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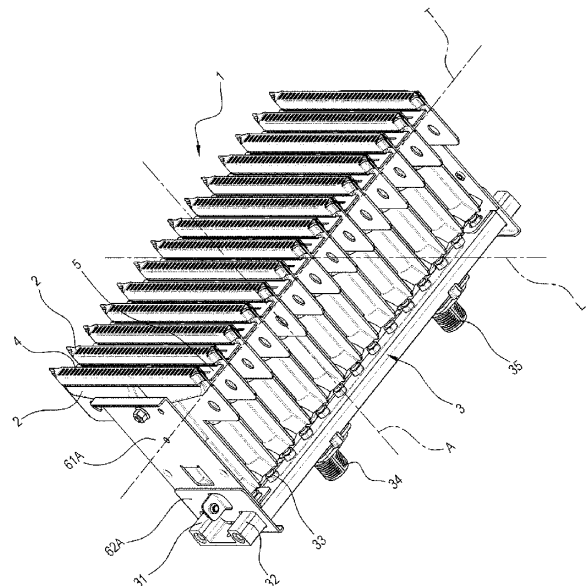
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(54) **GAS BURNER**

(57) An air-cooled gas burner (1) comprises: a plurality of ramp-like elements (2), each of which includes a first and a second intake duct (21, 22), having a respective inlet (21A, 22A) and a respective outlet (21B, 22B), wherein the plurality of ramp-like elements (2) are disposed in succession along a transverse direction (T); a manifold (3), configured to feed the gas to the inlets of the first and second intake ducts (21, 22), wherein the first and second intake ducts (21, 22) are configured to suck the gas and primary air into their respective inlets (21A, 22A) by the Venturi effect; for each ramp-like elements (2), a respective diffuser (4), defining a plurality of holes (40) from which a flame is generated by combustion of the gas coming from the first and the second intake duct (21, 22).





EUROPEAN SEARCH REPORT

Application Number

EP 21 19 9047

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	DE 42 07 814 A1 (VAILLANT JOH GMBH & CO [DE]) 17 September 1992 (1992-09-17) * column 1, line 3 - line 28; figures 10-15 * * column 5, line 13 - line 28 * * column 6, line 27 - line 61 * * column 9, line 28 - column 10, line 19 * * column 10, line 26 - line 67 * -----	1, 6-9, 11-14	INV. F23D14/04 F23D14/64
X	EP 1 201 990 A1 (BOSCH GMBH ROBERT [DE]) 2 May 2002 (2002-05-02)	1, 6-9, 11-14	
Y	* paragraphs [0001], [0002]; figures 1-7 * * paragraph [0007] - paragraph [0010] * -----	2, 3, 5, 15	
Y	DE 33 38 126 A1 (BOSCH GMBH ROBERT [DE]) 2 May 1985 (1985-05-02)	2, 3, 5, 15	
A	* page 3, line 2 - line 8; figures 1-3 * * page 4, line 17 - page 5, line 4 * * page 5, line 13 - line 17 * * page 6, line 15 - line 21 * * page 7, line 1 - page 9, line 2 * * page 9, line 18 - page 10, line 6 * -----	4	
			TECHNICAL FIELDS SEARCHED (IPC)
			F23D
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
Munich		2 February 2022	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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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements 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.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ 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 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 invention first mentioned in the claims, namely claims:

1-9, 11, 13-15 (completely); 12 (partially)

☐ The present supplementary 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 (Rule 164 (1) EPC).



LACK OF UNITY OF INVENTION SHEET B

Application Number

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

1. claims: 1-9, 11, 13-15 (completely); 12 (partially)

An air-cooled gas burner comprising a plurality of side by side ramp-like elements each having two venturi intake ducts with respective inlets and fuel gas ejectors and an outlet. Each of the plurality of ramp-like elements comprises a diffuser disposed at the outlet, the diffuser defines a plurality of flame generating holes arranged in a longitudinally extending manner and thereby defining a length.

A plate defining an opening for secondary air is positioned between a pair of the ramp-like elements; the opening has a longitudinal extension which is at least equal to the length.

2. claim: 10

An air-cooled gas burner comprising a plurality of side by side ramp-like elements each having two venturi intake ducts with respective inlets and fuel gas ejectors and an outlet. Each of the plurality of ramp-like elements comprises a diffuser disposed at the outlet, the diffuser defines a plurality of flame generating holes arranged in a longitudinally extending manner and thereby defining a length.

The diffuser is supported by a first and second upper end of the ramp like element, the ends being opposite to each other in a longitudinal direction.

3. claim: 12 (partially)

An air-cooled gas burner comprising a plurality of side by side ramp-like elements each having two venturi intake ducts with respective inlets and fuel gas ejectors and an outlet. Each of the plurality of ramp-like elements comprises a diffuser disposed at the outlet, the diffuser defines a plurality of flame generating holes arranged in a longitudinally extending manner and thereby defining a length.

The plurality of ramp-like elements have a common outlet.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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02-02-2022

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 4207814 A1	17-09-1992	NONE	
EP 1201990 A1	02-05-2002	DE 10053877 A1	16-05-2002
		EP 1201990 A1	02-05-2002
DE 3338126 A1	02-05-1985	NONE	

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