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3,718,307

MULTIPURPOSE SUPPORT BAR

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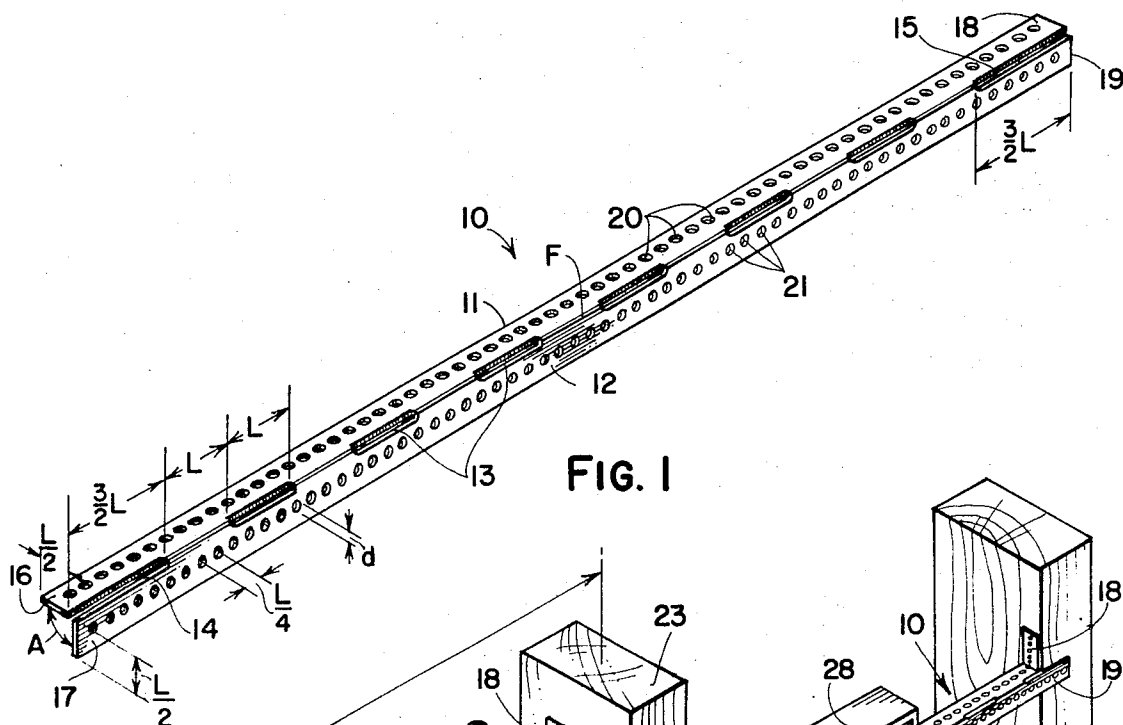


FIG. 1

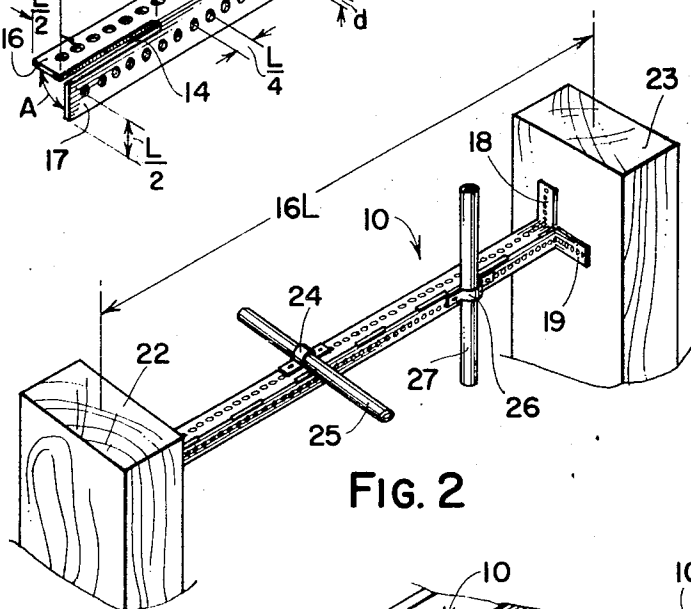


FIG. 2

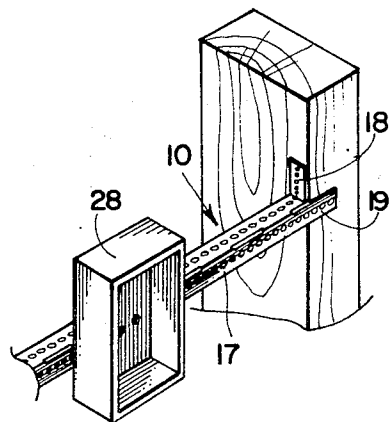


FIG. 3

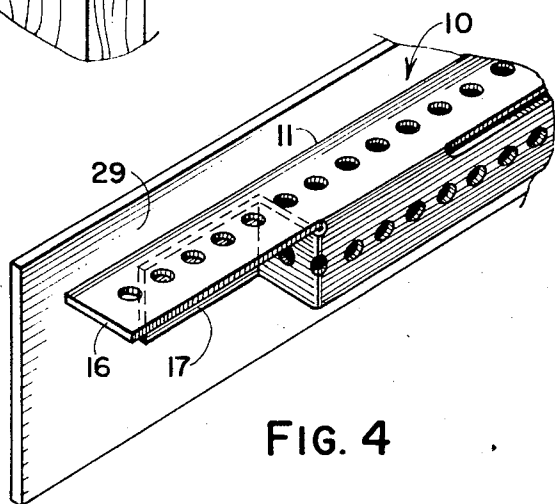


FIG. 4

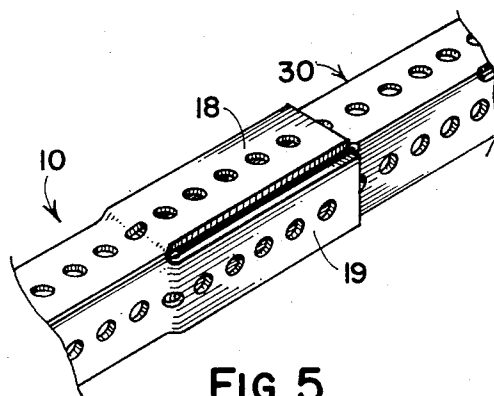


FIG. 5

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MULTIPURPOSE SUPPORT BAR

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1 Claim

ABSTRACT OF THE DISCLOSURE

An elongated angle bar is formed by folding a strip about its longitudinal center line to form first and second members at right angles to each other. A series of slots of equal length and spaced at equal intervals are formed in the longitudinal center line and terminate at each end in somewhat longer slots so that end portions of the members may be bent out of the plane of the members to define tabs. These tabs serve to mount the bar in a number of different desirable positions. The members themselves include a series of holes for mounting various devices such as electrical outlet boxes, brackets for supporting plumbing pipes, and other equivalent structures.

This invention relates generally to support devices and more particularly to an improved multipurpose support particularly useful in the construction of commercial and residential dwellings for supporting plumbing and electrical fixtures as well as other devices normally secured between or on studs constituting part of the building wall.

BACKGROUND OF THE INVENTION

In building construction, plumbing pipes, electrical conduits, and various different devices are normally supported between studs or joists within wall portions of the structure. Proper positioning of these devices and particularly outlets for the devices requires considerable time and labor in the improvisation of a proper support or bracket. The problem is particularly troublesome if the outlet is to be located at a point in a wall where no stud is present. In many instances, the problem is avoided by simply moving the outlet location to a point near a stud so that convenient mounting directly to the stud can take place. In such instances, a predesigned bathroom, for example, would have to be altered to fit the location of the building studs.

In instances wherein an outlet or other device must be located between studs at a given level between the floor and ceiling, cross studs are necessary which require cutting and angle nailing. Further, the worker must constantly use a ruler or other measuring device for the proper location and again all of these operations increase the length of time necessary to complete a given construction. The cost of materials and particularly the cost of labor has risen enormously in the construction field during the last few years. Any type of innovation which reduces the material and the time spent in a construction would thus be most useful.

BRIEF DESCRIPTION OF THE PRESENT INVENTION

With the foregoing in mind, it is a primary object of the present invention to provide a novel multipurpose support particularly designed for facilitating the installation of interior wall plumbing piping and electrical conduits as well as facilitating operations involved in locating and rigidly securing outlets in wall structures all to the end that the materials and amount of time spent heretofore deemed necessary for such operations are substantially reduced.

More particularly, the invention contemplates the pro-

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vision of a standard length elongated strip folded along its longitudinal center line to define an angle bar of first and second members at right angles to each other. A series of longitudinal slots is provided in the center line and terminates in open end slots of somewhat greater length such that one or more of the ends of the first and second members may be bent out of the plane of the remaining portion of the member to provide tabs. These tabs are convenient for securing the angle bar to a building structure such as between studs, on the front surfaces of studs, or even to flat surfaces. Each of the members includes a series of closely spaced holes dimensioned to receive machine screws or rivets so that at any desired location along the bar a bracket for supporting a plumbing pipe or electric conduit may be secured. Because the members are at right angles to each other, plumbing lines or electrical conduits running horizontally or vertically may be readily fastened to the support by selecting one or the other of the members of the angle bar.

In addition, electrical outlet or plumbing outlets may readily be directly secured to selected holes in the angle bar support so that the location of such outlet is not limited by the position of studs in the wall. Because of the angle configuration of the support, it may be made of fairly lightweight metal and yet be extremely rigid so that more than adequate support is provided.

In the preferred embodiment of the invention, the angle bars are provided in sixteen-inch lengths with the series of slots each being one inch and separated by intervals of one inch except for the end slots which are preferably one and one-half inches long. The series of holes in each of the members at right angles to each other are spaced at quarter-inch intervals. With this arrangement, the support can be readily affixed to studs normally spaced at sixteen inches without requiring any cutting or modification. However, should a shorter support be necessary, it is a simple matter to cut the angle bar to a desired length or, alternatively, connect two or more bars together by means of the unique tabs formed at the ends of each bar.

BRIEF DESCRIPTION OF THE DRAWINGS

A better understanding of the invention will be had by referring now to the accompanying drawings, in which:

FIG. 1 is a perspective view of a multipurpose support bar in accord with the present invention;

FIG. 2 is a fragmentary perspective view on a reduced scale illustrating one manner in which the multipurpose support bar may be secured between conventional wall studs in a building structure;

FIG. 3 is another fragmentary perspective view illustrating the manner in which the support bar may be secured to the front edge of building studs;

FIG. 4 is a fragmentary perspective view illustrating the manner in which the support bar may be secured to a flat surface; and,

FIG. 5 is a fragmentary view of two of the bars connected together to provide an increased length support bar.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIG. 1, the multipurpose support comprises an integral elongated metallic strip 10 folded along its longitudinal center line indicated at F to define an angle bar of first and second members 11 and 12 at right angles to each other. As shown, there are provided a series of longitudinal slots 13 along the longitudinal center line F terminating at open end slots 14 and 15. With this arrangement, the ends of the members as indicated at 16, 17, 18, and 19 may be bent out of the plane of the remaining portions of the members to define tabs.

Each of the members 11 and 12 includes a series of

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holes as indicated at 20 and 21. These holes are of a diameter d dimensioned to receive conventional sheet metal screws or blind rivets.

In the preferred embodiment of the invention, the various slots 13 are all of equal length L and are separated by intervals of length L except for the end slots which are preferably three halves or one and one-half times the length L . The widths of the members 11 and 12 are one-half the length L as shown.

For maximum convenience, the length L is made equal to one inch and the overall length of the angle bar is exactly sixteen inches. The spacing between the successive holes 20 and 21 is made equal to one-fourth L or one-quarter inch. With this arrangement, the elongated bar serves as a convenient measuring means so that a worker can count off distances down to one-quarter inch by means of the divisions defined by the slots and holes.

FIG. 2 illustrates one manner in which the angle bar of FIG. 1 may be used. As shown, the ends of the members such as 18 and 19 may be bent upwardly and outwardly respectively at right angles to the remaining portions of the members so that the angle bar 10 may readily be inserted between conventional studs 22 and 23. Since these studs are conventionally spaced at sixteen inches as measured from the center of the studs, bending of the tabs will reduce the overall length of the angle bar sufficiently to fit between the opposing surfaces of the studs and provide an adequate surface contact with the inner surface of the studs to enable ready securement of the angle bar between the studs. A bracket such as illustrated at 24 may be provided on the upper member to support a horizontal pipe 25. Alternatively, or in addition, a vertical pipe may be supported by a bracket 26 such as shown for the vertical pipe 27.

FIG. 3 illustrates the manner in which the angle bar may be used to support an electrical outlet 28. In this instance, it is desirable that the outlet be located at the front portion of the studs and thus only the tab 18 will be bent out of the plane of the remaining portion of the angle bar, the tab 19 simply being secured to the front edge of the stud. Similar securement would be provided for the other tabs 16 and 17 illustrated in FIG. 1. The outlet box 28 may be then secured directly to the member 17 of the angle bar in any desired horizontal position.

In FIG. 4, the tab 17 has been bent inwardly and thence outwardly to lie in a plane corresponding to the rear edge of the member 11. With this arrangement, the angle bar may be secured to a flat surface such as 29. Various devices may then be supported by or suspended from the angle bar.

While the multipurpose support bar will normally be provided in lengths of sixteen inches in large quantities thereby minimizing any cutting that may be necessary, there will arise situations in which it is desired to use a shorter length of the angle bar. In this instance, the bar may simply be cut preferably at a slot location to facilitate the cutting operation. In instances wherein a support bar longer than sixteen inches is required, two of the sixteen inch bars may readily be secured together by causing the tabs of one to overlap end portions of the members of the other.

Thus, referring to FIG. 5, the tabs 18 and 19 of the angle bar 10 are shown overlapping an end portion of an additional angle bar 30. Rivets or sheet metal screws

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may be passed through the openings in the tabs directly into the members over which the tabs lie of the additional angle bar. The angled construction assures rigidity even should several such angle bars be connected in this manner.

OPERATION

In operation, a construction worker will have a large number of the angle bars readily available all of sixteen inch lengths. As mentioned, the securement of plumbing pipes, electrical conduits, or outlet devices between or to building studs can rapidly be carried out by simply bending the tabs defined by the elongated end slots as required and as described for example in conjunction with FIGS. 2, 3, and 4. Because of the provision of the plurality of holes spaced at quarter-inch intervals, the worker need not constantly refer to a ruler or other measuring instrument but can readily locate pipes or outlets by simply counting the slots and holes to define the required distance to the nearest quarter inch. His work is thus enormously speeded up, and installation at substantially an exact location regardless of stud positioning is assured.

In those instances wherein a shorter or longer section of angle bar is necessary, the same may be cut or connected together as described in conjunction with FIG. 5.

From the foregoing, it will be evident that the present invention has provided a greatly improved multipurpose support bar wherein the various advantages of reduction in materials and labor time during construction processes are all realized.

What is claimed is:

1. A multipurpose support bar comprising: an integral elongated metallic strip folded along its longitudinal center line to define an angle bar of first and second members at right angles to each other, said angle bar including a series of longitudinal slots along said longitudinal center line terminating in open end slots such that one or more of the ends of said first and second members may be bent out of the plane of the remaining portion of the member to provide tabs for securing said angle bar to a building structure, said slots being of equal given length except for said end slots and being separated by equal intervals corresponding to said given length, said end slots each being of one and a half times said given length, each of said members including a series of holes along their length there being provided at least four holes per said given length, said holes being of uniform spacing to serve as a measuring means and to serve for securing devices to said angle bar for support in desired positions by said angle bar, and the holes along the side of said end slots serving to secure said tabs to said building structure.

References Cited

UNITED STATES PATENTS

1,583,474	5/1926	Kruse	248—205 X
1,812,756	6/1931	Riggs	220—3.9
2,638,643	5/1952	Olson	287—20.92
2,930,564	3/1960	Maier	248—228

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