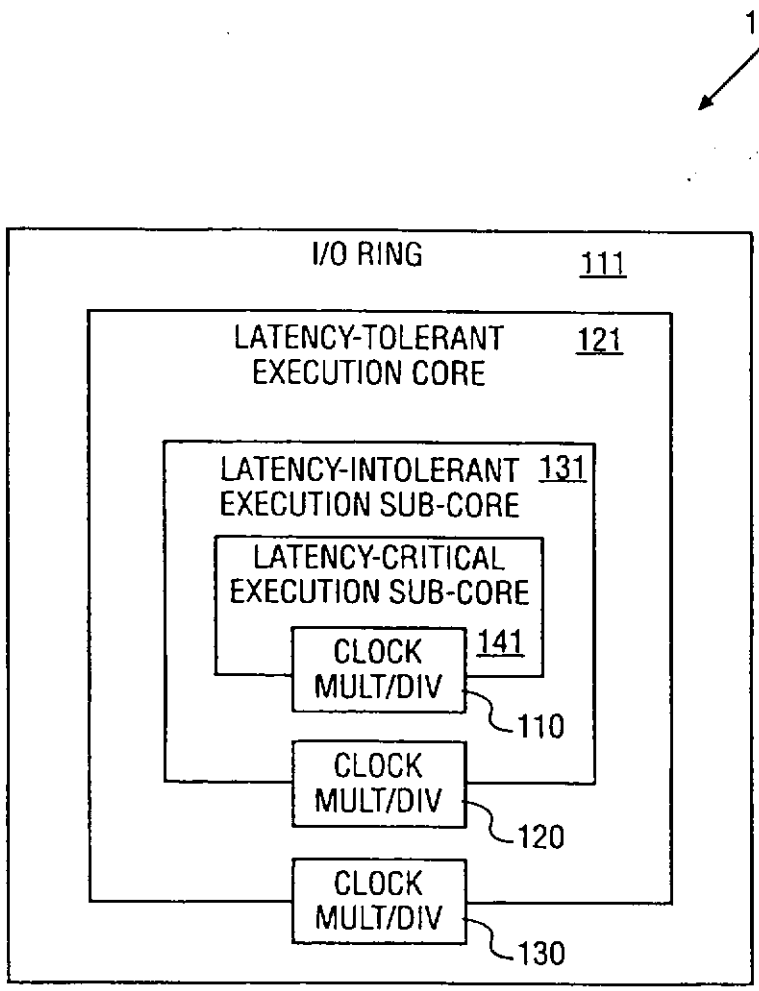


FIG. 1
(PRIOR ART)

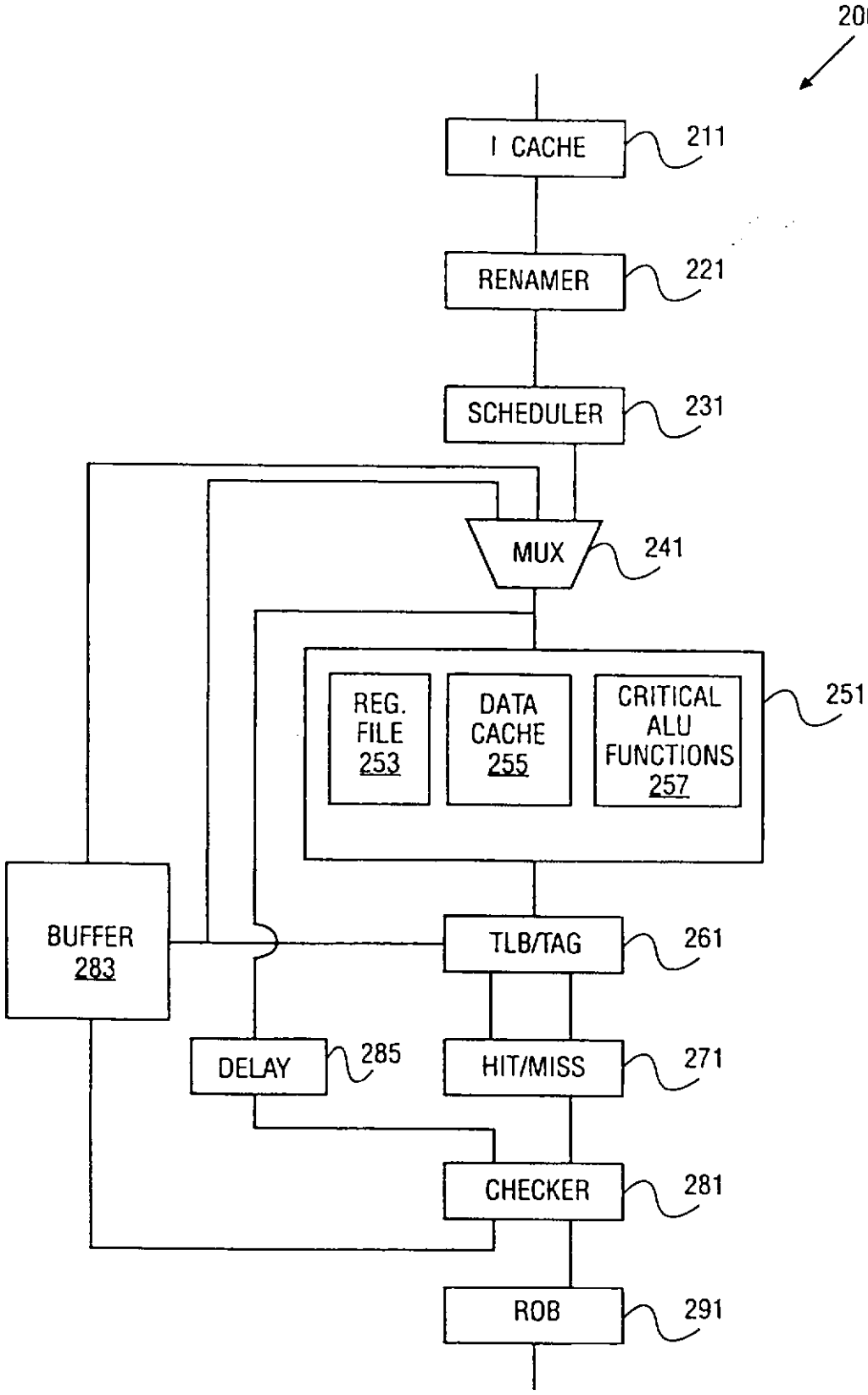


FIG. 2
(PRIOR ART)

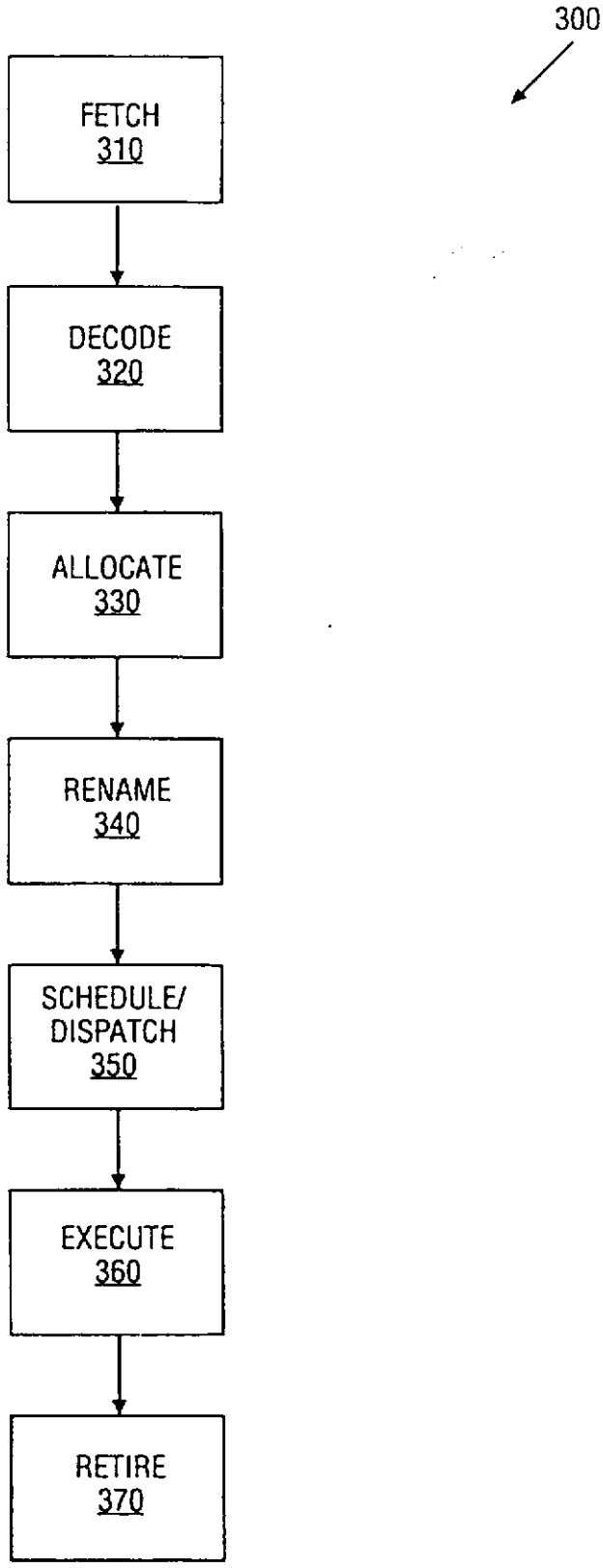

300
FETCH
310
DECODE
320
ALLOCATE
330
RENAME
340
SCHEDULE/
DISPATCH
350
EXECUTE
360
RETIRE
370

FIG. 3

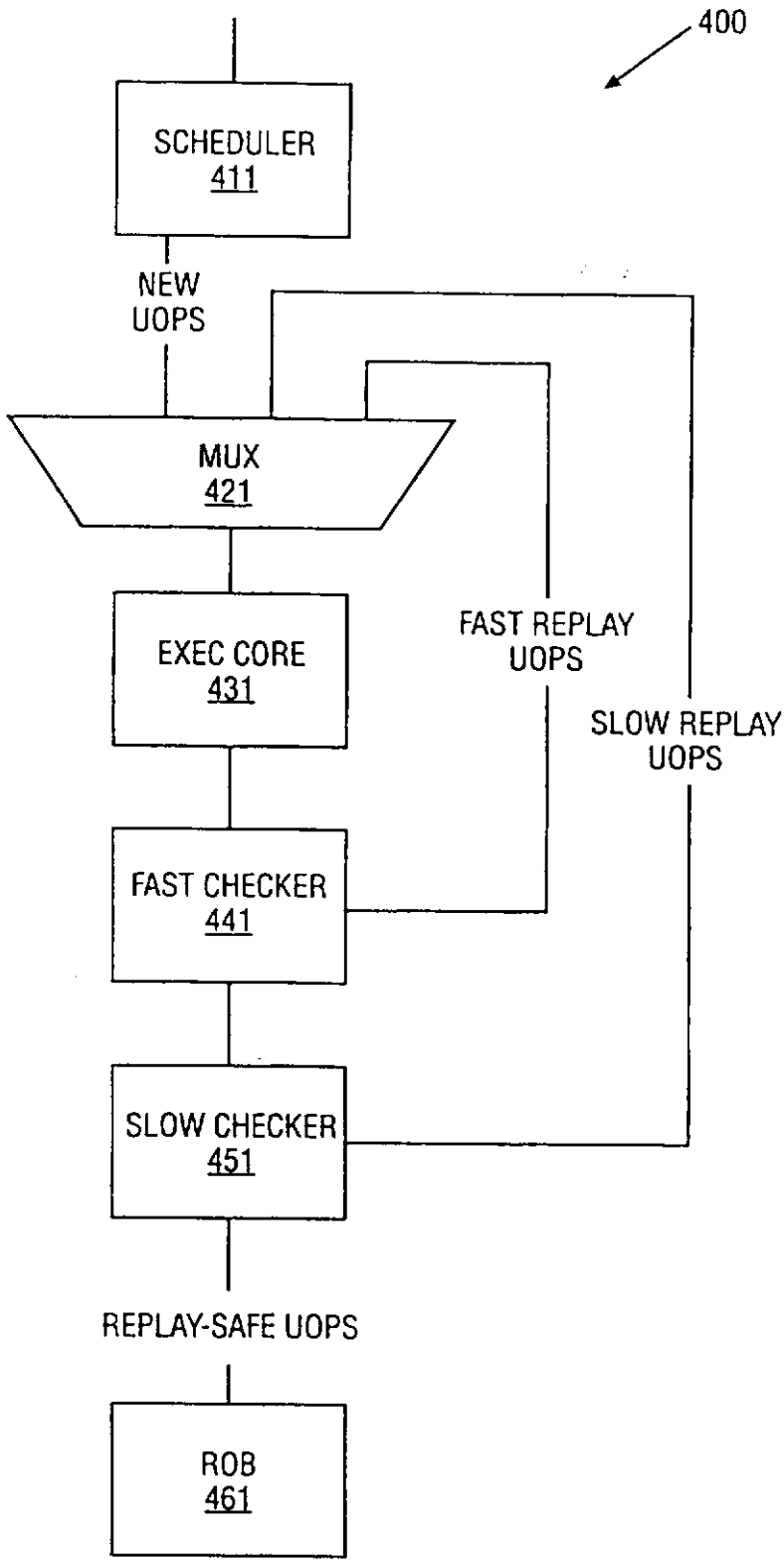

400
SCHEDULER
411
NEW
UOPS
MUX
421
EXEC CORE
431
FAST REPLAY
UOPS
SLOW REPLAY
UOPS
FAST CHECKER
441
SLOW CHECKER
451
REPLAY-SAFE UOPS
ROB
461

FIG. 4

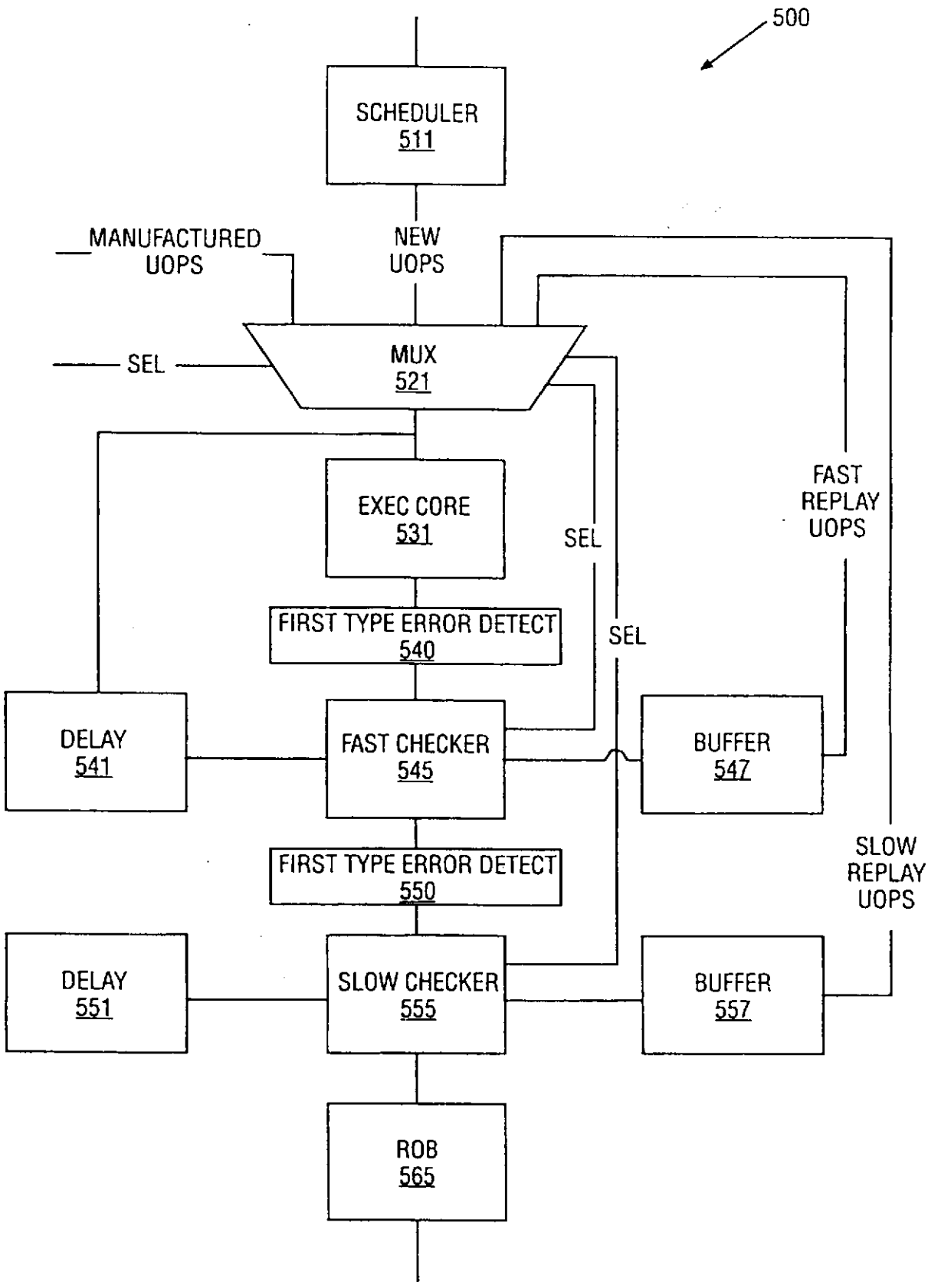

500
SCHEDULER
511
MANUFACTURED
UOPS
NEW
UOPS
SEL
MUX
521
EXEC CORE
531
FAST
REPLAY
UOPS
SEL
FIRST TYPE ERROR DETECT
540
SEL
DELAY
541
FAST CHECKER
545
BUFFER
547
FIRST TYPE ERROR DETECT
550
SLOW
REPLAY
UOPS
DELAY
551
SLOW CHECKER
555
BUFFER
557
ROB
565

FIG. 5

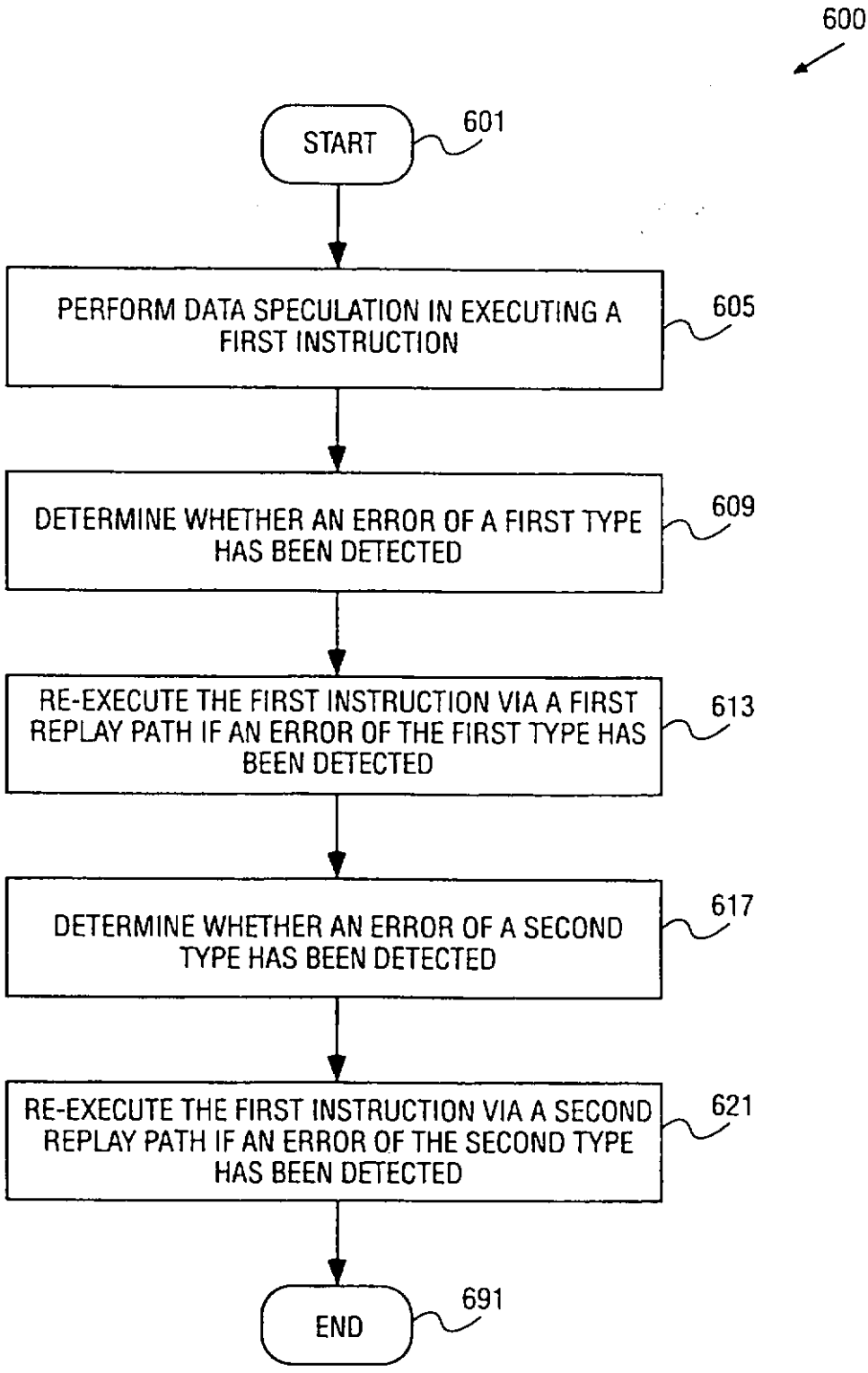

600
START
601
PERFORM DATA SPECULATION IN EXECUTING A FIRST INSTRUCTION
605
DETERMINE WHETHER AN ERROR OF A FIRST TYPE HAS BEEN DETECTED
609
RE-EXECUTE THE FIRST INSTRUCTION VIA A FIRST REPLAY PATH IF AN ERROR OF THE FIRST TYPE HAS BEEN DETECTED
613
DETERMINE WHETHER AN ERROR OF A SECOND TYPE HAS BEEN DETECTED
617
RE-EXECUTE THE FIRST INSTRUCTION VIA A SECOND REPLAY PATH IF AN ERROR OF THE SECOND TYPE HAS BEEN DETECTED
621
END
691

FIG. 6