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(71) Applicant(s):
Splashpower Limited
(Incorporated in the United Kingdom)
St John's Innovation Centre,
Cowley Road, CAMBRIDGE, CB4 0WS,
United Kingdom

(72) Inventor(s):
Michael Craig Stevens
Alexander Charles Knill
John Robert Dunton

(74) Agent and/or Address for Service:
Haseltine Lake & Co
Imperial House, 15-19 Kingsway,
LONDON, WC2B 6UD, United Kingdom

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H2K KSF K206 K360 K42Y K570 K779
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(56) Documents Cited:
EP 0867899 A2 **EP 0357829 A1**
US 4218648 A

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UK CL (Edition W) **H2K**
INT CL⁷ **H02H, H02J**
Other: **EPODOC, WPI, JAPIO**

(54) Abstract Title: **Controlling inductive power transfer systems**

(57) During a measurement period power transfer from primary unit 10, via driver 14 and primary coil 12 to secondary coil 32 of a separable secondary unit 30 is suspended, the decay of resonant energy stored in primary coil 12 is measured by means 12, and controller 16 restricts or stops power transfer depending on the decay measurement. Primary unit 10 is thereby shutdown when secondary unit 30 is not present or when a parasitic load (fig 4, 500) of a foreign object is in the vicinity of coil 12. The measurement may be based on the rate of decay of resonating energy and may involve comparing the decay measured in consecutive measurement periods (fig 7), and may be augmented using a switchable dummy load (fig 4, 40). The inductive power transfer system may be used to re-charge the battery of a portable device (fig 4, 46).

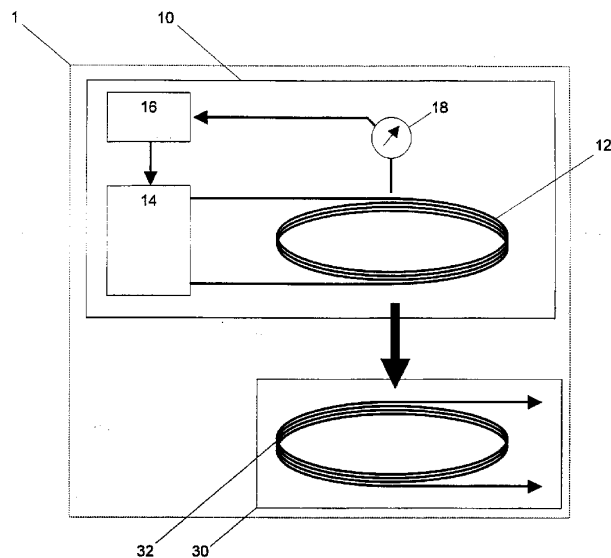


Figure 1

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GB 2 414 120 A

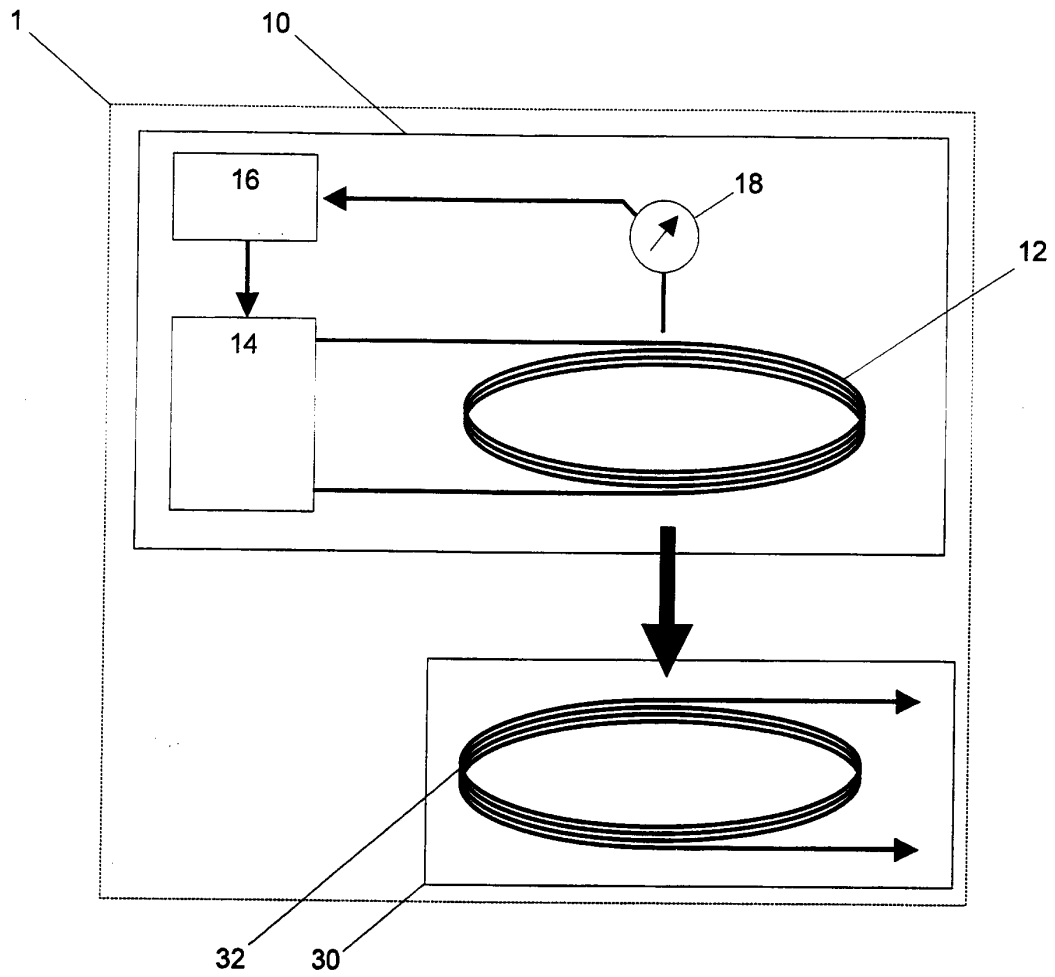


Figure 1

Figure 2(A)

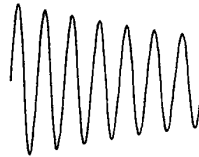
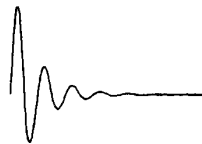


Figure 2(B)



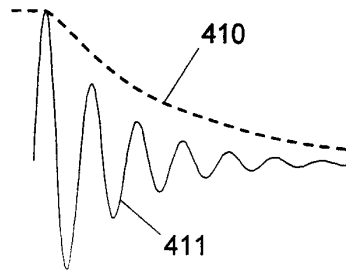


Figure 3

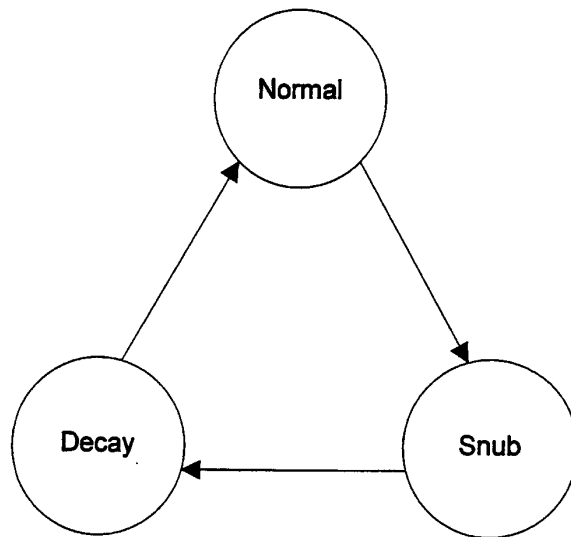


Figure 5

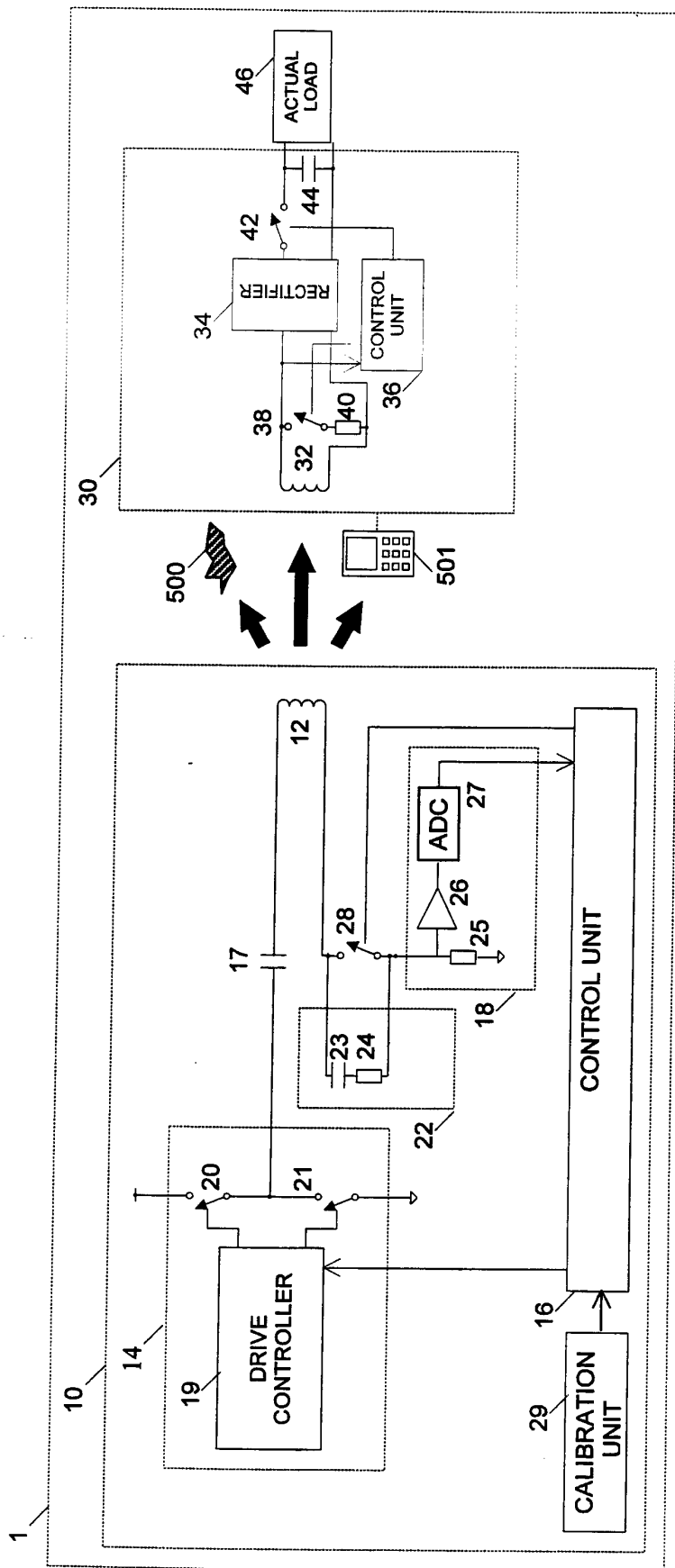


Figure 4

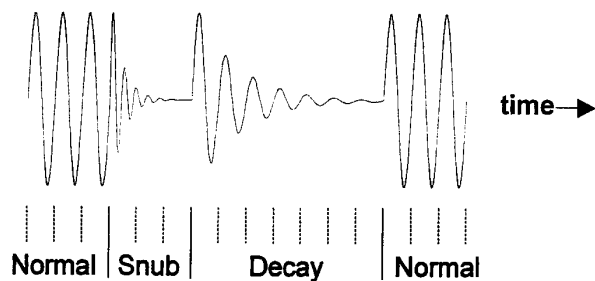


Figure 6



Figure 7

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