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(54) **FIRE GRATE AND MANUFACTURING METHOD THEREOF, BURNER AND WATER HEATER**

(57) A burner bar (10), a manufacturing method therefor, a burner and a water heater applying the burner bar. The burner bar (10) comprises a burner bar body (100), a flame stabilizing apparatus (200), and a metal mesh (300). The burner bar body (100) forms a ventilating channel (110). A diverting hole (120) in communication with the ventilation channel (110) is provided at the top section (130) of the burner bar body (100). The flame stabilizing apparatus (200) is provided at the upper section of the burner bar body (100). The flame stabilizing apparatus (200) is provided therein with a cavity (210) having an opening (211) on the top side. A gap (212) is

provided between the sidewall of the cavity (210) and the surface of the burner bar body (100). The gap (212) is in communication with the ventilation channel (110). The metal mesh (300) is affixed at the position corresponding to the diverting hole (120) to the burner bar body (100). The metal mesh (300) and the flame stabilizing apparatus (200) provide double flame stabilizing effects and increase the range of adaptability to single-piece heat load burning, the area of the aperture of the diverting hole (120) is increased, the performance of instant burning and flue gas discharging is great, and the usage requirement for an overall low nitrogen emission is satisfied.

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			TECHNICAL FIELDS SEARCHED (IPC)
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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 28 January 2025	Examiner Theis, Gilbert
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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28-01-2025

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82