

Fabricated of Motorized Vegetable Cutting Machine

M. S. Yadav, A. G. Raut, Prof. Pravinkekan

AtharavAmol Joshi, Siddheshwar Manohar Narvate, Partik Jitendra Ware, Vahid Saipan Bagwan

Department of Mechanical Engineering

JSPM's Bhivarabai Sawant Polytechnic, Wagholi, Pune

Abstract: *This project focuses on the design and development of an Automated Vegetable Chopping Machine by mechanizing a conventional manual fries maker. Traditionally, such chopping devices rely on human force to push vegetables through a cutter grid, which can be time-consuming and physically demanding. To overcome this limitation, a 12V DC wiper motor is integrated into the system to automate the cutting process.*

The core working principle involves the conversion of rotary motion to linear reciprocating motion using a crank-slider linkage mechanism. The continuous rotary output of the wiper motor drives the mechanical linkage, which in turn creates a vertical up-and-down motion. This reciprocating action applies consistent force on the pusher plate, enabling it to press vegetables through the cutter blades efficiently and uniformly. The structural framework is fabricated using mild steel wires, providing the necessary strength while keeping the overall weight low. A regulated 12V DC power supply is used to operate the motor, ensuring safety and energy efficiency.

This automation reduces manual labor, improves cutting uniformity, and enhances productivity, especially in settings like homes, hostels, and small-scale food stalls. The project highlights fundamental mechanical concepts such as motion transformation, force transmission, and practical automation, making it a valuable prototype in the field of low-cost kitchen automation..

Keywords: Automated Vegetable Chopping

