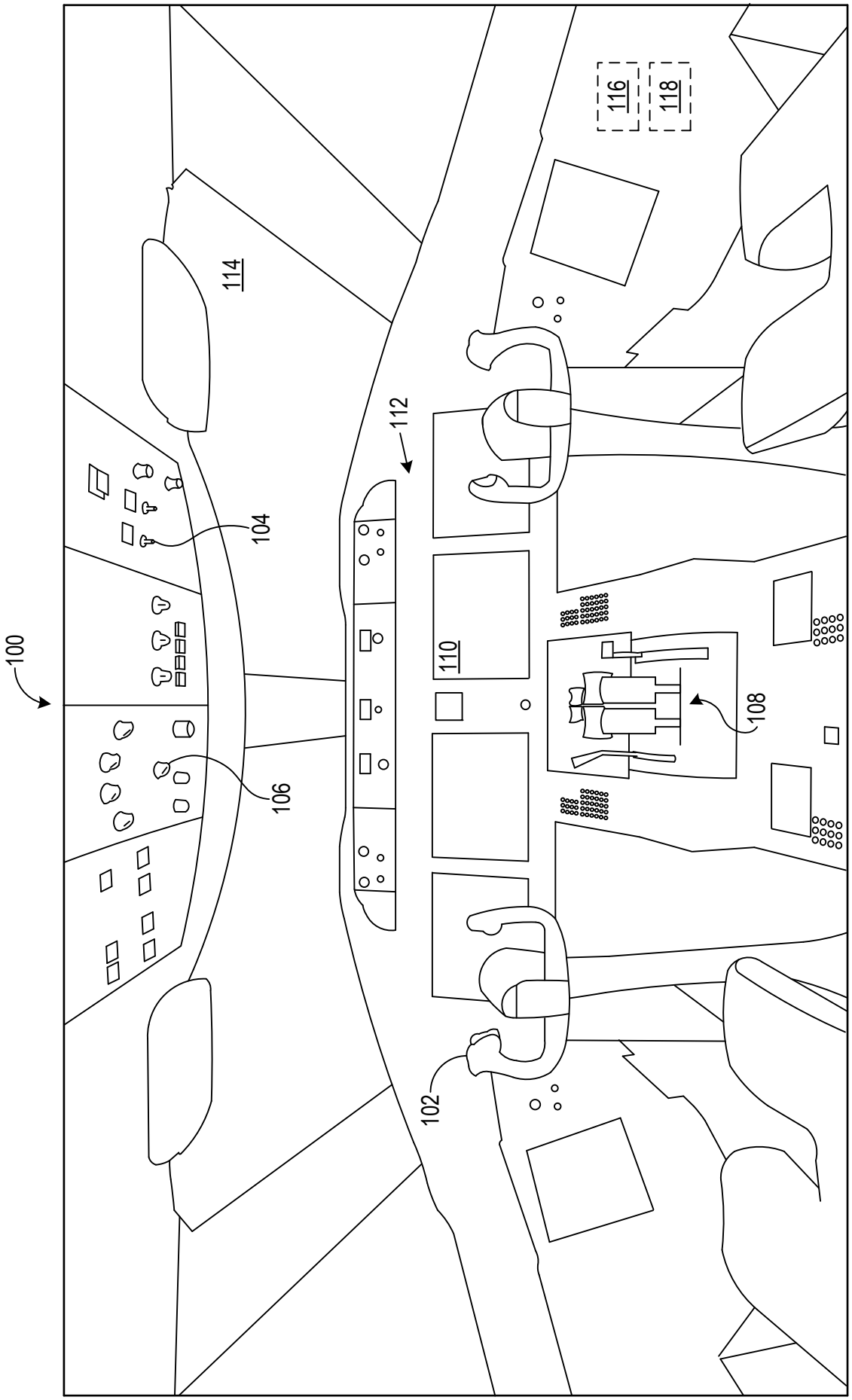
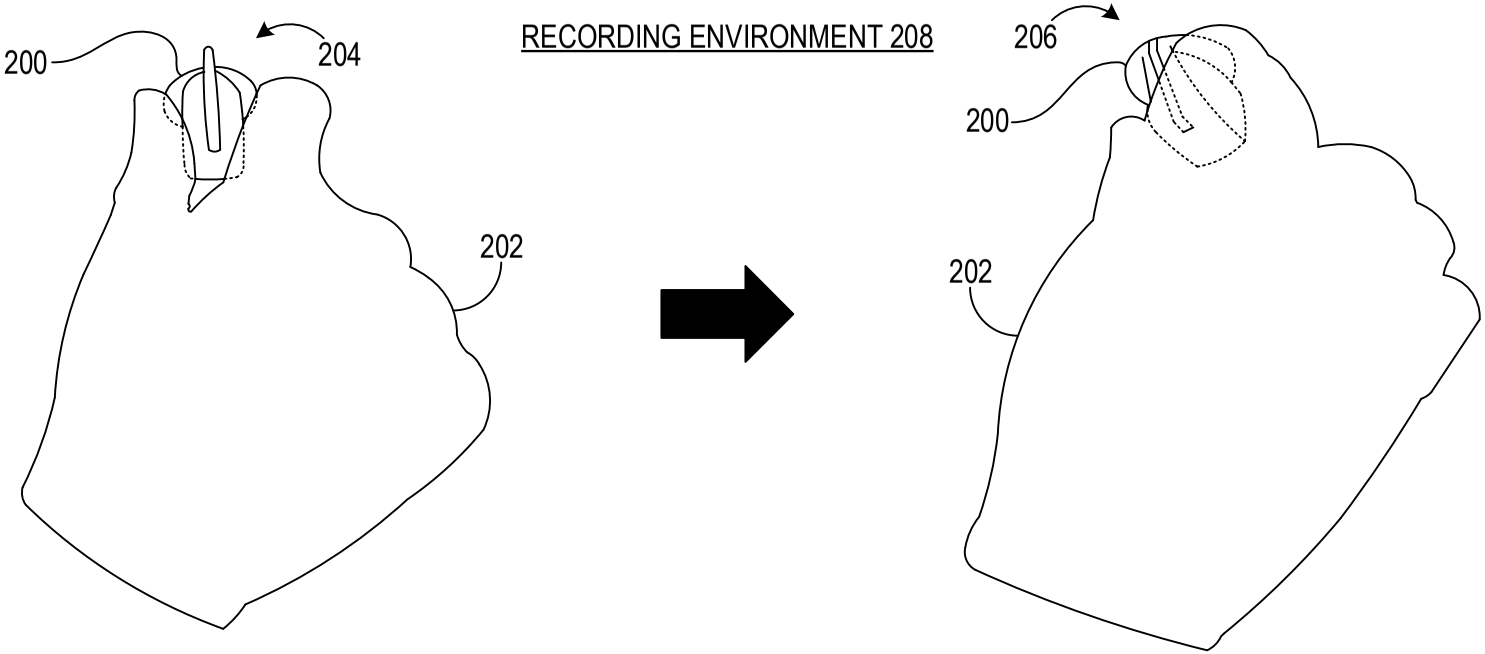


FIG. 1


RECORDING ENVIRONMENT 208
200
204
202
206
200
202

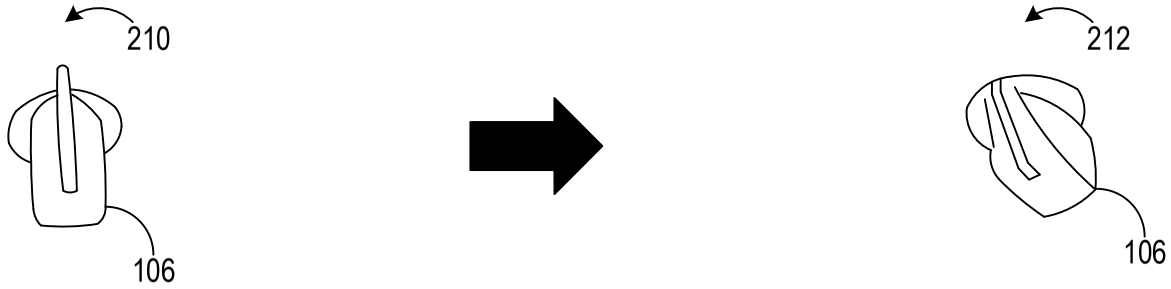

SIMULATION ENVIRONMENT 100
210
106
212
106

FIG. 2

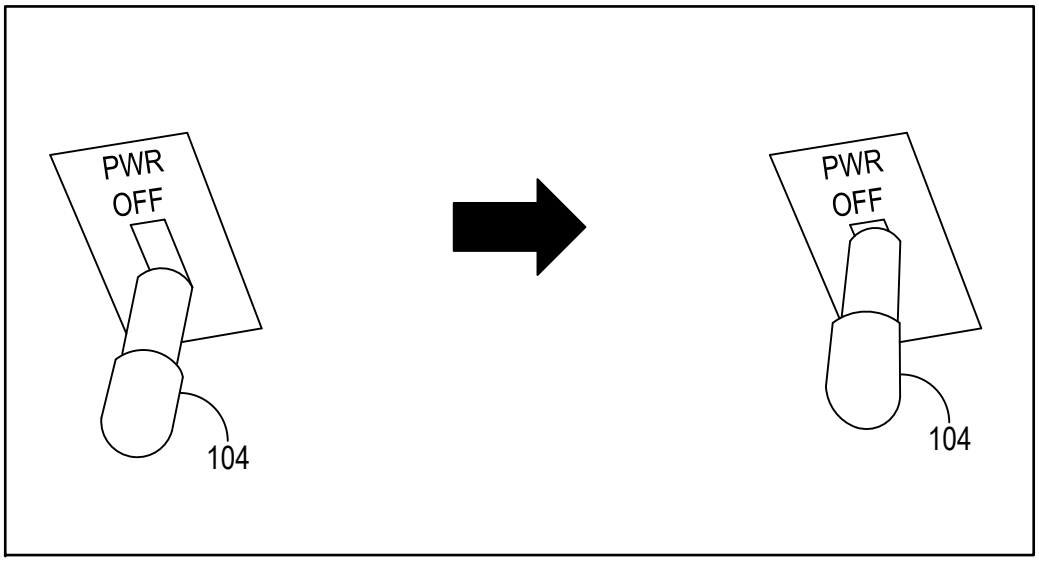


FIG. 3A

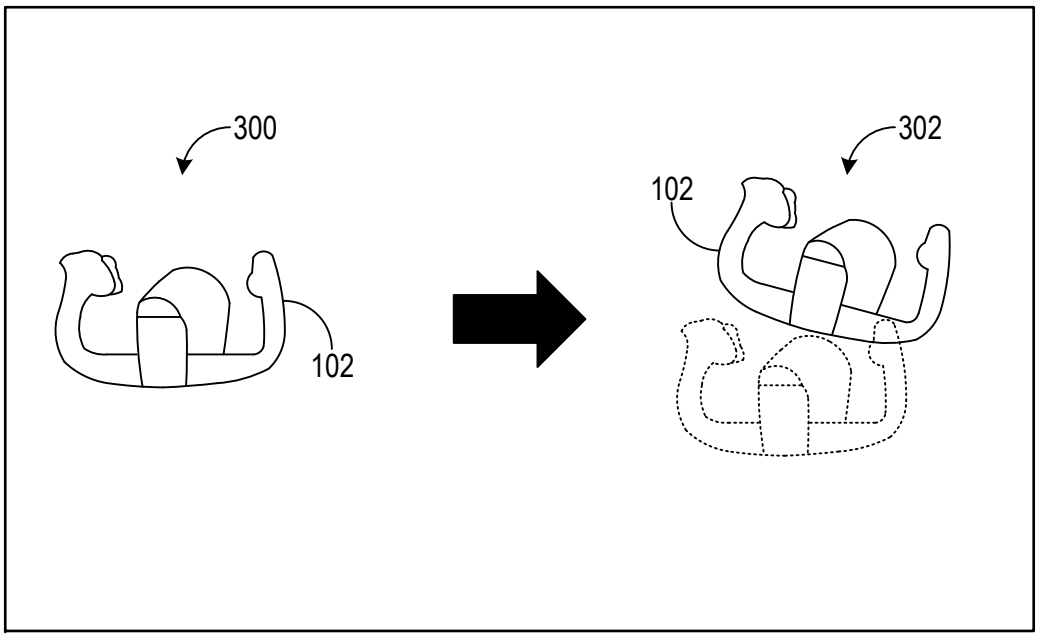


FIG. 3B

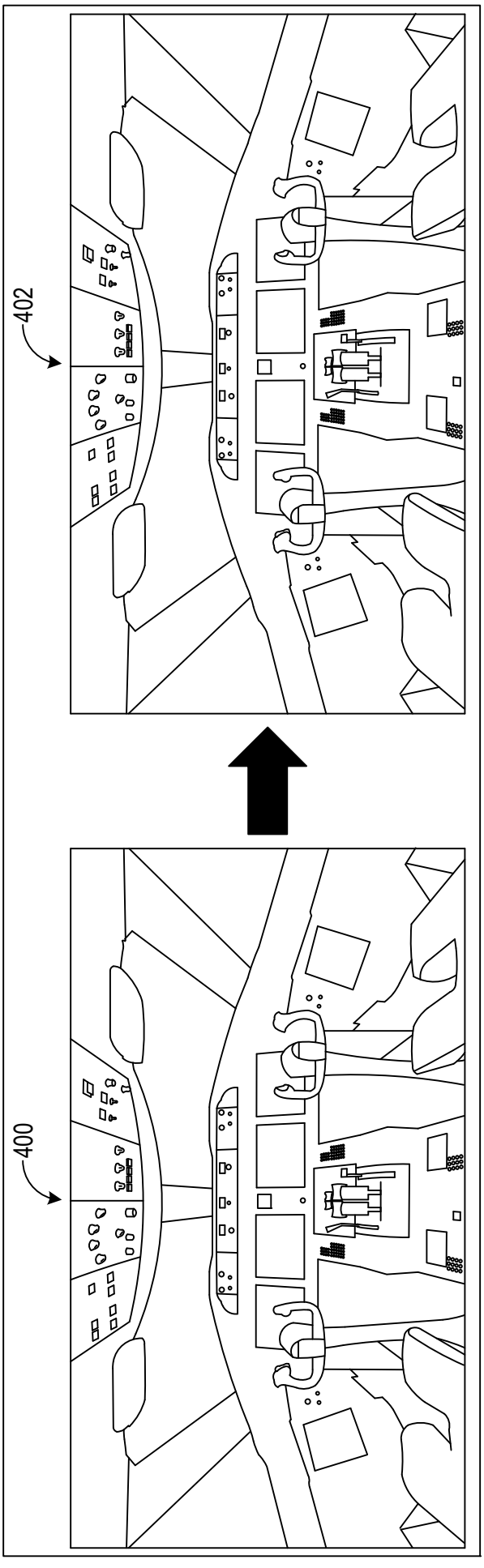


FIG. 4A

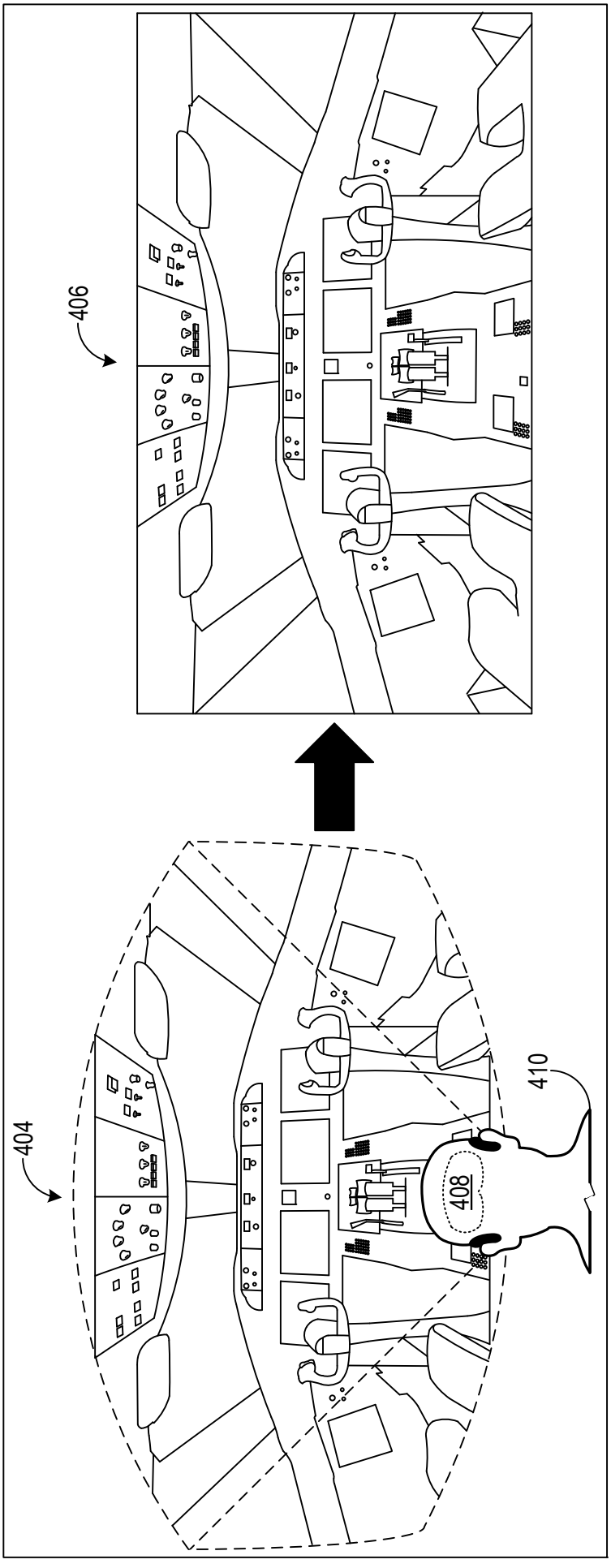


FIG. 4B

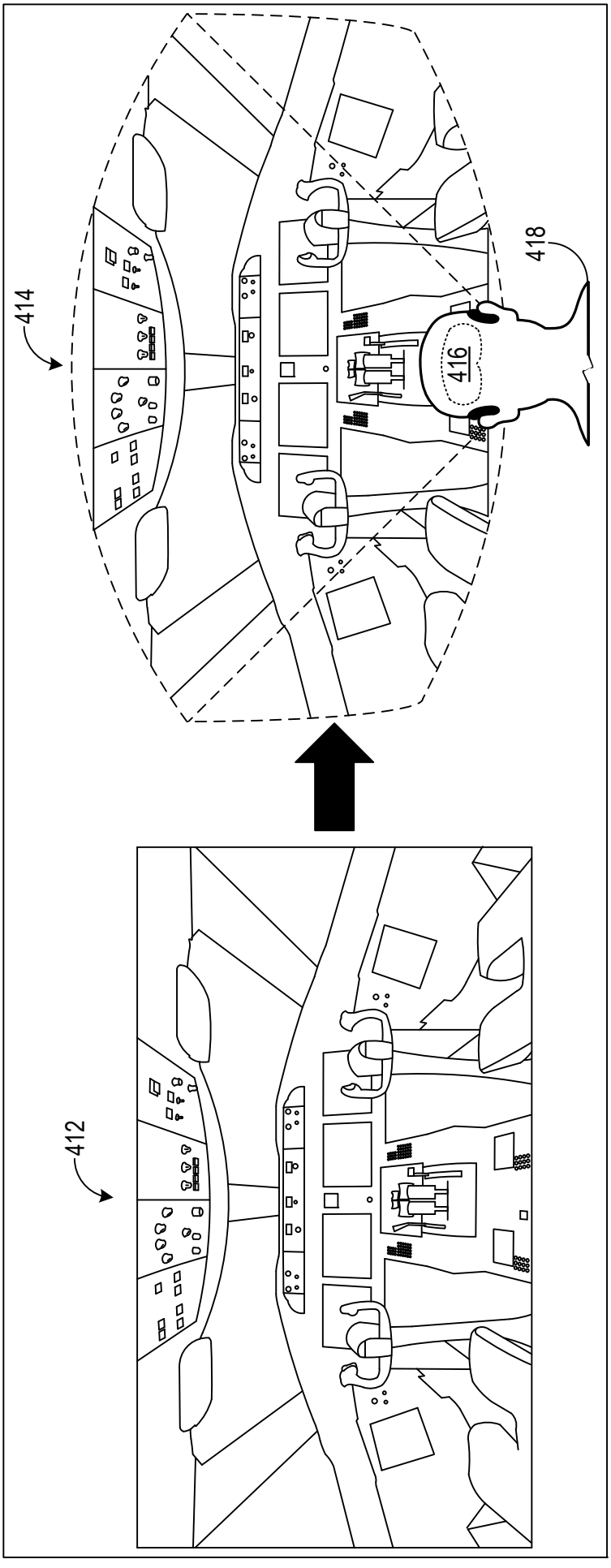


FIG. 4C

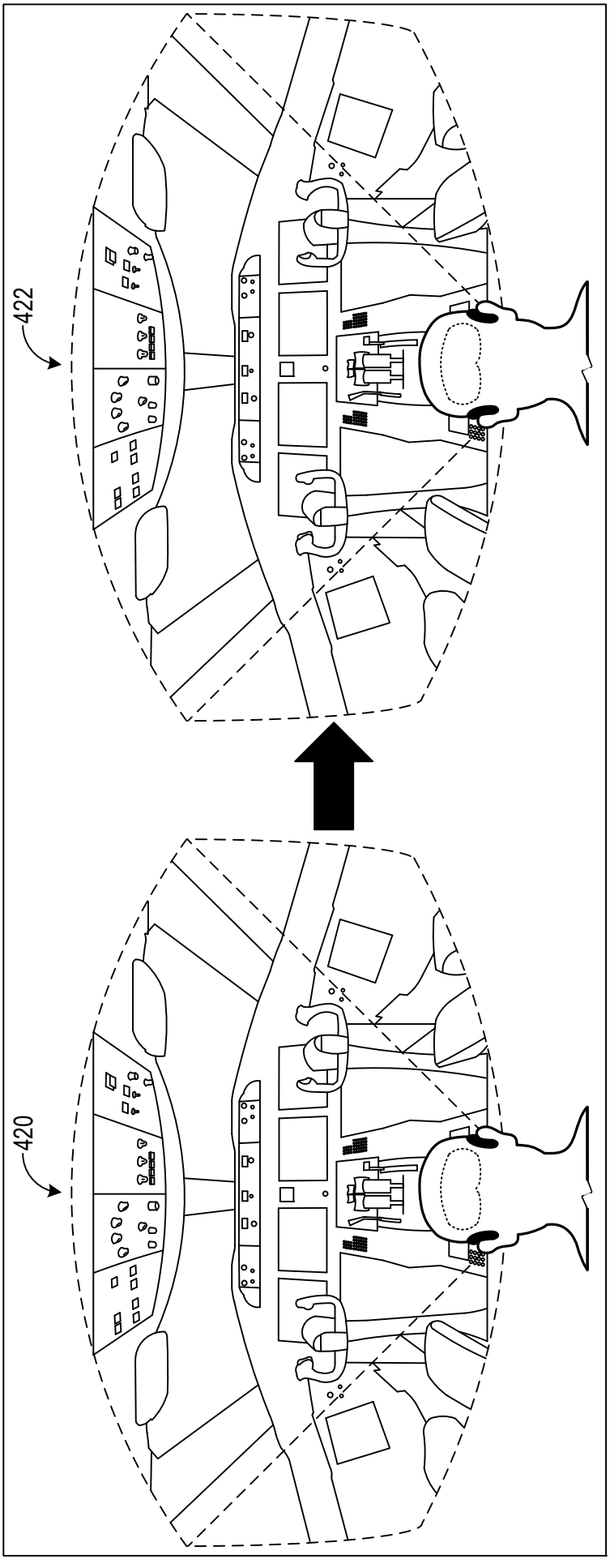


FIG. 4D

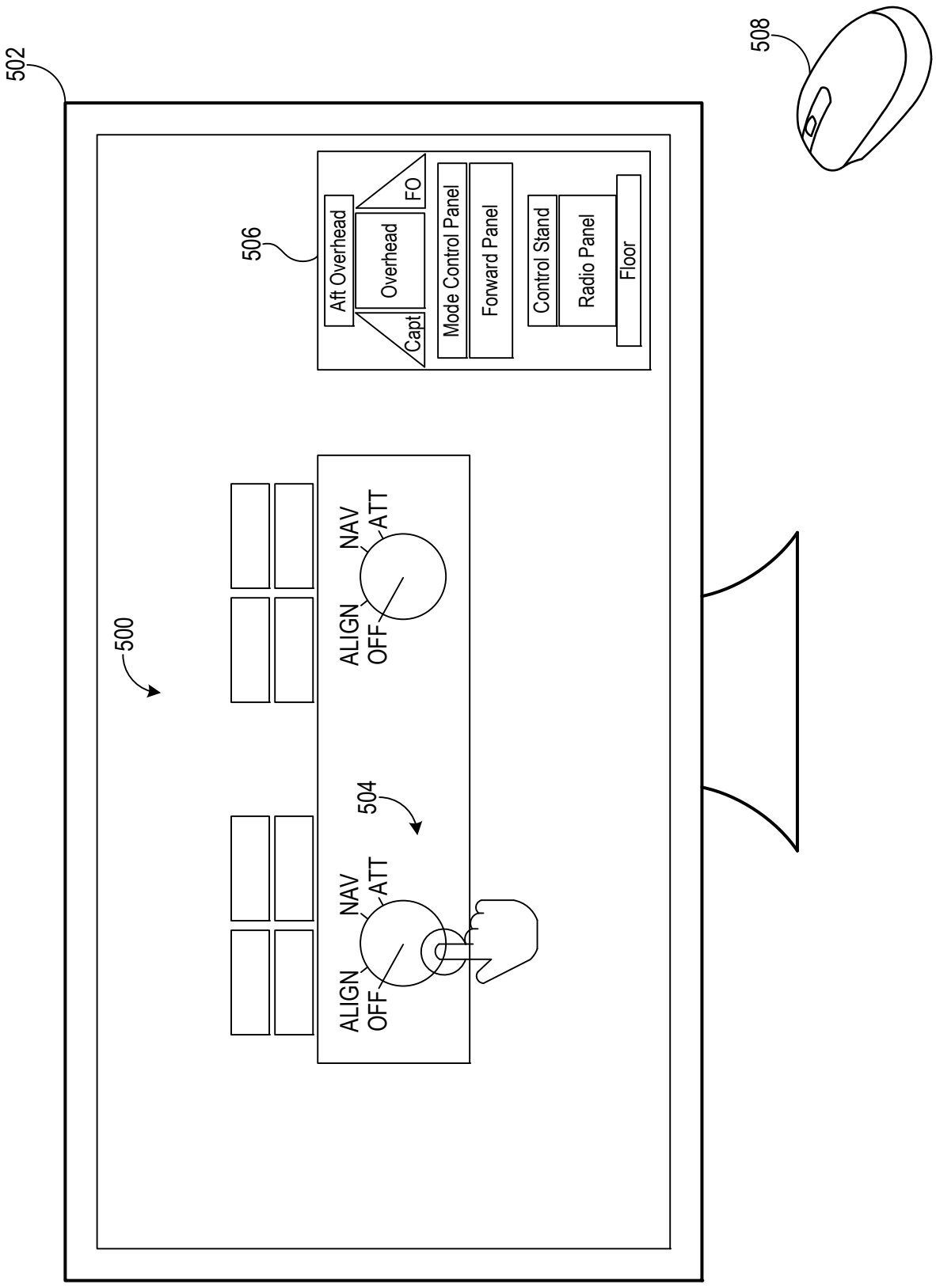

502
508
506
Aft Overhead
Overhead
FO
Capt
Mode Control Panel
Forward Panel
Control Stand
Radio Panel
Floor
500
NAV
ATT
ALIGN
OFF
504
NAV
ATT
ALIGN
OFF

FIG. 5

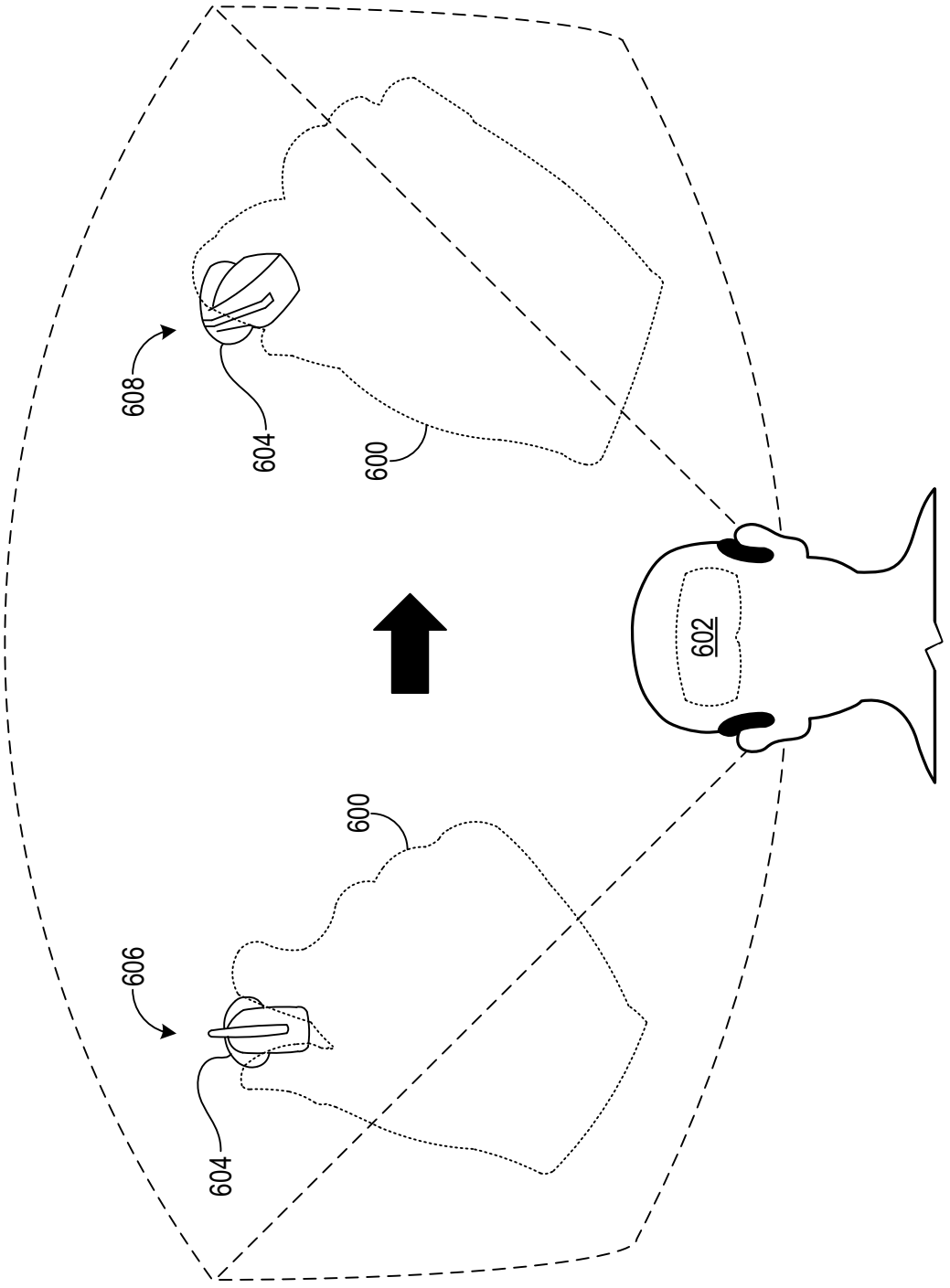


FIG. 6

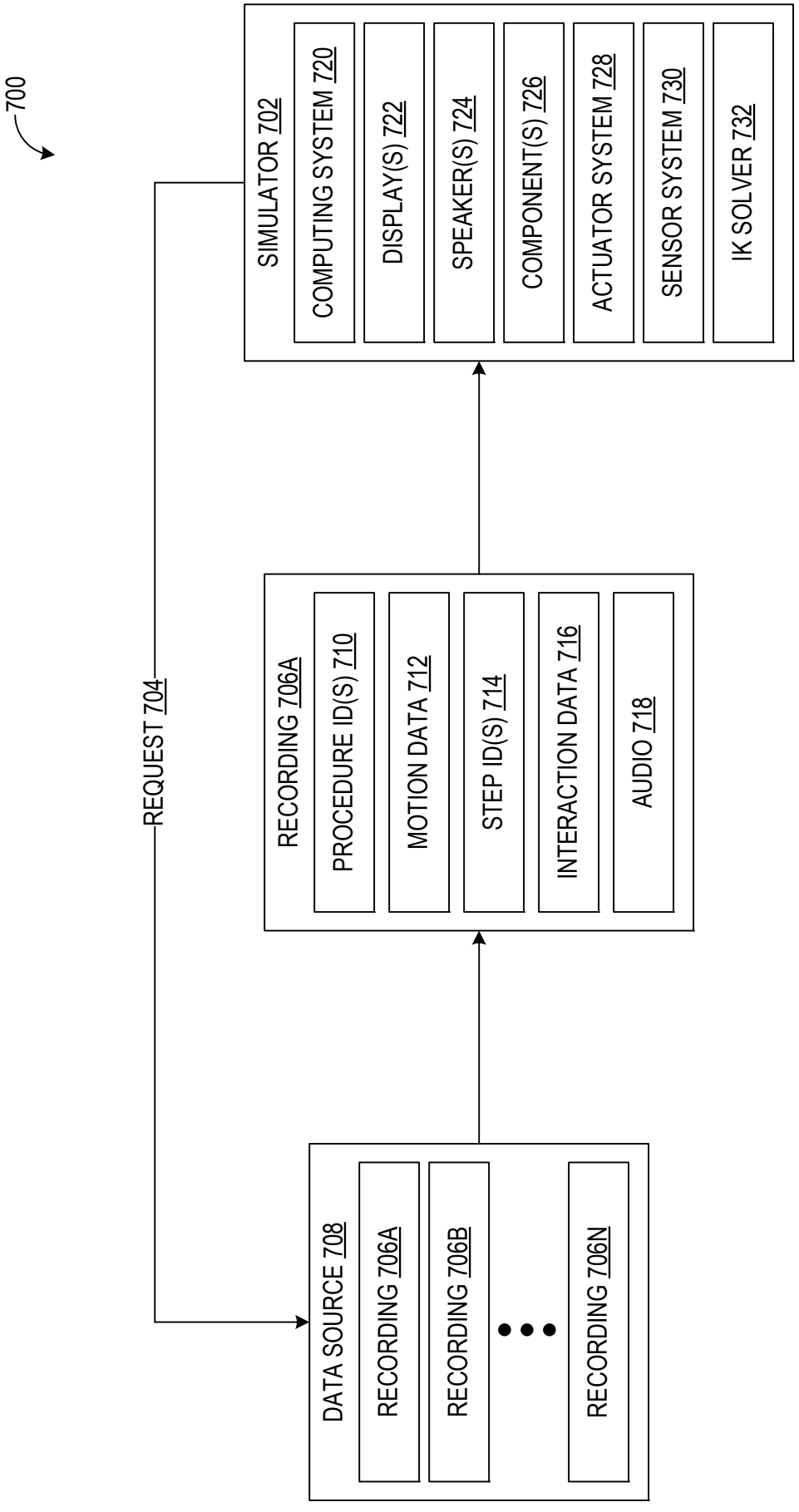

700
SIMULATOR 702
COMPUTING SYSTEM 720
DISPLAY(S) 722
SPEAKER(S) 724
COMPONENT(S) 726
ACTUATOR SYSTEM 728
SENSOR SYSTEM 730
IK SOLVER 732
REQUEST 704
RECORDING 706A
PROCEDURE ID(S) 710
MOTION DATA 712
STEP ID(S) 714
INTERACTION DATA 716
AUDIO 718
DATA SOURCE 708
RECORDING 706A
RECORDING 706B
RECORDING 706N

FIG. 7

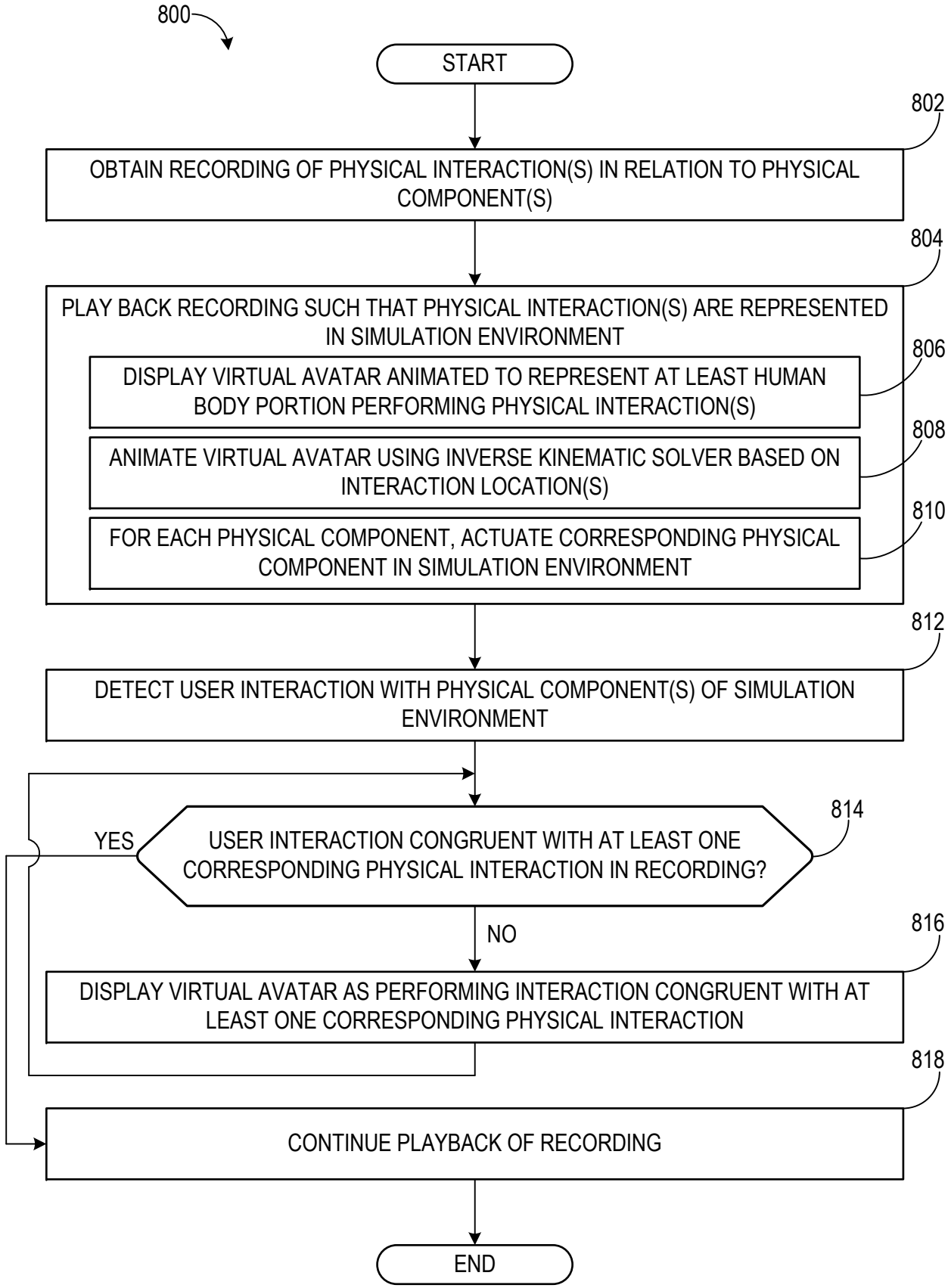

800
START
802
OBTAIN RECORDING OF PHYSICAL INTERACTION(S) IN RELATION TO PHYSICAL COMPONENT(S)
804
PLAY BACK RECORDING SUCH THAT PHYSICAL INTERACTION(S) ARE REPRESENTED IN SIMULATION ENVIRONMENT
806
DISPLAY VIRTUAL AVATAR ANIMATED TO REPRESENT AT LEAST HUMAN BODY PORTION PERFORMING PHYSICAL INTERACTION(S)
808
ANIMATE VIRTUAL AVATAR USING INVERSE KINEMATIC SOLVER BASED ON INTERACTION LOCATION(S)
810
FOR EACH PHYSICAL COMPONENT, ACTUATE CORRESPONDING PHYSICAL COMPONENT IN SIMULATION ENVIRONMENT
812
DETECT USER INTERACTION WITH PHYSICAL COMPONENT(S) OF SIMULATION ENVIRONMENT
814
YES
USER INTERACTION CONGRUENT WITH AT LEAST ONE CORRESPONDING PHYSICAL INTERACTION IN RECORDING?
NO
816
DISPLAY VIRTUAL AVATAR AS PERFORMING INTERACTION CONGRUENT WITH AT LEAST ONE CORRESPONDING PHYSICAL INTERACTION
818
CONTINUE PLAYBACK OF RECORDING
END

FIG. 8

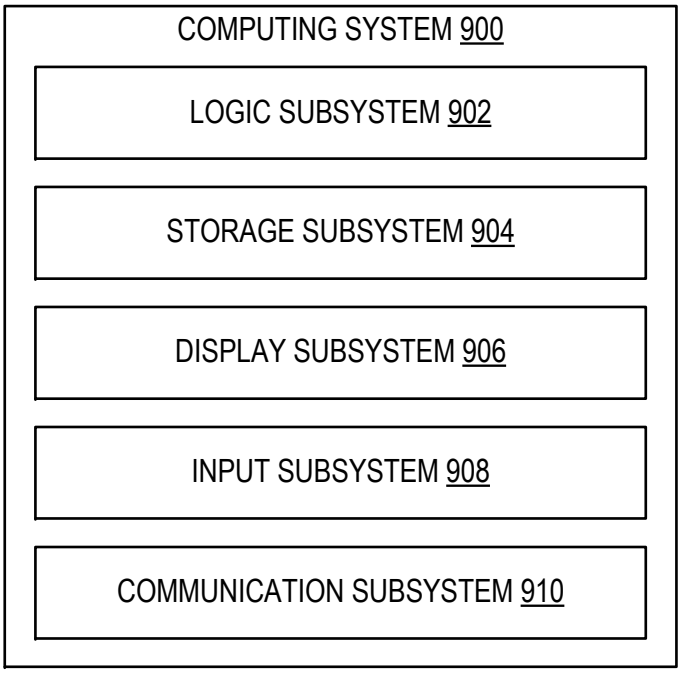

COMPUTING SYSTEM 900
LOGIC SUBSYSTEM 902
STORAGE SUBSYSTEM 904
DISPLAY SUBSYSTEM 906
INPUT SUBSYSTEM 908
COMMUNICATION SUBSYSTEM 910

FIG. 9