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## 54 High gain driver circuit and method.

57 Circuitry for providing unlimited, self-adjusted drive current and suitable for power applications is described. A four terminal high efficiency, high gain driver circuit (10) including enabling circuitry is provided along with a positive feedback loop that is designed to provide unlimited drive current which automatically adjusts to the load requirement. The driver circuit includes a startup transistor (14), drive regulation transistors (12,13), predrive transistors (16,18), a driving output transistor (17), and a current splitter (11). The drive regulation transistors (12,13) and the current splitter (11) provide a positive feedback loop which supplies current to the predrive transistors (16,18) and the driving transistor (17). Under typical conditions, feedback loop operation will cause the collector to emitter voltage of the driving transistor (17) to decrease which causes the drive regulation transistors (12,13) to saturate. This condition decreases positive feedback loop drive which in turn regulates the predrive current to the level required by the load. Under short circuit output conditions, the drive regulation transistors (12,13), together with the current splitter (11) and the sensing resistor (29), regulate the output drive current to a predetermined level.

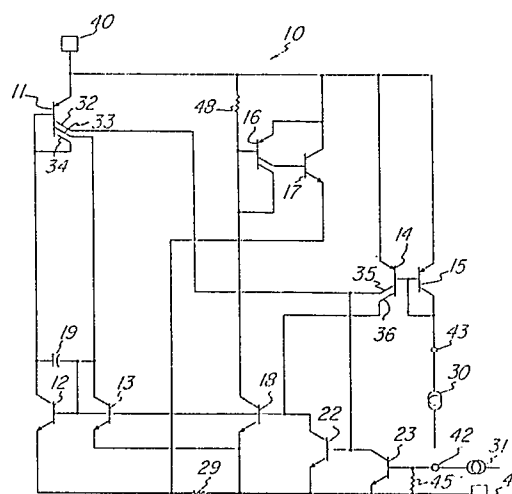


Fig.3



EP 88 31 0525

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)
A	EP-A-0121287 (N.V. PHILIPS GLOEILAMPENFABRIEKEN) * page 8, line 9 - line 37; figure 2 *	1, 3, 6-8, 12, 14-16	G05F3/22 G05F3/28
A	US-A-3629691 (CARL F. WHEATLEY) * column 4, line 42 - column 5, line 44; figure 1 *	1, 3, 6-8, 12, 14-16	
A	US-A-4085359 (AHMED) * column 2, line 22 - line 40 *  * column 3, line 13 - line 39; figure 1 *	1, 3, 6-8, 12, 14-16	
A	US-A-4338646 (DAVIS ET AL) * column 4, line 11 - line 22; figure 3 *	1, 7	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			G05F
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 13 APRIL 1989	Examiner CLEARY F.M.
<b>CATEGORY OF CITED DOCUMENTS</b> 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			