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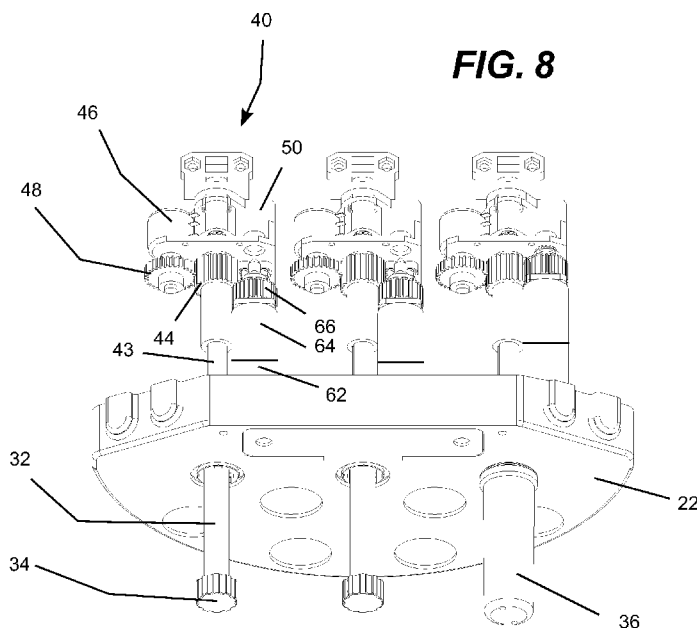
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))
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[Continued on next page]

(54) Title: REMOTE ELECTRICAL TILT ANTENNA WITH MOTOR AND CLUTCH ASSEMBLY



(57) Abstract: RET antenna with motor and clutch assembly that is operative to mechanically disengage the DC motor and drive unit (also called the gear-motor unit) from the phase shifter adjustment shaft during a manual tilt operation. Disengaging the gear-motor unit removes the drag of the motor and the high gear ratio gear box from the phase shifter control rod making it easier to manually turn the phase shifter control knob. In addition, the clutch disengages the gear-motor without disengaging the position detector from the phase shifter control rod so that position calibration is not lost during manual tilt adjustment. When the manual tilt operation is completed, the mechanical tilt clutch enables the gear-motor unit to be reliably re-engaged with the phase shifter control rod for motorized electrical tilt operation without having to re-calibrate the position detector.

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<p>A. CLASSIFICATION OF SUBJECT MATTER                  IPC(8) - H04B 1/38 (2009.01)                  USPC - 455/557                  According to International Patent Classification (IPC) or to both national classification and IPC</p>																										
<p>B. FIELDS SEARCHED</p> <p>Minimum documentation searched (classification system followed by classification symbols)                  IPC(8) - H04B 1/38 (2009.01)                  USPC - 455/557</p> <p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched</p> <p>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)                  Patbase, Google Patent Search</p>																										
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1"> <thead> <tr> <th>Category*</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>Y</td> <td>US 2007/0290935 A1 (FRANZON et al) 20 December 2007 (20.12.2007) entire document</td> <td>1-14</td> </tr> <tr> <td>Y</td> <td>US 5,235,344 A (SHINKAWA et al) 10 August 1993 (10.08.1993) entire document</td> <td>1-14</td> </tr> <tr> <td>Y</td> <td>US 2005/0057427 A1 (WENSINK) 17 March 2005 (17.03.2005) entire document</td> <td>3-12, 15-20</td> </tr> <tr> <td>Y</td> <td>US 6,175,340 B1 (OLDS et al) 16 January 2001 (16.01.2001) entire document</td> <td>13, 14</td> </tr> <tr> <td>Y</td> <td>US 2002/0109047 A1 (DRAISEY) 15 August 2002 (15.08.2002) entire document</td> <td>11, 12, 20</td> </tr> <tr> <td>Y</td> <td>US 2005/0272470 A1 (HURLER et al) 08 December 2005 (08.12.2005) entire document</td> <td>15-20</td> </tr> <tr> <td>Y</td> <td>US 2,361,956 A (MOSELEY) 07 November 1944 (07.11.1944) entire document</td> <td>12, 20</td> </tr> </tbody> </table>			Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	Y	US 2007/0290935 A1 (FRANZON et al) 20 December 2007 (20.12.2007) entire document	1-14	Y	US 5,235,344 A (SHINKAWA et al) 10 August 1993 (10.08.1993) entire document	1-14	Y	US 2005/0057427 A1 (WENSINK) 17 March 2005 (17.03.2005) entire document	3-12, 15-20	Y	US 6,175,340 B1 (OLDS et al) 16 January 2001 (16.01.2001) entire document	13, 14	Y	US 2002/0109047 A1 (DRAISEY) 15 August 2002 (15.08.2002) entire document	11, 12, 20	Y	US 2005/0272470 A1 (HURLER et al) 08 December 2005 (08.12.2005) entire document	15-20	Y	US 2,361,956 A (MOSELEY) 07 November 1944 (07.11.1944) entire document	12, 20
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