

Title (en)  
Surroundless piston-driven vibrating speaker

Title (de)  
Randringloser Kolbenlautsprecher

Title (fr)  
Haut-parleur à vibration de piston sans anneau de suspension

Publication  
**EP 1458215 A3 20080312 (EN)**

Application  
**EP 04003091 A 20040212**

Priority  
CN 03223604 U 20030217

Abstract (en)  
[origin: EP1458215A2] Disclosed is a surroundless piston-driven vibrating speaker, the main structure of which is composed of an improved vibrating system, a supporting system and an external magnet system. The forementioned vibrating system comprises a voice cone, a voice coil and a central damper. The forementioned supporting system comprises a shell frame 1 with air holes, a floating locating damper 6, a sound absorption cotton material 8, a damper fixing ring and a dust preventing cover 13. The forementioned external magnet system comprises a ferrite core, an upper plate and a T-yoke.

IPC 8 full level  
**H04R 7/20** (2006.01); **H04R 7/18** (2006.01)

CPC (source: EP)  
**H04R 7/20** (2013.01); **H04R 9/02** (2013.01); **H04R 1/20** (2013.01); **H04R 2201/34** (2013.01); **H04R 2400/11** (2013.01)

Citation (search report)

- [Y] US 6219432 B1 20010417 - FRYER PETER ALEXANDER [GB], et al
- [Y] US 2084945 A 19370622 - CORNWELL LIONEL B
- [Y] US 2238741 A 19410415 - HANS LAUFFER
- [Y] US 4829582 A 19890509 - HEUVINCK LEO A K [BE]

Cited by  
CN113747285A

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

Designated extension state (EPC)  
AL LT LV MK

DOCDB simple family (publication)  
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