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(54) **A furnace burning oil, gas and oil biofuel**

(57) The invention relates to a furnace burning oil, gas or oil biofuel, which furnace is encased by a mantle (1), a front end (2) and a back end (3) and comprises a combustion chamber (4) and tubes (5a, 5b) installed outside the combustion chamber, through which tubes the combustion gases generated by the flame of a burner are arranged to flow out of the furnace. The invention is **characterized in that** the burner (6) is of a type which generates in the combustion chamber (4) a fluttering flame, and the combustion chamber (4) ends up in an echo chamber (7) arranged in the back section of the furnace, said echo chamber having a sufficient length for producing a sound when the combustion gases gener-

ated by the fluttering flame of the burner (6) impinge on the back end (3) of the furnace, the front wall (9) of said echo chamber (7) being provided with outlets for a first tube set (5a) which ends up in a reversing chamber (10) arranged in front of the front end (2) of the furnace, the back wall (15) of said reversing chamber being provided with outlets for a second tube set (5b) arranged parallelly to the first tube set (5a), said second tube set ending up in a second echo chamber (11) arranged in the back section of the furnace, in which second echo chamber the sound produced by the vibrating combustion gas flow reaches a level capable of loosening and discharging ash and soot from all surfaces of the furnace. (Fig. 3)

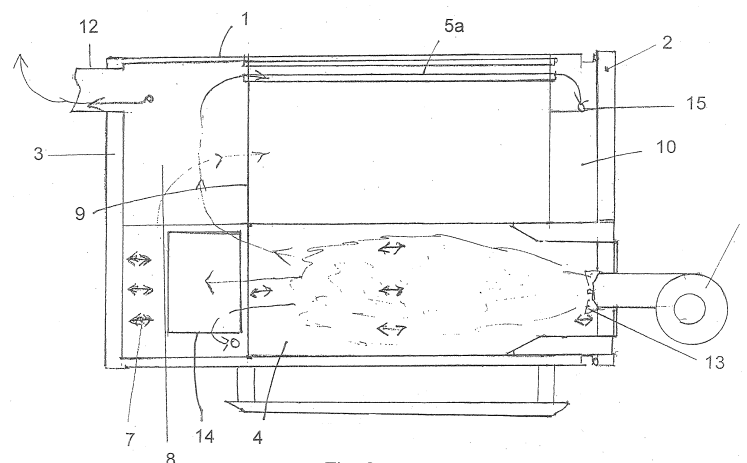


Fig. 3



EUROPEAN SEARCH REPORT

Application Number
EP 10 39 7518

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			F23J F23C F23R F23M F28G
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 22 October 2014	Examiner Hauck, Gunther
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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