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(54) **SYSTEM FOR DETECTING GUNSHOTS**

(75) Inventors: **Mark William Hynes**, Sierra Vista; **James Lee Cole**, Tucson, both of AZ (US)

(73) Assignee: **The United States of America as represented by the Secretary of the Navy**, Washington, DC (US)

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(58) **Field of Search** 367/118, 124, 367/129, 906; 381/56

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Primary Examiner—Ian J. Lobo
(74) *Attorney, Agent, or Firm*—William Randolph; William Medsger; Edward Stolarum

(57) **ABSTRACT**

A system for detecting gunshots includes an input device including a microphone for converting acoustic noises into signals and amplifiers for amplifying the input signals, a threshold detector for receiving the amplified signals and comparing the signals with a predetermined threshold value and for producing an output signal when the threshold value is exceeded. A pulse width detector is connected to the threshold detector for producing an output signal only if the width of the threshold detector output signal is within a predetermined range of values. A pulse count detector is also connected to the threshold detector for producing an output signal when the level of the threshold output signal is above a peak threshold level or the number of threshold level output signals that exceed a threshold level are less than a preset limit. An output device indicates that a gunshot has occurred only when signals are received from the pulse width detector and the pulse count detector during a sampling period.

14 Claims, 6 Drawing Sheets