

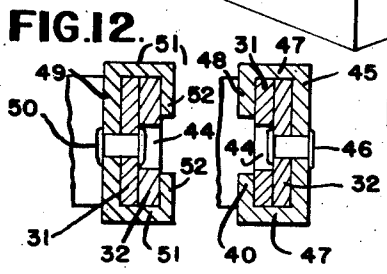
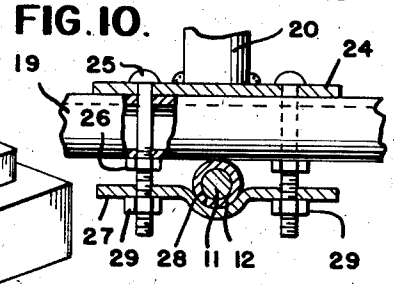
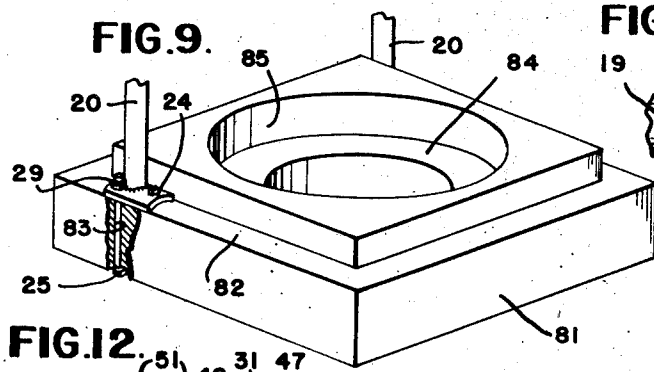
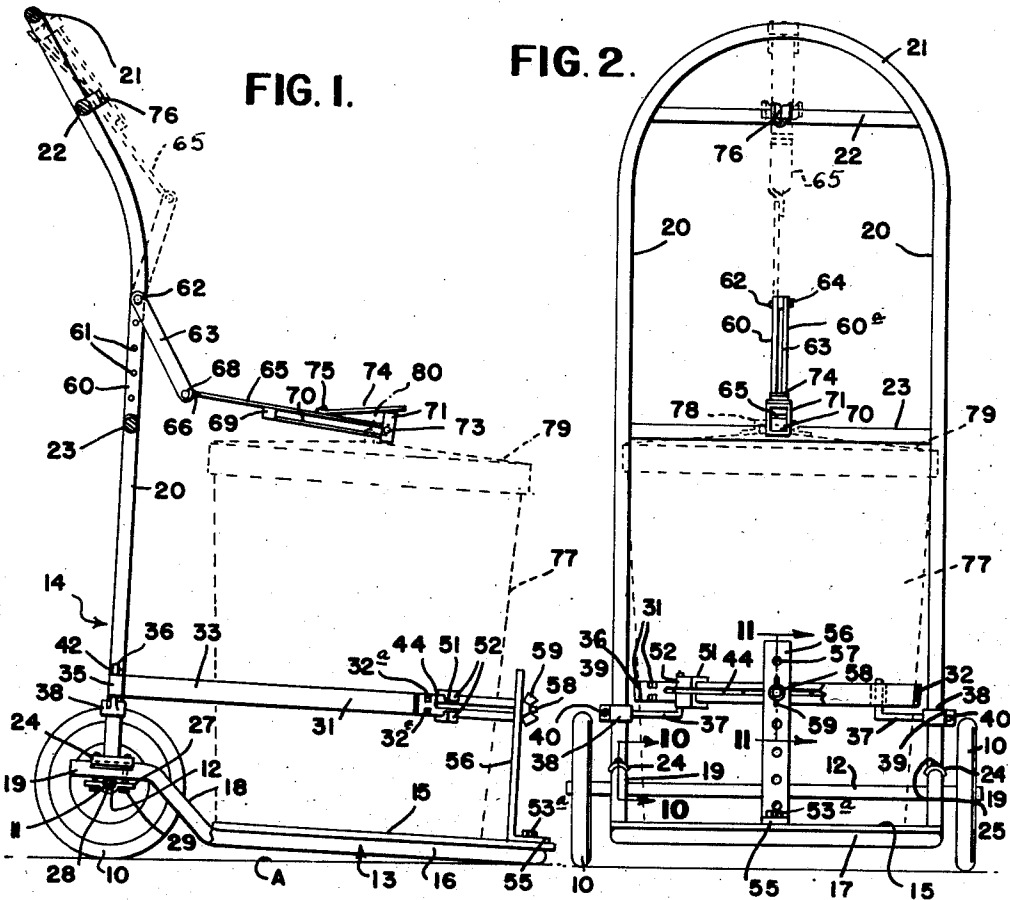
Sept. 1, 1953

G. S. PLATT
GARBAGE CAN HOLDER

2,650,786

Filed May 4, 1951

2 Sheets-Sheet 1



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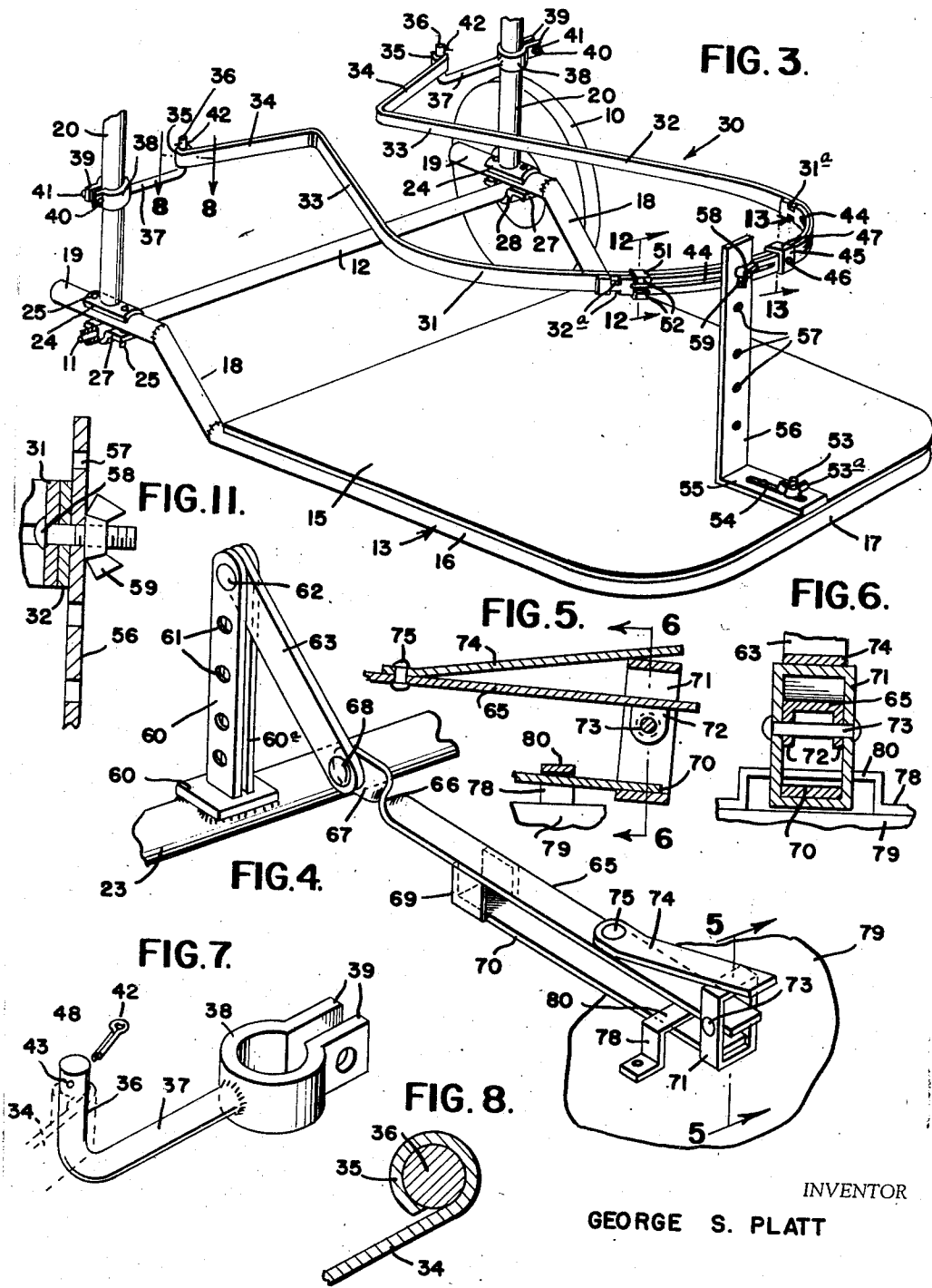
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UNITED STATES PATENT OFFICE

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GARBAGE CAN HOLDER

George S. Platt, Baton Rouge, La.

Application May 4, 1951, Serial No. 224,528

3 Claims. (Cl. 248—129)

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The present invention relates to improvements in garbage can holders and is a continuation-in-part of my co-pending application Serial No. 27,547 filed May 17, 1948, now Patent No. 2,555,455, June 5, 1951, and entitled Concrete Mold.

An object of the present invention is to provide an improved device of this character of such form and construction as to prevent the garbage cans from being overturned as by dogs or other animals.

Another object of the present invention is to provide an improved garbage can holder which comprises few parts, is sturdy, is economical to manufacture and simple to operate so that the manufacturing cost of the device will be low.

A further object of the present invention is to provide an improved device of this kind wherein a frame or stand may be mounted on the block described in my above mentioned co-pending application and cooperates therewith to maintain a garbage can in upright position and to retain the cover in its closed position against accidental displacement.

A still further object of the present invention is to provide an improved garbage can holder which may quickly and easily be converted from the substantially permanent installation on the block mentioned above into a portable unit.

The present invention contemplates the provision of an improved structure having a can holding member which may be adjusted to accommodate cans of various diameters.

The present invention further contemplates the provision of an improved garbage can holder wherein a top hold-down and support member is provided which may be adjusted to fit cans of various heights and diameters.

An aim of the present invention is to provide an improved device of this type which may be used not only for supporting and moving garbage cans but may also be used like a hand truck to transport other articles, such as sacks of grain, feed and the like.

With the foregoing and other objects in view, the invention will be hereinafter more fully described and more particularly pointed out in the appended claims.

In the drawings, in which the same parts are denoted by the same reference numerals throughout the several views,

Figure 1 is a side elevational view of the improved device constructed in accordance with the present invention with parts broken away and in section and showing in phantom lines a garbage can supported thereby,

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Figure 2 is a front elevational view of the improved device with parts broken away and illustrating a garbage can supported thereby,

Figure 3 is a perspective view of the lower portion of the improved device,

Figure 4 is a perspective view of the garbage can top hold-down and support member,

Figure 5 is a sectional view taken on the line 5—5 of Figure 4,

Figure 6 is a sectional view taken on the line 6—6 of Figure 5,

Figure 7 is a perspective view of one of the brackets for supporting the can holding member,

Figure 8 is a sectional view taken on the line 8—8 of Figure 3,

Figure 9 is a perspective view of a base block and illustrating the manner of mounting the frame thereon with parts broken away and in section,

Figure 10 is a sectional view taken on the line 10—10 of Figure 2,

Figure 11 is a sectional view taken on the line 11—11 of Figure 2,

Figure 12 is a sectional view taken on the line 12—12 of Figure 3, and

Figure 13 is a sectional view taken on the line 13—13 of Figure 3.

Referring more particularly to the drawings, 10 indicates a pair of supporting wheels which are mounted on the opposite end portions of an axle 11 for rotation therewith. A sleeve 12 loosely surrounds the axle 11 inwardly of the wheels 10. A base generally indicated as 13 and a main frame generally indicated as 14 are supported by the wheels 10.

The base 13 comprises a base plate 15 and a substantially U-shaped base frame having legs 16 and a closed end portion 17 which may be of tubular formation. The base plate 15 may be of any suitable material, such as steel or the like and may be secured to the upper faces of the closed end portion 17 and the forward end portions of the legs 16 by welding or the like. At the rear edge of the base plate 15 the legs 16 have intermediate portions 18 which are bent upwardly at an angle of the order of 45 degrees to the forward end portions of the legs 16. The free end portions 19 of the legs 16 extend rearwardly from the upper rear ends of the intermediate portions 18 and are substantially parallel to the forward portions of legs 16.

The base plate 15 may be substantially rectangular in plan or any other desirable shape and its forward edge corners may be rounded to conform to the rounded formation of the legs 16 and the portion 17 where they merge to elimi-

nate any sharp corners which might inflict damage or injury to person's clothing or to the person.

The main frame 14 is substantially U-shaped and comprises a pair of spaced apart substantially parallel standards 20 the upper ends of which are connected by a handle 21 which may be longitudinally arcuate, an upper brace 22 having its opposite ends secured to the inner faces of the opposite end portions of the handle and a lower brace 23 having its opposite ends secured to the inner faces of the standards 20 intermediate their ends. The upper end portions of the standards 20 may be curved rearwardly and upwardly as shown in Figure 1 of the drawings. The standards, the handle and the braces may be of tubular formation and may be made of steel or any other suitable material.

An elongated foot 24 is secured to the lower end of each standard 20 by welding or the like and may be substantially arcuate in cross section to conform to the contour of the upper surface of its tubular rear end portions 19 of each leg 16 on which it rests and to which it is attached. Threaded bolts 25 extend through suitable aligned openings in each foot 24 and each rear end portion 19 of the legs 16 and nuts 26 are threaded upon the extended threaded portions of the bolts 25 to clamp the feet 24 and the portions 19 firmly together.

A clamping plate 27 is associated with each rear end portion 19 of the legs 16 and each foot 24 and has a substantially centrally disposed recess 28 for receiving one end portion of the sleeve 12. Each clamping plate 27 has openings through which extend the threaded extended portions of the bolts 25. Nuts 29 are threaded upon the portions of the bolts which protrude downwardly beyond the clamping plates 27 so that the plates 27 will firmly clamp the sleeves 12, the standards 20 and the rear end portions 19 of the legs 16 together.

A can holding member generally indicated at 30 is adjustably mounted upon the standards 20 and comprises a pair of bands 31 and 32. Each band has a forward portion which is substantially semicircular for conforming to the outer contour of a garbage can or the like. The bands have intermediate portions 33 which extend inwardly and rearwardly from the rear ends of the forward portions of the bands in converging relation to one another for engaging the outer surface of the can to prevent rearward movement of the can when positioned upon the base plate 15.

Each band has a rear end portion 34 which extends outwardly and rearwardly at an angle to the intermediate portions 33 and terminates at its free end in a knuckle 35 which receives the upwardly bent free end portion 36 of bracket arms 37. The opposite end of each bracket arm is secured as by welding or the like to a split ring clamp 38 which has apertured ears 39. Each of the split ring clamps 38 encircles one of the standards 20 and is vertically adjustable thereon. Each clamp 38 may be held in the desired adjusted position by a threaded bolt 40 and nut 41. Each rear end portion 34 of the bands 31 and 32 are prevented from escaping from the portions 36 of the bracket arms 37 by cotter pins 42 or the like which are received by suitable openings 43 formed in the portions 36.

The forward end portions of the bands 31 and 32 are disposed in overlapping engaging relation to one another as illustrated in Figure 3 of the

drawings and are provided with aligned slots 44. The overlapping slotted end portions of the bands are adapted to have relative horizontal movement for changing the size of the can receiving space defined by the bands 31 and 32 for accommodating cans of different diameters.

A guide 45 is secured to the band 32 inwardly of the inner end of the slot 44 of the band 32 by a rivet 46 or the like. As shown in Figure 13 of the drawings the rivet extends through the guide 45 and the band 32 and has its inner head received by the slot 44 of the other band 31. The guide 45 is substantially U-shaped and has its legs 47 extending across and in engagement with the upper and lower edges of the bands 31 and 32. Each leg 47 has its free end portion turned inwardly as indicated at 48 to overlie and engage the inner face of the band 31.

A similarly U-shaped guide 49 is secured to the band 31 inwardly of the inner end of the slot 44 of the band 31 by a rivet 50 or the like. As shown in Figure 12 of the drawings the rivet 50 extends through the guide 49 and the band 31 and has its inner head received by the slot 44 of the other band 32. The legs 51 extend outwardly across and in engagement with the upper and lower edges of the bands 31 and 32. Each leg 51 has its free end portion turned inwardly as indicated at 52 to overlie and engage the outer face of the band 32.

A threaded stud 53 is carried by the base plate 15 adjacent the forward edge thereof and intermediate the side edges of the plate. The stud 53 extends upwardly through and above an elongated slot 54 formed in a foot 55 of an upstanding adjusting bar 56 which has a plurality of vertically aligned spaced apart openings 57. A thumb nut 53a is received by the stud 53 to clamp the foot 55 and the bar 56 rigidly in place on the base plate 15. A threaded bolt 58 extends through the slots 44 of the bands 31 and 32 and is adapted to be selectively received by one of the openings 57 of the bar 56. A wing nut 59 is threaded upon the extended threaded end of the bolt 58 for clamping the bands 31 and 32 and the bar 56 tightly together to hold the bands in their desired vertical adjusted position. This clamping action will also serve to hold the bands 31 and 32 in their desired relatively overlapped positions.

Upstanding adjusting arms 60 and 60a have their lower edges secured to a base plate 60b which is secured by welding or the like to the upper surface of the lower brace 23. The arms 60 and 60a have a plurality of vertically aligned spaced apart screw threaded holes 61 adapted to selectively receive a screw threaded pivot 62 which extends through a suitable aperture in the rear end portion of a link 63. A nut 64 is received by the extended threaded end of the pivot 62 to retain the link 63 in pivotal relation to the arms 60 and 60a. An upper strap 65 is twisted adjacent its rear end as indicated at 66 to provide an attaching portion 67 by which the strap 65 is pivotally connected to the forward end portion of the link 63. A pivot 68 which may be in the form of a rivet or the like extends through aligned openings in the link 63 and the attaching portion 67 of the strap 65.

A substantially U-shaped bracket 69 has the free edges of its legs secured as by welding or the like to the under face of the upper strap 65 forwardly of the twisted portion 66. A lower strap 70 has the under face of its rear end portion secured as by welding or the like to the

upper face of the connecting portion of the bracket 69 so that the lower strap 70 is supported in spaced apart parallel relation to the upper strap 65 with the free ends of the straps substantially flush with one another.

A keeper 71 which may be in the form of a substantially rectangular open frame embraces the free end portion of the upper strap 65 and is pivotally mounted thereon adjacent the free end thereof. For this purpose the strap 65 has a pair of apertured lugs 72 depending from its lower face at opposite edges thereof and a rivet 73 or the like extends through each lug 72 and the adjacent side of the keeper 71. The keeper 71 is of such a height that, when in its operative position as shown in Figures 4, 5 and 6 of the drawings, the top of the keeper will be substantially parallel to and spaced from the upper face of the upper strap 65, the bottom of the keeper will be in engagement with the under face of the lower strap 70 and the sides of the keeper will engage the opposite side edges of the straps 65 and 70.

A leaf spring 74 has its rear end portion attached to the upper face of the strap 65 by a rivet 75, or the like and the free end portion of the spring bears against the top of the keeper 71 to retain the keeper in its operative or inoperative position. A substantially U-shaped spring catch 76 is secured by welding or the like to the upper brace 22 intermediate the ends thereof and has a pair of resilient arms which extend forwardly and normally flex towards one another and are adapted to receive therebetween the strap 65 when in its raised position.

In the use of the device, assuming that the straps 65 and 70 are in their raised positions and that the strap 65 is disposed between the resilient arms of the catch 76 and that the wing nut 59 is loosened, a garbage can 77 or the like will be placed on the base plate 15 between the bands 31 and 32. The bands 31 and 32 will be moved towards one another to tightly grip the outer surface of the can 77 to prevent horizontal and vertical movement of the can with respect to the base plate.

When the bands have been properly adjusted the wing nut 59 will be screwed home to bind the bands between the head of the bolt 58 and the adjusting bar 56 to prevent horizontal and vertical movement of the bands. The bands 31 and 32 may be adjusted vertically with respect to the base plate 15 to accommodate cans of various heights by removing the wing nut 59 from the bolt 58 and inserting the bolt in another of the openings 57 of the bar 56 and replacing the wing nut 59 on the bolt to clamp the bands in the new position. In order to coordinate the height of the rear portions of the bands 31 and 32 to the newly selected vertical position of the forward portions the nuts 41 on the bolts 40 will be loosened and the split ring clamps 38 will be slid in the proper direction and distance in accordance with the newly selected position of the forward end portions of the bands. The nuts 41 will then be tightened to hold the clamps 38 in the desired adjusted position.

The straps 65 and 70 will then be lowered to the level of the hand grip 78 of the cover 79 of the can 77 and the straps 65 and 70 will be moved rearwardly until the free ends thereof are positioned rearwardly of the hand grip 78. The top portion of the keeper 71 will be swung rearwardly against the bearing down action of the spring 74

until the top of the keeper engages the upper strap 65 at which time the lower portion of the keeper will have swung forwardly and upwardly to clear the space between the straps 65 and 70.

The straps will then be moved forwardly so that the hand engaging portion 80 of the hand grip is received by the space between the straps and the lower strap engages the under face of the portion 80 of the hand grip. The keeper 71 will then be moved to the position shown in Figures 4, 5 and 6 of the drawings to confine the hand grip within the space between the straps. The bearing down tension of the spring 74 will retain the keeper in its operative position. The bracket 69 will prevent the escape of the hand grip 78 from between the straps at the rear end thereof.

In order to accommodate covers of various diameters and cans of different heights the link 63 may be selectively connected to the arms 60 and 60a at the different holes 61. By virtue of the flexible construction and arrangement of the adjusting arms 60 and 60a the link 63 and the straps 65 and 70, the straps can move in substantially vertical plane so that they can lift a flanged type of cover as illustrated in Figures 1 and 2 of the drawings or any other conventional type of can cover. The straps 65 and 70, the link 63 and the arms 60 and 60a will not only cooperate in the lifting of the can cover 79 but comprise a can hold-down member which will retain the cover in its closed position on the can and will also assist in maintaining the can in its proper upright position. The bands 31 and 32 may be removed for repair or replacement by removing the cotter pins 42 and the bolt 58.

In Figure 1 of the drawings the device is shown in its position of rest with the forward edge portion of the base 13 engaging the ground A or other supporting surface. The device with the can 77 positioned thereon may be moved from one location to another by the operator grasping the handle 21 and pulling towards himself so that the forward edge portion of the base 13 will be swung upwardly on the wheels 10 out of engagement with the ground A and pushed on its wheels to the new location. The device may also be used in the same manner as a conventional type hand truck for transporting other articles, such as sacks of grain and the like, by moving the straps 65 and 70 to their raised position and if desired the bands 31 and 32 may be removed as above described.

If desired the device may be converted into a permanent installation by the removal of the wheels 10 and the base 13 and the substitution of a block 81 of the kind disclosed in my above mentioned co-pending application.

The block may be of stepped formation to provide an upwardly facing ledge 82 which extends around the entire circumference of the block. The ledge 82 is provided with horizontally aligned bolt holes 83 on opposite sides of the block. The block has an interior annular upwardly facing shoulder 84 which forms the bottom of a can receiving recess 85. The block 81 may be positioned upon the ground at any desired location and the base 13 and the bands 31 and 32 are removed from the standards 20.

The bands are removed by withdrawing the cotter pins 42 and the wing nut 59 and bolt 58 and the base 13 is removed by removal of the nuts 29 and 26 and the withdrawal of the bolts 25 from the clamping plate 27 and the portions 19 of the legs 16 of the base 13. The feet 24 of the stand-

ards will then be positioned upon the ledge 82 at opposite sides of the block 81 with one of the openings in each foot in alignment with one of the bolt holes 83 to receive one of the bolts 25 which extends upwardly through the hole 83 in the block and through the aperture in the foot 24. The nuts 29 are threaded upon the upper ends of the bolts 25 and into frictional engagement with the feet 24.

The garbage can 77 will be positioned with its lower end portion disposed within the recess 85 of the block 81 and the bottom of the can resting upon the shoulder 84. The straps 65 and 70 will be applied to the hand grip 78 of the can cover 79 in the manner described above. If desired additional bolt holes 83 may be provided in the ledge 82 for the reception of additional bolts 25.

In order to permit the bands 31 and 32 to be disengaged from the guides 45 and 49, the bands 31 and 32 are provided adjacent their free ends with notches 31a and 32a, respectively, which are of greater depth than that of the portions 48 and 52. When it is desired to separate the bands they will be slid upon one another until the notches 31a are brought into registry with the portions 48 of the guide 45 and the notches 32a are brought into registry with the portions 52 of the guide 49. The bands will then be moved away from one another to effect the separation.

When the forward overlapped ends of the bands 31, 32 are moved together, the circle of such bands will be constricted or reduced in diameter for a smaller sized can; and when the overlapped forward ends of the bands 31, 32 are shifted outwardly relatively to one another, the diameter of the circle of the bands 31, 32 will be expanded or enlarged for cans of greater diameter. Incident to this constriction or expansion, the rear ends 34 of the bands are obliged to partake of a small angular movement about the pivots 36. Assuming that the forward overlapped ends of the bands 31, 32 are anchored fixedly to the vertical adjusting bar 56, when the bands are constricted, the knuckle ends 35 must move forwardly, which action is permitted by the angular adjustment of the brackets 37 about the standards 20. This is accomplished by loosening the nuts 41 which are tightened after the adjustment is effected. Consequently, the pivots 36 about which the rear ends 34, 35 of the bands 31, 32 are carried, can partake of a bodily movement forwardly and rearwardly by reason of the fact that the clamps 38 are rotatably mounted about the vertical standards 20. These clamps 38 also have a vertical movement up and down posts 20 to accord with the vertical adjustment provided by the apertures 57 in the vertical clamping bar 56 at the forward portion of the bands 31, 32.

In case the circle of the bands 31, 32 is expanded or enlarged in diameter, the rear ends 34, 35 will be forced to some extent backwardly and the brackets 37 and clamps 38 may be angularly adjusted in a rearward direction about the standards 20 to compensate for this expansion without causing undue outward bulging of the side portions of the bands 31, 32.

Cooperating to this same end is the forward and rear adjustment of the vertical adjusting bar 56 provided by the slot 54 in foot 55. In other words, when the circle of the bands 31, 32 is enlarged, the vertical adjusting bar 56 may be adjusted forwardly and when the circle of the bands 31, 32 is narrowed, the vertical adjusting bar 56 may be moved rearwardly to a desired extent. To secure extremely accurate and fine

adjustment of the bands 31, 32 to the sides of cans of widely varying diameter, the vertical adjusting bar 56 will be adjusted accordingly either forwardly or rearwardly and simultaneously the bracket arms 37 will be angularly adjusted rearwardly or forwardly about the vertical standards 20. Due to the fact that the pivots 36 are carried by the brackets 37 in offset relation to the axis of rotary adjustment of the brackets 37, such pivots 36 may be moved bodily or through movement of translation forwardly or rearwardly individually or in accompaniment with similar forward and rear adjusting movements of the vertical adjusting bar 56 at the front of the device.

Both of these concurrent adjustments are related to the fixed frame which carries the base 15 on which the can rests in its proper relation to the bands 31, 32, and to the frame of which the vertical standards 20 are part. This frame carries the base 15. The base 15 carries in a specified relation, namely, at its forward portion, the vertical adjusting bar 56. Thus the frame parts 20, the can support 15, which incidently is also the support for the vertical adjusting bar 56, all cooperate together to orient the can in proper position between the bands 31, 32. Moreover, as the bands are constricted for smaller diameter cans, the vertical adjusting bar 56 may be moved rearwardly on the supporting base 15 and the brackets 37 may be swung rearwardly so that small diameter cans are not left on the outer portion of the platform or base 15 but are brought to a closer position with respect to the axle 11 whereby in a truck of this character, the load may be more readily lifted for wheeled transportation than if the can were held at a point on the base 15 outwardly or remote from the axle 11.

It is obvious that various changes and modifications may be made in the details of construction and design of the above specifically described embodiment of this invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claims.

What I claim is:

1. A can holding device comprising a wheeled frame including upright standards, a base carried by said frame forwardly of the wheels for receiving a can, part-circular bands extending above said platform and having their forward ends overlapped and movable relatively to contract or enlarge the diameter of the circle of the bands to accommodate cans of varying sizes, an adjusting bar at the forward portions of said base, means for clamping the overlapped forward ends of the bands to fixed vertical positions on said adjusting bar, means for adjusting said adjusting bar forwardly and rearwardly upon said base to agree with various degrees of overlapping of the forward ends of said bands, said bands having separated rear ends, pivots for the rear ends of said bands, and brackets vertically and angularly adjustable on said standards carrying said pivots for vertical and forward and rearward bodily adjusting movement.

2. A can holding device comprising a wheeled frame including upright standards, a can-supporting platform on the frame extending forwardly from the wheels, an adjusting bar mounted for forward and rearward adjusting movement on the outer portion of said base, part-circular bands having their forward ends overlapped and relatively slidable for altering the diameter of the circle of the bands, means for securing said overlapped ends of the bands in adjusted position to

said adjusting bar, the rear ends of said bands being separated, brackets angularly adjustable about said standards, said brackets and rear ends of said bands being pivoted together on axes displaced from the axes of angular adjustment of the brackets about said standards to provide bodily movement of the pivoted rear ends of said bands forwardly and rearwardly to compensate for adjustment of the diameter of the circle of the bands.

3. A can holding device comprising can-embracing bands slidable on one another at their front end portions to fit cans of varying sizes and having separated rear ends, pivots for the rear ends of the bands, angularly adjustable rear supports for the pivots to permit bodily movement of the pivots forwardly and rearwardly in ac-

companionment to the contracting and expanding adjusting of said bands, and a front support for the front portions of the bands.

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