

Title (en)  
HORN DEVICE

Title (de)  
HORNVORRICHTUNG

Title (fr)  
DISPOSITIF AVERTISSEUR SONORE

Publication  
**EP 3696808 A4 20210630 (EN)**

Application  
**EP 18865859 A 20180828**

Priority  
• JP 2017196520 A 20171010  
• JP 2018031827 W 20180828

Abstract (en)  
[origin: EP3696808A1] A controller for controlling the energization of a coil 44 is constituted by an IC chip 51 that serves as a single package component in which a plurality of electronic components is sealed with a sealing material. As a result thereof, a horn device 10 which can meet the needs of productivity improvement, cost reduction, and a reduction in size and weight, while allowing improvements in reliability without the need for a control circuit board can be achieved. The IC chip 51 itself controls the energization of the coil 44, that is, the IC chip vibrates a diaphragm 22, thereby also allowing elimination of contacts. Consequently, the horn device suppresses generation of abrasion powders or the like due to contact with the contacts, and thus prevents malfunction of the IC chip 51, thereby improving reliability.

IPC 8 full level  
**G10K 9/13** (2006.01)

CPC (source: EP)  
**G10K 9/13** (2013.01)

Citation (search report)  
• [YA] WO 9321613 A1 19931028 - SPARTON CORP [US]  
• [Y] JP S61210399 A 19860918 - MITSUBA ELECTRIC MFG CO  
• [YA] WO 9315500 A1 19930805 - SPARTON CORP [US]  
• [A] JP 2008298823 A 20081211 - HAMANAKO DENSO CO LTD  
• See references of WO 2019073711A1

Designated contracting state (EPC)  
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

DOCDB simple family (publication)  
**EP 3696808 A1 20200819; EP 3696808 A4 20210630**; JP 6914347 B2 20210804; JP WO2019073711 A1 20200827;  
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