United States Patent

Ballenger

[15] **3,679,160**

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[54] PORTABLE LITTER BAG HOLDER

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[73] Assignee: **Central Specialties Co.**, Chicago, Ill.

[22] Filed: **March 24, 1971**

[21] Appl. No.: **127,729**

[52] **U.S. Cl.**.....**248/9**, 211/84, 248/101, 248/146, 248/150

[51] **Int. Cl.**.....**B65d 67/00**

[58] **Field of Search**.....248/97, 133, 99, 150, 101, 248/156; 211/84

[56] **References Cited**

UNITED STATES PATENTS

D216,438	1/1970	Gay et al.	248/97 X
1,322,445	11/1919	Hyer	248/97
2,781,536	2/1957	Paul	248/97 X
3,141,644	7/1964	Baird	248/146
3,603,542	7/1971	Grille	211/84 X

FOREIGN PATENTS OR APPLICATIONS

1,464,798	1/1967	France	248/99
461,346	7/1968	Switzerland	248/97

Primary Examiner—Chancellor E. Harris
Attorney—Dominik, Knechtel & Godula

[57] **ABSTRACT**

A portable litter bag holder is disclosed which is formed out of bent tubular material. The folding frame has a support stake with a right triangular foot piece secured thereto for pressing the same into the ground by standing on it. A rectangular bag frame is pivotally mounted to the support stake and a plastic bag of the typical 5 to 7 gallon plastic household variety has its upper edges folded around the bag frame, and is secured in place by a cover which is pivotally mounted to the bag frame along the edge opposite to the pivotal mount of the support stake to the bag frame. Stops are provided on the cover as well as the bag frame to insure the proper relationship of the parts when in operation, and yet permit the unit to be folded into a flat configuration.

10 Claims, 6 Drawing Figures

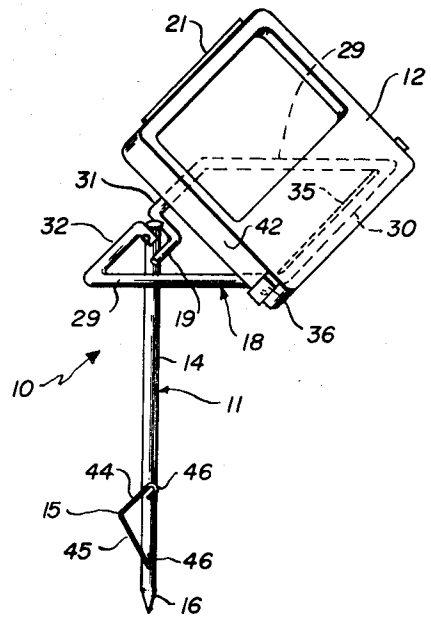


FIG. 1

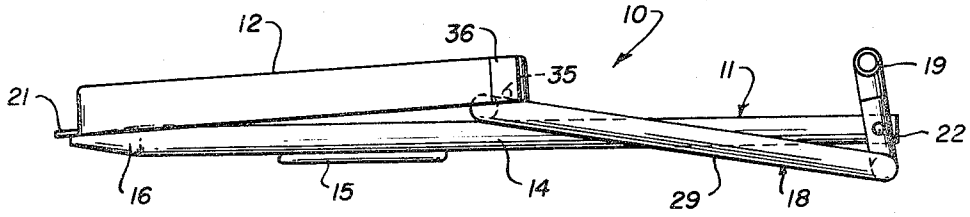


FIG. 2

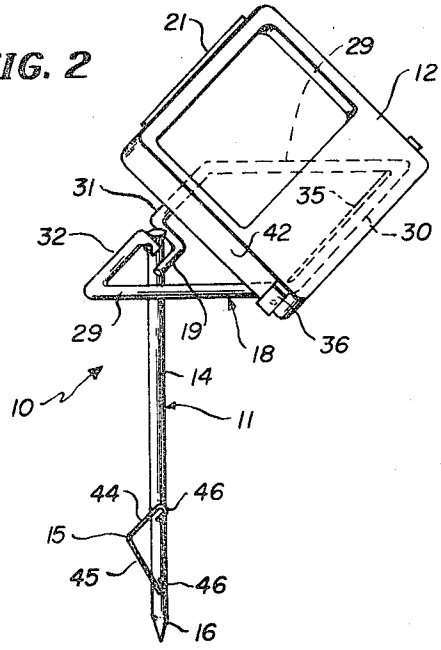


FIG. 3

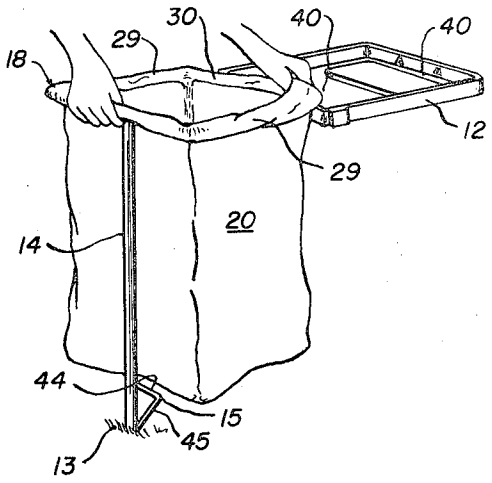
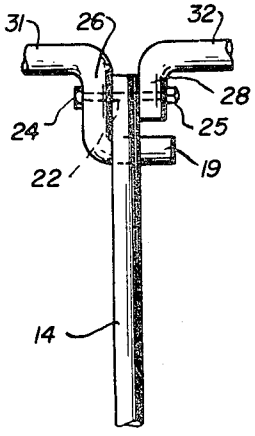


FIG. 4



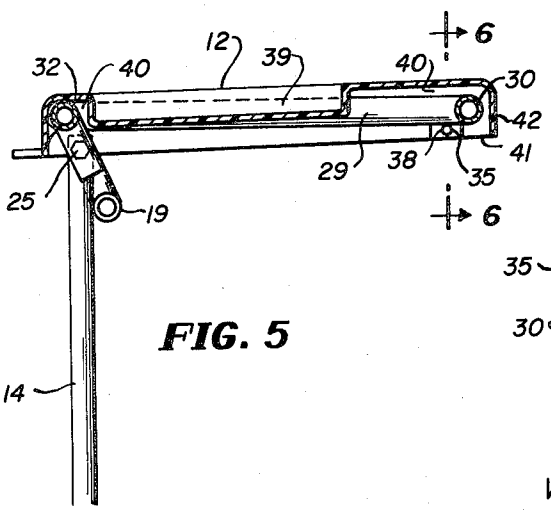


FIG. 5

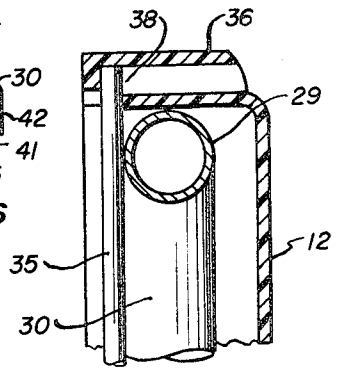


FIG. 6

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PORTABLE LITTER BAG HOLDER

BACKGROUND OF THE INVENTION

The field of invention relates primarily to supports for bags and generally classified in U.S. Pat. Office Class 248 sub 97.

The prior art is exemplified firstly as to the support stake and foot piece in U.S. Pats. Nos. 812,157 and 3,141,644. Such devices are not configured, however, to retain a disposable bag particularly in a windproof condition. The supports for bags are generally exemplified in U.S. Pats. Nos. 2,995,329; 3,095,172; 3,491,973; 3,494,541; and 3,502,291.

Various of these prior art devices will hold a litter bag such as U.S. Pat. No. 3,502,291. No cover is provided, nor is any means provided for securing the same in the ground. The bag holder shown in U.S. Pat. No. 3,494,541 discloses a cover, but no means for supporting the same in the ground, and no means for folding the entire unit into a small configuration for traveling such as required in a camper. Similar comments are applicable to U.S. Pat. No. 3,491,973.

SUMMARY OF INVENTION

In view of the foregoing, it is a principle object of the present invention to provide a portable litter bag holder which can be folded into a relatively small configuration, and yet is sturdy, windproof, self-locking, and sanitary in operation

An additional object of the invention looks to easy cleaning of the portable litter bag holder after it has had considerable use, and further more a construction which inherently reduces the likelihood of contamination from the refuse thrown into the portable litter bag.

An additional object of the present invention is to design a portable litter bag holder with all of the objectives embodied as set forth above which economical to manufacture both from the standpoint of ultimate configuration and tooling costs.

The invention of the portable litter bag holder comprises a construction which includes a folding frame having a support stake and a bag frame which is pivotally secured to the support stake. The bag frame has a stop provided on it to terminate the pivotal action of the bag frame when it is in a plane substantially perpendicular to the support stake. A cover is provided which is pivotally secured to the bag frame along a pivot axis parallel to the pivot axis of the bag frame about the stake, and further optionally provided with a stop which limits the travel of the cover to a position approximately parallel with that of the bag frame. The stake may be advantageously provided with a foot piece of an inverted right triangular configuration providing an upwardly facing step at the lower portion of the support stake so that by holding one hand on the pivotal portion of the bag frame, and the other hand on the front edge of the cover, one foot may be placed atop the foot piece and the stake impaled in the ground for supporting the unit. Additionally a recess may be provided around the underside of the cover which overlappingly engages the plastic bag which is secured to the bag frame.

DESCRIPTION OF DRAWINGS

Further objects and advantages of the present invention will become apparent as the description of an illustrative embodiment proceeds, taken in conjunction with the accompanying drawings in which:

FIG. 1 is a front elevation showing the portable litter bag holder in its folded configuration for travel, shipment, and the like.

FIG. 2 is a perspective partially diagrammatic view showing the portable litter bag holder with the cover in a partially opened position.

FIG. 3 is a further perspective partially diagramitic view showing the cover of the portable litter bag holder in its open position, and a pair of hands illustrating how the plastic bag is secured to the bag frame.

FIG. 4 is an enlarged partially broken view illustrating the joints where the bag frame pivotally is secured to the support stake.

FIG. 5 is a transverse enlarged partially sectioned view taken through the upper portion of the portable litter bag holder when the cover is closed illustrating the cooperative relationship between the bag frame and the cover as well as the support stake.

FIG. 6 is an enlarged partially broken sectional view showing the relationship between the bag frame and its hinge pin which secures the cover to the bag frame taken generally along section line 6—6 of FIG. 5.

DESCRIPTION OF PREFERRED EMBODIMENT

By referring to the drawings it will be seen that the portable litter bag holder **10** is secured into the ground **13** by means of pushing down on the foot piece **15** which drives the support stake **14** into the ground. A bag **20** is secured to the bag frame **18** by inserting the body portion through the generally rectangular bag frame **18** and curling the upper edges of the bag over the bag frame **18**. Thereafter the cover **12**, as shown in FIG. **2**, is pivoted above the hinge pin **35** until the same rests atop the bag frame **18** and thereby accomplishes the two-fold purpose of covering the refuse contained in the bag **20**, and resting atop the bag frame **18** in such a manner as to secure the attachment of the bag to the bag frame.

When out of use, the elements fold into a flat configuration as will be observed in FIG. **1** where the cover **12**, particularly at its remote edge which is the lift tab **21**, folds down generally parallel to the support stake **14** and coterminous with the end of the ground point **16**. Similarly it will be seen that the bag frame **18** which pivots about the frame pivot pin **22** is generally parallel with the support stake **14**, with the bag frame stop **19** extending upwardly from the stake **14** a distance approximately the same as the lower portion of the bag frame **18**. In a commercial embodiment, which is capable of using regular 5 to 7 gallon plastic bags, and manufactured out of heavy 20 gauge 5/16inch diameter zinc plated steel tubing, the same may be folded and shipped in a carbon 4 by 27 by 13 inches including a supply of plastic bags, and the weight is only 3 pounds. Thus, the low silhouette is highly advantageous for shipping and storage.

Additional details of construction are illustrated primarily in their usage in FIGS. **1** through **3**, but in detail in FIGS. **4** through **6**. Referring now to FIGS. **4** and **5**, it will be seen that the pivotal joint between the stake **14** and the bag frame **18** is defined by a stop elbow leg **31** and a pivot elbow leg **32** on that portion of the bag frame opposite the bag frame rear **30** and substantially parallel thereto. A bag frame stop elbow **26** extends generally downwardly from the plane of the bag frame **18** and rearwardly toward the bag frame rear **30**. An offset bend is formed to provide the bag frame stop **19**. At an opposite position, a bag frame pivot elbow **28** is provided with an orientation substantially the same as the bag frame stop elbow **26** but shorter in length. The spacing between the bag frame stop elbow **26** and bag frame pivot elbow **28** is to accommodate the width of the upper portion of the support stake **14**. Further as observed in FIG. **4**, a frame pivot pin **22** passes through the bag frame step elbow **26** and the bag frame pivot elbow **28** and has a flat head **24** at one end, and is geared in position by means of the nut **25** at its other end. As will be seen particularly in FIG. **5**, the bag frame stop **19** abuts the support stake **14** in such a relationship that the bag frame **18** is approximately perpendicular to the support stake **14**.

The cover **12**, which is preferably molded of plastic, has a dimensional limitation dictated by the size of the bag frame **18**, and is proportioned to be pivotally secured generally along the bag frame rear **30**, and with the width sufficient to overlap the bag frame sides **29** and position the lift tab **21** approximately over the joint between the front of the bag frame defined by the two stop elbow legs **31**, **32**. Particularly as noted in FIGS. **5** and **6**, it will be seen that a hinge pin pocket **36** is molded into the opposite sides of the cover **12** at its rear portion and an elongate hinge pin **35** positioned in the pivot hole **38** provided in the hinge pin pocket **36**. The cover **12** stops in its rearwardly tilted position as shown in FIG. **3**

because the open stop edge **41** beneath the rim **42** of the cover **12** abuts the underneath portion of the ends of the bag frame sides **29** as shown in the folded configuration in FIG. **1**. The hinge pin **35**, as shown in FIG. **6**, is welded or otherwise secured to the rear portion of the bag frame sides **29**, the pivotal action taking place by means of the cover **12** rotating around the pivot hold **38** provided in the hinge pin pocket **36**.

The configuration of the cover **12** is illustrated primarily in FIGS. **2**, **3**, and **5** as designed to provide a bag retainer recess **40** which generally follows the rim **42** of the cover **12** around its four-sided periphery. Particularly at the front portion of the cover **12**, as seen in FIG. **2**, the bag retainer recess **40** is relatively narrow and provides only sufficient space between the bag frame **18** and a recess **40** to allow the upper portion of the bag to be folded about the frame **18** (see particularly the upper left hand corner of FIG. **5**).

The details of the foot piece **15** are best shown in FIG. **2**. There it will be seen that the foot piece **15** is of a general right triangular configuration, and a wire bent member. The step **44** is the base of the right triangle, and the step support **45** the hypotenuse of the right triangle with the vertical leg being defined by the continuation of the support stake **14** towards its ground point **16**. A pair of weld bends **46** are provided at the terminus of the step **44** and the stop support **45**, and secured to the lower portion of this support stake **14** conveniently by welding. The configuration of the foot piece **15** thereafter has the geometrical integrity of a right triangle, and is conveniently engaged by the foot.

In operation the portable litter bag holder **10** is unfolded from its configuration as shown in FIG. **1** to that shown in FIG. **2**. While in the configuration generally as shown in FIG. **2**, the user grasps the cover **12** at its lift tab **21** with one hand, and holds the other hand generally above the support stake **14** at the joint with the stop elbow leg **31** and pivot elbow leg **32** with the support stake **14**. The foot is then placed atop the foot piece and more particularly on the step **44**, and by guiding the support stake **14** with the hand holding the cover **12** and directly above the support stake **14**, the support stake can be driven substantially perpendicularly into the ground as shown in FIG. **3**. Thereafter either a five or seven gallon plastic household bag is opened and the bottom inserted through the center portion of the bag frame **18**. The upper edges of the bag are curled around the members of the bag frame **18** including the bag frame rear **30**, the sides **29**, and the forward portion defined by the stop elbow leg **31** and pivot elbow leg **32**. Here it will be observed, particularly with reference to FIG. **5**, that relief is provided over the bag frame rear **30** and above the hinge pin **35** so that while the bag is curved over the bag frame rear **30** there is no interference with the pivotal action provided by the hinge pin **35** in conjunction with the hinge pin pocket **36** of the cover **12** thereby reducing action which would tend to tear the bag. Additionally, as observed in FIG. **5**, it will be noted that the upper portion of the support stake **14** is well beneath the smooth curves of the bag frame pivot elbow **28** and the bag frame stop elbow **26**, thereby holding the edge of the bag above that portion of the support stake which could tear the bag. Additionally, the entire configuration and co-action of the bag frame **18** with the cover **12** and the support stake **14** is designed to insure simple operation, and yet shield moving elements which could tear the bag **20** from ready contact with the bag **20**.

It will be further appreciated that for purposes of cleaning, even by the rain when camping, the bag **20** is merely removed from the bag frame **18**, and the cover **12** left open as shown in FIG. **3** and the rain can wash the entire unit. Obviously the better way to clean the unit is to prevent it from becoming dirty, and because the upper portion of the bag **20**, as shown in FIG. **3**, completely covers the upper portion of the bag frame **18**, the possibilities of contaminating or dirtying the bag frame as well as the support stake **14** are significantly reduced. Additionally, it becomes apparent that the cover **12** can be retracted to a position well clear of the opening defined by the bag frame **18** while refuse is placed into the bag **20**.

Although particular embodiments of the invention have been shown and described in full here, there is no intention to thereby limit the invention to the details of such embodiments. On the contrary, the intention is to cover all modifications, alternative embodiments, usages and equivalents of a portable litter bag holder as fall within the spirit and scope of the invention, specification and the appended claims.

What is claimed is:

1. A portable litter bag holder comprising, in combination,
- a folding frame having a support stake and a bag frame pivotally secured thereto to pivot about an axis perpendicular to the support stake,
- stop means on the bag frame proportioned to terminate the pivotal action of the bag frame in a plane substantially perpendicular to the support stake when pivoted thereabout,
- a cover having means pivotally mounting the same to the bag frame to pivot thereabout along an axis parallel with the axis about which the bag frame pivots with respect to the support stake,
- and stop means on the cover restraining the same for retraction into a plane substantially parallel with the plane of the bag frame

whereby the stop limits cooperate with the frame members to facilitate operation as well as folding for storage.

2. In the portable litter bag holder of the character defined in claim **1** above,
- a foot piece at the lower portion of the support stake to assist in mounting the unit in the ground.

3. In the portable litter bag holder of claim **2** above,
- a pointed end of the support stake.

4. In the portable litter bag holder of claim **1** above,
- said cover having a bag retainer recess about its periphery to positively engage the bag upper edges folded about the bag frame while closing the bag.

5. In the portable litter bag holder of Claim **1** above,
- said bag frame comprising a single piece member with a rear, two sides, a stop elbow leg, a pivot elbow leg, a stop elbow and a pivot elbow,
- and a pivot pin passing through the stop elbow and pivot elbow and support stake.

6. In the portable litter bag holder of claim **1** above,
- a cover hinge pin secured to the bag frame parallel with its rear portion and therebeneath,
- hinge pin pocket means on the cover to receive said cover hinge pin,

whereby the pivotal action of the cover proceeds out of direct contact with the bag frame edges thereby reducing any tendency to rub the upper edges of the bag reversely folded about the bag frame.

7. In the portable litter bag holder of claim **4** above,
- said bag frame comprising a single piece member with a rear, two sides, a stop elbow leg, a pivot elbow leg, a stop elbow and a pivot elbow,
- and a pivot pin passing through the stop elbow and pivot elbow and support state.

8. In the portable litter bag holder of claim **4** above,
- a cover hinge pin secured to the bag frame parallel with its rear portion and therebeneath,
- hinge pin pocket means on the cover to receive said cover hinge pin,

whereby the pivotal action of the cover proceeds out of direct contact with the bag frame edges thereby reducing any tendency to rub the upper edges of the bag reversely folded about the bag frame.

9. In the portable litter bag holder of claim **8** above,
- a cover hinge pin secured to the bag frame parallel with its rear portion and therebeneath,
- hinge pin pocket means on the cover to receive said cover hinge pin,

whereby the pivotal action of the cover proceeds out of direct contact with the bag frame edges thereby reducing any tendency to rub the upper edges of the bag reversely folded about the bag frame.

10. In the portable litter bag holder of the character defined in claim 9 above,

a foot piece at the lower portion of the support stake to assist in mounting the unit in the ground.

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