

PROJECT REPORT ON

DESIGN AND FABRICATION OF A WALKING CHAIR USING LINKAGE MECHANISM

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BACHELOR OF ENGINEERING in MECHANICAL ENGINEERING
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ABSTRACT

A machine is designed with the intentions of exploiting the advantages of the walking motion over the traditional rolling motion. Over the years people with locomotive disability have struggled to live a life of independency, many ideas were developed to kill the dependency but those ideas were lost either in research or the heavy expenses doomed them.

For a country like India, whose majority of the movement disabled population resides in the rural areas, it is very important to develop and alternative to their woes at very minimal cost. The answer to this was sought in the development of the walking chair. The project is intended to develop a chair that can be used on varied terrain and that can overcome small obstacles at the price of most basic wheelchair available in India.

This idea utilizes a parent idea of Theo Jansen, a Dutch physicist who invented a mechanism for the leg like motion of a system and called it the Jansen linkage. Now using these linkages we intend to build a chair that is propelled by hand using a chain and sprocket mechanism in order to make it cost effective.

Hence to sum up in a line our project changes the history of 8000 years in locomotion technology keeping in mind the social need for a change.