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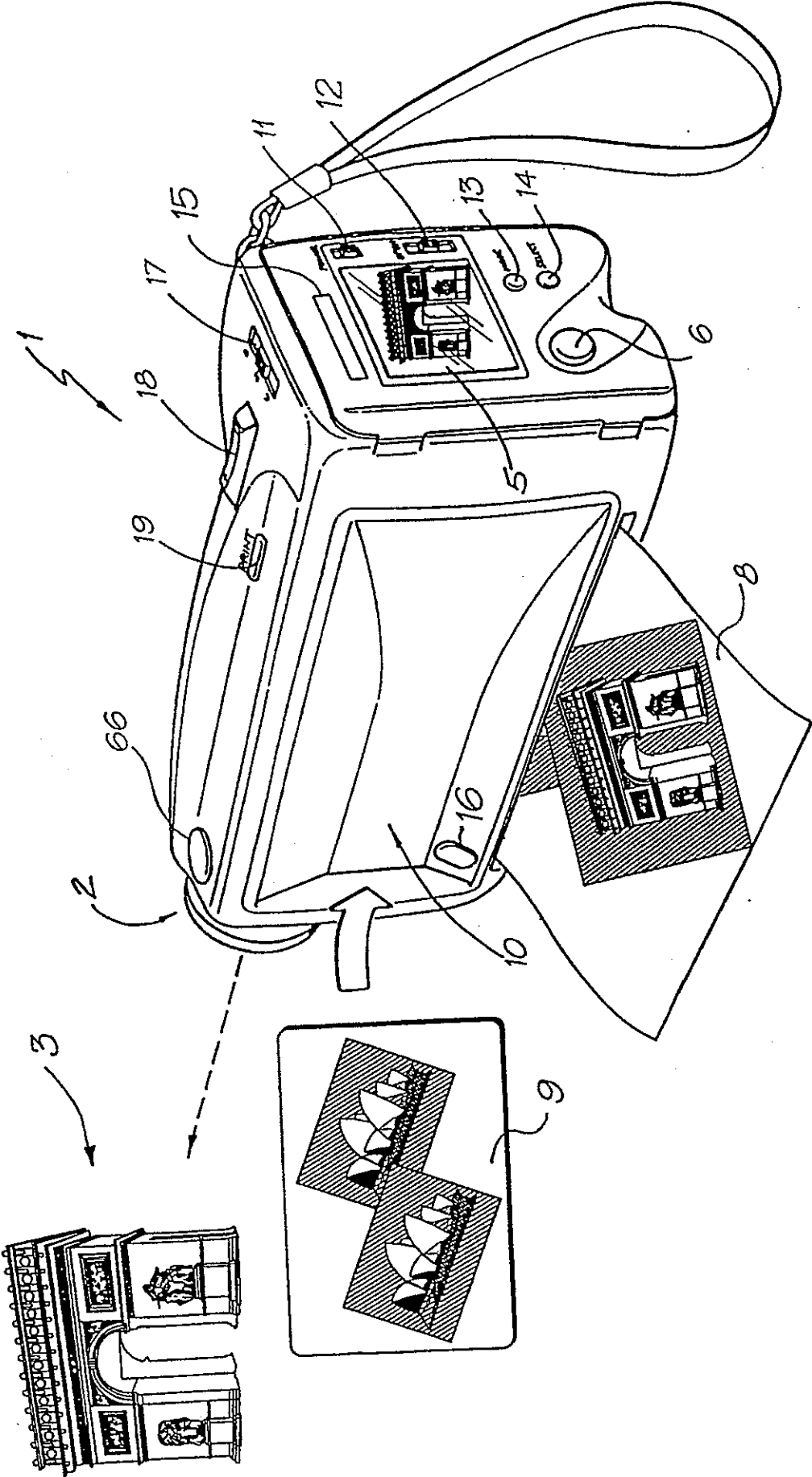


FIG. 1

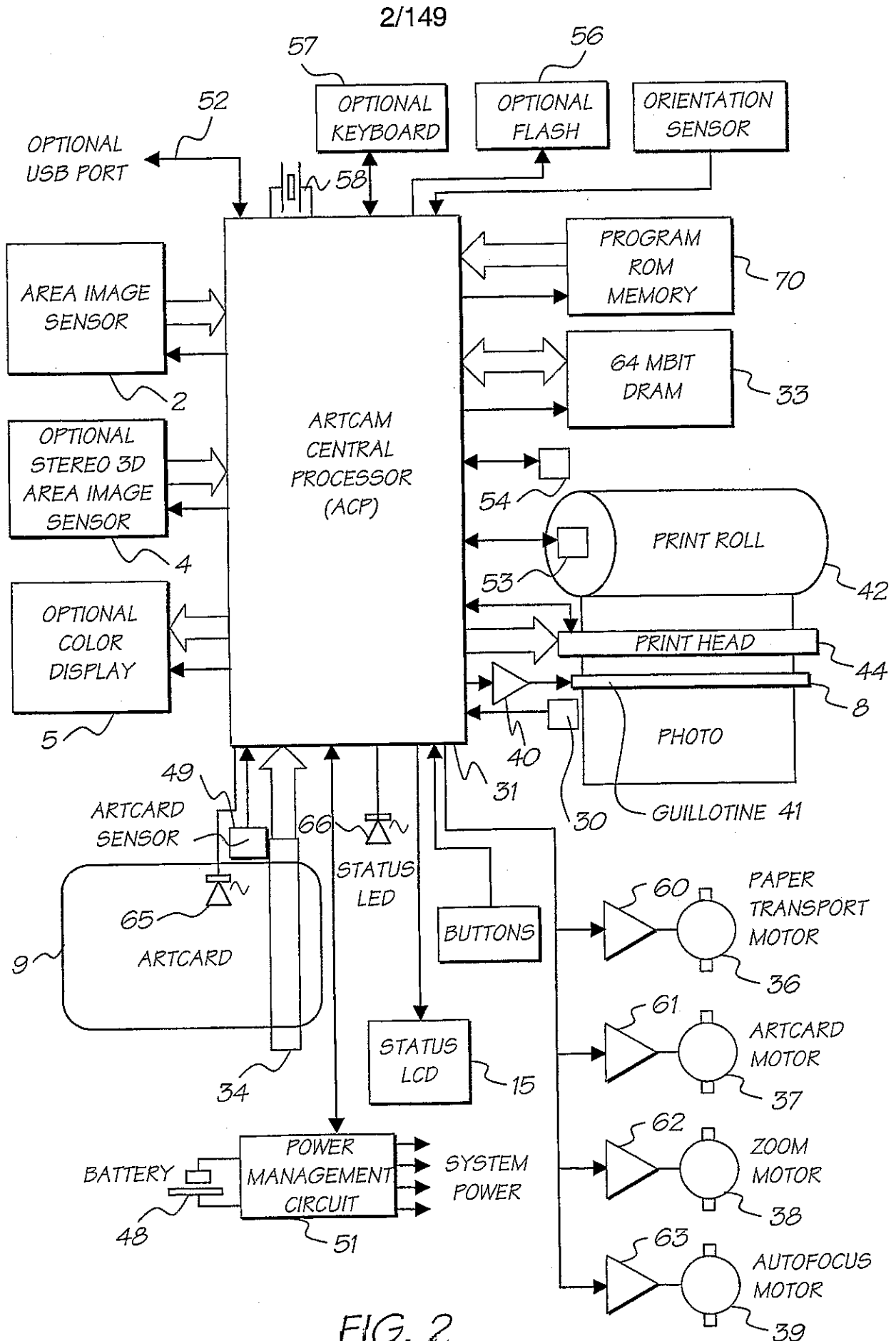


FIG. 2

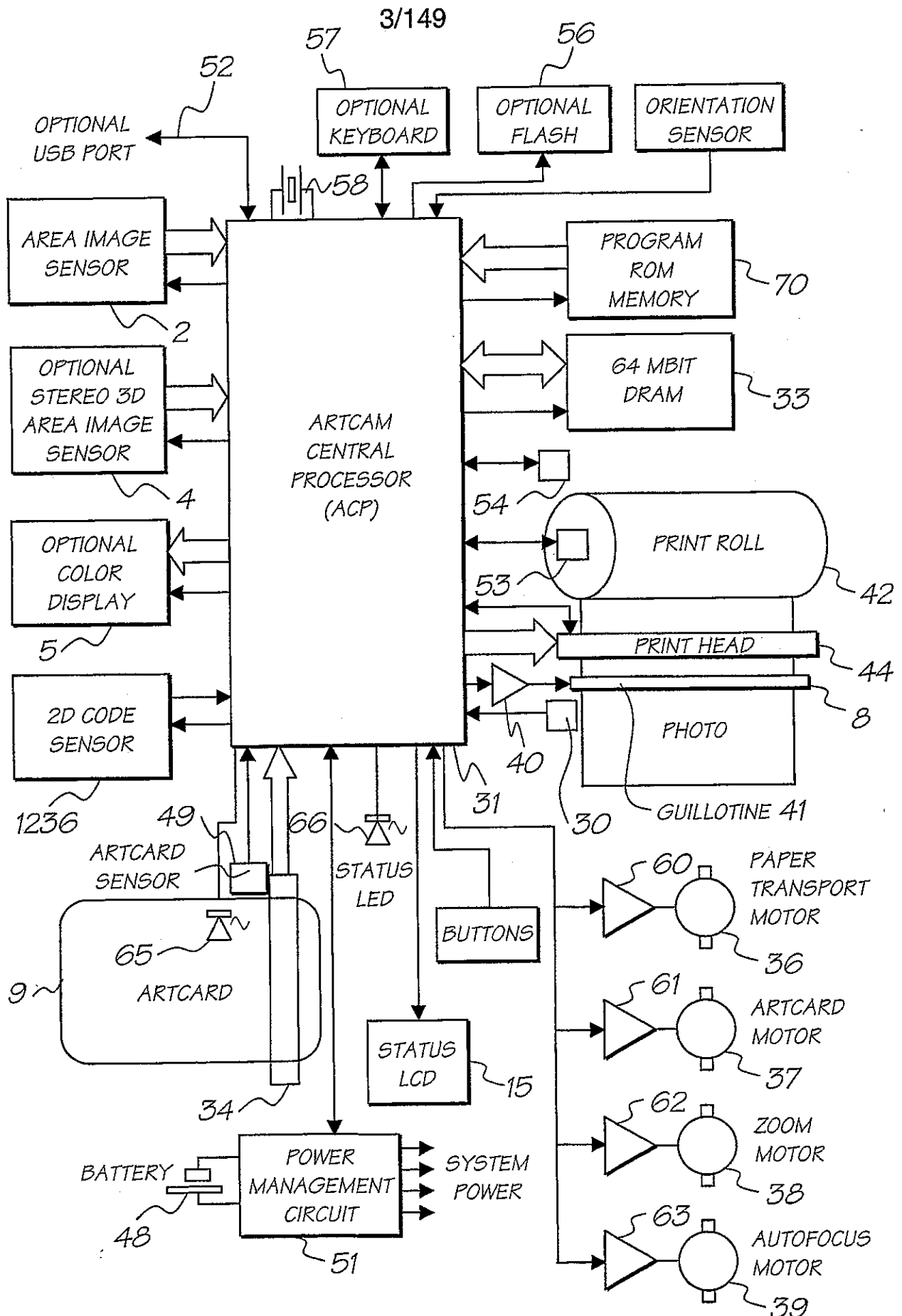


FIG. 2A

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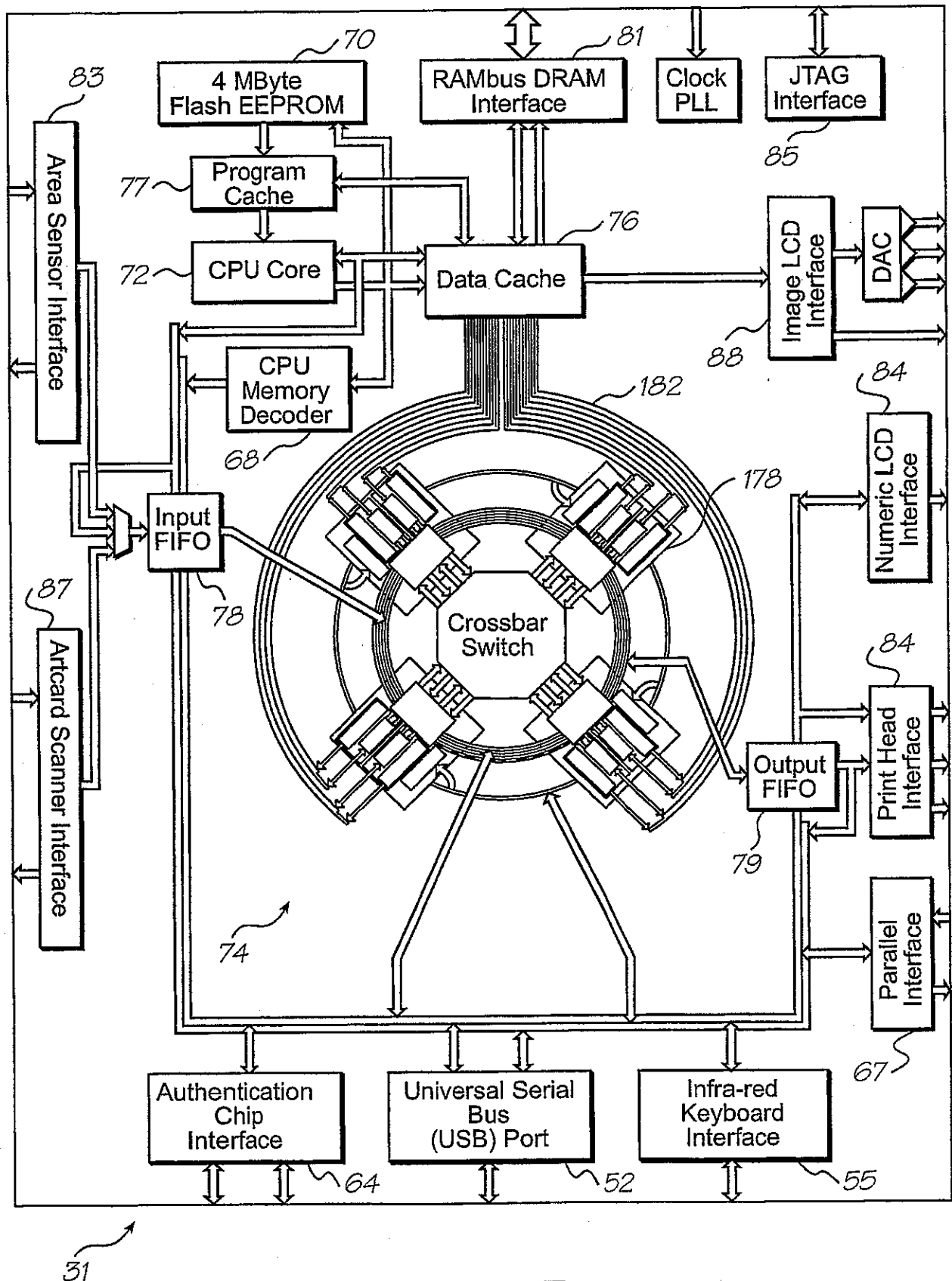


FIG. 3

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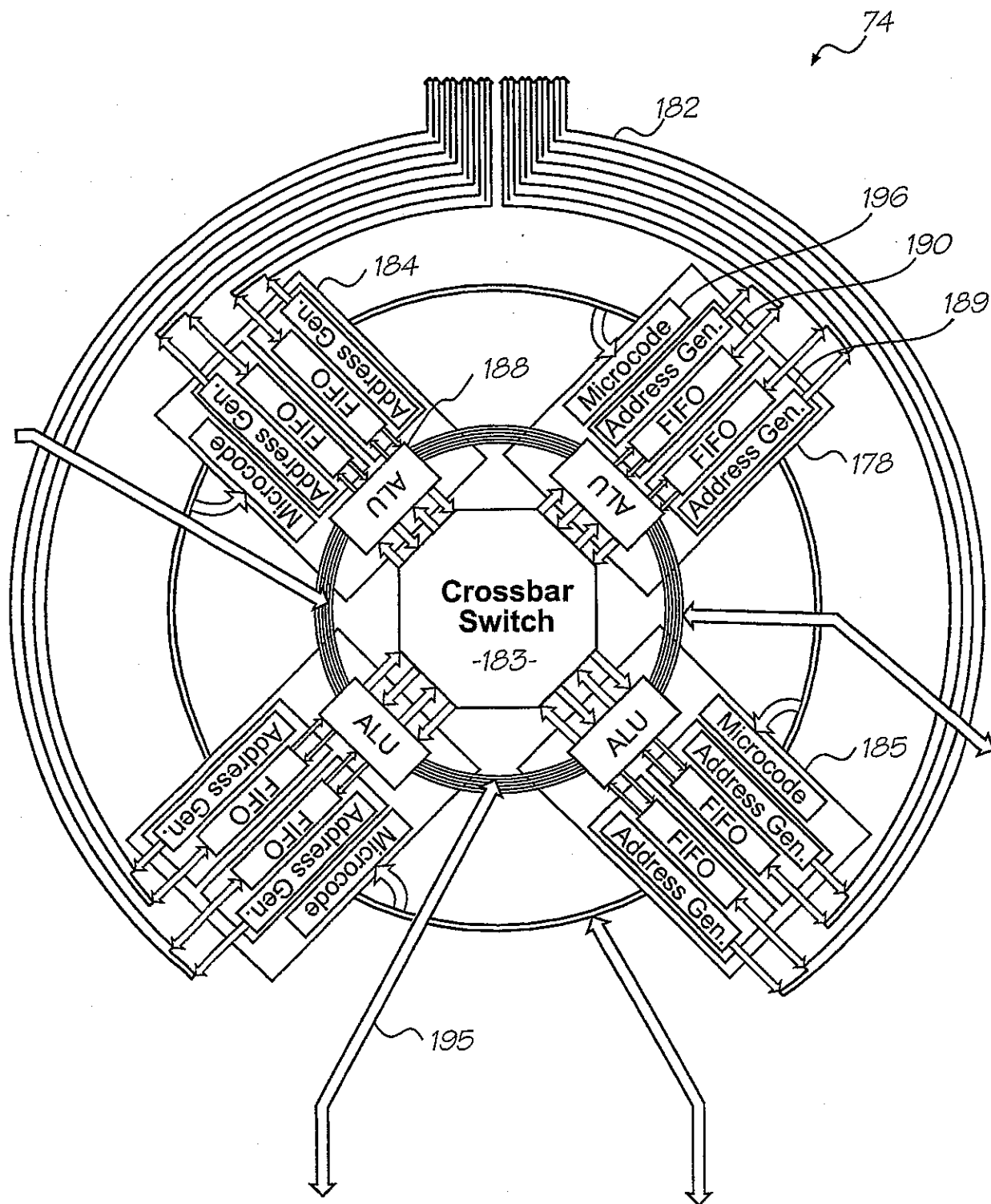
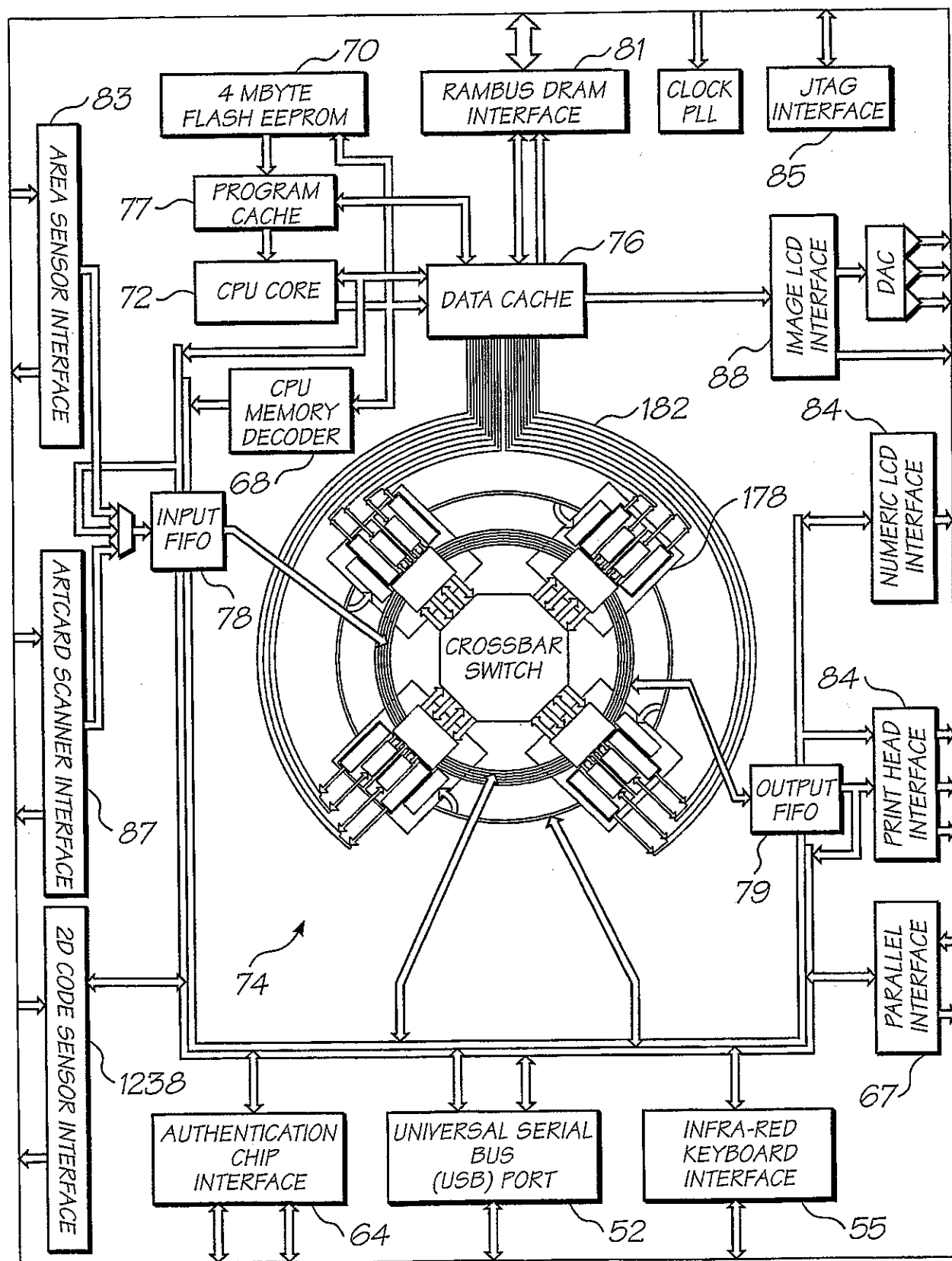


FIG. 3(a)

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FIG. 3A

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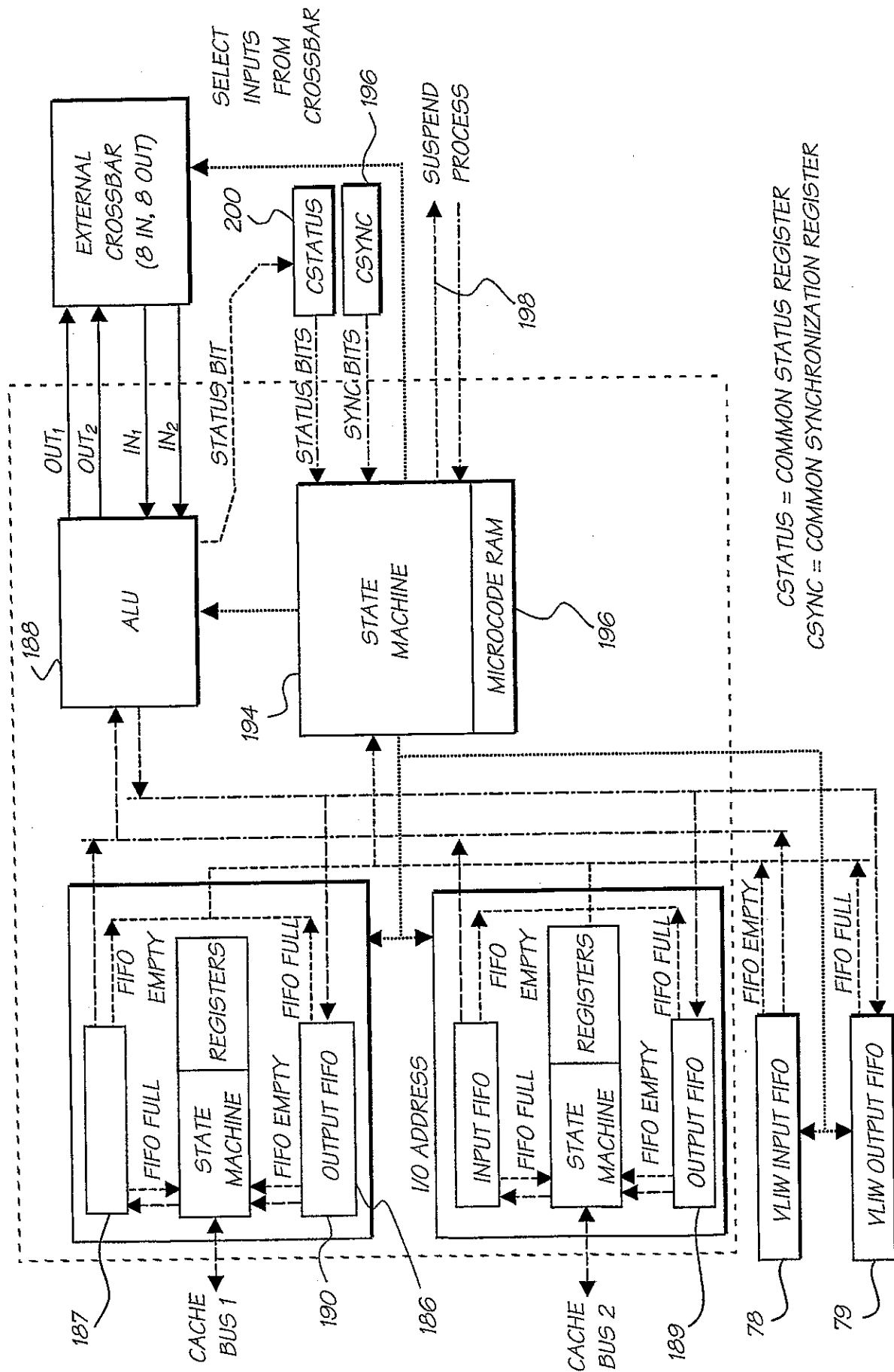


FIG. 4

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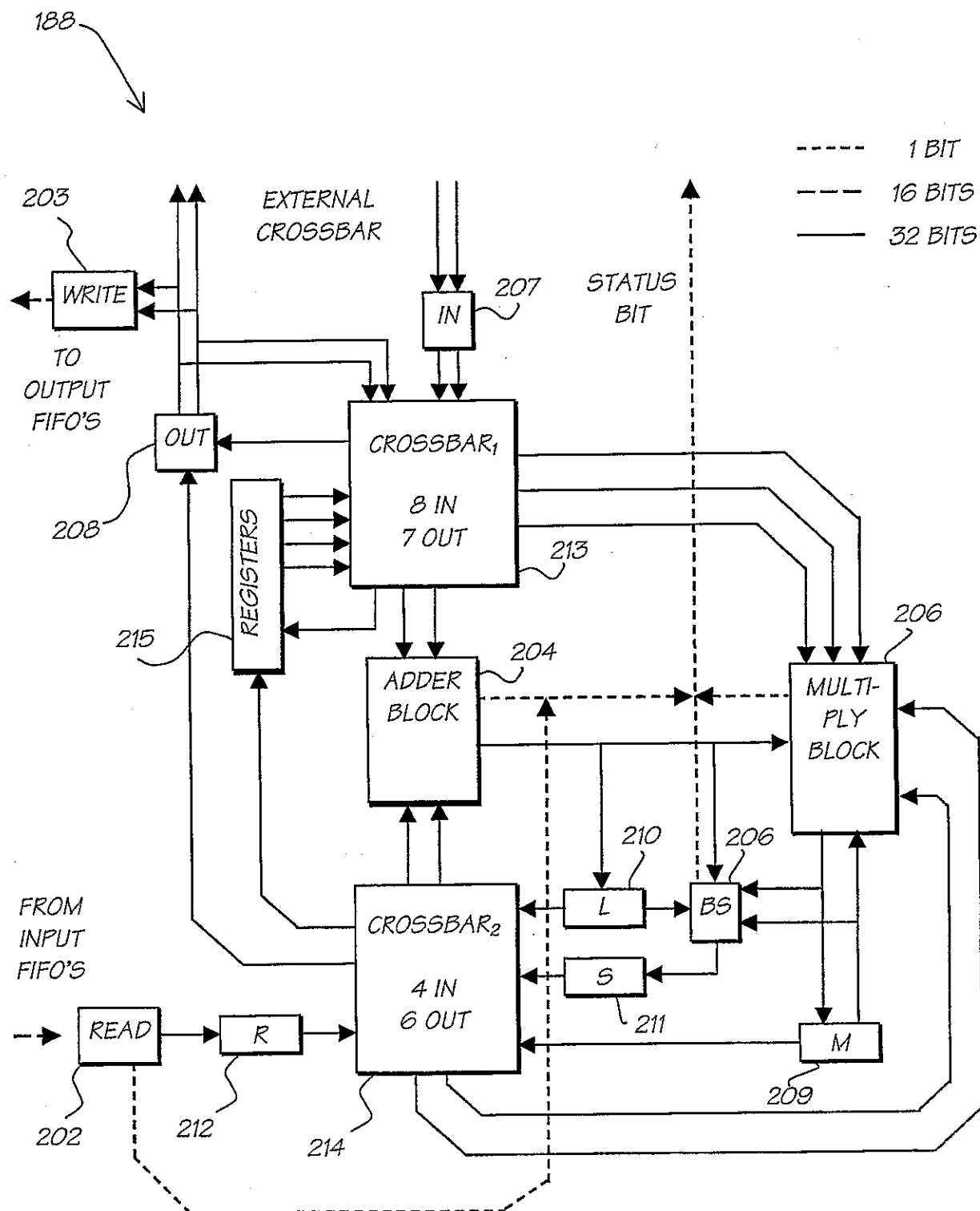


FIG. 5

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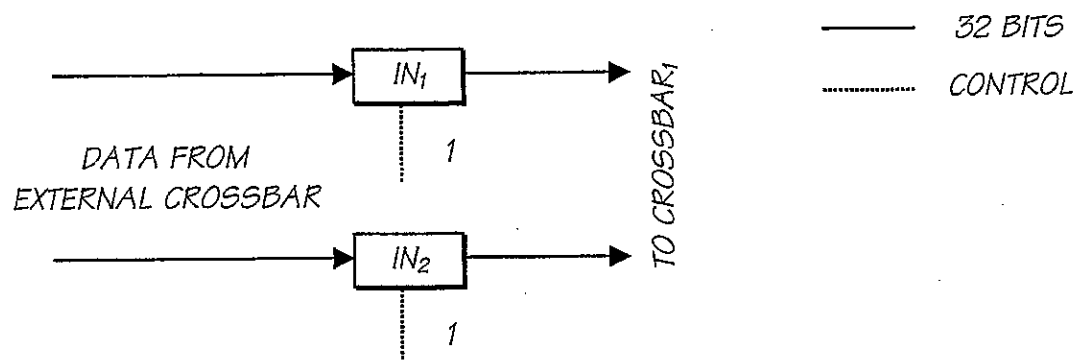


FIG. 6

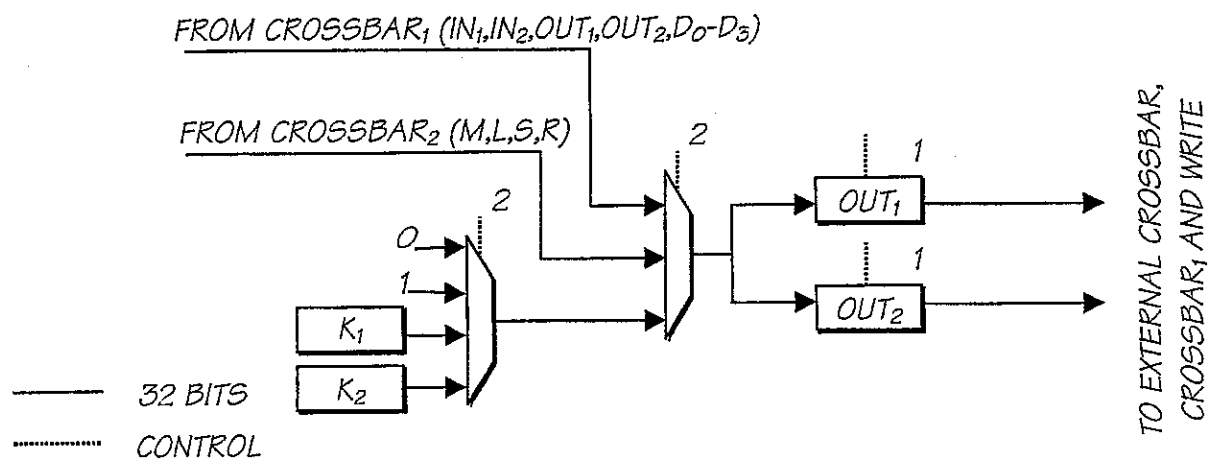


FIG. 7

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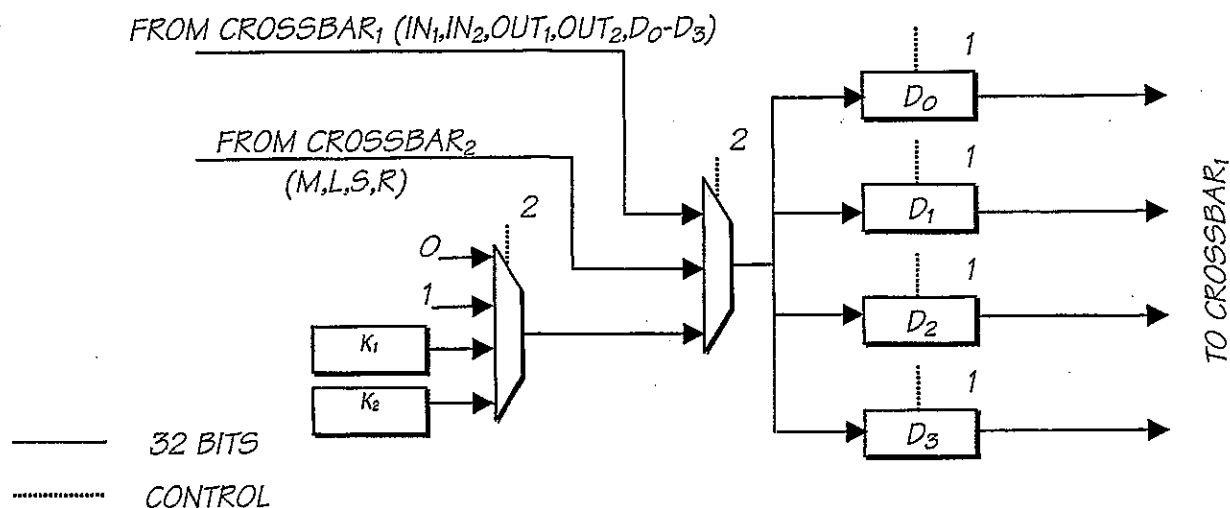


FIG. 8

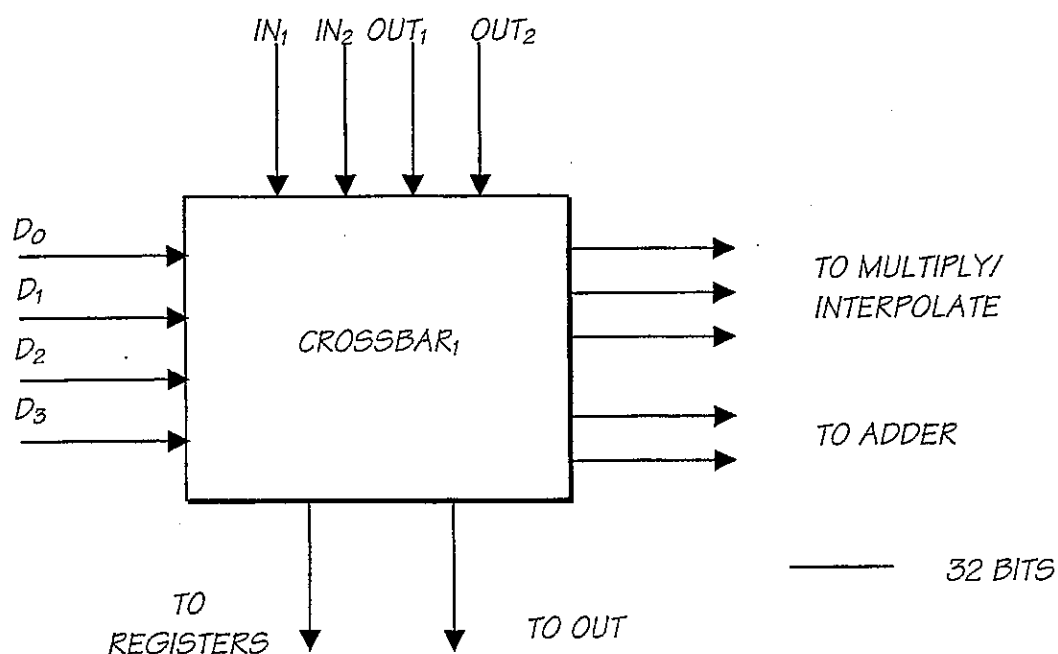


FIG. 9

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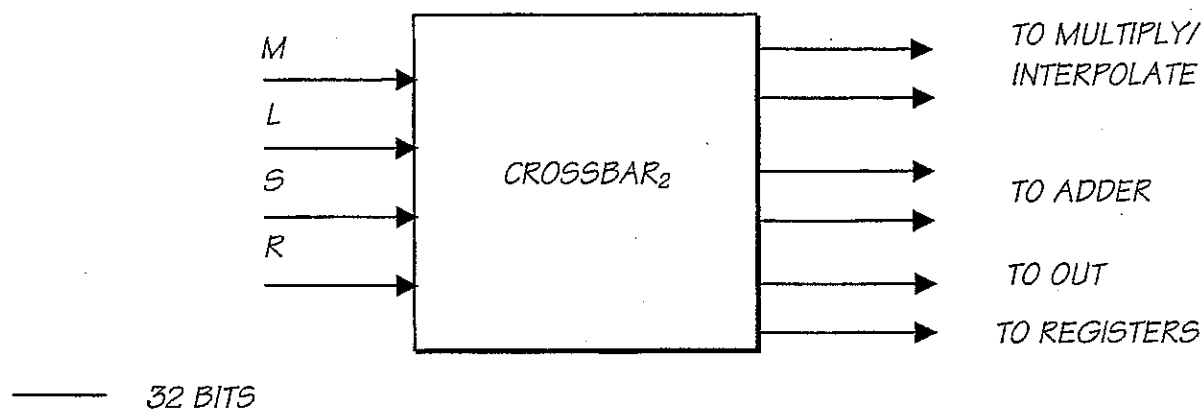


FIG. 10

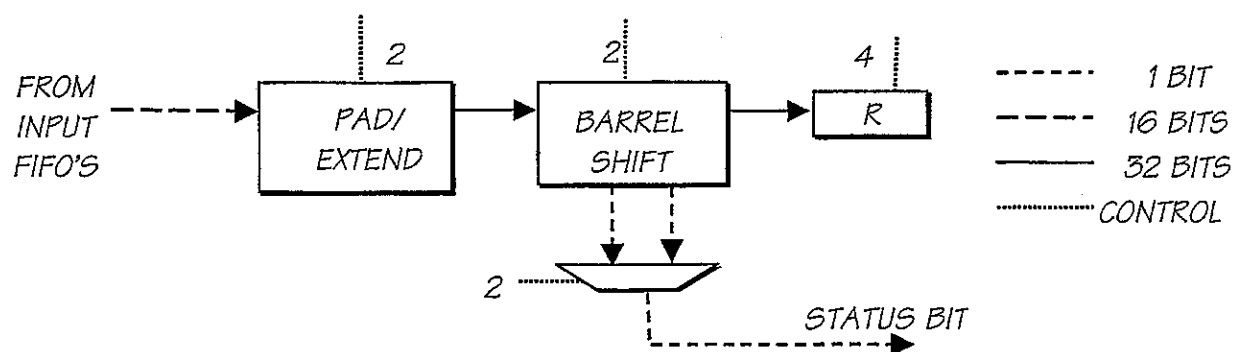


FIG. 11

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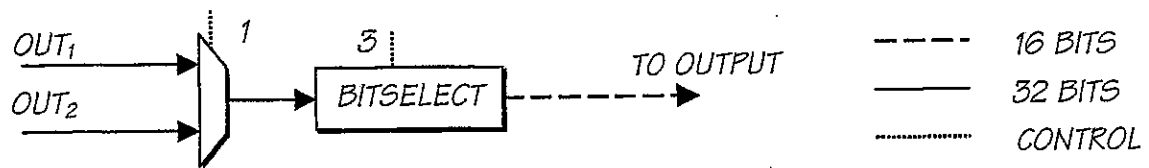


FIG. 12

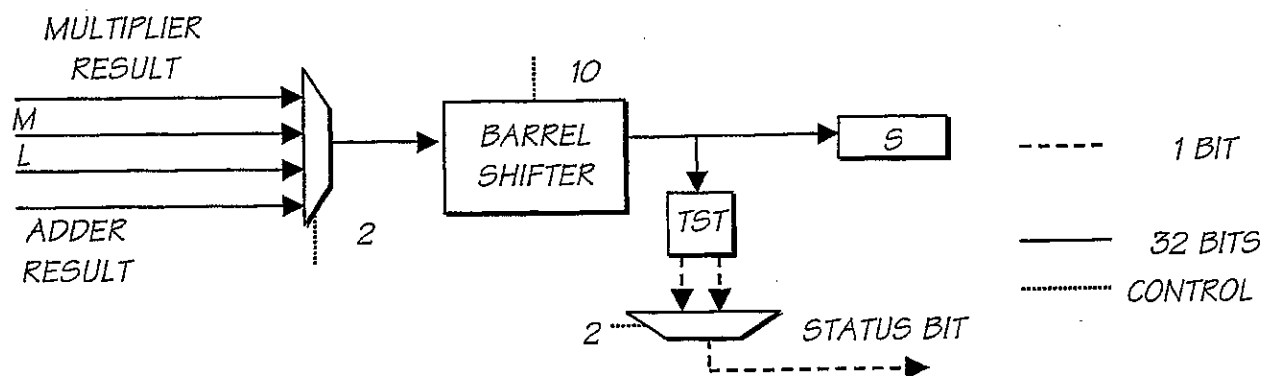


FIG. 13

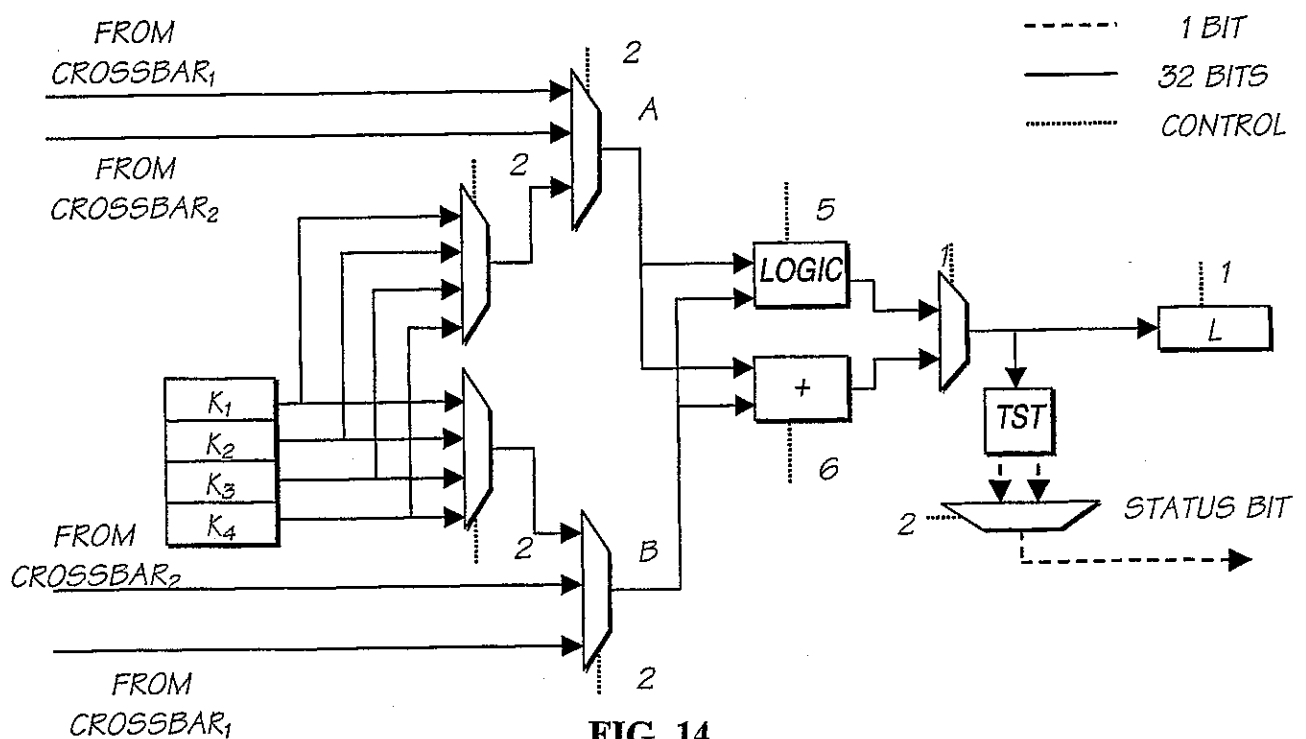


FIG. 14

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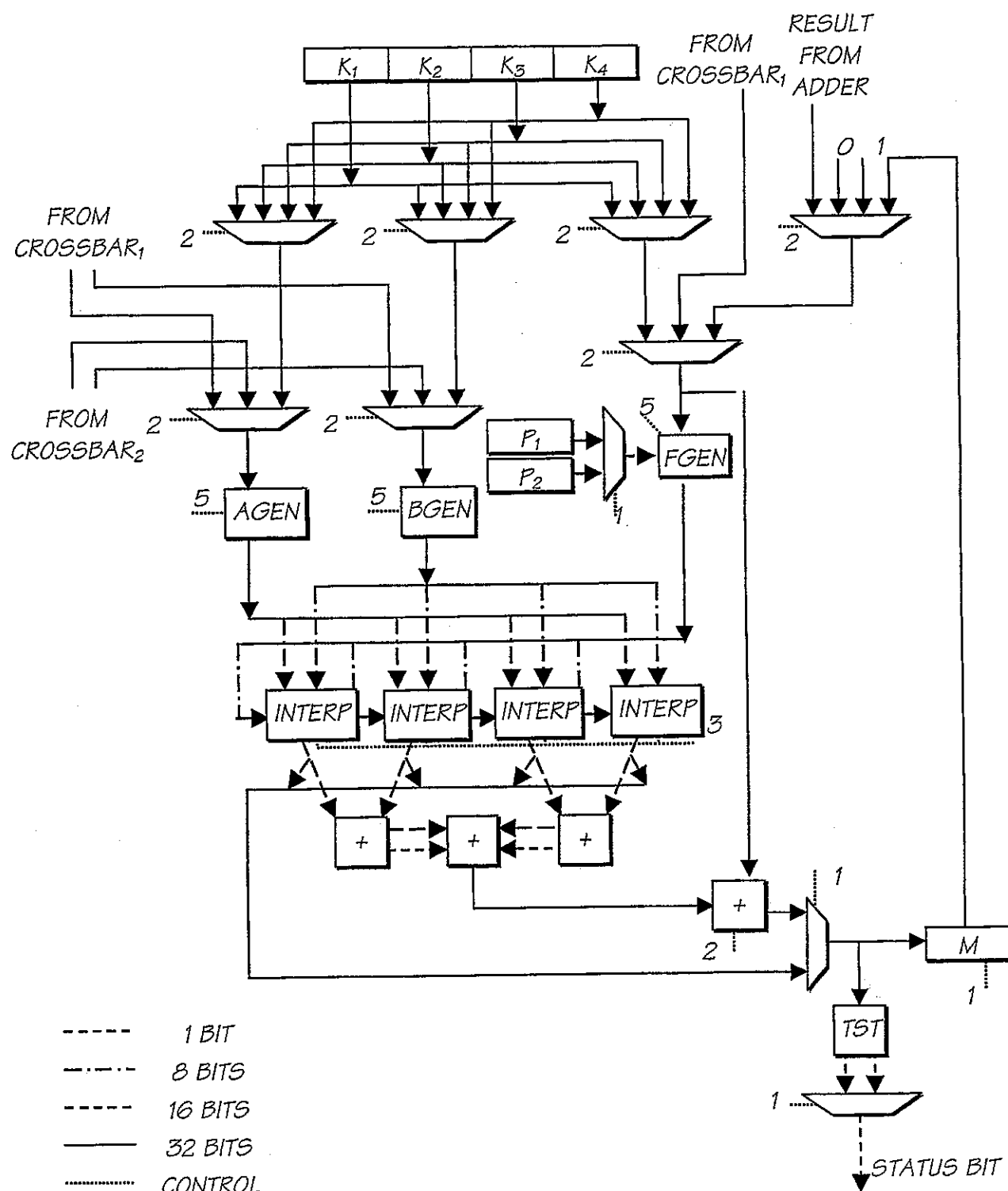


FIG. 15

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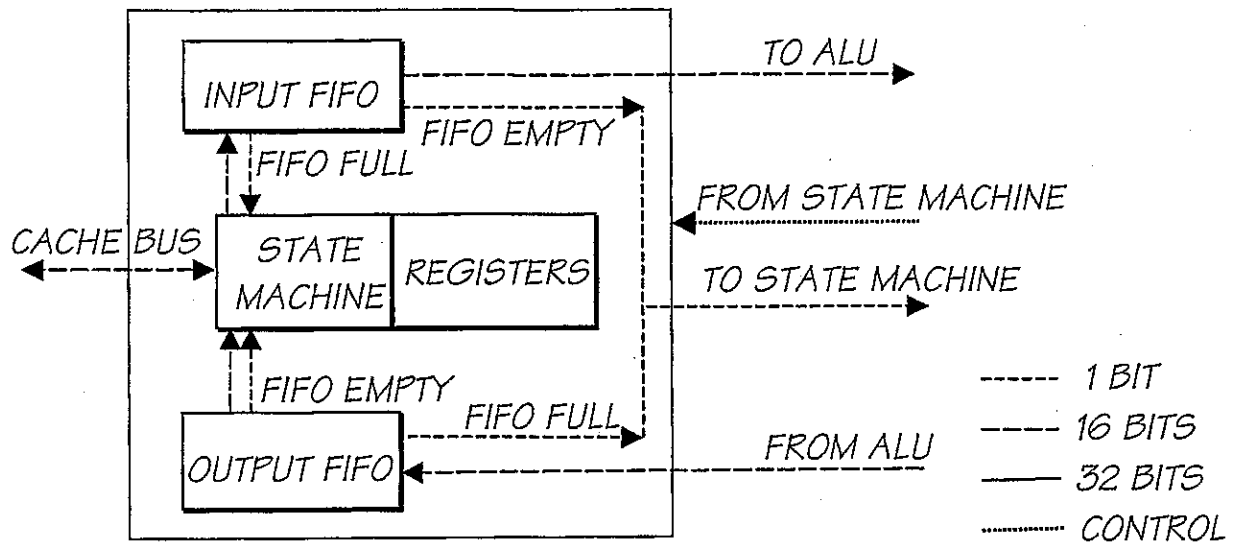


FIG. 16

ORDER OF PIXELS PRESENTED BY A SEQUENTIAL READ ITERATOR
ON A 4 X 2 IMAGE WITH PADDING.

0	1	2	3	
4	5	6	7	

FIG. 17

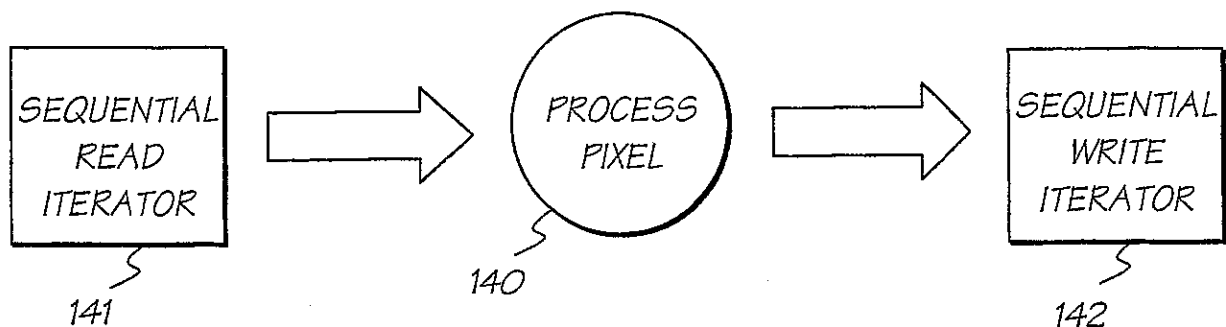
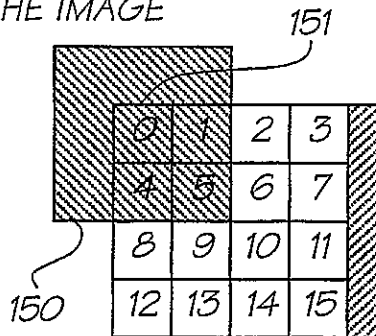


FIG. 18

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A 3x3 BOX VIEW TRAVERSES THE PIXELS IN ORDER: 0, 1, 2, 3, 4, 5, 6, 7, 8
ETC, PLACING A 3x3 BOX CENTERED OVER EACH PIXEL...

3x3 BOX VIEW OF FIRST
PIXEL IN IMAGE = 9 PIXELS,
5 OF WHICH ARE OUTSIDE
THE IMAGE

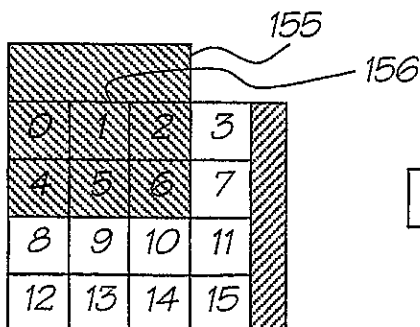


FIRST 9 PIXELS FROM THE BOX
READ ITERATOR:

IF DUPLICATION OF EDGE PIXELS IS
ON: 0, 0, 0, 0, 0, 1, 4, 4, 5

IF DUPLICATION OF EDGE PIXELS IS
OFF: V, V, V, V, 0, 1, V, 4, 5
WHERE V IS CONSTANT PIXEL
REGISTER VALUE REPRESENTING
"OUTSIDE THE IMAGE"

3x3 BOX VIEW OF
SECOND PIXEL IN IMAGE
= 9 PIXELS,
3 OF WHICH ARE
OUTSIDE THE IMAGE



SECOND 9 PIXELS FROM THE BOX
READ ITERATOR:

IF DUPLICATION OF EDGE PIXELS
IS ON: 0, 1, 2, 0, 1, 2, 4, 5, 6

IF DUPLICATION OF EDGE PIXELS
IS OFF: V, V, V, 0, 1, 2, 4, 5, 6
WHERE V IS CONSTANT PIXEL
REGISTER VALUE REPRESENTING
"OUTSIDE THE IMAGE"

FIG. 19

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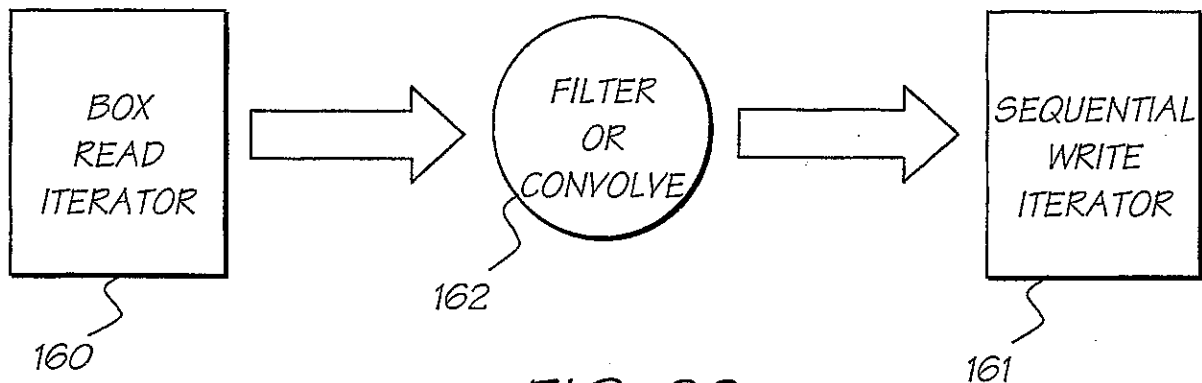
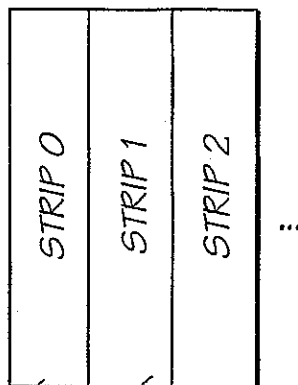
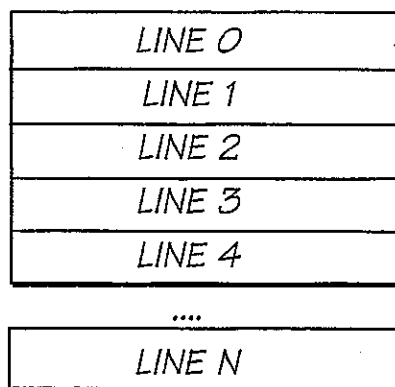


FIG. 20

IMAGE BROKEN INTO
VERTICAL STRIPS,
EACH STRIP IS 32
PIXELS ACROSS



LINES ARE ACCESSED
LINE 0 TO LINE N
WITHIN A SINGLE STRIP.



PIXELS ARE ACCESSED
PIXEL 0 - PIXEL 31
WITHIN A SINGLE LINE

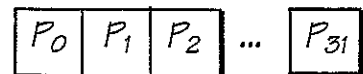


FIG. 21

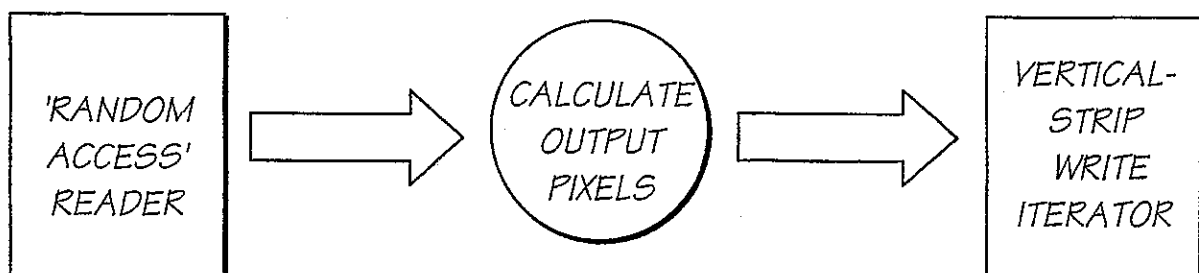


FIG. 22

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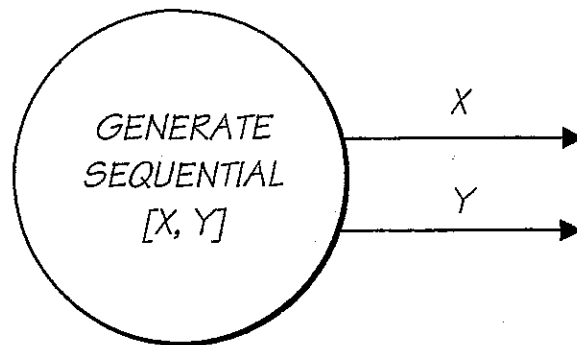


FIG. 23

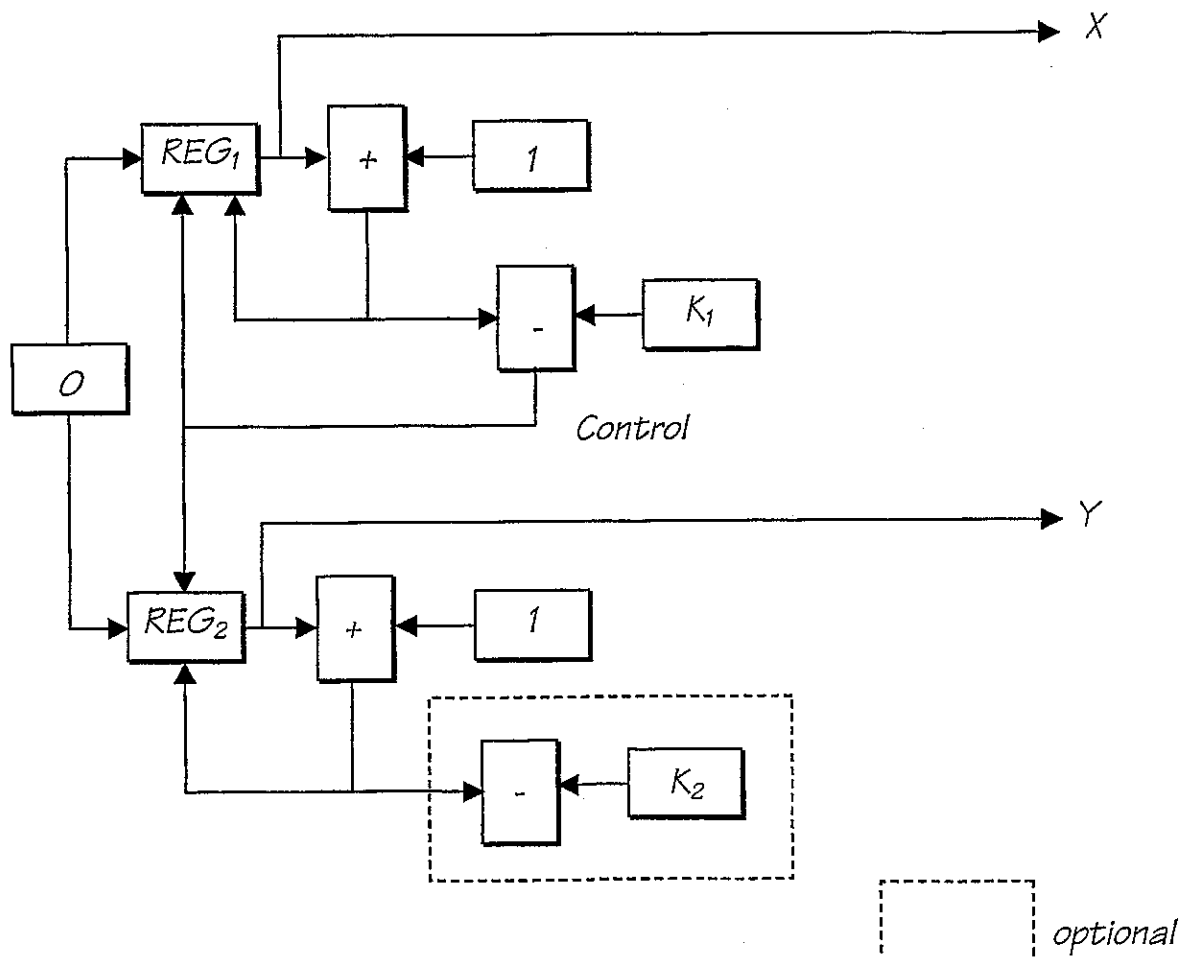


FIG. 24

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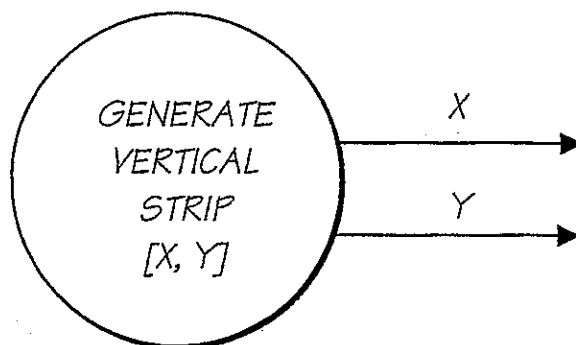


FIG. 25

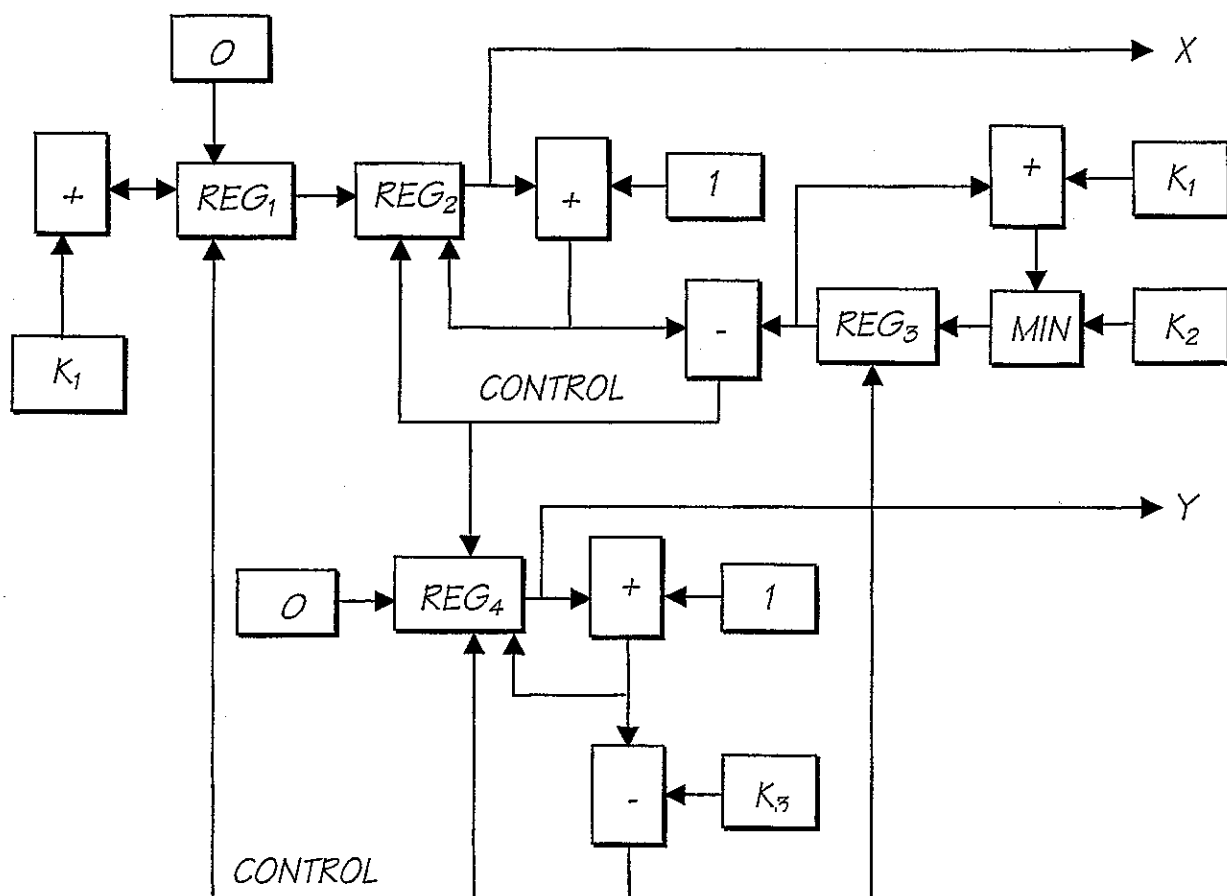
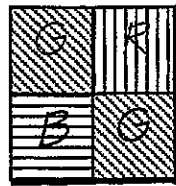


FIG. 26

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2X2 PIXEL BLOCK FROM SENSOR

FIG. 27

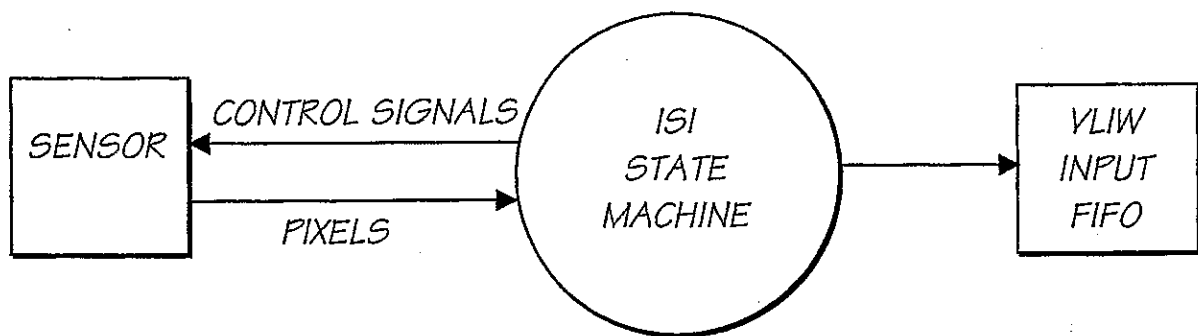


FIG. 28

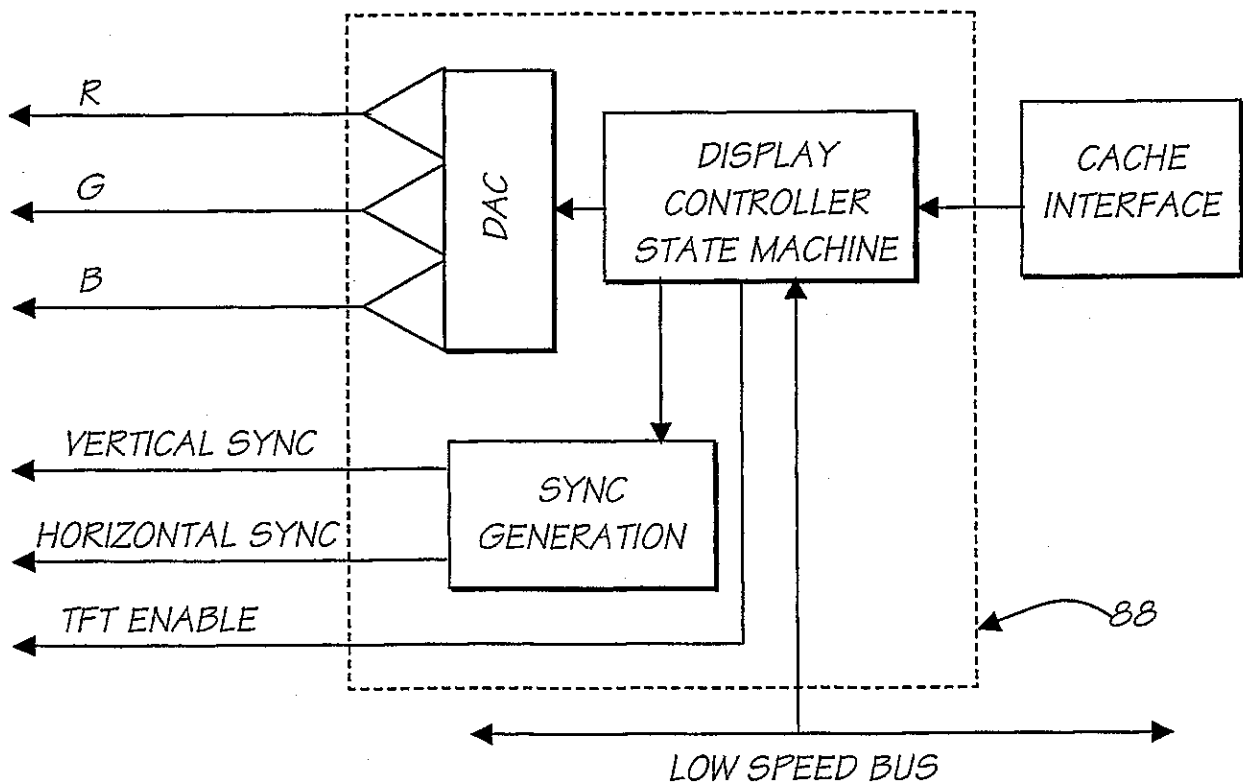
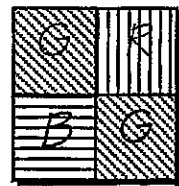


FIG. 29

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2X2 PIXEL BLOCK FROM CCD

FIG. 30

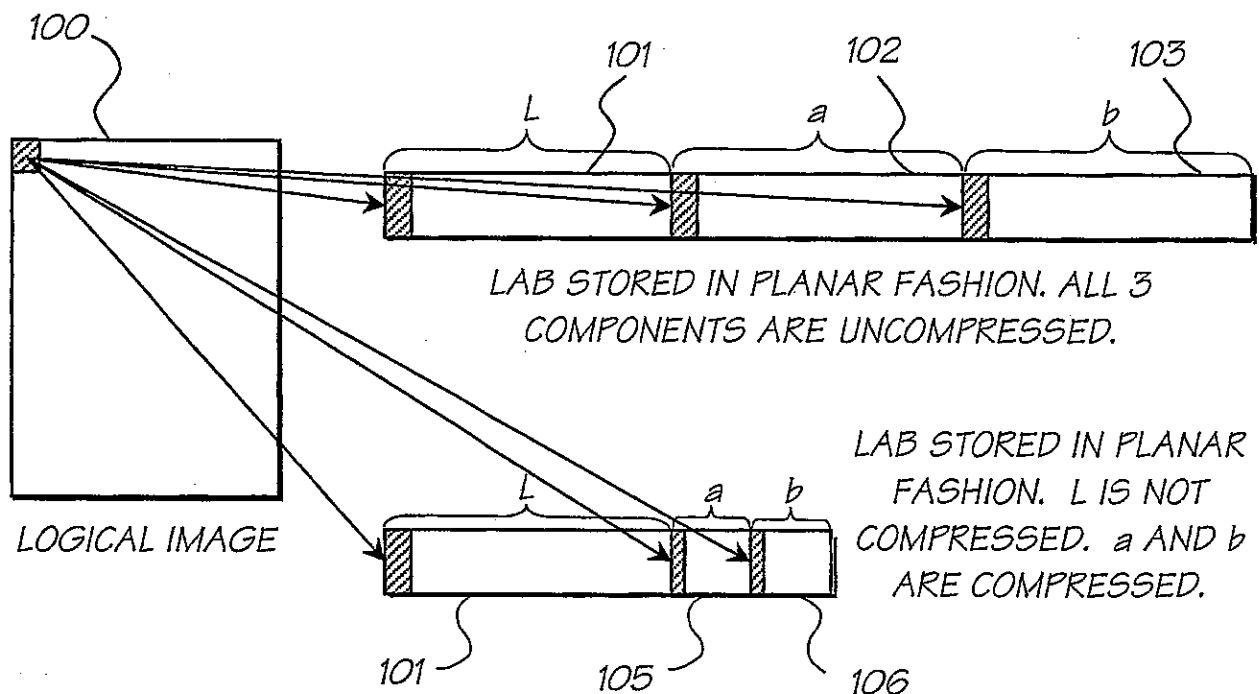


FIG. 31

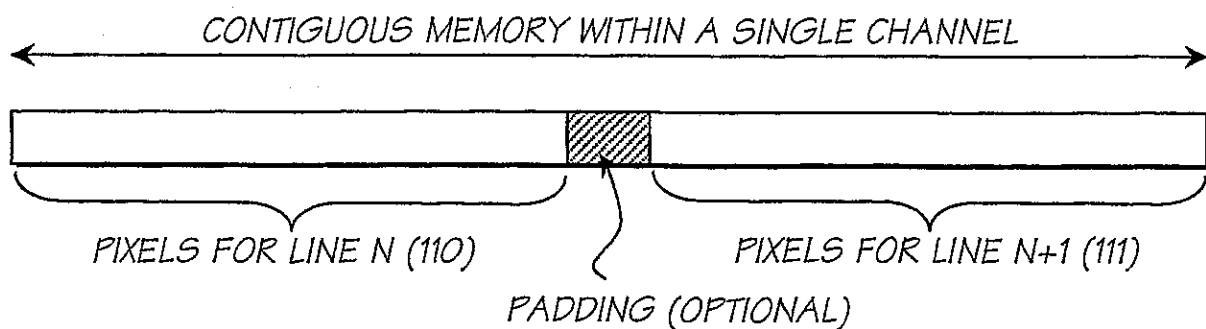


FIG. 32

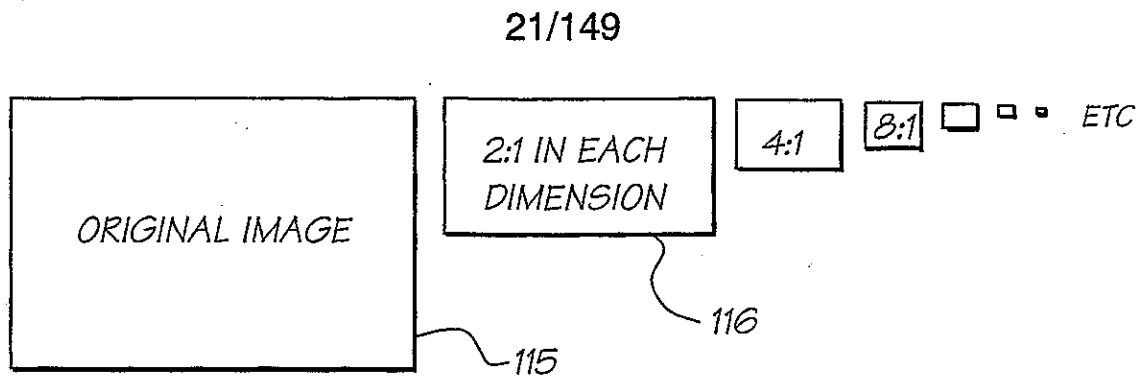


FIG. 33

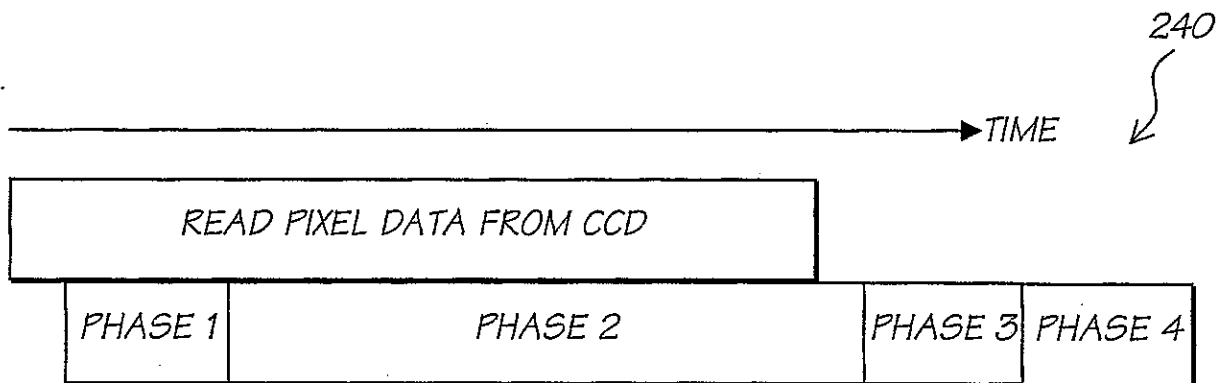


FIG. 34

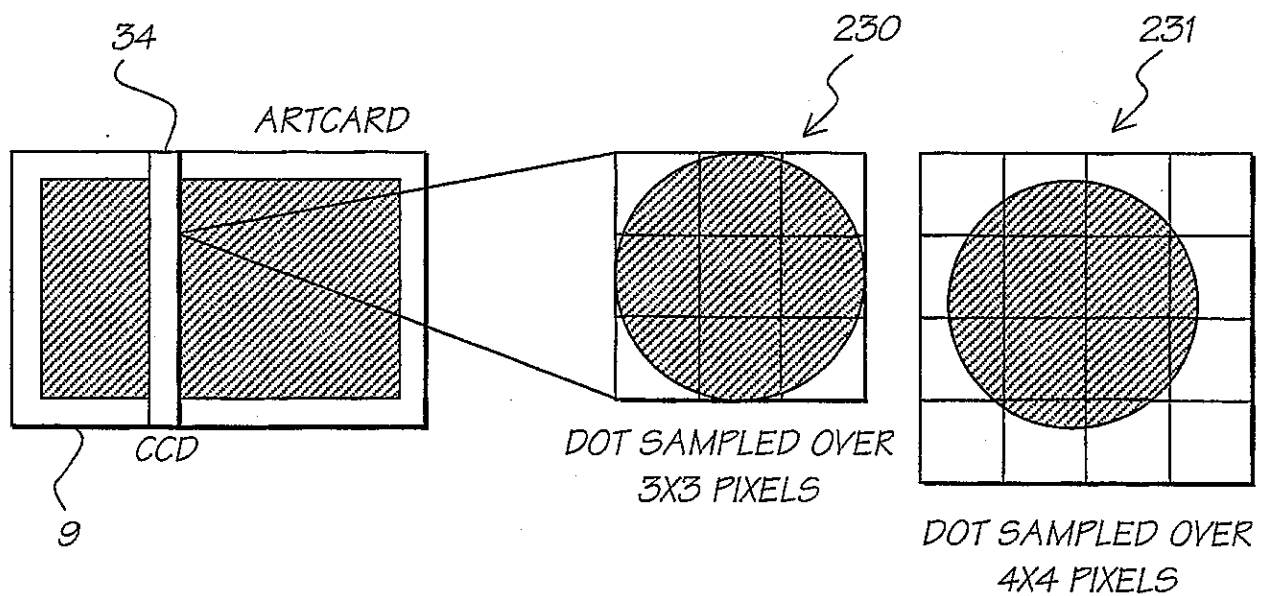


FIG. 35

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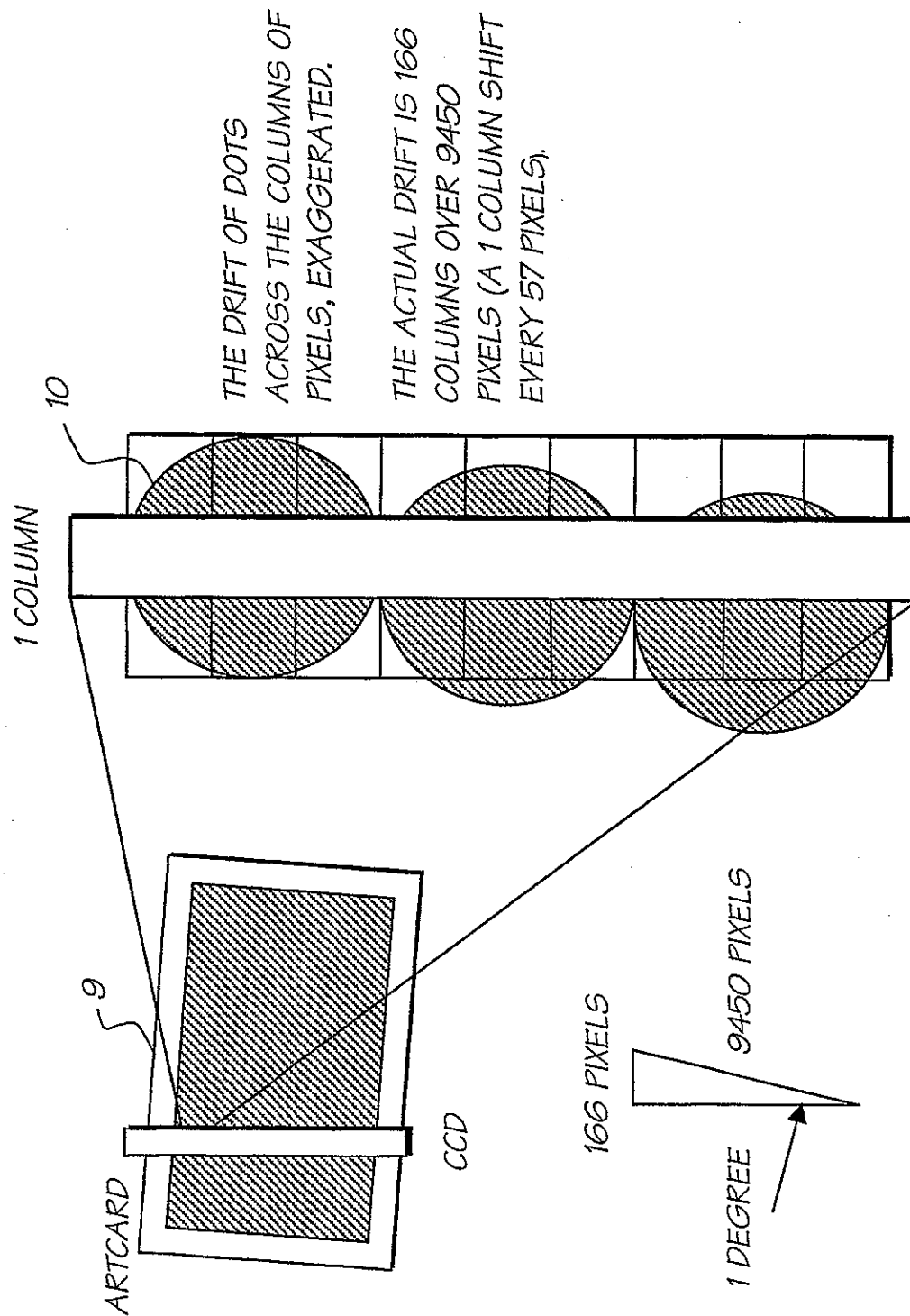


FIG. 36

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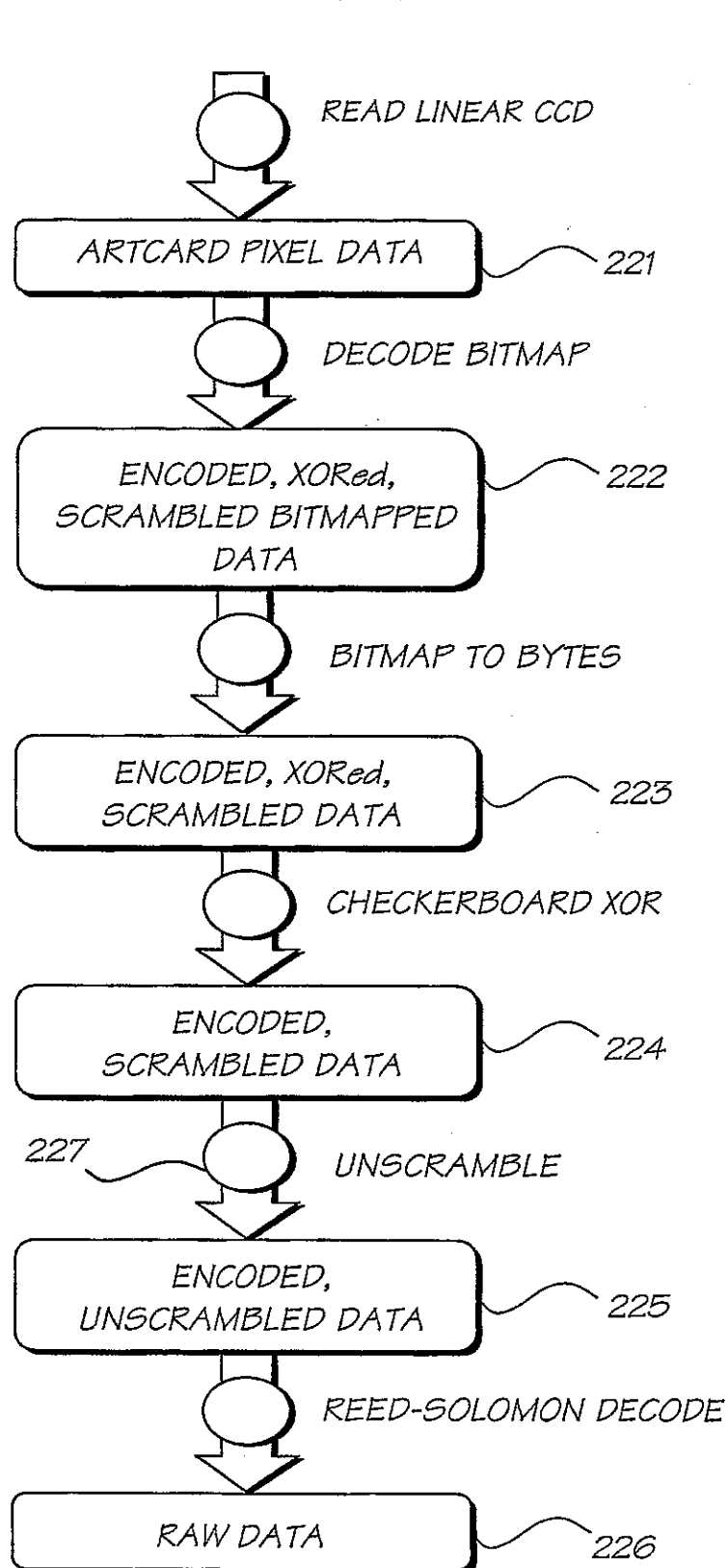


FIG. 37

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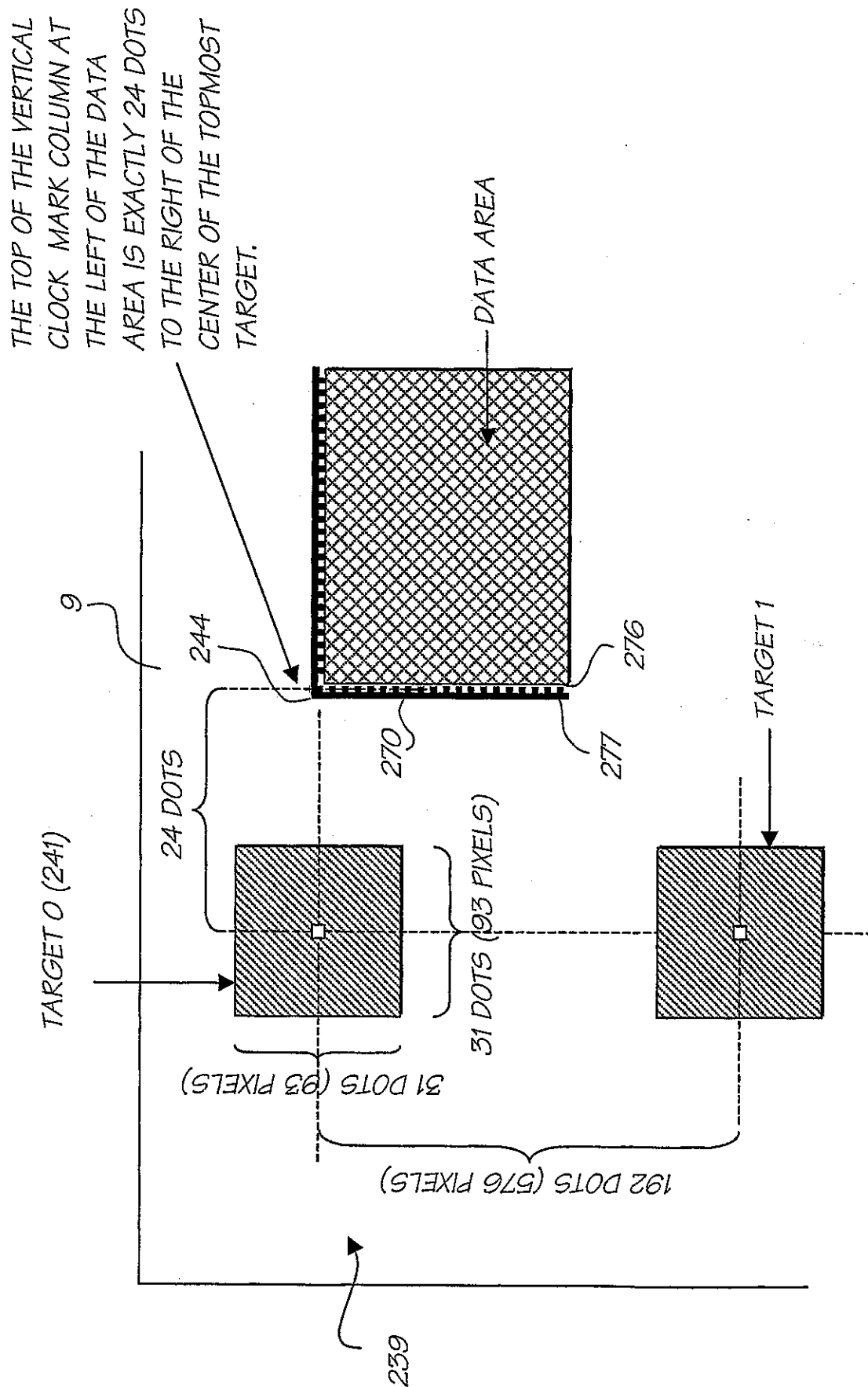


FIG. 38

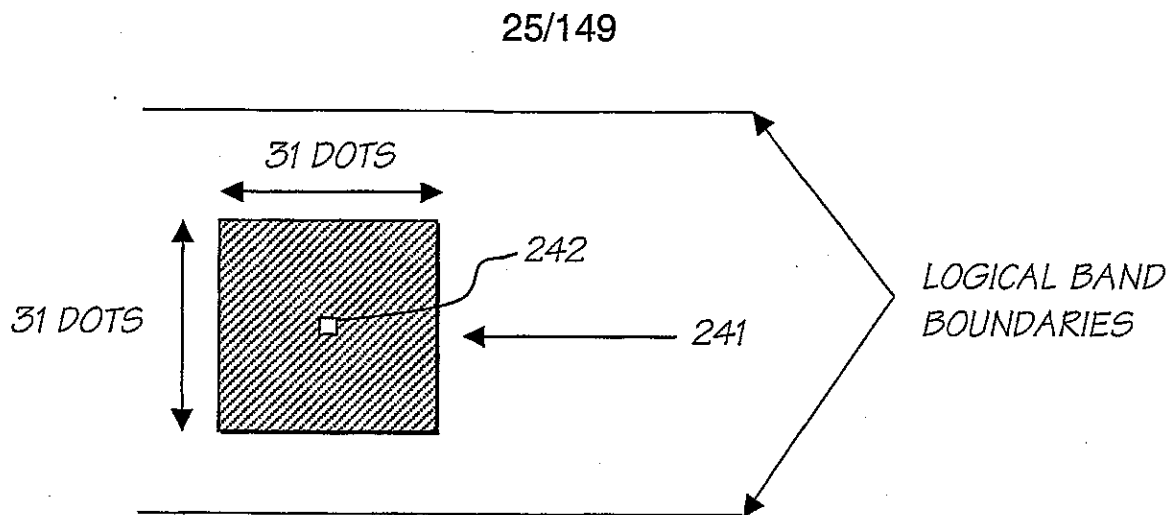


FIG. 39

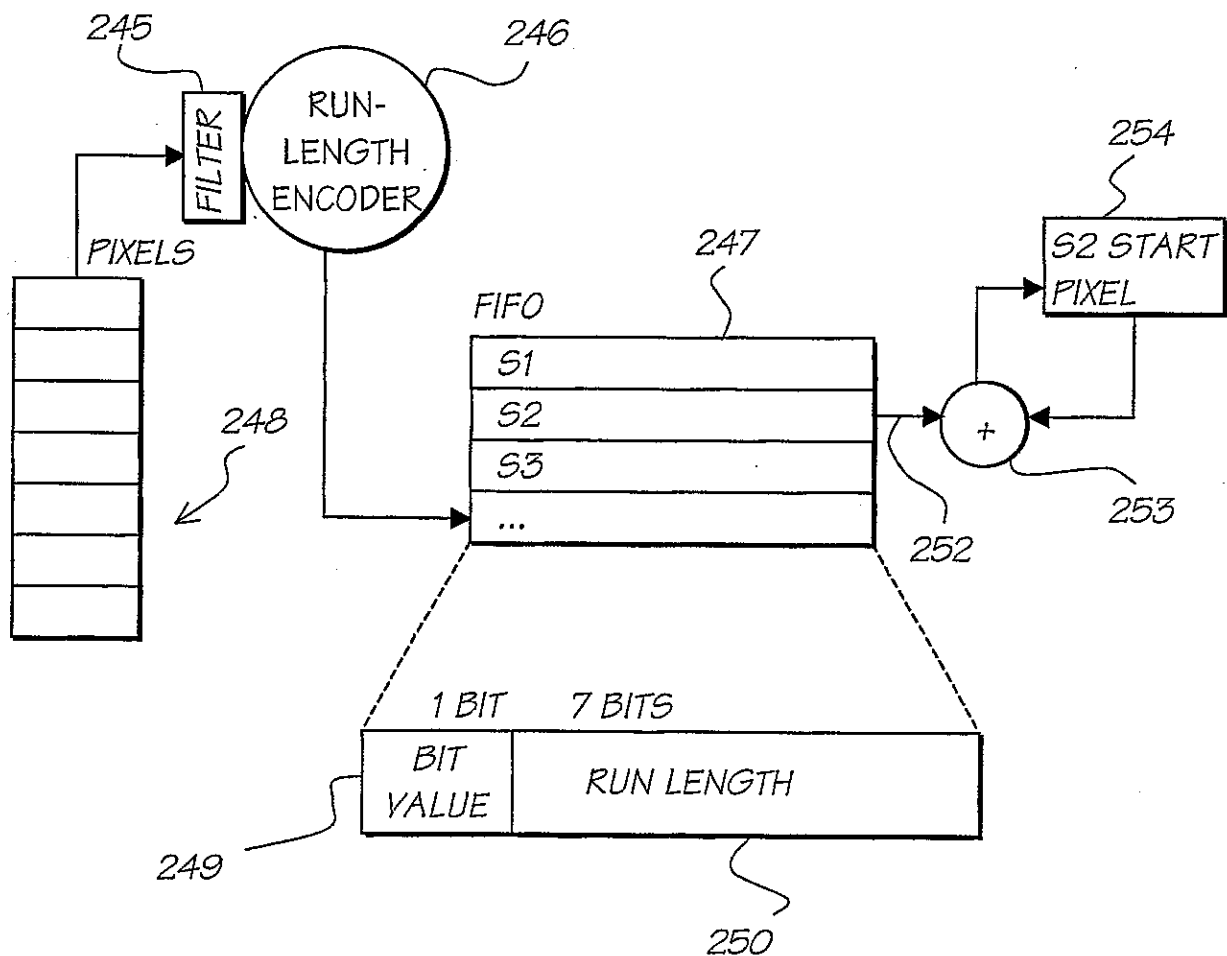


FIG. 40

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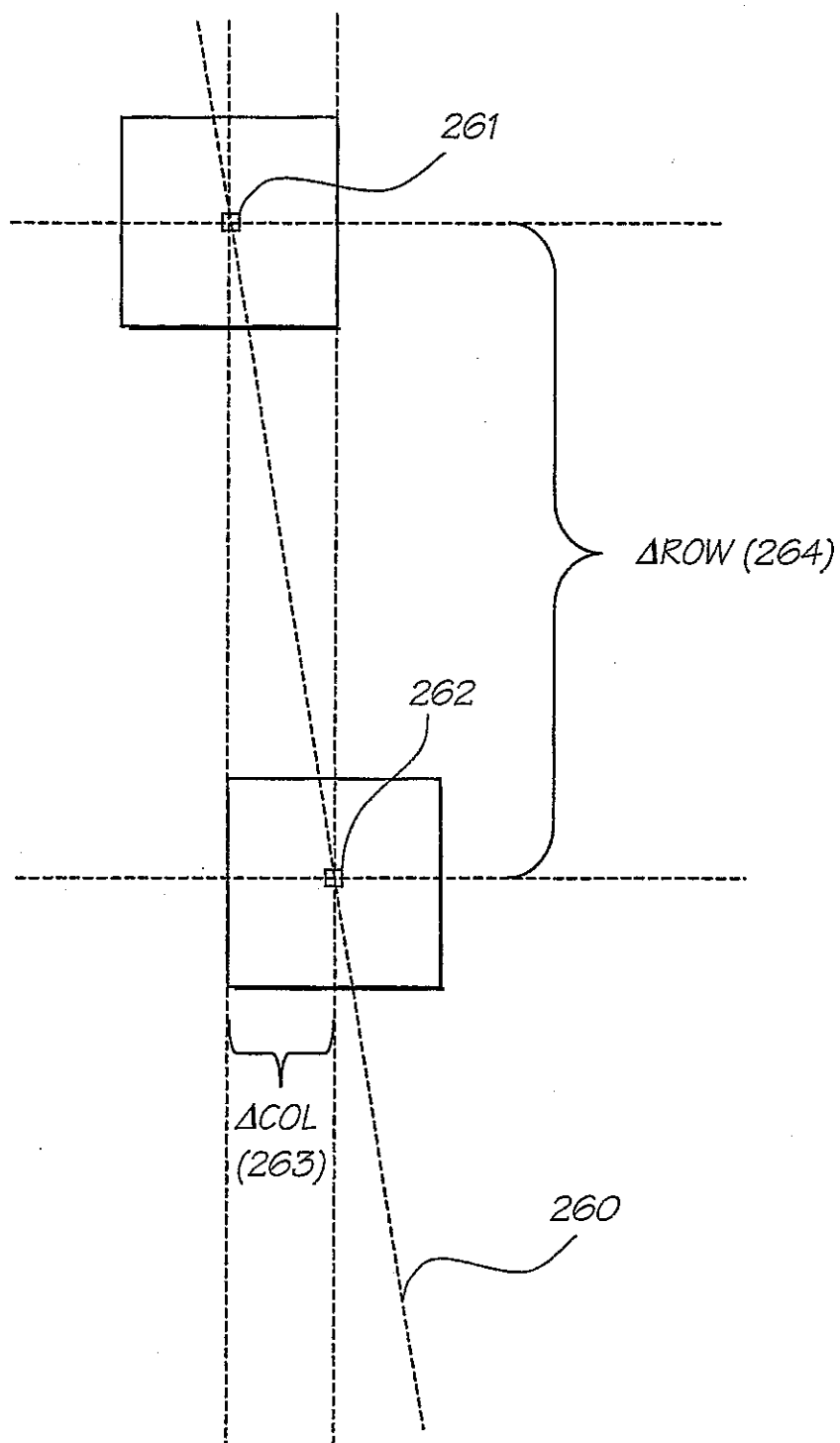
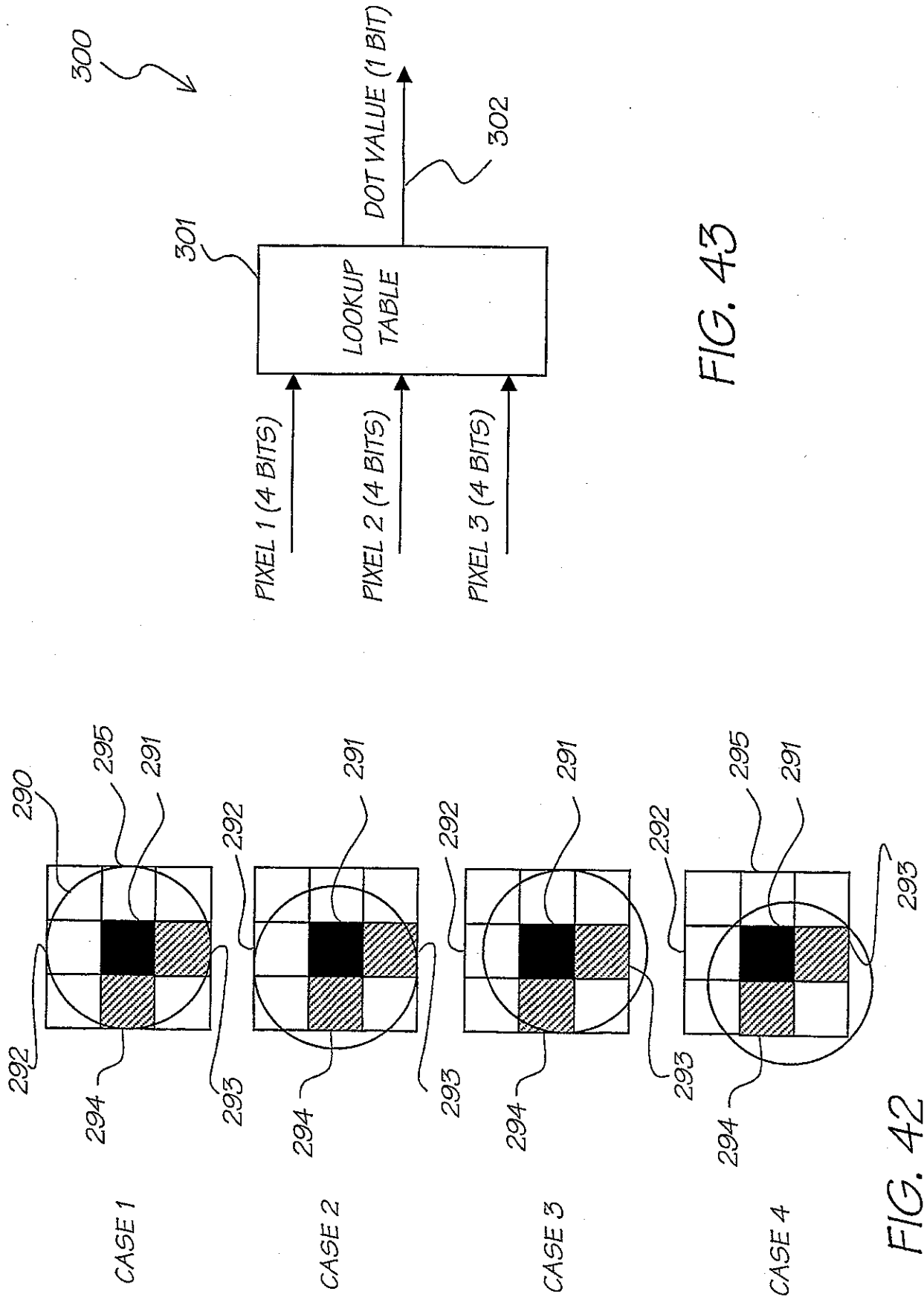


FIG. 41

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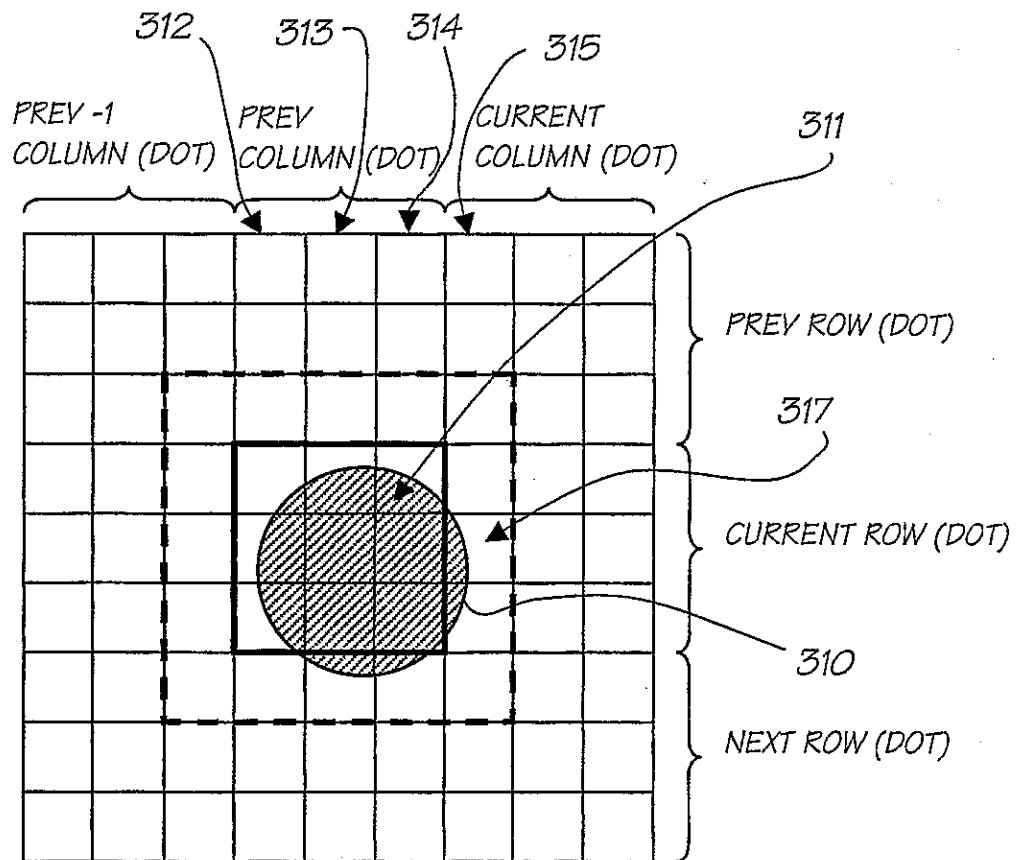


FIG. 44

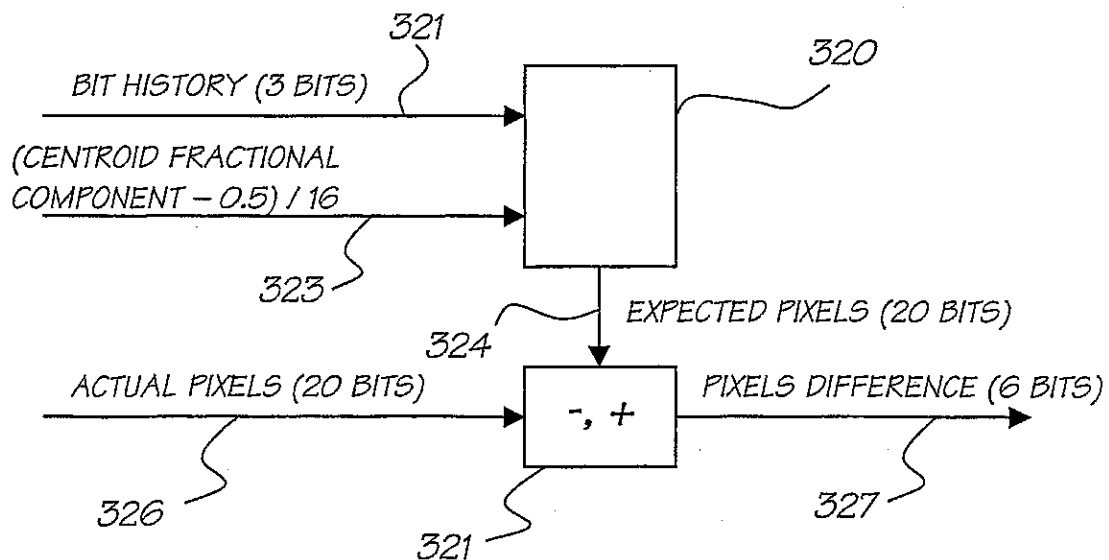


FIG. 45

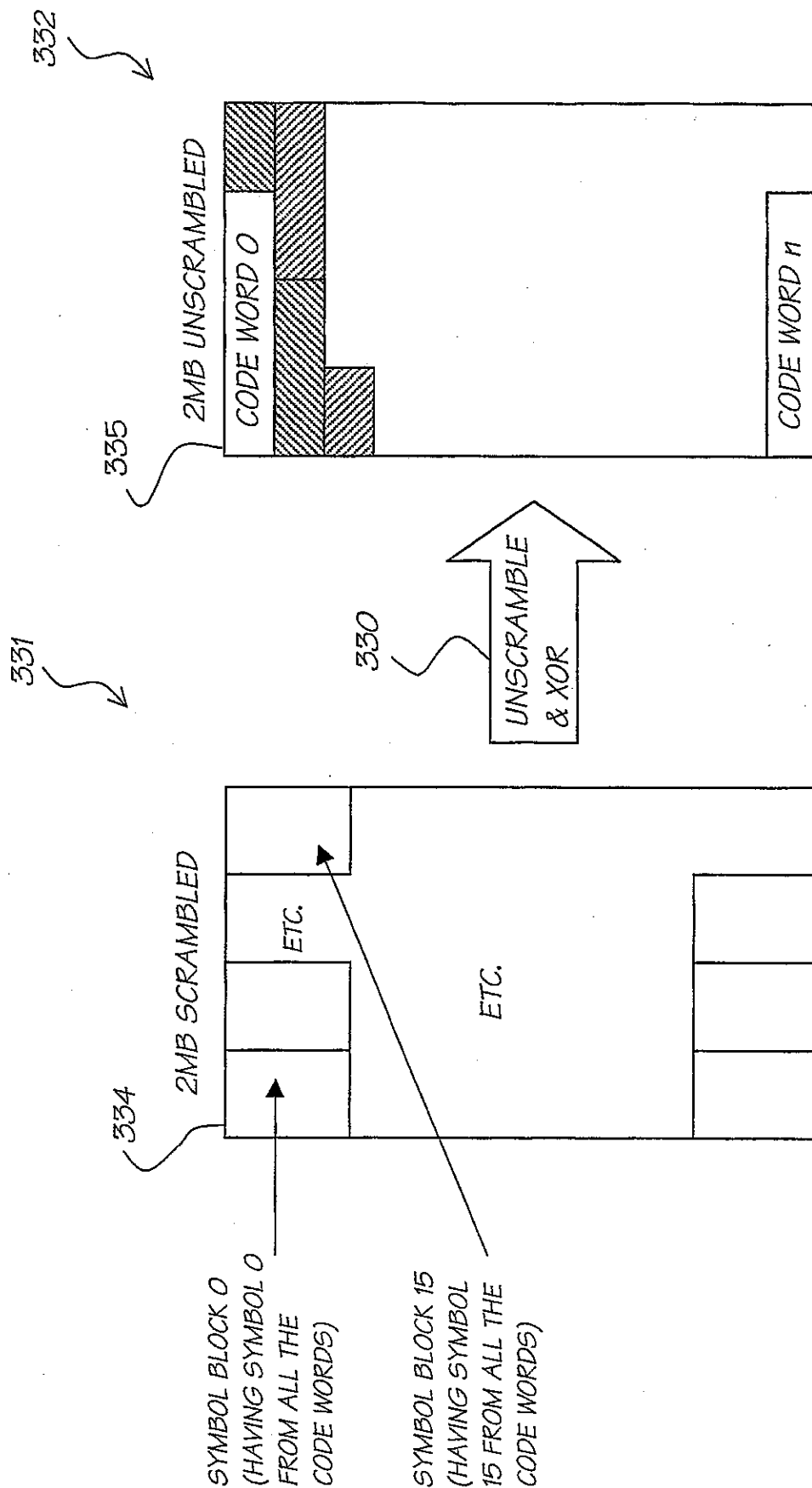


FIG. 46

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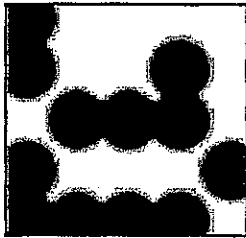
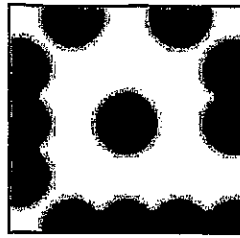
BLACK AND WHITE
DOTSBLACK DOT
SURROUNDED
BY WHITEWHITE DOT
SURROUNDED
BY BLACK

FIG. 47

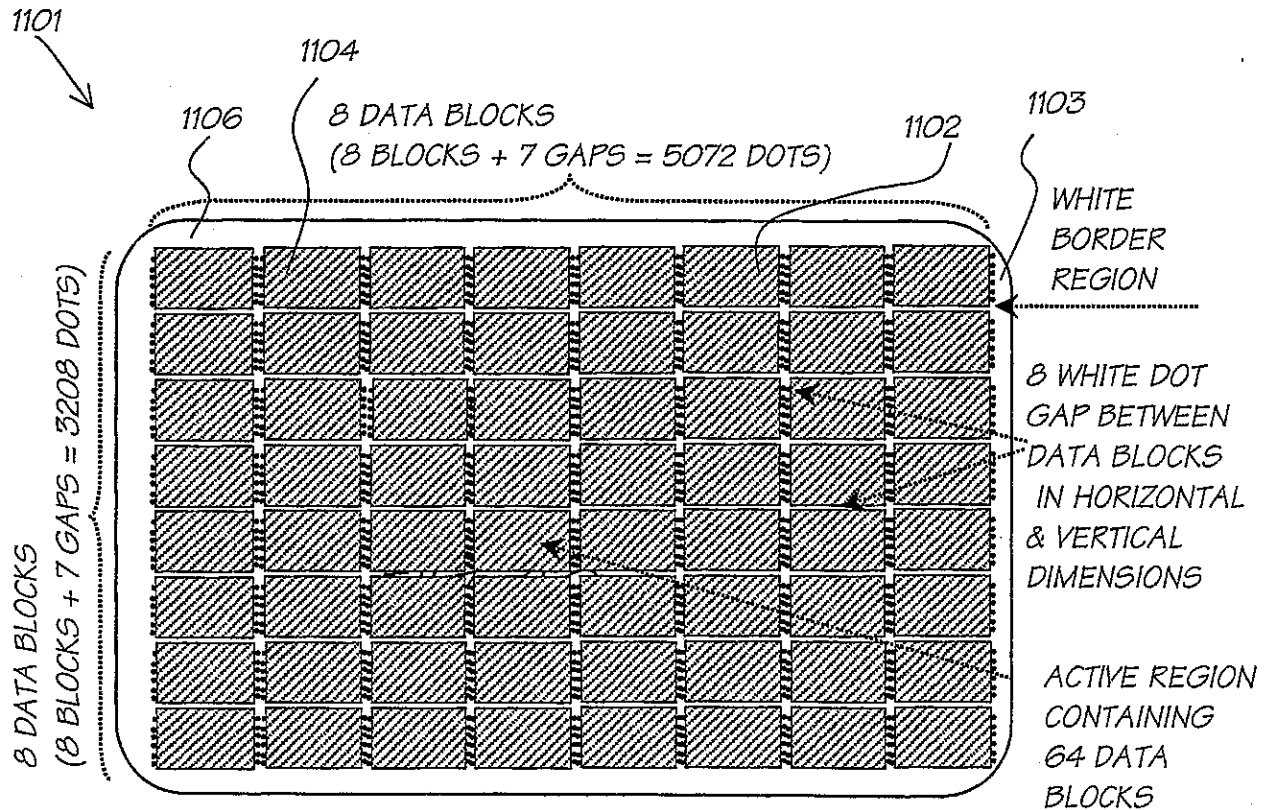


FIG. 48

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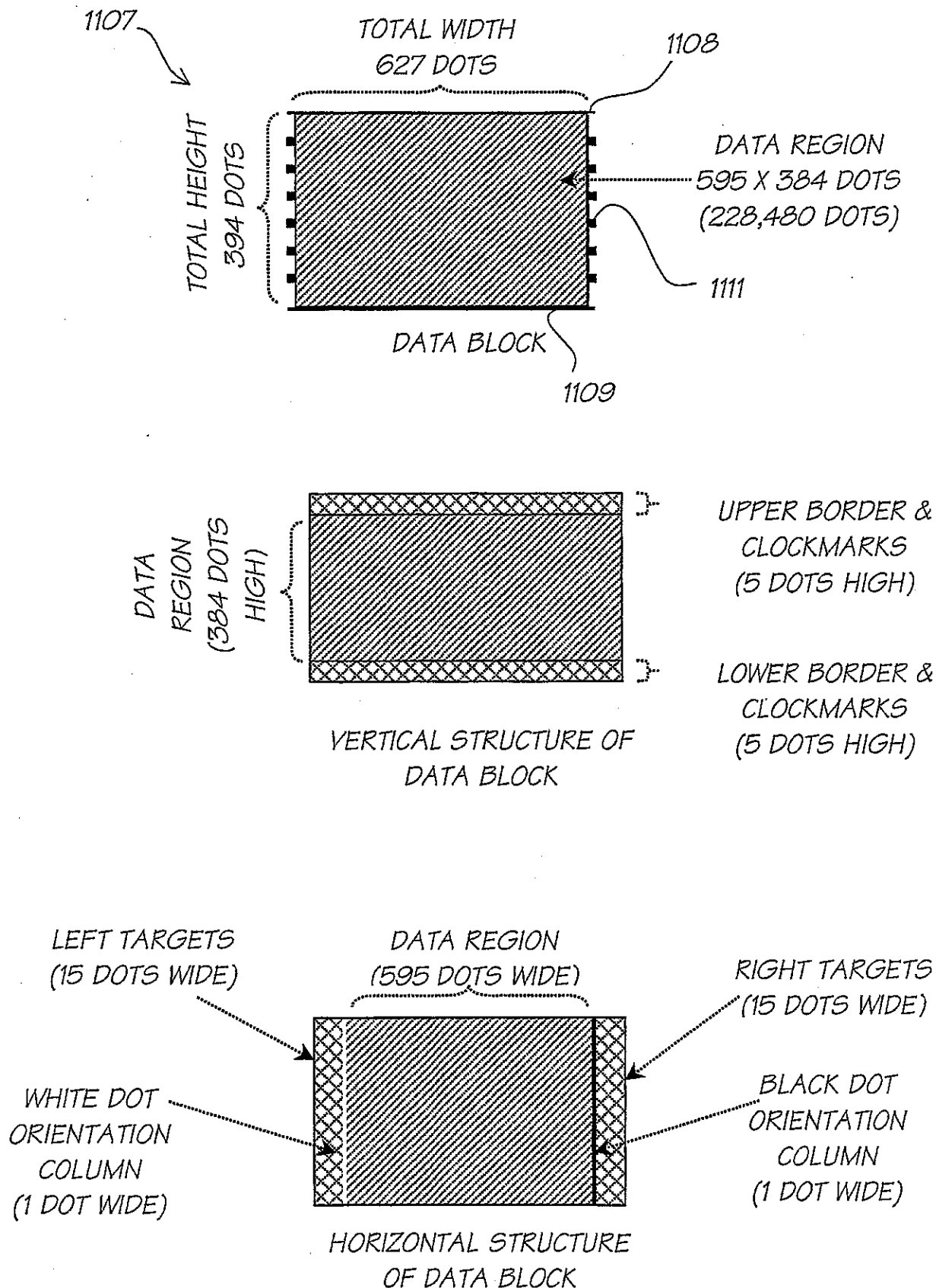
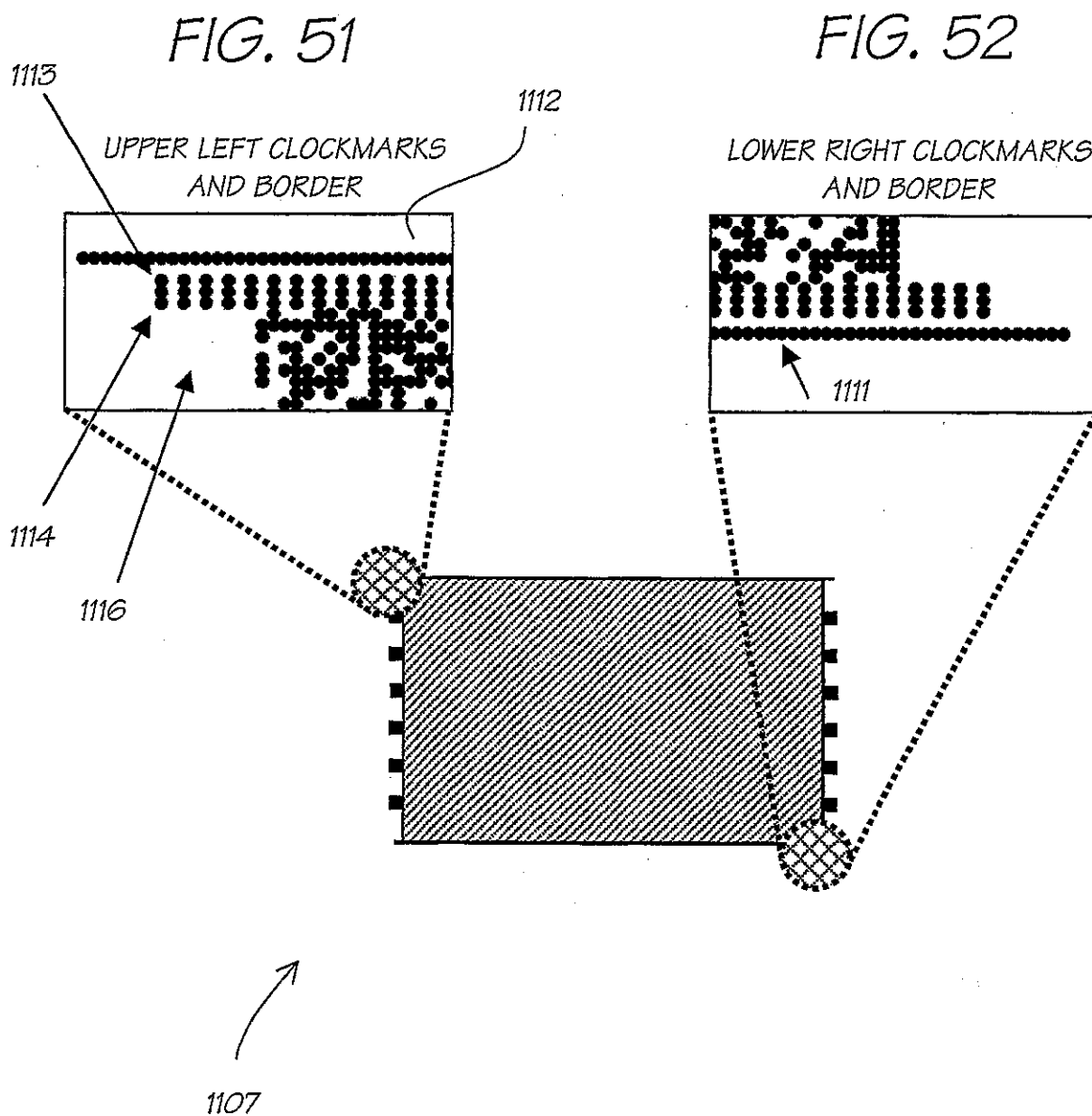


FIG. 49

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**FIG. 50**

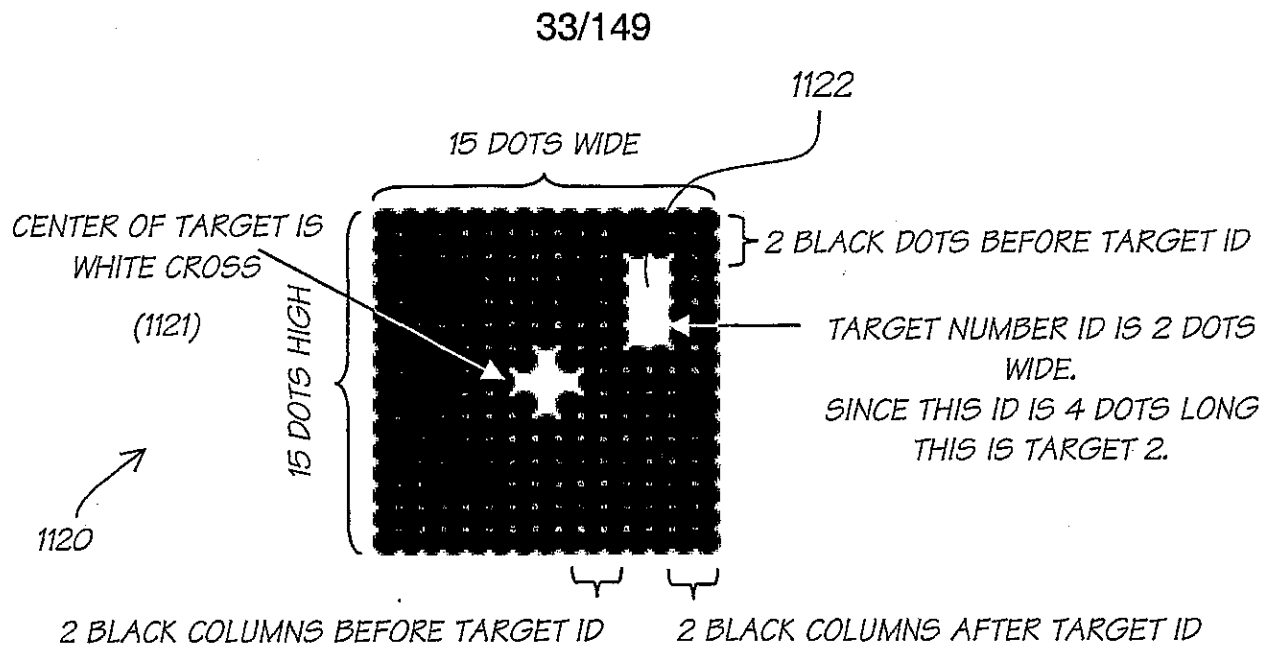


FIG. 53

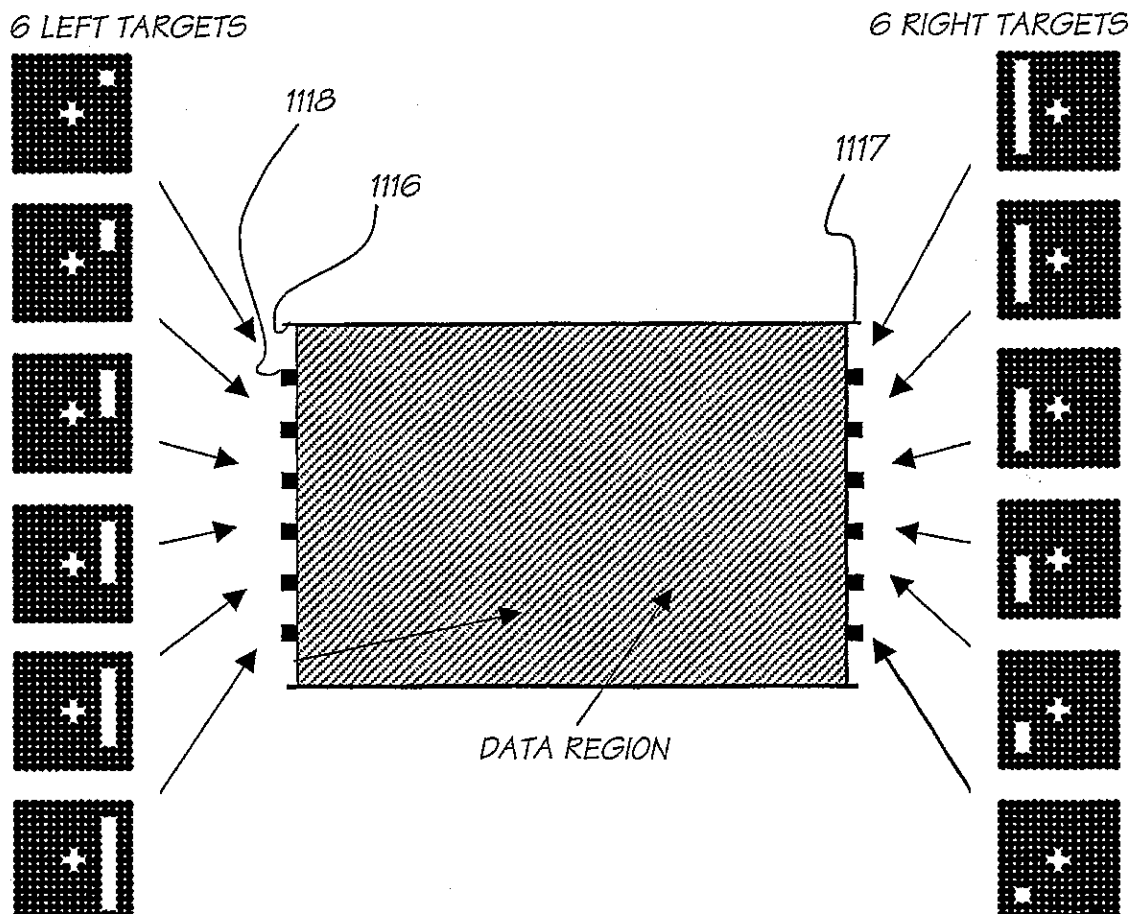


FIG. 54

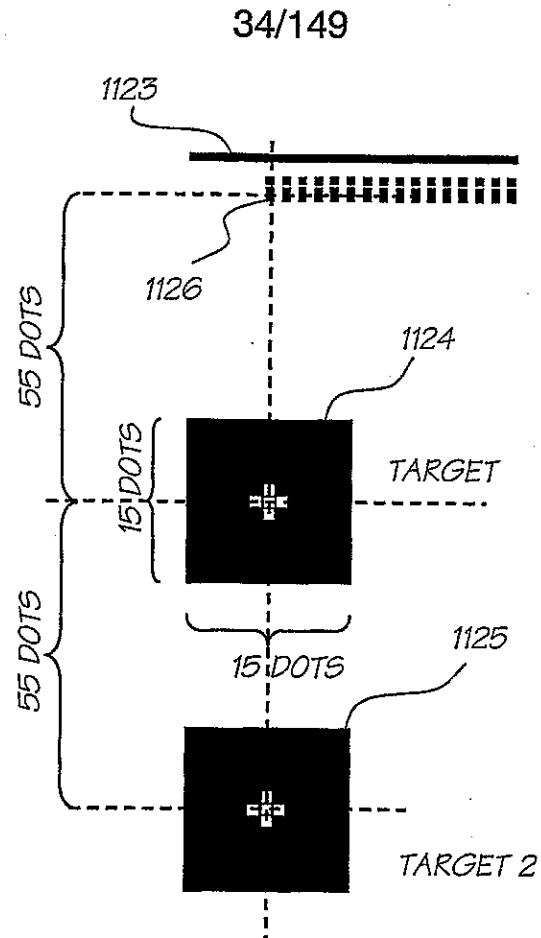


FIG. 55

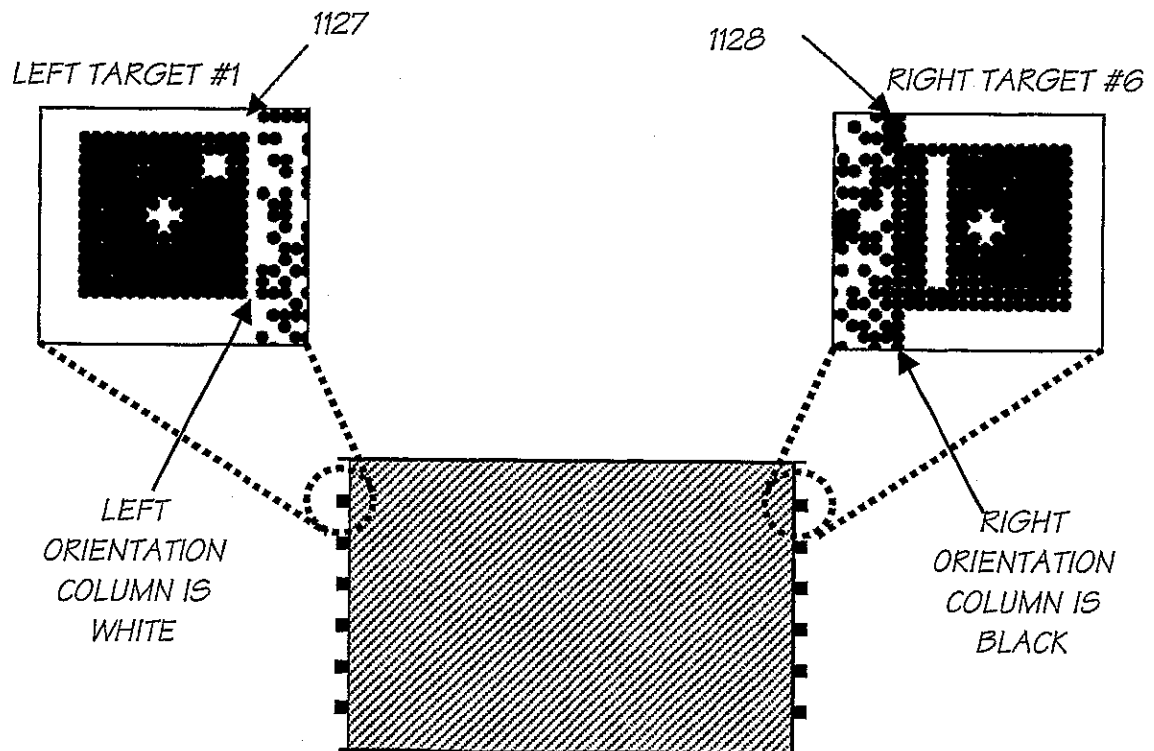


FIG. 56

1130



7168 REED-SOLOMON ENCODED BLOCKS OF DATA (1,827,840 BYTES)	CONTROL	CONTROL	} 2 CONTROL BLOCKS
	DATA BLOCK 1	DATA BLOCK 2	
			} N REED-SOLOMON BLOCKS, ENCODING THE FIRST COPY OF THE DATA.
		DATA BLOCK N	
	DATA BLOCK 1	DATA BLOCK 2	} N REED-SOLOMON BLOCKS, ENCODING THE SECOND COPY OF THE DATA.
		DATA BLOCK N	
			} OTHER COPIES OF THE DATA (NOT SHOWN) EACH COPY IS N BLOCKS.
	DATA BLOCK 1	DATA BLOCK 2	} FINAL COPY OF DATA - THERE IS ONLY ENOUGH SPACE FOR FIRST 2 OF THE N BLOCKS.

00:	4F	00	3D	4F	00	3D	4F	00	3D	4F	00	3D
0C:	4F	00	3D	4F	00	3D	4F	00	3D	4F	00	3D
18:	4F	00	3D	4F	00	3D	4F	00	3D	4F	00	3D
24:	4F	00	3D	4F	00	3D	4F	00	3D	4F	00	3D
30:	4F	00	3D	4F	00	3D	4F	00	3D	4F	00	3D
3C:	4F	00	3D	4F	00	3D	4F	00	3D	4F	00	3D
48:	4F	00	3D	4F	00	3D	4F	00	3D	4F	00	3D
54:	4F	00	3D	4F	00	3D	4F	00	3D	4F	00	3D
60:	00	00	00	00	00	00	00	00	00	00	00	00
6C:	00	00	00	00	00	00	00	00	00	00	00	00
78:	00	00	00	00	00	00	00	00	00	00	00	00

} 32 COPIES OF THE
3 BYTE CONTROL
INFORMATION

} RESERVED
BYTES ARE 0

SUBSTITUTE SHEET (RULE 26) RO/AU

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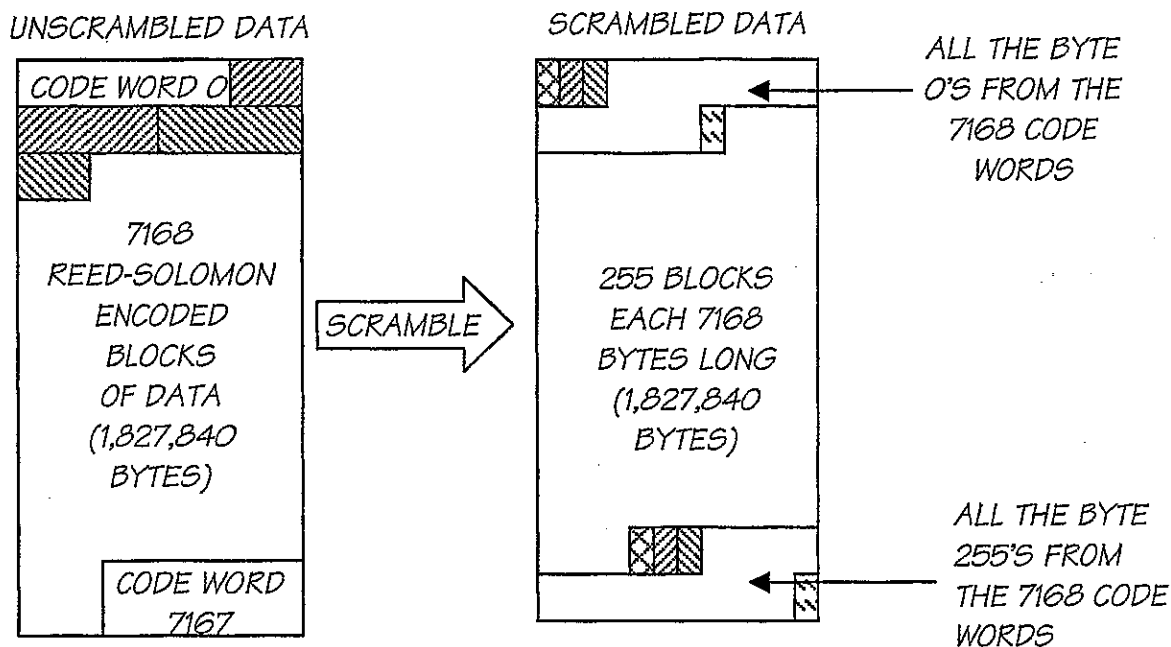


FIG. 60

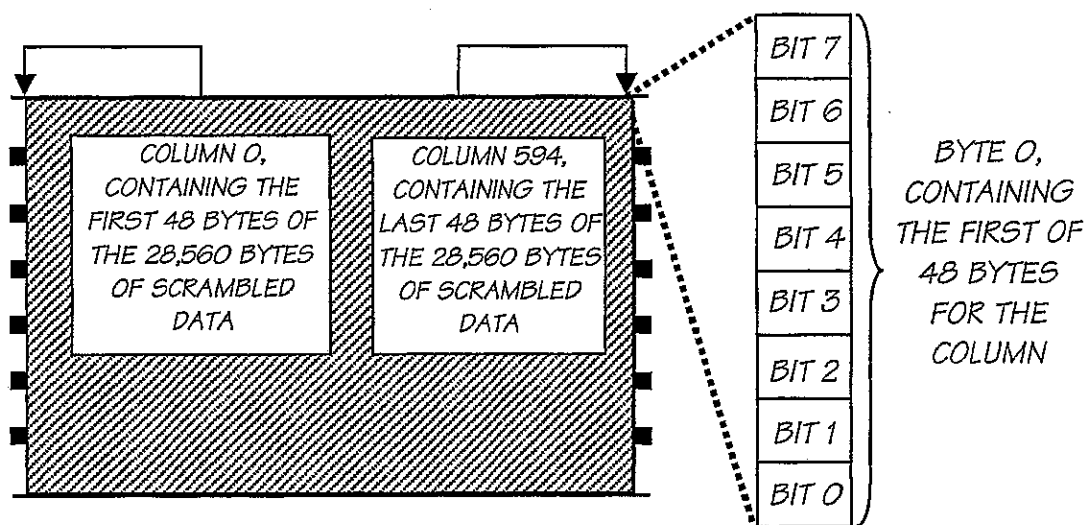


FIG. 61

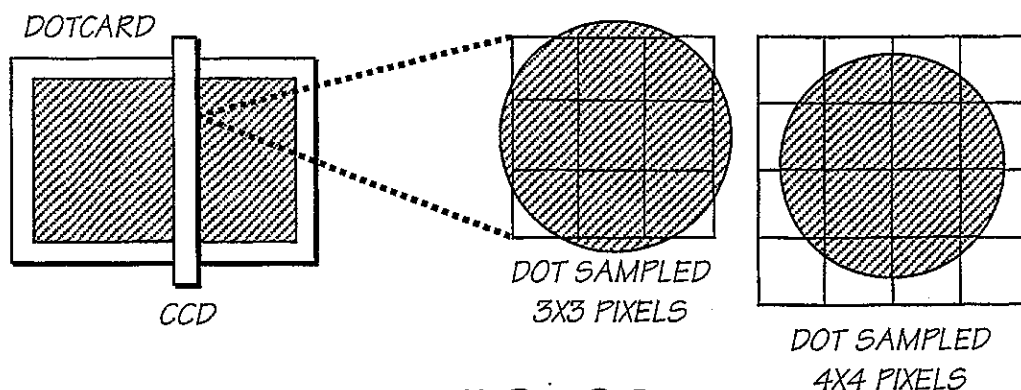


FIG. 62

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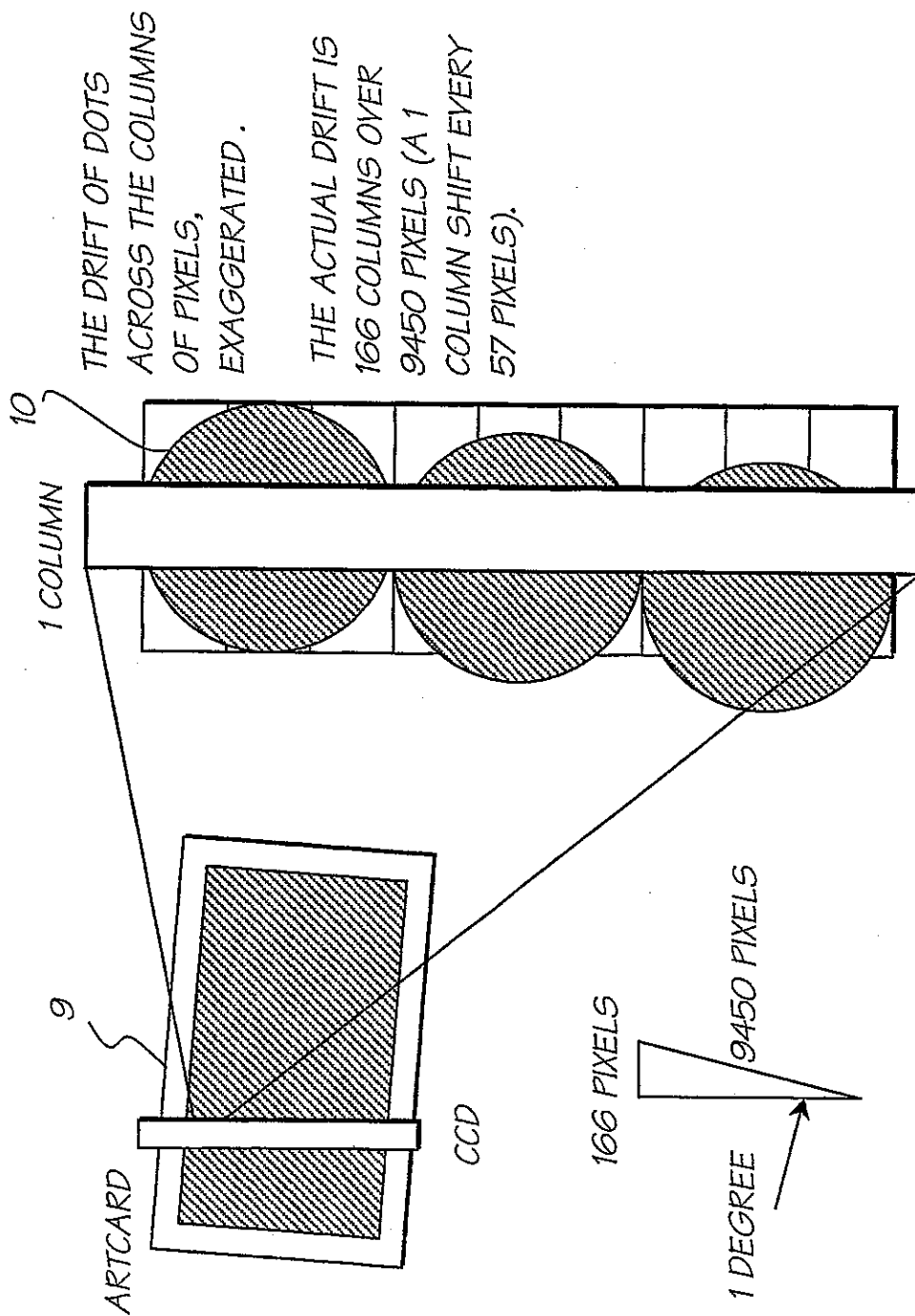


FIG. 63

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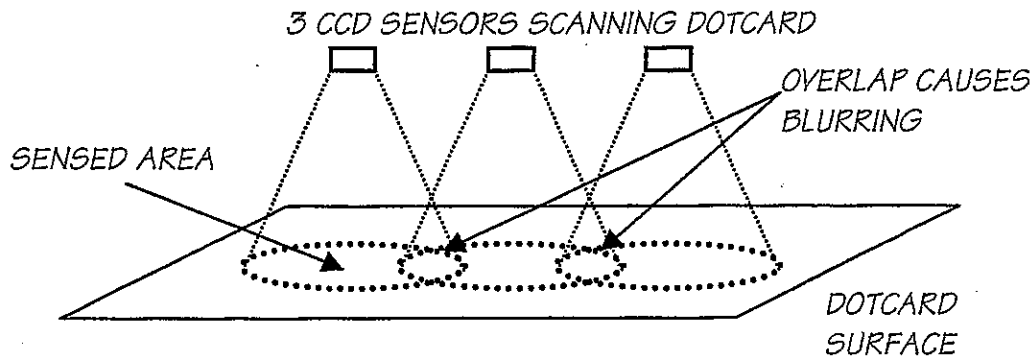


FIG. 64

RANGE OF BLACK DOTS
(FREQUENCY DISTRIBUTION)

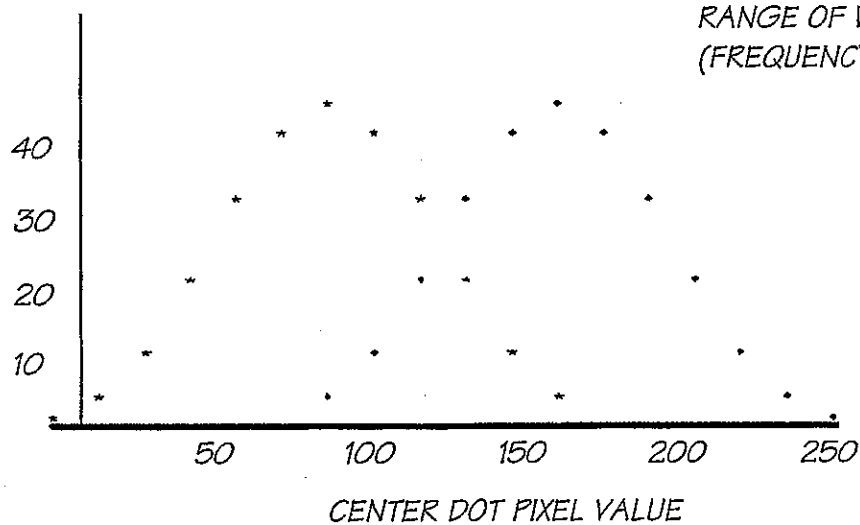


FIG. 65

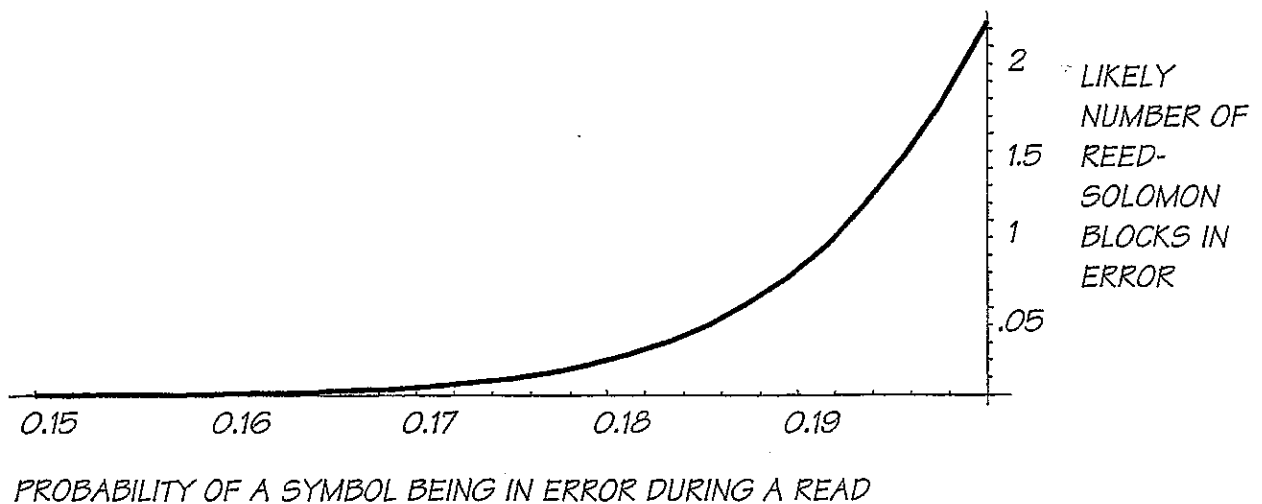
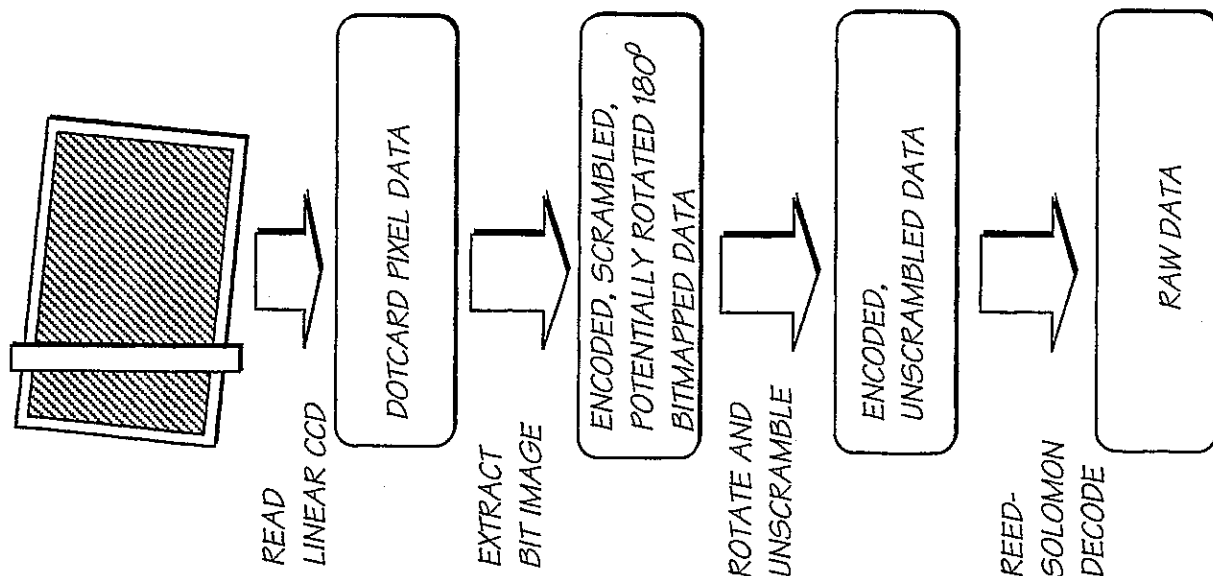


FIG. 66

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APPROXIMATE DATA SIZES FOR 1600 DPI DOTCARD

86MM + 1MM IN HORIZONTAL DIMENSION FOR 1° ROTATION = 87MM

87MM = 16,252 SCANLINES

16,440 SCANLINES @ 11,000 PIXELS PER SCANLINE = 180,840,000 PIXELS

180,840,000 PIXELS @ 1 BYTE PER PIXEL = 180,840,000 BYTES = 172.5 MB

64 DATA BLOCKS, EACH CONTAINING 597 COLUMNS (595 DATA REGION COLUMNS AND 2 ORIENTATION COLUMNS), @ 48 BYTES PER COLUMN = 28,656 BYTES PER DATA BLOCK FOR A TOTAL OF 1,833,984 BYTES.

64 DATA BLOCKS, EACH CONTAINING 112 ENCODED REED SOLOMON BLOCKS, @ 255 BYTES PER REED SOLOMON BLOCK FOR A TOTAL OF 1,827,840 BYTES.

DECODED DATA, WITH A MAXIMUM SIZE OF 910,082 BYTES.
(64 X 112 X 127 - (2 CONTROL BLOCKS @ 127 BYTES))

FIG. 67

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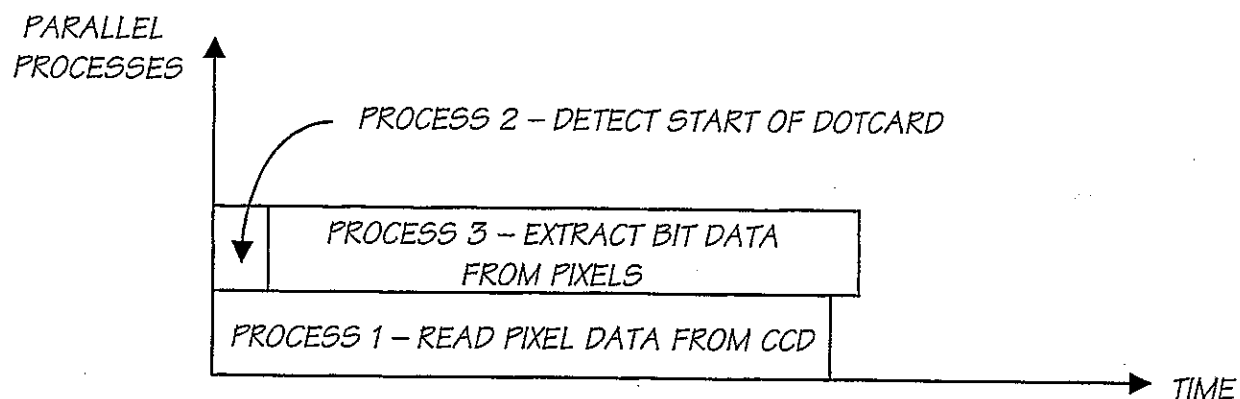


FIG. 68

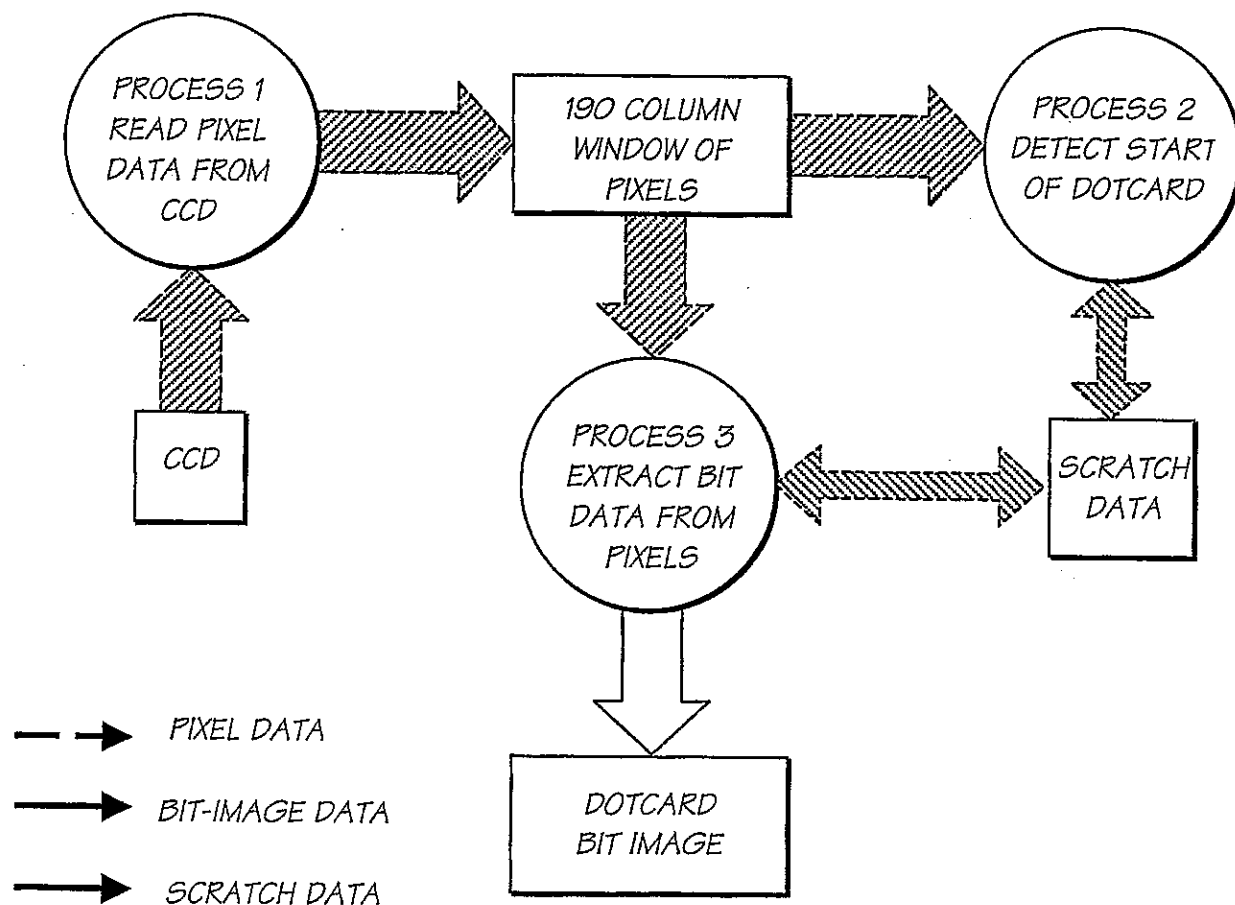


FIG. 69

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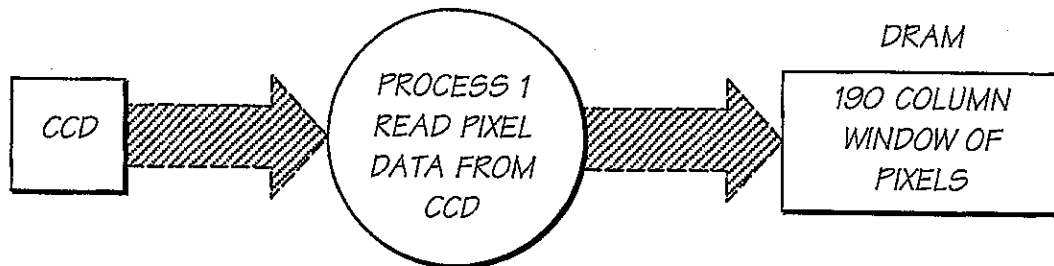


FIG. 70

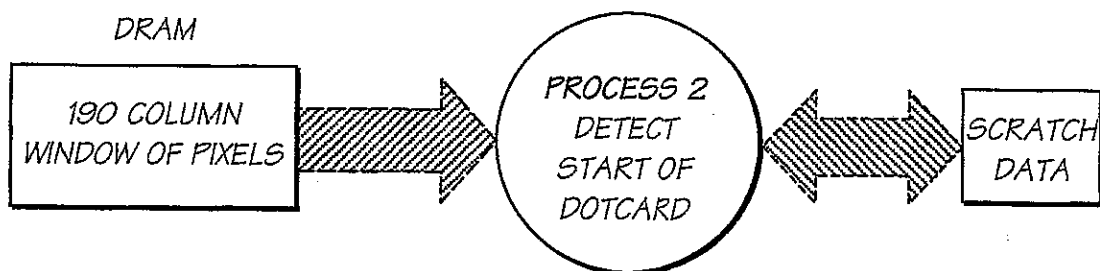


FIG. 71

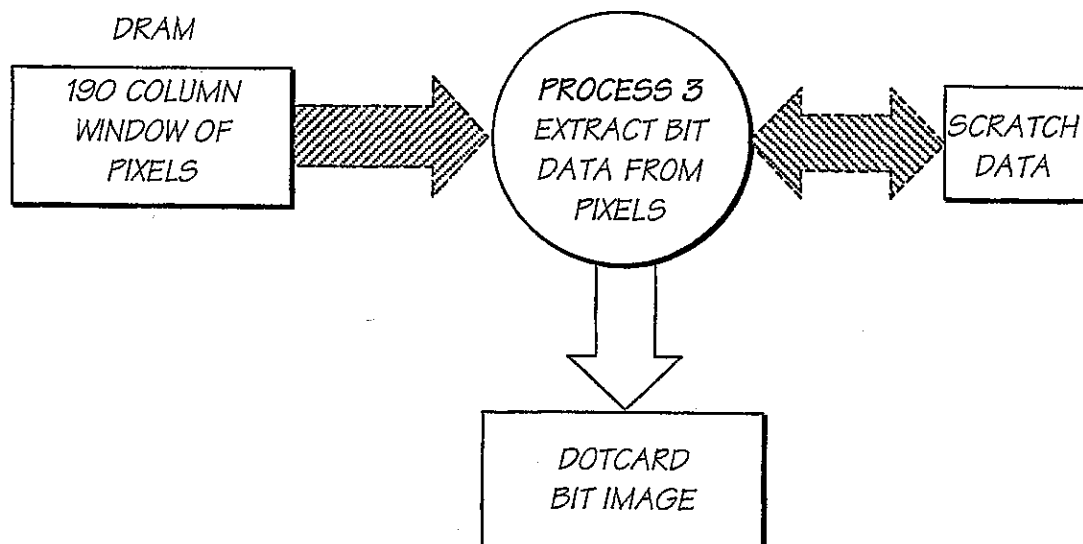


FIG. 72

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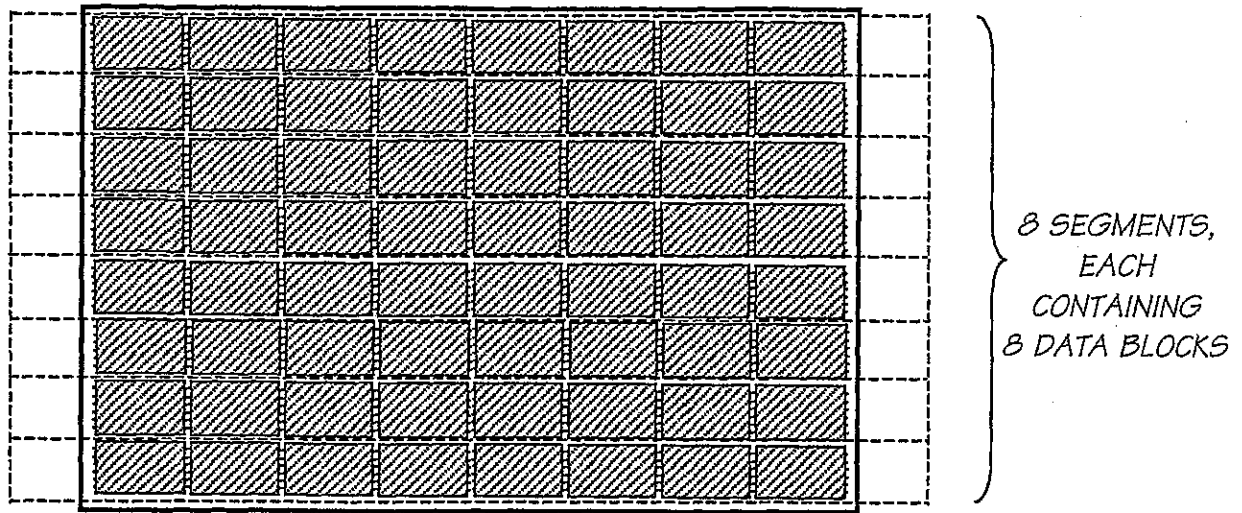


FIG. 73

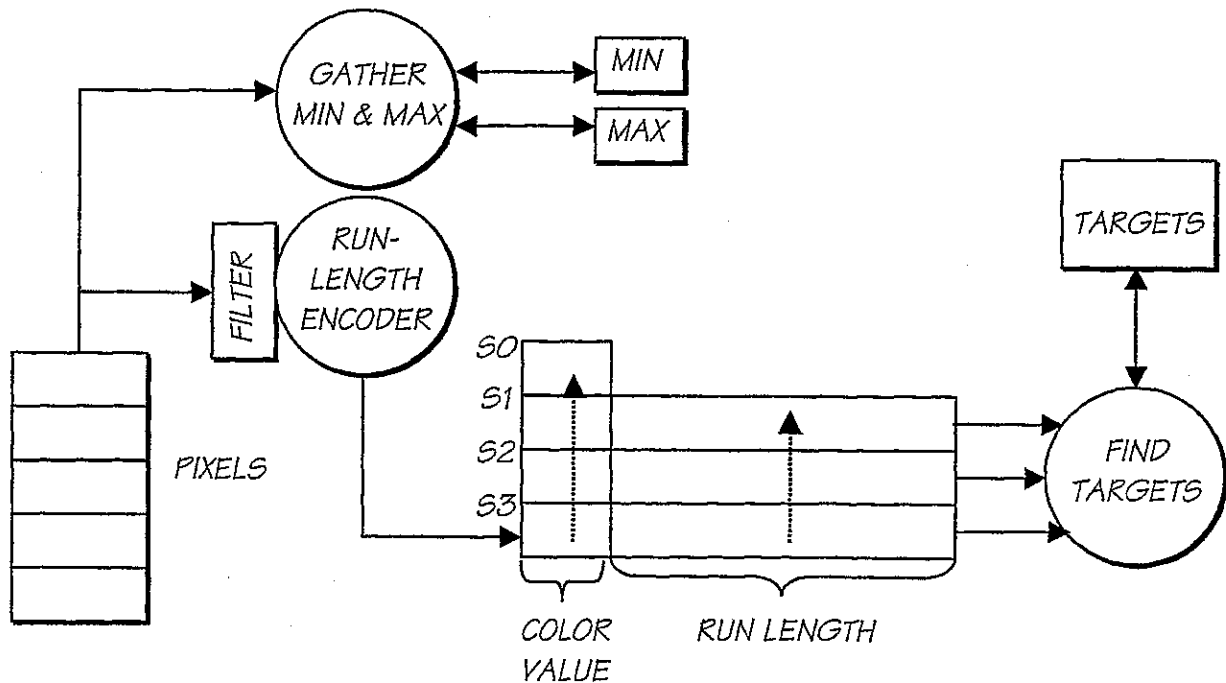


FIG. 74

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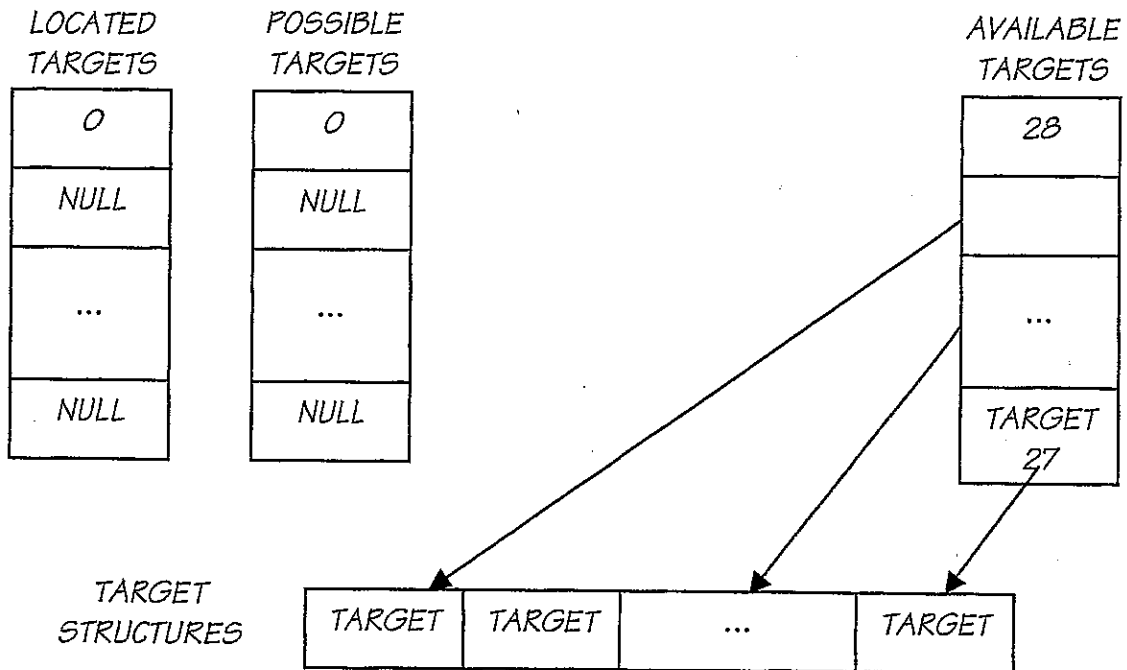


FIG. 75

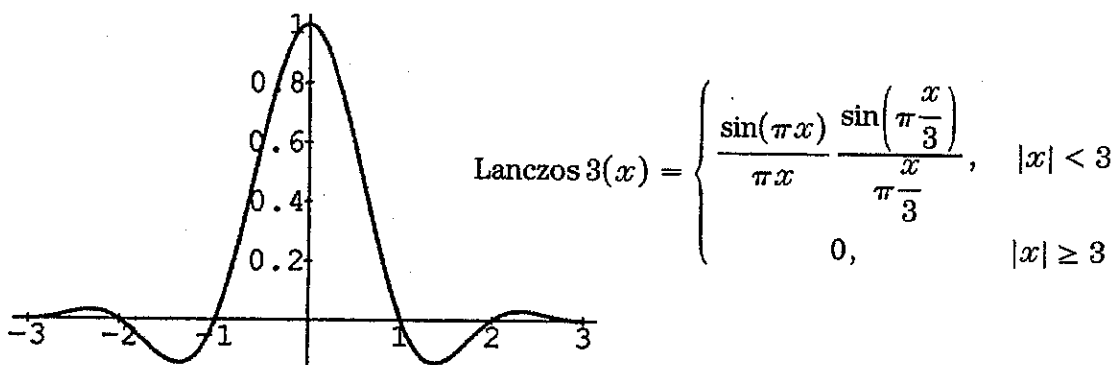


FIG. 76

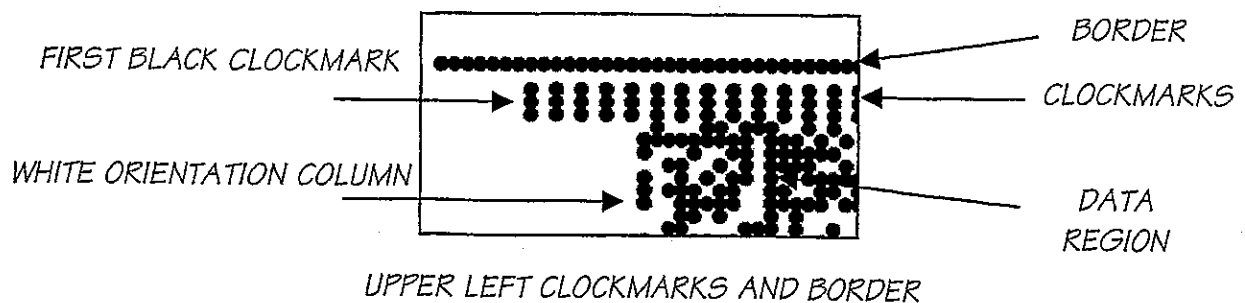


FIG. 77

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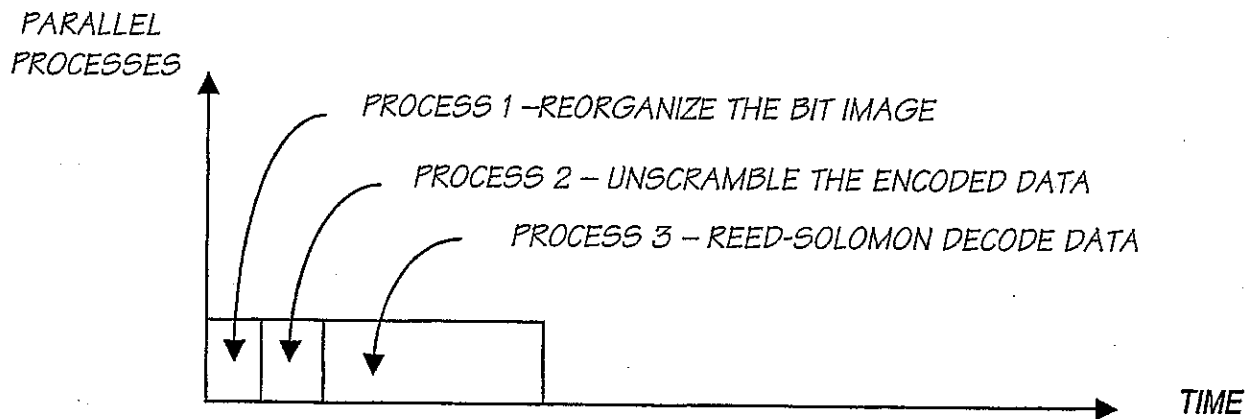


FIG. 78

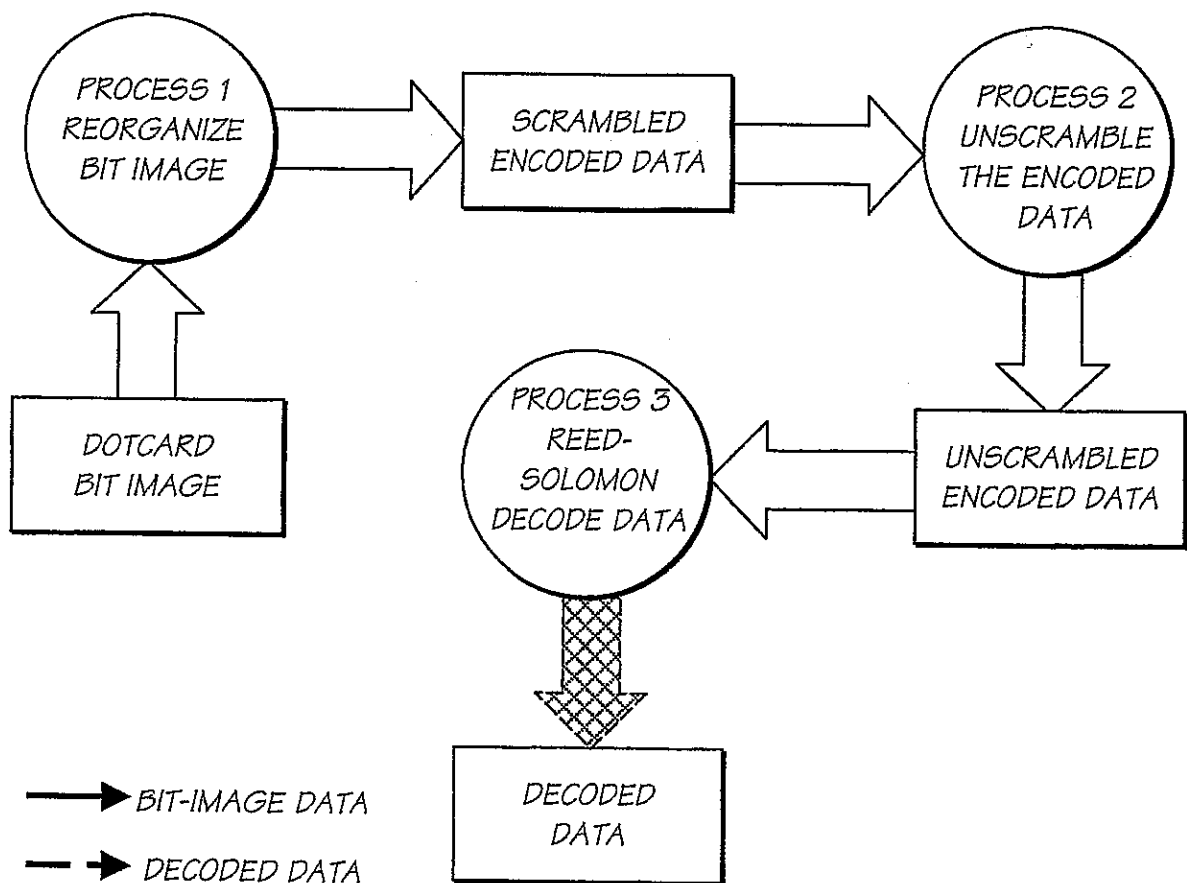


FIG. 79

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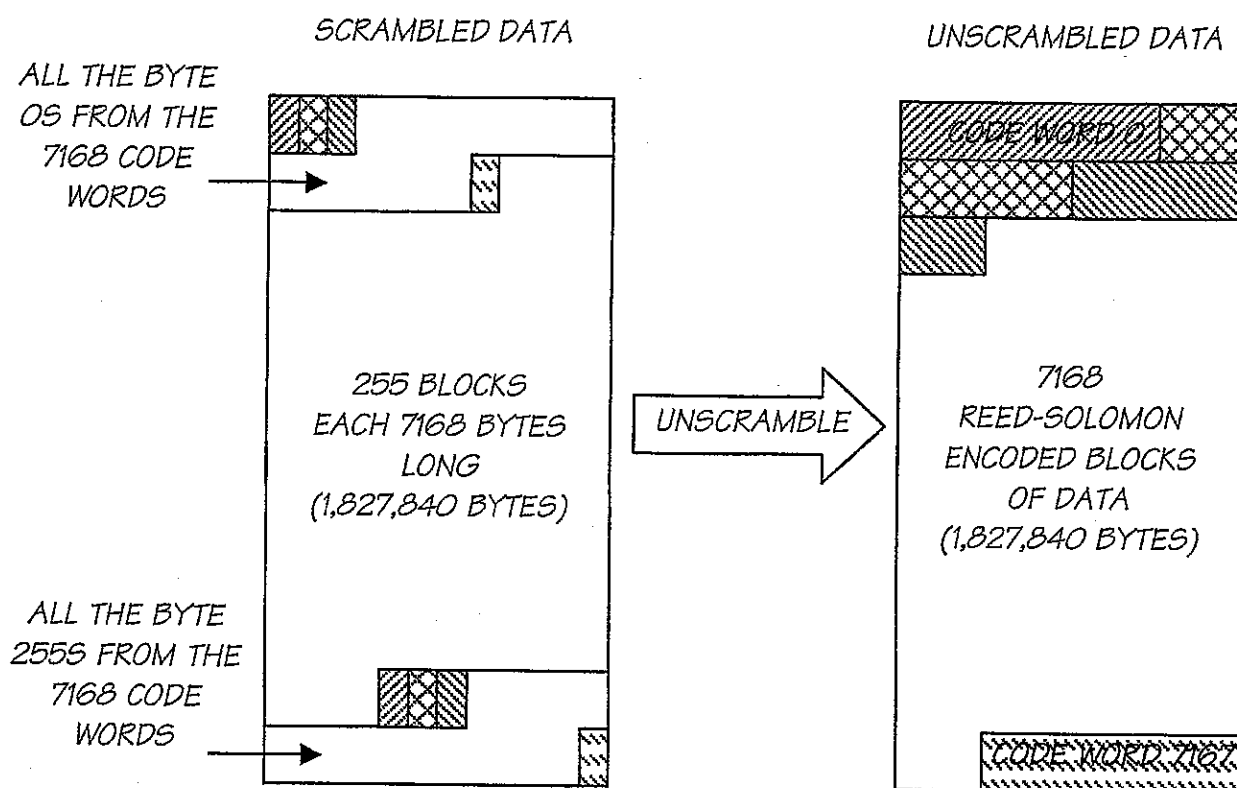


FIG. 80

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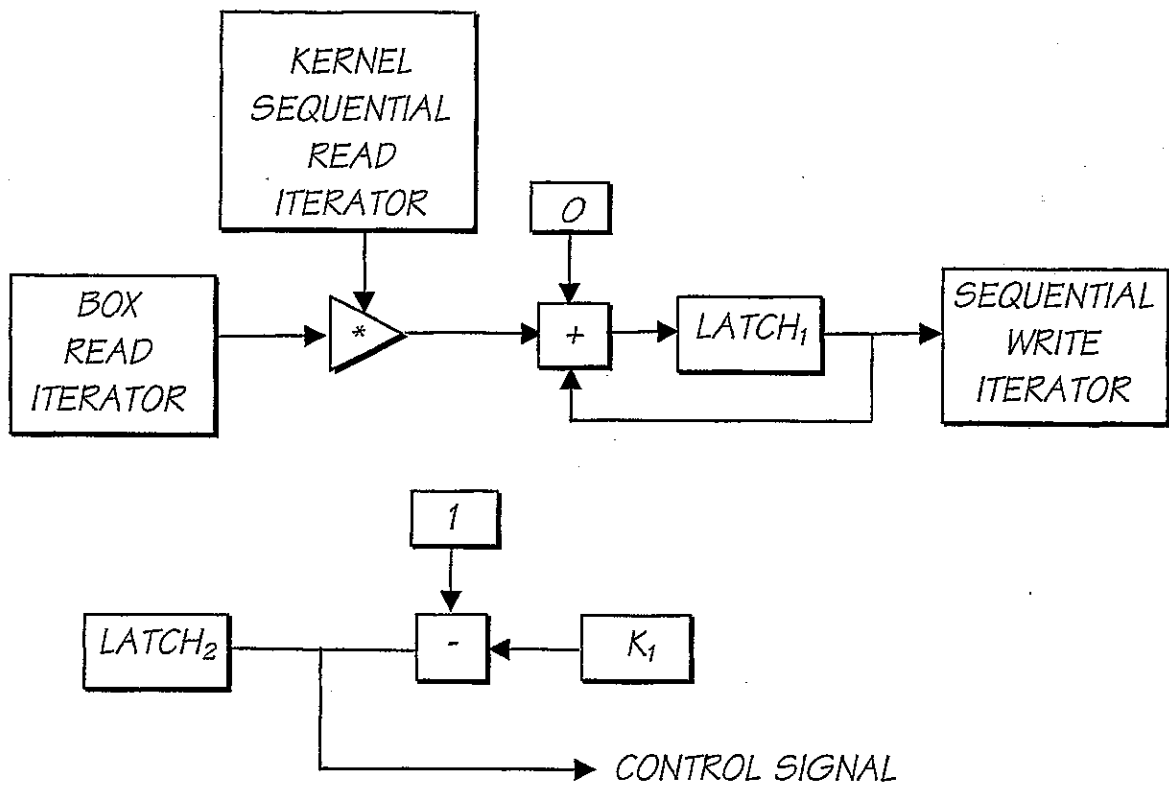


FIG. 81

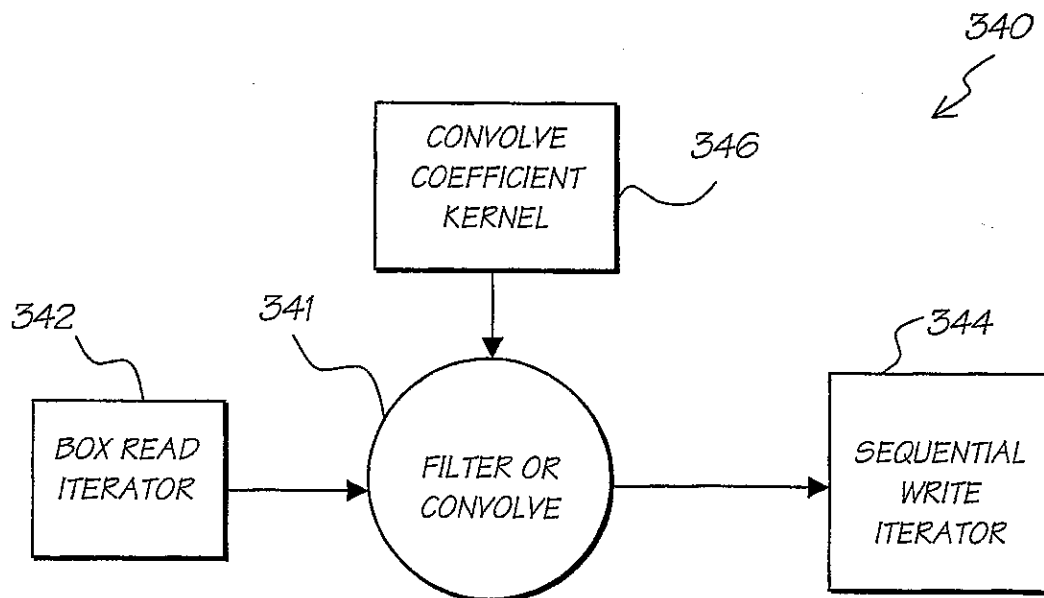


FIG. 82

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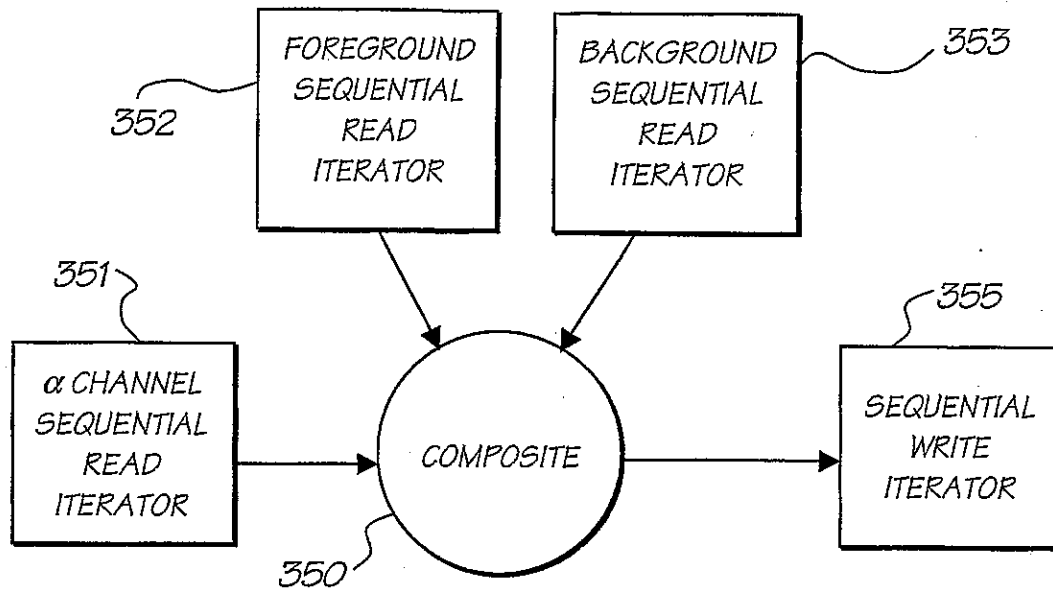


FIG. 83

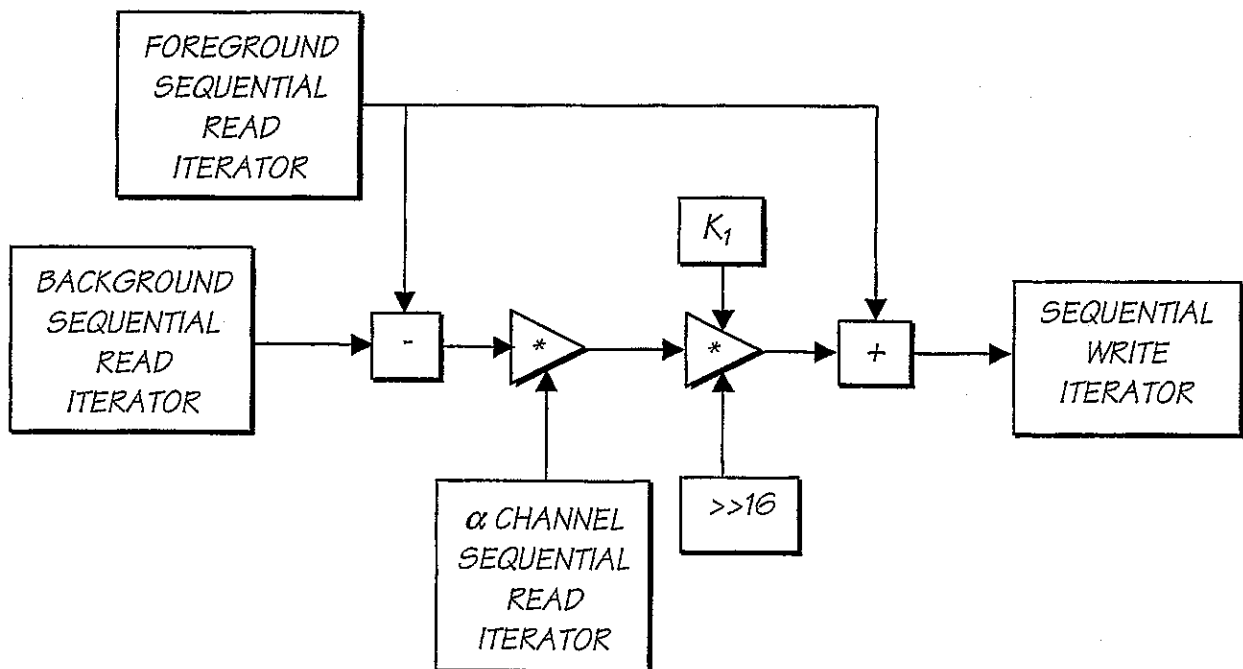


FIG. 84

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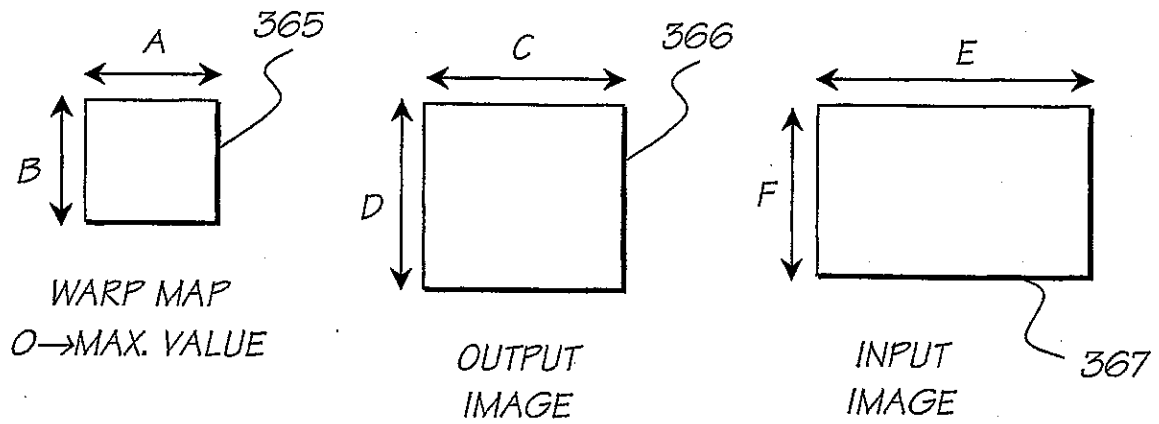


FIG. 85

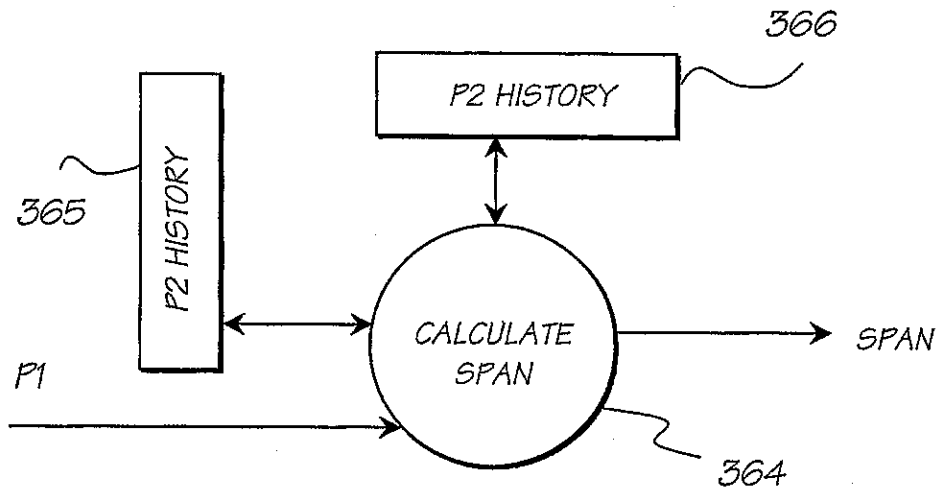


FIG. 86

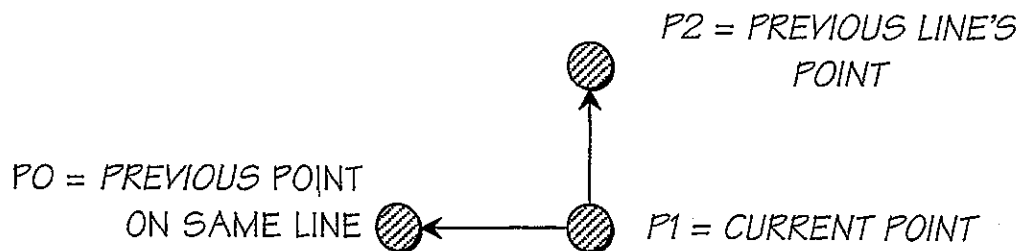


FIG. 88

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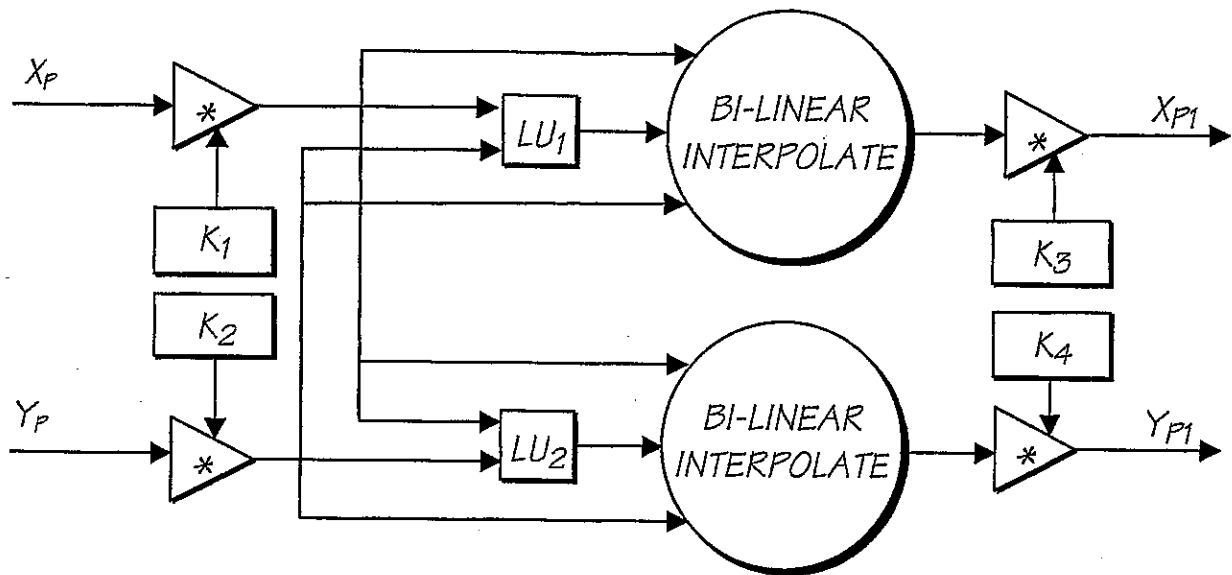


FIG. 87

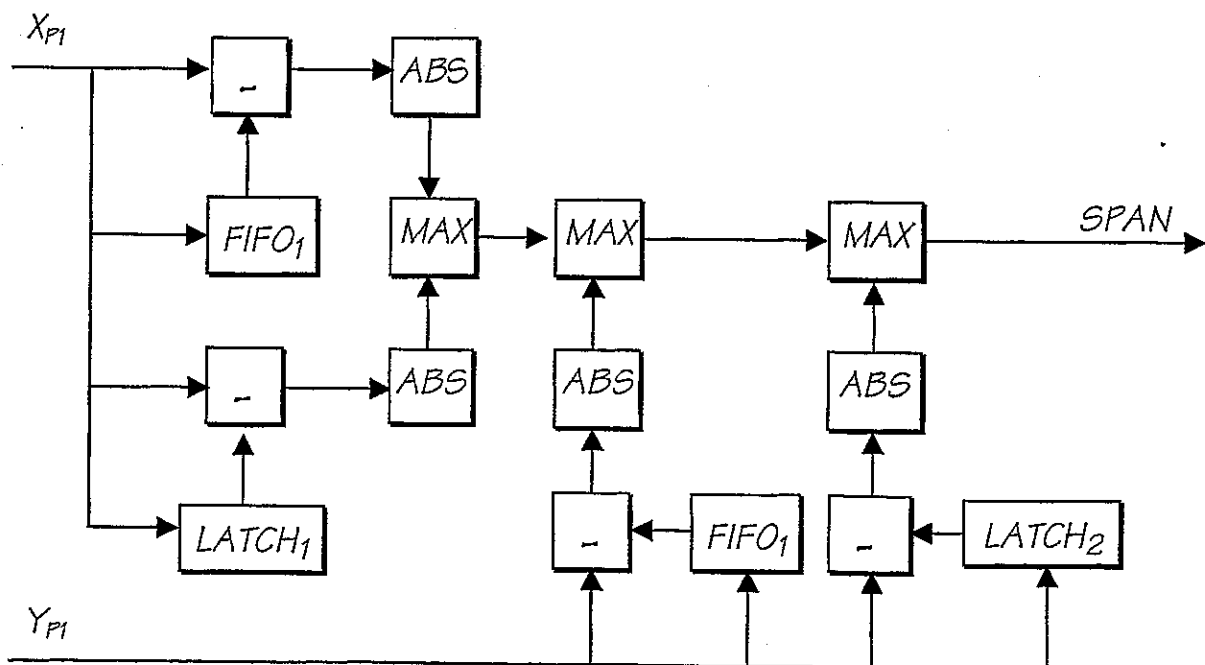


FIG. 89

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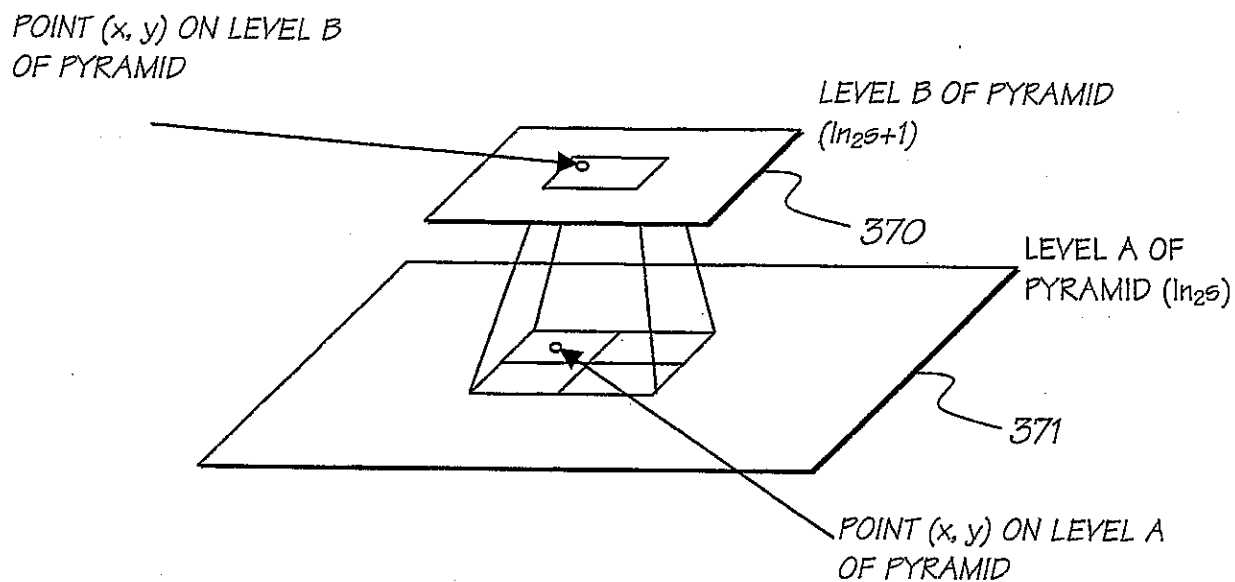


FIG. 90

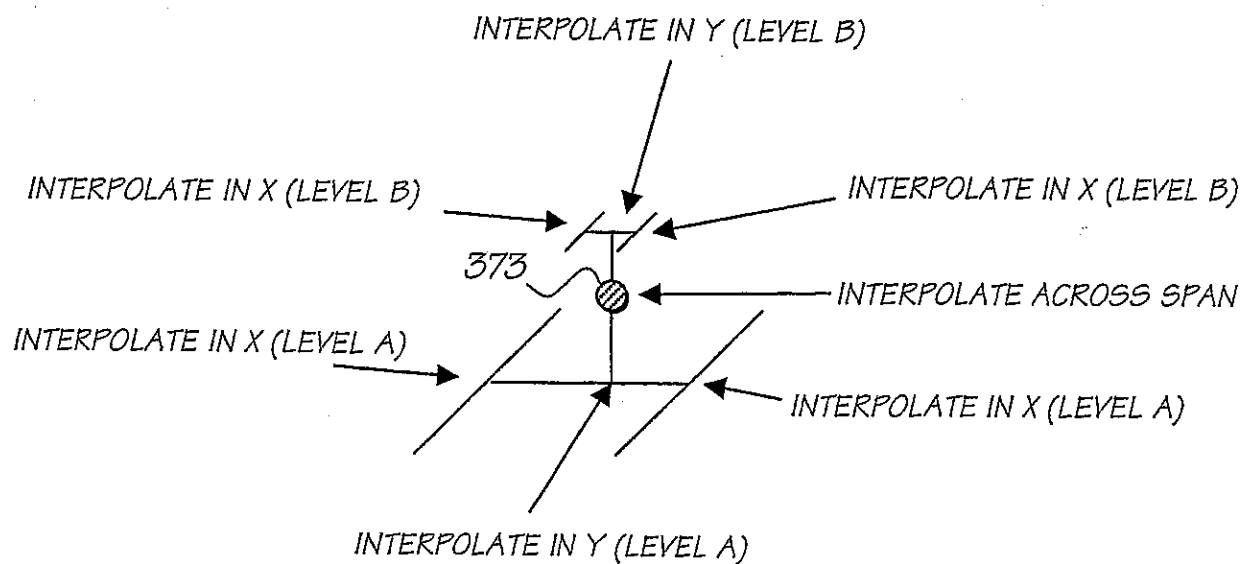


FIG. 91

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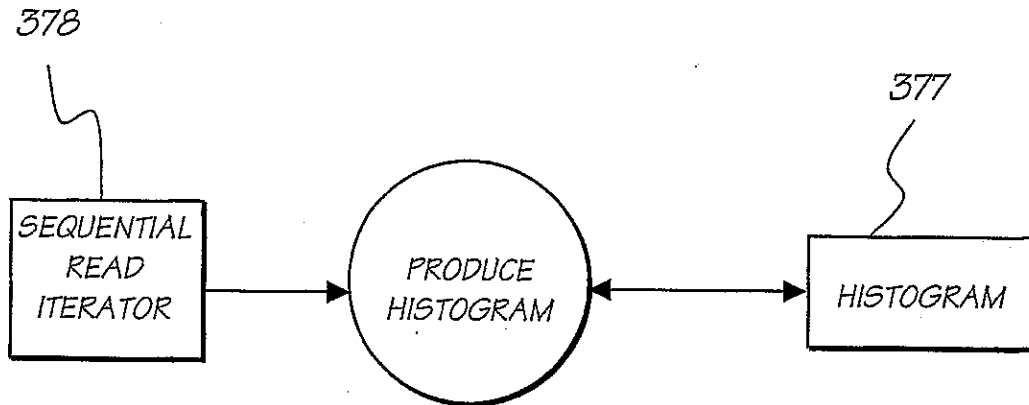


FIG. 92

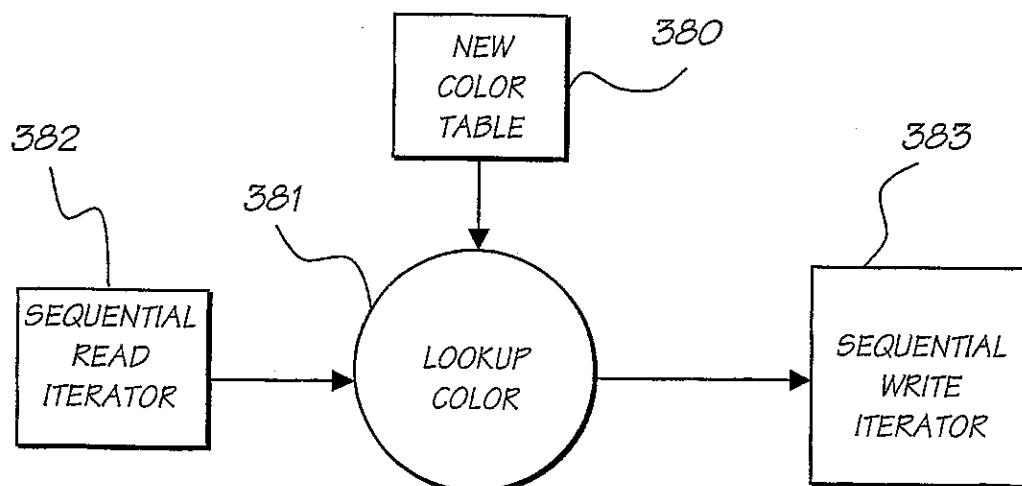


FIG. 93

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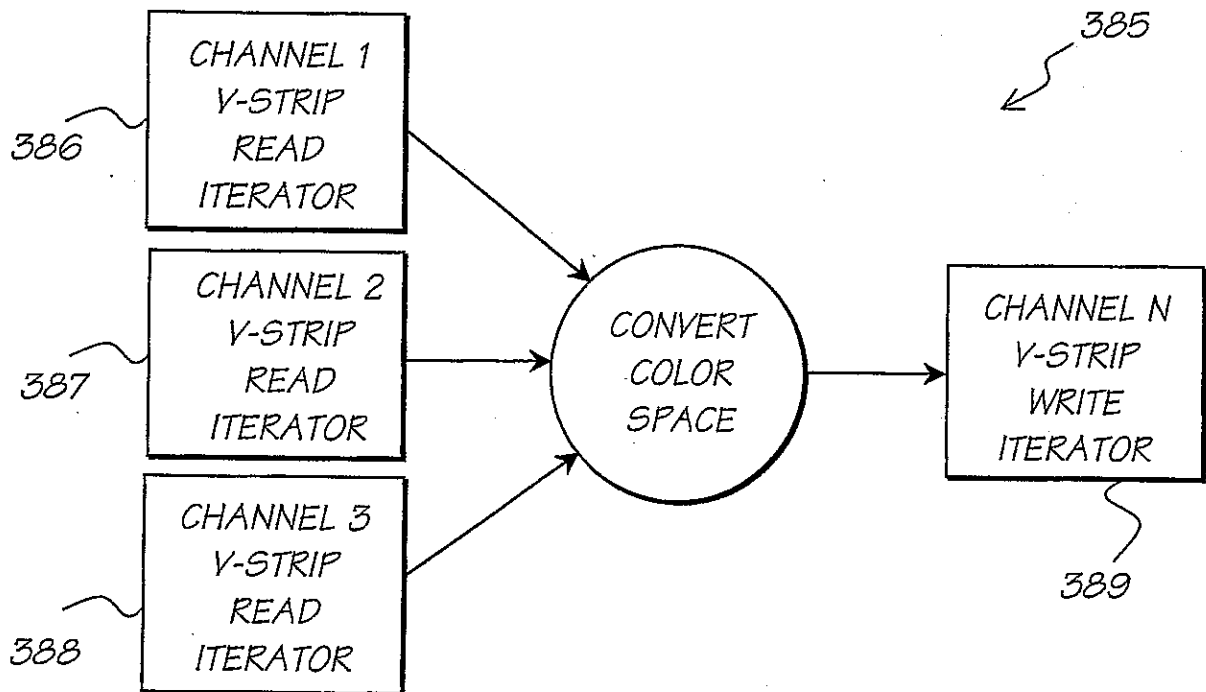


FIG. 94

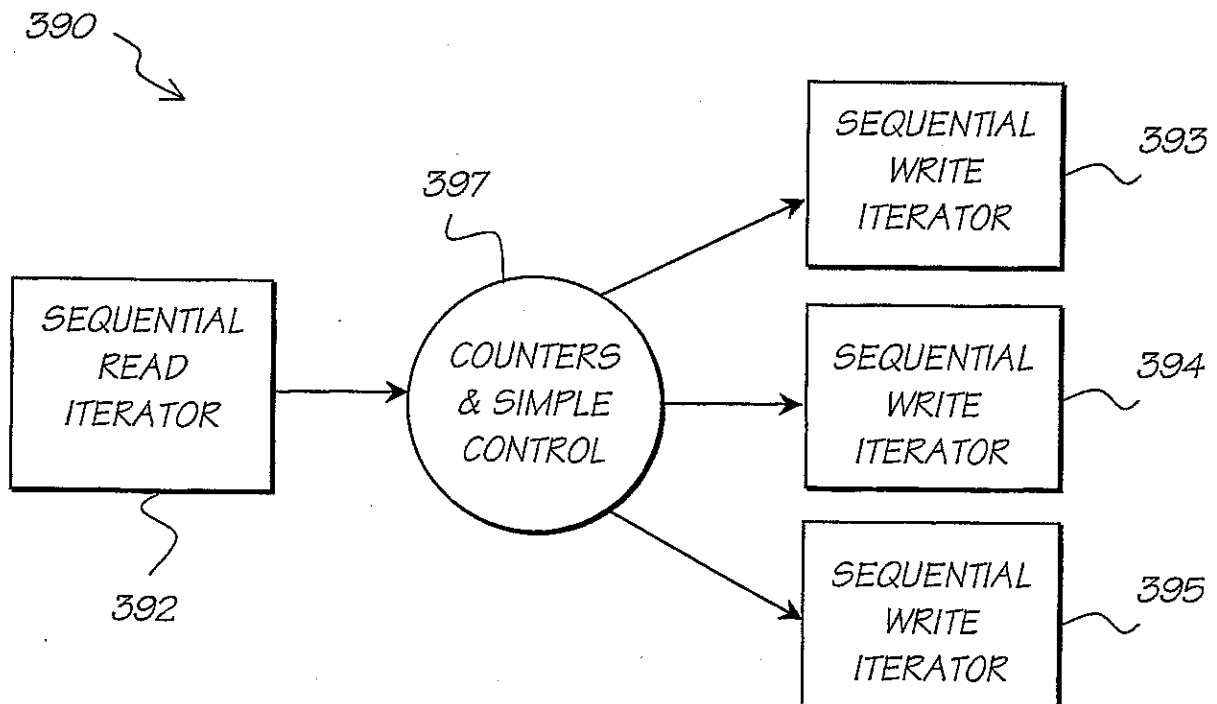


FIG. 101

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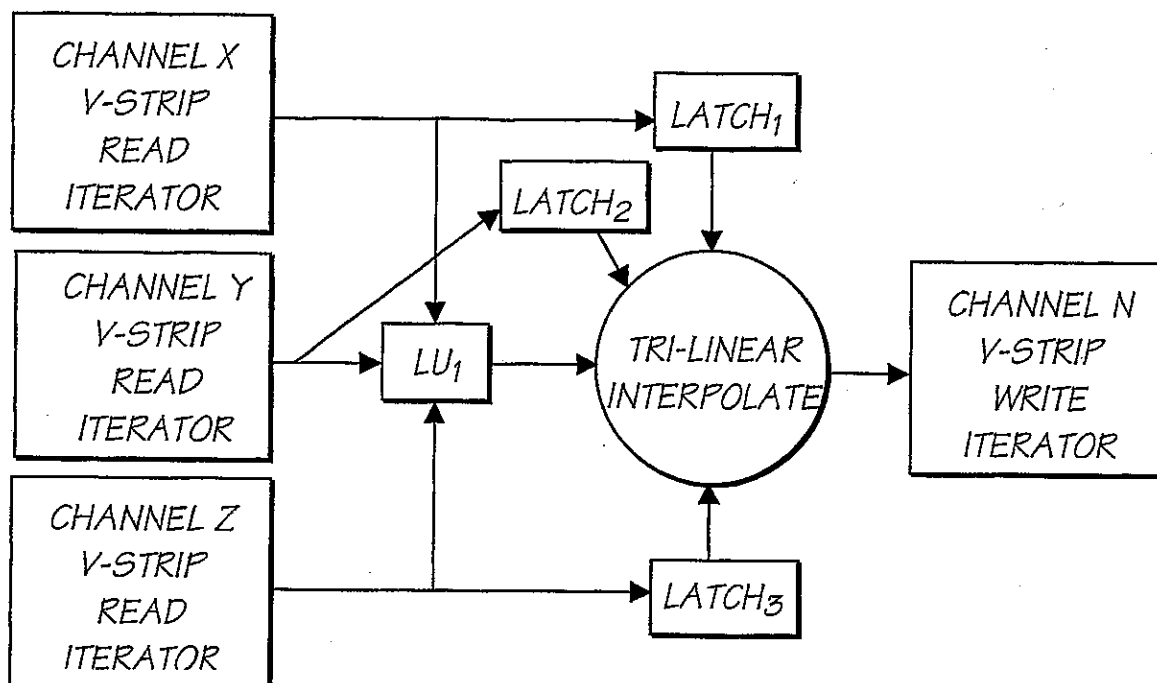


FIG. 95

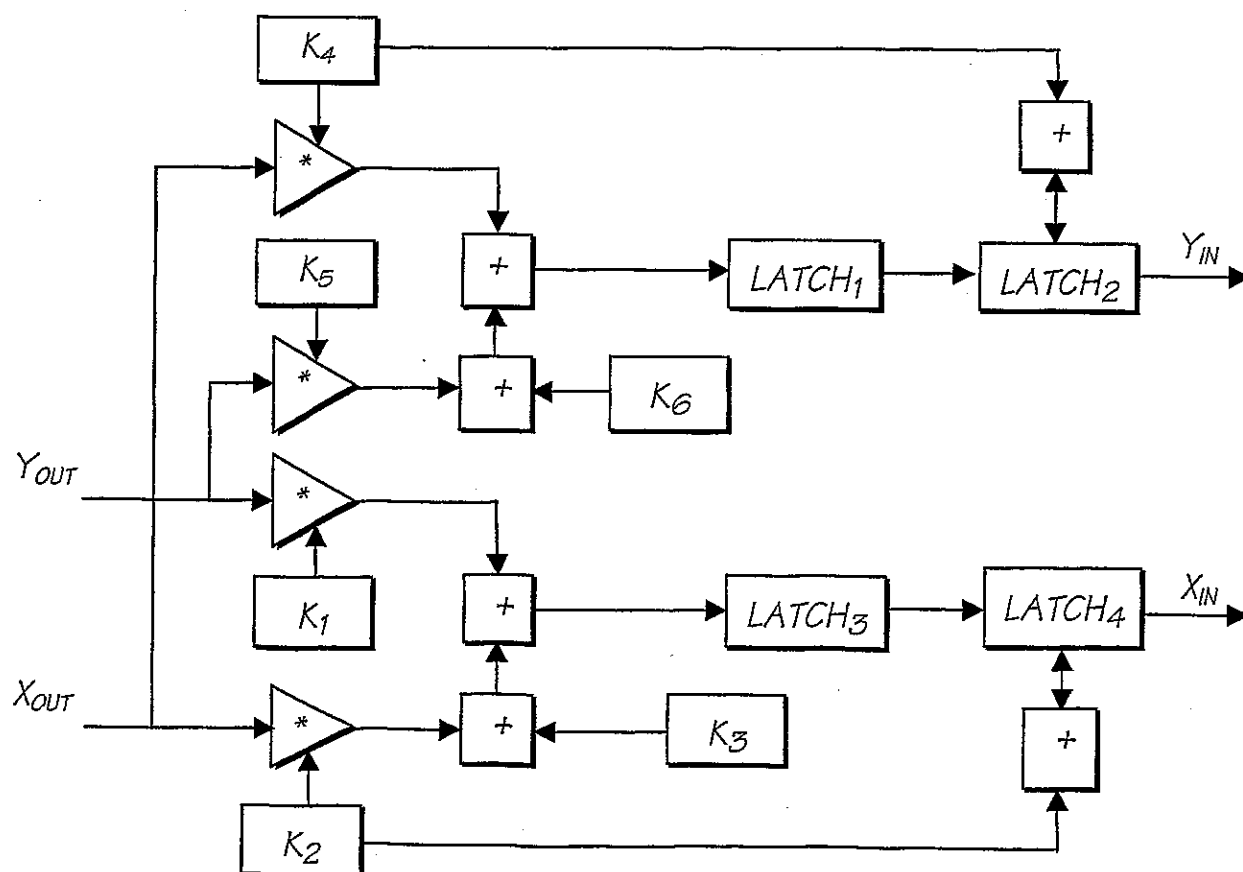


FIG. 96

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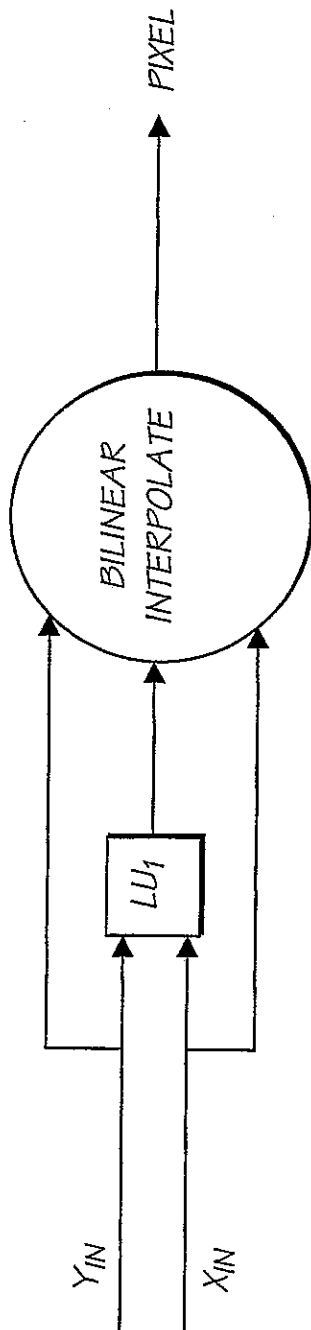


FIG. 97

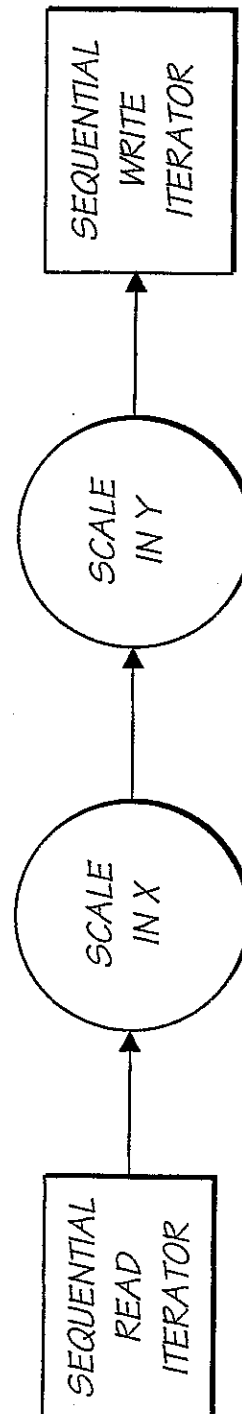


FIG. 98

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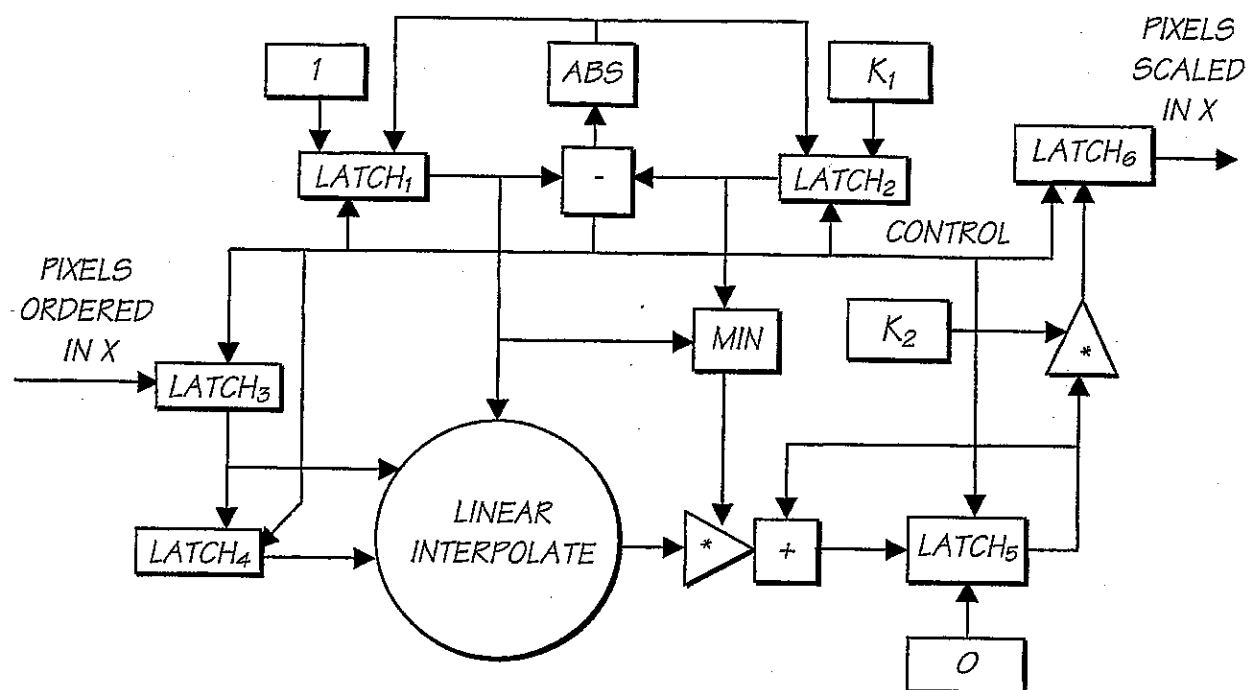


FIG. 99

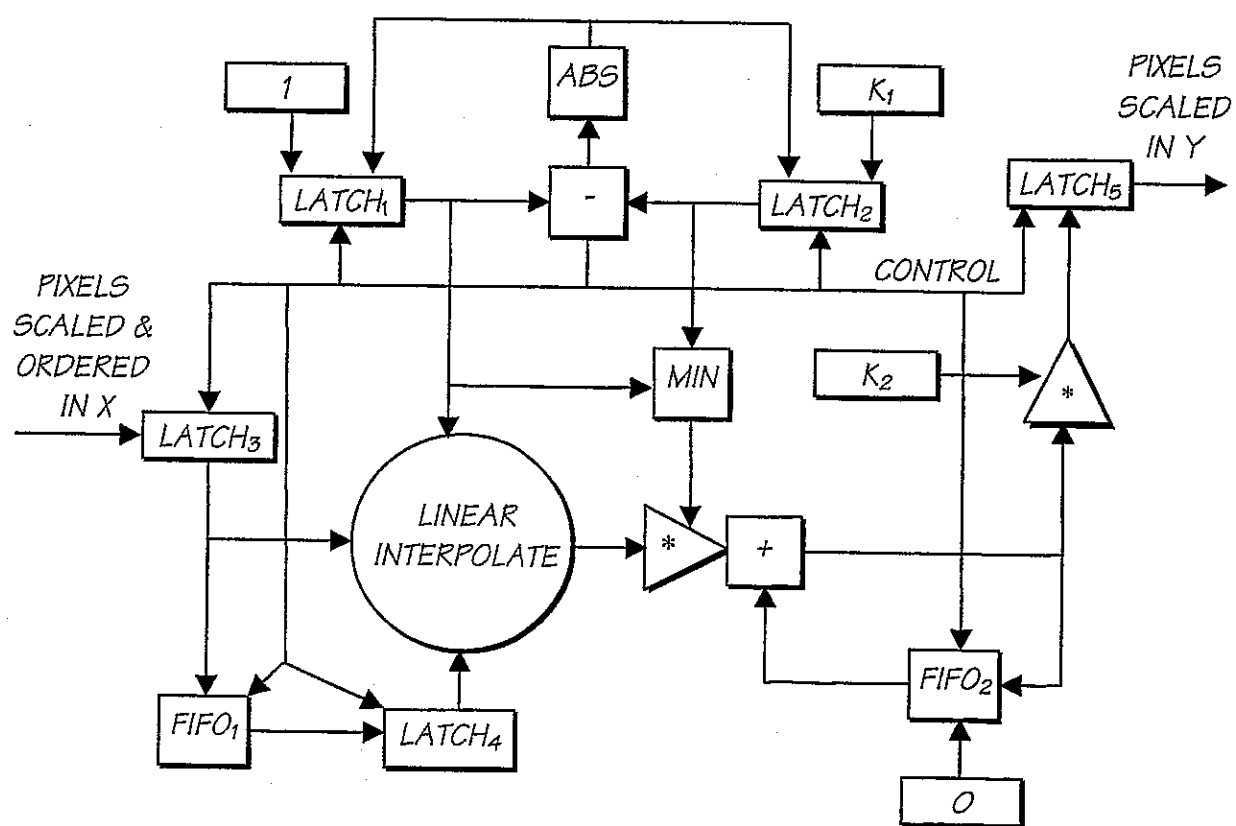
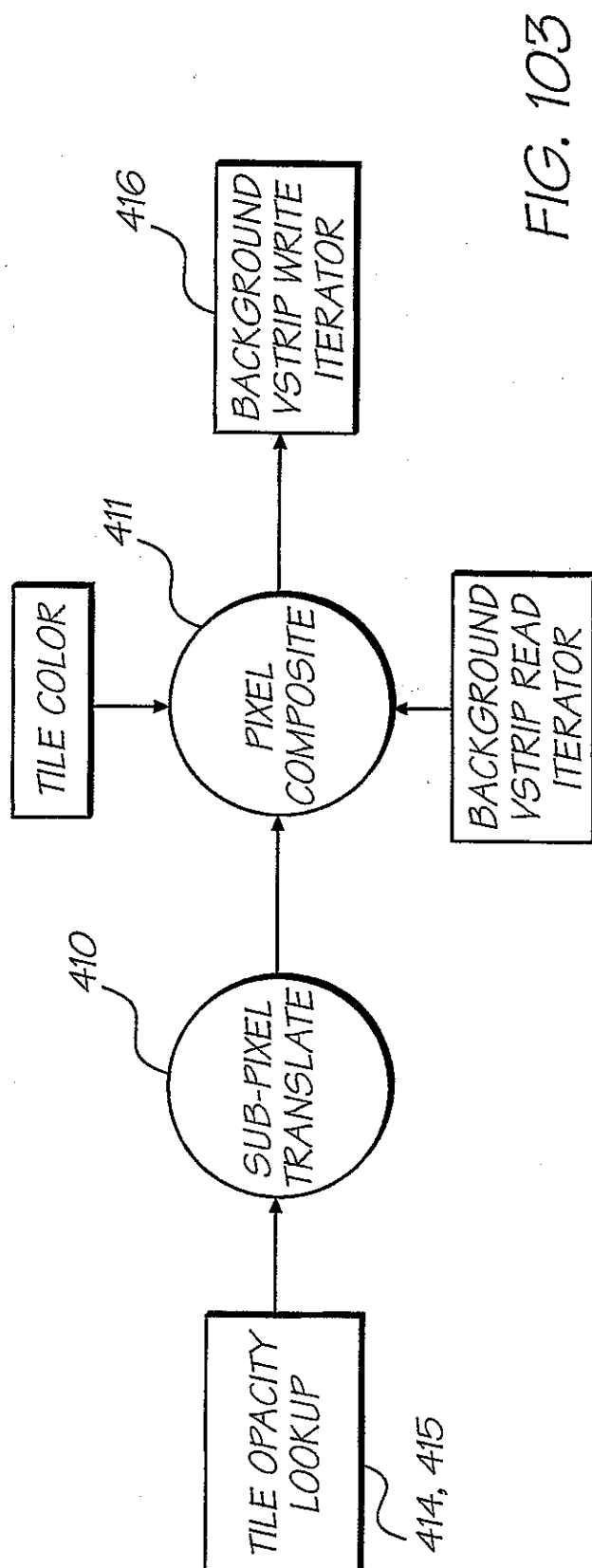
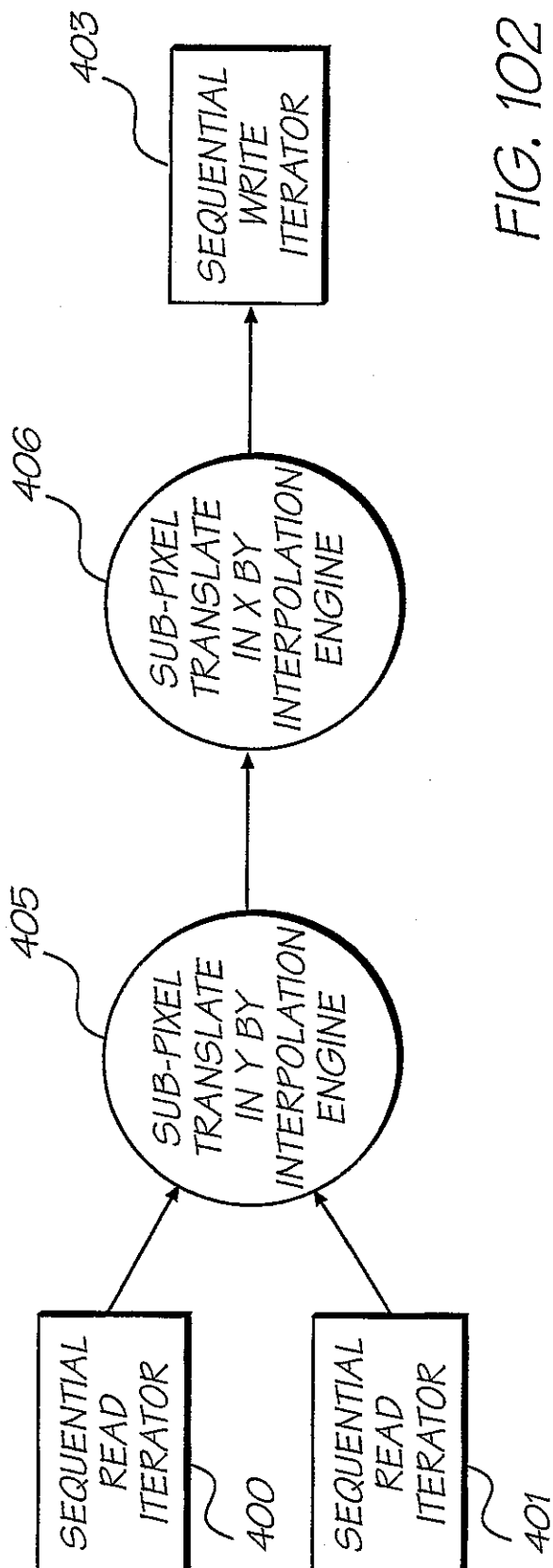
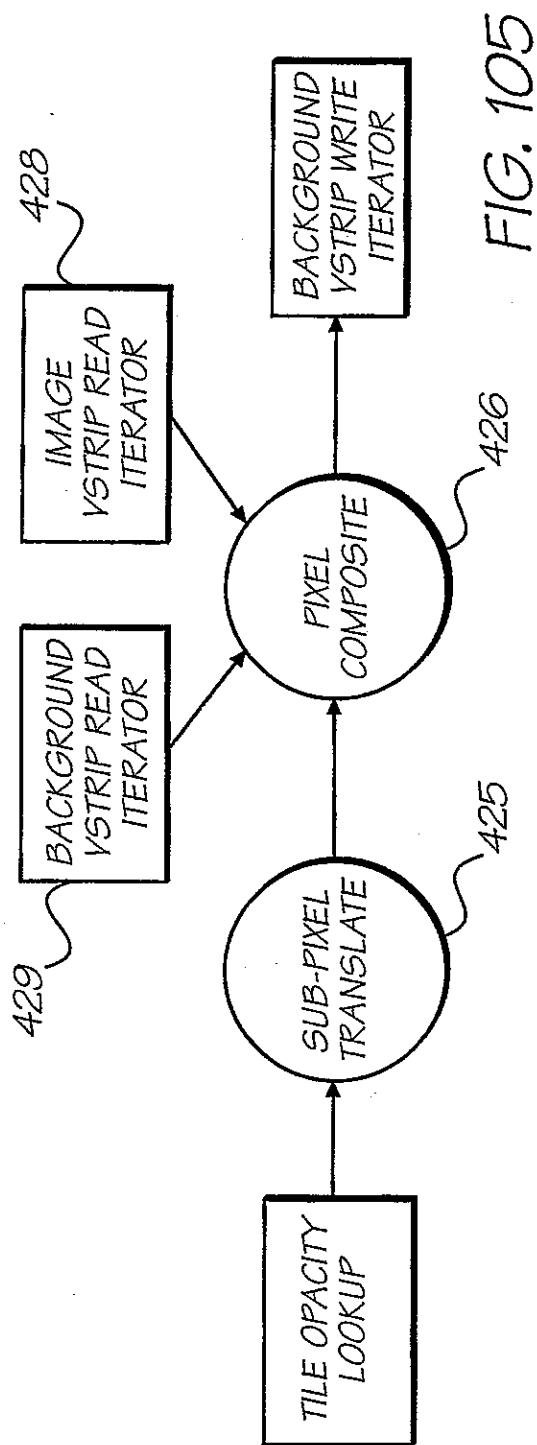
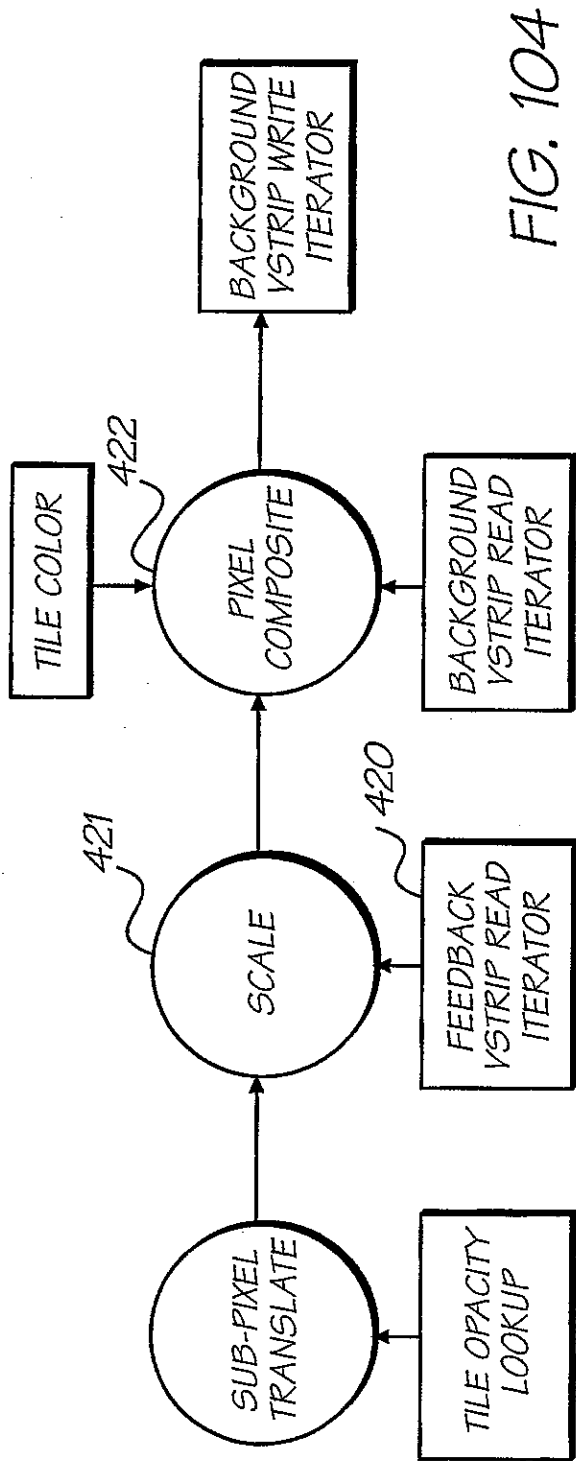


FIG. 100

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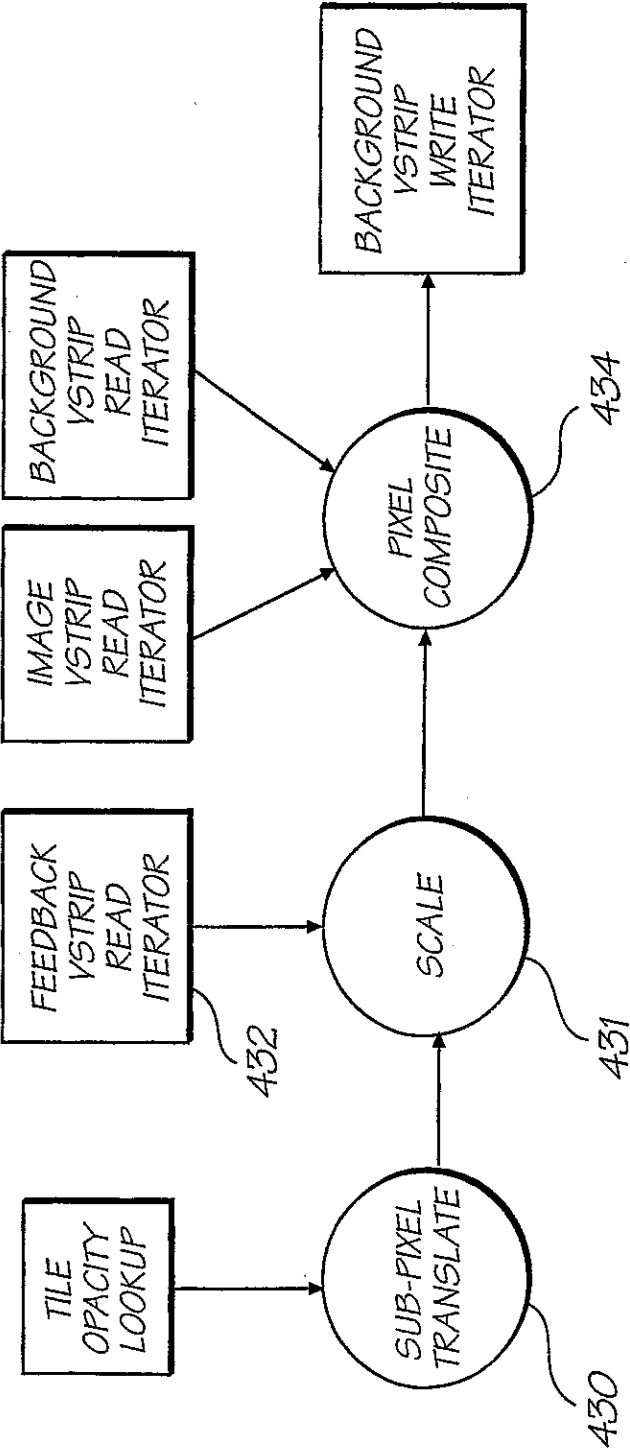


FIG. 106

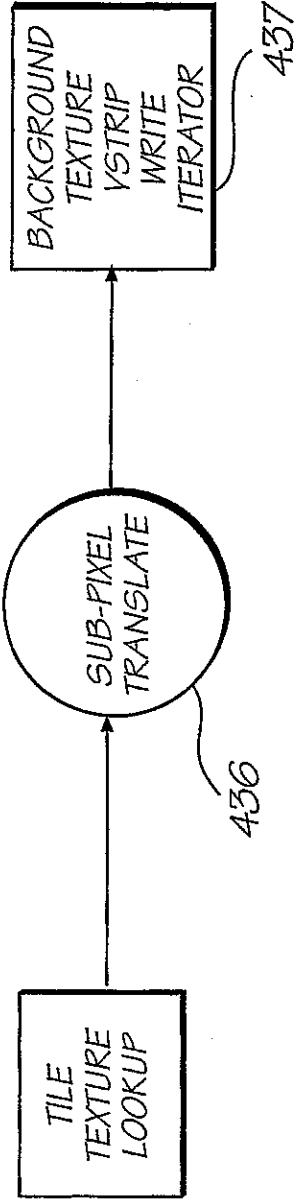


FIG. 107

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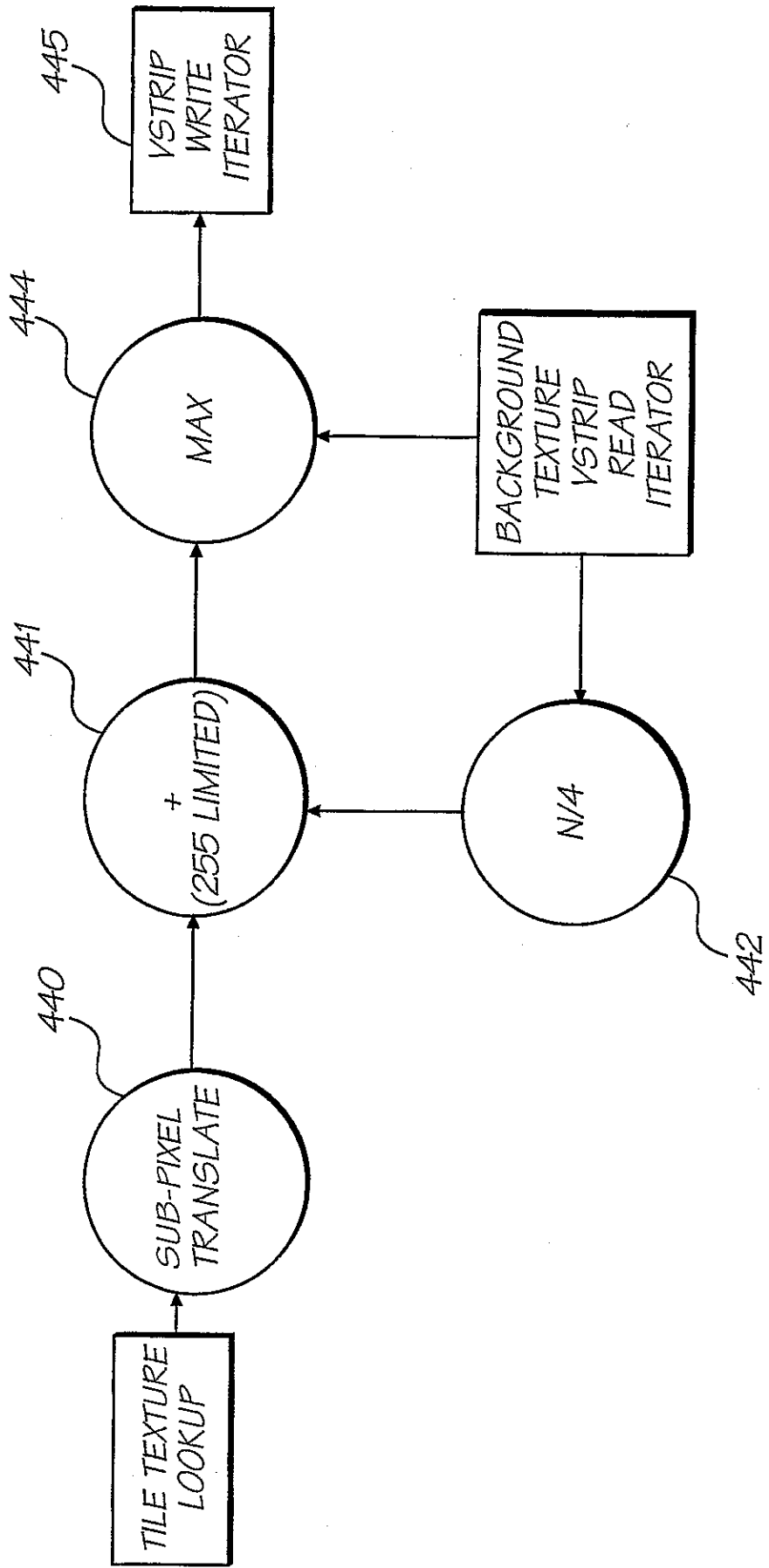


FIG. 108

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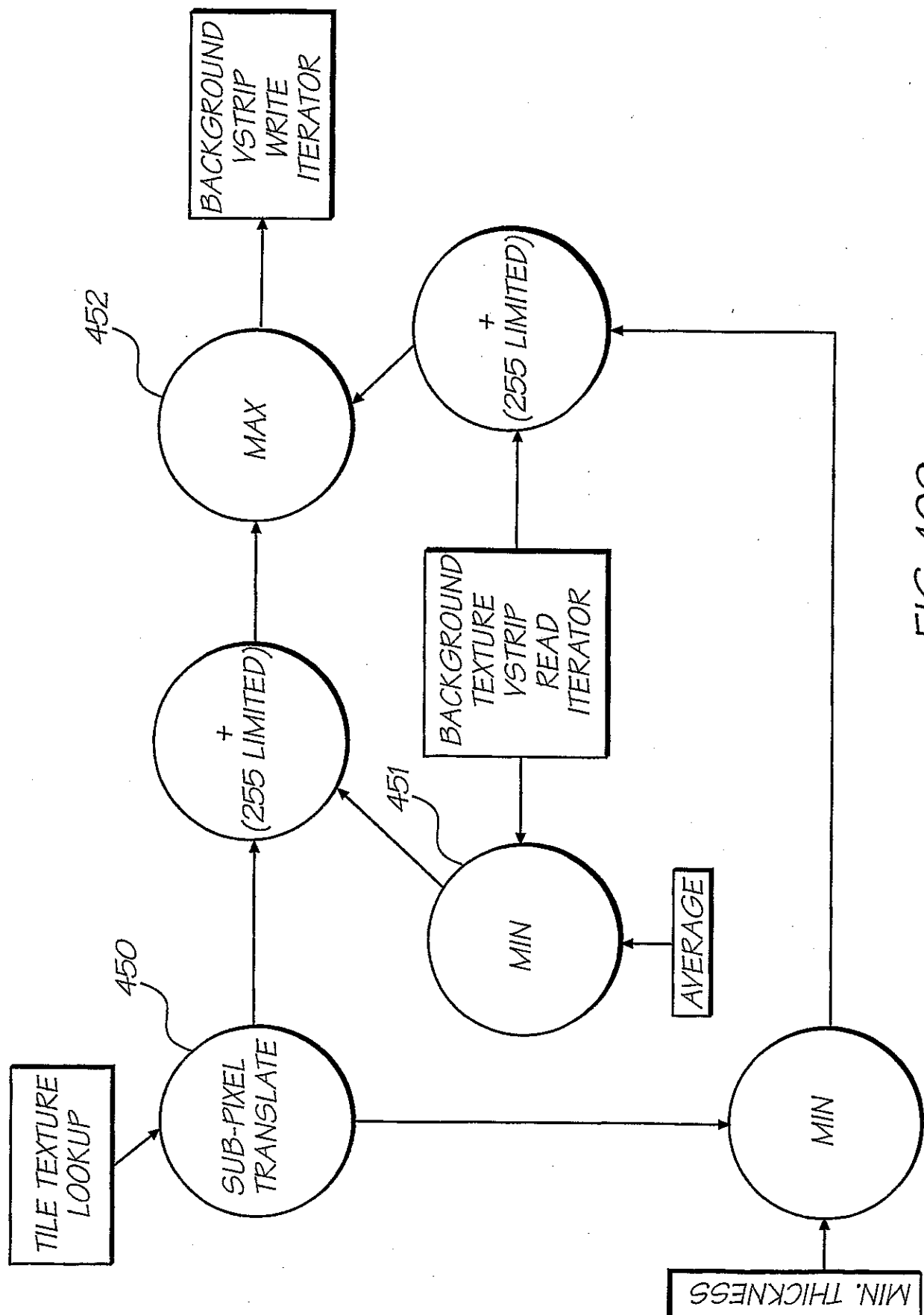


FIG. 109

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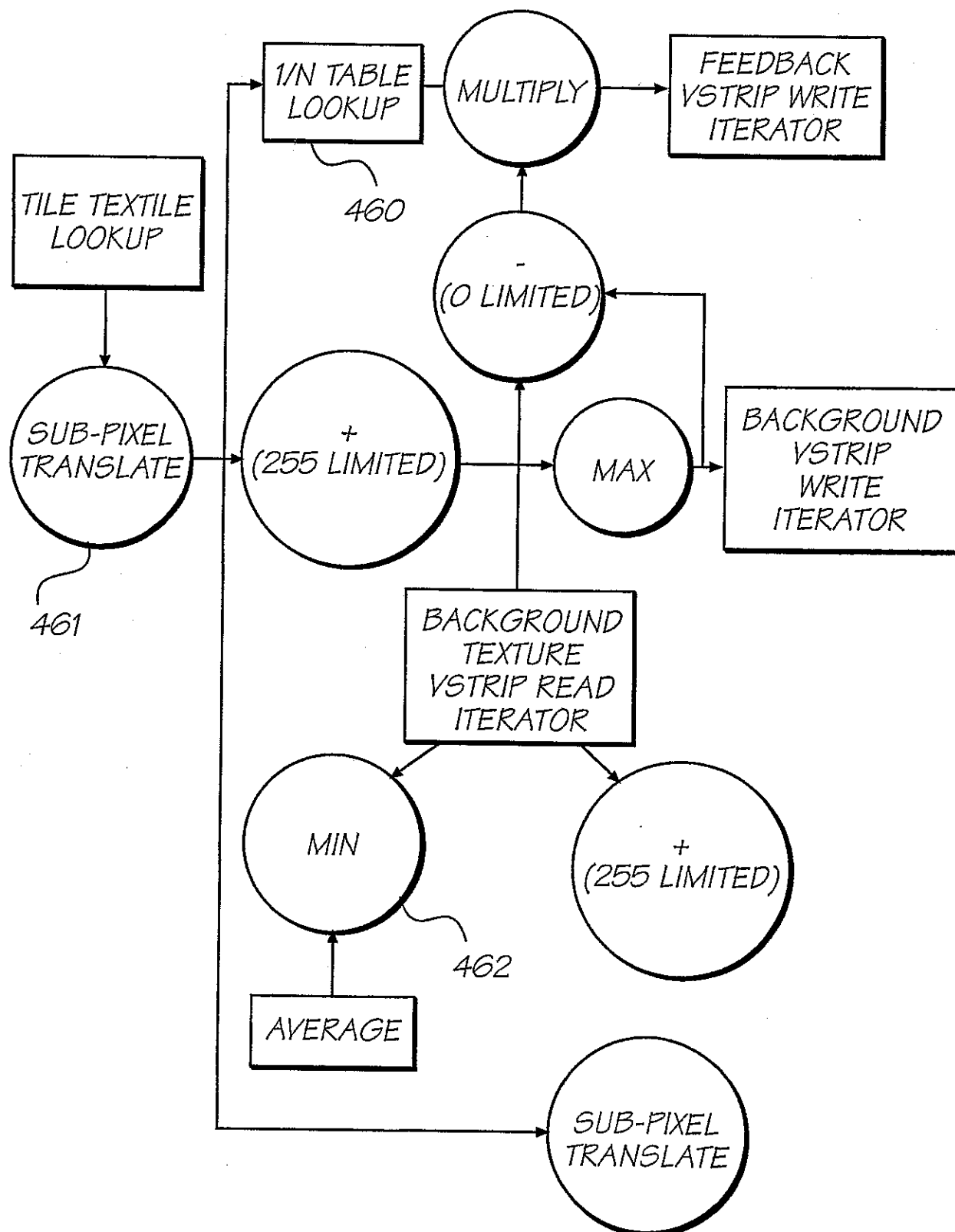


FIG. 110

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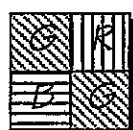
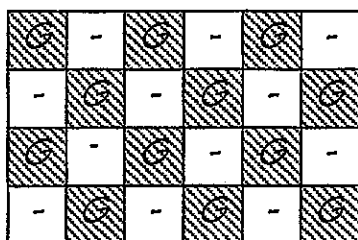
2X2 PIXEL BLOCK,
0 DEGREES2X2 PIXEL BLOCK,
90 DEGREES2X2 PIXEL BLOCK,
180 DEGREES2X2 PIXEL BLOCK,
270 DEGREES

FIG. 111

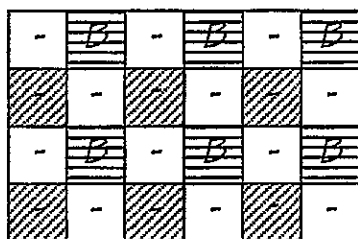


LINEAR INTERPOLATED PIXELS



ACTUAL PIXELS (NOT INTERPOLATED)

FIG. 112



LINEAR INTERPOLATED PIXELS

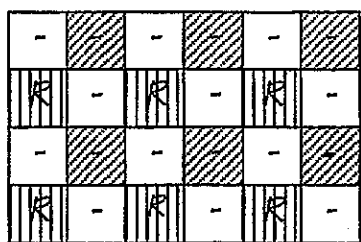


BI-LINEAR INTERPOLATED PIXELS



ACTUAL PIXELS (NOT INTERPOLATED)

FIG. 113



LINEAR INTERPOLATED PIXELS



BI-LINEAR INTERPOLATED PIXELS



ACTUAL PIXELS (NOT INTERPOLATED)

FIG. 114

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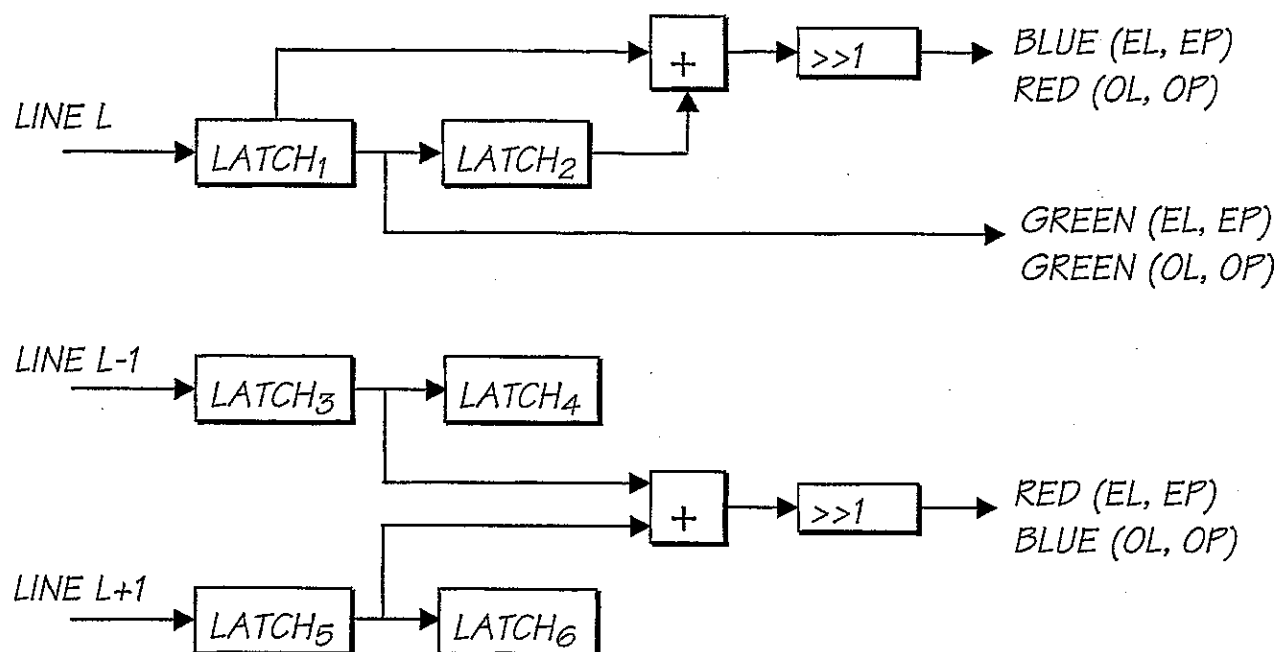


FIG. 115

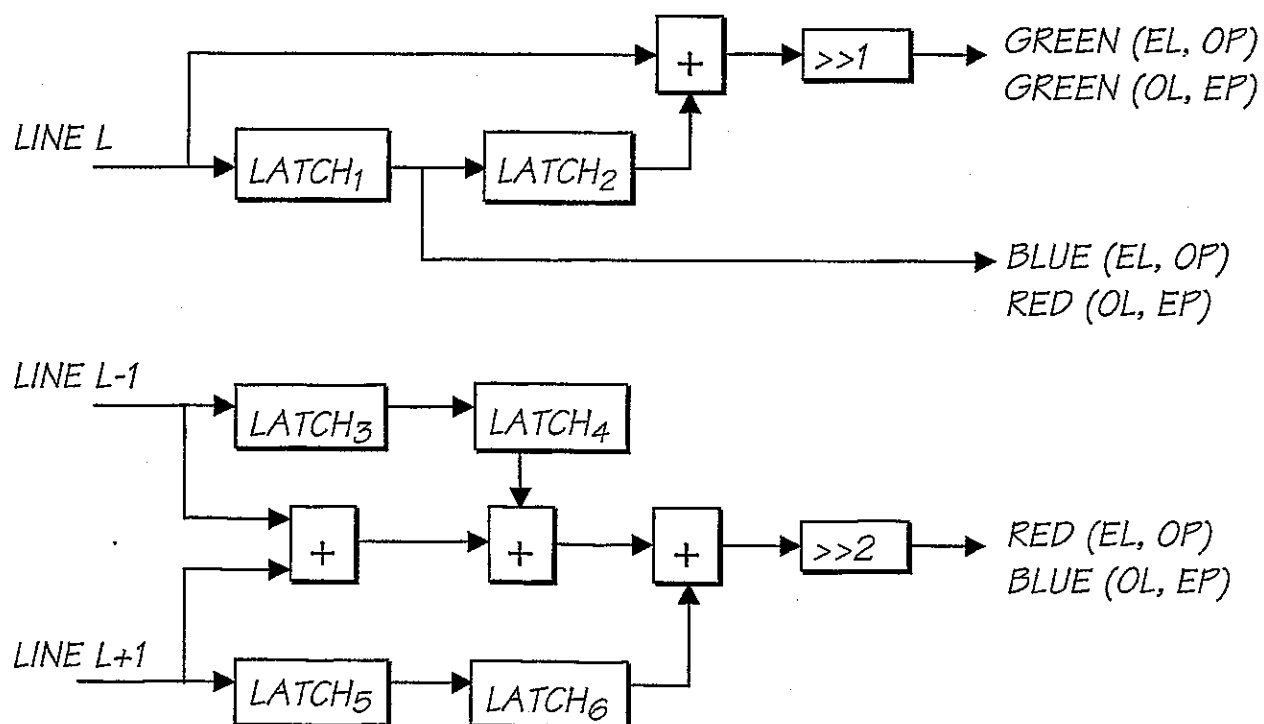


FIG. 116

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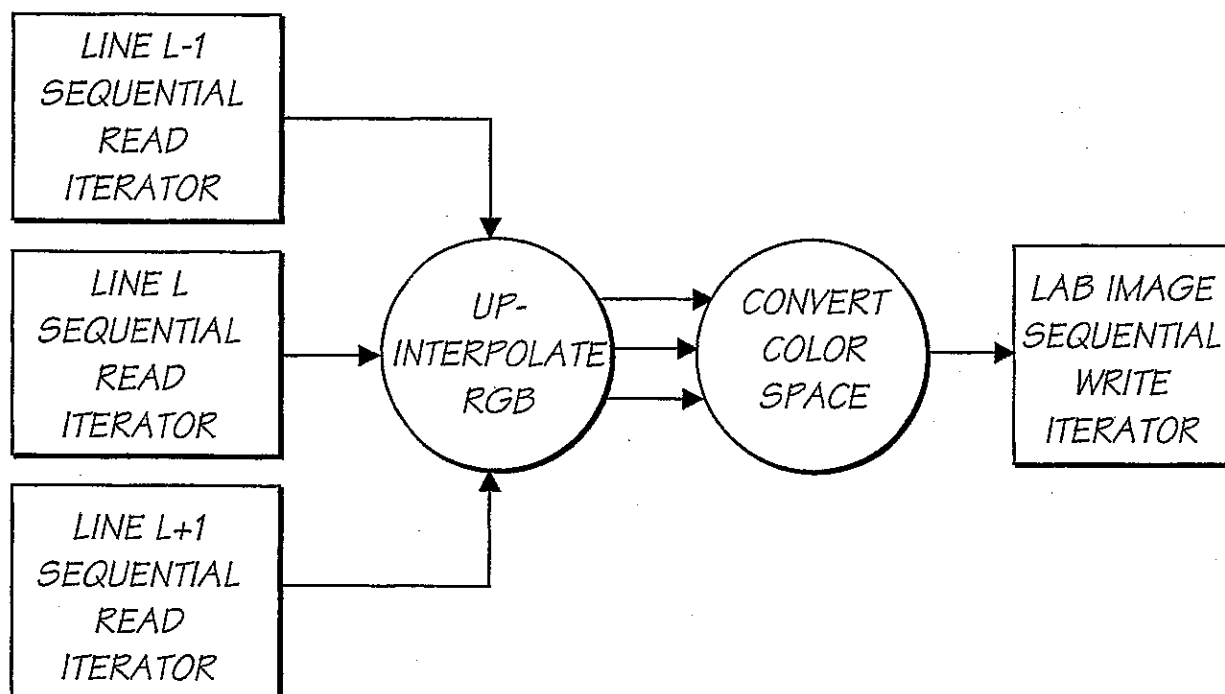


FIG. 117

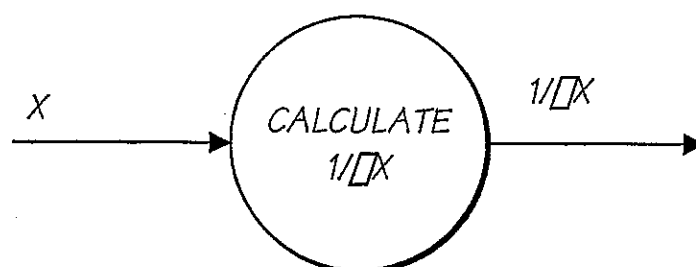


FIG. 118

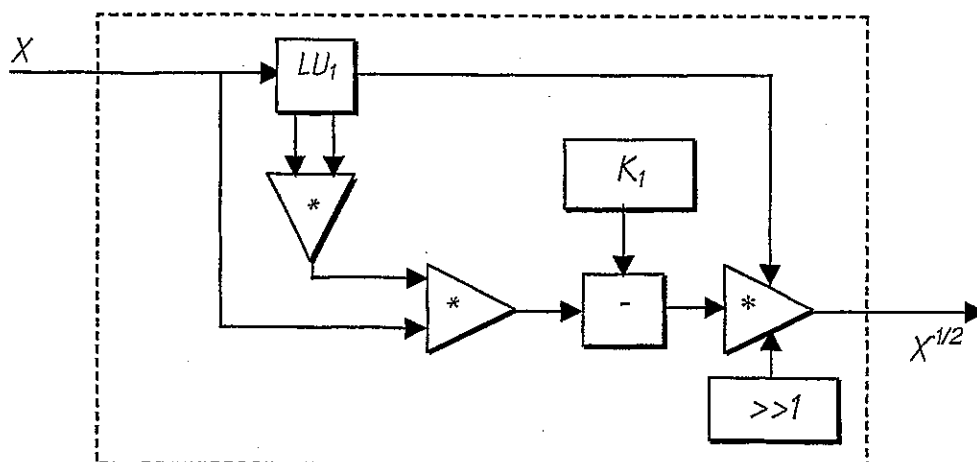


FIG. 119

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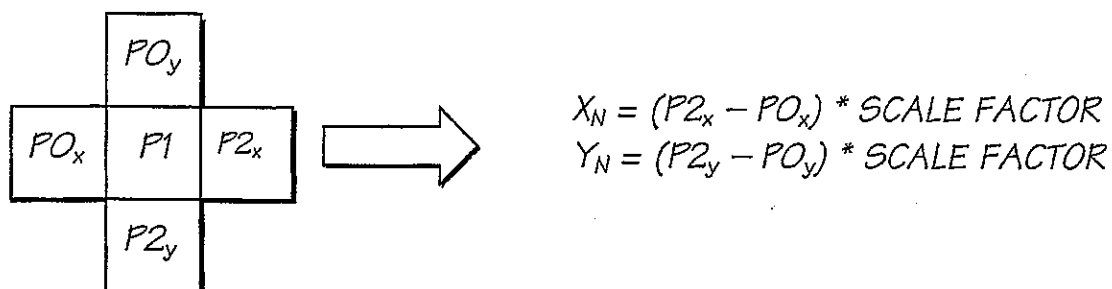


FIG. 120

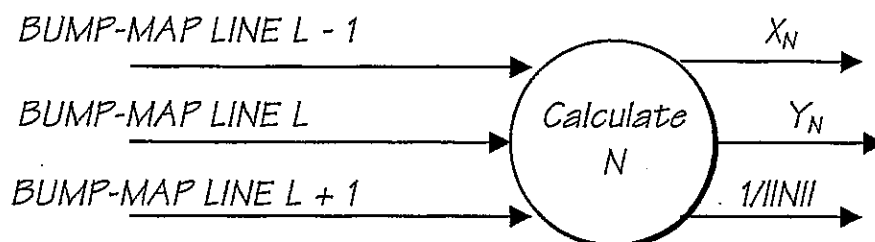


FIG. 121

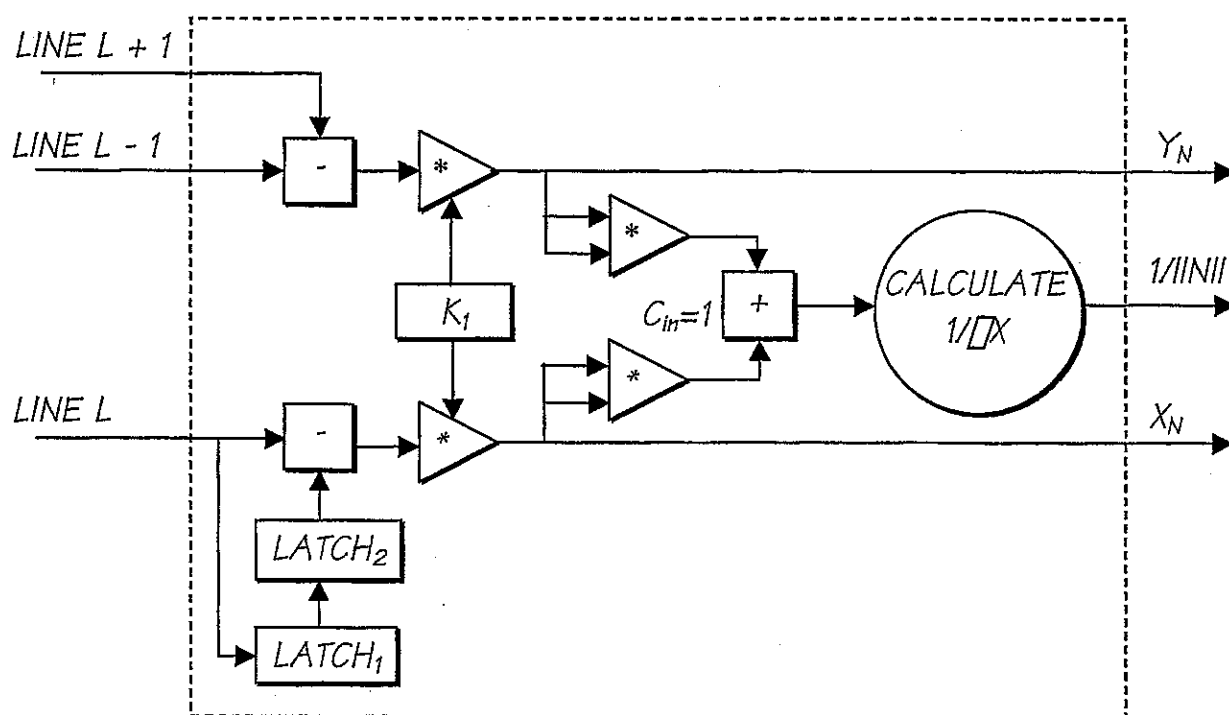


FIG. 122

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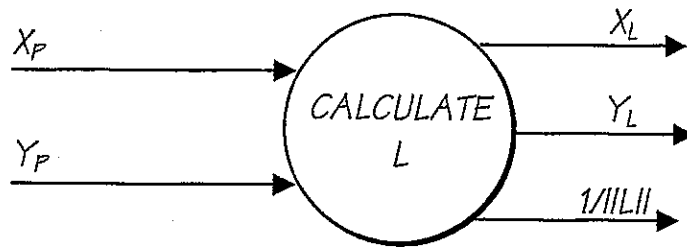


FIG. 123

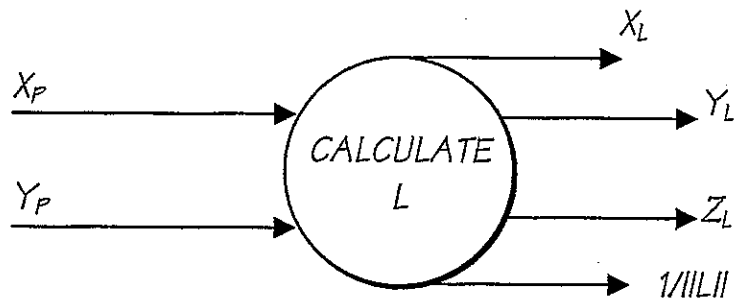


FIG. 124

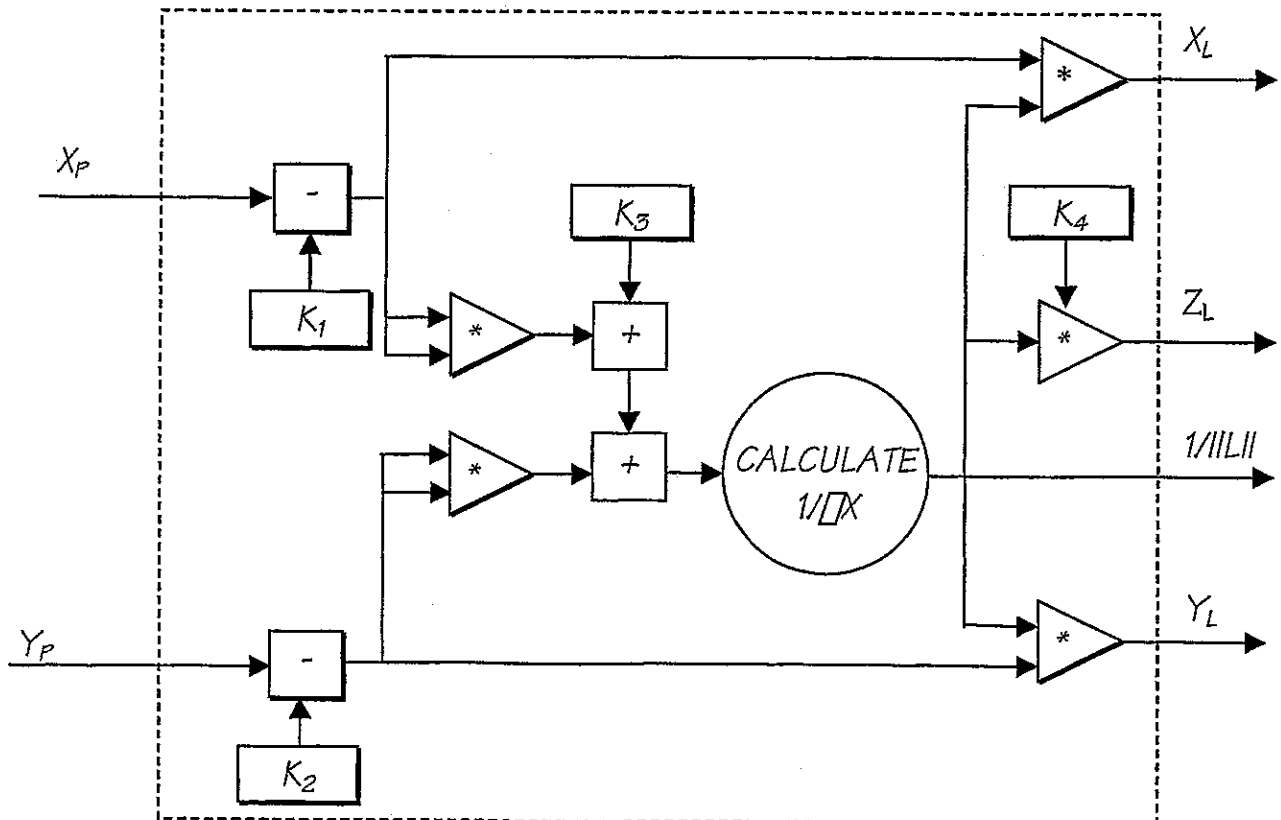


FIG. 125

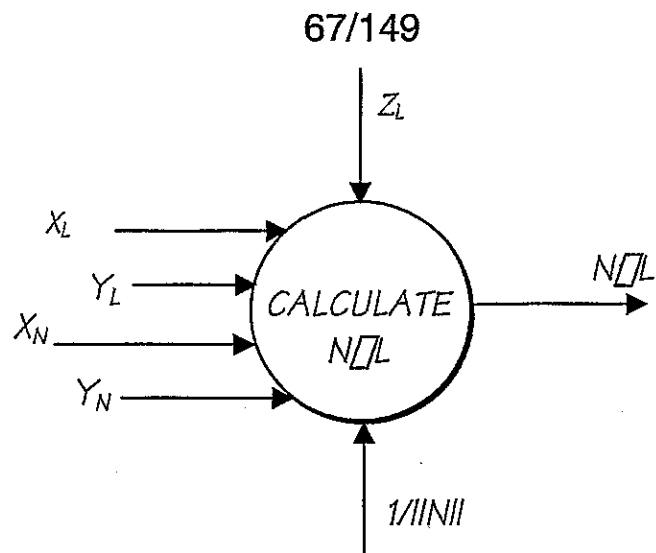


FIG. 126

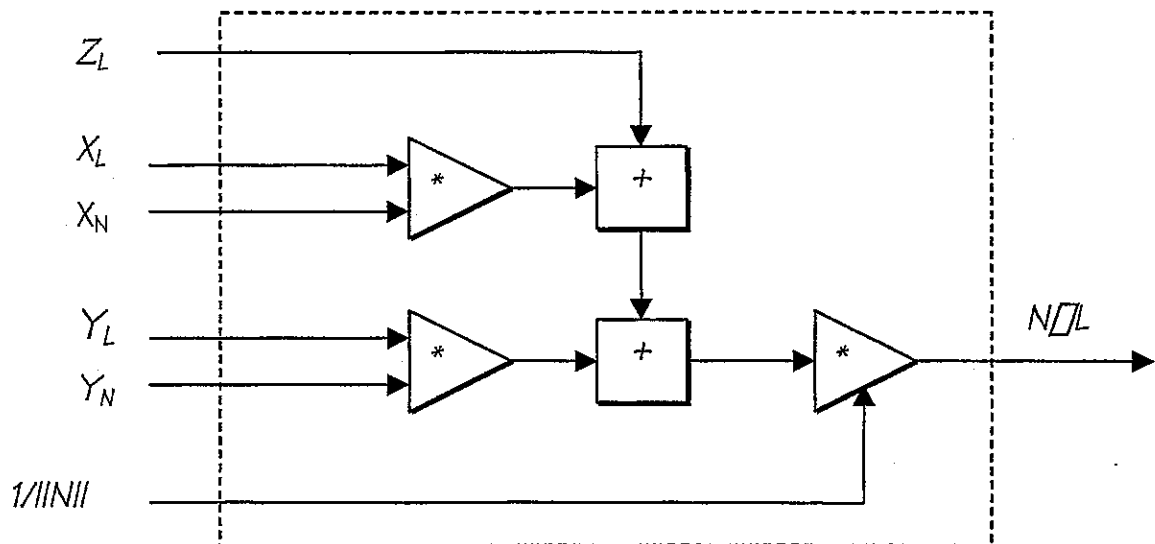


FIG. 127

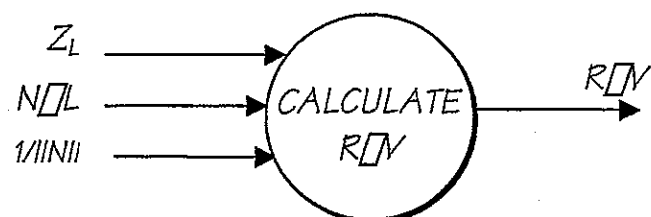


FIG. 128

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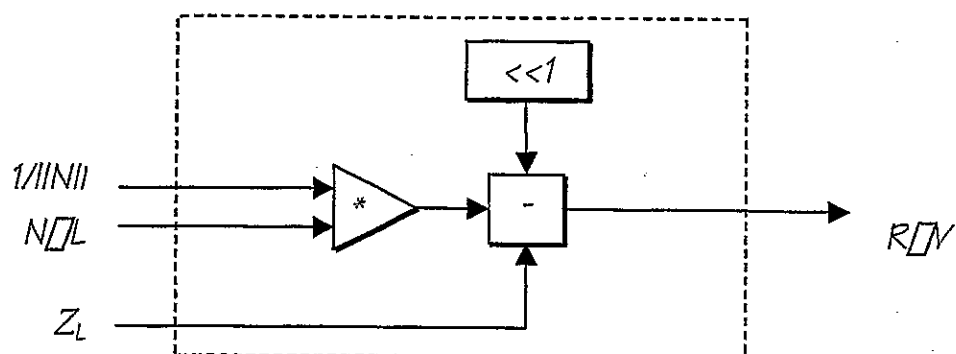


FIG. 129

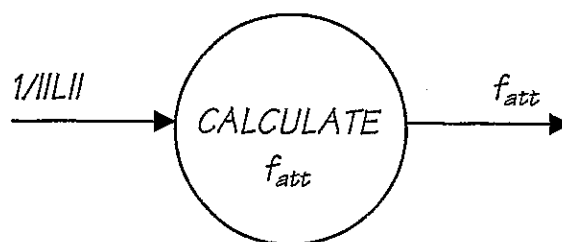


FIG. 130

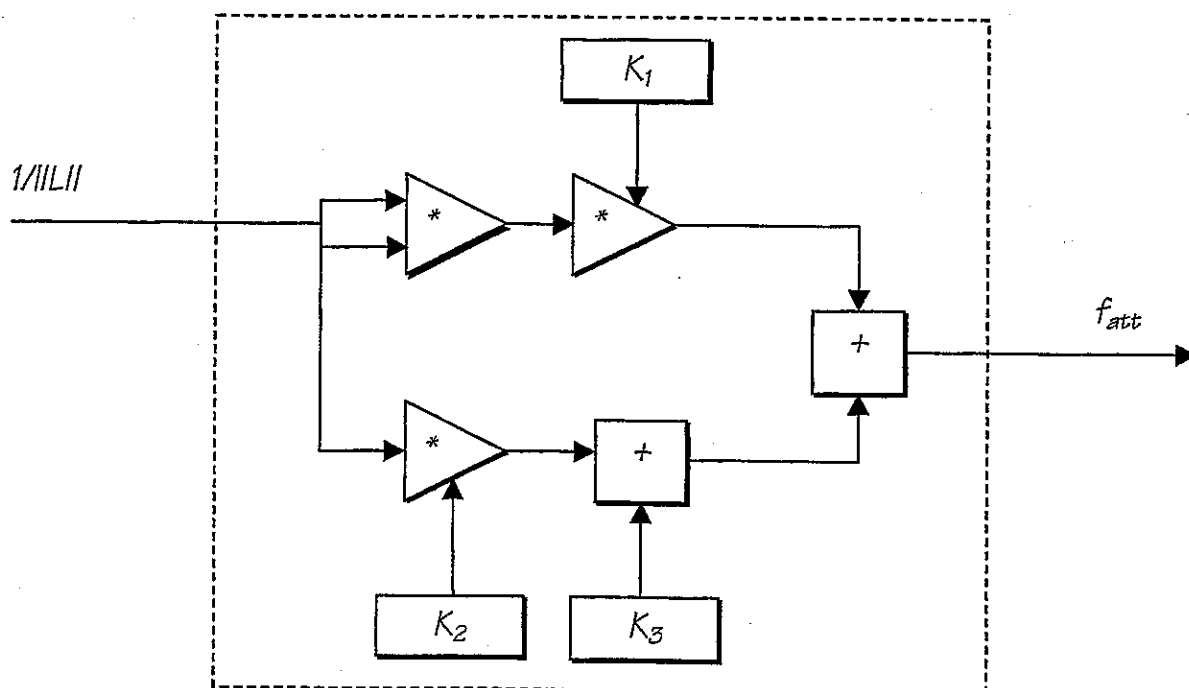


FIG. 131

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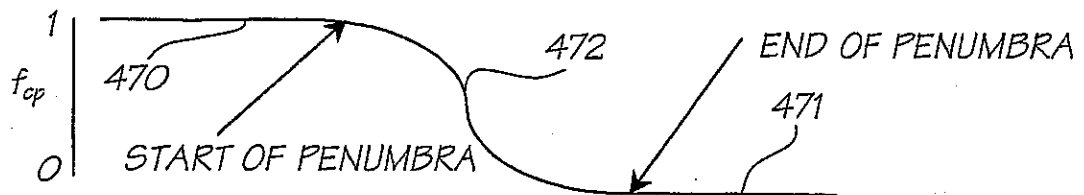


FIG. 132

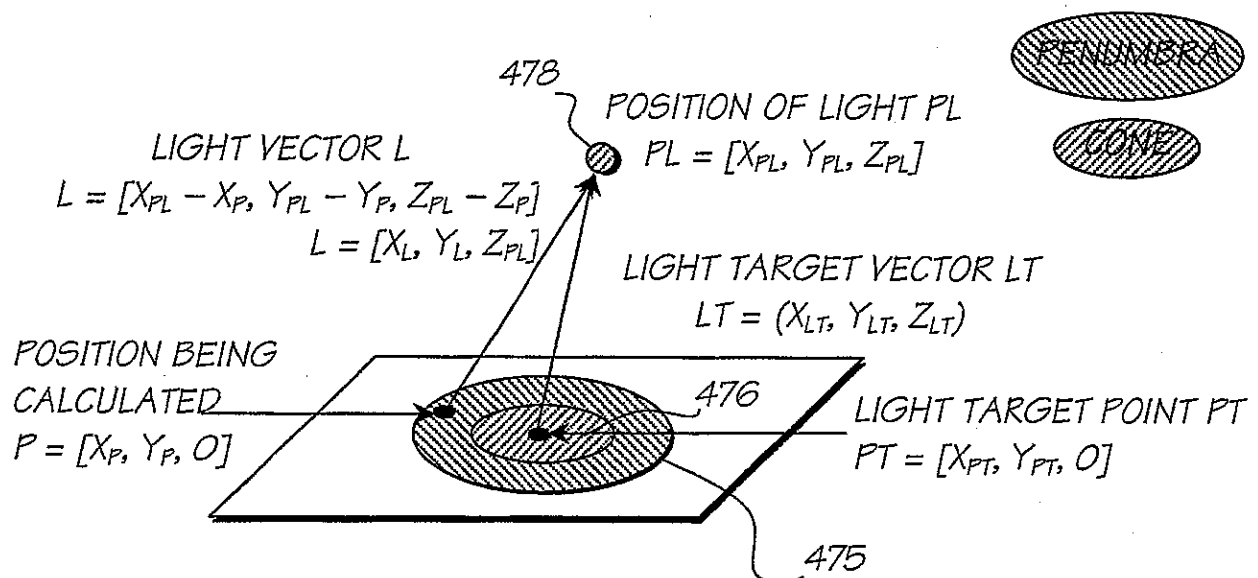


FIG. 133

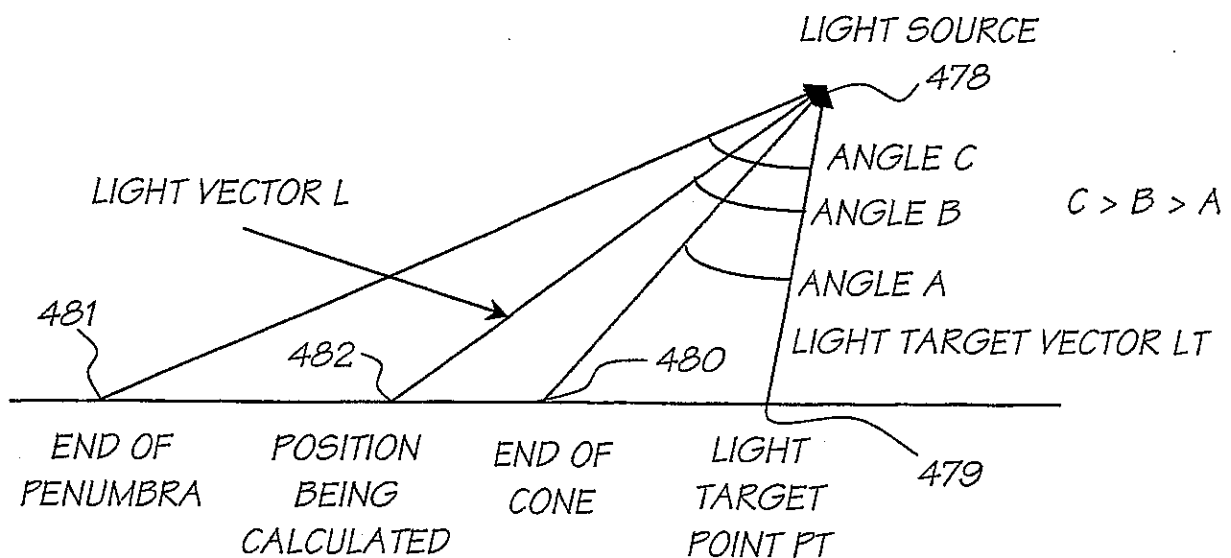


FIG. 134

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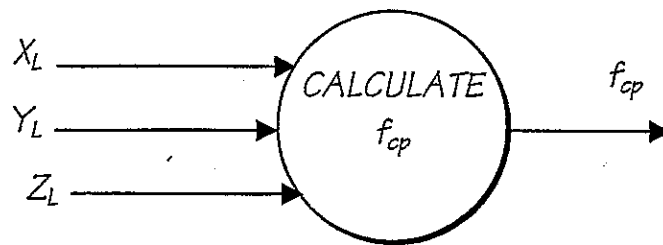


FIG. 135

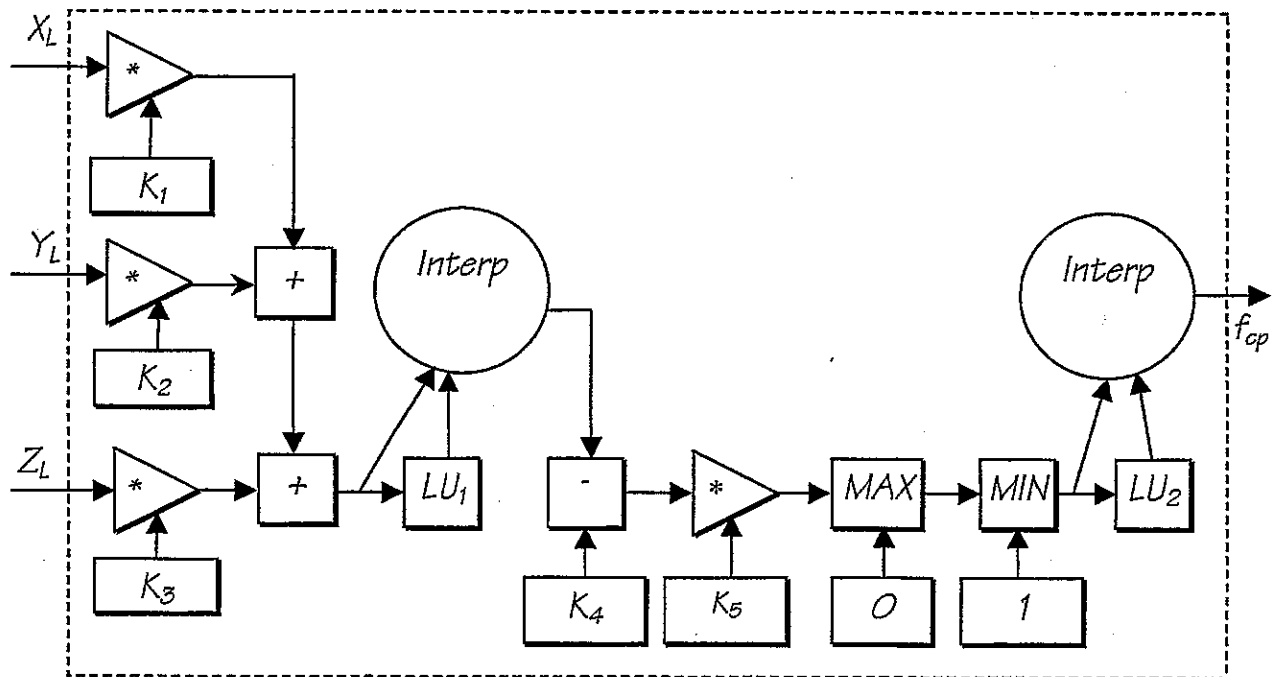


FIG. 136

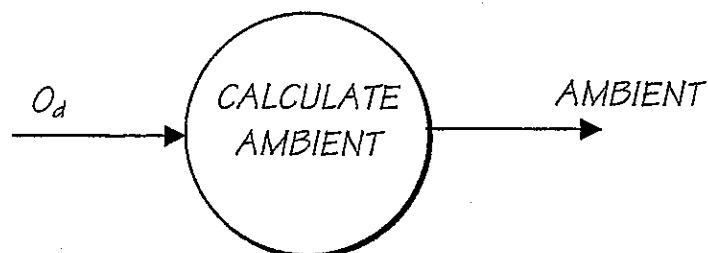


FIG. 137

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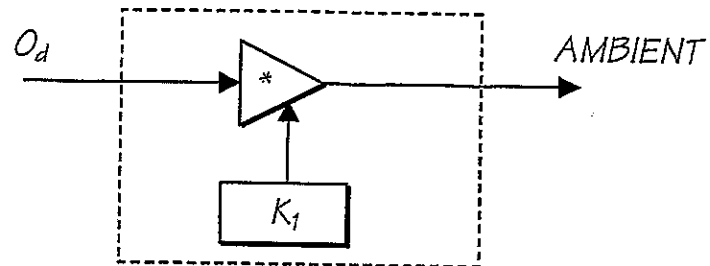


FIG. 138

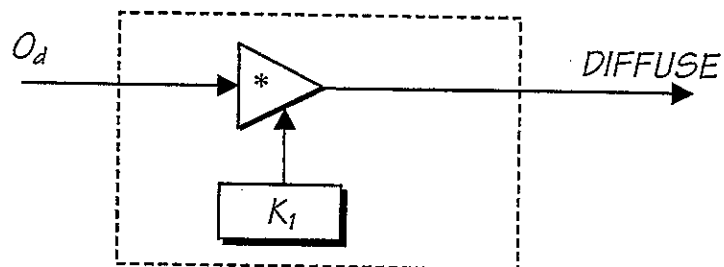


FIG. 139

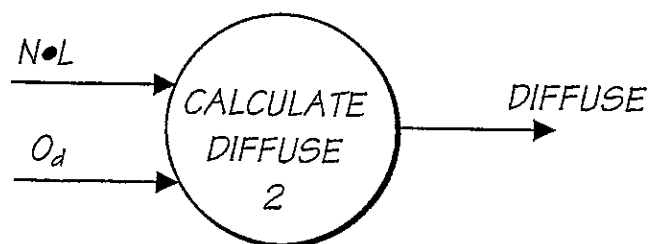


FIG. 140

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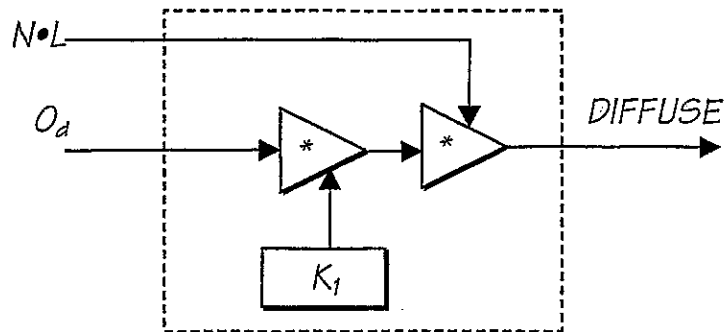


FIG. 141

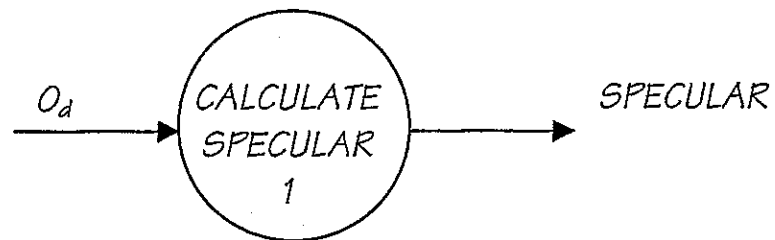


FIG. 142

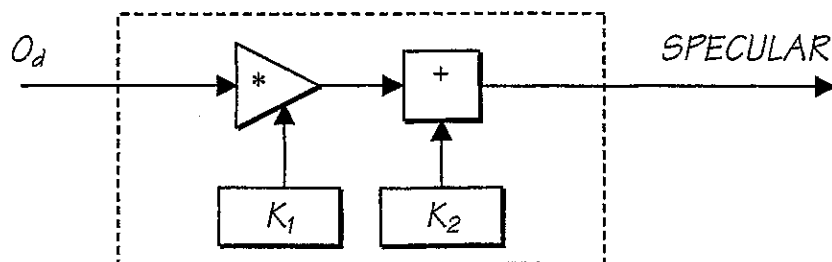


FIG. 143

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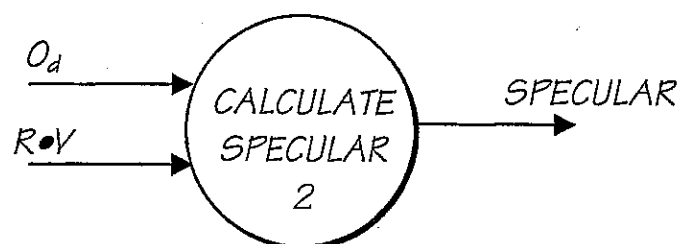


FIG. 144

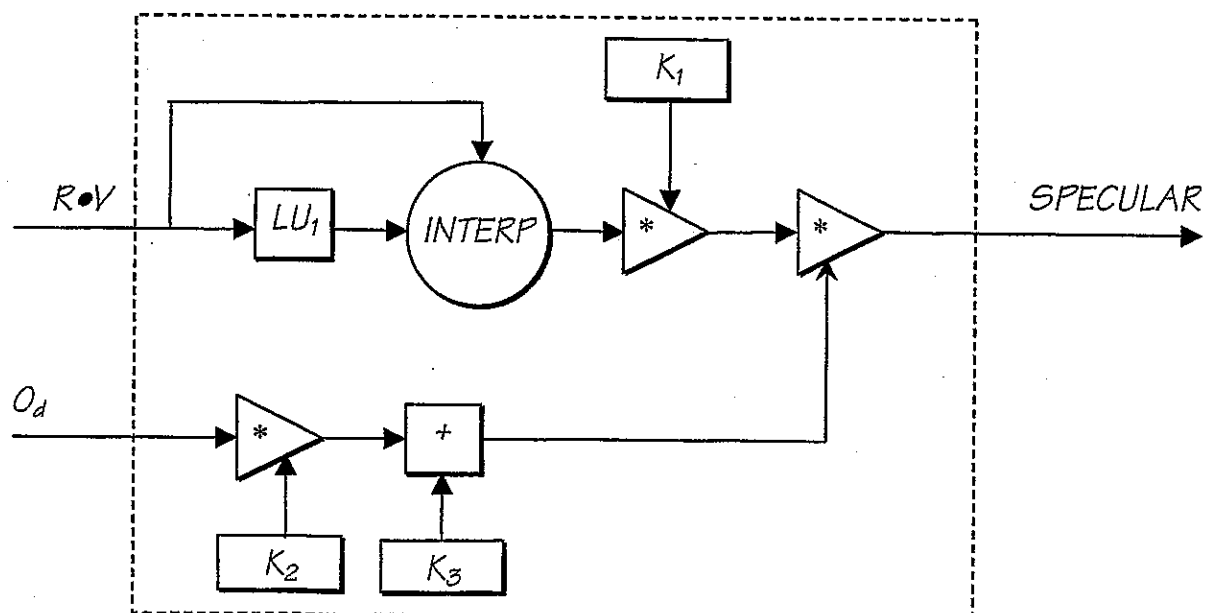


FIG. 145

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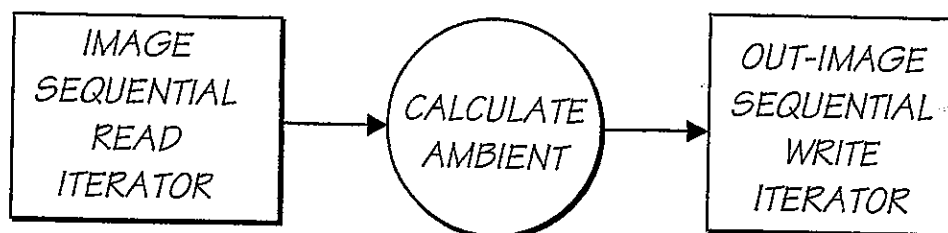


FIG. 146

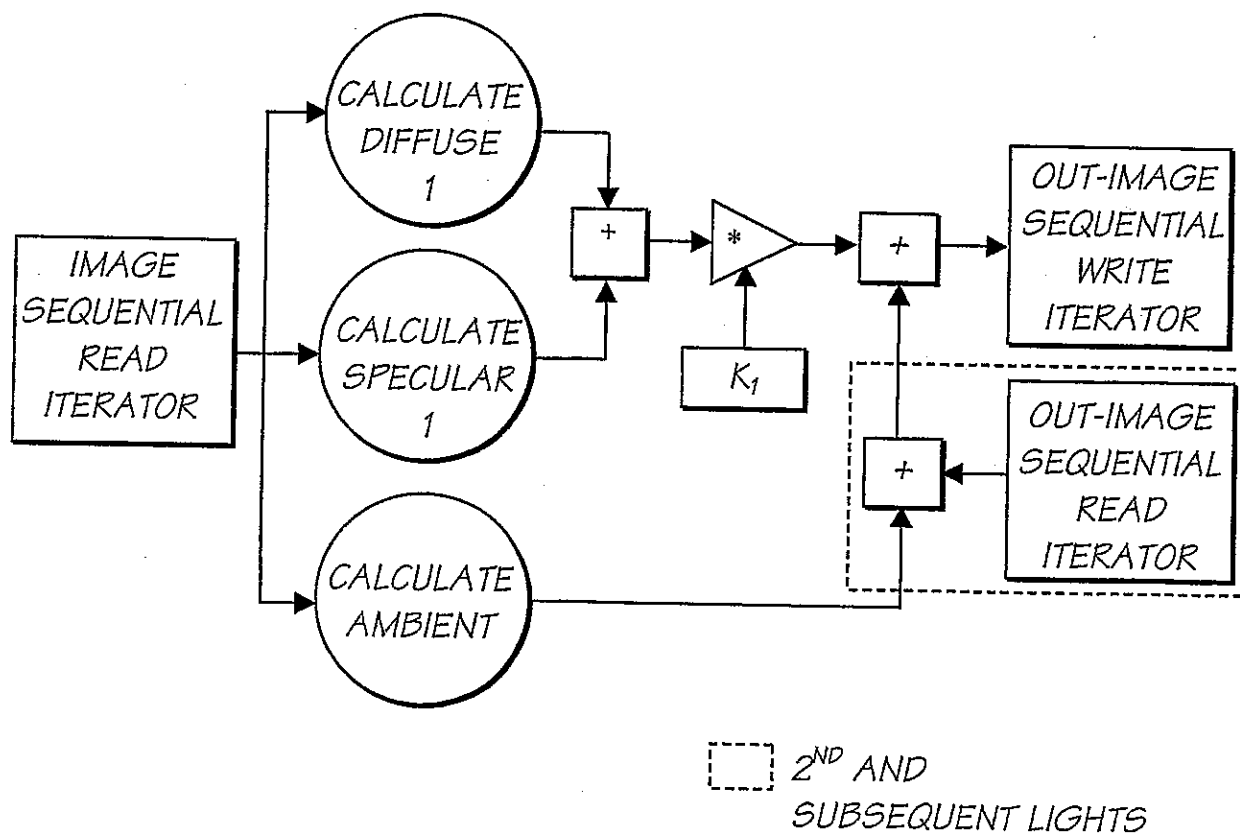


FIG. 147

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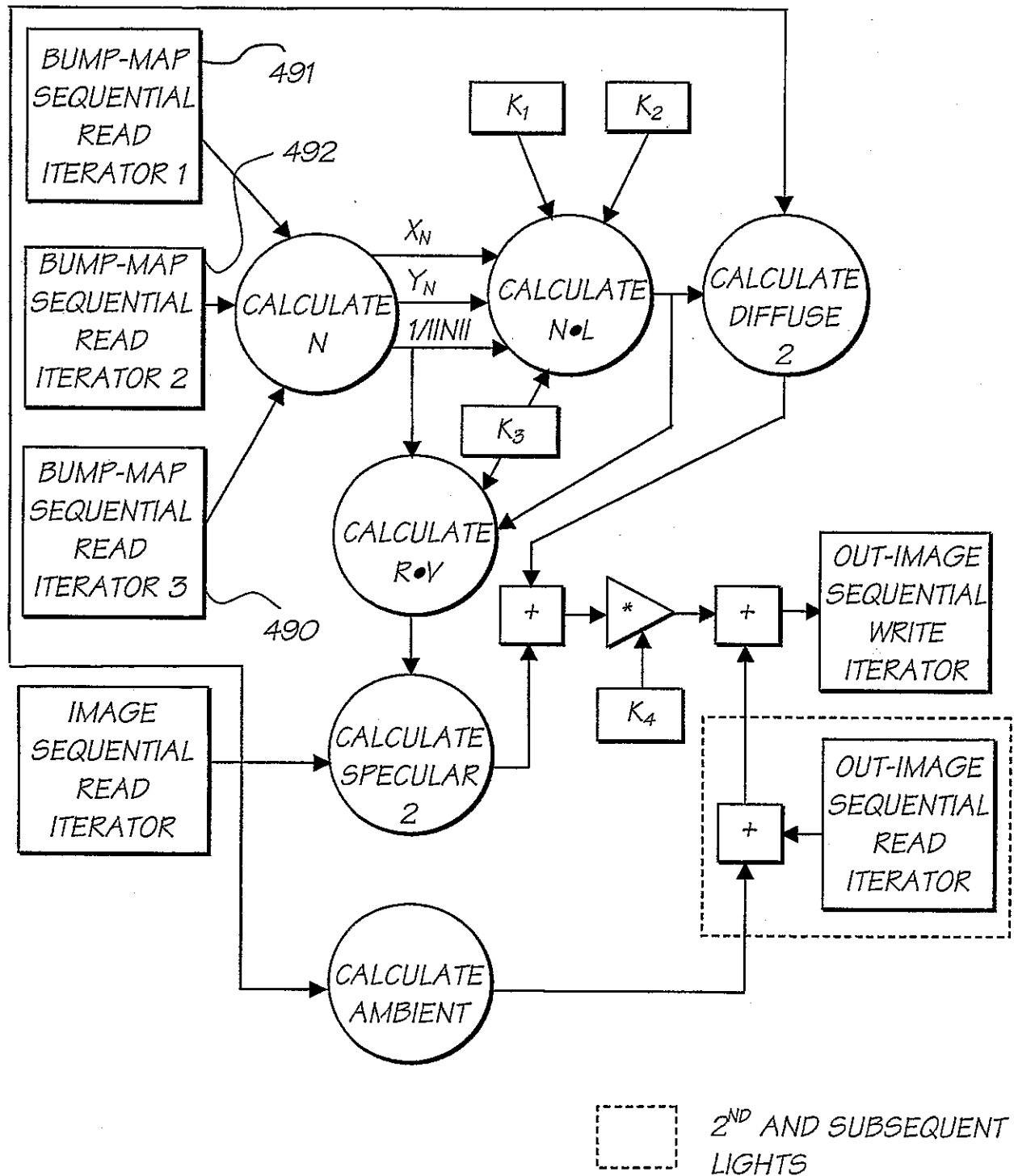


FIG. 148

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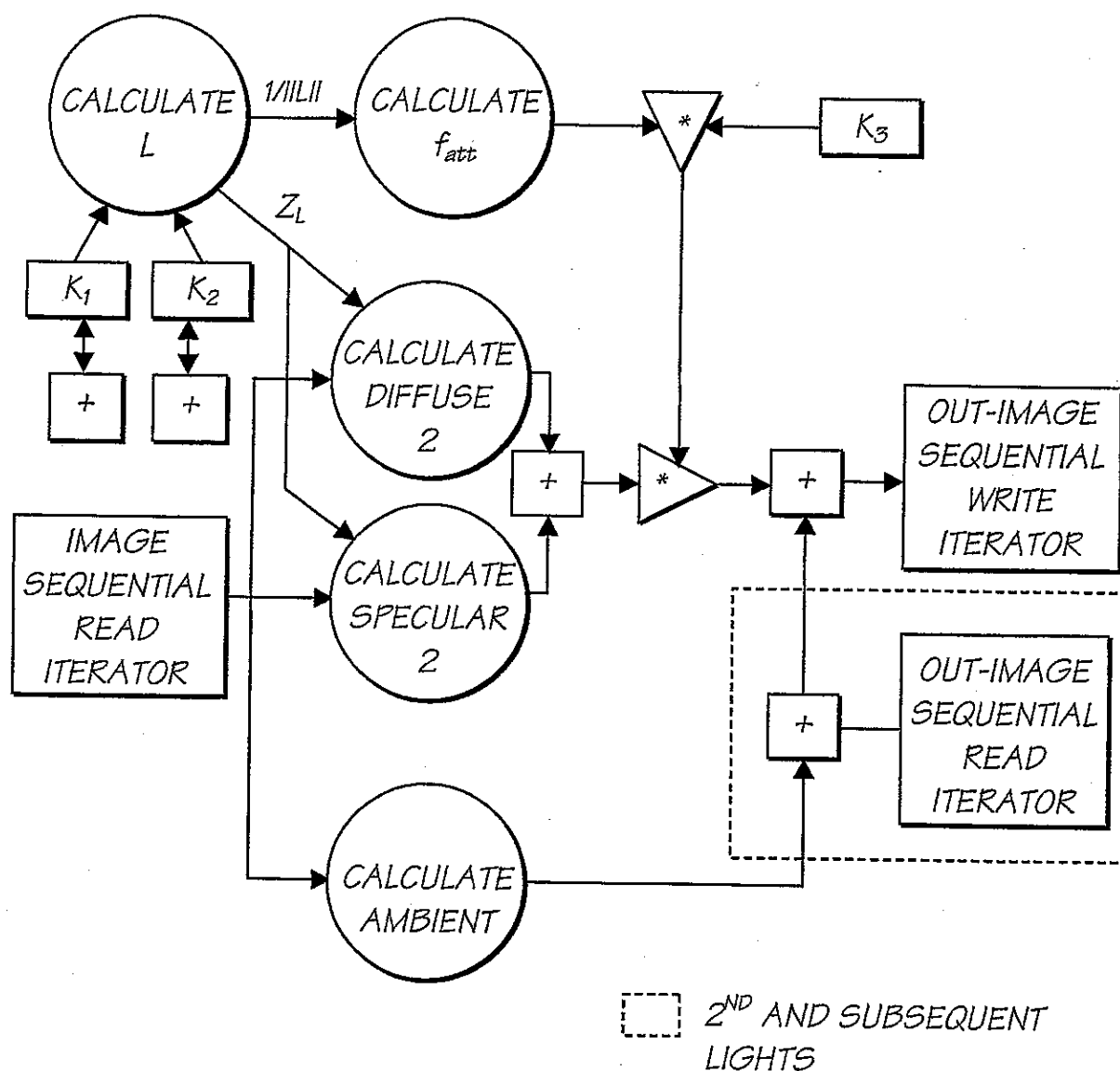


FIG. 149

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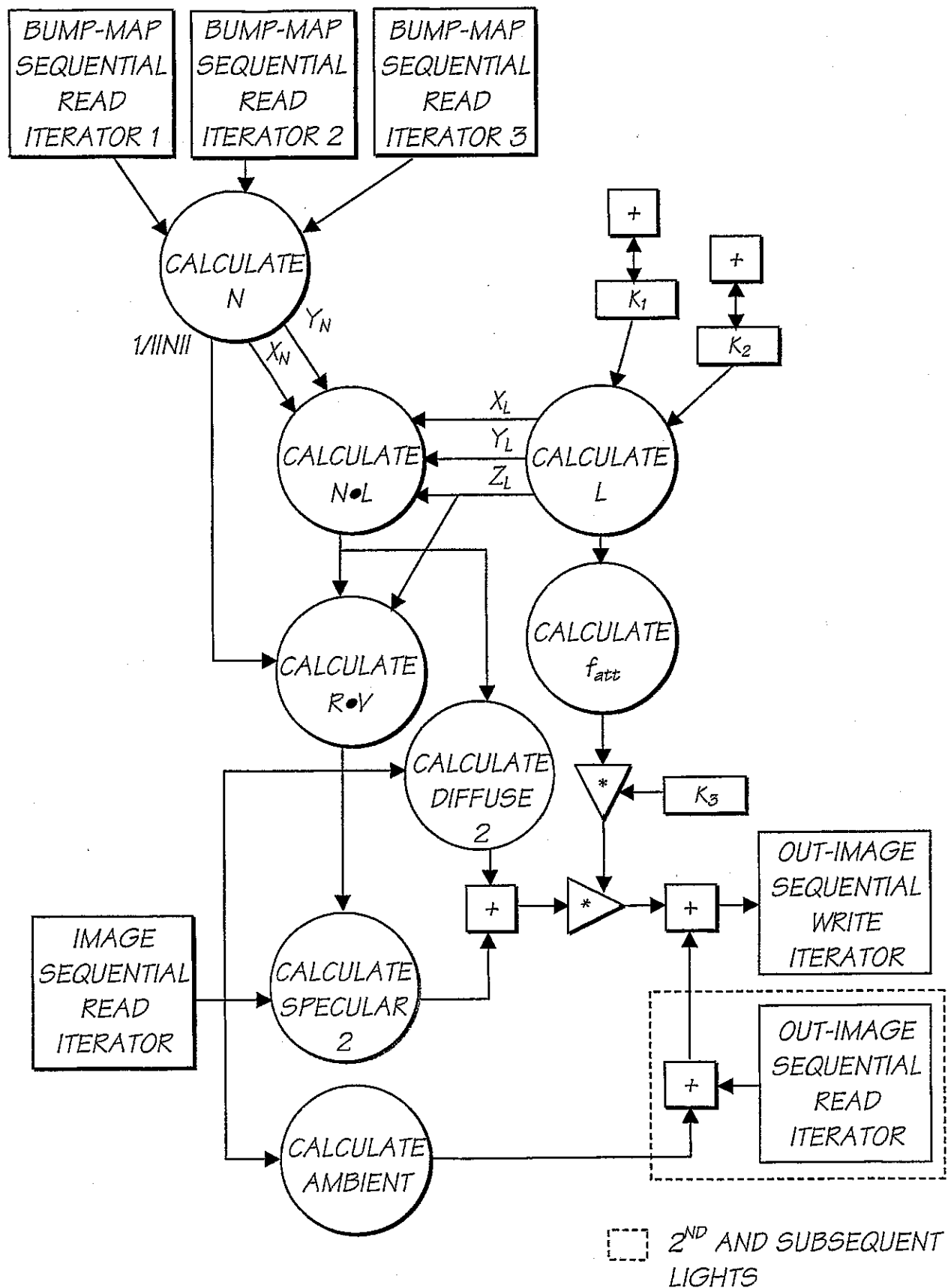


FIG. 150

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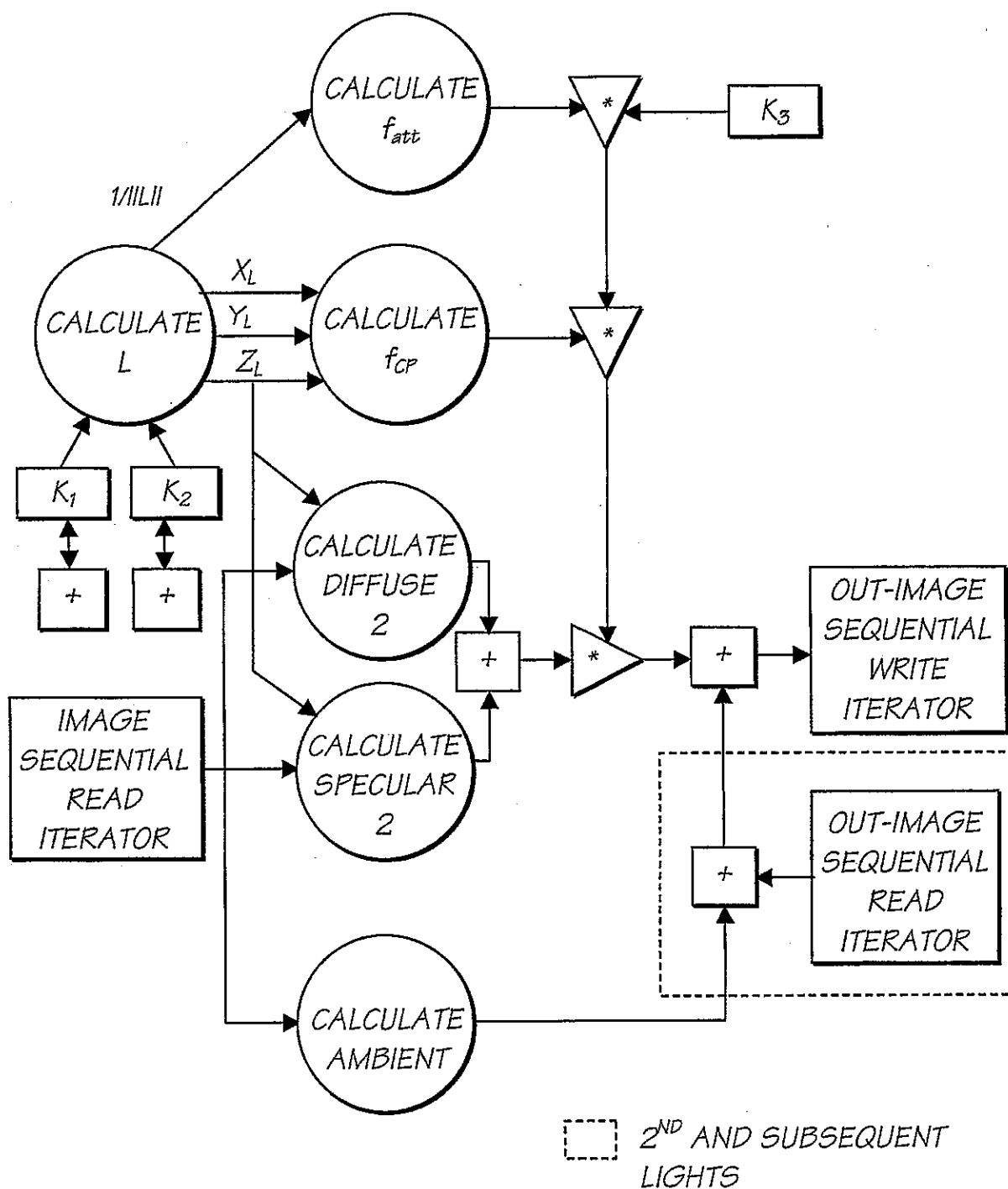


FIG. 151

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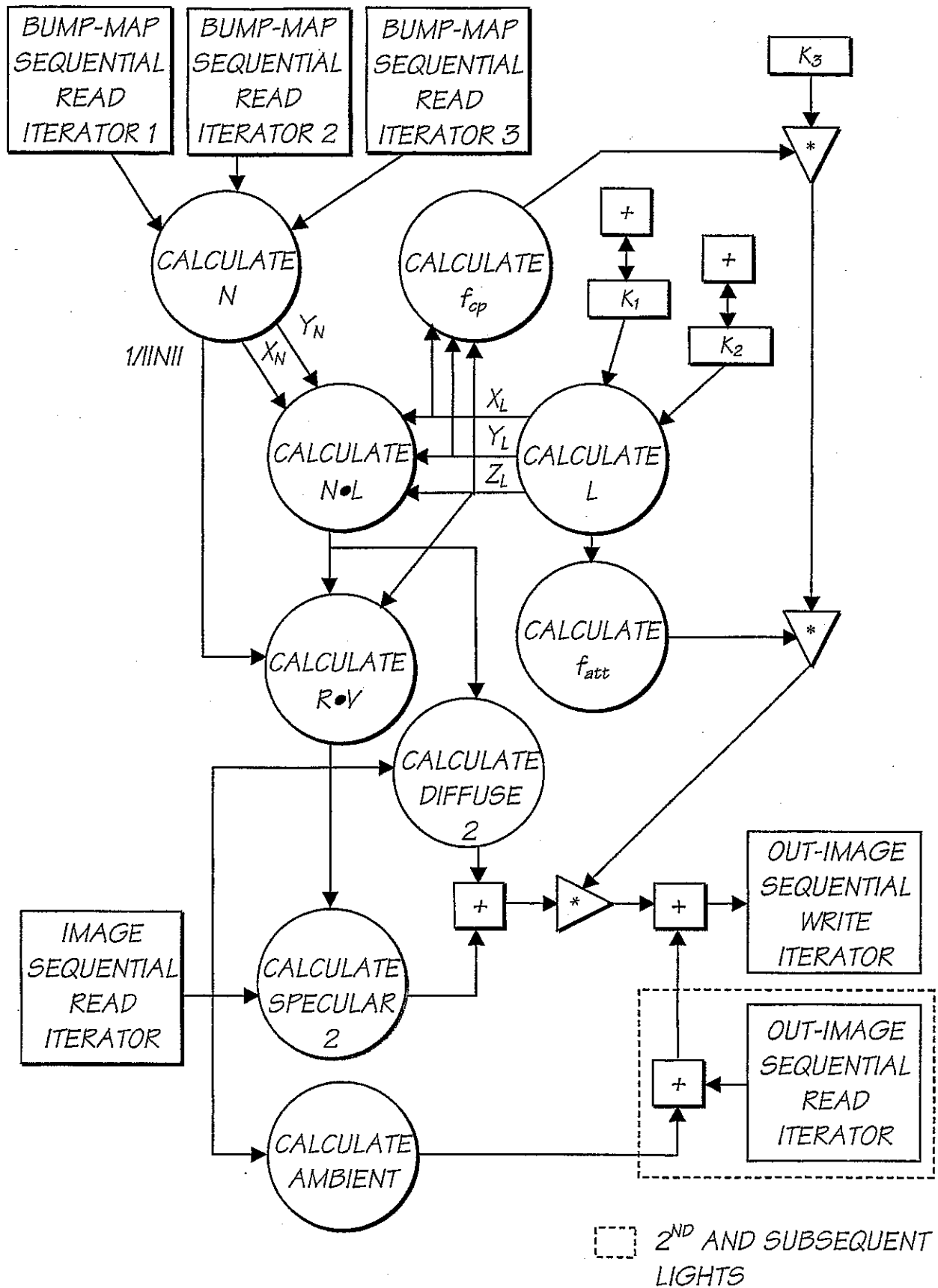
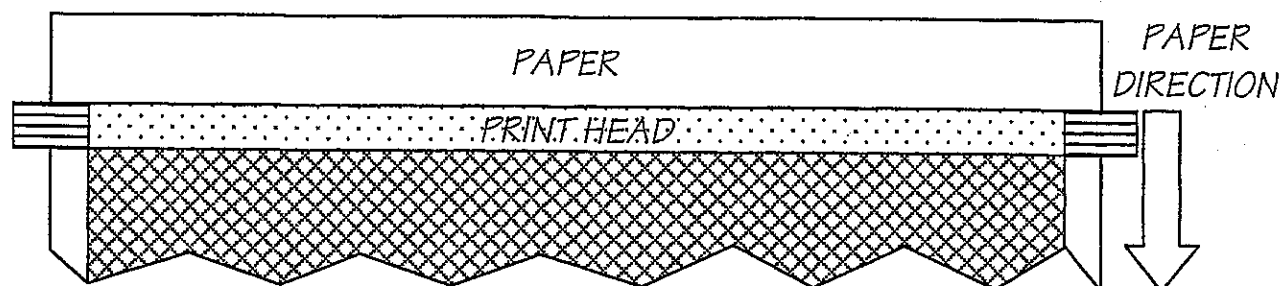


FIG. 152

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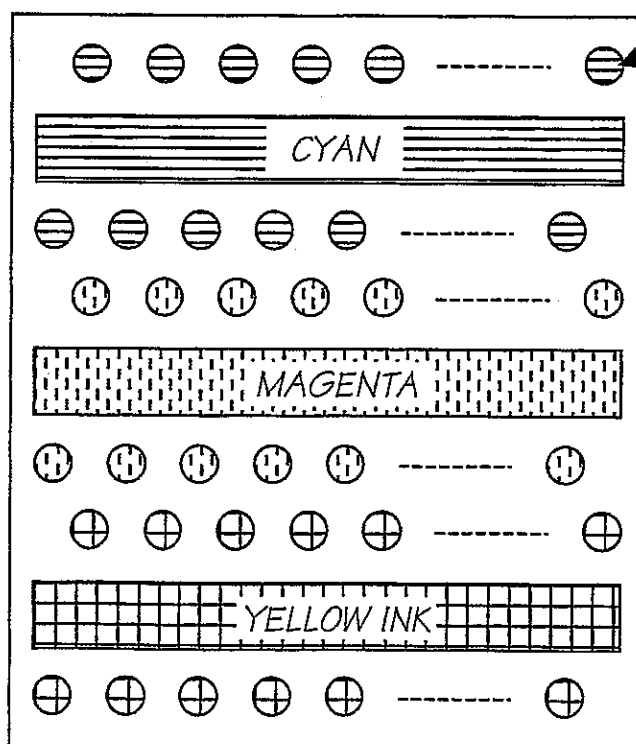
8 PRINT HEAD SEGMENTS IN PRINT HEAD

SEGMENT	SEGMENT	SEGMENT	SEGMENT	SEGMENT	SEGMENT	SEGMENT	SEGMENT
0	1	2	3	4	5	6	7

1250 μm (375 DOTS PER SEGMENT ROW,
OR 750 DOTS PER SEGMENT COLOR)

1 DOT IS 16.6 μm IN
DIAMETER

(A 100 μm SQUARE =
6 X 6 = 36 DOTS)



466.6 μm
(28 DOTS)

33.3 μm
(2 DOTS)

133.3 μm
(8 DOTS)

EACH SEGMENT CONTAINS 6 ROWS OF DOTS:
ODD AND EVEN CYAN, MAGENTA, AND YELLOW.

FIG. 153

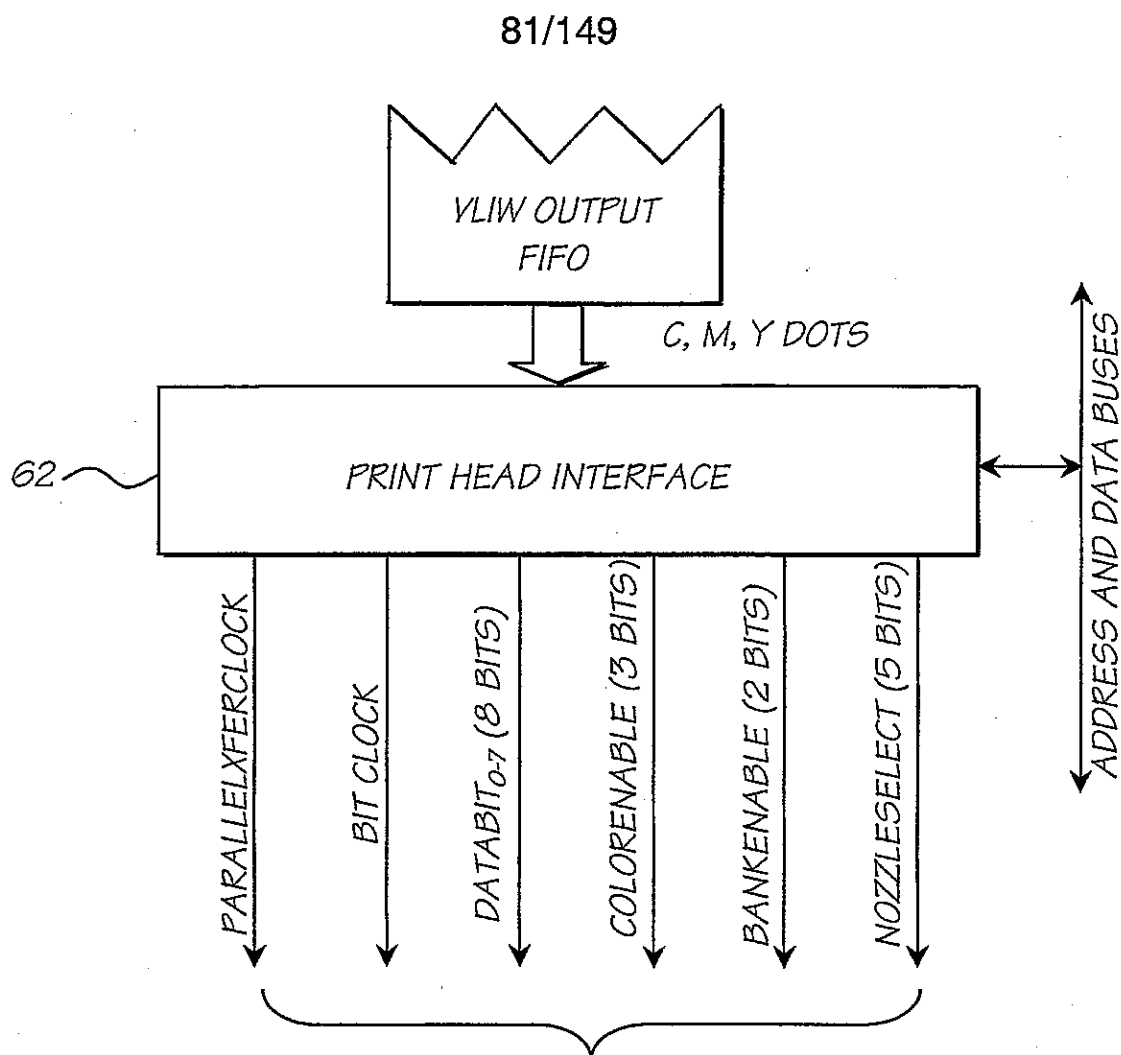


FIG. 154

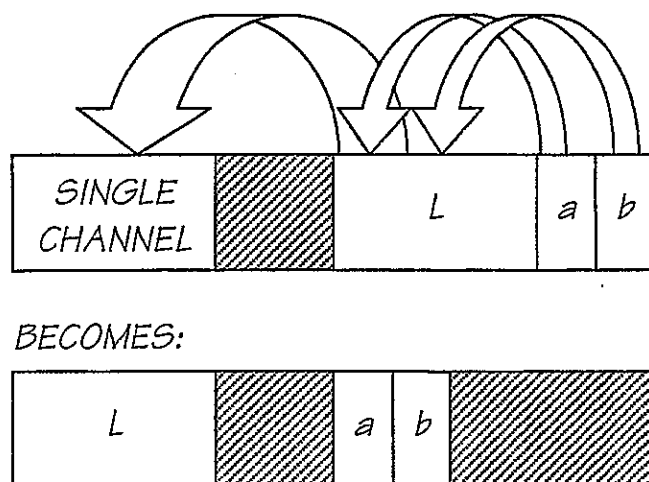


FIG. 155

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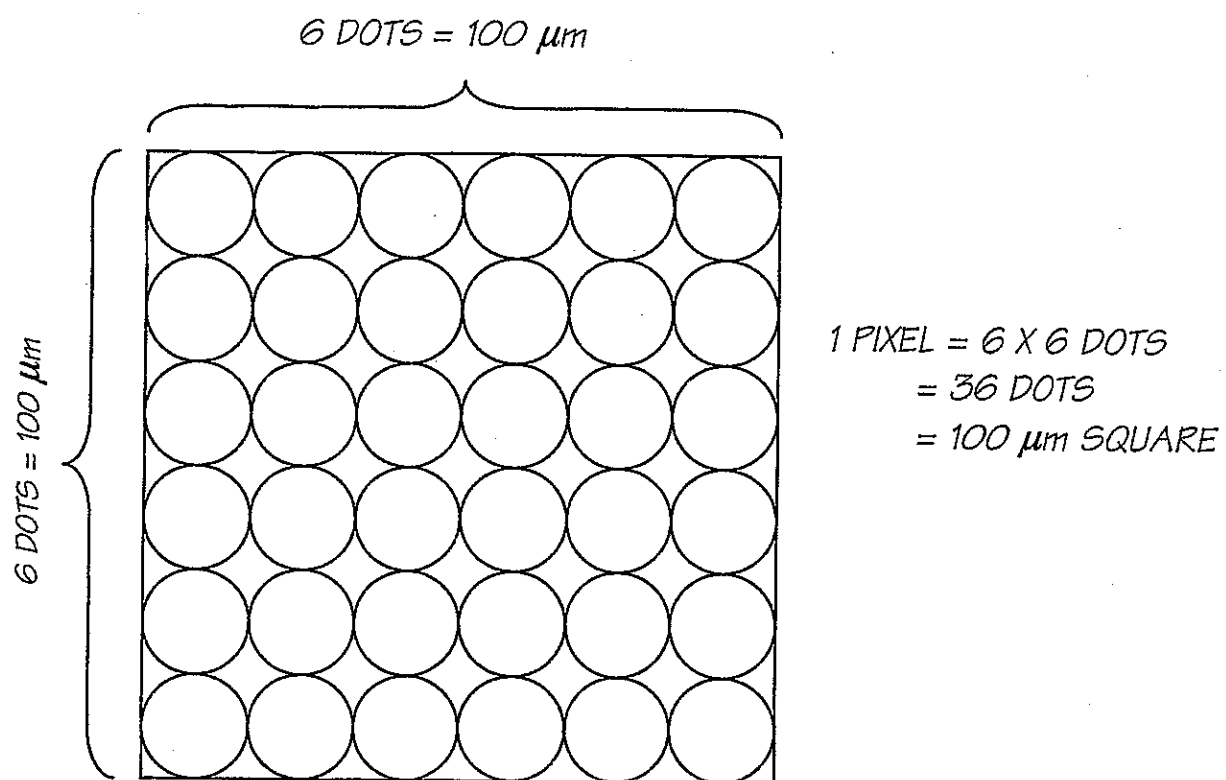


FIG. 156

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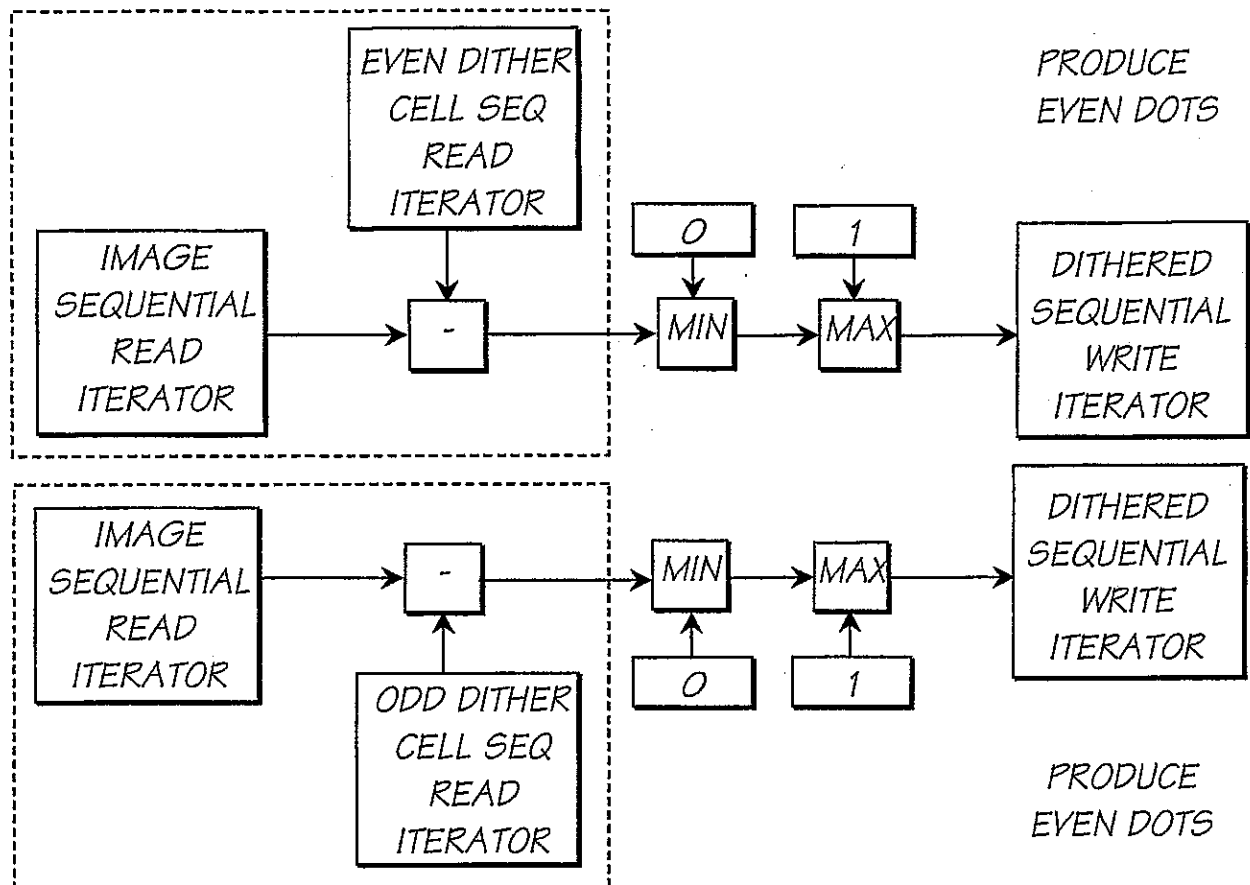


FIG. 157

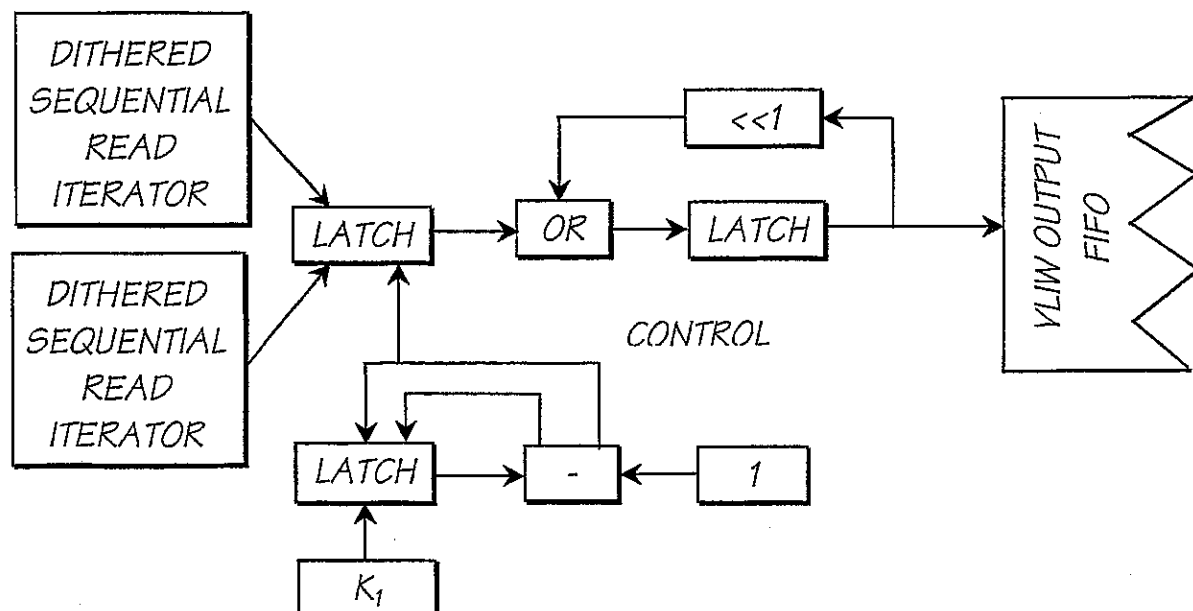


FIG. 158

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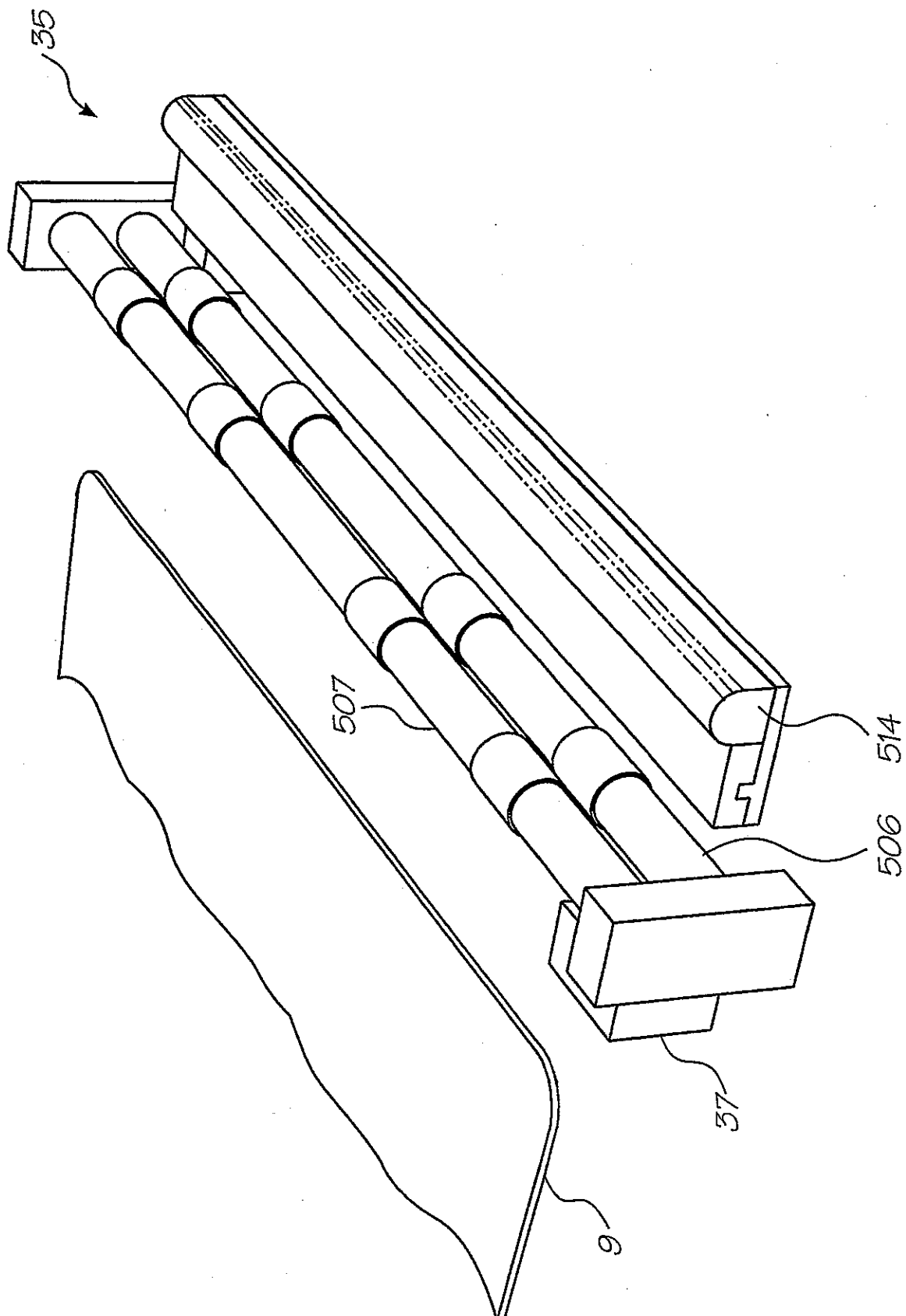
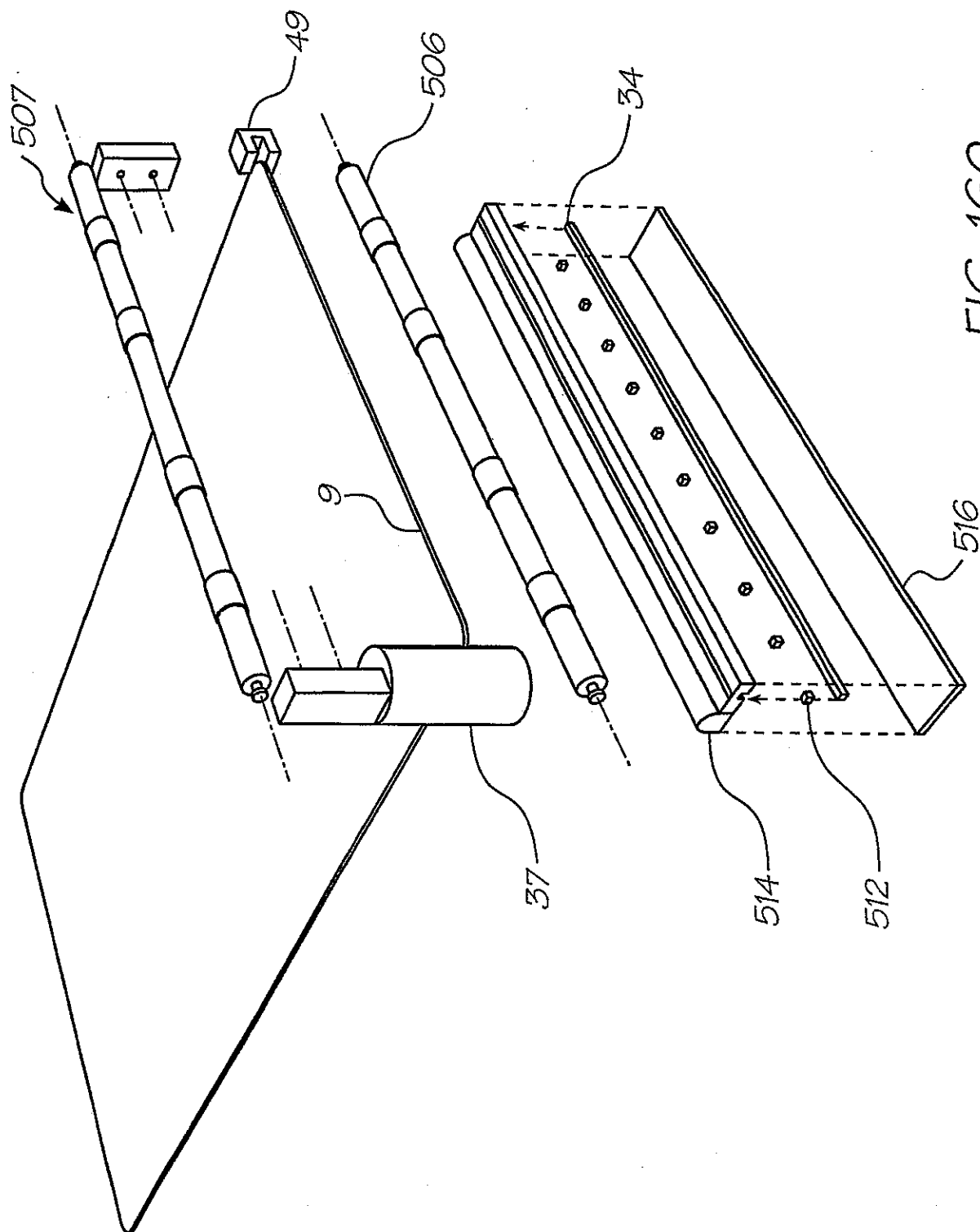
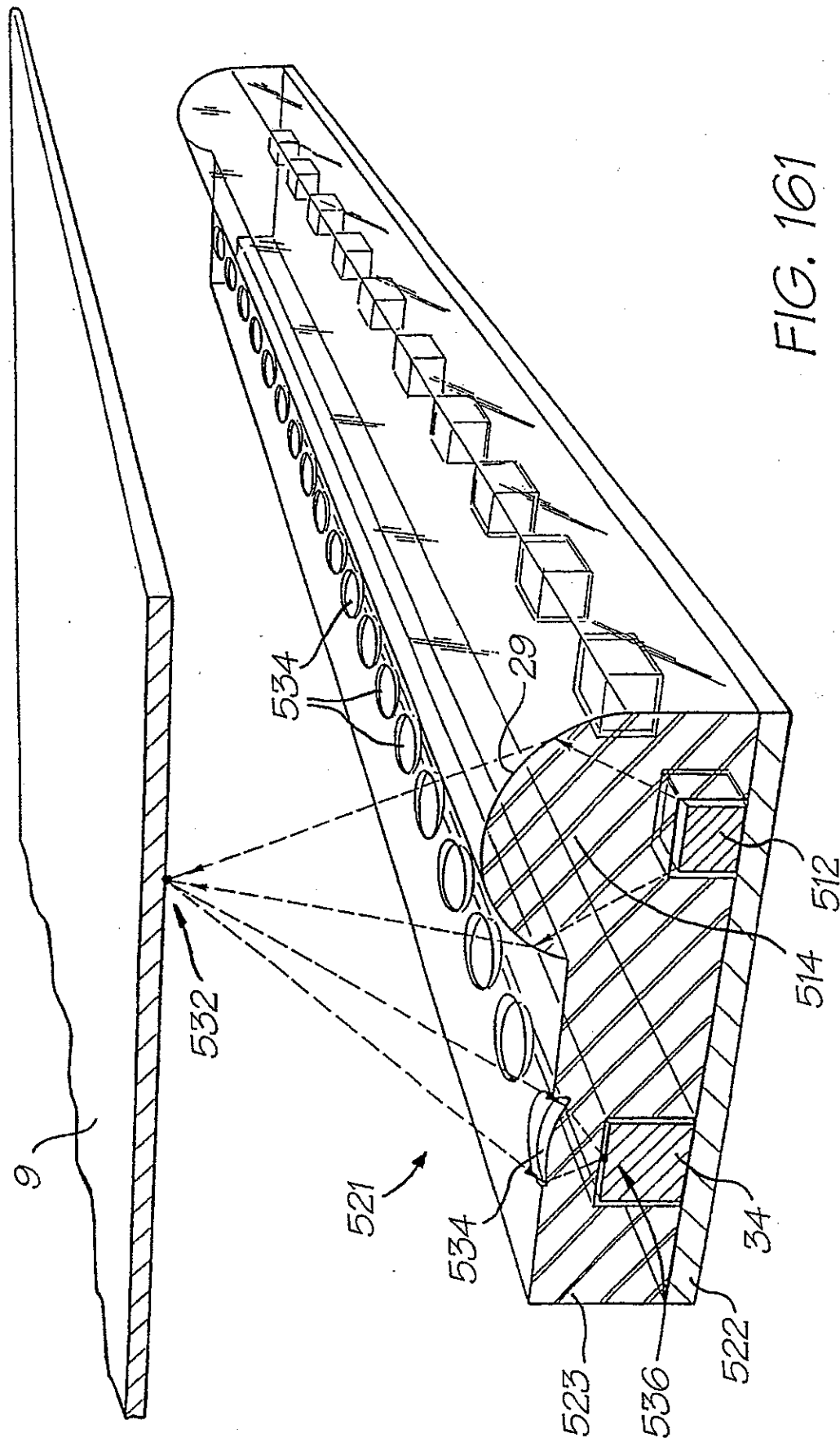


FIG. 159

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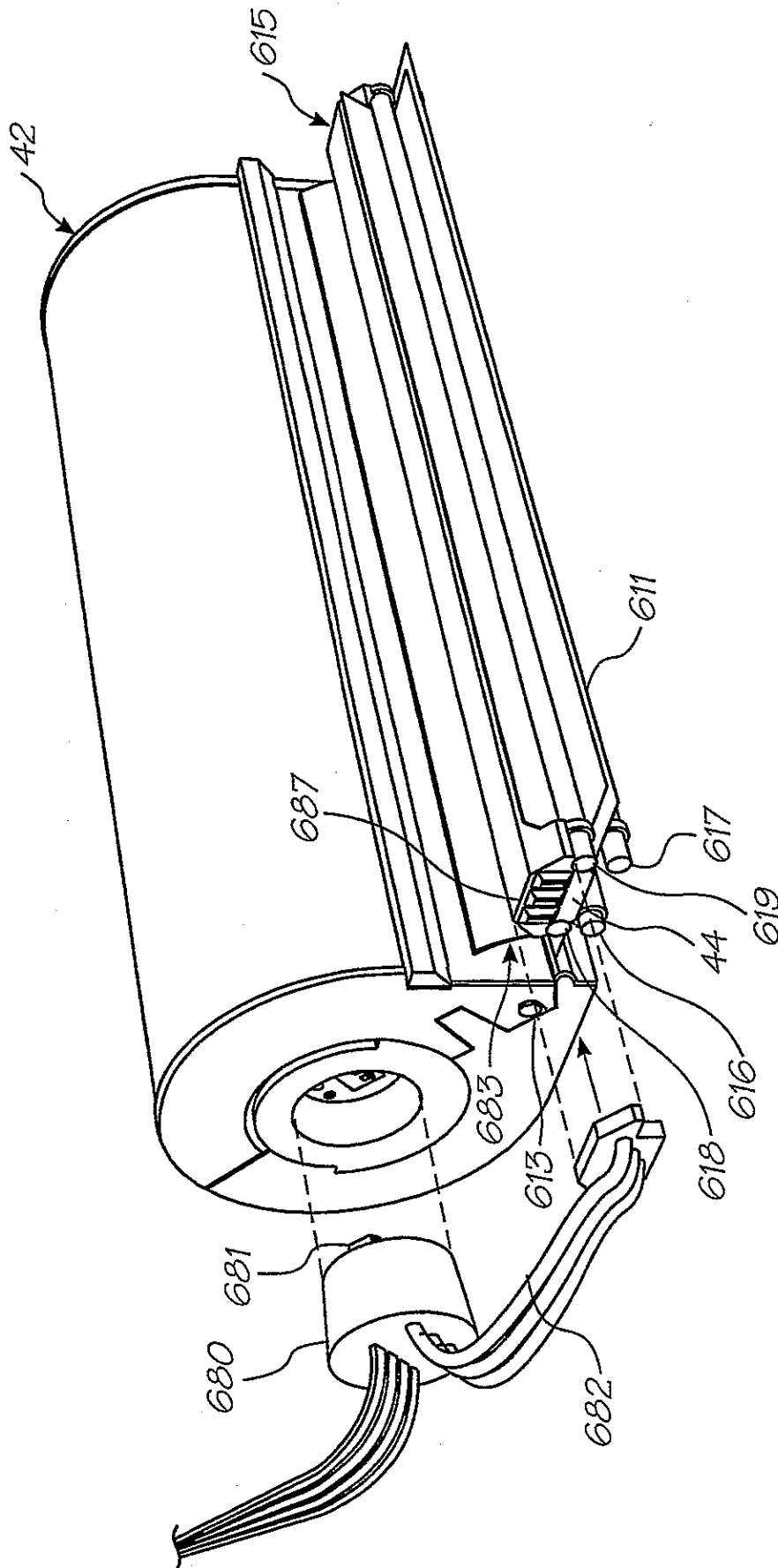


FIG. 162

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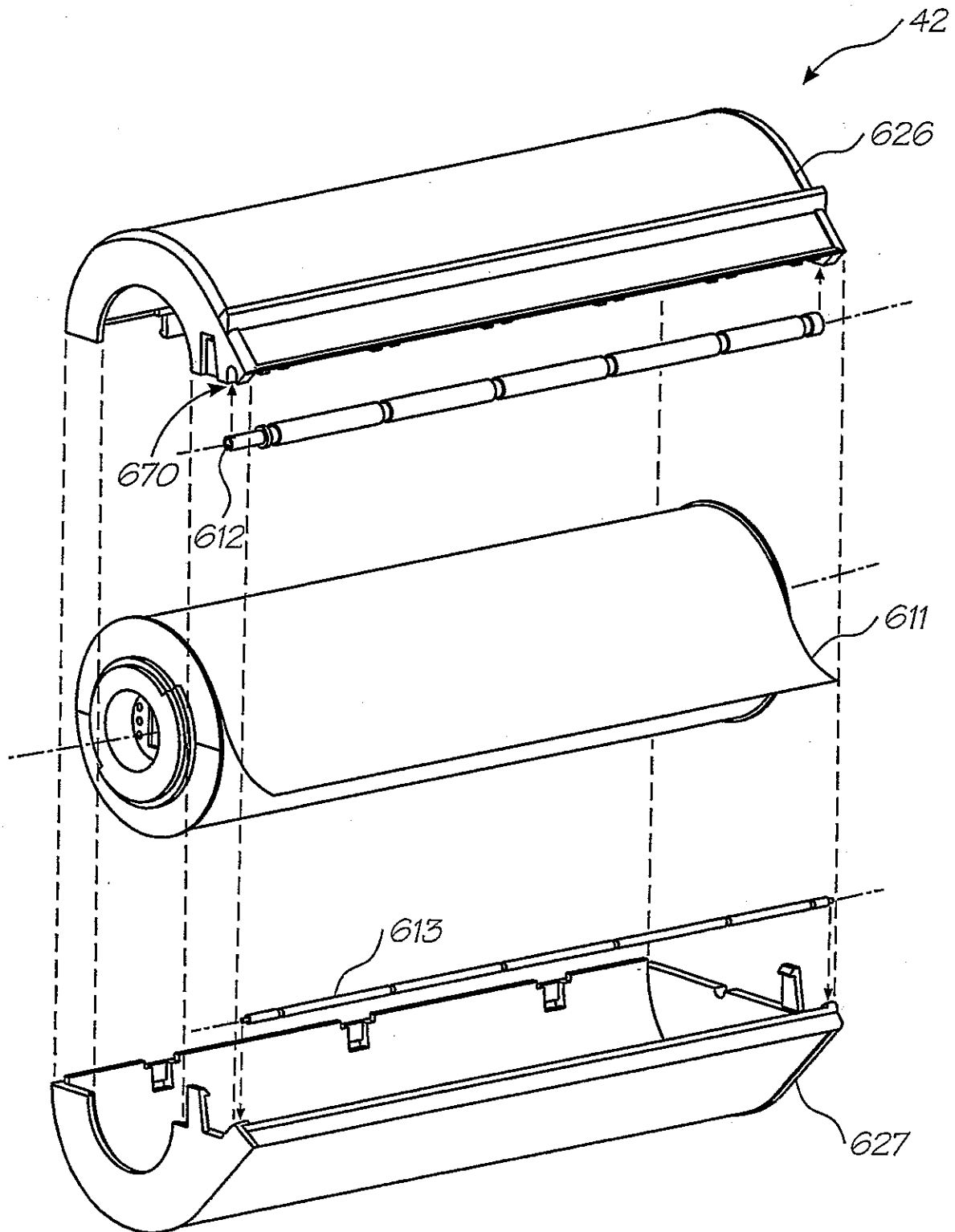


FIG. 163

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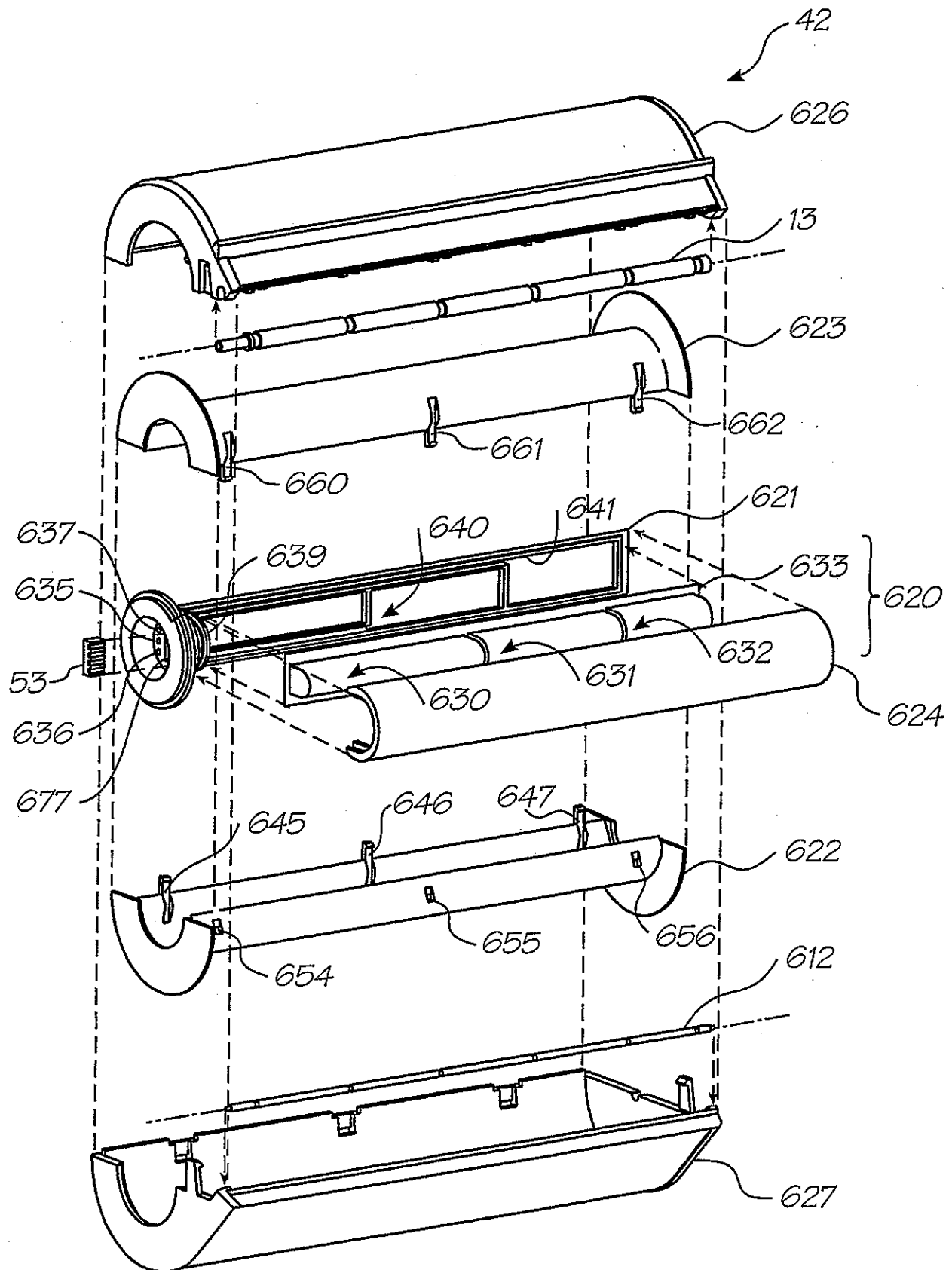


FIG. 164

SUBSTITUTE SHEET (RULE 26) RO/AU

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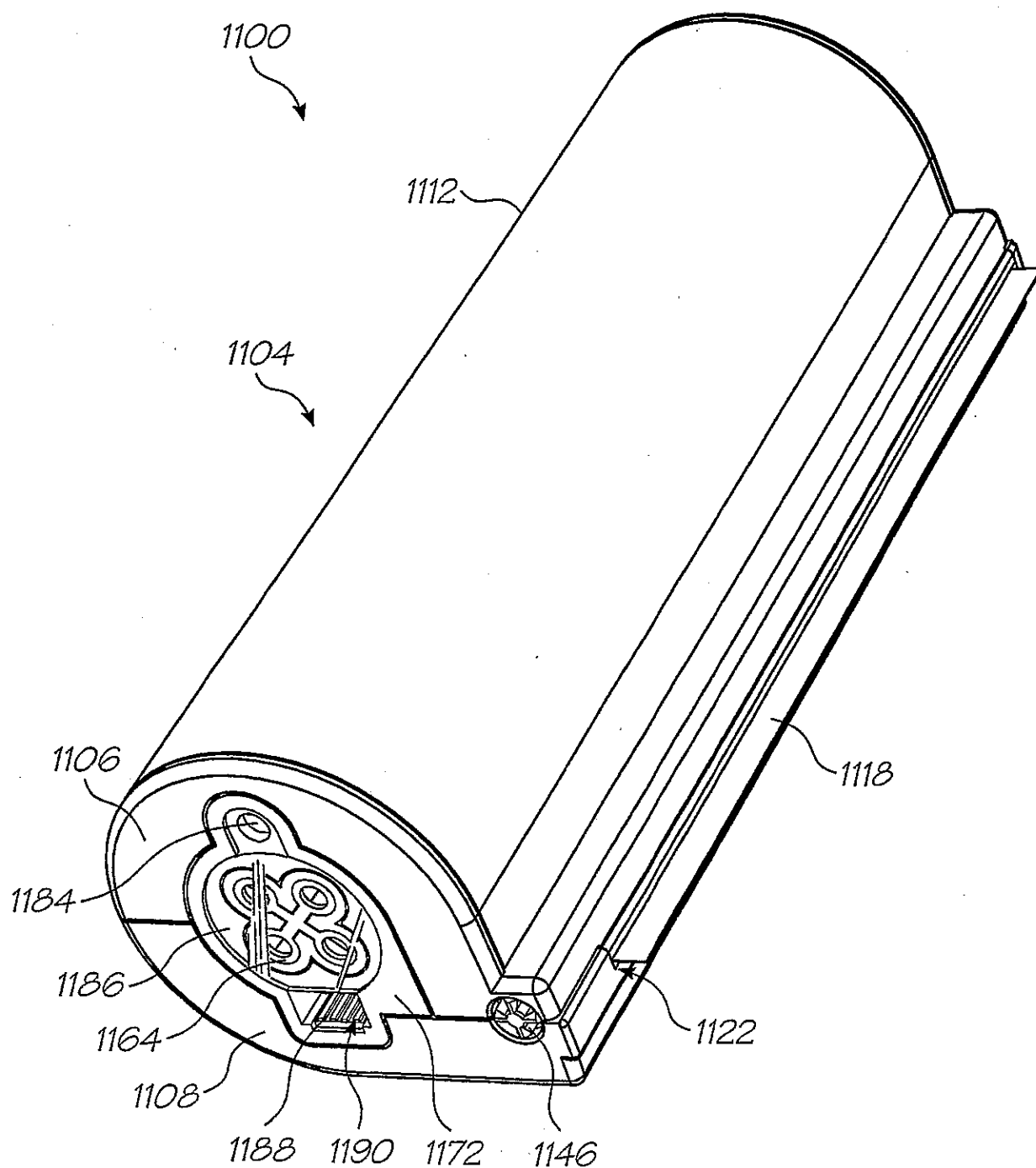


FIG. 164A

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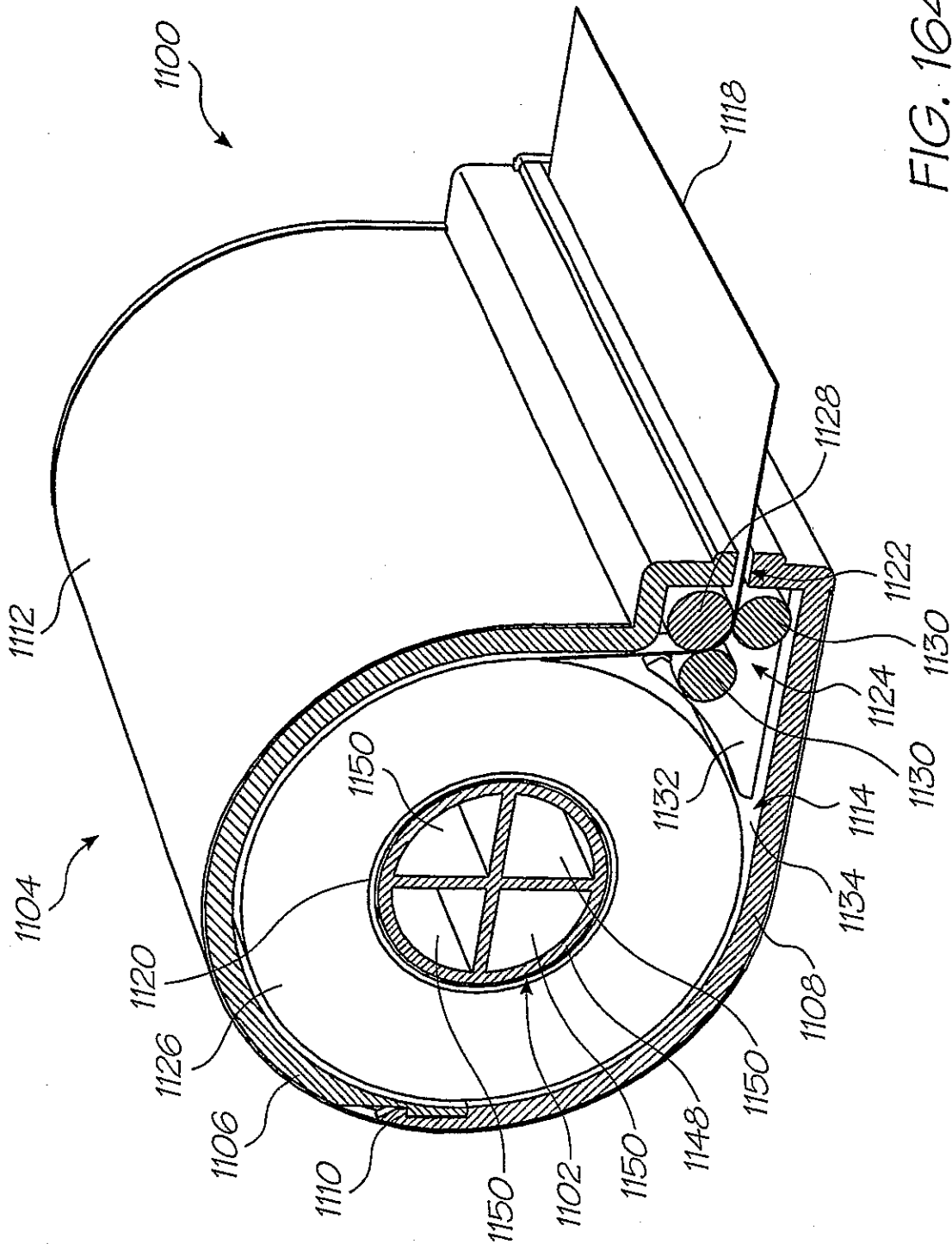


FIG. 164B

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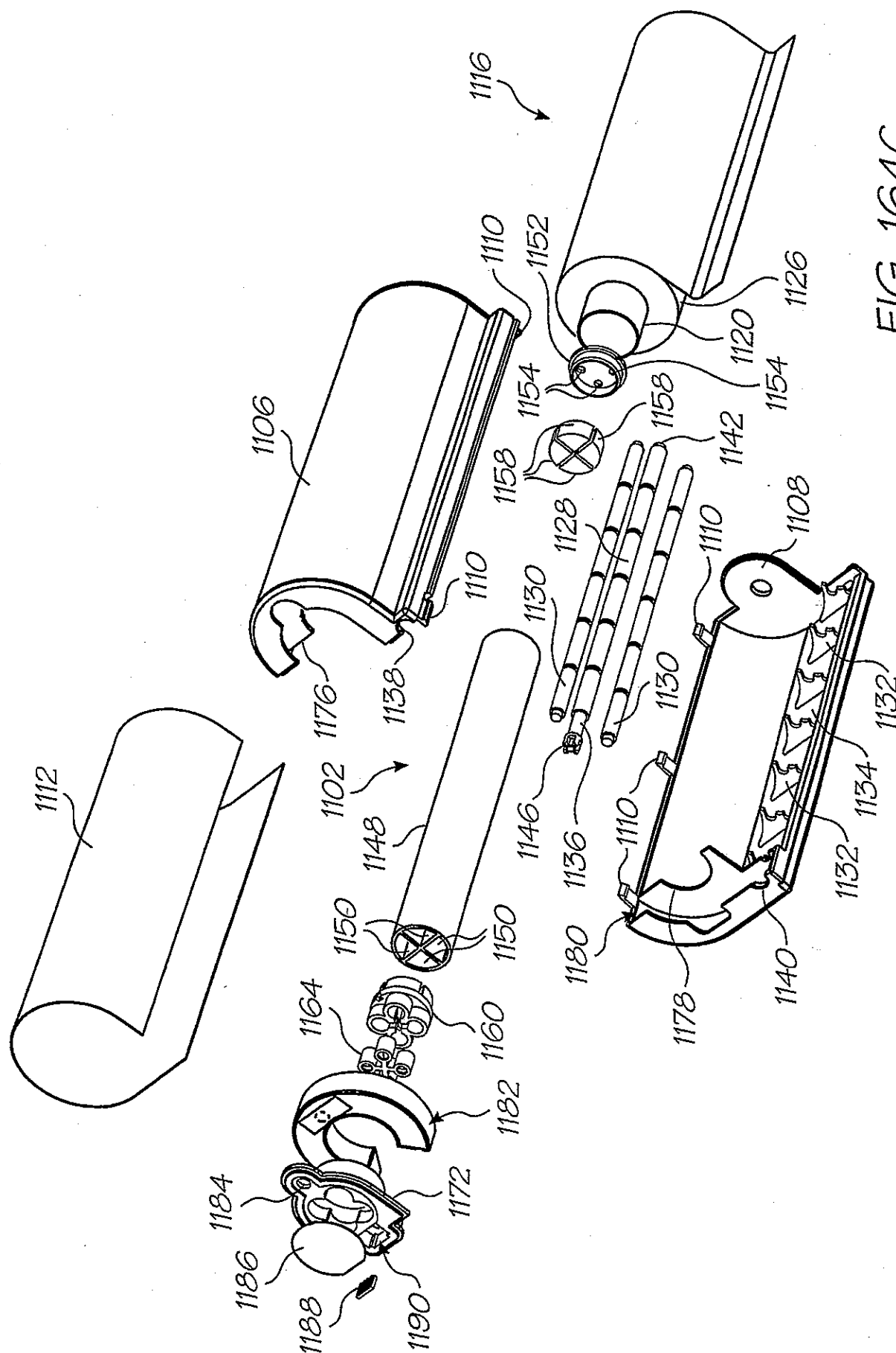


FIG. 164C

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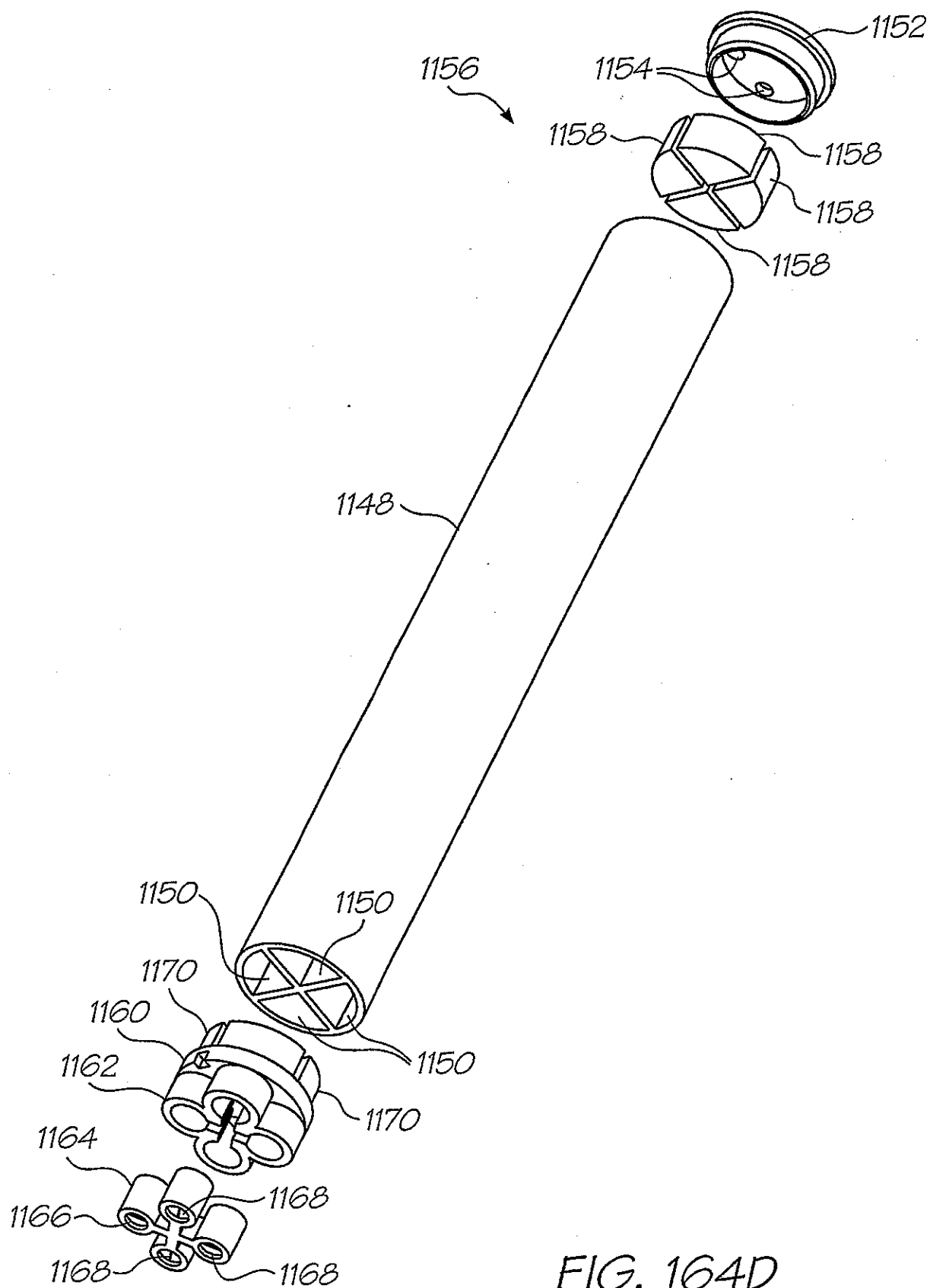


FIG. 164D

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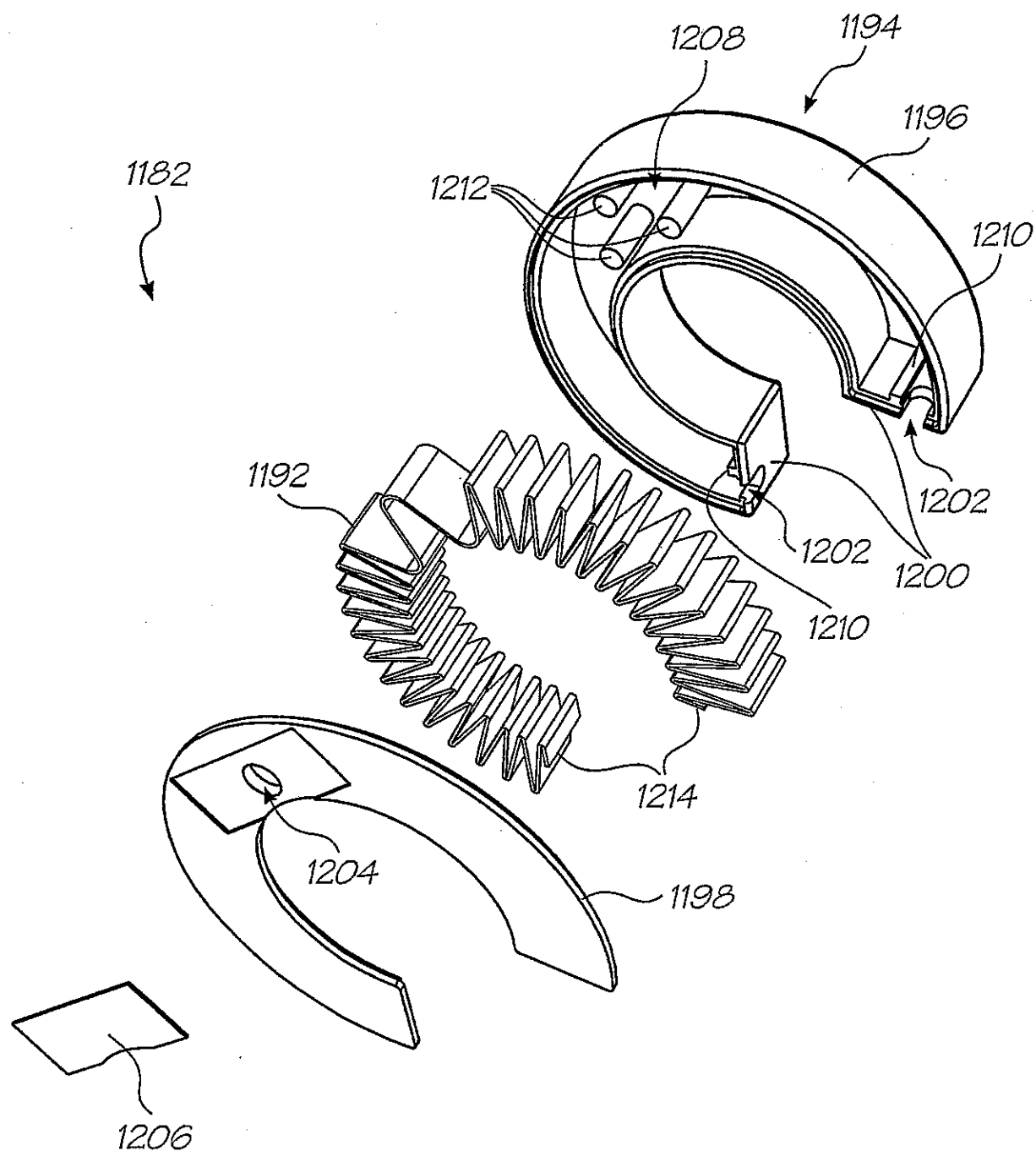


FIG. 164E

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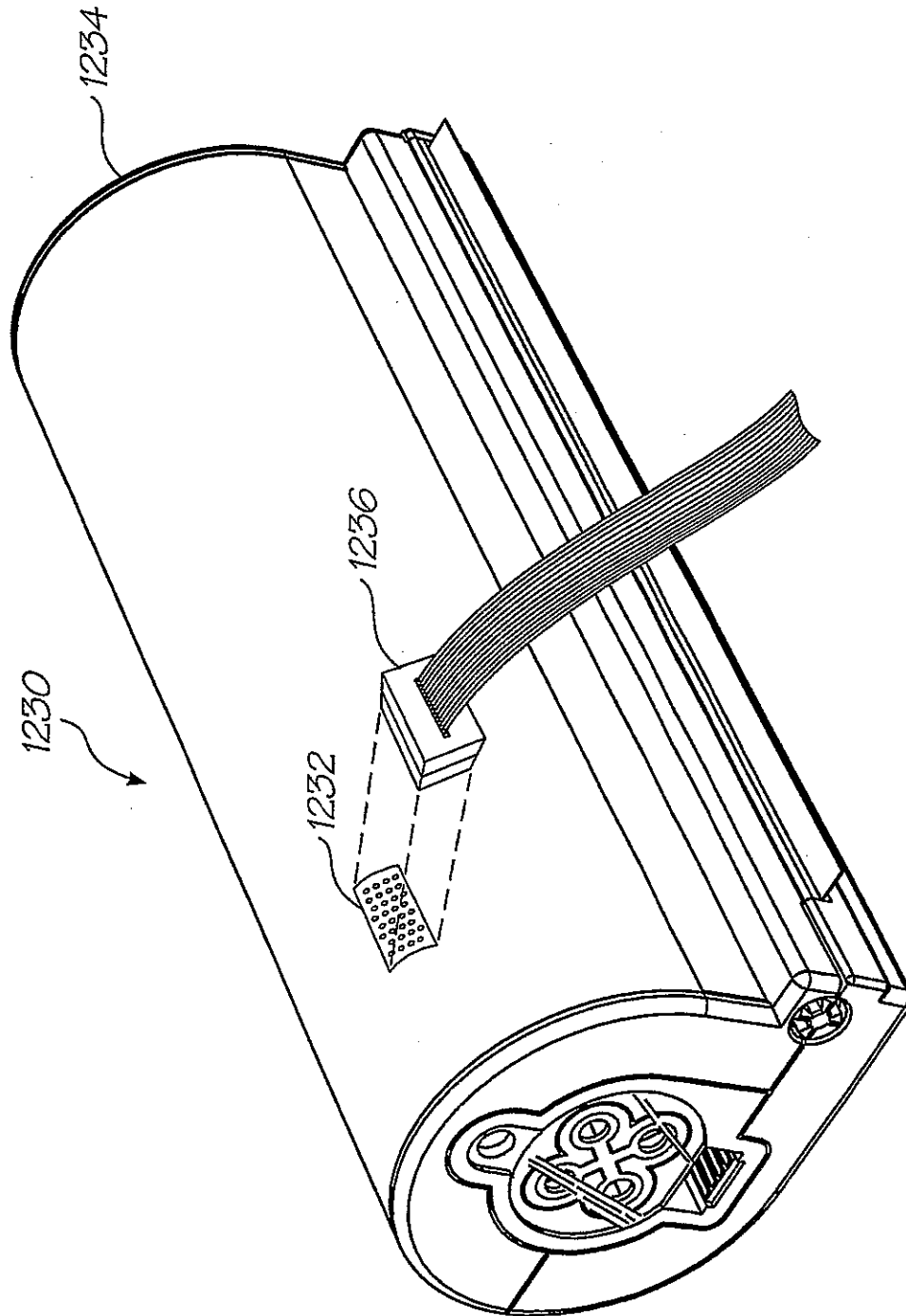


FIG. 164F

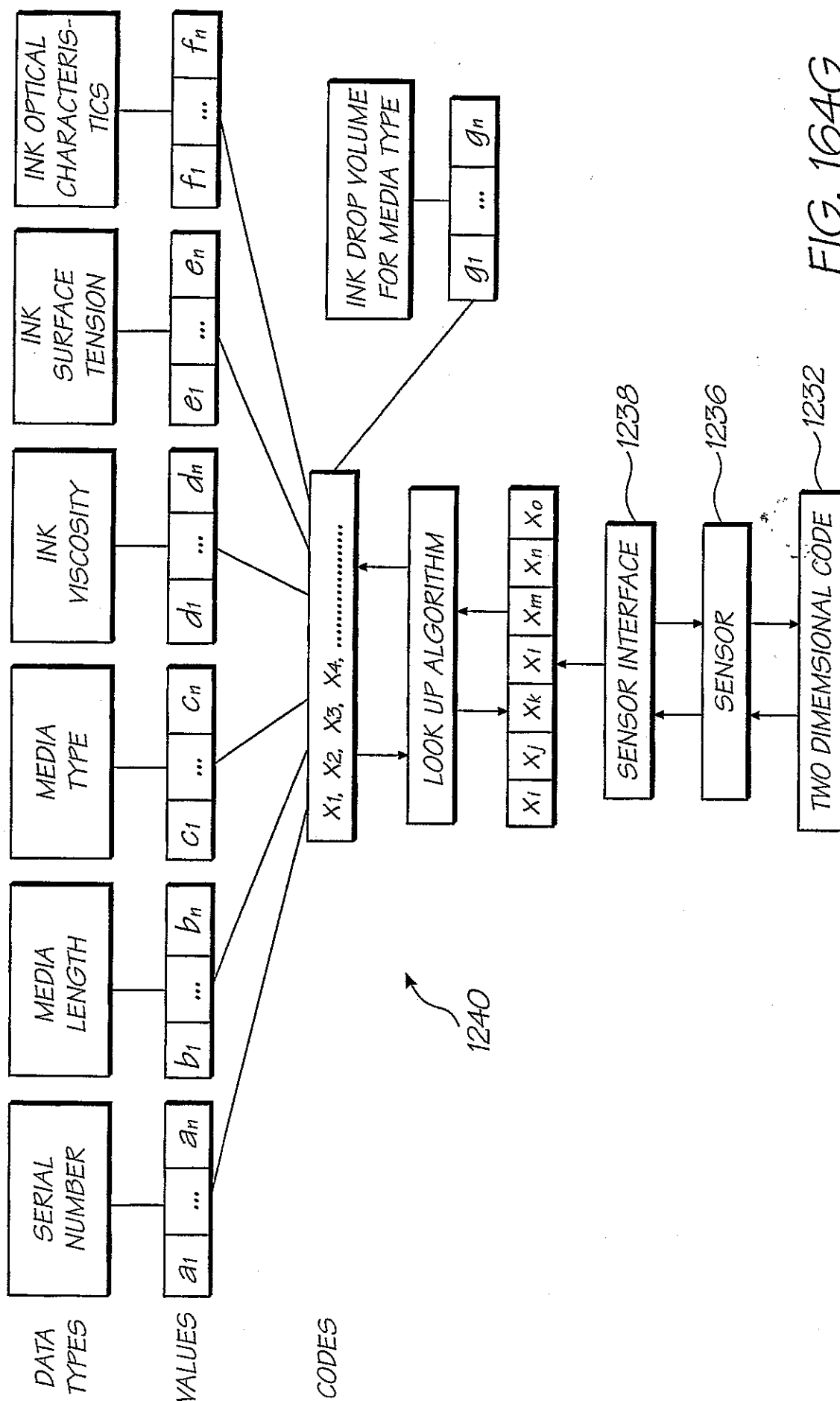


FIG. 164G

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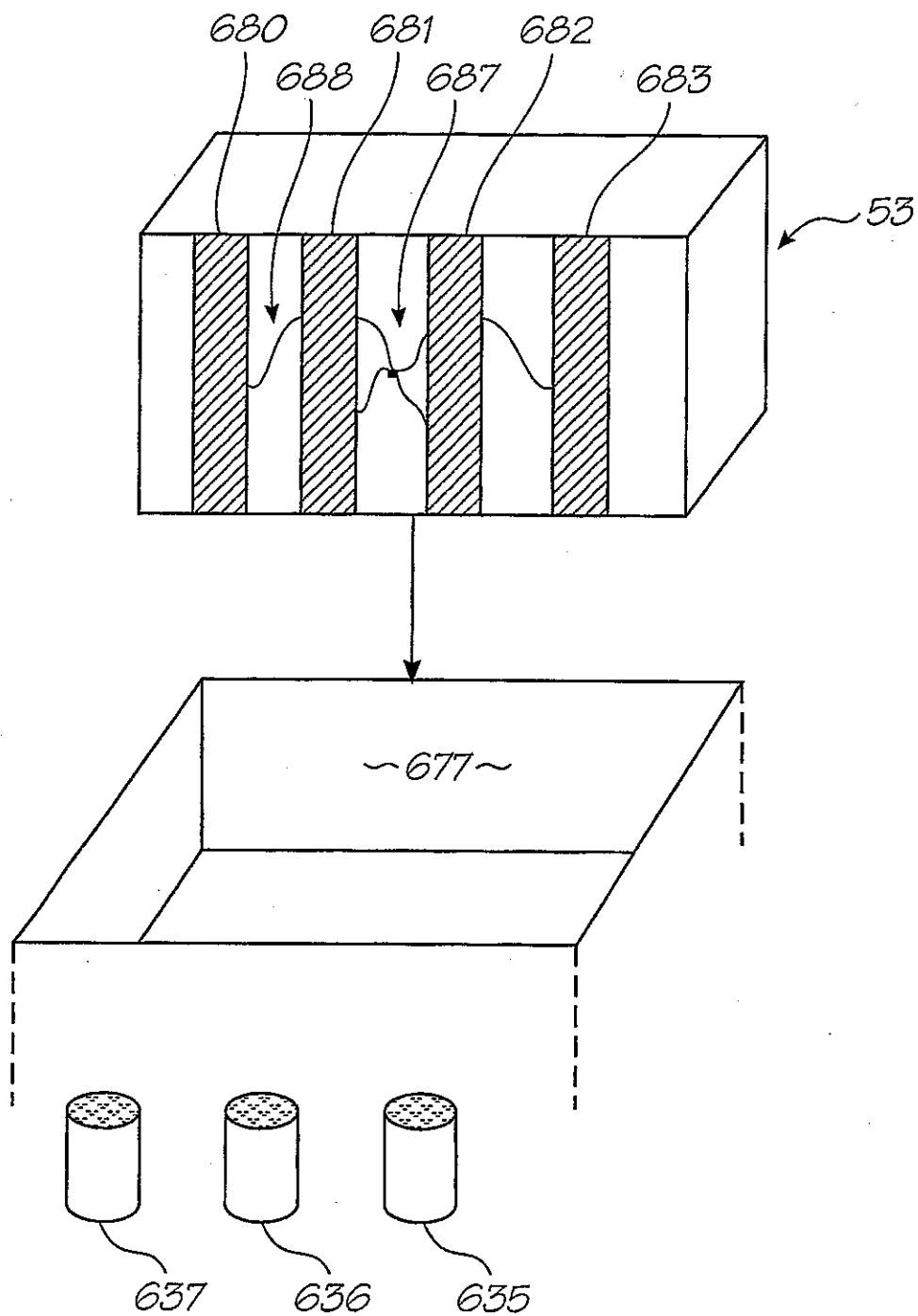


FIG. 165

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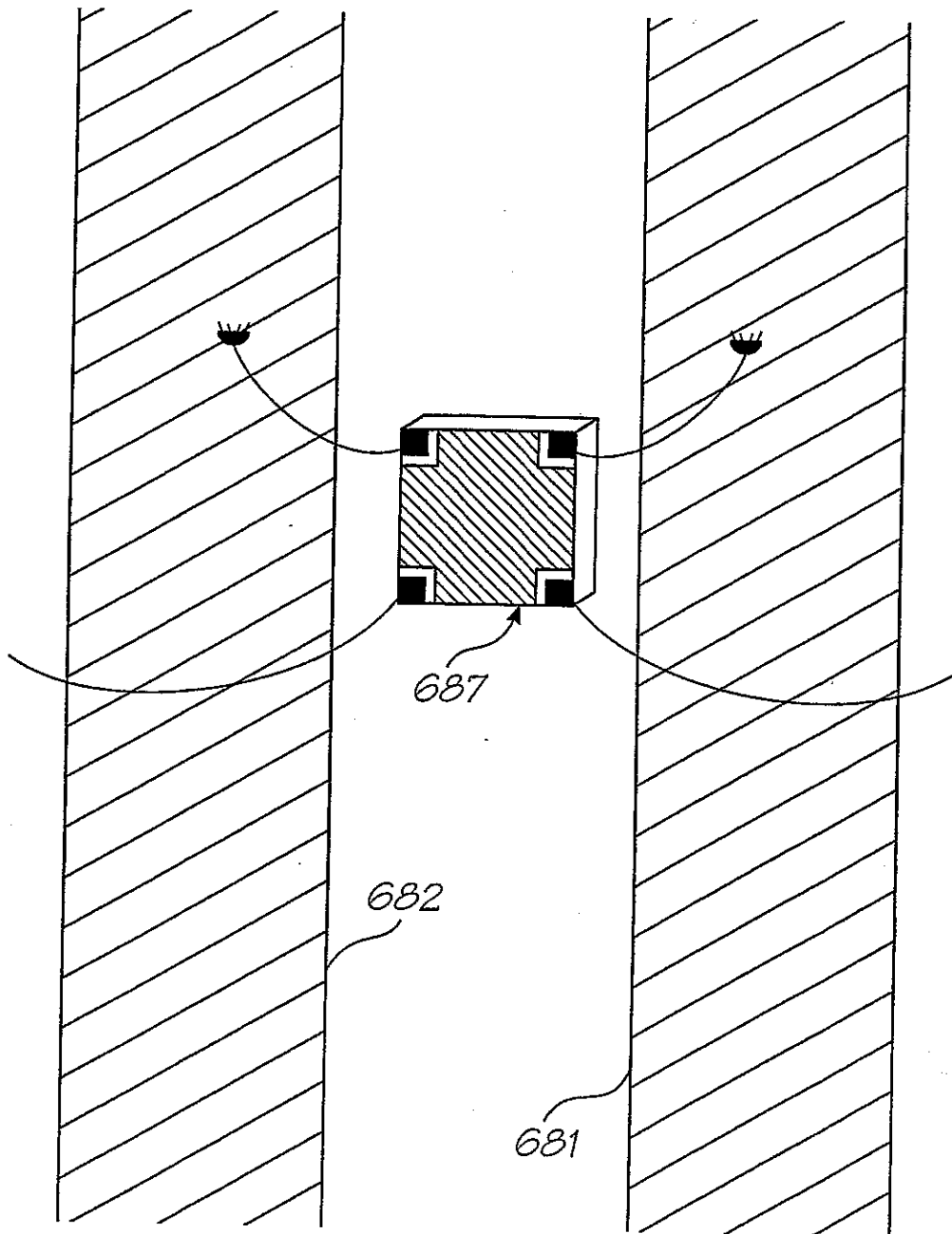


FIG. 166

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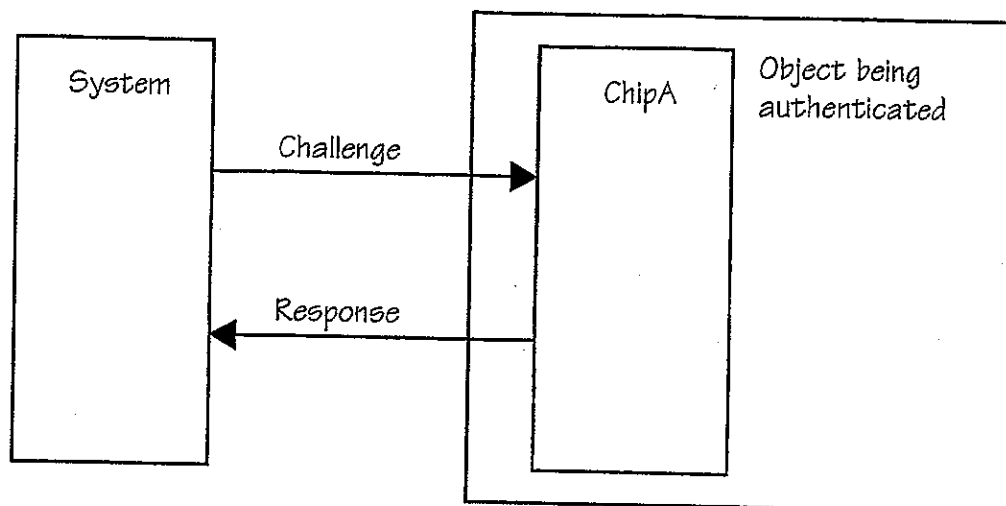


FIG. 167

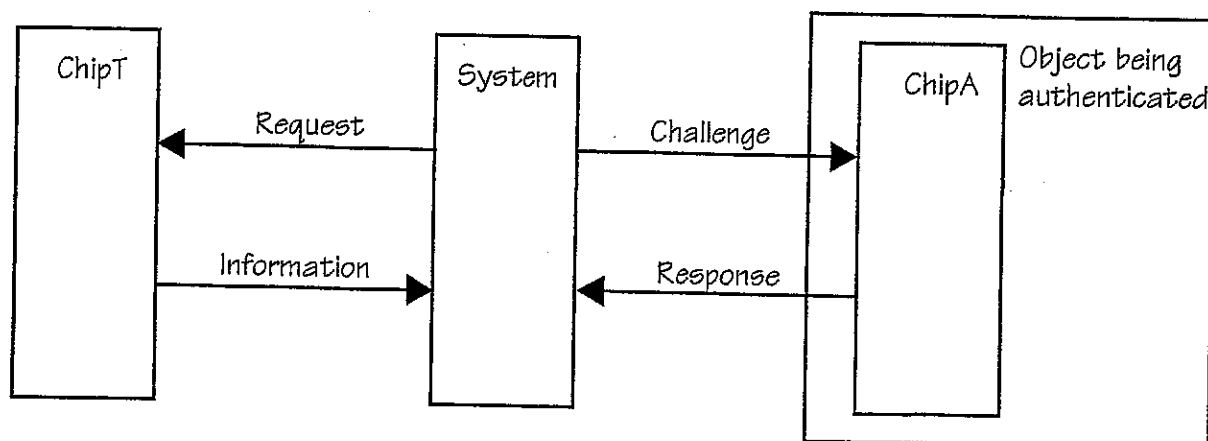


FIG. 168

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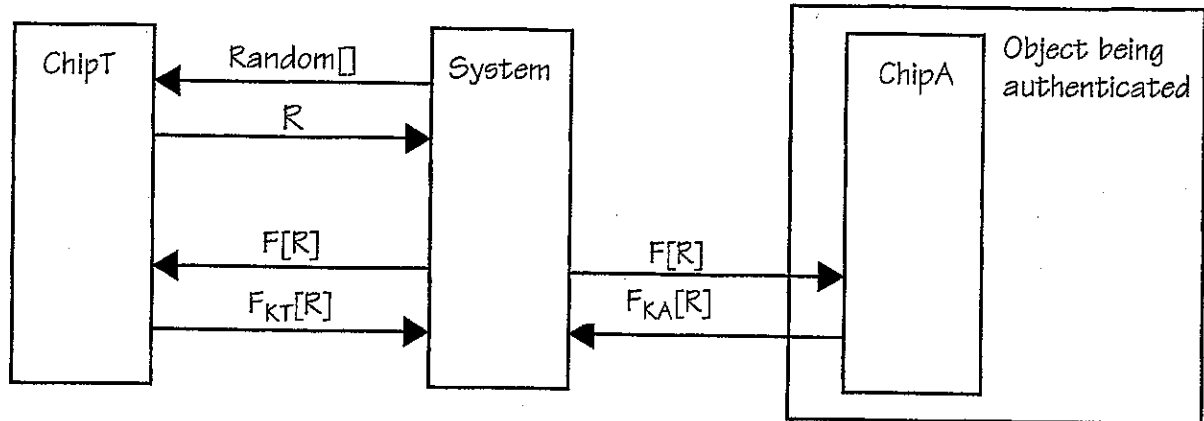


FIG. 169

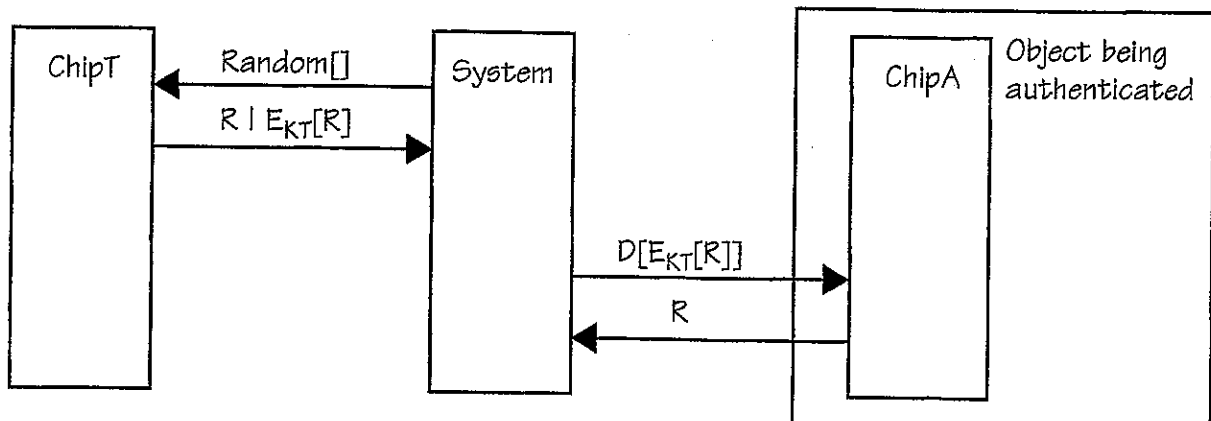


FIG. 170

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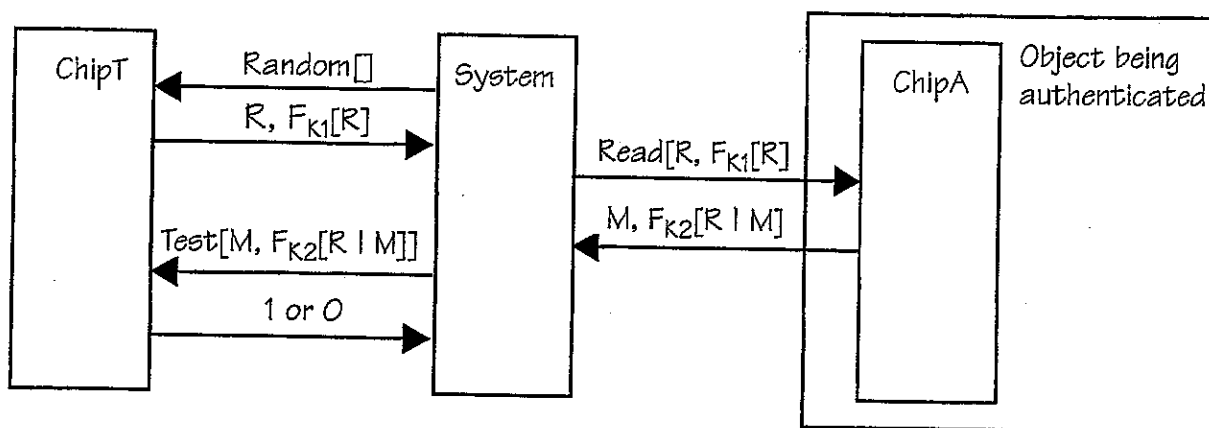


FIG. 171

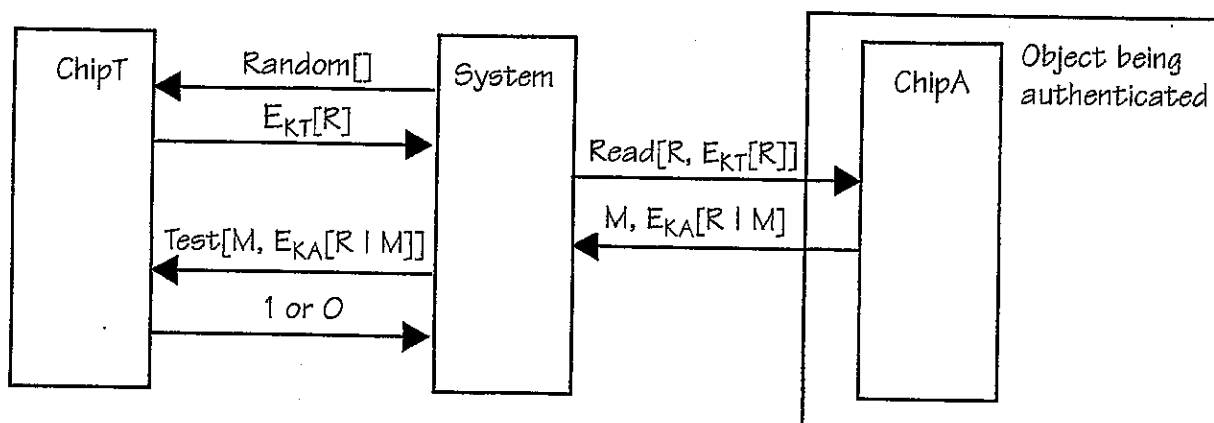


FIG. 172

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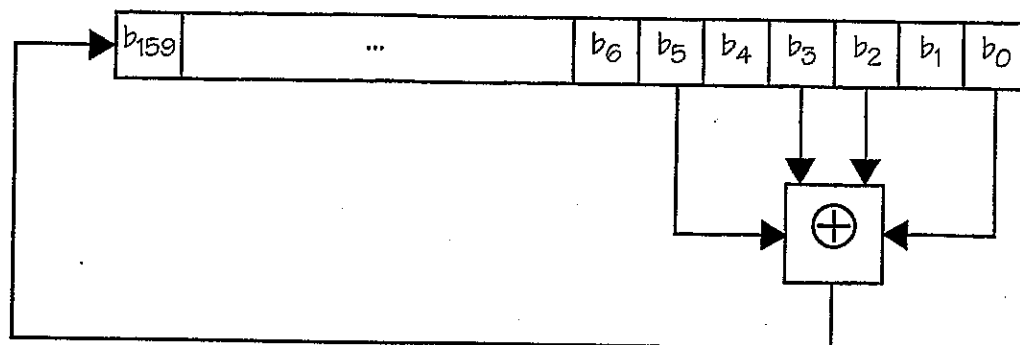


FIG. 173

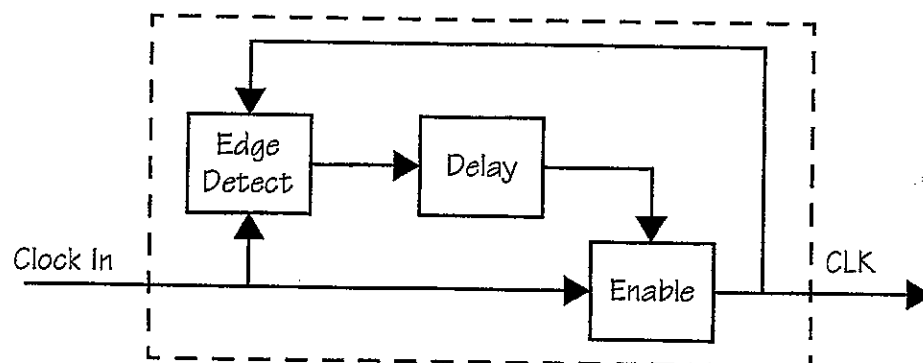


FIG. 174

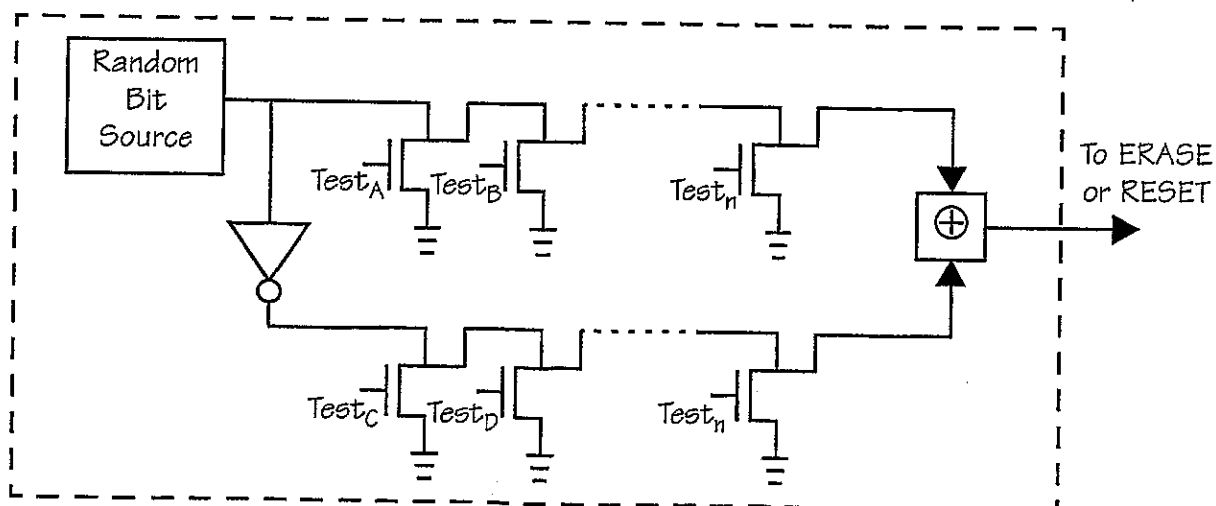


FIG. 175

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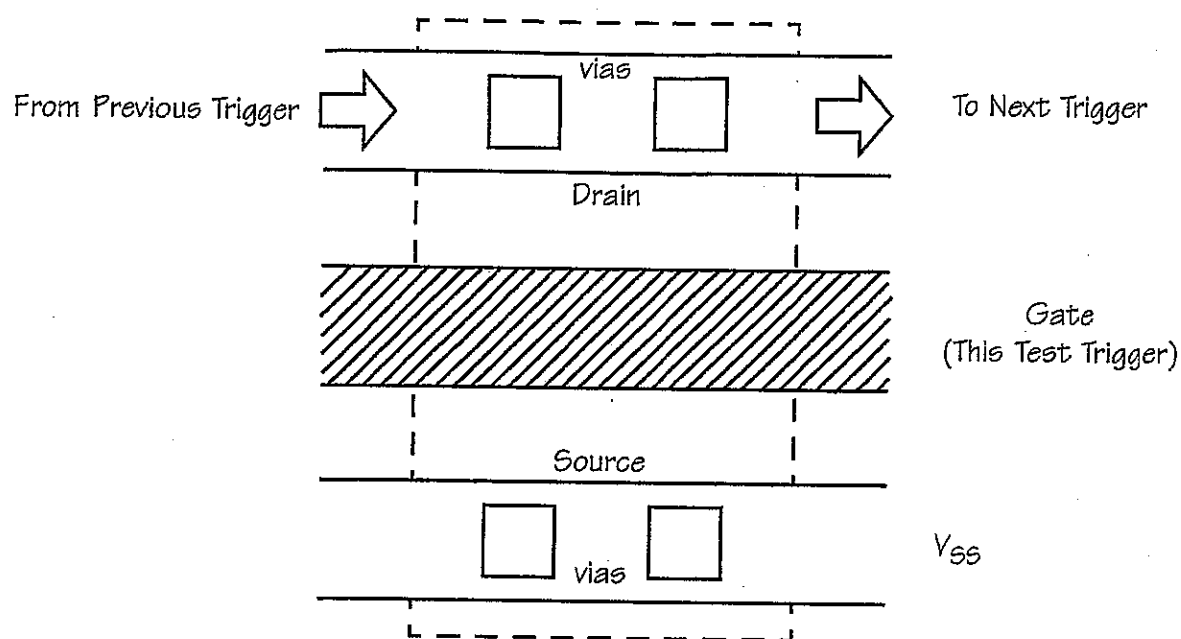


FIG. 176

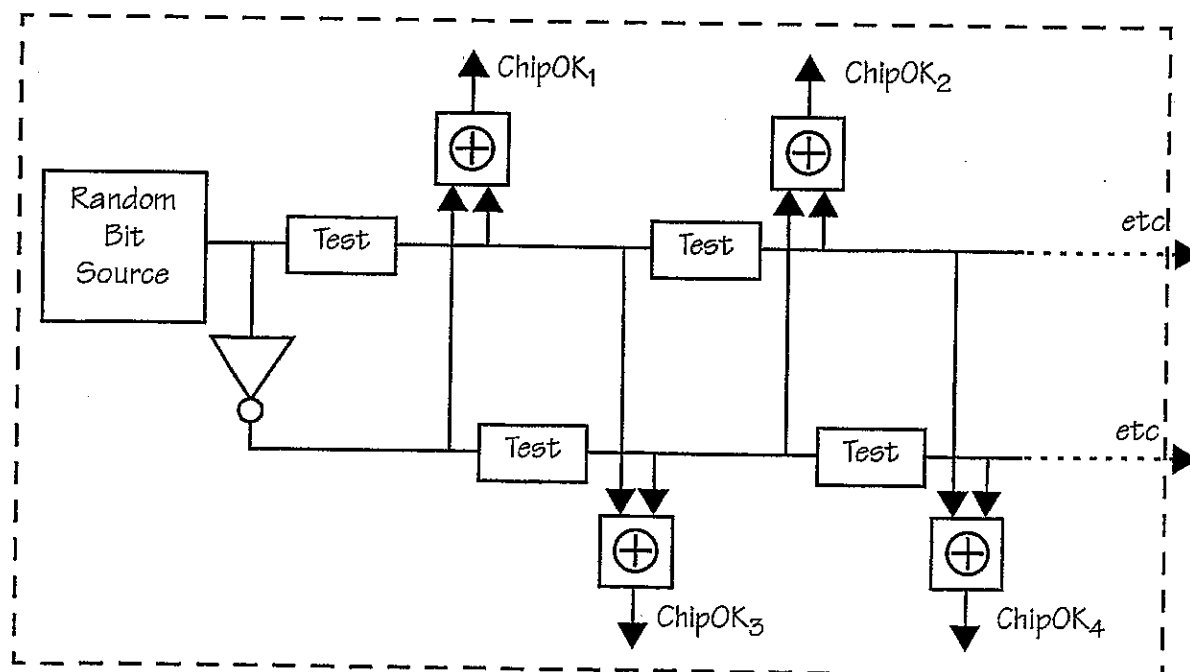


FIG. 177

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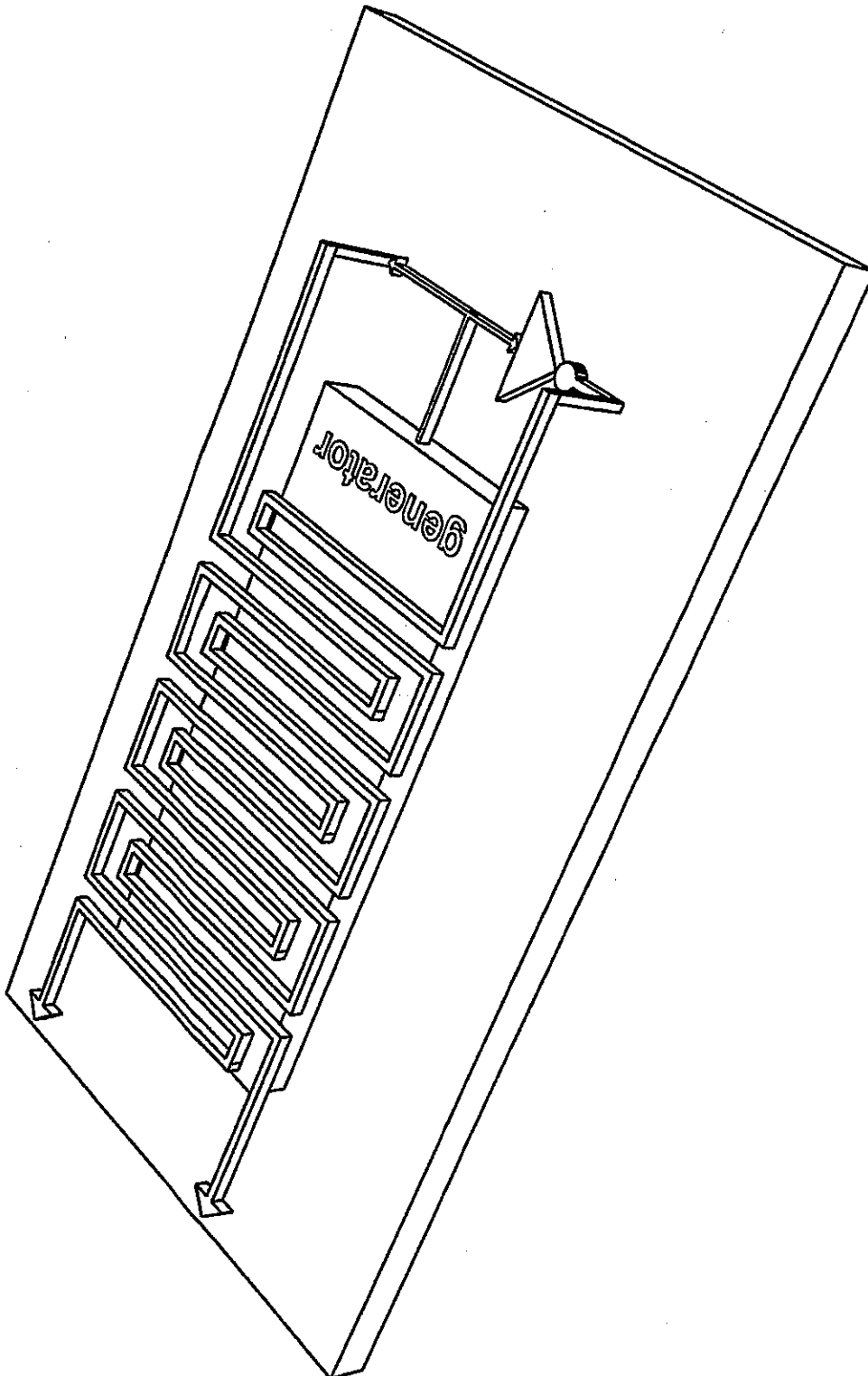


FIG. 178

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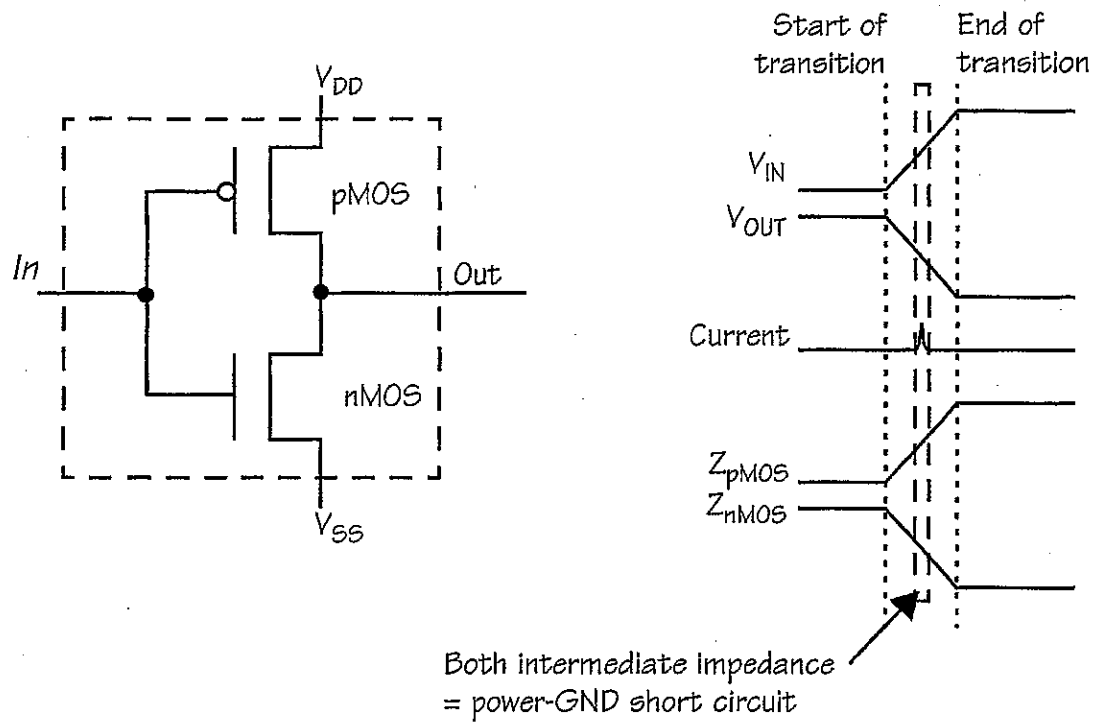


FIG. 179

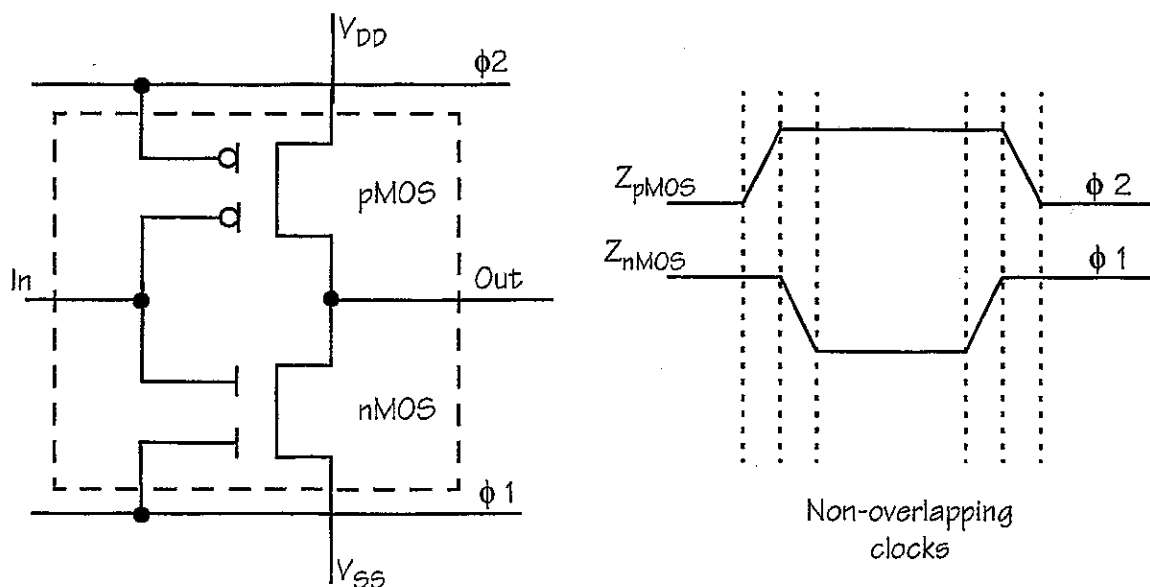


FIG. 180

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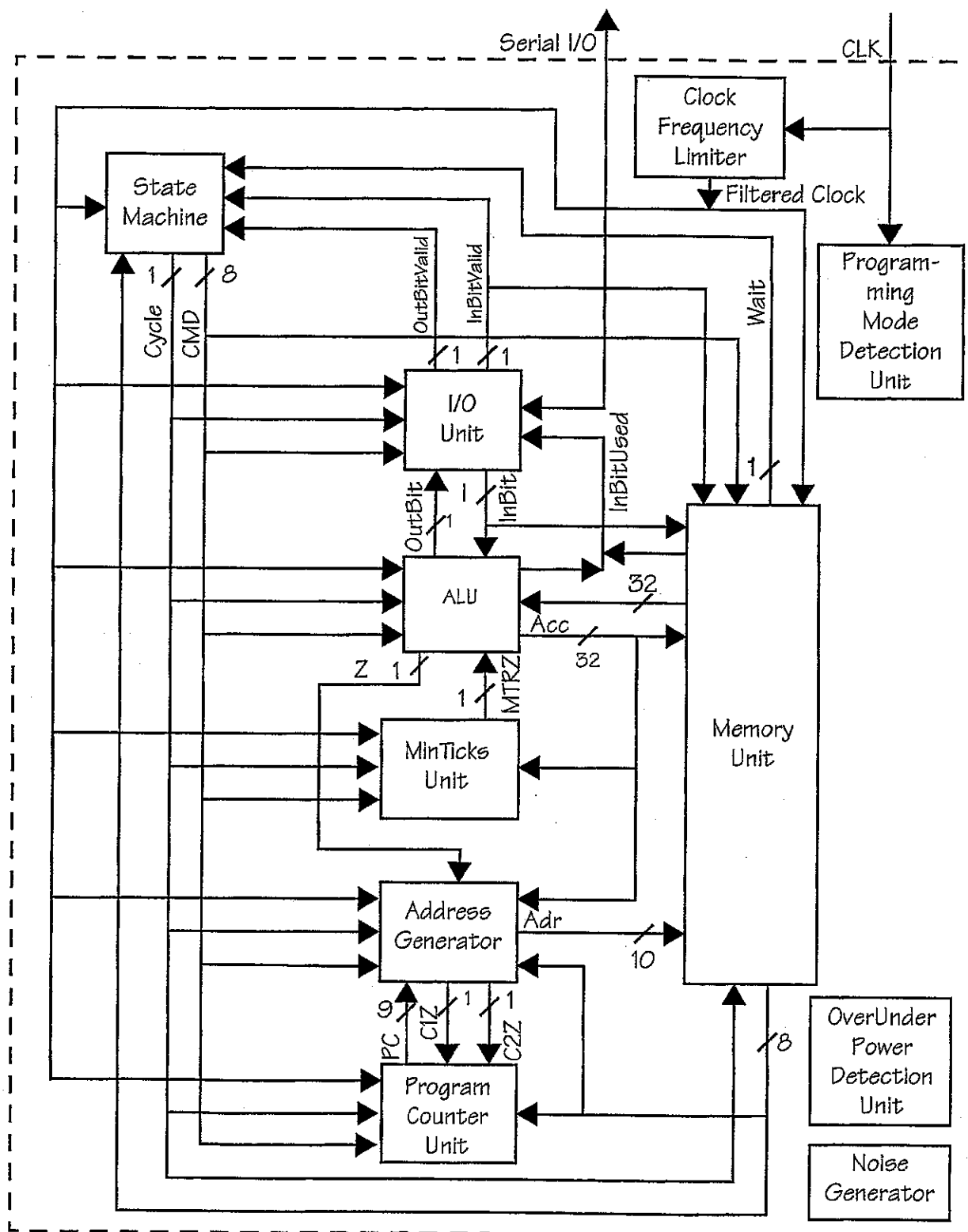


FIG. 181

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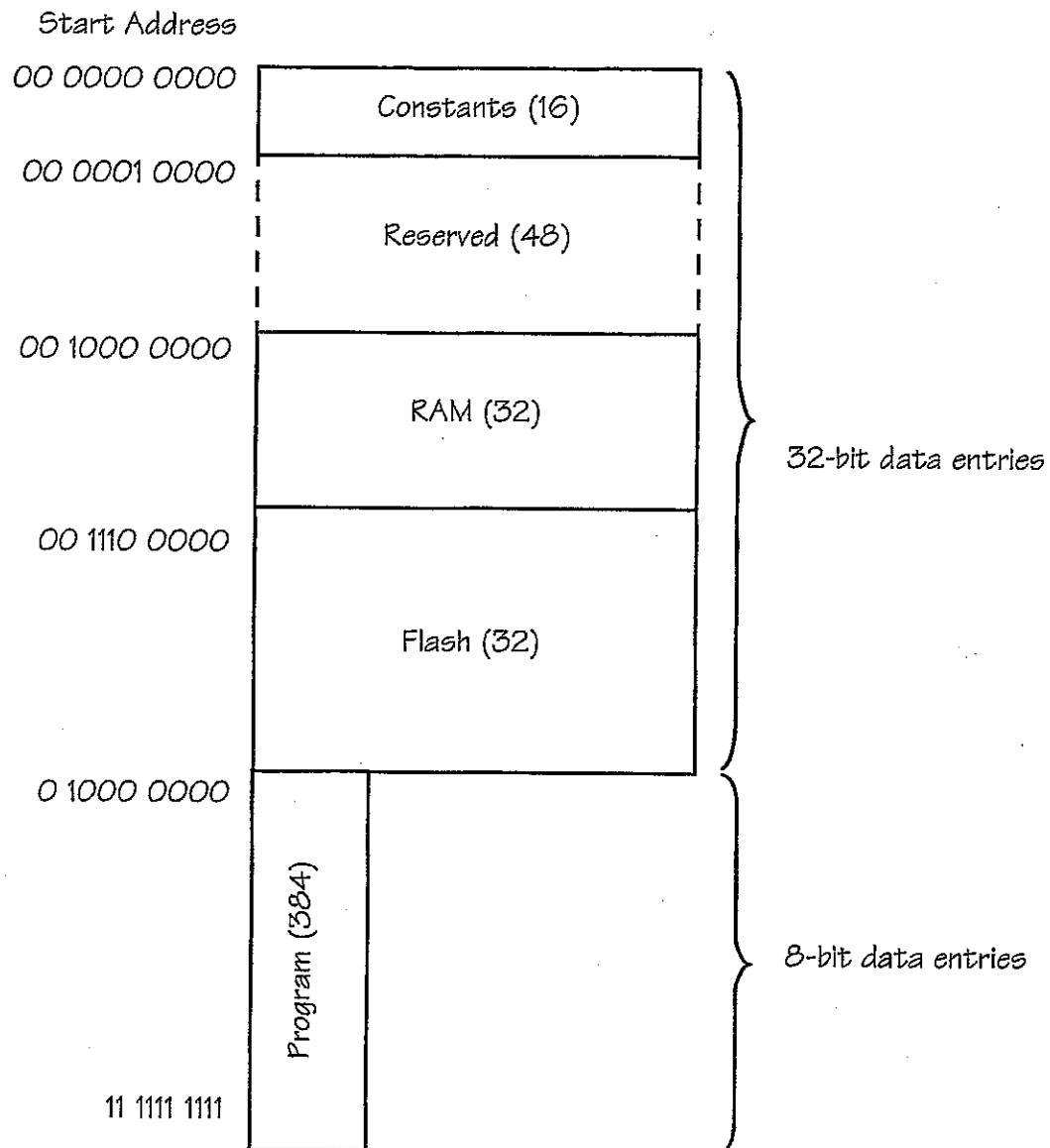


FIG. 182

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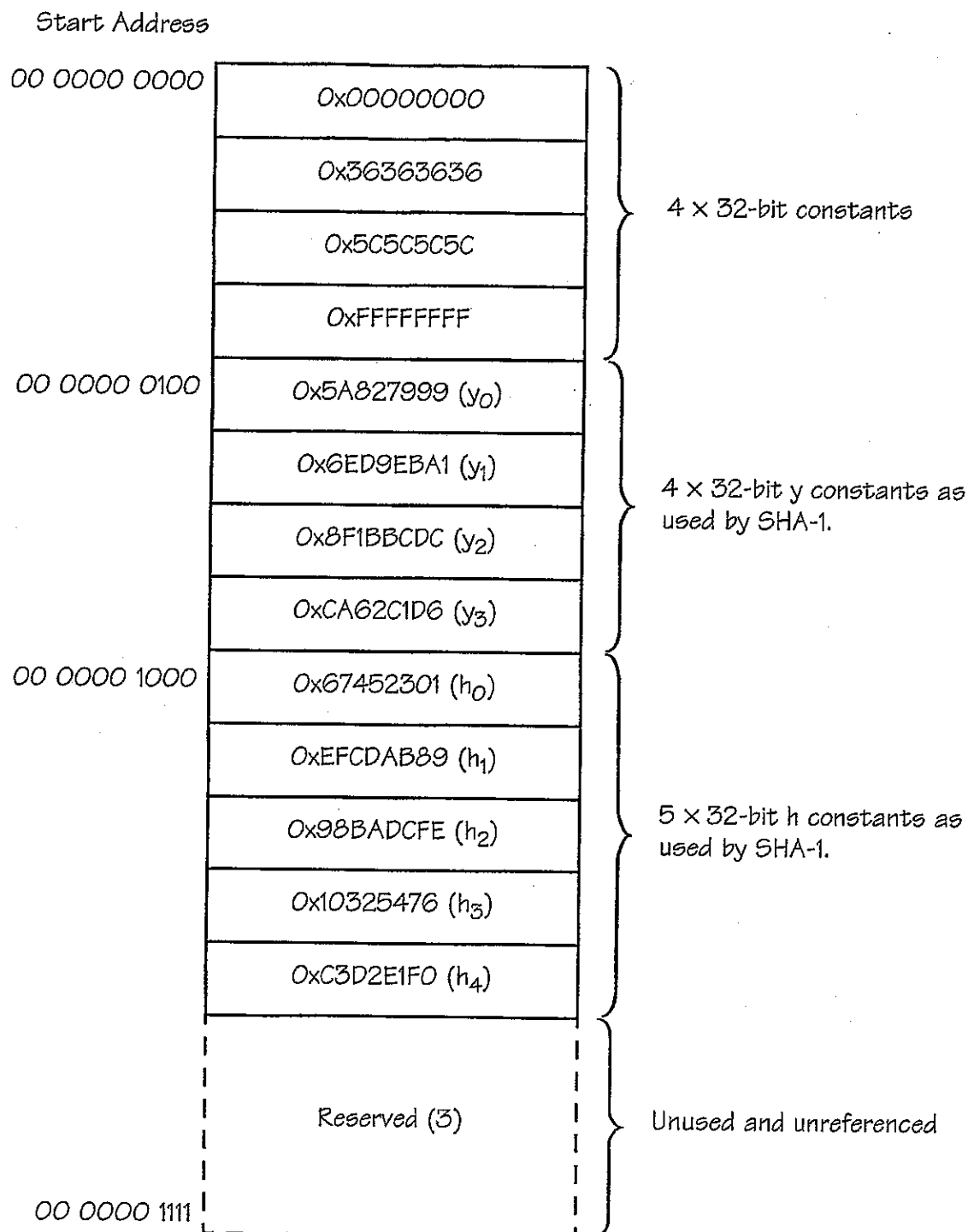


FIG. 183

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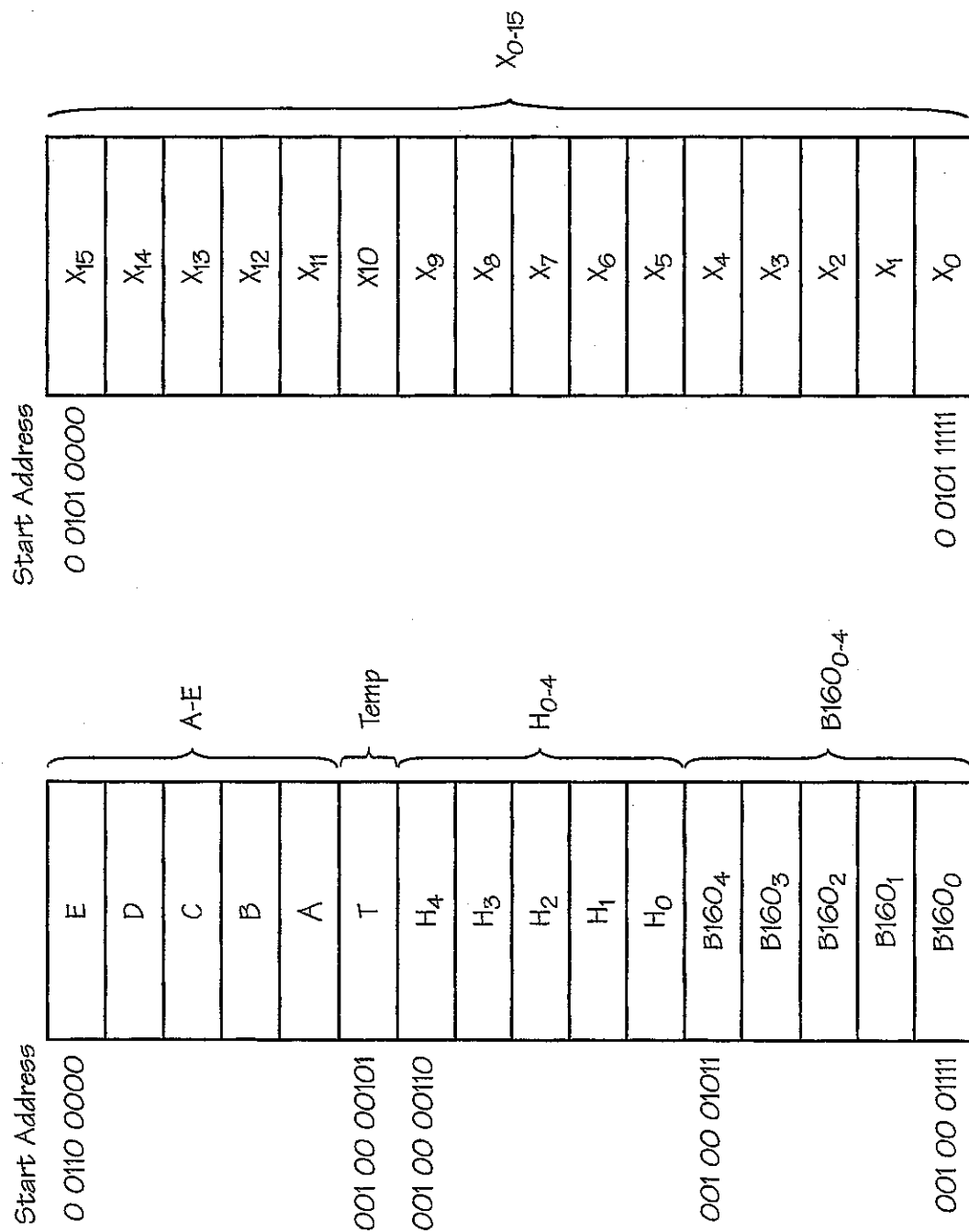


FIG. 184

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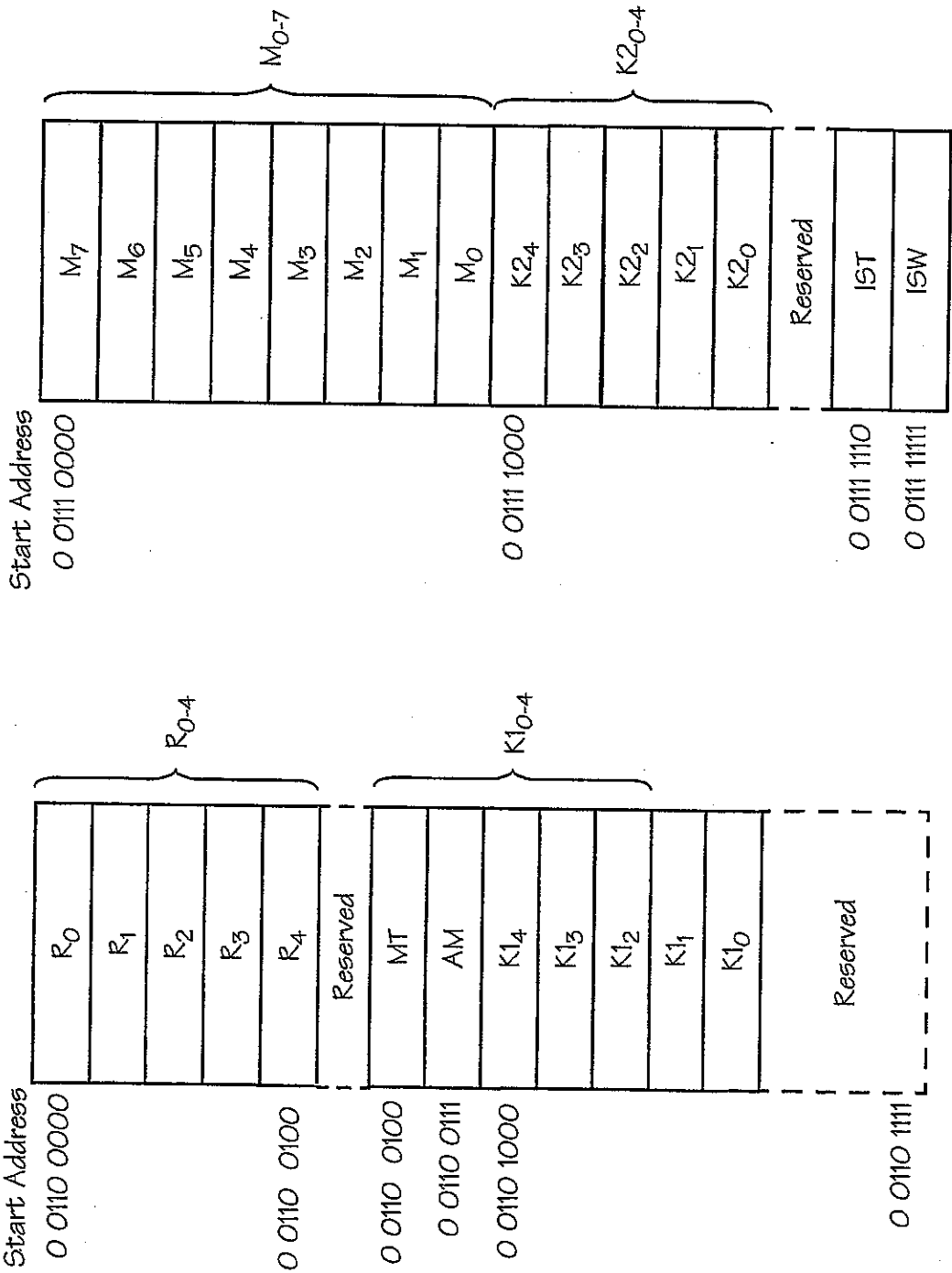


FIG. 185

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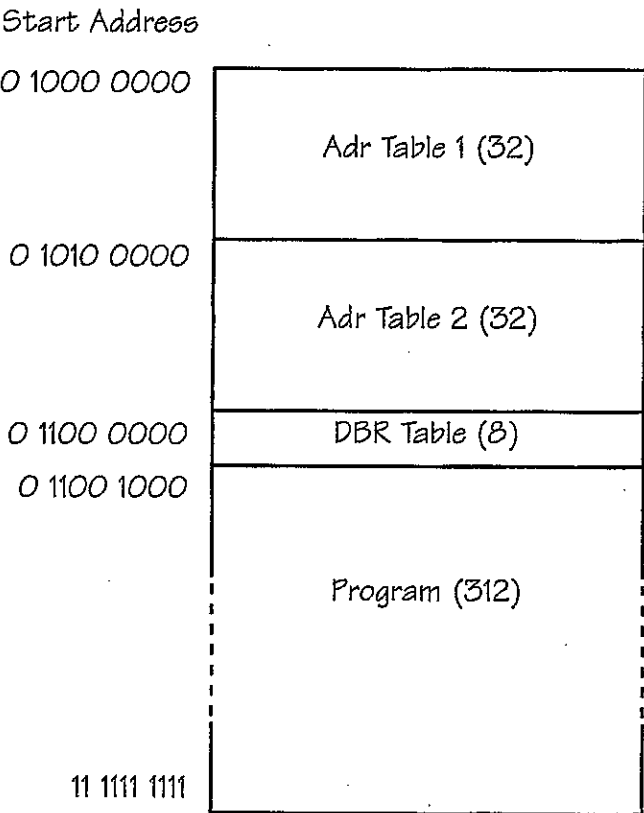


FIG. 186

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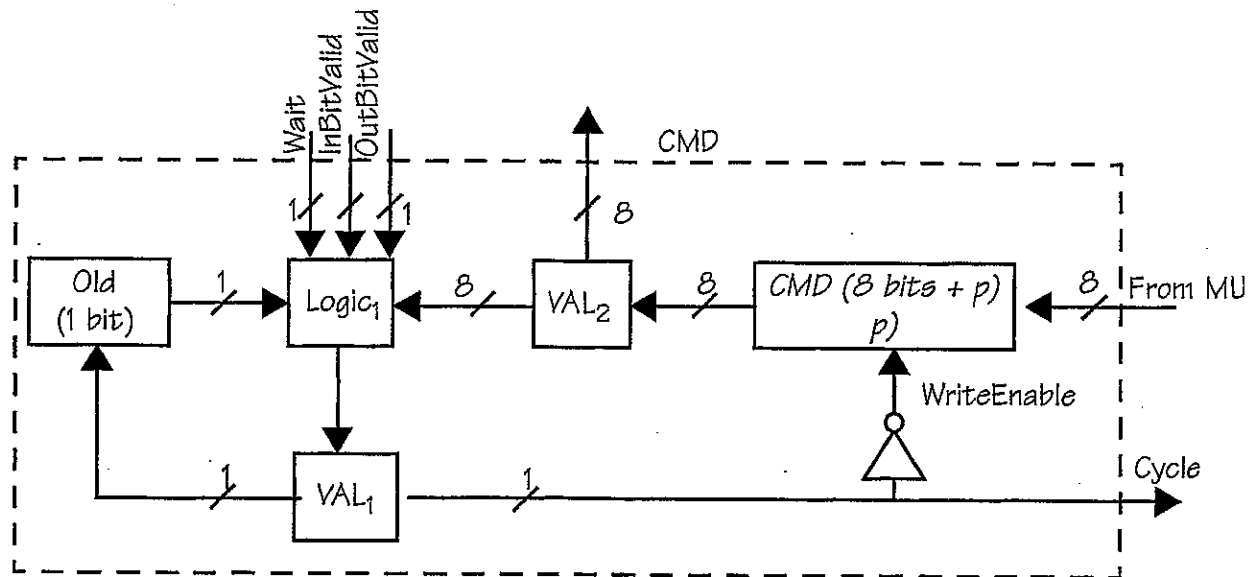


FIG. 187

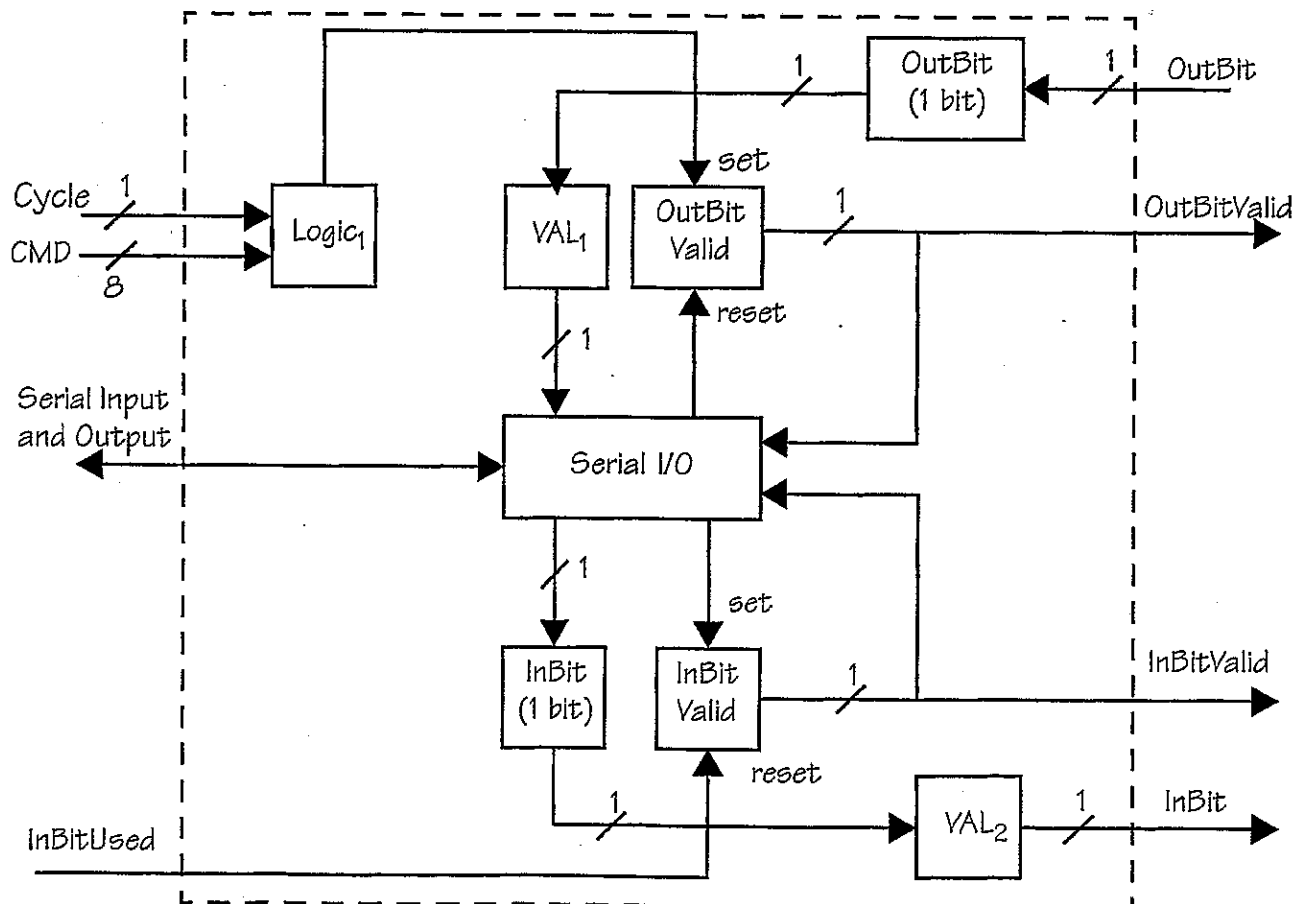


FIG. 188

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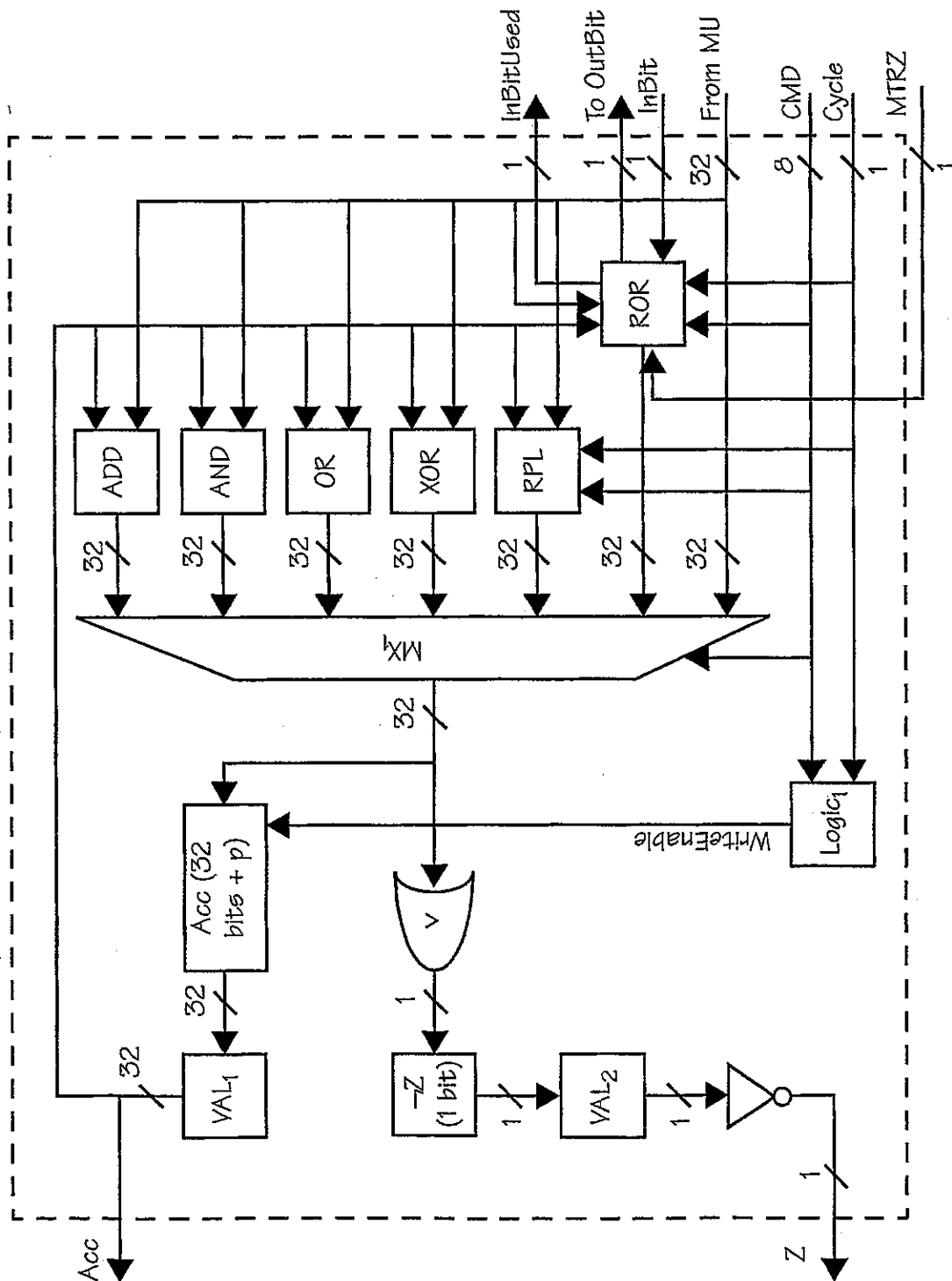


FIG. 189

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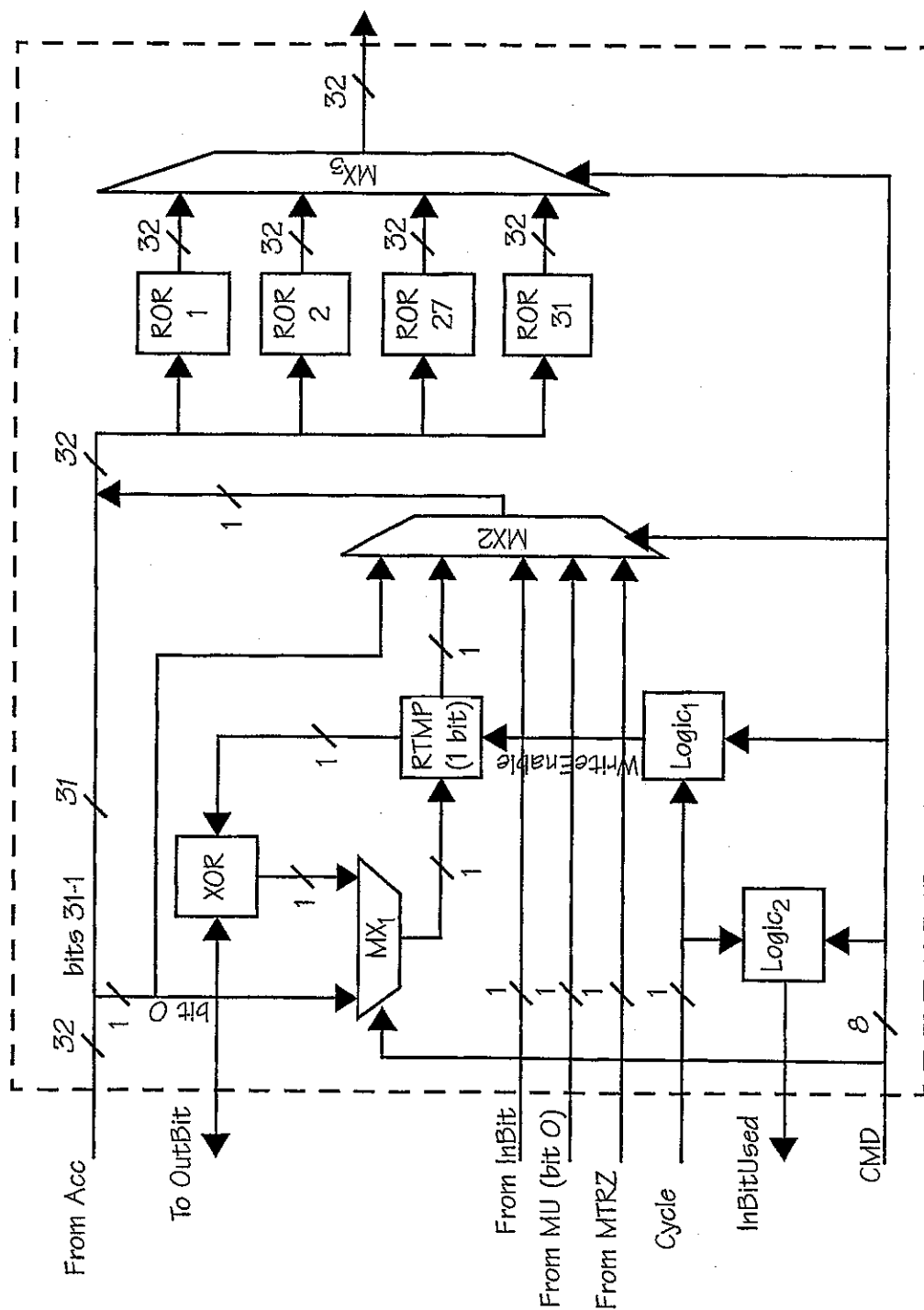


FIG. 190

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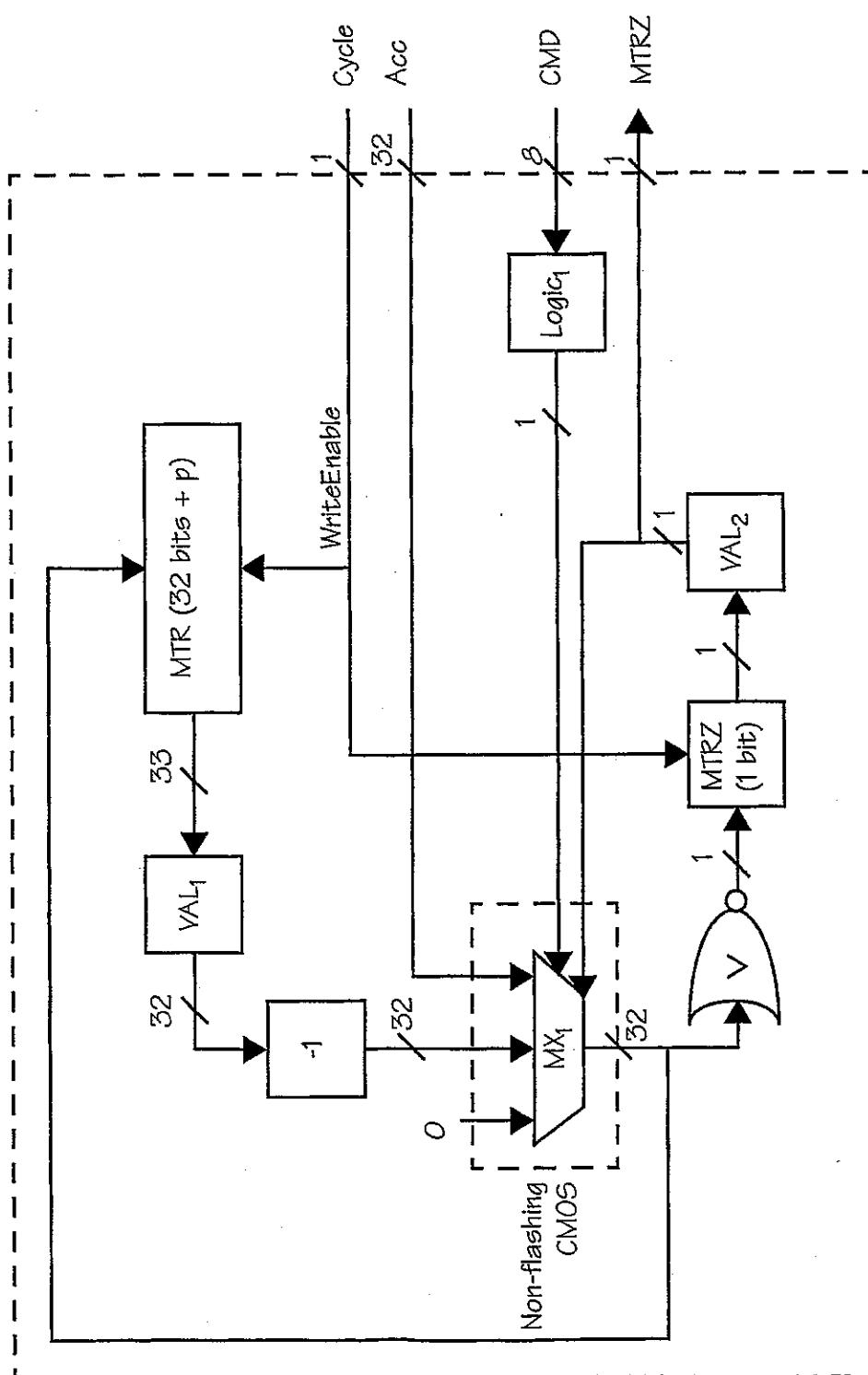


FIG. 191

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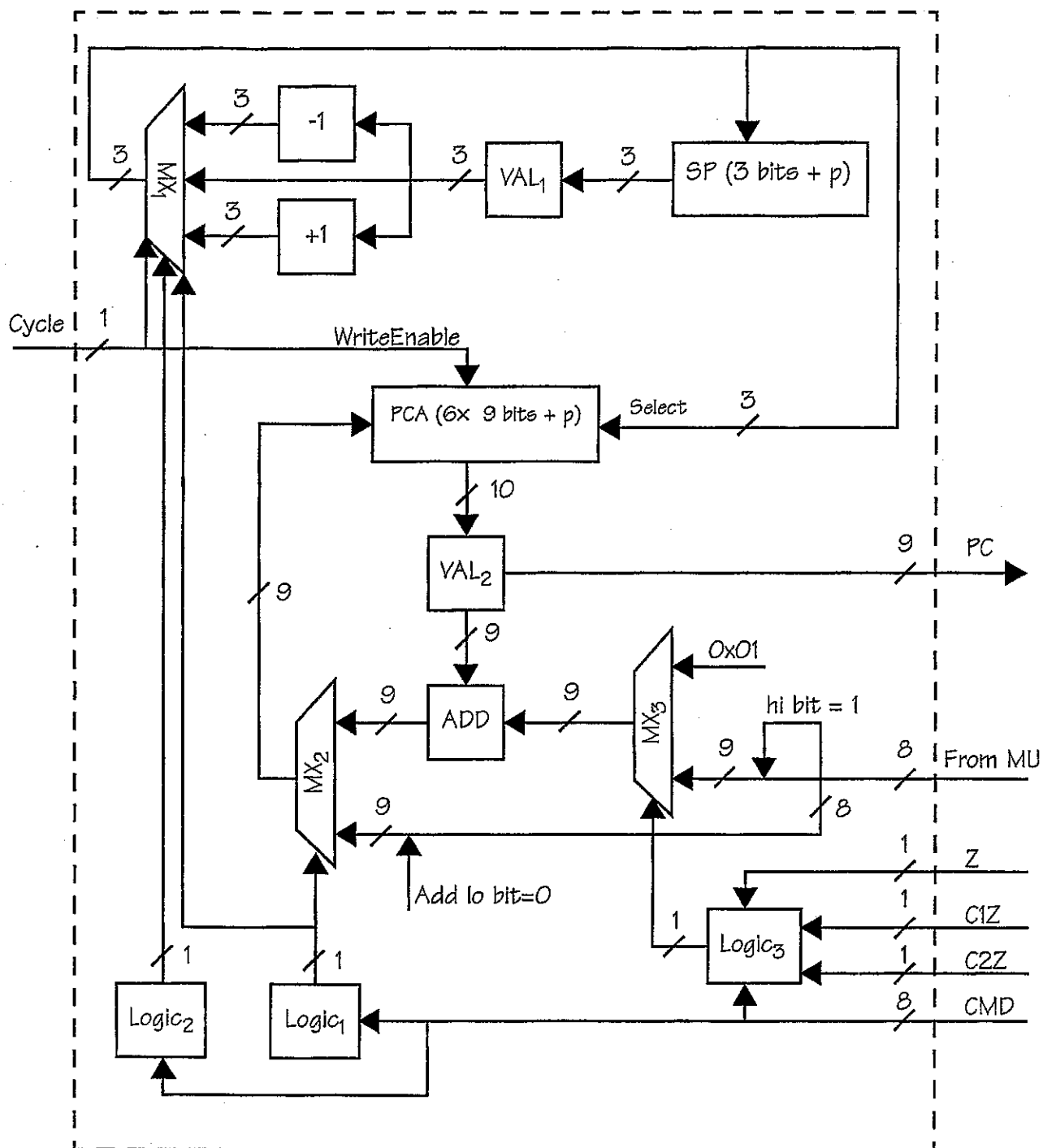


FIG. 192

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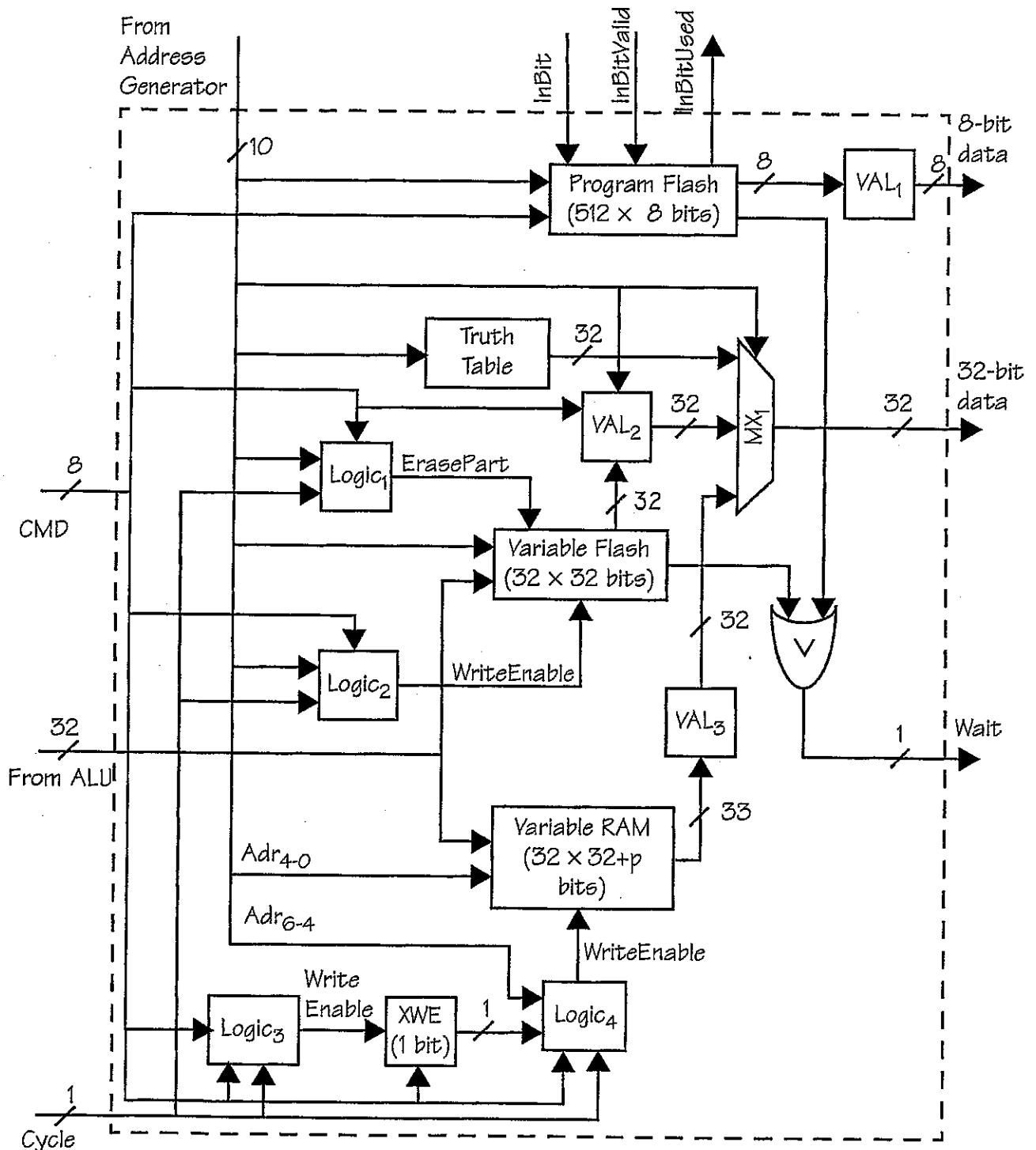


FIG. 193

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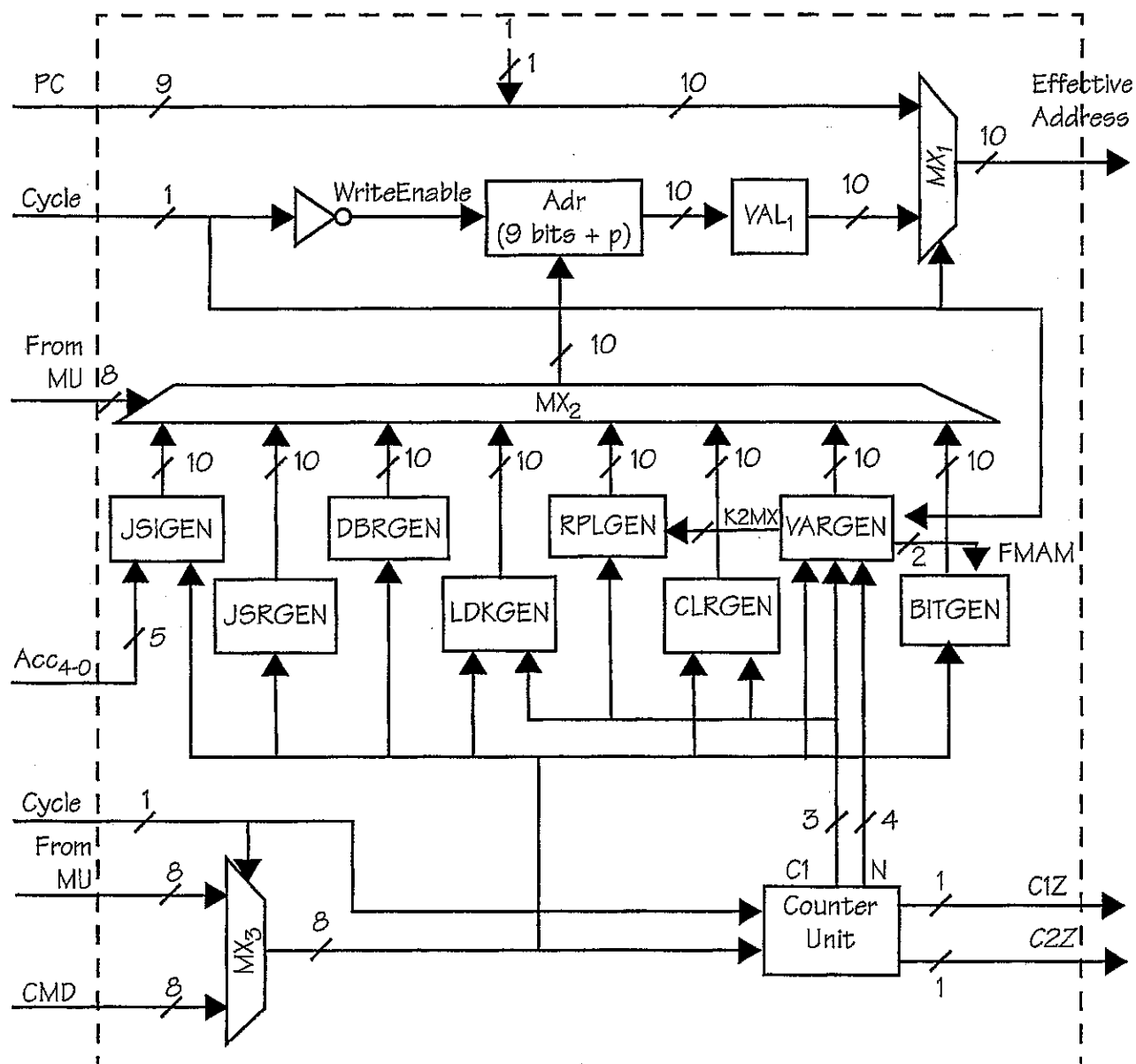


FIG. 194

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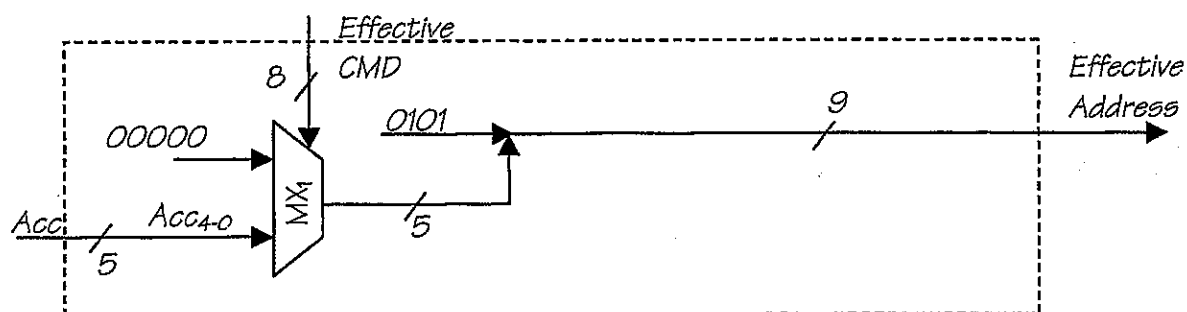


FIG. 195

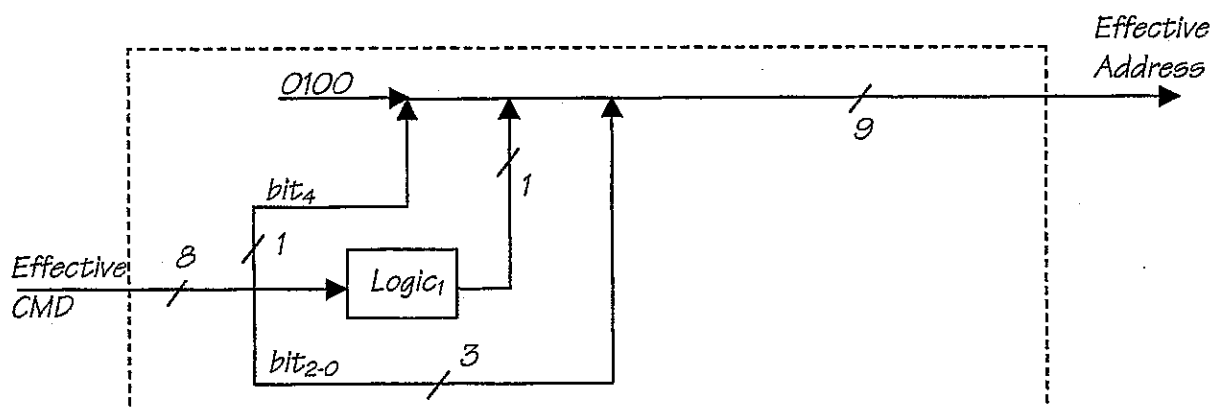


FIG. 196

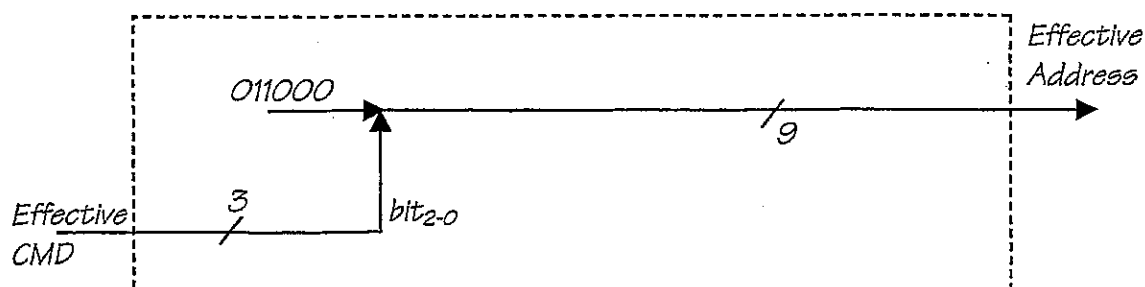


FIG. 197

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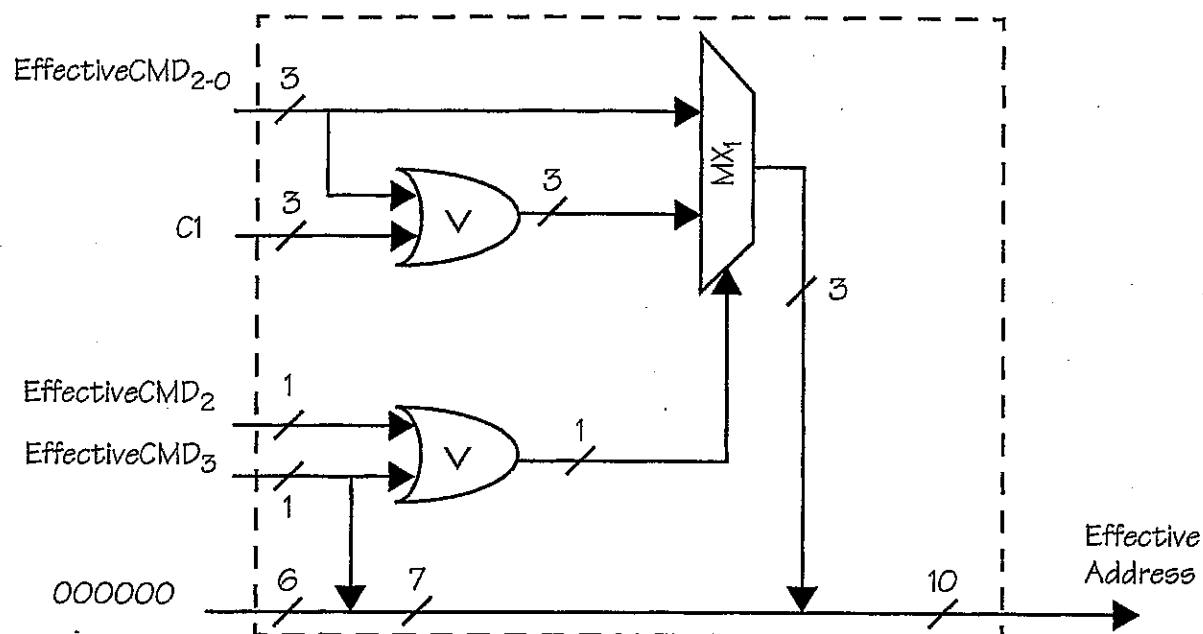


FIG. 198

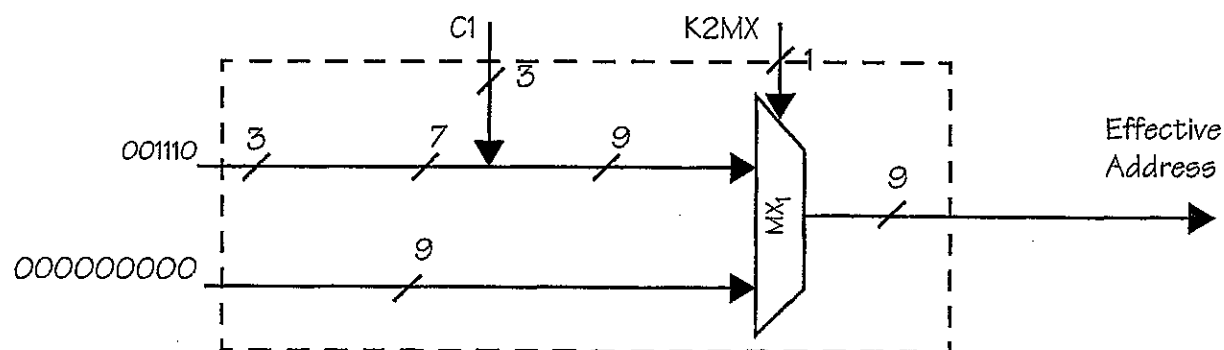


FIG. 199

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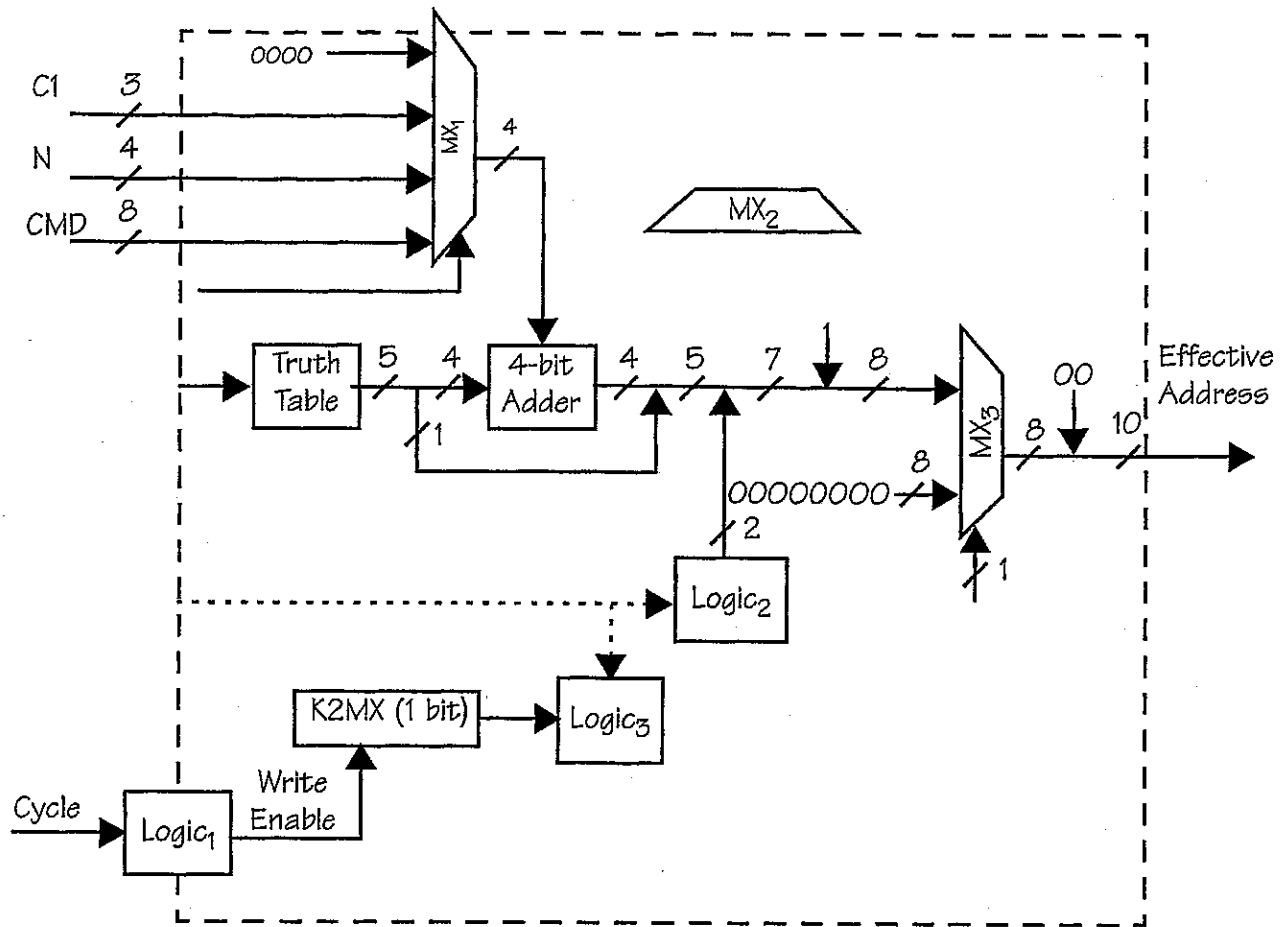


FIG. 200

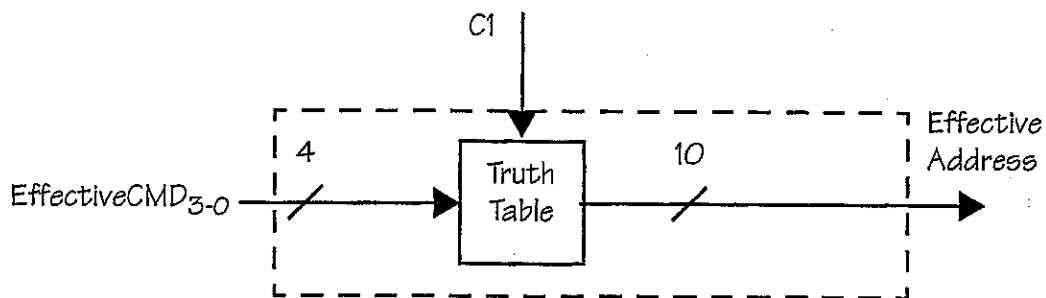


FIG. 201

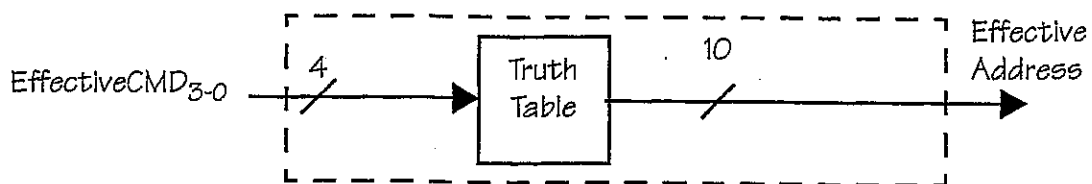


FIG. 202

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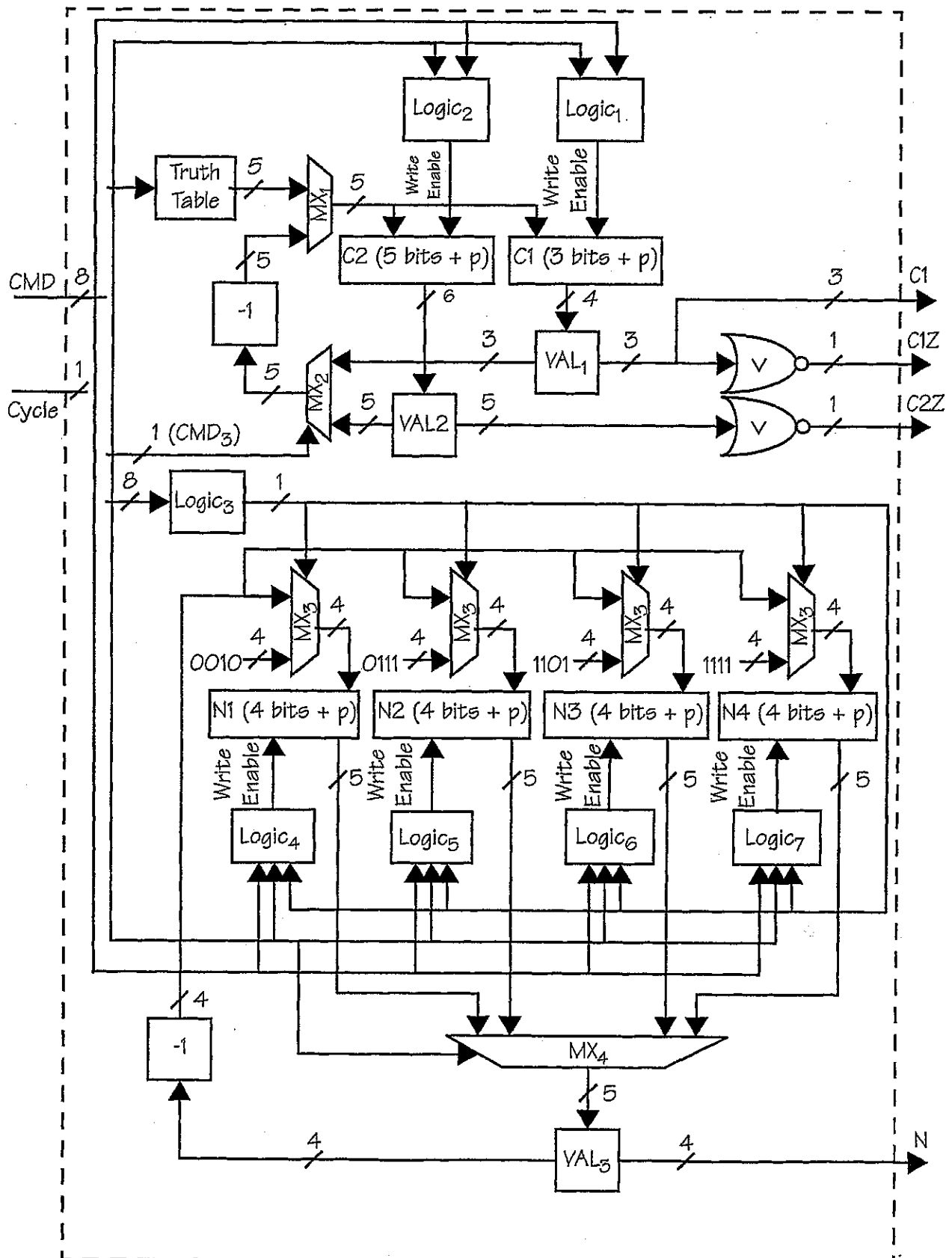
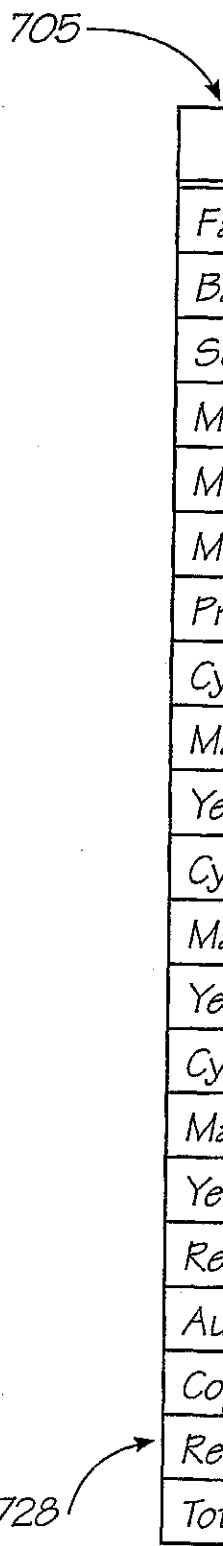


FIG. 203

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DATA TYPE	BITS
Factory Code	16
Batch Number	32
Serial Number	48
Manufacturing Date	16
Media Length	24
Media Type	8
Preprinted Media Length	16
Cyan Ink Viscosity	8
Magenta Ink Viscosity	8
Yellow Ink Viscosity	8
Cyan Drop Volume	8
Magenta Drop Volume	8
Yellow Drop Volume	8
Cyan Ink Color	24
Magenta Ink Color	24
Yellow Ink Color	24
Remaining-media Length Indicator	16
Authentication Key	128
Copyrightable bit pattern	512
Reserved for Camera Use	88
Total	1024

728

FIG. 204

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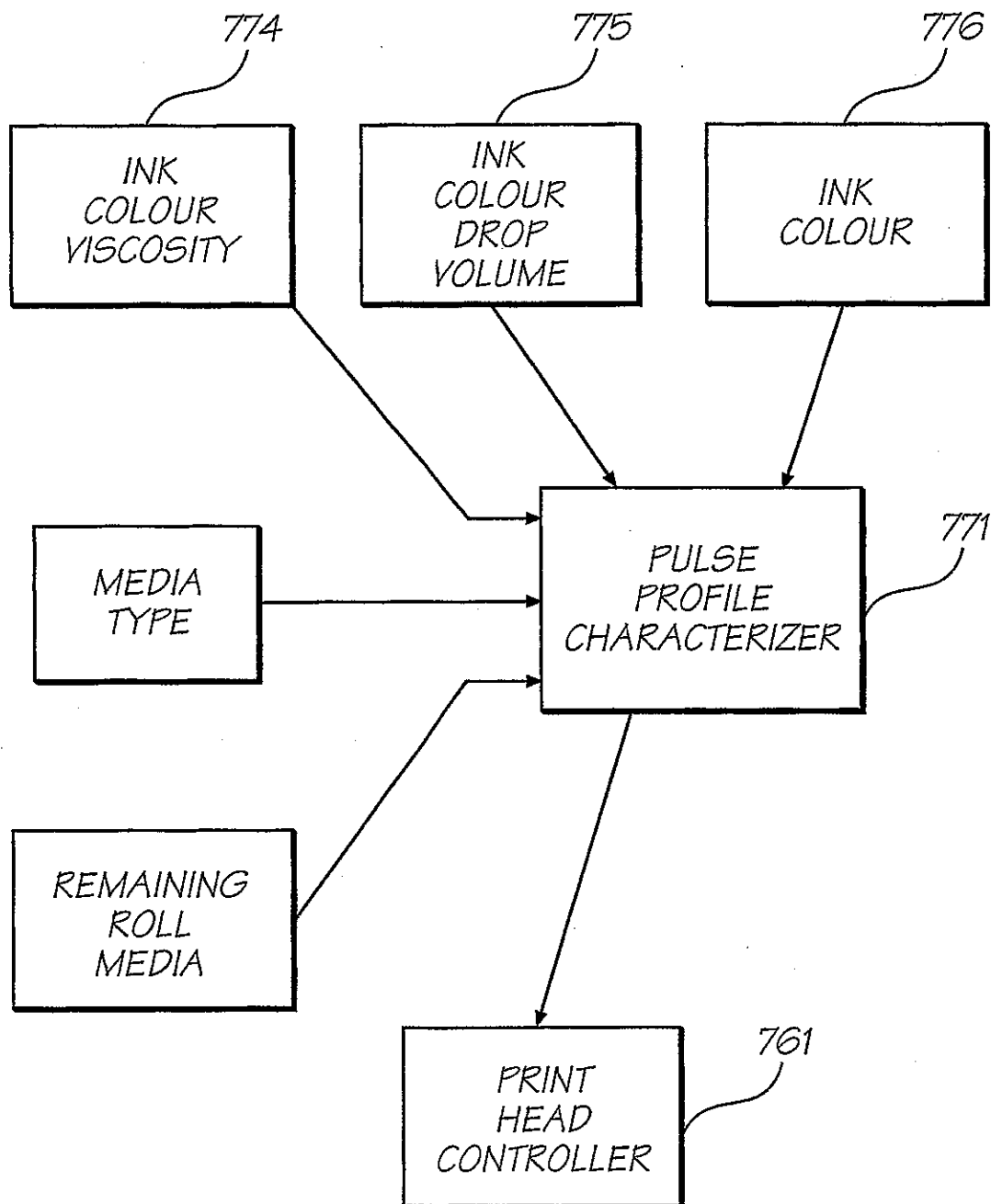


FIG. 205

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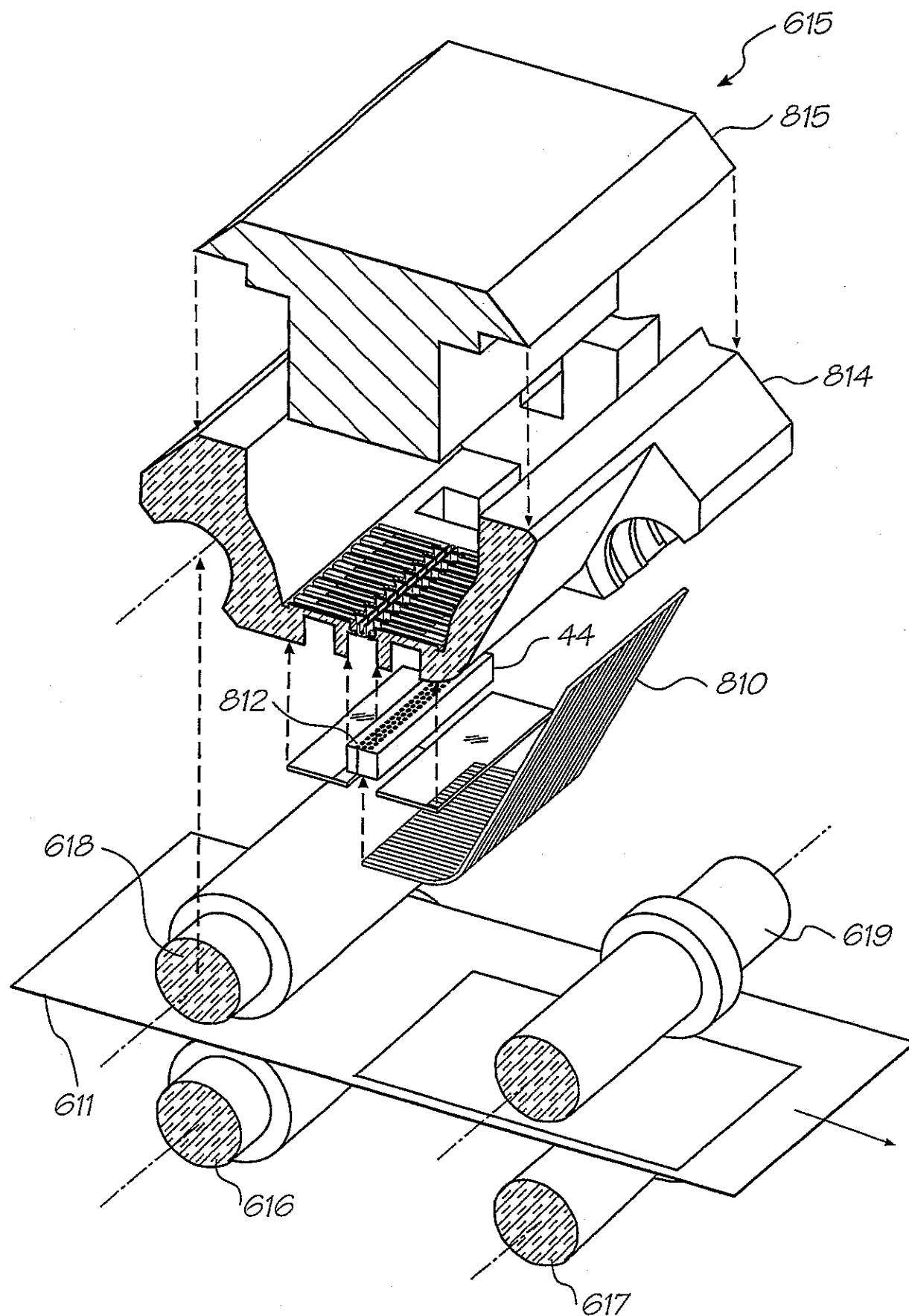


FIG. 206

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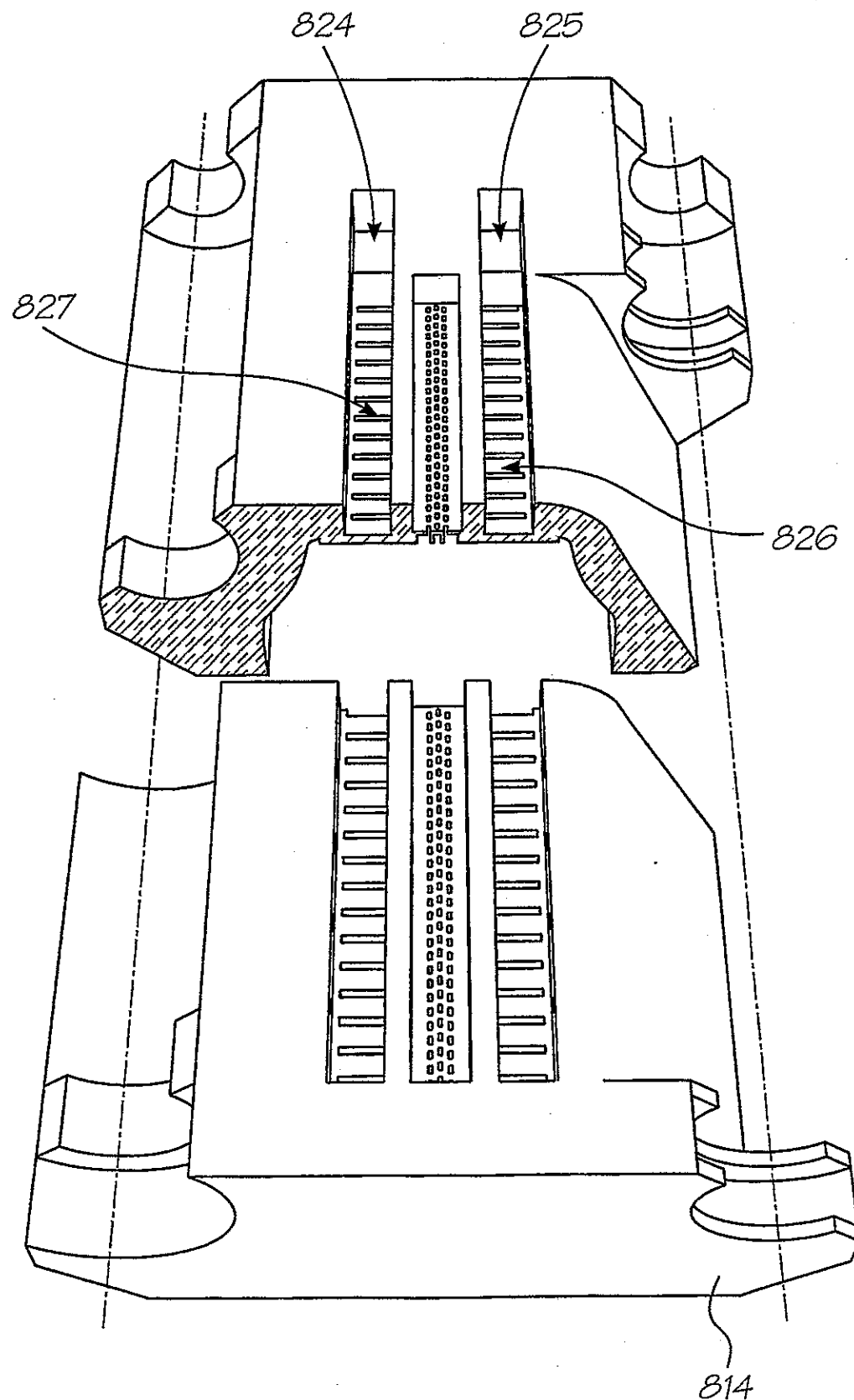
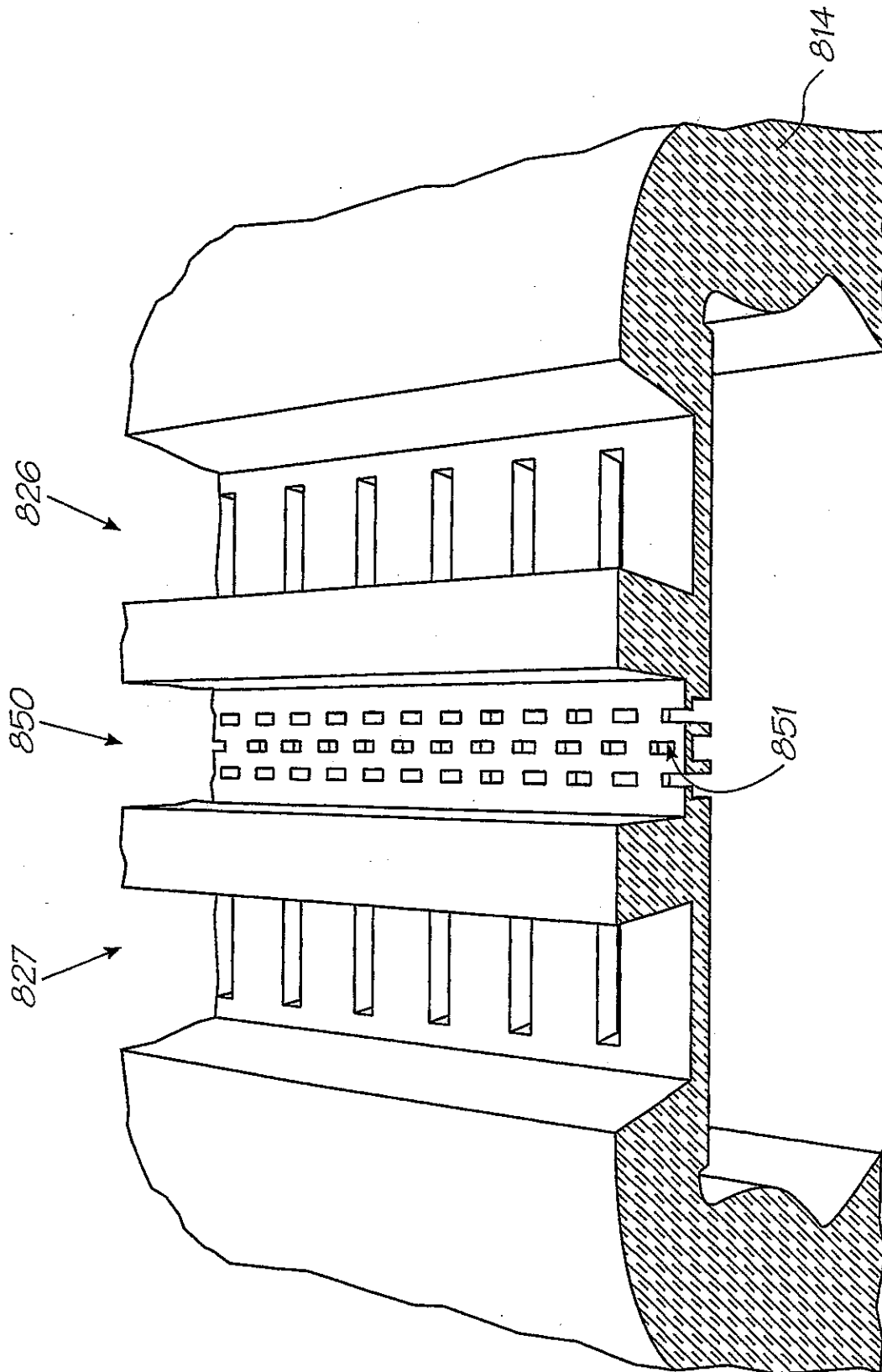


FIG. 207

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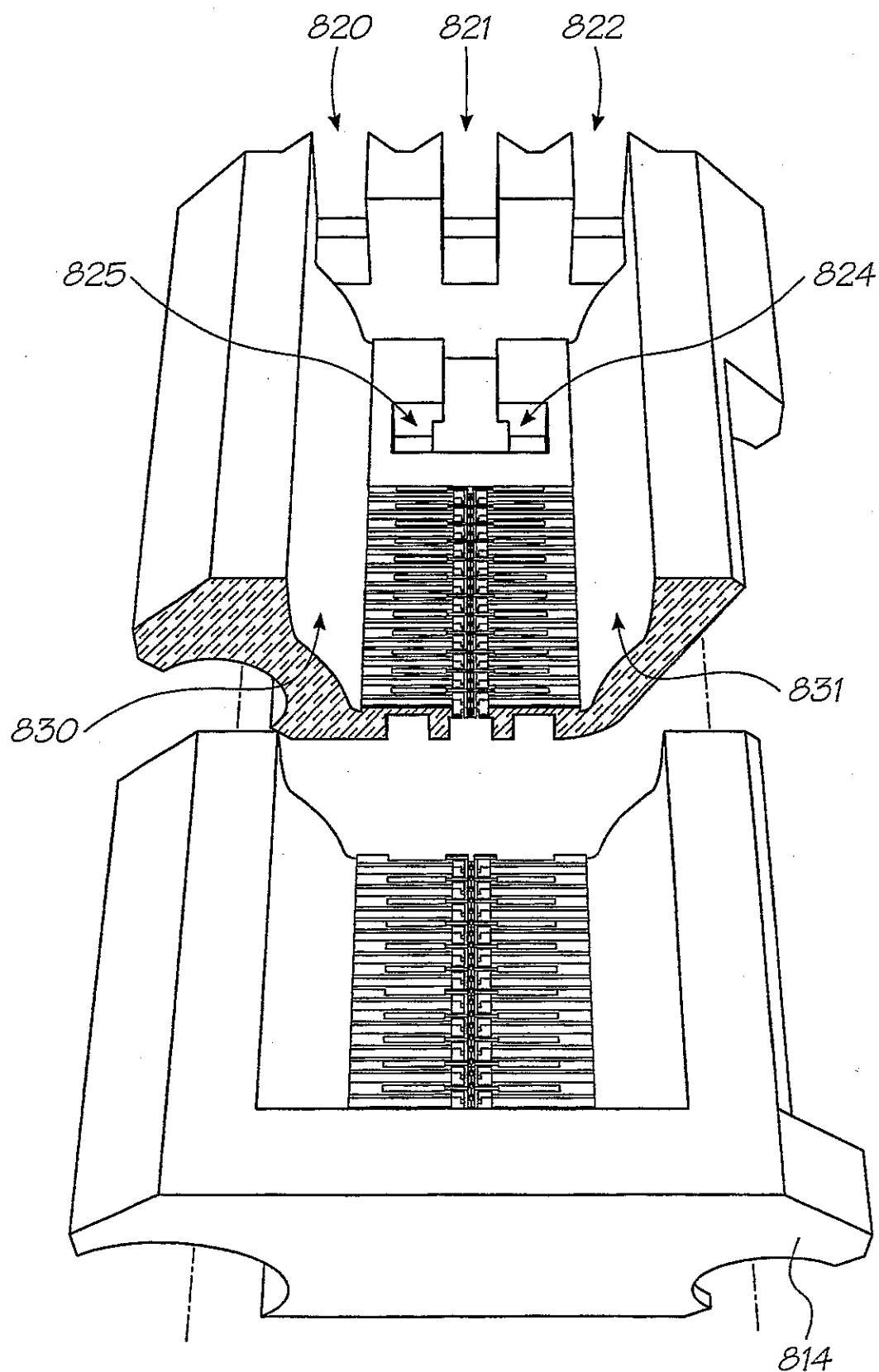


FIG. 209

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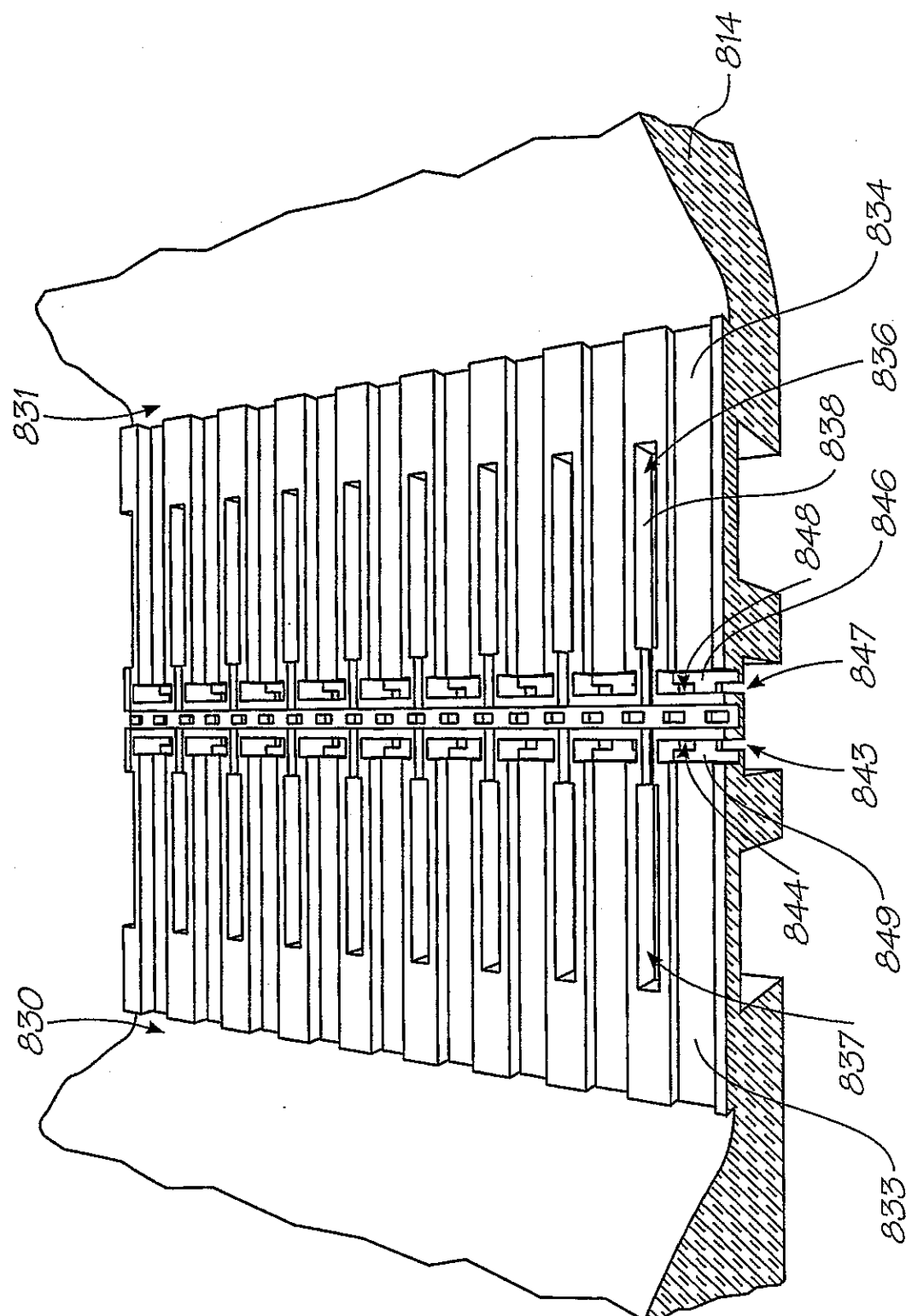


FIG. 210

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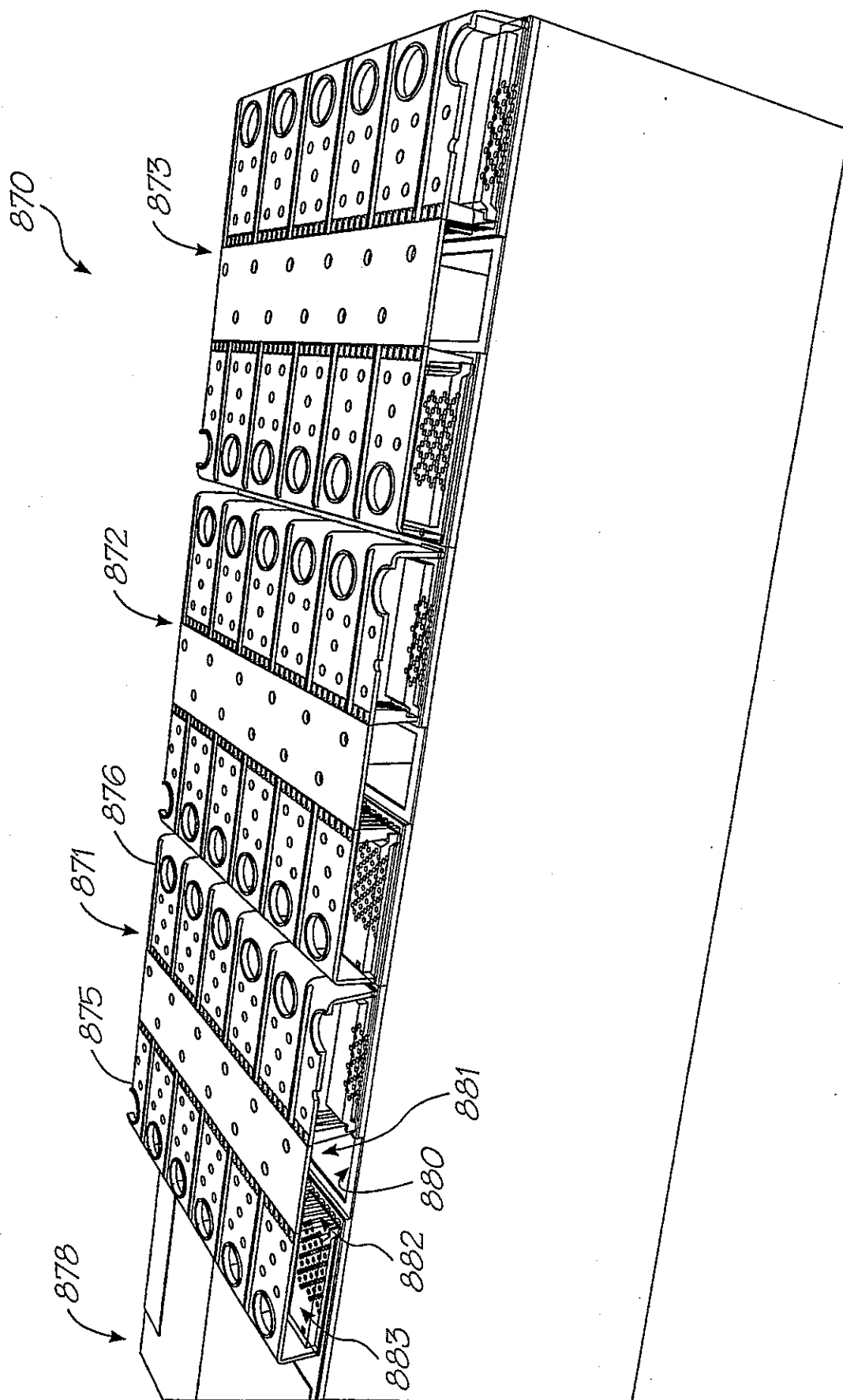


FIG. 211

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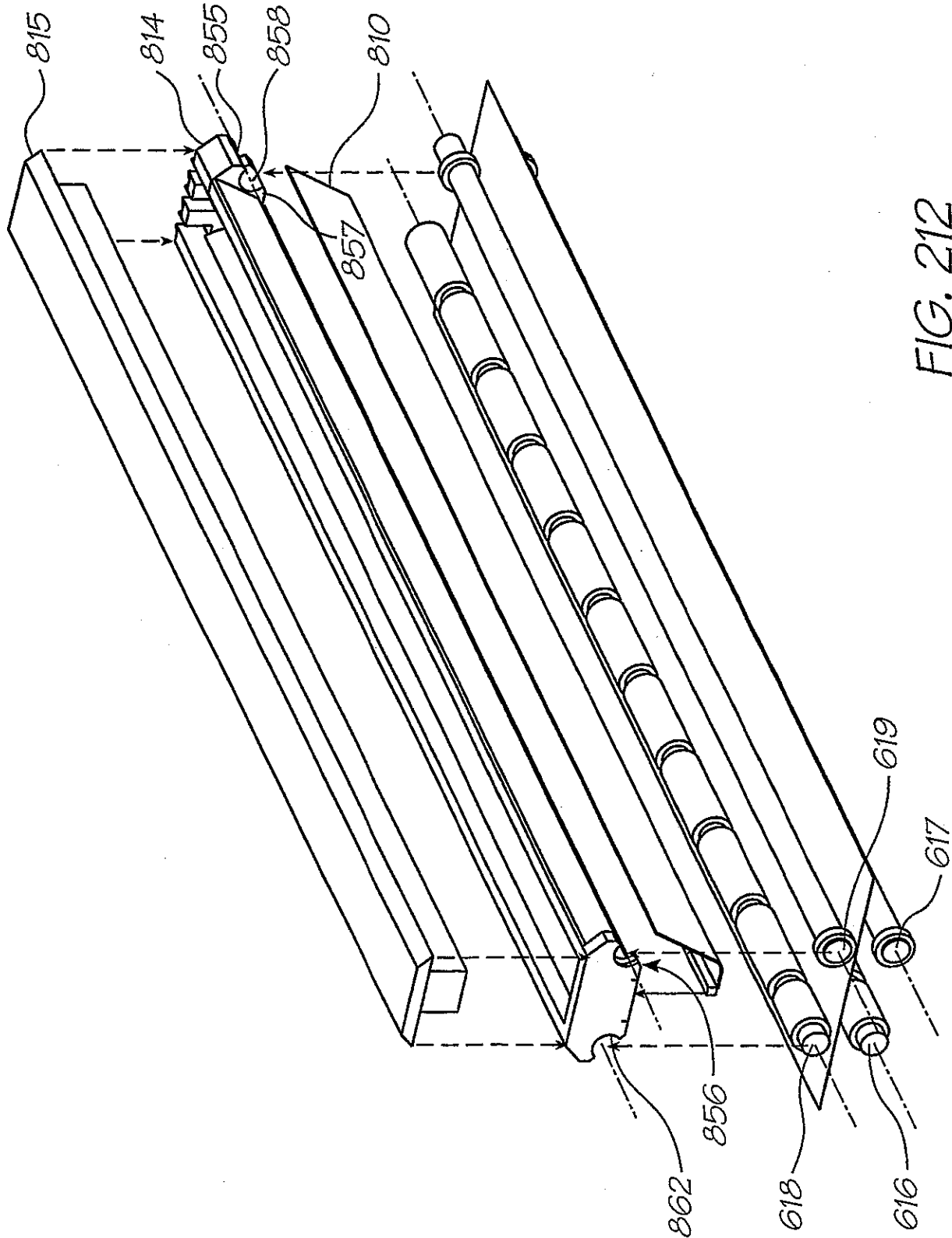


FIG. 212

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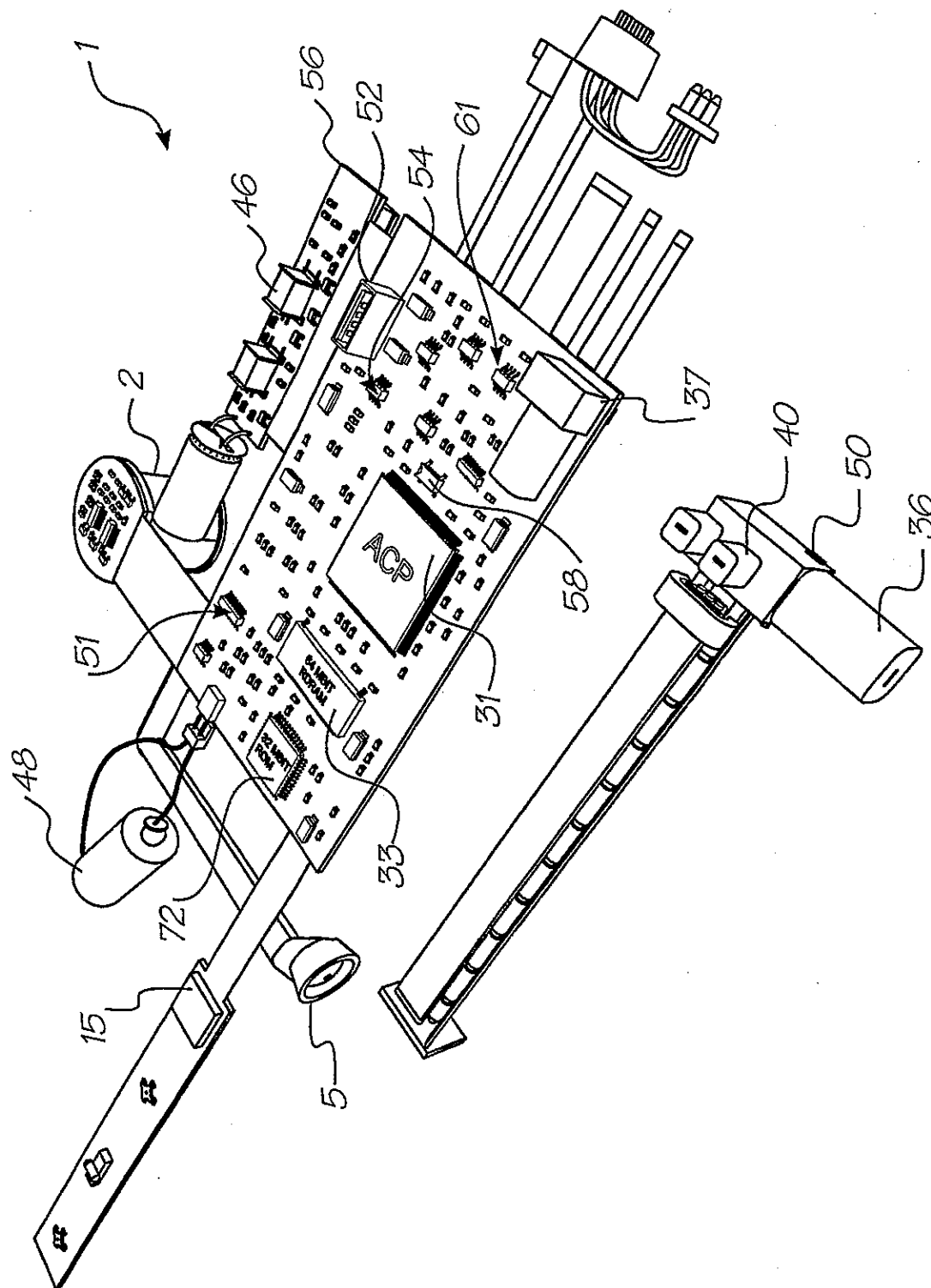


FIG. 213

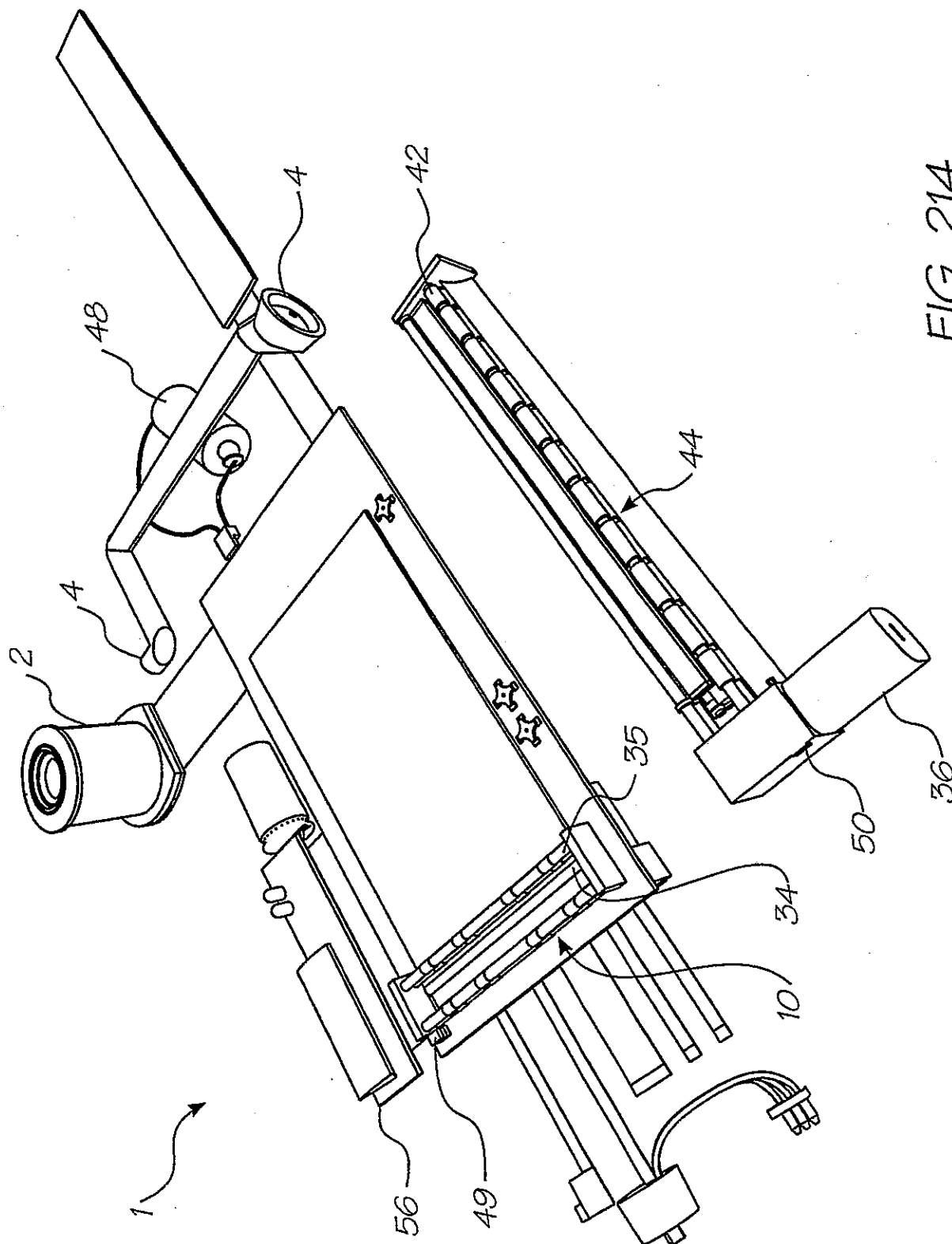


FIG. 214

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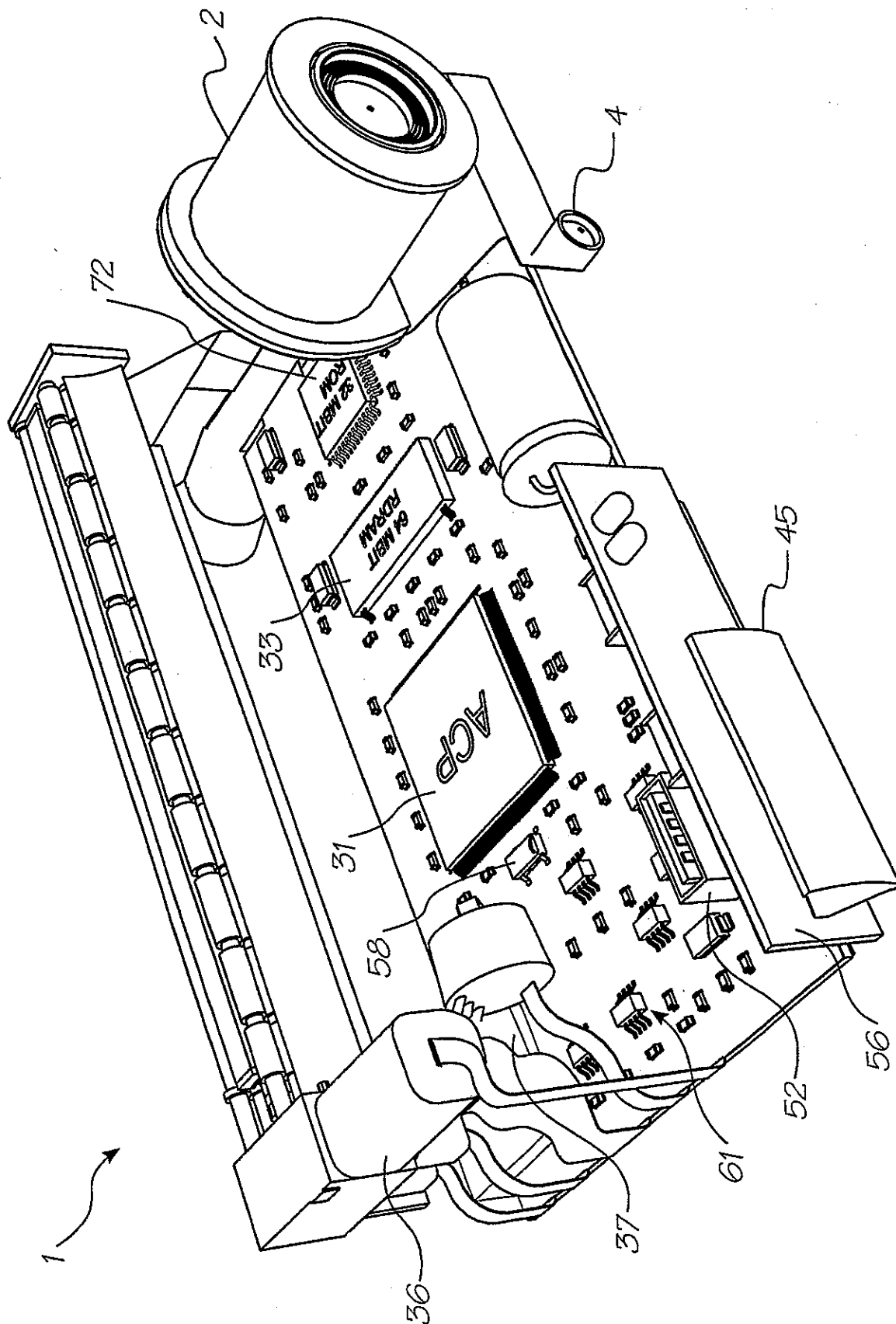


FIG. 215

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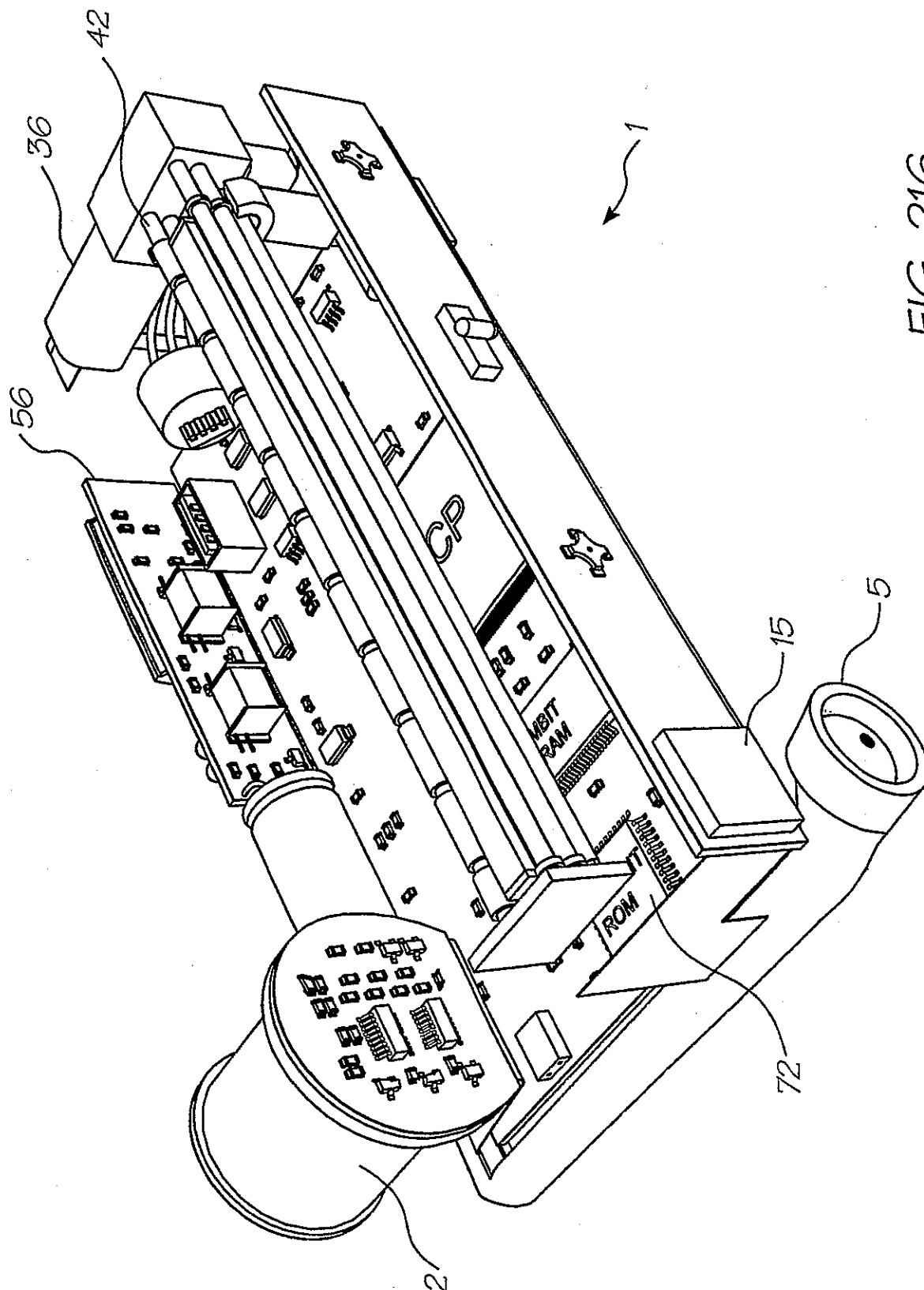


FIG. 216

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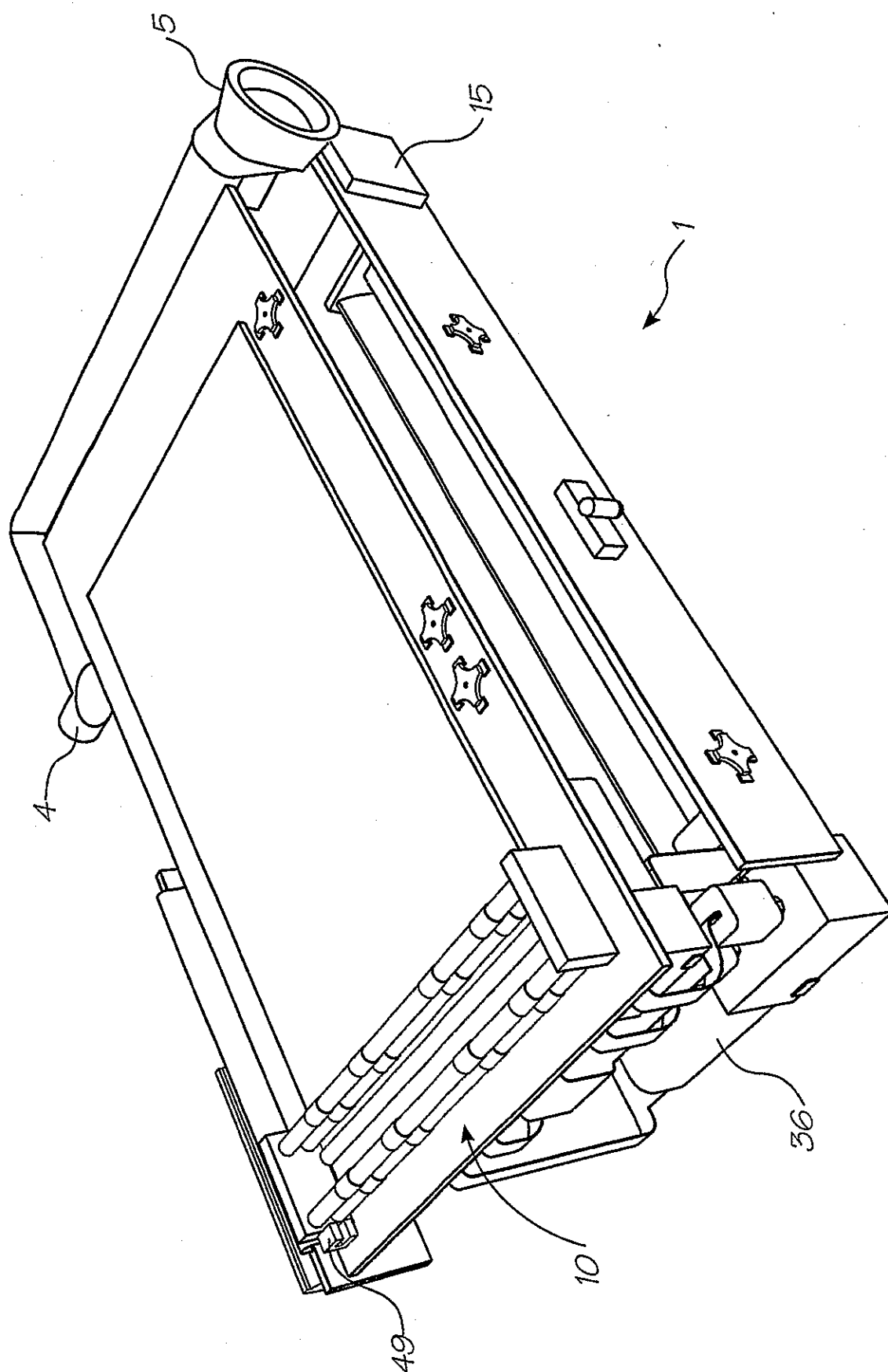


FIG. 217

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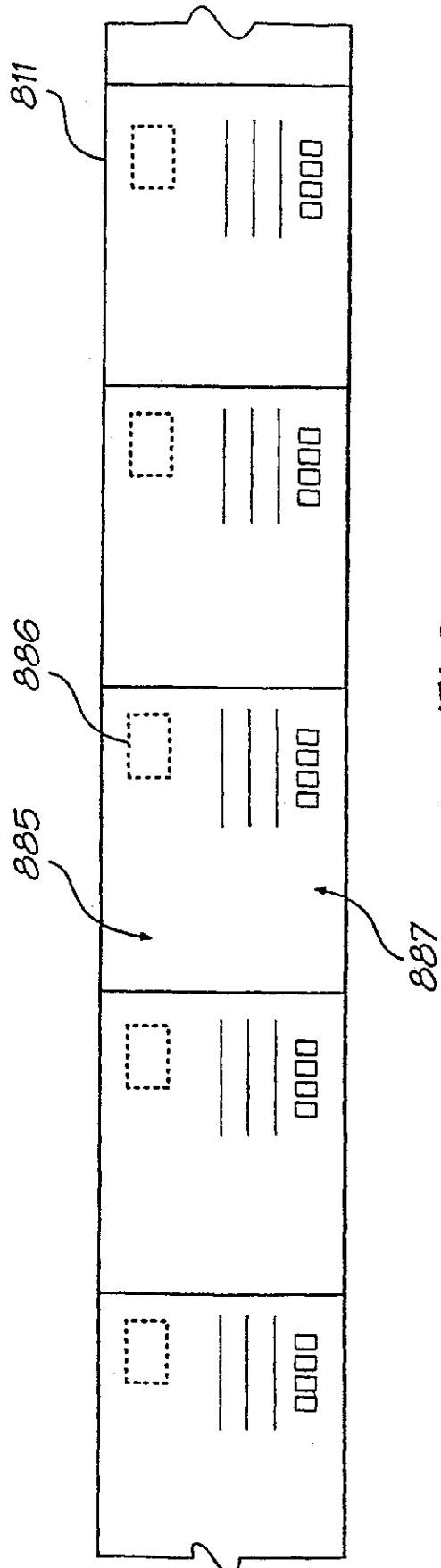


FIG. 218

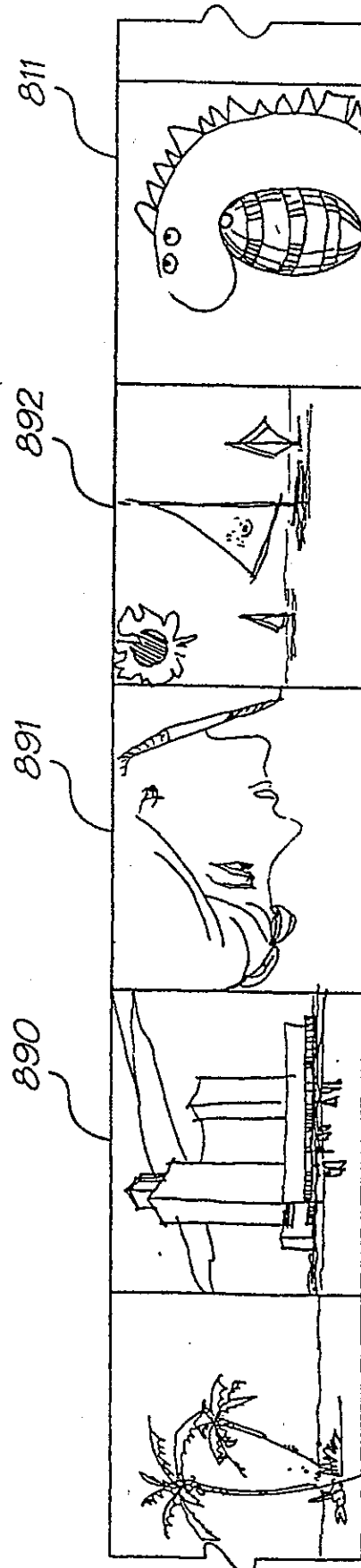


FIG. 219

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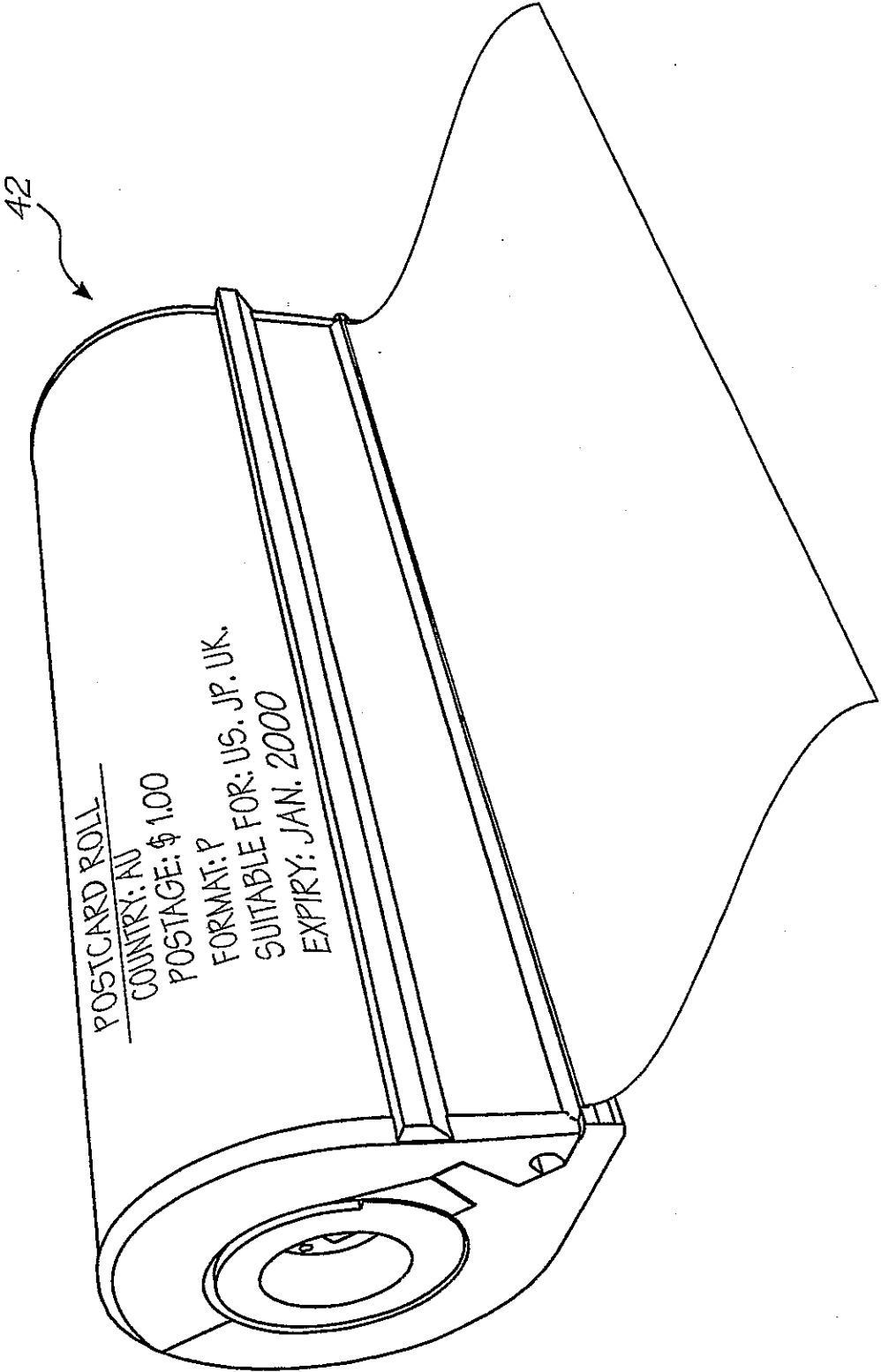


FIG. 220

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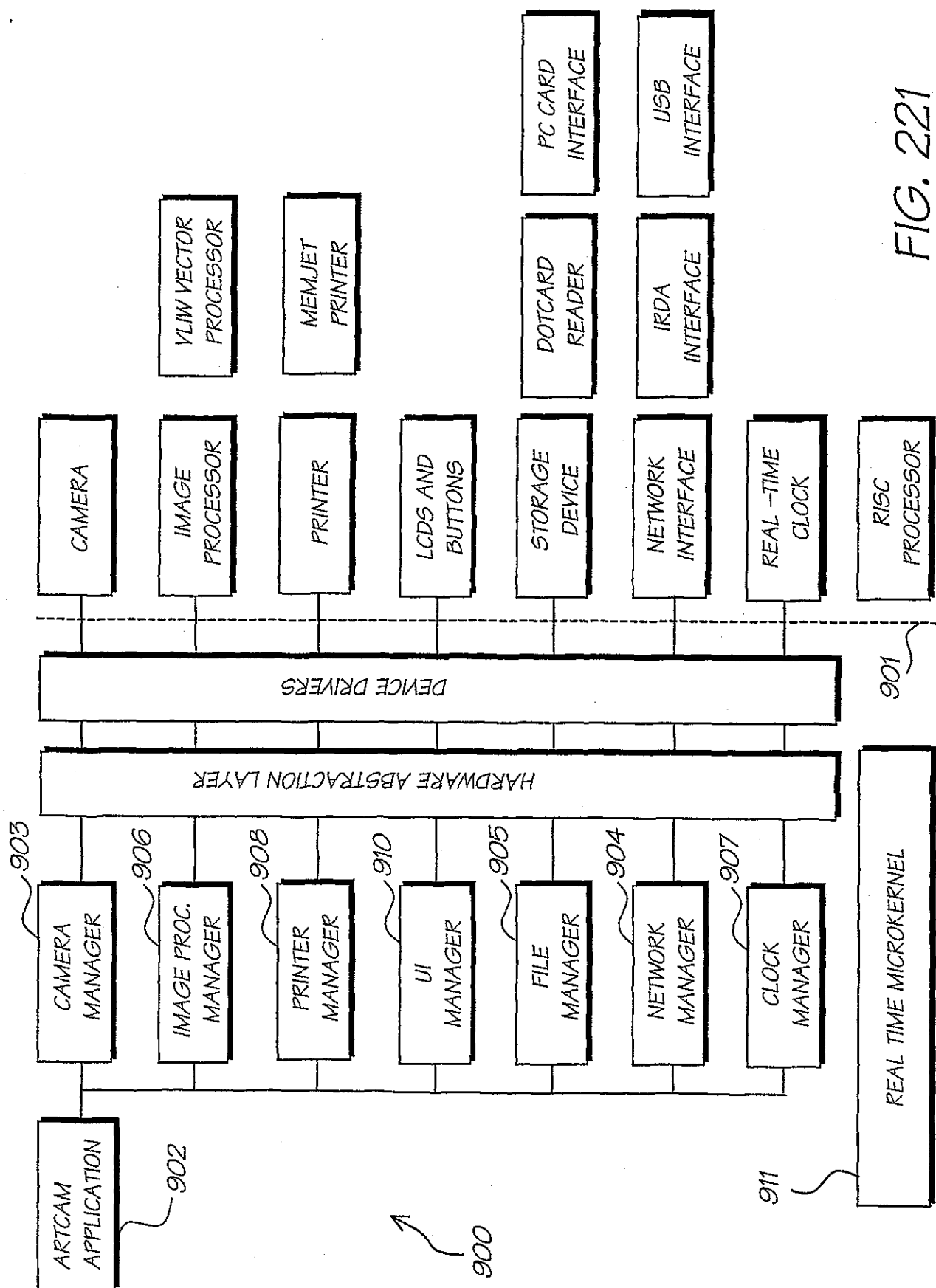


FIG. 221

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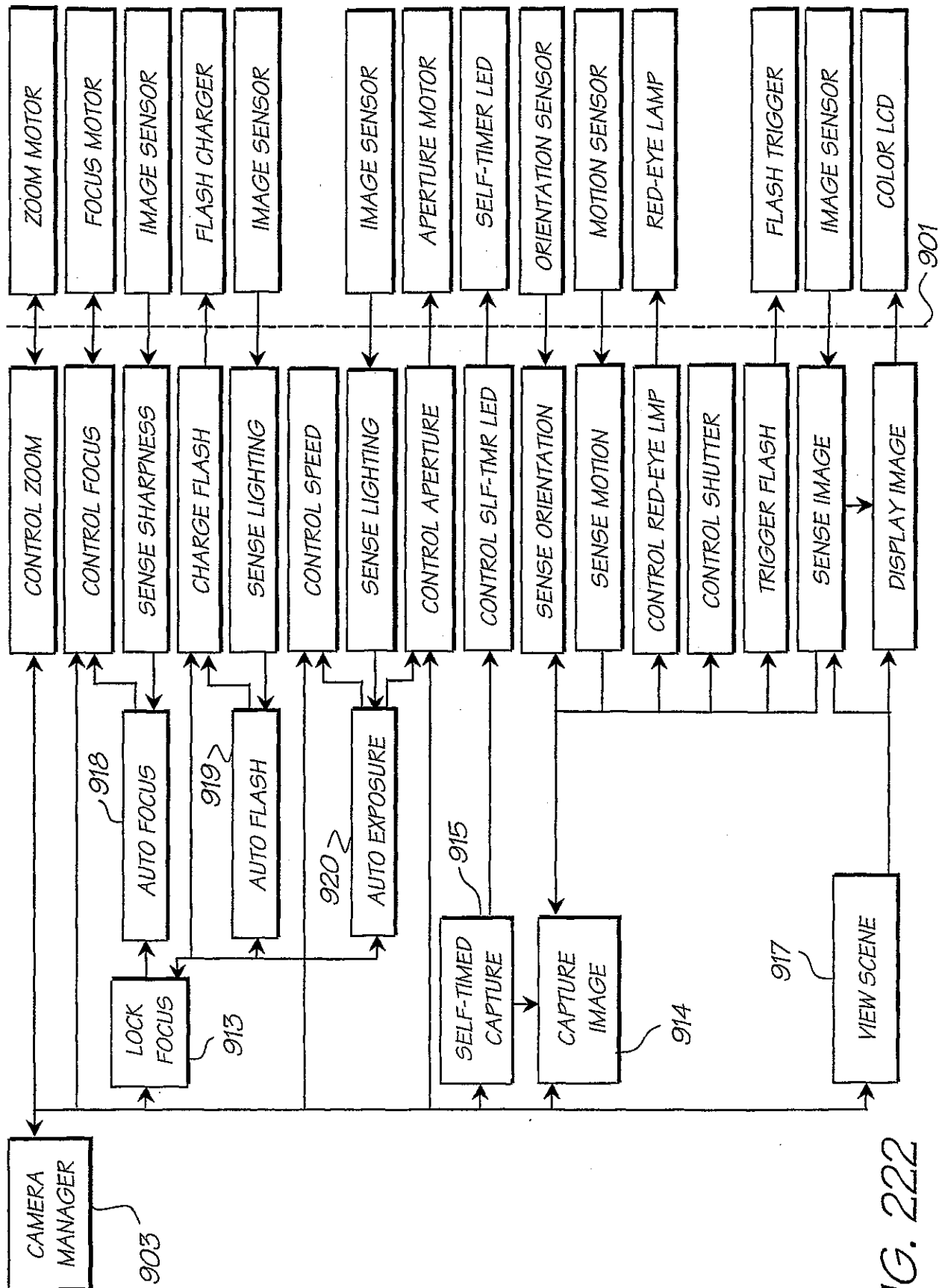
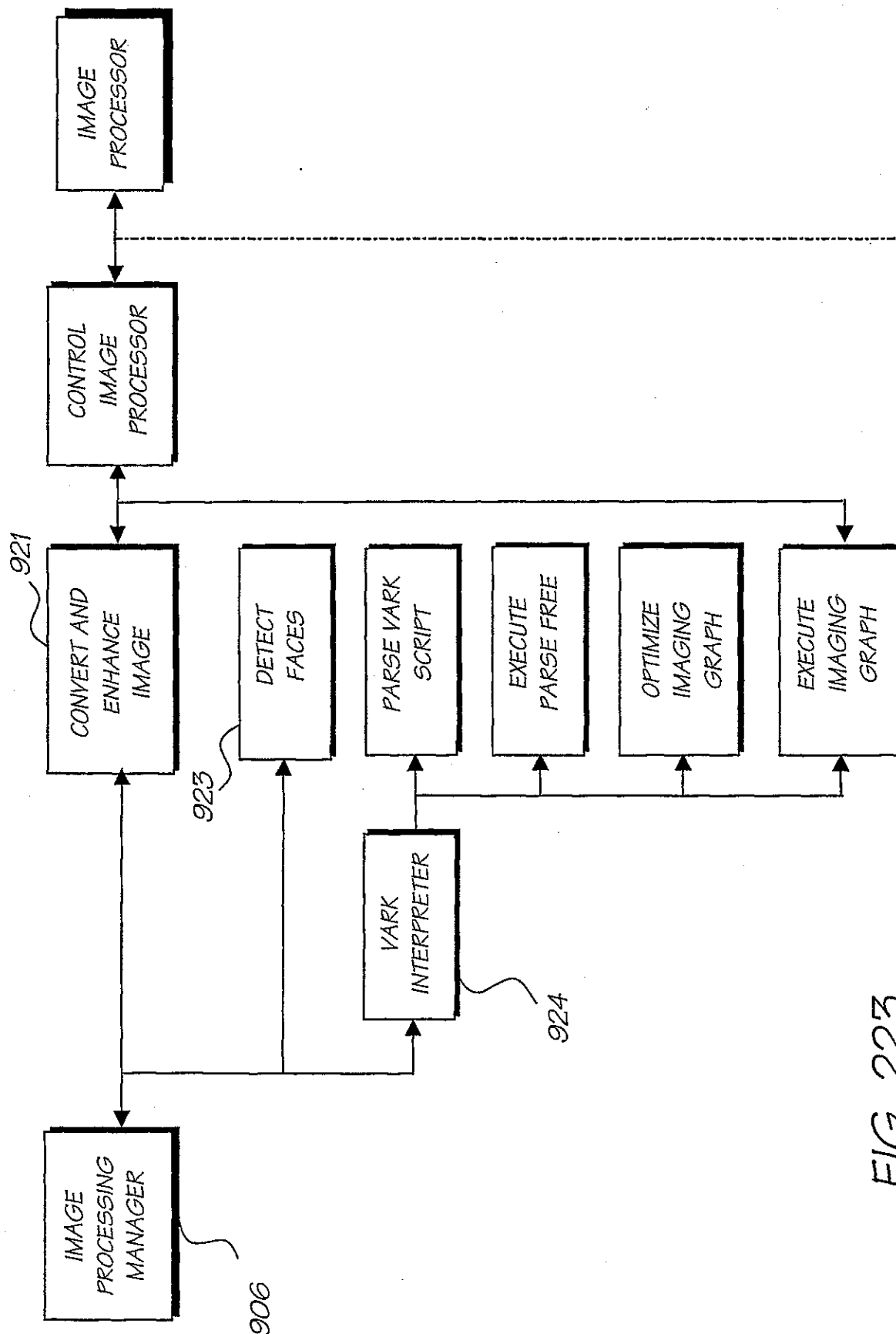


FIG. 222

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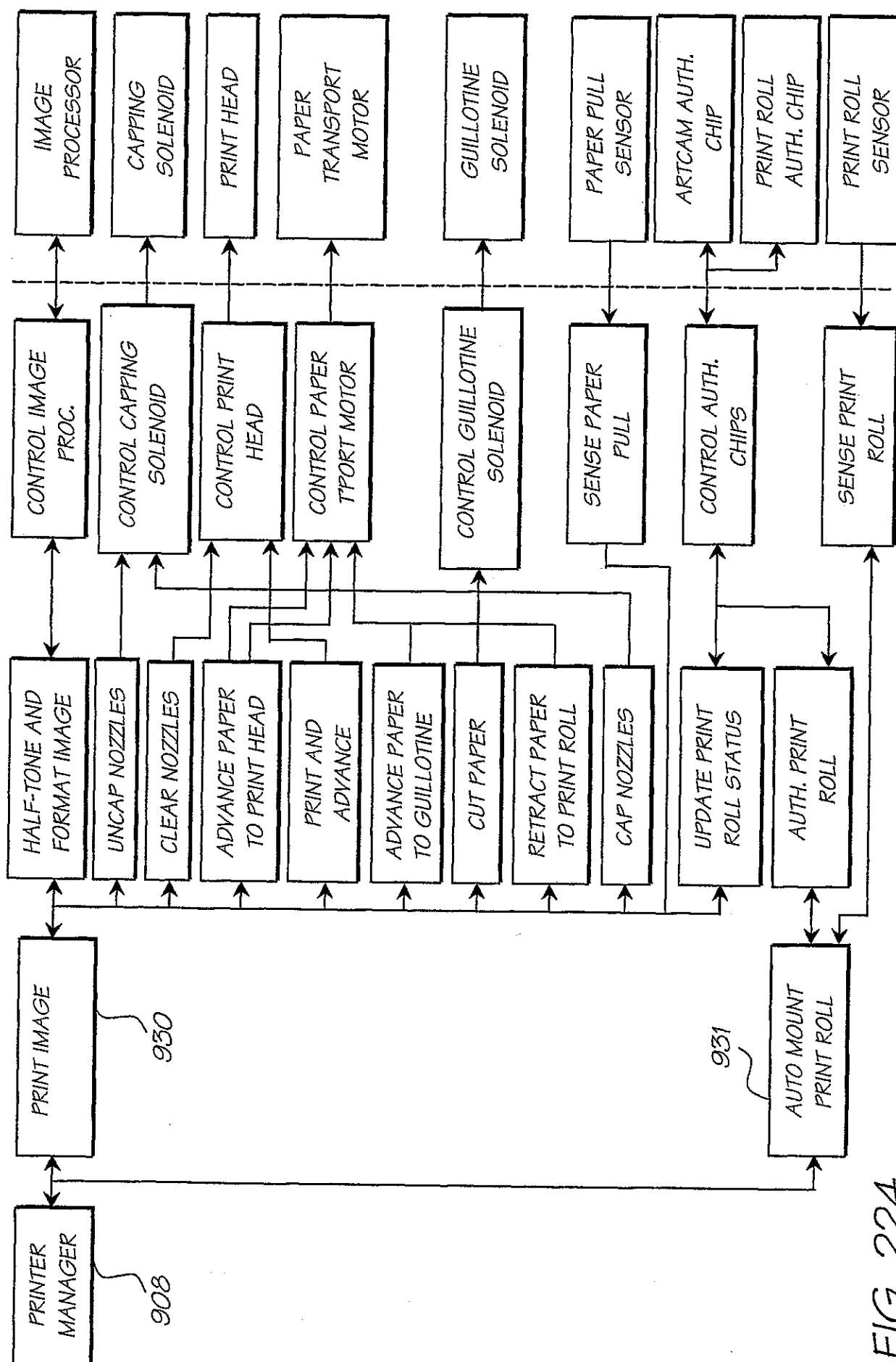


FIG. 224

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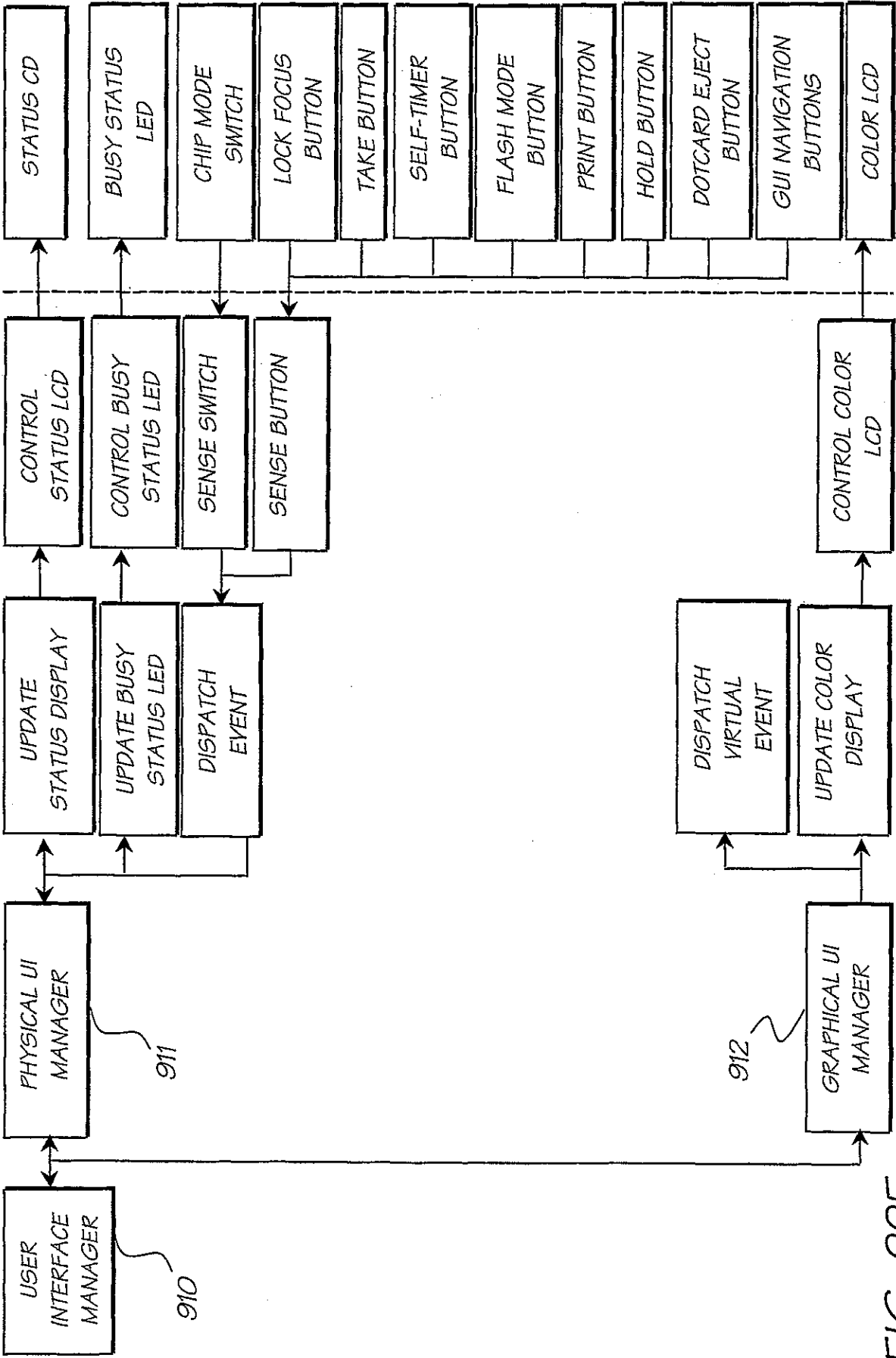


FIG. 225

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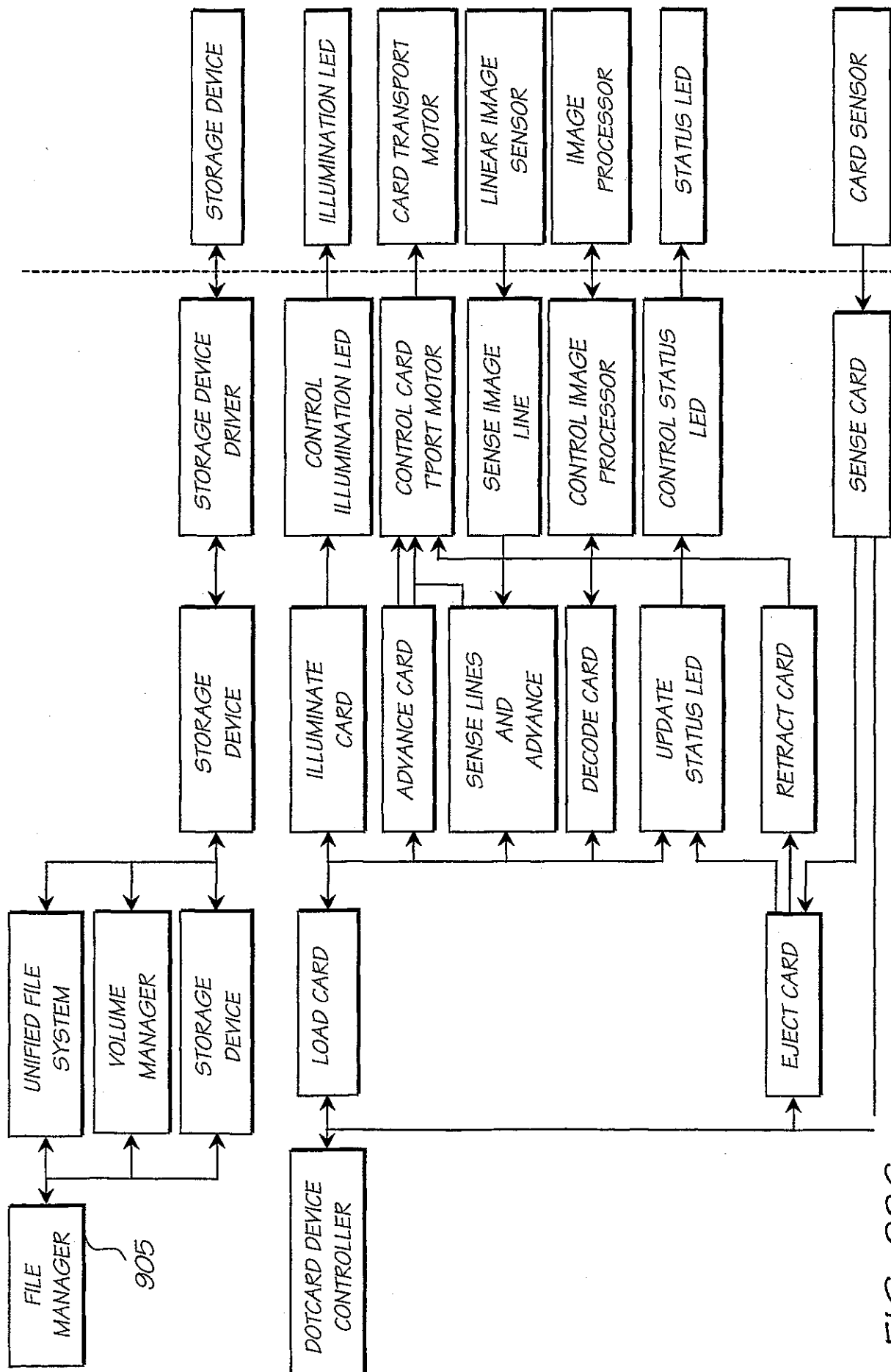
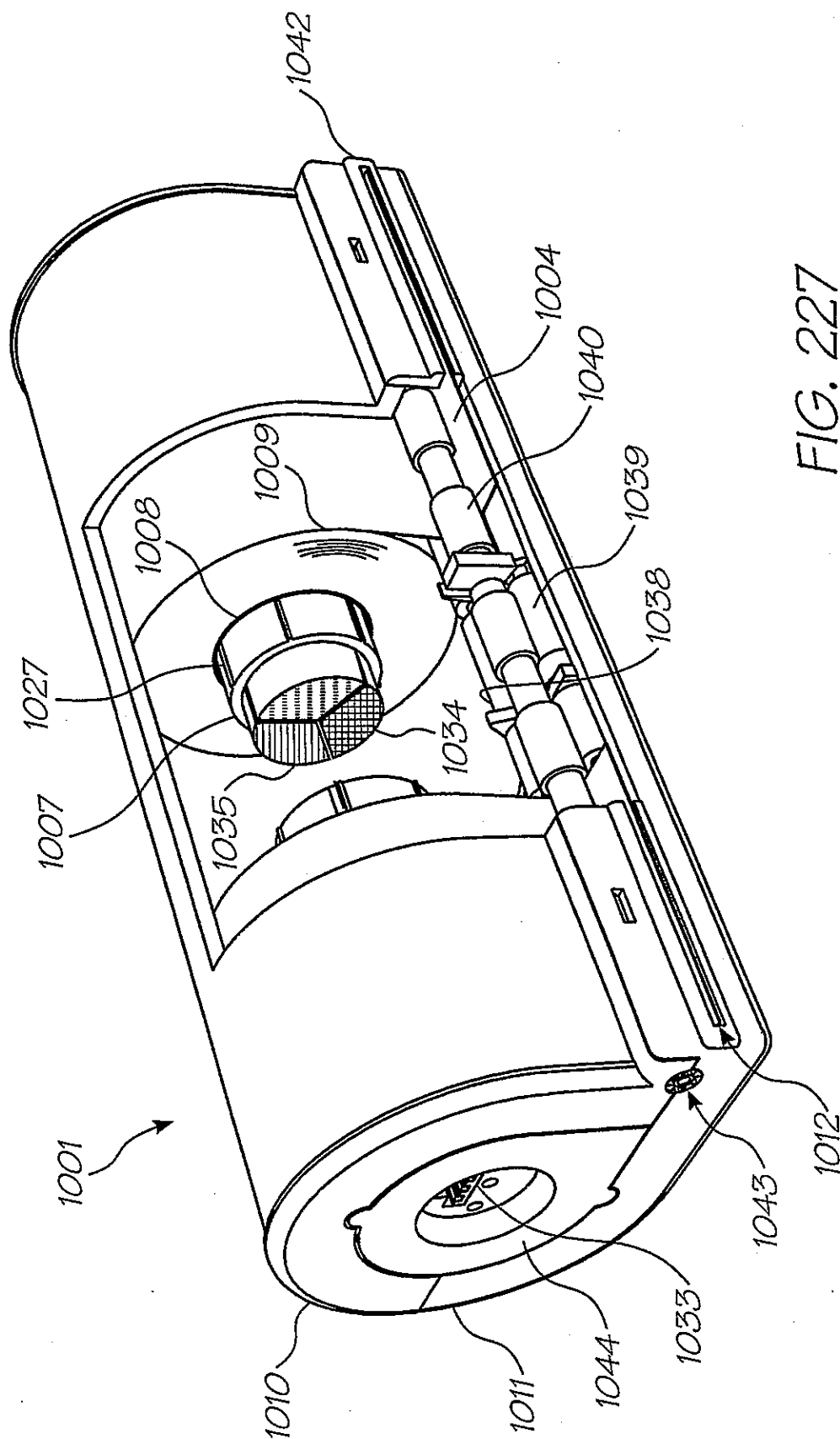


FIG. 226

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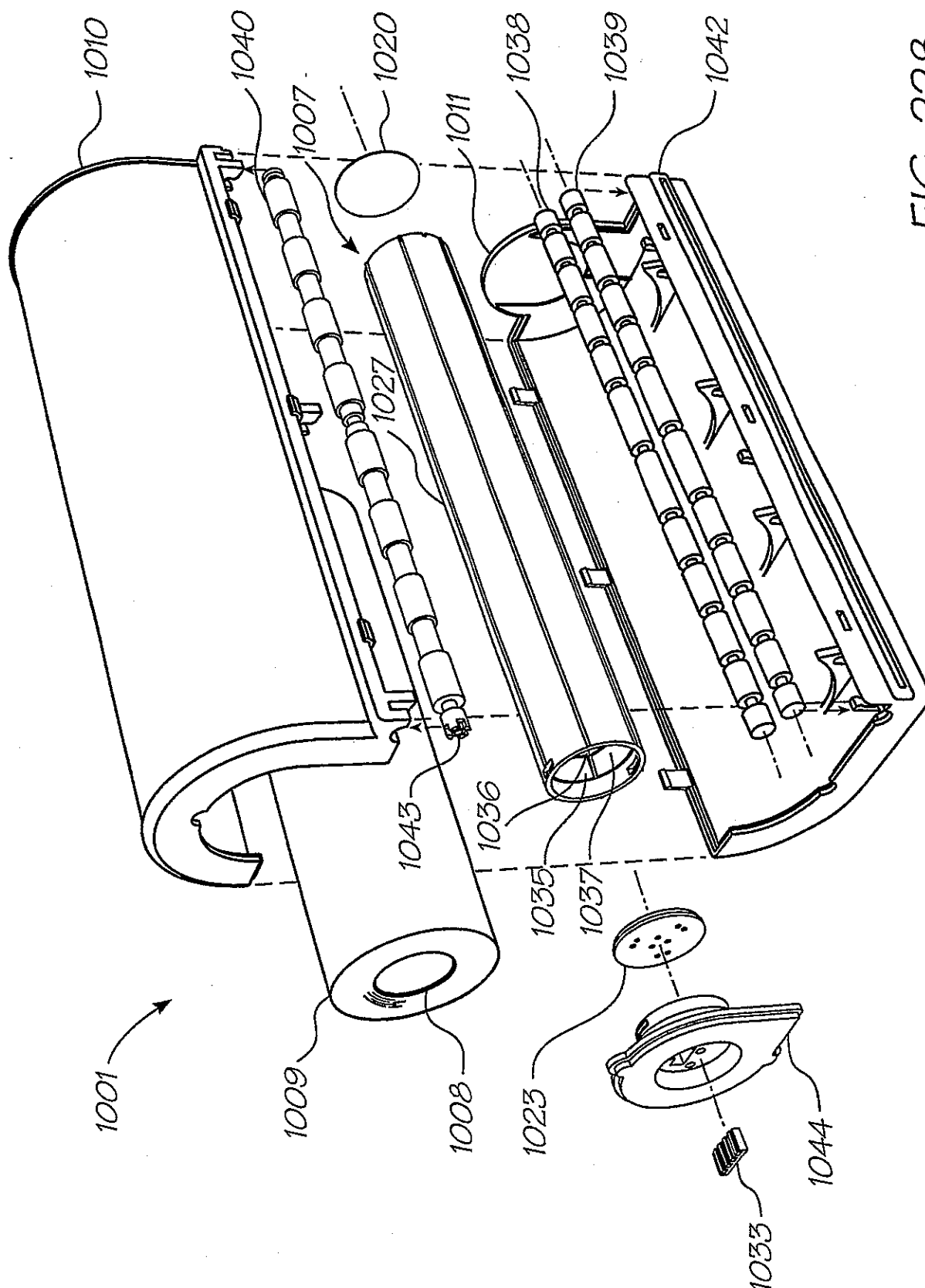


FIG. 228

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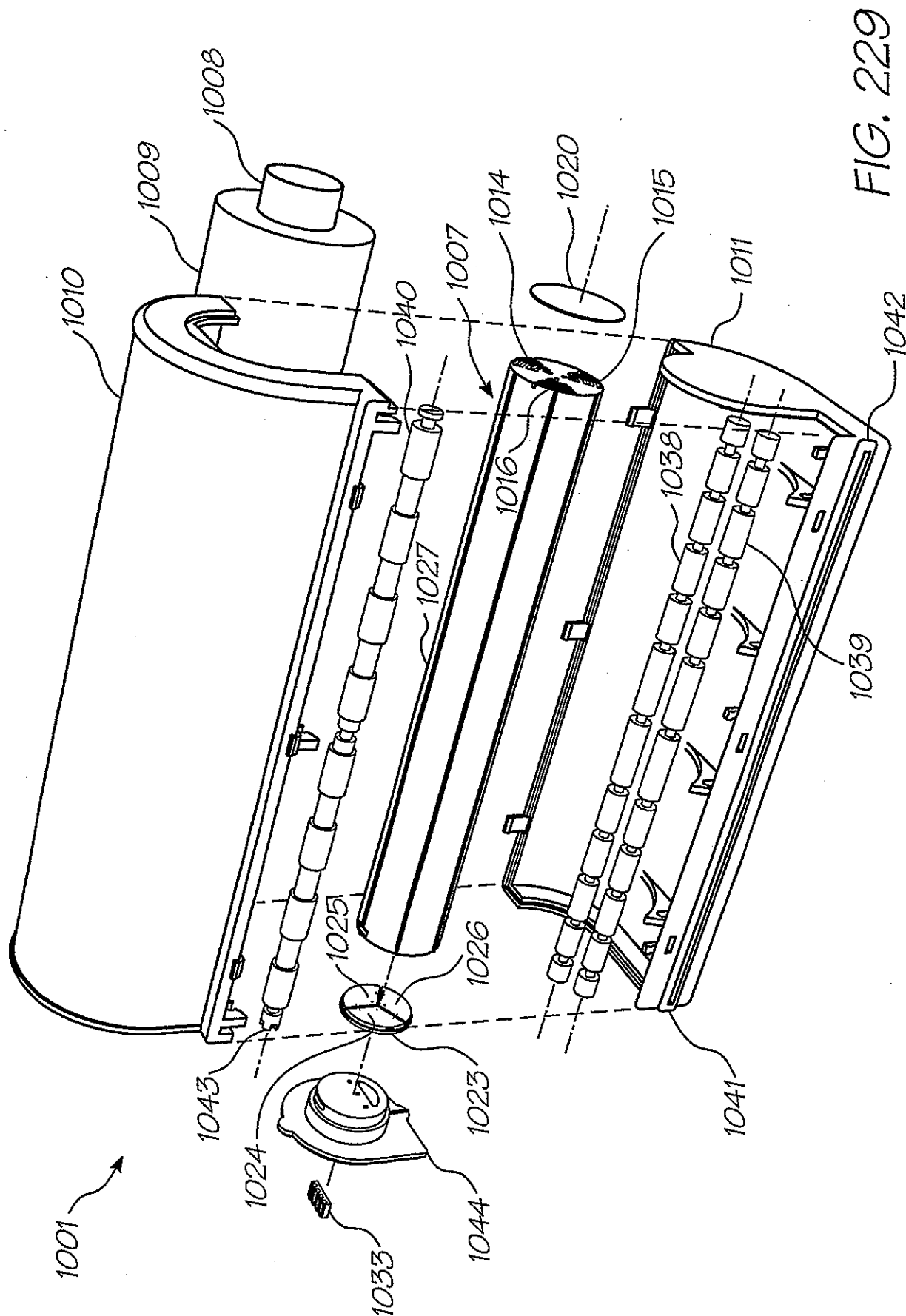


FIG. 229

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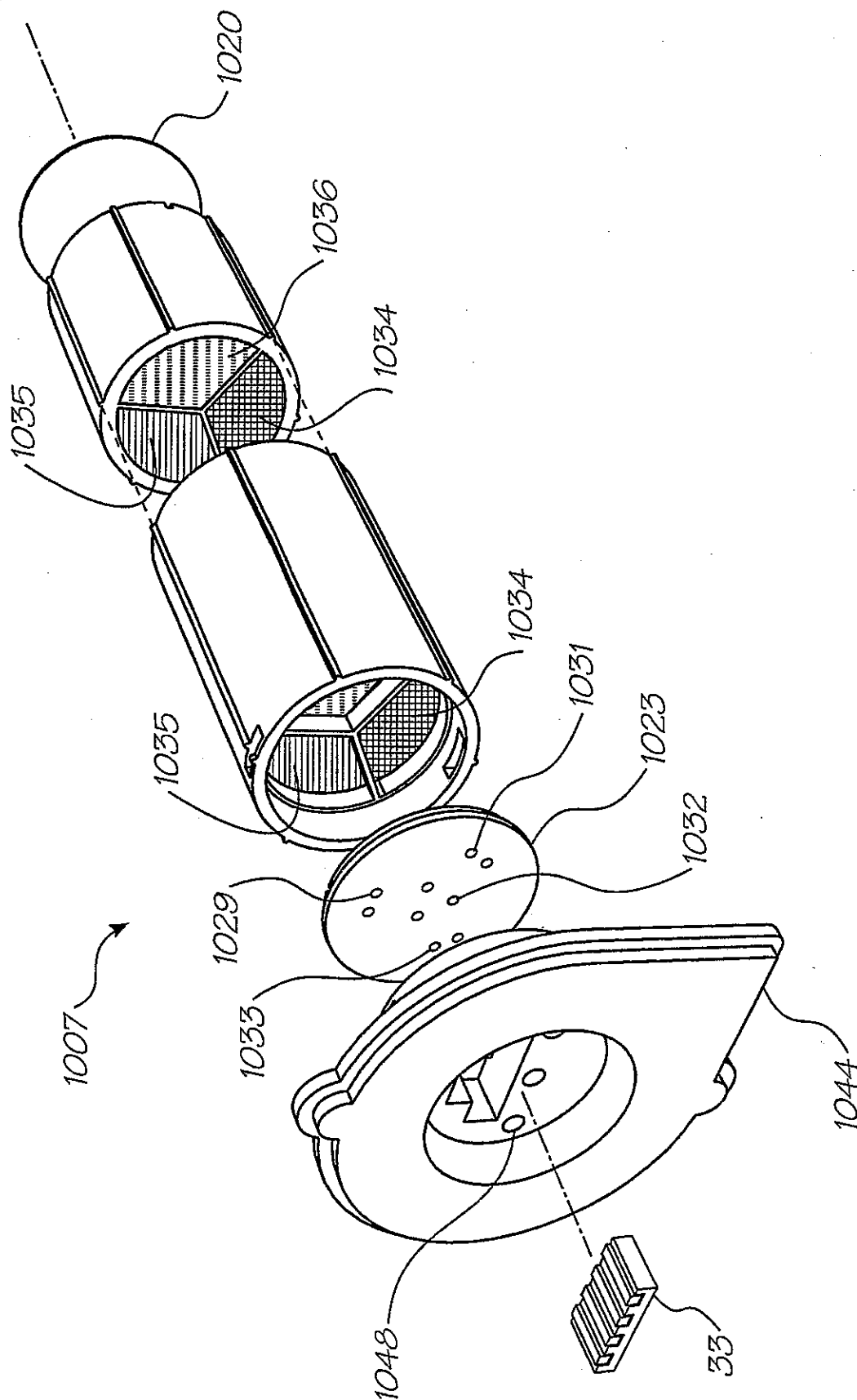


FIG. 230

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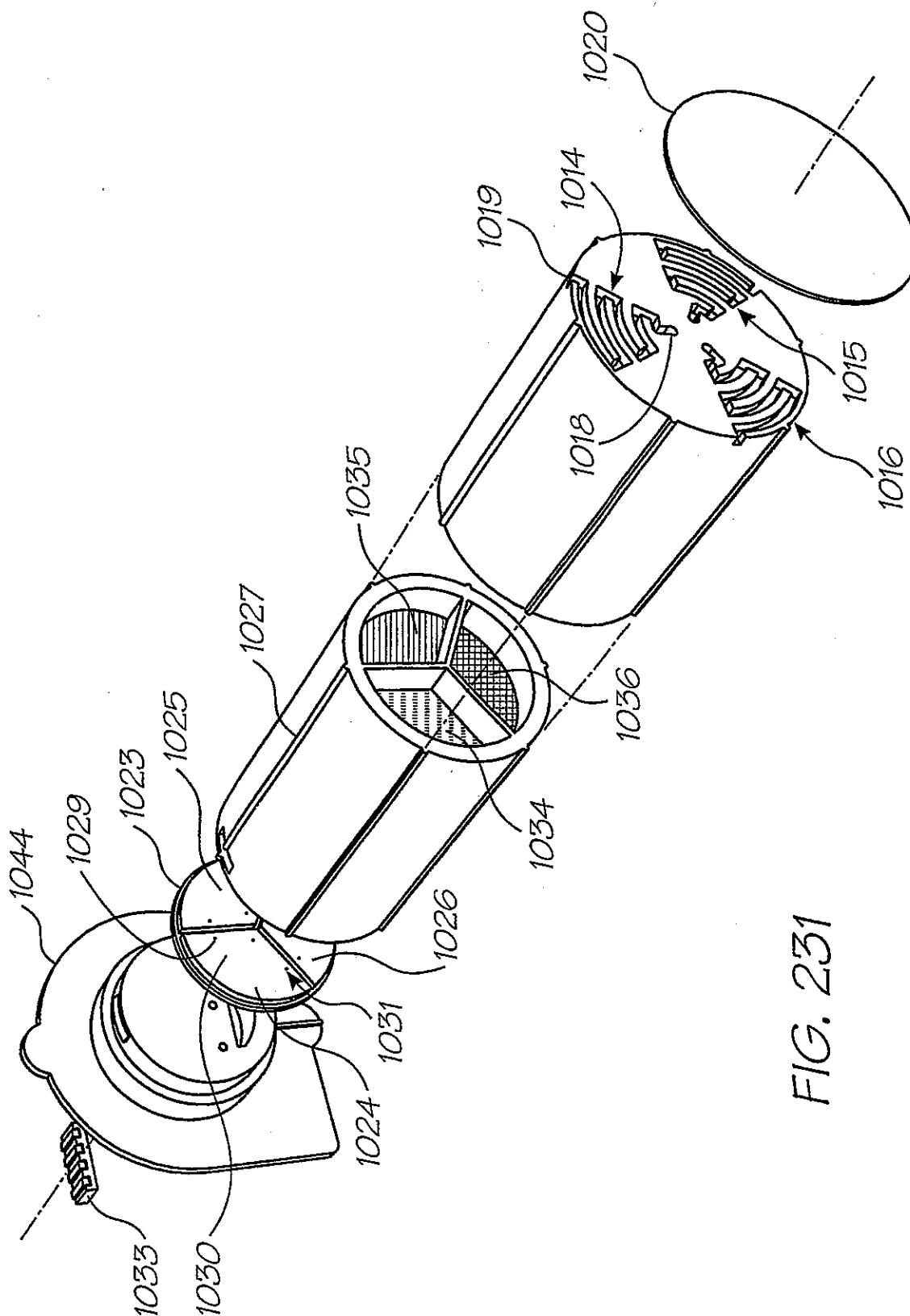


FIG. 231