



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**23.03.2022 Bulletin 2022/12**

(51) International Patent Classification (IPC):  
**F23J 11/00** <sup>(2006.01)</sup> **F23L 17/04** <sup>(2006.01)</sup>  
**F23L 17/16** <sup>(2006.01)</sup> **F23L 17/00** <sup>(2006.01)</sup>

(43) Date of publication A2:  
**05.01.2022 Bulletin 2022/01**

(52) Cooperative Patent Classification (CPC):  
**F23J 11/00; F23L 17/005; F23L 17/04;**  
**F23J 2211/101; F23J 2900/13004**

(21) Application number: **21183502.0**

(22) Date of filing: **02.07.2021**

(84) Designated Contracting States:  
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR**  
Designated Extension States:  
**BA ME**  
Designated Validation States:  
**KH MA MD TN**

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(30) Priority: **03.07.2020 BE 202005494**

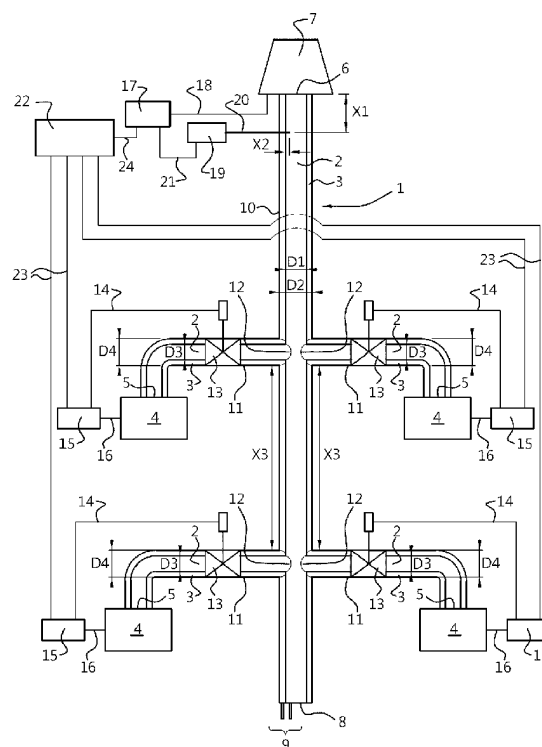
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(54) **DEVICE FOR AIR SUPPLY AND FLUE GAS DRAIN FOR GAS FIREPLACES**

(57) The invention relates to an air supply and flue gas exhaust device for closed-type gas fires (4), comprising a pipe system (1) comprising at least an inner first pipe (2) for flue gas exhaust and an outer second pipe (3) for air supply, wherein the pipe system (1) on the one hand ends in one or more coupling ends (5) for coupling with said gas fires (4) and on the other hand ends in one flue end (6), wherein, in use of the device, a fan (7) for forced discharge of flue gas from the first pipe (2) is placed on said flue end (6).

The invention further relates to a method for air supply to and flue gas exhaust from one or more closed-type gas fires (4) in a building, in particular in an apartment building. In addition, the invention relates to a system comprising one or more closed-type gas fires (4) and a device for air supply and flue gas exhaust, a kit and specific uses.

Fig. 1





## EUROPEAN SEARCH REPORT

Application Number

EP 21 18 3502

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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	EP 2 489 936 A2 (DRU VERWARMING B V [NL]) 22 August 2012 (2012-08-22)	1-3, 9, 11-16	INV. F23J11/00
Y	* paragraph [0003]; figure 1 * * paragraph [0007] - paragraph [0009] * * paragraph [0018] - paragraph [0019] *	4, 5	F23L17/04 F23L17/16 F23L17/00
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Y	US 5 418 438 A (HOLLENBECK ROBERT K [US]) 23 May 1995 (1995-05-23)	4, 5	
A	* column 1, line 54 - column 2, line 57 *	6, 11, 12	
A	GB 2 381 062 A (CARTWRIGHT SIMON GUY SOMERSET [GB]) 23 April 2003 (2003-04-23) * page 1, line 4 - line 6; figures 1, 2 * * page 8, line 24 - line 28 *	2, 4-6	
A	EP 2 469 166 A1 (OPSINOX [BE]) 27 June 2012 (2012-06-27) * the whole document *	1, 11-16	TECHNICAL FIELDS SEARCHED (IPC) F23J F23L
The present search report has been drawn up for all claims			

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EPO FORM 1503 03.82 (P04C01)

Place of search

Munich

Date of completion of the search

9 November 2021

Examiner

Hauck, Gunther

## 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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EP 21 18 3502

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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:

**1-6, 9, 11-16**

☐ 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

EP 21 18 3502

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: 1-6, 9, 11-16**

Device of the balanced flue gas duct type having a central exhaust and an annular air passage:  
an exhaust fan is connected to the outlet at the duct's top;  
the other outlet end is configured to be connected to a gas furnace.  
a pressure control system (preferably comprising a pressure sensor placed into the exhaust duct) is connected to the fan.

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## **2. claims: 7, 8**

Device of the balanced flue gas duct type having a central exhaust and an annular air passage:  
an exhaust fan is connected to the outlet at the duct's top;  
the other outlet end is configured to be connected to a gas furnace.  
Concentric exhaust dampers are positioned in the concentric flue gas duct proximate it's end connected to the gas furnace and are configured to close / open the air and exhaust passages.

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## **3. claim: 10**

Device of the balanced flue gas duct type having a central exhaust and an annular air passage:  
an exhaust fan is connected to the outlet at the duct's top;  
the other outlet end is configured to be connected to a gas furnace.  
The flue gas system comprises a lower end having a condensate removal system comprising two drain conduits, one for the exhaust duct and one for the air duct.

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

EP 21 18 3502

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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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EPO FORM P0459

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