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# Device to apply heat to burn hairs and dirt that clog wheels of suitcases/walkers/strollers/rollators/chairs

## Abstract

Suitcases, strollers, walkers, rollators, chairs and other objects with wheels often suffer from hairs and other dirt getting wrapped around the axles of a wheel, reducing functionality of the wheel, which will run less smooth, or even be blocked. Many objects do not allow easy replacement of wheels or axles to fix the problem. One solution is to mechanically remove these hairs, using scissors, knives or other sharp tools. The drawback of this method is that it could damage the object. Another method is to apply heat to melt the hairs. People have suggested to briefly heat the wheels using a lighter to melt any hairs. The risk is that heat is applied too long and the heat would damage the object.

This document introduces a concept of a portable device that would heat a thin metal tip using a battery or other power source and apply heat locally to melt hairs and other dirt wrapped around the axles with the goal to break the hairs so they can simply be removed from the wheels, while not heating up any other part of the object by accident which could damage the object.

## Keywords

suitcase, carry on luggage, trolley, travel, walker, rollator, stroller, chairs

## Design

A device that is very close to this is a soldering iron, but with a much thinner tip (closer to a needle) than a regular soldering iron.

An example design would be to have a tube like structure that fits a one or multiple AA or AAA batteries, and also contains a button (to turn the device on and off), and a needle that will be heated.

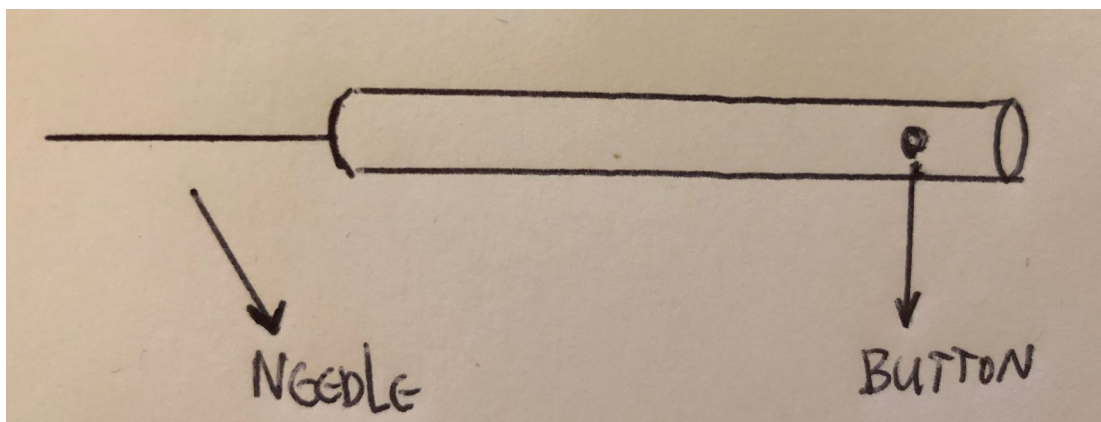


Figure 1: Example design