

[54] **SUPPORT BAR FOR SUSPENDED CEILING LIGHT FIXTURE**

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[22] Filed: **Mar. 22, 1972**

[21] Appl. No.: **237,052**

[52] U.S. Cl. **248/214, 52/28, 248/343**

[51] Int. Cl. **F21r 3/02**

[58] Field of Search **248/214, 215, 342, 343, 248/201; 52/28, 484, 488, 39**

[56] **References Cited**
UNITED STATES PATENTS

3,352,071	11/1967	Sutter	52/28
1,924,824	8/1933	Yeager	248/166 X
2,070,150	2/1937	Venzie	52/484 X

3,711,052	1/1973	Hoffman	248/343 X
3,039,729	6/1962	Nagle	248/343
2,939,669	6/1960	Pascucci	248/343

FOREIGN PATENTS OR APPLICATIONS

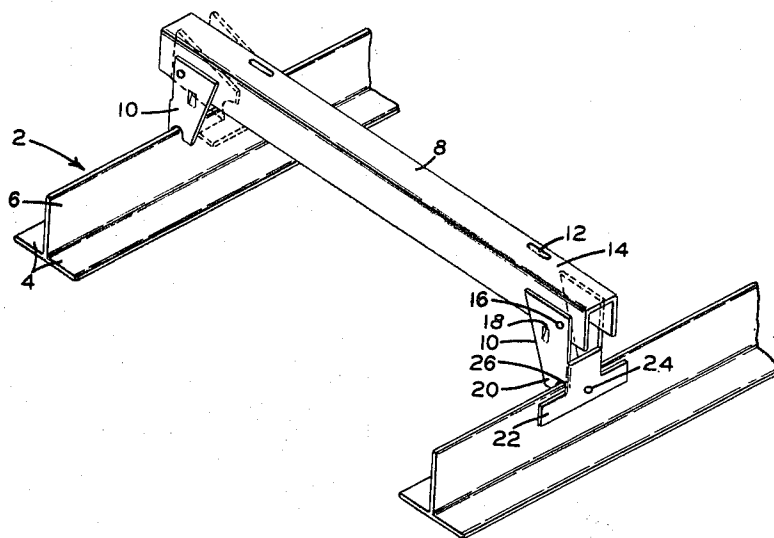
1,413,410	8/1965	France	248/343
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Primary Examiner—J. Franklin Foss

[57] **ABSTRACT**

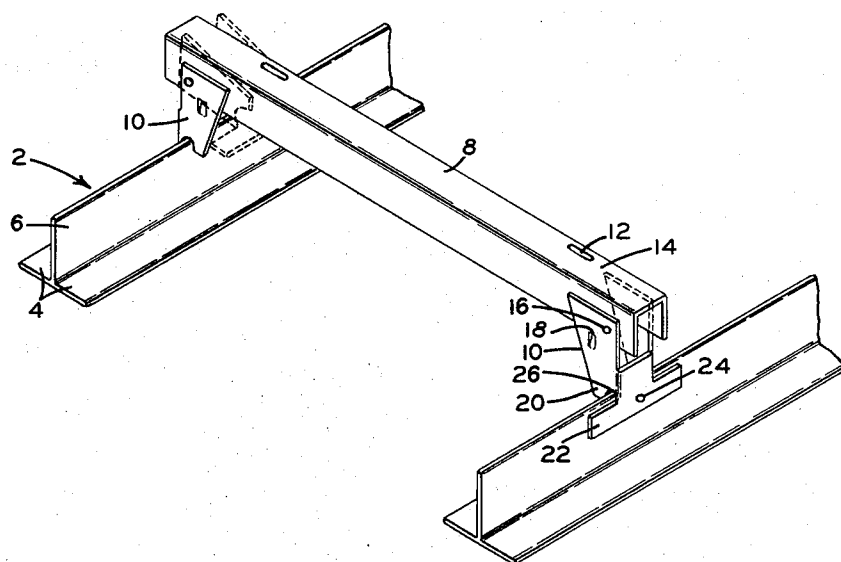
Suspended ceiling systems are provided with light fixtures which are supported by the gridwork of the suspended ceiling system. Herein, a support bar is positioned relative to two adjacent main runner structures of a suspended ceiling system for the purpose of supporting one side of a light fixture. The light fixture is hung from two adjacent support bars which are in turn supported by the main runner portion of the ceiling system.

3 Claims, 1 Drawing Figure



PATENTED MAR 19 1974

3,797,789



SUPPORT BAR FOR SUSPENDED CEILING LIGHT FIXTURE

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention herein is directed to a suspended ceiling system and, more particularly, to a light fixture support bar in a suspended ceiling system.

2. Description of the Prior Art

In U. S. Pat. No. 3,352,071, the conventional cross runner 12 is used to carry the lighting fixture. This is a very typical installation for supporting a light fixture in the ceiling system.

U. S. Pat. No. 3,581,448 is another example of a support structure for holding a light fixture in position in a ceiling assembly.

A number of different structures are available in the art to support a lighting fixture. Herein, there is provided a support bar structure which may be positioned anywhere within the ceiling system to support a light fixture in position. The support bar is carried by the main runner structures and can position the light fixture anywhere within two adjacent main runner structures without having the need to restrict the light fixture placement relative to the placement of the cross runner structures which heretofore have been the basic support structures for the light fixtures.

SUMMARY OF THE INVENTION

Main runner structures are the primary support elements for a suspended ceiling system. A plurality of the main runner structures are placed in a side-by-side relationship, normally spaced 2 feet apart. The light fixture is meant to be positioned between, and extending along, the main runner structures. The invention herein is a support bar which has collapsible legs. The structure is in a collapsed state for shipment, and the legs are extended to their operational position when the support bar is mounted in position. The support bars are formed with ends on the leg structures which permit the support bars to readily engage the vertical web of the main runner structure. This then holds the support bar in position spanning the distance between two main runner structures. Two support bars are positioned between two adjacent main runner structures, and a light fixture is hung from the support bars.

BRIEF DESCRIPTION OF THE DRAWING

The sole FIGURE is a perspective view of the invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The invention herein is used in any conventional ceiling system, for example, that shown in U. S. Pat. No. 3,352,071. The conventional ceiling system is composed of a plurality of main runner structures 2 that travel the full length of the room and are positioned parallel to each other at about 2-foot spacings. A plurality of ceiling boards or translucent lens elements are positioned on the horizontal flanges 4 of the main runner structures. Since the boards and lenses are approximately 4 feet in length, cross runner structures would be provided to support the edges of two adjacent boards or lenses. These cross runner structures are very similar to elements 12 of U. S. Pat. No. 3,352,071.

Since the placement of the cross runner structures is controlled by the board or lens size and, since they are not of great structural strength, it is more convenient to support lighting fixtures from supplemental support elements rather than the cross runner structures.

Herein, is provided a support bar structure for supporting light fixtures in a suspended ceiling system. The support bar structure is positioned to span two adjacent main runner structures 2 and the support bar is carried by the vertical web 6 of the main runner structures 2. In some main runner structures, the vertical web is an H-shape and the support bar structure herein can be used with one leg of the H or with the single leg of the inverted T-shape. In the embodiment shown in the drawing, the support bar is basically composed of a main body structure 8 and two leg assemblies 10.

The main body structure 8 is basically an inverted U-shaped channel structure which is slightly longer than the distance between two adjacent main runner structures 2. Slot structures 12 are provided in the surface 14 of the channel structure. The slots 12 are for use with the light fixture support strap of the above-mentioned copending application.

Each of the leg assemblies 10 is fastened by a pin 16 to the end of the main body structure 8. The pin 16 not only fastens the leg assemblies to the main body structure, but also functions as a pivot point which will permit the leg assemblies 10 to swing relative to the main body structure 8.

The leg assemblies 10 are of basically a modified U-shape. Each leg 20 of the U is roughly triangular in shape. Generally, the base of the triangle is positioned by the side of the main body structure 8 and the pivot pin 16 passes through one corner of the base. Closely adjacent the pivot pin a little lock tab 18 is formed to lock the leg in position. The lock tab is formed by cutting out a piece of metal along three sides from the side legs 20. The tab is formed very similarly to the protuberance 34 of U. S. Pat. No. 3,352,071. When the triangular sides of the leg assemblies 10 are positioned adjacent the main body member 8, the tab is in an ineffective position. Swinging the leg assemblies 10 through 90 degrees relative to the main body structure 8 then permits the tab to pop outwardly from the leg 20 and engage the lower edge of the U of the main body structure 8. This then prevents the leg from moving back towards its collapsed position. Connecting the two side legs 20 of the leg assembly 10 there is a flat metal structure 22. This structure is positioned on one side of the vertical web 6 of a main runner member 2 and is provided with a hole 24 into which a sheet metal screw may be placed to fasten the structure 22 to the vertical web 6 of the main runner structure. This in turn will result in the attachment of the support bar to the main runner structure. At the point where the flat structure 22 engages the triangular legs 20, the triangular legs are provided with a notch structure 26. Into this notch structure 26 is positioned the top of the vertical web 6 of the main runner structure 2. The combination of the notch resting on the vertical web plus the flat structure 22 positioned on one side of the vertical web will hold the support bar in position. The provision of a screw through hole 24 will permanently lock the structures together.

There is now provided a support bar for lighting fixtures which may be shipped in a collapsed state and readily extended to span the distance between two ad-

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jacent main runner structures to support a light fixture therein. On the left side of the showing of the support bar in the drawing, there is shown in dotted line form the leg 20 in its collapsed state. The right side of the support bar of the same drawing shows the leg in its extended state in engagement with the vertical web of a main runner structure.

What is claimed is:

1. The support bar for supporting a light fixture within a suspended ceiling system, the suspended ceiling system being composed of main runner structures which are generally of an inverted T shape with an upwardly extending vertical web, said support bar structure being of a length approximately that of the spacing between two adjacent main runner structures, said support bar having two pivotally-connected legs at the ends of the support bar structure, said pivoted legs having means on the ends of the legs for engaging the top of the vertical web of the main runner structures to support the support bar in position on two adjacent

main runner structures, said legs for the support bar are generally U-shaped with two sides and a connecting part and with the ends of the two sides of the U shape extending on either side of the main body of the support bar, each of the sides at their ends near the connecting part containing a notch which engages only the top of the vertical web of the main runner structure and the connecting part between the two sides of the U-shaped leg being positioned on one side of the vertical web of the main runner structure.

2. The structure of claim 1 wherein there is means to lock the legs in their extended position generally perpendicular to the ends of the main body of the support bar.

3. The structure of claim 2 wherein means are provided on the legs for fastening the legs to the vertical web of the main runner structures to permanently lock the support bar and main runner structure together.

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