



(51) International Patent Classification:

G05B 19/18 (2006.01) G06K 15/02 (2006.01)
B31F 1/07 (2006.01) G06K 19/06 (2006.01)

(21) International Application Number:

PCT/IB2024/055540

(22) International Filing Date:

06 June 2024 (06.06.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

23181535.8 26 June 2023 (26.06.2023) EP

(71) Applicant: **BOEGLI-GRAVURES SA** [CH/CH]; Rue de la Gare 24-26, 2074 Marin-Epagnier (CH).

(72) Inventors: **BOEGLI, Charles**; Rue de la Gare 24-26, 2074 Marin-Epagnier (CH). **DUMITRU, Gabriel**; Rue de l'Observatoire 40A, 2000 Neuchâtel (CH).

(74) Agent: **WEIHS, Bruno**; c/o ANDRE ROLAND SA, Avenue Collonges 21, 1004 Lausanne (CH).

(81) Designated States (unless otherwise indicated, for every kind of national protection available):

AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available):

ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

(54) Title: A METHOD FOR MANUFACTURING AN EMBOSSED TOOL WITH A CODE-CONTAINING TOPOGRAPHY

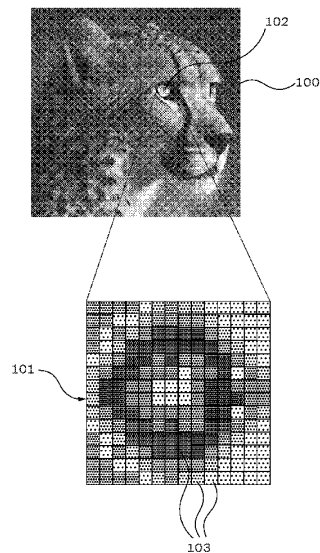


FIG. 1

(57) Abstract: A method for manufacturing an embossed tool with a code-containing topography that comprises a plurality of surface structures on the embossed tool surface, comprising providing an image file of the image containing a raster of image pixels with a determined bit depth and an initial image resolution, transforming the image file into a primary raster of image pixels with the determined resolution, providing a code raster of image pixels for the alphanumeric or graphical code, applying a first logical operation to combine the code raster of image pixels and the primary raster of image pixels in order to obtain a first image raster of image pixels as a result. The method further comprises applying a second logical operation to combine the first image raster of image pixels and the code raster of image pixels in order to obtain a second image raster of image pixels. The code raster of image pixels, the first image raster of image pixels and the second image raster of image pixels respectively comprise pixels of bit depth 1, wherein for each raster, a "1"-state of the pixel indicates that a raster-specific surface structure for that raster is to be planned in the topography for a location on the embossed tool surface corresponding to a position (m,n) of the image pixel in the raster, whereas a "0"-state of the pixel indicates that no raster-specific surface structure for that raster is to be planned in the topography for a further location on the embossed tool surface corresponding to a further position of the image pixel in the raster. The method further comprises projecting the code raster of image pixels, the first image raster of image pixels and the second image raster of image pixels onto the embossed tool surface to obtain the topography raster of the locations on the embossed tool surface for the raster specific surface structures, and engraving on the embossed tool surface the raster specific surface structures at their respective obtained locations and hence obtain the code containing topography.

Published:

— with international search report (Art. 21(3))