July 27, 1937. J. V. FLOOD 2,087,904

DISPLAY CABINET

Filed Dec. 5, 1932 2 Sheets-Sheet 1

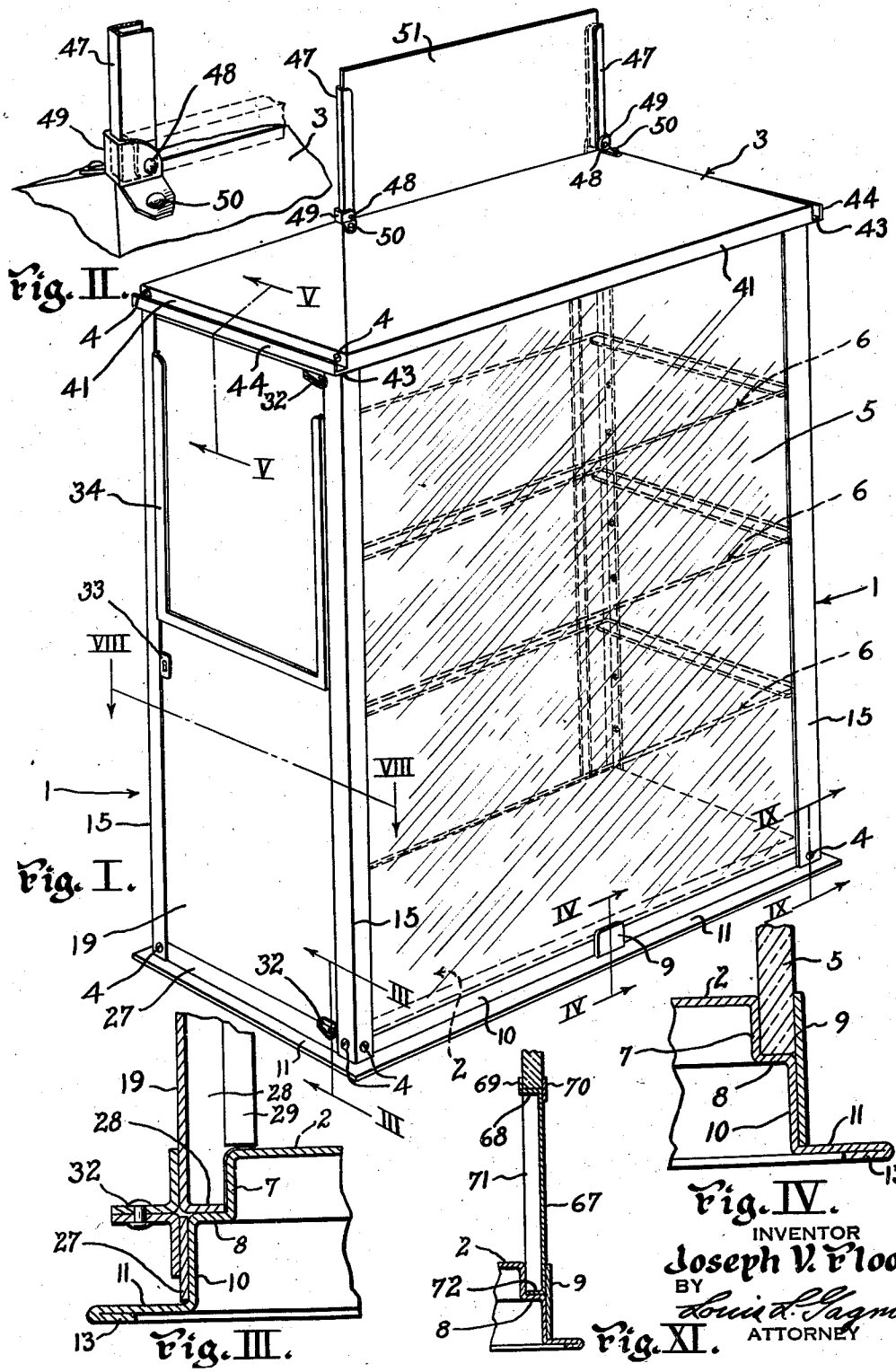


Fig. II.

Fig. I.

Fig. III.

Fig. IV.

Fig. XI.

INVENTOR

Joseph V. Flood

BY Louis A. Gagnon

ATTORNEY

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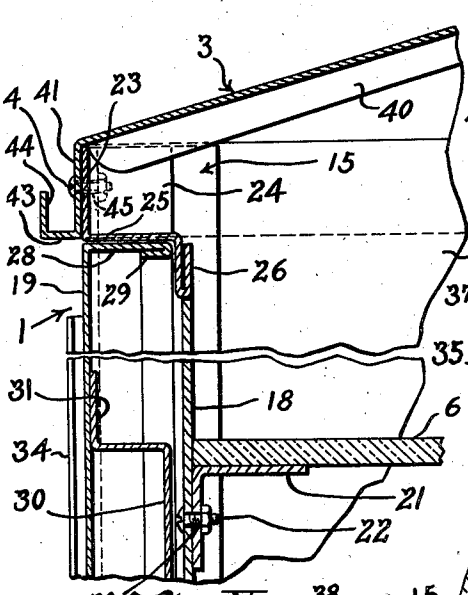


Fig. V.

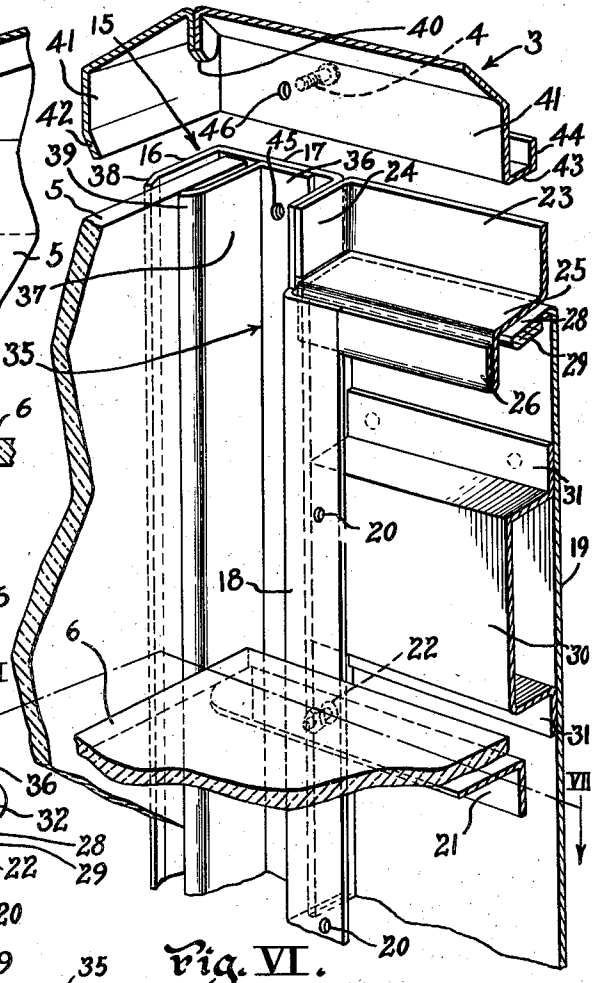


Fig. VI.

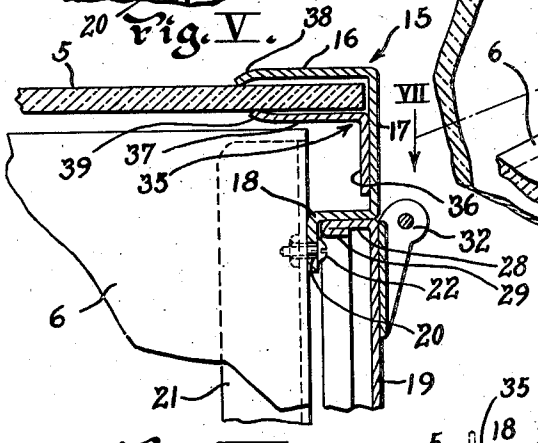


Fig. VII.

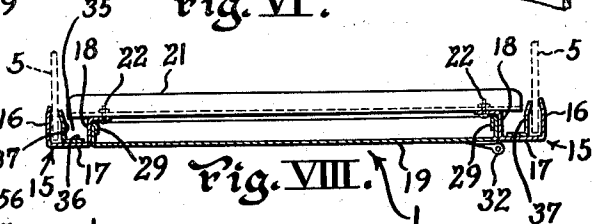


Fig. VIII.

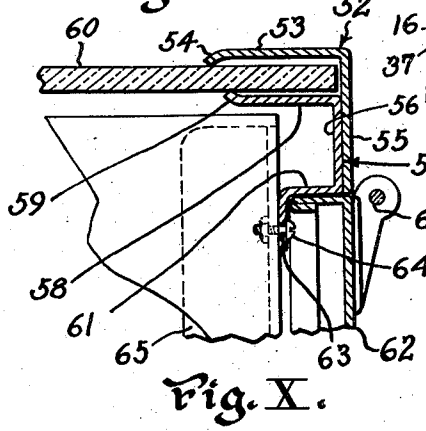


Fig. X.

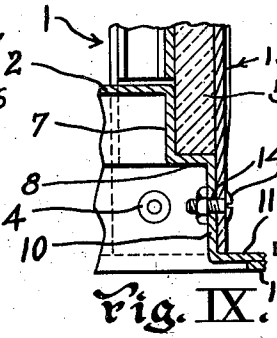


Fig. IX.

INVENTOR
Joseph V. Flood
BY
Louis L. Gagnon
ATTORNEY

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2,087,904

DISPLAY CABINET

Joseph V. Flood, Southbridge, Mass.

Application December 5, 1932, Serial No. 645,783

3 Claims. (Cl. 312—114)

This invention relates to improvements in display cabinets and has particular reference to improved means and method of making the same.

One of the principal objects of the invention is to provide an improved display cabinet having separable units which may be disunited and packed in compact relation with each other for ease in shipping and which may be quickly and easily assembled for use.

Another important object of the invention is to provide improved means and method of forming a cabinet having transparent walls, adjustable shelves and means for gaining access to the interior of the cabinet arranged in such a manner as to be weather proof and adapted particularly for use out of doors.

Another object is to provide improved means and method of forming a frame structure which is rigid and durable and which has unitary means forming a support for the side walls, doors and adjustable shelf holding means of the cabinet.

Another object is to provide an inexpensive cabinet in which commercial products may be displayed out of doors and be protected from weather conditions.

Another object is to provide a cabinet having separable units formed with interengaging means for uniting and sealing the cabinet against the entrance of moisture.

Another object is to provide novel means for gaining access to the interior of the cabinet and method of making same.

Another object is to provide unitary means for aiding in supporting the side walls, doors, and shelf holding means of the cabinet and having connecting zones for the top and bottom of said cabinet.

Another object is to provide a novel structure whereby the glass walls of the cabinet may be quickly and easily removed and replaced.

Another object is to provide a cabinet having novel means for supporting display cards or other advertising data.

Another object is to provide improved means and method of forming a removable top having means thereon for shielding the joints at the upper ends of the doors against the entrance of moisture.

Another object is to provide a novel base structure and method of making same.

Another object is to provide novel means of forming a display cabinet having a storage compartment therein and method of making the same.

Another object is to provide simple, inexpensive and efficacious means of accomplishing all of the objects and advantages of the invention.

Other objects and advantages of the invention will become apparent from the following description taken in connection with the accompanying drawings and it will be understood that many changes may be made in the details of construction, arrangement of parts and methods shown and described, without departing from the spirit of the invention as expressed in the accompanying claims. I, therefore, do not wish to be limited to the exact details of construction, arrangements of parts and methods shown and described, as the preferred forms only have been shown by way of illustration.

Referring to the drawings:

Fig. I is a perspective view of the device embodying the invention;

Fig. II is an enlarged fragmentary perspective view of the display card holding means on the top of the cabinet;

Fig. III is an enlarged fragmentary sectional view taken on line III—III of Fig. I, and looking in the direction indicated by the arrows;

Fig. IV is an enlarged fragmentary sectional view taken on line IV—IV of Fig. I and looking in the direction indicated by the arrows;

Fig. V is an enlarged fragmentary sectional view taken on line V—V of Fig. I and looking in the direction indicated by the arrows;

Fig. VI is an enlarged fragmentary perspective view partially in section showing a portion of the interior of the cabinet and the structural details of said cabinet;

Fig. VII is a sectional view taken on line VII—VII of Fig. VI;

Fig. VIII is a slightly enlarged sectional view taken on line VIII—VIII of Fig. I and looking in the direction indicated by the arrows;

Fig. IX is an enlarged fragmentary sectional view taken on line IX—IX of Fig. I and looking in the direction indicated by the arrows;

Fig. X is a view similar to Fig. VII showing a modification; and

Fig. XI is a fragmentary sectional view of a further modification.

To meet the requirements of the modern business trend automobile refueling stations have found it necessary to keep on hand a relatively large stock of automobile accessories and various other supplies, such as cleaning and polishing compounds, oils, top dressings, retouch paints, etc. It has been found from past experience that although necessary to carry this stock the sales

thereof are somewhat limited. One of the causes of this condition has been found in the past to be due to the fact that only a few individuals entering the yard of a refueling station ever get out of their cars or enter the station building in which the goods are displayed. To overcome this condition and to place the goods on display where they may be seen by all entering the station yard, applicant has devised a display cabinet which may be placed in the vicinity of the fuel pumps and in which the goods may be displayed and be protected from weather conditions. To accommodate for lack of storage room in some instances, particularly in small stations, applicant has further provided novel means whereby a storage compartment may be formed in the cabinet. It has been found from experience that a display cabinet of this type greatly increases the sales of articles such as referred to above, and that it opens a new and essential field to small dealers. The cabinet is designed to be simple, inexpensive and durable in structure, and adapted particularly for use in displaying articles of commerce out of doors. It is apparent that it may be adapted to many different uses either interiorly or exteriorly, and all of which are included in this invention.

Referring more particularly to the drawings wherein like characters of reference designate like parts throughout the several views, the device embodying the invention comprises broadly, four separate units, two of which constitute the ends 1 of the cabinet, another the bottom 2, and the other the top 3. These units are constructed with interrelated parts which may be quickly and easily united by bolts or other means 4 to support the separate side wall members 5 and a plurality of adjustable shelves 6 of glass, metal or other suitable material internally of the cabinet. Each unit is designed to carry a predetermined amount of the detailed elements of the cabinet and is adapted to position the said elements in desired relation with each other when the units are assembled for use. The purpose of forming the cabinet in separate units is to provide means whereby the cabinet may be quickly and easily disunited and the parts thereof placed in compacted relation with each other for ease in shipping. It also permits permanently welding or otherwise sealing the several joints of the detailed parts of the units during the manufacture thereof to provide a rigid and durable structure suitable for general use out of doors.

The bottom 2 as shown in Figs. III, IV and IX, is preferably formed of sheet material which is pressed or otherwise formed with depending peripheral lip portions 7 which turn outwardly to angular step portions 8 on which the lower edge of the side walls 5 are placed and held by plates or other means 9. The portion 8 is bent downwardly at 10 and outwardly at 11 to an angular flange portion having a hem 13 adjacent its edge turned inwardly to reinforce said edge. The portions 10 adjacent the corners of the base are provided with openings 14 through which the connecting bolts 4 may be placed, as shown in Fig. IX, to secure the end units 1 to the base 2. The plates 9 are welded or otherwise secured to the downwardly extending portions 10.

The end units 1, as shown in Figs. I, III and V to IX inclusive, comprise a main frame having its side pieces formed of strips of sheet material which are bent to longitudinal right angle corner members 15 having portions 16 which are adapted to overlie the vertical edges of the side walls 5 to aid in supporting the side walls 5 on the steps 8. The said members 15 also have portions 17 which extend at right angles to the portions 16 and are bent inwardly to form recessed right angle frame members 18 in which the end door members 19 are fitted. The recessed right angle members 18 form an abutment for the sides of the doors 19 and are provided with a plurality of openings 20, as shown in Figs. V to VIII inclusive, by means of which the shelf holding means 21 may be adjustably secured to the said members 18 by bolts or other means 22. The adjustable shelf holding means 21 are adapted to support the shelves 6 internally of the cabinet.

Attention is directed to the fact that the door members 19 are adapted to overlie the said openings 20 and shelf holding means 21 when in closed position and that the corner members 15 provide unitary means for supporting the side walls 5, doors 19 and adjustable shelf holding means 21.

The said corner members 15 are provided internally, as shown in Figs. VI to VIII inclusive, with angle brace members 35 having portions 36 which are secured to the portions 17 by welding or other means. The said members 35 are also provided with portions 37 extending at an angle to the portions 36 and lying in spaced substantially parallel relation with the portions 16 to form a support for the internal vertical edges of the side walls 5. The said portions 16 and 37 are provided with edges 38 and 39 which are deflected towards each other to form relatively resilient means for engaging the said side walls 5 on the opposite sides thereof and at an appreciable distance inwardly from their peripheral vertical edges. They provide means for supporting the said peripheral edges in spaced relation with the portions 16 and 37 and form relatively resilient shock and strain absorbing means at said edges. The said deflected portions also permit ease in removing and replacing the side walls 5 and maintain a snug fit with said walls to aid in preventing the entrance of moisture at said connections.

A cross piece 23 having an inturned right angle lip 24 at its opposite ends as shown in Figs. V and VI, is secured to the corner members 15 adjacent the tops thereof by welding or other means. The said cross piece 23 is adapted to aid in holding the members 15 in predetermined spaced relation and is bent inwardly at 25 along one of its longitudinal edges an amount substantially equal to the thickness of the door 19 and thence turns downwardly at a right angle to a hemmed edge 26 which forms an abutment for the upper end of the door. To further insure the supporting of the corner members 15 in proper spaced relation, a brace member 27 is secured adjacent its ends to the bottoms of said corner members by welding or other means, as shown in Fig. I.

The doors 19 are preferably formed of sheet material which is bent on all sides to form right angle peripheral lips 28 which are turned inwardly at 29 to form a reinforcing hem. The said peripheral lips 28 are secured to each other at the corners by welding or other means to provide a rigid and durable structure. To aid in increasing said rigidity a plurality of reinforcing channel members 30 having outwardly extending angular lip portions 31 are secured transversely of the door 19 by spot welding or other means as shown in Figs. V and VI. The said doors 19 are hinged at 32 to the end units 1 so that they may be swung outwardly and are provided with a lock 33 to secure them in closed

position. A frame 34 formed of strips of angled sheet material is secured to the outer surface of the doors 19 to provide means for supporting display cards or other advertising data. The steps 8 at the ends of the base 2 are adapted to form the abutments for the lower ends of the doors. Attention is directed to the fact that the abutments 18, 26 and 8 as set forth above form means for aiding in sealing the peripheral edges of the doors against the entrance of water.

The shelf holding means 21 are preferably formed of strips of sheet material which are bent or otherwise formed to right angle members which may be placed at varying heights in the cabinet by selecting the retaining holes 20 of the proper height.

One of the unique features of the end units 1 is that none of the separate elements, including the corner members 15, shelf holding means, doors, etc., are disturbed when the cabinet is disunited for shipping.

The top 3 is formed of separate pieces of sheet material which are cut to shape and bent at their engaging edges to form abutting portions 40 which are welded or otherwise secured and sealed together as shown in Figs. V and VI. The said pieces are provided with depending peripheral side lip portions 41 which fit over the upper ends of the side walls 5 and end units 1. The lip portions 41 along the sides of the top 3 are deflected inwardly at 42, as shown in Fig. VI, to provide relatively resilient snug fitting means for engaging the side walls 5 at an appreciable distance from the upper edges of said walls. These edges provide relatively resilient shock absorbing supporting means which aid in preventing the entrance of water at said connections. The lip portions 41 at the ends of the top 3 are bent outwardly at 43 and upwardly at 44 to form eave members which are adapted to overlie the tops of the doors to aid in preventing the entrance of water in the vicinity of said tops. The top 3 is removably held in position by bolts or other means 4 which are placed in the openings 45 in the members 17 and 36, and the openings 46 in the lip portions 41. The said openings 45 and 46 are adapted to assume an aligned relation with each other when the top 3 is in position of use.

To provide additional means for supporting display cards or other advertising data the top 3 is provided with U-shaped supports 47 which are hinged at 48 to brackets 49 secured to the top 3 by rivets or other means 50. The said supports 47 are hinged so that they may be folded in close relation with the top 3 for ease in shipping and are adapted to be held in an upright position by a plate 51 or by the advertising cards, etc., as desired. Although the top 3 is shown and described as being formed of separate pieces secured together, it is apparent that it may be formed of a single sheet of material pressed, bent, or otherwise shaped as desired.

Attention is also directed to the fact that each of the units 1, 2 or 3 and parts thereof, may be formed of separate pieces of material secured together or formed of pieces pressed, bent, cut, moulded, or otherwise shaped as desired.

To disunite the cabinet it is merely necessary to remove the top 3, lift out the side walls 5, remove the shelves 6, and detach the units 1 from the base 2. The separate units 1, 2, and 3 may then be placed in compact relation with each other for purpose of shipping and may be quickly and easily assembled for use.

Although applicant has described his door members as being at the ends of the cabinet it will be understood that they may be placed at the sides or only one door may be used if desired, either at one end or side, and that the transparent side walls 5 may be placed at the ends as well as at the sides of the cabinet, it being merely a question of forming the parts to proper dimensions.

Attention is also directed to the fact that any desired material may be used in forming any of the parts and that any suitable means may be used to secure the said parts together. If desired, the abutments 8, 18 and 26 of the doors, the supporting lips 16 and 37 for the side walls 5 and the shelves 8 at the bottom of said walls may be provided with a liner of rubber, cork, felt or other means to form water tight connections.

In Fig. X there is shown a slight modification wherein the corner members 52 are formed only with a portion 53 having a deflected edge 54 for engaging the side walls 60 and an angled portion 55 to which an inner angled support member 56 is secured by welding or other means along the engaging surfaces 57. The member 56 is formed with an angled portion 58 having a deflected edge 59 for engaging and supporting the side walls 60 internally thereof and a recessed right angled portion 61 forming a framing and abutment for the door 62. The portion 61 is provided with a plurality of openings 63 in which the shelf supporting bolts 64 may be placed to adjustably secure the shelf holding means 65 to said portion 61. The door 62 and hinge arrangement 66 in this instance is similar to that of the structure previously described.

In Fig. XI there is shown a further modification wherein instead of extending the side walls 5 or 60 downwardly to the steps 8, the said walls are terminated approximately at the location of the lower shelf 6. The walls in this instance are supported with their lower edges in approximate alignment with the lower shelf 6 by side members 67 formed of sheet material having their upper edges bent inwardly at a right angle an amount substantially equal to the thickness of the side walls 5 or 60 to form a shelf 68 on which the said walls are rested.

The shelf 68 is provided with an upwardly bent portion 69 which is adapted to form an internal backing member for the lower edges of the walls. The said walls 5 or 60 are supported outwardly by plates 70 secured to the exterior of the sheet material 67 by welding or other means. The sheet material is bent inwardly at an angle at its sides 71 and bottom 72 an amount substantially equal to the thickness of the walls 5 and is adapted to be removably placed between the outer and inner supporting portions 16 and 37, or 53 and 58, of the corner members 15 or 52, as the case may be. The lower angled end 72 of the sheet material 67 is adapted to rest on the step 8 of the base 2, and is held thereon by the plates 9 in a manner similar to that of the side walls 5 previously described, or by any suitable means.

The object of forming the lower part of the cabinet with the removable side sheets 67 is to provide means of forming a storage compartment in which surplus stock of the type on display in the cabinet may be placed. The lower shelf 6 in this instance may be made of sheet metal or other opaque material if desired. The shelves 6 and side walls 5 are preferably made of plate glass but may be made of any desirable material.

The cabinet may be illuminated interiorly by any suitable illuminating means, such as long tubular lamps built in the corners of the cabinet or by reflective means, and may be illuminated exteriorly by any type of illuminating means.

It is quite obvious that the cabinet may be supplied either with or without a storage compartment and that the said compartment may be quickly and easily formed by sliding the members 67 in the supporting portions 15 of the units 1. The side walls 5 in this instance are somewhat shorter and are placed above the members 67. In either arrangement none of the structural details of the main elements 1, 2 or 3 as previously described are changed. It is also apparent that the storage compartment may be formed above or below the display compartment as desired.

From the foregoing description it will be seen that applicant has provided simple, efficient and inexpensive means and methods of accomplishing all of the objects and advantages of the invention.

Having described my invention, I claim:

1. A display cabinet comprising separable major units, one of said units constituting the top of the cabinet, another the bottom, two others of relatively flat sheet material the sides, and two others the ends of said cabinet, said end units comprising opposed longitudinal edge frame structures each formed of superimposed angled members each of which is provided with adjacent inturned longitudinal edges substantially the entire length thereof forming channel portions for detachably receiving and aiding in supporting the peripheral edges of the relatively flat sides and having connecting zones adjacent their opposite ends for the attachment of the top and bottom units, one of said angled members having an angled longitudinal edge portion along its edge opposite its inturned longitudinal edge forming a reentrant frame for an end door, a door in said reentrant frame hinged along one side thereof so that it may be swung outwardly, said bottom unit having a peripheral outwardly extending flange lip below and substantially parallel with the plane of the bottom and having a peripheral step intermediate the lip and the surface level of said bottom for receiving one of the connecting zones of each end unit and said top unit having a peripheral depending lip fitting over the other connecting zones of each end unit and over the upper peripheral edges of the side units and means for separably uniting said units, the said peripheral steps along the sides of the cabinet each having an upwardly extending lug for positioning the lower ends of the side units on said steps.

2. A display cabinet comprising separable major units, one of said units constituting the top of the cabinet, another the bottom, two others of relatively flat plate glass the sides, and two others the ends of said cabinet, said end units comprising opposed longitudinal edge frame structures each formed of superimposed angled members each of which is provided with adjacent resilient longitudinal edges offset towards each other substantially the entire length thereof forming channel portions for detachably receiving and aiding in resiliently supporting the peripheral edges of the plate glass side units and having connecting zones adjacent their opposite ends for the attachment of the top and bottom units, said bottom unit having a peripheral outwardly extending flange lip below and substantially parallel with the plane of the bottom and having a peripheral step intermediate the lip and the surface level of said bottom for receiving one of the connecting zones of each end unit and said top unit having a peripheral depending lip fitting over the other connecting zones of each end unit and over the plate glass side units and means for separably uniting said units, the said peripheral steps along the sides of the cabinet having upwardly extending plates for aiding in positioning the lower ends of the side units on said steps.

3. A display cabinet comprising separable major units, one of said units constituting the top of the cabinet, another the bottom, two others of relatively flat sheet material, the sides, and two others the ends of said cabinet, said end units comprising opposed longitudinal edge frame structures each formed of superimposed angled members each having one of their respective sides spaced relative to each other to form channel portions for detachably receiving and aiding in supporting the peripheral edges of the relatively flat sides and having connecting zones adjacent their opposite ends for the attachment of the top and bottom units, one of said angled members having an angled longitudinal edge portion along its edge opposite the channel portion forming a reentrant frame for an end door, a door in said reentrant frame hinged along one side thereof so that it may be swung outwardly, said bottom unit having a peripheral step lying below the plane of the bottom for receiving one of the connecting zones of each end unit and said top unit having a peripheral depending lip fitting the other connecting zone of each end unit and the upper peripheral edges of the side units and means for separably uniting said units, the said peripheral step along the sides of the cabinet having means for supporting the lower ends of the side units on said step.

JOSEPH V. FLOOD.