

**Title:** Remote controlled turning mechanism of power tiller with safety features

**Type:** Patent

**No.:** 546351

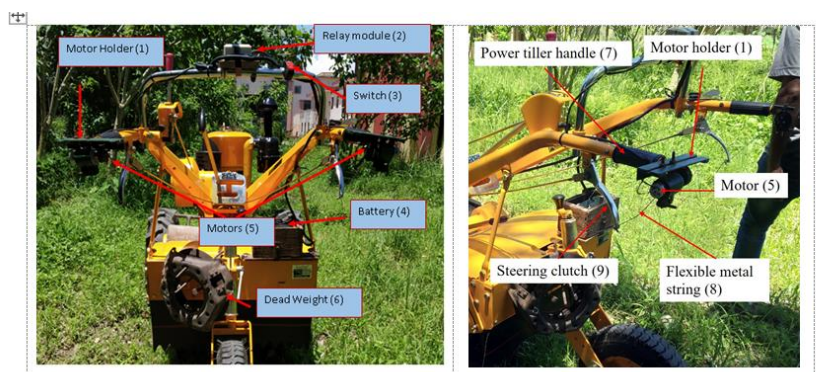
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**Details:**

The patent is about a remote-controlled turning mechanism for power tillers aimed at reducing operator drudgery, especially during prolonged field operations like tilling and puddling. Traditionally, operators must walk behind power tillers, exposing themselves to high levels of noise, vibration, and physical strain. This invention eliminates the need for walking by allowing operators to control the machine remotely using a simple, wireless system.

The mechanism consists of two 12V DC motors attached to the power tiller's steering clutch levers. The motors are connected by a flexible metal string, which is wound to operate the clutch when activated by a remote control. The remote has three buttons for turning left, right, and halting the machine. A key feature is the safety system, which incorporates an ultrasonic sensor to detect obstructions or bunds. When the tiller is within two meters of an obstruction, an audio alarm warns the operator. If the machine gets closer than 0.5 meters without turning, it halts automatically.

The system is cost-effective, easy to install, and does not hinder manual operation, providing flexibility for users. It greatly reduces operator exposure to noise, vibration, and risk of accidents, while enhancing comfort and safety during agricultural tasks.



**Fig.:** Developed remote controlled power tiller turning mechanism



**Fig.** Automatic safety stop incorporation with remote controlled turning mechanism

