

## Appendix C: Patent Research

### Introduction:

Our team plans on combining several self-defense tools into something portable, habitual, and easy to use. Along with that, we hope to better inform our users on the educational aspect of self-defense.

#### Patent 1: IN202111021059A Self-defense device

The device contains finger openings that fit a GPS, karate slash spikes, a punch knuckle, a pepper spray canister, and a hooter configured to a local network so that people around the area know where to help the person in danger.

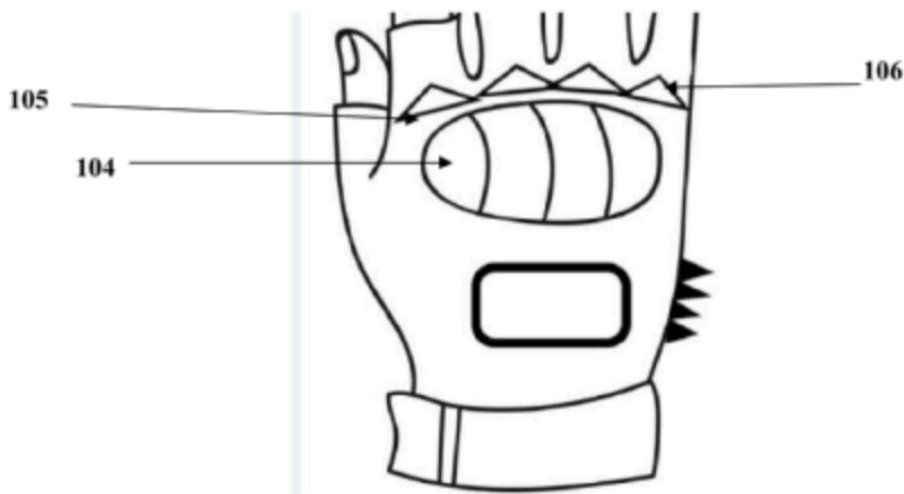


Figure 9: Self-Defense Glove

#### Patent 2: CN211097129U Emergency self-defense device

A self-defense device that contains a whip and a hammer tip, where the main body is provided with a holding part. The whip body group is arranged on the first end head, and the hammer tip group is arranged on the second end head. The body is used to apply force. The whip is for when someone encounters danger from a suspect far away. The hammer is for when the user needs to escape from a bus or a building, where the hammer can break the window.

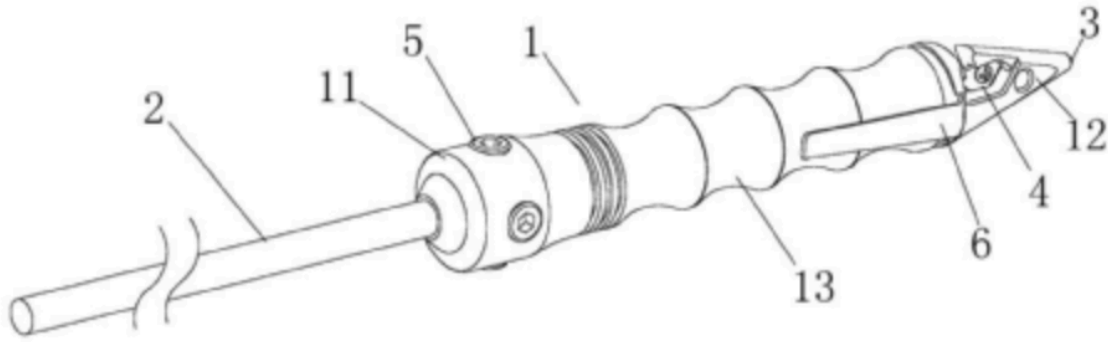


Figure 10: Emergency self-defense device

Patent 3: CN212212927U Multifunctional bracelet with self-defense function

A multifunctional bracelet with a button for an alarm, a switch that can be pulled to release the steel needle, a storage for self-defense spray, and a storage for life-saving medicine. The bracelet is for those who enjoy traveling by themselves or for the elderly.

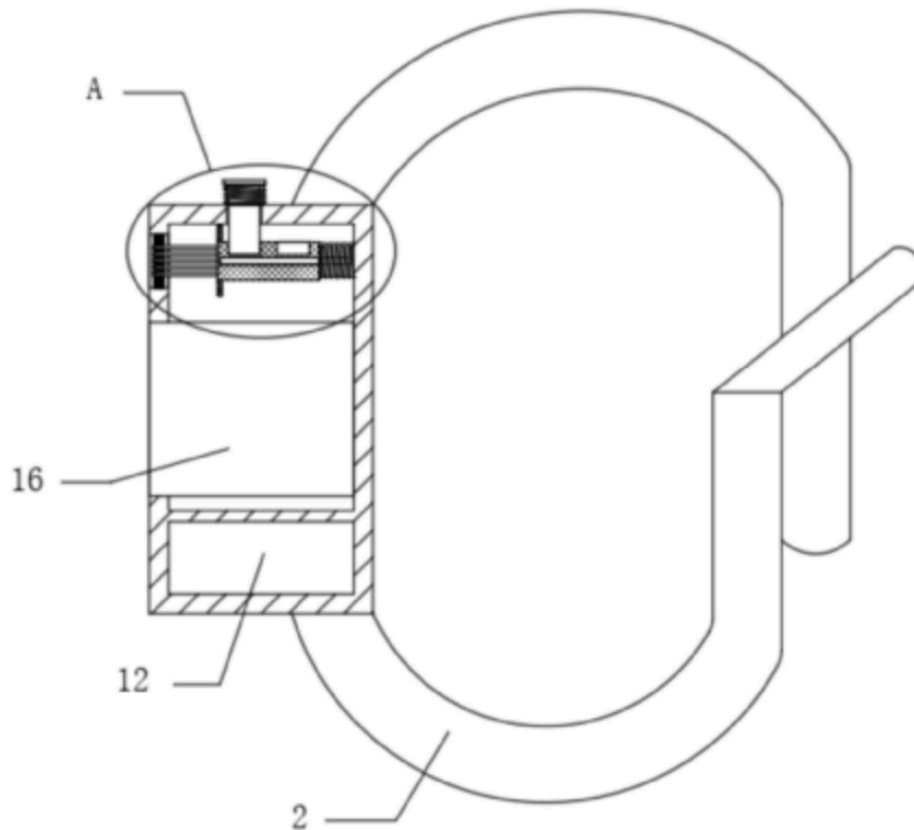


Figure 11: Multifunctional bracelet with self-defense function

Patent 4: CN209883266U Female handbag

A handbag with a bag body and a hand-held belt with a storage device that is convenient for storing and taking out an anti-riot self-defense sprayer. The installation piece and the bag body can lock the spray in place. When needed, the opening of the bag body is inclined towards the ground, and the spray slides out into the hand with gravity.

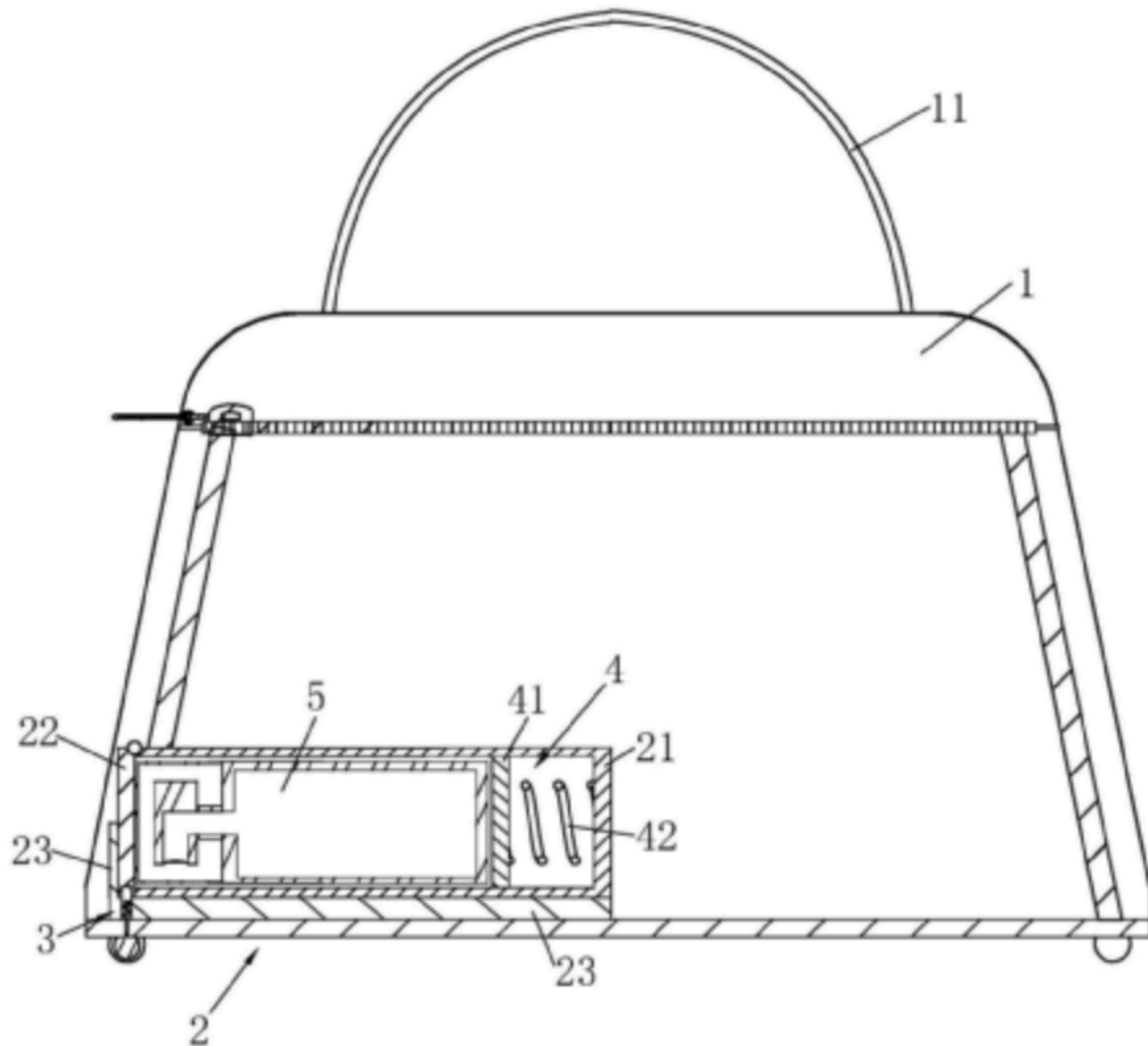


Figure 12: Female Handbag

### Discussion:

After researching patents related to self-defense tools, some features that would be useful to our project would be being able to protect yourself from an attacker at a distance (the whip), the product being multi-functional, and for the product to be an everyday item. However, this does result in limitations, such as if the product is too complicated, it might not be able to pass through security, or it might be difficult to carry day to day. Other limitations include weight, aesthetics, and design costs.