ABSTRACT

A wrist clamp having an integral and/or removable light source and attached magazine bracket is provided. The wrist clamp includes an outside surface and an inside surface. The wrist clamp is formed to fit around and secure to the wrist of a user so that the inside surface is adjacent to the user’s skin. The magazine bracket may protrude from the outside surface of the wrist clamp and may releasably secure a gun magazine within so that the user may have quick access to the gun magazine. The wrist clamp includes a power button for the light source.
LIGHT SOURCE AND FIREARM MAGAZINE HOLDER CLAMP

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application claims the benefit of priority of U.S. provisional application No. 61/813,161, filed Apr. 17, 2013, the contents of which are herein incorporated by reference.

BACKGROUND OF THE INVENTION

[0002] The present invention relates to firearm accessories and, more particularly, to a light source and firearm magazine holder that can quickly clamp to a user’s wrist.

[0003] Secure and safe handling of a firearm, such as a handgun, in an emergency situation and in limited light may require a two handed grip on the gun and quick acquisition of both a light source and spare ammunition. A light can be mounted on a firearm, but one must still either carry a spare magazine, taking their support hand off the firearm. Alternatively, the user may place the magazine in a pocket, if available, which severely restricts rapid reloading, or place the magazine in a typical magazine holder currently in use. Typical magazine holders, however, require placement on a belt or torso of the user, which is significantly further away from the firearm, requiring more skill and time to reload.

SUMMARY OF THE INVENTION

[0005] In one aspect of the present invention, a magazine holder comprises: a wrist clamp comprising an outside surface and an inside surface, wherein the wrist clamp is formed to secure to a user’s wrist; and a magazine bracket protruding from the outside surface of the wrist clamp, wherein the magazine bracket is formed to releasably secure a magazine of a gun.

[0006] These and other features, aspects and advantages of the present invention will become better understood with reference to the following drawings, description and claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] FIG. 1 is a perspective view of a light source and magazine holder wrist clamp, in a closed configuration, according to an exemplary embodiment of the present invention;
[0008] FIG. 2 is a perspective view of a light source and magazine holder wrist clamp, in an open configuration, according to an exemplary embodiment of the present invention;
[0009] FIG. 3 is a perspective view showing a user moving their wrist down onto the open light source and magazine holder wrist clamp of FIG. 2; and
[0010] FIG. 4 is a perspective view of the light source and magazine holder wrist clamp applied to the user after performing the movement illustrated in FIG. 3.

DETAILED DESCRIPTION OF THE INVENTION

[0011] The following detailed description is of the best currently contemplated modes of carrying out exemplary embodiments of the invention. The description is not to be taken in a limiting sense, but is made merely for the purpose of illustrating the general principles of the invention, since the scope of the invention is best defined by the appended claims.

[0012] Referring now to FIGS. 1 through 4, the present invention includes a wrist clamp 11 having an attached magazine bracket 26. The wrist clamp 11 includes an outside surface and an inside surface. The wrist clamp 11 is formed to fit around and secure to the wrist 36 of a user so that the inside surface is adjacent to the user’s skin. The magazine bracket 26 may protrude from the outside surface of the wrist clamp 11 and may releasably secure a gun magazine 22 within so that the user may have quick access to the gun magazine 22.

[0013] In certain embodiments, the wrist clamp 11 may include an ulnar wrist clamp 10 and a radial wrist clamp 12 that are designed similar to a clam shell to open and close around a user’s wrist 36. The ulnar wrist clamp 10 and the radial wrist clamp 12 can be attached to a base plate 28 with one or more hinges 24. The ulnar wrist clamp 10 and the radial wrist clamp 12 can open and close through various mechanisms, such as with a spring-loaded mechanism with a closure trigger arm 30 as described in greater detail below.

[0014] Closing the ulnar wrist clamp 10 and the radial wrist clamp 12 may include an engagement mechanism on each opposing engaging edge. The engagement mechanism may include, but is not limited to, mechanical operation (e.g., opposing teeth, friction, or the like) or any other type of system to securely hold the wrist clamps 10, 12 together and remain adjustable with one hand. For example, as shown in FIG. 2, a female slot 32 can be provided on one of the wrist clamps 10, 12 and a male toothed tab 40 can be disposed on the other one of the wrist clamps 10, 12, such that as the device is closed, the wrist clamps 10, 12 are securely engaged. A release button 42 may be used to disengage the male toothed tab 40 from the female slot 32 for the removal of the wrist clamp 11.

[0015] A trigger mechanism for closing the wrist clamp 11 together can be located on the inside surface (skin side) of the baseplate 28, the exact appearance of which may be determined by the type of functioning system used (mechanical, thermal, or the like) and the material of construction. In some embodiments, as shown in the Figures, a closure trigger arm 30 can extend from each of the wrist clamps 10, 12 so that a downward pressure (as can be achieved when moving from the position of FIG. 3 to the position of FIG. 4) on the closure trigger arms 30 causes the wrist clamps 10, 12 to pivot on their hinges 24 and close on the user’s wrist 36.

[0016] The wrist clamps 10, 12 can be reversed on the baseplate 28 in one embodiment to make the device ambidextrous and/or it could be produced in right and left hand versions. The inside surface (skin contact side) of all parts can be cushioned for user comfort. Variations of this device would include, but not limited to, using belts, straps, glove(s), stretchable material, hook and loop, or other methods and materials to secure the device to the user’s wrist and/or arm.

[0017] The outside surface of the baseplate 28, opposite the skin contact side, includes various attachment points and magazine brackets 26 to fit all the different magazines 22 on the market. Another embodiment includes but is not limited to producing proprietary adapters to securely fit each type of magazine bracket 26 and attaching the adapters by a uniform method securely to the baseplate 28. All attachment points include mechanical, magnetic, or hook and loop fasteners but is not limited to any one type or combination of methods of attachment.
One or more lights 14 can be provided on the device of the present invention. The light source 14 may protrude from the outside surface of the wrist clamp 11. Battery(s) can be inserted into a battery compartment 18 to energize the light bulb(s) 16 which can be controlled by one or more power button/switches 20, all of which are connected by the wiring/circuitry and are integral to one of the wrist clamps 10, 12, such as the radial wrist clamp 12, for a right-handed shooter and may be, but not necessarily, waterproof. The light housing provides convenient access to the battery(s) and remains waterproof, if designed for it, after repeated, rugged use. Rechargeable batteries and a recharging system can be used, but other battery types can be used to power the lights 14. The portion of the light housing comprising the actual light source is positioned such that the light beam it emits is unobstructed by the back of the hand or this portion could be made to articulate to accomplish same. Another embodiment includes a removable light source which includes its own controls and power source and could be user supplied. Another embodiment would include a proprietary, removable, light source, typically waterproof, that could comprise attachment systems to allow it to be placed elsewhere.

The power button/switch 20 can be located on the front edge of the radial wrist clamp 12 side, or as close as possible for activation by the thumb of the support hand. The power button/switch 20 can be connected through the wiring/circuitry to the battery(s) and light source. The light can be user programmable for multifunction capability, e.g., first activation constant beam, second flash, third-strobe, and/or any other combination of control functions deemed useful. The type of functions and electronic features of this device are limited only by cost and could include, but not limited to such items, or combination thereof, as public and/or private communication, emergency locator, 911 calling, GPS, and defensive tool(s) including electronic shock, piercing or striking tool, and the like.

To prepare the device for use, the user first grasps each unlocked side and separates them completely against the tension of the hinges until the sides lock open with the concavity (interior, closure trigger arms 30) of the sides facing up when placing the baseplate 28 with magazine bracket(s) 26 on a horizontal surface 34 (e.g., bed, table, inside a drawer, or the like) with the forward end (with the light source) just below the grip of a handgun with the grip pointing to the right (for a right-handed person). This exposes the trigger of the device on the interior (skin side) of the baseplate and permits a right-handed person to quickly grasp the grip of the gun and simultaneously activate the trigger of the device with pressure from the palmar surface of the wrist causing it to rapidly close and lock around the wrist. The adjustable mechanism allows the user to quickly change the pressure the device exerts on the wrist. The support hand grasps around the primary hand which holds the gun and with both thumbs outstretched and touching on the proper two-handed grip on the gun, it brings the thumb of the support hand very close to the power button/switch. The user is now able to activate the power button/switch 20 without removing the support hand and selects which type of light function is appropriate; the support hand is now free to perform other tasks such as maintaining the two handed grip, or reloading, manipulating doors, and the like. The spare magazine(s) 22 are now positioned in the same orientation as when loaded in the gun 38 and just a few inches from the support hand allowing the hand to quickly remove the magazine 22 from the device and rapidly insert it into the gun 38. The rapid acquisition of firearm, light source, and spare ammunition in one motion and leaving one hand free could prove the difference between life and death in an emergency situation and allowing for the most rapid reload possible for competition.

The device should be located on a flat surface where the user can keep the gun safe and place the firearm down with the muzzle pointing in a safe direction but oriented so that the user can pick it up again with the primary hand with the muzzle already in the firing position. Just as the user sets the gun down, they should note the position of both the gun and the device and store these items in that position with the sides locked open. Now, the user can activate the trigger of the device with their wrist at the same time they pick up the gun, allowing the user to acquire the gun, spare ammunition, and a powerful light source in one quick, efficient motion.

What is claimed is:

1. A magazine holder comprising:
   a wrist clamp comprising an outside surface and an inside surface, wherein the wrist clamp is formed to secure to a user’s wrist; and
   a magazine bracket protruding from the outside surface of the wrist clamp, wherein the magazine bracket is formed to releasably secure a magazine of a gun.

2. The magazine holder of claim 1, further comprising at least one light source protruding from the outside surface of the wrist clamp.

3. The magazine holder of claim 2, further comprising a power button wired to the at least one light source.

4. The magazine holder of claim 3, wherein the power button comprises a first activation activating a constant beam, a second activation activating a flash, and a third activation activating a strobe.

5. The magazine holder of claim 1, wherein the wrist clamp comprises:
   a base plate;
   an ulnar wrist clamp attached to the base plate by at least one hinge and comprising an engaging edge;
   a radial wrist clamp attached to the base plate by at least one hinge and comprising an engaging edge; and
   an engagement mechanism releasably attaching the engaging edge of the ulnar wrist clamp to the engaging edge of the radial wrist clamp.

6. The magazine holder of claim 5, wherein the engagement mechanism comprises a female slot and a male toothed tab configured to engage and releasably attach within the female slot.

7. The magazine holder of claim 6, further comprising a release button configured to disengage the male toothed tab from the female slot.

8. The magazine holder of claim 5, further comprising a trigger mechanism configured to activate the securing of the ulnar wrist clamp to the radial wrist clamp.

9. The magazine holder of claim 8, wherein the trigger mechanism comprises a pair of closure trigger arms each extending from the ulnar wrist clamp and the radial wrist clamp.
10. The magazine holder of claim 9, wherein the closure trigger arms are activated by applying pressure to the closure trigger arms, and thereby pivoting the ulnar wrist clamp and the radial wrist clamp towards one another.

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