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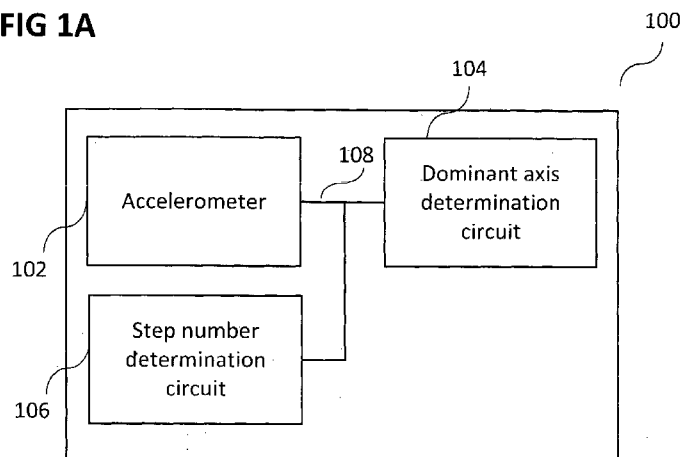
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(54) **Title:** STEP COUNTER DEVICES AND STEP COUNTING METHODS

FIG 1A



(57) **Abstract:** According to various embodiments, a step counter device may be provided. The step counter device may include an accelerometer configured to determine an acceleration in each axis of a plurality of axes; a dominant axis determination circuit configured to determine one axis of the plurality of axis as a dominant axis based on determining, for each axis of the plurality of axis, a plurality of criteria for the respective axis; a step number determination circuit configured to determine a number of steps based on determining the plurality of criteria for the dominant axis; wherein the criteria for a respective axis may include a criterion indicating whether a frequency of acceleration in the respective axis is within a first pre-determined range, a criterion indicating whether a variation in the frequency of acceleration in the respective axis between various cycles is within a second pre-determined range; a criterion indicating whether a variation in the amplitude of acceleration in the respective axis between various cycles is within a third pre-determined range; and a criterion indicating whether the acceleration in the respective axis is higher than a pre-determined threshold.

