United States Patent [19]

Hargarten et al.

[11] Patent Number: 4,817,448

[45] Date of Patent: Apr. 4, 1989

[54] **AUTO ZERO CIRCUIT FOR FLOW METER**

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[73] Assignee: **Micro Motion, Inc.**, Boulder, Colo.

[21] Appl. No.: **903,337**

[22] Filed: **Sep. 3, 1986**

[51] Int. Cl.⁴ **G01F 1/84**

[52] U.S. Cl. .... **73/861.38**; 307/525; 324/83 D; 328/133

[58] Field of Search 73/861.38, 861.29; 307/234, 510, 511, 525; 328/109, 133, 135; 324/830

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Primary Examiner—Herbert Goldstein

[57] **ABSTRACT**

An electronic signal processor for substantially eliminating timing errors in determining the time difference between two periodic analog signals which uses switches that allow one of the two signals to be connected to one channel for digitizing that signal and the other signal to be connected to a second channel, then the switches, after about a cycle, reverse the connections. The measured time differences over two cycles are then added or subtracted to substantially eliminate timing errors caused by variations in the operational characteristics of electronic components in the signal processor.
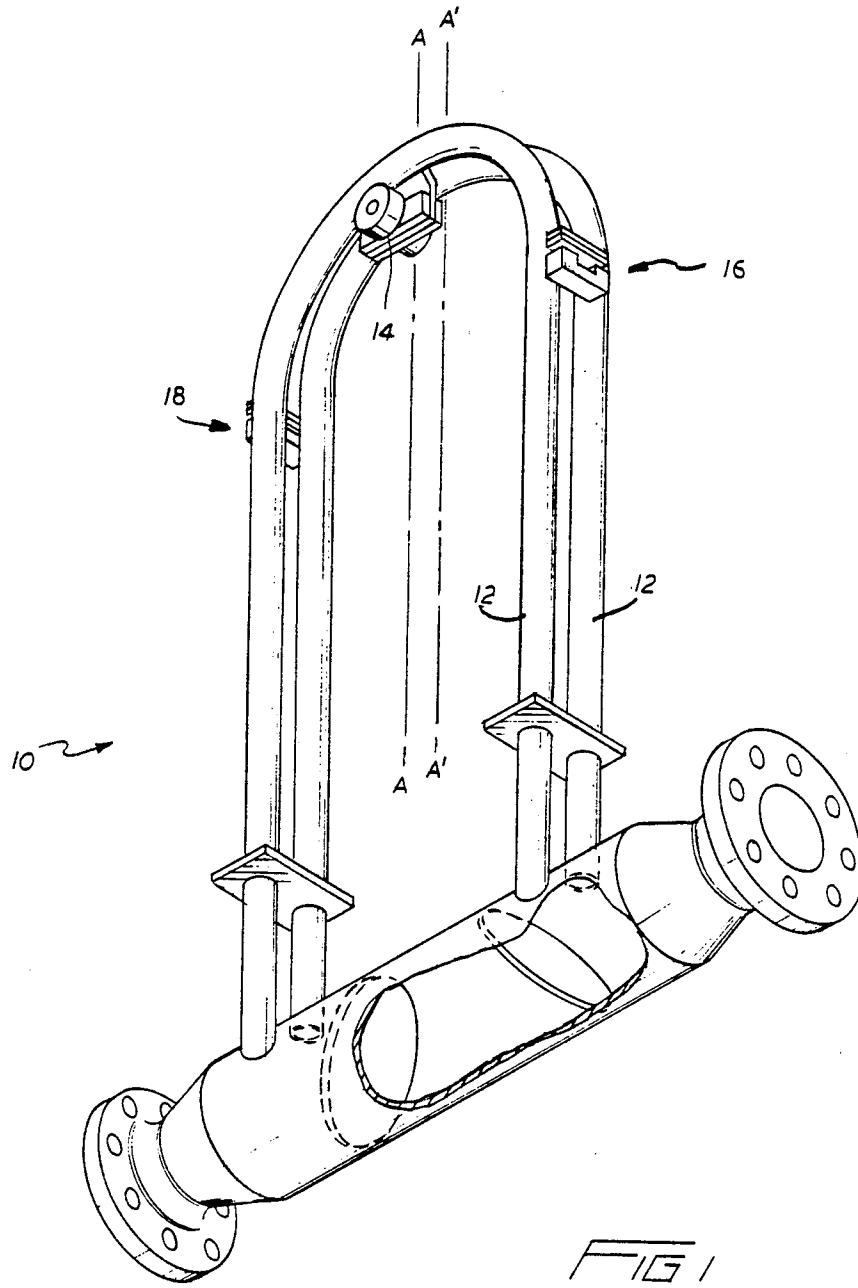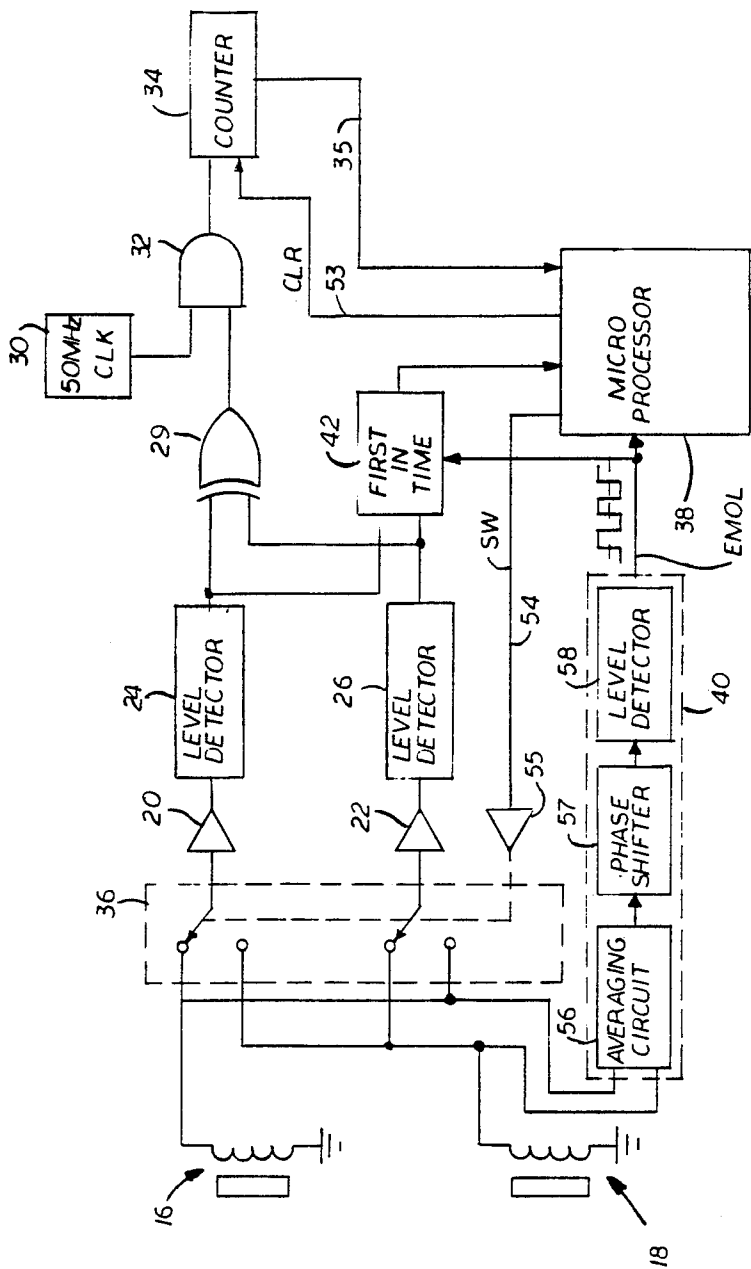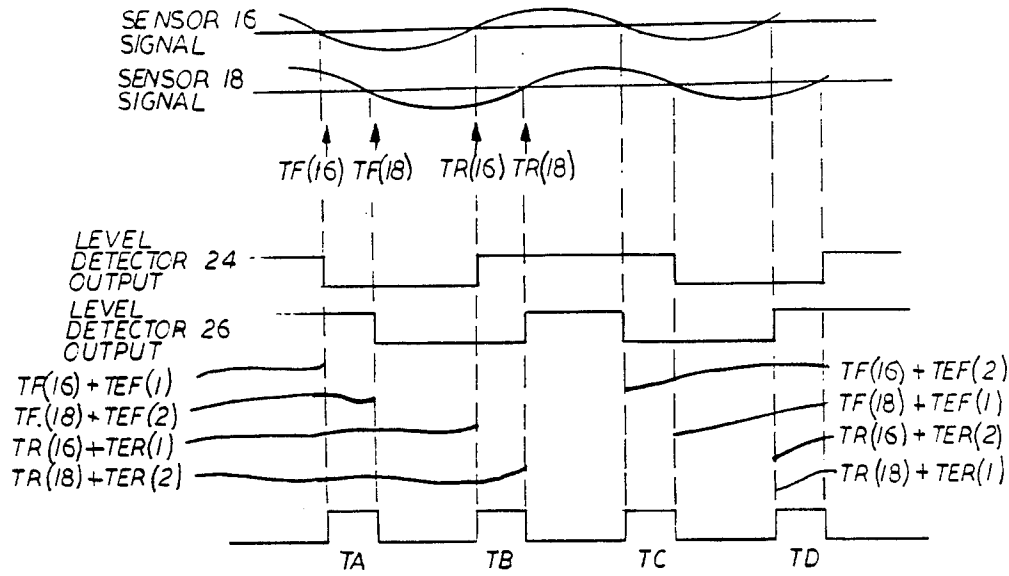
10 Claims, 5 Drawing Sheets
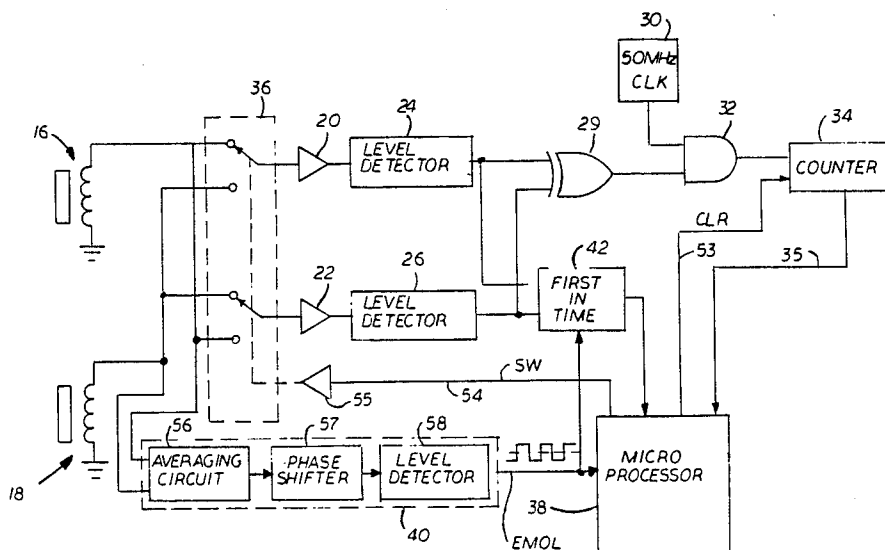
FIG 1

FIG 2

FIG 3

FIG 4

FIG 5

DOCKET ALARM
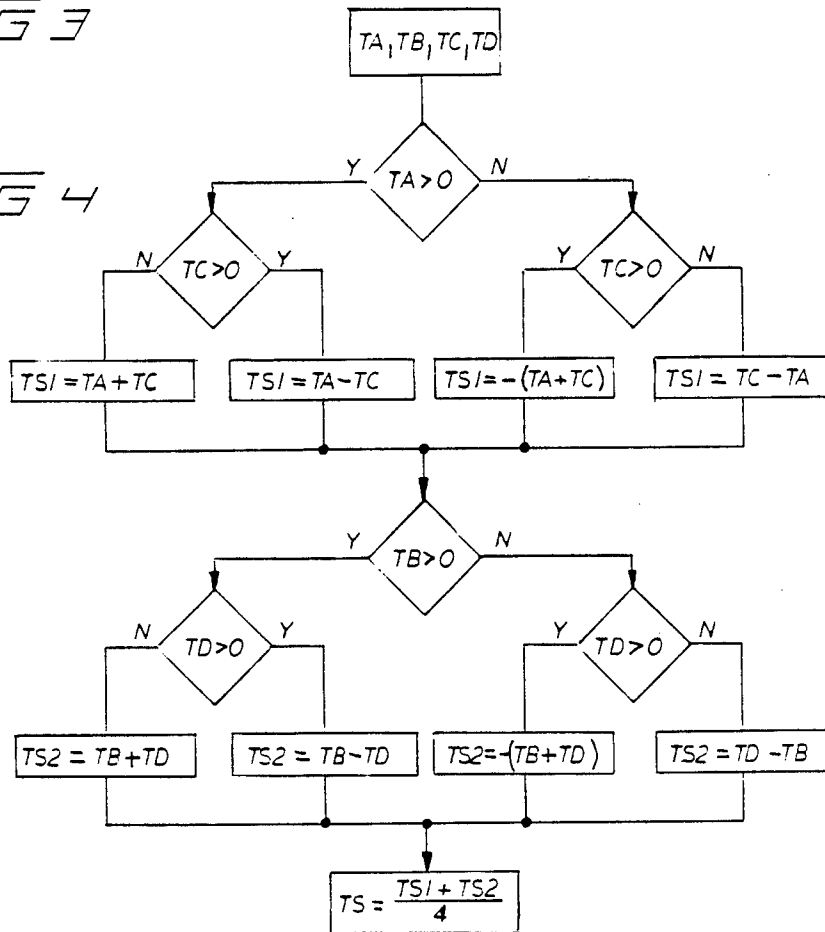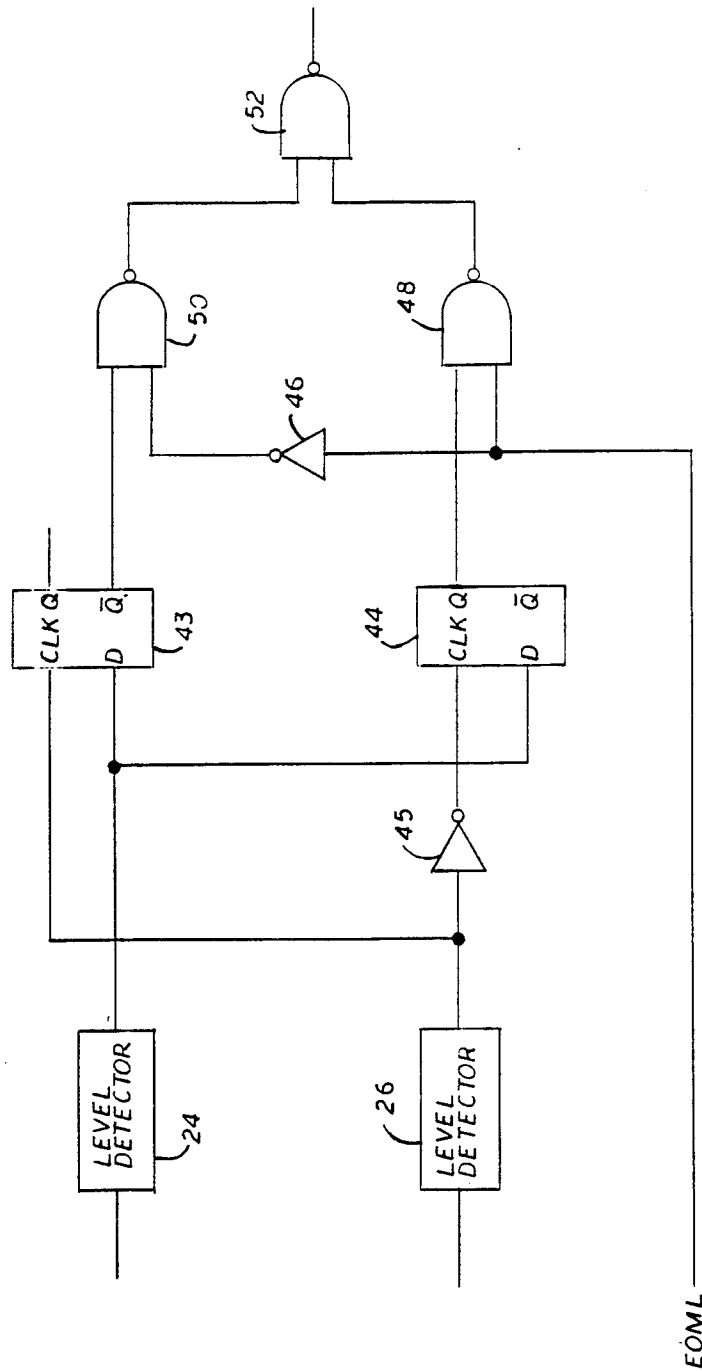
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