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(57) Abstract :

The present invention discloses a low-cost device for generating electrical energy from mechanical footsteps. The device comprises a footplate (1), compression springs (2), gear assembly (3), connecting shaft (4), dynamo (5), and energy storage unit (6). When a pedestrian steps on the footplate, the downward force compresses springs, activating the gear assembly to rotate the shaft and drive the dynamo. The generated electrical energy is stored in the energy storage unit. The invention offers a sustainable, modular, and eco-friendly method for low-cost energy harvesting in high-footfall areas.

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