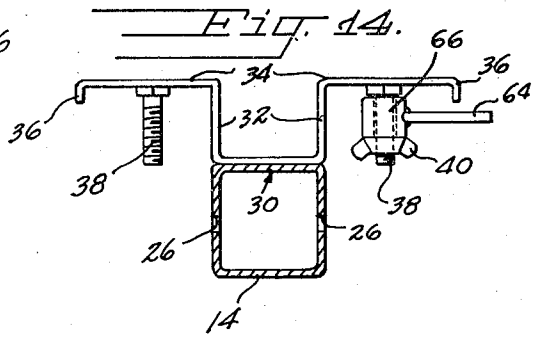


Fig. 14.



INVENTOR
Richard L. Crowther

BY
McMorrow, Berman + Davidson
ATTORNEYS

United States Patent Office 2,838,355 Patented June 10, 1958

2,838,355

KNOCKDOWN STORE FURNITURE

Richard L. Crowther, Denver, Colo.

Application March 9, 1954, Serial No. 414,952

1 Claim. (Cl. 312—257)

This invention relates to knockdown store furniture, and has for its primary object to provide furniture having components which are capable of being rapidly erected to provide bins, shelves, and showcases at selected heights.

Another object of the invention is to provide in such furniture, illuminated bin structure and silhouette symbols carried adjacent the top and the front thereof.

A further object is to provide in such furniture, adjustable support of a shelf above the bin which can be disposed in a selected position between the front and the back of the structure.

A still further object is to provide furniture of the character indicated above having levelling means erection and dismantling of the fixture while at the same time enabling it to be leveled irrespective of slight irregularities in the floor upon which it is erected.

Other important objects and advantageous features of the invention will be apparent from the following description and the accompanying drawings wherein, for purposes of illustration only, specific forms of the invention are set forth in detail.

In the drawings:

Figure 1 is a fragmentary top plan view of an article of store furniture embodying the features of this invention;

Figure 2 is a vertical transverse sectional view taken substantially on the line 2—2 of Figure 1;

Figure 3 is a fragmentary horizontal sectional view taken substantially on the line 3—3 of Figure 2;

Figure 4 is a fragmentary enlarged vertical longitudinal sectional view taken substantially on the line 4—4 of Figure 2;

Figure 5 is a fragmentary and contracted perspective view of one of the frames;

Figure 6 is an enlarged horizontal sectional view through the rear component of one of the frames;

Figure 7 is an enlarged fragmentary sectional view taken through a lower corner of a frame, showing levelling means therefor;

Figure 8 is an exploded perspective view of one of the shelf brackets, showing a portion of an associated shelf in section, and means by which the bracket is connected to an adjacent frame unit;

Figure 9 is a fragmentary perspective view of an upper display plate and an associated partition panel;

Figure 10 is an enlarged transverse vertical sectional view through the display plate and its associated cornice plate;

Figure 11 is a view similar to Figure 10, showing a modified form of top and cornice unit;

Figure 12 is a view similar to Figure 11, showing a further modified form thereof;

Figure 13 is a front view of a modified form of furniture article having crossed braces instead of a back pane; and,

Figure 14 is a fragmentary enlarged horizontal sectional view taken substantially on the line 14—14 of Figure 13.

Referring to the drawings in detail, the device illustrated in Figures 1 to 12 comprises two or more open vertical rectangular frames 10, each comprising spaced vertical front and rear members 12 and 14, respectively, which are joined at their upper ends by a horizontal top member 16 and at their lower ends by a horizontal bottom member 18. In the preferred form of the invention the vertical members 12 and 14 are of hollow or tubular form and are rectangular in cross section. Secured within the lower ends of the vertical members 12 and 14 are a vertically extending screw-threaded sleeve 20 into whose lower ends are threaded stems 22 carrying feet 24 arranged to rest upon a surface, such as a floor. Obviously, by turning the stems 22 the frame 10 can be levelled. Formed in the sidewalls of the members 12 and 14 are vertical rows of spaced holes 26, and opening through the top of the top bar 16 are longitudinally spaced pairs of holes 28. Fixed on the rear side of the rear member 14 is a vertical, rearwardly facing channel 30 having spaced parallel side flanges 32. On the rear edges of the flanges 32 are lateral flanges 34 which terminate at their laterally outward free edges in short, forwardly directed retaining flanges 86. Fixed to and extending forwardly from the lateral flanges 34 are studs 38 on which are threaded wing nuts 40.

Supported for vertical adjustment on and between two adjacent frames 10 by bolts 42 and wing nuts 44, with the bolts extending through holes 26 in the front and rear frame members 12 and 14 is a horizontal display panel 46 which comprises a rectangular plate 48 having a width equal to the depth of the frames and a length equal to the distance between two adjacent frames 10. Cleats 50 have spaced holes 52 receiving the bolts 42 whereby the cleats are secured to the frames and support the plate 48 on the frames. The cleats 50 have front end portions which project forwardly beyond the forward edge of the plate 48 and the frames. Secured to and extending between the front ends of the cleats 50 is a cornice plate 54, which, in the preferred form of the invention, inclines forwardly from the horizontal. Formed in the upper side of the plate 48 and extending longitudinally thereof are transversely spaced longitudinal grooves 56, the purpose of which is hereinafter described. Mounted on the rear side of the cornice plate 54 adjacent opposite ends thereof are oppositely disposed sockets 58 of a conventional tubular fluorescent lamp 60 by which the contents of a compartment or space between the frames may be illuminated.

Detachably secured to the front sides of the lateral flanges 34 of the frames 10 by the studs 38 and their wing nuts 40 are back panels 62, which enclose the rear of the space between the two adjacent frames 10 and stiffen these frames and prevent rocking thereof. In certain instances, in place of the back panel 62, crossed diagonal brace bars 64 carrying adjacent their opposite ends eyes 66, and the eyes 66 are engaged on the studs 38 and are clamped against the lateral flanges 34 by means of the wing nuts 40, as will be readily understood upon reference to Figure 14.

With the back panel 62 secured to and extending between a pair of frames 10 and the display panel 46 disposed at a selected height on the frames, a bin is defined between the frames below the panel 46 and in front of the back panel 62 in which merchandise may be displayed. When merchandise such as clothing is to be suspended in the bin, above described, brackets 68 are secured at selected heights on the frames 10 by means of hooks 70 which are coupled to the brackets 68 by suitable straps 72, hooks 70 being engaged in selected holes of the rows of openings 26. Each hook 70 has a lower leg 74 which is adapted to enter an opening 26 immediately below the

opening through which the hook **70** is engaged. It will thus be seen that the brackets **68** are supported by the hooks **70** on the frames **10** so as to extend across the respective frame units. Formed in the center of the upper edge **69** of each bracket **68** substantially midway between opposite ends thereof is a notch **76** which receives a suspension bar **78** (Figures 3 and 4) upon which garment hangers can be suspended within the bin. Each bracket **68** is provided with a groove **80** in the side thereof adjacent the connecting strip **72** and in the upper edge **69** for the reception of a stop member **82** depending from a shelf **84** which is adapted to rest on a pair of brackets **68** and hold the shelf **84** in place.

A vertical longitudinal partition panel **86** of a length substantially equal to the plate **48** is provided on its end edges with longitudinally extending hooks **88** which are adapted to engage in the holes **28** in the top bar **16** of an adjacent frame so as to hold the panel **86** in position in a selected one of the grooves **56**.

The partition panel **86** is illuminated by the fluorescent tube **60**. The cleats **50** are provided with notches **90** which open through their bottom edges adjacent the front members **12** of the frames to accommodate electrical conductors leading to the lamp **60**.

In the modified form of the invention illustrated in Figure 11, the cleats **50**, instead of the front cornice plate **54**, are provided with a front cornice member **92** which is supported on the front ends of the cleats **50** and includes a lower downwardly and rearwardly declining portion **94** on which are mounted the lamp tube supporting sockets **58** in which the fluorescent tube **60** is mounted. As illustrated, the lower portion **94** extends downwardly and rearwardly while the upper portion **96** extends upwardly and rearwardly and is provided in its upper edge with a longitudinal groove **98** for the reception of legs **100** on the lower ends of symbols **102**, which, as illustrated, project above the upper surface of the plate **48** so that when the upper panel **86** is illuminated by light passing upwardly and rearwardly from the tube **60**, the symbols **102** will appear as being silhouetted against an illuminated background.

In the further modification illustrated in Figure 12, the plate **48** of the panel **46** has secured thereupon a plate **104** which projects forwardly beyond the forward edge of the plate **48** and carries horizontally disposed vertically spaced channels **106** and **108** in which is removably supported a transparent panel **110** carrying on its surface symbols **112**. The lamp tube **114** is supported in sockets **116** secured to the underside of the plate **48**. When the lamp is illuminated, the symbols **112** appear silhouetted against the field of the panel **110**. Obviously, if so desired, the panel **110** may be dark or opaque if desired and the symbol **112** carried thereby may be transparent, according to the desires of the user.

While in the foregoing there have been shown and described preferred embodiments of this invention, it is to be understood that minor changes in the details of construction, combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

What is claimed is:

In knockdown store furniture, two laterally spaced vertical open frames having front and rear vertical members, vertically extending hook flanges on and projecting laterally inwardly from said rear vertical members, said hook flanges terminating in forwardly directed vertical flanges, said hook flanges having front and rear sides, a back panel extending between said rear frame members at the front sides of said hook flanges, said panel having a rear side and a front side, the rear side of the panel being provided with vertical grooves receiving the vertical flanges of the hook flanges, and bolts fixed in the hook flanges and projecting forwardly therefrom and traversing the back panel and securing the back panel in place.

References Cited in the file of this patent

UNITED STATES PATENTS

726,053	Harrison	Apr. 21, 1903
1,683,525	Burandt	Sept. 4, 1928
2,106,839	Gilbert	Feb. 1, 1938
2,306,385	Herter	Dec. 29, 1942
2,464,470	Vanderveld	Mar. 15, 1949
2,480,637	Dimling	Aug. 30, 1949
2,569,130	Katsetos	Sept. 25, 1951
2,583,931	Cummings	Jan. 29, 1952
2,626,198	Vanderveld	Jan. 30, 1953
2,631,913	Rosenberg	Mar. 17, 1953
2,710,241	Lieberman	June 7, 1955