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(54) **MODULAR SAFETY DEVICE WITH DOG  
DETERRENT AND PANIC ALARM**

**Publication Classification**

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(57) **ABSTRACT**

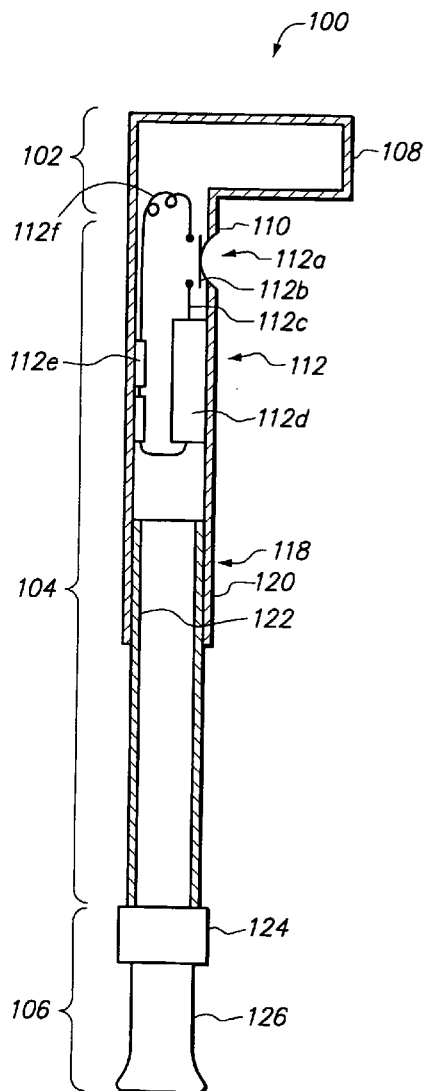
A modular safety device has an ultrasonic device capable of transmitting ultrasonic sound with a frequency of at least 20 kHz. The ultrasonic sound is inaudible to human ear and can cause barking or approaching dogs to stay in place, stop or move away from the user. The modular safety device also includes a power supply and an audible alarm device. The audible alarm device is capable of issuing a distress sound audible to human ear. The power supply, ultrasonic device and audible alarm device are incorporated into a detachable and portable unit that can be easily carried on a user's person or attached to a user's mobile device such as walker or wheelchair.

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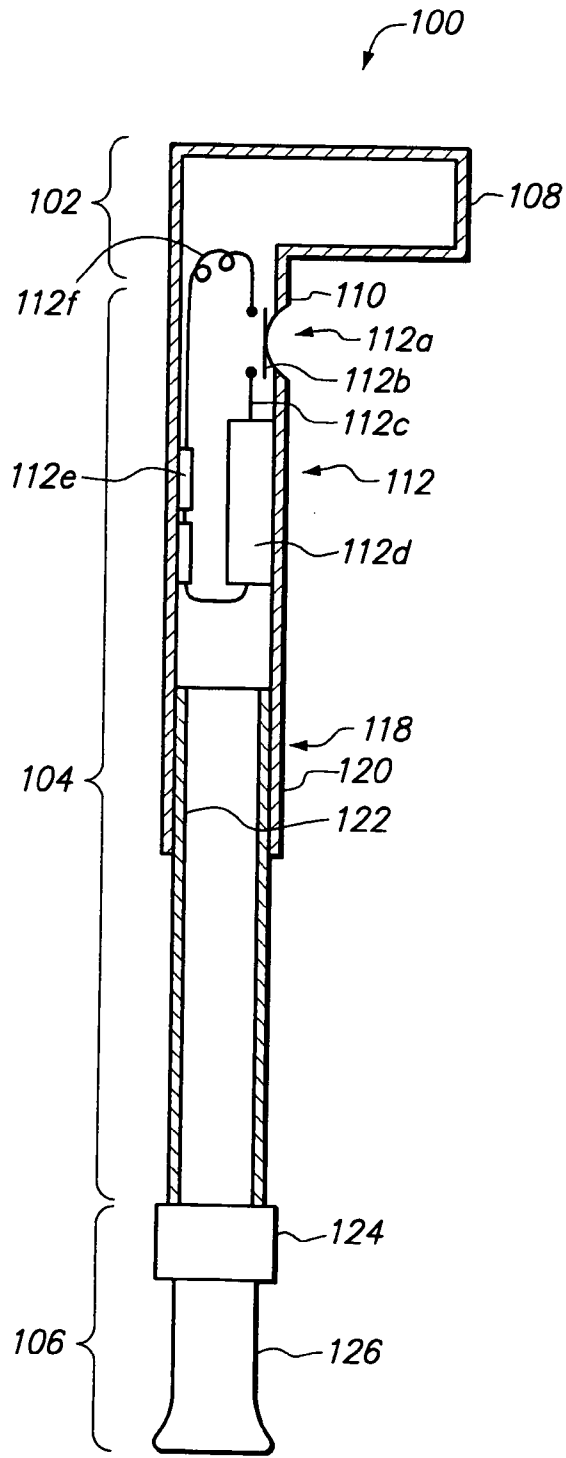
(22) Filed: **Apr. 29, 2008**

**Related U.S. Application Data**

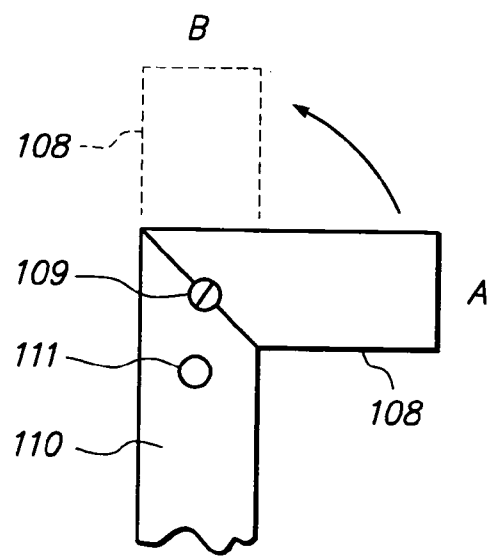
(63) Continuation of application No. 11/890,580, filed on Aug. 6, 2007.



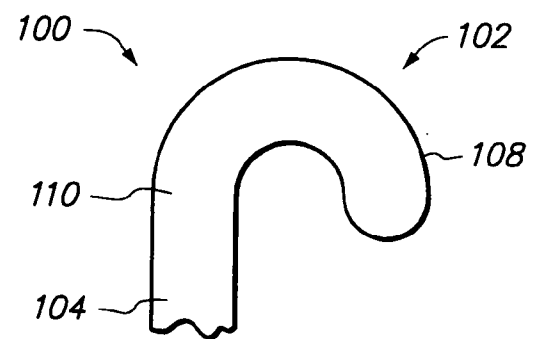
**FIG. 1**



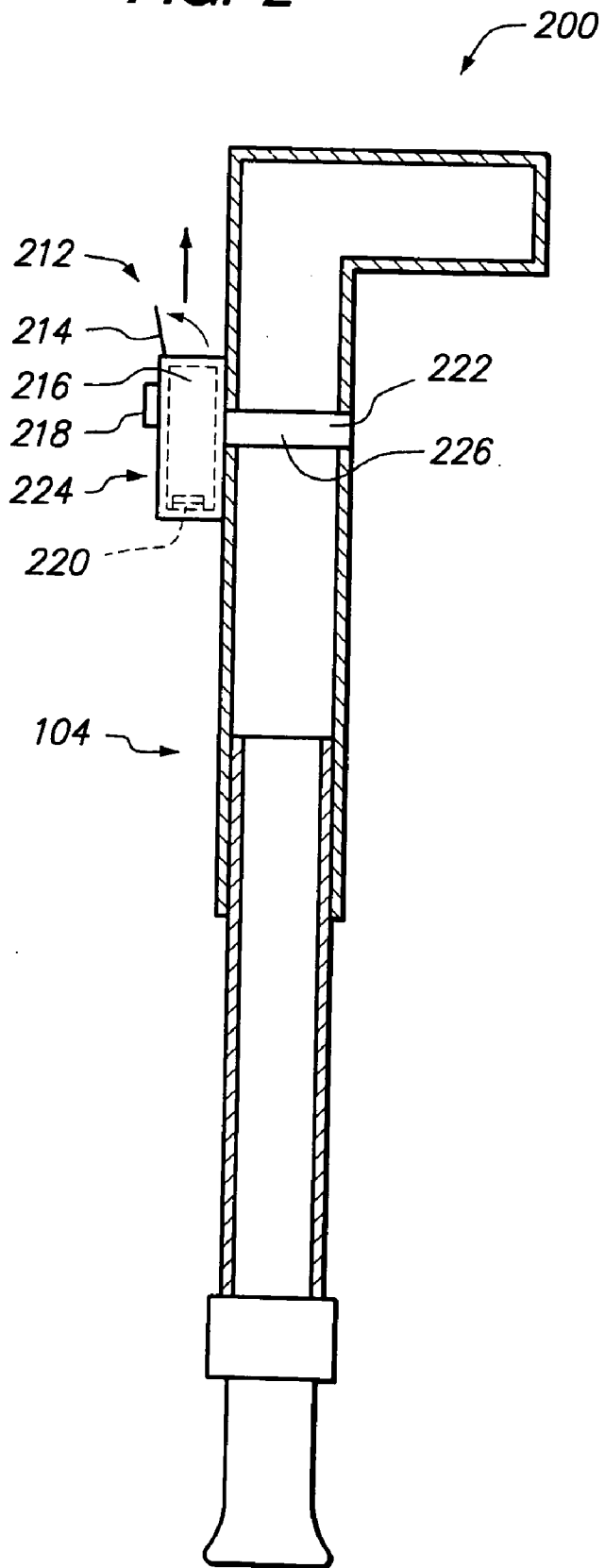
**FIG. 1A**



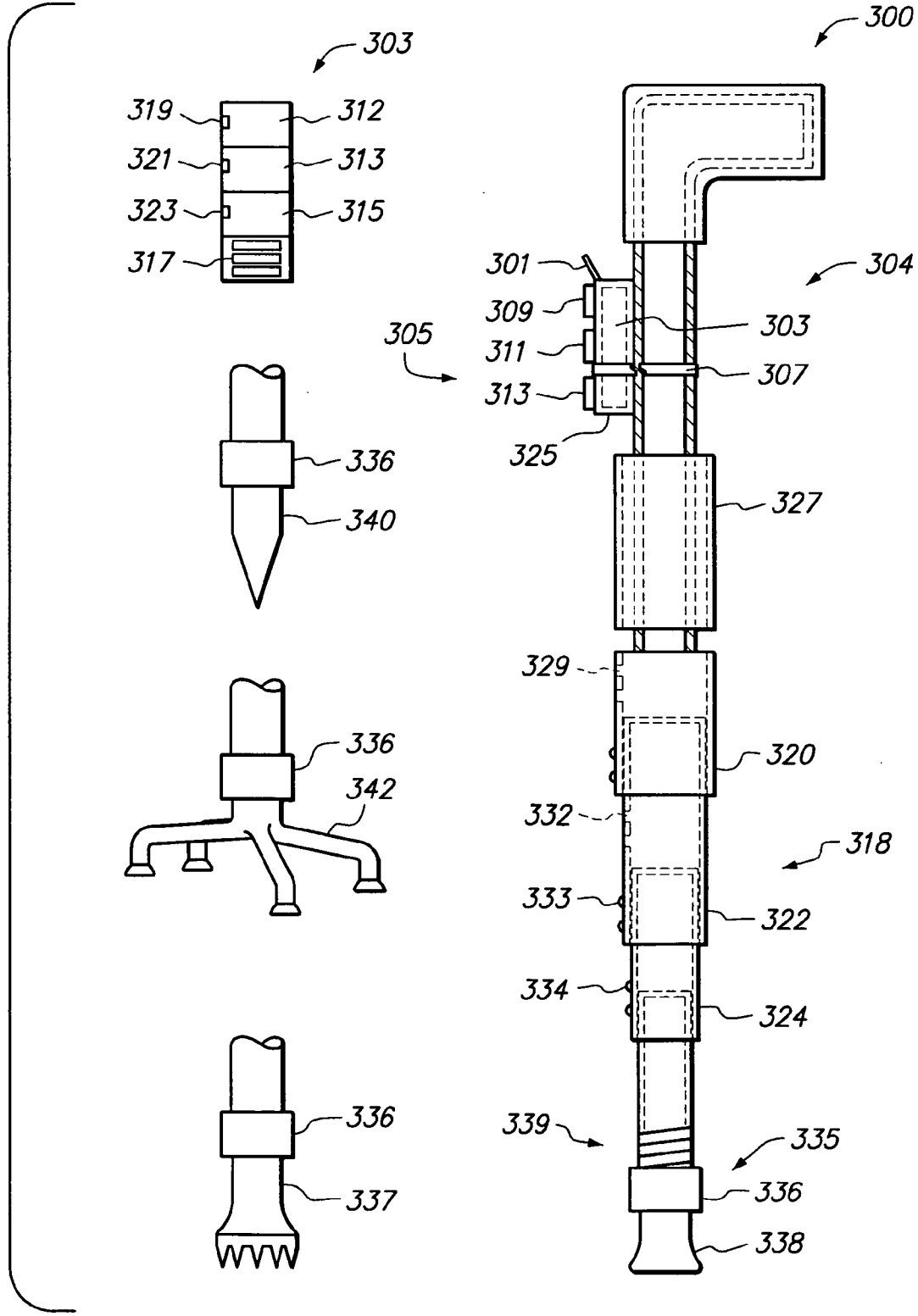
**FIG. 1B**

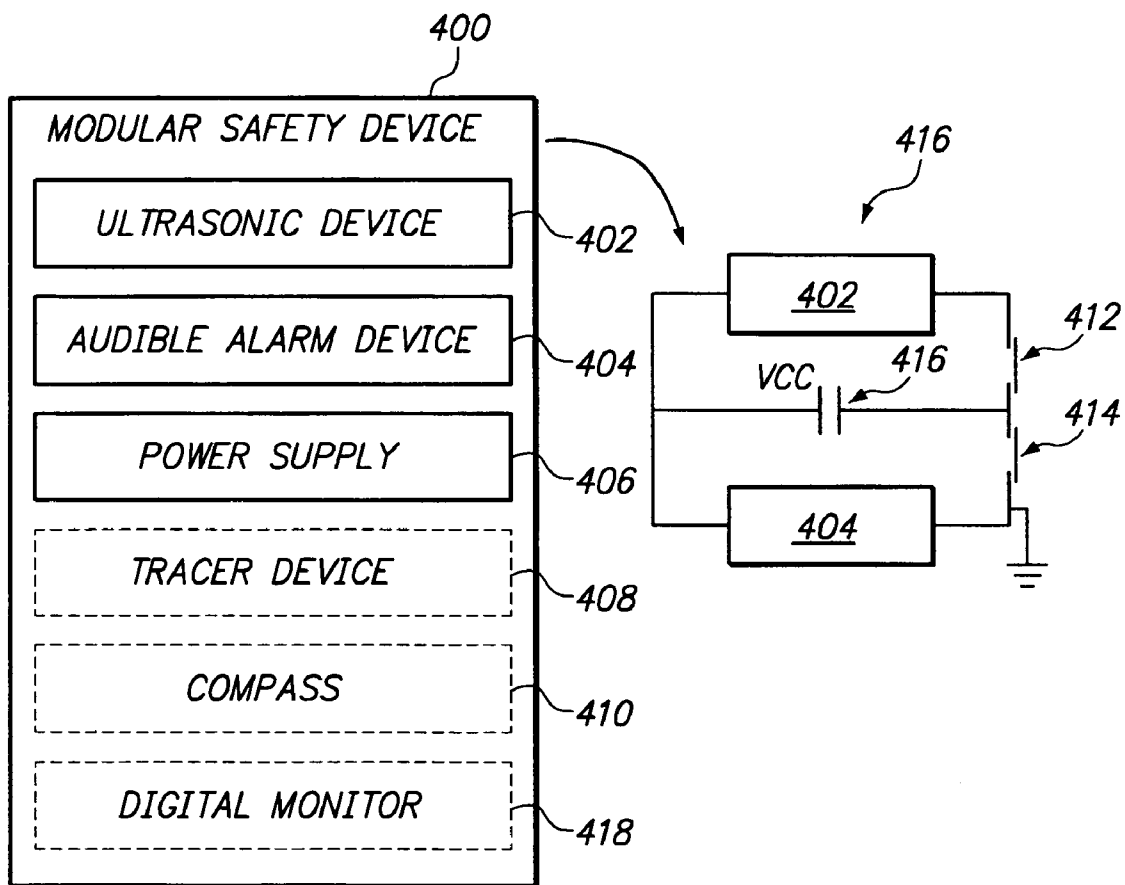


**FIG. 2**

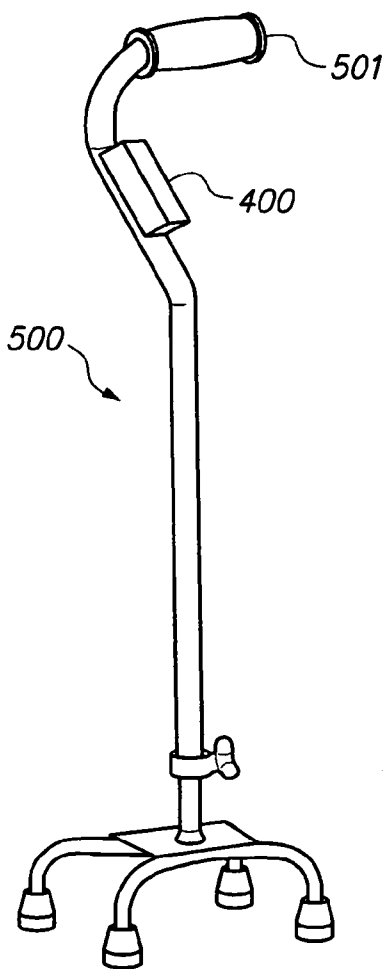


**FIG. 3**

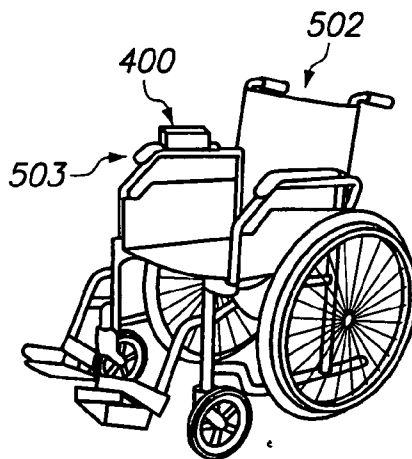




**FIG. 4**



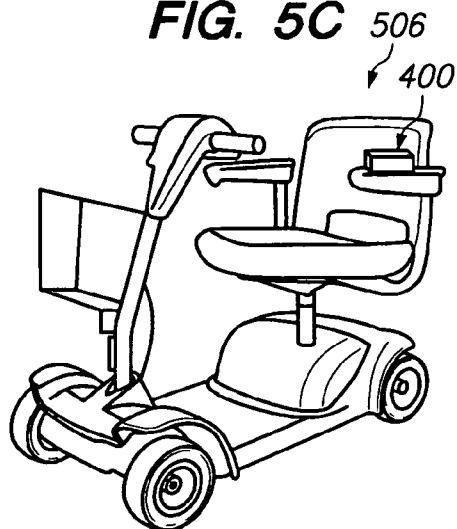
**FIG. 5A**



**FIG. 5B**



**FIG. 5C**



**FIG. 5D**

**MODULAR SAFETY DEVICE WITH DOG DETERRENT AND PANIC ALARM**

**CROSS-REFERENCE TO RELATED APPLICATION OF THE INVENTION**

[0001] This application is a continuation of copending, U.S. patent application Ser. No. 11/890,580, entitled MULTIFUNCTIONAL WALKING STICK WITH DOG DETERRENT AND ADAPTABLE BASED, filed Aug. 6, 2007.

**BACKGROUND OF THE INVENTION**

[0002] This invention relates generally to safety devices and more specifically to a modular safety device for use by the elderly, handicapped and the like.

[0003] Elderly users usually exercise by engaging in daily and nightly walks. Assume that during one such activity, an elderly user with a walking stick is approached by a barking dog. Instinctively, the user attempts to protect against the barking dog by prodding or swinging the walking stick. This results in loss of balance causing the user to fall. Unfortunately, not only does the user now incur injuries from falling, the user also sustains dog bites inflicted by the barking dog. The same can also be said when elder or handicapped users are approached by assailants. Such users cannot quickly flee from assailants because of their limited mobility. They are thus consequently prone to attack and injury from dangerous assailants.

[0004] There is a need to address one or more of the foregoing disadvantages associated with conventional safety devices and the present invention meets this need.

**BRIEF SUMMARY OF THE INVENTION**

[0005] Various exemplary embodiments can be found in a modular safety device with dog deterrent and panic alarm. In one embodiment, the modular safety device has an ultrasonic device capable of transmitting ultrasonic sound with a frequency of at least 20 kHz. The ultrasonic sound is inaudible to human ear and can cause barking or approaching dogs to stay in place, stop or move away from the user. The modular safety device also includes a power supply and an audible alarm device. The audible alarm device is capable of issuing a distress sound audible to human ear. The power supply, ultrasonic device and audible alarm device are incorporated into a portable unit. The Portable unit is detachable and transferable and can easily be carried on a user's person or attached to a user's mobile device such as walker or wheelchair.

[0006] An understanding of the nature and advantages of the present invention herein may be realized by reference to the remaining portions of the specification and the attached drawings. Further features and advantages of the present invention, as well as the structure and operation of various embodiments of the present invention, are described in detail below with respect to the accompanying drawings. In the drawings, the same reference numbers indicate identical or functionally similar elements.

**BRIEF DESCRIPTION OF THE DRAWINGS**

[0007] FIG. 1 illustrates a walking stick with which the present invention can be utilized.

[0008] FIG. 1A illustrates an exemplary handle for the walking stick of FIG. 1.

[0009] FIG. 1B illustrates another exemplary handle for the walking stick of FIG. 1.

[0010] FIG. 2 illustrates a walking stick with which the present invention can be utilized.

[0011] FIG. 3 illustrates a walking stick with which the present invention can be employed.

[0012] FIG. 4 is a block diagram of modular safety device 400 in accordance with an exemplary embodiment of the present invention.

[0013] FIG. 5A illustrates use of a modular safety device on a walking stick in accordance with an exemplary embodiment of the present invention.

[0014] FIG. 5B illustrates use of a modular safety device on a wheel chair in accordance with an exemplary embodiment of the present invention.

[0015] FIG. 5C illustrates use of a modular safety device on a wheel walker in accordance with an exemplary embodiment of the present invention.

[0016] FIG. 5D illustrates use of a modular safety device on an electric wheel chair in accordance with an exemplary embodiment of the present invention.

**DETAILED DESCRIPTION OF THE INVENTION**

[0017] Reference will now be made in detail to the embodiments of the invention, examples of which are illustrated in the accompanying drawings. While the invention will be described in conjunction with the preferred embodiments, it will be understood that they are not intended to limit the invention to these embodiments. On the contrary, the invention is intended to cover alternatives, modifications and equivalents, which may be included within the spirit and scope of the invention as defined by the appended claims. Furthermore, in the following detailed description of the present invention, numerous specific details are set forth in order to provide a thorough understanding of the present invention. However, it will be obvious to one of ordinary skill in the art that the present invention may be practiced without these specific details. In other instances, well known methods, procedures, components, and circuits have not been described in detail as not to unnecessarily obscure aspects of the present invention.

[0018] FIG. 1 illustrates walking stick 100 in accordance with an exemplary embodiment of the present invention.

[0019] Walking stick 100 broadly consists of three main components namely handle 102, stem 104 and base 106. Stem 104 is an elongated substantially square-shaped shaft connecting handle 102 and base 106. Although not shown, these components can be connected directly or indirectly by known methods such as screwing, riveting, forging, etc.

[0020] In use, briefly, walking 100 may be employed for walking, hiking, etc. A user begins by adjusting the walking stick height. This is done by manipulating telescopic stem 118 until a comfortable height is attained. Once a desired height is obtained, the user can then use walking stick 100 by grasping handle 102 at waist high level while placing base 106 on the ground. Walking stick 100 is then leaned upon to provide partial support as the user takes another step forward. This process continues and is repeated until the walking activity is concluded.

[0021] The user can also depress as necessary one or more safety buttons attached to stem 104. For example, dog deterrent button 112a can deter approaching barking dogs or the like from the user. Unlike conventional devices, the walking stick of the present invention incorporates a dog deterrent device providing users with much needed comfort and protection from aggressive type animals. Other safety buttons

described with reference to FIG. 3 can also be depressed in an alternative embodiment of the present invention.

[0022] In FIG. 1, in more detail, handle 102 is ergonomically designed to maximize productivity by reducing user fatigue and discomfort. The embodiment of FIG. 1 shows affixed handle 102 having upper grip 108 and lower grip 110. Upper grip 108 and lower grip 110 are continuous extensions of stem 104, over which grip material such as polyurethane, plastic, fiber resin and the like is molded to form the grips. Alternately, upper grip 108 and lower grip 110 can be separately formed or molded. The separately formed handle can then be fixedly attached to stem 104 using screws, riveting or the like.

[0023] The embodiment of FIG. 1 also illustrates a non-curved handle 102. Here, the longitudinal axis of upper grip 108 is substantially perpendicular to that of lower grip 110. Some users may prefer this substantially non-curved handle 102 to other handle types. For increased comfort, grips 108 and 110 can be made of soft comfortable material such as foam and the like. Preferably, the foam is substantially square shaped to conform to the shape of stem 104, and can also have indentations for comfortable gripping. The foam interior is dimensioned so it is slideable over stem 104. Preferably the lengths of upper grip 108 and lower grip 110 are 5" and 5", respectively. The grip sizes can be at least three standard sizes namely small, medium and large.

[0024] FIG. 1A illustrates an exemplary handle for the walking stick of FIG. 1.

[0025] In FIG. 1A, the user can adjust handle 102 between position A and position B, as shown. In position A, the longitudinal axis of upper grip 108 is substantially perpendicular to that of lower grip 110. This position is preferable for some users particularly when they are engaging in walking activities as they can easily grasp upper grip 108. In position B, upper grip 108 is substantially continuous with lower grip 110, with a single longitudinal axis running through both upper grip 108 and lower grip 110. This position is preferable for other users particularly when they are engaging in activities such as hiking and the like.

[0026] The user can depress handle button 111 to adjust handle 102 between position A and position B. This allows a lock mechanism (not shown) to release upper grip 108 from its current fixed position. Once the desired position is selected, upper grip 108 is again locked into position by depressing handle button 111. Upper grip 108 and lower grip 110 are coupled by hinge mechanism 109 such that upper grip 108 is rotatable around the hinge mechanism 109 axis.

[0027] FIG. 1B illustrates another exemplary handle for the walking stick of FIG. 1.

[0028] In FIG. 1B, handle 102 is curved as shown, for users preferring curved handles rather than. Specifically, upper grip 108 of handle 102 possesses a semi-circular axis or curvature. Lower grip 110 of handle 102 is also substantially rounded in this case. In fact, walking stick 100 has a substantially rounded and circular stem 104 from which lower grip 110 is continuously formed. Handle 102 includes three different handle choices namely sport, hiking and walking.

[0029] Referring back to FIG. 1, stem 104 also includes dog deterrent system 112 that can emit high pitched ultra-frequency sounds to force aggressive animals (particularly barking dogs and the like) to keep their distance from the user. Dog deterrent system 112 is fixedly incorporated within stem 104 preferably immediately below handle 102 so that proximity to the user's hands is maintained. Alternately (not shown), dog

deterrent system 112 may be located within upper grip 108 so that its button is easily manipulable by the user's thumb.

[0030] Dog deterrent system 112 includes button 112a with metal contact 112b. Button 112a is spring loaded (not shown). Depressing button 112a causes metal contact 112b to close switch 112c thus completing and activating this dog deterrent system circuitry. Switch 112c is coupled to ultrasonic device 112d, which is fixedly mounted to the interior wall of stem 104. Ultrasonic device 112d is dimensioned to fit within stem 104, which itself has exterior dimensions of up to 3.5" by 3.5" (or up to 3.5" diameter when the stem is substantially rounded).

[0031] Dog deterrent system 112 also includes power supply 112e for supplying power to ultrasonic device 112d. Power supply 112e comprises batteries located also within interior of stem 104 and opposite ultrasonic device 112d. A slideable door (not shown) is also provided so batteries can be replaced. Power supply 112e is communicably coupled to ultrasonic device 112d via wires 112f.

[0032] The high pitched ultra-frequency sounds that can be emitted by depressing button 112a have frequencies above 20 kHz that are inaudible to human ears. Preferably, the emitted sound is most effective when the canine is 15 ft or closer but is also operative up to 75 ft away. The ultrasonic output startles the approaching dog and causes most dogs to stop, move away or stay in place. An advantage of ultrasonic sound is that it is not physically harmful to canines and is a humane substitute for other deterrent types like pepper spray. It is also advantageous because ultrasonic sound is inaudible to human ears thus avoiding public disturbance that can be created by loud audible beeper or horn type devices.

[0033] Stem 104 further includes telescopic stem 118, which consists of external stem 120 and internal stem 122. The user can adjust the height of walking stick 100 by adjusting telescopic stem 118. As shown, internal stem 122 is slideable into external stem 120. Spring loaded pins (not shown) attached to the exterior wall of internal stem 122 can lock into apertures or security notches (not shown) cut out in external stem 120. The user can adjust to a desired height by depressing a spring loaded pin to release exterior stem 120, and pulling exterior stem 120 and interior stem 120 in opposite directions so stem 104 is extended to the desired length; a spring loaded pin then clicks into a desired exterior stem 120 aperture to lock stem 104 in place.

[0034] Stem 104 is preferably made of sturdy light weight material such as aluminum or comparable alloys although other materials consistent with the present invention can be employed. For example, plastic, polyurethane or fiber resin may be used. Stem 104 including its telescopic stems can resist breakage pressure of up to 500 lbs. Preferably, stem 104 weighs such that that walking stick 100 weighs no more than 2.5 lbs. Stem 104 height can range from 2'-5' and its diameter can be up to 3.5". Stem 104 is also waterproof and ice-proof capable of withstanding extreme cold and heat. The walking stick of the present invention itself, tentatively dubbed Prostick™ can come in various color choices with a futuristic and modern/spacey look.

[0035] As shown in FIG. 1, walking stick 100 also includes base 106, consisting of collar 124 and walking base bottom 126. Collar 124 is a raised horizontal molding encircling stem 104. Preferably, its interior is treaded to receive exterior threads of walking base bottom 126. Preferably, walking base bottom 126 can be rubber or other elastomeric material. In an

alternate embodiment, walking base bottom 126 is selectable from various available base bottoms.

[0036] FIG. 2 illustrates a walking stick with which the present invention can be utilized.

[0037] In FIG. 2, walking stick 200 permits the user to detach dog deterrent system 212. This dog deterrent system emits inaudible ultrasonic sound when button 218 is depressed. Upon detachment, the user can utilize ultrasonic device 216 independent of walking stick 200. Unlike the embodiment of FIG. 1, dog deterrent system 212 can be conveniently detached since it is modular with its own power supply 218. As shown, dog deterrent system 212 is removably coupled to walking stick 200 by clamping mechanism 222 having strap 226 and jacket 224.

[0038] The user can detach ultrasonic device 216 by opening cover 214, unlatching the device and then removing ultrasonic device 216 in the direction shown. After the device is detached, an empty jacket 224 remains. The user can also reinsert ultrasonic device 216 by reversing the insert process. Cover 214 is first opened. Next, ultrasonic device 224 is inserted into jacket 224. Upon being inserted, ultrasonic device 216 is locked in place and can then be activated by using button 218. Therefore, unlike conventional systems, the present embodiment allows ultrasonic device 216 to be employed with or without walking stick 200.

[0039] FIG. 3 illustrates a walking stick with which the present invention can be employed.

[0040] In this embodiment, not only can walking stick 300 generate audible alarms that force dangerous assailants to flee from the user, it can also include real time tracking to determine the user's location. As in prior embodiments, walking stick 300 also includes a dog deterrent device. Unlike conventional devices, the present invention incorporates all of these features into a modular safety device 303 detachably enclosed within exterior casing 325. This allows the user to detach and employ safety device 303 independent of walking stick 300. Safety device 300 has exterior dimensions preferably up to 3" by 3" by 1" and weighs no more than 2.5 lbs.

[0041] In FIG. 3, exterior casing 325 is detachably coupled to elongated stem 304 with clamp bracket 307. Exterior casing 325 encloses safety device 303 and incorporates deterrent button 309, panic button 311 and tracer button 313 as shown.

[0042] In use, when safety device 303 is seated within exterior casing 325, dog deterrent device 312 is activated by depressing deterrent button 309. This in turn contacts button 319 to activate dog deterrent device 312. An advantage of the present invention is that when removed from exterior casing 325, dog deterrent device 312 remains operable using button 319. In this manner, safety device 303 is usable with or without walking stick 300.

[0043] Similarly, when safety device 303 is seated within exterior casing 325, panic device 313 is activated by depressing panic button 311. This in turn contacts button 321 to activate panic device 313. An advantage of the present invention is that when removed from exterior casing 325, panic device 313 remains operable using button 321. In this manner, panic device 313 (and safety device 303) is utilizable with or without walking stick 300.

[0044] Further yet, when safety device 303 is seated within exterior casing 325, tracer device 315 is activated by depressing tracer button 313. This in turn contacts button 323 to activate tracer device 315. An advantage of the present invention is that when removed from exterior casing 325, tracer device 315 can be activated by depressing button 323. In this

manner, tracer device 315 is employable with or without walking stick 300. Unlike the embodiment of FIG. 1, safety device 303 is modular and detachable since its own power supply 317 is incorporated. Power supply 317 includes an aperture (not shown) for replacing batteries as proves necessary.

[0045] In FIG. 3, safety device 303 is detached by opening exterior casing cover 301 and disengaging the safety device using a release mechanism (not shown). Safety device 303 is thereafter removed in the direction shown by the arrow. Empty exterior casing 325 remains after safety device 300 is removed. Safety device 303 can also be reinserted by opening exterior casing cover 301, inserting and locking it in position.

[0046] In FIG. 3, dog deterrent device 312 functions in a similar manner as described with reference to prior embodiments. Panic device 313 can issue an audible alarm preferably between 90-120 dB. This is effective for use against dangerous animals such as bears and mountain lions and dangerous assailants. Preferably, the audible alarm is continuous for three to five minutes with one to two second intervals. It is deactivated by depressing panic button 311 for a second time.

[0047] Tracer device 315 is a real time tracking device for determining the user's location. This can be helpful, for example, during hiking when the user is lost. As with other features of the present invention, users need not carry separate tracking devices on their person. The real time tracking device of the present invention is integral with safety device 303 and is capable of receiving signals from GPS (Global Positioning System) satellites to accurately determine the user's location. Location data can be transmitted either automatically or on demand for viewing over maps or via text reports to email, mobile phone or the like. Although not shown, another navigational tool that is included in safety device 303 is a digital compass for use as a navigational tool during travel and a digital walking monitor for indicating time and monitoring distance (or steps) traveled during a given activity.

[0048] In FIG. 3, walking stick 300 further includes removable flare/glow stick compartment 327 for storing flares and glow sticks. This compartment may have an aperture and door (not shown) through which such flares and glow sticks are retrieved. Preferably, 2-6 inch sized glow sticks and/or flares are storable in compartment 327. When lost, for example, the user can utilize these flares/glow stick for distress signaling. Flares storable in compartment 327 are readily available from Orion® Safety Products, Easton Md.

[0049] Although not shown, walking stick 300 includes a fluorescent strip mounted on stem 304. Its visibility promotes safety for walking stick users. This fluorescent strip is observable from distances of between and 10 ft-50 ft away. In this manner, users and their walking sticks remain highly visible (both during the day and at nighttime). This can avoid motor vehicle injury to walking stick users, for example. Preferably, the strip is approximately 1 inch wide and runs the entire length of stem 104.

[0050] Walking stick 300 further comprises telescopic stem 318 having external stem 320, internal stem 322 and inner stem 324. As shown, inner stem 324 is slideable into internal stem 322 which is in turn slideable into external stem 320. Stem 320 has security notch 329; stem 322 has security notch 332 and spring loaded pins 333; stem 324 has spring loaded pins 334. The external dimension of external stem 320 is preferably 3"-3.5" while that of inner stem 324 is 2".

Although not shown, walking stick 300 includes a tilt-able flashlight coupled to stem 304 between inner stem 324 and interchangeable base 335.

[0051] In use, the height of walking stick 100 is changeable by adjusting telescopic stem 318. As an example, inner stem 324 can be slid into internal stem 322 until spring loaded pin 334 is locked into security notch 332. Similarly, internal stem 322 is slid into external stem 320 until spring loaded pin 333 locks into security notch 329 of external stem 320. Preferably, telescopic stem 318 can adjust the walking height of walking stick 100 between 3 ft and 5 ft. The preferred storage height of telescopic stem 318 is 2 ft such that walking stick 300 can easily be strapped across a user's shoulders.

[0052] Walking stick 100 further comprises shock absorber 339. This assists in absorbing vibrations caused by the walking/hiking surface. Preferably, the primary component of shock absorber 339 is a spring mechanism (not shown). Another advantage of the present invention is interchangeable base 335 having base collar 336 for receiving a base bottom selectable from different available base bottoms. As an example, collar 336 can receive base bottom 338 for walking. Base bottom 338 is preferably made of rubber. Quad-pod base bottom 342 for walking can also be selected. Quad-pod base bottom 342 is preferably made of aluminum with rubber tips. Another option for the user is to select ice base bottom 337 for traversing ice surfaces. Ice base bottom 337 consists of a rubber body with serrated metal ends. Also, hiking base bottom 340 (preferably made of carbide) for hiking may be used as well. Collar 336 is a raised horizontal molding encircling stem 304. Preferably, its interior is treaded to receive corresponding male treaded exteriors of the base bottoms (other interlocking techniques for removably attaching the base collar and base bottoms may be employed). In the manner, the user can preferably match base bottoms and walking stick functionality as proves necessary.

[0053] FIG. 4 is a block diagram of modular safety device 400 in accordance with an exemplary embodiment of the present invention.

[0054] Among other components, modular safety device 400 comprises ultrasonic device 402 and audible alarm device 404. Ultrasonic device 402 is capable of transmitting ultrasonic sound with a frequency of at least 20 kHz. The ultrasonic sound frequency is preferably 40 KHz for particular application as a dog deterrent.

[0055] Although ultrasonic sound is inaudible to human ear, it remains audible to barking or approaching dogs, and is capable causing such dogs to stay in place, stop or move away from the user. Preferably, the emitted sound is most effective when the canine is 15 ft or closer but is also operative up to 75 ft away. The ultrasonic output startles the approaching dog and causes most dogs to stop, move away or stay in place. An advantage of ultrasonic sound is that it is not physically harmful to canines and is a humane substitute for other deterrent types like pepper spray. It is also advantageous because ultrasonic sound is inaudible to human ears thus avoiding public disturbance that can be created by loud audible beeper or horn type devices.

[0056] Audible alarm device 404 can issue an audible alarm preferably between 90-120 dB. This is effective for use against dangerous assailants that might attack elderly or disabled person when they are walking, for example. It might also deter dangerous animals such as bears and mountain lions that may be encountered during hiking. Audible alarm device 404 can also signal to passersby that help is needed by

a user. Preferably, the audible alarm is continuous for three to five minutes with one to two second intervals.

[0057] Modular safety device 400 further comprises power supply 406 for providing power to all of the components. As shown by simplified circuitry 416, power supply 406 can provide power to ultrasonic device 402 and audible alarm device 404. Thus, when switch 412 is closed, power supply 406 delivers power to activate ultrasonic device 402. When switch 414 is closed, power supply 406 delivers power to activate audible alarm device 404.

[0058] Optionally, modular safety device 400 also comprises tracer device 408, compass 410 and digital monitor 418. Tracer device 408 is a real time tracking device for determining the user's location. This can be helpful, for example, during walking or hiking when the user is lost. The real time tracking device of the present invention is capable of receiving signals from GPS (Global Positioning System) satellites to accurately determine the user's location. Location data can be transmitted either automatically or on demand for viewing over maps or via text reports to email, mobile phone or the like.

[0059] Compass 410 is a digital or analog navigational tool for use during travel and a digital walking monitor for indicating time and monitoring distance (or steps) traveled during a given activity. Compass 410 comprises a magnetized needle pointer free that can align itself with Earth's magnetic field. The magnetized needle pointer indicates the direction of the magnetic north. Digital monitor 418 indicates total elapsed time and total distance (or steps) traveled during a given activity. It might also determine an estimated target or finish time for an activity.

[0060] FIGS. 5A-5D illustrate modular safety device 400 used in conjunction with various movement assistive devices. In FIG. 5A, modular safety device 400 can be utilized with walking stick 500, as shown. Specifically, modular safety device 400 is attached adjacent to handle 501 of walking stick 500 so that modular safety device 400 is easily accessible to a user's hands. One of ordinary skill in the art will understand that this configuration is exemplary and other suitable configurations can be employed.

[0061] In FIG. 5B, modular safety device 400 can also be employed with wheel chairs. As shown, modular safety device 400 is mounted on handle 503 of wheel chair 502. Again, modular safety device 400 is placed so that it remains easily accessible to the user when seated. In FIG. 5C, modular safety device 400 can also be mounted on wheel walker 504, as shown. In FIG. 5D, modular safety device 400 is attachable to electric wheelchair 506 as shown. All of these illustrations are but examples of applications of modular safety device 400. In each case, the user can easily open the modular safety device cover (not shown) to access desired buttons to operate modular safety device 400. Herein, the modularity of the safety device of the present invention is an advantage of the present invention. Safety components including a dog deterrent, panic alarm and tracer device among other components are incorporated in a single integrated modular unit never before seen by the prior art.

[0062] While the above is a complete description of exemplary specific embodiments of the invention, additional embodiments are also possible. Thus, the above description should not be taken as limiting the scope of the invention, which is defined by the appended claims along with their full scope of equivalents.

We claim:

- 1. A modular safety device comprising:  
 an ultrasonic device capable of transmitting ultrasonic sound with a frequency of at least 20 kHz,  
 wherein said ultrasonic sound is inaudible to human ear,  
 wherein said ultrasonic sound remains audible to barking or approaching dogs, and is capable causing such dogs to stay in place, stop or move away from the user;  
 a power supply communicably coupled to said ultrasonic device;  
 an audible alarm device communicably coupled to said power supply,  
 wherein said audible alarm device is capable of issuing a distress sound audible to human ear, and  
 wherein said power supply, ultrasonic device and audible alarm device form a detachable portable unit that can be easily carried on a user's person or attached to a user's mobile device such as walker or wheelchair.
- 2. The modular safety device of claim 1 further comprising a location tracer device for determining a user's location.
- 3. The modular safety device of claim 1 further comprising a compass for determining travel direction.
- 4. The modular safety device of claim 1 wherein the distress sound issued by the audible alarm device is at least 75 dB.
- 5. The modular safety device of claim 1 wherein the location tracer device is capable of determining the location of a user by employing a Global Positioning Satellite (GPS).

- 6. A modular safety device comprising:  
 a means for transmitting ultrasonic sound with a frequency of at least 20 kHz,  
 wherein said ultrasonic sound is inaudible to human ear,  
 wherein said ultrasonic sound remains audible to barking or approaching dogs, and is capable causing such dogs to stay in place, stop or move away from the user;  
 a means for supplying power communicably coupled to said means for transmitting ultrasonic sound;  
 a means for issuing an audible alarm communicably coupled to said means for supplying power,  
 wherein said means for issuing an audible alarm is capable of issuing a distress sound audible to human ear, and  
 wherein said means for supplying power, means for issuing ultrasonic sound and means for issuing an audible alarm are incorporated into a detachable and portable unit that can be easily carried on a user's person or attached to a user's mobile device such as walker or wheelchair.
- 7. The modular safety device of claim 6 further comprising a location tracer means for determining a user's location.
- 8. The modular safety device of claim 6 further comprising a means for determining travel direction.
- 9. The modular safety device of claim 6 wherein the distress sound issued by the audible alarm means is at least 75 dB.
- 10. The modular safety device of claim 6 wherein the location tracer means is capable of determining the location of a user by employing a Global Positioning Satellite (GPS).

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