July 17, 1951 L. S. CHADWICK 2,561,094

CABINET CONSTRUCTION

Filed Oct. 29, 1945 4 Sheets-Sheet 1

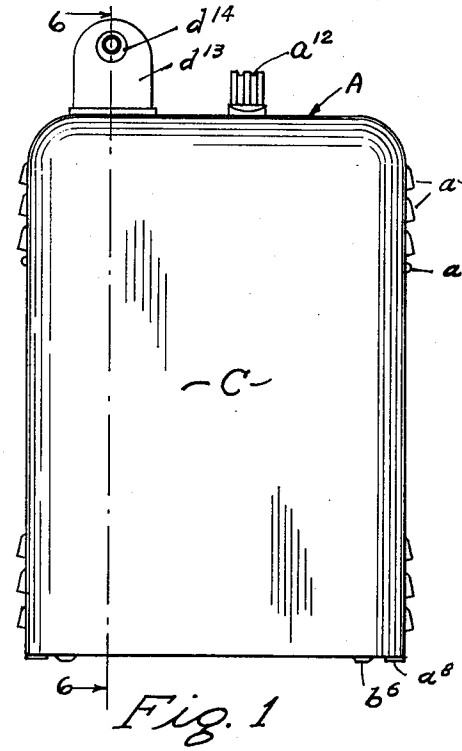


Fig. 1

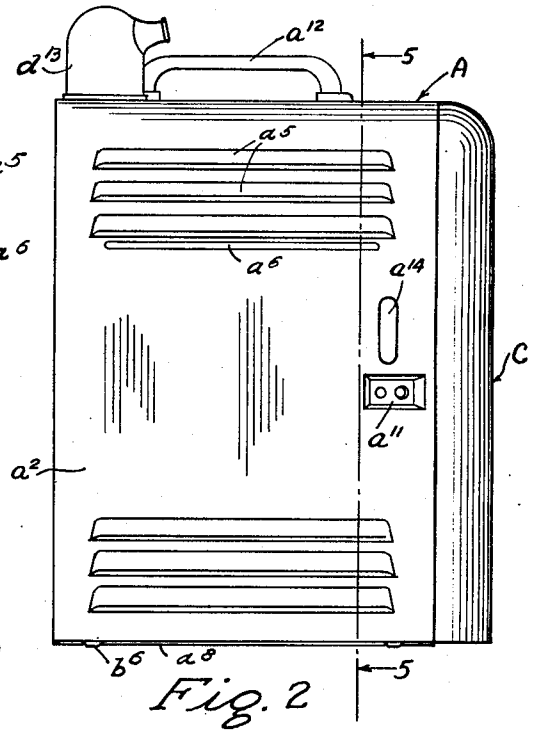
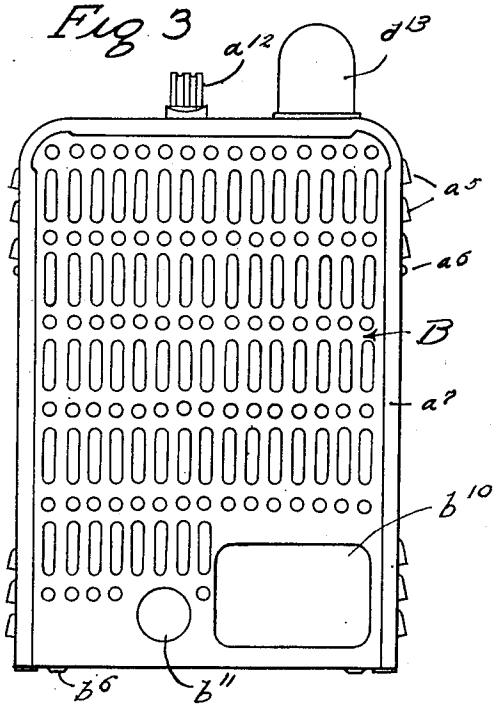


Fig. 2

Fig 3



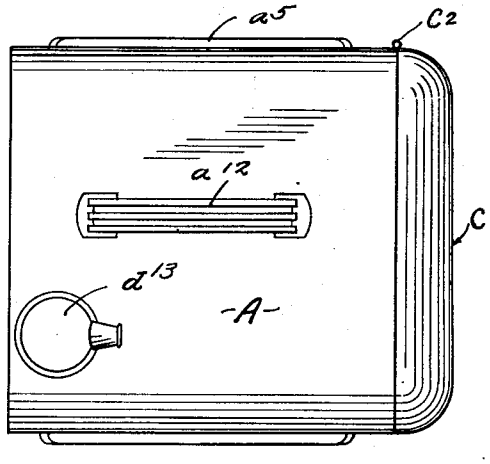


Fig. 4

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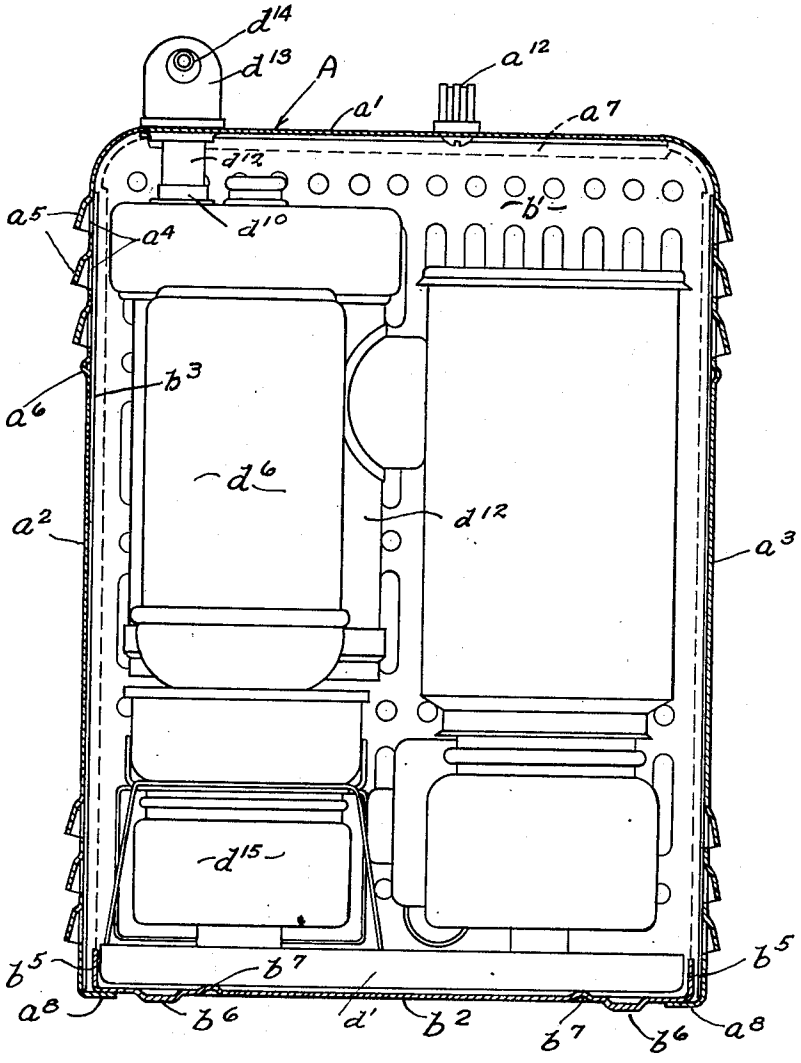


Fig. 5.

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CABINET CONSTRUCTION

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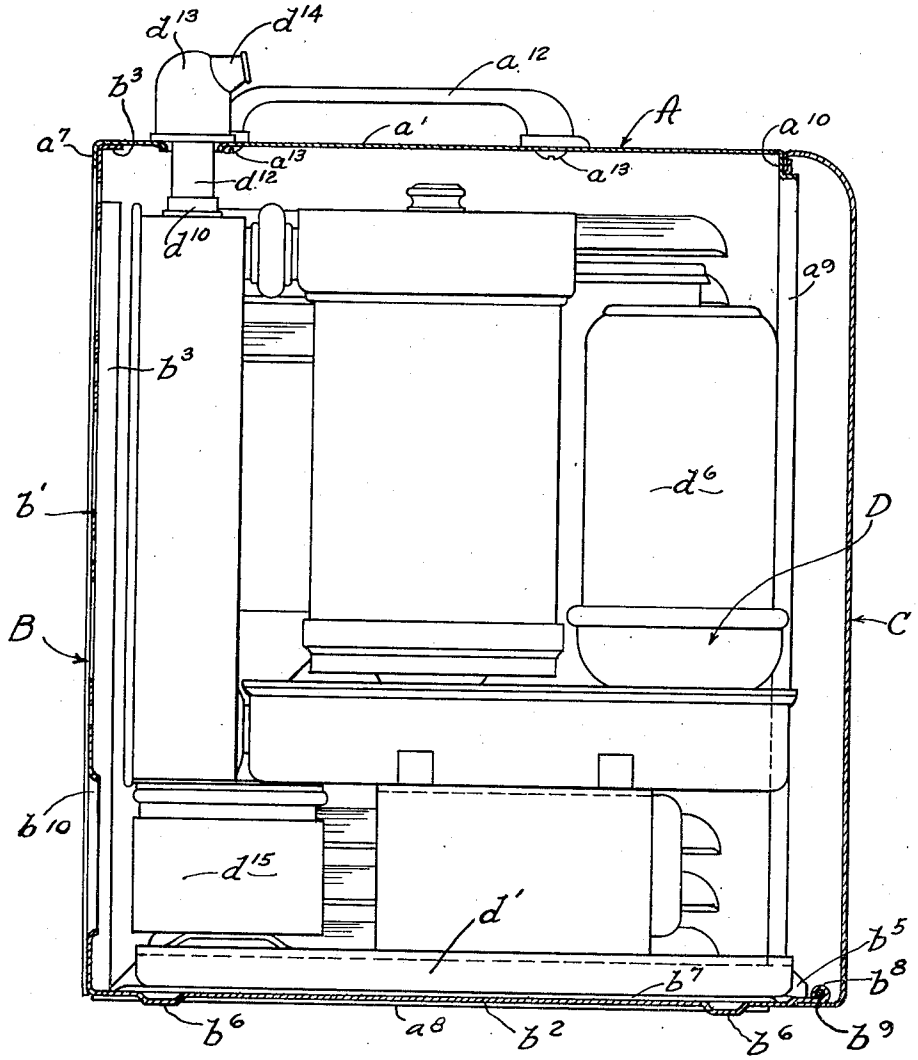


Fig. 6

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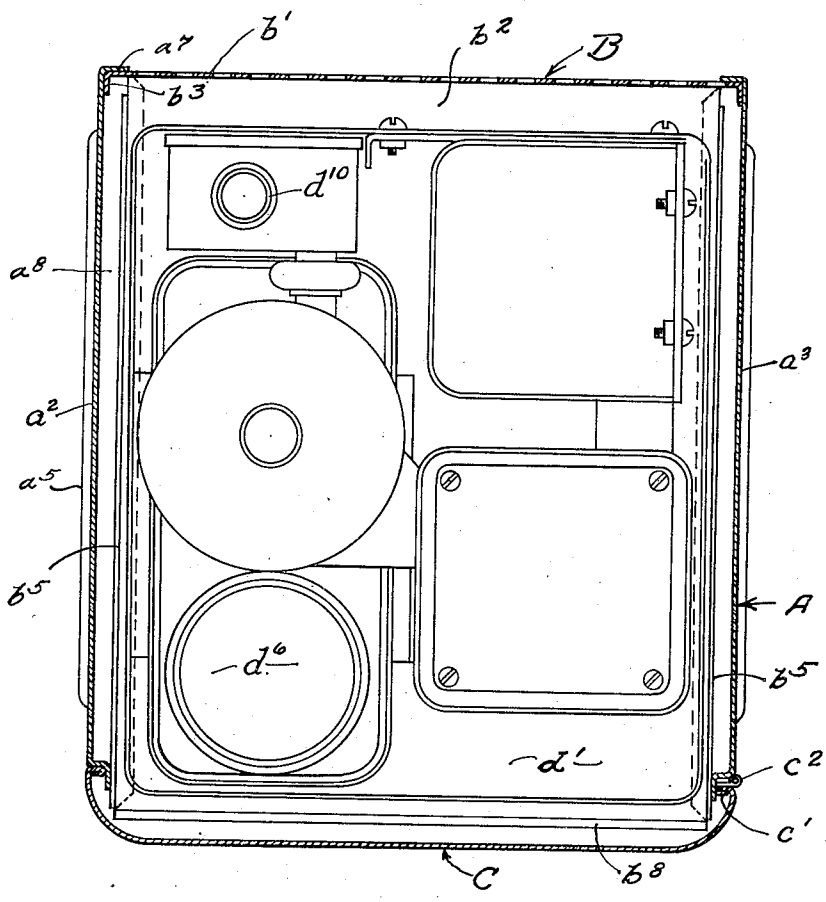


Fig. 7

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2,561,094

CABINET CONSTRUCTION

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Application October 29, 1945, Serial No. 625,135

5 Claims. (Cl. 312—329)

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This invention pertains, generally, to a cabinet of improved construction that is especially adapted to removably receive and properly house an ozonizing apparatus.

The ozonizing apparatus herein disclosed, minus the cabinet, forms the subject matter of my copending application Serial No. 602,596, filed June 30, 1945, now Patent No. 2,529,137.

An object of the invention is to provide a cabinet having a large opening, fitted with a suitable closure, through which opening the ozonizing unit may readily be moved into and out of the cabinet.

Another object of the invention is to provide a sheet metal cabinet that is constructed of a minimum number of parts that are so shaped, and so fitted and connected together, as to facilitate fabrication and render the cabinet rigid and strong.

The foregoing objects with others that will appear as this description proceeds are attained by the construction illustrated in the accompanying drawings in which—

Figs. 1, 2 and 3 are, respectively, a front, a side, and a rear elevational view of the cabinet; Fig. 4 is a plan view thereof; Fig. 5 is a vertical section through the cabinet on the line 5—5 of Fig. 2 and on a scale considerably enlarged over that of the preceding views, and showing an ozonizing unit in front elevation enclosed by the cabinet; Fig. 6 is a vertical section from front to rear through the cabinet, on the line 6—6 of Fig. 1, showing the ozonizing unit in side elevation; and Fig. 7 is a horizontal section through the cabinet and shows the ozonizing unit in plan.

Like reference characters designate corresponding parts throughout the several views.

The cabinet, according to my present preferred construction, consists of three major sheet metal parts designated, generally and respectively, A, B and C. The part A is an inverted U-shaped body comprising a top wall a' and side walls a^2 and a^3. The side walls are provided adjacent their upper and lower ends with ventilating openings or slots a^4, shown as equipped with louvers a^5 that are preferably formed integral with said walls from the metal struck from said openings or slots. The louvers a^5 impart rigidity to the side walls in the region of the slots, and in order to stiffen the body portion of the side walls immediately below the lowermost slot of the top series, said walls are provided with transverse ribs a^6.

Turned downwardly from the rear edge of the top wall a' and inwardly from the corresponding edges of the side walls a^2 and a^3 is a flange a^7; and at their lower ends the side walls are provided with relatively wide inwardly directed right angle flanges a^8. A large opening in the front of the body A is defined at top and sides by a flange a^9 that is connected to and spaced inwardly from the top and side walls of said body by a part designated a^{10} that constitutes a door jamb.

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The part B consists of an L-shaped sheet metal element including a back panel b' and a bottom b^2. The top and side edges of the back panel are turned forwardly at right angles to the plane of the panel to produce flanges b^3 that are engaged with the inner surface of the top and side walls of the body A, while the previously mentioned flange a^7 at the rear of said body overlies the outer side of the back panel and is suitably secured thereto, as by spot welding. The side edges of the bottom wall b^2 are turned upwardly to provide guides b^5, and inwardly of said guides the bottom wall engages the flanges a^8 and are fastened thereto, preferably by spot welding. Adjacent its corners, the bottom wall b^2 has depressions that provide feet b^6 for the cabinet. The bottom wall is also provided with upwardly embossed ribs b^7 that are spaced inwardly, beyond the adjacent feet b^6, from the guides b^5 wherewith they are parallel. The forward ends of the guides b^5 project through the front opening of the cabinet and are spot welded or otherwise secured to the adjacent parts of the flange a^9. The bottom wall b^2 extends beyond the vertical plane of the front edge of the flange a^9, where it is stepped upwardly approximately a distance equal to its thickness, and the front edge of the bottom wall is curled upwardly and over in tubular formation, as shown at b^8, and is preferably reinforced by a rod b^9, producing a stiff transverse ledge.

The part C is a door that is drawn from sheet metal to the form of a bay sufficiently deep to receive the projecting front end of the bottom wall b^2, and at top and sides the door gradually curves inwardly and merges with the top and side walls of the body A. Along its top and side edges, the door is stiffened by the sheet metal thereof being turned abruptly inwardly and back upon itself to form a double flange c' of a size to embrace the flange a^9, and of a shape to bear flatwise against the part a^{10} that constitutes the door jamb. Along one side the door C is connected by a hinge c^2, desirably of the piano type, to the adjacent part a^{10} of the body

A; and at its side opposite the hinge, the door cooperates with a suitable latch and lock, shown generally at a^{11} in Fig. 2. The bottom of the door fits beneath the elevated front portion of the bottom wall b^2, as best shown in Fig. 6. A handle a^{12} is secured to the top wall of the body A by screws a^{13}.

Occupying the cabinet is the ozonizing unit designated generally by the reference letter D, and the same includes a rectangular pan-like base d', of a width somewhat less than the distance between the opposed guides b^5, and of a length somewhat less than the depth of the cabinet. As previously brought out, the unit is adapted to be moved into and out of the cabinet through the open front thereof, the base d' riding over the ridge provided by the sleeve b^8, and along the ribs b^7 whereon the base rests when the unit is in the cabinet.

Since the ozonizing apparatus or unit, of itself, constitutes no part of the present invention, description thereof beyond mention of the parts that have special relationship to the cabinet will be dispensed with. The ozonized vapors leave the apparatus or unit through a flue d^{10}, into which telescopes a tube d^{12} of a dome d^{13} having a vapor discharge spout d^{14}. The tube d^{12} occupies an opening in the top wall a' of the body A, while the annular bottom of the dome rests on said wall, the tube being smaller and said bottom being considerably larger than the opening so that the dome may shift upon the wall to allow for differences in location of the flue d^{10} with respect to the aforesaid opening.

A vessel or jar d^{15}, into which condensed residue of the vapors drains, may be reached for removal through the open front of the cabinet when the door C is open, or more directly and conveniently through a hand hole b^{10} in the back panel b'.

Heat produced by the ozone generator escapes through the perforations in the back panel b' and through the openings or slots a^4 adjacent the tops of the side walls a^2 and a^3, and said openings or slots, in conjunction with those adjacent the bottoms of said side walls, provide an upward flow of fresh air through the spaces between said walls and the ozonizing unit. This keeps the walls of the cabinet relatively cool, and effectively ventilates the unit.

The depressions that form the legs b^6 are sufficiently deep to support the cabinet a slight distance above any supporting surface upon which it may be placed, and the cabinet is adapted to be lifted and carried by the handle a^{12} that is so located relative to the top wall that when the outfit is held suspended thereby, the ozonizing unit hangs substantially level, which is an important factor since a glass vessel or reservoir d^6, that contains the liquid to be vaporized, is supported in an inverted position in the vaporizing unit and is liquid sealed in a vaporizing tank d^3, and any appreciable deviation from this position would cause flooding. The side wall a^2 is provided with a slot a^{14} (Fig. 2) through which the contents of the glass vessel or reservoir d^6 may be observed. A circular opening b^{11} is made in the back panel for the entrance of the electric cable that leads current to the ozonizing unit.

Having thus described my invention, what I claim is:

1. A cabinet for the accommodation of a unit including a base that determines the maximum width of the unit, said cabinet having a front opening defined by a forwardly projecting flange

that is inset from the front edges of the side and top walls of the cabinet and is connected to said edges by parts constituting a door jamb, parallel guides rising from the bottom of the cabinet and spaced apart a distance corresponding to the width of the front opening and between which the base of the aforesaid unit reposes when inside the cabinet, and a closure for the open front of the cabinet hinged thereto and having an inwardly extending peripheral portion closely surrounding the flange that defines said front opening and bearing against the parts constituting the door jamb.

2. A cabinet for the accommodation of a unit including a rectangular base that determines the maximum width of the unit, said cabinet having an opening in its front slightly greater in width than the base and through which the unit is adapted to be moved into and out of the cabinet, side guides along the bottom of the cabinet between which the base is movable, the bottom wall of the cabinet extending through and beyond the aforesaid opening and terminating in a raised ridge across which the base of the unit is slidable, said guides extending through the front opening and terminating at their forward ends in close proximity to said ridge and a closure for said opening formed with a bay to accommodate the portion of the bottom wall that extends through said opening.

3. A cabinet comprising an inverted U-shaped sheet metal body including integral top and side walls, an L-shaped sheet metal element consisting of a back panel, and a bottom wall integral therewith, the rear edges of the top and side walls being flanged inwardly and engaged about the corresponding edges of the back panel, and the top and side edges of the back panel being flanged forwardly along the inner surfaces of the top and side walls, the lower edges of the side walls being secured to the lateral edges of the bottom wall, and a door for the cabinet hingedly connected along one of its edges to the front of the body.

4. A cabinet comprising an inverted U-shaped sheet metal body including integral top and side walls, and an L-shaped sheet metal element consisting of a back panel, and a bottom wall integral therewith, the rear edges of the top and side walls being secured, respectively, to the top and side edges of the back panel, the lateral edges of the bottom wall being extended upwardly to provide side guides, and the bottom edges of the side walls extending inwardly beneath the bottom wall and secured thereto, and a door hingedly connected along one of its edges to the front of the body.

5. A cabinet comprising an inverted U-shaped sheet metal body including integral top and side walls, an L-shaped sheet metal element consisting of a back panel, and a bottom wall integral therewith, the rear edges of the top and side walls being secured, respectively, to the top and side edges of the back panel, the front edge portions of the top and side walls being extended inwardly a distance and thence forwardly to provide a flange that extends across the top and down the sides of a front opening, the forward edge of the bottom wall being extended through and beyond said opening and curled upwardly and over to provide a sleeve, the lateral edges of the bottom wall being extended upwardly to provide side guides that overlie the lower ends of the aforesaid flange and are secured thereto, the lower ends of the side walls being flanged inwardly beneath the bottom wall and secured thereto, a rod

extended through the aforesaid sleeve, and a closure for the front of the cabinet that is formed to provide a bay of sufficient depth to receive the extended front portion of the bottom wall, said closure being flanged inwardly about its periphery for contact with the inwardly extended front portions of the top and side walls.

LEE S. CHADWICK.

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