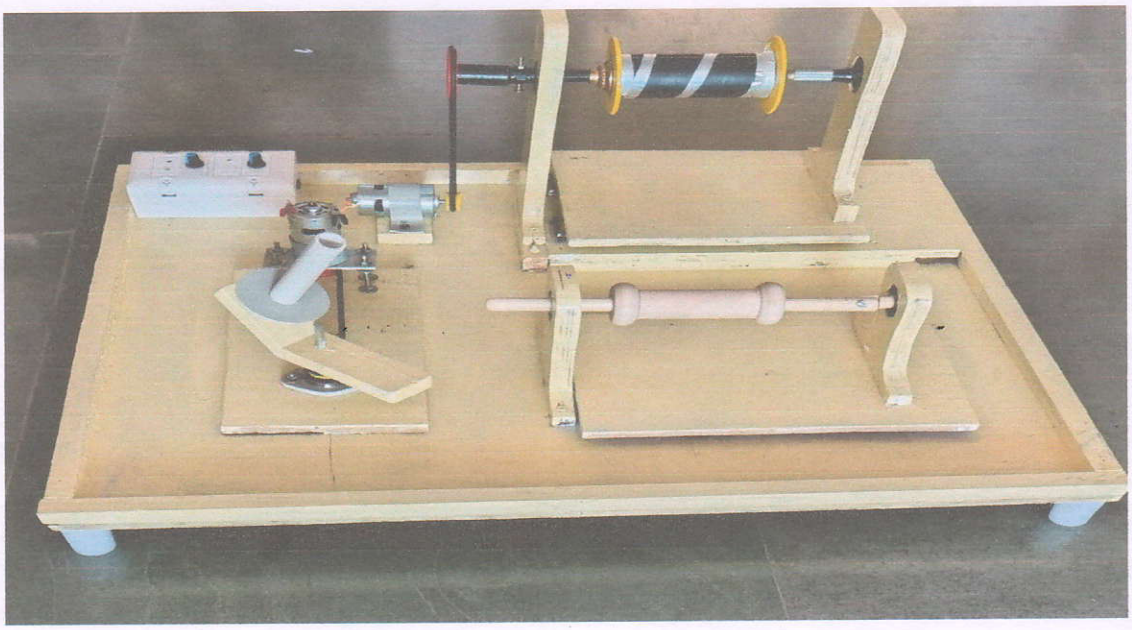
Govt. Shramodaya Awasiya Vidyalaya

Mangeli, Jabalpur (M.P.)

Topic- Thread Wrapping Machine



Presented By

Aditya Pandey

Class-9th

Mentor Teacher

Mr. Deepak Baghel

(TGT-Science)

Title: Thread Wrapping Machine

(Manual & Mechanical Model)

Introduction

This model represents a Thread Wrapping Machine, which is used to wind different types of threads such as textile yarn, kite thread, and woollen thread. Thread wrapping is an important process in the textile and handicraft industries, as it helps in proper storage, handling, and further use of threads.

Objective of the Model

The main objective of this model is to demonstrate the working principle of both manual and mechanical thread wrapping machines in a simple and economical way using easily available materials.

Description of the Model

This model is designed with two working systems:

→ Manual System – operated by hand

→ Mechanical System – operated using an electric motor

→ The machine winds thread evenly around a spool or bobbin with the help of rotating shafts and guiding mechanisms.

Materials Used

The following materials are used to construct the model:

- → Electric DC Motor (775, 12V)
- → Adapter (Power Supply – 12V – 5 Amp)
- → Regulator (to control speed, 12V)
- → Wooden base and frame
- → Bearings (for smooth rotation, 6203,6002)
- → Shaft and Rollers
- → Switches and Connecting Wires

Working Principle

In the manual mode, the thread is wrapped by rotating the handle by hand. Bearings reduce friction and ensure smooth movement.In the mechanical mode, the motor rotates the shaft when power is supplied through the adapter. The resistance helps control the speed of rotation.The rotating shaft winds the thread uniformly on the spool.

Applications

- → Textile industry (Yarn Winding)
- → Kite Thread Preparation
- → Wool and Handicraft thread wrapping
- → Small-scale and cottage industries

Advantages

→ Simple and easy to operate

→ Can work in both manual and mechanical modes

→ Low cost and energy efficient

→ Helps in understanding basic mechanical and electrical concepts.

Conclusion

The Thread Wrapping Machine model clearly explains how threads are wrapped using manual and mechanical methods. It is a useful educational model that demonstrates practical applications of mechanics, electricity, and simple machine design. This model is helpful for students to understand industrial processes in a simple and effective manner.

****

Prepared and Presented By -

Aditya Pandey

Class-9th

CERTIFICATE

OF SELECTION FOR STATE LEVEL

This is to certify that

ADITYA PANDEY S/D of BHAGWAT PRASAD Reference No. 24MP5588319

Class: 8TH, School: SHRAMODAYA AWASIYA VIDH District JABALPUR presented his project/model in the District Level Science Exhibition organised under the Inspire Award Scheme .....at Govt. PM Shri.M.L.B.G.H.S School Narsinghpur (M.P.).

He has been selected to participate in the state level science exhibition .

This certificate is being happily presented with the best wishes that your scientific thinking and creative energy may be utilized for the benefit of society and nation building.

District Education Officer
Narsinghpur

Collector
Narsinghpur