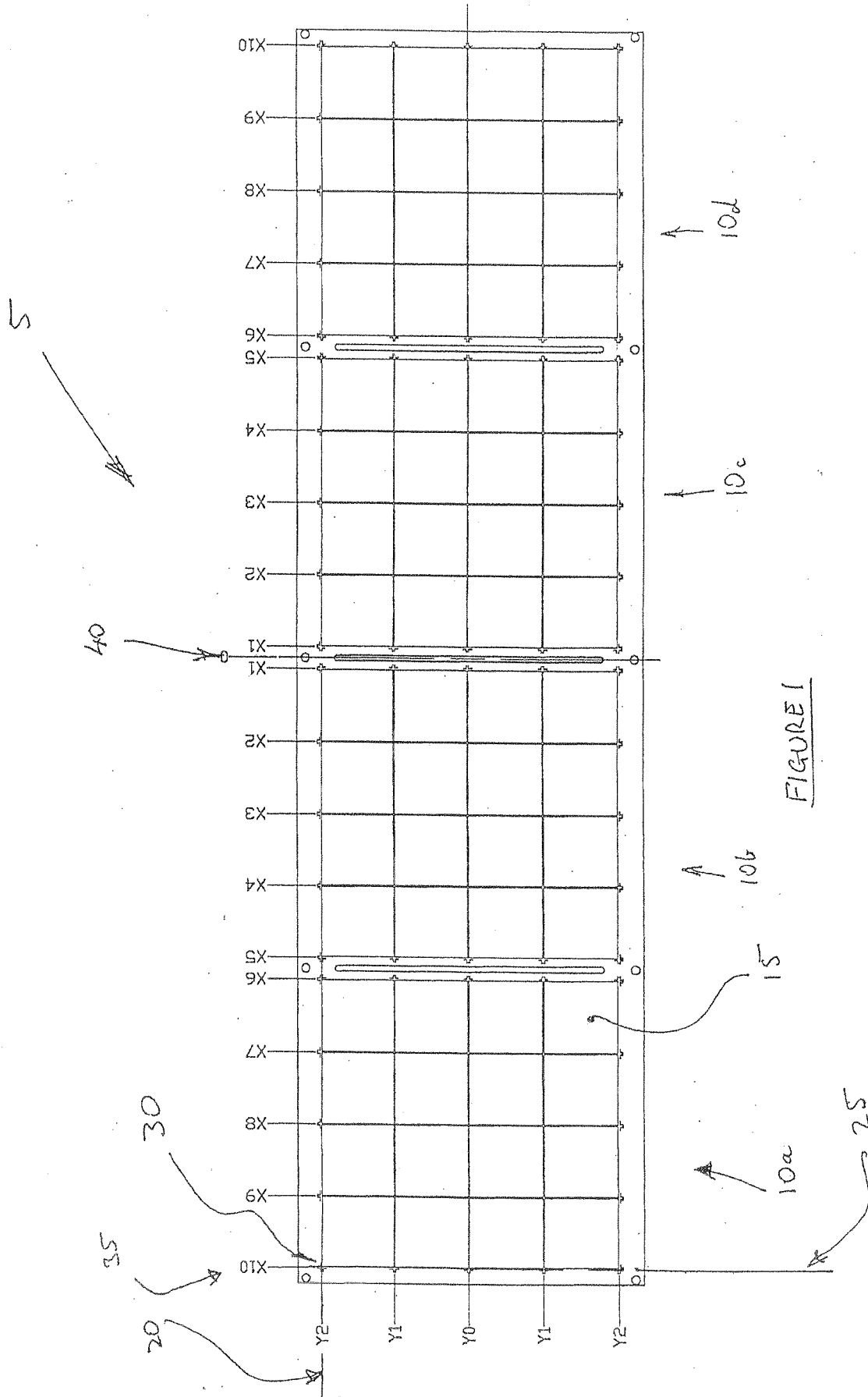
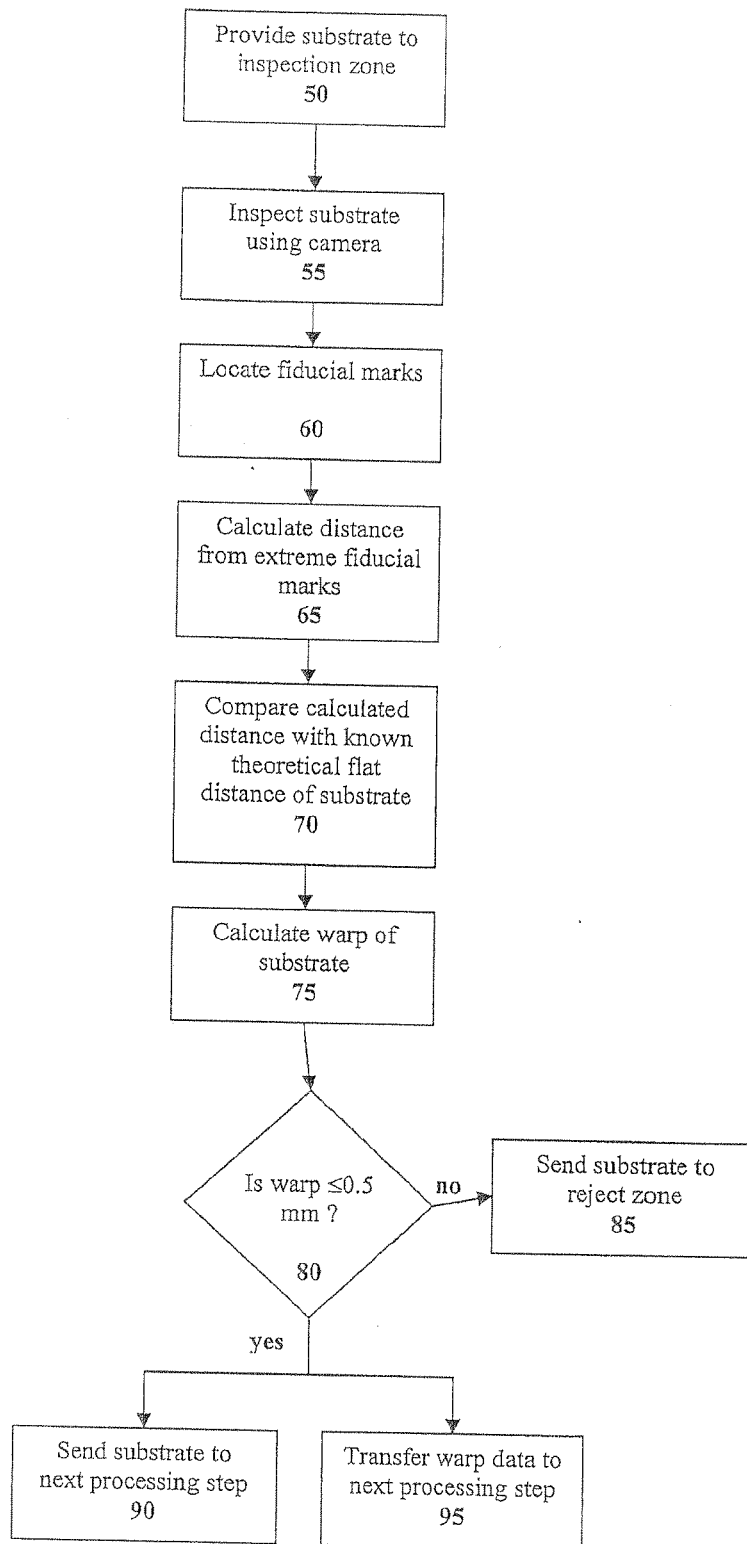




Figure 2

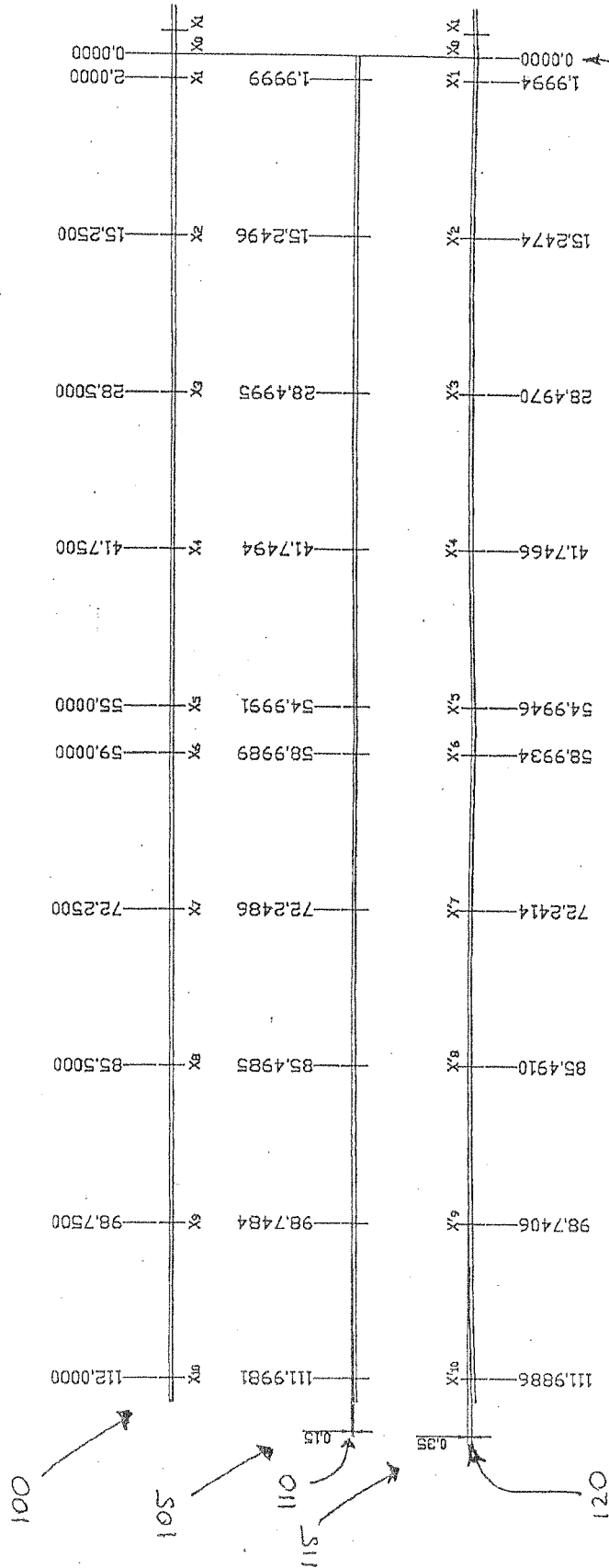


FIGURE 3

175

For side (Concave)

Yn----- dimension on the drawing
Yh----- checking dimension from camera
Y'n----- dimension after suction
Y'n = Wn*Yn + Vn*Y'h, Wn + Vn = 1

If warpage <= 0.5, we choose Wn=Vn=0.5

So, A:

$$2*Y'h_1 = 26.5 \times 0.5 + 26.4995 \times 0.5 = 26.49975$$

$$2*Y'h_2 = 31.0 \times 0.5 + 32.9972 \times 0.5 = 32.9986$$

B:

$$2*Y'h_1 = 26.5 \times 0.5 + 26.4991 \times 0.5 = 26.49955$$

$$2*Y'h_2 = 31.0 \times 0.5 + 32.9931 \times 0.5 = 32.99655$$

Similar A after suction

If 0.5 < warpage <= 1.0, choose Wn = 0.55, Vn = 0.45

C:

$$2*Y'h_1 = 26.5 \times 0.55 + 26.4978 \times 0.45 = 26.49901$$

$$2*Y'h_2 = 31.0 \times 0.55 + 32.9878 \times 0.45 = 32.9923$$

Similar B after suction

D:

$$2*Y'h_1 = 26.5 \times 0.55 + 26.4966 \times 0.45 = 26.49847$$

$$2*Y'h_2 = 31.0 \times 0.55 + 32.973 \times 0.45 = 32.9879$$

Similar B after suction

If warpage = 1.2, choose Wn = 0.6, Vn = 0.4

E:

$$2*Y'h_1 = 26.5 \times 0.6 + 26.4952 \times 0.4 = 26.49808$$

$$2*Y'h_2 = 31.0 \times 0.6 + 32.9614 \times 0.4 = 32.9846$$

Similar C after suction

If warpage = 1.5, choose Wn = 0.7, Vn = 0.3

F:

$$2*Y'h_1 = 26.5 \times 0.7 + 26.4925 \times 0.3 = 26.49775$$

$$2*Y'h_2 = 31.0 \times 0.7 + 32.9395 \times 0.3 = 32.9819$$

Similar C after suction

If warpage = 2.0, choose Wn = 0.8, Vn = 0.2

G:

$$2*Y'h_1 = 26.5 \times 0.8 + 26.4867 \times 0.2 = 26.4973$$

$$2*Y'h_2 = 31.0 \times 0.8 + 32.8927 \times 0.2 = 32.9785$$

Similar D after suction

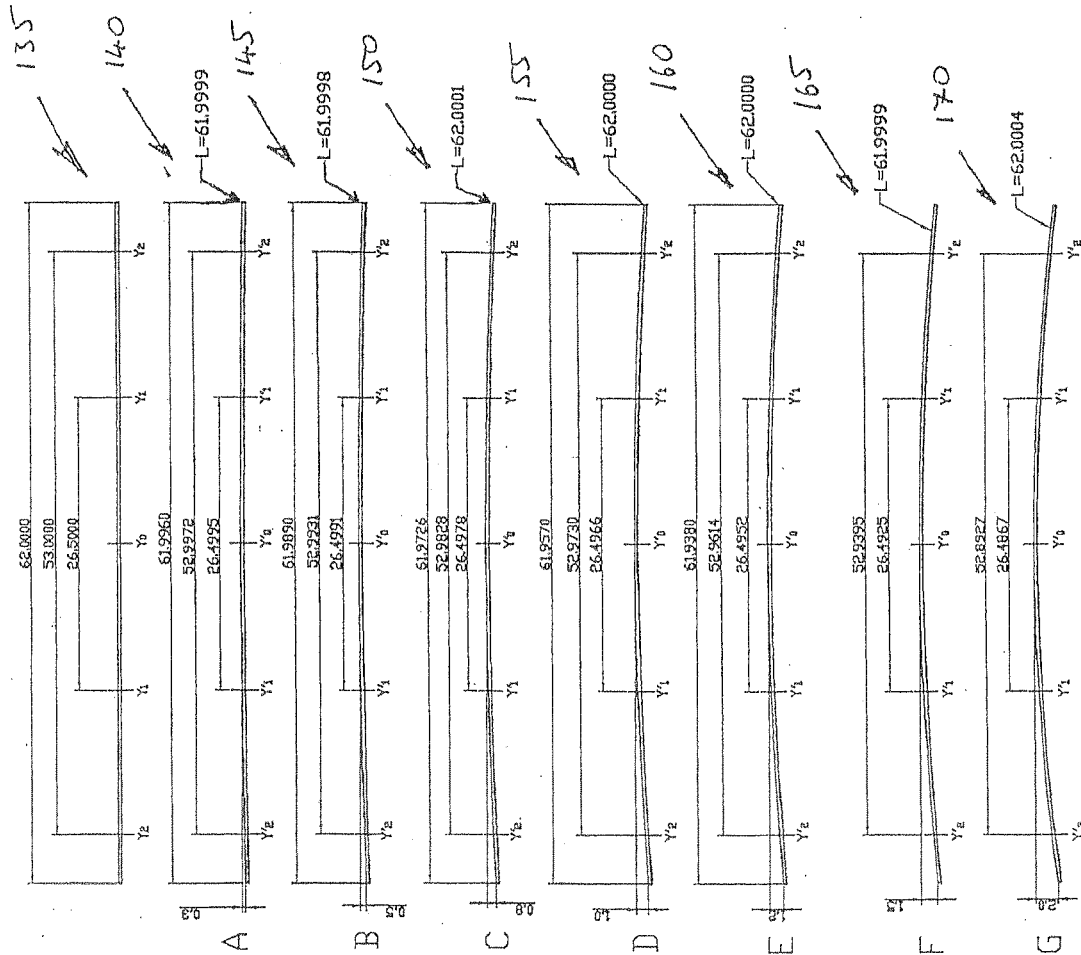


FIGURE 4