United States Patent

Fremont

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[54] SUSPENDED ELECTRIFIED CEILING SYSTEM

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[73] Assignee: **Halo Lighting Division, a Division of McGraw Edison Company**, Rosemont, Ill.

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[52] **U.S. Cl.** **174/48**, 339/21, 52/39

[51] **Int. Cl.** **H02g 3/04**

[58] **Field of Search** 174/48, 49; 339/20, 21, 22; 52/28, 39, 221, 495, 656

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Primary Examiner—Thomas J. Kozma
Assistant Examiner—D. A. Tone
Attorney—Max R. Kraus

[57] **ABSTRACT**

A suspended ceiling system formed of an electrified or power track combined with inverted T-shaped members and other components to support panels which combine to form a suspended ceiling and whereby the electrified track permits the installation and connection thereto of various different types of lighting units at any point on the track surface.

28 Claims, 18 Drawing Figures

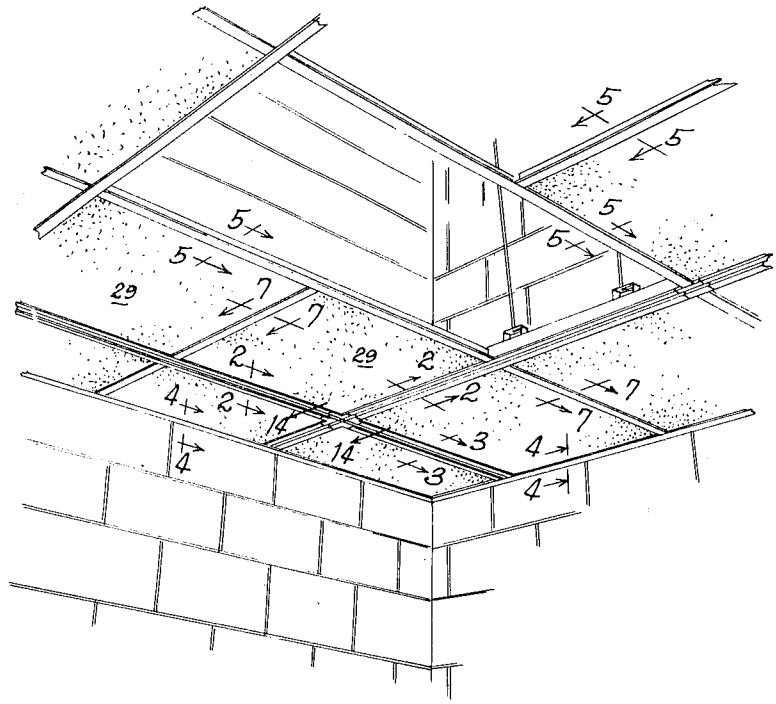


FIG. 1

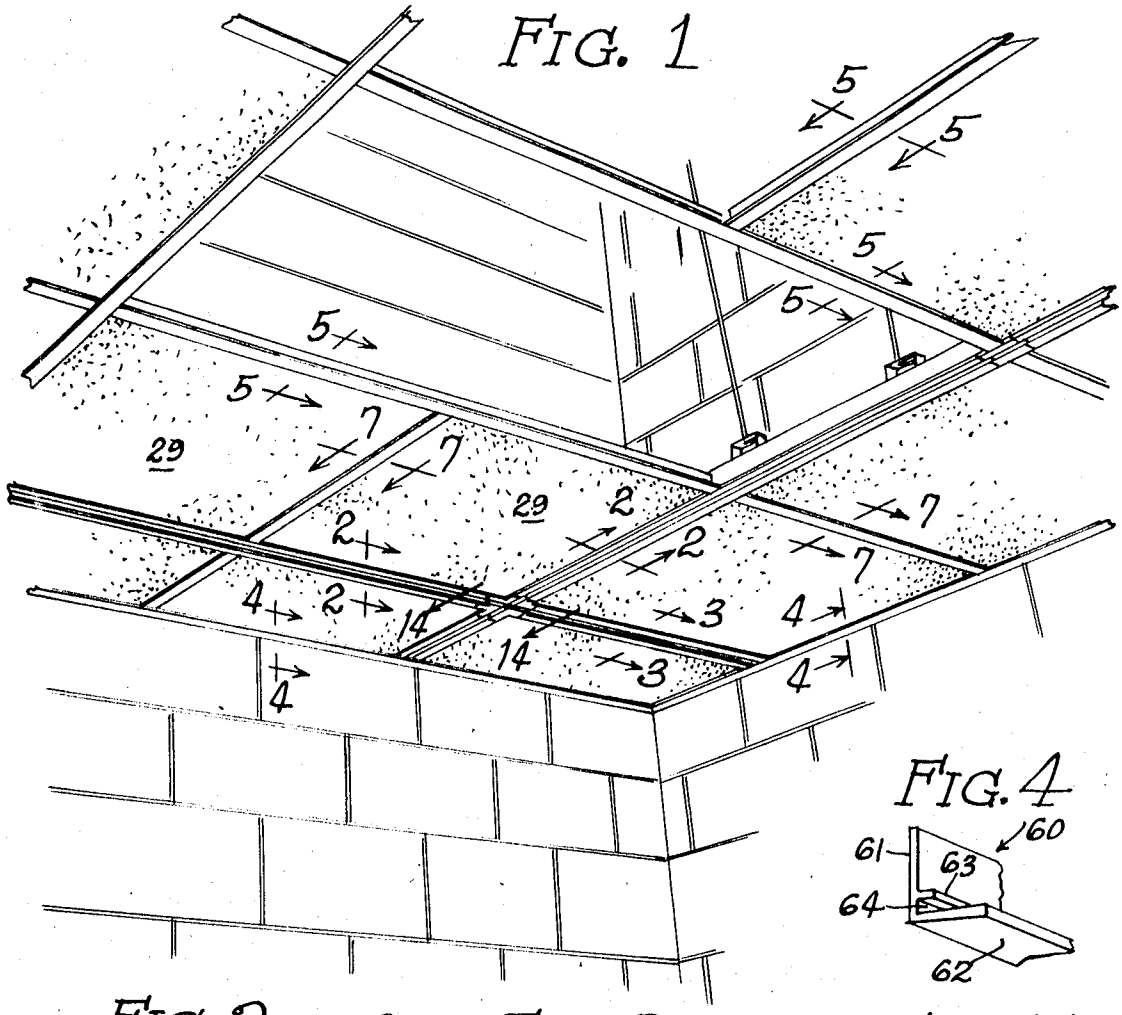


FIG. 4

FIG. 2

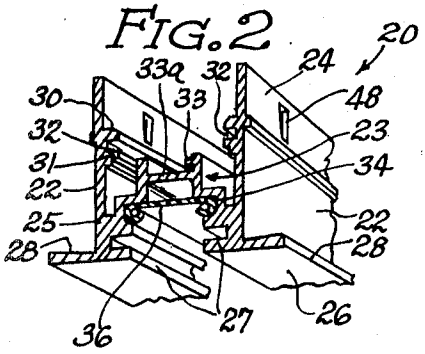


FIG. 3

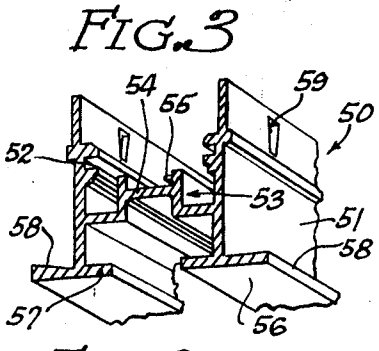


FIG. 4A

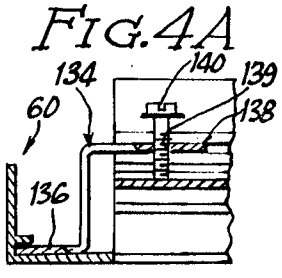


FIG. 5

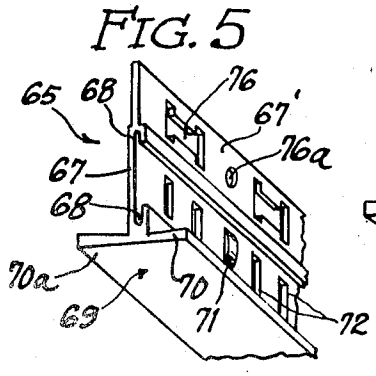


FIG. 6

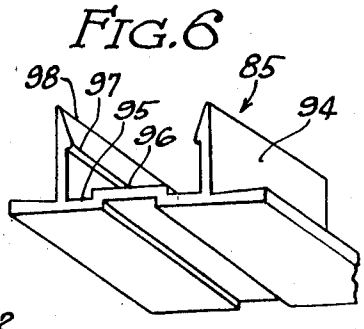
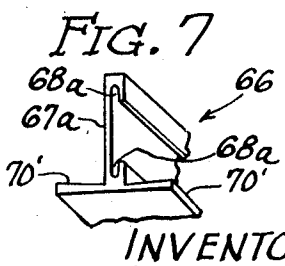


FIG. 7



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FIG. 8

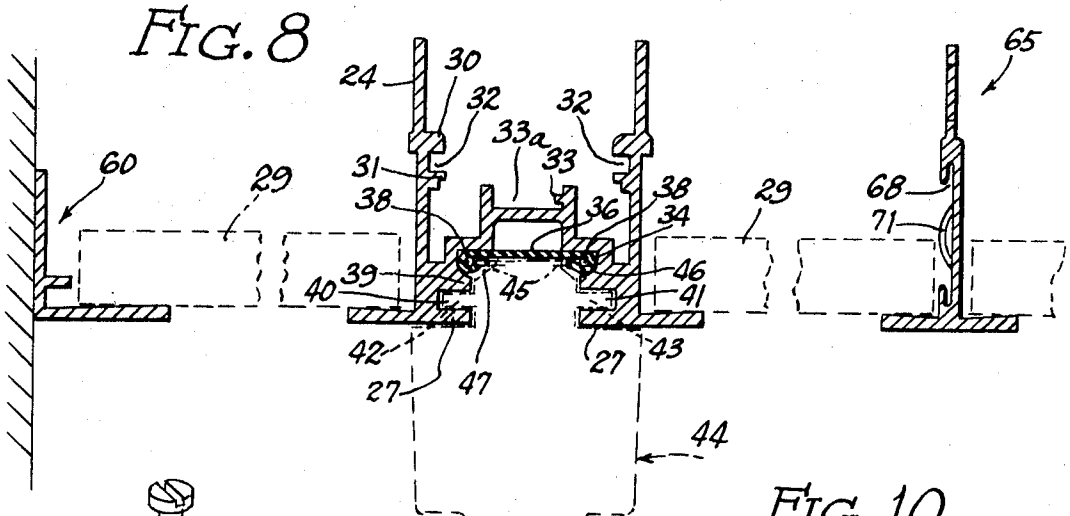
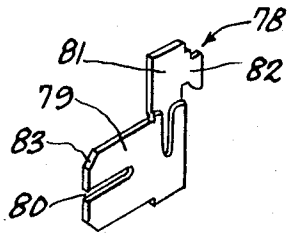


FIG. 10



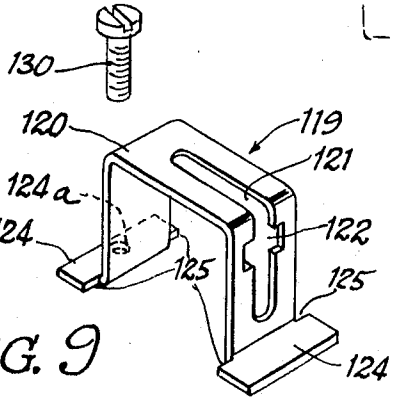


FIG. 9

FIG. 11

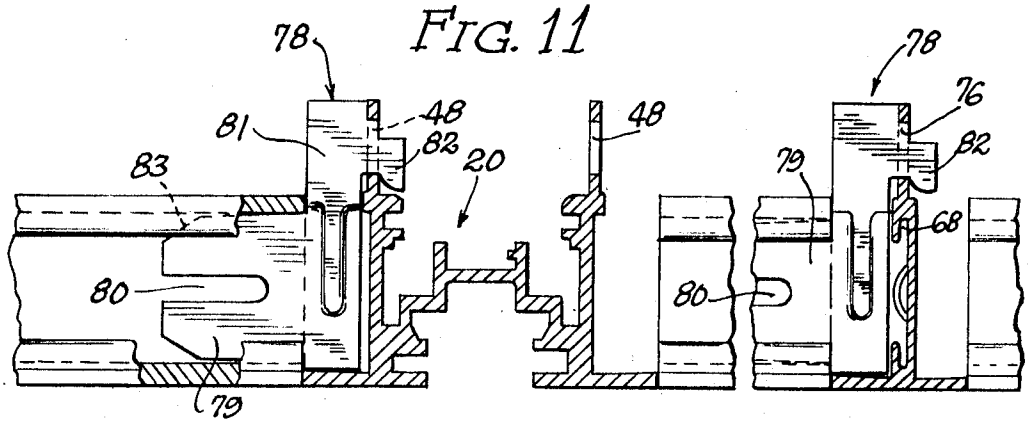


FIG. 13

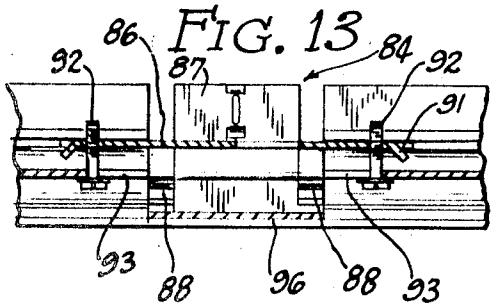


FIG. 12

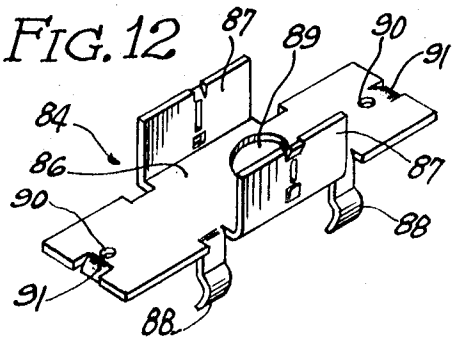


FIG. 14

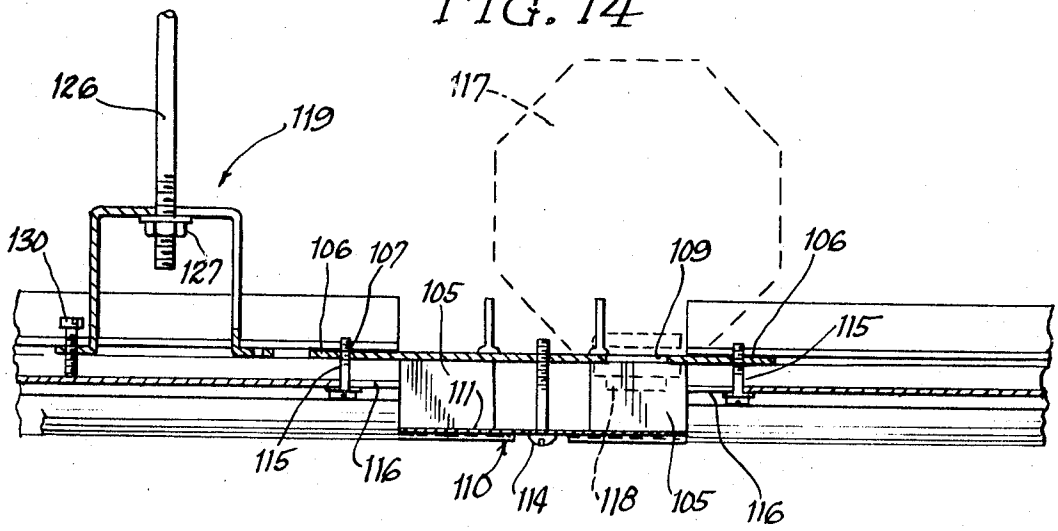


FIG. 15

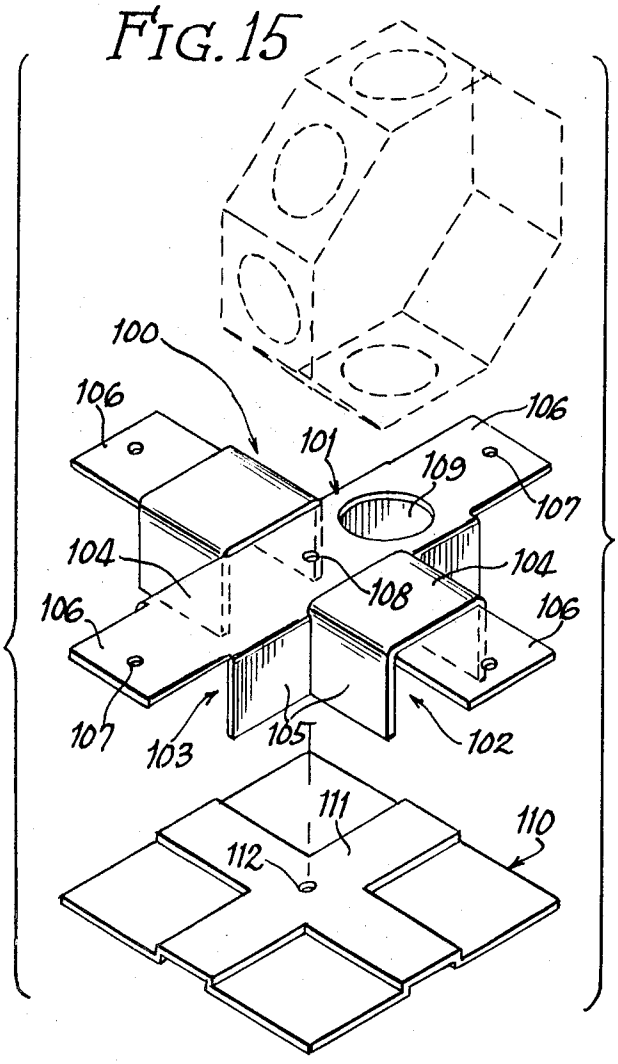


FIG. 16

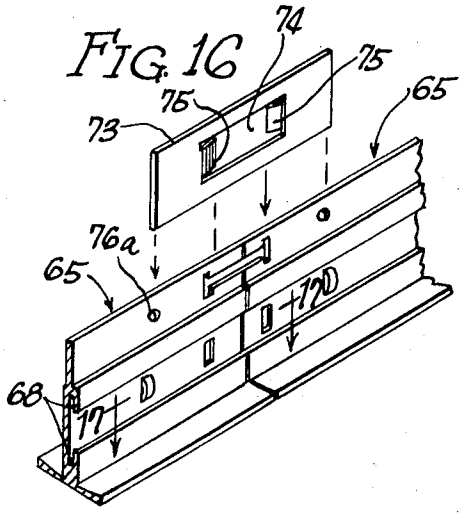
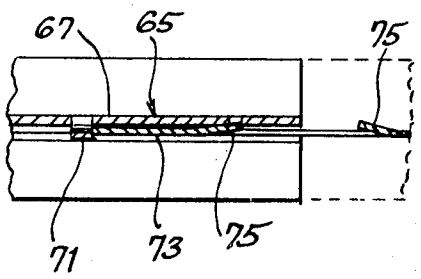


FIG. 17



SUSPENDED ELECTRIFIED CEILING SYSTEM

BRIEF SUMMARY OF THE INVENTION

An object of this invention is to provide a framework for a suspended ceiling which supports panels and the like forming the body of the ceiling structure, which framework includes an electrified or power track permitting the installation of various lighting units at any point on the power track surface.

Another object of this invention is to provide a suspended ceiling system with an electrified track or tracks combined with other components, including inverted T-shaped members, all of which are connected to form a framework to support panels thereon which form the ceiling surface.

Another object of this invention is to provide a framework for a suspended ceiling which includes a combination of an electrified track, inverted T-shaped strips, filler channels, and mechanical connectors for connecting same to form a unified skeleton framework for supporting panels which form the ceiling surface.

Another object of this invention is to provide a structure of the foregoing character which is made of prefabricated components and which can be readily assembled and economically installed in a minimum of time at the point of installation and which is very flexible in that the power track and other connecting components are made in various standardized lengths and can be connected to meet the requirements of different sized ceiling dimensions.

Other objects will become apparent as this description progresses.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. **1** is a view of the suspended electrified ceiling system forming this invention.

FIG. **2** is a sectional view taken on line **2—2** of FIG. **1**, showing the power track.

FIG. **3** is a sectional view taken on line **3—3** of FIG. **1**, showing the filler channel.

FIG. **4** is a view taken on line **4—4** of FIG. **1**, showing the wall angle strip which is mounted on the wall and forms the perimeter of the ceiling.

FIG. **4A** is a view showing a bracket for connecting the ends of the power track or filler channel to the angle strip.

FIG. **5** is a T-member taken on line **5—5** of FIG. **1**.

FIG. **6** is a view of the cover which is used to cover the connector shown in FIG. **12**.

FIG. **7** is a view of another type of T-member taken on line **7—7** of FIG. **1**.

FIG. **8** is a view showing a ceiling formed by a combination of the electrified track of FIG. **2** with the T-member of FIG. **5** and the wall angle strip which attaches to the perimeter of the room as own in FIG. **4**.

FIG. **9** is a view of the hanger bracket and locking screw used therewith.

FIG. **10** is a view of the connector clip used for connecting a T-member to the power track and/or filler channel.

FIG. **11** shows the T-members transversely connected to the opposite sidewalls of a power track by the connector clip shown in FIG. **10**.

FIG. **12** is a view of the connector to connect lineally two power tracks or two filler channels or a power track and a filler channel.

FIG. **13** is a side view showing two power tracks connected by the connector of FIG. **12** and the cover of FIG. **6** connected to the connector.

FIG. **14** is a view showing two power tracks connected by the cross connector of FIG. **15** with a junction box positioned on the cross connector.

FIG. **15** is an exploded view of the parts forming the cross connector and a junction box.

FIG. **16** is a view of two T-members abutting end to end and connected by a connector, and

FIG. **17** is a section taken on line **17—17** of FIG. **16**.

POWER TRACK

The track shown in detail in FIG. **2** and centrally in FIG. **8** is indicated generally by the numeral **20** and is hereinafter identified as a power track for it supports the electrical conductors which supply the electrical current to the ceiling system. The lighting units (not shown) which would include down-lights, spotlights, chandeliers, and the like, are mechanically and electrically connected by means of an attachment to the power track at any point or points on the track.

The power track **20** is formed preferably of extruded aluminum, integrally formed, and comprises a pair of vertical spaced side walls **22** connected by a transversely extending crossmember of the configuration best shown in FIG. **2** and generally indicated at **23**. The spaced vertical sidewalls **22** have an upper potion **24** and a lower portion **25** which terminates at the bottom thereof with horizontal flanges **26** which extend inwardly of the sidewall as at **27** and outwardly of the sidewall as at **28**. The outwardly extending portion **28** of the flanges form ledges for supporting ceiling panels **29**, such as tiles, accustical panels, and the like, well known in the art.

The vertical sidewalls **22** each have inwardly extending spaced lips **30** and **31** which define horizontal and longitudinal extending channels **32** for receiving the ends of the connector shown in FIG. **12**. The central upper portion of the crossmember **23** is generally H-shaped in transverse section and has an inwardly extending lip **33** which forms a longitudinal channel **33***a*. The crossmember continues downwardly and outwardly to form a pair of horizontal and longitudinally extending channels **34** which serve to support the insulating strip **36** which carries the electrical conducting wires **38**. The lower inwardly extending lips **39** of the channel **34** also forms the upper portion of a pair of channels **40** and **41** with the bottom flanges **27**.

The channels **40** and **41** receive the supporting ears **42** and **43** of a plug **44** which is connected to the lighting fixture. Channel **41** is wider than channel **40** to receive the ears **42** and **43** of different thicknesses on the attachment member **44** so that the attachment member can be inserted in the channels **40** and **41** in only one manner. Ear **43** is thicker than ear **42**. The attachment member **44** has metal contact fingers **45** extending through the nose of the attachment to make contact with the conducting wires **38**.

The sides of the insulating strip **36** are shaped to form sheaths **46** which envelop most of the conducting wires but leave a space between the lips **47** of the sheath and the wall of the insulating strip to accommodate the contact fingers **45** of the attachment members **44**, as shown n FIG. **8**. The specific construction of the attachment member forms the subject matter of an application to be filed.

The upper portions **24** of the sidewalls **22** are provided with vertically extending slots **48** to receive the rear hook end of connector clips, best shown in FIG. **10**, which connector clips are secured to the T-members of the type shown in FIGS. **5** and **7**, for supporting and connecting the T-members transversely of the power track or to the filler channels of FIG. **3**.

FILLER CHANNEL

The filler channels, best shown in FIG. **3**, generally indicated at **50**, are connected linearly to the power tracks **20** and are used in the system to form and complete the framework for supporting the panels and tiles, as well as to provide support for the power tracks and the T-members which are part of the complete framework. The filler channels are used to occupy the spaces between the power tracks. The filer channel **50** is shaped generally similar to the power track and is made of extruded aluminum. It comprises spaced vertical sidewalls **51** having horizontally and longitudinally extending channels **52** for receiving the ends of the connector shown in FIG. **12**.

A crossmember **53** extends between the sidewalls and the crossmember follows generally the shape of the crossmember **23** of the power track and is shaped to form a horizontally and longitudinally extending top channel **54** with an inwardly ex-

tending lip 55 on one side thereof. The channel 54 is similar to the channel 33*a* of the power track and receives the hanger bracket of FIG. 9. The spaced side walls 51 of the filler channel terminate at the bottom with flanges 56 which extend inwardly as at 57 and outwardly as at 58 to form ledges for supporting the ceiling panels. Spaced slots 59 are formed in the walls, similar to slots 48 and for the same purpose.

WALL ANGLE STRIP

The wall angle strip generally designated at 60 is best shown in FIG. 4 and comprises an extruded aluminum strip having a vertical wall 61 and an inwardly extending flange 62 at right angles thereto which forms the ledge on which the panels rest. An inwardly extending lip 63 spaced from the flange 62 defines a channel 64. The wall angle strip is attached to the perimeter of the room by any suitable fastening means, such as by forming holes in the wall 61 and using screws or nails. The wall angle strip supports the ceiling panels on the flange 62. The wall angle strip 60 is also used to support the ends of the power track and filler channel, as best shown in FIG. 4A, and as will be described subsequently in greater detail.

T-member

The member shown in FIG. 5 and generally indicated at 65, and the member shown in FIG. 7 and generally indicated at 66 are both hereinafter referred to generally as T-members. They are used to support the ceiling panels and are connected transversely to the power tracks 20 and/or the filler channels 50. The T-member 65 of FIG. 5 is of a generally inverted T-shape and comprises a vertically extending wall 67 and inwardly extending lips defining inwardly facing spaced channels 68 extending horizontally and longitudinally. A bottom flange 69 extends on opposite sides of the wall 67 to form opposite ledges 70 and 70*a* for the ceiling panels. The wall 67 adjacent the opposite ends thereof has a locating tongue 71 and vertically extending slots 72 spaced therefrom. The wall 67 has an upper extension 67′ at the upper end. When two T-members 65 are to be connected linearly abutting end to end, as shown in FIG. 16, a locking plate 73 of rectangular shape is inserted in the channels 68 between two adjacent T-members 65. The locking plate has a central opening 74 with ears 75 offset from the plate 73 which enter the slots 72 of the two adjacent T-strips (FIG. 17) to lock the T-members together. The locating tongues 71 limit the inward sliding movement of the locking plates 73 relative to the T-members. The upper extension 67′ of the side wall adjacent its end is provided with H-shaped slots 76 to receive the flanges of the hanger brackets (FIG. 9) for supporting the T-members 65 suspended from the overhead. It is also provided with an opening 76*a* to receive a suspension wire (not shown) that might be used to support the T-members from the overhead.

The T-member 66, best shown in FIG. 7, is shaped in cross section, similar to the T-member 65 previously described, except that it does not have the upper wall extension. It has a vertical wall 67*a*, channels 68*a*, and a flange 69*a* forming opposite facing ledges 70′.

CLIP CONNECTOR FOR TRANSVERSELY CONNECTING T-MEMBERS TO POWER TRACK OR FILLER CHANNEL

The connector clip for attaching the T-members 65 (FIG. 5) and/or the T-members 66 (FIG. 7) transversely to the power track or filler track is best shown in FIG. 10 and is generally designated by the numeral 78. It is shown in attaching position in FIG. 11. The clip 78 has a vertical wall 79 with a longitudinal slot 80 adjacent the front end. An extension 81 extends upwardly of the wall 79 and said extension has a rearwardly extending hook 82. To connect the clip connector to the power track 20 or to the filler channel 50, as shown in FIG. 11, the vertical wall 79 is slid into the end of the channel 68 of the T-member 65 or the channel 68*a* of the T-member 66. The longitudinal slot 80 will permit the wall 79 to compress to permit the tapered front edges 83 to enter the channel, and after it enters the wall 79 will be frictionally held in the channel. The hook 82 of the clip 78 will extend outwardly beyond the end of the T-member and will enter the slot 48 in the power track (FIG. 2) or the slot 59 in the filler channel (FIG. 3) to lock the T-members 65 and/or 66 to the power track 20 and to the filler channel 50.

CONNECTOR FOR CONNECTING POWER TRACKS AND/OR FILLER CHANNELS

The mechanical connector for connecting the power tracks 20 or filler channels 50 linearly is designated generally by the numeral 84 and is best shown in FIG. 12, and the cover therefor is generally designated by the numeral 85 and is best shown in FIG. 6.

The connector 84 is formed of metal and comprises a horizontal bottom wall 86 with centrally positioned spaced vertical sidewalls 87 and downwardly extending spaced fingers 88 extending on both sides of the spaced sidewalls 87. The bottom wall 86 has an enlarged central knockout 89 and is also provided with smaller openings 90 and downwardly extending tongues 91 adjacent the opposite ends. The open opposite ends of the bottom wall 86 are slid into the channels 32 of the power track 20 or the channels 52 of the filler channel 50. The power tracks 20 or filler channels 50 are spaced apart linearly but are connected through the connector 84. A threaded bolt 92 passes through the opening 90 of the connector and through a suitable opening 93 in the transverse wall of the power track and locks the tracks 20 or filler channels 50 to the connector 84. The walls 87 will occupy some of the space between the ends of the tracks. The mechanical connector 84 will also polarize the assembly.

The fingers 88 of the connector extend downwardly to engage the side walls of the cover 85 (FIG. 6). The cover has a pair of spaced vertical side walls 94 connected by a bottom wall 95 which extends laterally of the sidewalls. The bottom wall is centrally offset as at 96. The sidewalls 94 have inwardly extending lips 97 with tapering inner walls 98. The cover 85 is positioned against the fingers 88 of the connector 84 and is pushed upwardly so that the fingers ride past the tapering wall 98 to engage the lips 97 and lock the cover to said connector and thereby cover the area under the connector.

CROSS CONNECTOR (FIG. 15)

FIG. 15 shows the cross connector for connecting the power tracks both linearly and transversely. The cross connector generally indicated at 100 comprises a body member 101 shaped to form a cross in plan with a channel 102 extending transversely of a channel 103, with the said channels intersecting at the centers thereof. The channels 102 and 102 are formed by top walls 104 with downwardly depending sidewalls 105. Extending outwardly beyond the top wall of each of the opposite ends of the channels are extensions 106, each provided with an opening 107 adjacent the ends thereof. An opening 108 is centrally provided at the intersection. An enlarged opening 109 is provided in the top wall which communicates with the interior of channel 103. The channels are closed at their bottom by a square cover plate 110 which has a raised cross portion 111 which fits within the lower open face of the channels 102 and 103 to close the bottom thereof. A small opening 112 is centrally provided in the cover plate.

The extensions 106 of the cross connector are inserted in the ends of the channels 33*a* of the power tracks 20 and in the ends of the channels 54 of the filler channel 50 and the cover plate 110 then closes the bottom of the cross connector. A threaded bolt 114 passes through the alined openings 112 and 108 and secures the parts in locked position. Suitable threaded bolts 115 are passed through the openings 107 in the extensions 106 of the cross connector (FIG. 14) and in the alined openings 116 of the crossmembers of either the power track or filler channel and lock the power tracks and filler channel in a cross arrangement. A conventional octagonal

junction box **117** with knockouts on all sides is positioned against the top of the cross connector, with the enlarged opening **109** of the cross connector alined with a knockout opening of the junction box. A threaded hollow bushing **118** passes through said openings and secures the junction box to the connector by threaded nuts, as shown in FIG. **14**.

HANGER BRACKET

The hanger bracket by which the power track and filler channel are supported in a suspended position is best shown in FIGS. **9** and **14**. The hanger bracket, generally indicated by the numeral **119**, has a inverted U-shaped body **120** with the top and one of the sides having a continuous longitudinal slot **121**, with an intersecting rectangular shaped slot **122**. Extending laterally of the body are flanges **124** which have ends **125** extending beyond the side edges of the U-shaped body. One of the flanges **124** is provided with a threaded opening **124***a* for receiving a locking screw **130**.

The bracket is inserted endwise in the channels **32** of the power track **20** and the channels **52** of the filler channel to engage same. The locking screw **130** is then tightened to engage the surface of the power track or filler channel, as shown in FIG. **14**, to lock the hanger bracket **119** thereto. A hanger rod **126** with a threaded end and a nut **127** thereon is passed through the elongated opening **122**. The upper end of the anger rod is secured to the ceiling of the building structure.

BRACKET FOR CONNECTING ENDS OF POWER TRACK OR FILLER CHANNEL TO ANGLE STRIP (FIG. 4A)

FIG. 4A shows the means for connecting the ends of a power track or filler channel to the angle strip **60**. Said means comprises a generally Z-shaped bracket **134** having a lower flange **136** which is received in the channel **64** of the angle strip. The upper flange **138** has a central opening **139**. The upper flange **138** is inserted in either the ends of channels **32** of the power track or the channels **52** of the filler channel **50** and is locked thereto by a screw **140** extending through the opening **139**, which engages the top wall of either the power track or the filler channel.

PREFERRED LENGTHS

The following are the preferred lengths, although it will be understood that they are by way of illustration to suit most needs.

The power track **20** can come in three lengths of 2, 4 and 8 feet. The filler channel **50** can be a length of 50 inches. The T-member **65** can be a 12 foot length. The T-member **66** can be in two and 4 foot lengths. The wall angle strip **66** can be in 12 foot lengths.

I claim:

1. An electrified suspended ceiling system having a power track formed of a pair of spaced vertical sidewalls connected by a transversely extending crossmember, said power track having an upper trackway and a separate lower trackway positioned below said upper trackway, said lower trackway including an inwardly extending lower flange extending inwardly from said spaced sidewalls and an outwardly extending flange extending outwardly from said spaced sidewalls, said flanges extending on each of the two sidewalls longitudinally of the sidewalls, said transversely extending member positioned above the plane of said inwardly extending flanges, said power track comprising said spaced side walls, said transversely extending crossmember, said upper and lower trackways and said inwardly and outwardly extending flanges being integrally formed, both of said trackways having an open face at the bottom of each and extending the length thereof providing access thereto, said upper trackway supporting a pair of conductors in spaced relation, said lower trackway adapted to support an attachment member for a lighting fixture or the like, with said attachment member having contact means for electrically connecting said attachment member to said pair of conductors in said upper trackway, said outwardly extending flanges adapted to support a ceiling panel, a T-shaped member transversely connected to at least one of said sidewalls of said power track, said T-shaped member having means for supporting a ceiling panel.

2. A structure as set forth in claim **1** having connector means engaging the side wall of said power track and said T-shaped member for connecting said T-shaped member transversely to said power track.

3. A structure as set forth in claim **2** in which the sidewall of the power track has an opening for receiving one end of the connector means for connecting the T-shaped member transversely to said power track, said T-shaped member also having a channel for receiving the other end of said connector means.

4. A structure as set forth in claim **1** having a filler channel connected to said power track, said filler channel having means adapted to support a ceiling panel.

5. A structure as set forth in claim **4** in which a Z-shaped bracket connects the ends of a filler channel to an angle strip which is supported on a wall perimeter.

6. A structure as set forth in claim **1** in which two T-shaped members are connected in abutting relation end to end, said T-shaped members each having a channel, a locking plate secured in said channels to secure the two T-shaped members together.

7. A structure as set forth in claim **6** in which the locking plate has tongues engaging openings in the vertical wall of the T-shaped members.

8. A structure as set forth in claim **1** in which angle strips are adapted to be secured to a wall perimeter, said angle strips having means adapted to support a ceiling panel.

9. A structure as set forth in claim **8** in which a generally Z-shaped bracket connects the ends of a power track to the angle strips.

10. A structure as set forth in claim **1** in which the sidewall of the power track has a slot and in which said T-member has a channel for receiving a connector clip having a hook which engages the slot in the sidewall of power track for connecting same transversely.

11. A structure as set forth in claim **1** in which the power track has a channel for receiving a connector to connect the power tracks linearly, said connector having means extending from the opposite ends of same insertable in said channels, said connector spacing the adjacent ends of the power tracks from each other.

12. A structure as set forth in claim **1** in which the framework also includes a filler channel, said filler channel having means permitting said filler channel to be connected to said power track and also having means for permitting a T-member to be transversely connected to it.

13. A structure as set forth in claim **1** in which the framework also includes a filler channel and in which the power track and the filler channel each have a pair of spaced channels for receiving the connector to mechanically connect a power track to said filler channel and in which said power track and filler channel each have means for mechanical connection by a T-member transversely thereof.

14. A structure as set forth in claim **1** in which the T-member has a pair of spaced channels vertically alined for receiving a connector connecting the T-member transversely to the power track and in which said spaced channels also at the ends thereof receive a connector strip for connecting two T-members linearly.

15. A structure as set forth in claim **14** in which the vertical wall of the T-member has a tongue which limits the inward movement of said connector strip and in which the connector strip has an ear engaging an opening in the vertical wall of the T-member.

16. An electrified suspended ceiling system having a power track supporting a pair of conductors in spaced relation, said track having means adapted to support an attachment member for a lighting fixture or the like, with said attachment member having contact means for electrically connecting said attachment member to said pair of conductors, said power

track having means for supporting a ceiling panel, a first T-shaped member transversely connected to said power track, a second T-shaped member connected to said first T-shaped member in abutting relation end to end, said T-shaped members each having a channel, a locking plate secured in said channels and said locking plate having tongues engaging openings in the vertical wall of said T-shaped members to secure said first and second T-shaped members together, said T-shaped members having means for supporting a ceiling panel.

17. A suspended ceiling framework comprising a plurality of power tracks having panel supporting ledges, a pair of electrical conductors supported by said power tracks, said power tracks each having a channel for receiving a connector to connect the power tracks linearly, said connector having means extending from the opposite ends of same insertable in said channels, said connector spacing the adjacent ends of the power tracks from each other, another connector, and an inverted T-shaped member transversely connected to said power track by said other connector.

18. A structure as set forth in claim 17 in which at least one of said plurality of power tracks has means for receiving a generally U-shaped hanger bracket having flanges engaging said means to connect said bracket to said means, and a hanger member engaging said hanger bracket for holding said power track in a suspended position.

19. An electrified suspended ceiling system having a power track supporting a pair of conductors in spaced relation, said track having means adapted to support an attachment member for a lighting fixture or the like, with said attachment member having contact means for electrically connecting said attachment member to said pair of conductors, said power track having means for supporting a ceiling panel, a T-shaped member transversely connected to said power track, said T-shaped member having means for supporting a ceiling panel, angle strips adapted to be secured to a wall perimeter, said angle strips having means adapted to support a ceiling panel, and a generally Z-shaped bracket connecting the ends of a power track to the angle strip.

20. An electrified suspended ceiling system having a power track supporting a pair of conductors in spaced relation, said track having means adapted to support an attachment member for a lighting fixture or the like, with said attachment member having contact means for electrically connecting said attachment member to said pair of conductors, said power track having means for supporting a ceiling panel, a T-shaped member transversely connected to said power track, said T-shaped member having means for supporting a ceiling panel, a filler channel connected to said power track, said filler channel having means adapted to support a ceiling panel, an angle strip supported on a wall perimeter, and a Z-shaped bracket connecting the end of the filler channel to said angle strip.

21. A suspended ceiling framework comprising a power track having panel supporting ledges, a pair of electrical conductors supported by said power track, a connector, an inverted T-shaped member transversely connected to said power track by said connector, said T-member having a pair of spaced channels vertically alined for receiving said connector for connecting the T-member transversely to the power track and in which said spaced channels also receive at the ends thereof a connector strip for connecting two T-members linearly, the vertical wall of the T-member having a tongue which limits the inward movement of said connector strip and in which the connector strip has an ear engaging an opening in the vertical wall of the T-member.

22. An electrified suspended ceiling system having a power track provided with an upper trackway and a separate lower trackway positioned below said upper trackway, both of said trackways having an open face at the bottom of each and extending the length thereof providing access thereto, said upper trackway supporting a pair of conductors in spaced relation, said lower trackway adapted to support an attachment member for a lighting fixture or the like, with said attachment member having contact means for electrically connecting said attachment member to said pair of conductors in said upper trackway, said power track having means for supporting a ceiling panel, a first T-shaped member transversely connected to said power track and a second T-shaped member connected in abutting relation end to end to said first T-shaped member, said T-shaped members each having a channel, a locking plate secured in said channels to secure said first and second T-members together, said locking plate having tongues engaging openings in the vertical walls of said T-shaped members, said T-shaped members having means for supporting a ceiling panel.

23. An electrified suspended ceiling system having a plurality of power tracks each provided with an upper trackway and a separate lower trackway positioned below said upper trackway, both of said trackways having an open face at the bottom of each and extending the length thereof providing access thereto, said upper trackway supporting a pair of conductors in spaced relation, said lower trackway adapted to support an attachment member for a lighting fixture or the like, with said attachment member having contact means for electrically connecting said attachment member to said pair of conductors in said upper trackway, said power tracks having means for supporting a ceiling panel, a T-shaped member transversely connected to at least one of said power tracks, said T-shaped member having means for supporting a ceiling panel, each said power track having a channel, a connector received in said channels to connect a plurality of power tracks linearly, said connector having means extending from the opposite ends of same insertable in said channels, said connector spacing the adjacent ends of the power tracks from each other.

24. A structure as set forth in claim 23 in which the connector has downwardly extending fingers, a cover plate engaged by said fingers to hold said cover plate below said connector.

25. A structure as set forth in claim 23 in which the power track has a channel, a generally U-shaped hanger bracket having flanges engaging said channel, and a hanger member engaging said hanger bracket for holding said power track in a suspended position.

26. An electrified suspended ceiling system having a power track provided with an upper trackway and a separate lower trackway positioned below said upper trackway, both of said trackways having an open face at the bottom of each and extending the length thereof providing access thereto, said upper trackway supporting a pair of conductors in spaced relation, said lower trackway adapted to support an attachment member for a lighting fixture or the like, with said attachment member having contact means for electrically connecting said attachment member to said pair of conductors in said upper trackway, said power track having means for supporting a ceiling panel, a first T-shaped member, a connector transversely connecting said first T-member to said power track, and a second T-shaped member linearly connected to said first T-shaped member by a connector strip, each said T-member having a pair of spaced channels vertically alined, said connector strip linearly connecting said T-members to each other, said connector strip being received in said spaced channels at the ends thereof, the vertical wall of each said T-member having a tongue which limits the inward movement of said connector strip, said connector strip having an ear engaging an opening in the vertical wall of the T-members, said T-shaped members having means for supporting a ceiling panel.

27. An electrified suspended ceiling system having a power track provided with an upper trackway and a separate lower trackway positioned below said upper trackway, both of said trackways having an open face at the bottom of each and extending the length thereof providing access thereto, said upper trackway supporting a pair of conductors in spaced relation, said lower trackway adapted to support an attachment member for a lighting fixture or the like, with said attachment member having contact means for electrically connecting said attachment member to said pair of conductors in said upper

trackway, said power track having means for supporting a ceiling panel, an angle strip adapted to be secured to a wall perimeter, said angle strip having means adapted to support a ceiling panel, a generally Z-shaped bracket connecting the ends of a power track to said angle strip, a first T-shaped member and a second T-shaped member, said T-shaped members having means for supporting a ceiling panel, said T-shaped members each having a pair of spaced channels vertically alined, a connector received in the channels of said first T-member for transversely connecting said first T-member to said power track, a connector strip received in said channels at the ends thereof for connecting the first and second T-members linearly.

28. An electrified suspended ceiling system having a power track provided with an upper trackway and a separate lower trackway positioned below said upper trackway, both of said trackways having an open face at the bottom of each and extending the length thereof providing access thereto, said upper trackway supporting a pair of conductors in spaced relation, said lower trackway adapted to support an attachment member for a lighting fixture or the like, with said attachment member having contact means for electrically connecting said attachment member to said pair of conductors in said upper trackway, said power track having means for supporting a ceiling panel, and angle strip supported on a wall perimeter, a filler channel connected to said power track, said filler channel having means adapted to support a ceiling panel, a Z-shaped bracket connecting the ends of a filler channel to said angle strip, a T-shaped member transversely connected to said power track, said T-shaped member having means for supporting a ceiling panel.

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