

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202311067484 A

(19) INDIA

(22) Date of filing of Application :09/10/2023

(43) Publication Date : 22/12/2023

(54) Title of the invention : AUTOMATIC FAN CLEANER

(51) International classification :H04N0021450000, A47L0025000000, F04D0029700000, G01N0015060000, G08B0013140000

(86) International Application No :NA  
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA  
Filing Date :NA

(62) Divisional to Application Number :NA  
Filing Date :NA

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(57) Abstract :

A present disclosure relates to an automatic fan cleaning system. The system features an extendable rod (101) designed to reach varying fan blade lengths. At the rod's top, a vacuum cleaner (102) suctions dust, while an adjacent microfiber cloth (103) cleans the blades. A L9110 DC motor driver (104) manages the rod's movement, and an IR sensor (105) detects fan blade ends, signalling the DC motor to halt extension. The system includes a Bluetooth module HC-06 (106) for wireless communication with external devices and for dust detection, sending alerts to paired devices. An Arduino NANO v3.0 controller (107) orchestrates the system's functions. The system is powered by a rechargeable battery (108) with a 9-volt DC charger. An LED indicator (109) showcases the system's operational status, turning red when active and green when deactivated.

No. of Pages : 15 No. of Claims : 9