AUTOMATIC GRAIN LIFTING MACHINE

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Abstract

As we all know farmers collect grains and fill in bags. For that they hire largenumber of labors and pay them. To solve this issue, we are here, with a proposingsolution for collecting, packing and loading large quantities of grains which isreally a hard task and requires a lot of manual labors. Now we made easy withour Model. This is designed in such a way that the front part of the Machinecollects the grains. With the help of the conveyor belt, grains are passed throughthe belt and collects in trolley. This works with the help of motor. On a wholethis is one of the best Machine and best idea that we thought off. It is also lowcost in preparing and can be used by small famers. This overcomes problems likelack of manual power labors and time.

KEY WORDS:Conveyor Belt, Motor, Wheels, Bearings, Pulley.

1. INTRODUCTION:

We see many farmers facing troubles in filling the grains into the bags. The needmany labors to do that work. In our country, most of the farmers need uponagriculture works. Their income also depends on agriculture investments. In orderto make their investment less, to make their work easy there is an equipmentwhich helps in easy filling of food grains. It is very essential to every farmer, whois struggling with, lack of time, lack of labors. This can help them in variableways. And it is portable too. Definitely this machine can help 80% of farmers infilling the grains. The aim of this project is to consume the less time, completethe work with less labors and help the farmers.So, this equipment can widely change the farmers life style.

2. RELATED WORK

A review of the literature reveals that, different types of grain collector machineshave been successfully used for grain colleting bagging machine. However, mostof the studies deal with effect of change in power sources likes electricallyoperated, engine operated, hydraulically,

Pneumatic machines etc. to run amachine and collecting grains. Survey also provides clear idea about thedrawbacks of traditional type of grain collector machine and how this machine can overcome from these drawbacks. The benefit of manually mechanicallyoperated systems and without using electric power source is not found in theliterature till date. So, came to know there is no machine is used for collectinggrains, therefore we develop our model to overcome those problems. The presentwork explores this possibility by mechanically operated collecting grains withoutuse of electric power.

3. IMPLEMENTATION

"The majority of farmers in our country are facing trouble in packing the grains

in bags like paddy, jowar's etc. Due to lack of labours at that time. This leads tocomplete the work out of time."

The main objective of this project work is to design and develop a grain lifter thatcan be easily manufactured locally from available local materials and low cost itwill replace the old traditional process.

*To fabricate and assemble the designed grain lifter.

*Grain collector is small machinery for efficient collection of all types of small

size grains.

*The machine has a simple construction and is light in weight which makes it

easy to handle.

*To minimize manpower and reduce the hard work.

*To minimize the time for collecting.

The grains spread over the floor that can be lifted and collected by using thiscollector. Here the conveyor belt will be provided at the front of the machineand bag is fixed back side of the machine. Machine can be operated manuallywhen at rest position of the hopper the machine is moved the grains which ispresented on the floor is to be collected in the conveyor belt up to 4 to 5 kgsof grains. Handle which is connected to the conveyor belt that can be pulleddown word whatever grains present in the conveyor belt is collected into thebag; this can be done up to fill the bag.

4. EXPERIMENT RESULT
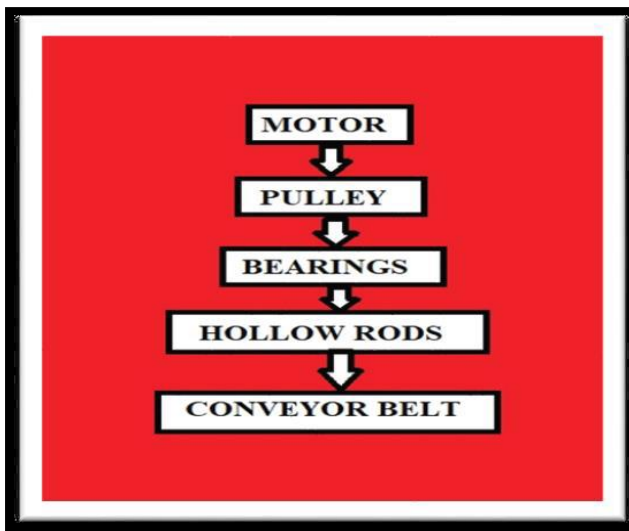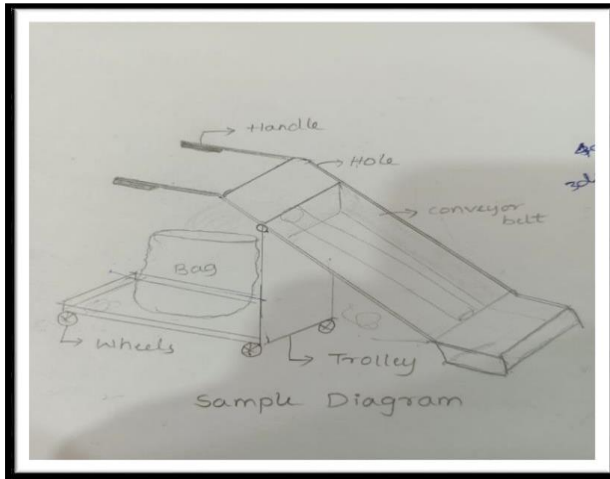
This machine does the task of three people and reduces the labour required.

➢It also reduces the time consumption.

➢It has wheels which helps to move the machine easily, and carry anywhere.

➢The machine can also can be purchased in a low cost.

➢We can also shift the gunny bags with the help of trolley.

➢ Small farmers can also have variable benefits by reducing labours, money, time, with this machine.

5. CONCLUSION:

A manual grain bagging machine that collects grains from the concrete pavementfloor through the collecting bin and made to fall into the bag placed adjacent toit. This machine has vast application in India due to lack of electricity andinvestment for the poor farmers. This became the main motivation to automaticgrain lifting machine. This machine reduces the grain collecting time and labourcost. As the main goal to reduce the usage of electricity we don't suggest thefuture scope with motors rather the belt drive mechanism can be designed toreduce the time and mechanical force of labour or operator.

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