SECURITY DEVICES AND METHODS FOR REGULATING ACCESS TO ITEMS SECURED WITHIN

BACKGROUND

[0001] The disclosure relates generally to security devices, and more particularly to security devices and methods of regulating operations and/or access to items secured within the security devices.

[0002] Security devices provide safe storage against theft and unauthorized access to items stored within. For example, a firearm security device is a primary requirement in most firearm-owning households to protect against theft and unauthorized access. Laws and regulations around safe firearm storage and child prevention access emphasize the presence of a firearm security device in a firearm-owning home. The firearm security device may be used to store the firearm while preventing an unauthorized user from accessing and tampering with the firearm. However, conventional firearm security devices do not provide additional protection to authorized users in certain applications. For example, in the case of a suicidal crisis, an authorized firearm user may easily obtain access to the firearm for conducting suicidal attempts. It has been reported that a duration of the suicidal crisis, that is, an acute period of heightened risk for suicidal behavior, often only lasts between 5 minutes to an hour. Thus, having a firearm security device with enhanced safety features for suicidal crisis management is highly desirable. In another application, a conventional firearm security device may be used as a holster for law enforcement personnel to store and carry their firearm(s) during active duties. However, if a criminal attempts to grab an officer's holstered firearm, the conventional firearm security device is not configured to provide additional protection and/or support to the officer in the field. Therefore, the market is still in need of a security device with enhanced safety features for regulating access to the items stored within the security device.

SUMMARY

[0003] An aspect of the disclosure provides a method for regulating access to an item secured within a security device, the method including: determining if a requesting user submitting a request to access the item secured within the security device is an authorized user based on authentication data collected from the requesting user and authentication data corresponding to the authorized user; and in response to determining the requesting user is the authorized user, the method further includes one or more actions of: triggering a predefined wait period during which the access to the item is denied; allowing the requesting user access to the item and notifying at least one of a primary user, a designated user, or a third party service that the item is accessible to the requesting user; or notifying the at least one of the primary user, the designated user, or the third party service that the requesting user is requesting access to the item, and receiving an approval or a denial of access to the item to the requesting user from at least one of the primary user, the designated user, or the third party service.

[0004] Another aspect of the disclosure provides a computer-implemented method for regulating access to an item secured within a security device, the method including: activating one or more internet of things (IoT) devices in response to receiving a distress signal predefined to be indicative of an emergency; notifying at least one of a primary user, a designated user, or a third party service that the predefined distress signal is received; receiving an indication from the at least one of the primary user, the designated user, or the third party service, whether the emergency exists; in response to receiving an indication that the emergency exists, notifying an emergency response unit; and in response to receiving an indication that the emergency does not exist, maintaining the security device in a locked configuration to prevent access to the item secured within the security device.

[0005] Further aspects of the disclosure provides a security device for securing an item, the security device including: an enclosure including a cavity for storing the item therein; a cover operably coupled to the enclosure and configured to block access to the cavity where the item is stored; a locking mechanism coupled to the cover and the enclosure and configured to secure the cover to the enclosure; an access authentication assembly included within and exposed on the enclosure, and configured to receive or provide authentication data for determining if a requesting user requesting access to the item is an authorized user; a device condition sensor configured to provide device condition data associated with at least one of the security device and an environment in proximity to the security device; and a computing device operably coupled to the locking mechanism, the access authentication assembly, and the device condition sensor, and configured to regulate the security device between a locked configuration where access to the item is denied and an unlocked configuration where the item is accessible.

[0006] Still further aspects of the disclosure provide a security holster for securing a firearm, the security holster including: a body including a cavity for receiving the firearm; a locking mechanism extending at least partially into the cavity for selectively securing at least a portion of the firearm within the cavity; an access authentication assembly configured to receive or provide authentication data for determining if a requesting user requesting access to the firearm is an authorized user; a device condition sensor positioned on the body and configured to provide device condition data associated with at least one of the security holster and an environment in proximity to the security holster; and a computing device operably coupled to the locking mechanism, the access authentication assembly, and the device condition sensor, and configured to regulate the security holster between a locked configuration where access to the firearm is denied and an unlocked configuration where the firearm is accessible.

[0007] Additional aspects of the disclosure provide a computer-implemented method for regulating access to a firearm secured within a security holster, the method including: performing at least one of: detecting a request to access the firearm secured within the security holster by a requesting user, and detecting a distress signal predefined to be indicative of an emergency; in response to the at least one of detecting the request to access the firearm or detecting the predefined distress signal, activating a user monitoring device of an authorized user associated with the security holster and notifying a predefined support group associated with the authorized user; receiving an indication from the predefined support group, whether the emergency exists; and in response to receiving the indication that the emer-