

Title (en)  
TUNING APPARATUS FOR A RADIO FREQUENCY POWER DEVICE.

Title (de)  
ABSTIMMGERÄT FÜR EINE HOCHFREQUENTE LEISTUNGSEINRICHTUNG.

Title (fr)  
DISPOSITIF D'ACCORD POUR APPAREIL DE PUISSANCE A HAUTE FREQUENCE.

Publication  
**EP 0160094 A4 19880616 (EN)**

Application  
**EP 85900516 A 19841102**

Priority  
US 54820383 A 19831102

Abstract (en)  
[origin: WO8502071A1] A tuning assembly (42) for selectively oscillating the frequency of an electromagnetic field within a hermetically sealed device (12), which device includes a rigid, hermetically sealed housing (14), apparatus for generating the electromagnetic field therewithin (32, 34 and 36), for elements for defining a cavity (30) within the housing for establishing the frequency of the electromagnetic field. The tuning assembly (42) includes electrically conductive members (54) mounted for linear movement within the cavity (30) to selectively vary the volume of the cavity (30) to oscillate the established frequency. Elements (52) disposed within the rigid housing (14) are provided for mounting the electrically conductive members (54), and are adapted for oscillatory movement at a predetermined mechanical resonant frequency to move the electrically conductive members (54) in the described linear manner. The tuning assembly (42) incorporates an electron emitter assembly having a highly efficient cathode assembly (24, 102) arranged in the form of a helical spring (102), the cathode assembly (24, 102) being composed of porous tungsten impregnated by an electronemissive material and being directly heated by an electric current (at 108). Finally, a power source (108) is provided exterior to the rigid housing (14) and is magnetically coupled to the mounting elements (44) for exciting the mounting of elements (44).

IPC 1-7  
**H03B 9/10; H01J 1/14; H01J 1/15**

IPC 8 full level  
**H01J 23/213** (2006.01); **H03B 9/10** (2006.01)

CPC (source: EP)  
**H01J 23/213** (2013.01)

Citation (search report)  
• US 4331935 A 19820525 - THORNBUR GEOFFREY  
• See references of WO 8502071A1

Designated contracting state (EPC)  
DE FR GB

DOCDB simple family (publication)  
**WO 8502071 A1 19850509**; EP 0160094 A1 19851106; EP 0160094 A4 19880616; JP S61500290 A 19860220

DOCDB simple family (application)  
**US 8401798 W 19841102**; EP 85900516 A 19841102; JP 50070985 A 19841102