



⑫

EUROPEAN PATENT APPLICATION

⑳ Application number : **90402997.2**

⑤① Int. Cl.⁵ : **H01Q 5/02, H01Q 1/10,
H01Q 1/32, H01Q 1/02**

㉔ Date of filing : **24.10.90**

③① Priority : **30.12.89 KR 2100789 U**
30.04.90 KR 563390 U
11.08.90 KR 1215890 U

④③ Date of publication of application :
10.07.91 Bulletin 91/28

⑧④ Designated Contracting States :
DE FR GB IT SE

⑧⑧ Date of deferred publication of search report :
04.12.91 Bulletin 91/49

⑦① Applicant : **Choi, Kue-Tek**
1-205, 2-Dangi, Saegyeong Apt., Gaeun-dong
Wonju-shi, Gangwon-do (KR)
Applicant : **Choi, Kue-Byoung**
51 Park Lane
Trumbull, Conn. 06611 (US)

⑦② Inventor : **Choi, Kue-Tek**
1-205, 2-Dangi, Saegyeong Apt. Gaeun-dong
Wonju-shi, Gangwon-do (KR)

⑦④ Representative : **Ballot, Paul Denis Jacques et**
al
Cabinet Ballot-Schmit 7, rue le Sueur
F-75116 Paris (FR)

⑤④ **Automobile antenna.**

⑤⑦ An automobile antenna is disclosed which includes : a radio antenna rod for receiving the radio signals ; a car phone antenna for transmitting and receiving the car phone signals ; and an antenna storing tube for storing said radio antenna rod and said car phone antenna. The combination of the above three components forms a single antenna unit, and this antenna unit is extendable to the outside of the car body during a use, while it is hidable during a non-use. Further, there is provided a wire winding unit which is installed on the lower end portion of the antenna storing tube. Owing to this wire winding unit, the antenna unit can be extended and contracted, and the single antenna unit serves for both the car radio and the car phone.

FIG. 1

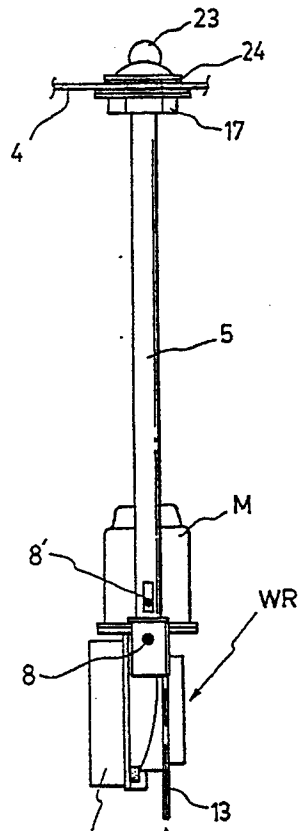
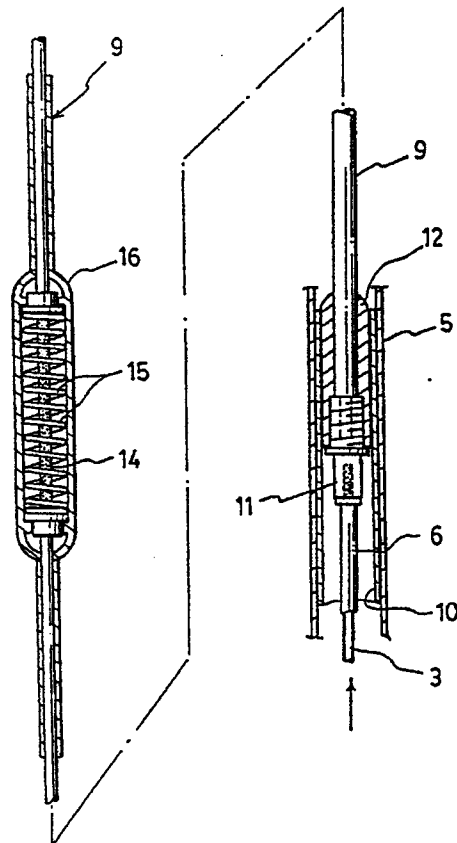


FIG. 5





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number

EP 90 40 2997

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X	US-A-4 748 450 (HINES ET AL.) * column 2, line 40 - column 4, line 2; figure 1 * * column 5, line 27 - column 6, line 4; figure 4 * ---	1-3	H01Q5/02 H01Q1/10 H01Q1/32 H01Q1/02
X	PATENT ABSTRACTS OF JAPAN vol. 13, no. 298 (E-784)(3646) July 10, 1989 & JP-A-1 77 205 (NIPPON DENSO) March 23, 1989 * the whole document * ---	1-3	
A	US-A-2 717 957 (OHLHEISER) * column 2, line 32 - line 53 * ---	1,7	
A	US-A-2 285 588 (KIRKES) * the whole document * ---	1,7	
A	US-A-4 660 049 (SHINKAWA) * claim 1; figures 3,4 * -----	1,9	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			H01Q
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 04 OCTOBER 1991	Examiner ANGRABEIT
CATEGORY OF CITED DOCUMENTS		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 I : document cited for other reasons & : member of the same patent family, corresponding document	
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			

EPO FORM 1503 03.82 (P/001)