

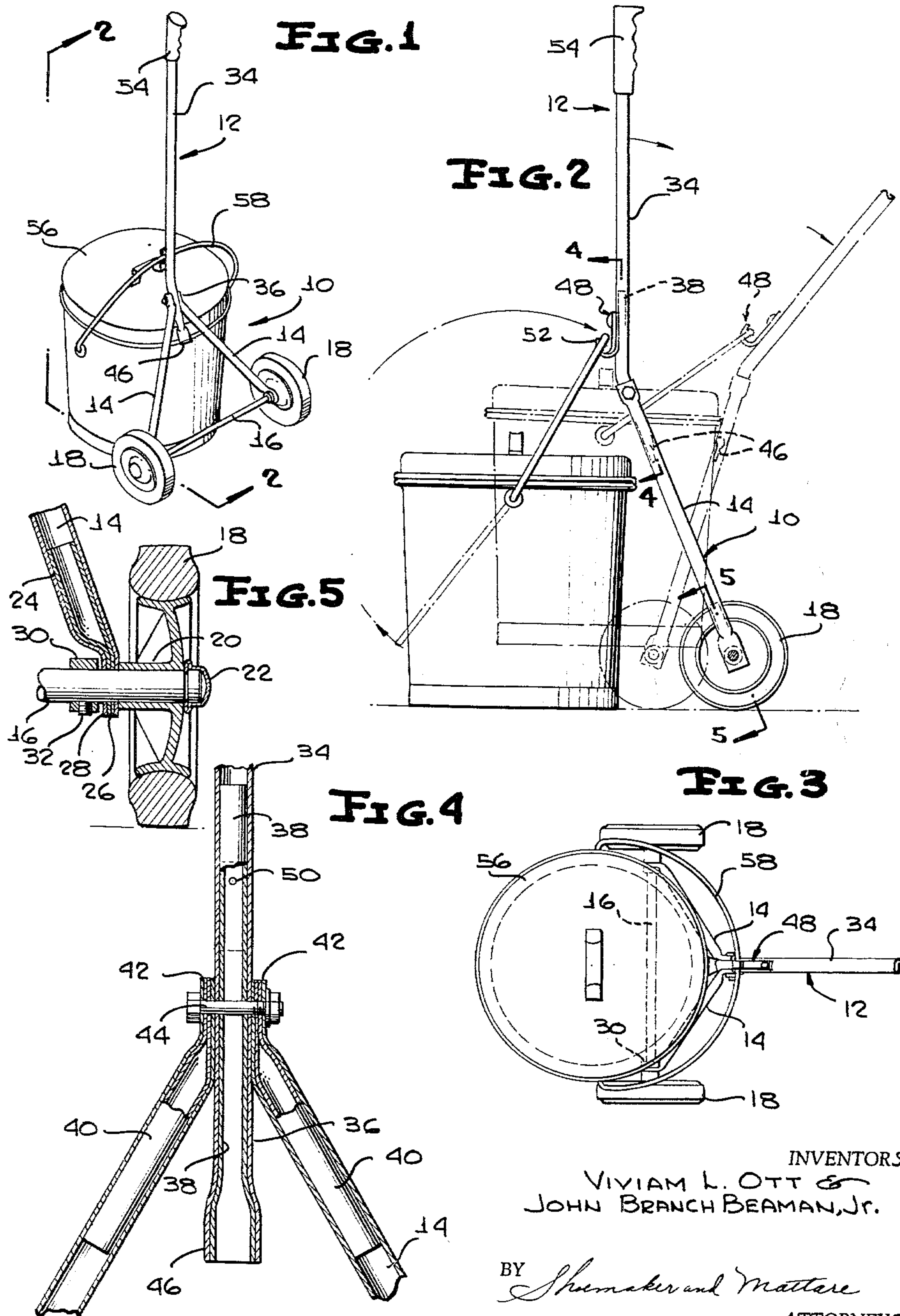
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WHEELED CAN CARRIER OF REINFORCED TUBULAR MATERIAL

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## WHEELED CAN CARRIER OF REINFORCED TUBULAR MATERIAL

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2 Claims. (Cl. 214—384)

This invention relates to a wheeled carrier device for handling buckets and cans.

The handling of buckets and cans in and around a home is a chore which has to be performed quite frequently and is one which many times falls to the lot of the housewife and accordingly the provision of a lightweight easily manipulated carrier device is very desirable and the present invention has for its primary object to provide a wheeled carrier device by means of which cans and buckets can be easily and quickly picked up and moved from one place to another as required.

Another object of the invention is to provide a lightweight wheeled can carrier designed in a novel manner whereby a can, either of the type having a bail handle or of the type having a handle pivotally attached to a side of the can, may be easily elevated from the ground and placed upon a supporting part of the carrier by manipulation of the carrier itself and without requiring the manual lifting of the can from the ground to attach it to or mount it on the carrier.

Another object of the invention is to provide a wheeled can carrier of the character described which may be constructed of relatively lightweight tubular material, such as aluminum, for example, and which is provided with novel reinforcement means in certain portions thereof to give rigidity and strength to those portions where weight and/or strain would be concentrated in the use of the carrier.

Still another object of the invention is to provide a wheeled can carrier embodying a substantially triangular frame portion wherein one side of such frame portion consists of a wheel carrying axle, with means carried by a handle, attached to the upwardly directed apex portion of such frame portion, whereby a can may be elevated to a position where it can be caused to rest upon the axle and supported thereby while the carrier and the can are moved.

Still another object of the invention is to provide a construction of the character described in the preceding paragraph, with novel reinforced rest means in the upper part or apex portion of the frame portion of the carrier against which the top part or top edge of a can may rest when such can has been elevated to a position where the bottom part is supported upon the axle of the carrier.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawing forming a part of the specification and wherein:

FIG. 1 is a view in perspective of the can carrier of the present invention showing the same with a can and in a position ready to pick up or lift the can from the ground by the bail of the can.

FIG. 2 is a view of the carrier in side elevation and in full lines, illustrating a first position of the carrier preparatory to picking up a can by a bail handle, and showing, in broken lines, the position of the carrier when the can has been elevated onto the axle thereof and is ready for travel.

FIG. 3 is a view in top plan of the carrier and the can when the can is in elevated position as it is shown in broken lines in FIG. 2.

FIG. 4 is a sectional view on an enlarged scale, taken

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substantially on the line 4—4 of FIG. 2, and illustrating the reinforcing insert and can support tongue at the bottom of the handle bar and the reinforcements in the side portions of the frame, with parts of the latter reinforcements being in elevation.

FIG. 5 is a sectional view taken substantially on the line 5—5 of FIG. 2 and illustrating the reinforcing insert at the bottom end of one leg of the triangular frame and showing the movement limiting collar on the axle.

Referring now more particularly to the drawings it will be seen that the carrier comprises the frame or body portion which is generally designated 10 and to which the hereinafter described supporting wheels are attached, and the handle which is generally designated 12.

The frame forming the body portion 10 comprises the two tubular side members 14 and the horizontal bottom member 16. These members 14 and 16 when in assembled relation form a substantially triangular structure as shown, the bottom member 16 forming the base of the triangle and the leg members 14 converging upwardly to form the apex of the triangle where they are joined together in the manner about to be described.

The bottom portion of the frame body not only constitutes the base of the frame but also constitutes the axle for the carrier upon which the supporting wheels 18 are mounted.

The axle forming base of the frame preferably is in the form of a solid bar as illustrated at 16 in FIG. 1 and the wheels 18 have the hub portions 20, each of which has an end of the bar forming the axle base of the frame, extended therethrough and the ends of the axle have hub cap members 22 thereon which retain the wheels against separation or detachment from the axle.

As hereinbefore stated an object of the invention is to provide a lightweight but strong and sturdy wheeled can carrier. The legs 14 of the body frame and also the handle 12 are therefore formed of suitable lightweight tubular material such as aluminum, for example. In order to strengthen the tubular material reinforcing inserts are placed therein and each of the upwardly converging side members or legs 14 of the frame 10 accordingly has positioned in the lower end thereof a tubular reinforcement such as that illustrated in FIG. 5 and designated 24. The lower end of each leg 14 is compressed or flattened as indicated at 26 and the lower end of the tubular insert 24 is likewise flattened as shown and this flattened lower end portion of the leg is angled inwardly slightly with respect to the major portion of the leg so that it will assume a substantially vertical position in use and it is also provided with a suitable bearing opening 28 through which an end of the axle portion 16 of the body frame extends. This terminal lower end portion of each leg 14 is disposed, as shown, upon the inner side of the adjacent wheel 18 and a collar 30 is positioned on the axle upon the inner side of the flattened terminal portion of the leg, where it is secured against movement in a suitable manner as, for example, by the employment of a set screw 32. Thus while the axle portion 16 may be free to turn in the bearing opening 28 and in the hub 20 of the wheel its longitudinal or axial movement will be limited between the cap 22 which is fixedly attached to the end of the axle portion and the collar 30. If, due to the weight of a can on the axle portion 16, such portion is held against rotation then, of course, the wheel 18 at each end of the axle portion will be free to turn on such portion.

The handle 12 comprises a relatively long piece of tubular material 34, having a short portion 36 at one end thereof bent off at an oblique angle and positioned within this angled portion 36 is a length of reinforcing tubular material 38 which extends from the lower end of the



portion 36 upwardly and into a part of the longer straight upper portion of the handle.

The upper end of each of the frame leg portions 14 also has a length of tubular reinforcing material 40 positioned therein and the upper ends of the legs 14 together with the upper ends of the reinforcing tubular inserts 40 are compressed or mashed into a coupling terminus 42 which is also given a transversely arcuate cross sectional contour to receive the rounded or curved side of the upper part of the angled portion 36 of the handle.

As is also shown each of the coupling termini 42 is angled outwardly with respect to the leg from which it extends so that it will be parallel with the part of the handle to which it is attached.

The coupling terminals 42 are secured to the angled lower portion 36 of the handle member 34 by a nut and bolt coupling 44 as shown in FIG. 4, the bolt passing through the terminal portions 42 and through the portion 36 and also the reinforcing insert 38. Thus while the tubular parts of the structure may be of relatively light material there is provided in this connection a strong and rigid structure.

As shown, the upper ends or terminal portions 42 of the upwardly convergent legs 14 of the frame body are secured to the angled portion 36 of the handle, at a substantial distance above the lower end thereof. Thus the major portion of the angular extension 36 projects downwardly through the apex portion of the triangular frame forming the body 10 and into the frame and lies in a common plane with the parts 14 and 16 of the frame.

The lower end of the portion 36 of the handle and also the lower end of the insert 38 are flattened as indicated at 46 and the major width of this flattened portion extends across the width of the frame or parallel with the plane in which the side members 14 of the frame lie. This flattened terminal lower end of the portion 36 provides a rest against which the top edge of a supported can bears when the latter is lifted by the carrier, as illustrated in broken lines in FIG. 2.

In the part of the handle which is reinforced by the upper end of the reinforcement 38 a hook member 48 is secured in a suitable manner as by means of a screw or bolt 50 to the front or forward side of the carrier, the hook member having the bill portion 52 for engaging a bail handle on a bucket or any other type of can handle.

As will be apparent from the illustration, the front side of the can carrier, to which the hook member 48 is attached, is the side opposite from the obtuse angle formed by the joined handle and body frame parts of the carrier or, in other words, the outside angle formed by the connected parts. Thus when the handle portion 12 of the carrier is vertical the body portion or frame 10 will be angled downwardly and rearwardly or toward the person operating the carrier.

In order to facilitate gripping the upper end of the handle portion, a suitable hand grip 54 is fixed to the upper end of the tube 34 which forms the handle portion or handle bar.

It will be readily apparent from the illustration of the invention when a can, such as that designated 56, having a bail handle 58, is to be picked up, the handle portion 12 of the carrier is swung by the operator forwardly or away from him to swing the hook member 48 downwardly to an elevation where the bail 58 can be engaged thereover. The operator then reversely swings the handle to elevate the hook and in so doing the can will be picked up by the hook from the surface of the ground and may be brought to rest upon the horizontal axle portion 16 of the body frame. Thus the lower part of the can will lie partly within the triangle of the frame and the top edge of the can at the back thereof will rest against the depending tongue-like portion 46.

It will be seen from the illustration of the can carrier that, in addition to providing a strong structure of rela-

tively lightweight when the parts are in assembled relation, the design of the carrier is such that it may be conveniently packed or packaged in a disassembled or knocked down condition for merchandising. The purchaser of the knocked-down carrier then only needs a screwdriver and light wrench to easily and quickly assemble the parts.

The caps 22 attached to the ends of the axle forming portion 16 of the frame may be of a known type which is self-locking or self-securing when pressed onto the end of the axle and while such a cap is preferred, obviously any other suitable type of cap may be provided.

It will also be apparent that in addition to being strongly reinforced at the lower ends of the legs 14 and at the apex portion of the frame, by the tubular inserts, the curved or arcuate formation of the terminals 42, which receive between them the circular portion of the handle, form with the handle, a connection which will remain rigid and cannot turn on the coupling bolts 44.

As this invention may be embodied in several forms without departing from the spirit or essential characteristics thereof, the present embodiment is therefore illustrative and not restrictive, since the scope of the invention is defined by the appended claims rather than by the description preceding them, and all changes that fall within the metes and bounds of the claims or that form their function as well as conjointly cooperative equivalents, are therefore intended to be embraced by those claims.

We claim:

1. A can carrier comprising a substantially triangular frame and an elongate handle bar, said frame including an elongate horizontal bottom part forming an axle and elongate side parts extending in upwardly convergent relation from the bottom part, said handle bar having a short angulated lower end portion positioned between and extending downwardly beyond the upper ends of said convergent side parts, means securing said upper ends of said side parts to opposite sides of said angulated portion at a substantial distance above the lower end of the latter, said angulated portion lying in a common plane with said bottom and side parts of the frame, a hook secured to the handle bar above said angulated portion and on the side of the handle bar remote from the angulated portion, wheels mounted on said axle forming bottom part of the frame, means forming a hand grip upon the upper end of the handle bar, a reinforcing and stiffening tubular insert in the angulated portion of the handle bar and extending a short distance above said angulated portion and a reinforcing and stiffening tubular insert in the upper end portion of each of said side parts of the frame, the said upper ends of the side parts and the tubular inserts therein being compressed to form a stiff terminus and being of transversely arcuate contour to receive the adjacent side of the angulated portion of the bar, the said means securing the upper ends of said side parts to opposite sides of the angulated portion of the bar comprising a nut and bolt means with the bolt passing through said compressed ends of the side parts and the interposed portion of the bar, and the lower end of the angulated portion and the tubular insert therein being compressed and flattened and the major width of said flattened part lying in and parallel with said plane and providing a rest or support for a can when the latter is attached by a handle to the hook and is resting upon said axle forming bottom part.

2. A wheeled carrier for lifting and transporting a can body having a pivoted bail and having a predetermined combined body and raised bail height, and the carrier comprising an axle, wheels on the ends of the axle, a pair of straight tubular members each having a short flattened obtusely angled end portion having a bearing aperture therein through which an end of the axle extends on the inner side of a wheel, the tubular members extending in convergent relation away from the axle and having their opposite ends terminating in end portions obtusely angled oppositely to the first named end portions whereby the



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end portions of each member are approximately parallel, the second named end portions being in spaced opposed relation, an elongate handle member having a relatively long obtusely angled lower end portion interposed in the space between said approximately parallel end portions of the tubular members, closely adjacent to the bend of the angle whereby a major portion of said angled lower end portion extends into the space between said tubular members toward the axle and lies in a common plane with the tubular members, means rigidly securing together said angled lower end portion of the handle and the adjacent end portions of the tubular members, and a bail engaging hook secured to the handle member adjacent to and above the bend between the handle and the said lower end portion thereof and on the side of the handle away from the inside of the bend, and the distance between the hook and the axle being such with respect to the said combined body and raised bail height that such receptacle may be lifted and swung in between the axle engaging ends of said tubular members to rest upon the axle when the

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handle is swung from a vertical position away from the can body when the latter is resting on the ground with the bail thereof engaged on said hook.

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