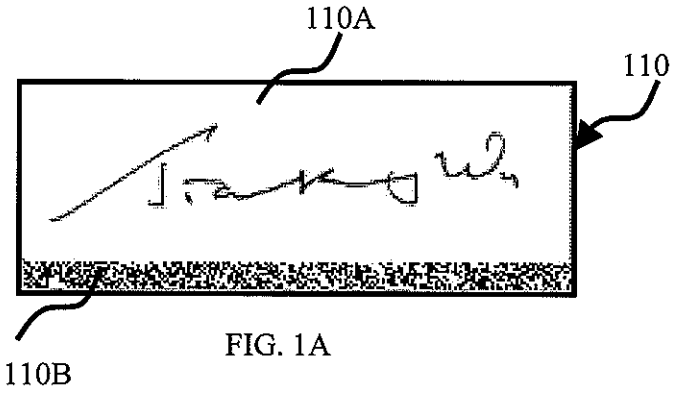


FIG. 1A

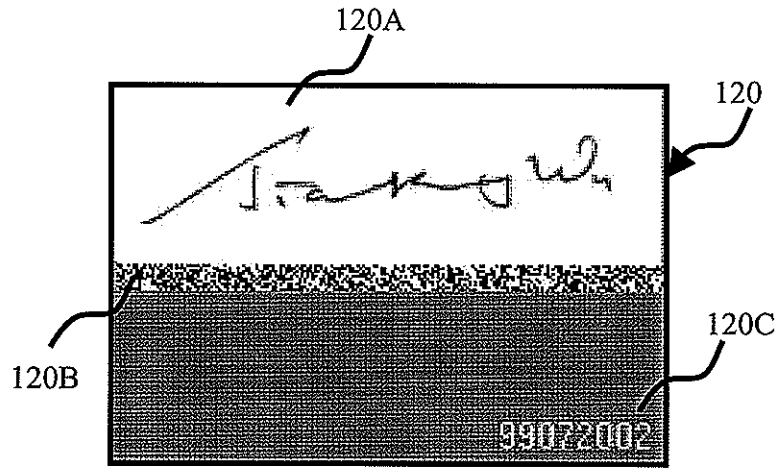


FIG. 1B

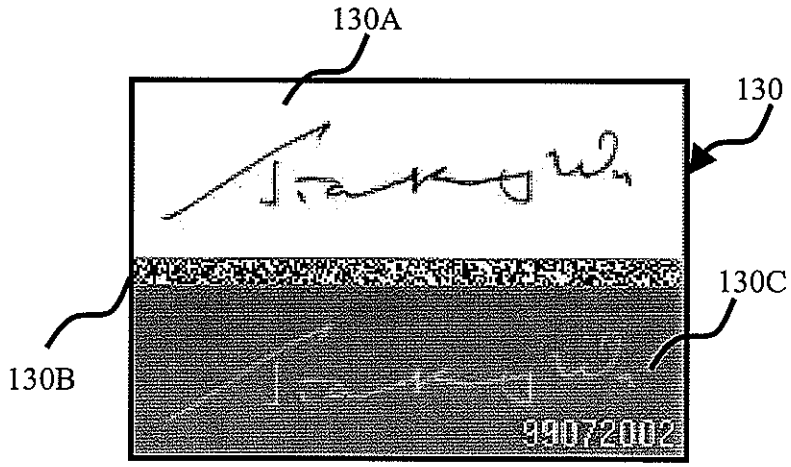


FIG. 1C

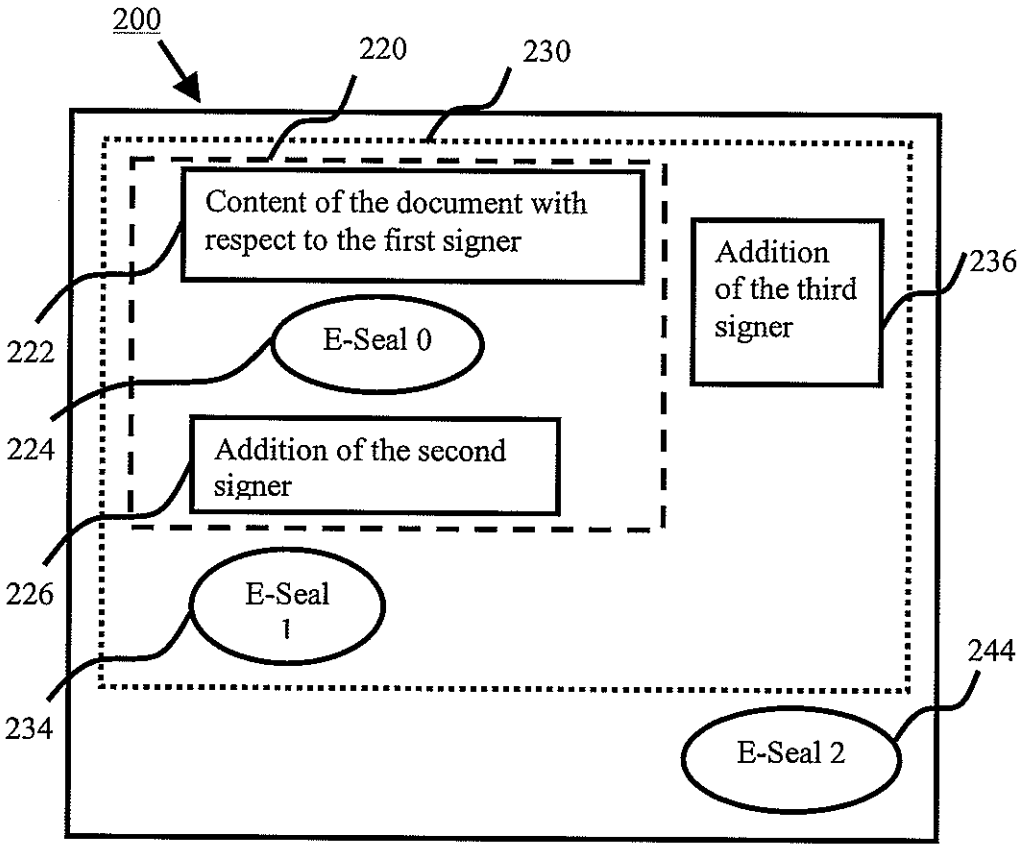

200
220
230
Content of the document with respect to the first signer
Addition of the third signer
236
222
E-Seal 0
224
Addition of the second signer
226
E-Seal 1
234
244
E-Seal 2

FIG. 2

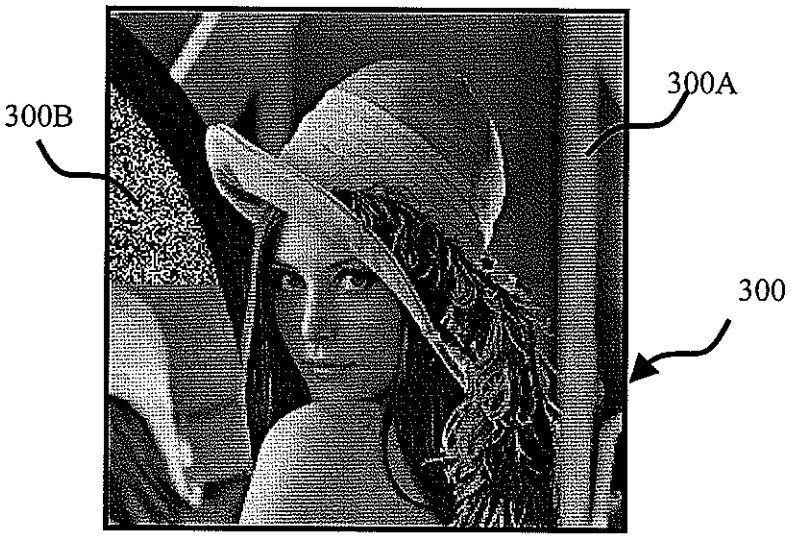

300B
300A
300

FIG. 3

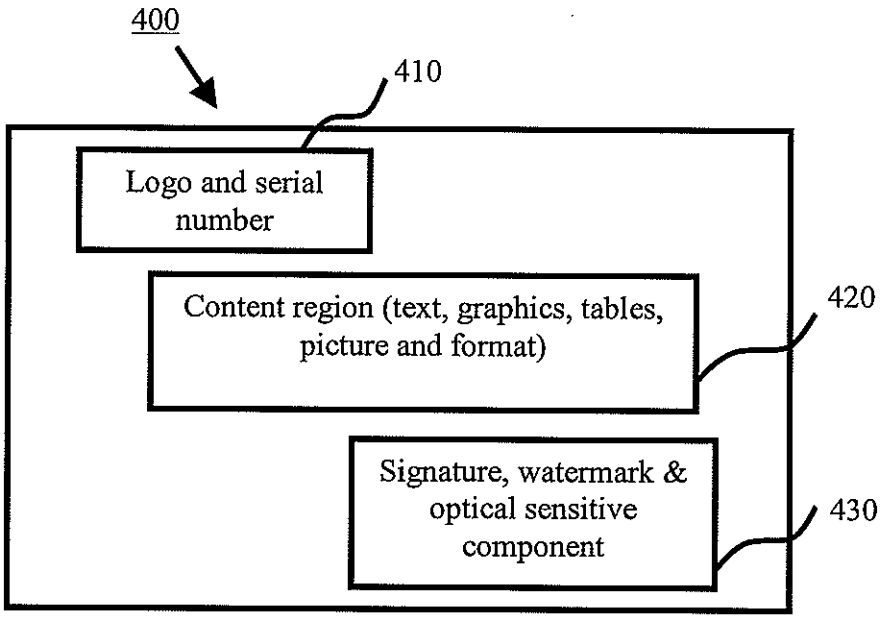

400
410
Logo and serial number
Content region (text, graphics, tables, picture and format)
420
Signature, watermark & optical sensitive component
430

FIG. 4

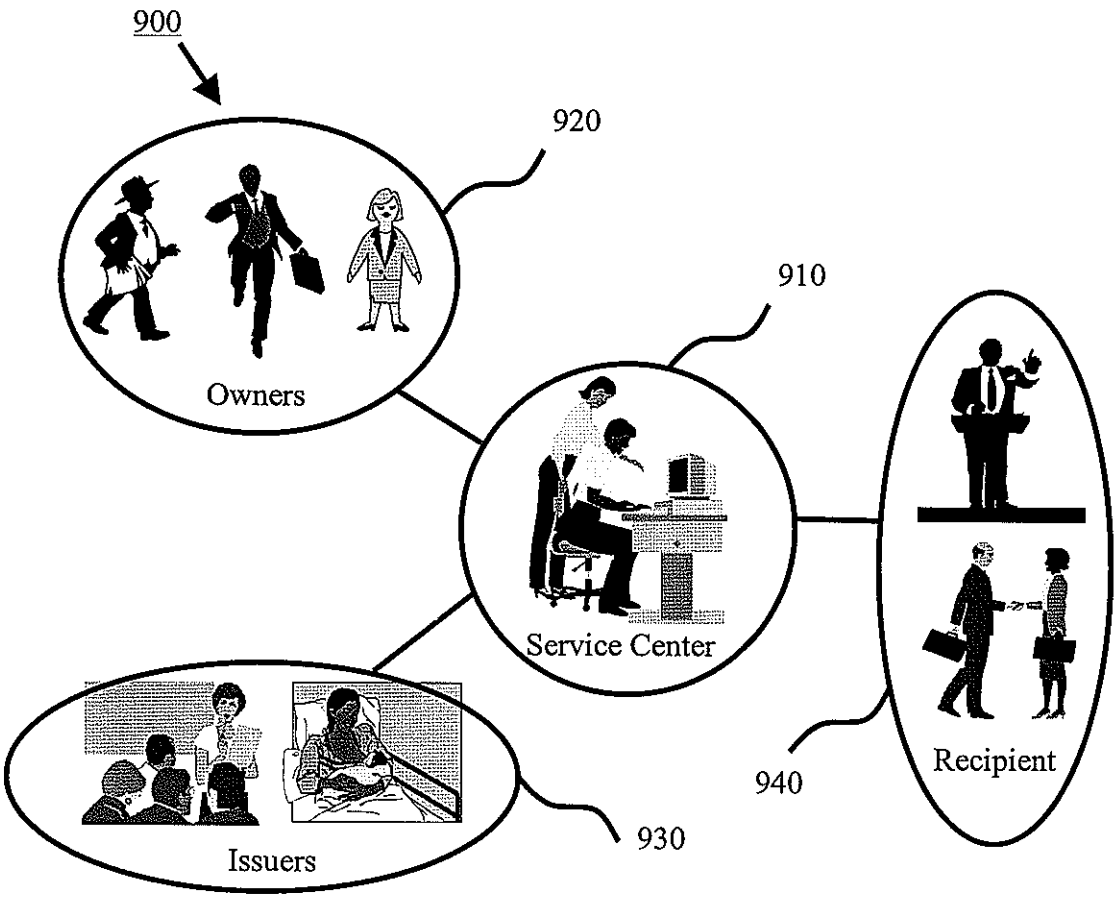

900
920
Owners
910
Service Center
Recipient
940
Issuers
930

FIG. 9

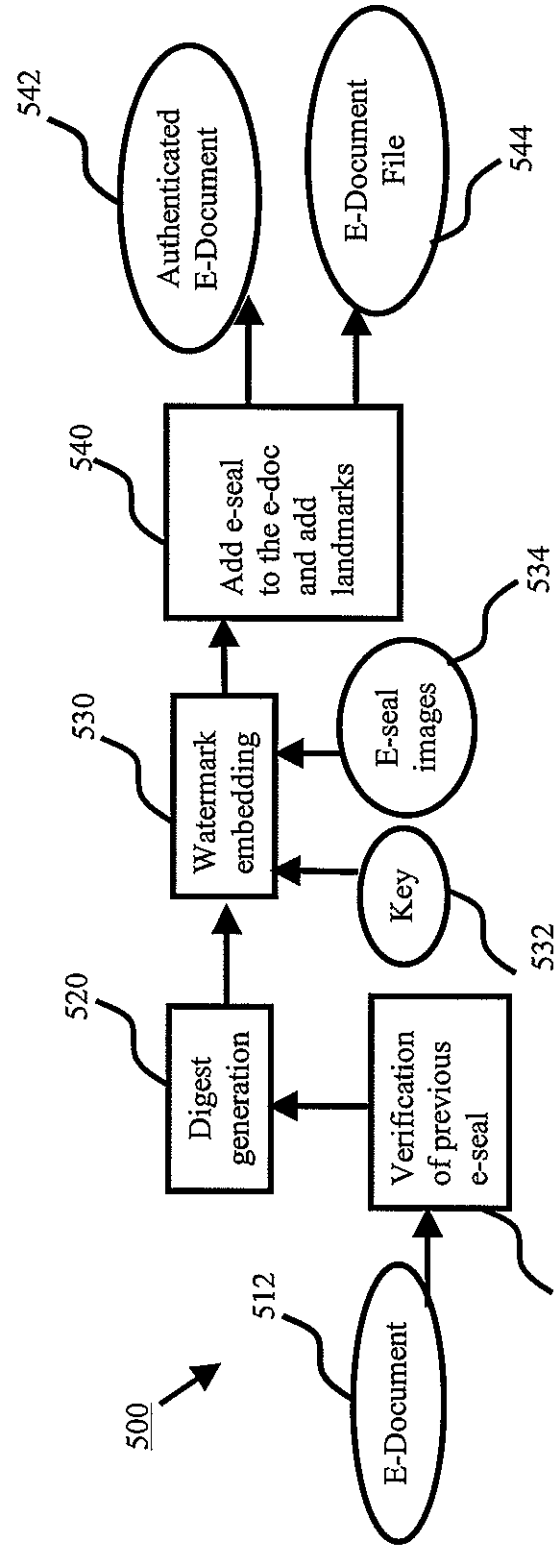

500
512
E-Document
510
Verification of previous e-seal
520
Digest generation
532
Key
534
E-seal images
530
Watermark embedding
540
Add e-seal to the e-doc and add landmarks
542
Authenticated E-Document
544
E-Document File

FIG. 5

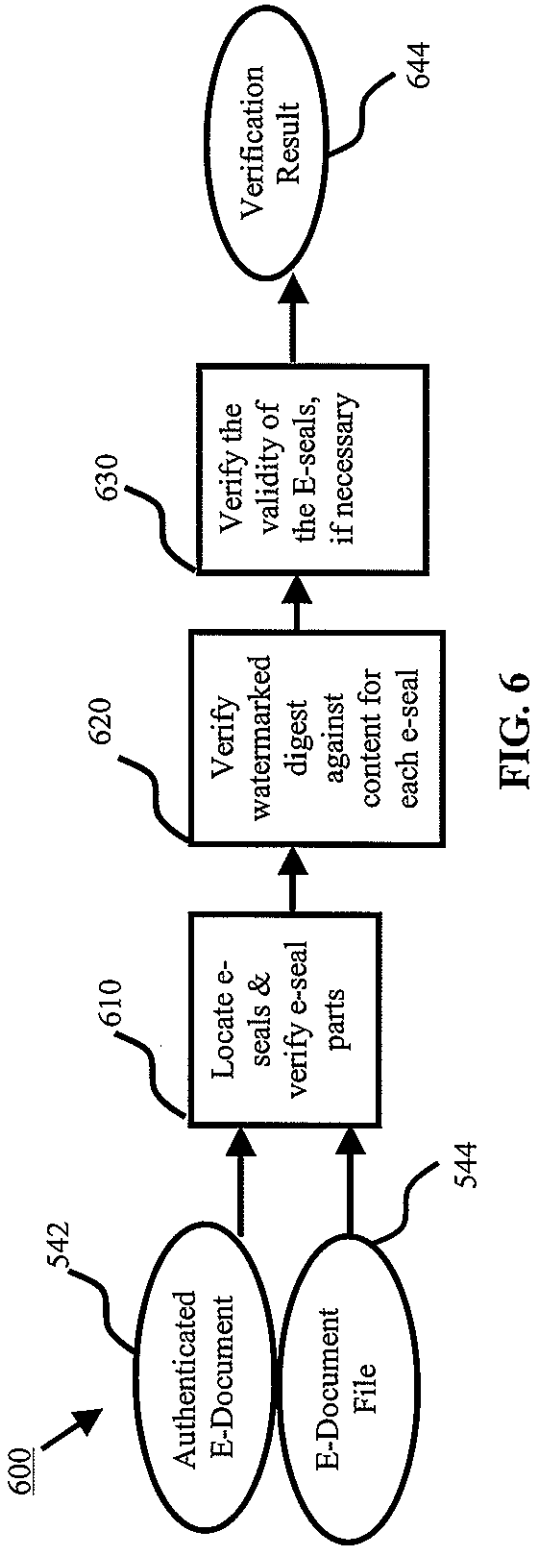

600
542
Authenticated E-Document
544
E-Document File
610
Locate e-seals & verify e-seal parts
620
Verify watermarked digest against content for each e-seal
630
Verify the validity of the E-seals, if necessary
644
Verification Result

FIG. 6

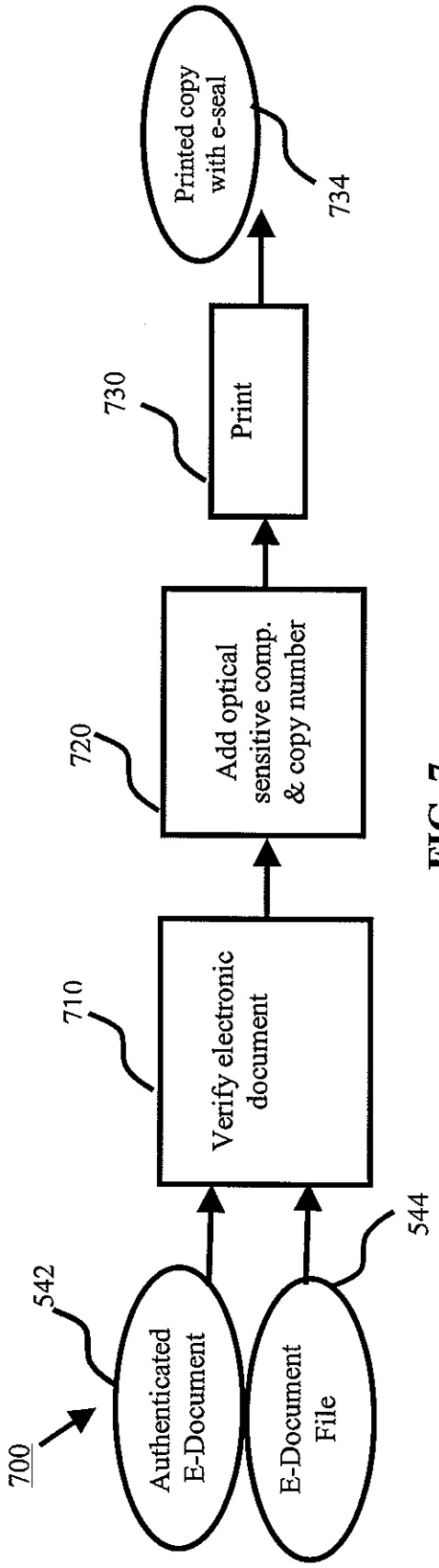

700
542
Authenticated E-Document
E-Document File
544
710
Verify electronic document
720
Add optical sensitive comp. & copy number
730
Print
Printed copy with e-seal
734

FIG. 7

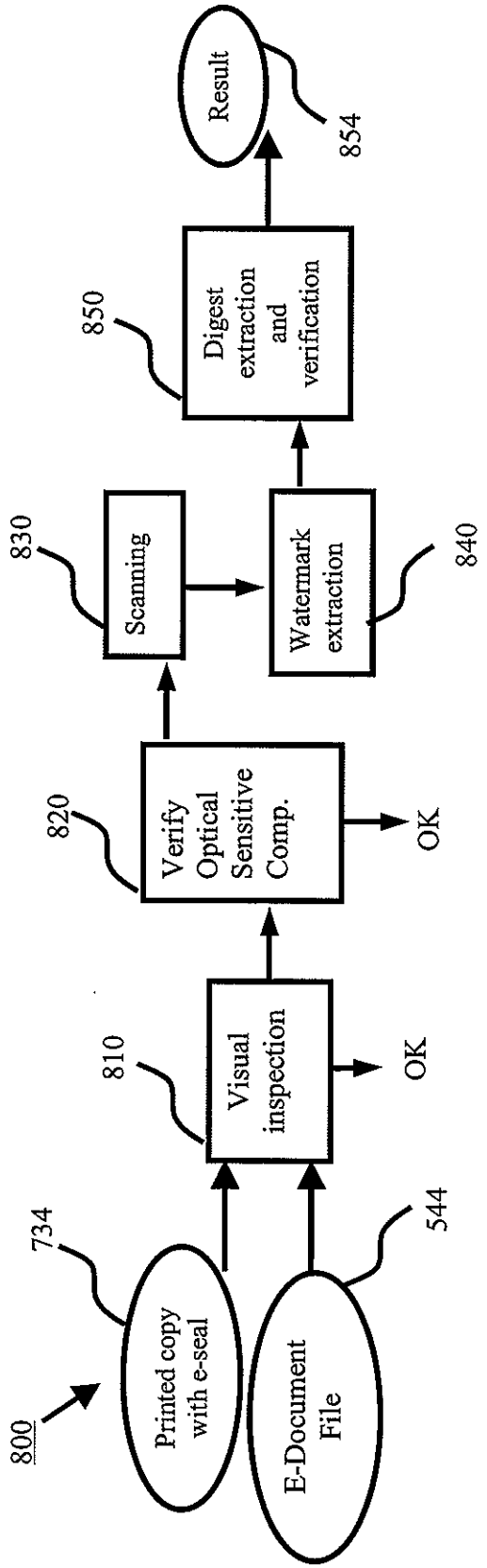

800
734
Printed copy with e-seal
E-Document File
544
810
Visual inspection
OK
820
Verify Optical Sensitive Comp.
OK
830
Scanning
840
Watermark extraction
850
Digest extraction and verification
Result
854

FIG. 8