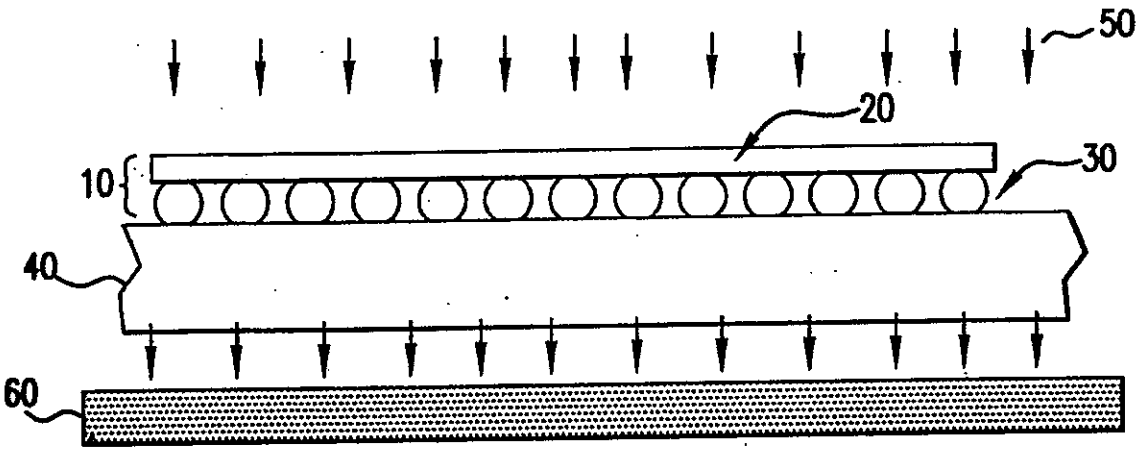


FIG.1

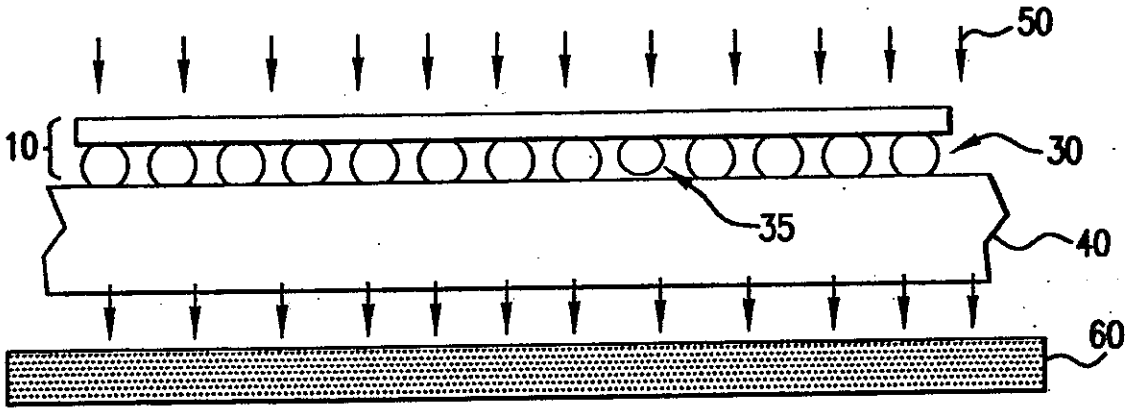


FIG.2

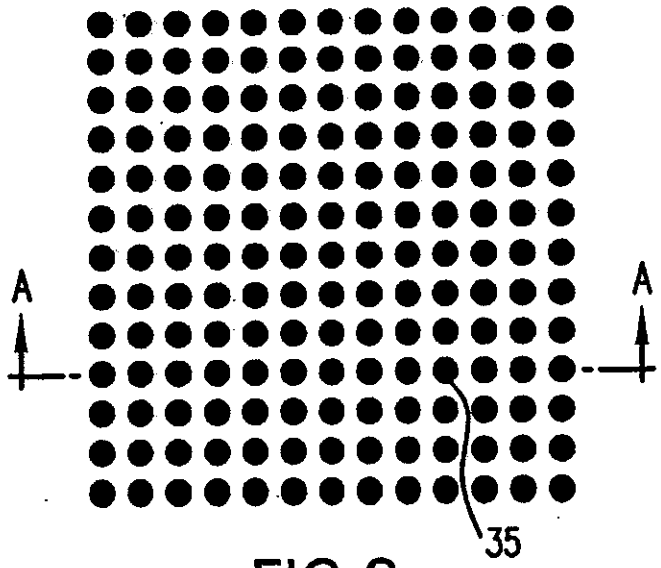


FIG.3

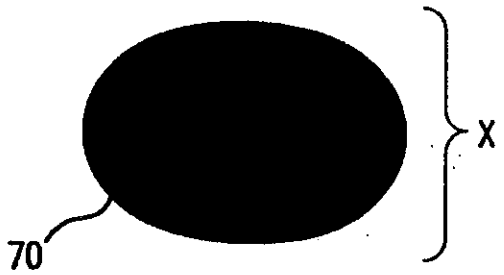


FIG.4

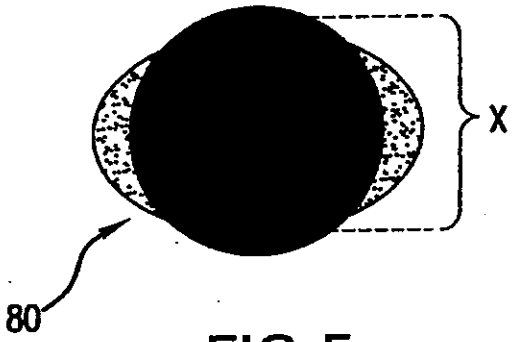


FIG.5

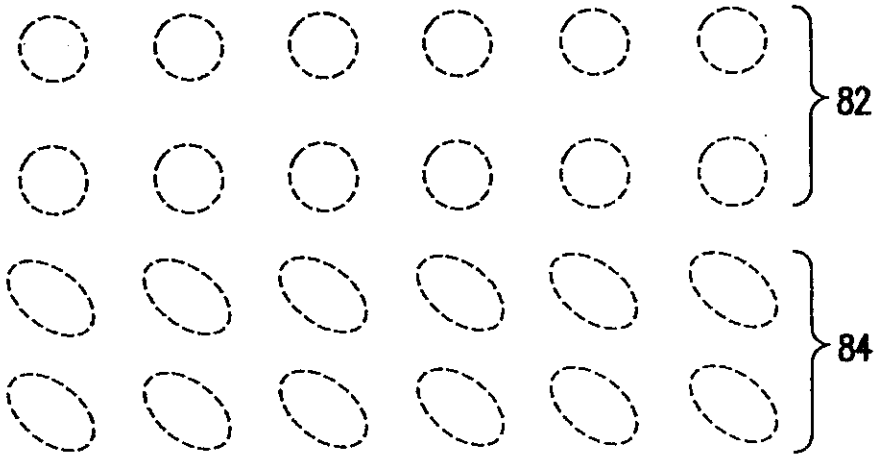


FIG.6

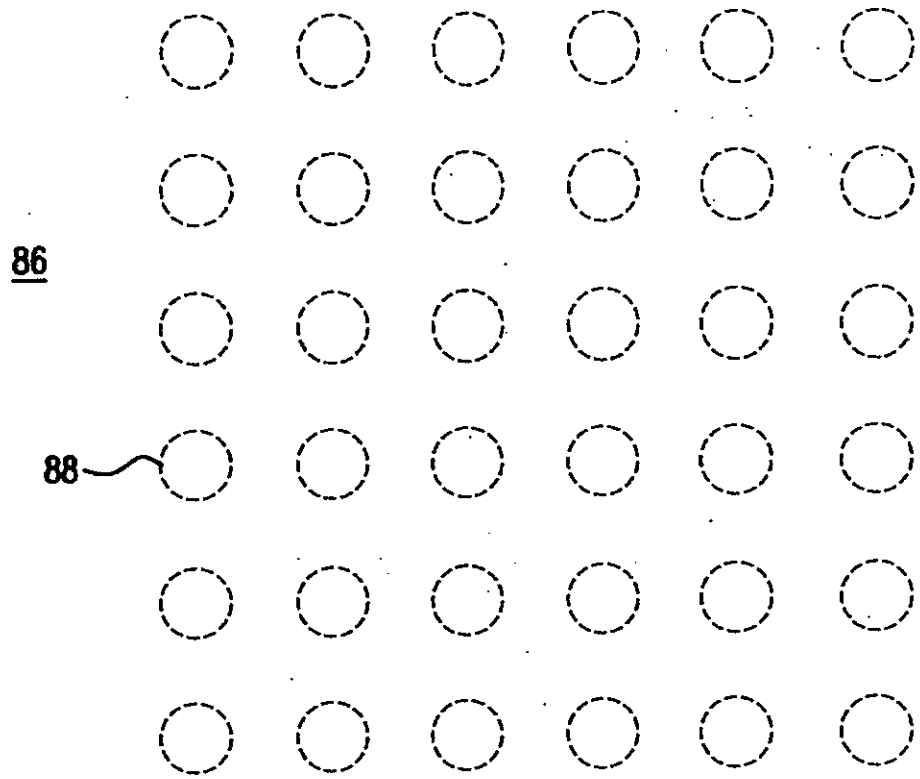


FIG.7

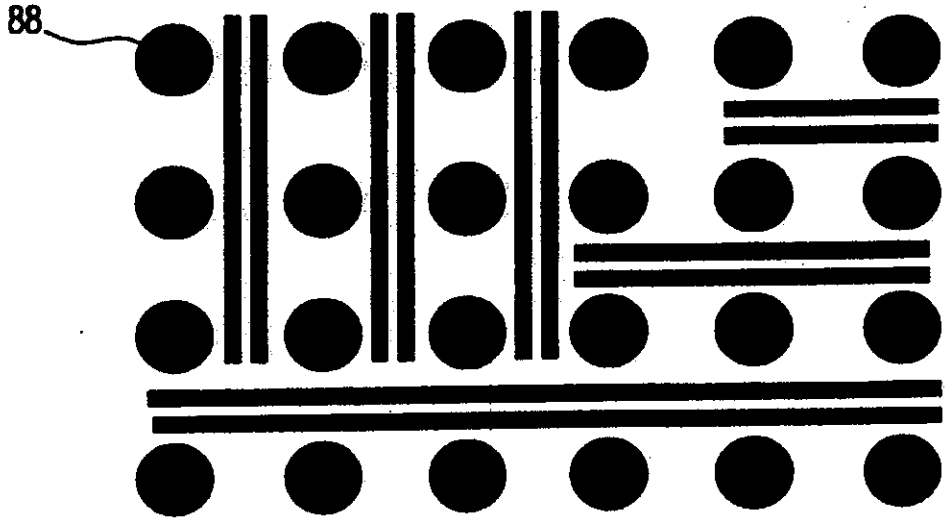


FIG.8

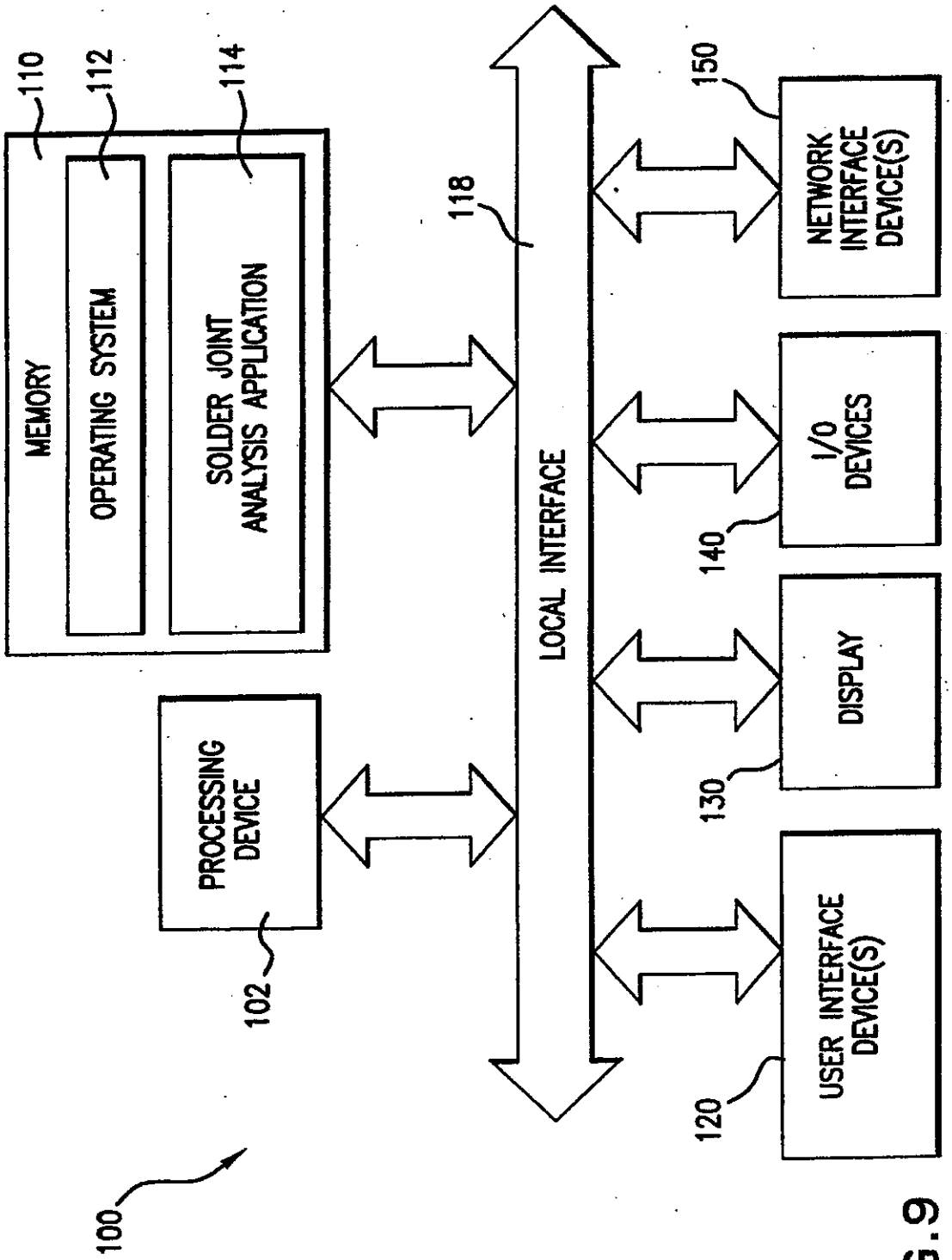

100
MEMORY
110
OPERATING SYSTEM
112
SOLDER JOINT ANALYSIS APPLICATION
114
PROCESSING DEVICE
102
LOCAL INTERFACE
118
NETWORK INTERFACE DEVICE(S)
150
I/O DEVICES
140
DISPLAY
130
USER INTERFACE DEVICE(S)
120

FIG.9

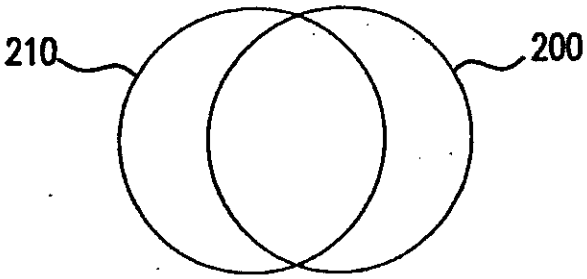


FIG.10

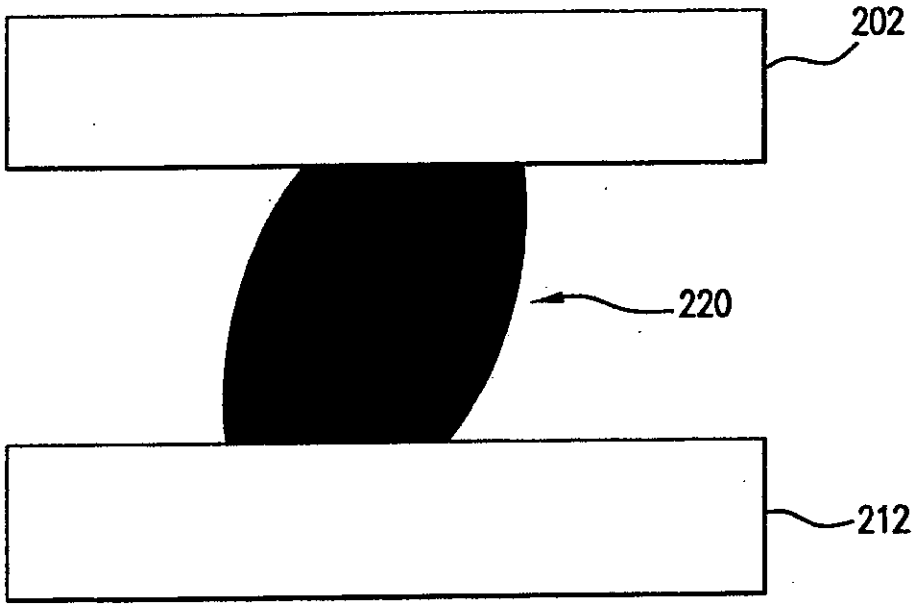


FIG.11

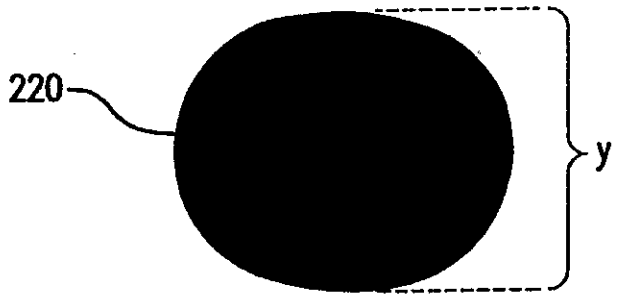


FIG.12

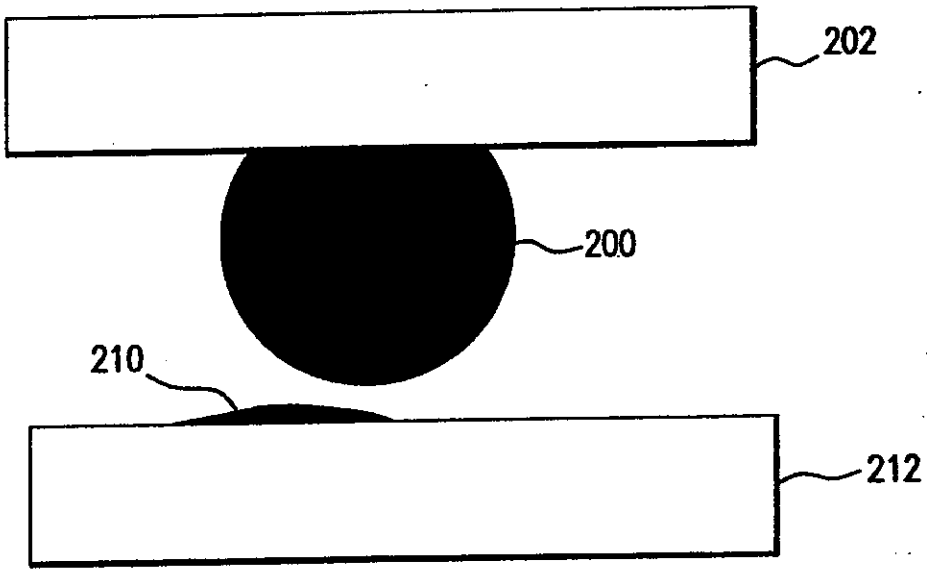


FIG.13

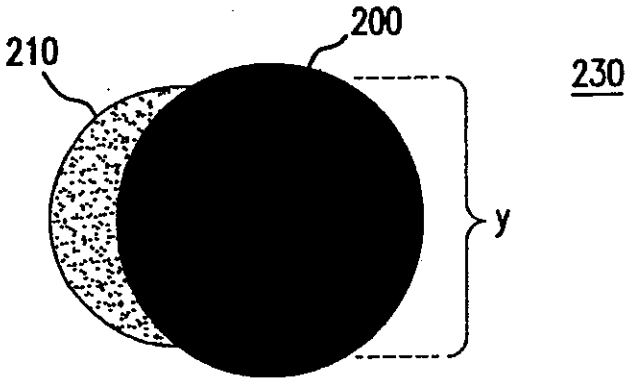


FIG.14

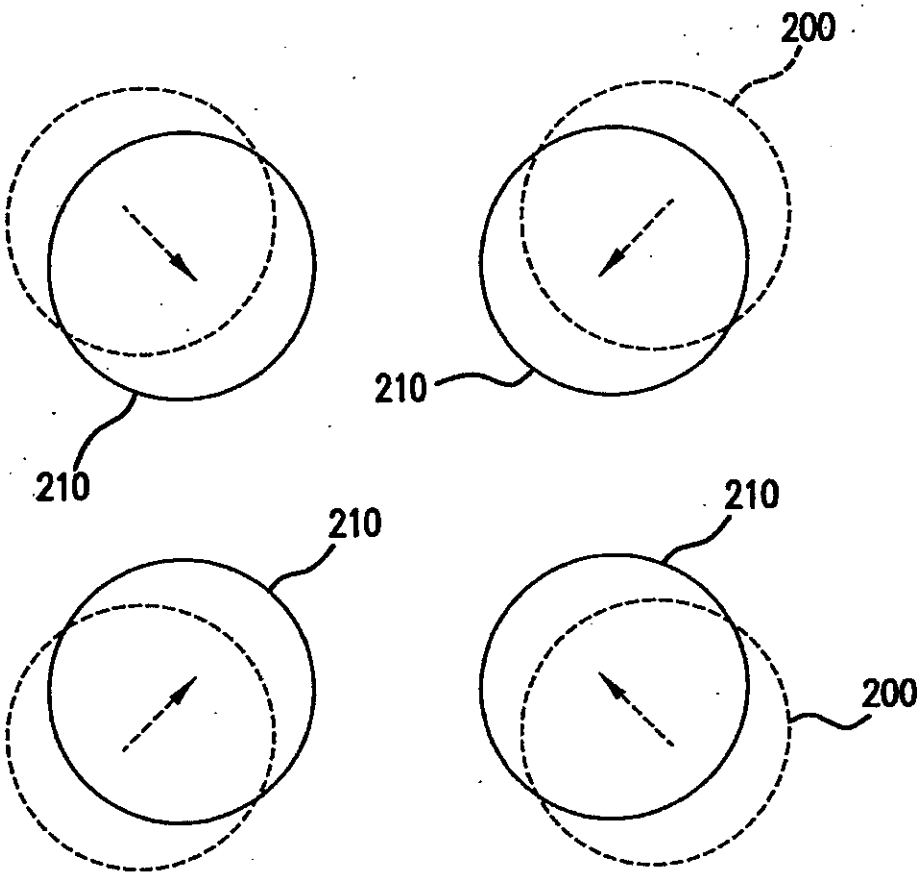


FIG.15

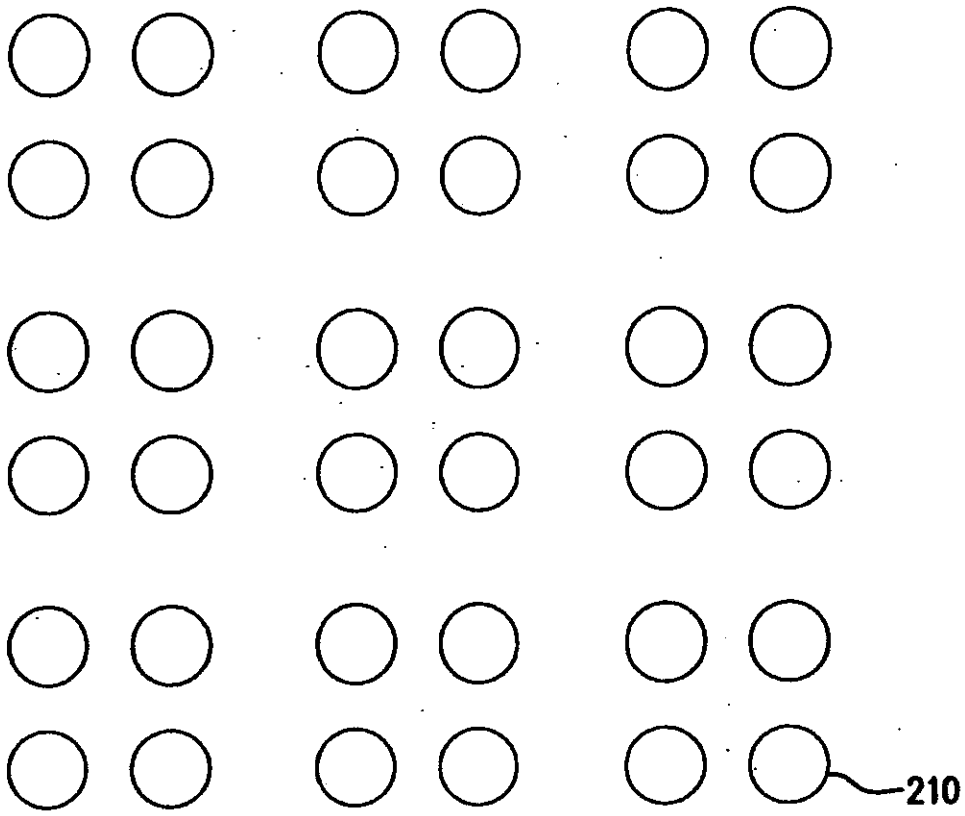


FIG.16

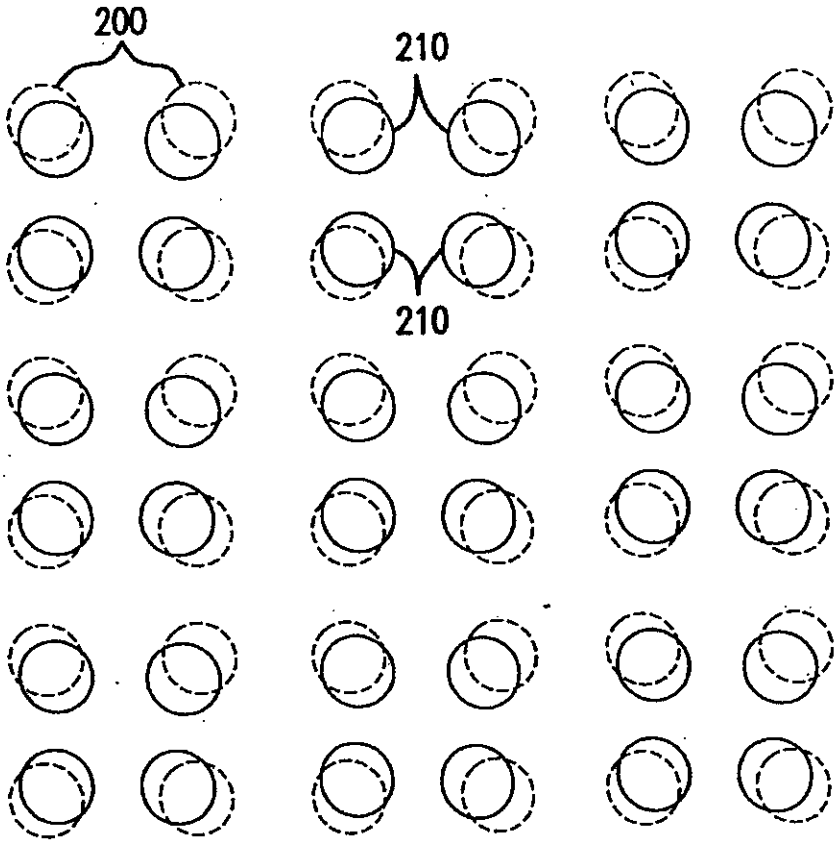


FIG.17

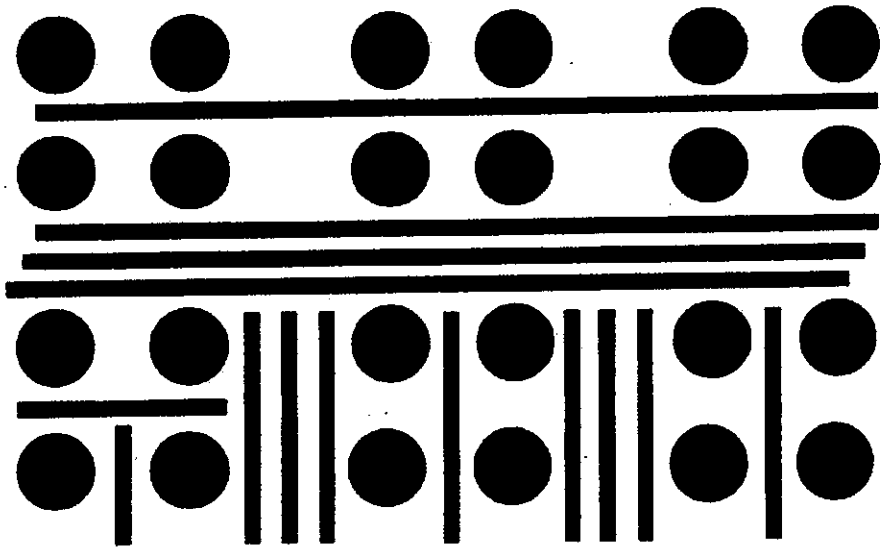


FIG.18

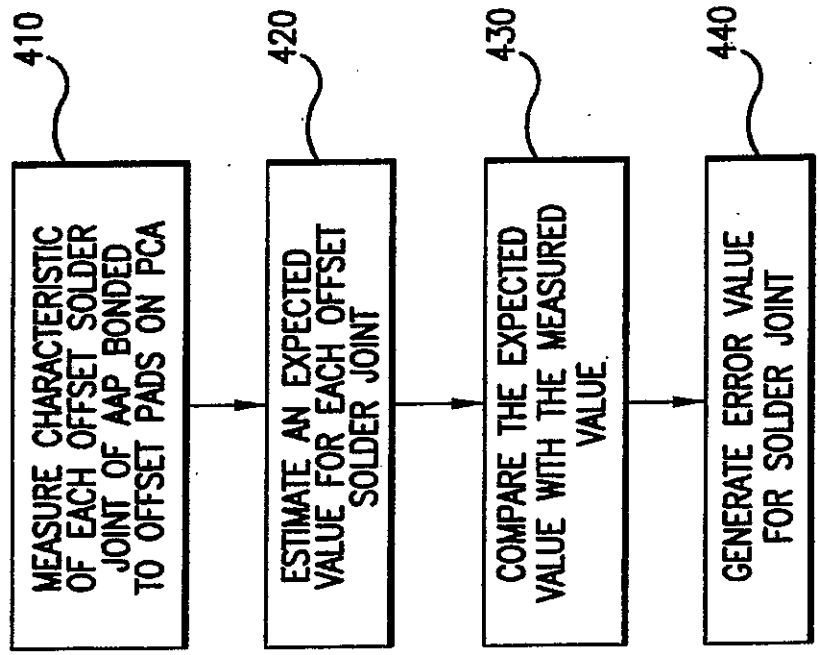

410
MEASURE CHARACTERISTIC OF EACH OFFSET SOLDER JOINT OF AAP BONDED TO OFFSET PADS ON PCA
420
ESTIMATE AN EXPECTED VALUE FOR EACH OFFSET SOLDER JOINT
430
COMPARE THE EXPECTED VALUE WITH THE MEASURED VALUE
440
GENERATE ERROR VALUE FOR SOLDER JOINT

FIG.20

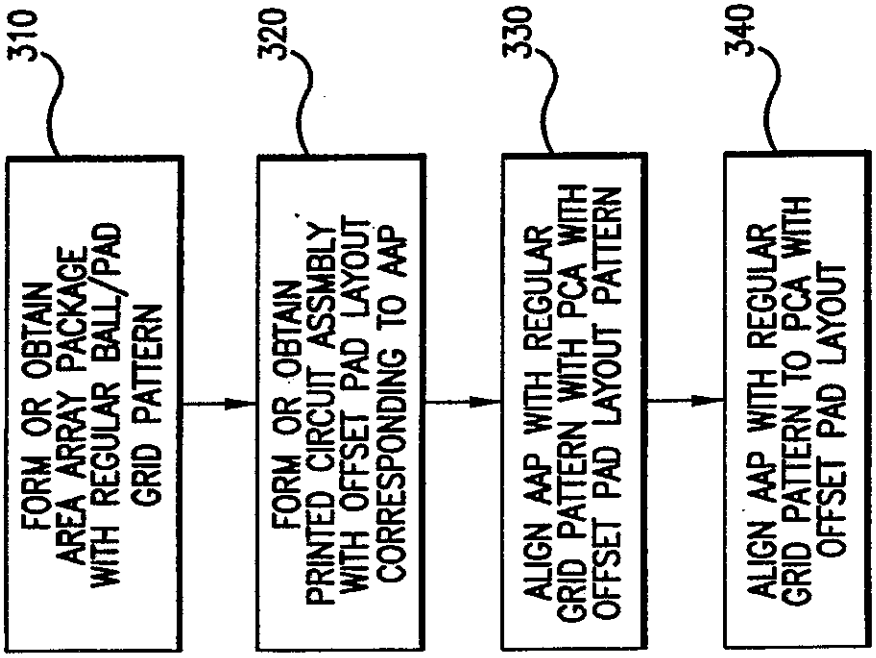

310
FORM OR OBTAIN AREA ARRAY PACKAGE WITH REGULAR BALL/PAD GRID PATTERN
320
FORM OR OBTAIN PRINTED CIRCUIT ASSMBLY WITH OFFSET PAD LAYOUT CORRESPONDING TO AAP
330
ALIGN AAP WITH REGULAR GRID PATTERN WITH PCA WITH OFFSET PAD LAYOUT PATTERN
340
ALIGN AAP WITH REGULAR GRID PATTERN TO PCA WITH OFFSET PAD LAYOUT

FIG.19