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02.09.92 Bulletin 92/36(71) Applicant: **MERLONI TERMOSANITARI S.p.A.
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I-00187 Roma(IT)**(54) **Wall-mounted gas boiler with premixing burner, particularly for domestic use.**

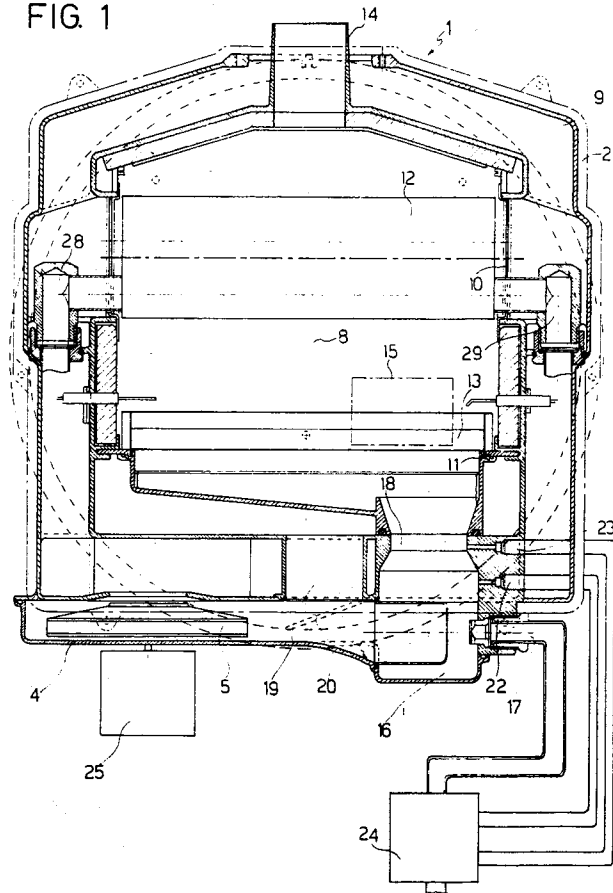
(57) This invention relates to a wall-mounted gas boiler, particularly useful for domestic employment, of the type comprising a pre-mix burner (13), a heat exchanger (12), a circuit (8) for allowing the combustion air to circulate, means (5) for causing said air to circulate, a chamber (18) for mixing air with the gas, in which chamber an opening (19) is provided, upstream of said mixing chamber (18) in the circuit (8) for the circulation of air, said opening being closed by valve means (20) and allowing the dilution air to flow towards the openings (21) without becoming mixed with the gas at the point corresponding to the mixing chamber (18), means (22, 23 and 24) being provided for changing the amount of gas introduced in proportion to the flowrate of the air flowing through

the same.

The boiler according to this invention can also be provided with a single-piece container (2) having a pressurized inner chamber (9), inside which both the burner (13) and the heat exchanger (12) are arranged, and an outer depressurized chamber (8) through which the air sucked in by the fan (5) flows, the outflow of smokes from the inner chamber (9) and the inflow of air into the outer chamber (8) occurring through an upper coaxial pipe (14); a closure member (3) of the container, said member being provided with a double seal for closing both the inner chamber (9) and the outer chamber (8) tightly; and a lower Archimedean screw (4) inside which the fan (5) is housed.

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FIG. 1





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EUROPEAN SEARCH REPORT

Application Number

EP 91 83 0573

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X	EP-A-0 320 072 (FASTO B.V.) * The whole document *	1,4	F 24 H 9/00
Y	---	6,7,8	F 24 H 1/40
Y	PATENT ABSTRACTS OF JAPAN, vol. 7, no. 183(M-235), 12th August 1983; & JP-A-58 085 016 (MATSUSHITA DENKI SANGYO K.K.) 21-05-1983 * Abstract *	6	F 24 H 9/14
Y	---		F 28 F 1/32
Y	FR-A-2 320 505 (LECOMTE) * Figure 1 *	7	
Y	---		
Y	PATENT ABSTRACTS OF JAPAN, vol. 7, no. 215 (M-244)(1360), 22nd September 1983; & JP-A-58 108 394 (HITACHI SEISAKUSHO K.K.) 28-06-1983 * Abstract *	8	
A	---		
A	FR-A-2 464 437 (NEFIT NV) * Claims 1,4; figure 3 *	2	
A	---		
A	NL-A-8 000 460 (LEENAARS) * Figures *	2	TECHNICAL FIELDS SEARCHED (Int. Cl.5)
A	---		F 24 H
A	NL-A-8 403 236 (DURIEUX) * Figures *	2	F 28 F

The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 17-06-1992	Examiner VAN GESTEL H.M.
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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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ All claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid,
namely claims:
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions,
namely:

see sheet -B-

- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid,
namely claims:
- ☐ None of the further search fees has been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims,
namely claims:



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LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions,

namely:

1. Claims : 1,4-11 : Gas boiler having means for mixing bringing air into the combustion chamber for lowering the dewpoint of the combustion gases.
2. Claims : 2,3-11 : Gas boiler having a double wall housing building a pressurized combustion chamber and a depressurized outer chamber for air intake.