Sept. 27, 1927. 1,643,738

W. H. BROOKS

DISPLAY AND STORAGE CABINET

Filed March 17, 1926 3 Sheets-Sheet 1

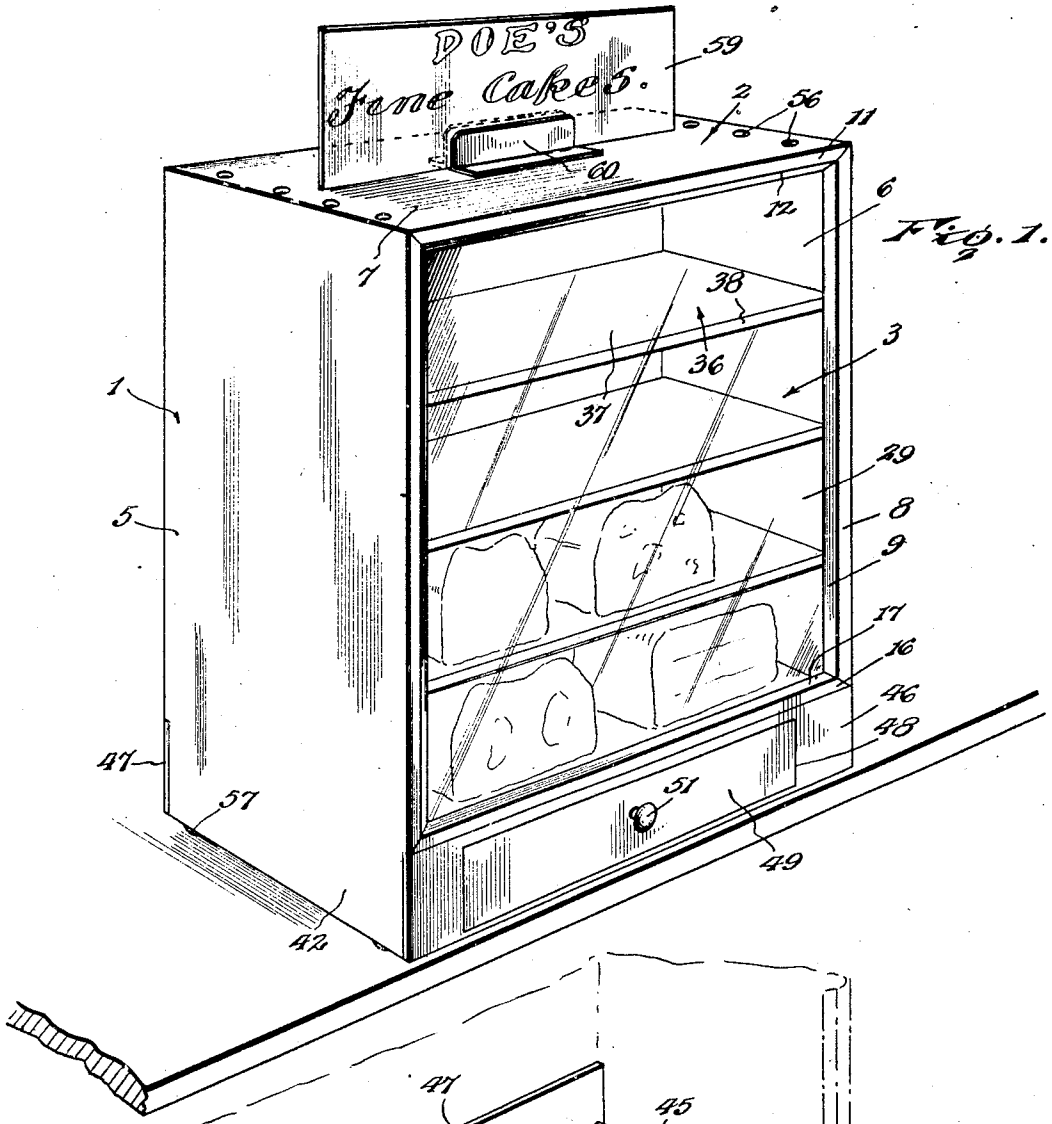


Fig. 1.

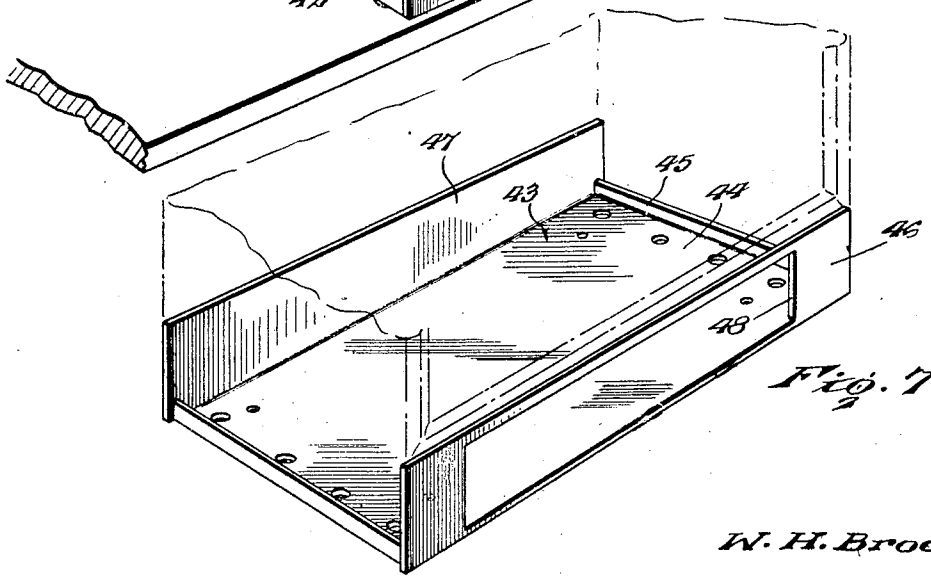


Fig. 7.

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Fig. 2.

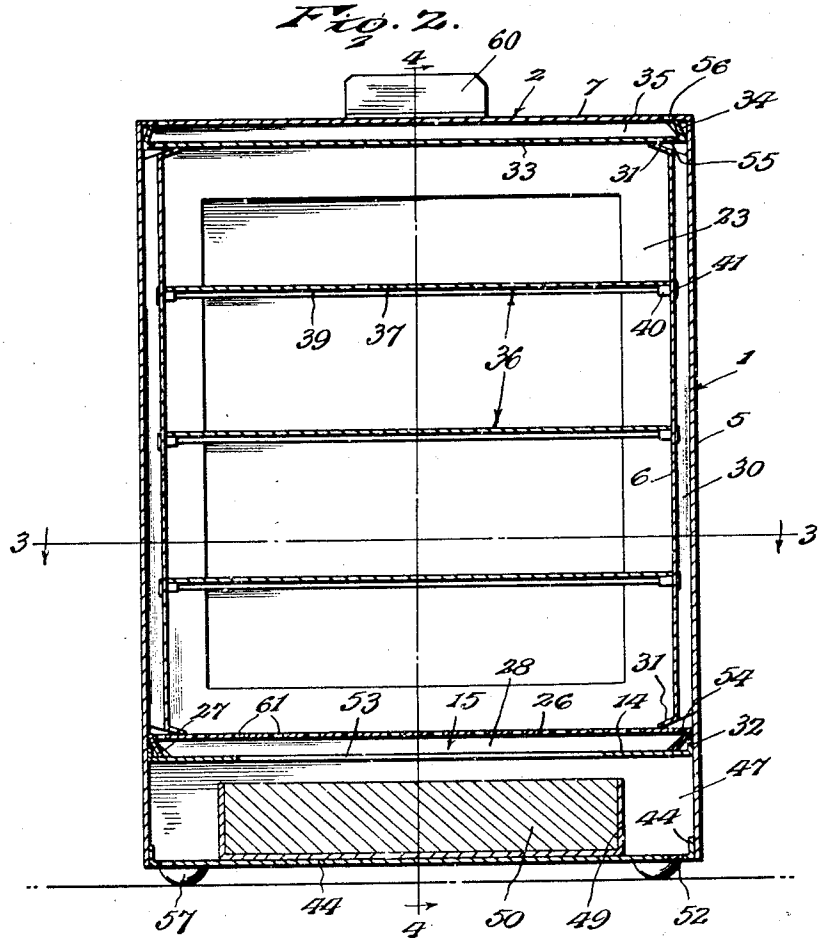
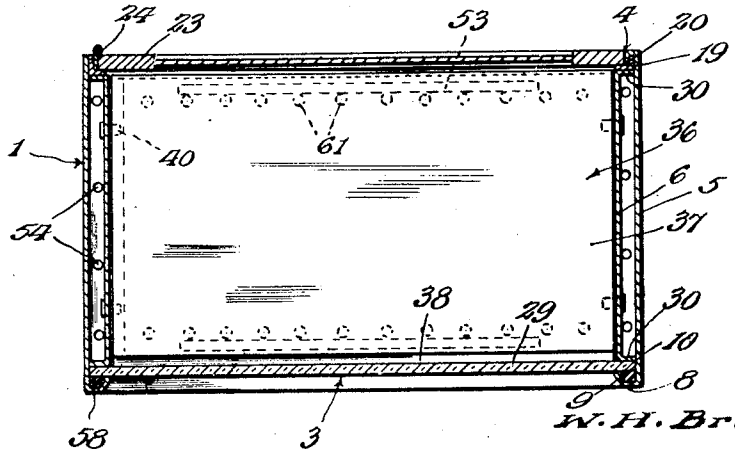


Fig. 3.



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Fig. 4.

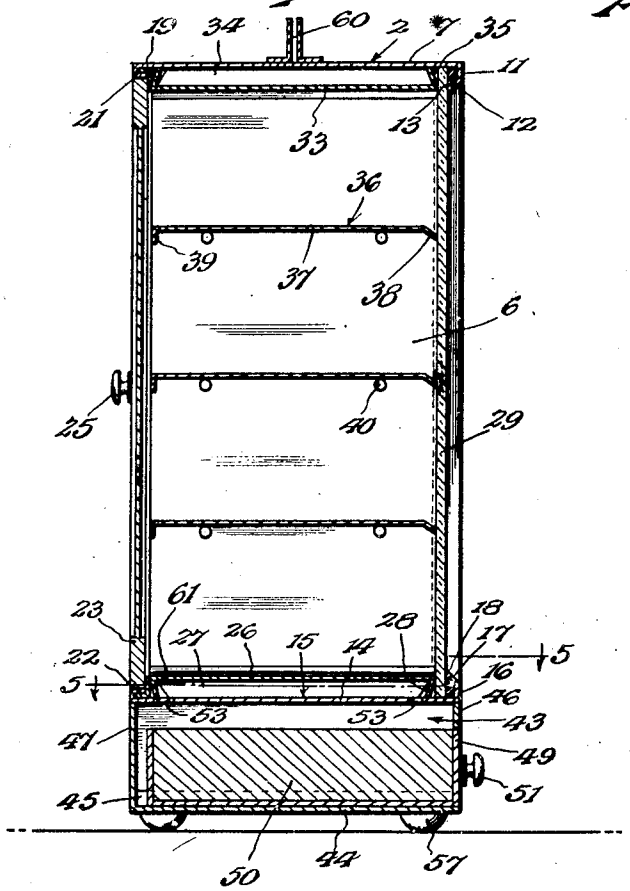


Fig. 6.

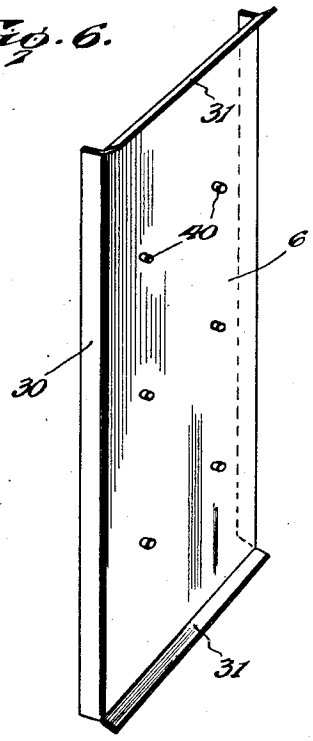
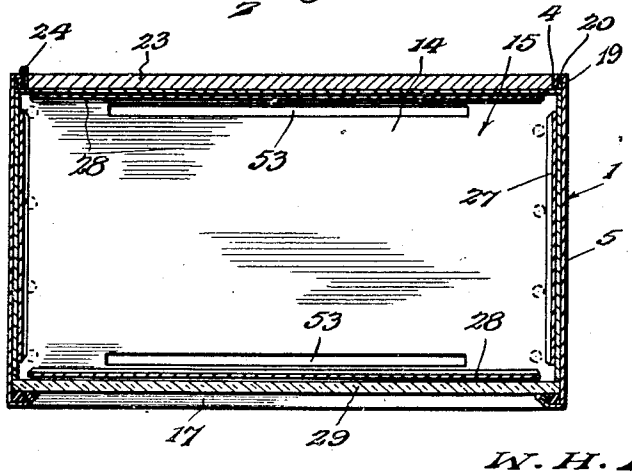


Fig. 5.



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Patented Sept. 27, 1927. 1,643,738

UNITED STATES PATENT OFFICE.

WILLIAM HAROLD BROOKS, OF SAN FRANCISCO, CALIFORNIA.

DISPLAY AND STORAGE CABINET.

Application filed March 17, 1926. Serial No. 95,420.

This invention relates to display and storage cabinets and more particularly to a cabinet designed primarily for the display and storage of cakes.

Ordinarily, cabinets of the type referred to above are so constructed that there is practically no ventilation of the cabinet and, if the cabinet is of wood, the moisture which is given off from the cakes within the cabinet is absorbed by the wood or, in the case of a metal cabinet, condenses on the interior surfaces thereof, with the result that the cabinet soon develops a sour odor which is likely to be communicated to the cakes therein and impair their quality. Therefore, the present invention has, as one of its objects to provide a cabinet so constructed that cakes contained therein will be kept fresh for a long period of time and will retain their wholesomeness, with the result that they will be in a fresh saleable condition even though stored for some period of time.

Another object of the invention is to provide novel means for insuring of circulation of air about the walls of the cabinet so that the same will be maintained at a relatively low temperature as compared to a non-ventilated cabinet of wood and even a non-ventilated metal cabinet, the cabinet of the present invention being, therefore, admirably adapted for the display and storage of cakes in the summer months.

Another disadvantage presented by ordinary cabinets of the type referred to is that the moisture in cakes stored therein will soon evaporate and the cakes will become stale because of the loss of moisture and, therefore, the present invention contemplates the provision of a cabinet having means whereby a desired percentage of moisture will be present within the cabinet at all times.

Another object of the invention is to provide a display and storage cabinet so constructed that the component parts thereof may be readily separated so as to permit of a thorough cleansing of the interior of the cabinet from time to time as occasion may require.

In the accompanying drawings:

Figure 1 is a perspective view of the cabinet embodying the invention.

Figure 2 is a vertical transverse sectional view through the cabinet.

Figure 3 is a horizontal sectional view taken substantially on the line 3—3 of Figure 2, looking in the direction indicated by the arrows.

Figure 4 is a vertical front to rear sectional view taken substantially on the line 4—4 of Figure 2, looking in the direction indicated by the arrows.

Figure 5 is a horizontal sectional view taken substantially on the line 5—5 of Figure 4, looking in the direction indicated by the arrows.

Figure 6 is a perspective view of one of the inner side wall sections before the same is built into the interior of the cabinet.

Figure 7 is a perspective view of a bottom member in which means is arranged for supplying moisture to the interior of the cabinet.

The cabinet embodying the invention comprises side walls which are indicated in general by the numeral 1, a top indicated in general by the numeral 2, a front indicated in general by the numeral 3, and a back indicated in general by the numeral 4. In the preferred embodiment of the invention and as a matter of convenience in manufacture, the side walls 1 and top 2 are preferably formed from an integral blank of suitable marginal contour, and substantially without exception, all of the parts of the cabinet are of heavy sheet metal coated with baked enamel. As will now be explained, the side walls 1 and top 2 are of hollow construction, as is also the bottom of the cabinet and which bottom will presently be likewise fully described. Each of the side walls 1 comprises an outer wall section 5 and an inner wall section 6, the wall sections 5 being integral with an outer section 7 constituting a part of the hollow top 2 of the cabinet in the event the parts are formed from a single sheet metal blank as stated above. Each outer side wall section 5 is formed along its vertical front edge with a flange turned inwardly at right angles, as indicated by the numeral 8, and thence inwardly from its portion 8 at an obtuse angle, as at 9, the free margin of the portion 9 being turned back upon itself as indicated by the numeral 10, and, in a like manner, the top 2 is provided along its forward edge with a right angularly downwardly extending flange 11 having a portion inclined downwardly and inwardly at an obtuse angle, as at 12, and corresponding to the portion 9 of the flange 8, and having its free marginal portion bent back upon itself as indicated by the numeral

13. The flanged marginal portions of the side walls and top are cut away at the upper corners of the front of the structure so that their end edges will abut and these edges may be soldered or otherwise connected to provide a smooth union between the same. The purpose of the flanges 8 and 11 will presently be more fully explained. The numeral 14 indicates a sheet metal plate comprising the lower section of the hollow bottom of the cabinet which hollow bottom is indicated in general by the numeral 15, and this plate is provided along its forward side with a flange 16 upstanding at right angles from the plane of the plate and provided with an upwardly and inwardly inclined portion 17 corresponding to the portions 9 and 12 of the flanges 8 and 11 and having its free marginal portion bent back upon itself as at 18. The ends of the flange 16 meet the lower ends of the flanges 8 and are suitably united thereto so that the front 3 of the cabinet is of open rectangular form, as clearly shown in Figure 1 of the drawings, and has the appearance of an open rectangular frame. The numeral 19 indicates a rectangular frame formed from angle iron material of small dimensions in cross section, and this frame is arranged within the rear of the cabinet with its side, top and bottom members abutting the inner sides of the rear marginal portion of the wall section 5 and the top section 7 of the top 2 and the lower or bottom section 14 of the bottom 15. The said rear marginal portions of the wall sections 5, 7 and 14 are turned upon themselves to embrace the flanges of the respective members of the angle iron frame 19 which are, as previously stated in engagement with the inner surfaces of the said wall sections so as to secure the frame in place within the open rear of the cabinet, these overturned portions being indicated by the numerals 20, 21 and 22 respectively. This structure defines a door opening, and the numeral 23 indicates a door which is arranged within the opening and at one side is hinged, as at 24, to the door frame structure and at its other side is provided with a hand knob 25 whereby the door may be conveniently swung about its hinges. The said door may be of wood or of metal and when it is swung to open position, the entire interior of the cabinet is rendered accessible. It will be evident on the other hand, that when the door is closed, its marginal portions will abut the inwardly extending flanges of the angle iron frame 19, thus effectually closing the cabinet at the rear.

The hollow bottom 15 of the cabinet comprises, in addition to the bottom section 14, an upper section 26 which is formed of sheet metal and is of dimensions to fit in the cabinet in the manner clearly shown in Figures 2 and 4 of the drawings. The said section 26 of the bottom 15 is provided at its ends with downwardly and inwardly inclined flanges 27 and at its front and rear edges with correspondingly inclined flanges 28 and the said section is arranged within the lower portion of the cabinet with the lower edges of the flanges resting upon the upper side of the bottom section 14 of the said bottom 15, the flanges 27 and 28 serving to support the plate comprising the section 26 in spaced position with respect to the plate comprising the section 14, so that an air space is provided and the said bottom is, in effect, of double-wall construction. As will be observed in Figures 2 and 4 of the drawings, the ends of the section 26 of the bottom abut against the inner sides of the outer side wall sections 5 and the rear edge of the section 26 abuts against the lower member of the angle iron frame 19. It will likewise be observed by reference to Figure 4, that the forward edge of the section 26 is slightly spaced from the overturned margin 18 of the flange portion 17 so that the lower marginal portion of a glass pane 29 may be snugly received between these opposing parts of the structure and retained in place, the lower edge of the pane resting upon the upper side of the section 14 of the hollow bottom 15.

The inner section 6 of each side wall of the cabinet is most clearly shown in Figures 2, 3 and 6 of the drawings, and is, as previously stated, of sheet metal and of rectangular form and the same is provided at its vertical edges with continuous flanges 30 which project from that side of the section which is to be presented toward the outer wall sections 5, and the section is provided at its upper and lower edges with upwardly and downwardly inclined flanges indicated by the numeral 31 and which flanges project from that side of the member which is presented toward the interior of the cabinet. The side wall sections 6 are arranged within the cabinet with the edges of their flanges 30 abutting the inner sides of the respective sections 5, so that the two sections of each wall are spaced with respect to each other as clearly shown in Figures 2 and 3 of the drawings, and the lower edge of the flange 31 at the lower end of each section 6 rests upon the upper side of the upper section 26 of the hollow bottom 15. At this point it will be observed that, as clearly shown in Figure 2 of the drawings, the lower section 14 of the bottom is provided at its end edges with upstanding flanges 32 which are soldered or otherwise permanently connected with the respective outer sections 5 of the side walls 1, so that the section 26 of the bottom is firmly supported and, in turn, firmly supports the inner sections 6 of the side walls. It will be observed by reference to Figure

3 of the drawings that the vertical flanges 30 of the sections 6 of the side walls 1 not only abut at their free edges against the inner sides of the respective sections 5 of the said walls, but, likewise, the flange 30 at the forward vertical edge of each section 6 abuts against the inner side of the pane 29 at the respective vertical margins thereof and the corresponding flange 30 at the opposite vertical edge of the section 6 abuts against the inner side of the respective vertical member of the angle iron frame 19.

The top 2 of the cabinet comprises, in addition to the section 7, a lower section indicated by the numeral 33 and comprising a rectangular sheet metal plate corresponding substantially in dimensions to the plate comprising the section 26 of the hollow bottom of the cabinet and provided with upwardly and inwardly inclined end flanges 34 and upwardly and inwardly inclined flanges 35 extending along its front and rear edges. This section 33 is arranged within the upper portion of the cabinet immediately beneath the section 7 of the top thereof and with the upper edges of the flanges 34 and 35 abutting the under side of the section 7, the ends of the said section 33 at the juncture of the flanges 34 therewith, abutting against the inner surfaces of the outer sections 5 of the walls 1, and the rear edge of the said section 33 substantially abutting against the inner side of the top member of the angle iron frame 19. The forward edge of the section 33 at its juncture with the corresponding flange 35, abuts against the inner side of the pane 29 at the upper margin thereof, and the said section 33 rests near its ends upon the flanges 31 at the upper ends of the sections 6 of the hollow side walls 1 and is, in this manner, supported.

In this manner, the section 33 is firmly supported between the section 7 and the said flanges of the inner sections of the side walls and thus retained in place.

The numeral 36 indicates shelves which are arranged within the cabinet and upon which and the upper section 26 of the bottom 15, the cakes are to be arranged, so that they will be attractively displayed through the pane 29 at the front of the cabinet, any of the cakes being readily accessible by opening the door at the rear of the cabinet. Each of the shelves 36 comprises a sheet metal plate 37 of rectangular form having its forward marginal portion turned downwardly at an obtuse angle, as indicated by the numeral 38, so as to present an attractive and finished appearance, these margins of the plates comprising the shelves being arranged substantially in contact with the inner face of the pane 29. The rear margin of the plate comprising each shelf 36 is preferably turned downwardly at right angles, as indicated by the numeral 39, so that the shelves are reenforced, the downturned forward margins 38 likewise serving to reenforce said shelves. In order that the shelves may be removably supported within the cabinet, studs 40 having heads 41 are fitted through openings in the section 6 of each side wall 1 and with their heads 41 engaging the outer sides of the said sections 6, the studs being preferably soldered in place and projecting beyond the inwardly presented faces of the said sections 6 so as to support the shelves in the manner most clearly illustrated in Figures 2 and 4 of the drawings. This means for supporting the shelves presents the advantage that, unlike angle iron pieces, the studs do not accumulate dirt to an appreciable extent.

The hollow bottom 15, hollow side walls 1, and hollow top 2 of the cabinet provide spaces for the circulation of air and means, which will now be described, is preferably provided for supplying the air, admitted to these spaces, with a desirable percentage of moisture. With this end in view, the side walls 1 have their outer sections 5 extended downwardly below the plane of the lower section 14 of the bottom 15, as indicated by the numeral 42, to constitute the side walls of a compartment which is indicated in general by the numeral 43 and which is best shown in Figure 7 of the drawings. This portion of the structure is likewise made of heavy baked enameled sheet metal and comprises a bottom 44, flanges 45 which upstand at right angles from the ends of the said bottom, a front 46 which extends upwardly at right angles from the forward side of the bottom, and a back 47 which extends upwardly at right angles from the rear side of the bottom, the front 46 and rear 47 of the compartment structure being of a height substantially equal to the depth of the extensions 42 of the side wall sections 5 of the body of the cabinet, and these extensions 42 being soldered or otherwise permanently secured to the flanges 45 and having their outer surfaces substantially flush with the vertical end edges of the said front 46 and back 47. The upper edges of the front 46 and back 47 engage the under side of the section 14 of the hollow bottom 15 of the cabinet at the front and rear margins thereof, as shown in Figure 4 of the drawings, and in this manner, the said section 14 of the hollow bottom of the cabinet constitutes the top of the compartment 43. The front 46 of the compartment 43 is provided with a rectangular longitudinally extending opening 48, and a drawer 49 is slidably fitted through said opening so as to occupy a position within the compartment. Within the drawer 49 there is removably disposed a block 50 of brick clay or other argillaceous material capable of absorbing

and retaining water. The drawer 49 is provided at its front with a knob 51 by which it may readily be withdrawn from the compartment for the purpose of removing the block from the drawer and permitting the block to remain immersed in water until it has become thoroughly saturated, whereupon it is replaced in the drawer and the drawer re-inserted into the compartment. This constitutes the moisture supplying medium of the cabinet and the cabinet is ventilated in a manner which will now be explained. Openings 52 are formed in the bottom 44 of the compartment 43 and extend in a series parallel to each of the flanges 45 so that air may enter the compartment by way of these openings and pass or circulate over the drawer 49. The bottom section 14 is formed adjacent and parallel to its front and rear edges with longitudinally extending slots 53 through which air currents circulating over the top of the block 50 in the drawer 49 may pass in an upward direction, the air currents then passing through a series of openings 54 formed in the upper section 12 of the said bottom 15 in a series near each end edge of the said section and at the lower ends of the spaces between the sections 5 and 6 of the respective side walls 1. In this manner, the air which has collected a percentage of moisture in passing over the surface of the block 50, is permitted to pass upwardly through the spaces of the side walls 1 of the cabinet and when the air currents reach the upper ends of the spaces they flow through openings 55 formed in series near the end edges of the lower section 33 of the top 2 and enter the space between the sections 33 and 7, the air finally passing out through series of openings 56 formed in the section 7 of the top 2 adjacent the end edges of the same. In this manner, a circulation of air is provided about the top, bottom and sides of the cake containing space defined by the corresponding inner sections of the said walls of the structure and the interior of the structure or, in other words, the said space is kept at a relatively low temperature, so that the cakes will not readily lose their moisture and will, therefore, retain their freshness for a very considerable length of time.

From the foregoing description of the invention, it will be understood that the inner sections of the side, top and bottom walls may be readily removed, as well as the shelves 36 and that, therefore, these parts may be thoroughly cleansed as well as the entire interior of the cabinet so that the cabinet may be kept in an exceptionally sanitary condition notwithstanding the fact that its said side, top and bottom walls are of hollow construction to conduct air currents.

In order that the cabinet may be supported in slightly elevated position with respect to the counter or other surface upon which it is disposed and so as to permit the ready and free entrance of air through the openings 52, rubber buttons 57 are secured in any suitable manner to the under side of the bottom 44 of the compartment 43, as clearly shown in Figures 2 and 4 of the drawings.

Preferably, strips of rubber or other packing material, indicated by the numeral 58, are arranged in the channels defined by the flanges 8 and their angular portions 9, and the flanges 11 and 16 and their respective angular portions 12 and 17, so as to be in contact with the surface of the pane 29 at the margins thereof.

In order that an advertising card, indicated by the numeral 59, may be suitably mounted upon the cabinet, spaced flanged retaining members 60 are secured upon the top of the cabinet in any suitable manner and have their upstanding flange portions spaced apart a distance to snugly and frictionally receive the lower marginal portion of the card 59.

In order that moist air may circulate throughout the interior of the case, rows of perforations 61 are preferably formed in the bottom shelf 26 of the case.

Having thus described the invention, what I claim is:

1. A cabinet of the class described comprising walls embodying fixed outer sections and inner sections removably assembled with the outer sections and spaced with respect thereto to provide air circulation spaces, a bottom comprising a fixed lower section and a removable upper section supported thereon in spaced relation thereto and in turn supporting the said inner sections of the said walls and having an air inlet passage in the lower section and air inlet passages in the upper section in communication with the said spaces, and a top comprising a fixed upper section and a lower section removably assembled therewith and spaced with relation thereto to provide an air space between said sections, the said lower section of the top being supported by the said inner sections of the walls, the lower section of the top having air passages in communication with the said spaces between the sections of the walls, and the upper section of the top having air outlets in communication with the space between the sections of the top.

2. A cabinet of the class described comprising walls embodying fixed outer sections and inner sections removably assembled with the outer sections and spaced with respect thereto to provide air circulation spaces, a bottom comprising a fixed lower section and a removable upper section sup-

ported thereon in spaced relation thereto and in turn supporting the said inner sections of the said walls and having an air inlet passage in the lower section and air inlet passages in the upper section in communication with the said spaces, and a top comprising a fixed upper section and a lower section removably assembled therewith and spaced with relation thereto to provide an air space between said sections, the said lower section of the top being supported by the said inner sections of the walls, the lower section of the top having air passages in communication with the said spaces between the sections of the walls, and the upper section of the top having air outlets in communication with the space between the sections of the top, and shelves extending between and supported by the inner sections of the said walls and relatively bracing the same and maintaining the same assembled with the outer sections of the walls.

3. A cabinet of the class described comprising walls embodying fixed outer sections and inner sections removably assembled with the outer sections and spaced with respect thereto to provide air circulation spaces, a bottom comprising a fixed lower section and a removable upper section supported thereon in spaced relation thereto and in turn supporting the said inner sections of the said walls and having an air inlet passage in the lower section and air inlet passages in the upper section in communication with the said spaces, and a top comprising a fixed upper section and a lower section removably assembled therewith and spaced with relation thereto to provide an air space between said sections, the said lower section of the top being supported by the inner sections of the walls, the lower section of the top having air passages in communication with the said spaces between the sections of the walls, and the upper section of the top having air outlets in communication with the spaces between the sections of the top, and shelves extending between and supported by the inner sections of the said walls and relatively bracing the same and maintaining the same assembled with the outer sections of the walls, the inner sections of the said walls having lower flanges extending at an angle therefrom and resting upon the upper side of the upper section of the bottom and upper flanges extending at an angle therefrom and engaging the under side of the lower section of the top.

4. A cabinet of the class described comprising walls embodying fixed outer sections and inner sections removably assembled with the outer sections and spaced with respect thereto to provide air circulation spaces, a bottom comprising a fixed lower section and a removable upper section supported thereon and in turn supporting the said inner sections of the said walls and having an air inlet passage in the lower section and air inlet passages in the upper section in communication with the said spaces, and a top having air outlet passages in communication with the said spaces, and means normally maintaining the said inner sections assembled with the outer sections, the said means comprising a shelf supported by and extending between the said inner sections of the walls and displaceable to provide for removal of the said inner sections of the walls and removal of the upper section of the bottom, the upper section of the said bottom having openings therein in communication with the interior of the cabinet.

In testimony whereof I affix my signature.

WILLIAM HAROLD BROOKS. [L. S.]