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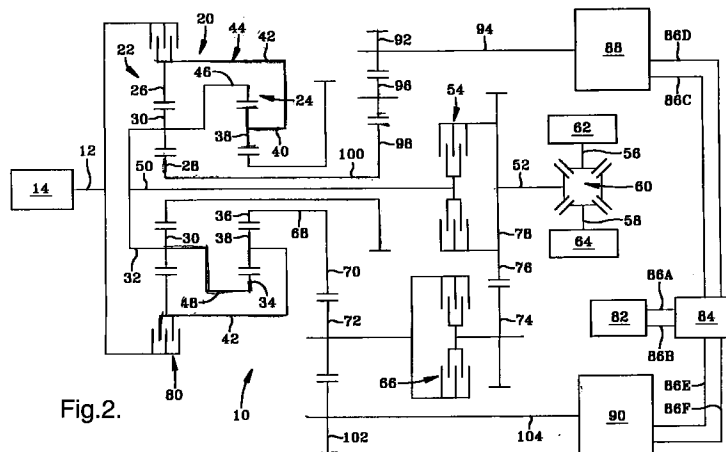
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(54) Hybrid vehicle compound transmission with two electric motors

(57) A compound-split transmission (10) utilizing an input (12) for receiving power from an engine (14). An output (52) is also utilized to deliver power to the wheels of the vehicle. First (88) and second (90) motor/generators are used in conjunction with an energy storage device (82) for accepting power from, and supplying power to, the motor/generators. A control mechanism (84) regulates power flow among the energy storage device and the motor/generators as well as between the motor/generators. A compound gear set (20) having first (22) and second (24) gear subsets is incorporated in the transmission. Each of the gear subsets has an

inner gear member (28,36) and an outer gear member (26,34), each of which engages a plurality of planet gear members (30,38). Mechanical arrangements (92-98), (104-70), (80,54) are utilized operatively to connect: (1) the first motor/generator to at least one of the gear members in the compound gear set; (2) the second motor/generator to at least one of the other of the gear members in the compound gear set; (3) the input to at least one of the remaining gear members in the compound gear set; and, (4) at least one of the gear members in the compound gear set to the power output.





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EUROPEAN SEARCH REPORT

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| DOCUMENTS CONSIDERED TO BE RELEVANT | | | |
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| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (Int.Cl.6) |
| Y A | US 3 699 351 A (ADDIE ALBERT N) * claim 2; figure 1 * --- | 1-16 9,10 | B60K6/04 F16H3/72 F16H37/08 |
| Y A | US 3 623 568 A (MORI YOICHI) * claim 1; figures 1,10-13,17-28 * --- | 1-16 9-16 | |
| A | US 4 825 721 A (GABRIELE DARCY) * figures 3-31 * --- | 1,2,5-8, 10-13, 15,16 | |
| A | US 4 335 429 A (KAWAKATSU SHIRO) * claim 8; figure 3 * --- | 1,9,14 | |
| A | GB 541 105 A (LIEBRECHT) * figures 1,3 * --- | 1 | |
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| A | AU 58401 73 A (STEPHEN JOHN ELLIOTT) * page 4, line 8 - line 20; figure 15 * ----- | 1 | TECHNICAL FIELDS SEARCHED (Int.Cl.6) B60K F16H H02K |
| The present search report has been drawn up for all claims | | | |
| Place of search THE HAGUE | | Date of completion of the search 14 April 1998 | Examiner Bufacchi, B |
| 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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