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[54] **HANGER FOR LIGHTING FIXTURES**

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Related U.S. Application Data

[63] Continuation of Ser. No. 236,706, March 21, 1972, abandoned.

[52] **U.S. Cl.** **248/342,** 52/39, 248/228, 248/317

[51] **Int. Cl.** **F16b 1/00**

[58] **Field of Search** 248/228, 342, 343, 248/300, 317, 72; 52/484, 485, 39

[56] **References Cited**

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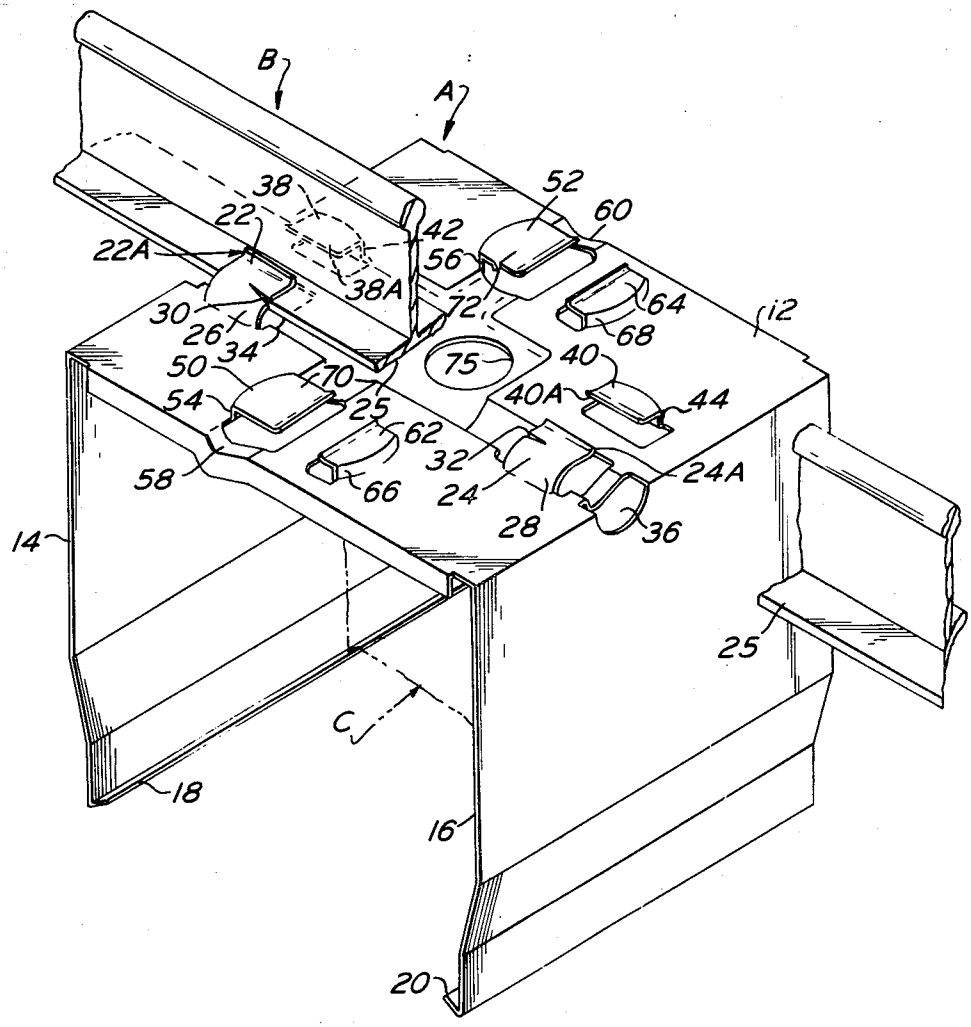
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Attorney—Stanley Bilker

[57] **ABSTRACT**

A hanger for supporting lighting fixtures from inverted T-bars of a suspended ceiling includes an inverted U-shaped member with a flat central portion and depending legs. Pairs of spaced tabs are struck from the central portion and extend in a plane thereabove facing in the same direction. Integrally struck clips face opposite the tabs and are spaced therefrom by a distance such that the width of the T-bar flange can be accommodated between the lips of the clips and the rear wall of the tabs. Arcuate depressions below the tabs and coextensive with the dimension across the hanger allow the hanger to be pivoted about the T-bar flange and then slidably interlocked under the clips by detents.

15 Claims, 4 Drawing Figures



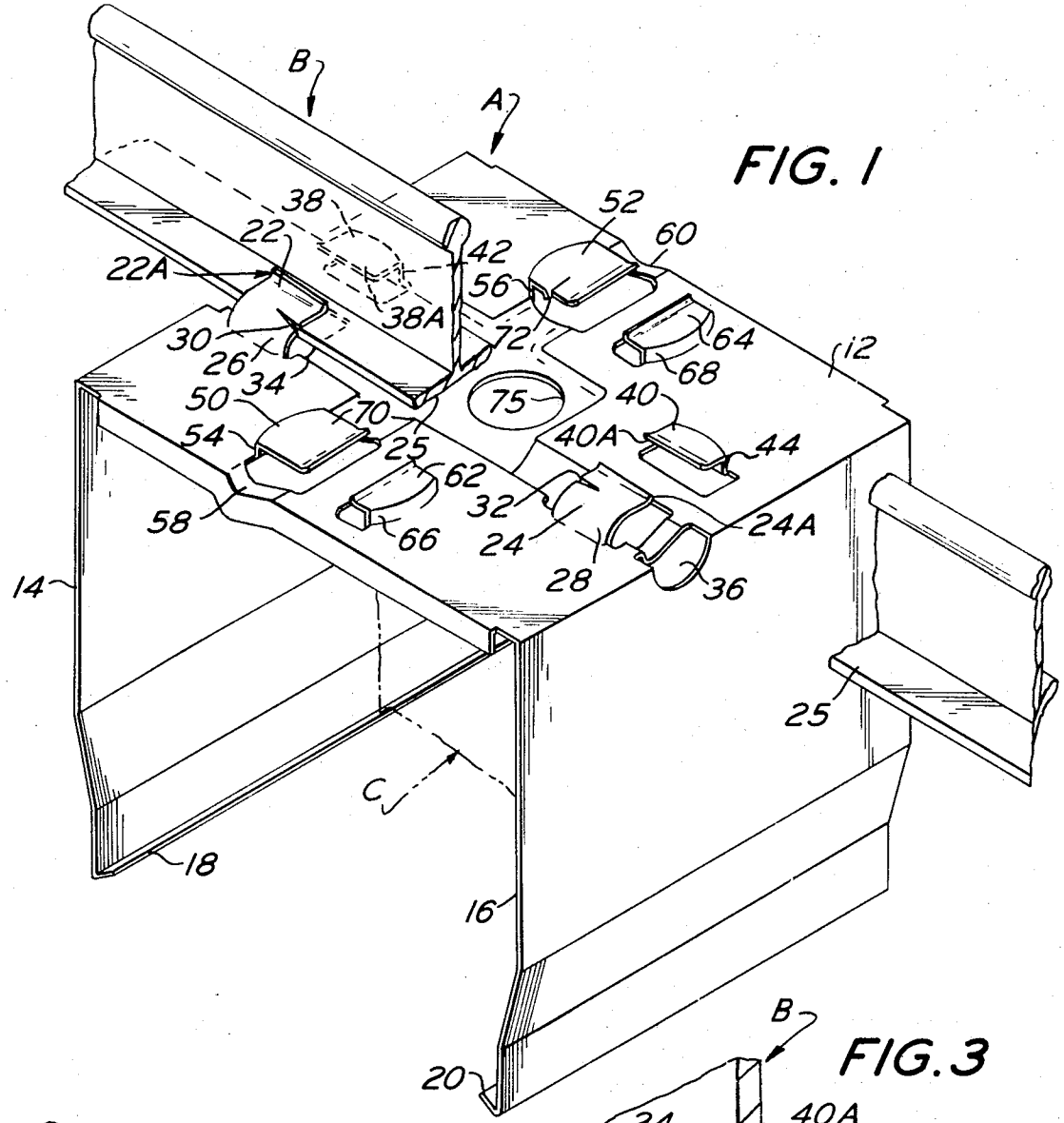


FIG. 1

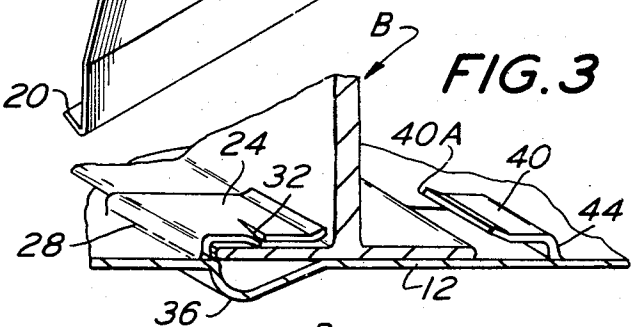


FIG. 3

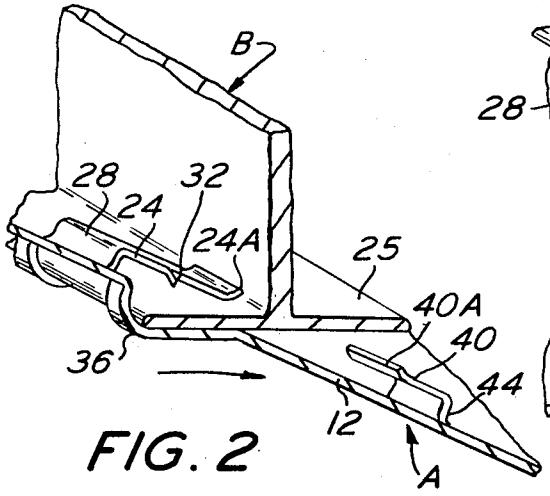


FIG. 2

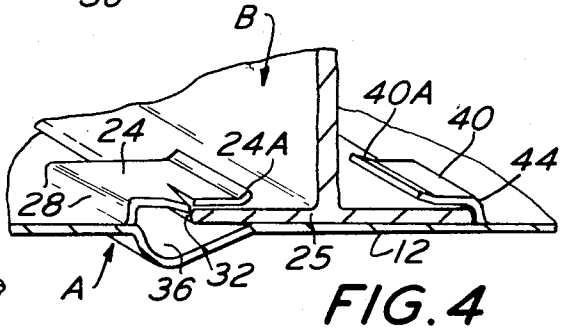


FIG. 4

HANGER FOR LIGHTING FIXTURES

This is a continuation of application Ser. No. 236,706, filed Mar. 21, 1972 now abandoned.

This invention relates to hangers for lighting fixtures, and more particularly relates to a hanger for supporting lighting fixtures in either perpendicular or parallel disposition from inverted T-bars of a suspension ceiling.

In recent years, it has become conventional to utilize dropped ceilings in both commercial and factory buildings as well as in the home wherein panels or tiles are peripherally supported within inverted T-bars so arranged as to form a rectangular grid. The electrical lighting fixtures are also supported or suspended in either flush or drop-mounted disposition from the ceiling by use of hangers which are adapted to snap or interlock onto the horizontal flange of the inverted T-bars. It is desirable to mount these lighting fixtures, especially those of the elongate type, in either perpendicular or parallel disposition with respect to the T-bars without the use of special tools, bolts, screws or other fasteners and allow their attachment to or detachmnet from the ceiling grid by either skilled or unskilled people.

It is therefore an object of this invention to provide a hanger for supporting lighting fixtures from inverted T-bars of suspended ceilings.

Another object of this invention is to provide a lighting fixture hanger which may easily be coupled to or detached from dropped ceiling T-bars without the use of special tools, bolts, screws or other separate fasteners.

Yet another object of this invention is to provide a lighting fixture hanger which may be used singly to support a fixture at its center of gravity without being subject to unintentional disengagement from the ceiling grid.

Still another object of this invention is to provide a hanger for detachably attaching elongated lighting fixtures upon dropped ceiling T-bars in either perpendicular or parallel disposition with respect thereto.

Other objects of this invention are to provide an improved device of the character described which is easily and economically produced, sturdy in construction, and both highly efficient and effective in operation.

With the above and related objects in view, this invention consists of the details of construction and combination of elements as will be more fully understood from the following detailed description when read in conjunction with the accompanying drawing in which:

FIG. 1 is a perspective view of a T-bar suspension lighting fixture hanger embodying this invention.

FIG. 2 is a fragmentary perspective view showing the first step in attaching the lighting fixture hanger to the T-bar flange.

FIG. 3 is a fragmentary perspective view showing the second step in the hanger attachment procedure.

FIG. 4 is a fragmentary perspective view showing the third step in the attachment procedure.

Referring now in greater detail to the drawing in which similar reference characters refer to similar parts, there is shown a hanger, generally designated as A, for detachable coupling to an inverted T-bar B of a suspension ceiling and adapted to hold a lighting fixture C in either perpendicular or parallel snapped disposition with respect thereto.

The hanger A comprises a single sheet metal stamping, preferably steel, formed into a generally inverted U-shaped configuration including a central portion which is substantially flat and a pair of spaced downwardly depending legs **14** and **16.** The legs **14** and **16** have inwardly turned toe portions **18** and **20** for grasping the lower side edge of the lighting fixture C, the legs being of a shorter length to hold the fixture in flush disposition with respect to the ceiling or of a longer length to suspend the fixture in spaced disposition below the ceiling.

A pair of spaced tabs **22** and **24** are integrally struck from the central portion **12** slightly behind an imaginary line passing through the hanger center. The tabs **22** and **24** include lobes which lie in a plane substantially parallel to the plane of the central portion **12** and spaced thereabove by a distance slightly less than the thickness of horizontal flange **25** of T-bar B. End walls **26** and **28** resiliently connect the respective tabs **22** and **24** to the central portion along a single line so that they face in the same direction.

The free end of each tab has a corresponding inclined lip **22A** and **24A.** Tangs **30** and **32** are formed along one edge of the tabs **22** and **24** and project downwardly from a medial portion thereof. Arcuate depressions **34** and **36** are formed in the central portion **12** immediately below and coextensive with the tabs **22** and **24** along the entire line thereof. A pair of resilient clips **38** and **40** of generally hook-like disposition are also integrally struck from the central portion **12** directly opposite to and facing the tabs **22** and **24.** The horizontal portion of the clips **38** and **40** include ears which lie in a plane parallel to the central portion and are spaced thereabove by a distance slightly less than the thickness of the T-bar flange **25.** Vertical portions **42** and **44** of the respective clips **38** and **40** are on a line slightly forward of the centerline of the hanger and are spaced from the tangs or detents **30** and **32** by a distance exactly equal to the width of the T-bar horizontal flange **25.** Inclined lips **38A** and **40A** are formed on the free edge of the clips **38** and **40,** and the lip edges are spaced from the rear walls **26** and **28** of the respective tabs **22** and **24** by a distance slightly greater than the width of the T-bar flange **25.**

As may be seen, the pair of tabs **22** and **24** coupled with the pair of clips **38** and **40** are adapted to grip a T-bar perpendicular to the elongated lighting fixture C. The hanger A is first tilted as shown in FIG. **2** and the tabs **22** and **24** are inserted over one side of the T-bar flange **25,** the latter being directed into the depressions **34** and **36.** The hanger A is then pivoted until the T-bar flange seats down flat upon the central portion **12** in front of the clips **38** and **40.** Next, the flange **25** of the T-bar is slid under the lips **38A** and **40A** and in abutment with the vertical portions **42** and **44** of the clips. Tangs **30** and **32** now fall off and engage the opposite edge of the flange **25** to resiliently lock the hanger in place on the inverted T-bar.

In order to suspend the lighting fixture C in parallel disposition with respect to the T-bar B, a pair of spaced tabs **50** and **52** are oriented along a line perpendicular to the tabs **22** and **24** and slightly behind the axis of symmetry of the hanger. The tabs **50** and **52** are resiliently coupled to the central portion **12** by rear walls **54** and **56** and both face the leg **16.** Arcuate wells **58** and **60** define a linear depression across the central section immediately below and coextensive with the tabs **50**

and **52.** Clips **62** and **64** extend above the central section **12** by means of vertical portions **66** and **68** and face the tabs **50** and **52.** The edge of the clip lips are spaced from rear wall of the tabs **50** and **52** by a distance slightly greater than the width of flange **25.** Tangs or detents **70** and **72** are struck downwardly from the tabs **50** and **52** such that the distance between the tangs and the vertical portions **66** and **68** is exactly equal to the width of the flange **25.** Thus, they are adapted to detachably snap engage upon the flange **25** in a manner hereinbefore described, but to hold the lighting fixture C in parallel disposition with respect to the T-bar.

A central hole **75** is formed in the exact center of the central portion **12** in order to permit the hanger to be secured by way of a conventional tubular mounting bracket (not shown).

Although this invention has been described in considerable detail, such description is intended as being illustrative rather than limiting, since the invention may be variously embodied and the scope of the invention is to be determined as claimed.

What is claimed is:

1. A hanger for supporting a lighting fixture from an inverted T-bar of suspended ceilings comprising:

a generally inverted U-shaped member formed from a single sheet metal stamping including a substantially flat central portion having downwardly depending spaced legs for grasping the lighting fixture therebetween,

a pair of spaced generally flat resilient tabs integrally struck from the central portion and lying in a plane spaced thereabove by a distance corresponding substantially to the thickness of the T-bar horizontal flange, said tabs facing in the same direction along a line defined by respective end walls connecting the tabs to the central portion,

an arcuate depression formed in the central portion immediately below the tabs and coextensive with the central portion along the line thereof,

a resilient clip integrally struck from the central portion facing in a direction opposite from the tabs and including a horizontal portion lying in a plane spaced above the central portion by a distance corresponding substantially to the thickness of the T-bar flange, a vertical portion connecting the clip to the central portion, and an inclined lip on the free edge of the horizontal portion spaced from the end walls of the tabs by a distance at least slightly greater than the width of the T-bar flange, and

detent means on said central portion spaced from the vertical portion of the clip by a distance substantially equal to the width of the T-bar flange.

2. The hanger of claim **1** wherein said detent means comprises tangs downwardly projecting from each of said tabs.

3. The hanger of claim **2** wherein one clip is disposed opposite each of said tabs.

4. The hanger of claim **3** wherein said tabs and said clips are disposed for mounting the lighting fixture parallel to the line of the T-bar.

5. The hanger of claim **3** wherein the tabs and the clips are disposed for mounting the lighting fixture perpendicular to the line of the T-bar.

6. A hanger for supporting a lighting fixture from an inverted T-bar of a suspended ceiling comprising:

a generally inverted U-shaped member formed from a single sheet metal stamping including a substantially flat central portion having downwardly depending spaced legs for grasping the lighting fixture therebetween,

a pair of spaced generally flat tabs integrally struck from the central portion and lying in a plane spaced thereabove by a distance corresponding substantially to the thickness of the T-bar horizontal flange, said tabs facing in the same direction along a line defined by respective end walls connecting the tabs to the central portion,

a generally arcuate depression formed in the central portion immediately below the tabs and coextensive with the central portion along the line of said tabs,

at least one clip integrally struck from the central portion and facing in a direction opposite the tabs, each said clip including a horizontal portion lying in a plane spaced above the central portion by a distance corresponding substantially to the thickness of the T-bar flange, a vertical portion connecting the horizontal portion to the central portion, and a lip on the free edge of the horizontal portion spaced from the end walls of the tabs by a distance greater than the width of the T-bar flange, and

means constituting a detent associated with said tabs and spaced from the vertical portion of each clip by a distance substantially equal to the width of the T-bar flange.

7. The hanger of claim **6** wherein one clip is disposed opposite each of said tabs.

8. The hanger of claim **7** including a second pair of spaced generally flat tabs integrally struck from the central portion and lying in a plane spaced thereabove by a distance corresponding substantially to the thicnkness of the T-bar, said second pair of tabs facing in the same direction along a line defined by respective end walls disposed perpendicular to the line of said first pair of tabs, and a substantially arcuate depression formed in the central portion immediately below said second pair of tabs and coextensive with the central portion along the line of said second pair of tabs, a second pair of clips integrally struck from the central portion and facing in a direction opposite said second pair of tabs, said second pair of clips each including a horizontal portion lying in a plane spaced above the central portion by a distance corresponding substantially to the thickness of the T-bar flange, and a vertical portion connecting the clips of said second pair to the central portion, said second pair of clips having lips on the free edge thereof spaced from the end walls of said second pair of tabs by a distance greater than the width of the T-bar flange, and means constituting detents associated with said second pair of tabs whereby either parallel or perpendicular mounting of the lighting fixture with respect to the T-bar may be effected.

9. The hanger of claim **8** wherein wherein each of said means constituting a detent comprises a tang integrally struck from and projecting under each said tab.

10. A hanger for supporting a lighting fixture from an inverted T-bar of a suspended ceiling comprising:

a generally U-shaped member formed from a single sheet metal stamping including a central portion having downwardly depending spaced legs for grasping the lighting fixture therebetween,

a pair of spaced tabs integral with the central portion, each tab including an upstanding portion and a lobe cantilevered therefrom, said lobes facing in

the same direction along a line defined by the upstanding portions and spaced above the central portion by a distance corresponding substantially to the thickness of the T-bar flange,

a depression formed in the central portion below the lobes and coextensive with the central portion along the line of said lobes,

a pair of clips integral with the central portion, each clip including a vertical portion and an ear cantilevered therefrom, said ears facing in a direction opposite from the lobes along a line defined by the vertical portions and spaced above the central portion by a distance corresponding substantially to the thickness of the T-bar flange, the clip ears having lips spaced from the upstanding portions of said tabs by a distance greater than the width of the T-bar flange, and

detent means associated with the central portion and spaced from the vertical portion of the clips by a distance substantially equal to the width of the T-bar flange whereby pivoting the hanger with one side of the T-bar flange engaged under the tabs and then sliding the hanger until the other side of the T-bar flange abuts against the vertical portions of the clips effects locking engagement of said detent means.

11. The hanger of claim **10** wherein said tabs and said clips are disposed for mounting the lighting fixture parallel to the line of the T-bar.

12. The hanger of claim **10** wherein said tabs and said clips are disposed for mounting the lighting fixture perpendicular to the line of the T-bar.

13. The hanger of claim **10** including a second pair of spaced tabs integrally formed with the central portion and having upstanding portions lying along a line perpendicular to the line of said first pair of tabs, said second pair of tabs including lobes cantilevered from the upstanding portions thereof and facing in the same direction in spaced disposition above the central portion by a distance corresponding substantially to the thickness of the T-bar flange, a depression underlying said second pair of tabs formed coextensive with said central portion along the line of said second pair of tabs, a second pair of clips integrally formed with the central portion and including vertical portions and ears cantilevered therefrom facing in a direction opposite said lobes of said second pair of tabs, the ears of said second pair of clips being spaced above the central portion by a distance corresponding to the thickness of the T-bar flange, and having lips spaced from the upstanding portions of said second pair of tabs by a distance greater than the width of the T-bar flange, and second detent means associated with said second pair of tabs and spaced from the vertical portion of said second pair of clips by a distance substantially equal to the width of the T-bar flange whereby parallel or perpendicular mounting of the lighting fixture with respect to the T-bar may be effected.

14. The hanger of claim **13** wherein said detent means comprises tangs downwardly projecting from each of said tabs.

15. A hanger for supporting a lighting fixture from an inverted T-bar of a suspended ceiling comprising:

a generally U-shaped member formed from a single sheet metal stamping including a central portion having downwardly depending legs for grasping the lighting fixture therebetween,

a tab integral with the central portion and including an upstanding portion and a lobe cantilevered therefrom in spaced disposition above the central portion by a distance corresponding substantially to the thickness of the T-bar flange,

a depression formed in the central portion below said lobe and coextensive with the central portion along the line of the lobe,

a clip integral with the central portion and including a vertical portion and an ear cantilevered therefrom, said ear facing in a direction opposite from said lobe and being spaced above the central portion by a distance corresponding substantially to the thickness of the T-bar flange, the clip ear having a lip spaced from the upstanding portion of said tab by a distance greater than the width of the T-bar flange, and

detent means associated with said tab and spaced from the vertical portion of said clip by a distance substantially equal to the width of the T-bar flange whereby hooking one side of the T-bar under the tab and pivoting the hanger until the flange abuts the upper surface of the central portion followed by sliding the hanger until the other side of the T-bar flange abuts the vertical portion of the clip effects locking by said detent means.

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