



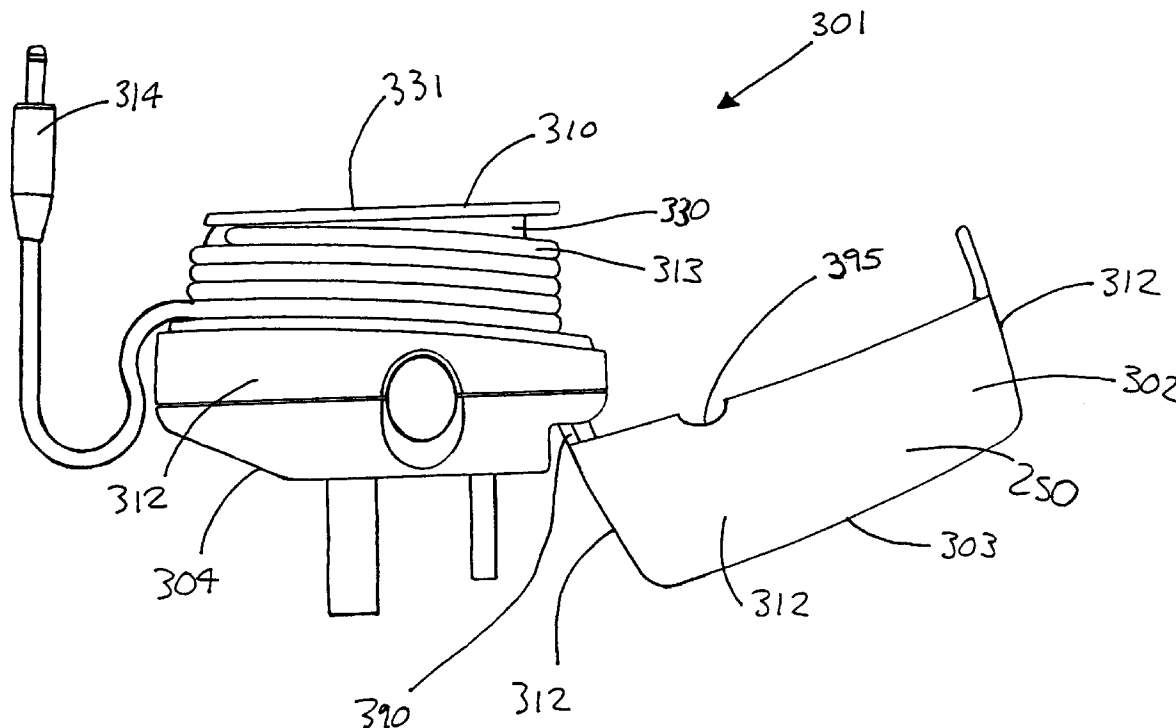
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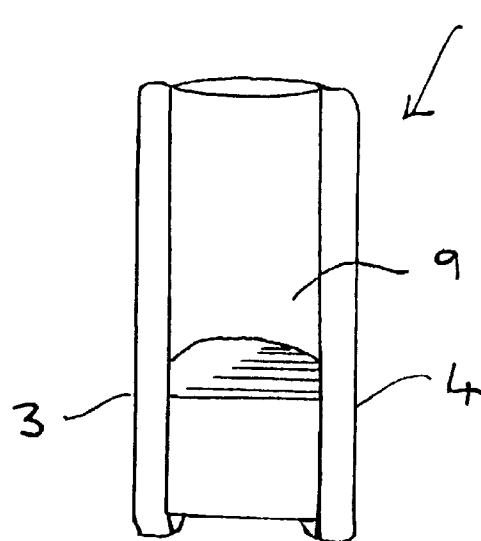
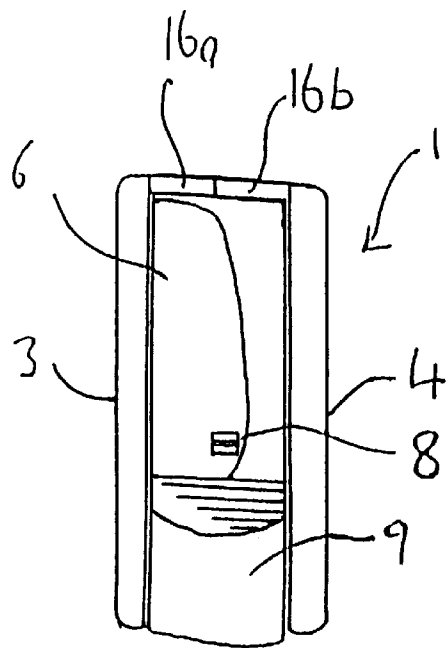
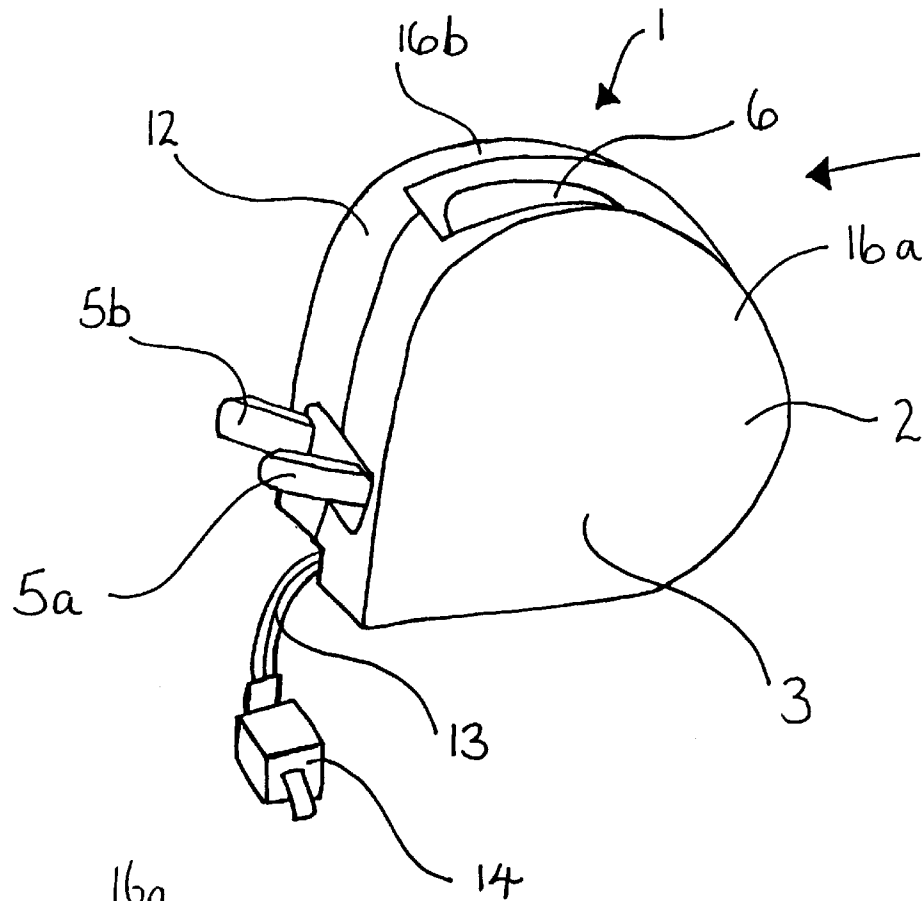
**United States Patent** [19]**Martensson**[11] **Patent Number:** **5,923,146**[45] **Date of Patent:** **Jul. 13, 1999**[54] **BATTERY CHARGING UNIT  
INCORPORATED IN A POWER CORD REEL  
HOUSING**5,358,461 10/1994 Bailey, Jr. .... 482/2  
5,367,243 11/1994 Wells et al. .... 320/105**FOREIGN PATENT DOCUMENTS**[75] Inventor: **Nils Martensson**, Chobham, United Kingdom0 692 849 A1 1/1996 European Pat. Off. .  
0 716 495 A2 6/1996 European Pat. Off. .  
1165608 10/1969 United Kingdom .  
2 095 209 9/1982 United Kingdom .  
2 158 308 11/1985 United Kingdom .[73] Assignee: **IPR Industries, Ltd.**, Farnborough, United Kingdom[21] Appl. No.: **08/946,664**[22] Filed: **Oct. 7, 1997**[30] **Foreign Application Priority Data**

Oct. 30, 1996 [GB] United Kingdom ..... 9622585

[51] **Int. Cl.<sup>6</sup>** ..... **H02J 7/00; H02M 1/00**[52] **U.S. Cl.** ..... **320/111; 320/113; 363/146**[58] **Field of Search** ..... 320/105, 107,  
320/112, 113, 111; 363/144, 146[56] **References Cited****U.S. PATENT DOCUMENTS**3,621,869 11/1971 Albarran ..... 137/234.6  
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4,893,037 1/1990 Schwartz ..... 310/68 R*Primary Examiner*—Peter S. Wong*Assistant Examiner*—Gregory J. Toatley, Jr.*Attorney, Agent, or Firm*—Oliff & Berridge, PLC[57] **ABSTRACT**

The present invention relates to a battery charging unit comprising a housing having a current supply means provided therein for supplying current to an electrical or electronic apparatus located remote from the battery charging unit, coupling means provided on the housing for coupling the current supply means to a mains power supply, means for coupling the remote apparatus to the current supply means, comprising a cable, and a reel provided in the housing for storing the cable in the housing when the battery charging unit is not in use, and allowing the cable to be dispensed when required. This has the advantage that by having a device around which the cable remains wound during storage and from which the cable is simply unwound from the charging unit when it is required eliminates the unsightly and messy bunching of the cable which is a feature of known charging units.

**18 Claims, 11 Drawing Sheets**



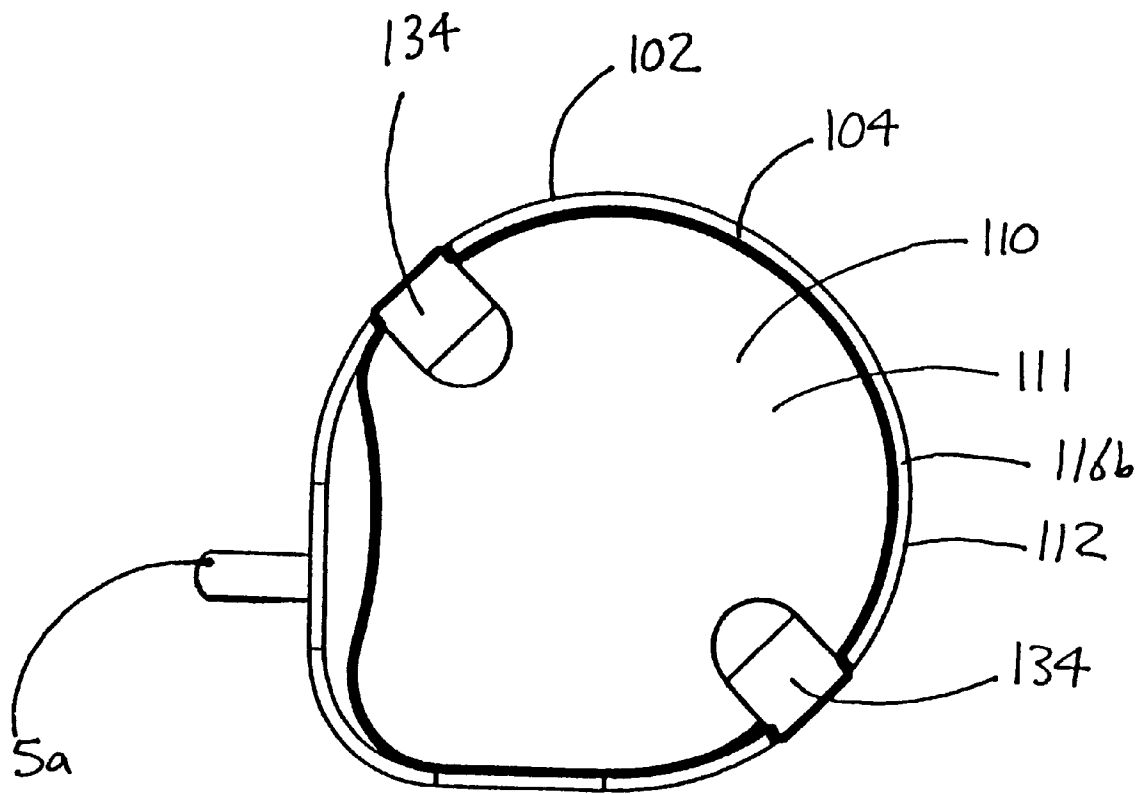
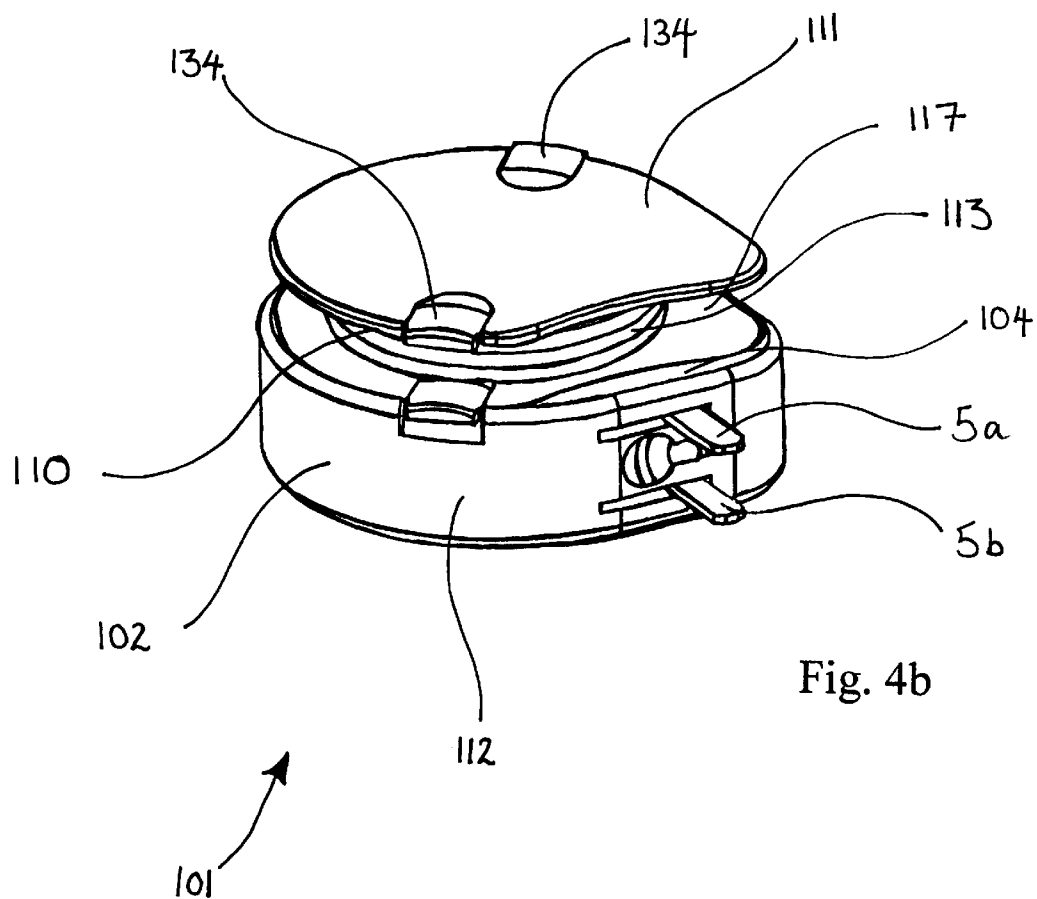
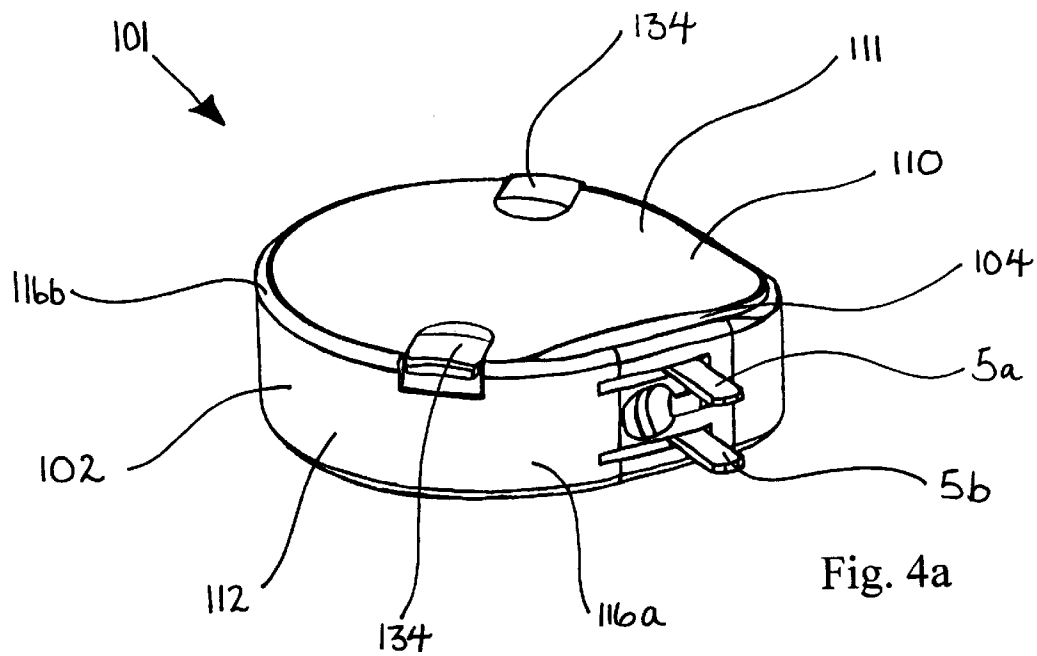


Fig. 3

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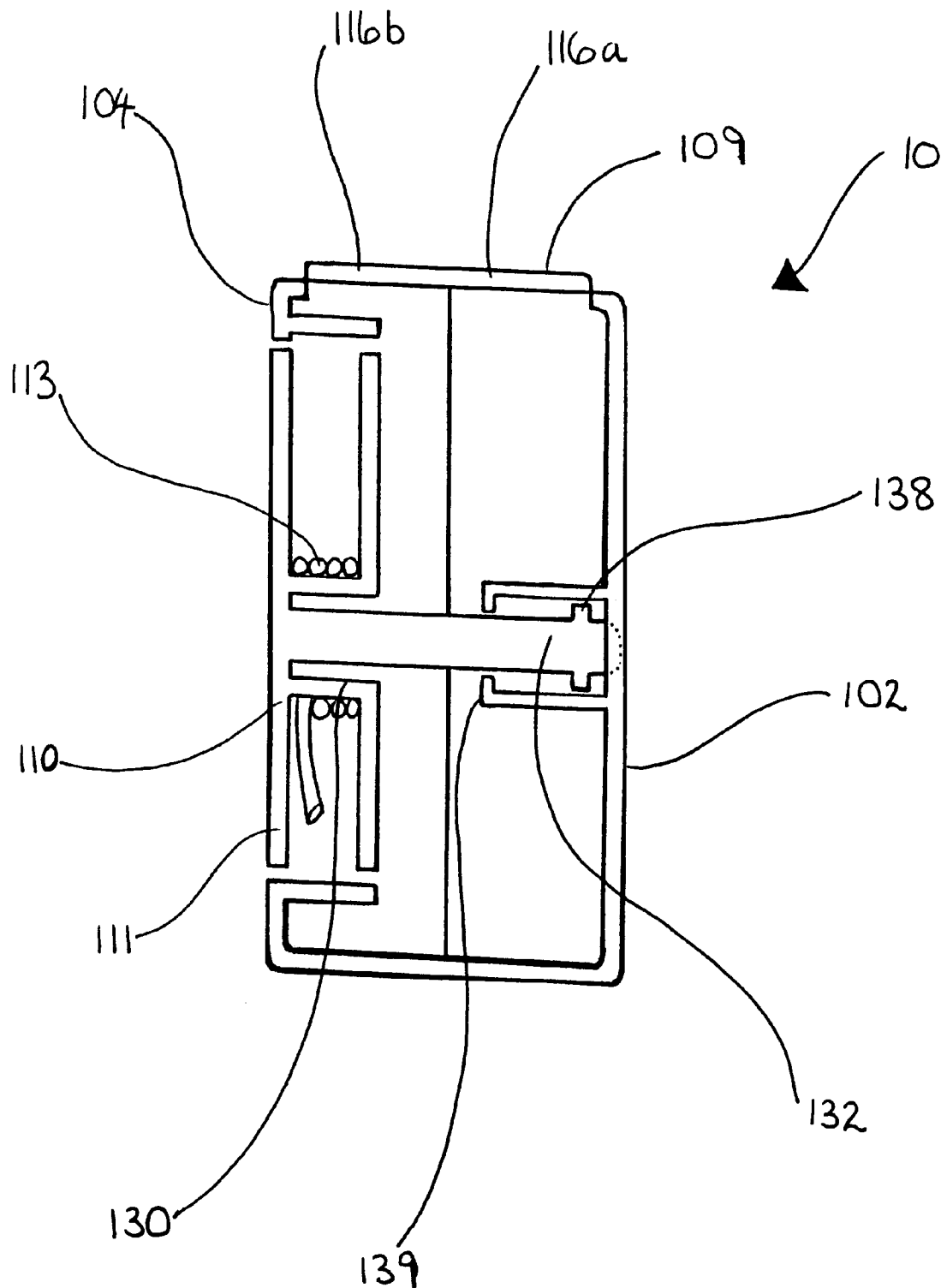


Fig. 5a



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