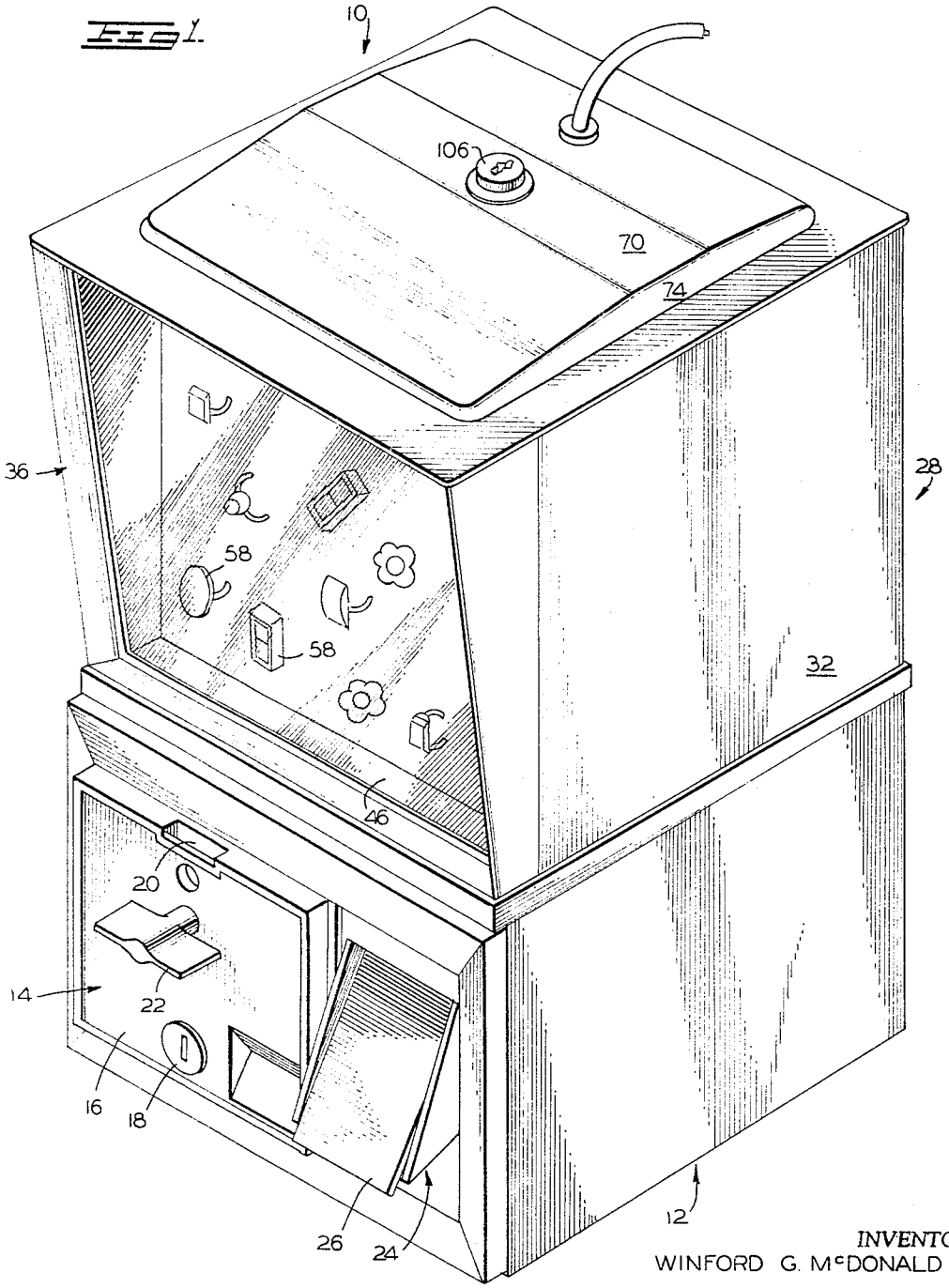
April 30, 1968 W. G. McDONALD 3,381,121

MERCHANDISE DISPLAY BOARD ILLUMINATING MEANS FOR COIN-CONTROLLED VENDING MACHINES

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Fig. 1.



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Fig 2.

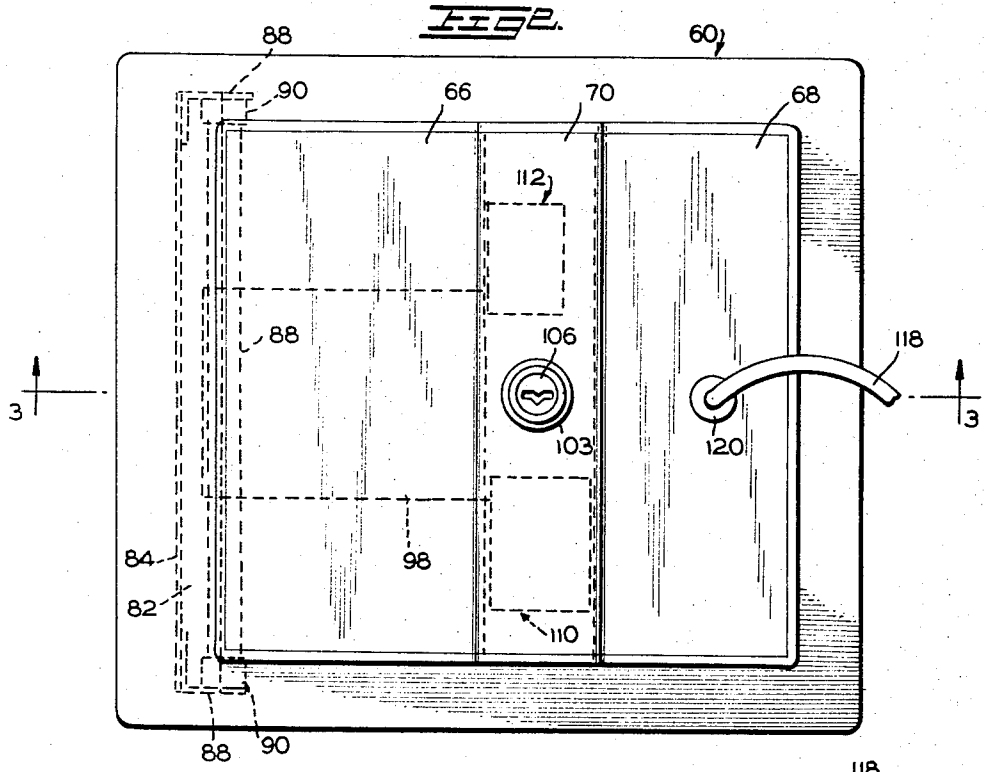
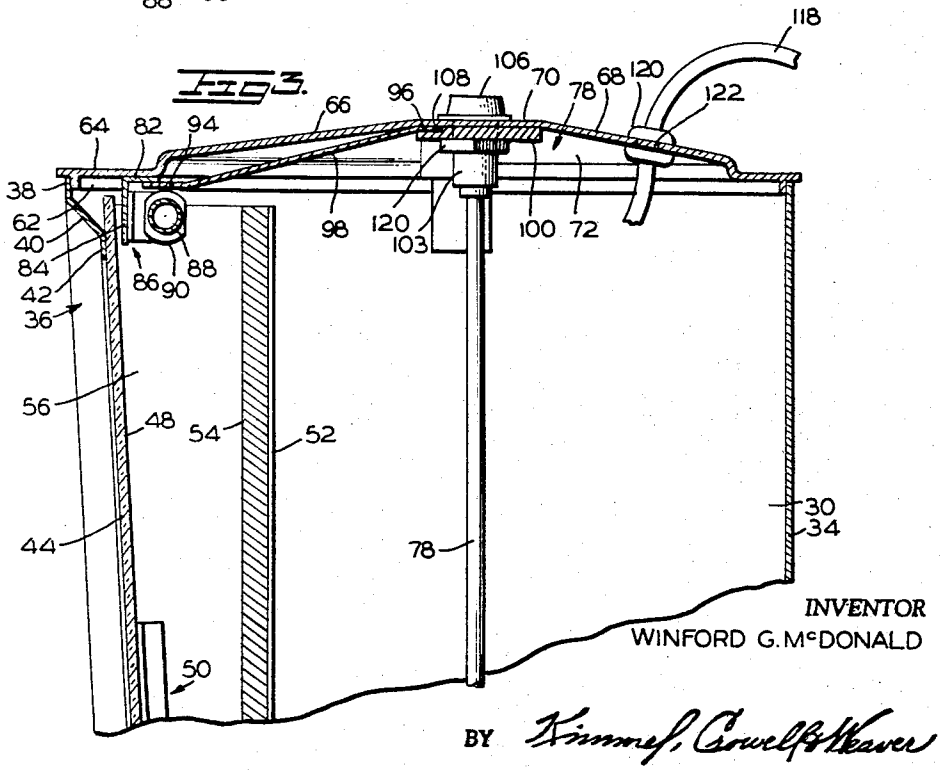


Fig 3.



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Fig 4

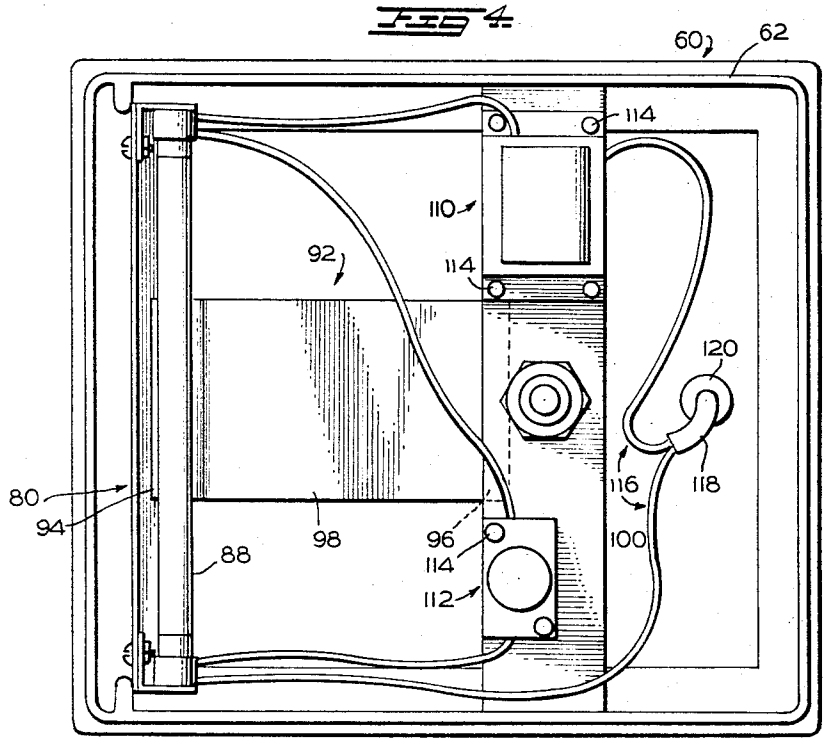
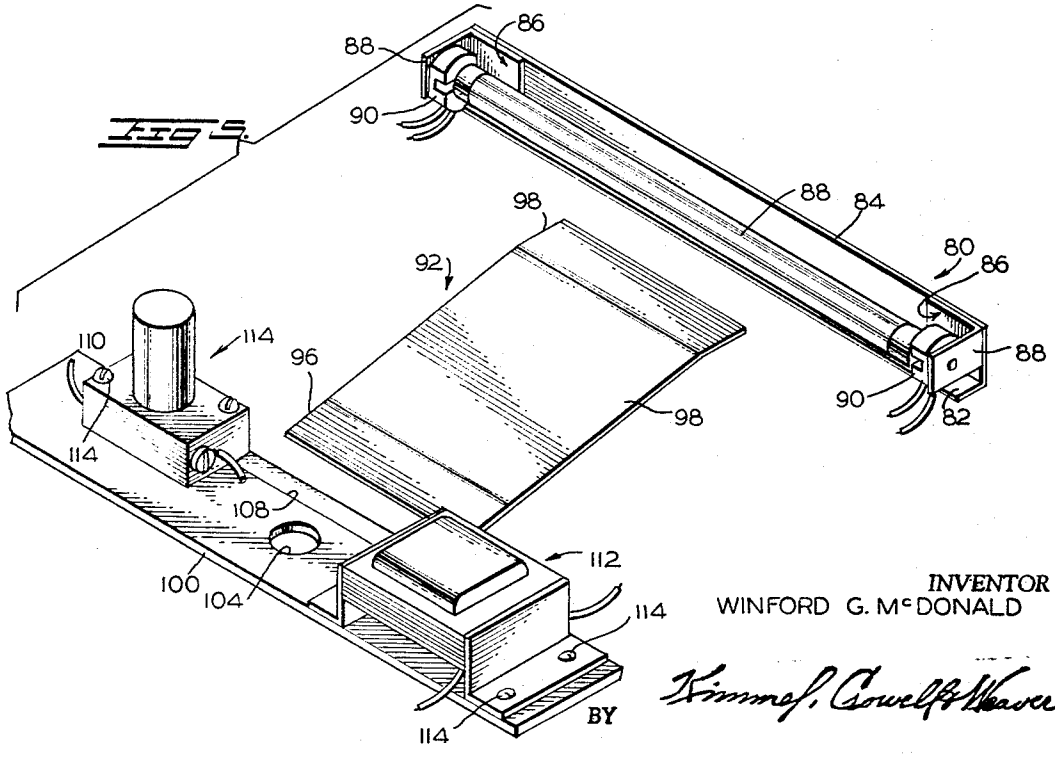


Fig 5



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MERCHANDISE DISPLAY BOARD ILLUMINATING MEANS FOR COIN-CONTROLLED VENDING MACHINES

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ABSTRACT OF THE DISCLOSURE

Vending machine apparatus having an upright merchandise display board and an opposed transparent window. The board and window define opposed sides of a compartment having an open upper end. A cover for the apparatus, including a portion spanning the open end of the compartment, and means suspended from the cover between the window and display board to illuminate merchandise supported on the latter.

This invention relates to the general field of illumination and, more specifically, the instant invention pertains to the provision of means for illuminating stock merchandise of vending machines.

One of the primary objects of this invention is to provide electrical illuminating means for conventional coin-controlled merchandise vending machines wherein sample merchandise is mounted on a display board and is illuminated by the aforementioned means.

Another object of this invention is to provide, as an attachment for or as a permanent installation of the cover plate or hopper closure member for vending machines of the type described, means for illuminating sample or display merchandise subject to vending by the machine, and wherein the illuminating means is interposed between a transparent window and a display board bearing the sample wares.

A further object of this invention is to provide illuminating means of the type generally described supra, which may be assembled as an integral unit or may comprise individual components for subsequent assembly.

Still a further object of this invention is to provide means for releasably securing the illuminating means to the vending machine cover plate, the means including seperable elements to permit interchange or replacement of the elements and wherein the interchange or replacement of the elements may involve the use of elements having larger or smaller dimensions, all within the physical limits of the inventive concept.

This invention contemplates, as a still further object thereof, the provision of illuminating means of the type generally described above, the means being noncomplex in construction and assembly, inexpensive to manufacture and maintain, and which is rugged and durable in use.

Other and further objects and advantages of the instant invention will become more manifest from the consideration of the following specification when read in conjunction with the annexed drawings, in which:

FIGURE 1 is a perspective view of a conventional coin-controlled vending machine of the counter or portable type and embodying the present invention;

FIGURE 2 is a top plan view of the coin-controlled vending machine shown in FIGURE 1;

FIGURE 3 is a fragmentary detail cross-sectional view, FIGURE 3 being taken substantially on the vertical plane of line 3—3 of FIGURE 2, looking in the direction of the arrows;

FIGURE 4 is a bottom plan view of the vending machine cover plate and showing the illuminating means according to this invention as installed thereon; and

FIGURE 5 is an exploded perspective veiw of the illuminating means of this invention.

Referring now more specifically to the drawings, reference numeral 10 designates, in general, a coin-controlled merchandise vending machine constructed in accordance with the teaching of this invention. The machine 10, is generally speaking, of conventional construction to the extent that it includes a substantially rectangular hollow base 12 housing the usual coin-controlled vending mechanism 14. The latter is shown in conjunction with the usual coin receiving box 16 slidably received within the base 12 and which is releasably secured therein by key controlled lock means 18. The box 16 includes the conventional coin receiving slot 20 to receive a coin of the proper denomination whereby the vending machine article release mechanism may be operated through the actuation of the manually manipulated handle means 22, all in the usual and conventional manner. Also included in the base 12 is a mechandise dispensing chute 24 across the open discharge end of which extends the gravity operated pivotally mounted cover plate 26.

Superimposed on the base 12, also in the conventional manner is a merchandise receiving hopper 28 which includes the usual laterally spaced, confronting and substantially parallel upright side walls 30, 32 spanned at their back edges by a back wall 34 and at their respective front edges by an open continuous frame 36 (see FIGURES 1 and 3). The frame 36 cants outwardly at its upper end and includes an upright outer continuous flange 38, an inwardly extending continuous bight 40 from which projects an open continuous inner window supporting flange 42 defining the substantially rectangular window opening 44. The hopper 28 includes a bottom wall 46 which supports the lower end of a transparent window 48, the latter spanning the opening 44 and being supported on the continuous flange 42. Any suitable back stop and window guide means, such as the L-shaped element 50 secured to the opposed side walls, 30, 32 may be used to prevent the accidental or inadvertent displacement of the window 44.

At 52 is indicated an upright flange which projects laterally (only one being shown) from each side wall 30, 32 and which serves as a backstop for a normally upright substantially rectangular merchandise display board 54, the latter having a side disposed in confronting and inwardly spaced relation relative to the window 44. As is seen in FIGURE 3, the window 48, the display board 54 and those portions of the side walls 30, 32 extending therebetween define a substantially hollow inverted pyramidal compartment 56 to which further reference will be made, infra.

The display board 54 is adapted to mount and support merchandise 58 (see FIGURE 1) comprising differing items which are capsuled in the usual manner and are inserted in the hopper 28. These are vended, by chance, upon insertion of the proper coin in the slot 20 followed by the operation of the handle means 22.

The upper open end of the hopper 28 is closed by a removable cover plate 60 having a substantially rectangular configuration and including a depending continuous guide flange 62 (see FIGURES 3 and 4) spaced inwardly from its peripheral marginal edge. As is seen in FIGURE 3, the guide flange 62 slidably engages behind the upper peripheral marginal edges of the side walls 30, 32, back wall 34 and the upper end of the flange 38.

The cover plate 60 is formed with a normally horizontal continuous peripheral flange 64 at the outer marginal edge thereof, the flange 64 at its inned edge merging with front and back walls 66, 68 which converge upwardly to join in a horizontal top wall 70, and normally upright side walls 72, 74, these walls cooperating to define a downwardly opening cavity 76.

At 78 is designated a conventional normally upright standard disposed within the hopper 28 and having its lower end fixedly secured within the machine 10 by con-

ventional means not shown. The other or upper end of the standard **78** projects above the open upper end of hopper **28** to serve a function to be described.

All of the foregoing relates to conventional vending machine construction, well known in the art and which has been but briefly described herein to afford a suitable utilitarian background for the subject matter of this invention which is described immediately below.

It has been mentioned above that one of the primary objects of this invention is to provde illumination for the merchandise mounted on the display board **54** whereby attention is directed thereto. To this end this invention provides an elongated inverted opaque L-shaped hanger bracket means **80** having an elongated horizontally extending foot portion **82** provided with an integrally formed depending leg section **84**. Fixedly connected to the leg section **84** at each end thereof is an angle bracket **86** having an inwardly projecting arm **88**, each of the latter providing mounting means for fluorescent light sockets **90** adapted to releasably receive and support the opposed ends of a conventional fluorescent light tube **88**.

Projecting laterally from the foot portion **82** substantially centrally of its ends, is a reversed (as shown in FIGURE 3) Z-shaped resilient metal strap **92** (see FIGURE 5) having end tabs **94**, **96** offset laterally and extending in diverging directions from its bight **98**. As is seen in FIGURE 3, the hanger bracket **80** extends transversely across the upper end of the window **44** with the foot portion **82** releasably clamped between the tab **94** and an adjacent portion of the underside of the flange **64**, and the leg section **84** is interposed between the fluorescent light tube **88** and the adjacent end of the window **44** to reflect light rays away therefrom for dispersement inwardly in the direction of the display board **54** and to preclude a concentration thereof at the upper edge of the window **44**.

The tab **96** is clamped between the top wall **70** and an elongated substantially rectangular cross-member **100** which engages against and extends parallel to the underside of the top wall **70**, the cross-member **100** being detachably connected thereon by means of a jamb nut **102** threaded on a conventional lock housing **103** telescopically received over the upper end of the standard **78**. The lock housing **103** depends from the top wall **70** and the lower end thereof extends through a suitable opening **104** disposed centrally of the ends of the cross-member **100**; the upper end of the lock housing **103** projects above the top wall **70** to releasably receive a conventional key operated locknut **106** (see FIG. 1) which cooperates with the upper end of the standard **78** to releasably secure the cover plate **60** on the upper end of the hopper **28**, all in the conventional manner. If desired, the cross-member **100** may be formed with an upwardly facing groove **108** to receive the tab **96** therein as shown in FIGURE 3.

For ease of shipment, the component elements **80**, **92** and **100** may be knocked down as shown in the exploded perspective view of FIGURE 5, or two or more thereof may be rigidly connected together, at the option of the manufacturer, to form one or more units. The knocked down elements permit, of course, assembly of similar elements wherein the dimensions of the several elements may be changed in accordance with changes in size and configuration of the hopper **28** whereas a rigid assembly would somewhat limit the usage of the invention except in those instances wherein a plurality of devices constructed in accordance with this invention were to be made for installation in vending machines the hoppers of which would be of uniform size and construction.

The cross-member **100** is adapted to subtend the usual starter and ballast components **110**, **112**, respectively, which may be secured thereto by conventional fastening means **114**.

The conventional circuitry **116** (see FIGURE 4) connects the electrical components, the electrical circuit **116** being connected to one end of a cable **118** that is carried in a bushing **120** which extends transversely through an opening **122** formed in the back wall **68**. The other end of the cable **118** is connected to a suitable source of E.M.F. (not shown).

While the above description discloses a specific means for top lighting the compartment **56**, it is contemplated that the bottom lighting thereof could be accomplished in an analogous manner. Additionally, it will be understood that the electrical components, depending upon the size of the display board **54** and window **48** may be standard or miniaturized; and it is to be recognized that if desired, and if the circumstances so warrant, the ballast **112** and starter **110** could be located elsewhere internally or externally of the machine **10** without departing from the spirit and scope of this invention.

Having described and illustrated one embodiment of this invention in detail, it will be understood that the same is offered merely by way of example, and that this invention is to be limited only by the scope of the appended claims.

I claim:

1. In combination with a vending machine having an upright hopper provided with an open end, a window at a side thereof, a merchandise display board disposed within said hopper in inwardly spaced confronting relation relative to said window and defining a compartment therebeween, a cover plate mounted on said hopper and closing said open end thereof while spanning one end of said compartment, means for illuminating said compartment, said illuminating means including an elongated L-shaped opaque hanger bracket having a foot portion and a leg section, releasable clamping means connecting said foot portion to said cover plate with said leg section depending between said window and said board, said hanger bracket having opposed ends each having socket means thereon to releasably receive, electrically connect, and to support the opposed ends of a fluorescent tube therein with said tube extending transversely across and between adjacent ends of said window and said display board and being interposed between said display board and said depending leg section.

2. In the combination of claim **1** wherein said clamping means of said support means comprises an elongated strap having one end thereof connected on said foot portion and having another end thereof fixedly connected to said cover plate.

3. In the combination of claim **2** wherein said strap is resilient and includes a tab at each said end thereof, and wherein the tab at said one end of said strap is biased for closing movement against an adjacent portion of said cover plate to releasably clamp said foot portion therebetween.

4. In the combination of claim **3** wherein said support means includes a cross-member connected to said cover plate and which extends transversely of the underside thereof to connect the other of said tabs thereto.

5. In the combination of claim **4** wherein said other of said tabs is engaged between said cover plate and said cross-member, and means to clamp said other of said tabs therebetween.

6. In the combination of claim **5** wherein said cross-member is provided with a groove to releasably receive said other of said tabs therein.

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