ROLLING LUGGAGE WITH MULTIPLE MODES OF CONVEYANCE

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ABSTRACT

An article of rolling luggage is provided. The article has a retractable or collapsible handle that is convertible between a stored position and a first extended position of use. The handle is also rotatable about an axis such that the handle can be converted between a second extended position of use. The second extended position of use is characterized in that the luggage item may be provided such that a base portion of the item is substantially adjacent to and parallel with a ground surface. Various locking means to enable conversion between the stored position, first extended position of use and second extended position of use are also provided.
ROLLING LUGGAGE WITH MULTIPLE MISTES OF CONVEYANCE

[0001] This U.S. Non-Provisional Patent Application claims the benefit of priority from U.S. Provisional Application Ser. No. 62/076,373, filed on Nov. 6, 2014, the entire disclosure of which is hereby incorporated by reference in its entirety.

FIELD OF THE INVENTION

[0002] The present invention relates generally to luggage. More specifically, the present invention relates to rolling luggage devices with multiple modes of conveyance or use, and features to enable the multiple modes.

BACKGROUND

[0003] Rolling luggage has become increasingly popular in recent years. A common configuration for this type of luggage includes a container or case portion that is generally rectangular in shape in which one or more articles can be stored for travel. The container is typically comprised of a base, side walls, ends, and a lid. A wheel assembly is commonly provided to allow the container to be rolled rather than carried. The wheel assembly generally includes a pair of wheels mounted at an interface of the base and one of the ends of the luggage. A telescoping handle assembly is generally provided attached to the base. The telescoping handle assembly has at least one, and usually two, telescoping posts that can extend from the top panel of the container, which are connected by a handle for wheeling the luggage.

[0004] Typically, such rolling luggage configurations are suitcases, which have substantially rigid sides and/or a substantially rigid lid, however suitcases can be heavy, and take up a large amount of storage space when not in use. Duffle bags are also popular because of their lightweight, flexible construction and ability to store a large quantity of items. In addition, the flexible material allows the duffle bag to be folded or crumpled for storage.

SUMMARY OF THE INVENTION

[0005] There exists a long felt and unmet need to provide a luggage handle for luggage devices that provides enhanced ease of use, assembly, and manufacture. The present disclosure provides an improved article of rolling luggage including duffle bags and the like. Although various embodiments contemplate providing handles as shown and described herein in combination with luggage, it will be recognized that the present invention is not limited to such uses or combinations.

[0006] Various embodiments of the present invention relate to rolling luggage devices. Rolling luggage devices include, but are not limited to various forms of luggage including rolling duffels, hard-shells, attaches, laptop cases, etc.

[0007] In one embodiment, an article of rolling luggage is provided, the article comprising a substantially rigid base portion comprising a first end and second end and a predetermined length provided between the first end and the second end. A first pair of wheels is connected to the base portion and proximal to the first end. A second pair of wheels is connected to the base portion and proximal to the second end. A retractable handle assembly is connected to the base portion for towing the article of rolling luggage. A substantially flexible cover portion formed of a deformable material is secured to the base portion, and a retractable handle assembly comprising a first portion and a second portion is interconnected at a hinge and the first and second portions are rotatable with respect to one another about the hinge. The retractable handle is convertible between a retracted position, a first position of use, and a second position of use, the first position of use characterized in that said retractable handle extends out of and coplanar to at least a portion of the base portion, and the second position of use characterized in that the retractable handle is provided at an angle with respect to the base portion.

[0008] In certain embodiments, a luggage device is provided with a handle member for grasping and towing the luggage device. In preferred embodiments, a luggage handle is provided, the handle comprising a telescoping or extendable member that extends between a stored position and an extended position, the extended position comprising a position of use for towing the luggage device. The present disclosure contemplates that handles of the present disclosure are telescoping or extendable, and also rotatable about an axis, such that the handle is adapted to tow, manipulate, or otherwise provide a force to the luggage item. In certain embodiments, the axis comprises an axis that extends substantially parallel to an axle of a pair of wheels on the device. The handle is rotatable or convertible between an extended position, wherein the handle extends substantially parallel to a planar portion of the base of the luggage item and is adapted for towing the device on two wheels, and a second extended position wherein the handle is provided at an angle to a planar portion of the base of the item. The second extended position enables towing and other manipulation of the base when the base is provided on four wheels and a base of the item is provided substantially parallel to and/or proximal to a floor or ground surface.

[0009] In various embodiments, the handle comprises first and second parallel elongate members, and a substantially perpendicular grasping member extending between the first and second parallel elongate members. Handle members of various embodiments of the present disclosure contemplate first and second actuation or control members. In certain embodiments, the handle member comprises a first actuation member for releasing the handle member and enables a telescoping action of the handle, the telescoping action comprising at least one of extending and retracting the handle member. In certain embodiments, a push-button is provided on the handle member, the push-button adapted for unlocking or releasing various components of the handle member to enable an extending or retracting operation of the handle member. The handle member further comprises a second actuation member for enabling a rotation of the handle member. In various embodiments, the second actuation member comprises a second push-button. In other embodiments, the second actuation member comprises a rotatable portion of the handle member, wherein rotation of the rotatable portion enables at least one of unlocking and a rotation of the handle member between the first extended position and the second extended position.

[0010] U.S. Pat. No. 6,079,527 to Kuo, which is hereby incorporated by reference in its entirety, discloses a luggage device with a retractable handle comprising parallel retractable arms. Kuo provides rotating means for the arms to allow the arms to be rotated to a predetermined position and locked at that position. Kuo also provides locking assemblies including static elements, movable elements, and locking pins. Such features are contemplated for use with embodiments of the present disclosure. Kuo fails to disclose, however, various
novel features of the present disclosure, including devices and systems for providing a handle in first and second extended positions for use in towing or manipulating a luggage device.

[0011] U.S. Pat. No. 5,630,521 to Waddell et al., which is hereby incorporated by reference in its entirety, provides a wheeled luggage device comprising a handle portion with collapsible rod members and wherein the handle portion can be provided in at least two angled positions. Waddell fails to disclose, however, various features of embodiments of the present disclosure including, for example, devices and features that enable a luggage item to be towed or manipulated in either a two-wheeled or four-wheeled configuration.

[0012] U.S. Pat. No. 5,526,908 to Wang, which is hereby incorporated by reference in its entirety, discloses a luggage device with a collapsible handle member. Wang discloses various push-button features for unlocking a movement of the handle member. Such features, and variations that would be recognized by one of skill in the art, are contemplated for use with various embodiments of the present disclosure.

[0013] U.S. Pat. No. 5,499,426 to Hsieh, which is hereby incorporated by reference in its entirety, provides various devices and means for unlocking or activating a retractable handle assembly. Such features are contemplated for use with various embodiments of the present disclosure.

[0014] In certain embodiments, a handle member for a luggage device is provided, the handle member comprising a grasping portion with first and second release or control mechanisms. In such embodiments, a grasping portion of a handle is provided wherein the grasping portion extends between two collapsible or telescoping elongate members. The grasping portion comprises a first release mechanism wherein at least a portion of the grasping portion is rotatable about an axis. A user may twist or rotate the grasping portion to enable activation of at least one of two modes of conveyance of an associate luggage item. The grasping portion further comprises a push-button as a second release mechanism. The combination of the first release mechanism and the second release mechanism enables a user-selection of one of at least two modes of conveyance for the handle. For example, in one embodiment, a rotation of the grasping portion in a first rotational direction enables traditional conveyance of an item of rolling luggage wherein the handle portion extends substantially parallel to a base portion of the item. Rotation of the grasping portion enables conveyance of the item wherein the handle portion is provided at an angle to the luggage item and wherein the luggage item is provided on wheels with the base portion proximal to and substantially parallel to a floor or ground surface. In alternative embodiments, a grasping portion is provided with release mechanisms and wherein activation of a push-button without a rotation of the grasping portion enables extension of the handle member to a first position, and wherein activation of a push-button and rotation of the grasping portion enables extension of the handle member to a second position.

[0015] In various embodiments, luggage devices and handle portions for luggage devices are provided with control features for selectively enabling various movements of the handle portion based on user input. For example, in certain embodiments, handle portions are provided with a first control feature for enabling the extension or extraction of the handle portion from a stored, stowed, or collapsed position to an extended position of use for towing, pulling, or otherwise manipulating a luggage item. Additionally, the handle portions comprise a second control feature for selectively rotating the handle portion to a second extended position and wherein the second extended position comprises a position of use wherein the luggage device may be towed or otherwise manipulated while a base member of the luggage item is provided proximal to a ground surface and two pairs of wheels of the device are in contact with the ground surface. In such embodiments, control features comprise various moveable parts including, but not limited, moveable locking pins and similar release features that may be selectively activated and deactivated by a user-input. Such user-inputs include, but are not limited to, depression of a push-button provided on the handle portion, rotation of at least a portion of the handle portion, activation or movement of one of switches provided on the handle portion, and similar features and actions as will be recognized by one of ordinary skill in the art.

[0016] The Summary of the Invention is neither intended nor should it be construed as being representative of the full extent and scope of the present disclosure. The present disclosure is set forth in various levels of detail in the Summary of the Invention and as well as in the attached drawings and the Detailed Description of the Invention and no limitation as to the scope of the present disclosure is intended by either the inclusion or non-inclusion of elements, components, etc. in this Summary of the Invention. Additional aspects of the present disclosure will become more readily apparent from the Detailed Description, particularly when taken together with the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017] Those of skill in the art will recognize that the following description is merely illustrative of the principles of the disclosure, which may be applied in various ways to provide many different alternative embodiments. This description is made for illustrating the general principles of the teachings of this disclosure invention and is not meant to limit the inventive concepts disclosed herein.

[0018] The accompanying drawings, which are incorporated in and constitute a part of the specification, illustrate embodiments of the disclosure and together with the general description of the disclosure given above and the detailed description of the drawings given below, serve to explain the principles of the disclosures.

[0019] It should be understood that the drawings are not necessarily to scale. In certain instances, details that are not necessary for an understanding of the disclosure or that render other details difficult to perceive may have been omitted. It should be understood, of course, that the disclosure is not necessarily limited to the particular embodiments illustrated herein.

[0020] FIG. 1 is a perspective view of a luggage item according to one embodiment of the present disclosure in a first position of use.

[0021] FIG. 2 is a perspective view of a luggage item according to one embodiment of the present disclosure in a second position of use.

[0022] FIG. 3 is a side elevation view of a luggage item according to one embodiment of the present disclosure.

[0023] FIG. 4 is a perspective view of a component of a luggage item according to one embodiment of the present disclosure.

[0024] FIG. 5 is a perspective view of a component of a luggage item according to one embodiment of the present disclosure.
DETAILED DESCRIPTION

FIG. 1 is a perspective view of a luggage item 2 according to one embodiment of the present invention. As shown, the luggage item 2 comprises a retractable handle member 4, a first pair of wheels 6, a second pair of wheels 8, a base member 10, and a substantially flexible cover portion 12. As shown, the substantially flexible cover portion 12 is interconnected to and extends from the base member 10. The base member 10 and associated cover portion 12 collectively define a storage volume for receiving, storing, and transporting articles. Although various embodiments of the present invention contemplate a substantially flexible cover portion 12, alternative embodiments contemplate articles of rolling luggage of various construction, including full hardshell rolling luggage units, rolling duffels, expandable rolling units, molded spinner units, wheeled upright units, laptop bags, and various other similar items.

As shown in FIG. 1, the retractable handle member 4 is provided in a position of use that enables the luggage item 2 to be towed, pulled and/or conveyed with both pairs of wheels 6, 8 provided on the ground or floor surface. Such a position may be desirable where the luggage item 2 comprises significant weight, uneven packaging, etc. as this position provides a wider base with greater stability than other positions. The retractable handle member 4 as shown in FIG. 1 is provided in an extracted state (i.e. with respect to the base member 10) and in an angled position wherein at least a portion of the handle member is angled about a hinge provided on the handle 4.

In the embodiment of FIG. 1, the first pair of wheels 6 comprise rotatable wheels of a substantially fixed position. The wheels 6 are rotatable about a horizontal axis wherein that axis is provided in a substantially fixed position such that wheels are not provided as "swivel" or castor wheels. In alternative embodiments, the first pair of wheels 6 comprise swivel wheels that are rotatable about a substantially horizontal axis and a substantially vertical axis. The second pair of wheels 8 comprise castor wheels that are rotatable 360 degrees about a substantially vertical axis and are rotatable about a substantially horizontal axis to allow for travel along a ground or floor surface.

In the embodiment of FIG. 1, the first pair of wheels 6 comprise rotatable wheels of a substantially fixed position. The wheels 6 are rotatable about a horizontal axis wherein that axis is provided in a substantially fixed position such that wheels are not provided as "swivel" or castor wheels. In alternative embodiments, the first pair of wheels 6 comprise swivel wheels that are rotatable about a substantially horizontal axis and a substantially vertical axis. The second pair of wheels 8 comprise castor wheels that are rotatable 360 degrees about a substantially vertical axis and are rotatable about a substantially horizontal axis to allow for travel along a ground or floor surface.

FIG. 2 is a perspective view of a luggage item according to one embodiment of the present invention in a second position of use. FIG. 2 depicts the luggage item 2 in a generally upright position wherein the unit 2 is adapted for travel on the first pair of wheels 6 and wherein the second pair of wheels 8 are provided in an elevated position and are not in contact with the ground or floor surface. The base member 10 is depicted with the retractable handle member 4 extending therefrom and adapted for grasping and pulling by a user. In the depicted embodiment, the retractable handle member 4 comprises two parallel members 15a, 15b and a connecting member 17. The retractable handle member 4 comprises at least one and preferably two hinge members 16a, 16b to allow the handle member 4 to hinge between at least a first position and a second position. In various embodiments, and as shown in FIG. 2, a first position comprises a position adapted for transporting the item 2 in an upright position as shown in FIG. 2 and/or retracting the handle member 4 within the base member 10 such as may be desired for storage or stowage of the bag 2. The hinge member 16a, 16b preferably comprise locking means to secure the handle in the desired first or second position. In certain embodiments, the locking means or mechanism is activated and/or released by a button or control provided on the connecting member 17. In certain embodiments, a single button provided on the connecting member 17 of the handle 4 activates a release that both allows the handle 4 to be retracted and/or extracted and releases the hinge members 16a, 16b. In other embodiments, separate release buttons or other user-interfaces are provided on the handle 4 to separately control the release of the hinge members 16a, 16b and retract and/or expand the handle 4.

FIG. 3 is a side elevation view of a luggage item according to one embodiment of the present invention. As shown in FIG. 3, the luggage unit 2 of the depicted embodiment comprises a first pair of wheels 6 and a second pair of wheels 8, wherein both pairs of wheels 6, 8 are provided in contact with a ground surface and the luggage unit 2 is provided in a generally horizontal position. In the horizontal position, the base member 10 provides support for the device. Preferably, the base member 10 comprises a lightweight and substantially rigid material, such as any one or more plastics suitable for such purposes, that is sufficient to support the bag and moment forces applied in the horizontal position. In various embodiments, and as shown in FIG. 3, the substantially flexible cover portion 12 extends from the base member 10 and surrounds a primary storage volume of the bag 2.

In various embodiments, a first pair of wheels 6 comprise a pair of roller wheels wherein the axis of rotation of the first pair of wheels is substantially fixed. This arrangement allows for the first pair of wheels 6 to comprise a primary set of wheels that are used when the bag is provided in an upright or partially upright position. The second pair of
wheels 8 comprises rotatable of pivotable wheels, wherein each axis of each wheel 8 is moveable. Such rotational or pivotal movement of the wheels 8 allows the item 2 to be pulled in the position shown in FIG. 3, and steering is enabled at least in part by the rotation of the wheels 8.

[0040] FIGS. 4-5 are perspective views of a retractable handle portion 4 of a luggage item according to one embodiment of the present invention. As shown, the handle portion 4 comprises a collar unit 20 interconnected to and spanning between first 22a and second 22b handle members. The base member 10 of the depicted embodiment comprises apertures 24 to receive the elongate first and second 22a, 22b handle members when the handle 4 is retracted or stowed. The first 22a and second 22b post-like handle members are translatable with respect to the collar portion 20 and, as shown in FIG. 5, the handle 4 and collar portion 20 are rotatable about an axis 30. Each handle member 22a, 22b comprises molded stopper members 32 that prevent the handle members from being fully withdrawn from the collar portion.

[0041] FIGS. 6A-6B are front and side elevation views of a wheel assembly according to one embodiment of the present invention. As shown, wheels 6 of various embodiments of the present invention comprise minimal housing structures such that the wheels 6 are exposed or useful when the luggage item 2 is provided in at least two different positions. The bag 2 as shown in FIGS. 6A-6B is provided in an upright position. The positioning of the wheels 6 is such that a circumferential of the wheel 6 extends beyond the limits or boundary of the main body portion and/or base portion 10 of the bag 2, and such that the wheels 6 extend beyond a first side 30 and a second side 32 of the bag. The positioning of the wheels axles in such a manner as to allow portions of the wheels 6 to extend beyond limits of the bag 2 allows the bag 2 to be transported or rolled in at least two arrangements as shown and described herein.

[0042] FIG. 7 is a rear elevation view of a bag 2 of one embodiment of the present invention. As shown, the bag 2 comprises first 6 and second 8 wheel assemblies. The bag may be transported by rolling on the first wheel assembly 6 only, or may be provided in a second position, sometimes referred to as “wagon carry”, wherein all four wheels 6, 8 are provided in rolling contact with a ground surface.

[0043] As shown in FIGS. 8A-8B, a first pair of wheels 6 is provided at a higher point of gravitational energy than the second pair of wheels 8 when the base member 10 is provided in a horizontal position. Accordingly, when the luggage item 2 is provided in a horizontal arrangement with all four wheels 6, 8 in contact with a ground surface, the luggage item assumes a slightly tilted arrangement wherein a leading portion of the bag proximal the second set of wheels 8 is slightly elevated and the base member 10 extends slightly downwardly toward a rear portion comprising the first pair of wheels 6. In such embodiments, this arrangement allows for ease of use of the luggage item 2 wherein easier access to various features including, for example, the handle 4 is provided.

[0044] FIG. 9 is a perspective view of a handle portion and a base portion of a luggage item according to one embodiment of the present disclosure. As shown, a base portion 40 is provided, the base portion comprising a substantially rigid member formed of plastic or similar materials, a lower portion 42 which preferably comprises at least one substantially planar portion 43, and wherein the lower portion 42 is surrounded by a plurality of sidewalls 44. Although not shown in FIG. 9, a flexible portion preferably extends from the side-walls 44 to provide a rolling duffel structure, wherein an internal storage volume is provided between the base portion 40 and the substantially flexible portion. The base portion 40 comprises a first pair of wheels 46a, 46b and a second pair of wheels 48a, 48b. In preferred embodiments, the second pair of wheels 48a, 48b comprise caster wheels that are rotatable about an axis provided substantially perpendicular to a ground surface.

[0045] A handle portion 52 is extendable from the base portion 40 at a first end of the base portion 40. As shown in FIG. 9, the handle portion 52 is provided in a first position of use wherein the handle portion 52 is adapted to tow or maneuver the luggage device when the device is disposed on only the first pair of wheels 46a, 46b. In the position shown in FIG. 9, collapsible members 54a, 54b of the handle portion 52 have been extended or extracted through a bracket member 62. In FIG. 9, the bracket member 62 is provided in a substantially fixed position, both with respect to rotation and other movements. Accordingly, the extended handle portion 52 as shown in FIG. 9 comprises a secure or rigid position that enables movement and manipulation of the luggage device.

[0046] Additionally, the base portion 40 comprises a cut-out or angled recess 50 that allows rotation of the handle portion 52 wherein collapsible members 54a, 54b of the handle portion 52 are allowed to rotate without interference from the base portion 40. The collapsible members 54a, 54b are translatable through a bracket member 62. The bracket member 62 comprises a selectively rotatable member that enables a rotation of the handle portion 52 as shown and described herein. When unlocked, the bracket member 62 is rotatable about an axis that extends substantially parallel to an axis extending through the wheels 46a, 46b and substantially perpendicular to the collapsible members 54a, 54b. The rotation of the bracket member 62 enables rotation of the handle member 52 and conversion between first and second positions of use. In the embodiment provided in FIG. 9, the collapsible members 54a, 54b are provided in tracks or slots 49 extending along a portion of the base member 40 to help guide movement of the collapsible members. The bracket member 62 is provided adjacent or proximal to the slots 49, and rotation of the bracket member 62 is not restricted by the slots 49.

[0047] The handle portion 52 comprises a grasping member 56, which generally comprises an elongate member adapted for communication with a hand of a user to manipulate and maneuver an associated luggage item. The grasping member 56 is provided substantially perpendicular to the collapsible members 54a, 54b, and extends between the two collapsible members. In addition to providing a user-interface and a point of contact for a user to grasp the handle, the grasping member 56 also comprises at least one control feature for converting the handle member 52 between at least two positions of use. Specifically, embodiments of the present disclosure contemplate that the handle portion 52 is extendable between a retracted, stored position and at least two extended positions of use. The at least two positions of use comprise a first extended position (shown in FIG. 9) wherein the device is provided for rolling or conveyance on the first pair of wheels 46a, 46b, and a second extended position wherein the handle portion 52 is provided at an angle to the base portion 40 and the device is adapted for rolling or conveyance on both pairs of wheels 46a, 46b, 48a, 48b. To enable the conversion between the retracted position, the first extended position, and the extended position, the grasping portion 56 comprises a first control member 58 and
a second control member 60. In the depicted embodiment, the first control member 58 comprises a rotatable portion of the handle that is rotatable about the longitudinal axis of the grasping member 56. The second control member, as shown in FIG. 9, comprises a push-button adapted for use in conjunction with the first control member. In contrast with known devices, which generally provide for a single release feature to enable selective extension of a collapsible handle, embodiments of the present disclosure provide for a selectively extendible handle that comprises at least one additional control member to convert the handle between a first extended position and a second extended position.

[0048] As shown in FIG. 9, a bracket member 62 is provided. The bracket member 62 comprises a selectively rotatable portion having first and second apertures for receiving the collapsible members 54a, 54b of the handle portion 52 and wherein the collapsible members 54a, 54b are translatable through the rotatable bracket 62 along at least a portion of the lengths of the collapsible members 54a, 54b. To convert the handle portion 52 from a first position of use (see FIG. 9) to a second position of use wherein the handle portion 52 is rotated and provided at an angle with respect to the base portion 40, a control mechanism is activated and allows the rotatable bracket 62 and the handle portion 52 to rotate. The base portion 40 comprises an aperture, a cut-out, or recess 50 to enable this rotation. In preferred embodiments, an angled recess 50 is provided in the base portion to enable and/or limit rotation of the rotatable bracket 62 and the handle portion 52.

[0049] FIG. 10 is an exploded perspective view of the handle portion 52 of the embodiment of FIG. 9. As shown, the handle portion 52 comprises a grasping portion 56 provided at one end of first and second collapsible members 54a, 54b. The collapsible members 54a, 54b extend through a selectively rotatable bracket member 62. A second bracket member 68 is provided at a second end of the handle member, generally opposite from the grasping portion 56. When assembled, the handle member comprises a grasping portion 56 on a first end of the collapsible members 54, 54b and a second bracket at an opposed second end of the collapsible members. The handle is rotatable between a stored position wherein the grasping portion is provided proximal to the bracket portion 62, and an extended position wherein the second bracket member 68 is brought into contact with the bracket member 62 (See FIG. 9).

[0050] In various embodiments, the present disclosure contemplates a handle portion 52 comprising elongate wire members 64a, 64b extending along and preferably internal to the collapsible members 54a, 54b wherein the collapsible members 54a, 54b comprise elongate tubular members. The elongate wire members 64a, 64b comprise force-transmitting means provided to convert a force or movement applied to the push-button 60 on grasping portion 56 to additional features. The wire members 64a, 64b act upon locking pins to manipulate the locking pins and selectively lock and unlock the collapsible members so that they may be extended or retracted based on a user preference. Additionally, and depending upon a position of a rotatable portion 58 of the grasping portion 56, a movement of the push-button and the wire members unlocks a rotation of the bracket member 62 to enable rotation of the handle member 52 and allows the handle member 52 to be provided in an angled position.

[0051] As shown in FIG. 9, the rotatable bracket member 62 is provided proximal to a first end of the base portion 40. The bracket member 62 is preferably fixed in a lateral and longitudinal direction and rotatable about an axis. In other words, the rotatable bracket 62 is selectively rotatable with respect to the base portion 40, but is otherwise in a fixed relative position with respect to the base portion 40. The second bracket member 68 is substantially fixed to a second end of the collapsible members 54a, 54b and translates with the collapsible members between a stored position and an extended position wherein the second bracket member 68 is brought into contact with the rotatable bracket member 62, as shown in FIG. 9.

[0052] In the depicted embodiment, a handle portion 52 is provided wherein a grasping portion 56 comprises a rotatable portion 58 that is rotatable between at least a first and second position. The rotational position of the rotatable portion 58 dictates or governs the overall displacement of distal ends 65 of the wire members 64. When the rotatable portion 58 is provided in a first position, a depression of the push-button 60 extends the wire members 64 to a first predetermined position. The first predetermined position corresponds to unlocking a first locking member that allows the collapsible members 54a, 54b to extend, but does not allow for or unlock rotation of the bracket 62 and a rotational position of at least the rotating bracket 62 remains substantially fixed. Thus, even when the handle portion 52 is extracted or expanded to a first position of use, the handle portion 52 and collapsible members 54a, 54b are provided substantially parallel to at least a planar portion 43 of a base portion 40 and the luggage device is adapted to be towed, wheeled, manipulated, etc. on the first pair of wheels 46a, 46b.

[0053] When the rotatable portion 58 of the grasping portion 56 is rotated to a second position, depression of the push button enables extension of the collapsible members 54a, 54b and unlocks additional locking members to enable rotation of the bracket 62 such that the handle portion 52 may rotate to an angled position with respect to at least the planar portion 43 of the base 40. In various embodiments, the angled position of the handle portion 52 comprises an angle with respect to the planar portion 43 and/or ground or floor surface of between approximately 20 degrees and approximately 80 degrees. In preferred embodiments, the angled position of the handle portion 52 comprises an angle with respect to the planar portion 43 and/or ground or floor surface of between approximately 40 degrees and approximately 50 degrees, and most preferably of approximately 45 degrees. It is contemplated that the planar portion 43, and a plane extending therefrom, comprises a surface that is substantially parallel to a ground or floor surface when each of the two pairs of wheels are provided in contact with the ground or floor surface. It will be recognized, however, that the planar portion 43 of the base portion 40 need not be exactly parallel to the ground surface. Indeed, the orientation of the planar portion 43 and a ground surface may vary based on contours provided in the base portion 40, relative sizes of the opposing pairs of wheels, etc.

[0054] Referring to FIG. 10, various unlocking features are shown in an exploded state. As shown a grasping portion 56 comprises a rotatable portion 58 and a push button 60. The rotatable portion 58 is rotatable between at least a first position and a second position. The first position enables a displacement of the wire members 64a, 64b by a first amount. The second position enables a displacement of the wire members 64a, 64b by a second amount, and wherein the second amount is greater than the first. A depression of the push button 60 induces a linear movement of the elongate wire members 64a, 64b. The second ends of the wire members
64a, 64b comprise push boards 65. The push boards 65 are provided in the form of flanges or other extensions adapted to transmit a force from the wire members 64a, 64b to unlock various locking elements, such as one or more lock pins. The one or more lock pins are displaceable in a direction substantially perpendicular to a longitudinal axis of the collapsible members and the wire members. In various embodiments, a cammed or ramped surface is provided to convert a linear motion of the wire members in a first direction to a linear portion of the lock pins in a second, substantially perpendicular direction. The lock pins are moveable in and out of rigid portions of the bag, such movement corresponding to a locking and unlocking motion of the handle member 52 and/or the bracket 62.

[0055] In one embodiment, a device is provided wherein a first rotational position of the rotatable portion 58 of the grasping member 56 comprises a position wherein the pushbutton 60 and rotatable portion 58 are provided in a first position, and the pushbutton 60 preferably extends upwards as in conventional devices. In such a position, activation or depression of the push button unlocks first lock pins 75 associated with extension of the handle 52. The lock pins 75 are preferably biased toward a locking position by a coil spring or similar member.

[0056] As shown in FIG. 10, a second bracket 68 comprises biased locking pins 76 that are adapted to secure the second bracket 68 and the handle 52 in stored position (see FIG. 9) and to engage the rotatable bracket 62 in an extended position and when desired by a user.

[0057] The rotatable bracket 62 comprises a first and second axes 74 that enable rotation of the rotatable bracket 62 when associated lock pins are released. In various embodiments, a single axle may extend through the bracket 62 and be provided in communication with a luggage device. The axes 74 may be biased by one or more springs to bias or urge the bracket 62 to a first or second position.

[0058] In the embodiment provided in FIG. 10, the collapsible members 54 comprise a first pair of members 54a, 54b and a second pair of members 54c, 54d. The first pair of members 54a, 54b extend or telescope outwardly from the second pair of member 54c, 54d when two-wheeled carry (FIG. 9) is desired. The second pair of members 54c, 54d and the second bracket 68 provided on a distal end of the second pair of members 54c, 54d remain substantially fixed when the grasping member 56 and first pair of collapsible members 54a, 54b are extended to a first position of use. In a second position of use, the first pair of members 54a, 54b are extended with respect to the second pair of members. Additionally, the second pair of members 54c, 54d are extended with respect to the bag such that the second bracket 68 is brought into communication with the rotatable bracket 62. The second position thus comprises a greater overall extended handle 52 length as the first position. A stored or collapsible position comprises the first pair of collapsible members 54a, 54b being collapsed or extending into the second pair of members 54c, 54d and both pairs being retracted such that the grasping portion 56 of the handle is provided proximal to the base portion 40 of a luggage item.

[0059] To extend a first pair of collapsible members 54a, 54b and the grasping portion 56 to a first position of use, the rotatable portion 58 of the grasping portion 56 is provided in a first position (see FIG. 9). The push button 60 is depressed, which extends the wire members 64a, 64b and associated push boards 65 by a first distance. The push boards 65 act upon push pins 70, and cause an unlocking of a first pair of lock pins 75. The unlocking of the first pair of lock pins 75 enables the first pair of collapsible members 54a, 54b to extend upwardly with respect to other features of the bag, and the bracket 62 and second pair of collapsible members 54c, 54d remain substantially unaltered and unaffected. This unlocking motion allows the grasping portion 56 to be extended upwardly to a first position of use wherein the first lock pins 75 are preferably biased outwardly to temporarily lock the handle portion in the first position of use.

[0060] To extend the handle 52 to a second position of use, the rotatable portion 58 of the handle is rotated to a second position. In certain embodiments, the second position comprises a position wherein the push button 60 is provided substantially perpendicular to its position or location in the first position of use. This rotation of the rotatable portion 58 allows the wire members 64a, 64b and associated push boards 65 to extend by a second distance. In the depicted embodiment, the second distance is greater than the first distance. The movement of the push board 65 by the second distance causes an unlocking of the first pair of lock pins 75 as described above and further causes a similar unlocking action of a second pair of lock pins 76 provided in association with the second bracket 68. The second bracket 68 and second pair of collapsible members 54c, 54d are also extended upwardly to a second position of use, and the bracket 62 is rotated to an angle that enables the device to be towed an all four wheels. The first pair of collapsible members 54a, 54b are also enabled to telescope or extend outwardly from the second pair of collapsible members 54c, 54d.

[0061] FIG. 11 is a perspective view showing the base portion 40 provided in a second position of use wherein four-wheeled carry or movement of the device is enabled. As described herein, telescoping collapsible members 54a, 54b, 54c, 54d are extended with respect to each other and with respect to the base portion 40. The second bracket 68 is brought into contact with the rotatable bracket 62, and the handle 52 is rotated to an angle that allows a user to manipulate the handle 52 and associate luggage item when the base position 40 is provided with all four wheels in contact with a ground surface.

[0062] Although FIGS. 9-11 of the present disclosure provide a device with a pair of substantially parallel collapsible members, alternative embodiments contemplate a handle portion comprising a single telescoping or collapsible member. For example, a single collapsible may be provided in combination with the features shown and described herein including, for example, the rotatable bracket 62. The single collapsible member may be centered on the base portion, or provided in any number of desired orientations. The single collapsible member may include, for example, a grasping portion similar to that shown and described herein and extending laterally away from the collapsible member in two directions.

[0063] While various embodiments of the present invention have been described in detail, it is apparent that modifications and alterations of those embodiments will occur to those skilled in the art. However, it is to be expressly understood that such modifications and alterations are within the scope and spirit of the present invention. Further, the invention(s) described herein are capable of other embodiments and of
being practiced or of being carried out in various ways. In addition, it is to be understood that the phraseology and terminology used herein is for the purposes of description and should not be regarded as limiting. The use of “including,” “comprising,” or “adding” and variations thereof herein are meant to encompass the items listed thereafter and equivalents thereof, as well as, additional items.

What is claimed is:

1. An article of rolling luggage comprising:
   a base portion comprising a first end and second end and a predetermined length provided between the first end and the second end;
   a first pair of wheels connected to the base portion and proximal to the first end;
   a second pair of wheels connected to the base portion and proximal to the second end;
   the substantially rigid base portion extending between the first pair of wheels and the second pair of wheels, and comprising at least one substantially planar portion;
   a retractable handle assembly connected to the base portion for towing the article of rolling luggage;
   a substantially flexible cover portion secured to the base portion;
   the retractable handle being translatable along a length of the base portion and in a first direction substantially parallel to the at least one substantially planar portion;
   the retractable handle being rotatable about an axis, the axis being substantially perpendicular to the first direction; and
   wherein the retractable handle is convertible between a retracted position, a first position of use, and a second position of use, the first position of use characterized in that the retractable handle extends substantially parallel to the substantially planar portion, and the second position of use characterized in that the retractable handle is provided at an angle with respect to the substantially planar portion.

2. The article of rolling luggage of claim 1, wherein the second position of use is characterized in that the first pair of wheels and the second pair of wheels are provided on a ground surface.

3. The article of rolling luggage of claim 1, wherein the angle is between 10 and 90 degrees.

4. The article of rolling luggage of claim 1, wherein the base portion comprises a molded plastic portion.

5. The article of rolling luggage of claim 1, wherein the first end of the base portion comprises at least one of an angled portion and a recessed portion to enable rotation of the retractable handle.

6. The article of rolling luggage of claim 1, wherein the base portion comprises the at least one substantially planar portion and a plurality of sidewalls, the sidewalls extending substantially perpendicular to the substantially planar portion and at least partially defining an interior storage volume.

7. The article of rolling luggage of claim 1, wherein the first pair of wheels comprise caster wheels rotatable about an axis provided substantially perpendicular to a ground surface.

8. An article of rolling luggage, comprising:
   a substantially rigid base portion comprising a plurality of wheels;
   a retractable handle assembly provided in communication with the base portion for towing the article of rolling luggage;
   a substantially flexible cover portion secured to the base portion, the base portion and the cover portion defining a storage volume of the article;
   the retractable handle being translatable between a first position and a second position, the first position comprising a retracted position and the second position comprising an extended position adapted for towing the article;
   the retractable handle being rotatable about an axis to convert the retractable handle from the second position to a third position; and
   at least one control member provided on the retractable handle, the control member provided in force transmitting communication with a stop pin and wherein a position of the stop pin is altered by activation of the control member to enable rotation of the retractable handle about the axis.

9. The article of rolling luggage of claim 8, wherein the retractable handle comprises a first control member and a second control member.

10. The article of rolling luggage of claim 8, wherein the third position of use is characterized in that the retractable handle is provided at an angle of between approximately 30 and 60 degrees with respect to the base portion.

11. The article of rolling luggage of claim 9, wherein the control member comprises a push-button which is operably engaged to a release mechanism to allow rotation of the handle.

12. The article of rolling luggage of claim 8, wherein the base portion comprises a molded plastic portion.

13. The article of rolling luggage of claim 8, wherein a first end of the base portion comprises at least one of an angled portion and a recessed portion to enable rotation of the retractable handle.

14. The article of rolling luggage of claim 8, wherein the base portion comprises at least one substantially planar portion and a plurality of sidewalls, the sidewalls extending substantially perpendicular to the substantially planar portion and at least partially defining the storage volume.

15. The article of rolling luggage of claim 8, wherein at least one of the wheels comprises a caster wheel rotatable about an axis provided substantially perpendicular to a ground surface when the wheel is provided in contact with the ground surface.

16. An article of rolling luggage comprising:
   a substantially rigid base portion comprising a plurality of wheels;
   a retractable handle assembly provided in communication with the base portion for towing the article of rolling luggage;
   a substantially flexible cover portion secured to the base portion, the base portion and the cover portion defining a storage volume of the article;
   the retractable handle being translatable between a first position and a second position, the first position comprising a retracted position and the second position comprising an extended position adapted for towing the article;
   the retractable handle being rotatable about an axis when provided in the second position, the axis being substantially perpendicular to at least one collapsible member of the handle and substantially parallel to an axis of rotation of at least one of the plurality of wheels; and
the base portion comprising at least one of a cut-out and a recess for receiving at least a portion of the retractable handle when the retractable handle is rotated about the axis.

17. The article of rolling luggage of claim 16, wherein at least two of the wheels comprise caster wheels rotatable about an axis provided substantially perpendicular to a ground surface.

18. The article of rolling luggage of claim 16, wherein the base portion comprises a molded plastic portion.

19. The article of rolling luggage of claim 16, wherein the retractable handle is rotatable from the second position to a third position.

20. The article of rolling luggage of claim 19, wherein the third position of use is characterized in that each of the wheels are provided on a ground surface.

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