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3,017,152 RECEPTACLE SUPPORTS FOR INCLINED SURFACES

Fred M. Alpaugh, 1966 Williams St., Union, N.J.
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The present invention relates to a receptacle support and particularly to a device for supporting a receptacle on an inclined surface.

It is an object of this invention to provide such a receptacle support which is relatively inexpensive, durable, efficient and reliable, easy to use, and which can be readily dismantled and reassembled for purposes of storage and shipment.

Having in mind the above and other objects that will be evident from an understanding of this disclosure, the invention comprises the devices, combinations and arrangements of parts as illustrated in the presently preferred embodiment of the invention which is hereinafter set forth in such detail as to enable those skilled in the art readily to understand the function, operation, construction and advantages thereof when read in conjunction with the accompanying drawings in which:

FIG. 1 is a perspective view of a support in accordance with the present invention having a phantom-illustrated receptacle mounted thereon.

FIG. 2 is a sectional view taken substantially on the line 2—2 of FIG. 1 and illustrating in dotted lines the inclined surfaces upon which the support is to be mounted.

With reference to the drawings there is illustrated a support S for a cylindrical receptacle R illustrated in phantom in FIG. 1. The support S comprises a sheet metal base bar 1 having a longitudinally arranged slot 2 extending inwardly from the one end thereof. A sliding sheet metal cross bar 3 is arranged transversely of the base bar 1 with the base bar 1 intersecting the crossbar 3 at substantially the midpoint thereof. For securing the crossbar 3 to the base bar 1 for sliding movement of the crossbar 3 longitudinally of the base bar 1, there is provided a pair of depending lugs 4 and 5 struck from the crossbar 3 and extending downwardly through the slot 2 in the base bar 1. The lugs 4 and 5 are only slightly less in width than the slot 2 to prevent excessive play between the crossbar 3 and base bar 1. The lug 4 is formed with an enlarged free end 6 that is wider than the slot 2 to hold the crossbar 3 on the base bar 1.

The free ends of the crossbar 3 are bent downwardly to form legs 7 to which feet 8 are adjustably secured by means of screws 9 extending through the legs 7 and through elongated slots 10 in the feet 8. Wing nuts 11 are threaded onto the ends of the screws 9 for clamping the feet 8 to the legs 7 in adjusted position. The side edges of the feet 8 are bent laterally to form flanges 12 that embrace the side edges of the legs 7 for preventing turning of the feet 8 relatively to the legs 7 about the screws 9. The free ends of the feet are cut off at an angle to form a sharp point 13 that is designed to dig into the surface upon which the support is mounted and thus prevent its sliding relatively to the surface.

A fixed sheet metal crossbar 14 is mounted as by screws 15 upon the base bar 1 at the end opposite from the slot 2, and together with the base bar 1 comprises a base member. The crossbar 14 is arranged transversely of the base bar 1 with the base bar 1 intersecting the same at substantially the midpoint of the crossbar 14. The free ends of the crossbar 14 are bent downwardly to form legs 16 that preferably are also pointed to prevent the support from sliding off an inclined surface upon which it rests.

For gripping the receptacle R, there are provided up-standing receptacle gripping lugs 17 struck from the

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crossbars 3 and 14. The upper ends of the lugs 17 are turned inwardly as at 18 to engage the periphery of the receptacle R above the rim 19 at the bottom thereof. While the number and the arrangement of the gripping lugs 17 is not critical, there preferably are three, arranged two on the sliding crossbar 3 and one on the fixed crossbar 14. The two gripping lugs 17 on the sliding crossbar 3 are disposed about midway between the base bar 1 and the ends of the crossbar 3 and the one on the fixed crossbar 14 is disposed centrally thereof so that the three lugs 17 will engage the receptacle R at three symmetrically spaced points with the receptacle R balanced relatively to the base bar 1.

The sliding crossbar 3 is biased longitudinally of the base bar 1 in the direction to urge the lugs 17 resiliently into engagement with the receptacle R by a tension spring 20. The spring 20 is fastened at one end to the base bar 1 by means of a depending lug 21 struck from the base bar 1 and at the other end to the crossbar 3 by means of the depending lug 5.

In operation, the support in accordance with the present invention is fastened to the receptacle R by sliding the crossbar 3 toward the end of the base bar 1 against the action of the spring 20. The receptacle R is then seated on the platform defined by the upper surfaces of the crossbars 3 and 14. When the crossbar 3 is released, the crossbars 3 and 14 are drawn together by the spring 20 until the lugs 17 engage the side wall of the receptacle R. Thus with the lugs 17 resiliently held against the side wall of the receptacle R and the ends 18 of the lug overhanging the rim 19 of the receptacle R, the support S is secured to the receptacle R so that when the receptacle is carried as by the bail 22, the support will be carried with it, and the receptacle R can be placed on an inclined surface.

While the range is limited by the sliding ability of the crossbar 3, the support is adapted to accommodate receptacles of different sizes. By way of illustration, one common occurrence of the problem of supporting a receptacle on an inclined surface arises in painting dormers on houses. In such use, it is usually a one gallon size paint can that must be supported. Thus, although the size of the support is not critical and it can of course be made in different sizes, the illustrated receptacle R represents a one gallon size paint type can. When designed primarily for such a receptacle, the parts are dimensioned such that the sliding crossbar 3, when the support is mounted upon a receptacle, is disposed as close as practical to the end of the base bar 1, having in mind that for mounting and removing the receptacle, the crossbar 3 must be moved further toward the end of the base bar 1. This dimensioning provides as wide and as stable a support as practical. When so dimensioned, the slot 2 can be elongated and the spring 20 selected to provide for accommodation of a smaller receptacle R, such as a one quart size paint can. The spacing of the lugs 17 on the crossbar 3 also effects the required sliding movement of the crossbar 3 in order to accommodate the smaller size receptacle since it determines the points on the periphery of the receptacle that are engaged by the lugs.

The feet 8 provide for adjusting the support in order to maintain the receptacle supporting platform defined by the upper surfaces of the crossbars 3 and 14 horizontal despite variations in the inclination of the surfaces on which it is to be used. In FIG. 2 there are illustrated three inclined surfaces represented by the lines 23, 24 and 25. When mounted on a surface having an inclination represented by the line 23, the feet 8 are adjusted to a minimum length. When mounted on a surface having an inclination represented by the line 24, the feet 8 are adjusted to a maximum length. The position of sliding crossbar 3 lengthwise of the base bar 1 is determined by

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the size of the receptacle R. When used with a one gallon size paint can, the position of the crossbar 3 is as illustrated in the full line position in FIG. 2. Thus, the lines 23 and 24 represent the minimum and maximum slope of the surface with which the illustrated support is designed to be used. With a smaller size can, the crossbar is located further from the end of the base bar 1 so that the same adjustment of the feed 8 does not produce the same range of inclination of the support. Thus, with a smaller type can, the maximum slope of the surface on which the support can be used is represented by the line 25 in FIG. 2.

One of the important advantages of the support in accordance with the present invention is that it is relatively inexpensive to manufacture. It is composed essentially of parts that can be made of sheet metal and are adapted to be punched from stock and thereafter formed by simple stamping and bending operations. Since the bars 1, 3 and 14 are rectangular, there is virtually no waste of stock material. In addition to the bars 1, 3 and 14 there is a minimum of other elements and these are relatively inexpensive. While the fixed crossbar 14 is preferably used to add stability to the support, it could be eliminated and a single leg bent downwardly from the end of the base bar 1. This would further reduce the number of parts.

The present support can also be readily dismantled for storage and shipment. The crossbar 3 can be removed from the base bar 1 by sliding it off the end to remove the lugs 4 and 5 from the slot 2. The fixed crossbar can be removed by taking out the screws 15. The support can thus be reduced to three bars that can be sandwiched into a relatively small package.

Various alternations of the structure herein disclosed will suggest themselves to those skilled in the art. However, it is to be understood that the present disclosure relates to a preferred embodiment of the invention which is for purposes of illustration only and not to be construed as a limitation of the invention. All such modifi-

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cations which do not depart from the spirit of the invention are intended to be included within the scope of the appended claims.

Having thus set forth the nature of the invention, what I claim herein is:

1. A device for supporting a receptacle on an inclined surface comprising a base member including a sheet metal base bar having a longitudinally arranged slot extending inwardly from the one end thereof, a sheet metal crossbar arranged transversely of said base bar and intersecting the same at substantially the midpoint of said crossbar, means for mounting said crossbar on said base bar for sliding movement freely of said crossbar longitudinally of said base bar including a depending lug struck from said crossbar and extending downwardly through said slot, legs integral with and depending from the free ends of said crossbar, upstanding receptacle gripping lugs struck from said crossbar and base member for engaging against the periphery of the bottom of a receptacle, and means for biasing said crossbar on said base bar to slide longitudinally of said slot to engage said gripping lugs against the bottom of the receptacle comprising depending lugs struck from said base bar and said crossbar and a tension spring connected at its opposite ends to said last mentioned lugs.

2. A support in accordance with claim 1 including an enlarged free end on said first mentioned lug depending from said crossbar for confining said crossbar against displacement relatively to said base bar while providing for sliding movement.

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