Trash Bag Stopper

Mechanical Engineering

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Abstract

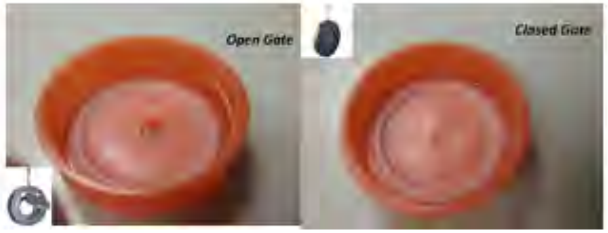
Our proposed product helps facilitate janitorial services with the task of placing a trash bag around the lip of a container. Due to inconsistency between the sizes of trash bags and containers, a knot is often required to hold the bags. Nonetheless, over time this repetitive act will cause strain and inconvenience in the operator's hands. To achieve reduction in strain and inconvenience, the product incorporates the use of recycled bottle caps and a custom designed hole punch. By punching a hole in a bottle cap and placing the trash bags through, it is possible to maintain a strong bond between the trash bag and the container. We project once mass production starts, the product is planned to be hand held and easily purchased by the public

Current vs Proposal

Current Mechanical Design

Design 1 Prototype

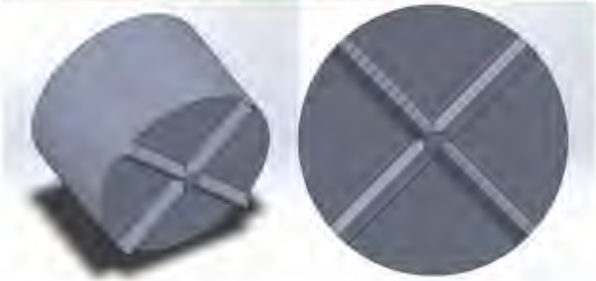
Cap Design



Future Mechanical Design

Current Process

Current Die Design



Conclusion

Further development of this product will involve a 3D printed product that can be used with standard vice clamps. The use of this product can be applied to multiple applications outside of our current scope, such as cable management. Overall, the goal of this project is to reduce the strain on the user and provide the optimal die shape securing the trash bags to the container.

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