GARBAGE BAG SYSTEM

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Appl. No.: 10/267,139
Filed: Oct. 7, 2002

ABSTRACT

A garbage bag system for providing an economical and disposable garbage bag then when opened maintains a freestanding shape. With a freestanding shape the garbage bag system does not require an additional container or frame to hold the garbage bag open. Deleting this requirement will significantly simplify lawn maintenance and janitorial work. A support ring at the top, and a support ring at the bottom, give shape and rigidity to the system. The sides are constructed using molded beveled flutes running vertically to provide structural support to the system. Openings in the top of the system provide access to a cinch strap used for drawing the garbage bag system closed. A second embodiment of the garbage system uses a plurality of telescopic side sections to provide additional support to the freestanding design.
GARBAGE BAG SYSTEM

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] Not applicable to this application.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

[0002] Not applicable to this application.

BACKGROUND OF THE INVENTION

[0003] 1. Field of the Invention

[0004] The present invention relates generally to garbage bags and more specifically it relates to a garbage bag system for providing an economical and disposable garbage bag that when opened maintains a freestanding shape thereby simplifying lawn maintenance and janitorial work by deleting the need for a trash container to support the garbage bag.

[0005] 2. Description of the

[0006] Garbage bags have been in use for years. Typically, garbage bags are made of plastic and are positioned within trash containers. The structure of the trash container facilitates keeping the bag open so that material can be deposited therein. The trash container also provides a structure that allows the garbage bag to maintain a tubular shape.

[0007] Efforts have been made to design freestanding garbage containers. Designs have included bags having a rectangular shape to facilitate their staying in an open configuration. Typically, these bags are made from materials that more readily maintain their shape when opened. Folded paper bags are an example of this type of freestanding bag. Freestanding plastic garbage bag designs have historically included attempting to thicken the plastic to facilitate the garbage bag holding its shape. However, thickening the plastic is not a cost effective method to provide a freestanding garbage bag.

[0008] Current garbage bags require the user to have a trash container to effectively use the bags. This can be cumbersome and difficult for users doing lawn maintenance and janitorial work. As the user travels to work from one location to another he has to transport the trash container. Often the user will desire having the garbage available without being required to locate and use a trash container.

[0009] Examples of patented devices which may be related to the present invention include U.S. Pat. No. 5,022,767 to Cardula; U.S. Pat. No. 4,848,930 to Williams; U.S. Pat. No. 3,249,286 to Palmer; U.S. Pat. No. 4,764,029 to Abbett; U.S. Pat. No. 5,158,371 to Moravek; U.S. Pat. No. 5,048,977 to Robbins, III; U.S. Pat. No. 4,353,497 to Bustin; and U.S. Pat. No. 1,087,702 to Van Patten.

[0010] While these devices may be suitable for the particular purpose to which they address, they are not as suitable for providing an economical and disposable garbage bag that when opened maintains a freestanding shape without any supplemental support.

[0011] Prior art systems often comprised elaborate mechanism and means to attempt to maintain a freestanding configuration. In addition, some prior art systems include materials that significantly increase the weight and cost of freestanding systems.

[0012] In these respects, the garbage bag system according to the present invention substantially departs from the conventional concepts and designs of the prior art, and in so doing provides an apparatus primarily developed for the purpose of providing an economical, disposable garbage bag that when opened maintains a freestanding shape thereby simplifying lawn maintenance and janitorial work by deleting the need for a trash container to support the garbage bag.

BRIEF SUMMARY OF THE INVENTION

[0013] In view of the foregoing disadvantages inherent in the known types of garbage bags now present in the prior art, the present invention provides a new garbage bag system construction wherein the same can be utilized for providing an economical, disposable garbage bag that when opened maintains a freestanding shape thereby simplifying lawn maintenance and janitorial work by deleting the need for a trash container to support the garbage bag.

[0014] The general purpose of the present invention, which will be described subsequently in greater detail, is to provide a new garbage bag system that has many of the advantages of the garbage bags mentioned heretofore and many novel features that result in a new garbage bag system which is not anticipated, rendered obvious, suggested, or even implied by any of the prior art garbage bags, either alone or in any combination thereof.

[0015] To attain this, the present invention generally comprises two plastic support rings the smaller of which provides the shape to the bottom of the garbage bag and the larger ring providing the shape to the top of the garbage bag. Connecting these two rings and giving the garbage bag system its shape is a multi-ply plastic that is designed and manufactured to provide a sufficiently rigid structure to maintain the garbage bag system in a conical freestanding configuration. The garbage bag system can be stored in a collapsed state to minimize the overall storage volume of the garbage bag system.

[0016] There has thus been outlined, rather broadly, the more important features of the invention in order that the detailed description thereof may be better understood, and in order that the present contribution to the art may be better appreciated. There are additional features of the invention that will be described hereinafter and that will form the subject matter of the claims appended hereto.

[0017] In this respect, before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and to the arrangements of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of the description and should not be regarded as limiting.

[0018] A primary object of the present invention is to provide a garbage bag system that will overcome the shortcomings of the prior art devices.
[0019] A second object is to provide a garbage bag system for providing an economical, disposable garbage bag that when opened maintains a freestanding shape.

[0020] An additional object is to provide a garbage bag system that is self-supporting.

[0021] A further object is to provide a garbage bag system that simplifies lawn maintenance and janitorial work.

[0022] Another object is to provide a garbage bag system that is economical.

[0023] An additional object is to provide a garbage bag system that is easy to use.

[0024] A further object is to provide a garbage bag system that can be cinched closed.

[0025] Another object is to provide a garbage bag system that can be stored in a collapsed state.

[0026] Other objects and advantages of the present invention will become obvious to the reader and it is intended that these objects and advantages are within the scope of the present invention.

[0027] To the accomplishment of the above and related objects, this invention may be embodied in the form illustrated in the accompanying drawings, attention being paid 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 DRAWINGS

[0028] Various other objects, features and attendant advantages of the present invention will become 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:

[0029] FIG. 1 is an upper perspective view of the present invention.

[0030] FIG. 2 is an upper perspective view of the present invention cinched closed.

[0031] FIG. 3 is an upper perspective cutaway view of the present invention.

[0032] FIG. 4 is an upper perspective view of a second embodiment of the present invention illustrating a telescopic configuration.

[0033] FIG. 5 is an upper perspective view of a second embodiment of the present invention with the telescopic configuration cinched closed.

[0034] FIG. 6 is an upper perspective cutaway view of a second embodiment of the present invention illustrating a telescopic configuration.

[0035] FIG. 7 is a sectional view of a second embodiment of the present invention along line 7-7 of FIG. 6.

[0036] FIG. 8 is a top view of a second embodiment of the present invention.

[0037] FIG. 9 is a side view of a second embodiment of the present invention illustrating the telescopic configuration in a collapsed state.

DETAILED DESCRIPTION OF THE INVENTION

[0038] Turning now descriptively to the drawings, in which similar reference characters denote similar elements throughout the several views, FIGS. 1 through 9 illustrate a garbage bag system 10, which comprises a side covering 40 attached to a bottom covering 50. The bottom of the side covering 40 includes a first ring 20 for giving the bottom of the side covering 40 a circular shape. The top of the side covering 40 includes a second ring 22 for giving the top of the side covering 40 a circular shape. A cinch strap 30 is used to draw the top of the garbage bag system 10 closed. The outer wall 42 and inner wall 44 are manufactured and designed to provide sufficient stiffness to maintain the shape of the freestanding garbage bag system 10. In one embodiment the outer wall 42 and inner wall 44 are manufactured and designed in a telescopic configuration.

[0039] The bottom covering 50 is preferably of a multi-ply construction comprised of a top layer 54 and a bottom layer 52. The top layer 54 and the bottom layer 52 are preferably made of plastic however various other materials may be utilized. The bottom covering 50 preferably has a circular shape. The top layer 54 and the bottom layer 52 are preferably heat-sealed along the entire circumference of the bottom covering 50 for providing additional strength to the bottom of the freestanding garbage bag system 10.

[0040] As seen in FIGS. 1 and 3, the side covering 40 is made of a multi-ply construction. The inner wall 44 and the outer wall 42 are preferably constructed in a conical shape with the bottom of the inner wall 44 and the outer wall 42 of a diameter equal to the diameter of the bottom covering 50. However, it can be appreciated by one skilled in the art that shapes other than conical may be used. The diameter of the bottom covering 50 is preferably between ½ and ⅔ the diameter of the top ends of the inner wall 44 and the outer wall 42. The bottom ends of the inner wall 44 and the outer wall 42 are heat-sealed to the top layer 54 and the bottom layer 52 to provide a watertight base to the garbage bag system 10.

[0041] The inner wall 44 and the outer wall 42 are preferably made of a heat-treated plastic that allows for the plastic to be molded into a semi-rigid beveled shape. The flutes of the bevels run vertically down the side covering 40 from the top of the side covering 40 to the bottom of the side covering 40. The top ends of the inner wall 44 and the outer wall 42 are heat-sealed together. The inner wall 44 and the outer wall 42 are additionally heat-sealed at a distance from the top of the side covering 40 greater than the width of the cinch strap 30. This additional heat-seal creates a channel 48 for the cinch strap 30 to rest in.

[0042] The first ring 20 rests within the void 46 between the inner wall 44 and the outer wall 42. The first ring 20 is preferably made from hardened plastic that will maintain its circular shape. The diameter of the first ring 20 is slightly larger than the diameter of the bottom covering 50 thereby
providing a circular base to the garbage bag system 10. Though the first ring 20 in the preferred embodiment is made of plastic it is obvious to one skilled in the art that the first ring 20 could be made from other materials capable of providing a rigid base to the garbage bag system 10.

[0043] The second ring 22 also rests within the void between the inner wall 44 and the outer wall 42. Preferably the second ring 22 frictionally rests on the inside surface of the outer wall 42 below the channel 48 created for the cinch strap 30. The second ring 22 is preferably made from hardened plastic that will maintain its circular shape. The diameter of the second ring 22 is preferably slightly smaller than the diameter of the top of the garbage bag system 10. Though the second ring 22 in the preferred embodiment is made of plastic it is obvious to one skilled in the art that the second ring 22 could be made from other materials capable of providing a rigid circular shape to the top of the garbage bag system 10.

[0044] The cinch strap 30 rests within the channel 48 at the top of the side covering 40. The cinch strap 30 is preferably a piece of pliable plastic formed into a circle and capable of being pulled and tied to close the top of the garbage bag system 10. However, it can be appreciated by one skilled in the art that materials other than plastic could be utilized for the cinch strap 30. A first opening 49a and a second opening 49b are located at the top of the side covering 40. As best seen in FIGS. 1 and 3, the first opening 49a and the second opening 49b are preferably located opposite each other to facilitate cinching the top of the garbage bag system 10 by drawing the cinch strap 30 out of the first opening 49a and the second opening 49b.

[0045] FIGS. 4 through 9 show a second embodiment of the garbage bag system 10. In this embodiment the side covering 40 is telescopically shaped and is preferably comprised of a base side covering 62, a plurality of upper side coverings 60 and a top side covering 64. The base side covering 62, the plurality of upper side coverings 60 and the top side covering 64 are preferably made of a multi-ply construction having an inner wall 44 and an outer wall 42 which are heat-sealed together at the top and the bottom of the base side covering 62, each of the plurality of upper side coverings 60 and the top side covering 64.

[0046] The bottom end of the base side covering 62 is additionally heat-sealed to the bottom covering 50 to provide a watertight base to the garbage bag system 10. The bottom end of each of the plurality of upper side coverings 60 is of a diameter slightly smaller than the diameter of the top end of the upper side covering 60 directly below it. The bottom end of the top side covering 64 is of a diameter slightly smaller than the diameter of the top end of the top-most upper side covering 60. With this telescopic design, when the first of the upper side coverings 60 is extended away from the base side covering 62 the bottom end of the upper side covering 60 frictionally engages the top end of the base side covering 62. Correspondingly, as each subsequent upper side covering 60 is extended away from the base side covering 62 each upper side covering 60 frictionally engages the upper side covering 60 directly below. Lastly, the top side covering 64 frictionally engages the upper side covering 60 directly below the top side covering 64.

[0047] Situated within the void 46 created between the inner wall 44 and the outer wall 42 of the base side covering is the first ring 20. The first ring 20 is preferably made from hardened plastic that will maintain its circular shape. The diameter of the first ring 20 is slightly larger than the diameter of the bottom covering. Though the first ring 20 in this embodiment is made of plastic it is obvious to one skilled in the art that the first ring 20 could be made from other materials capable of providing a rigid base to the garbage bag system 10.

[0048] The inner wall 44 and the outer wall 42 of the top side covering 64 are additionally heat-sealed at a distance from the top of the top side covering 64 greater than the width of the cinch strap 30. This heat-seal creates a channel 48 for the cinch strap 30 to rest in. Situated within the void 46 created between the inner wall 44 and the outer wall 42 and below the cinch strap 30 of the top side covering 64 is the second ring 22.

[0049] The second ring 22 preferably frictionally rests on the inside surface of the outer wall 42 below the channel 48 created for the cinch strap 30. The second ring 22 is preferably made from hardened plastic that will maintain its circular shape. The diameter of the second ring 22 is preferably slightly smaller than the diameter of the top of the garbage bag system 10. Though the second ring 22 in this embodiment is made of plastic it is obvious to one skilled in the art that the second ring 22 could be made from other materials capable of providing a rigid circular shape to the top of the garbage bag system 10.

[0050] In this second embodiment the cinch strap 30 rests within the channel 48 at the top of the top side covering 64. The cinch strap 30 is preferably a piece of pliable plastic formed into a circle and capable of being pulled and tied to close the top of the garbage bag system 10. However, it can be appreciated by one skilled in the art that materials other than plastic could be utilized for the cinch strap 30. A first opening 49a and a second opening 49b are located at the top of the top side covering 64. As best seen in FIGS. 1 and 3, the first opening 49a and the second opening 49b are preferably located opposite each other to facilitate cinching the top of the garbage bag system 10 by drawing the cinch strap 30 out of the first opening 49a and the second opening 49b.

[0051] In use, a number of garbage bag systems 10 would be stored together. One garbage bag system 10 would be separated from the other garbage bag systems 10. The garbage bag system 10 would be opened up from its stored configuration. The top-most section of the side covering 40 would be pulled away from the bottom-most section of the side covering 40. The first ring 20 would provide a circular shape for the bottom covering, and the second ring 22 would provide a circular shape for the top-most section for the side covering 40. The heat-treated beveled inner wall 44 and outer wall 42 would provide sufficient rigidity to the configuration so that the garbage bag system 10 will be usable without the need for additional support. To close the garbage bag system 10 the user pulls the cinch strap 30 out from first opening 49a and the second opening 49b. By drawing up the exposed sections of the cinch strap 30, the top-most section of the side covering 40 will be drawn together to close the
garbage bag system 10. The two sections of the cinch strap 30 that have been pulled through the first opening 49a and second opening 49b can be tied into a knot keeping the garbage bag system 10 closed.

[0052] In another embodiment of the garbage bag system 10 the garbage bag systems 10 would be preferably stacked one on top of another as the garbage bag system’s 10 telescopic configuration will best support this method of storing. However it can be appreciated by one skilled in the art that other methods of storing could be used. The top side covering 64 is drawn up from the garbage bag system 10. The top side covering 64 then frictionally engages the outer-most upper side covering 60, which then frictionally engages the next most upper side covering 60. Each upper side covering 60 is drawn up by this method until the last upper side covering 60 frictionally engages the base side covering 62. This telescopic configuration, along with the first ring 20, and the second ring 22 would provide sufficient rigidity to the configuration so that the garbage bag system 10 will be usable without the need for additional support.

[0053] As to a further discussion of the manner of usage and operation of the present invention, the same should be apparent from the above description. Accordingly, no further discussion relating to the manner of usage and operation will be provided.

[0054] With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of the invention, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed to be within the expertise of those skilled in the art, and all equivalent structural variations and relationships to those illustrated in the drawings and described in the specification are intended to be encompassed by the present invention.

[0055] Therefore, the foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

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I claim:

1. A garbage bag system, comprising:
   a bottom covering;
   a side covering having a first end and a second end, wherein said first end is attached to said bottom covering;
a first ring positioned within said side covering near said first end;
a second ring positioned within said side covering near said second end; and
a strap positioned within said side covering.

2. The garbage bag system of claim 1, wherein said bottom covering is comprised of multi-ply plastic.

3. The garbage bag system of claim 1, wherein said side covering is comprised of multi-ply plastic.

4. The garbage bag system of claim 1, wherein said side covering is sealed together along the circumference of the said side covering at a point below said second end at a distance slightly greater than the width of said strap but above said second ring creating a channel for positioning said strap.

5. The garbage bag system of claim 1, wherein said first end has a diameter of between $\frac{3}{8}$ to $\frac{1}{2}$ the diameter of said second end.

6. The garbage bag system of claim 1, wherein said first end and said bottom covering are heat-sealed together along the diameter of said bottom covering.

7. The garbage bag system of claim 1, wherein said first ring and said second ring are made from hardened plastic to maintain the circular shape of said first ring and said second ring.

8. The garbage bag system of claim 1, wherein said side covering is constructed with heat-treated plastic molded into a plurality of beveled flutes running vertically from said second end to said first end.

9. The garbage bag system of claim 1, wherein said strap is made from pliable plastic.

10. The garbage bag system of claim 1, wherein said second end of said side covering has a plurality of openings exposing said strap.

11. A garbage bag system, comprising:
a base side covering having a first end and a second end, wherein said first end has a bottom covering;
a plurality of telescopically mating upper side coverings each having a lower end and an upper end, wherein said lower end has a size smaller than said second end of said base side covering; and
a top side covering having a top end and a bottom end, wherein said bottom end has a size smaller than said upper end of said telescopically mating upper side coverings.

12. A garbage bag system of claim 11, wherein said base side covering has a first ring positioned within said base side covering.

13. A garbage bag system of claim 11, wherein said top side covering has a second ring positioned with said top side covering.

14. A garbage bag system of claim 11, wherein said top side covering has a strap positioned within said top side covering.

15. The garbage bag system of claim 11, wherein said base side covering, said plurality of telescopically mated upper side coverings and said top side covering are comprised of multi-ply plastic.

16. The garbage bag system of claim 11, wherein said top side covering is sealed together along the circumference of the said top side covering at a point below said top end at a distance slightly greater than the width of said strap but above said second ring creating a channel for positioning said strap.

17. The garbage bag system of claim 11, wherein said first end has a diameter of between $\frac{3}{8}$ to $\frac{1}{2}$ the diameter of said top end.

18. The garbage bag system of claim 11, wherein said base side cover, said plurality of telescopically mated upper side coverings and said top side covering are constructed with heat-treated plastic molded into a plurality of beveled flutes running vertically on said base side covering, each of said plurality of telescopically mated upper side coverings and said top side covering.

19. The garbage bag system of claim 11, wherein said strap is made from pliable plastic.

20. The garbage bag system of claim 11, wherein said second end of said multi-ply conically shaped side covering has a plurality of openings exposing said strap.

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