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W. H. CHURCHILL
FASTENER FOR ATTACHING CONTAINER
BACKS OR COVERS
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Fig. 1.

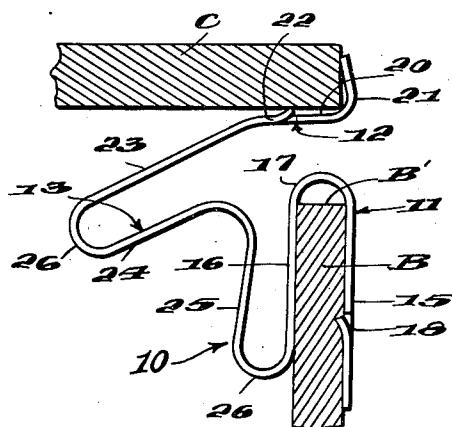


Fig. 3.

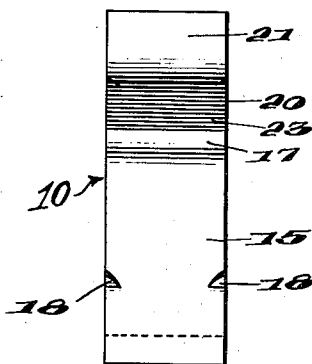


Fig. 2.

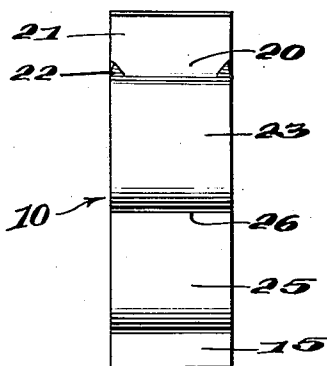
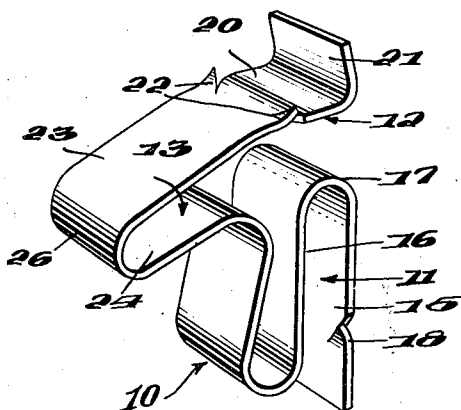


Fig. 4.



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FASTENER FOR ATTACHING CONTAINER
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5 Claims. (Cl. 292-80)

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The present invention relates to fasteners, and more particularly to fasteners for securing together two parts, for example, panels disposed in right angled relation to each other.

More particularly, the invention relates to improvements in cabinet fasteners such as those designed to hold one cabinet wall in place relative to another right angularly disposed wall.

For example, radio cabinets usually comprise rigidly connected top, bottom and end walls and a removable back wall at least one edge of which is preferably spaced from its adjacent fixed wall to provide for air circulation within the cabinet. It is desirable that such back wall be readily removable from and replaced in the cabinet, as by merely pulling it from or pushing it into place, while insuring that it be so securely retained in place as to avoid accidental dislodgment therefrom.

Accordingly, one of the principal objects of the invention is the provision of an improved fastener of simple construction that will accomplish the above stated results.

More specific and detailed objects and advantages of the invention will be apparent to persons skilled in the art to which the invention relates from a consideration of the accompanying drawings and annexed specification illustrating and describing a preferred form of the invention.

In the drawings—

Fig. 1 is an edge elevation of an improved fastener, according to the invention, shown in position to secure a fragmentary portion of a removable back cover to a cabinet wall;

Fig. 2 is an inner face elevation of the fastener as viewed from the left hand side of Fig. 1;

Fig. 3 is an outer face elevation of the fastener as viewed from the right hand side of Fig. 1; and

Fig. 4 is a perspective view of the fastener.

Referring to the drawings, the improved fastener is designed to secure a back cover B to a cabinet wall C spaced from and disposed in right angled relation to the cover B. The cabinet wall C conveniently may be a rectangular box-like structure having side and end walls, for example, a radio cabinet, and the back cover B is preferably designed to substantially close one open end thereof, the marginal edges B', at least in some instances, being spaced from its adjacent cabinet wall C. As will be apparent, the cover B will usually be disposed in a plane normal to each and all sides of the cabinet to which it may be attached.

The cover B is held securely in place by one or more fasteners embodying the invention. In the form illustrated in the drawings, the fastener

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10 may be formed of resilient strip material, for example metal or like sheet material, provided with a part-gripping portion 11 and a spaced support bearing portion 12 disposed in a plane normal to the gripping portion 11 and interconnected by a resilient connecting portion 13.

The part-gripping portion 11 is preferably U-shaped and comprises spaced walls 15 and 16 connected by a bight 17, said walls normally converging toward the open end of the U so as to be expanded by the part B and thus grip opposite faces thereof under tension. One or more of the walls 15, 16 may be provided with interned teeth 18, adapted to bite into the material of the part B and maintain the fastener securely in place thereon.

The support bearing portion 12 preferably comprises a bearing surface 20 spaced outwardly from the bight 17 and disposed in a plane normal to the plane of the U of the gripping portion 11. The outer end of the bearing surface 20 may terminate in a flanged end 21 to serve as a limit stop for positioning the fastener relative to the support C, as well as a handle portion, for releasing the fastener from engagement with the support C. Preferably, the bearing surface 20 is provided with one or more outwardly turned teeth 22 adapted to bite into the material of the support C and prevent accidental dislodgment of the fastener therefrom.

The part-gripping portion 11 and the support bearing portion 12 are joined by means of a resilient connecting portion 13 designed to permit movement of the support-bearing portion 12 under tension in or parallel to the plane of the U-shaped gripping portion 11. Preferably this resilient connecting portion 13 includes a leg 23 joined at one end to the support-bearing surface 20 and disposed at an obtuse angle thereto, the opposite end of the leg 23 being connected to the end of the part-gripping wall 16 remote from the bight 17. I prefer to make the resilient connecting portion 13 of generally W-shape as shown in order to provide the desired stiffness in the resilient connecting portion 13 and thus insure a maximum tension of the bearing surface 20 against the support C when the fastener is under compression.

In such a construction the leg 23 and the leg 16 may constitute the longer legs of the W-shaped connecting portion 13, the shorter legs 24 and 25 thereof being connected to their adjacent longer legs 23 and 16, respectively, by arcuate bights 26.

In use, the part-gripping portion 11 of the fastener 10 is slipped over an edge of the part B

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to be supported, which may be a removable back cover of a radio or like cabinet. Due to the tapered throat of the U-shaped gripping portion 11, the opposed walls or legs 15 and 16 grip the part B under tension and cause the teeth 18 to bite into the part B, insuring the firm grip of the fastener thereon.

The cover B may be applied in the open side or end of the cabinet C by merely pushing it in place. In so moving the cover or part B in the direction of the plane of the wall C, the inclined leg 23 may engage the wall C and compress the bearing surface 20 toward the bight 17 of the gripping portion 11. The part B will be in its final position when the flange or stop 21 engages the end of the support C, in which position the bearing surface 20 is under maximum compression causing the teeth 22 to bite into the material of the support C. To remove the part B from secured relation with the support C the support-bearing surface may be released from the support by depressing the flange or handle 21.

Although I have described my invention as being particularly adaptable to radio and like cabinets, it is to be understood that it is not limited to such use but is equally useful in other installations, as for example, boxes, crates, furniture, receptacle closures and the like. Also, the invention is not to be restricted to the details of construction shown and described as the scope of the invention is best defined in the appended claims.

I claim:

1. A fastener for securing a part to a support disposed in right angled relation thereto, comprising a U-shaped part-gripping portion having spaced legs for engaging opposite faces of the part to be supported, a support-engaging portion disposed in a plane normal to and spaced from the part-gripping portion, and a generally W-shaped portion resiliently joining said part-gripping and support-bearing portions.

2. A fastener comprising an elongated metal strip provided with a U-shaped part-gripping portion at one end and a part-bearing surface adjacent the opposite end, said bearing surface being disposed in a plane normal to the gripping portion and resiliently supported for movement relative thereto, a generally W-shaped portion resiliently connecting the part-gripping portion and bearing surface and including a

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camming portion inwardly of said part-bearing surface, and a limit stop joining said bearing surface to limit movement of the fastener relative to the part engaged thereby.

3. A fastener comprising an elongated metal strip provided with a U-shaped part-gripping portion at one end and a part-bearing surface adjacent the opposite end, said bearing surface being disposed in a plane normal to the gripping portion and resiliently supported for movement relative thereto, and a generally W-shaped portion resiliently connecting the part-gripping portion and bearing surface and including a camming portion inwardly of said part-bearing surface.

4. A fastener comprising an elongated metal strip provided with a U-shaped part-gripping portion at one end and a part-bearing surface adjacent the opposite end, said bearing surface being disposed in a plane normal to the gripping portion and resiliently supported for movement relative thereto, a generally W-shaped portion resiliently connecting the part-gripping portion and bearing surface and including a camming portion inwardly of said part-bearing surface, and teeth on both the gripping portion and bearing surface.

5. A fastener for retaining two parts in right angled relation comprising a strip of resilient material having spaced part-gripping and bearing portions adjacent opposite terminal ends of the strip and disposed in planes normal to each other, a generally W-shaped portion connecting said part-engaging portions, and a limit stop integrally joined to said bearing portion to limit movement of the fastener relative to the part engaged thereby.

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REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
738,490	Samuel	Sept. 8, 1903
1,955,648	Nickler	Apr. 17, 1934

FOREIGN PATENTS

Number	Country	Date
67,306	Norway	Jan. 17, 1944