FIG. 1

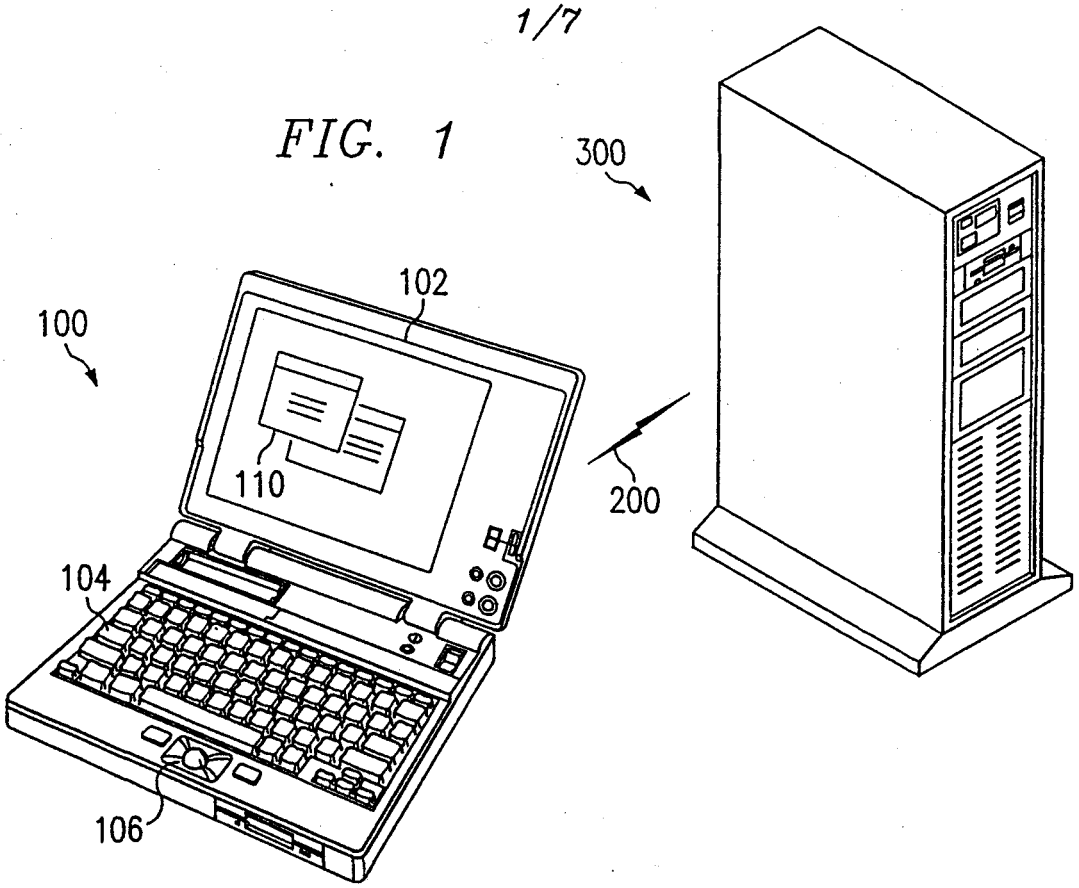

300
102
100
110
200
104
106

FIG. 2

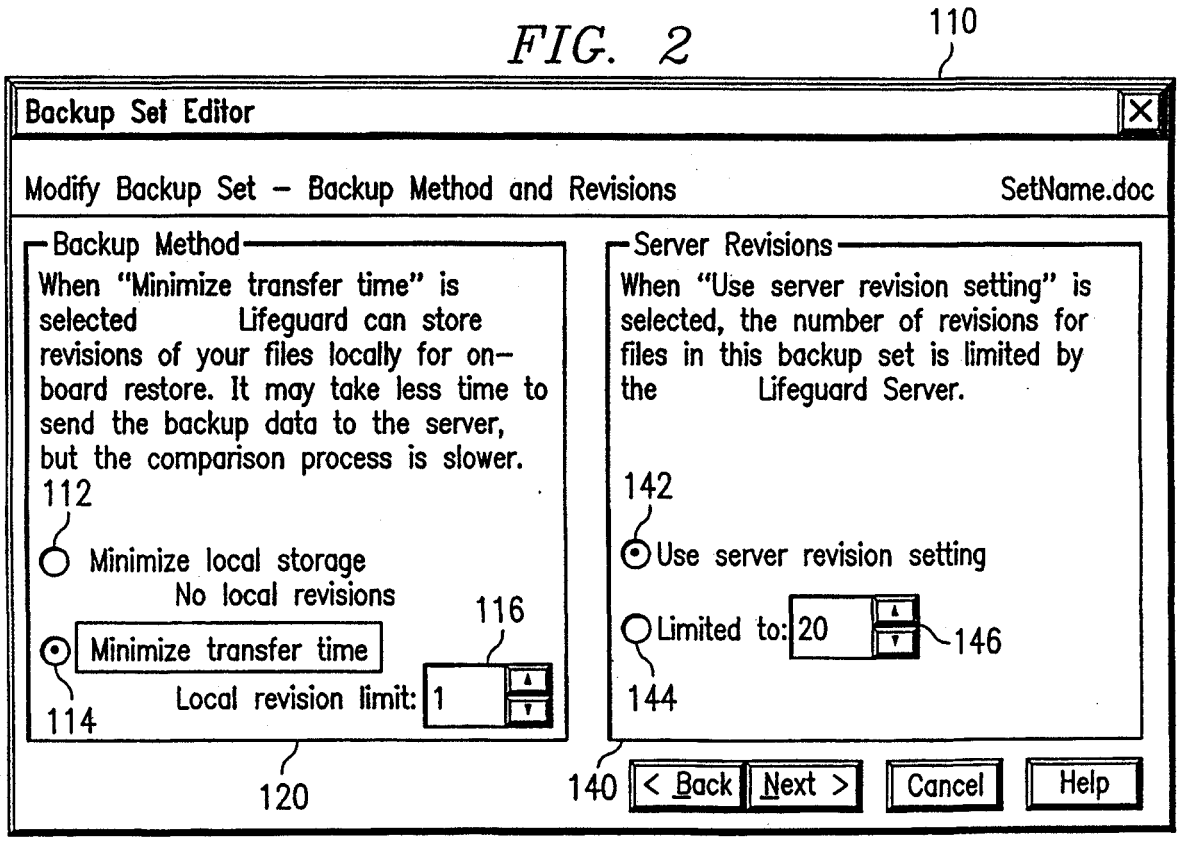

110
Backup Set Editor
Modify Backup Set – Backup Method and Revisions
SetName.doc
Backup Method
When "Minimize transfer time" is selected Lifeguard can store revisions of your files locally for on-board restore. It may take less time to send the backup data to the server, but the comparison process is slower.
112
Minimize local storage
No local revisions
Minimize transfer time
116
Local revision limit: 1
114
120
Server Revisions
When "Use server revision setting" is selected, the number of revisions for files in this backup set is limited by the Lifeguard Server.
142
Use server revision setting
Limited to: 20
146
144
140
< Back
Next >
Cancel
Help

FIG. 3

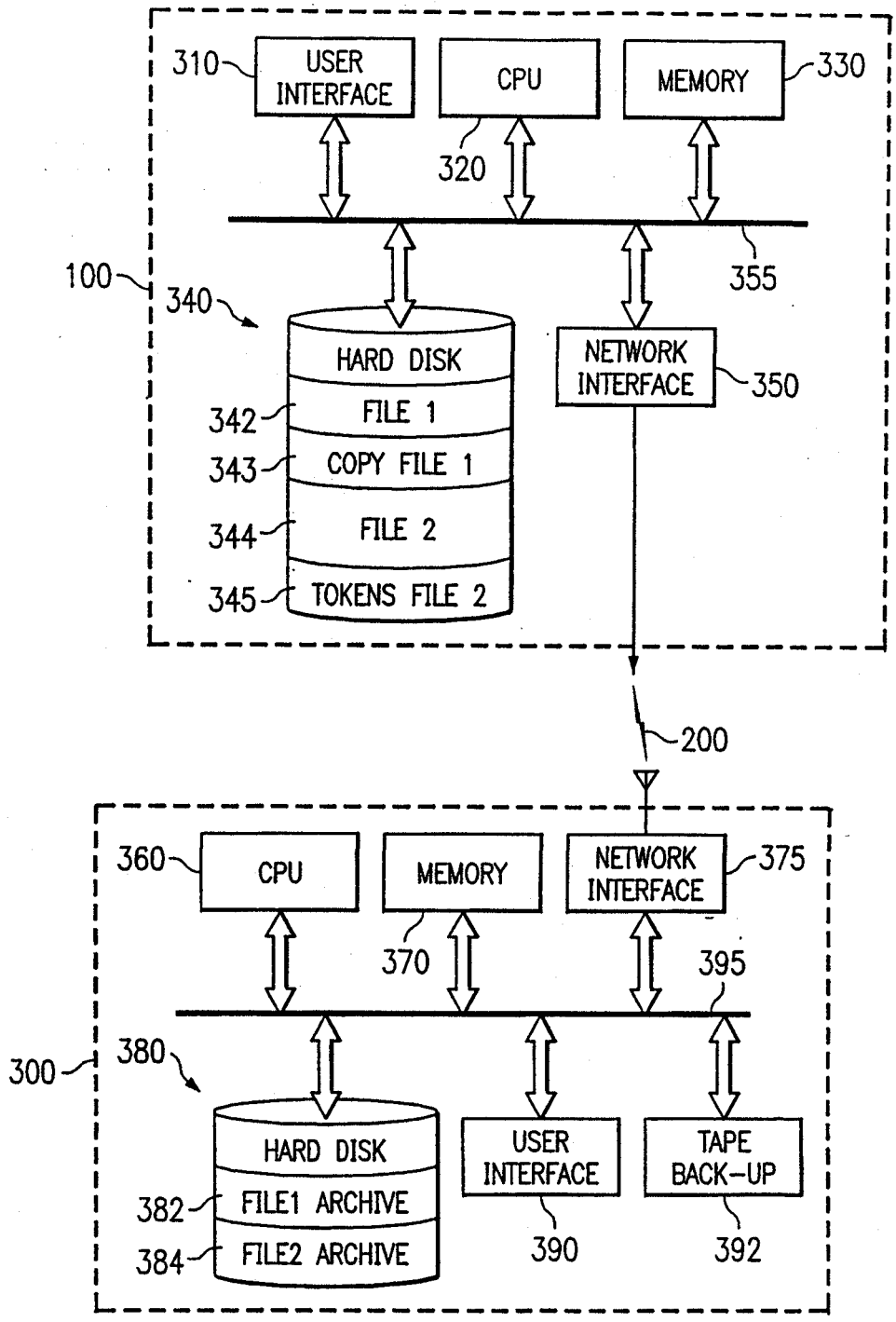

310
USER INTERFACE
CPU
MEMORY
330
320
355
100
340
HARD DISK
FILE 1
COPY FILE 1
FILE 2
TOKENS FILE 2
342
343
344
345
NETWORK INTERFACE
350
200
360
CPU
MEMORY
NETWORK INTERFACE
375
370
395
300
380
HARD DISK
FILE1 ARCHIVE
FILE2 ARCHIVE
382
384
USER INTERFACE
390
TAPE BACK-UP
392

FIG. 4

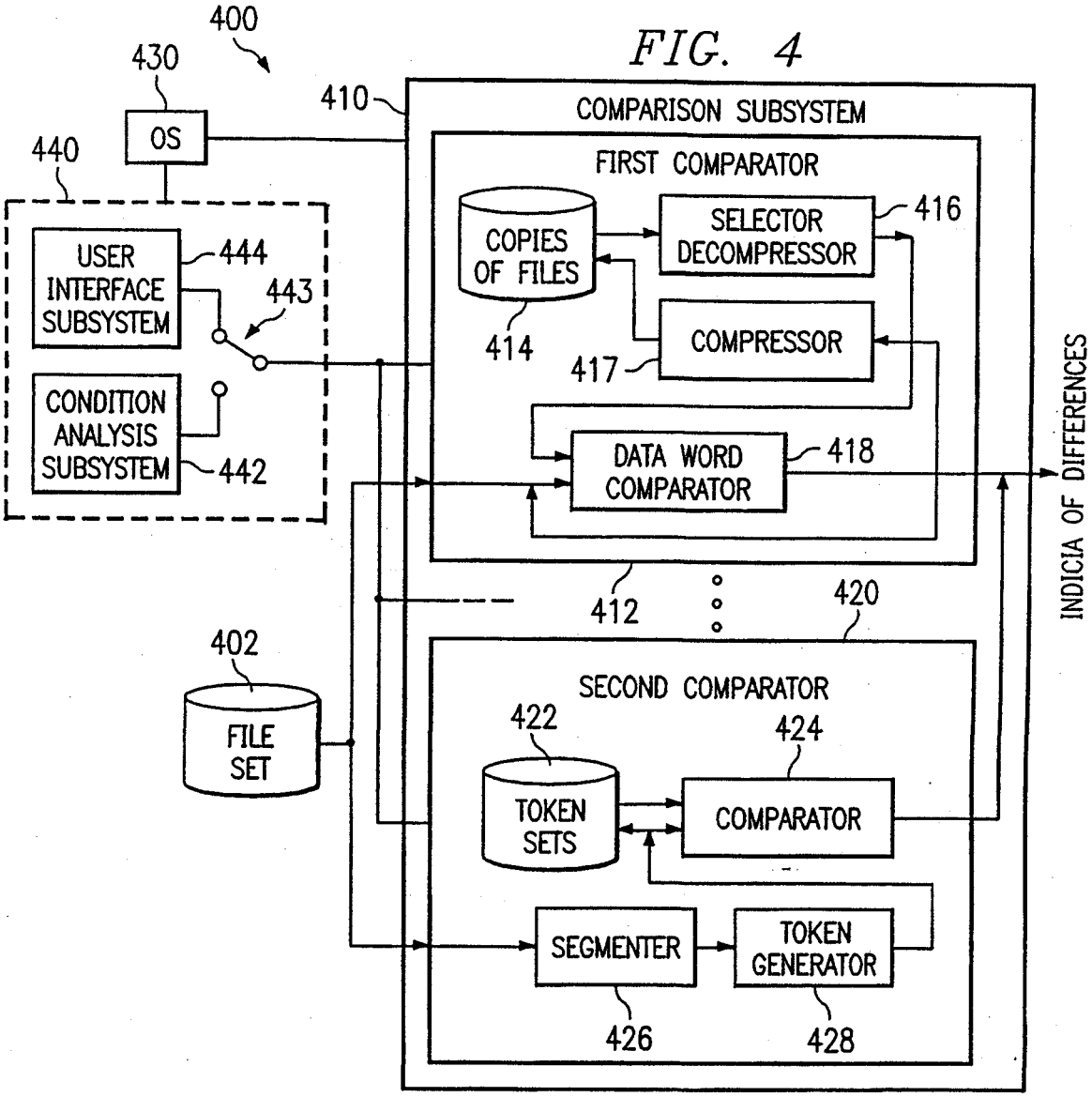
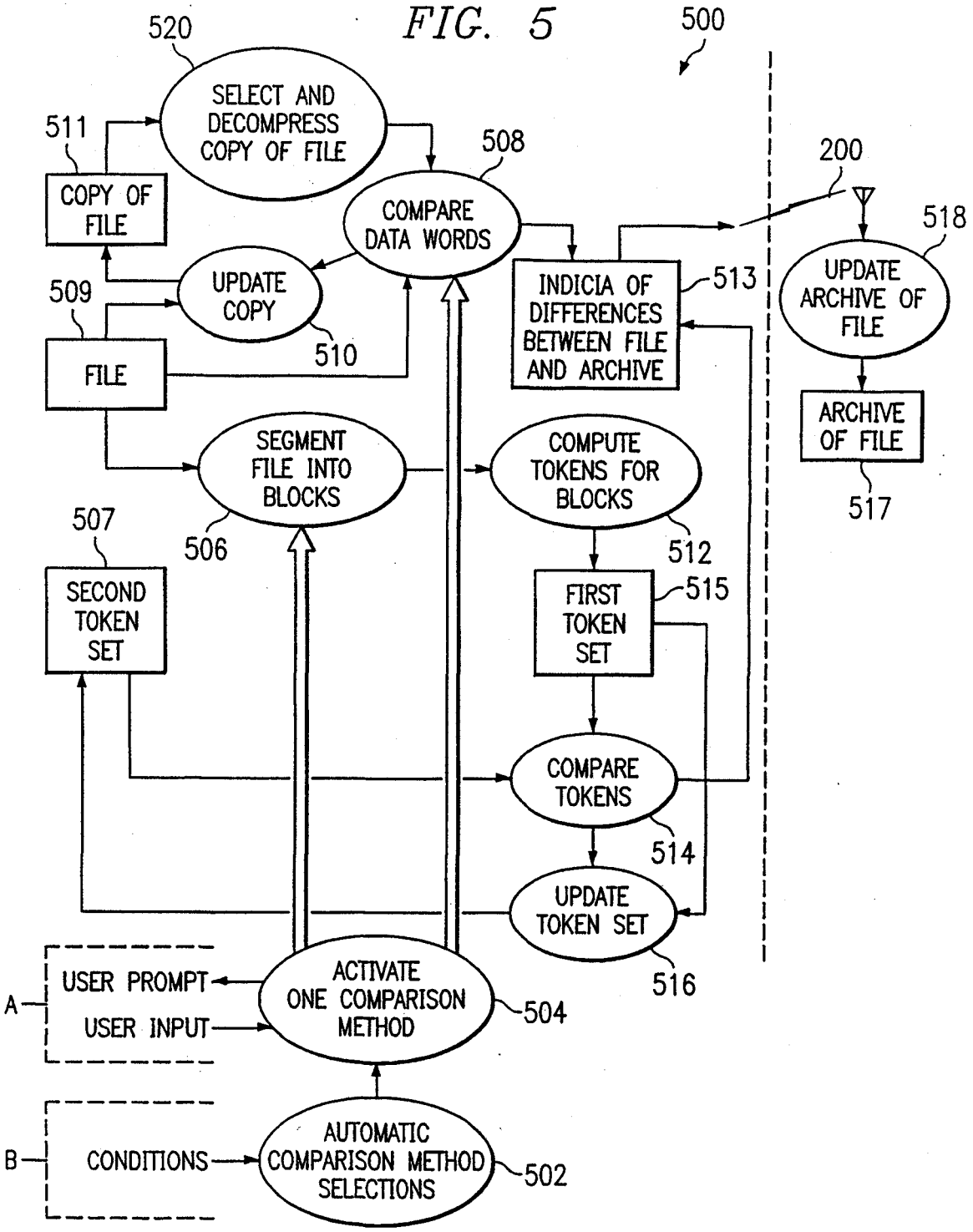

400
430
OS
440
410
COMPARISON SUBSYSTEM
FIRST COMPARATOR
USER INTERFACE SUBSYSTEM
444
443
CONDITION ANALYSIS SUBSYSTEM
442
COPIES OF FILES
414
SELECTOR DECOMPRESSOR
416
COMPRESSOR
417
DATA WORD COMPARATOR
418
INDICIA OF DIFFERENCES
412
420
402
FILE SET
SECOND COMPARATOR
422
TOKEN SETS
424
COMPARATOR
SEGMENTER
TOKEN GENERATOR
426
428

FIG. 5


500
520
SELECT AND DECOMPRESS COPY OF FILE
511
COPY OF FILE
508
COMPARE DATA WORDS
200
518
UPDATE ARCHIVE OF FILE
509
UPDATE COPY
510
FILE
INDICIA OF DIFFERENCES BETWEEN FILE AND ARCHIVE
513
ARCHIVE OF FILE
517
SEGMENT FILE INTO BLOCKS
506
COMPUTE TOKENS FOR BLOCKS
512
507
SECOND TOKEN SET
FIRST TOKEN SET
515
COMPARE TOKENS
514
UPDATE TOKEN SET
516
A
USER PROMPT
USER INPUT
ACTIVATE ONE COMPARISON METHOD
504
B
CONDITIONS
AUTOMATIC COMPARISON METHOD SELECTIONS
502

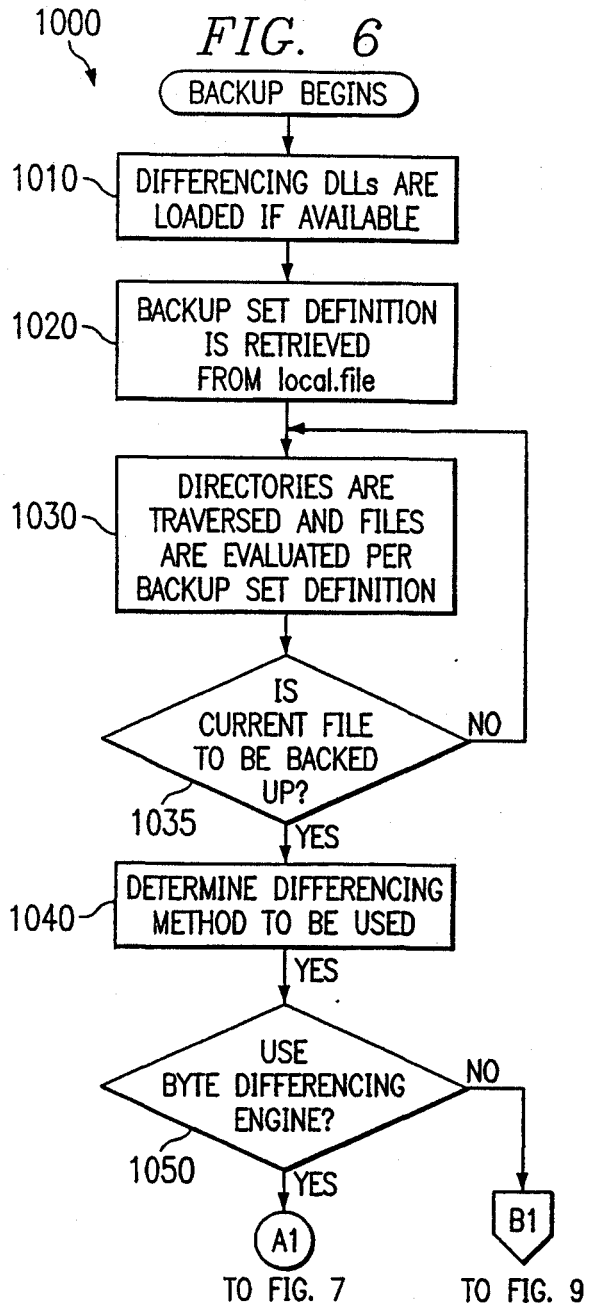

1000
BACKUP BEGINS
1010
DIFFERENCING DLLs ARE LOADED IF AVAILABLE
1020
BACKUP SET DEFINITION IS RETRIEVED FROM local.file
1030
DIRECTORIES ARE TRAVERSED AND FILES ARE EVALUATED PER BACKUP SET DEFINITION
IS CURRENT FILE TO BE BACKED UP?
NO
1035
YES
1040
DETERMINE DIFFERENCING METHOD TO BE USED
YES
USE BYTE DIFFERENCING ENGINE?
NO
1050
YES
A1
TO FIG. 7
B1
TO FIG. 9

FIG. 6

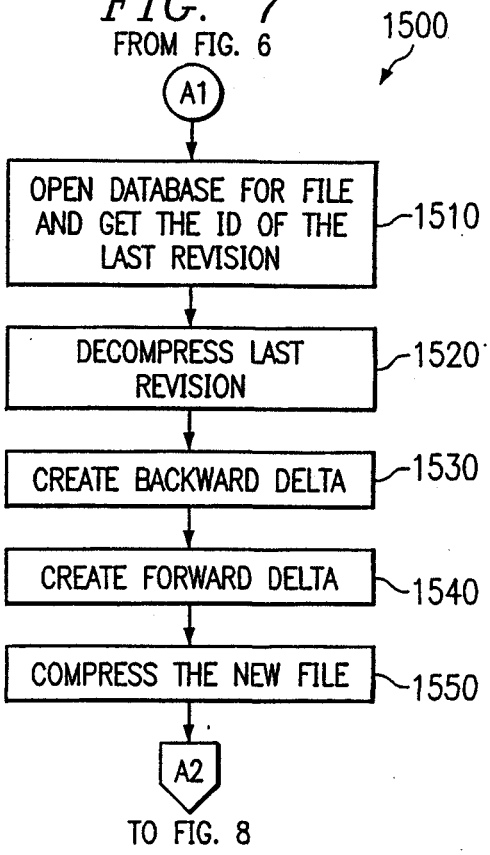

FROM FIG. 6
A1
1500
OPEN DATABASE FOR FILE AND GET THE ID OF THE LAST REVISION
1510
DECOMPRESS LAST REVISION
1520
CREATE BACKWARD DELTA
1530
CREATE FORWARD DELTA
1540
COMPRESS THE NEW FILE
1550
A2
TO FIG. 8

FIG. 7

FIG. 8

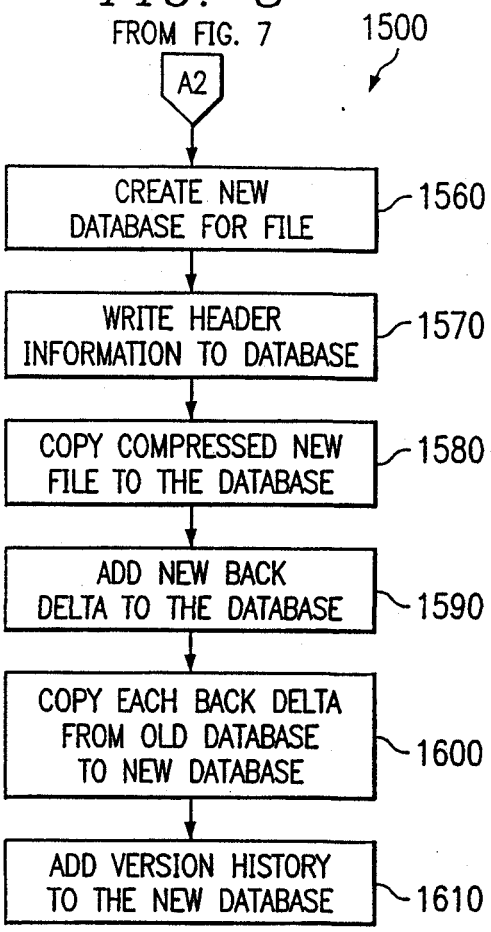

FROM FIG. 7
A2
1500
CREATE NEW DATABASE FOR FILE
1560
WRITE HEADER INFORMATION TO DATABASE
1570
COPY COMPRESSED NEW FILE TO THE DATABASE
1580
ADD NEW BACK DELTA TO THE DATABASE
1590
COPY EACH BACK DELTA FROM OLD DATABASE TO NEW DATABASE
1600
ADD VERSION HISTORY TO THE NEW DATABASE
1610

FIG. 9

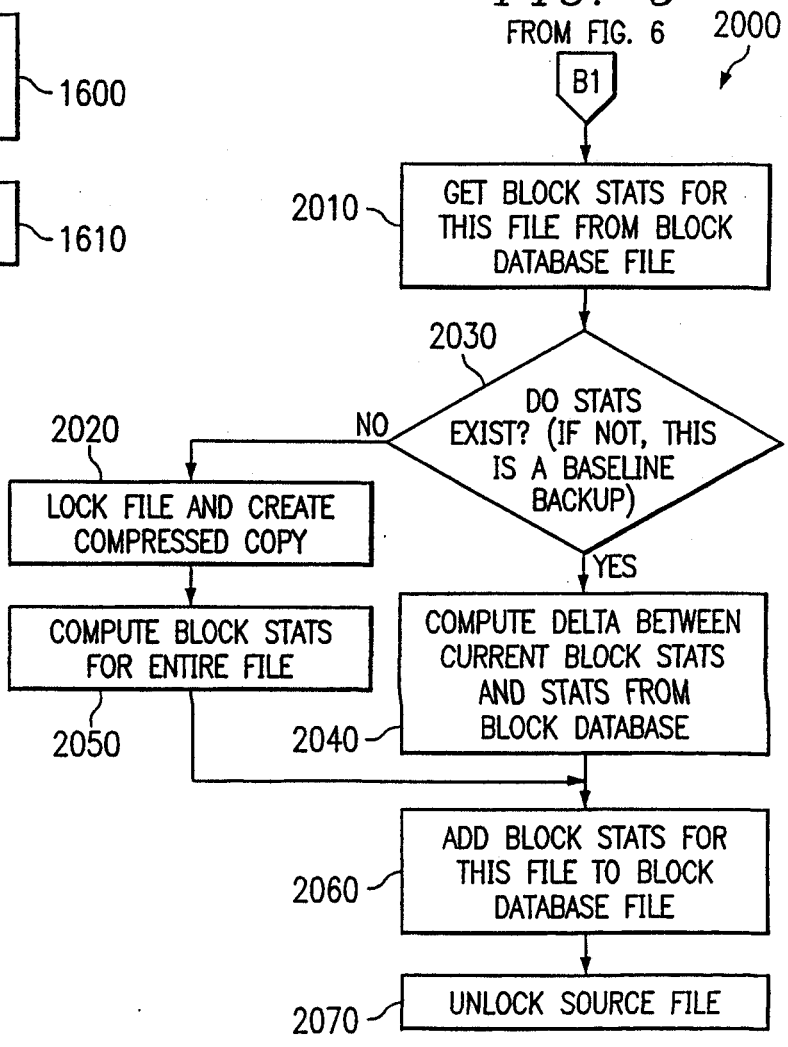
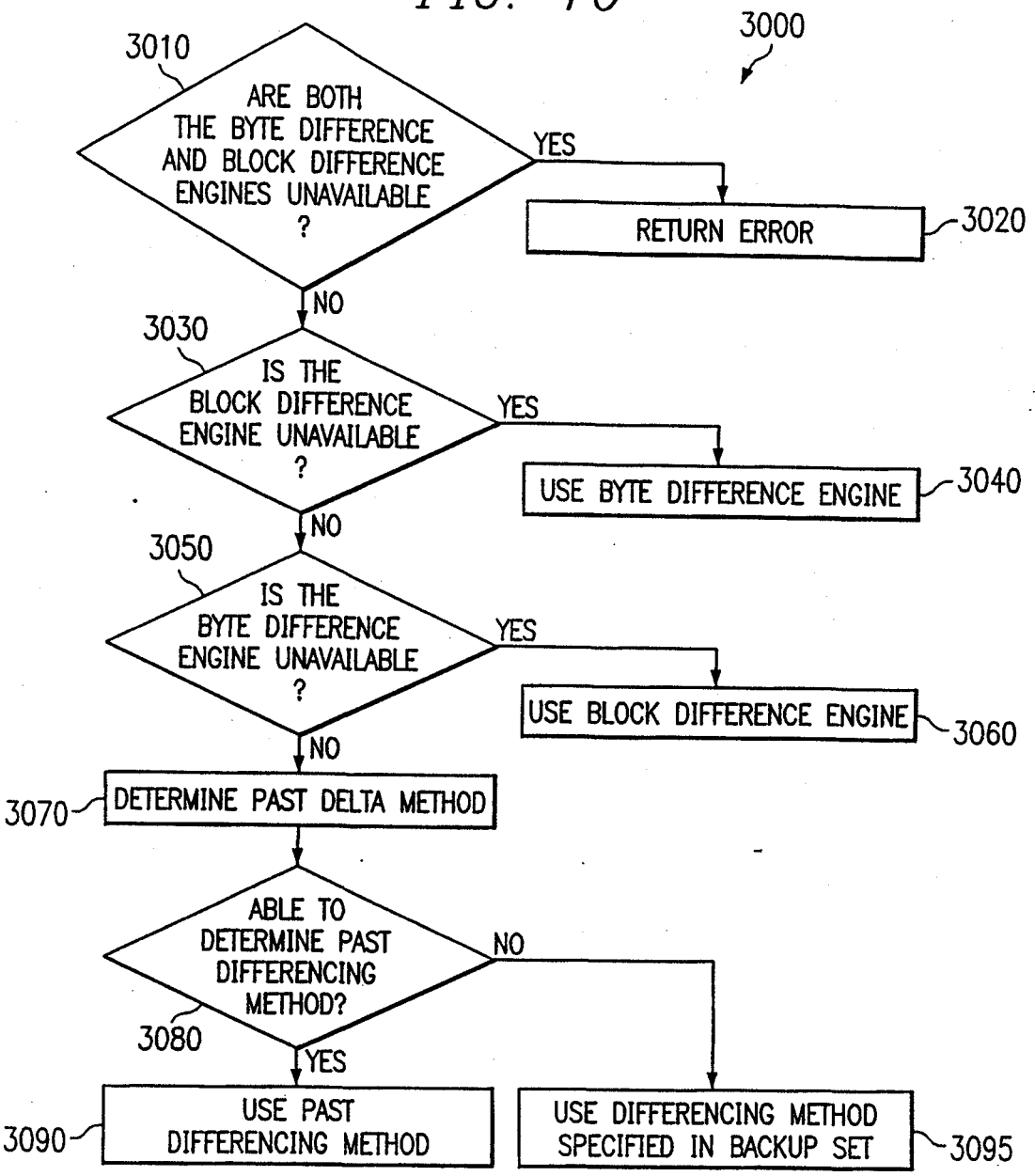

FROM FIG. 6
B1
2000
2010
GET BLOCK STATS FOR THIS FILE FROM BLOCK DATABASE FILE
2030
DO STATS EXIST? (IF NOT, THIS IS A BASELINE BACKUP)
NO
YES
2020
LOCK FILE AND CREATE COMPRESSED COPY
COMPUTE BLOCK STATS FOR ENTIRE FILE
2050
COMPUTE DELTA BETWEEN CURRENT BLOCK STATS AND STATS FROM BLOCK DATABASE
2040
ADD BLOCK STATS FOR THIS FILE TO BLOCK DATABASE FILE
2060
UNLOCK SOURCE FILE
2070

FIG. 10


3000
3010
ARE BOTH THE BYTE DIFFERENCE AND BLOCK DIFFERENCE ENGINES UNAVAILABLE ?
YES
RETURN ERROR
3020
NO
3030
IS THE BLOCK DIFFERENCE ENGINE UNAVAILABLE ?
YES
USE BYTE DIFFERENCE ENGINE
3040
NO
3050
IS THE BYTE DIFFERENCE ENGINE UNAVAILABLE ?
YES
USE BLOCK DIFFERENCE ENGINE
3060
NO
3070
DETERMINE PAST DELTA METHOD
ABLE TO DETERMINE PAST DIFFERENCING METHOD?
NO
3080
YES
3090
USE PAST DIFFERENCING METHOD
USE DIFFERENCING METHOD SPECIFIED IN BACKUP SET
3095