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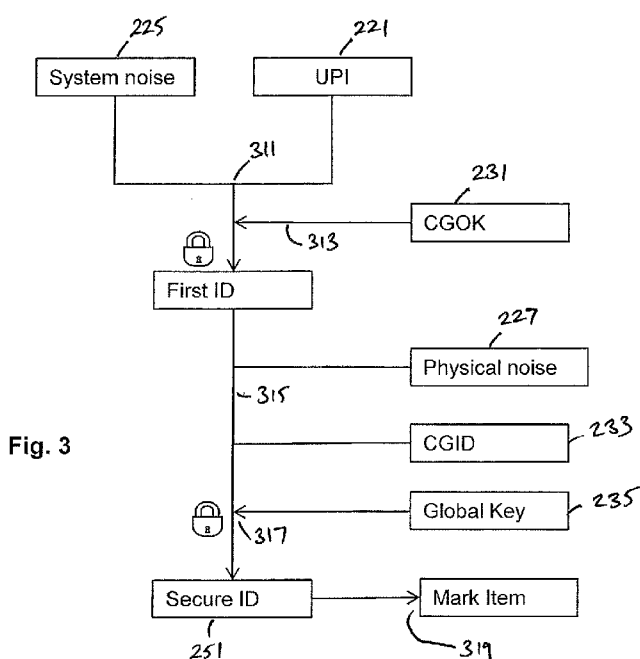
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- (54) **Title:** METHOD AND APPARATUS FOR MARKING MANUFACTURED ITEMS USING PHYSICAL CHARACTERISTIC



- (57) **Abstract:** A method of marking a manufactured item is described, comprising: creating a unique product identifier for a manufactured item; creating one or more encryption keys; generating a secret key using the unique product identifier and the one or more encryption keys; generating a system noise value by performing a hash function on the secret key and the unique product identifier; generating a physical key from a measured physical property of the manufactured item; generating a physical noise value by performing a hash function on the physical key and the unique product identifier; generating a secure identifier derived from or incorporating the system noise value and the physical noise value; and placing a mark on the manufactured item, the mark comprising the secure identifier or an identifier derived from the secure identifier. Also described are methods of authenticating items marked in accordance with the described method.