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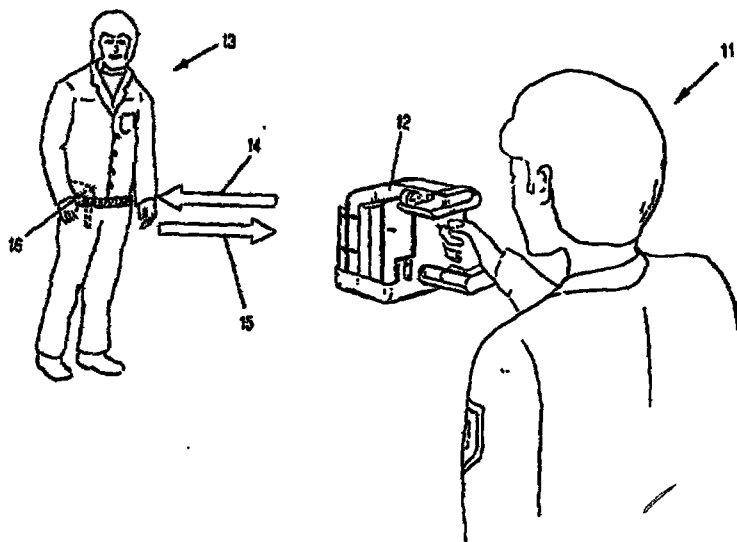
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(54) Title: CONCEALED WEAPONS DETECTION SYSTEM



(57) Abstract

A weapons detector (12) and method utilizing radar. The system comprises a transmitter for producing an output (14) of frequencies of a set of self-resonant frequencies of weaponry; an antenna directing the transmitter output toward locations potentially having weapon; and collecting backscattered signals (15); a receiver receiving the backscattered signals (15) and operating over a range of the self-resonant frequencies; and a signal processor for detecting the presence of a plurality of the self-resonant frequencies in the backscattered signal (15). Accuracies of greater than 98 % can be obtained at distances, preferably between 4-15 yards. The weapons detector (12) is capable of detecting metal and non-metal weapons (16) on a human body (13) in purses, briefcases and under clothing; and discerning weapon (16) from objects such as belt buckles, coins, keys, calculators, cellular phones.