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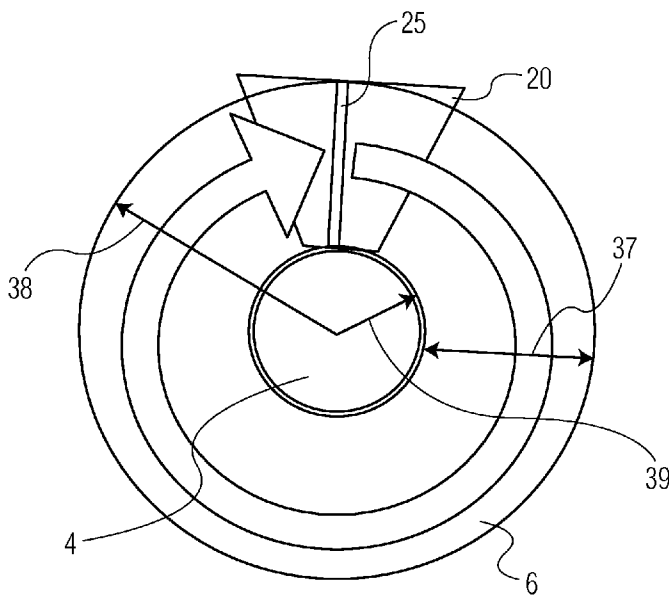
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[Continued on next page]

(54) Title: CIRCULAR DISPLAYS



(57) Abstract: A rollable circular display device (10) is disclosed, comprising, in one embodiment, a ring-shaped display (6) expandable in two dimensions between a stored configuration and an expanded configuration and a body for winding the ring-shaped display in the stored configuration. In another embodiment, the rollable circular display device (10) comprises a housing (20), a circular display (6) expandable in two dimensions between a stored configuration in which the circular display (6) is stored within the housing (20) and an expanded configuration in which the circular display is fully viewable, and an inner cone, being arranged co-axially within the housing (20) and rotatable within the housing, wherein the circular display (6) is wound around the inner cone in the stored configuration.



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- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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## INTERNATIONAL SEARCH REPORT

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## A. CLASSIFICATION OF SUBJECT MATTER

INV. G02F1/13 G02F1/1333 G09F9/30

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, INSPEC, COMPENDEX, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2005/114309 A1 (KONINKL PHILIPS ELECTRONICS NV [NL]; PHILIPS CORP [US]; LAFARRE RAYMON) 1 December 2005 (2005-12-01) figures 1,2	1,4
A	*idem*	2,19
X	WO 2005/015302 A (KONINKL PHILIPS ELECTRONICS NV [NL]; OVERWIJK MARK H F [NL]; DE ZWART) 17 February 2005 (2005-02-17)	1,4,18
A	abstract; figures 1,2	2,19
X	JP 11 272205 A (TOKYO SHIBAURA ELECTRIC CO) 8 October 1999 (1999-10-08)	1,4
A	abstract; figures 1-6	2,19

 Further documents are listed in the continuation of Box C. See patent family annex.

## \* Special categories of cited documents :

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2005114309 A1	01-12-2005	CN 1973240 A EP 1754100 A1	30-05-2007 21-02-2007
WO 2005015302 A	17-02-2005	CN 1833194 A JP 2007501954 T KR 20060070535 A	13-09-2006 01-02-2007 23-06-2006
JP 11272205 A	08-10-1999	NONE	