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### AUTOMATIC SOIL/SAND FILLER

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**Abstract:** Sand/soil filling in Jute/plastic bags on construction site is done manually by labours. It is time taking and hard method. In this study we have tried to construct an automatic filler machine which can directly fill the bags during the excavation. Also it will sieve the soil/sand according to size so there will be no need to sieve again. It will reduce the cost of labour also it will save the time of filling and sieving soil/sand.

**Keywords:** Sieve Analysis, Filling Of Material Into Bag Multiple Works in One Time, Reduction of Cost, Labour, And Time.

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## INTRODUCTION

About the product: - as the name suggest “automatic filler” which means something which does not require any manual effort for performing a particular task. In the same manner this machine also does not require any manual technique for filling as well as for sieving of sand/soil during excavation on construction site. Below mention are the detail of automatic filler and its various purposes.

- Purpose :- Its purpose is to save time as well as the cost
- Functions: - Its main function is to separate aggregate and sand from sand dumps.
- Feature: - Its main feature is to do sieve analysis and fill bags.
- Cost: - It is one time investment product.
- Advantages : - Some advantage of this product are as follows
  - Time saving
  - Economical
  - Reduces labour
  - Wastage reduces

## OBJECTIVES

The main purpose or objective of this model was to save cost as well as time which was very important for construction site in present scenario where quality as well as quantity with limited time matter.

## MATERIALS AND METHODS

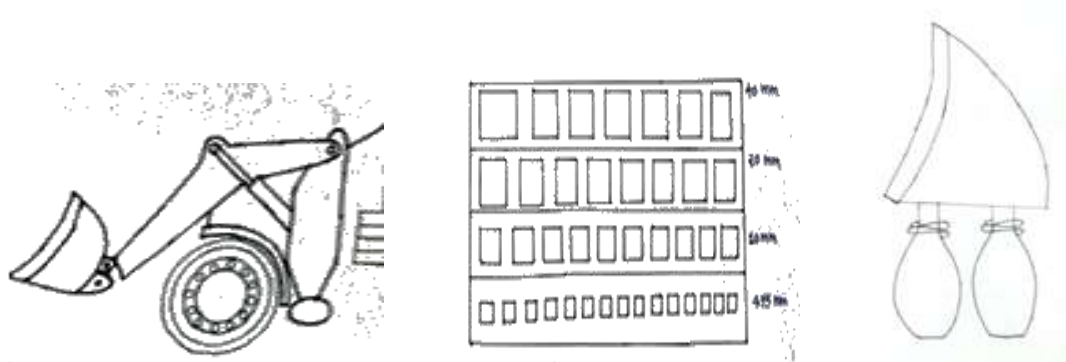
Material: - materials used during construction of the model were

1. Jute/plastic bags
2. Hooks
3. Sieve of different size
4. Hoe

Method: - method used during making of model were

1. All the required material were first collected
2. Now first of all the sieve are arranged as per size one above other.
3. Then holes are made parallel to sieve, so the sand which pass through respected sieve is collected in jute/plastic bags which are hang with the help of hook. And then finally bags are filled and are transported as per requirement

## Technical details



The normal hoe is modified so that we can attach new design in it. And also the top view is mention here.

### RESULT AND DISCUSSION

After observing we learned how to analyse the entire machine, with help of it we have to design our model so this was helpful to gain practical knowledge of designing. After making of this product we came to know various things like what demand of users is and what changes we can bring in the product so it can perform multiple works efficiently at one time. And also get the product experience of the users.

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