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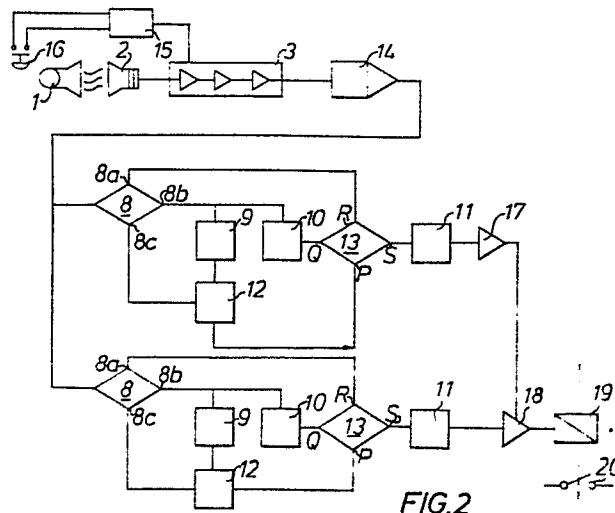
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(54) **Sound operated start circuit.**

(57) The invention is concerned with starting of electrical machines from a sound emitting device and is particularly concerned with safety circuits for the start of a coal getting machine on the sounding of a klaxon giving warning to mine workers underground that the machine is to be started and hence to keep clear. The signal from the klaxon is detected as to certain predetermined parameters including amplitude, frequency and the rate at which the klaxon is being operated since it would normally be controlled by a water driven pump. The signal is then fed to a discriminator circuit which then determines that these parameters are correct. Two such circuits are provided in parallel with each other and a signal to enable the machine to be started is only provided at an output terminal when the correct signal is found and detected by both circuits simultaneously.





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. 3)
X	GB-A-1 387 828 (ANDERSON MAVOR) * Whole document *	1-10	E 21 F 17/18 E 21 C 35/24 G 08 C 23/00
A	GB-A-2 041 601 (RUPPERTSBERG) * Abstract *	1	
A	US-A-4 110 742 (HAWKINS)		
A	GB-A-1 586 036 (DRESSER EUROPE)		
A	FR-A-2 250 453 (ETAT FRANCAIS)		
			TECHNICAL FIELDS SEARCHED (Int. Cl. 3)
			E 21 F E 21 C G 08 C
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 15-07-1983	Examiner HAKIN R.E.M.
CATEGORY OF CITED DOCUMENTS			
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	