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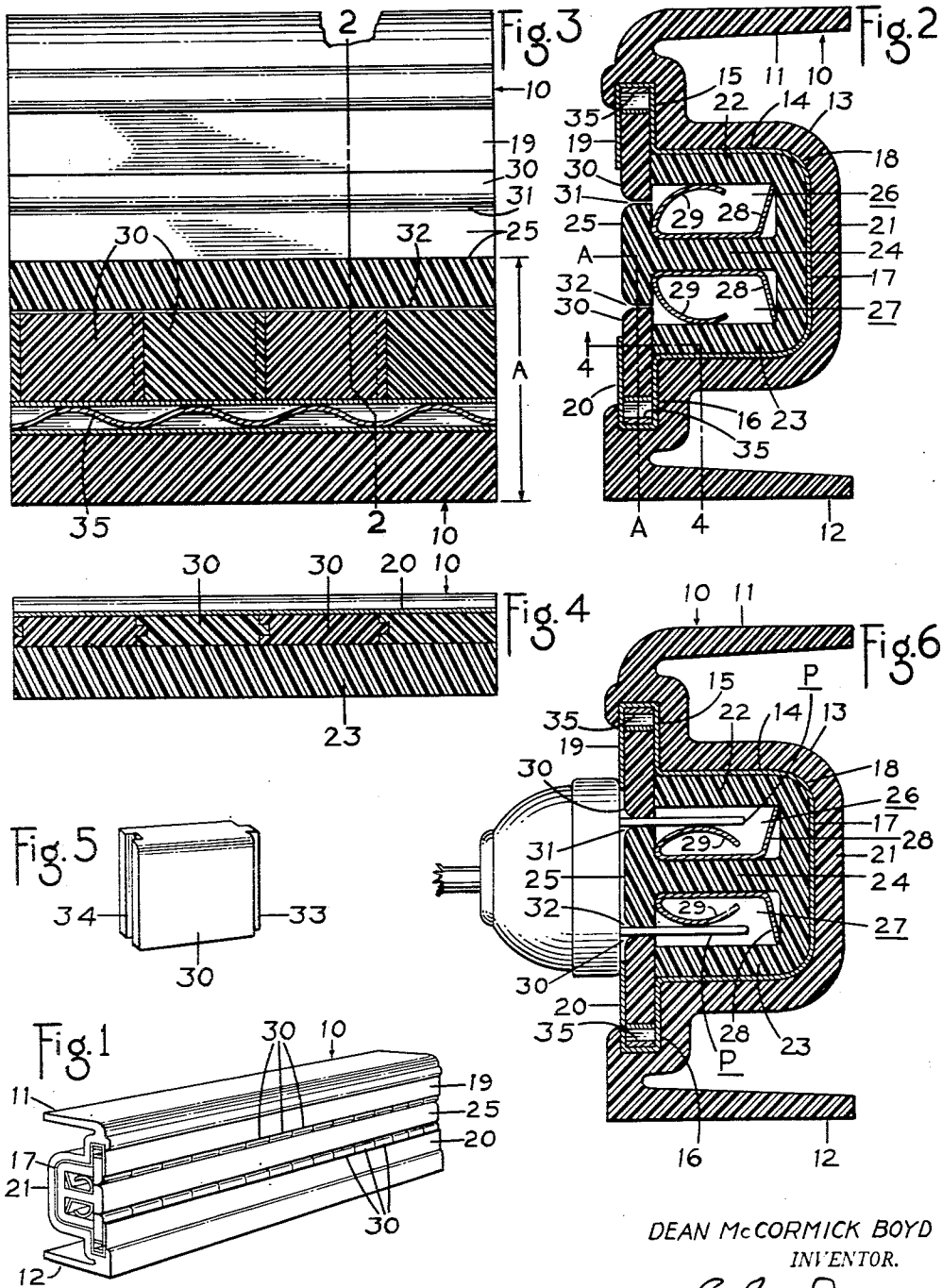
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CONTINUOUS ELECTRIC SOCKET CONSTRUCTIONS

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2 Sheets-Sheet 1



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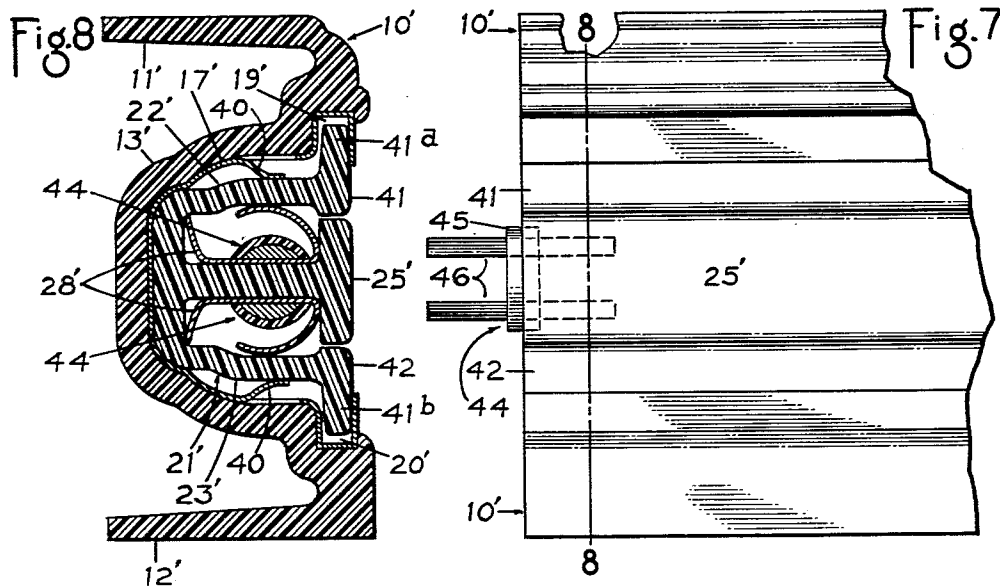
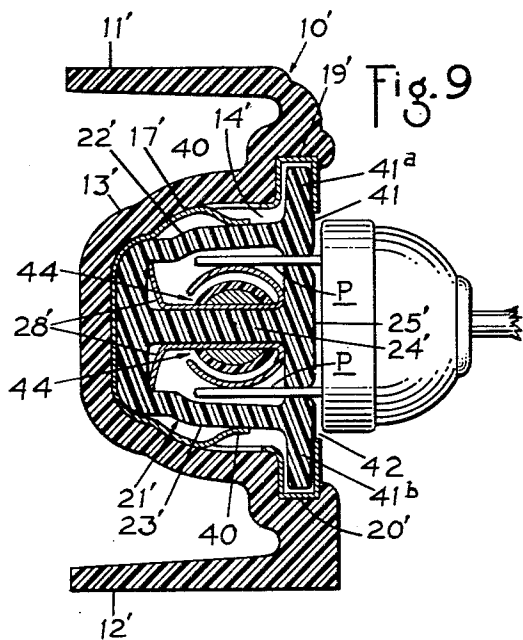
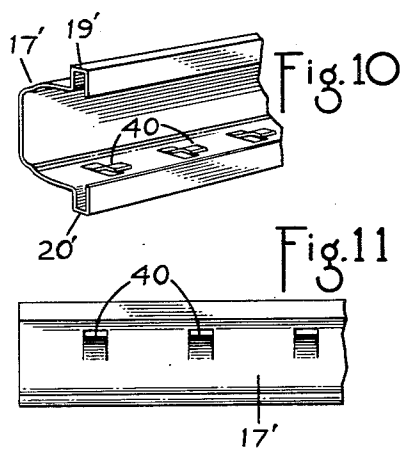
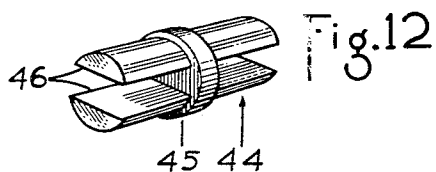
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CONTINUOUS ELECTRIC SOCKET CONSTRUCTIONS

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6 Claims. (Cl. 339—21)

This invention relates to continuous electric socket constructions.

The invention is more particularly concerned with an electric outlet or socket construction which is continuous in the sense that it is adapted to extend continuously around the four walls of a room and provides for plugging in of a male member at any point throughout its length.

A primary object of the invention is to provide a continuous or elongated electric outlet or socket construction which is particularly characterized in a normal substantial concealment of the electric current conducting contact members by yieldable means which readily permit insertion of the prongs of a plug into contact with said members at any desired point throughout the length of the socket construction.

A further object of the invention is to provide a novel connector element for removably connecting adjacent ends of elongated electric outlet or socket constructions of the general character above referred to.

Other objects and advantages of the invention will become apparent in the course of the following detailed description, taken in connection with the accompanying drawings, wherein—

Fig. 1 is a perspective view of an elongated section of an electric outlet structure in accordance with one embodiment of the invention and wherein the cooperating elements are shown in end elevation.

Fig. 2 is an enlarged transverse sectional view as observed in the plane of line 2—2 on Fig. 3.

Fig. 3 is an enlarged view showing the structure of Fig. 2 in front elevation in the upper half thereof and the lower half in vertical longitudinal section in the plane of line A—A.

Fig. 4 is a horizontal sectional view as observed in the plane of line 4—4 on Fig. 2.

Fig. 5 is an enlarged perspective view of one of the retractible members involved in the construction.

Fig. 6 is a view similar to Fig. 2 but showing a cord plug in operative position.

Fig. 7 is a fragmental elevational view of a modified embodiment of the invention.

Fig. 8 is a transverse vertical sectional view as observed in the plane of line 8—8 on Fig. 7.

Fig. 9 is a sectional view corresponding to Fig. 8 but showing a cord plug in operative position.

Fig. 10 is a fragmentary perspective view of the elongated metal casing.

Fig. 11 is a bottom plan view of the casing and which, together with Fig. 10, are on a reduced scale.

Fig. 12 is a perspective view of a connector element embodied in the structure of Figs. 7 to 11.

Referring now in detail to the drawings and first to Figs. 1 to 6, thereof, 10 designates an elongated body which may constitute a baseboard whereby the structure may encircle a room adjacent the floor. The structure may, however, be embodied in an elongated section for any particular adaptation. The above referred to body

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10 may be constructed of any desired material but same is preferably constructed from plastic as indicated.

The body 10 comprises upper and lower horizontal flanges 11 and 12 and a generally U-shaped intermediate portion 13 providing an outwardly opening recess 14. The body 10 at the juncture of flanges 11 and 12 with the intermediate portion 13 is provided with upper and lower horizontal recesses 15 and 16 which open inwardly toward the intermediate horizontal plane of the body 10.

Disposed within the body 10 is a continuous metallic casing 17 including a rearwardly projecting cupped portion 18 and upper and lower forward channel portions 19 and 20 whose base portions are seated in the recesses 15 and 16.

Disposed within the metallic casing 17 is a continuous body member 21 preferably of plastic construction as indicated and same includes three outwardly projecting flanges, an upper flange 22, a lower flange 23, and an intermediate flange 24.

The intermediate flange 24 is provided with a vertical head 25 which projects equally above and below the flange and is in vertical alignment with the channels 19 and 20.

The flanges 22, 23 and 24 together with the base of body member 21 and the head 25 provide upper and lower elongated chambers 26 and 27 which open forwardly between the flanges 22 and 23 and the upper and lower edges of the head 25.

A continuous electric contact metallic spring strip 28 is disposed within each of the chambers 26 and 27 and each such strip includes a transversely arcuate plug prong engageable portion 29 which normally engages a respective flange 22, 23.

Cooperating with the head 25 and vertically aligned therewith are upper and lower series of elements 30 whose adjacent edges and the opposite edges of head 25 provide continuous upper and lower plug prong admission slots 31 and 32.

The elements 30 of each series thereof are provided with cooperating vertically disposed tongues and grooves 33, 34 respectively whereby the elements are individually movable toward and from the respective edges of head 25.

The elements 30 of each series thereof are jointly yieldably urged toward the respective edge of head 25 by a corrugated leaf spring 35 disposed in the bottom of each channel 19, 20.

With this construction, the prongs P (Fig. 6) may be admitted through the normally substantially closed slots 31, 32 at any desired point lengthwise of the structure due to the yieldable action of the elements 30 and upon insertion of the plug the prongs P thereof will engage the contact portions 29 of the contact strips 28 and urge same inwardly as indicated in Fig. 6.

In the modified construction of Figs. 7 to 12, the individually movable elements 30 are omitted and all parts entering into the construction are continuous. This embodiment of the invention also includes a body 10' having upper and lower flanges 11' and 12' and a generally U-shaped intermediate portion 13' providing an outwardly opening recess 14'.

This structure also includes a continuous metallic casing 17' having upper and lower channels 19' and 20'. In this embodiment, however, the casing 17' is provided with upper and lower longitudinal series of struck-out spring tongues 40.

The body member 21' is similar to the body member 21 of the first form but the sides or upper and lower flanges 22', 23' are yieldable and are engaged by the tongues 40 which normally urge the adjacent edges of head portions 41, 42 toward opposite edges of the head 25' on the intermediate flange 24'. The heads 41, 42 have extended upper and lower edges 41^a, 41^b which

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loosely ride in the channels 19', 20'. Otherwise, this modified embodiment of the structure is similar to that of Figs. 1 to 6.

In the use of this modified embodiment the prongs P (Fig. 9) of a cord plug will cause local yielding of the body member flanges 22', 23' with a consequent movement of heads 41, 42 within the channels 19' and 20'.

In order to connect adjacent ends of sections of the structure in this embodiment as well as the first embodiment, connecting elements 44 (Fig. 12) are provided. Such connecting elements each comprise a central disk 45 from each opposite side projects upper and lower cylindrical segments 46.

In the use of such elements in effecting connection between adjacent ends of two elongated sections of the structure, a small notch is cut in the end of each section to accommodate the disk 45 which is preferably of plastic construction. The longitudinally extending segments are engaged with the contact strips 28' with the adjacent sections as is indicated in Fig. 9.

Having set forth my invention in accordance with certain specific structural embodiments thereof, what I claim and desire to secure by U. S. Letters Patent is:

1. A continuous electric socket construction comprising an elongated body having inwardly directed upper and lower horizontal flanges and an outwardly opening recess intermediate said flanges, a continuous metallic casing disposed within said body including an inwardly directed cupped portion disposed within said recess and upper and lower channels opening toward each other, a body member disposed within said casing including upper and lower and an intermediate flange projecting outwardly from a base portion seated in the bottom of said cupped casing portion, said intermediate flange having a head in vertical alignment with said channels and including upper and lower plug prong engageable edges defining corresponding edges of continuous prong admitting slots, and yieldable means at the outer edges of

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said upper and lower flanges having portions movably disposed in said channels and other portions cooperating with said head edges and defining the opposite edges of said prong admitting slots which are normally substantially closed.

2. The structure according to claim 1, together with a continuous contact strip disposed within said body member between the intermediate flange thereof and each of the upper and lower flanges, said contact strips having prong engageable arcuate portions normally engaging said upper and lower flanges.

3. The structure according to claim 1, wherein said yieldable means comprise a longitudinal series of independently vertical movable elements in each of said channels, and yieldable means in each channel and engaged with said elements for yieldably urging same toward the respective edges of said head.

4. The structure according to claim 3, wherein said elements have vertical tongue and groove connections between the adjacent ends thereof.

5. The structure according to claim 1, wherein said yieldable means comprise heads on the outer edges of said upper and lower flanges having portions movably disposed within said channels and other portions cooperating with corresponding edges of the head on said intermediate flange, and spring tongues on said metallic casing engaged with said upper and lower flanges.

6. The structure according to claim 1, together with an element including means engageable with opposed ends of a pair of sections of said electric socket construction for effecting connection therebetween.

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