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Tanahara

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[54] **APPARATUS FOR ANIMAL WASTE COLLECTION**

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[51] **Int. Cl.**[6] **A01K 29/00**; E01H 1/12

[52] **U.S. Cl.** **294/1.4**; 15/257.6

[58] **Field of Search** 294/1.3–1.5, 19.1, 294/50.8, 50.9, 55, 103.1, 119.1; 15/104.8, 257.1, 257.4, 257.6, 257.7

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,830,423	8/1974	Prescott .	
3,942,831	3/1976	Sosnove	294/1.4
3,986,744	10/1976	Krogstad et al. .	
4,200,321	4/1980	Warkentin	294/1.4
4,240,656	12/1980	Eiffinger .	
4,641,873	2/1987	Nurnberger	294/1.4
4,896,912	1/1990	Parnell .	
5,320,393	6/1994	Cortinas	294/1.4
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2444155	3/1976	Germany	294/1.4

Primary Examiner—Dean Kramer

Attorney, Agent, or Firm—Michael I. Kroll

[57] **ABSTRACT**

An apparatus (**10**) for animal waste collection comprising a frame member (**12**). A disposable bag (**14**) is to receive animal waste (**16**) therein. An element (**18**) is for connecting a folded over mouth portion of the disposable bag (**14**) to the frame member (**12**) in a removable manner. An upright handle assembly (**20**) is also provided. A facility (**22**) is for coupling the frame member (**12**) with the disposable bag (**14**) to a bottom end of the upright handle assembly (**20**) in a removable manner. A person (**24**) can grasp the upright handle assembly (**20**) in a removable manner. A person (**24**) can grasp the upright handle assembly (**20**), position the frame member (**12**) with the disposable bag (**14**) adjacent animal waste (**16**) deposited upon the ground (**26**), scoop the animal waste (**16**) into the disposable bag (**14**), disengage the upright handle assembly (**20**) from the frame member (**12**) and separate the disposable bag (**14**) from the frame member (**12**) to get rid of the disposable bag (**14**) with the animal waste (**16**).

21 Claims, 2 Drawing Sheets

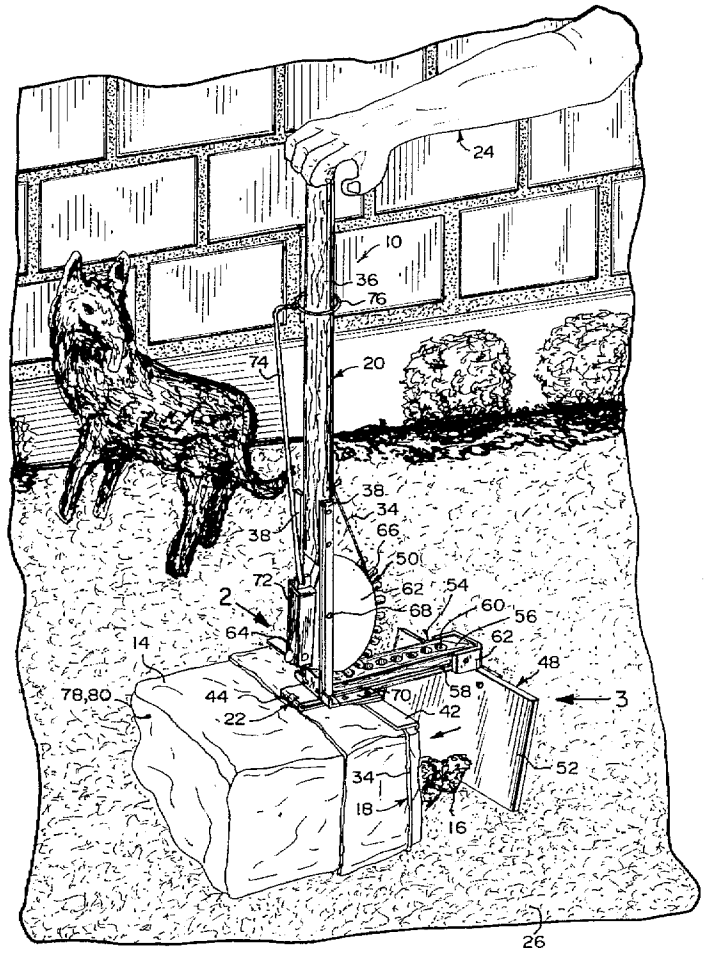
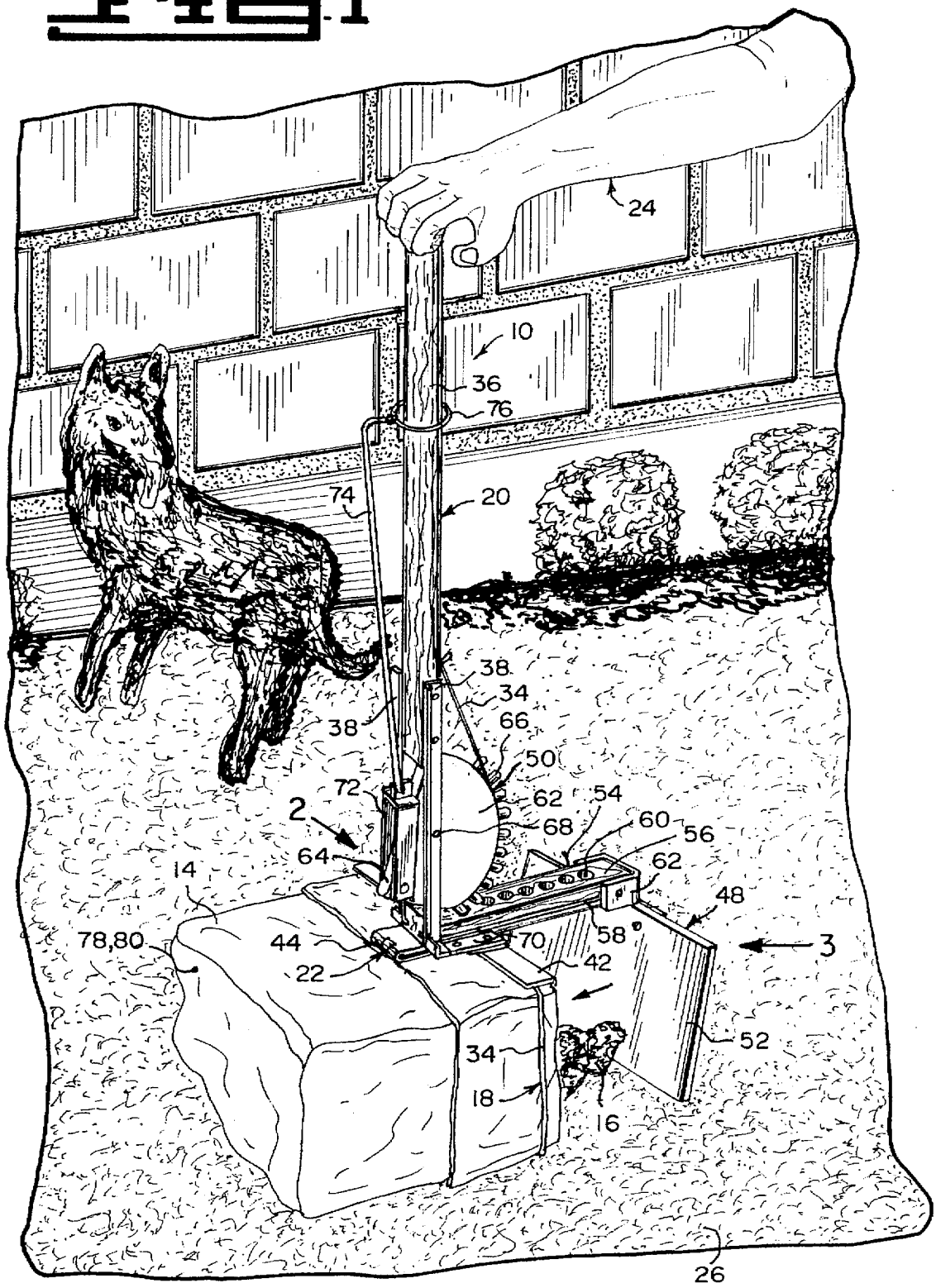


Fig. 1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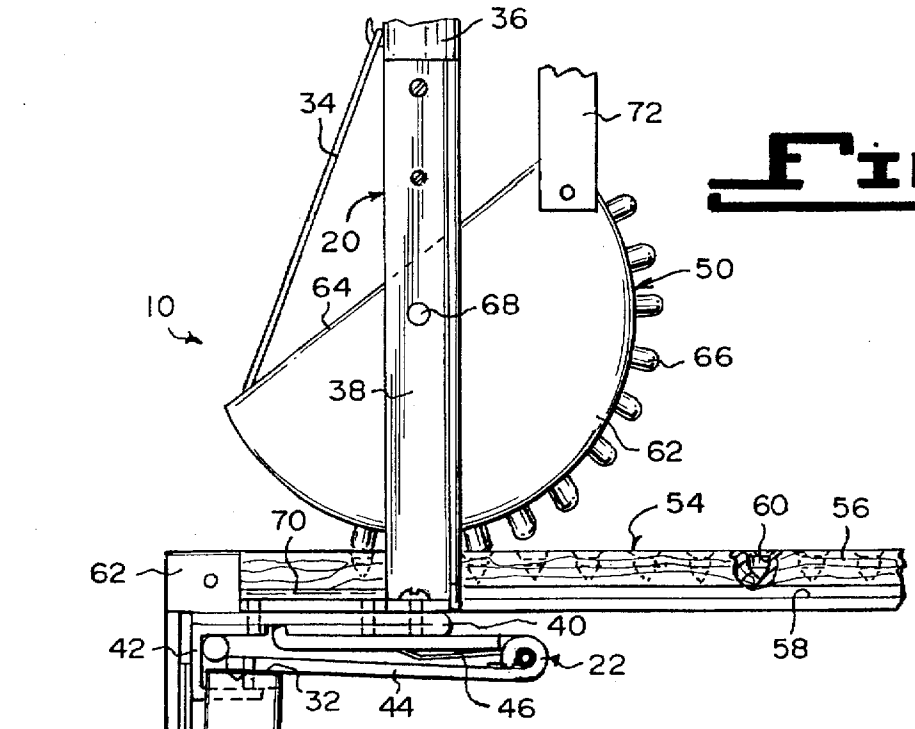
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Fig. 2

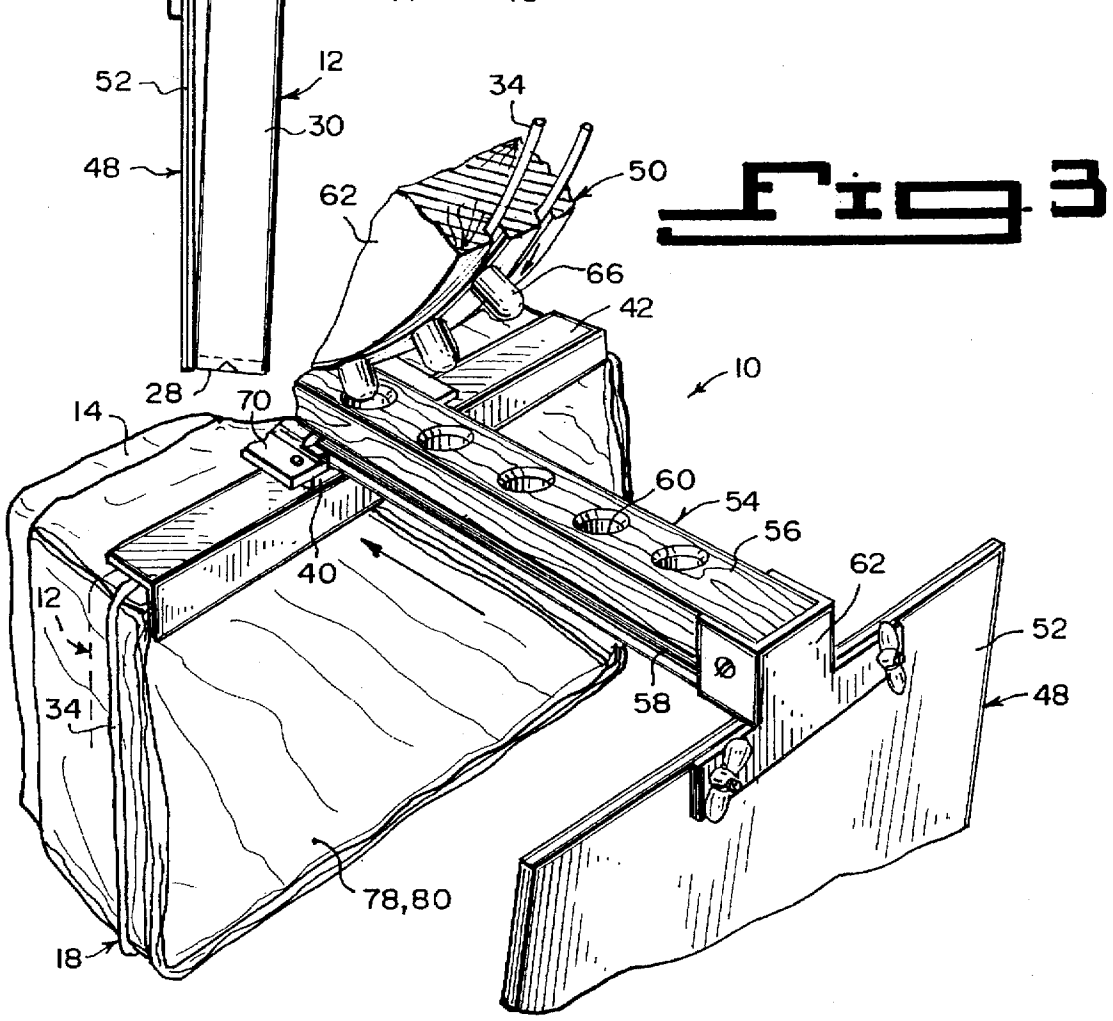
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Fig. 3

APPARATUS FOR ANIMAL WASTE COLLECTION

BACKGROUND OF THE INVENTION

1. Field of the Invention

The instant invention relates generally to excrement retrieval devices and more specifically it relates to an apparatus for animal waste collection.

2. Description of the Prior Art

Numerous excrement retrieval devices have been provided in prior art. For example, U.S. patents numbered U.S. Pat. No. 3,830,423 to Prescott; U.S. Pat. No. 3,986,744 to Krogstad et al.; U.S. Pat. No. 4,240,656 to Eiffinger and U.S. Pat. No. 4,896,912 to Parnell all are illustrative of such prior art. While these units may be suitable for the particular purpose to which they address, they would not be as suitable for the purposes of the present invention as heretofore described.

PRESCOTT, BEATRICE M.

DISPOSABLE PET EXCRETA CONTAINER

U.S. Pat. No. 3,830,423

This invention is a disposable pet excreta container of bag-like or box-like construction. Portions of one side of the container are extended to provide ears engaged by the feet of the user to hold the container in position on the ground. A flexible cord engages the opposite side of the container and upon upward force, holds the container open. A disposable member is provided for directing the excreta into the container.

KRUGSTAD, DAVID

NIGRO, GEORGE A.

REFUSE COLLECTION DEVICE

U.S. Pat. No. 3,986,744

A refuse collecting device which is designed particularly for dog or other animal waste or excrement embodies an open-ended, tubular, scoop-like body and has a flat bottom wall which constitutes a scoop proper and the forward edge of which is provided with comb-like teeth which enhances the pick-up action of the device when the latter is used on a lawn. A manipulating handle overlies the top wall of the tubular body and a combined closure plate and paddle member is hinged to the top wall of the body top wall and is spring-biased to a position wherein it extends across and fully closes the open front end of the body. A thumb piece which is secured to the combined closure plate and paddle member arches rearwardly over the handle and is accessible to the user's thumb whereby depression thereof causes the combined closure plate and paddle member to be swung forwardly and upwardly thus exposing the interior of the tubular body for excrement scooping purposes. Release of the thumb piece allows the member to swing downwardly and rearwardly and by way of a paddle action to slide or sweep the scooped excrement rearwardly into the open front end of the tubular body. An ordinary paper or plastic bag which is telescopically received over the open rear end of the tubular body and is held in position by a rubber band or other suitable releasable attaching means constitutes a disposable receptacle which receives successive scoopings each time the handle, and consequently, the device as a whole, is upended.

EIFFINGER, KARLHEINZ

APPARATUS FOR RETRIEVAL AND DISPOSAL OF ANIMAL EXCREMENTS

U.S. Pat. No. 4,240,656

Disclosed herein is an apparatus for the picking up and disposal of animal excrements in a hygienic and simple manner. The apparatus provides for one or more lined shovels to be attached to one end of a telescoping shaft. The shaft is provided with a handle, allowing its use as a walking stick. It is optionally provided with a wheel on the end. By placing the shovel end of the shaft on the ground, and depressing the other end of the shaft, the shaft telescopes, causing the shovels to be tilted from their normally upright position to a position in which they are horizontal with the ground and able to pick up the desired excrements. In order to select which of the shovels attached to the shaft is to be tilted to the ground, a pin and wing nut assembly is provided for each shovel. This assembly permits the coupling or decoupling of the individual shovel's tilting lever from the shaft.

PARNELL, VERNON A.

SANITARY METHOD AND APPARATUS FOR WASTE COLLECTION AND DISPOSAL

U.S. Pat. No. 4,896,912

A waste material collection and disposal apparatus includes a long-handled scoop and a long-handled scraper releasably coupled together with a carrying ring, and a supply of first and second flexible disposable bags, which may also be carried by means of a clip on the carrying ring. In use, a receptacle portion of the scoop and a blade portion of the scraper are respectively enclosed within first and second bags, which are then secured in a closed condition about the handles of the scoop and scraper with twister ties. The scraper is released from the carrying ring and used to scrape the waste material into the receptacle. Then the bags are untied and inverted for removing them for the scoop receptacle and scraper blade, respectively, and simultaneously enclosing therein collected waste material. The bags are then secured closed with the twister ties for disposal.

SUMMARY OF THE INVENTION

A primary object of the present invention is to provide an apparatus for animal waste collection that will overcome the shortcomings of the prior art devices.

Another object is to provide an apparatus for animal waste collection that contains a mechanism for the convenient hygienic retrieval of animal waste.

An additional object is to provide an apparatus for animal waste collection that is removably attached thereto for the proper disposal of the animal waste after the animal waste is placed within the disposable bag.

A further object is to provide an apparatus for animal waste collection that is simple and easy to use.

A still further object is to provide an apparatus for animal waste collection that is economical in cost to manufacture.

Further objects of the invention will appear as the description proceeds.

To the accomplishment of the above and related objects, this invention may be embodied in the form illustrated in the accompanying drawings, attention being called to the fact,

however, that the drawings are illustrative only, and that changes may be made in the specific construction illustrated and described within the scope of the appended claims.

BRIEF DESCRIPTION OF THE DRAWING FIGURES

Various other objects, features and attendant advantages of the present invention will become more fully appreciated as the same becomes better understood when considered in conjunction with the accompanying drawings, in which like reference characters designate the same or similar parts throughout the several views, and wherein;

FIG. **1** is a rear perspective view showing the instant invention in use.

FIG. **2** is a side elevational view taken in the direction of arrow **2** in FIG. **1** in a closed position, with parts broken away in section and the plastic bag removed therefrom.

FIG. **3** is a front perspective view taken in the direction of arrow **3** in FIG. **1**, with parts broken away and in section.

Similar reference characters denote corresponding features consistently throughout the attached drawings.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Turning now descriptively to the drawings, in which similar reference characters denote similar elements throughout the several views, FIGS. **1** through **3** illustrate an apparatus **10** for animal waste collection comprising a frame member **12**. A disposable bag **14** is to receive animal waste **16** therein. An element **18** is for connecting a folded over mouth portion of the disposable bag **14** to the frame member **12** in a removable manner. An upright handle assembly **20** is also provided. A facility **22** is for coupling the frame member **12** with the disposable bag **14** to a bottom end of the upright handle assembly **20** in a removable manner. A person **24** can grasp the upright handle assembly **20**, position the frame member **12** with the disposable bag **14** adjacent animal waste **16** deposited upon the ground **26**, scoop the animal waste **16** into the disposable bag **14**, disengage the upright handle assembly **20** from the frame member **12** and separate the disposable bag **14** from the frame member **12**, to get rid of the disposable bag **14** with the animal waste **16**.

The frame member **12**, as shown in FIG. **2**, is an opened ended rectangular shaped body which includes a bottom wall **28** and a pair of side walls **30**. Each side wall **30** extends upwardly from one end of the bottom wall **28**. A top wall **32** extends across top ends of the side walls **30**, so that the folded over mouth portion of the disposable bag **14** can fit thereabout. The connecting element **18** is a rubber band **34**, to hold the folded over mouth portion of the disposable bag **14** in place on the frame member **12**.

The upright handle assembly **20** consists of an elongated shaft **36**. A pair of L-shaped stanchion braces **38** are affixed on opposite sides and at a bottom end of the elongated shaft **36**. A main stand and stopper **40** is attached to bottom ends of the stanchion braces **38**. A C-shaped channel connector **42** is secured to the main stand and stopper **40**.

The coupling facility **22** includes a hinged receiver and lock **44** secured to the top wall **32** of the frame member **12**. A spring **46** is carried in the hinged receiver and lock **44**. The top wall **32** of the frame member **12** can engage with the C-shaped channel connector **42**, while the spring **46** will bias the hinged receiver and lock **44** upward, to make contact with a bottom surface of the main stand and stopper **40**.

A component **48** is for covering the folded over mouth portion of the disposable bag **14** on the frame member **12**. A system **50** is for actuating the covering component **48**. The covering component **48** can go from an open position to a closed position. The movement of the covering component **48** will help scoop the animal waste **16** into the disposable bag **14**.

The covering component **48** is a pusher plate **52**, sized to fit across the folded over mouth portion of the disposable bag **14** on the frame member **12**. The actuating system **50** is a rack and pinion assemblage **54**, extending between a lower portion of the upright handle assembly **20** and the covering component **48**. When rack and pinion assemblage **54** is activated, the covering component **48** will close over the folded over mouth portion of the disposable bag **14** on the frame member **12**.

The rack and pinion assemblage **54** consists of the rack being an elongated arm **56**, having a pair of longitudinal grooves **58** extending along opposite sides of the arm **56**. A plurality of spaced apart holes **60** are along a top surface of the arm **56**. The arm **56** slides horizontally between the pair of stanchion braces **38** on the upright handle assembly **20**. A bracket **62** on a first end of the arm **56** is connected to a top portion of the covering component **48**.

The pinion is a cogwheel **62**, having a flat stop portion **64** and a plurality of cogs **66** extending about the rim of the cogwheel **62**. The cogwheel **62** is pivotally mounted at **68** between the stanchion braces **38**. When the cogwheel **62** rotates, the cogs **66** can engage with the holes **60** in the arm **56**, to cause the arm **56** to slide horizontally and move the covering component **48** towards and away from the folded over mouth portion of the disposable bag **14** on the frame member **12**. A pair of slide guides **70** are mounted to the main stand and stopper **40** of the upright handle assembly **20**. The slide guides **70** can engage with the grooves **58** in the arm **56**, to maintain the arm **56** in its horizontal position when the arm **56** slides between the stanchion braces **38**.

A connector **72** is pivotally connected to the cogwheel **62**. A wire rod **74** is pivotally connected at a bottom end to the connector **72** and extends upwardly along the elongated shaft **36** of the upright handle assembly **20**. A loose wire loop handle **76** is formed on a top end of the wire rod **74** and extends about the elongated shaft **36**. When the person **24** pulls up on the loose wire loop handle **76**, the wire rod **74** via the connector **72** will cause the cogwheel **62** to rotate in a first direction to move the arm **56** horizontally, causing the covering component **48** to move vertically towards the folded over mouth portion of the disposable bag **14** on the frame member **12**.

Another rubber band **34** is connected between one cog **66** on the cogwheel **62** opposite from the connector **72** and the elongated shaft **36** of the upright handle assembly **20**. The rubber band **34** will cause the cogwheel **62** to rotate in a second opposite direction, to move the arm **56** horizontally causing the covering component **48** to move vertically away from the folded over mouth portion of the disposable bag **14** on the frame member **12**.

The disposable bag **14** can be made out of a thin flexible plastic material **78**. The disposable bag **14** can also be made out of a thin flexible paper material **80**.

LIST OF REFERENCE NUMBERS

10 apparatus
12 frame member
14 disposable bag
16 animal waste
18 connecting element
20 upright handle assembly

22 coupling facility
24 person
26 ground
28 bottom wall of **12**
30 side wall of **12**
32 top wall of **12**
34 rubber band for **18**
36 elongated shaft of **20**
38 L-shaped stanchion brace of **20**
40 main stand and stopper of **20**
42 C-shaped channel connector of **20**
44 hinged receiver and lock of **22**
46 spring of **22**
48 covering component
50 actuating system
52 pusher plate for **48**
54 rack and pinion assemblage for **50**
56 elongated arm of **54**
58 longitudinal groove in **56**
60 hole in **56**
62 cogwheel of **54**
64 flat stop portion on **62**
66 cog on **62**
68 pivot
70 slide guide of **54**
72 connector on **62**
74 wire rod on **72**
76 loose wire loop handle on **72**

It will be understood that each of the elements described above, or two or more together may also find a useful application in other types of methods differing from the type described above.

While certain novel features of this invention have been shown and described are pointed out in the annexed claims, it is not intended to be limited to the details above, since it will be understood that various omissions, modifications, substitutions and changes in the forms and details of the device illustrated and in its operation can be made by those skilled in the art without departing in any way from the spirit of the present invention.

Without further analysis, the foregoing will so fully reveal the gist of the present invention that others can, by applying current knowledge, readily adapt it for various applications without omitting features that, from the standpoint of prior art, fairly constitute essential characteristics of the generic or specific aspects of this invention.

What is claimed is new and desired to be protected by Letters Patent is set forth in the appended claims:

1. An apparatus for animal waste collection comprising:

a) a frame member;

b) a disposable bag to receive animal waste therein;

c) means for connecting a folded over mouth portion of said disposable bag to said frame member in a removable manner;

d) an upright handle assembly including:

1) an elongated shaft;

2) a pair of L-shaped stanchion braces affixed on opposite sides and at a bottom end of said elongated shaft;

3) a main stand and stopper attached to bottom ends of said stanchion braces; and

4) a C-shaped channel connector secured to said main stand and stopper; and

e) means for coupling said frame member with said disposable bag to a bottom end of said upright handle assembly in a removable manner, whereby a person can grasp said upright handle assembly, position said frame member with said disposable bag adjacent animal waste deposited upon the ground, scoop the animal waste into said disposable bag, disengage said upright handle assembly from said frame member and separate said disposable bag from said frame member to get rid of said disposable bag with the animal waste.

2. An apparatus for animal waste collection as recited in claim **1**, wherein said frame member is an opened ended rectangular shaped body which includes:

a) a bottom wall;

b) a pair of side walls, in which each said side wall extends upwardly from one end of said bottom wall; and

c) a top wall extending across top ends of said side walls, so that the folded over mouth portion of said disposable bag can fit thereabout.

3. An apparatus for animal waste collection as recited in claim **1**, wherein said connecting means is a rubber band to hold the folded over mouth portion of said disposable bag in place on said frame member.

4. An apparatus for animal waste collection as recited in claim **1**, wherein said coupling means includes:

a) a hinged receiver and lock secured to a top wall of said frame member; and

b) a spring carried in said hinged receiver and lock, so that said top wall of said frame member can engage with said C-shaped channel connector, while said spring will bias said hinged receiver and lock upward to make contact with a bottom surface of said main stand and stopper.

5. An apparatus for animal waste collection as recited in claim **1**, wherein said disposable bag is made out of a thin flexible plastic material.

6. An apparatus for animal waste collection as recited in claim **1**, wherein said disposable bag is made out of a thin flexible paper material.

7. An apparatus for animal waste collection comprising:

a) a frame member;

b) a disposable bag to receive animal waste therein;

c) means for connecting a folded over mouth portion of said disposable bag to said frame member in a removable manner;

d) an upright handle assembly;

e) means for coupling said frame member with said disposable bag to a bottom end of said upright handle assembly in a removable manner, whereby a person can grasp said upright handle assembly, position said frame member with said disposable bag adjacent animal waste deposited upon the ground, scoop the animal waste into said disposable bag, disengage said upright handle assembly from said frame member and separate said disposable bag from said frame member to get rid of said disposable bag with the animal waste,

f) means for covering the folded over mouth portion of said disposable bag on said frame member; and

g) means for actuating said covering means so that said covering means can go from an open position to a closed position, whereby the movement of said covering means will help scoop the animal waste into said disposable bag, wherein said actuating means is a rack and pinion assemblage extending between a lower portion of said upright handle assembly and said covering means, so that when rack and pinion assemblage is activated said covering means will close over the

folded over mouth portion of said disposable bag on said frame member.

8. An apparatus for animal waste collection as recited in claim **7**, wherein said covering means is a pusher plate sized to fit across the folded over mouth portion of said disposable bag on said frame member.

9. An apparatus for animal waste collection as recited in claim **7**, wherein said rack and pinion assemblage includes:

a) said rack being an elongated arm having a pair of longitudinal grooves extending along opposite sides of said arm and a plurality of spaced apart holes along a top surface of said arm, whereby said arm slides horizontally between a pair of stanchion braces on said upright handle assembly;

b) a bracket on a first end of said arm connected to a top portion of said covering means;

c) said pinion being a cogwheel having a flat stop portion and a plurality of cogs extending about the rim of said cogwheel, said cogwheel pivotally mounted between said stanchion braces, so that when said cogwheel rotates, the cogs can engage with the holes in said arm to cause said arm to slide horizontally and move said covering means towards and away from the folded over mouth portion of said disposable bag on said frame member; and

d) a pair of slide guides mounted to a main stand and stopper of said upright handle assembly, so that said slide guides can engage within the grooves in said arm, to maintain said arm in its horizontal position when said arm slides between said stanchion braces.

10. An apparatus for animal waste collection as recited in claim **9**, further including:

a) a connector pivotally connected to said cogwheel;

b) a wire rod pivotally connected at a bottom end to said connector and extending upwardly along an elongated shaft of said upright handle assembly;

c) a loose wire loop handle formed on a top end of said wire rod and extending about said elongated shaft, so that when a person pulls up on said loose wire loop handle, said wire rod via said connector will cause said cogwheel to rotate in a first direction to move said arm horizontally causing said covering component to move vertically towards the folded over mouth portion of said disposable bag on said frame member.

11. An apparatus for animal waste collection as recited in claim **10**, further including a rubber band connected between one said cog on said cogwheel opposite from said connector and said elongated shaft of said upright handle assembly, whereby said rubber band will cause said cogwheel to rotate in a second opposite direction to move said arm horizontally causing said covering component to move vertically away from the folded over mouth portion of said disposable bag on said frame member.

12. An apparatus for animal waste collection comprising:

a) a disposable bag to receive animal waste therein;

b) a frame member having an opened ended rectangular shaped body which includes:

1) a bottom wall;

2) a pair of side walls, in which each said side wall extends upwardly from one end of said bottom wall; and

3) a top wall extending across top ends of said side walls, so that the folded over mouth portion of said disposable bag can fit thereabout;

c) means for connecting a folded over mouth portion of said disposable bag to said frame member in a removable manner, wherein said connecting means is a rubber band to hold the folded over mouth portion of said disposable bag in place on said frame member;

d) an upright handle assembly including:

1) an elongated shaft;

2) a pair of L-shaped stanchion braces affixed on opposite sides and at a bottom end of said elongated shaft;

3) a main stand and stopper attached to bottom ends of said stanchion braces; and

4) a C-shaped channel connector secured to said main stand and stopper; and

e) means for coupling said frame member with said disposable bag to a bottom end of said upright handle assembly in a removable manner, whereby a person can grasp said upright handle assembly, position said frame member with said disposable bag adjacent animal waste deposited upon the ground, scoop the animal waste into said disposable bag, disengage said upright handle assembly from said frame member and separate said disposable bag from said frame member to get rid of said disposable bag with the animal waste.

13. An apparatus for animal waste collection as recited in claim **12**, wherein said coupling means includes:

a) a hinged receiver and lock secured to a top wall of said frame member; and

b) a spring carried in said hinged receiver and lock, so that said top wall of said frame member can engage with said C-shaped channel connector, while said spring will bias said hinged receiver and lock upward to make contact with a bottom surface of said main stand and stopper.

14. An apparatus for animal waste collection as recited in claim **13**, further including:

a) means for covering the folded over mouth portion of said disposable bag on said frame member; and

b) means for actuating said covering means so that said covering means can go from an open position to a closed position, whereby the movement of said covering means will help scoop the animal waste into said disposable bag.

15. An apparatus for animal waste collection as recited in claim **14**, wherein said covering means is a pusher plate sized to fit across the folded over mouth portion of said disposable bag on said frame member.

16. An apparatus for animal waste collection as recited in claim **15**, wherein said actuating means is a rack and pinion assemblage extending between a lower portion of said upright handle assembly and said covering means, so that when rack and pinion assemblage is activated said covering means will close over the folded over mouth portion of said disposable bag on said frame member.

17. An apparatus for animal waste collection as recited in claim **16**, wherein said rack and pinion assemblage includes:

a) said rack being an elongated arm having a pair of longitudinal grooves extending along opposite sides of said arm and a plurality of spaced apart holes along a top surface of said arm, whereby said arm slides horizontally between a pair of stanchion braces on said upright handle assembly;

b) a bracket on a first end of said arm connected to a top portion of said covering means;

c) said pinion being a cogwheel having a flat stop portion and a plurality of cogs extending about the rim of said cogwheel, said cogwheel pivotally mounted between said stanchion braces, so that when said cogwheel

rotates, the cogs can engage with the holes in said arm to cause said arm to slide horizontally and move said covering means towards and away from the folded over mouth portion of said disposable bag on said frame member; and

d) a pair of slide guides mounted to a main stand and stopper of said upright handle assembly, so that said slide guides can engage within the grooves in said arm, to maintain said arm in its horizontal position when said arm slides between said stanchion braces.

18. An apparatus for animal waste collection as recited in claim **17**, further including:

a) a connector pivotally connected to said cogwheel;

b) a wire rod pivotally connected at a bottom end to said connector and extending upwardly along an elongated shaft of said upright handle assembly;

c) a loose wire loop handle formed on a top end of said wire rod and extending about said elongated shaft, so that when a person pulls up on said loose wire loop handle, said wire rod via said connector will cause said cogwheel to rotate in a first direction to move said arm horizontally causing said covering component to move vertically towards the folded over mouth portion of said disposable bag on said frame member.

19. An apparatus for animal waste collection as recited in claim **18**, further including a rubber band connected between one said cog on said cogwheel opposite from said connector and said elongated shaft of said upright handle assembly, whereby said rubber band will cause said cogwheel to rotate in a second opposite direction to move said arm horizontally causing said covering component to move vertically away from the folded over mouth portion of said disposable bag on said frame member.

20. An apparatus for animal waste collection as recited in claim **19**, wherein said disposable bag is made out of a thin flexible plastic material.

21. An apparatus for animal waste collection as recited in claim **19**, wherein said disposable bag is made out of a thin flexible paper material.

* * * * *