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(54) **HYBRID DRIVETRAIN AND METHOD OF OPERATION THEREOF**

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(58) **Field of Classification Search**

None

See application file for complete search history.

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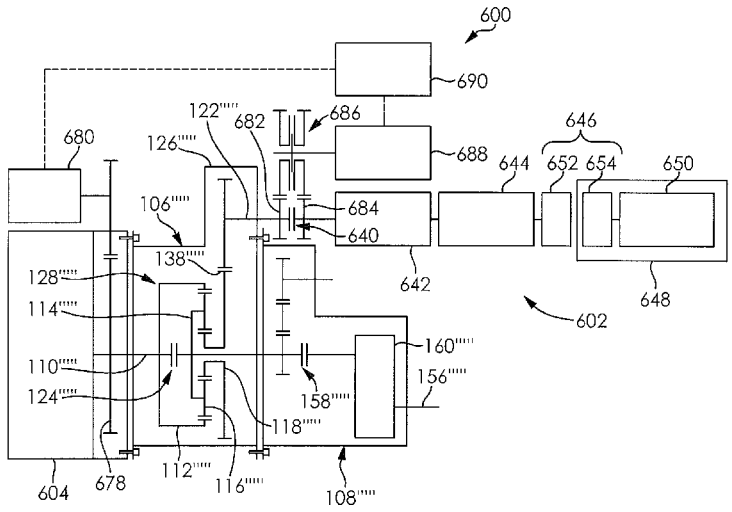
(57) **ABSTRACT**

A driveline for a vehicle is provided. The driveline includes a power source, a planetary gearset, a lockout clutch, a transmission, and a kinetic energy recovery system. The planetary gearset includes a sun gear, a carrier having a plurality of planet gears rotatably disposed thereon, and a ring gear. The power source is in driving engagement with a portion of the planetary gearset. The lockout clutch is capable of placing the planetary gearset in a locked out condition. The transmission is in driving engagement with another portion of the planetary gearset. The kinetic energy recovery system includes an accessory clutch and a flywheel. The accessory clutch facilitates driving engagement between the flywheel and another portion of the planetary gearset. The lockout clutch and the accessory clutch are selectively engaged to facilitate a transfer of energy to and from the transmission and the flywheel.

14 Claims, 7 Drawing Sheets