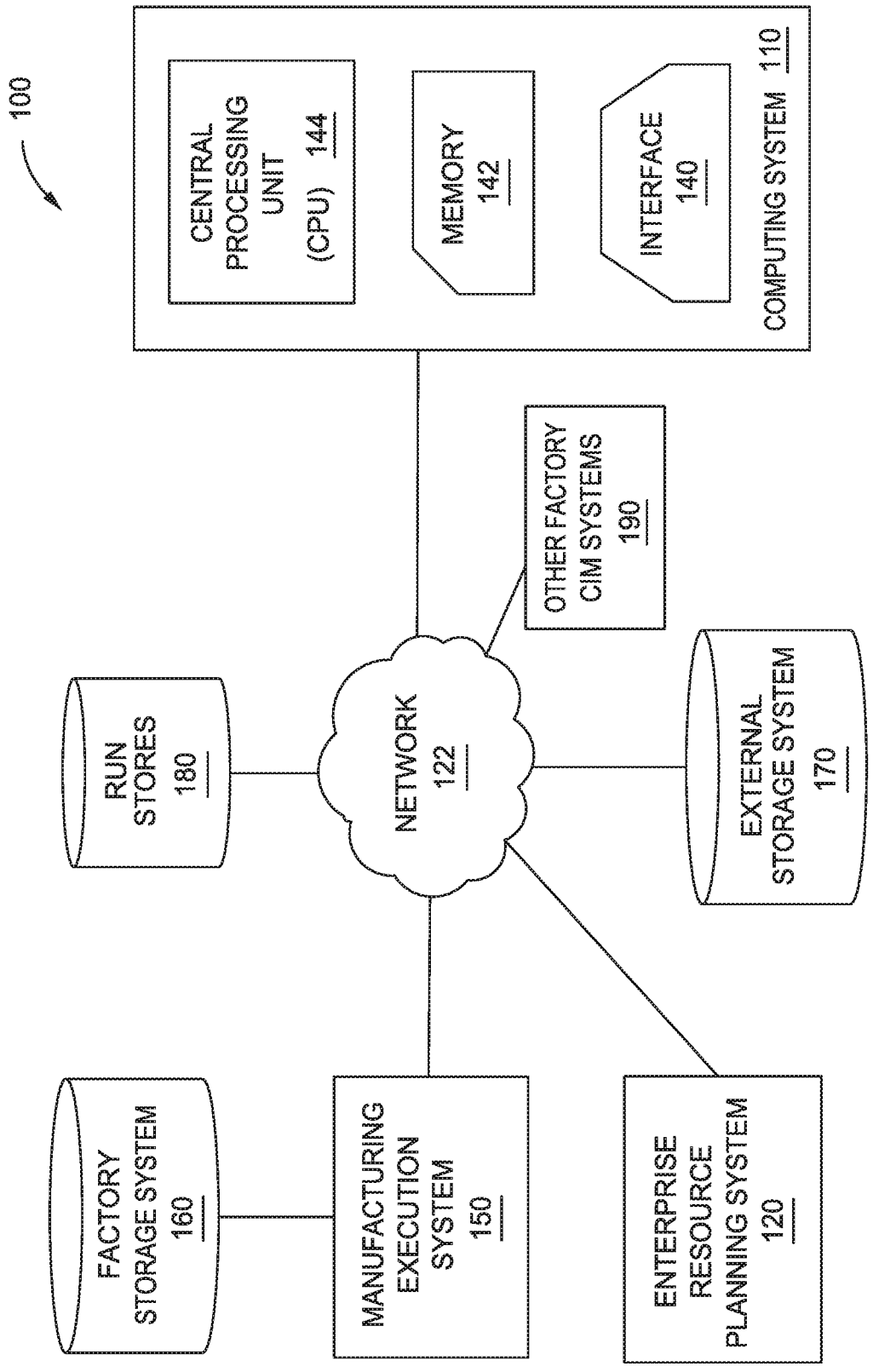

100
COMPUTING SYSTEM 110
CENTRAL PROCESSING UNIT (CPU) 144
MEMORY 142
INTERFACE 140
NETWORK 122
OTHER FACTORY CIM SYSTEMS 190
RUN STORES 180
EXTERNAL STORAGE SYSTEM 170
FACTORY STORAGE SYSTEM 160
MANUFACTURING EXECUTION SYSTEM 150
ENTERPRISE RESOURCE PLANNING SYSTEM 120

FIG. 1

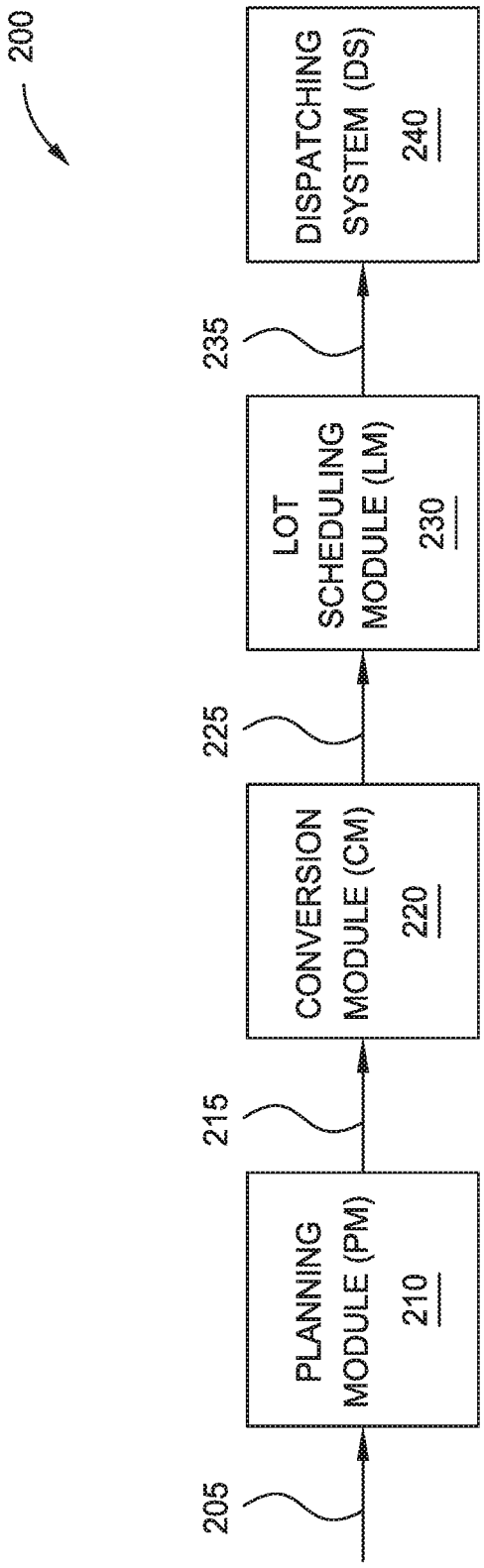

200
PLANNING MODULE (PM) 210
CONVERSION MODULE (CM) 220
LOT SCHEDULING MODULE (LM) 230
DISPATCHING SYSTEM (DS) 240
205
215
225
235

FIG. 2

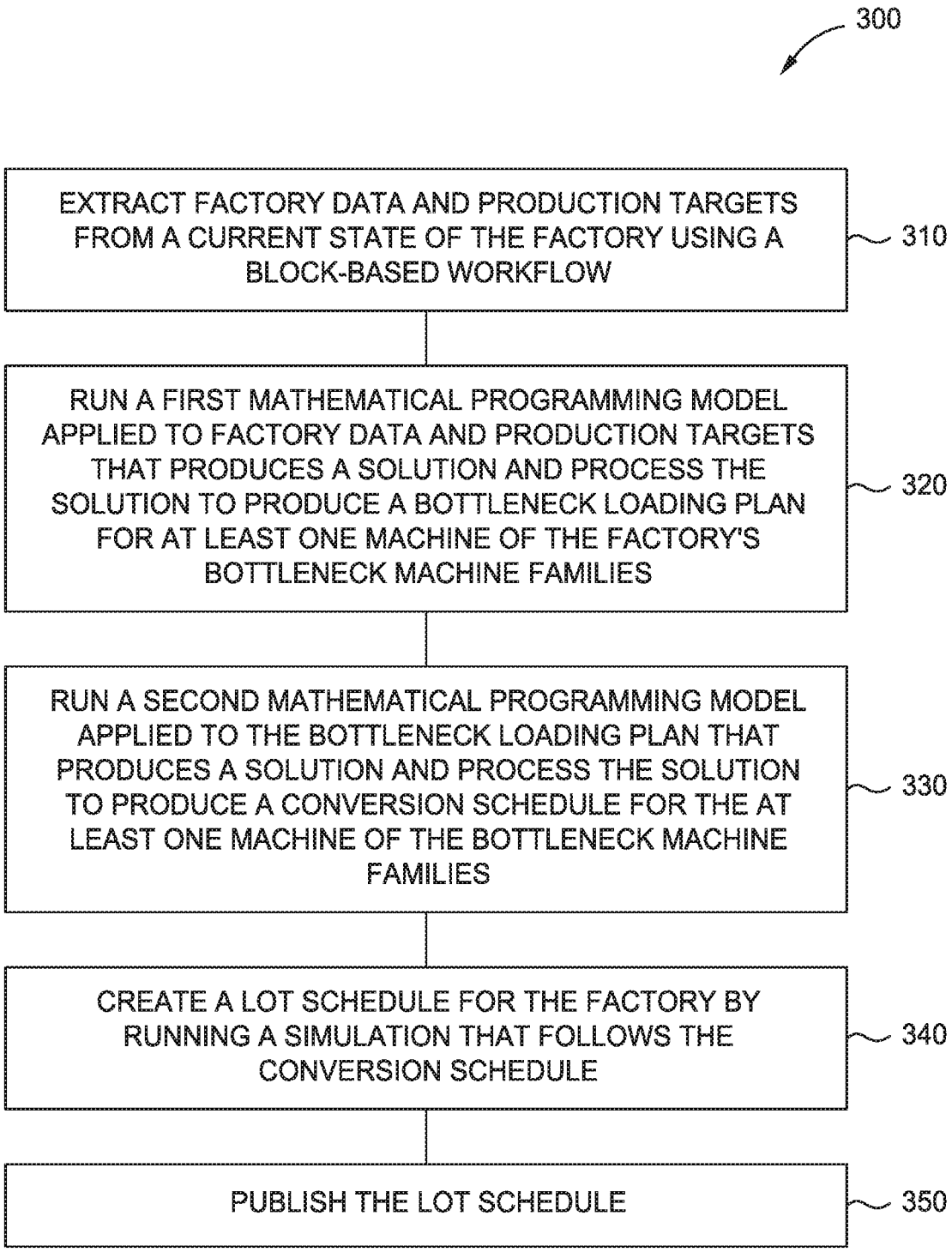

300
EXTRACT FACTORY DATA AND PRODUCTION TARGETS FROM A CURRENT STATE OF THE FACTORY USING A BLOCK-BASED WORKFLOW
310
RUN A FIRST MATHEMATICAL PROGRAMMING MODEL APPLIED TO FACTORY DATA AND PRODUCTION TARGETS THAT PRODUCES A SOLUTION AND PROCESS THE SOLUTION TO PRODUCE A BOTTLENECK LOADING PLAN FOR AT LEAST ONE MACHINE OF THE FACTORY'S BOTTLENECK MACHINE FAMILIES
320
RUN A SECOND MATHEMATICAL PROGRAMMING MODEL APPLIED TO THE BOTTLENECK LOADING PLAN THAT PRODUCES A SOLUTION AND PROCESS THE SOLUTION TO PRODUCE A CONVERSION SCHEDULE FOR THE AT LEAST ONE MACHINE OF THE BOTTLENECK MACHINE FAMILIES
330
CREATE A LOT SCHEDULE FOR THE FACTORY BY RUNNING A SIMULATION THAT FOLLOWS THE CONVERSION SCHEDULE
340
PUBLISH THE LOT SCHEDULE
350

FIG. 3