

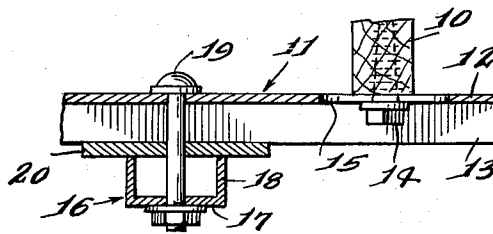
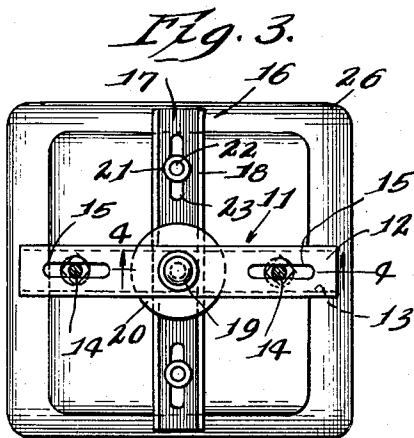
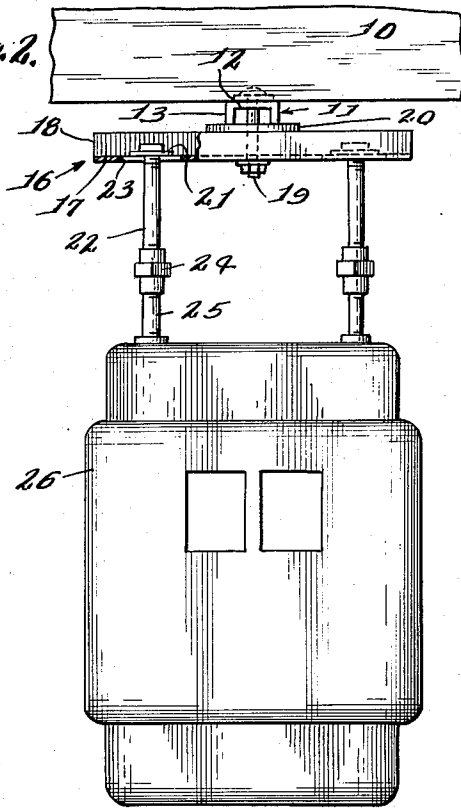
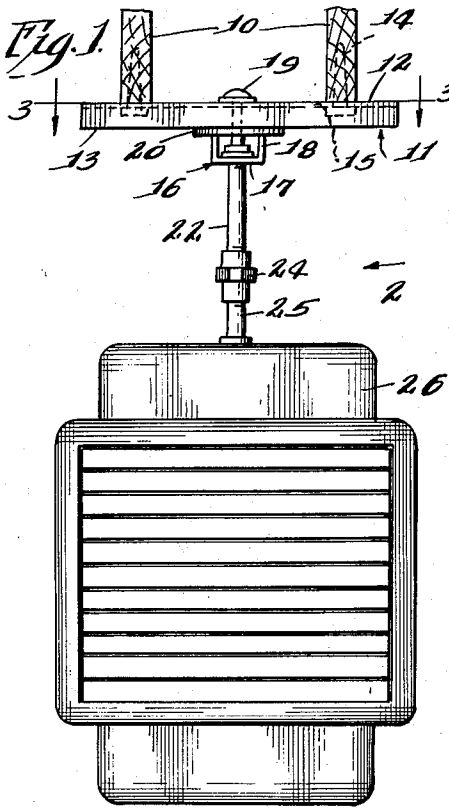
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2,650,056

SUPPORT

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UNITED STATES PATENT OFFICE

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SUPPORT

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4 Claims. (Cl. 248—323)

1

My invention relates to supports and is concerned more particularly with an arrangement for suspending any type of apparatus or other device from the ceiling structure of a building.

While not restricted in any manner, the support is primarily intended for the suspension of various types of heating or ventilating apparatus, such as unit heaters, radiators and blowers. Cardinal requirements of a support for this purpose are that it be capable of satisfying a variety of attaching demands with respect to ceiling structures, particularly as regards joist spacing, that it be adjustable with respect to the suspended structure which, in the case of a heater, for example, enables the hot air issuing therefrom to be directed as desired, and that it be composed of simply shaped, inexpensive members.

It is therefore the principal object of my invention to provide a support which adequately meets the above requirements and is characterized by a material reduction in the number of parts composing the structure.

A further object is to provide a support of the character indicated whose component parts are constructed and related to insure stability and rigidity of the structure in any adjusted position thereof.

The present invention is an improvement over the supporting structure disclosed and claimed in my U. S. Letters Patent No. 2,074,660, dated March 23, 1937.

These and further objects of the invention will be set forth in the following specification, reference being had to the accompanying drawing, and the novel means by which said objects are effectuated will be definitely pointed out in the claims.

In the drawing:

Fig. 1 is an elevation showing my improved support utilized to suspend a unit heater from a ceiling structure.

Fig. 2 is a view looking in the direction of the arrow 2 in Fig. 1.

Figs. 3 and 4 are sections along the lines 3—3 and 4—4 in Figs. 1 and 3, respectively.

Referring to the drawing, the numeral 10 designates a pair of adjacent joists forming part of a typical ceiling structure. Bridged between these joists is a horizontal, channel member 11 comprising a web 12 which abuts the lower edge faces of the joists and depending flanges 13—13. The member 11 is secured to the joists 10 by lag screws 14 which are intended to be representative of any convenient fastening means and whose shanks

2

extend through elongated slots 15 in the web 12 so that the member 11 may be primarily positioned lengthwise with respect to the joists.

Located below the member 11 is a second, horizontal channel member 16 comprising a web 17 and upwardly extending flanges 18—18. The member 16 is swivelly related to and supported by the member 11 through the medium of a bolt 19 which extends through and between intermediate portions of the webs 12 and 17, and the adjacent edges of the flanges 13 and 18 are separated by a plate 20 through which the bolt 19 also extends and which provides bearing contact between the members and facilitates their relative swivelling movements. The diameter of the plate 20 is larger than the width of each member.

Resting on the web 17 on opposite sides of the bolt 19 are disks or flanges 21 into each of which is threaded the upper end of a pipe hanger 22 that extends through an elongated slot 23 in the web 17 and the lower end of each hanger 22 is attached by a coupling 24 to the upper end of a support pipe 25 which is connected to a unit heater 26.

From the foregoing, it will be apparent that the structure is characterized by a material reduction in the number of parts required relative to the patented structure referred to above, with a consequent reduction in cost of manufacture. The support is easily attached to a ceiling structure and possesses versatility of adaptation to any particular operating requirement in that the upper member 11 is adjustable endwise within limits relative to the joists, the heater 26 is adjustable with respect to the lower member 16, and the pivoting relation of both members enables the heater to be directed as desired. Further, the plate 20 not only provides a simple bearing between the members, but also serves to impart stability and rigidity to the assembly.

I claim:

1. A suspension support comprising an upper, downwardly facing, channel member and a lower, upwardly facing, channel member, attaching means connected to the upper member for connection to an overhead structure, bolt means extending through intermediate portions of the members for providing relative rotation thereof, a bearing plate interposed between adjacent parts of the members and through which the bolt means extends, and means depending from the lower member for attachment to the device to be supported.

3

2. A suspension support comprising an upper channel member and a lower channel member each including horizontal webs, the flanges on the upper member extending downwardly and the flanges on the lower member extending upwardly, attaching means connected to the web of the upper member for connection to an overhead structure, bolt means extending through intermediate parts of the webs of the members for providing relative rotation thereof, bearing means interposed between the adjacent edges of the upper and lower flanges and through which the bolt means extends, and means depending from the web of the lower member for attachment to the device to be supported and including a headed portion resting on the upper side of the lower member web.

3. A suspension support comprising an upper channel member and a lower channel member each including horizontal webs, the flanges on the upper member extending downwardly and the flanges on the lower member extending upwardly, attaching means connected to the web of the upper member for connection to an overhead structure, bolt means extending through intermediate parts of the webs of the members for providing relative rotation thereof, a bearing plate interposed between the adjacent edges of the upper and lower flanges and through which the bolt means extends, and means depending from the web of the lower member for attachment to the device to be supported and including a

4

headed portion resting on the upper side of the lower member web.

4. A suspension support comprising an upper channel member and a lower channel member each including horizontal webs, the flanges on the upper member extending downwardly and the flanges on the lower member extending upwardly, attaching means connected to and adjustable lengthwise of the web of the upper member for connection to an overhead structure, bolt means extending through intermediate parts of the webs of the members for providing relative rotation thereof, a bearing plate interposed between the adjacent edges of the upper and lower flanges and through which the bolt means extends, and means depending from and adjustable lengthwise of the web of the lower member for attachment to the device to be supported and including a headed portion resting on the upper side of the lower member web.

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References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
2,074,660	Masoner	Mar. 23, 1937
2,089,390	Mangin	Aug. 8, 1937
2,400,224	Christensen	May 14, 1946

FOREIGN PATENTS

Number	Country	Date
650,833	France	Feb. 11, 1929