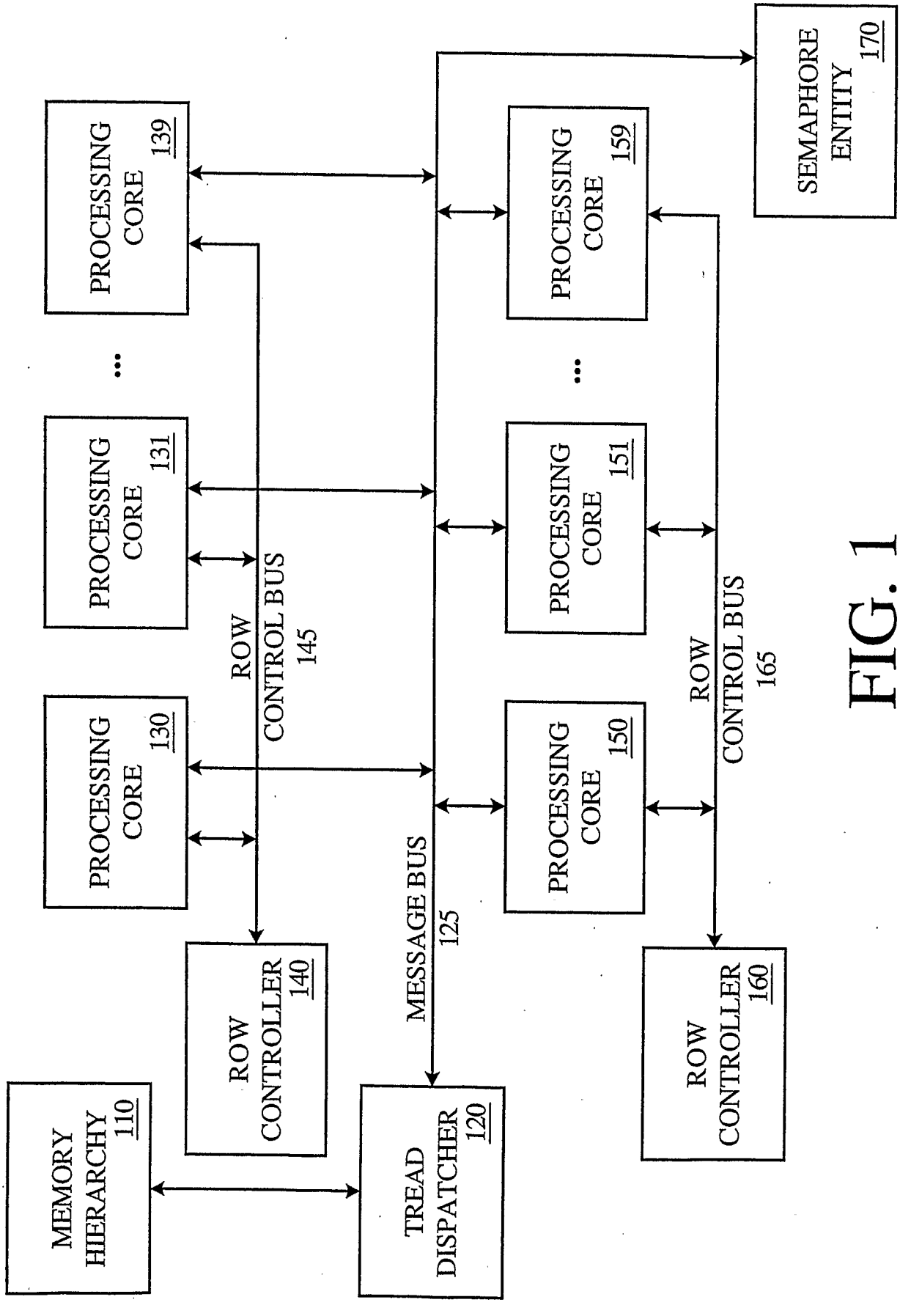

MEMORY HIERARCHY 110
TREAD DISPATCHER 120
MESSAGE BUS 125
ROW CONTROLLER 140
ROW CONTROLLER 160
ROW CONTROL BUS 145
ROW CONTROL BUS 165
PROCESSING CORE 130
PROCESSING CORE 131
PROCESSING CORE 139
PROCESSING CORE 150
PROCESSING CORE 151
PROCESSING CORE 159
SEMAPHORE ENTITY 170

FIG. 1

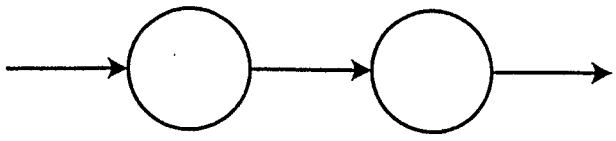


FIG. 2a

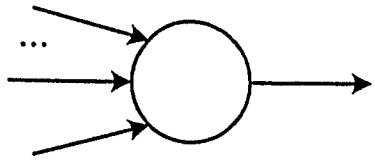


FIG. 2b

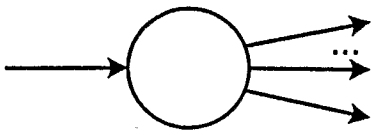


FIG. 2c

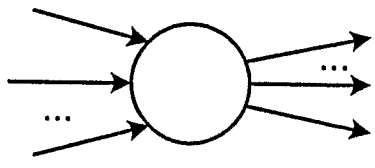


FIG. 2d

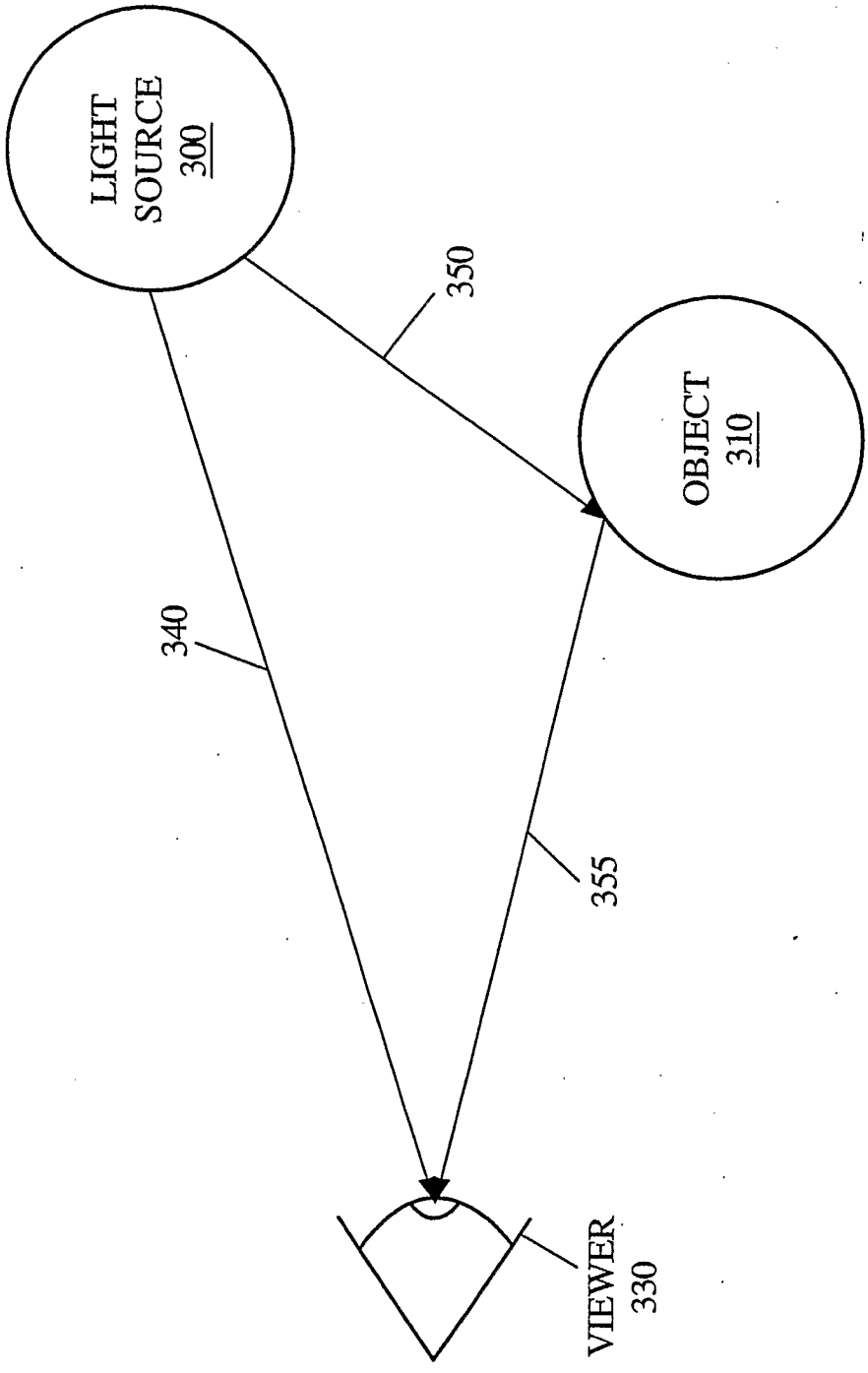



FIG. 3

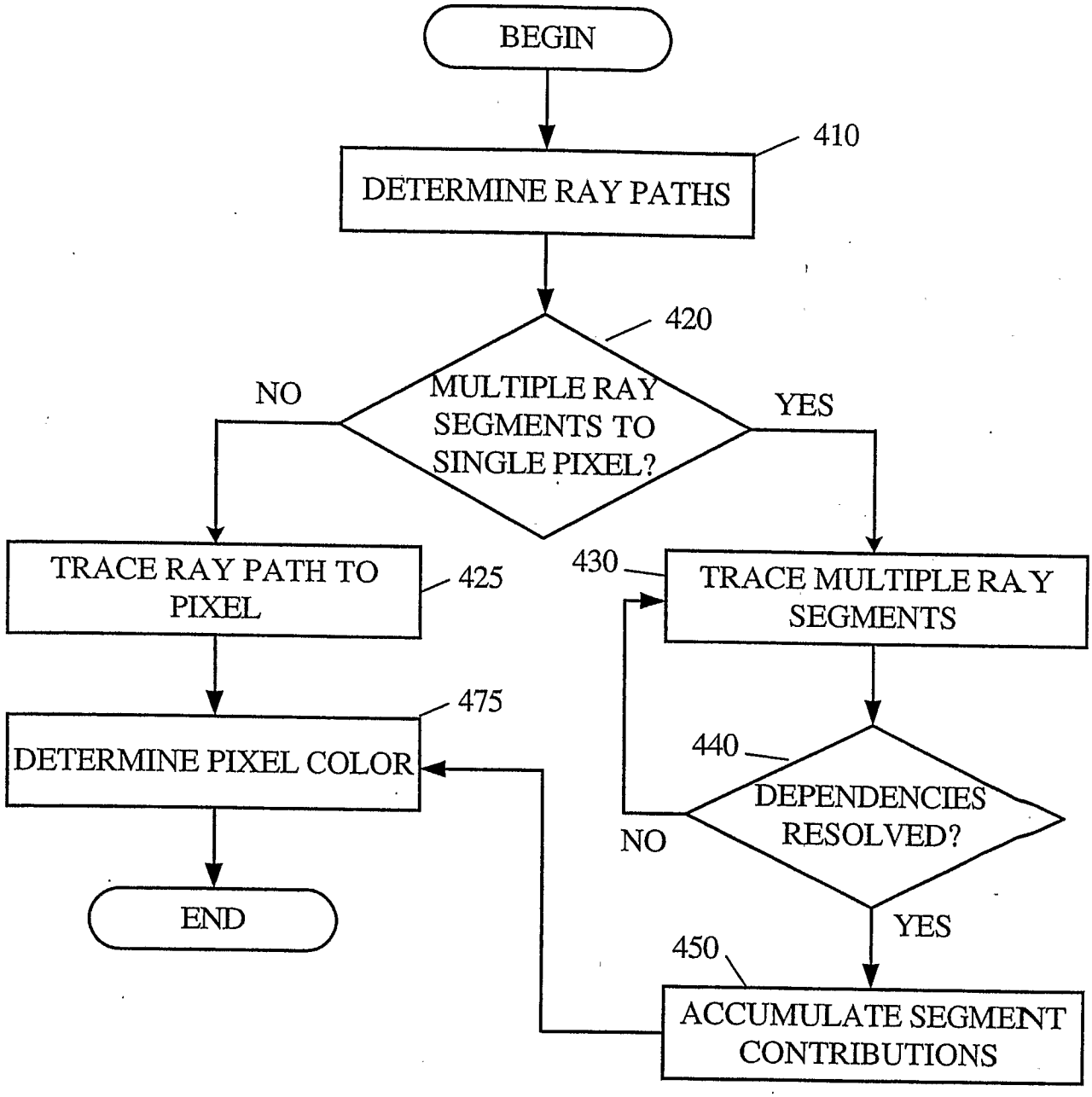

BEGIN
410
DETERMINE RAY PATHS
420
MULTIPLE RAY SEGMENTS TO SINGLE PIXEL?
NO
YES
TRACE RAY PATH TO PIXEL
425
430
TRACE MULTIPLE RAY SEGMENTS
475
DETERMINE PIXEL COLOR
440
DEPENDENCIES RESOLVED?
NO
YES
END
450
ACCUMULATE SEGMENT CONTRIBUTIONS

FIG. 4

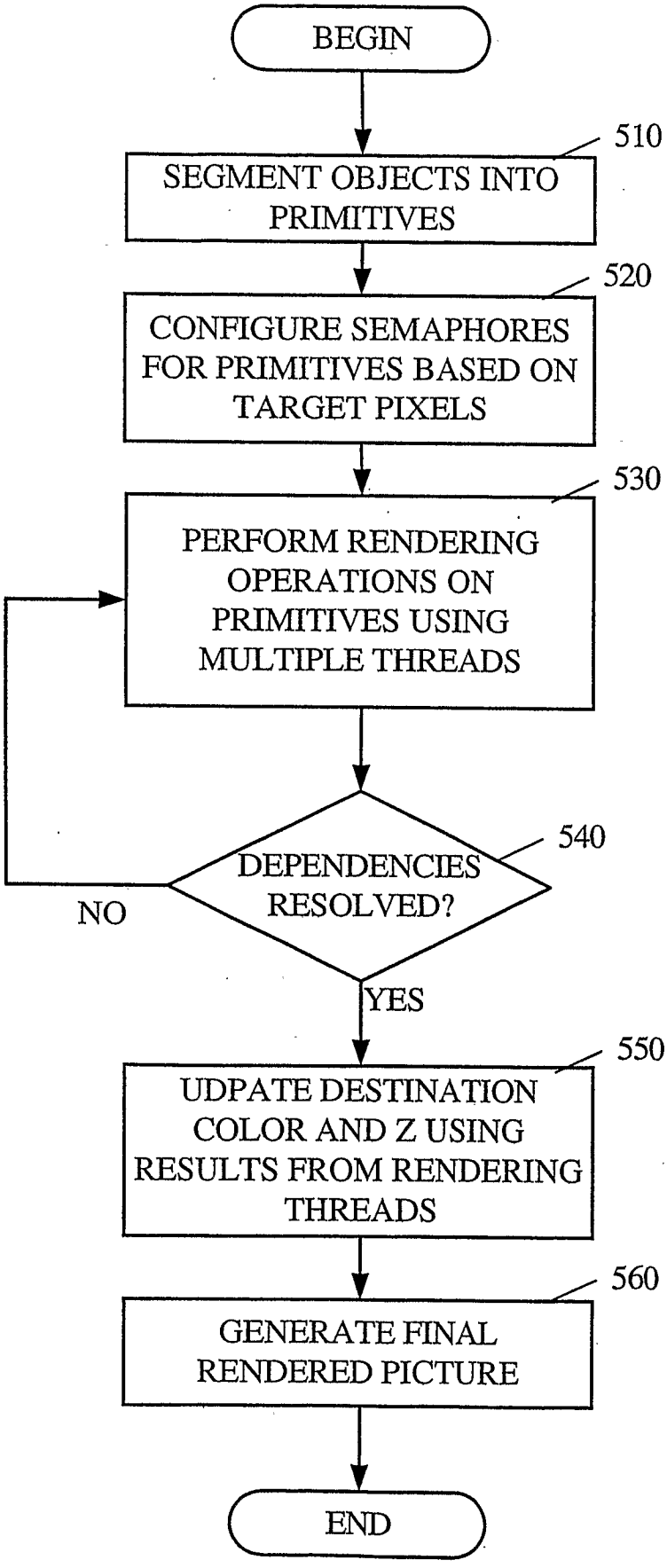

BEGIN
510
SEGMENT OBJECTS INTO PRIMITIVES
520
CONFIGURE SEMAPHORES FOR PRIMITIVES BASED ON TARGET PIXELS
530
PERFORM RENDERING OPERATIONS ON PRIMITIVES USING MULTIPLE THREADS
540
DEPENDENCIES RESOLVED?
NO
YES
550
UDPATE DESTINATION COLOR AND Z USING RESULTS FROM RENDERING THREADS
560
GENERATE FINAL RENDERED PICTURE
END

FIG. 5

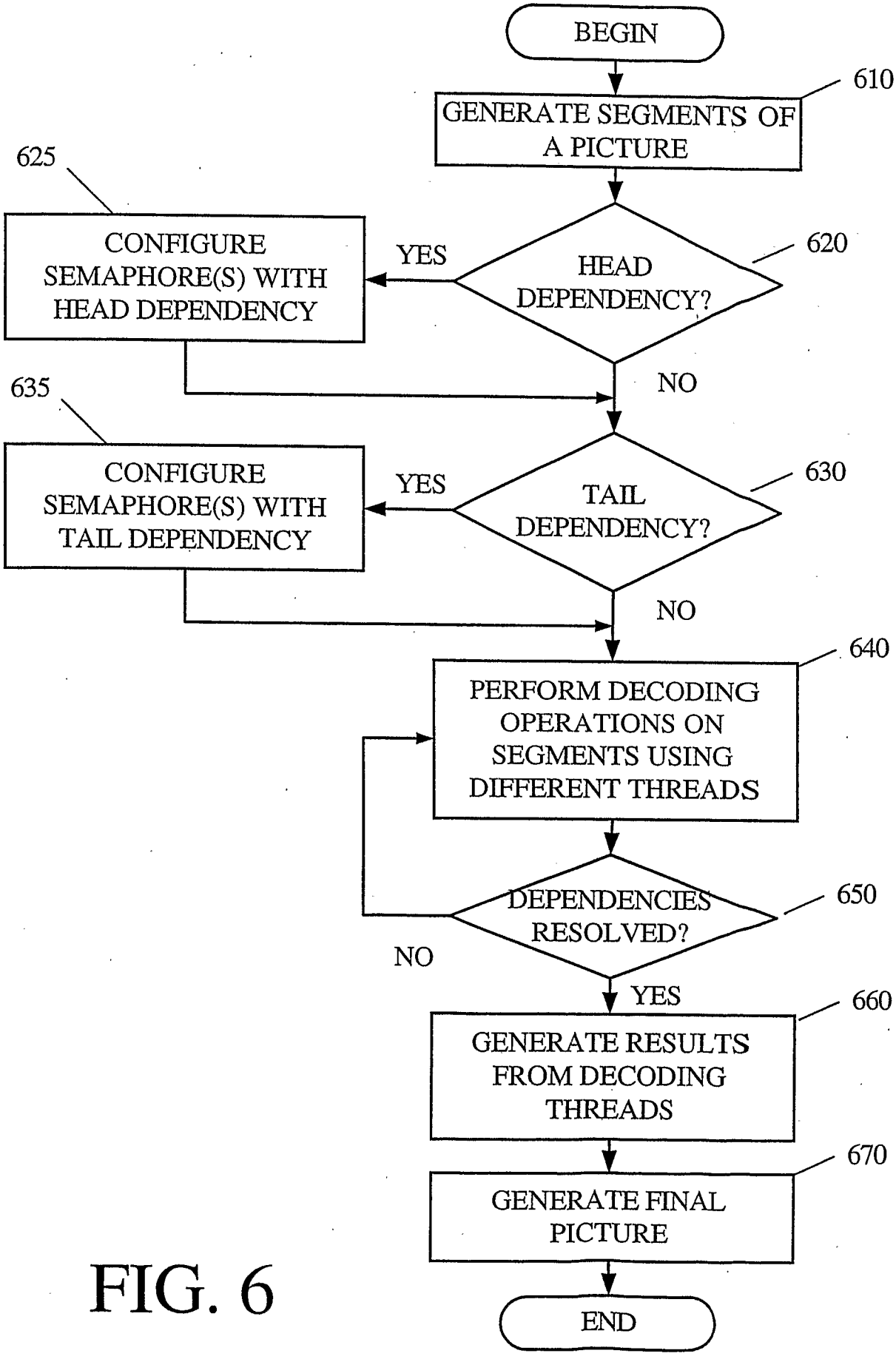

BEGIN
610
GENERATE SEGMENTS OF A PICTURE
625
CONFIGURE SEMAPHORE(S) WITH HEAD DEPENDENCY
YES
620
HEAD DEPENDENCY?
NO
635
CONFIGURE SEMAPHORE(S) WITH TAIL DEPENDENCY
YES
630
TAIL DEPENDENCY?
NO
640
PERFORM DECODING OPERATIONS ON SEGMENTS USING DIFFERENT THREADS
650
DEPENDENCIES RESOLVED?
NO
YES
660
GENERATE RESULTS FROM DECODING THREADS
670
GENERATE FINAL PICTURE
END

FIG. 6