



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**27.07.2016 Bulletin 2016/30**

(51) Int Cl.:  
**G08B 3/10 (2006.01)** **G08B 5/36 (2006.01)**  
**G08B 17/10 (2006.01)** **G08B 29/12 (2006.01)**

(43) Date of publication A2:  
**11.05.2016 Bulletin 2016/19**

(21) Application number: **15189646.1**

(22) Date of filing: **13.10.2015**

(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:  
**MA**

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(30) Priority: **14.10.2014 CN 201420594178 U**

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(54) **A SMOKE ALARM**

(57) The invention discloses a smoke alarm, which is in the field of machine design, and the smoke alarm comprises a housing, a button column (8.1), a circuit board (4), a smoke collecting box (5), a buzzer (7) and a tune trope (8); and the circuit board (4), the smoke collecting box (5), the buzzer (7) and the tune trope (8) are arranged inside the housing successively. The circuit board (4) is configured with a button module. The smoke collecting box (5) is configured with a first through-hole. The button column (8.1) is configured slidably inside the first through-hole. One end of the button column (8.1) matches with the button module of the circuit board, and another end of the button column (8.1) is connected with the tune trope (8). The tune trope (8) is configured slidably inside the housing, and the sliding direction of the tune trope (8) is the same as the sliding direction of the button column (8.1). The smoke alarm drives one end of the button column (8.1) through the sliding of the tune trope (8) to touch with the button module of the circuit board (4) to emit the button signal. The technical plan of the invention is compact in structure, convenient in use, easy to install and form.

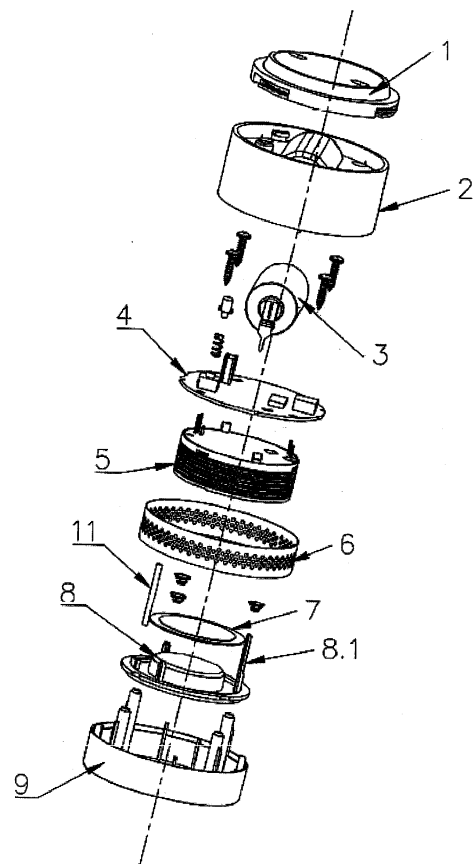


Figure 1



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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 15 June 2016	Examiner Tanguy Michotte
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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The present search report has been drawn up for all claims			
Place of search <b>The Hague</b>		Date of completion of the search <b>15 June 2016</b>	Examiner <b>Tanguy Michotte</b>
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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Application Number

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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:

☐ 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: 2-6, 9, 10(completely); 1(partially)

Smoke alarm with movable sound chamber for actuating a hush/test button, with particular constructional features, an annular mesh enclosure and/or specific battery arrangements.

1.1. claims: 5, 6(completely); 1(partially)

Smoke alarm with movable sound chamber for actuating a hush/test button, with an annular mesh enclosure.

1.2. claims: 9, 10(completely); 1(partially)

Smoke alarm with movable sound chamber for actuating a hush/test button, with specific battery arrangements.

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2. claims: 7, 8(completely); 1(partially)

Smoke alarm with movable sound chamber for actuating a hush/test button, with a light pipe for signalling.

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Please note that all inventions mentioned under item 1, although not necessarily linked by a common inventive concept, could be searched without effort justifying an additional fee.

**ANNEX TO THE EUROPEAN SEARCH REPORT  
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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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