

DEP 405

BDes Design Project - 1

Bottle Opener

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01

TOPIC:
BOTTLE OPENER

A bottle opener is the device that enables the removal of metal bottle caps (crown caps) from glass bottles. More generally, it might include corkscrews used to remove cork or plastic stoppers from wine bottles or can openers.

The brief was to create a universal opener, thus the product is to be used single-handedly. Additional features like can opener and water bottle openers were added to make it more functional.



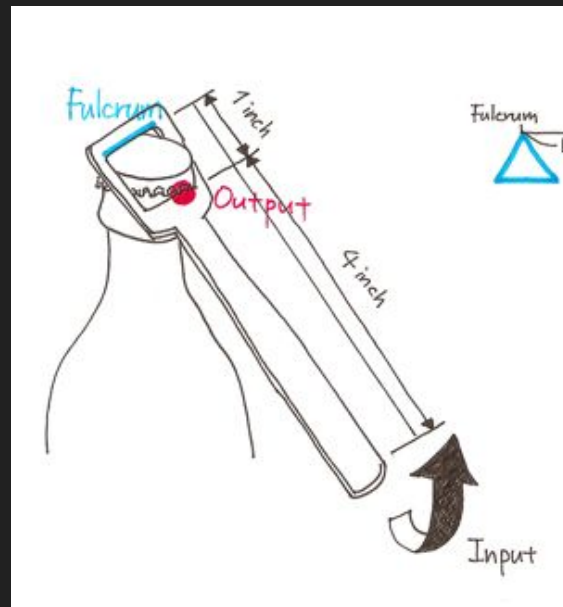
02

UNDERSTANDING THE OPENER

William Painter, the inventor of the Crown Cap (metal bottle cap, affixed to the rim of the neck of a bottle by being pleated or ruffled around it), patented the first tool to open his new cap in 1894.

A bottle opener is a specialized lever inserted beneath the pleated metalwork, which uses a point on the bottle cap as a fulcrum on which to pivot.

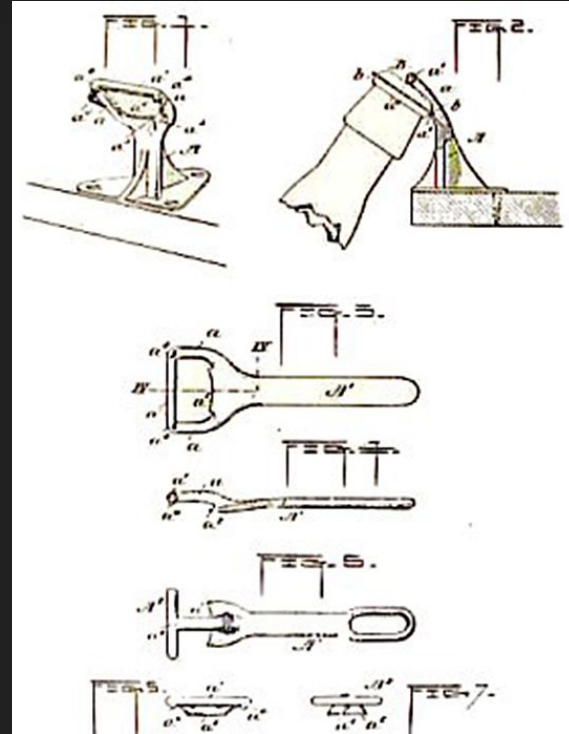
The earliest bottle openers resembled small keys, with the Church Key style opener on one end and a hole on the other so it could be attached to a key chain or hung from a hook on the wall.



02

UNDERSTANDING THE OPENER

Cheap and easy to make, many early openers were simple metal tools embossed with advertising for beer, soda pop, restaurants and bars. Beyond the utilitarian ones, openers were shaped like animals, figurines, boots, hats, bottles and countless other shapes, and made from brass, cast-iron and steel. Other openers were made to commemorate special events or as souvenirs for tourist and travellers.



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THE PROPOSED DESIGN

The proposed design is a single-hand-use bottle opener, which comes with additional features of can opener as well as PET bottle opener.

The main objectives during the project were to make an opener that is:

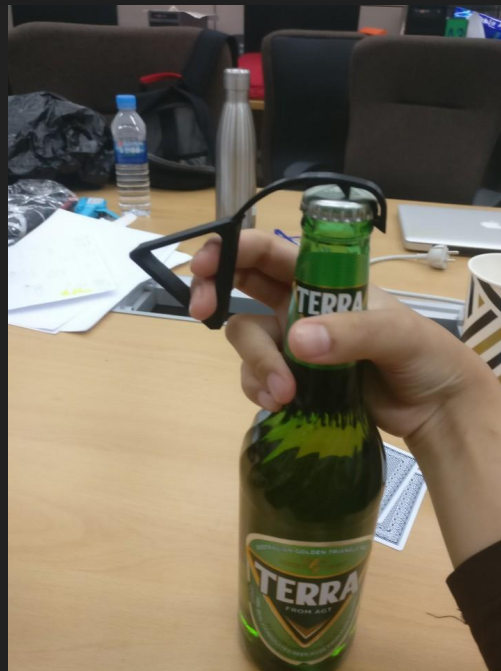
- ergonomic,
- has good aesthetics,
- technologically feasible,
- safe to use.

04

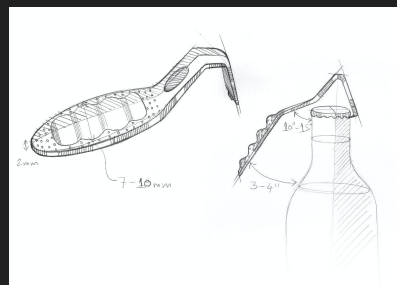
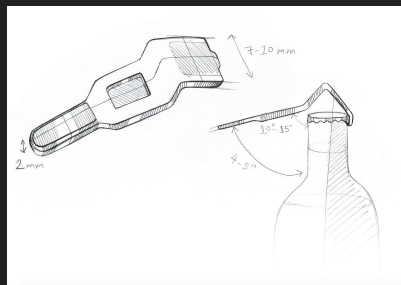
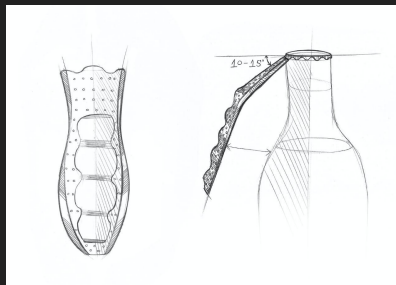
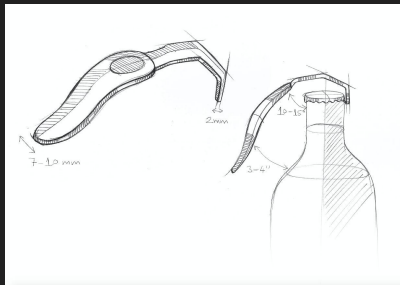
THE PROPOSED MECHANISM

The idea is to let them be used solely by one hand, including supporting as well opening, without an external supporter like a wall or refrigerator.

The mechanism for this is using the cap as the fulcrum and then taking the handle behind the bottle, so that the thumb, the ring and little fingers can hold the bottle, while index and middle ones open the bottle.

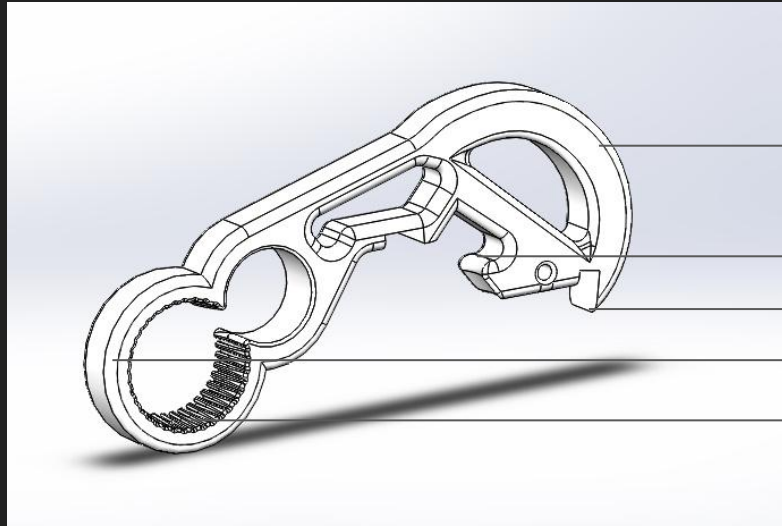


05 EXPLORATIONS



06

THE FINAL DESIGN



Handle for bottle opener,
Curvature for tuna can opener

Crown cap opener

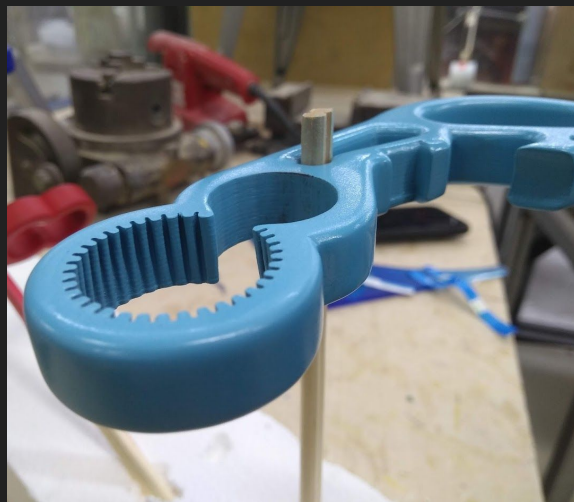
Tuna can opener

Handle for openers

Bottle opener

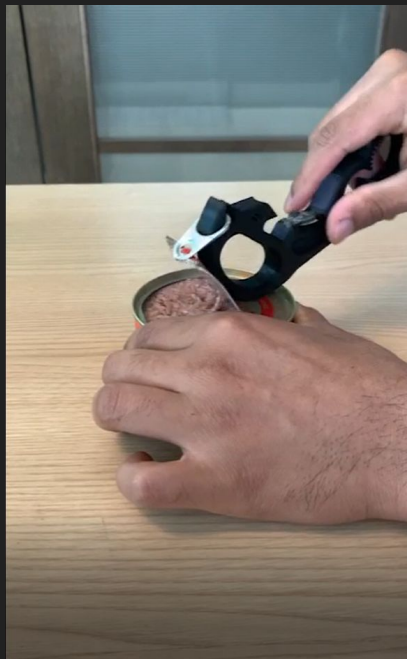
07

PROTOTYPING



08

TESTING



09

THE FINAL PRODUCT



The final render can be found [here](#)

THANK YOU