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(54) **Vertical burner for a domestic heating apparatus**

(57) A vertical burner (10) for a domestic heating apparatus (12) fed by granular biomass fuel such as pellets, olive pulp, maize and suchlike, comprises a support frame (13) inside which a combustion unit (11) is installed, having inside it a combustion chamber (25). The combustion unit (11) comprises an internal conveyor body (26) which delimits the combustion chamber (25) inside it and, outside it, a containing chamber (22) for the comburent air, wherein the internal conveyor body (26) is made of material with low heat conductivity and high

resistance to temperature, able to maintain, in normal use, the internal temperature of the chamber (25) at a determinate combustion temperature. The internal conveyor body (26) is shaped so as to vertically define one or more parts (28, 30, 32) of the chamber (25), which are shaped with cross sections having predetermined and different geometry so as to determine an ascent of the combustion fumes upward at a determinate speed of out-flow, so that they have adequate time to remain in the chamber (25) in order to allow a substantial complete combustion.

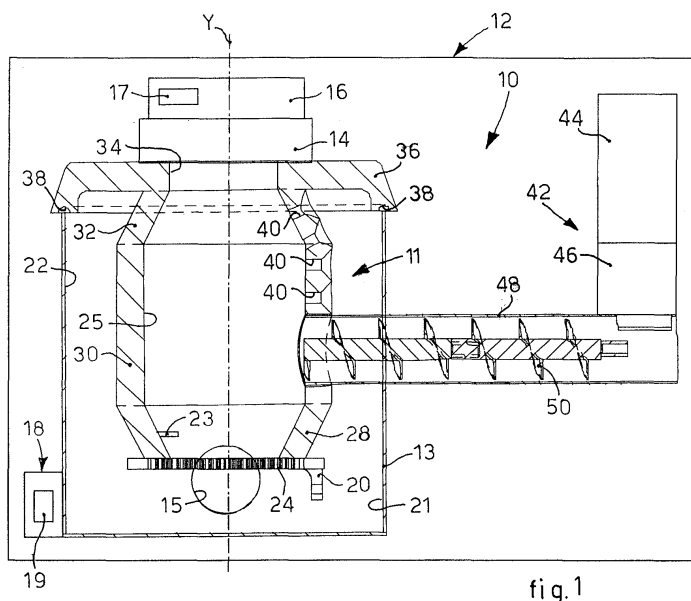


fig.1



EUROPEAN SEARCH REPORT

Application Number
EP 09 15 1181

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 6 April 2010	Examiner Coli, Enrico
CATEGORY OF CITED DOCUMENTS 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 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			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82