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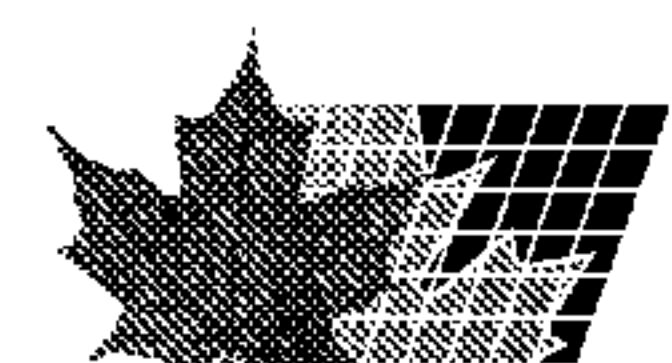
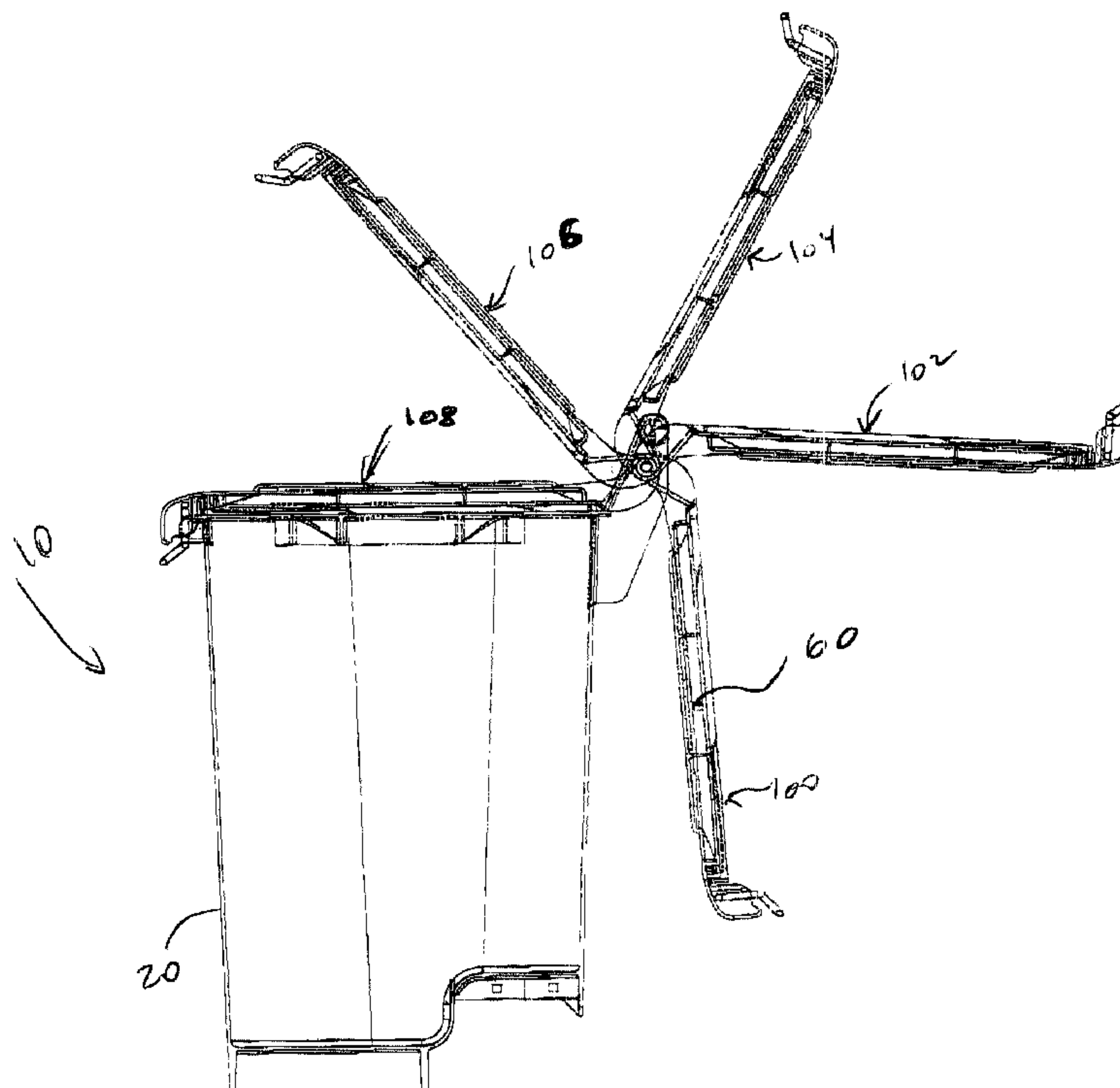
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(54) Title: REFUSE CONTAINER



REFUSE CONTAINER

Field of Invention

The present invention relates to containers for holding refuse, and particularly to container configured for facilitating easier filling and emptying of such containers.

Description of Drawings

Figure 1 is a sectional elevation view of the container of the present invention, illustrating the lid in various positions relative to the bin;

Figure 2 is a second sectional elevation view of the container of the present invention, illustrating the lid in various positions relative to the bin;

Figure 3 is a detailed sectional plan view of the container, illustrating the connection of the bracket to the rear surface of the bin;

Figure 4 is a top perspective view of the bin of the container;

Figure 5 is a front sectional elevation view of the bin of the container;

Figure 6 is a side sectional elevation view of the bin of the container;

Figure 7 is a detailed view taken along lines C-C in Figure 8;

Figure 8 is a bottom plan view of the bin of the container of the present invention;

Figure 9 is a detailed view taken along lines D-D in Figure 8.

Figure 10 is a top perspective view of the lid of the container of the present invention;

Figure 11 is a front sectional elevation view of the lid in Figure 10;

Figure 12 is a top plan view of the lid in Figure 10;

Figure 13 is a bottom plan view of the lid in Figure 10, and

Figure 14 is a side sectional elevation view of the lid in Figure 10.

Detailed Description

Referring to Figures 1, 4, and 10, the present invention provides a refuse container 15 including a bin 20 and a lid 60, wherein the lid is pivotally connected and rotatably moveable relative to the bin.

Figure 1 is a sectional elevation view of the refuse container 15, illustrating the lid 60 in five different positions indicated by reference numerals 100, 102, 104, 106, and 108. The lid 60 is disposed in fully open and fully closed positions in those positions illustrated by reference numerals 100 and 108, respectively. The lid 60 is in various intermediate open positions in those positions illustrated by reference numerals 102, 104, and 106.

Figure 4 is a top perspective view of the bin 20 of the container 15, wherein the lid 60 is removed for purposes of clarity.

Figure 10 is a top perspective view of the lid 60 of the container 15, wherein the bin 20 is removed for purposes of clarity.

Referring to Figures 4 - 9, the bin 20 includes a floor 30 and a continuous upstanding sidewall 40 extending from the floor 30. The floor 30 and the sidewall 40 combine to define a cavity 50. The sidewall 40 terminates at a rim 42. An upstanding lip 44 extends about the rim and is configured to register with a recess 62 in the lid 60, when the lid is in the closed position 108.

The sidewall includes an exterior surface 46 and an interior surface 48. The exterior surface 46 generally includes front and rear surfaces 70, 72 respectively connected by opposite first and second side surfaces 74 and 76 respectively. First and second handles 80 and 82 respectively extend laterally outwardly from the first and second side surfaces, respectively. The handles 80, 82 are configured for gripping by a human operator laterally of the first and second side surfaces 74, 76.

A spout 64 is formed in the rim 42 proximate to the front surface 70. The interior surface 48 is tapered to urge flow of materials from within the container towards the spout.

A strike 90 is generally disposed and extends laterally outwardly from the front surface 70. The strike 90 includes a detent 92 or latch retainer, configured to resist movement of a latch 110, as will hereinafter be described.

A pair of brackets 20, 22 extend from the rear surface 72 of the bin 20. Each of the brackets 120 and 122 include apertures 130, 132 to receive a respective pin 140 and 142 for pivotally mounting the lid 60 to the bin 20. Each of the bracket 120 and 122 includes a detent mechanism 160 configured to resist rotational movement of the lid 60 relative to the bin 20 between the fully open position 100 and the fully closed position 108 (see Figure 1).

A handle 170 is further provided and mounted to the bin 20. In one embodiment, the handle 170 extends between and connects the pair of brackets 120 and 122. In one embodiment, the handle 170 is reinforced by a plurality of reinforcement ribs 172, extending radially from the handle 170. The handle 170 is configured for grasping by a human operator, to effect movement of the entire container. Consequently the handle 170 is disposed vertically above the bin 20 of the container 15, when the container 15 is in an upstanding position, such as that illustrated in Figure 4).

Referring to Figures 10 - 14, the lid 60 generally includes a front section 64, a rear section 66 and first and second opposite side sections 67 and 68 respectively extending between and connecting the front and rear sections 64 and 66. A latch 200 is pivotally coupled to the front section 64, and is configured to ride over the detent 92 provided on the striker 90, to thereby maintain the lid in the closed position, as indicated by reference numeral 108 in Figure 1. This is referred to as the "locked position". The lid 60 can be locked or unlocked relative to the bin 20 by applying a force to the latch 200 to displace the detent 92 by simultaneously causing resilient deformation of one or both of the latch 200 and the striker 90 to allow passage of the latch 200 over the detent 92. The latch 200 includes a handle 210 configured to be grasped by a human operator to facilitate application of the necessary force by the human operator. The front section 64 of the lid includes a slot 69 to facilitate deformation of the lid as the latch rides over the detent to a locked position. By deforming the front section 64 of the lid 60 in this manner, further resistance is provided to the movement of the latch 200 from a locked position.

As described above, the lid 60 includes a recess configured to engage the lip 44 of the bin 20, when the lid 60 is in the closed position 108. Such engagement substantially prevents the egress of any materials from the container cavity 50, when the lid 60 is fully closed and locked to the bin 20.

A pair of opposing mounting brackets 240, 242 extend from the rear section 66 of the lid 60. The mounting brackets 240, 242 are configured to effect pivotal coupling of the lid to the bin. In this respect, and in one embodiment, each of the mounting brackets includes an inwardly facing mounting pin 140 and 142 respectively. The mounting pins 140 and 142 are received within the apertures 130 and 132 of the respective bin brackets 120 and 122, thereby effecting pivotal coupling of the lid 60 to the bin 20.

Referring to Figures 1 - 3, the lid 60 is rotatably moveable relative to the bin 20 between the fully closed 68 and fully open position 100, as described above. When it is desired to dump the contents of the bin 20, the lid 60 is moved to the fully open position 100, and is substantially disposed below the handle 170. The lid retainer is configured to resist movement of the lid 60 away from the fully open position 100. As such, when the container is tilted to facilitate gravitational flow of its contents for discharge thereof, the lid retainer resists the lid from closing itself against the bin. The detent mechanism 160 may, as illustrated, include a cam surface which engages the brackets 240 and 242 extending from the lid 60. Disengagement of the detent mechanism 160 would be effected by resilient deformation of at least one of the brackets 120 and 122 of the bin 20 and the brackets 240 and 242 of the lid 60. Accordingly, in order to close the lid against the bin, a threshold force must be applied to the lid 60.

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I Claim:

1. A container comprising

a bin

a lid hingedly coupled to said bin for movement between open configuration providing access to an interior of said bin and a closed configuration inhibiting access to said interior; and

a detent mechanism acting between said bin and said lid for maintaining said lid in said open configuration until a minimum threshold force is applied to said lid toward said closed configuration

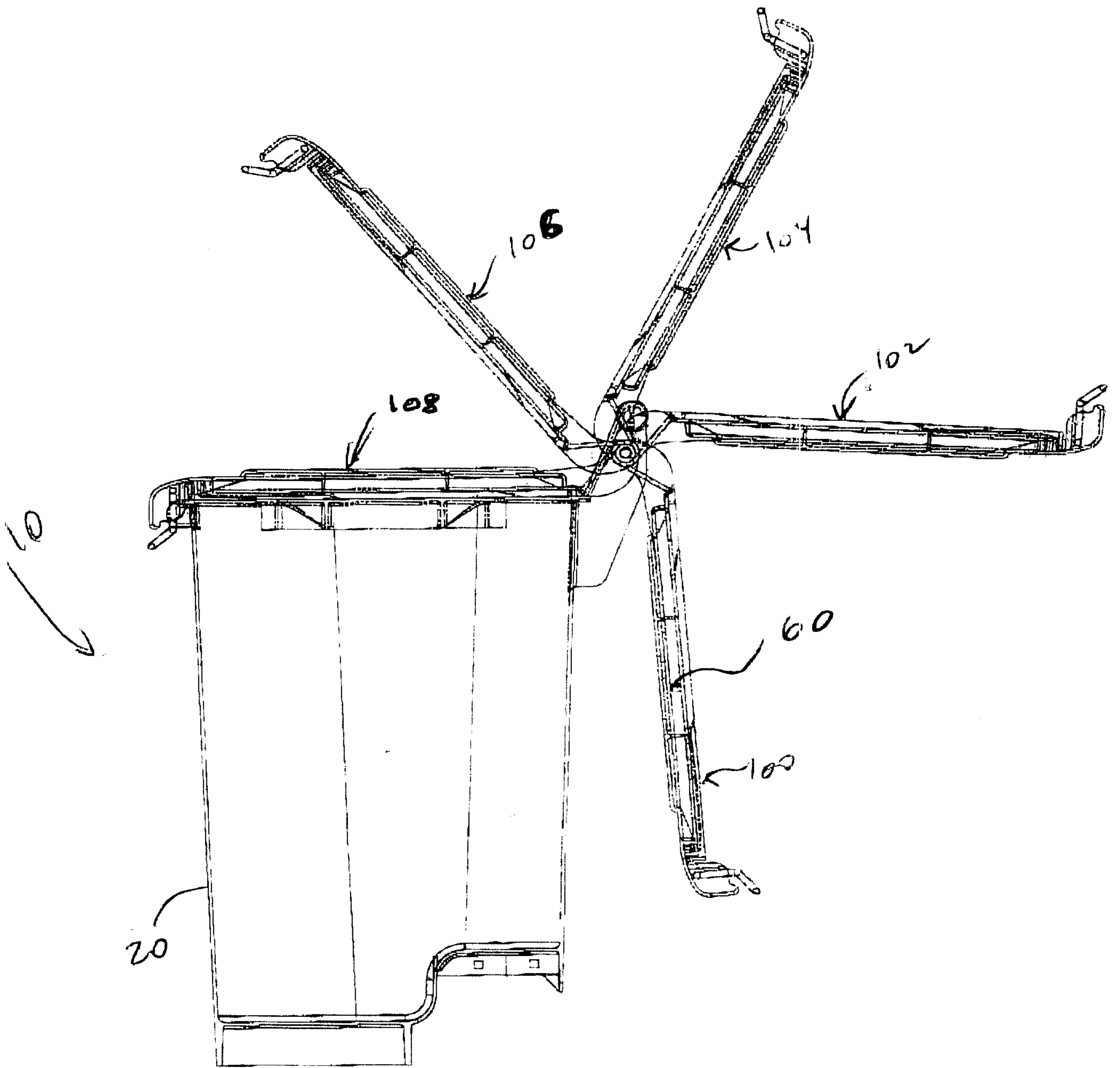


FIG. 1

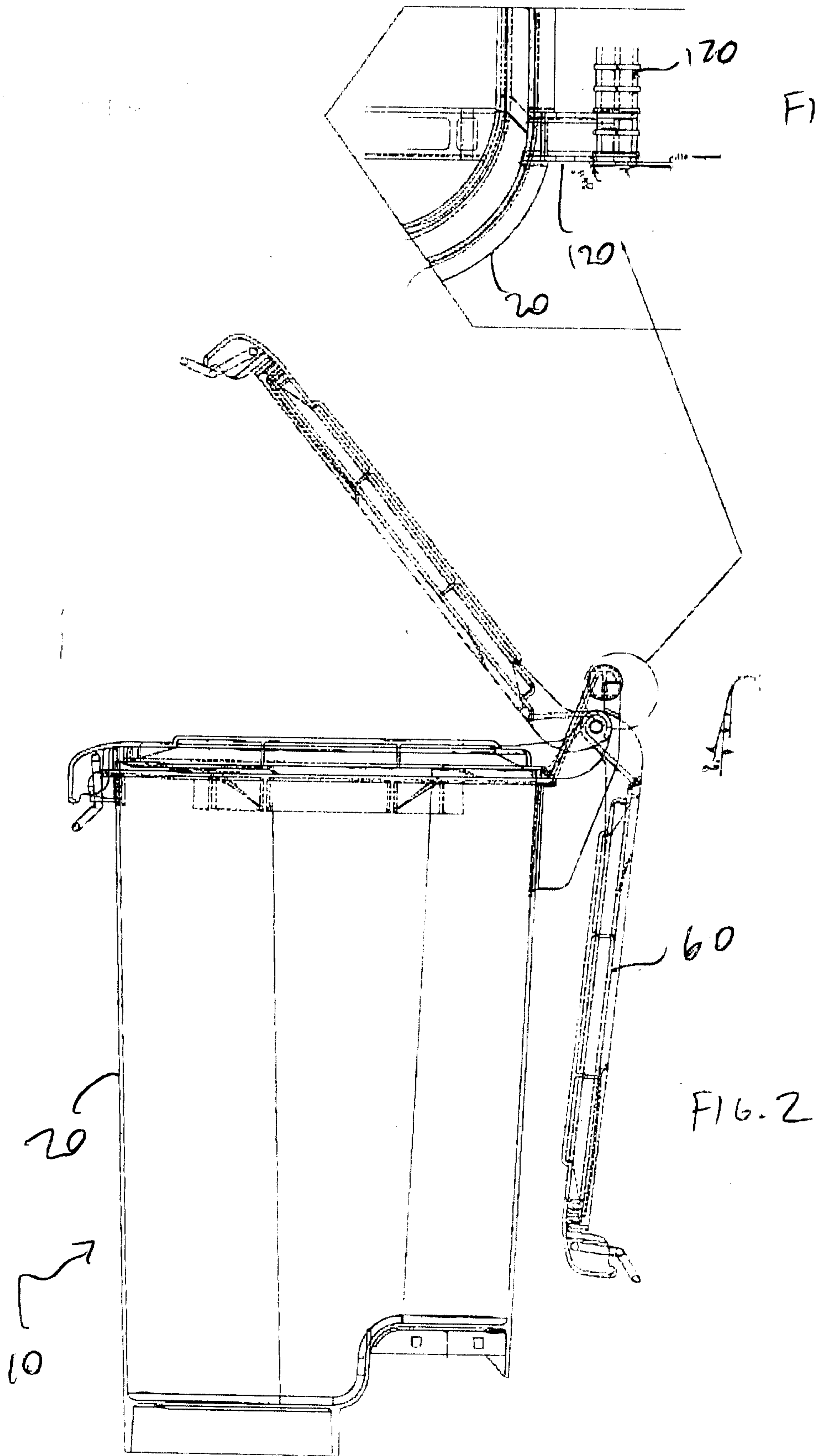


FIG. 3

FIG. 2

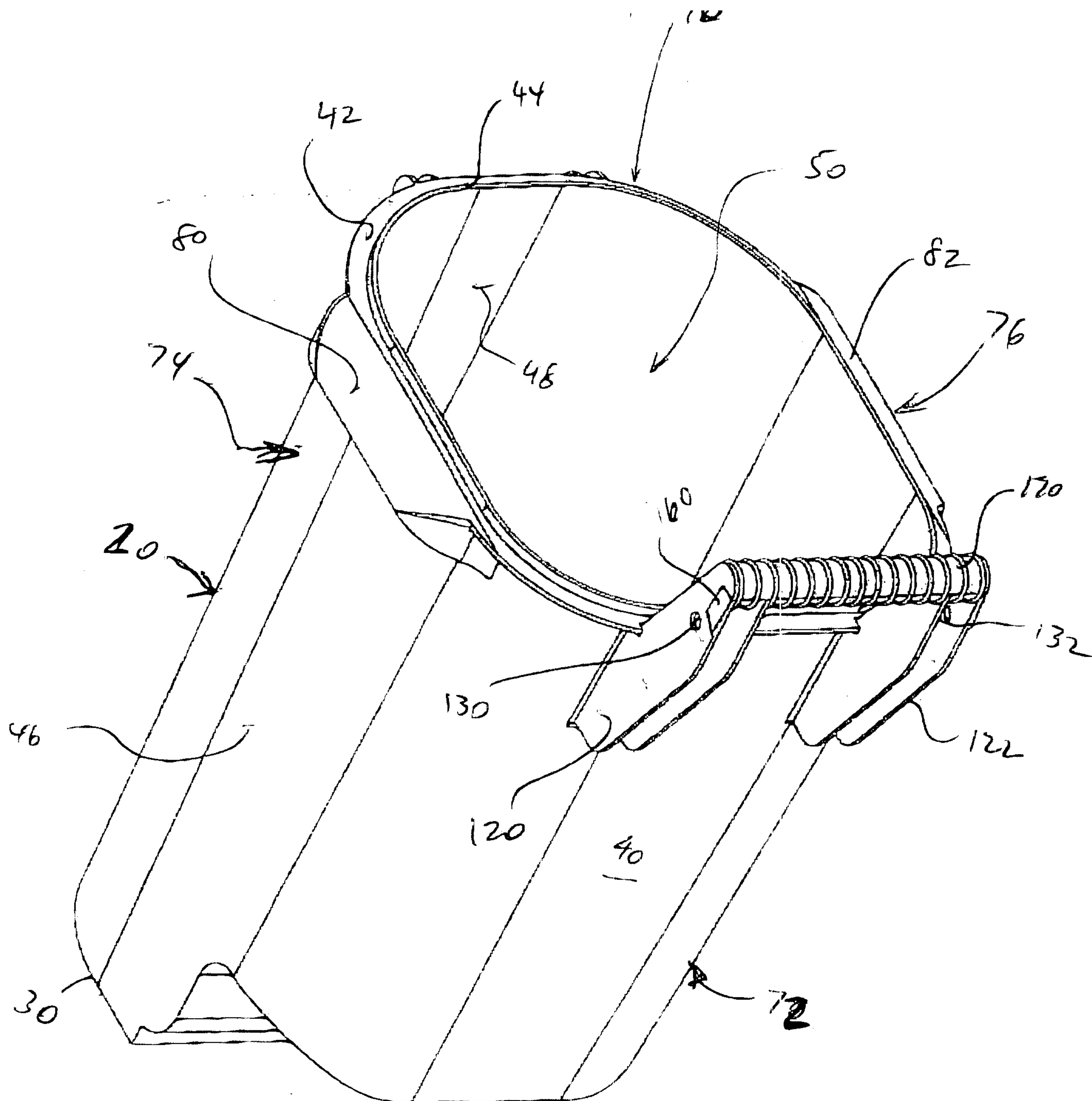


FIG. 4

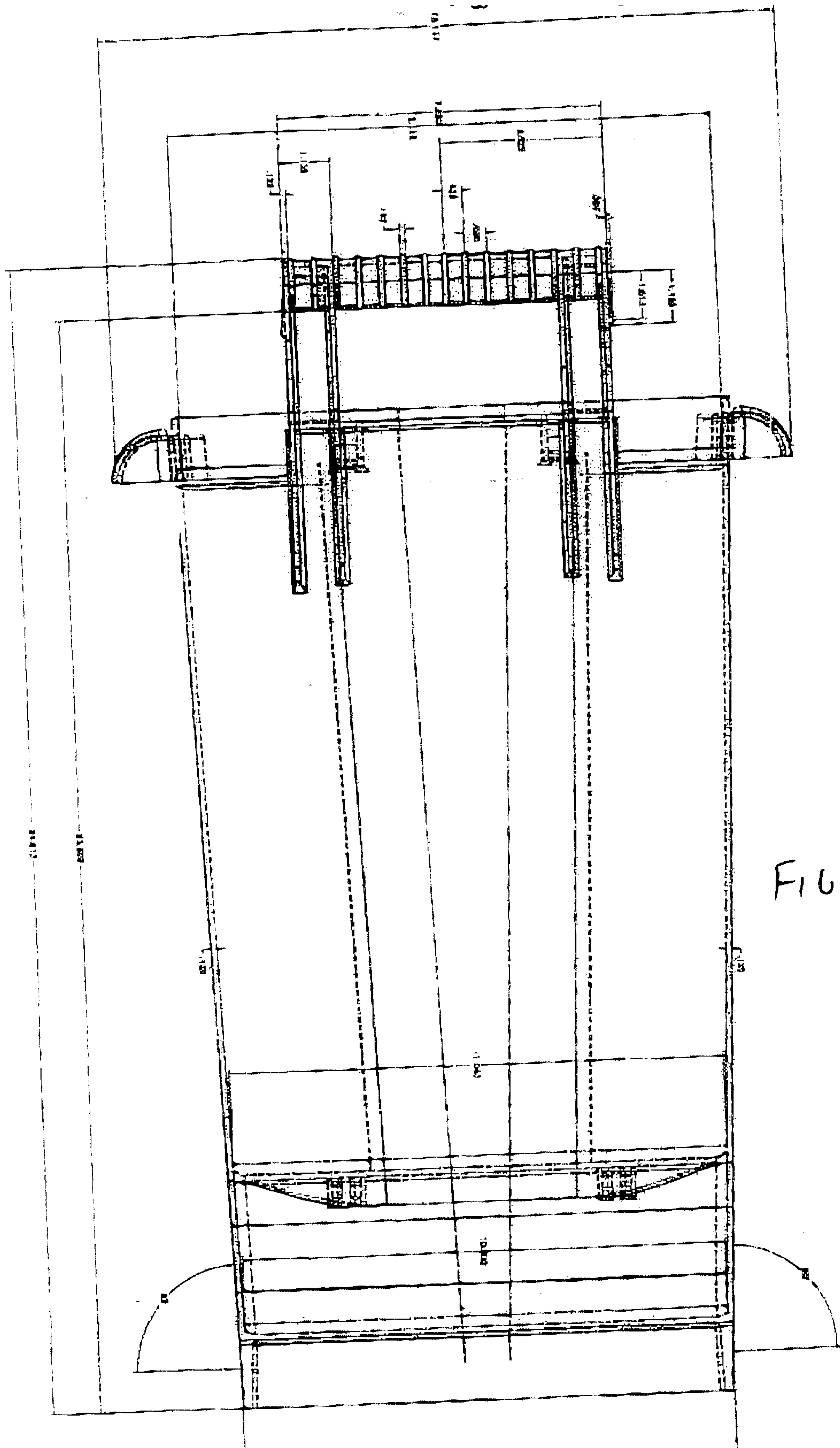


FIG. 7

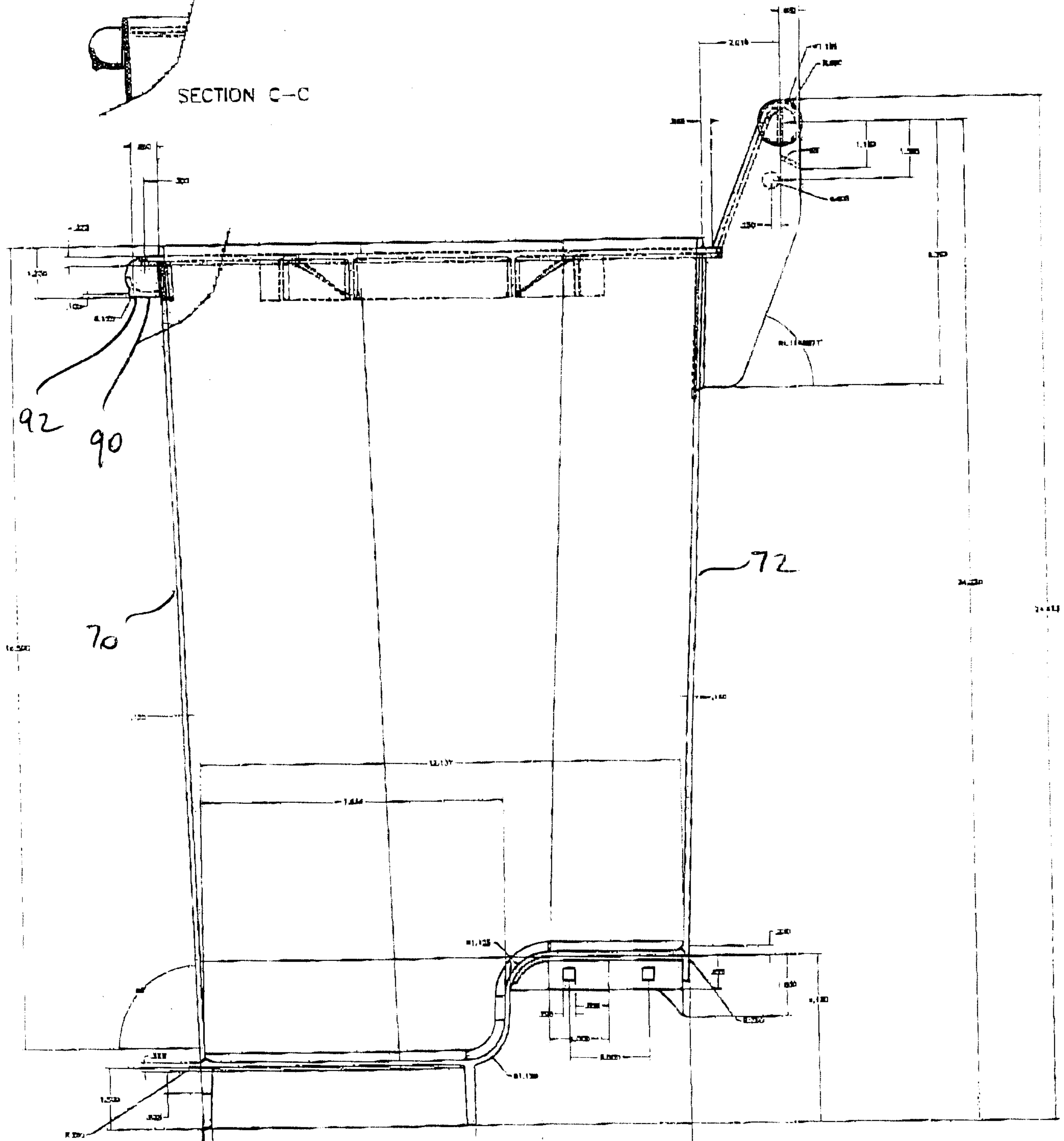
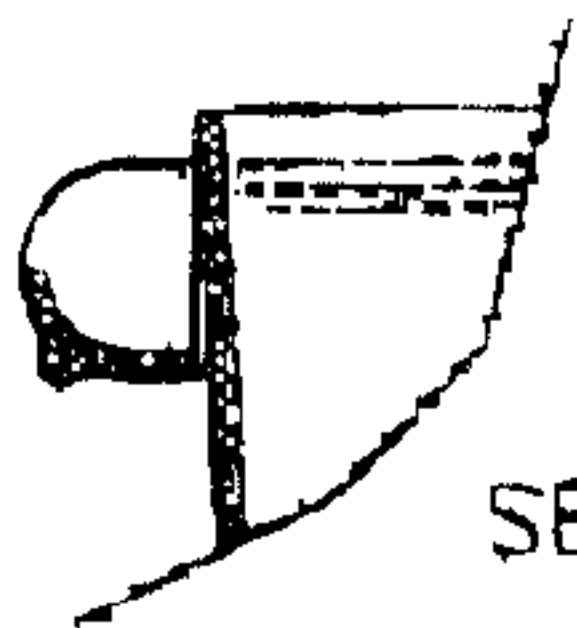
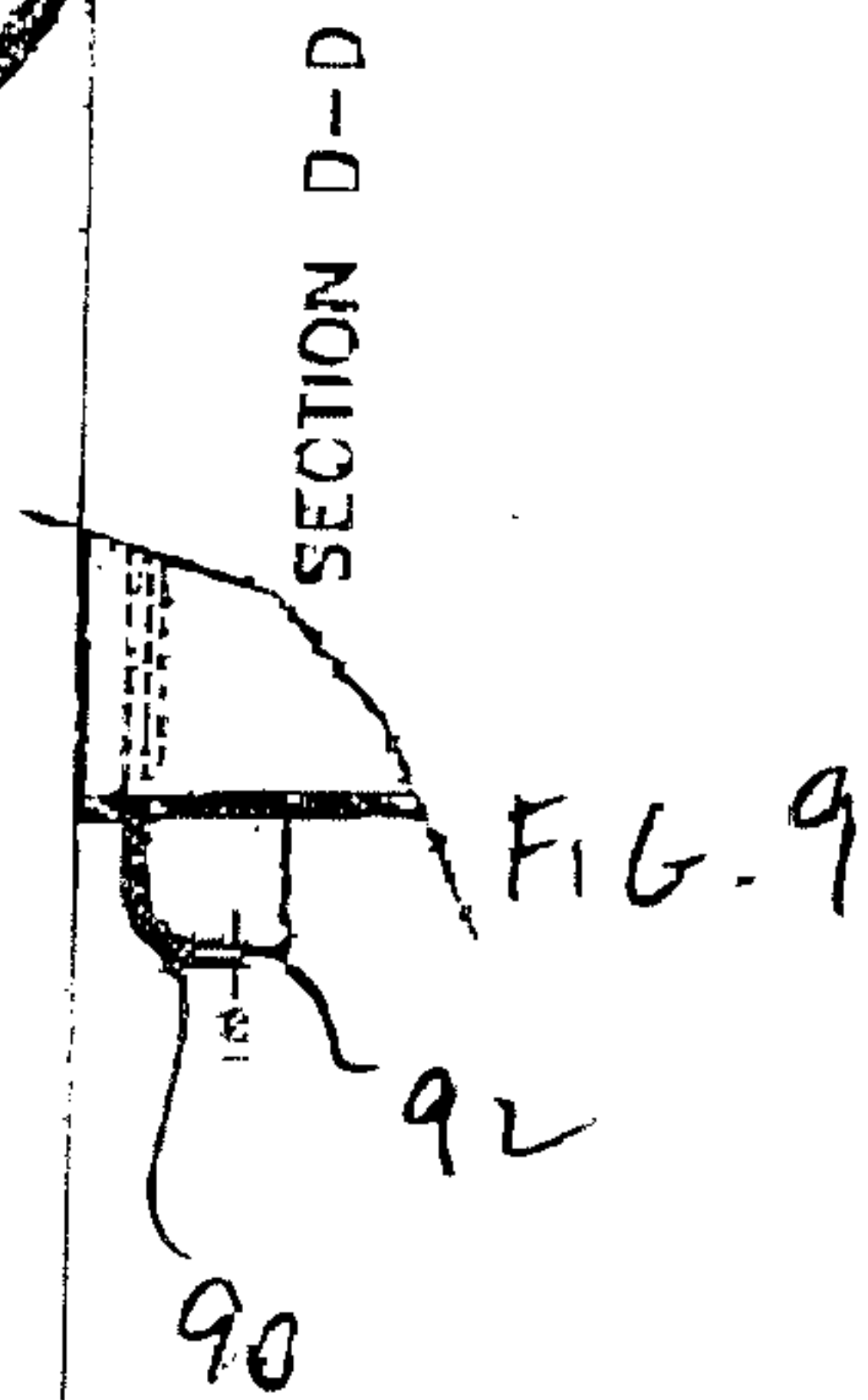
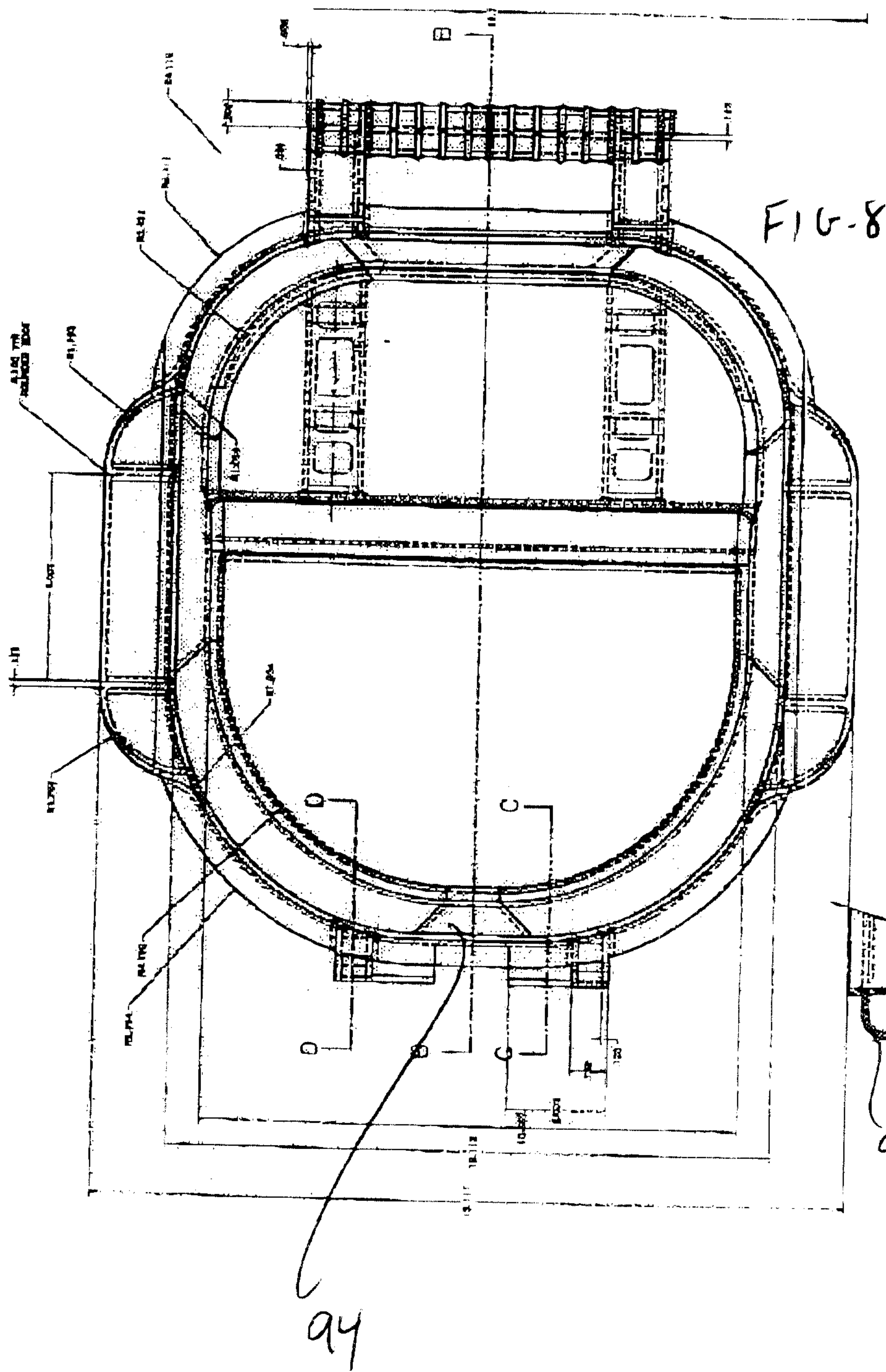


FIG - 6



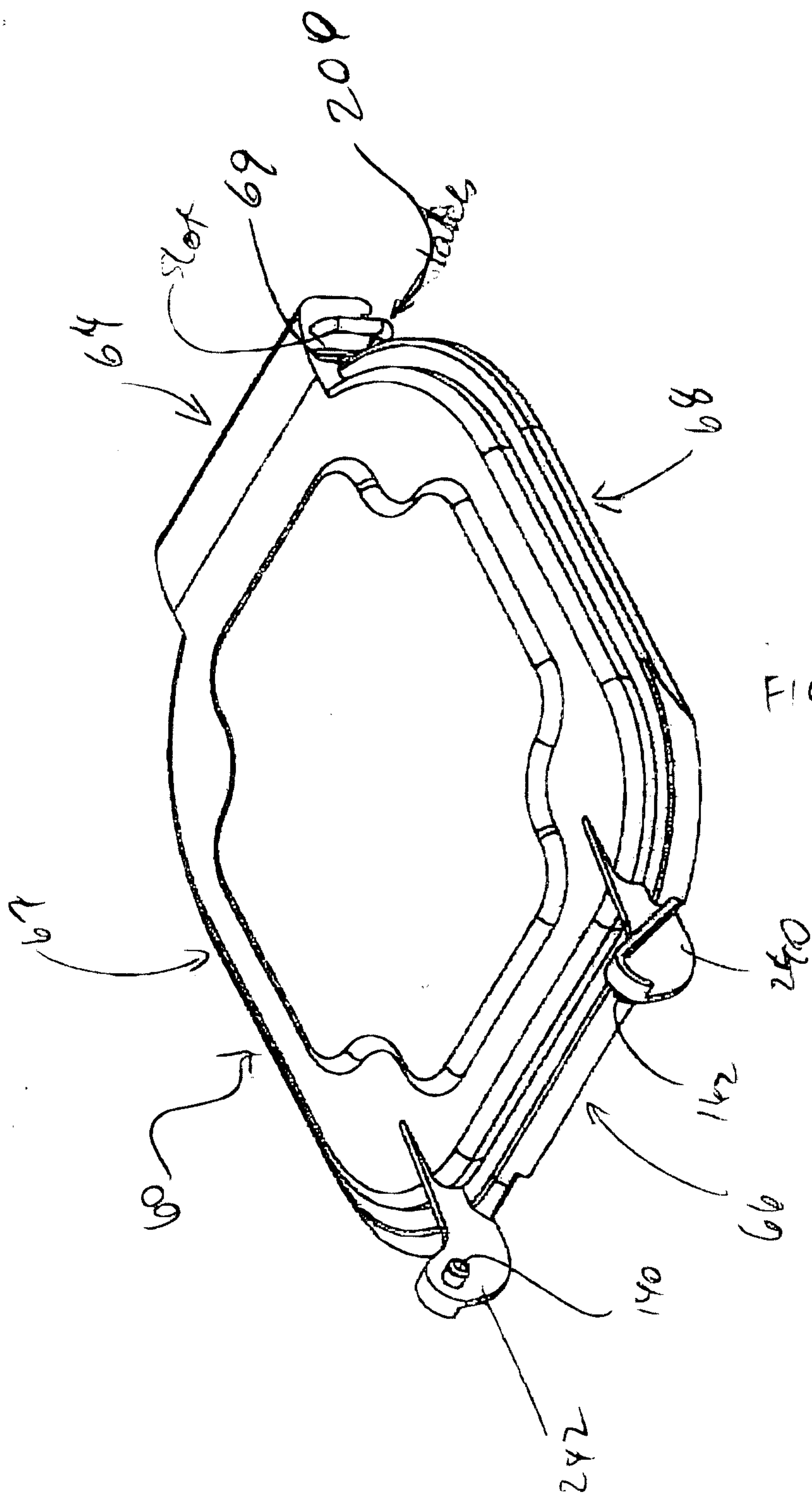


FIG. 10

