MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION, MUMBAI
VISHWESHWARAYA POLYTECHNIC COLLEGE, ALMALA

A

PROJECT

REPORT ON

"STAIRCASE CLIMBING TROLLEY"

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Submitted to,

Prof. Padile H. P.

In Partial Fulfillment of

"DIPLOMA IN MECHANICAL ENGINEERING"

Vishweshwaryya Polytechnic College, Almala

For Academic Year

2019-20

MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION, MUMBAI
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CERTIFICATE

This is to certify that,

Waghmare Swapnil Devidas (ENR.NO.1710950194)

This student of our Institute From Third Year Diploma in Mechanical Engineering (ME6I) Has successfully completed the Project Report on

"STAIRCASE CLIMBING TROLLEY"

As requested by the Maharashtra State Board of Technical Education Mumbai, For Partial Fulfillment of -

"Diploma in Mechanical Engineering".

During the Academic Year 2019-20

H.O.D
Prof. Bidve M. A.

Guided By,
Prof. Padile H.P.

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ABSTRACT

This project aims at developing a mechanism for easy transportation of heavy loads over stairs. The need for such a system arises from day-to-day requirements in our society. Devices such as hand trolleys are used to relieve the stress of lilting while on flat ground; however, these devices usually fail when it comes to carrying the load over short fleet of stairs. In the light of this. the project attempts to design a stair climbing hand can which can carry heavy objects up the stairs with less effort compared to carrying them manually. It also endeavors to study the commercial viability and importance of such a product. Several designs were conceived that would allow a non-industrial hand trolley to travel over stairs, curbs. Or uneven terrain while reducing the strain on the user.

In our project. the trolley is equipped with Tri-Star wheels which enable us to carry load up and down the stairs. It also eases the movement of trolley in irregular surfaces like holes, bumps. etc.

Keywords – Stair climbing vehicle, Wheel frame, Nuts & Bolts, Bearings, Axel, Wooden sheet, Ratchet, Square rod.

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