



## (51) International Patent Classification:

G06Q 10/08 (2012.01) G06Q 30/06 (2012.01)  
G06Q 10/06 (2012.01) G06K 19/06 (2006.01)  
G06Q 10/10 (2012.01)

## (21) International Application Number:

PCT/IB2020/059576

## (22) International Filing Date:

12 October 2020 (12.10.2020)

## (25) Filing Language:

English

## (26) Publication Language:

English

## (30) Priority Data:

17/066,350 08 October 2020 (08.10.2020) US

## (71) Applicant: COUPANG CORP. [KR/KR]; 570 Songpa-daero, Songpa-gu, Seoul, Seoul 05510 (KR).

(72) Inventors: MCMASTER, Shuyun; 570 Songpa-daero, Songpa-gu, Seoul, Seoul 05510 (KR). NANDURI, Subrahmanya Pramod; 570 Songpa-daero, Songpa-gu, Seoul, Seoul 05510 (KR). MILLER, Darin; 570 Songpa-daero, Songpa-gu, Seoul, Seoul 05510 (KR). SHI, Kenny; 570 Songpa-daero, Songpa-gu, Seoul, Seoul 05510 (KR).

(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, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW,

## (54) Title: SYSTEMS AND METHODS FOR DYNAMIC BALANCING OF VIRTUAL BUNDLES

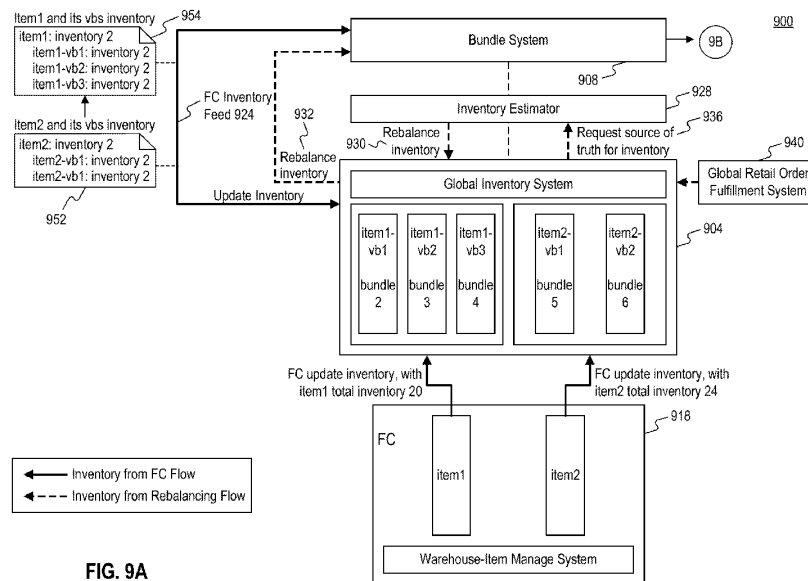


FIG. 9A

(57) Abstract: A computer-implemented system for dynamic inventory balancing including at a processor and a memory device comprising instructions that when executed configure the processor to perform operations. The operations including receiving an inventory data feed from at least one fulfillment center, storing (in a database) a plurality of virtual bundles with associated grouping numbers and quantities—the plurality of virtual bundles having item bundles grouping two or more of a same item in the inventory data. The operations also include exposing the database to queries from a seller portal through at least one of RESTful service, a queue based system, an index, or an object table and receiving a client order, the client order comprising a bundle selection from the plurality of virtual bundles, and updating the plurality of virtual bundles by rebalancing the plurality of virtual bundles and corresponding associated quantities based on the bundle selection.

[Continued on next page]

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, GH, GM, KE, LR, LS, MW, MZ, NA, RW, 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, 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).

**Published:**

- *with international search report (Art. 21(3))*
- *in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE*