

A MODULAR TRANSPORTATION SYSTEM

IITM Technology Available for Licensing

Problem Statement

- Elevated transportation systems such as rope ways and cable ways to transport people, industrial and agricultural produce are generally permanent and cannot be used in narrow and uneven pathways.
- There is need in the art to for a mechanized transportation system which can replace the requirement of either employing large number of people to carry the goods over a distance, or use expensive transportation means.

Technology Category/ Market

Category – Mechanical Engineering

Applications –Agricultural Engineering ,Farm Machinery, Transportation, Shipping

Industry – Agriculture Machinery

Market -The Global Agricultural And Farm Machinery Market Size in 2022 stood at USD 196.5 Billion and is set to reach USD 485.7 Billion by 2032, growing at a CAGR of 8.6%

Key Features / Value Proposition

Technical Perspective

- A transportation system to move a load from one place to another that is
- Involves a trolley mechanism made up of frames on all sides and wheels on both ends of the top portion of the trolley the bottom portion adapted to carry load

User Perspective

- Cost effective and time –saving reduces manual labour in the fields
- Light-weight, simple, portable, and extendable over a long distance.

Technology

The modular transportation system of the present invention comprise:

A cantilever beam supported on a hard support

A metal rail fixed on top of the cantilever beam

A trolley made up of frames on all sides and wheels

- The wheels of the trolley are positioned on the rail so as to move the trolley in a linear direction.
- The trolley can be connected to a plurality of trolleys on either side of it to move all the trolleys connected to it.



FIG.1 shows the photograph of the upright steel posts and lightweight steel rails erected along the edge of a farm with the traction trolleys and the loaded trolleys

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Industrial Consultancy & Sponsored Research (IC&SR)

- ❑ The said trolley comprises a prime mover operatively connected to the wheels of the trolley to self-propel the trolley in the forward or reverse direction, the said **prime mover may be the prime mover may be a fossil fuel engine, or an electric motor**
- ❑ The trolley is made of cast iron that travels on the rail with minimum friction, further Steel posts of L shaped construction are placed at the projecting end supporting the rails.
- ❑ Under the trolley may be a tray or a sling on which the load to be carried can be placed.
- ❑ **The trolley fitted with the prime mover is the leading trolley or traction trolley to which other trolleys can be attached via a detachable link**
- ❑ The traction trolley further has a reversing gear mechanism to make the trolleys move back and forth.

Images

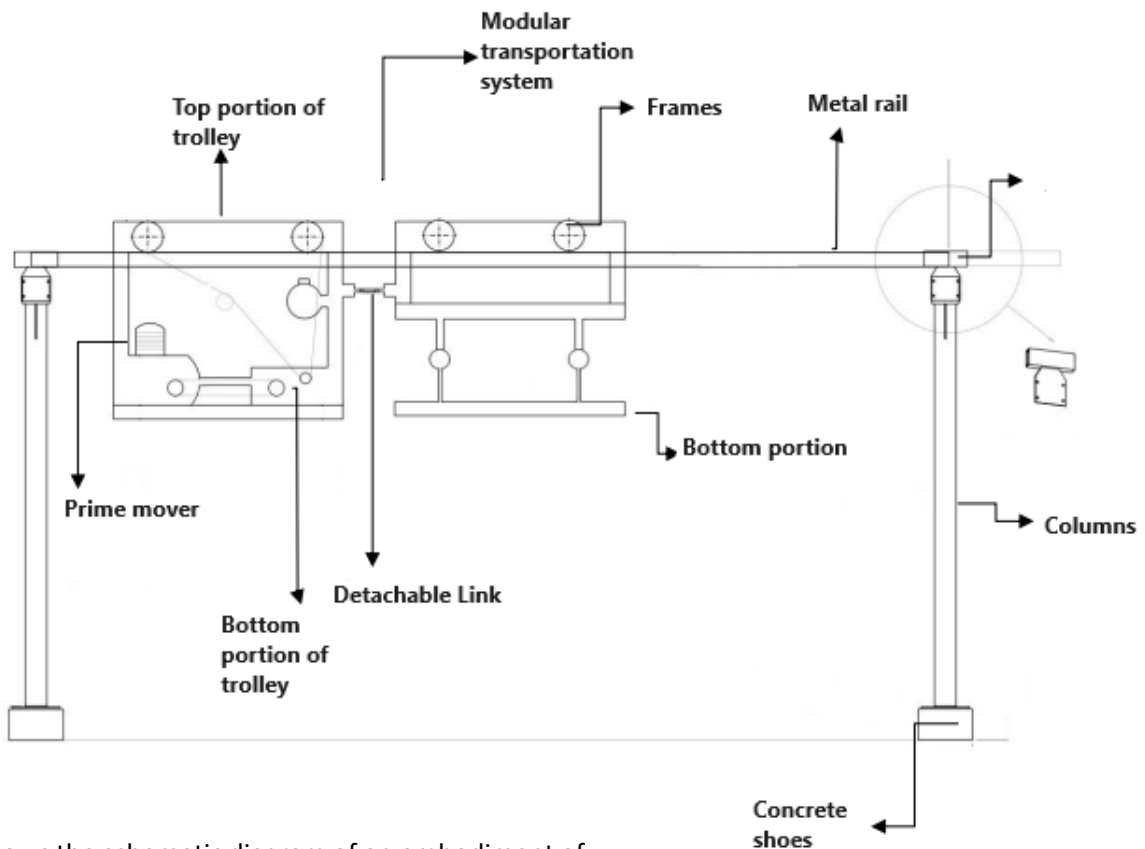


FIG.2 shows the schematic diagram of an embodiment of the invention.

Intellectual Property

- IITM IDF Ref. 2461
- IN453553-Granted

TRL (Technology Readiness Level)

TRL- 5, Technology Validated in Relevant Environment

Research Lab

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