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(54) Title: AUTHENTICATION OF DOCUMENTS AND ARTICLES BY MOIRE PATTERNS

(57) **Abstract:** The present invention relies on the moiré patterns generated when superposing a base layer made of base band pat-
terns and a revealing line grating (revealing layer). The produced moiré patterns comprise an enlargement and a transformation
of the individual patterns located within the base bands. Base bands and revealing line gratings may be rectilinear or curvilinear.
When translating or rotating the revealing line grating on top of the base layer, the produced moiré patterns evolve smoothly, i.e.
they may be smoothly shifted, sheared, and possibly be subject to further transformations. Base band patterns may incorporate any
combination of shapes, intensities and colors, such as letter, digits, text, symbols, ornaments, logos, country emblems, etc... They
therefore offer great possibilities for creating security documents and valuable articles taking advantage of the higher imaging capa-
bilities of original imaging and printing systems, compared with the possibilities of the reproduction systems available to potential
counterfeiters. Since the revealing line grating reflects a relatively high percentage of the incident light, the moiré patterns are easily
apparent in reflective mode and under normal illumination conditions. They may be used for the authentication of any kinds of
documents (banknotes, identity documents, checks, diploma, travel documents, tickets) and valuable articles (optical disks, CDs,
DVDs, CD-ROMs, packages for medical drugs, bottles, articles with affixed labels).



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