

Title (en)  
VERTICAL HUMIDIFIER HAVING DIAMETER-VARIABLE EVAPORATOR

Title (de)  
VERTIKALER BEFEUCHTER MIT DURCHMESSERVARIABLEM VERDAMPFER

Title (fr)  
HUMIDIFICATEUR VERTICAL PRÉSENTANT UN ÉVAPORATEUR À DIAMÈTRE VARIABLE

Publication  
**EP 4109002 A4 20230816 (EN)**

Application  
**EP 20920455 A 20201130**

Priority  
• CN 202010103698 A 20200220  
• CN 2020132672 W 20201130

Abstract (en)  
[origin: EP4109002A1] The present invention provides a vertical humidifier with a stepped evaporator, which pertains to an evaporative humidifier. The humidifier includes a housing. An evaporative water trough is provided inside the housing, and the evaporator is provided in the evaporative water trough. A fan is mounted under the evaporator, and an air inlet end of the fan is communicated with an air inlet of the housing. A water tank is further mounted at the upper portion of the evaporative water trough, the evaporator is mounted around the lower portion of the water tank, and the water tank is further communicated with the evaporative water trough through a water inlet. An air outlet is provided at the upper portion of the housing, and the air outlet is communicated with an air outlet end of the fan. The evaporator is arranged in an airflow channel between the air outlet and the air outlet end of the fan. The fan is mounted under the lower portion of the evaporator, so that the noise passing through the evaporator can be dampened, thereby realizing silence. The stepped evaporator with a compact lower end and a sparse upper section may also improve the turbulence and mass transfer effects of airflow, thereby effectively increasing the humidification amount. Moreover, the humidifier has a smaller volume due to the compact product structure with the longitudinal cylindrical stepped evaporator.

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Citation (search report)  
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• [A] US 2017122592 A1 20170504 - CHOI JIEUN [KR], et al  
• See references of WO 2021164366A1

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