FINAL DIMENSIONS AND WEIGHT

S.No	Parts	Dimensions(cm)	Quantity
1.	Bottom,Top &CrusherDisc	8(D) , thickness(1)	3
2.	Base	39.5 x 20.2	1
3.	Framework(Cylindrical cut)	35.5(L),8(D)	1
4	Handle(Small)	14 x 1.5	1
5	Handle(Large)	30.5 x 1.5	1
6	Connectors(Large)	4 x 2.5	2
7	Connectors(Small)	2.5 x 2.5	4
8	Inside Cylinder	15(L)	1

Weight = 4.1kg

TA 211 PROJECT 2024/ODD

INDIAN INSTITUTE OF TECHNOLOGY, KANPUR

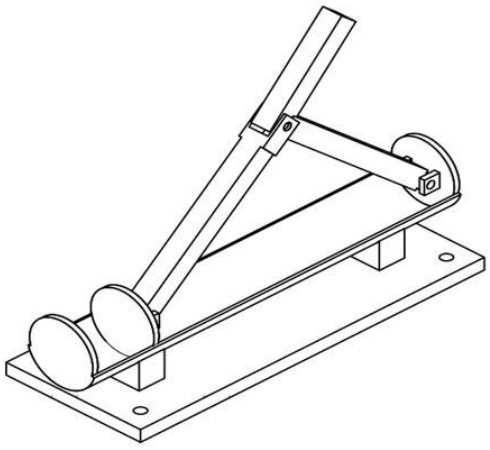
COURSE INSTRUCTOR – Prof. Kantesh Balani

COURSE-IN-CHARGE – Mr. I.P. Singh

LAB IN-CHARGE - Mr. A.K. Verma

TUTOR - Prof. Sarang Ingole

PROJECT NAME: **Can Crusher**



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INTRODUCTION

Our project is named "CAN CRUSHER".

A can crusher is a mechanical device used to compress aluminium cans, making them easier to recycle and reducing the amount of space they occupy in recycling bins or waste containers. By applying force through a handle connected to a crusher disc , the crusher flattens the cans, which allows for more efficient storage for waste cans and hence making their transportation easier. Can crushers are popularly used at places where aluminium beverage cans are frequently used, as they promote eco-friendly practices by encouraging recycling and minimizing environmental waste. A can crusher is a tool which is designed in such a way that it reduces the volume occupied by the cans and saving the space required for storage. They can be manually operated with a lever or mechanized for convenience, helping to make recycling easier and more accessible.

MOTIVATION

We first came across this idea while learning our theory for TA211. Our group had decided that whatever was to be made in this project would be something that would be movable and practically functional . The idea of Can Crusher came into our mind and when we looked for practically useful working for this project, we decided to work upon this idea and create a perfect working model.

During the period of idealizing and designing our model for this very report, we realised how even the simplest and very old and primitive machines and tools have a very important and precise mechanism behind their working. This helped us appreciate the beauty of engineering in general, and this machine in particular.

ACKNOWLEDGEMENT

We are very grateful to TA 211 course instructor, **Mr. Kantesh Balani,** tutor **Prof. Sarang Ingole** and the course-in-charge , **Mr. Indra Pal Singh** for their valuable and constructive suggestions during the planning and development of this project. Without their guidance and technical support, we would not have been able to complete this effortful task.

We would like to express our great appreciation towards all lab staffs, namely **Mr. I.P. Singh**, **Mr. Anil Kumar Verma**, **Mr. Rakesh Kumar, Mr. Gaurav Mishra**, **Mr. Bharat Raj Singh**, **Mr. Surya Prakash Sonkar, Mr. Rajdipta Samadder**, **Mr. Gyanendra Singh**, and **Mr. Pappu**, **Mr.Avinash Chandra Saini** for their constant supervision and encouragement which helped us in the completion of the project.

Special thanks to our TAs **Ms. Ruhi A.G. Syed** and **Mr. Rahul Poddar** for giving us their valuable time.

Finally we would also like to thank the MSE Laboratory in-charge, **Mr. Anil Kumar Verma** for giving us this invaluable opportunity to do something constructive using the various available manufacturing processes.

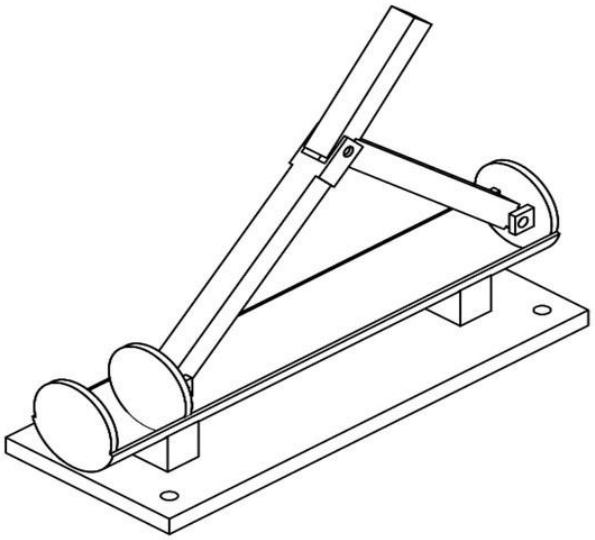
MATERIALS REQUIRED

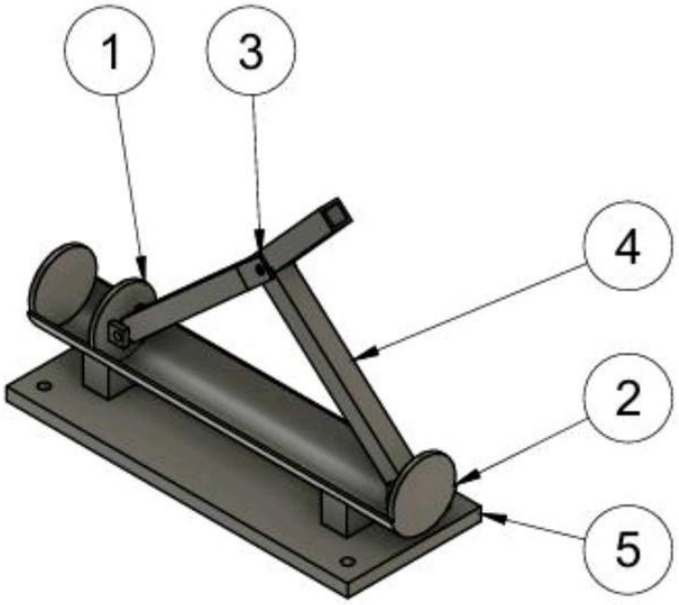
Sno.	Parts name	Material	Process applied	Dimension (mm)	Quantity	Cost Estimation
1.	Bottom, Top & Crusher Disc	MS	Welding	Diameter (50), Thickness (4)	3	108
2.	Base	MS	-	Dimensions (106*271)	1	440
3.	Framework (Cylindrical cut)	MS	Folding	Diameter (50), Height (290)	1	700
4.	Connectors	MS	Cutting, Drilling	Dim (12*12*4), Inner Diameter (punched) (6)	6	162
5.	L-Shaped Handle	MS	Cutting, Drilling, Welding	Hori Arm Dim (160*12.89*15), Vert Arm Dim (85*12.89*15)	1	53
6.	Handle	MS	Cutting, Drilling	Dim(160*15*15)	1	28

WORK DISTRIBUTION

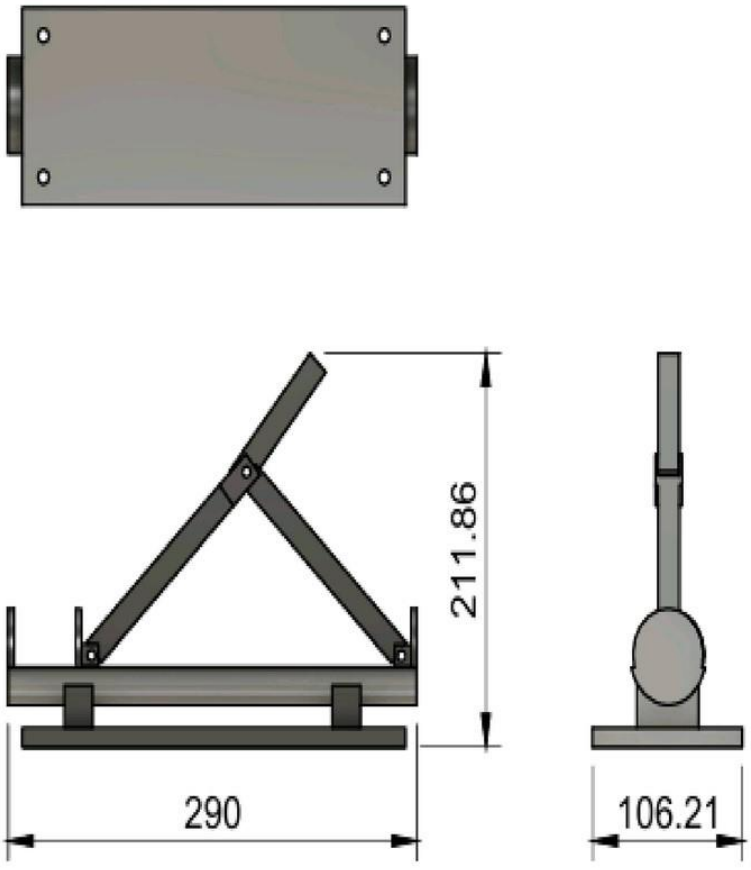
NAME	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
Sanket	3 Discs, Additional Support	3 Discs, Additional Support	Framework	Framework	ASSEMBLY	ASSEMBLY
Sanyam	3 Discs, Additional Support	3 Discs, Additional Support	Framework	Framework	ASSEMBLY	ASSEMBLY
Shubham	3connectors	3connectors	L-shaped handle	L-shaped handle	ASSEMBLY	ASSEMBLY
Shivesh	3connectors	3connectors	L-shaped handle	L-shaped handle	ASSEMBLY	ASSEMBLY
Shivam	handle	handle	base	base	ASSEMBLY	ASSEMBLY
Neha	handle	handle	base	base	ASSEMBLY	ASSEMBLY
Shubhangam	handle	handle	base	base	ASSEMBLY	ASSEMBLY

CAN CRUSHER ISOMETRIC DIAGRAM

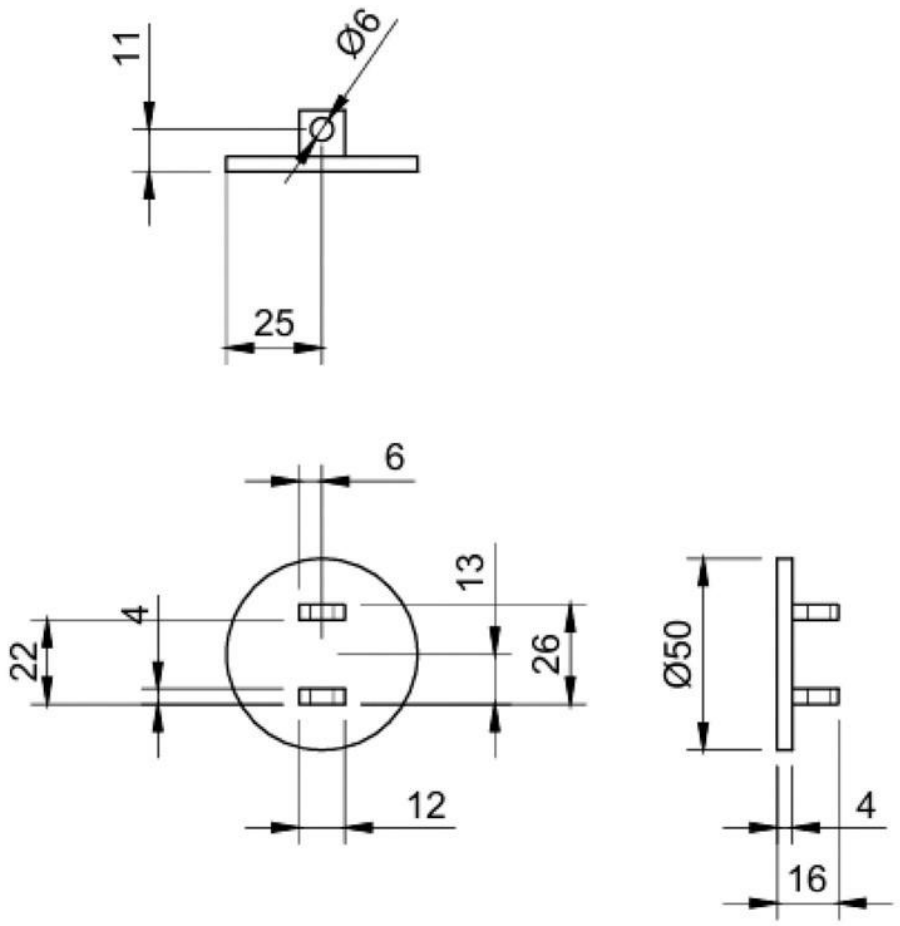




CAN CRUSHER ORTHOGRAPHIC DIAGRAM



CRUSHER DISC & CONNECTOR

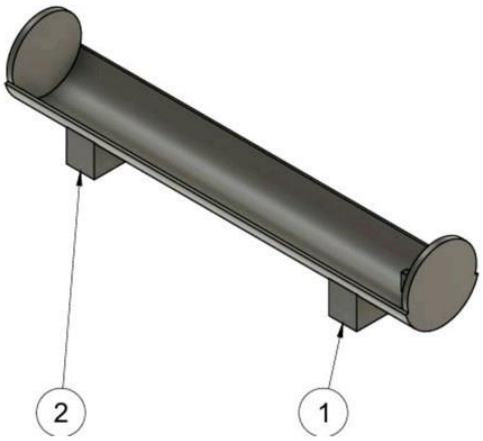


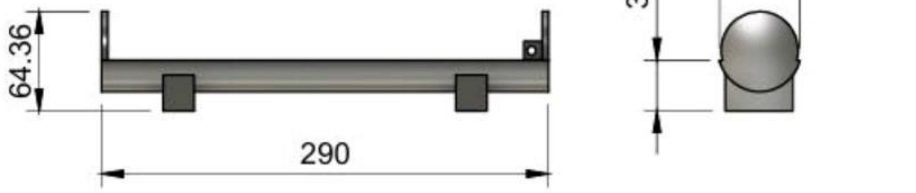
Disc:
Quantity: 3
Process: Welding ,Cutting
Materials: Mild Steel

Connectors:
Quantity: 6
Process: Cutting &
Drilling
Materials: Mild Steel

1

FRAME



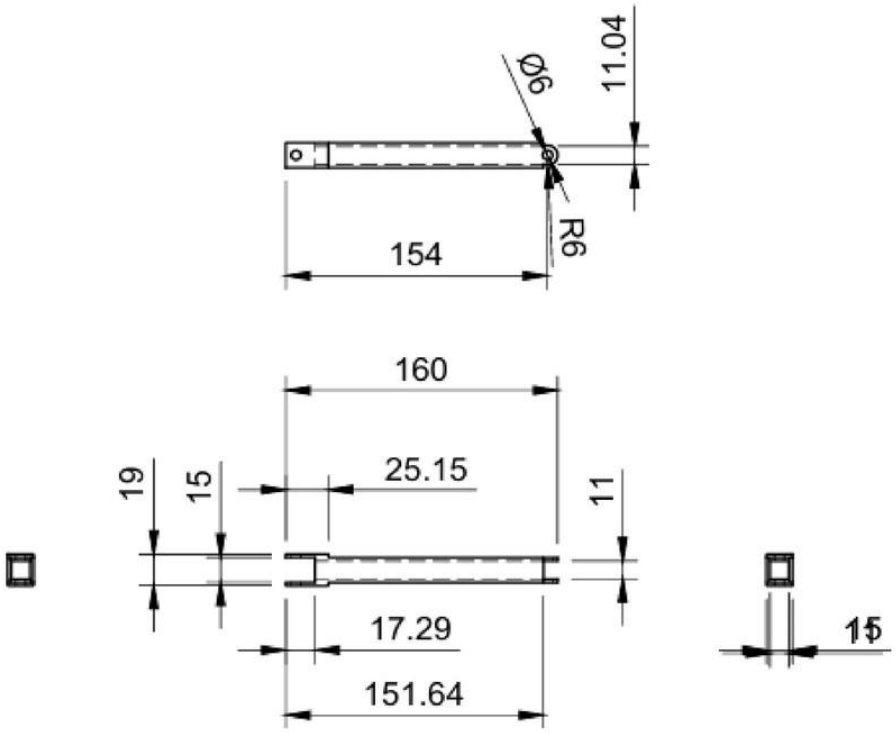


Quantity: 1
Process: Folding
Materials: Mild Steel

2

Supporters:
Quantity:2
Process: Cutting , Welding
Materials: Mild Steel

HANDLE



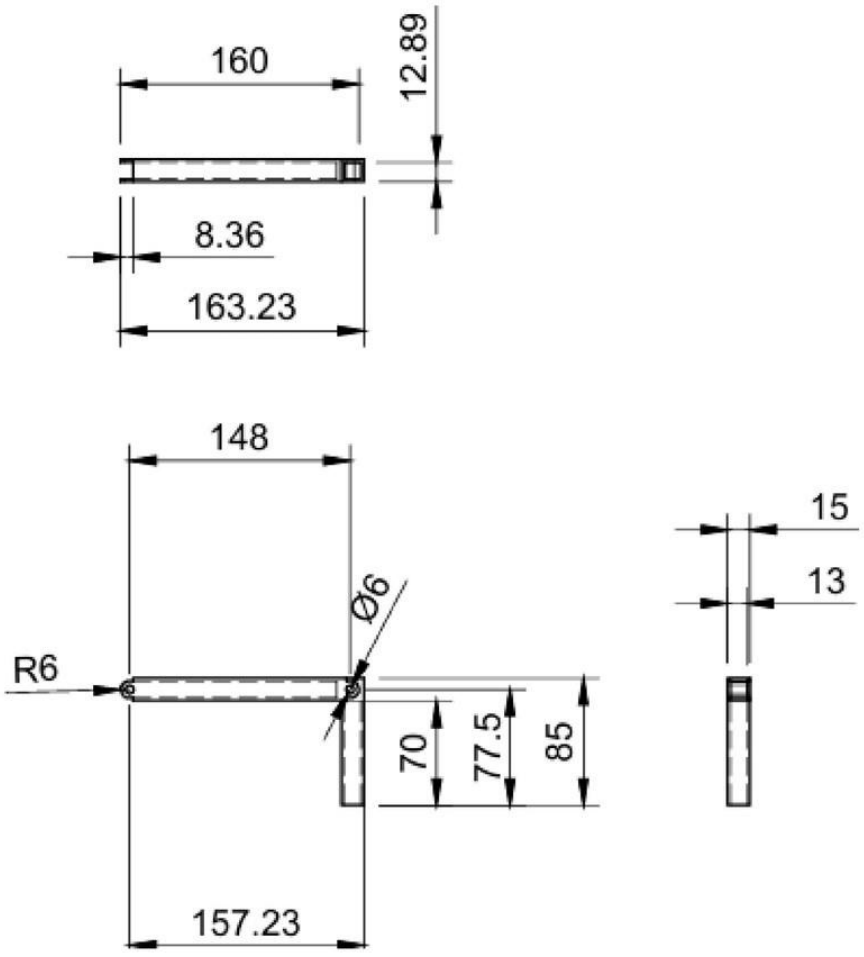
Quantity: 1

Process: Cutting and Drilling

Materials: Mild Steel

3

L – SHAPED HANDLE



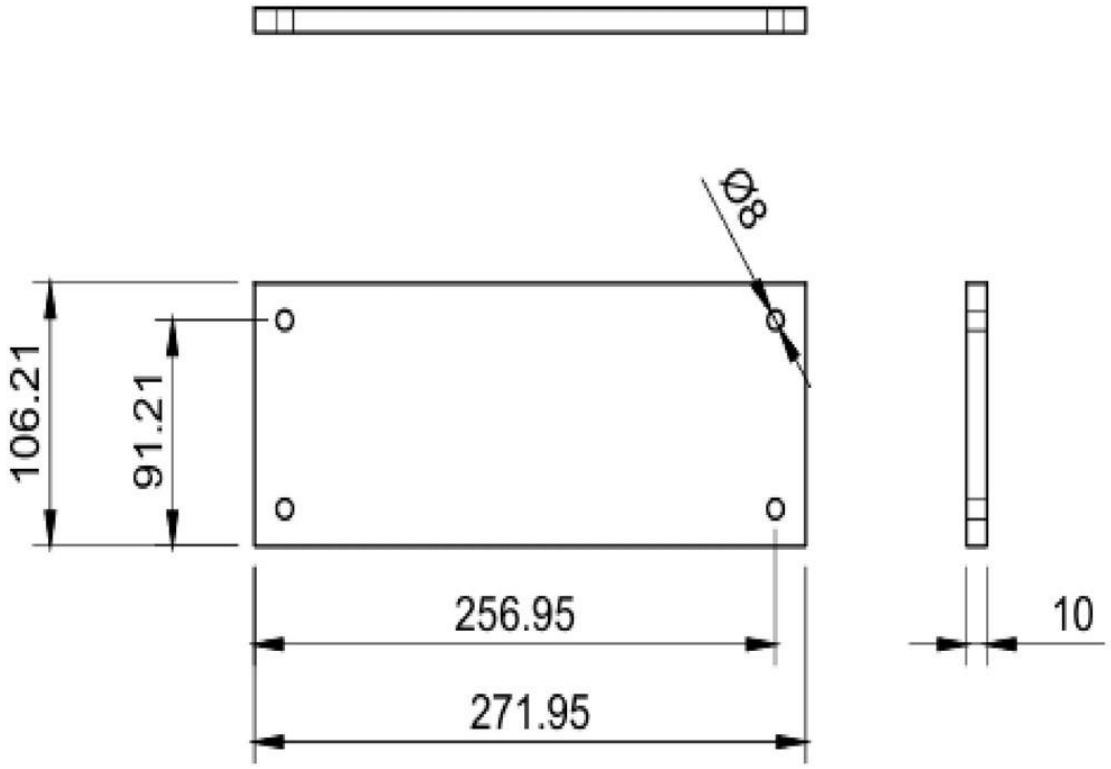
Quantity: 1

Process: Cutting ,
Drilling and Welding

Materials: Mild Steel

4

BASE



Quantity: 1
Process: Cutting
Materials: Mild Steel

5

SUPPORTER