Sept. 1, 1931. S. C. APPEL 1,821,084

RADIATOR BRACKET

Filed Nov. 8, 1929

Fig. 5.

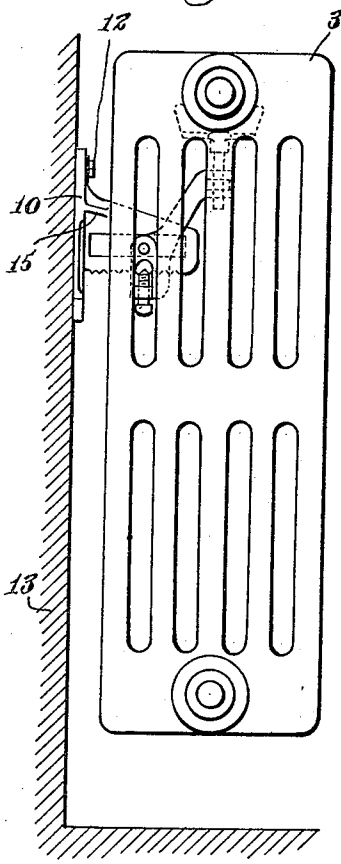
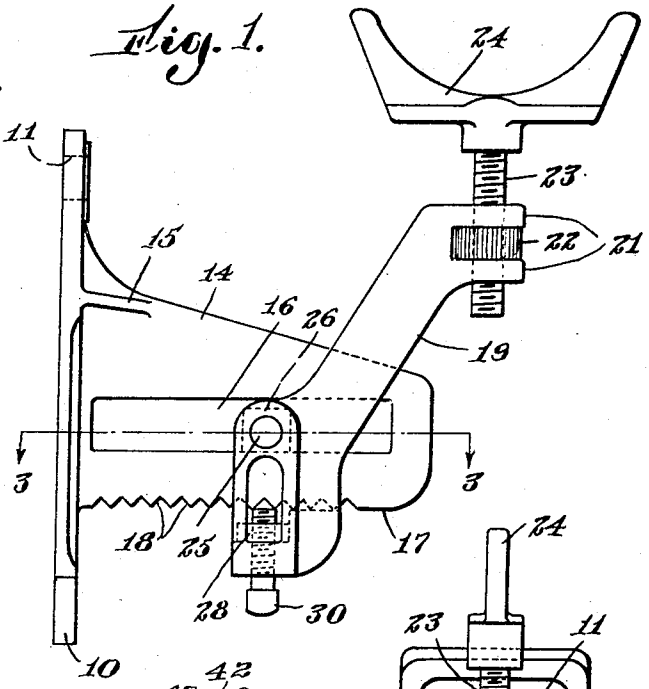


Fig. 1.



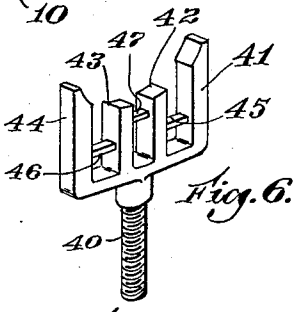


Fig. 6.

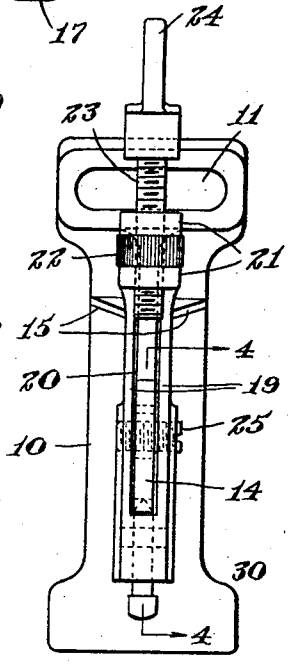


Fig. 2.

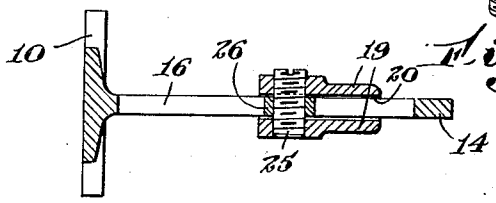


Fig. 3.

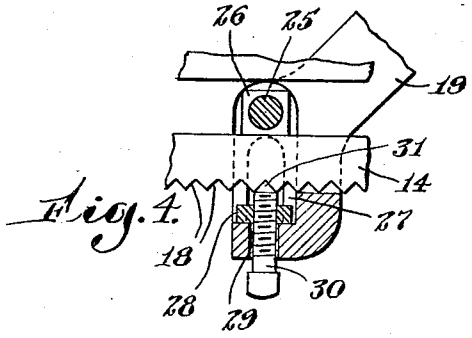


Fig. 4.

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Patented Sept. 1, 1931 1,821,084

UNITED STATES PATENT OFFICE

SAUL C. APPEL, OF MEDFORD, MASSACHUSETTS

RADIATOR BRACKET

Application filed November 8, 1929. Serial No. 405,685.

My present invention relates to supporting devices, and more particularly to an improved bracket for supporting legless tube radiators.

Heretofore, as tube radiators were made in a plurality of different widths, it has been necessary for the plumber or steamfitter to carry a different size radiator support for each different width of radiator, with a result that it tied up considerable capital and it was impossible to substitute one width radiator for another in any installation without at the same time substituting a different width of radiator support. Various attempts have been made to design a radiator support which will be universal and which will enable the plumber or steamfitter to carry a minimum amount of stock.

In my copending application, serial No. 334,615, filed January 24, 1929, now Patent No. 1,755,093, April 15, 1930, I have described and claimed a radiator bracket that has been found successful and the present invention is to be considered an improvement thereon.

In carrying out my present invention I provide a base portion adapted to be adjustably secured to the wall or other support, said base or plate being provided with a perforation which enables the same to be adjusted on the wall or other support parallel to the radiator it is intended to support. Preferably formed integral with this plate or base is a laterally extending arm or bracket, which arm extends laterally outward therefrom and at right angles thereto, and being provided, where necessary, with supporting webs for forming a stronger structure in combination with the plate or base.

The arm or bracket is preferably of plate construction and is provided with a slot lying at right angles to the base or plate and in a substantially horizontal plane. The lower edge of the laterally extending bracket or plate is provided with a plurality of transversely arranged serrations on its lower edge or face and substantially parallel to the arm or bracket above referred to. Associated with the laterally extending arm or bracket and extending upwardly therefrom is a bracket that acts as a radiator support and which radiator support is pivotally mounted on a shaft slidably mounted lengthwise of the above referred to slot. In the lower portion of the radiator support is mounted a screw threaded member that engages with one or the other of the serrations above referred to and which acts to hold the radiator support in any adjusted position on the arm or bracket. Adjustably mounted on the upper and outward end of the radiator support is a screw threaded member, carrying a radiator seat at its upper end and has associated therewith means for adjusting the same vertically with respect to the radiator bracket. Preferably the upwardly and outwardly extending radiator bracket is formed of two main side members rigidly spaced apart and located on either side of the laterally extending arm or bracket. This construction provides an adjustable radiator bracket capable of adjusting a radiator vertically, longitudinally or parallel to the wall or other support and also laterally with respect to the wall or support.

The object of my invention, therefore, is an improved radiator support.

In the accompanying drawings illustrating a preferred embodiment of my invention,

Fig. 1 is a side elevation;

Fig. 2 is a front elevation;

Fig. 3 is a sectional plan view on the line 3—3 of Fig. 1;

Fig. 4 is a detail section on the line 4—4 of Fig. 2 showing the detail of construction for rigidly securing the upwardly and outwardly extending support to the laterally extending plate;

Fig. 5 is an end elevation of the radiator supported on a wall by means of a bracket of my construction, the bracket being shown in side elevation, and

Fig. 6 is a perspective view of a modified form of saddle.

Referring to the drawings, 10 designates a plate substantially rectangular in shape and provided at its upper end with an elon-

gated transverse slot 11 through which may pass a bolt 12 for adjustably securing the plate 10 to a wall 13 or other like support. Secured to, or preferably formed integral with, the plate 10 and extending laterally outward therefrom and at right angles thereto and at one side thereof is a member 14, such member being additionally secured to the plate 10 by webs 15.

This member 14 is provided with an elongated slot 16 extending substantially perpendicular to the plate 10 and, therefore, lying substantially in a horizontal plane when the plate 10 is secured to the vertical wall 13. Below the slot 16 and parallel thereto is the lower edge or face 17 of such plate and in this lower edge or face is formed a plurality of parallelly arranged serrations 18 and for economy in construction, these serrations 18 are preferably cast in the member 14, as is also the slot 16.

19 designates an upwardly and outwardly extending support provided on its middle portion with a slot 20 of a width slightly greater than the thickness of the laterally extending member 14. In the upper end of this support 19 are formed members 21 spaced apart from each other and located in the space between the members is a knurled adjusting nut 22. The members 21 are drilled or cast to receive as a sliding fit a vertically arranged threaded member 23, this threaded member being engaged by the knurled adjusting nut 22 and also being provided at its top end with a radiator supporting saddle 24. By means of the knurled adjusting nut 22 co-operating with the threaded member 23 it is obvious that the radiator supporting saddle may be moved upward or forward, as desired. Formed in the upwardly and outwardly extending member 19 are bearings in which is rotatably mounted a threaded shaft 25, such shaft extending through the slot 16 and on such shaft is threaded a preferably rectangular member 26 adapted to ordinarily engage with the lower surface of the slot 16.

Formed in the upwardly and outwardly extending member 19 adjacent its lower end and below the serrations 18 in the laterally extending member 14 is a pocket 27 in which is loosely mounted a nut 28. Passing through a perforation 29 in the lower portion of the upwardly and outwardly extending member 19 is a set screw 30, which set screw threads through the loosely mounted nut 28 and is provided with a pointed end 31 that is adapted to engage with one or the other of the serrations 18 on the lower edge or face of the laterally extending member 14.

In utilizing my improved invention, the base or plate 10 is secured to the wall 13 by the bolt 12, the slot 11 enabling the base or plate 10 to be moved parallel to the wall and the saddle 24 tentatively adjusted by the knurled adjusting nut 22 for height. Also, the set screw 30 is brought into engagement with the particular serration 18 to obtain an approximation for the distance of the center of the radiator 32 from the wall 13. With the radiator 32 in approximate position, the same may be moved parallel to the wall by sliding the base or plate 10 on the bolt 12, may be adjusted for height by the knurled adjusting nut 22, and for distance from the wall by the upwardly and outwardly extending bracket 19. The device, therefore, is capable of practically universal adjustment and, therefore, the device may be used to support radiators of different sizes and types, making it unnecessary to provide a different size bracket for each different size radiator.

Referring now to Fig. 6, there is shown a modified form of saddle in which a threaded member 40 is formed integrally with a member having a plurality of arms 41, 42, 43 and 44, such arms being spaced apart from each other, and extending between the arms, as between the arms 41 and 42, is a cross-beam 45, while between the arms 43 and 44 is a crossbeam 46, similar and in the same relative position as the crossbeam 45. Between the two middle arms 42 and 43 is a cross-beam 47, similar in construction but in a different relative position to the crossbeams 45 and 46. The crossbeams 45, 46, and 47 are of relatively small cross sectional area and may be easily sawed out, leaving the space between the adjacent arms 41, 42, 43 or 44 clear. The upper ends of the arms 41 to 44 inclusive are of different heights and define a substantially semi-circular seat or saddle on which a radiator may rest, as in the case of the saddle 24. In some forms of radiator, particularly those having exposed tie rods, the tie rods will rest on the crossbeams 45 and 46 and under such circumstances there may or may not be a central rod, and in case there is such a central rod, the cross bar 47 may be sawed out from between the arms 42 and 43. The radiator is, therefore, supported at a plurality of points, that is on the saddle formed by the upper ends of the arms 42, 43, and 44 and on the crossbeams 45 and 46. Again, in some forms of radiator the crossbeam 45 will be in the right position to support, or help support, the radiator and in such event the construction of the radiator may be such that it will be necessary to remove the crossbeams 45 and 46, which may be readily done.

While I have necessarily shown and described the preferred embodiment of my invention somewhat in detail, it is to be understood that I may vary the size, shape, and arrangement of parts within wide limits without departing from the spirit of the invention. For example, I have shown and

described a threaded shaft 25 associated with a threaded and loosely mounted nut 26 resting on the bottom surface of the slot 16. It is obvious, however, that I may use a cylindrical, unthreaded shaft as well as an element similar to 26 but without the internal threads therein. Also, I may dispense with the loosely mounted member 28 in the pocket 27 and thread the set screw 30 in a threaded hole in the bottom portion of the upwardly and outwardly extending support or bracket.

Various other modifications will suggest themselves to those skilled in the art and I do not desire to limit myself other than as pointed out in the appended claims.

Having thus described my invention, what I claim as new is:

1. In a device of the kind described, the combination of a base, a bracket member formed integral therewith and extending laterally outward therefrom and at right angles thereto, said bracket member being provided with an elongated slot extending perpendicularly to the plane of the base, a plurality of parallelly arranged serrations formed on the lower edge or surface of said bracket and lying transversely of, but parallel to, said slot, a supporting arm extending upwardly and laterally with respect to the base, an adjustable radiator supporting means mounted on the upper end of said arm, means for mounting said arm on said bracket, and adjustable means independent of said mounting for rigidly securing the upwardly and outwardly extending arm on the laterally extending bracket.

2. In a device of the kind described, the combination of a base, a bracket member formed integral therewith and extending laterally outward therefrom and at right angles thereto, an elongated slot formed in said bracket and extending perpendicularly to the base, a plurality of serrations extending laterally of the bracket and parallel to each other and formed in the lower surface of the bracket, a supporting arm extending upwardly and outwardly with respect to said base, an adjustable radiator supporting means mounted at the upper end thereof, a shaft mounted in said upwardly and outwardly extending arm, a bearing member rotatably mounted on said shaft and engaging with the lower surface of the elongated slot, a pocket formed in the lower end of the upwardly and outwardly extending arm, a loosely mounted threaded member mounted in said pocket, a set screw extending upwardly through the lower end of the upwardly and outwardly extending arm and passing through said loosely mounted member, said set screw being provided with a pointed end adapted to engage with one or the other of the parallelly arranged serrations to thereby clamp the outwardly and upwardly extending member rigidly in adjusted position on the bracket.

3. An improved saddle for radiator brackets and the like comprising a supporting member, a plurality of parallelly arranged arms formed integral therewith and extending substantially parallel thereto, the ends of the arms being of different lengths to define a substantially semi-circular saddle, and readily removable beams extending between adjacent arms.

In testimony whereof, I have signed my name to this specification.

SAUL C. APPEL.