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(54) Title: INCORPORATION OF SUSTAINABILITY METRICS IN PAINT FORMULATION OPTIMIZATION USING MACHINE LEARNING

(57) Abstract: A method may include receiving a paint formulation, maximum allowable ingredient deviations, and minimum threshold performance metrics. The method may further include determining a plurality of candidate paint formulations within that are modified within the maximum allowable deviations of the received paint formulation. The method may further include inputting the candidate paint formulations into a trained model, which outputs performance metrics of the candidate paint formulations. The model may further include selecting the candidate paint formulations meeting the minimum threshold performance metrics. The method may further include determining a sustainability metric of each selected candidate paint formulation. The method may further include selecting the candidate paint formulation having the highest sustainability metric.

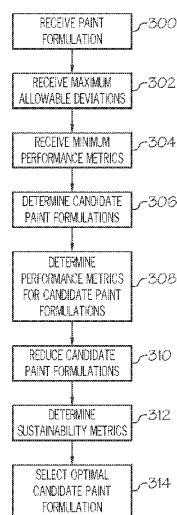


FIG. 3

**(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).

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- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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