HAND-HELD ANTI-ASSAULT WEAPON

Inventor: Robert P. Wood, Ft. Washington, MD (US)

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ABSTRACT

An anti-assault weapon to deter, or defeat, attackers. Weapon includes a body, usually cylindrical in shape, that is open at opposite ends. One end is closed by a closure, while the opposite end is closed by a reversible end cap. Threads are defined on the exterior of the end cap and complementary threads are formed on the interior of the body, so that the end cap is securely joined to the body. In one position, a sharp knife projects axially from the reversible end cap, so that an attacker may be threatened and/or stabbed, if necessary. In a second position, the knife is concealed in the interior of the body, and a stub shaft projects outwardly from the end cap. Serrations are defined on the exposed face of the stub shaft, and the serrations may be raked across the face of arms of an attacker. The serrations inflict pain on the attacker, and simultaneously collect a DNA sample that can be tested to facilitate identifying the attacker.
HAND-HELD ANTI-ASSAULT WEAPON

RELATED APPLICATIONS

[0001] This application claims priority from provisional patent application Ser. No. 61/272,178, filed Aug. 27, 2009.

BACKGROUND OF THE INVENTION

[0002] The invention pertains generally to hand-held anti-assault weapon for inflicting an injury upon an attacker. More particularly, the invention pertains to a hand-held anti-assault weapon with a serrated surface for raking over the face, arms, or other body parts of an attacker while collecting a DNA specimen from the attacker.

[0003] Various anti-assault weapons that deter, or repel, attackers have been devised and implemented. Such weapons, to be effective, must inflict intense pain upon the attacker to deter the attack. Known anti-assault weapons rely upon electrical shocks administered to the attacker, or pepper sprayed in the face and eyes of the attacker. Other known anti-assault weapons are shaped as batons or clubs, and the weapon is swung to deliver sharp blows to the attacker.

[0004] Anti-assault weapons must be relatively light in weight, so that a relatively small, potential victim can punish a would-be attacker. Furthermore, the anti-assault weapon should be capable of storage in a relatively small space, such as a woman’s handbag or the glove box of a car. Lastly, the anti-assault weapon must be shielded, or covered, in some manner, when not in use, so that the user is not accidentally hurt by the weapon.

[0005] A representative personal defense device is disclosed in U.S. Pat. No. 4,565,372, granted Jan. 21, 1986 to August R. Werth. Such patent discloses a hand-held device provided with a piercing member (32) mounted on the end of a handle (12). The piercing member is normally sheathed by a tubular protective housing (14) reciprocal against spring bias (44) from a finite position shielding the piercing member to a position wherein at least the tip of the piercing member projects beyond the tubular housing.

[0006] Another representative personal defense device is disclosed in U.S. Pat. No. 6,021,572, granted Feb. 8, 2000, to Robert L. Smith. Such patent discloses a stabbing point (8) covered by a retractable cover (4). The cover may be slidably retracted into a body cavity (10) by the pressure of the contacting object on a cover thrusting surface. The stabbing point, which is rigid to a grippable handle (5), is exposed by the retracting cover. An alarm (20) is switched internally by the motion of the cover, thus eliminating manual operation of a switch by the riser during emergencies. Button 24 cooperates with holes (22) to control the travel of the cover the spike point.

SUMMARY OF THE INVENTION

[0007] Consequently, with the shortcomings of known anti-assault devices clearly in mind, the invention relates to a relatively simple, hand-held, anti-assault weapon that is versatile, effective, and compact enough to fit into a woman’s handbag or a pocket on an article of men’s clothing. The invention employs a hollow, cylindrical rigid tube, of metal or hard plastic; the opposite ends of the tube are open, and the opposite ends of the tube may be internally threaded. A reversible end cap is screwed into engagement with at least one end of the tube. In its normal position, the end cap presents a serrated surface that may be raked across the face and arms of an attacker to inflict pain, while collecting a DNA sample for testing at a later time. In its second, or reversed, position, a small sharp knife is exposed while the serrated surface is hidden within the interior of the hollow tube. The reversible end cap is retained in locked position by a bayonet coupling.

[0008] A second end cap may be used to seal the opposite end of the tube, and money or other small, precious items may be stored in the interior of the tube. The second end cap may anchor keys, whistles, small lights, etc., so that the person carrying the anti-assault may use same in the same fashion as a key chain.

[0009] Alternatively, a simple screw cap may be substituted for the second end cap and a key ring and a ring for a whistle may be passed through holes drilled through the hollow body adjacent the end remote from the end cap.

[0010] The invention requires a minimum number of components, that are easy to manufacture and assemble, thereby leading to production at a reasonable price. The hollow body, preferably cylindrical in shape, may be made of steel, or a rigid plastic, and may be provided with ridges or gripping surfaces on its exterior. The anti-assault weapon may be used in an instinctive manner, and may be included in the teaching of self defense and martial arts.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] FIG. 1 is a perspective view of applicant’s anti-assault weapon;

[0012] FIG. 2 is a plan view, on an enlarged scale, of an end cap secured to one end of the hollow body of the anti-assault weapon;

[0013] FIG. 3 is a perspective view of the end cap of FIG. 2;

[0014] FIG. 4 is a side elevational view of the end cap of FIG. 2, and a bayonet coupling for securing the end cap to the body of the anti-assault weapon;

[0015] FIG. 5 is a plan view of the end cap of FIG. 2, in its reversal position, with a knife projecting therefrom; and

[0016] FIG. 6 is a perspective view of two end caps, one cap presenting a different pattern of serration for capturing a DNA sample.

DETAILED DESCRIPTION OF THE PRESENT INVENTION

[0017] FIG. 1 shows applicant’s anti-assault weapon indicated generally by reference numeral 10. Weapon 10 comprises a hollow rigid cylinder 12, with a screw cap 14 sealing one end of the cylinder, and an end cap 16 sealing the opposite end. A plurality of keys 17, and whistle 19, are secured by metal rings 18, 20 to end cap 16. The hollow cylinder of the weapon is small enough, at four-five inches or so, to be held in the hand of a woman as she walks toward her car, or her home, or some other destination. The cylinder is preferably made of metal, but a rigid, durable plastic may also be used. Grooves or gripping surfaces may be formed on the cylinder to increase gripping strength.

[0018] End cap 16 is screwed into engagement with interior threads 25 on the end of cylinder 12 remote from the keys, whistle, miniature light, etc. Threaded stub shaft 22 projects axially outwardly, from end cap 16. The exposed face of stub shaft 22 is defined by serrations or ridges 24. Serrations 24 may be raked across the face, or neck, of an attacker, who attempts to physically harm the person carrying the anti-assault weapon. The serrations gather skin tissue, DNA, etc.
from the would be attacker, in addition to inflicting pain or discomfort upon the attacker. The collected DNA etc. may be helpful in identifying the attacker, as well, as thwarting or dissuading him.

[0019] End cap 16 includes an inwardly projecting stud, or stub shaft, with threads 23 defined on its exterior. Exterior threads 23 are advanced into secure engagement with screw threads 25 formed on the interior wall of hollow cylinder 12 to lock the end cap in fixed position.

[0020] Alternatively, as suggested in FIGS. 3 and 4, pins 26, 28 may be formed on the exterior of end cap 16. The pins cooperate with an L-shaped notch 30 to define a bayonet connection that firmly locks end cap 16 in fixed position. The bayonet coupling may be used to supplement the threaded engagement of shank 22 on end cap 16 with the interior threads on cylinder 16, or in lieu thereof.

[0021] Serrations 24 are shown on end cap 16, for the purposes described above. However, if the woman holding the anti-assault weapon decides that a more aggressive course of action is warranted, she may reverse end cap 16 by unscrewing same or overcoming the bayonet connection. The reversal places serrations 24 into the hollow interior of cylinder 12, while exposing knife blade 32 as shown in FIG. 5. The blade can inflict deep puncture wounds on the would be attacker, if used with a plunging motion.

[0022] FIG. 6 shows two end caps in side by side relation. The end cap to the left shows serrations 34A that are different in size, shape, and position than serrations 24 shown in FIG. 3. The end cap to the right shows a pattern of raised blocks 36B, that are spaced in an offset manner.

[0023] Modifications and revisions may occur to the skilled artisan, when informed by the photographs and detailed description. For example, knife blade 32 may be removed from the anti-assault weapon, so that the weapon may be carried onto airplanes, through security in public buildings, schools, stadiums, public gatherings, and the like. A barrier may be formed, or inserted within the interior of body 12 to form a storage compartment 40, shown in FIG. 1; currency may be tightly rolled and inserted into compartment 40 for safekeeping. Other modifications to applicant’s invention, with its ability to capture DNA specimens for subsequent testing to identify an assailant, or would be attacker, will occur to the skilled artisan. Consequently, the appended claims should be construed broadly in a manner consistent with the spirit and scope of the invention, and should not be limited to their exact terms.

What is claimed is:
1. An anti-assault weapon comprising:
   a) a body made of a rigid material and sized to fit in the hand of a user;
   b) a first opening at one end of said body and a second opening at the opposite end of said body;
   c) a closure sealing one end of said body;
   d) a reversible end cap sealing the other end of said body;
   e) a stub shaft projecting axially from said second end cap in a first direction;
   f) serrations defined on the exposed face of said stub shaft;
   g) said serrations being configured to (1) inflict pain or discomfort on a potential attacker, and (2) simultaneously collect DNA.

2. The anti-assault weapon of claim 1, wherein said reversible end cap can be secured to said body to display either a sharp knife or a serrated surface for collecting DNA, skin tissue, etc.

3. The anti-assault weapon of claim 1, wherein threads are formed on the interior of said body, and cooperating threads are defined on the exterior of said stub shaft of said reversible end cap whereby said reversible end cap is screwed into engagement with said body of said weapon.

4. The anti-assault weapon of claim 1, wherein said reversible end cap is secured to said hollow body by a bayonet connection.

5. The anti-assault weapon of claim 1, wherein a compartment is formed in the interior of said body, said compartment receiving currency for safekeeping.

6. The anti-assault weapon of claim 1, wherein said closure is a screw cap.

7. The anti-assault weapon of claim 6, wherein metal rings are secured to the end of the body adjacent to said screw cap, said rings retaining keys and whistles.

8. The anti-assault weapon of claim 1, wherein said weapon is made of metal and said body is cylindrical in shape.

9. The anti-assault weapon of claim 1, wherein threads are formed on the exterior of said reversible end cap, and internal threads are defined in said body, said reversible end cap being screwed into engagement with said body.

10. The anti-assault weapon of claim 1, wherein said closure comprises an end cap.

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