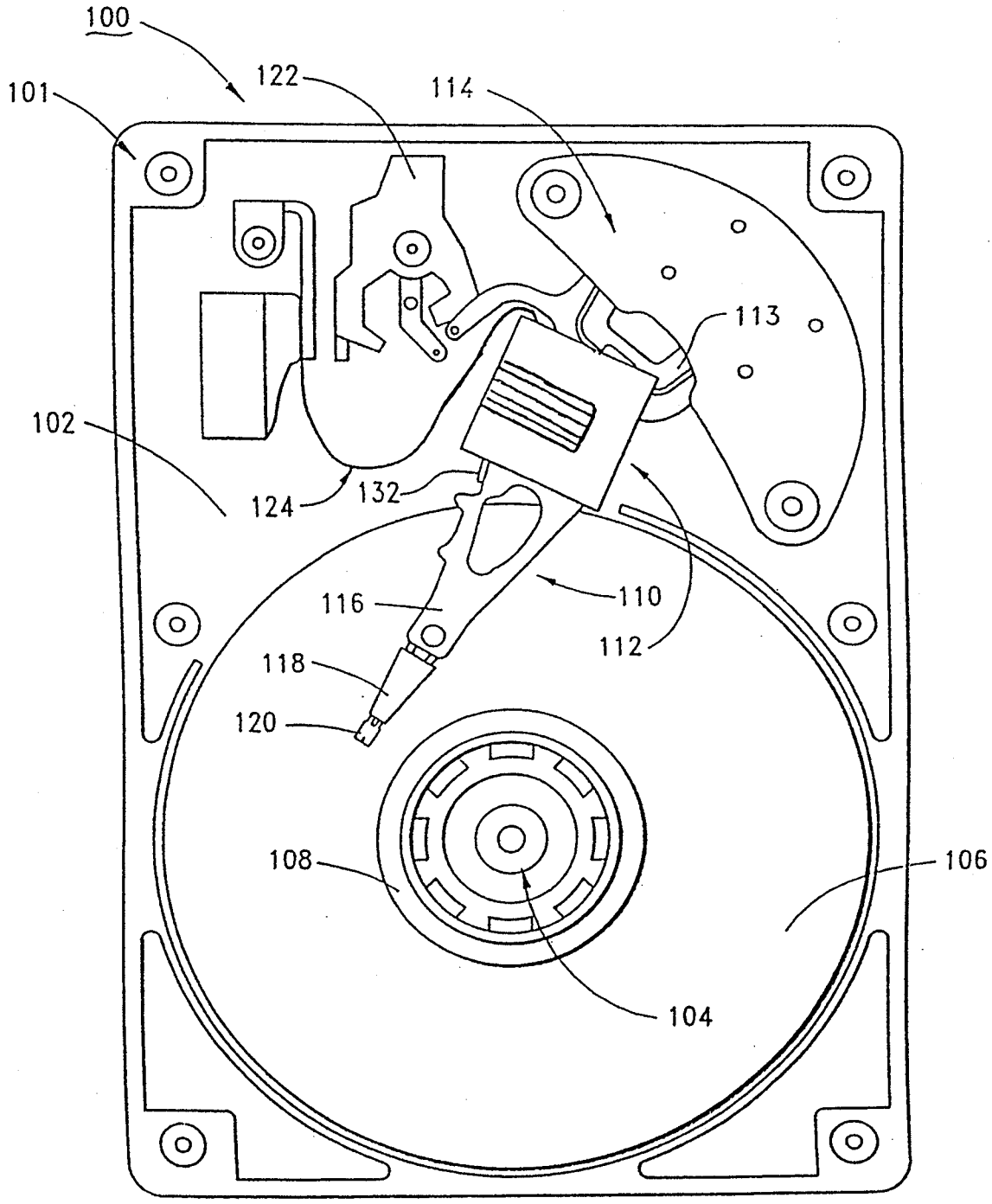


FIG. 1

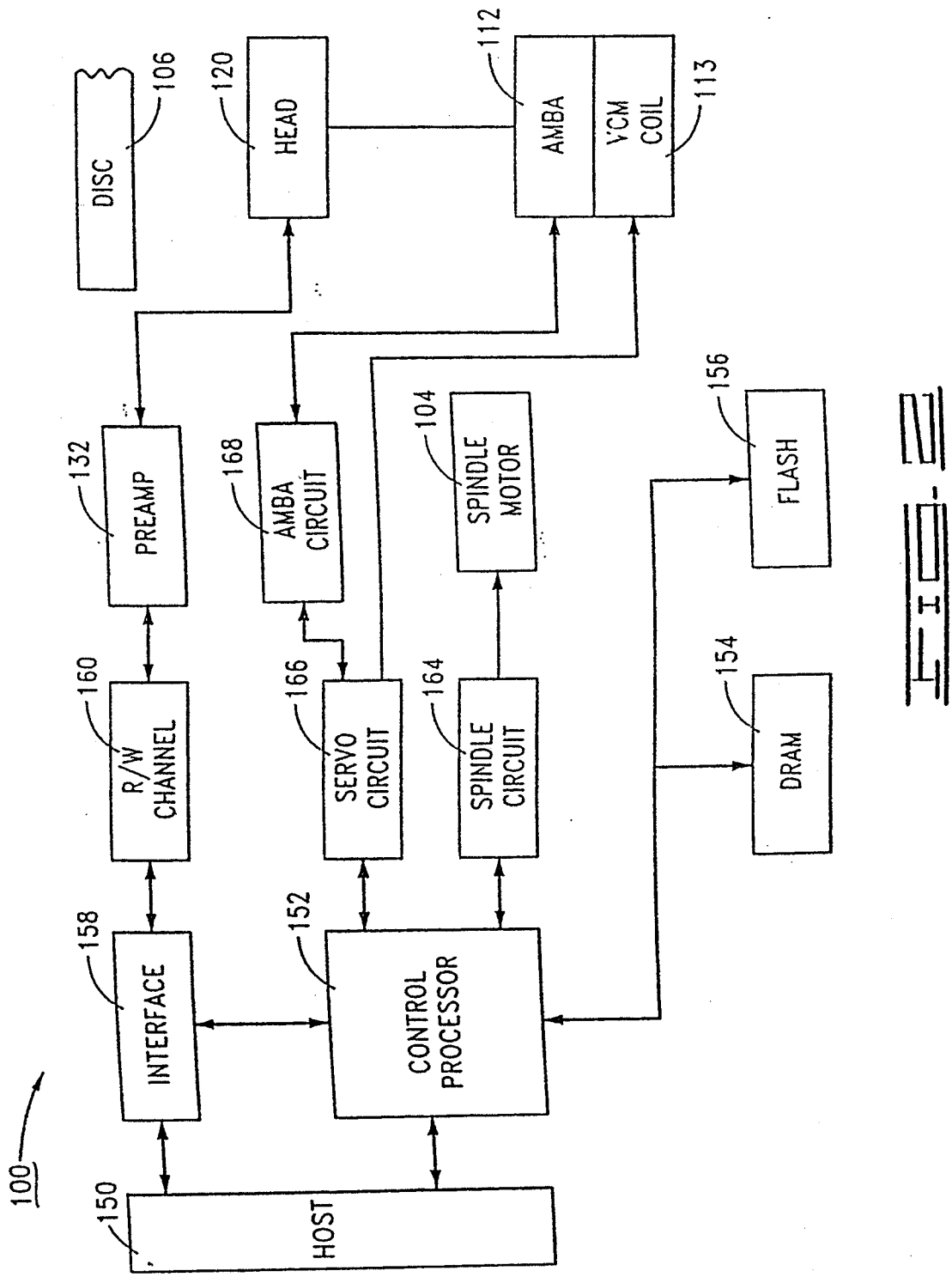

100
150
HOST
158
INTERFACE
152
CONTROL PROCESSOR
160
R/W CHANNEL
166
SERVO CIRCUIT
164
SPINDLE CIRCUIT
132
PREAMP
168
AMBA CIRCUIT
104
SPINDLE MOTOR
154
DRAM
156
FLASH
106
DISC
120
HEAD
112
AMBA
113
VCM COIL

FIG. 2

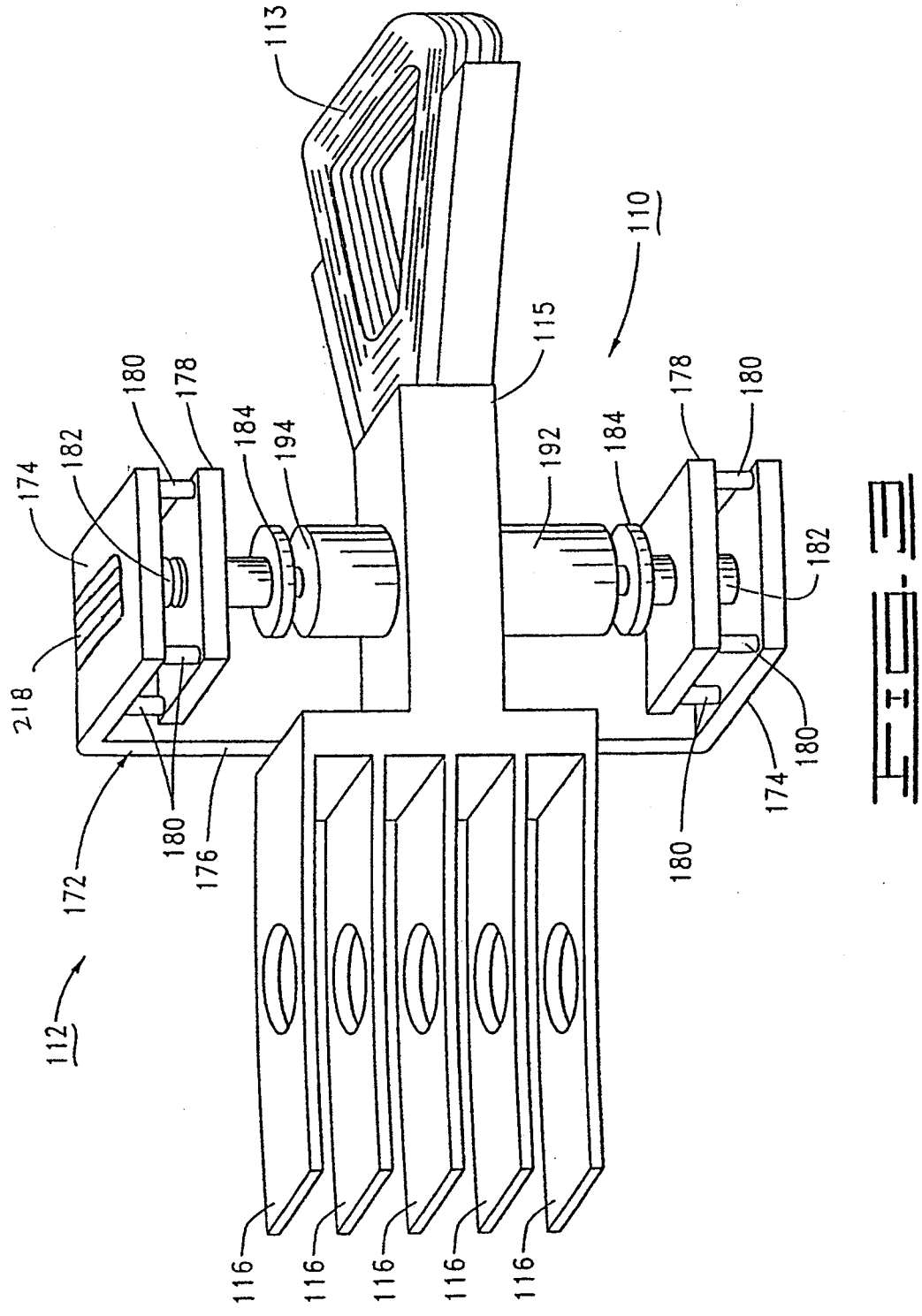


FIG. 3

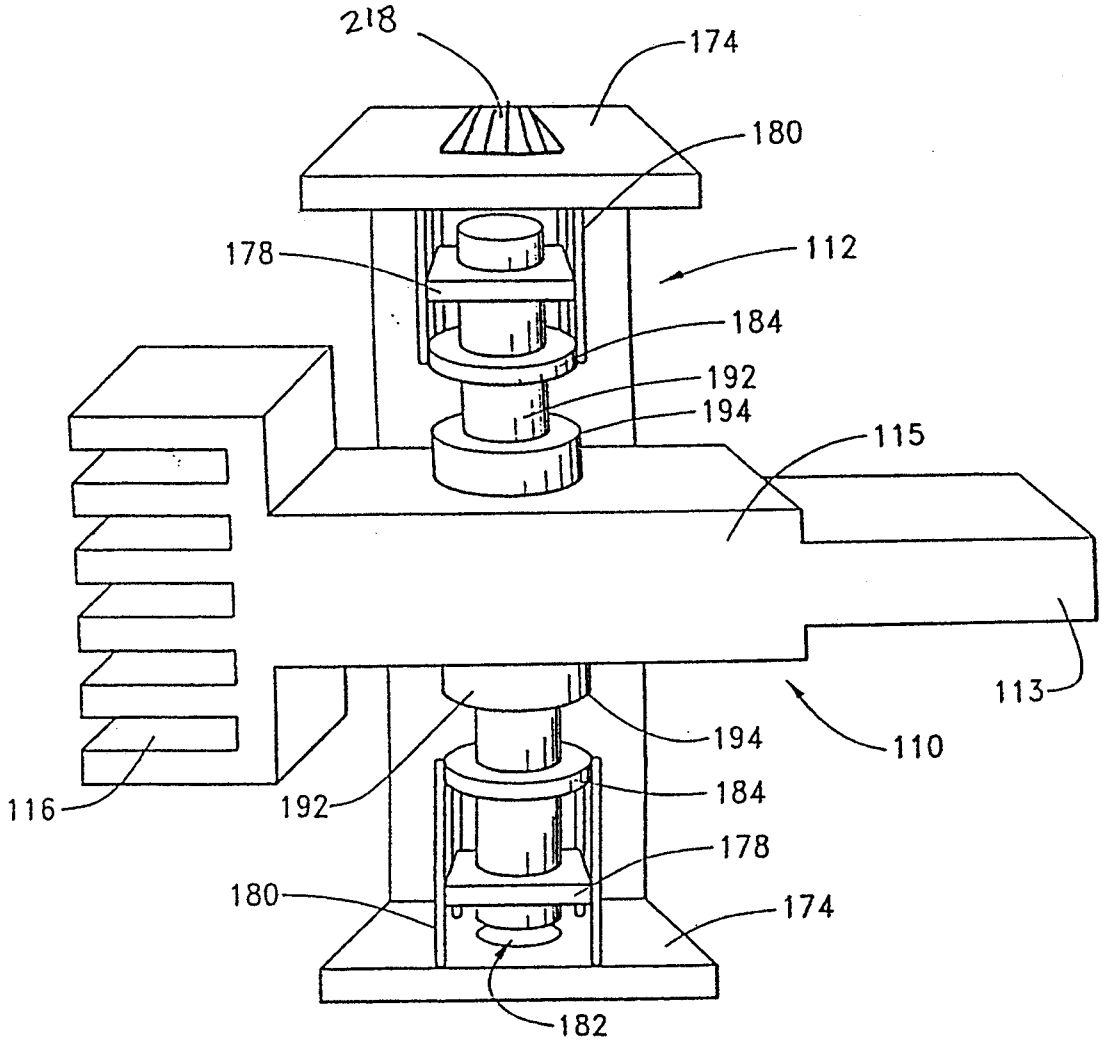
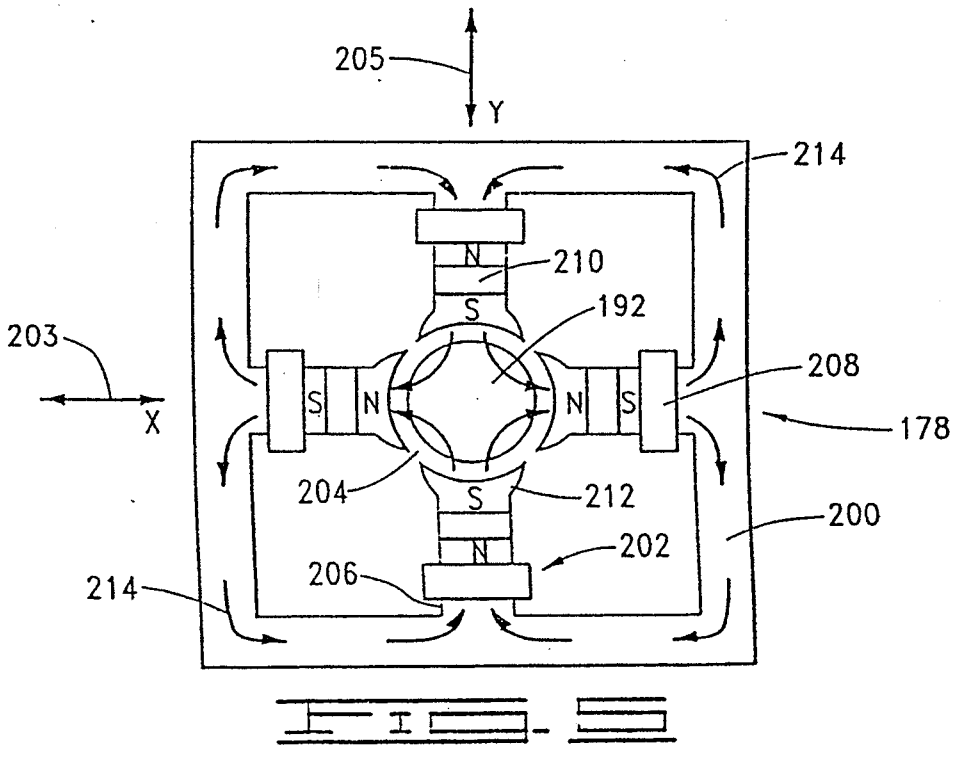
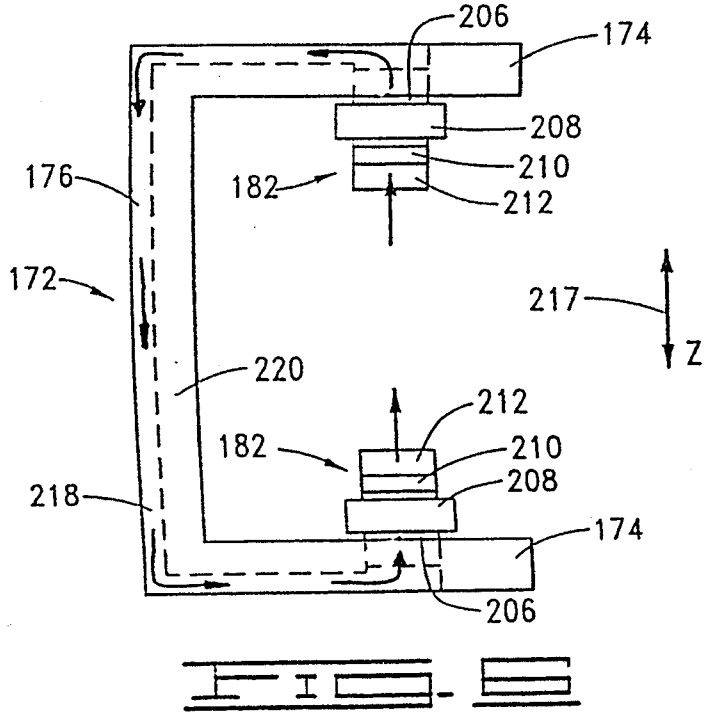

218
174
180
178
112
184
192
194
115
113
110
116
192
194
184
178
180
174
182

FIG. 4


205
Y
214
N
210
S
192
203
X
S
N
N
S
208
178
204
S
212
200
N
202
206
214


206
174
208
210
176
182
212
172
217
Z
220
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182
210
208
218
174
206

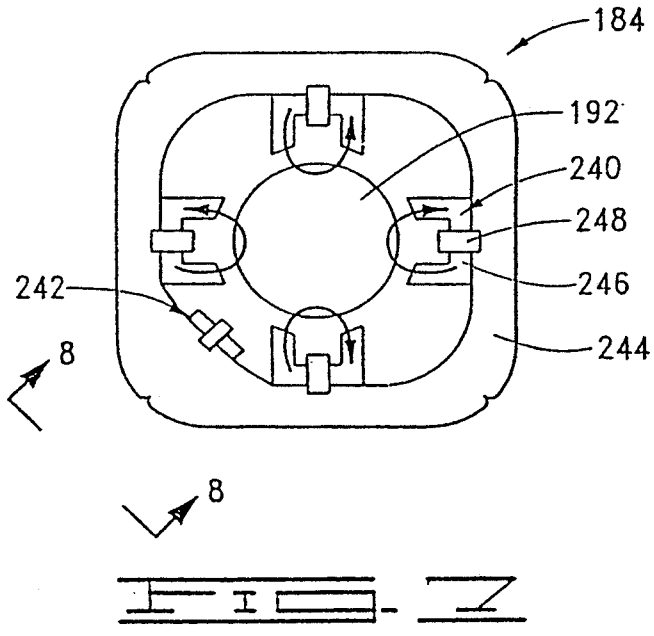


FIG. 7

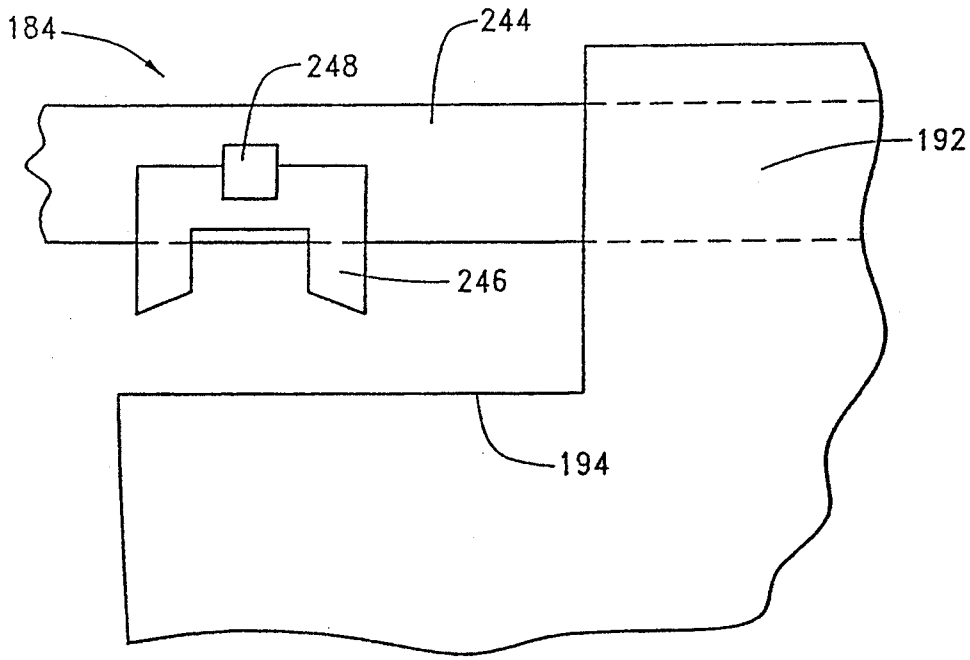
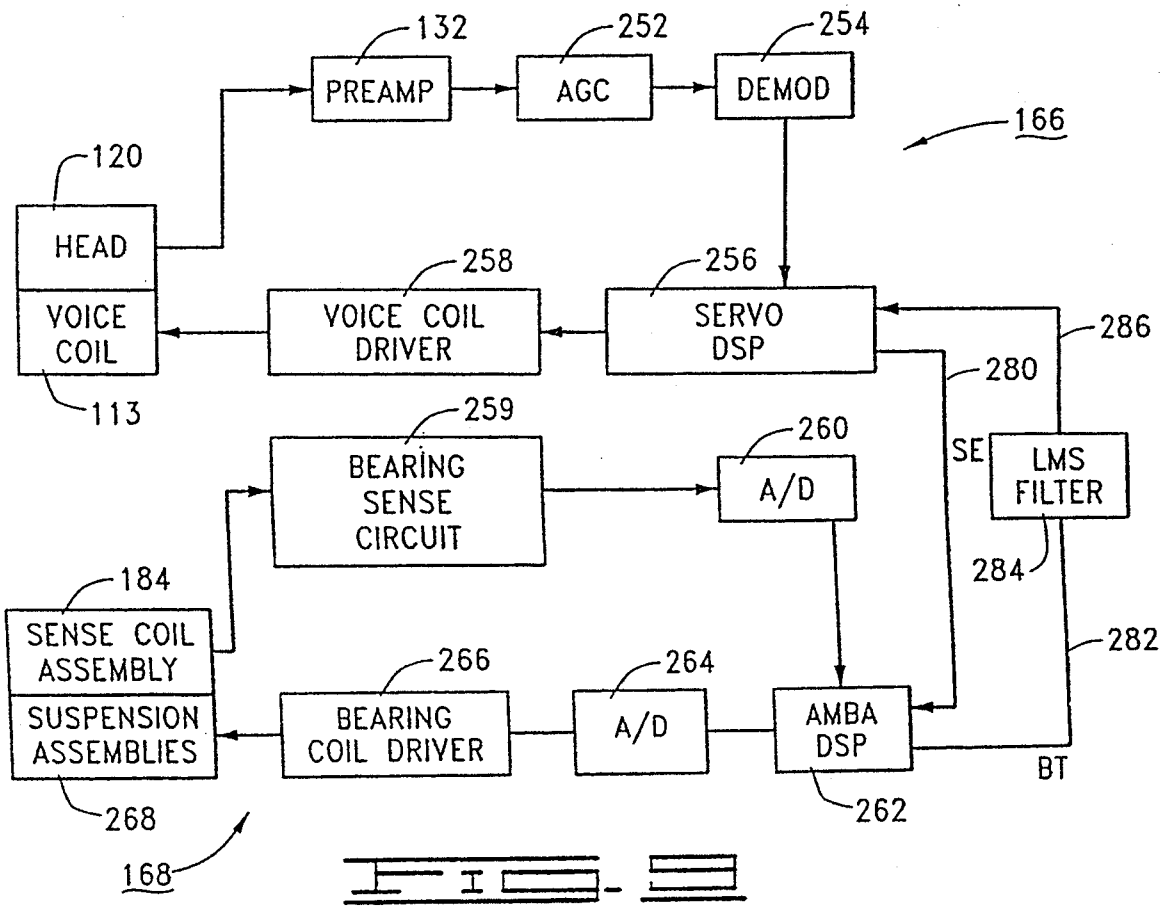
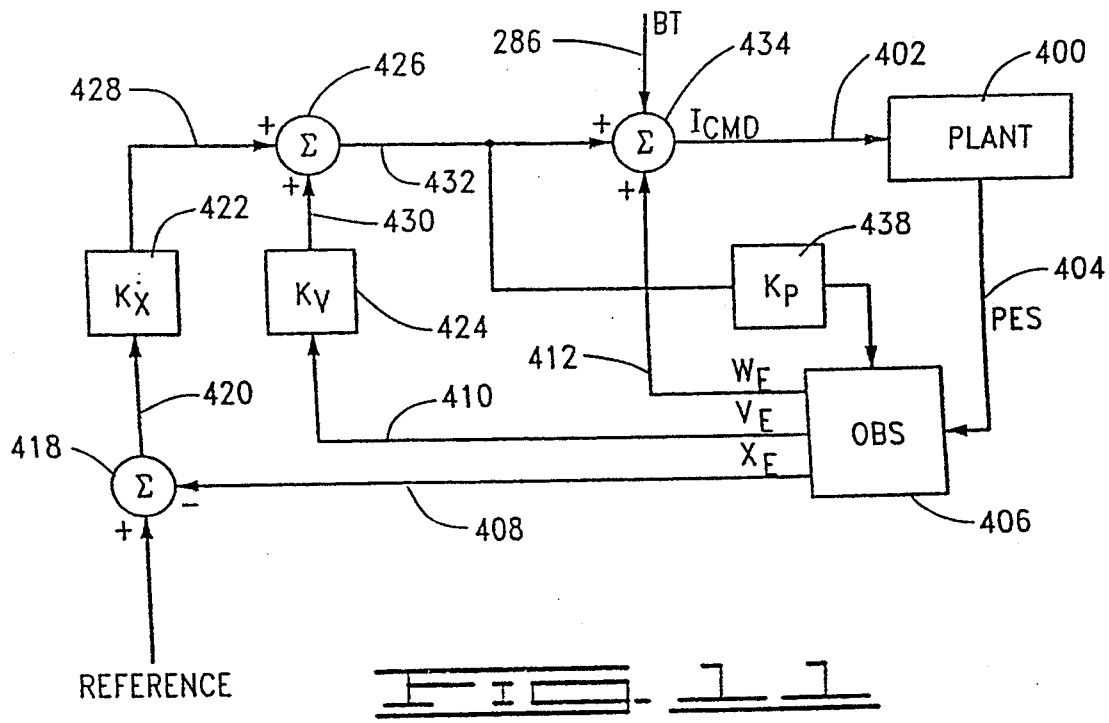


FIG. 8


132
PREAMP
252
AGC
254
DEMOD
166
120
HEAD
VOICE COIL
113
258
VOICE COIL DRIVER
256
SERVO DSP
286
280
259
BEARING SENSE CIRCUIT
260
A/D
SE
LMS FILTER
284
282
184
SENSE COIL ASSEMBLY
SUSPENSION ASSEMBLIES
268
266
BEARING COIL DRIVER
264
A/D
AMBA DSP
BT
262
168


BT
286
434
402
400
428
426
+
Σ
+
+
Σ
+
ICMD
PLANT
432
422
430
438
404
PES
KX
KV
KP
424
412
WE
VE
XE
OBS
420
410
418
Σ
+
−
408
406
REFERENCE

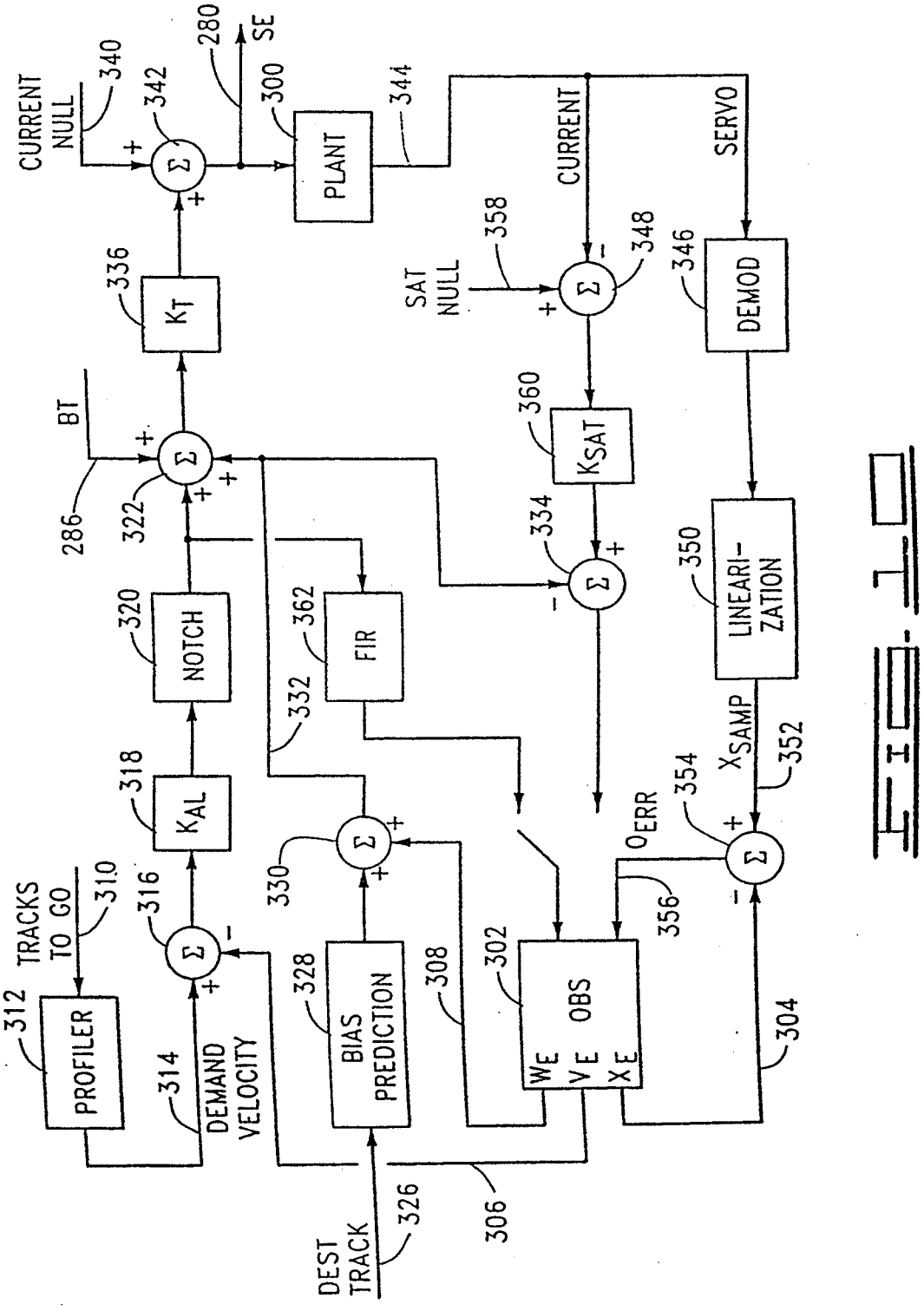

CURRENT NULL
340
342
280
SE
300
PLANT
344
CURRENT
SERVO
SAT NULL
358
348
346
DEMOD
336
K_T
BT
286
322
360
K_{SAT}
334
350
LINEARI-ZATION
320
NOTCH
362
FIR
332
318
K_{AL}
330
354
O_{ERR}
X_{SAMP}
352
TRACKS TO GO
310
316
312
PROFILER
314
DEMAND VELOCITY
328
BIAS PREDICTION
308
302
OBS
W_E
V_E
X_E
356
304
DEST TRACK
326
306

FIG. 1

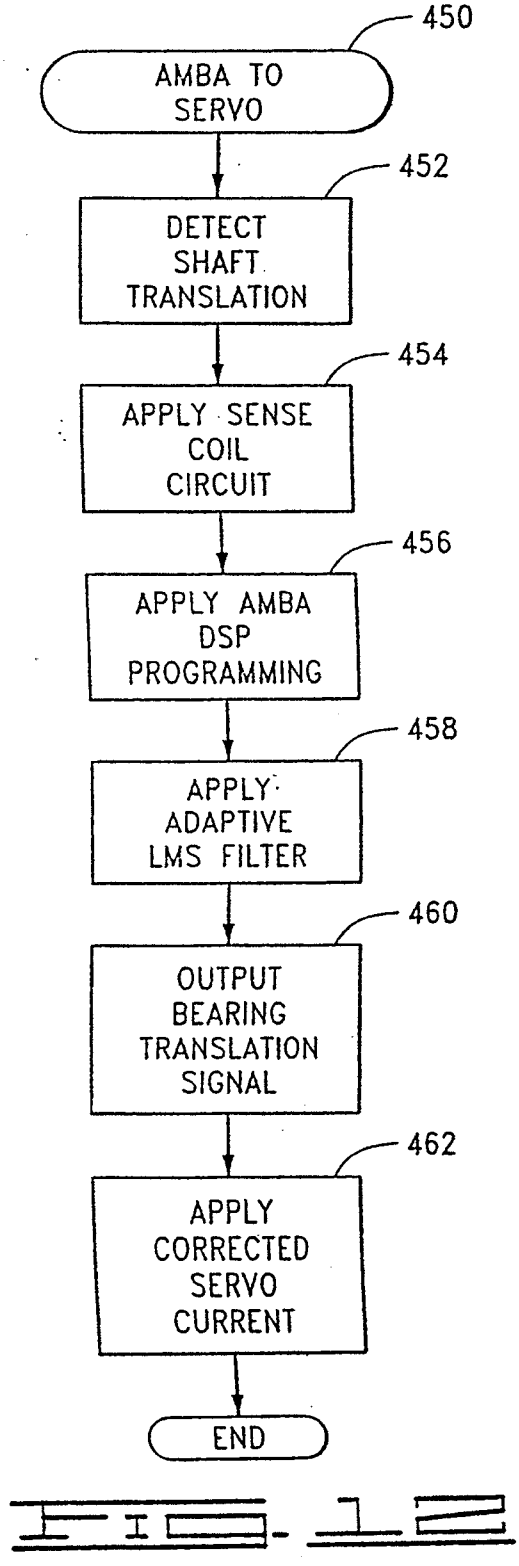
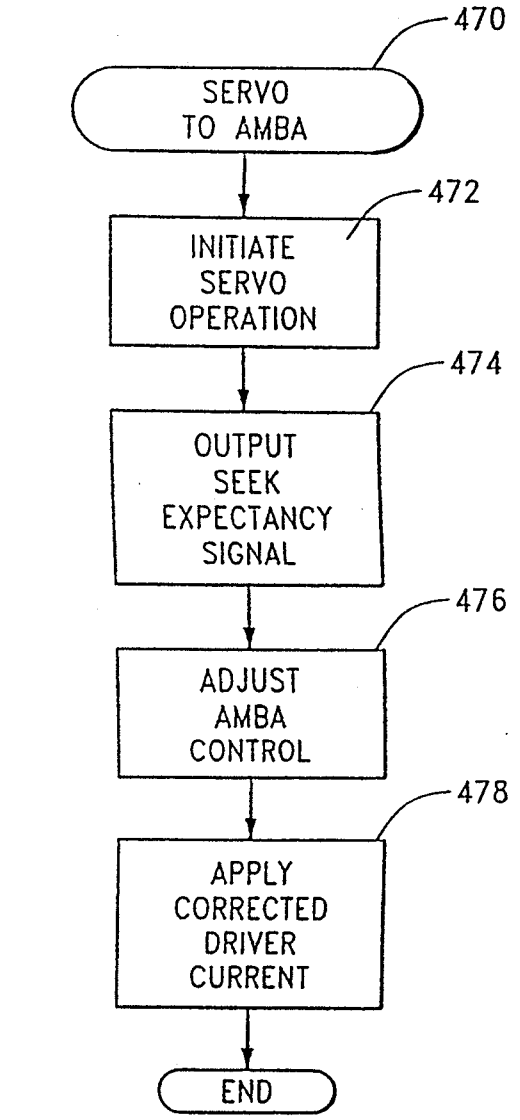

450
AMBA TO SERVO
452
DETECT SHAFT TRANSLATION
454
APPLY SENSE COIL CIRCUIT
456
APPLY AMBA DSP PROGRAMMING
458
APPLY ADAPTIVE LMS FILTER
460
OUTPUT BEARING TRANSLATION SIGNAL
462
APPLY CORRECTED SERVO CURRENT
END

FIG. 1


470
SERVO TO AMBA
472
INITIATE SERVO OPERATION
474
OUTPUT SEEK EXPECTANCY SIGNAL
476
ADJUST AMBA CONTROL
478
APPLY CORRECTED DRIVER CURRENT
END