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(54) Title: COATED ARTICLE WITH NANOLAYERED COATING SCHEME

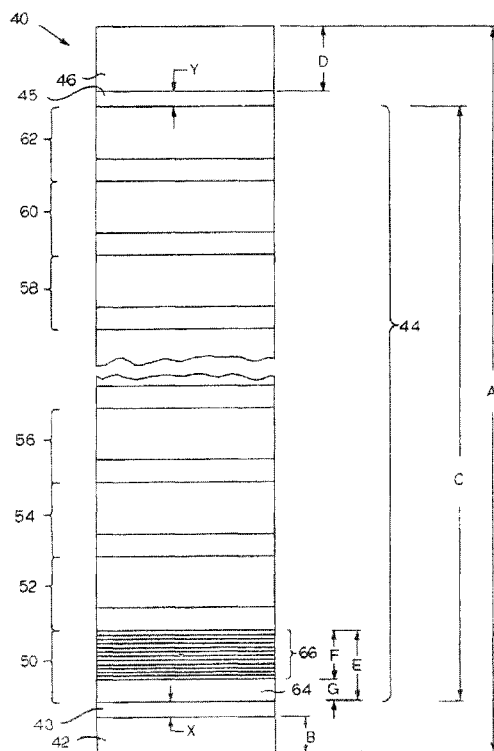


FIG 2

(57) Abstract: An article including a substrate 22 and a coating is provided. The article may be a cutting insert 20 shown to improve performance in chip-forming material removal operations or a wear-resistant component for chipless forming operations. One wear-resistant coating scheme 40 has an underlayer 42 and top layer 46 containing aluminum, chromium, and nitrogen. The coating scheme 40 also includes a mediate multi-periodicity nanolayer coating scheme 44 containing titanium, aluminum, chromium and nitrogen. The mediate multi-periodicity nanolayer 44 coating scheme includes a plurality of sets of alternating layer arrangements 50, 52, 54, 56, 58, 60, 62. Each one of the alternating layer arrangements 50, 52, 54, 56, 58, 60, 62 has a base layer 64 comprising titanium, aluminum and nitrogen and a nanolayer region having a plurality of sets of alternating nanolayers 68, 70, 72, 74, 76, 78. Each set of alternating nanolayers 68, 70, 72, 74, 76, 78 has one nanolayer 82 having aluminum, chromium, titanium and nitrogen and another nanolayer 84 having aluminum, chromium, titanium and nitrogen. The base layer thickness G is smaller than the nanolayer region thickness F.



NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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