May 3, 1949. J. J. BAUMAN 2,468,727

SECTIONAL RADIO CABINET

Filed June 14, 1944

Fig.-1

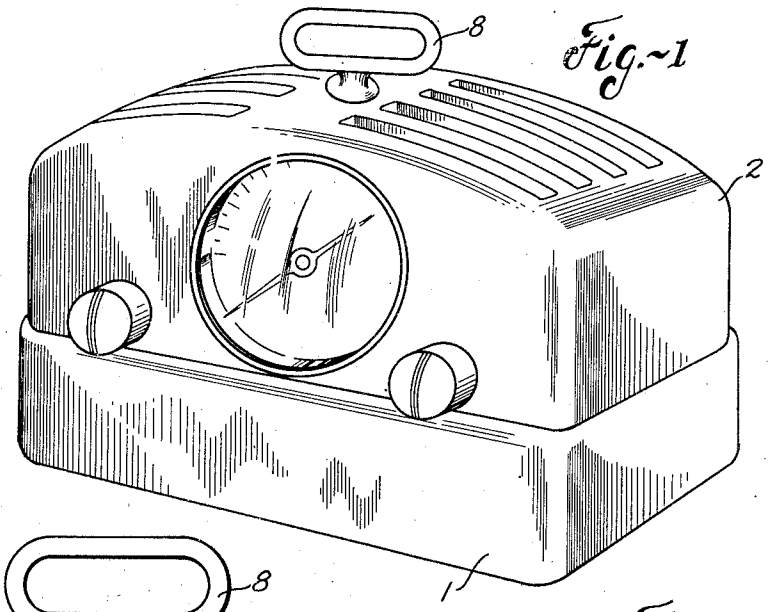


Fig.-6

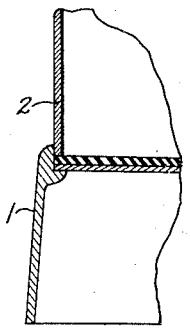


Fig.-2

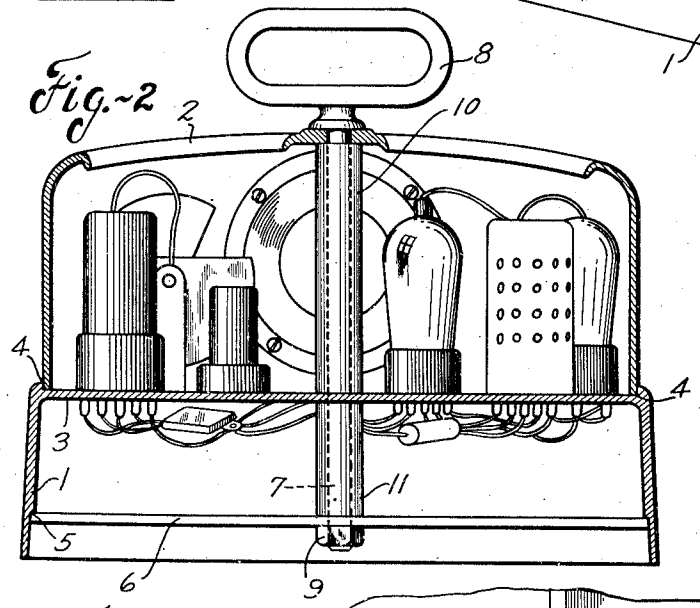


Fig.-4

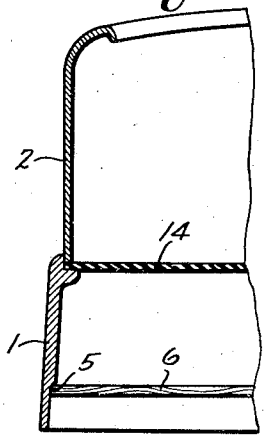
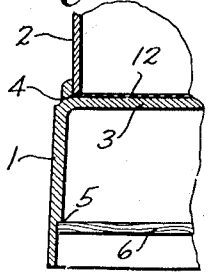


Fig.-3



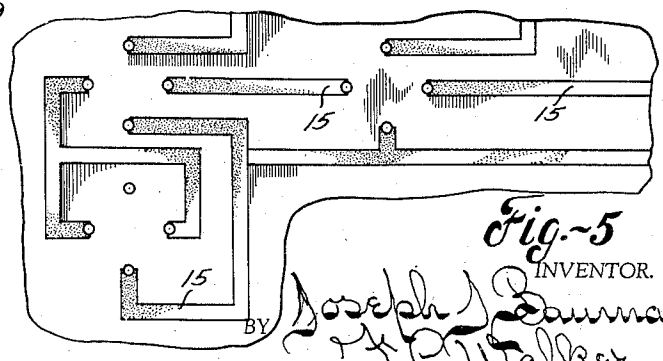


Fig.-5

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SECTIONAL RADIO CABINET

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14 Claims. (Cl. 250—16)

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This invention pertains to cabinet structures, and more particularly to radio cabinets of plastic molding materials, and to the mode of assembly thereof.

In the present disclosure there is contemplated a radio cabinet comprising a plurality of separable sections or units, which are interchangeable with other like sections of similar shapes but of different colors or of different ornamental configurations, for combination with other sections or units into various combinations to afford a variety of completed cabinets having different appearance.

The object of the invention is to improve the construction as well as the mode of assembly of radio cabinets and the like, whereby they may not only be economically manufactured, but will be efficient in use, capable of being easily and quickly assembled of maximum strength and unlikely to get out of rapair.

A further object of the invention is to provide a sectional cabinet wherein the different separable sections thereof may be interchanged with like sections of other cabinets of different color, finish, or ornamental delineation into various combinations to produce from a relatively few molds and molded elements, cabinets of distinctively different appearance.

A further object of the invention is to provide an improved method of assembly and support of the separable sections, whereby the cabinet sections will be to a great extent relieved of the strain and weight of the radio equipment or other devices contained therein.

A further object of the invention is to provide a removable support or base for the radio equipment which base is assembled as a component part of the cabinet.

A further object of the invention is to provide a radio cabinet or the like having electrical shielding and conductor elements embodied as a component part of the cabinet.

A further object of the invention is to provide a radio cabinet or the like having the advantageous structural features, inherent meritorious characteristics, and mode of assembly and use herein described.

With the above primary and other incidental objects in view as will more fully appear in the specification, the invention intended to be protected by Letters Patent consists of the features of construction, the parts and combinations thereof, and the mode of operation, or their equivalents, as hereinafter described or illustrated in the accompanying drawings.

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In the drawings,

Fig. 1 is a perspective view of an assembled radio cabinet embodying the present invention.

Fig. 2 is a vertical sectional view of an assembled radio cabinet taken on a substantially medial plane thereof.

Figs. 3 and 4 are two fragmentary sectional views taken on the same plane as Fig. 2 illustrating modifications.

Fig. 5 is a plan view partly broken away of the radio equipment base, provided with permanently located electrical conductors.

Fig. 6 is a fragmentary sectional view taken on the same plane as Fig. 2 illustrating a further modification.

Like parts are indicated by similar characters of reference throughout the several views.

The radio industry has long since been interested in permanent colors of all hues, including pastel shades for radio cabinets, but heretofore the materials available have not been satisfactory because they lacked mechanical stability. Such available materials when used for molded radio cabinets have been subject to shrinkage and cracking, and lacked strength to support the radio equipment, especially when used in portable radio cabinets. By the construction hereinafter described, it is quite possible to produce molded cabinets having tops and bases of preferred colors, the tops of which are not subjected to strain, or required to perform any mechanical functions. The cabinet parts are not necessarily rigidly held in place, but may be free for slight relative shifting movement to compensate for expansion and contraction and thus avoid stresses and strains and consequent fracture.

Referring to the drawings, there is illustrated a simple form of portable radio cabinet comprising a base section 1 and a dome or cover section 2, which may be molded of differently colored materials or each may have distinctive ornamental configuration.

By assembling bases and domes of different colors or different ornamental designs in various combinations, a quite large variety of cabinets may be produced from a relatively few molds. The invention is not limited to merely two sections, but may comprise three or more sections in a single cabinet.

The base section 1 is duo-functional and includes a continuous top panel 3 directly onto which may be mounted the radio equipment elements as shown in Fig. 2. The base section 1 thus becomes the radio chassis and simultaneously a component exposed part of the cabinet.

The top of the base section 1 is marginally rabbeted at 4 to afford a seat for the cover or dome 2, which is not tightly engaged therein, but is sufficiently loosely seated to enable limited expansion and contraction. Adjacent its bottom the base section 1 is interiorly rabbeted at 5 to receive a bottom panel 6 which may be of fiber board or plywood or other inexpensive non-fragile material.

Centrally disposed within the assembly is a bolt or tie rod 7 having at its upper end a carrying handle 8. The tie rod or bolt 7 extends through the top of the dome 2 and through the panel 3 of the base section and thence through the bottom panel 6, where it is engaged by a nut 9. Intermediate the top of the dome 2 and the chassis panel 3 the tie rod or bolt is surrounded by a spacer sleeve 10 which may be of card board, paper pulp or of wood. A similar spacer sleeve 11 surrounds the tie rod 7 intermediate the chassis panel 3 and the bottom panel 6. The bottom panel affords an enclosure for the radio elements and connections which may be disposed beneath the top 3 and also sustains the weight of the assembly, relieving the molded sections 1 and 2 of tension strain.

The entire weight of the assembly of cabinet sections and radio equipment is sustained by the tie rod 7 and the bottom panel 6, thus minimizing breakage of the molded cabinet portions, and also enabling the cabinet to be quickly disassembled and reassembled by removal and reengagement of the tie rod 7 and nut 9.

In some assemblies of radio equipment, it may be desirable to provide a metal shielding for the radio elements, which is easily incorporated, as in Fig. 3 by superimposing an aluminum or other metallic plate 12 on top of the base panel 3, with its margins clamped beneath the side walls of the dome or cover section 2, or a sheet of metallic foil may be secured either to the top or under surface of the panel 3. In lieu thereof the radio equipment may be assembled upon a metallic chassis plate 14 as shown in Fig. 4 in which event the panel 3 of the base section may be entirely omitted, leaving only the marginal rabbets to receive and support the chassis plate 14.

The chassis panel 3 may be formed separately from plastic material with a sheet of metallic shielding foil attached to either its top or under side, and be removably supported on the marginal rabbet 4 as shown in Fig. 6. By assembling the radio equipment thereon the latter may be readily removed for repair or for replacement by merely removing the nut 9 and withdrawing the tie bolt 7. As a further means of simplifying the construction electrical conductor lines may be applied to either the top or bottom of the base panel 3, as shown in Fig. 5 whether the base panel be integral with the base 1 or separately formed and assembled between the sections 1 and 2. Electroconductive lines 15 comprising the radio circuit interconnecting the various radio elements may be formed on either surface of the panel 3 by spraying metal thereon through a mask or otherwise confining it to prescribed lineal areas. Otherwise such conductor lines 15 may comprise strips of metallic foil adhesively applied to one or both the surfaces of the panel 3 in such relation as to connect the radio elements in proper sequence.

By such construction manufacture of radio sets may be made quite flexible as to color combinations of the cabinet parts and the combinations of ornamental designs thereof and the radio

equipment may be rendered quite easily accessible for repair or replacement, and shielding and electrical connections may be economically incorporated. The molded cabinet parts are relieved of strain and stress and breakage is minimized.

From the above description it will be apparent that there is thus provided a device of the character described possessing the particular features of advantage before enumerated as desirable, but which obviously is susceptible of modification in its form, proportions, detail construction and arrangement of parts without departing from the principle involved or sacrificing any of its advantages.

While in order to comply with the statute the invention has been described in language more or less specific as to structural features, it is to be understood that the invention is not limited to the specific features shown, but that the means and construction herein disclosed comprise the preferred form of several modes of putting the invention into effect, and the invention is therefore claimed in any of its forms or modifications within the legitimate and valid scope of the appended claims.

Having thus described my invention, I claim:

1. A radio cabinet, including a base section and a dome or cover section both molded from plastic material and interchangeable with other similar sections of different color or of different ornamental design to afford sundry combinations of distinctive appearance, a horizontal instrument panel forming a top for the base section and adapted to support sundry elements of radio equipment, a bottom for the base section of non-fragile substantially rigid material, a tie bolt extending through the dome or cover, the instrument panel and the base bottom, a handle attached to the top end of the tie bolt and a nut on the lower end thereof beneath the base bottom, the construction and arrangement being such that the weight of the assembly when carried by the handle is sustained entirely by the tie bolt and the base bottom, independently of any tension strains on the base or dome.

2. A radio cabinet of molded plastic material, including separable upper and lower sections, the lower section serving as a radio base or chassis and the upper section being a dome shaped cover or enclosure therefor, a marginal rabbet coincident with the top of the lower section in which the upper section is seated, each of said sections being interchangeable with other like sections of different appearance to afford sundry distinctive cabinet assemblies, a bottom panel for the lower section, a seat therefor on the lower section against which the bottom panel bears, and a single tie bolt extending centrally through the upper and lower sections and detachably engaged with the bottom panel for detachably holding said sections in assembled relation, the construction and arrangement being such that the weight of the assembly is suspended upon the tie bolt and bottom panel wholly independently of tension strain on the upper or lower sections.

3. A radio cabinet of molded plastic material, including separable base and cover sections, a seat formed on the base section to receive the cover section and locate it relative to the base section, a chassis panel for support of radio elements removably engaged in said seat intermediate the base and cover section, a bottom panel for said base section, a tie bolt transfixing the cover and base section and the chassis and

bottom panels and affixed to the latter, spacer sleeves surrounding the tie bolt intermediate the cover and chassis panel and also between the chassis panel and bottom panel, the construction and arrangement being such that the weight of the assembly is sustained by the tie bolt and bottom panel independently of tension strains upon the base and cover sections.

4. A radio cabinet, including a base section, a top panel therefor to support radio elements, projections on the base section extending above the level of the top panel, a cover section seated upon the base section in accordance with said projections, a bottom panel having seating engagement upon the base section, a tie bolt transfixing the cover section, the top panel of the base section and the bottom panel and detachably engaged with the latter, the construction and arrangement being such that the several parts are separably retained in assembled relation by the tie bolt and when supported thereby the base and cover sections are relieved of tension strain.

5. A radio cabinet, including a base section molded from plastic material including side walls, an integral top panel to support radio equipment, a marginal rabbet formed about the top panel to receive a cover section, a bottom panel of non-fragile material, seating areas on the base section engageable by the bottom panel and a suspension member extending through the top panel and releasably engageable with the bottom panel for supporting the assembly independently of tension strain on the base section.

6. A radio cabinet, including a hollow base section and a domed cover section both molded from plastic material, locating means upon the base section for positioning the cover section relative thereto, a radio equipment supporting panel separating the hollow base section from the domed cover section, a bottom panel of non-fragile material seated on the base section, a tie bolt releasably interconnecting the top of the cover section through the cover section and hollow base section and intermediate radio equipment supporting panel with the bottom panel, spacer tubes surrounding the tie bolt intermediate the top of the cover section and the radio equipment supporting panel, and between the latter panel and the base panel, the construction and arrangement being such that the base and cover sections are held in assembled relation by the tie bolt and the weight of the assembly when suspended is sustained by the base panel and tie bolt independently of tension strain on the base or cover sections.

7. A radio cabinet, including a base section and a cover section engageable upon the base section, both being molded from plastic material, a chassis panel to support radio equipment elements formed integral with the base section and separating the assembled cabinet into separate compartments, a bottom panel for the base section engageable therewith in spaced relation with the radio chassis panel, a tie bolt interconnecting the cover section and the bottom panel extending through the intermediate cover and base compartments and the separating chassis panel.

8. A radio cabinet, including separable base and cover sections, both molded from plastic material, matching conformations upon the respective sections for locating the cover section in superposed relation with the base section, a chassis panel for support of radio equipment elements comprising a stratum of dielectric material and a parallel contacting stratum of metal affording an electrical shielding effect, removably clamped between the cover section and base section, and a tie member for interconnecting the cover and base sections with the chassis panel clamped therebetween.

9. A radio cabinet, including separable base and cover sections, both molded from plastic material, matching conformations upon the respective sections for locating the cover section in superposed relation with the base section, a chassis panel for support of radio equipment elements, said chassis panel comprising a stratum of dielectric material and metallic lines delineated thereon defining an electrical radio circuit communicating with radio equipment elements supported upon the chassis panel, and connector means for detachably interconnecting the cover and base sections into a unitary assembly, with the chassis panel interposed therebetween.

10. A radio cabinet, including separable superposed base and cover sections of molded plastic material, interchangeable with other like sections of different color or ornamental characteristics in different combinations to afford cabinet assemblies of different appearances, a bottom panel engageable with the base section, a chassis panel for support of radio equipment elements separating the assembly into upper and lower compartments, and a suspension rod interconnecting the top of the cover section with the bottom panel of the base section for transportation maintaining the parts in assembled relation and supporting the assembly independently of tension strains on the base and cover sections.

11. A radio cabinet, including separable superposed base and cover sections of molded plastic material, a chassis panel for support of radio equipment elements coincident with the top of the base section and separating the assembly into upper and lower compartments, a bottom panel engageable with the base section in spaced relation with the chassis panel, a suspension rod interconnecting the top of the cover section with the bottom panel of the base section into a unitary assembly, and a handle attached to the suspension rod for transporting the assembly, the construction and arrangement being such that the suspension rod and bottom panel sustains the weight of the assembly independently of strain on the base and cover sections, during transportation.

12. A radio cabinet, including separable base and cover sections molded from plastic material, a separable chassis panel for support of radio equipment elements clamped between the base and cover sections, a bottom panel engageable with the base section in spaced relation with the chassis panel, a connecting bolt interconnecting the top of the cover section with the bottom panel of the base section and clamping the chassis panel therebetween, the construction and arrangement being such that the weight of the assembly is sustained by the connecting bolt and bottom panel wholly independently of tension strain on the cover and base sections.

13. A radio cabinet, including separable superposed base and cover sections molded from plastic material, a chassis panel of dielectric material for support of radio equipment elements dividing the assembly into upper and lower compartments, and metallic strips affixed to the chassis panel comprising electroconductors of a radio circuit connecting radio equipment elements mounted thereon, a bottom panel engageable with the base sec-

tion in parallel spaced relation with the chassis panel and a single tie bolt interconnecting the cover section and the bottom panel retaining the several parts in assembled relation.

14. A radio cabinet, including separable superposed base and cover sections molded from plastic material, a chassis panel of dielectric material for support of radio equipment elements dividing the assembly into upper and lower compartments, a stratum of metallic material overlying at least a portion of the chassis panel and affording electric shielding for at least a portion of the radio equipment elements mounted on said panel, a bottom panel engaged with the base section in parallel spaced relation with the chassis panel and a single interconnection between the cover section and the bottom panel separably retaining the several parts in assembled relation.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
18,035	Boorman	Aug. 25, 1857
1,920,741	Bol	Aug. 1, 1933
1,930,103	Mechling	Oct. 10, 1933
2,066,511	Arlt	Jan. 5, 1937
2,068,844	Ciccarelli	Jan. 26, 1937
2,176,212	Dijksterhuis	Oct. 17, 1939
2,176,374	Brown	Oct. 17, 1939
2,219,941	Rochow	Oct. 29, 1940
2,278,835	Crowley	Apr. 7, 1942
2,300,617	Crowley	Nov. 3, 1942

FOREIGN PATENTS

Number	Country	Date
635,782	France	Jan. 3, 1928

OTHER REFERENCES

Wireless World, "Metal Cabinets," pages 27–29, 250–16.3, July 10, 1929.