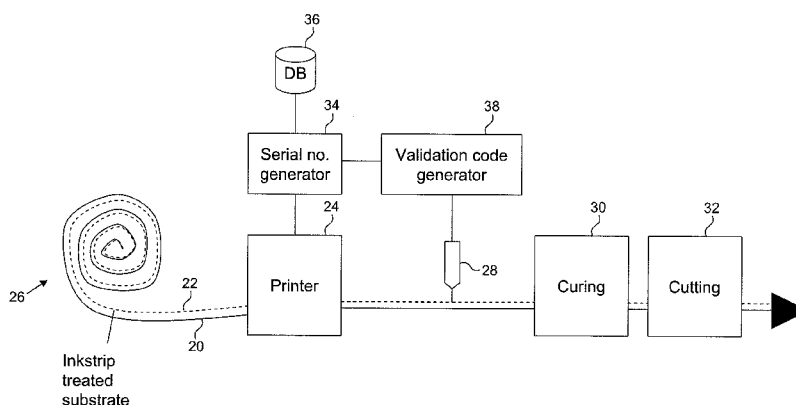




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(54) **Title:** SECURITY IMPROVEMENTS FOR FLEXIBLE SUBSTRATES**Figure 2a**

(57) **Abstract:** A method of creating an optical security element in a value document using a low-cost printing device of a data processing terminal is described. The method comprises: providing a flexible substrate having a pre-printed ink portion; wherein the pre-printed ink portion is provided in an unexposed state which does not provide an optical security function of the security element; configuring a variable laser irradiation device to determine a part of the unexposed pre-printed ink portion to be exposed to laser radiation in a machine-controlled manner, and exposing the unexposed pre-printed ink portion to laser radiation in the machine-controlled manner to create from the pre-printed ink portion a predefined pattern, wherein the optical characteristics of the pattern provide the optical security element.