Can Opener - Monster Opener

IAT 337 - Representation & Fabrication

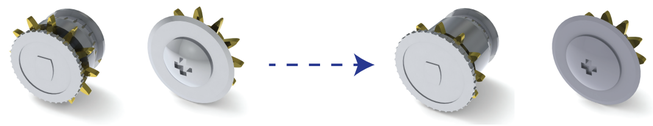
Janice Ng - 3011418031 LAB - 103

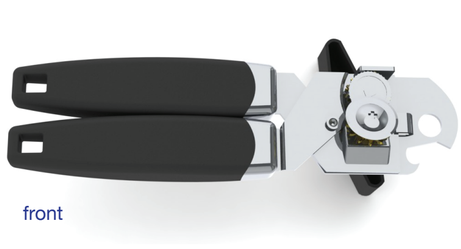
Original Configuration

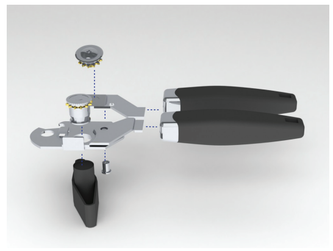
Configuration 1 - Resizing

At least two parts resized from their original configuration

The features found resized are the two gears which are used to secure the can, as well as to open the lid of a can. To achieve this task in modeling, a design table was used to alter between the original state and the changed state of two larger gears. By changing the size of the two gears, it can help users perform their task of opening a can lid faster.



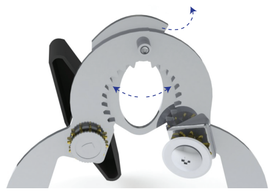


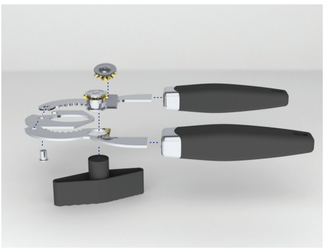


Configuration 2 - Change in Module Structure

A change to the basic module structure resulting in changes to at least two parts

In this configuration, the two plates at the center which is used to widen the can opener to place the gears at the position of the can lid has been changed by adding curves and teeth which can help open nuts as well. Then in order to accommodate the change, the placement of the two gears have been adjusted to a slightly different position.

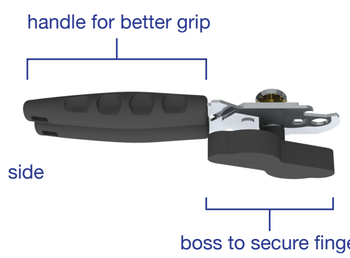


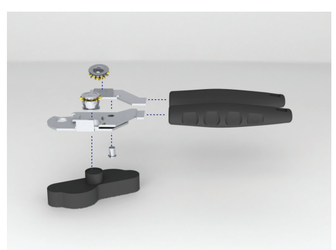


Configuration 3 - Replacement

Replacing at least two parts with new parts, using the same module structure

For this configuration, the two parts that have been replaced are the two handles and the knob to crank the gears. With these changes, it provides an ergonomic aspect of the can opener where users have a better grip at the handle area and that the two boss found at the knob part will help secure users' fingers while trying to open the can.





Configuration 4 - New Parts

Adding new parts to increase functionality

Functionality is added by having a churchkey and magnet. The churchkey is added at the top of the centered plate where an individual can use it to perform a different type of can opening by using the tip to dig into the can, then pry it open for a triangular opening. The other element added is a magnet on the right gear which helps hold the lid when the user finishes opening the can.