

Title (en)  
DEVICE WITH A ROOF TURBOFAN FOR EXTRACTING THE AIR FROM A BUILDING HAVING AN AIR TANK WITH A TURBOFAN THEREOF  
AND METHOD OF BUILDING VENTILATION WITH SUCH DEVICE

Title (de)  
VORRICHTUNG MIT EINEM DACHTURBOLÜFTER ZUR ABSAUGUNG DER LUFT AUS EINEM GEBÄUDE MIT EINEM LUFTBEHÄLTER MIT  
EINEM TURBOLÜFTER UND VERFAHREN ZUR GEBÄUDEBELÜFTUNG MIT SOLCH EINER VORRICHTUNG

Title (fr)  
DISPOSITIF COMPORTANT UNE TURBOSOUFFLANTE DE TOIT POUR EXTRAIRE L'AIR D'UN BÂTIMENT AYANT UN RÉSERVOIR D'AIR  
COMPORTANT UNE TURBOSOUFFLANTE ET PROCÉDÉ DE VENTILATION D'UN BÂTIMENT COMPORTANT UN TEL DISPOSITIF

Publication  
**EP 3764005 A1 20210113 (EN)**

Application  
**EP 19185668 A 20190711**

Priority  
LT 2019518 A 20190710

Abstract (en)  
The invention provides a structure of a device with a roof turbofan and method of operation allowing to ensure the air exchange inside the building when the wind does not rotate the roof turbofan sufficiently or completely. The device has at least the following elements: a roof turbofan, a multi-stage gear transmission, a pulley, an air tank of variable volume, an air intake valve and a compressed air driven turbofan. The axis of rotation of the roof turbofan is connected through the clutch and the shaft to the multi-stage gear transmission which is connected by a cable through the pulley to the air storage tank. When the air exchange inside the building created by the roof turbofan rotated by the wind is higher than necessary at that time, the multi-stage gear transmission lifts upwards the isobaric air tank weight and fills the air storage tank with the air through the air intake valve. When the wind does not rotate the roof turbofan sufficiently or completely and the air exchange inside the building is needed, the isobaric air tank weight falls down and compresses the air that enters the compressed air driven turbofan from the air storage tank. When the compressed air driven turbofan releases the air, it starts to rotate and sucks the air from the building. The fresh air enters the building through air inlet openings. The present invention does not require electricity.

IPC 8 full level  
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CPC (source: EP)  
**F24F 7/025** (2013.01)

Citation (applicant)  
LT 6613 B 20190410 - UNIV VILNIAUS GEDIMINO TECH [LT]

Citation (search report)  
• [AD] LT 6613 B 20190410 - UNIV VILNIAUS GEDIMINO TECH [LT]  
• [A] DE 102004052223 A1 20060504 - DUEHRING KARL HEINZ [DE]  
• [A] US 4043777 A 19770823 - PARREN JOSEPH R  
• [A] US 6302778 B1 20011016 - ANDREWS GABRIEL [AU], et al

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