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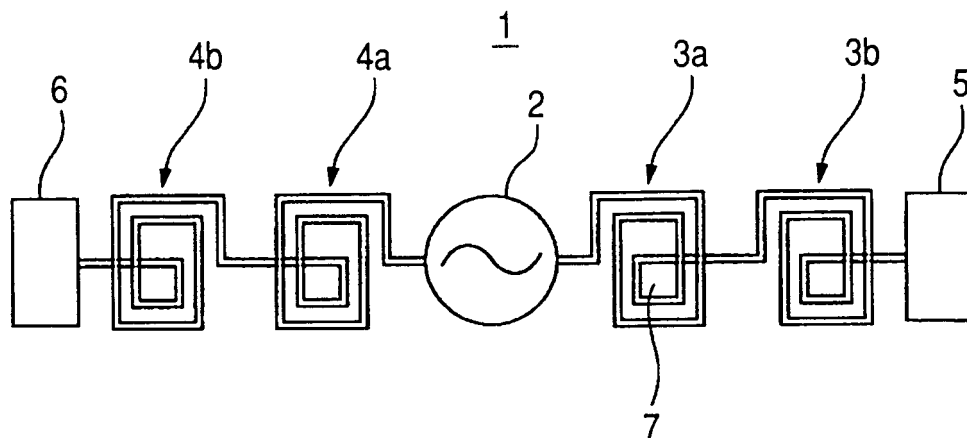
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(54) **Antenna device**

(57) Provided is a dipole or monopole antenna device capable of realizing great miniaturization. In a dipole antenna device 1, a plurality of flat coils 3a and 3b, and 4a and 4b are connected in which conductors forms closed areas in the plan view in a magnetic field area in the vicinity of a power supply portion 2. Capacitors 5 and 6

as radiation conductors are connected to both ends of the antenna device 1, respectively. Resonant current radiation is performed from the capacitors 5 and 6 at the antenna ends, and magnetic field radiation is performed from flat foils 3a and 3b, and 4a and 4b in the vicinity of the power supply portion 2.

FIG. 1A





EUROPEAN SEARCH REPORT

Application Number
EP 08 01 6951

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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X	JP H11 46109 A (DENSO CORP) 16 February 1999 (1999-02-16) * the whole document *	1-3,5	H01Q1/24 H01Q9/16 H01Q1/36
X	JP S59 140508 U (NA) 19 September 1984 (1984-09-19) * the whole document *	1-3,5	
X	JP H04 103711 U (NA) 7 September 1992 (1992-09-07) * the whole document *	1-3,5	
X	EP 1 176 664 A2 (FURUKAWA ELECTRIC CO LTD [JP]; SONY CORP [JP]) 30 January 2002 (2002-01-30) * the whole document *	1-5	
			TECHNICAL FIELDS SEARCHED (IPC)
			H01Q
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		17 January 2014	Fredj, Aziz
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:

1-5

☐ 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 08 01 6951

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: 1-5

Flat coil on a folded film substrate

2. claim: 6

Tuning of the resonance frequency of a monopole/Dipole antenna

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

EP 08 01 6951

5

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