

(12)

**EUROPEAN PATENT APPLICATION**

(21) Application number: **87302910.2**

(51) Int. Cl.<sup>4</sup>: **G 08 C 23/00**

(22) Date of filing: **02.04.87**

(30) Priority: **17.04.86 GB 8609403**

(43) Date of publication of application:  
**21.10.87 Bulletin 87/43**

(84) Designated Contracting States:  
**AT BE DE ES FR GB IT NL SE**

(88) Date of deferred publication of search report:  
**07.01.88 Bulletin 88/01**

(71) Applicant: **SMITH METERS LIMITED**  
**170, Rowan Road**  
**Streatham Vale London, SW16 5JE (GB)**

(72) Inventor: **Shadrach, John William**  
**89, Hazelwood Road**  
**Oxted Surrey, RH8 0JA (GB)**

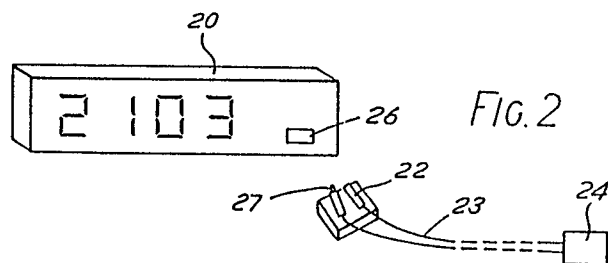
(74) Representative: **Betteridge, Eileen Margaret**  
**170, Rowan Road**  
**Streatham Vale London, SW16 5JE (GB)**

**(54) Remote reading of a metered quantity.**

(57) A meter has a liquid crystal (20) on which is displayed the value of a metered quantity, for direct visual reading. A single flashing zone (26) is arranged to display a binary-coded representation of the same value as a timed sequence of flashes. The binary 0's and 1's are represented by the presence or absence of flashes.

The flashing code is read by a photo-electric sensor (22) which transmits electrical signals to remote reading station (24). Thus there are no direct connections to the meter.

In an alternative arrangement, fibre optics transmit the flashes of light to a remote station.





DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)
X	US-A-4 213 119 (WARD et al.) * Figure 2; column 3, lines 9-15; column 10, lines 17-22; column 11, lines 55-67 *	1-4	G 08 C 23/00
Y	WO-A-8 505 530 (NCR CORP.) * Page 6, lines 15-18; page 7, lines 9-25; figure 4 *	5	
A	PATENT ABSTRACTS OF JAPAN, vol. 8, no. 261 (E-281)[1698], 30th November 1984; & JP-A-59 133 743 (MATSUSHITA DENKI SAGYO K.K.) 01-08-1984 * Whole document *	7-10	
			TECHNICAL FIELDS SEARCHED (Int. Cl. 4)
			G 08 C G 01 F H 04 B G 01 D
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 13-10-1987	Examiner WILTINK J.G.
<p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>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</p> <p>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 &amp; : member of the same patent family, corresponding document</p>			

