Dec. 24, 1929. J. A. FABER 1,740,769

PIPE AND RADIATOR SUPPORT

Filed May 14, 1928 2 Sheets-Sheet 1

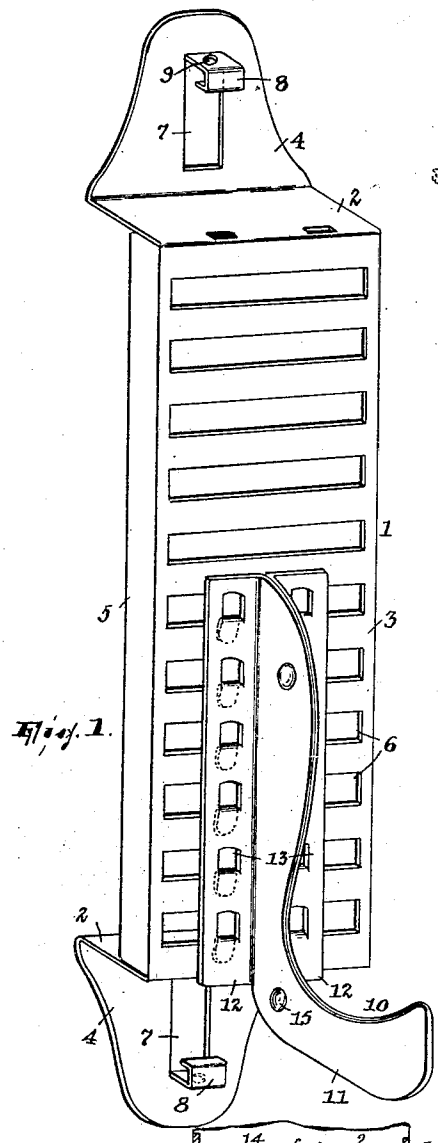


Fig. 1.

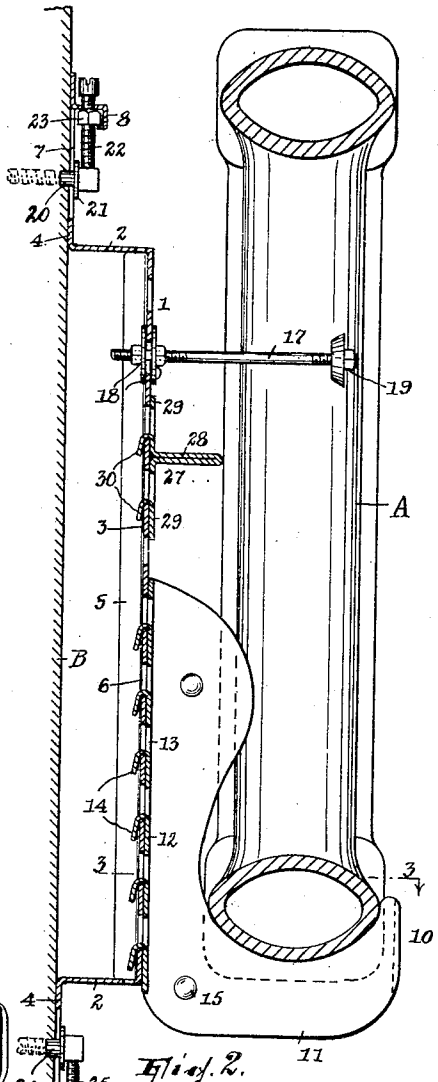


Fig. 2.

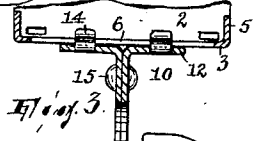


Fig. 3.

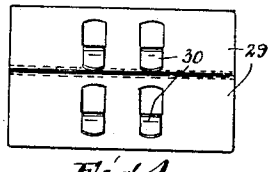


Fig. 4.

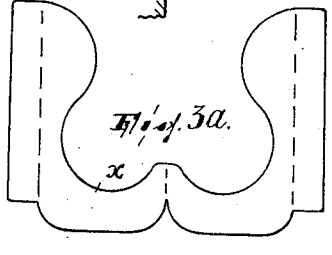


Fig. 3a.

WITNESS

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PIPE AND RADIATOR SUPPORT

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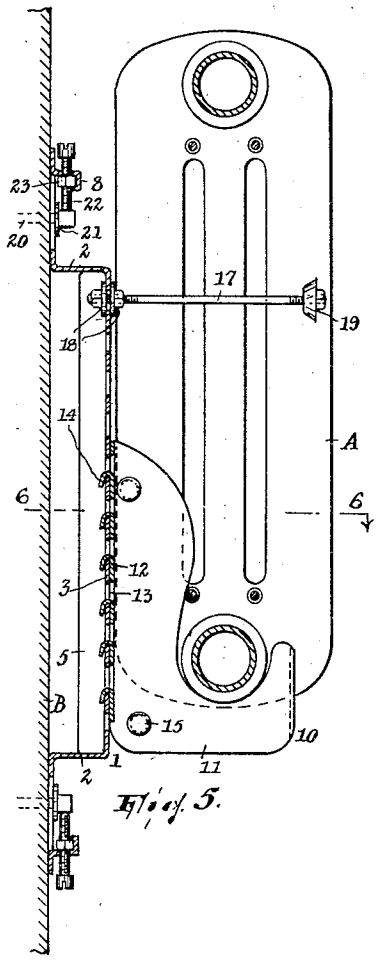


Fig. 5.

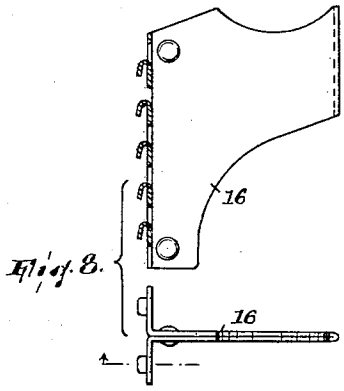


Fig. 8.

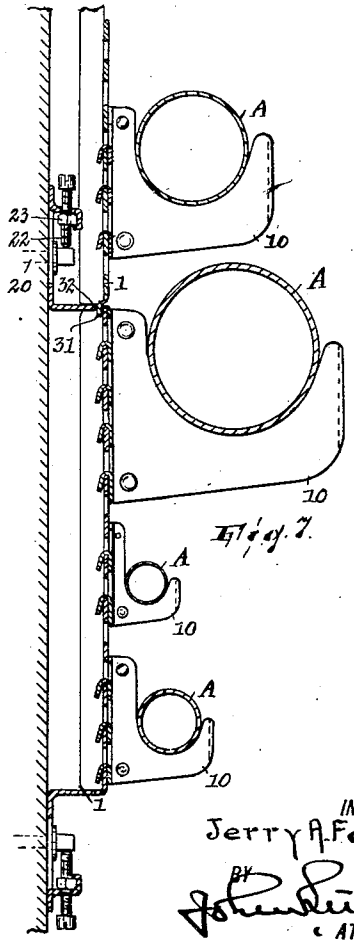


Fig. 7.

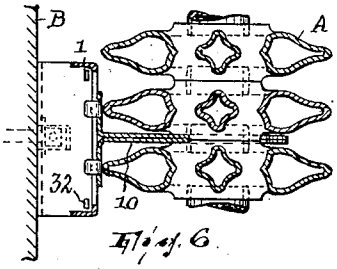


Fig. 6.

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Patented Dec. 24, 1929 1,740,769

UNITED STATES PATENT OFFICE

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PIPE AND RADIATOR SUPPORT

Application filed May 14, 1928. Serial No. 277,453.

This invention relates to supports for radiators, coils, stretches of piping, etc. (hereinafter termed the supported element), and its principal object is to provide a simple and inexpensive support which shall have ample strength and stability, which will facilitate the work of installing the supported element, and which will permit certain necessary adjustments in the installing operation.

In the drawings,

Fig. 1 is a perspective view of the improved support;

Fig. 2 a vertical sectional view thereof, showing a radiator in place and in vertical section;

Fig. 3 is a section on line 3—3, Fig. 2;

Fig. 3ª shows the blank from which the hanger is formed;

Fig. 4 is a rear elevation of a certain spacer;

Fig. 5 is a view similar to Fig. 2, excepting that a radiator of a different type is shown;

Fig. 6 is a section on line 6—6, Fig. 5;

Fig. 7 shows how a plurality of the supports may be used where the vertical capacity of a single one is insufficient, being a vertical sectional view of such supports and pipes carried thereby; and

Fig. 8 is a side elevation and plan of a form which the hanger may take.

The character 1 designates the main or carrying member of my support, it being constructed as follows so as to be at once inexpensive and yet well adapted to carry the load to be imposed on it: A strip of heavy sheet metal is pressed so that its end portions 2 are bent off at right angles and in the same direction from its intermediate portion 3 to form end walls and then their extremities 4 bent away from each other and at right angles, to form ears lying in a plane parallel with that of portion 2; and for stiffening the portion 3 against buckling and imparting a finish its side edges may be bent off as at 5 at right angles in the same direction as the portions 2, portion 3 otherwise remaining planiform. When in use the said member stands upright, and portion 3 has openings or notches in the form preferably of horizontal superposed slots 6. Each ear 4 has an opening 7 punched therein, the material punched out being left attached (at the relatively outer end of such opening) and projecting forward as a hook 8 provided with a hole 9.

The character 10 designates one of the hangers, also constructed so as to be at once inexpensive and yet well adapted to carry the load to be imposed upon it, to wit, as follows: A blank x of suitably heavy sheet metal having two counterpart halves shown in Fig. 3ª is folded on the central one of the three broken lines in that figure and bent in opposite directions on the other two lines, thus forming a two-ply hook 11 having opposite flanges 12; and the flanges have superposed holes 13 punched in them, the punched out material being bent backward and downward to form pairs of hooks 14. The two plies of the hook 11 may be riveted together as shown at 15. The hooks 14 are so spaced as all to enter any group of slots 6 of the same number. The hanger 16 shown in Fig. 8 is identical to the one just described excepting that it is designed to receive a radiator or other supported element that is suspended, i. e., depends from its point of support in the hanger.

When the supported element is a radiator and is stepped, or reaches up from its point of support in the hanger, a stay device to support it against outward tilting may be employed, such here consisting of a stem 17 threaded at both ends and having one end extending through one of the slots in the portion 3 of member 1 and provided with means 18 (as nuts and washers) to clamp said portion and its other end equipped with means 19, as a nut and washer, to form an adjustable stop or head engaging outwardly the two loops of the radiator A between which the stem passes as shown.

Member 1 is secured to the wall B as follows: A stud 20 is driven into the wall through the opening 7 of the upper ear 4 of said member, being headed as shown to hold said member up to the wall, as by having a flange or washer 21 thereon. On this is stepped a vertical screw 22 which has threaded engagement with member 1, in the present example by receiving a nut 23 which is effectually a part of said member in that it is received in

hook 8 (which is penetrated by said screw) and is held thereby against turning. A similar stud 24, screw 25 and nut 26 cooperate with the lower ear 4 in the same way, excepting that they act as a take-up and as means to confine the member 1 to vertical position and against displacement in installing the coil. Each stud may be regarded as a projection from the building wall and as affording a bearing surface of such wall (facing in the one case upwardly and in the other downwardly) for the screw.

In some instances (Figs. 5 and 6) the conformation of the supported element, as a radiator, will be such that the latter, when the means 19 of the stay device is manipulated to draw the same toward the wall, will find a rest backwardly against some part of the support. Where such is not the case the spacer 27 shown in Figs. 2 and 4 may be used. This is formed by folding a rectangular sheet metal blank on a transverse line and then bending off its extremities on lines parallel to the first line and in opposite directions, thus producing a two-ply web 28 and two wings 29; the wings have punched-out hooks 30 to engage in slots 6 of member 1.

Where the supported element or elements extend to a height exceeding the height of a single support the supports may be superposed, as in Fig. 7. In such case the superposed supports may be interlocked, as by a tongue 31 formed on the end of one and a hole 32 formed in the adjoining end wall of the other, and in that case the upper support need have the described means for securing it to the wall B only at the top, its wall 2 and such means being omitted at the bottom as shown in said Fig. 7. This figure shows that the support is adapted for sustaining coils, or equivalent lengths of piping of various diameters extending horizontally, as in tunnels.

Adjustments to suit different requirements are possible by varying the vertical position of the hanger on the member 1, i. e., by engaging its hooks at any elevation in the vertical series of slots in member 1; by adjusting member 1 vertically with respect to the wall by turning screws 22; by shifting the hanger horizontally in the slots. The adjustability of the member 1 with respect to the wall B makes it possible for the workman to bring the two or more supports for the supported element up to their work if otherwise this would not be possible by merely shifting the hangers up or down in the series of slots 6.

This is the first instance in devices of this class where the hanger abuts the building wall and is supported by vertically adjustable means therein and on the hanger is vertically adjustable means to carry the element to be supported.

Having thus fully described my invention, what I claim is:

1. A supporting structure for the purpose described including, in combination, a carrying member having a superposed series of horizontal slots, vertically adjustable means to support said member on an upright wall, and a hanger member for the element to be supported having hook means engaging in and adjustable lengthwise of the slots of the carrying member.

2. A supporting means for the purpose described including, in combination, a carrying member having a wall to stand substantially parallel with the surface of an upright building wall and also having portions at top and bottom to space its said wall from the building wall and the upper one of said portions formed with an upright apertured ear to bear against the building wall and receive in its aperature a projection from said wall, and screw-including means engaged with a part of the ear and adapted to rest on said projection, and means on said wall of the carrying member to support the element to be supported.

3. A supporting means for the purpose described including, in combination, a carrying member having a wall to stand substantially parallel with the surface of an upright building wall and also having portions at top and bottom to space its said wall from the building wall and the upper one of said portions formed with an upright apertured ear to bear against the building wall, a headed stud to be driven into said wall through the aperture of the ear and have its head bearing against the ear, and screw-including means engaged with a part of the ear and adapted to rest on said stud.

4. A supporting means for the purpose described including, in combination, a carrying member having a wall to stand substantially parallel with the surface of an upright building wall and also having portions at top and bottom to space its said wall from the building wall and the upper one of said portions formed with an upright apertured ear to bear against the building wall, said building wall having a projection, a nut underlying a portion of and held non-revoluble by said ear, and a screw engaged with the nut and adapted to rest on said projection.

5. A supporting means for the purpose described including, in combination, an upright carrying member to stand in face to face relation to a building wall, vertically adjustable means at the top portion of said member to support the latter on an upwardly facing surface of a building wall structure, and vertically adjustable means at the bottom portion of said member to bear against a downwardly facing surface of said structure.

6. In combination, with a carrying member, a hanger member consisting of a sheet metal blank folded upon itself and having edge portions bent away from each other on lines approximately parallel with the line of

fold and standing in the same plane and forming flanges to bear against said member, said member and flanges having intercatching portions and the folded portion being adapted to form a support for the element to be supported.

In testimony whereof I affix my signature.

JERRY A. FABER.