

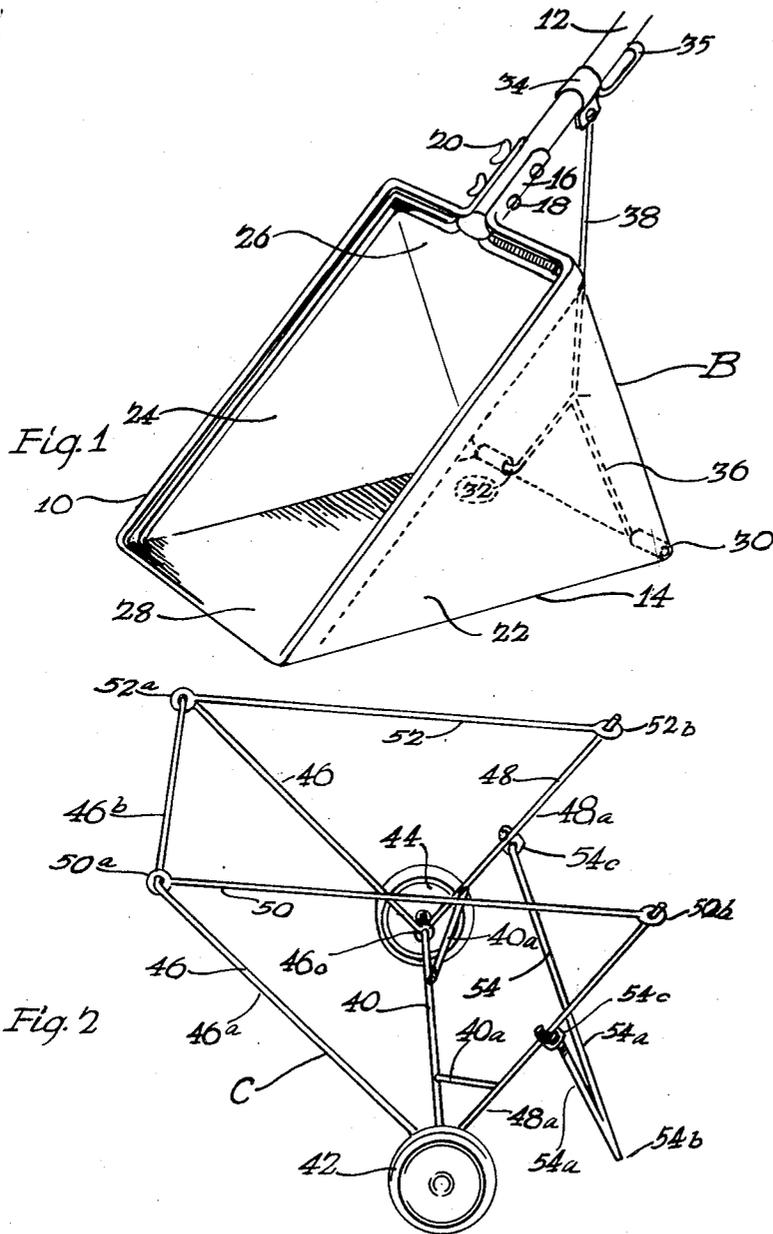
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REFUSE CARRYING DEVICE

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The present invention relates generally to the art of gardening, and more particularly to a novel device for handling garden refuse, and the like.

A major source of labor involved in gardening is the removal of refuse resulting from the gardener's efforts. Such refuse normally includes grass cuttings, weeds, dead vegetation, and hedge clippings. Usually such refuse is gathered up by means of a rake, which rake is then utilized to urge the refuse into a shovel. Thereafter the shovel is lifted so as to dump the refuse into a wheelbarrow or a small cart. The wheelbarrow or cart is then moved to a refuse disposal location such as a trash bin, or the like. If the opening of the trash bin is higher than the top of the wheelbarrow, either the latter must be raised or else the refuse must be emptied therefrom by means of a shovel. Any professional or amateur gardener will readily appreciate that this series of operations is most time-consuming and tedious.

It is a principal object of the present invention to provide a refuse carrying device by the use of which the time and labor connected with collecting, transporting and emptying refuse may be substantially reduced.

It is a further object of the present invention to provide a refuse carrying device which may be easily manipulated by even one not particularly skilled in the art of gardening.

It is another object of this invention to provide a refuse carrying device by the use of which the number of gardening tools required for the removal of refuse may be reduced.

A further object of the present invention is to provide a refuse carrying device which is light in weight, yet sturdy of construction whereby it may be easily manipulated during the refuse removing operation.

It is an additional object of the present invention to provide a refuse carrying device which is of collapsible construction whereby it may be folded into a size and shape permitting its storage in a comparatively small space when not in use.

Yet another object of this invention is to provide a refuse carrying device which has few parts and is of simple construction whereby it may be manufactured to sell at a comparatively low price.

Other objects and advantages of the present invention will become apparent from the following description of a preferred embodiment thereof.

Figure 1 is a perspective view showing the refuse-receiving bag portion of a refuse carrying device which embodies the present invention; and,

Figure 2 is a perspective view showing the cart portion of said refuse carrying device, which cart is adapted to removably receive the bag shown in Figure 1.

Referring to the drawings, it will be seen that the refuse carrying device of the present invention broadly comprises a refuse-receiving bag B of the type shown in Figure 1, and a wheeled cart C of the type shown in Figure 2. In its open position of Figure 1 the bag B is adapted to receive refuse whereafter it may be disposed

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within the cart C for easy transportation to a refuse bin, or the like.

The preferred form of bag B comprises a rigid rectangular frame 10 having an elongate handle 12 secured to its upper portion, and a flexible receptacle 14, which receptacle is secured at its front portion to the frame 10 and extends rearwardly therefrom. This preferred form of bag will also include means interposed between the rear of receptacle 14 and the handle 12 adapted to effect the collapse of the receptacle toward the frame 10. By this arrangement, the contents of the receptacle may be urged through the space encompassed by the frame.

The frame 10 may conveniently be formed of a single length of metal having a channelled cross section. The free ends 16 of this single length of metal may be bent upwardly so as to receive the lower end of the handle 12. Conveniently these free ends 16 will be transversely curved in cross section in order to effect a firm grip with the handle, said handle preferably having an annular cross section. The free ends 16 of the frame will preferably mount fastening means such as bolts 18 and wing nuts 20 whereby to provide a rigid connection between the frame and the ends of the handle 12.

The receptacle 14 will preferably be formed of a durable canvas material and is seen to include a pair of parallel side walls 22 and 24 which taper rearwardly from the frame, a top wall 26 and a bottom wall 28. Conveniently, the top and bottom walls will be formed of a single length of material having its edges secured to the peripheries of the side walls. It will be found desirable to provide means for securing the receptacle 14 to the frame 10 which will permit ready substitution of a new receptacle upon the old receptacle becoming worn out or damaged.

It should be noted that a pair of tubular elements 30 and 32 are shown secured to the rear of the receptacle 14 at the outer portion of the apex defined by its side, top and bottom walls. These tubular elements form part of the means provided for effecting collapse of the receptacle 14. Also forming a part of these means is a sleeve-like anchor member 34 which has a sliding engagement with the handle 12 permitting its longitudinal movement therealong. To aid in effecting such movement the anchor member 34 may be provided with a manipulating loop 35. The tubular elements 30 and 32 are shown as being connected with the anchor member 34 by rod means consisting of an inverted V-shaped rod 36 and a straight rod 38; the straight rod 38 being disposed between the apex of the rod 36 and the lower edge of the anchor member 34. The ends of the V-shaped rod 36 are shown pivotally secured within the tubular elements 30 and 32, while the upper end of the rod 38 is shown pivotally secured to the lower portion of the anchor member 34. In order to effect the collapse of the receptacle 14 it is only necessary to move the manipulating loop 35, and hence the anchor member 34, along the handle 12 away from the frame 10.

Referring now to Figure 2, a preferred form of cart C will comprise a horizontally disposed axle 40 which mounts a pair of wheels 42 and 44 at its ends; a pair of rigid frames 46 and 48; spacers 50 and 52; and a skid 54; which skid is adapted to permit the cart to be supported in the upright position shown in Figure 2.

The rigid frame 46 is of an inverted U-shape, and includes two laterally spaced parallel legs 46a that are connected on their upper ends by a horizontally disposed member 46b. Each leg 46a is formed with a loop 46c on the lower end thereof that pivotally engages the shaft 40.

Frame 48 includes two laterally spaced, parallel members 48a that are rigidly connected on their lower ends to shaft 40. Two angularly disposed reinforcing mem-

bers 40a extend between the shaft 40 and members 48a as may best be seen in Figure 2.

Two spacing members 50 and 52 are provided that are of identical construction, with the members having loops 50a, 52a, and 50b, 52b formed on the ends thereof as may best be seen in Figure 2. Loops 50a and 52a pivotally engage member 46b, with the loops 50b, 52b adjustably engaging members 48a. By removing the loops 50b, 52b from members 48a, or causing them to slide thereon, frame 46 can be pivoted into close association with frame 48 to form a compact unit of the cart C when it is not in use. The loops 50b, 52b may be held in the desired position by auxiliary means (not shown) adapted for this purpose, or by forming the spacers 50, 52 from a resilient material. When the resilient spacers 50, 52 are bowed upwardly slightly the loops 50b, 52b may slidably engage members 48a. However, when the deforming force is released from the spacers 50, 52 they assume substantially horizontal positions, putting the loops 50b, 52b in binding engagement with the members 48a.

In order that the cart C may be supported in an upright position a V-shaped skid 54 is provided. The skid includes two legs 54a joined at one end to form an apex 54b, and on the opposite ends clamps 54c are provided that adjustably engage members 48a. By vertically adjusting the skid 54 on the members 48a, the cart C may be disposed at the desired vertical angle to receive the bag B.

In operation, the bag B may be placed upon the ground adjacent the refuse to be removed with the bottom wall 28 disposed substantially parallel to the ground. Refuse may then be forced into the open receptacle 14 by means of a rake, broom, or the like. After a desired amount of such refuse has been received within the receptacle the entire bag may be lifted onto the cart C, the receptacle 14 being received within the triangular pocket defined by the frames and spacers of the cart. In this position it will be noted that the bag handle 12 will extend outwardly from the cart whereby the handle may be utilized to move and to guide the cart. When the combined cart and bag has been moved to a refuse bin, or the like, the bag B may be lifted from the cart by means of its handle 12. Next, the receptacle 14 may be collapsed, such collapse being accomplished by movement of the manipulating loop 35 along the handle 12 so as to urge the receptacle toward the frame 10. In this manner the refuse contained within the receptacle will be forced through the space defined by the frame.

At the completion of the refuse-carrying operation, both the bag B and the cart C may be readily collapsed whereby they may be stored in a comparatively small space. The bag B is collapsed by movement of the manipulating loop 35 along the handle away from the frame 10. In this manner the rear of the receptacle will be urged to a position closely adjacent to the rear of the frame 10. The cart C may be collapsed when not in use by following the procedure previously described in detail.

In order that the aforedescribed bag B and cart C may be easily manipulated, the rigid members thereof may be conveniently formed of a light metal, such as aluminum. This construction will likewise afford a refuse carrying device which is corrosion-resistant. The refuse carrying device of the present invention affords several advantages over the means heretofore utilized for this purpose. For example, inasmuch as refuse may be directly loaded into the bag, the present device eliminates the cost of providing a wheelbarrow and shovel, and also the labor required to fill the wheelbarrow with a shovel. Additionally, the bag and cart of the present invention may be stored in a minimum of space by virtue of their collapsibility.

It will be apparent to those skilled in the art that various modifications and changes may be made with respect to the foregoing description without departing from the spirit of the invention or the scope of the appended claims.

I claim:

1. A refuse carrying device, comprising: a refuse-receiving bag which includes, a rigid rectangular frame, a handle extending upwardly from the upper portion of said frame, a flexible receptacle secured at its front portion to said frame, said receptacle including a pair of parallel side walls which taper rearwardly from said frame to a point, and top and bottom walls secured to the peripheries of said side walls; a pair of tubular elements secured to the outer portion of the apex defined at the rear of said receptacle by said walls; a sleeve-like anchor member having a sliding engagement with said handle permitting its longitudinal movement therealong; a manipulating loop secured to said anchor member for effecting its movement relative to said handle; an inverted V-shaped rod having its ends pivotally secured within said tubular elements; and a rod interconnecting the apex of said inverted V-shaped rod and said anchor member, said rods being adapted to effect collapse of said receptacle toward said frame upon movement of said anchor member along said handle away from said frame whereby the contents of said receptacle may be urged through the space encompassed by said frame; and a cart for removably receiving said bag whereby it may be easily transported which includes, a horizontal axle; a pair of parallel frame elements rigidly affixed at their lower ends to said axle; an inverted U-shaped frame pivotally attached at its lower ends to said axle; and a pair of spacing elements pivotally attached at one of their ends to the cross bar of said U-shaped frame and releasably engageable at their other ends to the free ends of said parallel frame elements; wheels mounted by said axle, said spacing elements being disengageable from said free ends of said parallel frame elements whereby said frames and spacers may be collapsed; and an inverted V-shaped skid having clamps at its upper ends slidably engaged with said parallel frame elements in order that it may be vertically adjusted relative thereto whereby to support the cart at the desired vertical angle to receive said bag.

2. A refuse carrying device, comprising: a rigid frame; a handle extending upwardly from said frame; a flexible receptacle secured to said frame and extending rearwardly therefrom; a sleeve-like anchor member having a sliding engagement with said handle permitting its longitudinal movement therealong; a tubular element secured to the rear of said receptacle; and rod means interconnecting said anchor member and said tubular element whereby upon movement of said anchor member along said handle away from said frame said receptacle will be collapsed toward said frame so as to cause its contents to be urged through the space encompassed by said frame.

3. A refuse carrying device, comprising: a rigid rectangular frame; a handle extending upwardly from the upper portion of said frame; a flexible receptacle secured at its front portion to said frame, said receptacle including a pair of parallel side walls which taper rearwardly from said frame to a point, and top and bottom walls secured to the peripheries of said side walls; a pair of tubular elements secured to the outer portion of the apex defined at the rear of said receptacle by said walls; a sleeve-like anchor member having a sliding engagement with said handle permitting its longitudinal movement therealong; a manipulating loop secured to said anchor member for effecting its movement relative to said handle; an inverted V-shaped rod having its ends pivotally secured within said tubular elements; and a rod interconnecting the apex of said inverted V-shaped rod and said anchor member, said rods being adapted to effect collapse of said receptacle toward said frame upon movement of said anchor member along said handle away from said frame whereby the contents of said receptacle may be urged through the space encompassed by said frame.

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