



US00D969324S

(12) **United States Design Patent** (10) **Patent No.:** **US D969,324 S**
Dyer (45) **Date of Patent:** **** Nov. 8, 2022**

(54) **ORTHODONTIC ELASTOMERIC LIGATURE TIE**

B000YAYXB8/ref=sr_1_12?crd=3M2N3KGE441YK&keywords=alphabet+soup&qid=1663270842&srefix=alphabet+soup%2Caps%2C78&sr=8-12 (Year: 2019).*

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(Continued)

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Assistant Examiner — Danielle Nichole Bowly

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(73) Assignee: **Message Ties, LLC**, Birmingham, AL (US)

(**) Term: **15 Years**

(57) **CLAIM**

The ornamental design for an orthodontic elastomeric ligature tie, as shown and described.

(21) Appl. No.: **29/839,816**

DESCRIPTION

(22) Filed: **May 24, 2022**

(51) **LOC (13) Cl.** **24-02**

FIG. 1 is a perspective view of a first embodiment of my new design.

(52) **U.S. Cl.**
USPC **D24/180**

FIG. 2 is a front view of the design shown in FIG. 1.

(58) **Field of Classification Search**
USPC D24/133, 144, 147, 176, 180, 181;
D18/24; D20/12

FIG. 3 is a rear view of the design shown in FIG. 1.

FIG. 4 is a right-side view of the design shown in FIG. 1.

FIG. 5 is a left-side view of the design shown in FIG. 1.

FIG. 6 is a top view of the design shown in FIG. 1.

FIG. 7 is a bottom view of the design shown in FIG. 1.

FIG. 8 is a perspective view of the design shown in FIG. 1 in use.

(Continued)

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FIG. 9 is a perspective view of a second embodiment of my new design.

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FIG. 10 is a front view of the design shown in FIG. 9.

FIG. 11 is a rear view of the design shown in FIG. 9.

FIG. 12 is a right-side view of the design shown in FIG. 9.

FIG. 13 is a left-side view of the design shown in FIG. 9.

FIG. 14 is a top view of the design shown in FIG. 9.

FIG. 15 is a bottom view of the design shown in FIG. 9.

FIG. 16 is a perspective view of the design shown in FIG. 9 in use.

(Continued)

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FIG. 17 is a perspective view of a third embodiment of my new design.

FIG. 18 is a front view of the design shown in FIG. 17.

FIG. 19 is a rear view of the design shown in FIG. 17.

FIG. 20 is a right-side view of the design shown in FIG. 17.

FIG. 21 is a left-side view of the design shown in FIG. 17.

(Continued)

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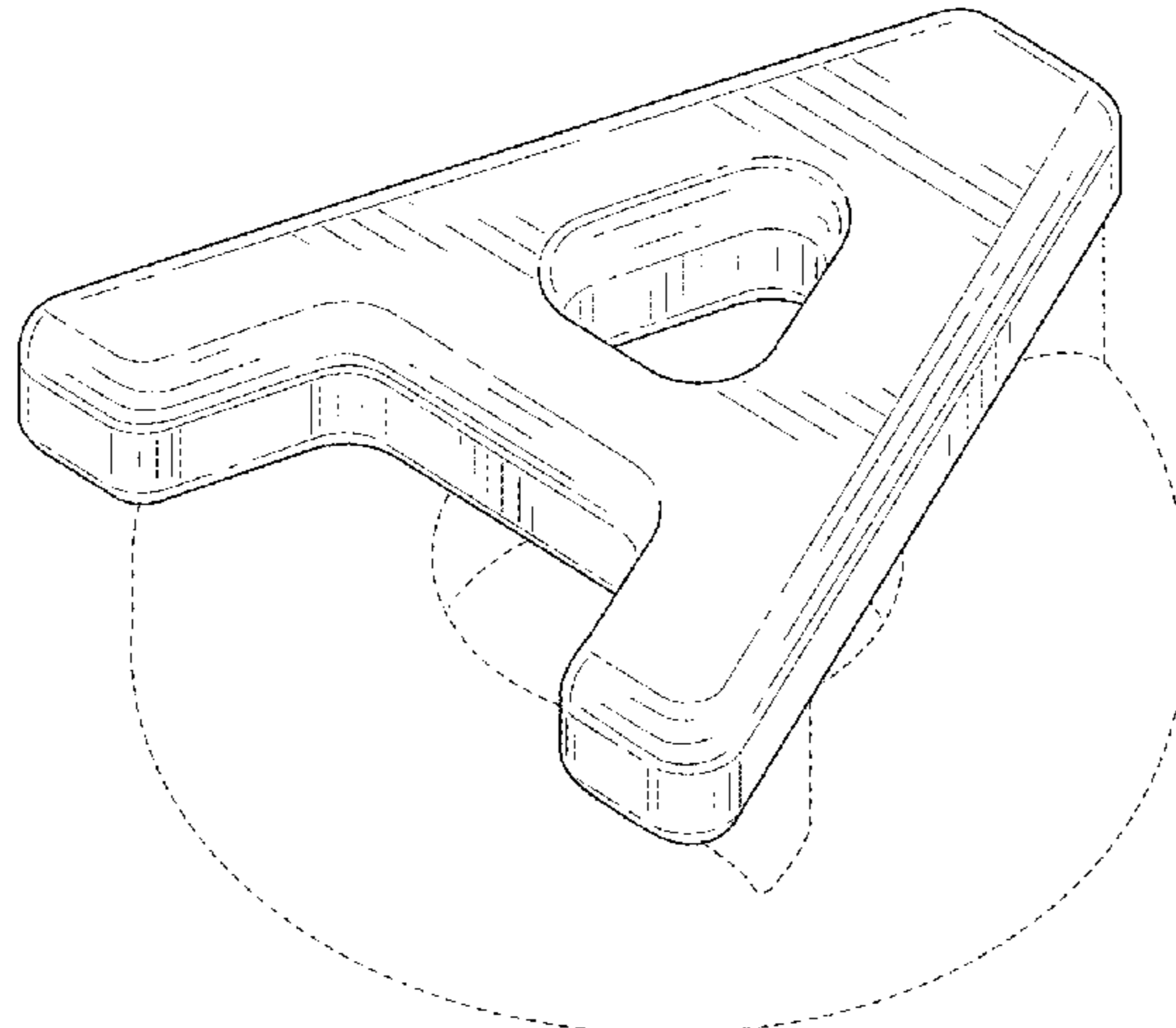


FIG. 22 is a top view of the design shown in FIG. 17.
FIG. 23 is a bottom view of the design shown in FIG. 17.
FIG. 24 is a perspective view of the design shown in FIG. 17 in use.
FIG. 25 is a perspective view of a fourth embodiment of my new design.
FIG. 26 is a front view of the design shown in FIG. 25.
FIG. 27 is a rear view of the design shown in FIG. 25.
FIG. 28 is a right-side view of the design shown in FIG. 25.
FIG. 29 is a left-side view of the design shown in FIG. 25.
FIG. 30 is a top view of the design shown in FIG. 25.
FIG. 31 is a bottom view of the design shown in FIG. 25.
FIG. 32 is a perspective view of the design shown in FIG. 25 in use.
FIG. 33 is a perspective view of a fifth embodiment of my new design.
FIG. 34 is a front view of the design shown in FIG. 33.
FIG. 35 is a rear view of the design shown in FIG. 33.
FIG. 36 is a right-side view of the design shown in FIG. 33.
FIG. 37 is a left-side view of the design shown in FIG. 33.
FIG. 38 is a top view of the design shown in FIG. 33.
FIG. 39 is a bottom view of the design shown in FIG. 33.
FIG. 40 is a perspective view of the design shown in FIG. 33 in use.
FIG. 41 is a perspective view of a sixth embodiment of my new design.
FIG. 42 is a front view of the design shown in FIG. 41.
FIG. 43 is a rear view of the design shown in FIG. 41.
FIG. 44 is a right-side view of the design shown in FIG. 41.
FIG. 45 is a left-side view of the design shown in FIG. 41.
FIG. 46 is a top view of the design shown in FIG. 41.
FIG. 47 is a bottom view of the design shown in FIG. 41.
FIG. 48 is a perspective view of the design shown in FIG. 41 in use.
FIG. 49 is a perspective view of a seventh embodiment of my new design.
FIG. 50 is a front view of the design shown in FIG. 49.
FIG. 51 is a rear view of the design shown in FIG. 49.
FIG. 52 is a right-side view of the design shown in FIG. 49.
FIG. 53 is a left-side view of the design shown in FIG. 49.
FIG. 54 is a top view of the design shown in FIG. 49.
FIG. 55 is a bottom view of the design shown in FIG. 49.
FIG. 56 is a perspective view of the design shown in FIG. 49 in use.
FIG. 57 is a perspective view of an eighth embodiment of my new design.
FIG. 58 is a front view of the design shown in FIG. 57.
FIG. 59 is a rear view of the design shown in FIG. 57.
FIG. 60 is a right-side view of the design shown in FIG. 57.
FIG. 61 is a left-side view of the design shown in FIG. 57.
FIG. 62 is a top view of the design shown in FIG. 57.
FIG. 63 is a bottom view of the design shown in FIG. 57.
FIG. 64 is a perspective view of the design shown in FIG. 57 in use.
FIG. 65 is a perspective view of a ninth embodiment of my new design.
FIG. 66 is a front view of the design shown in FIG. 65.
FIG. 67 is a rear view of the design shown in FIG. 65.
FIG. 68 is a right-side view of the design shown in FIG. 65.
FIG. 69 is a left-side view of the design shown in FIG. 65.
FIG. 70 is a top view of the design shown in FIG. 65.
FIG. 71 is a bottom view of the design shown in FIG. 65.
FIG. 72 is a perspective view of the design shown in FIG. 65 in use.

FIG. 73 is a perspective view of a tenth embodiment of my new design.
FIG. 74 is a front view of the design shown in FIG. 73.
FIG. 75 is a rear view of the design shown in FIG. 73.
FIG. 76 is a right-side view of the design shown in FIG. 73.
FIG. 77 is a left-side view of the design shown in FIG. 73.
FIG. 78 is a top view of the design shown in FIG. 73.
FIG. 79 is a bottom view of the design shown in FIG. 73.
FIG. 80 is a perspective view of the design shown in FIG. 73 in use.
FIG. 81 is a perspective view of an eleventh embodiment of my new design.
FIG. 82 is a front view of the design shown in FIG. 81.
FIG. 83 is a rear view of the design shown in FIG. 81.
FIG. 84 is a right-side view of the design shown in FIG. 81.
FIG. 85 is a left-side view of the design shown in FIG. 81.
FIG. 86 is a top view of the design shown in FIG. 81.
FIG. 87 is a bottom view of the design shown in FIG. 81.
FIG. 88 is a perspective view of the design shown in FIG. 81 in use.
FIG. 89 is a perspective view of a twelfth embodiment of my new design.
FIG. 90 is a front view of the design shown in FIG. 89.
FIG. 91 is a rear view of the design shown in FIG. 89.
FIG. 92 is a right-side view of the design shown in FIG. 89.
FIG. 93 is a left-side view of the design shown in FIG. 89.
FIG. 94 is a top view of the design shown in FIG. 89.
FIG. 95 is a bottom view of the design shown in FIG. 89.
FIG. 96 is a perspective view of the design shown in FIG. 89 in use.
FIG. 97 is a perspective view of a thirteenth embodiment of my new design.
FIG. 98 is a front view of the design shown in FIG. 97.
FIG. 99 is a rear view of the design shown in FIG. 97.
FIG. 100 is a right-side view of the design shown in FIG. 97.
FIG. 101 is a left-side view of the design shown in FIG. 97.
FIG. 102 is a top view of the design shown in FIG. 97.
FIG. 103 is a bottom view of the design shown in FIG. 97.
FIG. 104 is a perspective view of the design shown in FIG. 97 in use.
FIG. 105 is a perspective view of a fourteenth embodiment of my new design.
FIG. 106 is a front view of the design shown in FIG. 105.
FIG. 107 is a rear view of the design shown in FIG. 105.
FIG. 108 is a right-side view of the design shown in FIG. 105.
FIG. 109 is a left-side view of the design shown in FIG. 105.
FIG. 110 is a top view of the design shown in FIG. 105.
FIG. 111 is a bottom view of the design shown in FIG. 105.
FIG. 112 is a perspective view of the design shown in FIG. 105 in use.
FIG. 113 is a perspective view of a fifteenth embodiment of my new design.
FIG. 114 is a front view of the design shown in FIG. 113.
FIG. 115 is a rear view of the design shown in FIG. 113.
FIG. 116 is a right-side view of the design shown in FIG. 113.
FIG. 117 is a left-side view of the design shown in FIG. 113.
FIG. 118 is a top view of the design shown in FIG. 113.
FIG. 119 is a bottom view of the design shown in FIG. 113.
FIG. 120 is a perspective view of the design shown in FIG. 113 in use.
FIG. 121 is a perspective view of a sixteenth embodiment of my new design.

FIG. 122 is a front view of the design shown in FIG. 121.
FIG. 123 is a rear view of the design shown in FIG. 121.
FIG. 124 is a right-side view of the design shown in FIG. 121.
FIG. 125 is a left-side view of the design shown in FIG. 121.
FIG. 126 is a top view of the design shown in FIG. 121.
FIG. 127 is a bottom view of the design shown in FIG. 121.
FIG. 128 is a perspective view of the design shown in FIG. 121 in use.
FIG. 129 is a perspective view of a seventeenth embodiment of my new design.
FIG. 130 is a front view of the design shown in FIG. 129.
FIG. 131 is a rear view of the design shown in FIG. 129.
FIG. 132 is a right-side view of the design shown in FIG. 129.
FIG. 133 is a left-side view of the design shown in FIG. 129.
FIG. 134 is a top view of the design shown in FIG. 129.
FIG. 135 is a bottom view of the design shown in FIG. 129.
FIG. 136 is a perspective view of the design shown in FIG. 129 in use.
FIG. 137 is a perspective view of an eighteenth embodiment of my new design.
FIG. 138 is a front view of the design shown in FIG. 137.
FIG. 139 is a rear view of the design shown in FIG. 137.
FIG. 140 is a right-side view of the design shown in FIG. 137.
FIG. 141 is a left-side view of the design shown in FIG. 137.
FIG. 142 is a top view of the design shown in FIG. 137.
FIG. 143 is a bottom view of the design shown in FIG. 137.
FIG. 144 is a perspective view of the design shown in FIG. 137 in use.
FIG. 145 is a perspective view of a nineteenth embodiment of my new design.
FIG. 146 is a front view of the design shown in FIG. 145.
FIG. 147 is a rear view of the design shown in FIG. 145.
FIG. 148 is a right-side view of the design shown in FIG. 145.
FIG. 149 is a left-side view of the design shown in FIG. 145.
FIG. 150 is a top view of the design shown in FIG. 145.
FIG. 151 is a bottom view of the design shown in FIG. 145.
FIG. 152 is a perspective view of the design shown in FIG. 145 in use.
FIG. 153 is a perspective view of a twentieth embodiment of my new design.
FIG. 154 is a front view of the design shown in FIG. 153.
FIG. 155 is a rear view of the design shown in FIG. 153.
FIG. 156 is a right-side view of the design shown in FIG. 153.
FIG. 157 is a left-side view of the design shown in FIG. 153.
FIG. 158 is a top view of the design shown in FIG. 153.
FIG. 159 is a bottom view of the design shown in FIG. 153.
FIG. 160 is a perspective view of the design shown in FIG. 153 in use.
FIG. 161 is a perspective view of a twenty-first embodiment of my new design.
FIG. 162 is a front view of the design shown in FIG. 161.
FIG. 163 is a rear view of the design shown in FIG. 161.
FIG. 164 is a right-side view of the design shown in FIG. 161.
FIG. 165 is a left-side view of the design shown in FIG. 161.
FIG. 166 is a top view of the design shown in FIG. 161.
FIG. 167 is a bottom view of the design shown in FIG. 161.
FIG. 168 is a perspective view of the design shown in FIG. 161 in use.

FIG. 169 is a perspective view of a twenty-second embodiment of my new design.
FIG. 170 is a front view of the design shown in FIG. 169.
FIG. 171 is a rear view of the design shown in FIG. 169.
FIG. 172 is a right-side view of the design shown in FIG. 169.
FIG. 173 is a left-side view of the design shown in FIG. 169.
FIG. 174 is a top view of the design shown in FIG. 169.
FIG. 175 is a bottom view of the design shown in FIG. 169.
FIG. 176 is a perspective view of the design shown in FIG. 169 in use.
FIG. 177 is a perspective view of a twenty-third embodiment of my new design.
FIG. 178 is a front view of the design shown in FIG. 177.
FIG. 179 is a rear view of the design shown in FIG. 177.
FIG. 180 is a right-side view of the design shown in FIG. 177.
FIG. 181 is a left-side view of the design shown in FIG. 177.
FIG. 182 is a top view of the design shown in FIG. 177.
FIG. 183 is a bottom view of the design shown in FIG. 177.
FIG. 184 is a perspective view of the design shown in FIG. 177 in use.
FIG. 185 is a perspective view of a twenty-fourth embodiment of my new design.
FIG. 186 is a front view of the design shown in FIG. 185.
FIG. 187 is a rear view of the design shown in FIG. 185.
FIG. 188 is a right-side view of the design shown in FIG. 185.
FIG. 189 is a left-side view of the design shown in FIG. 185.
FIG. 190 is a top view of the design shown in FIG. 185.
FIG. 191 is a bottom view of the design shown in FIG. 185.
FIG. 192 is a perspective view of the design shown in FIG. 185 in use.
FIG. 193 is a perspective view of a twenty-fifth embodiment of my new design.
FIG. 194 is a front view of the design shown in FIG. 193.
FIG. 195 is a rear view of the design shown in FIG. 193.
FIG. 196 is a right-side view of the design shown in FIG. 193.
FIG. 197 is a left-side view of the design shown in FIG. 193.
FIG. 198 is a top view of the design shown in FIG. 193.
FIG. 199 is a bottom view of the design shown in FIG. 193.
FIG. 200 is a perspective view of the design shown in FIG. 193 in use.
FIG. 201 is a perspective view of a twenty-sixth embodiment of my new design.
FIG. 202 is a front view of the design shown in FIG. 201.
FIG. 203 is a rear view of the design shown in FIG. 201.
FIG. 204 is a right-side view of the design shown in FIG. 201.
FIG. 205 is a left-side view of the design shown in FIG. 201.
FIG. 206 is a top view of the design shown in FIG. 201.
FIG. 207 is a bottom view of the design shown in FIG. 201; and,
FIG. 208 is a perspective view of the design shown in FIG. 201 in use.
The mouth and teeth rendered in short broken lines in FIGS. 8, 16, 24, 32, 40, 48, 56, 64, 72, 80, 88, 96, 104, 112, 120, 128, 136, 144, 152, 160, 168, 176, 184, 192, 200, and 208, illustrate environmental subject matter intended to assist in showing how the design appears when in use and forms no part of the claim. The short broken lines showing elements

of the orthodontic elastomeric ligature tie in the drawings illustrate features of the article of manufacture that form no part of the claimed design.

1 Claim, 130 Drawing Sheets

(58) Field of Classification Search

CPC A61C 7/28; A61C 7/30; A61C 13/275; A61C 13/267

See application file for complete search history.

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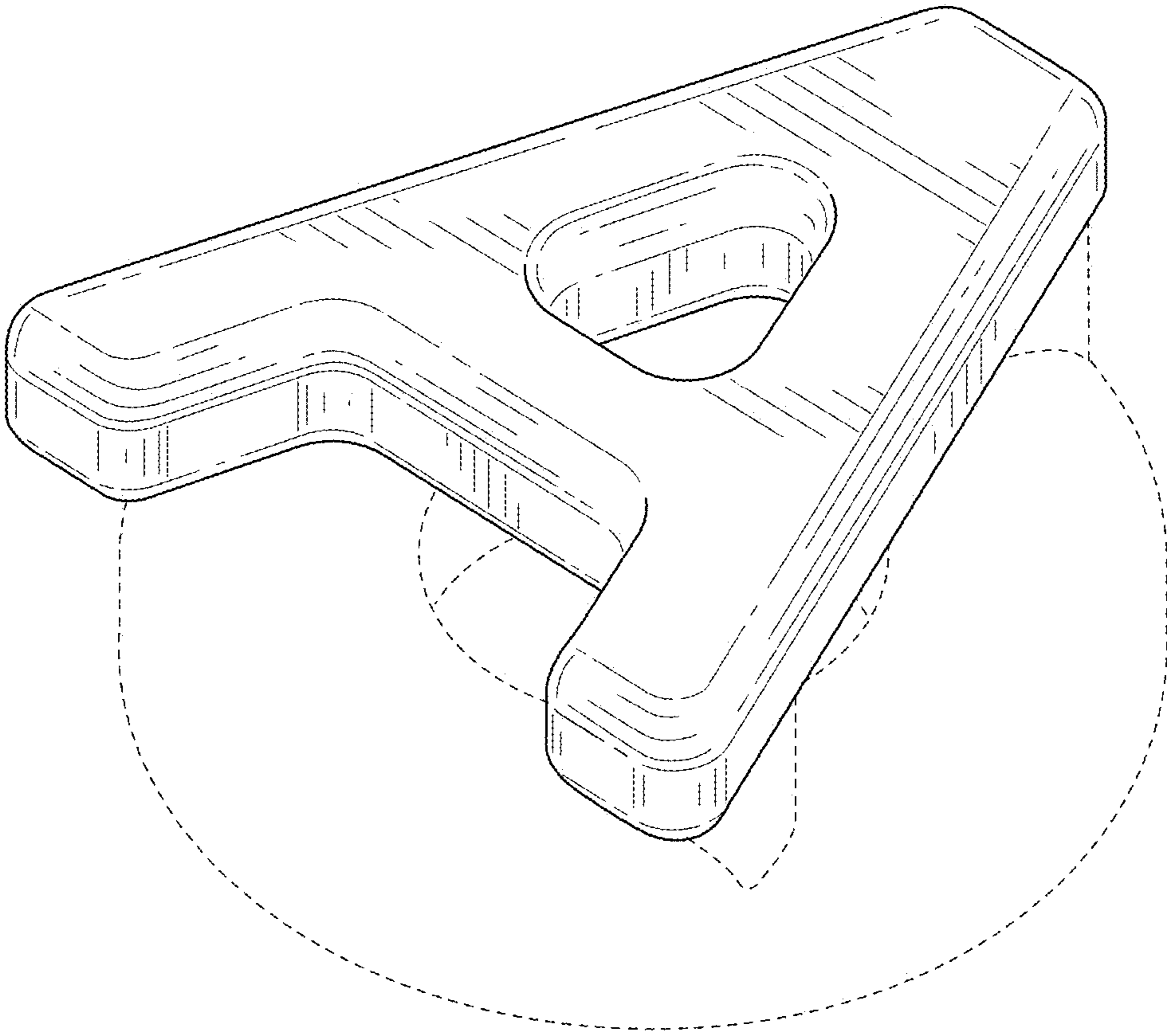


FIG. 1

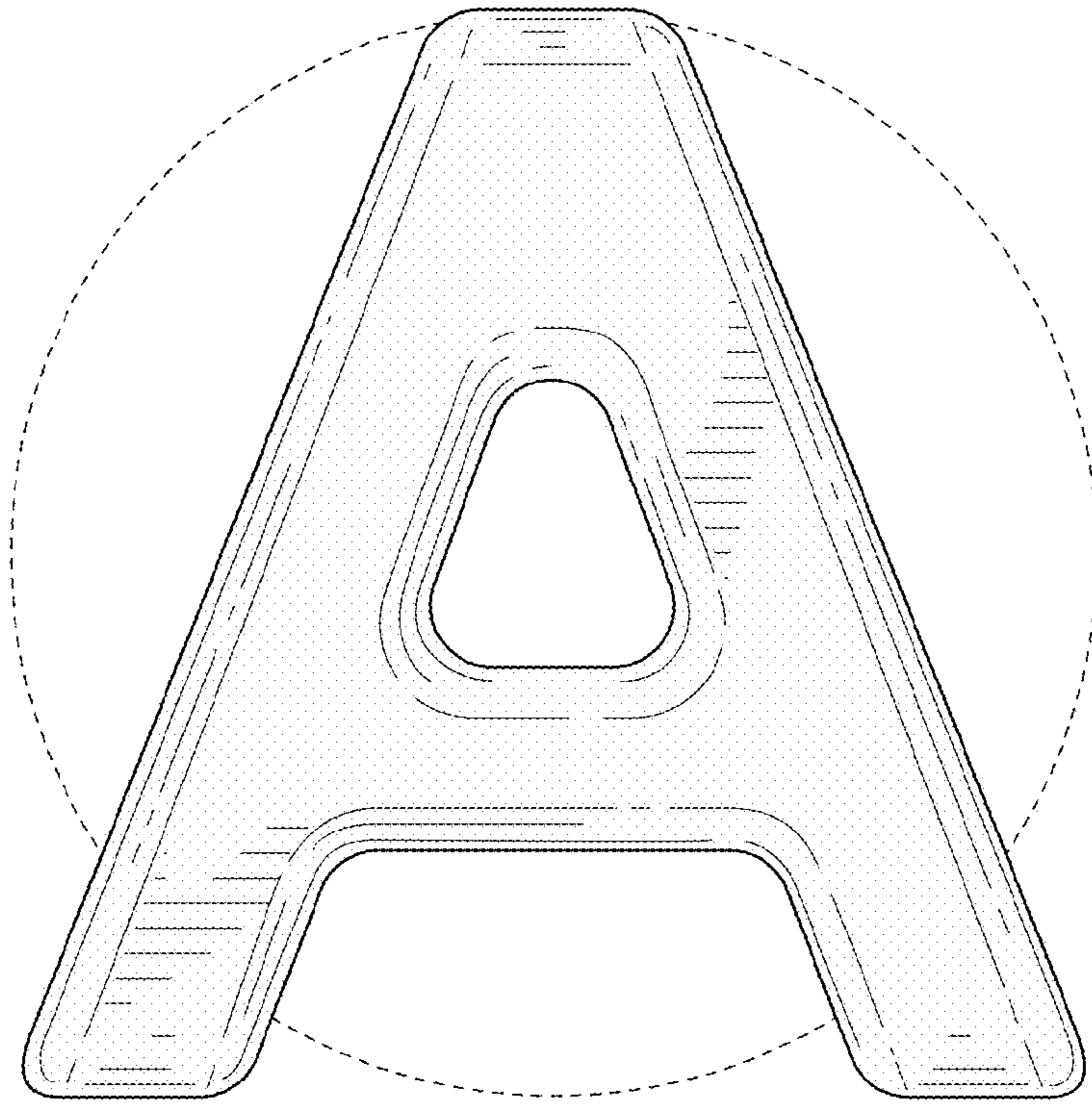


FIG. 2

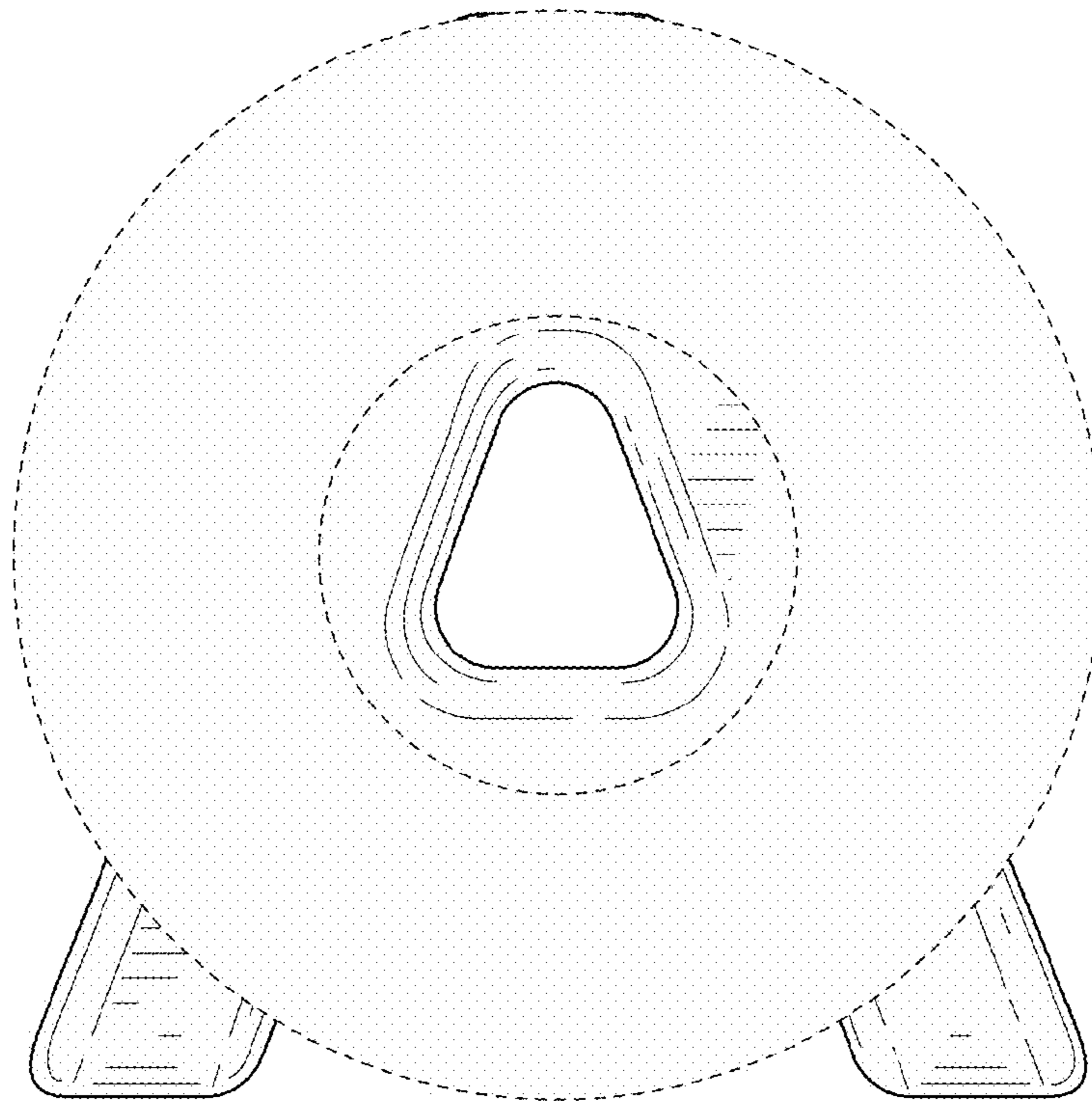


FIG. 3

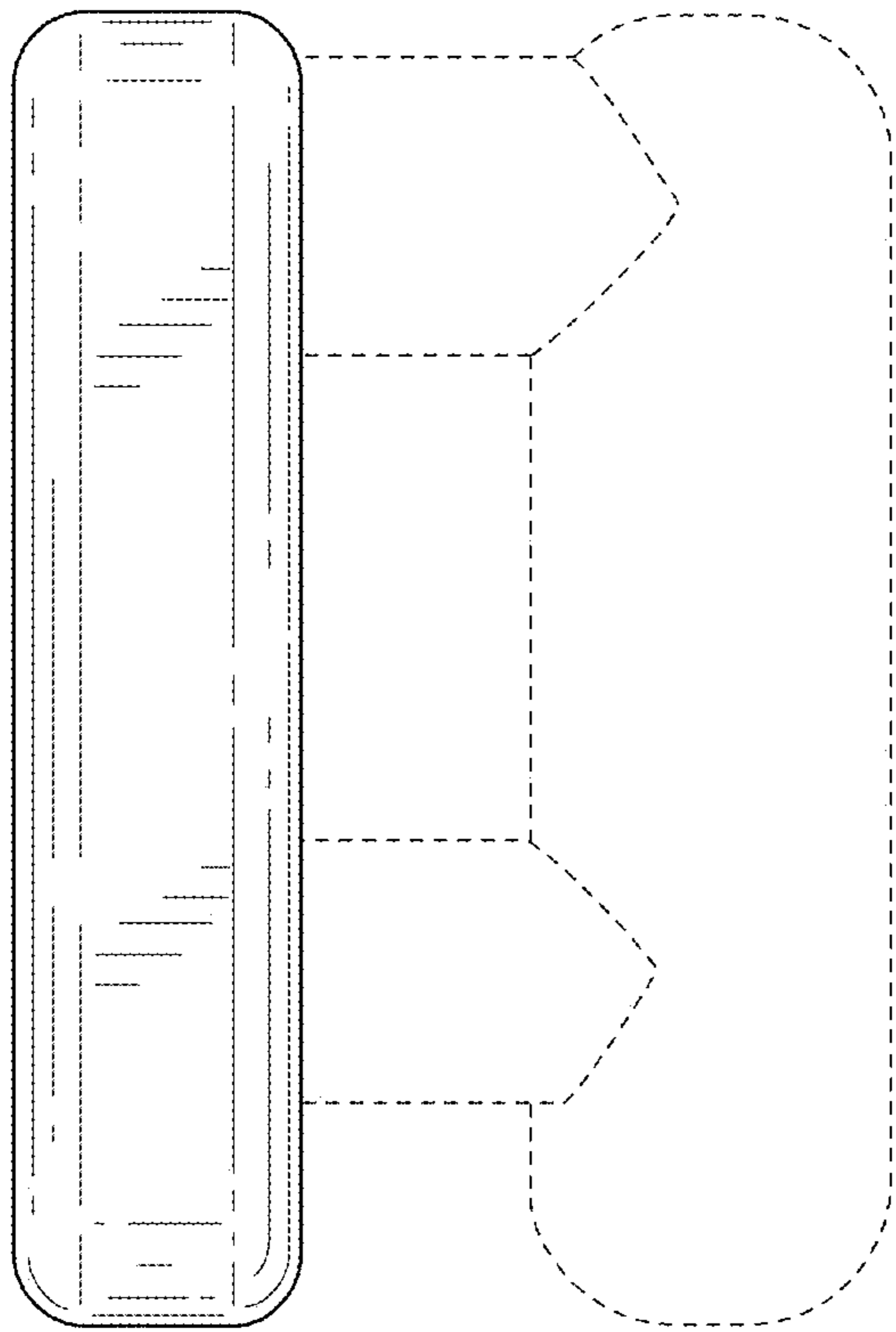


FIG. 4

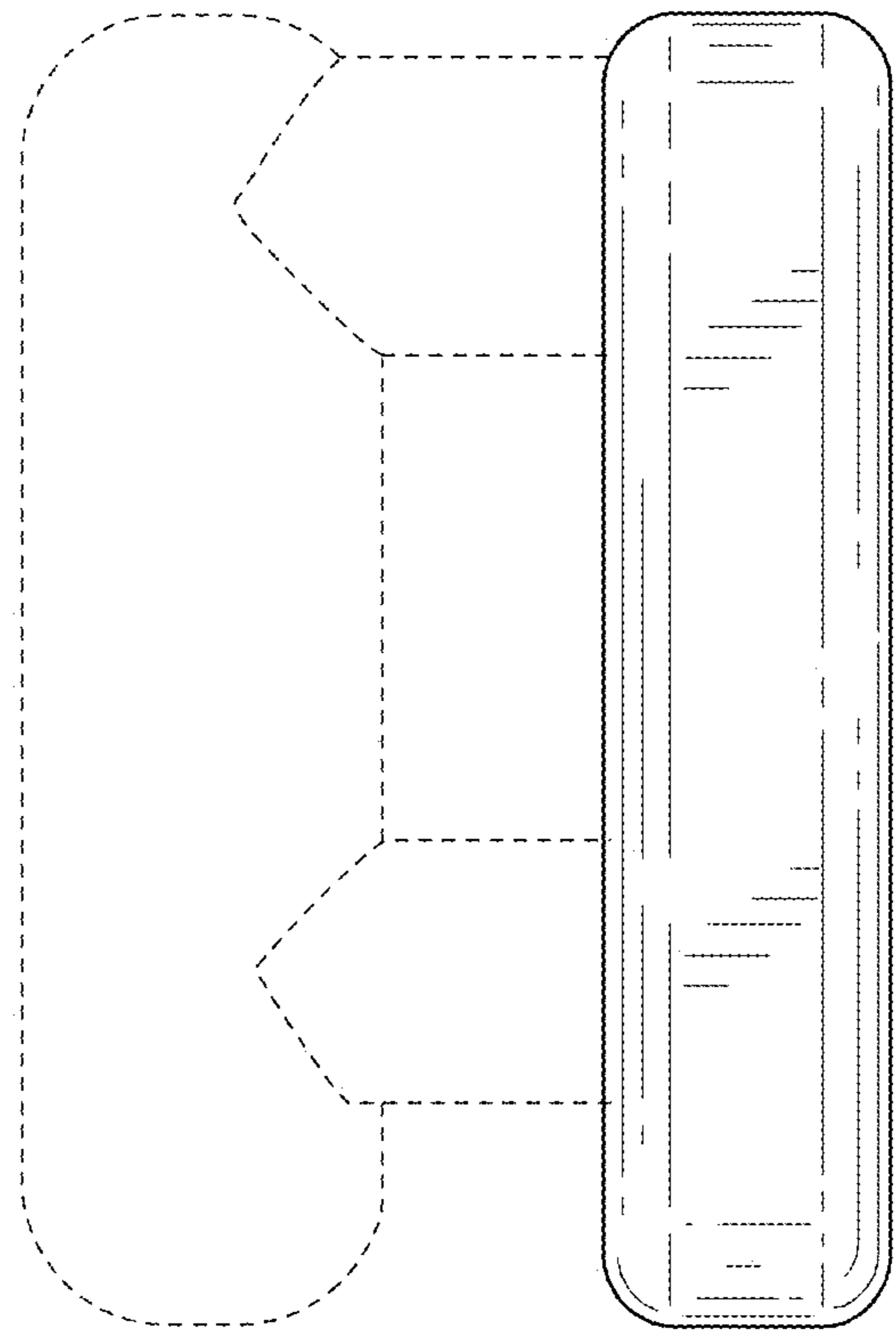


FIG. 5

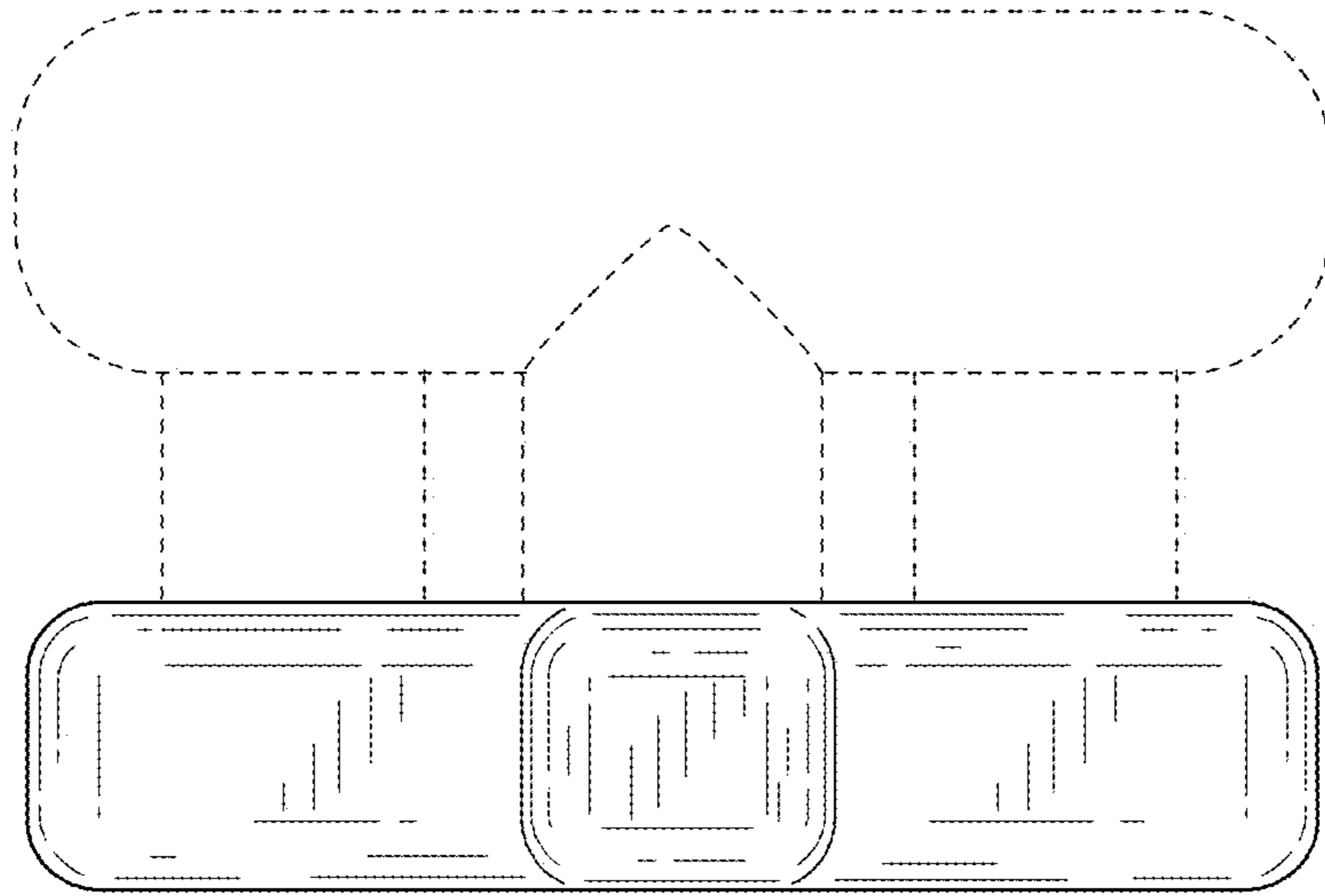


FIG. 6

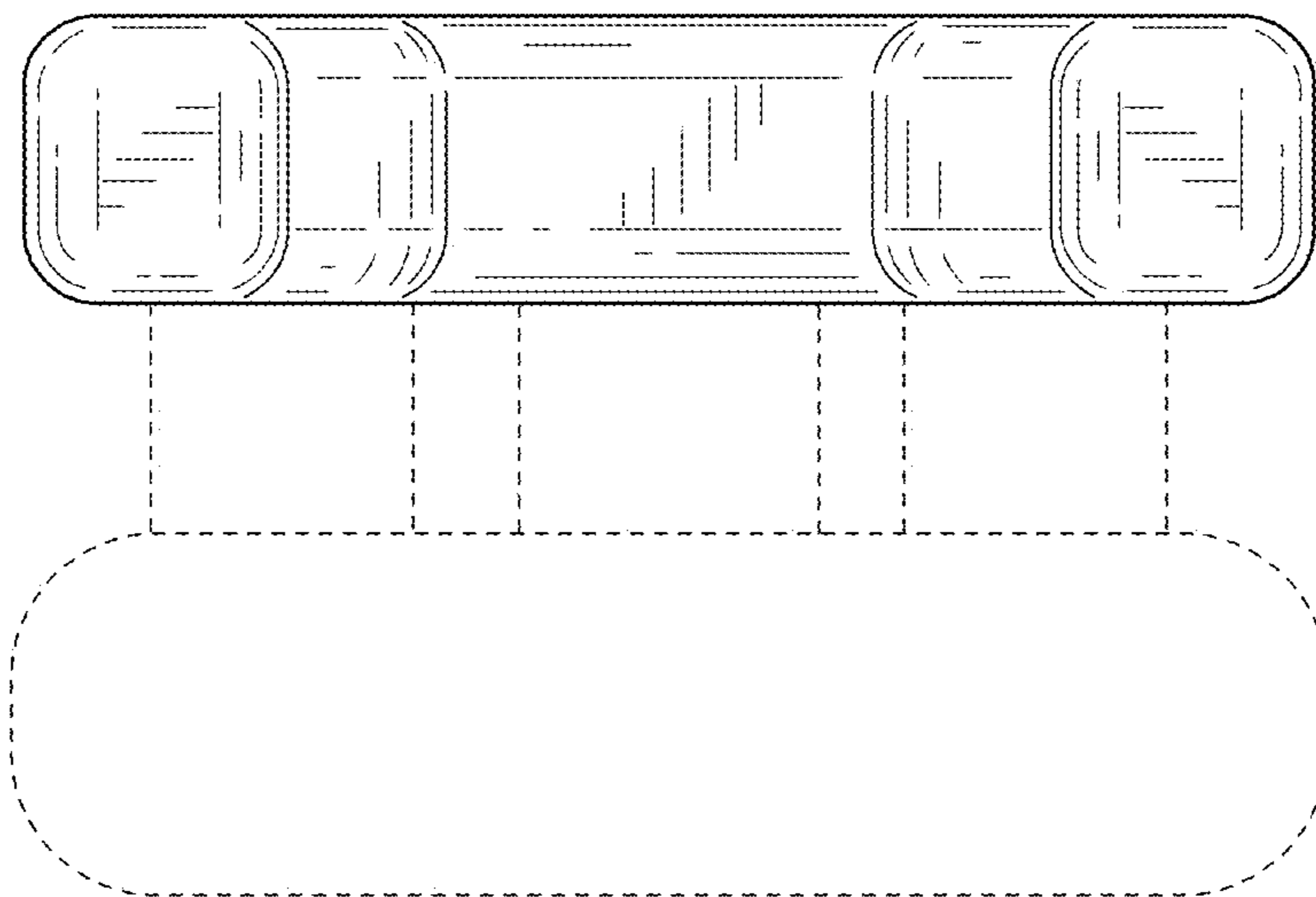


FIG. 7

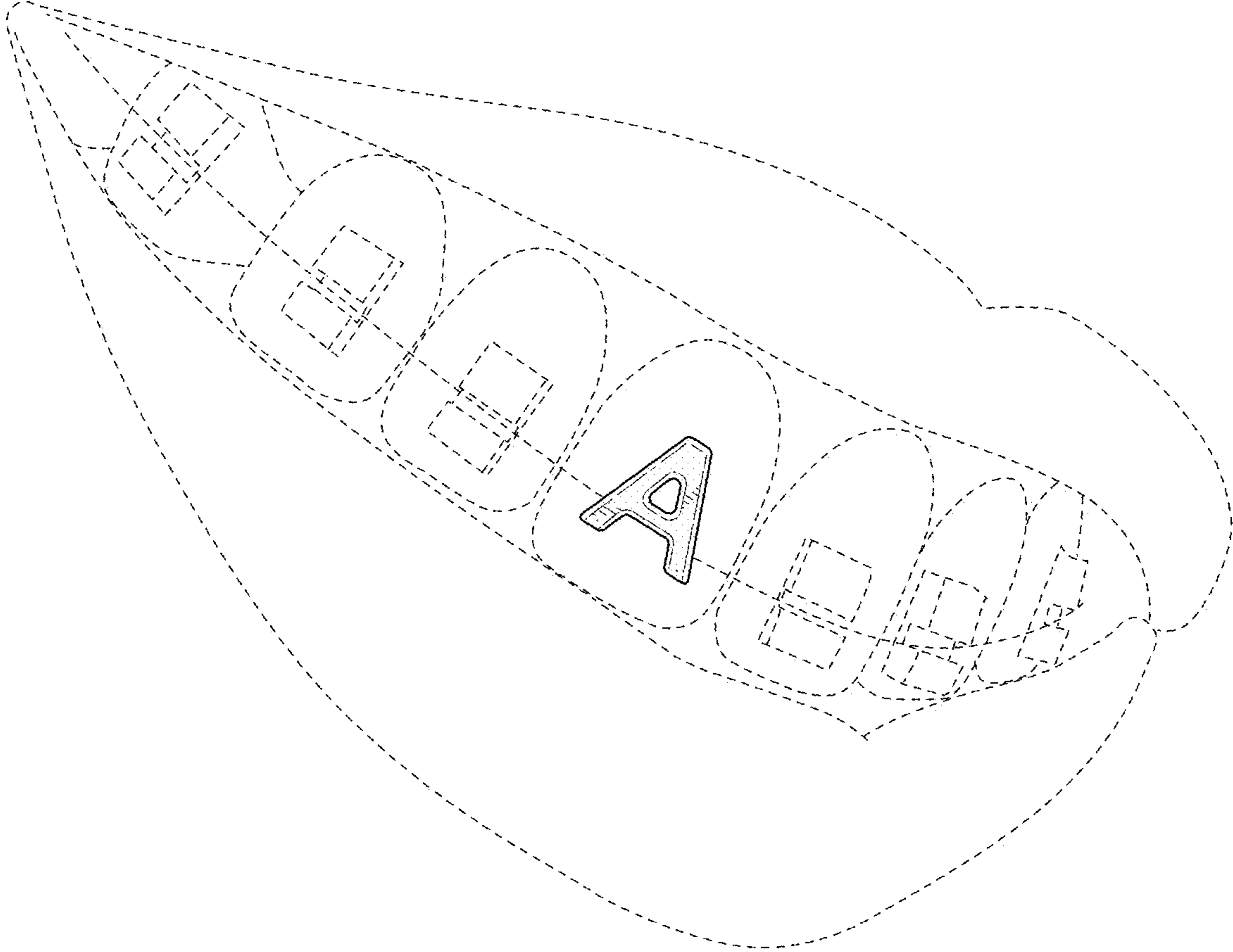


FIG. 8

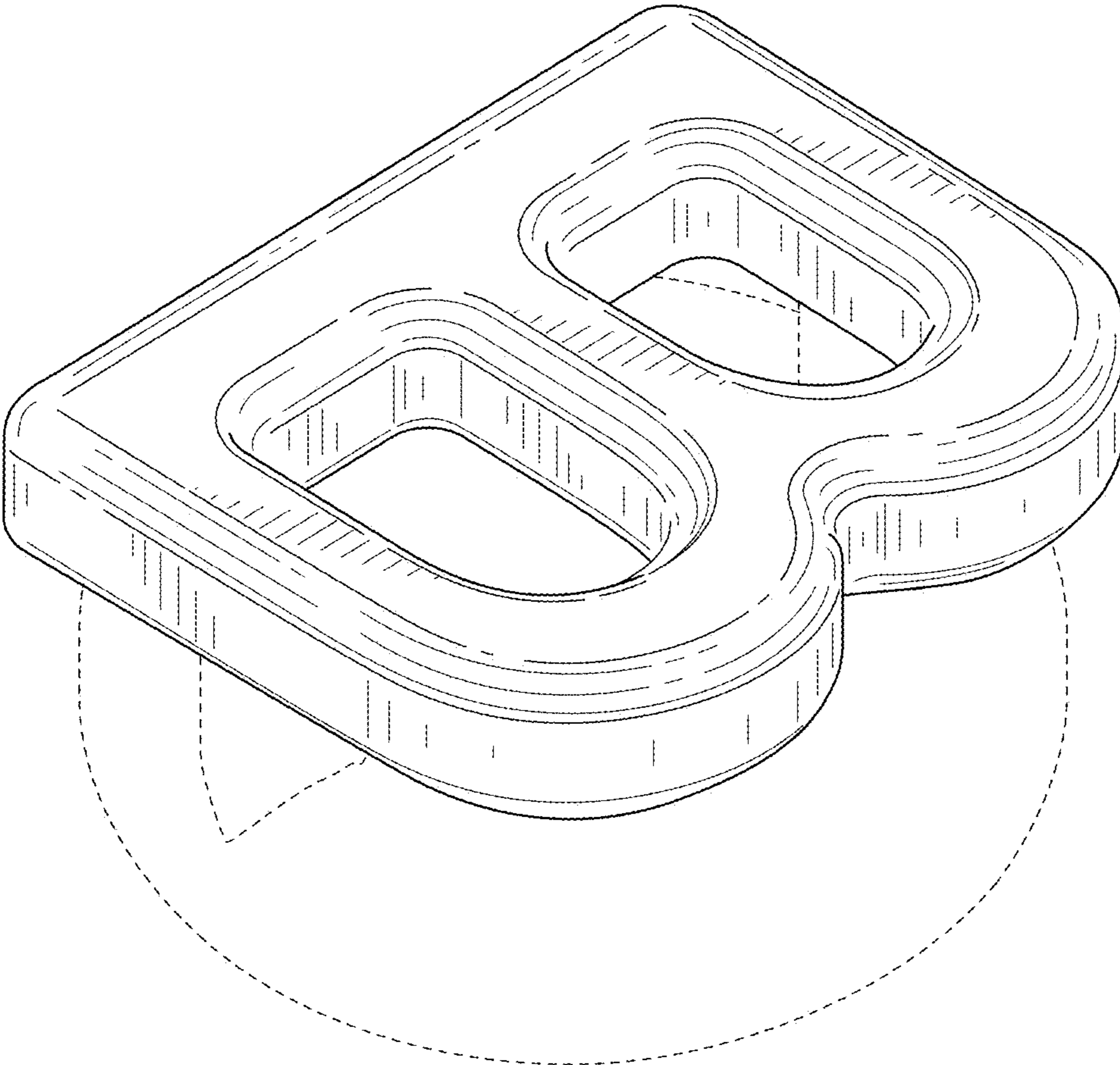


FIG. 9

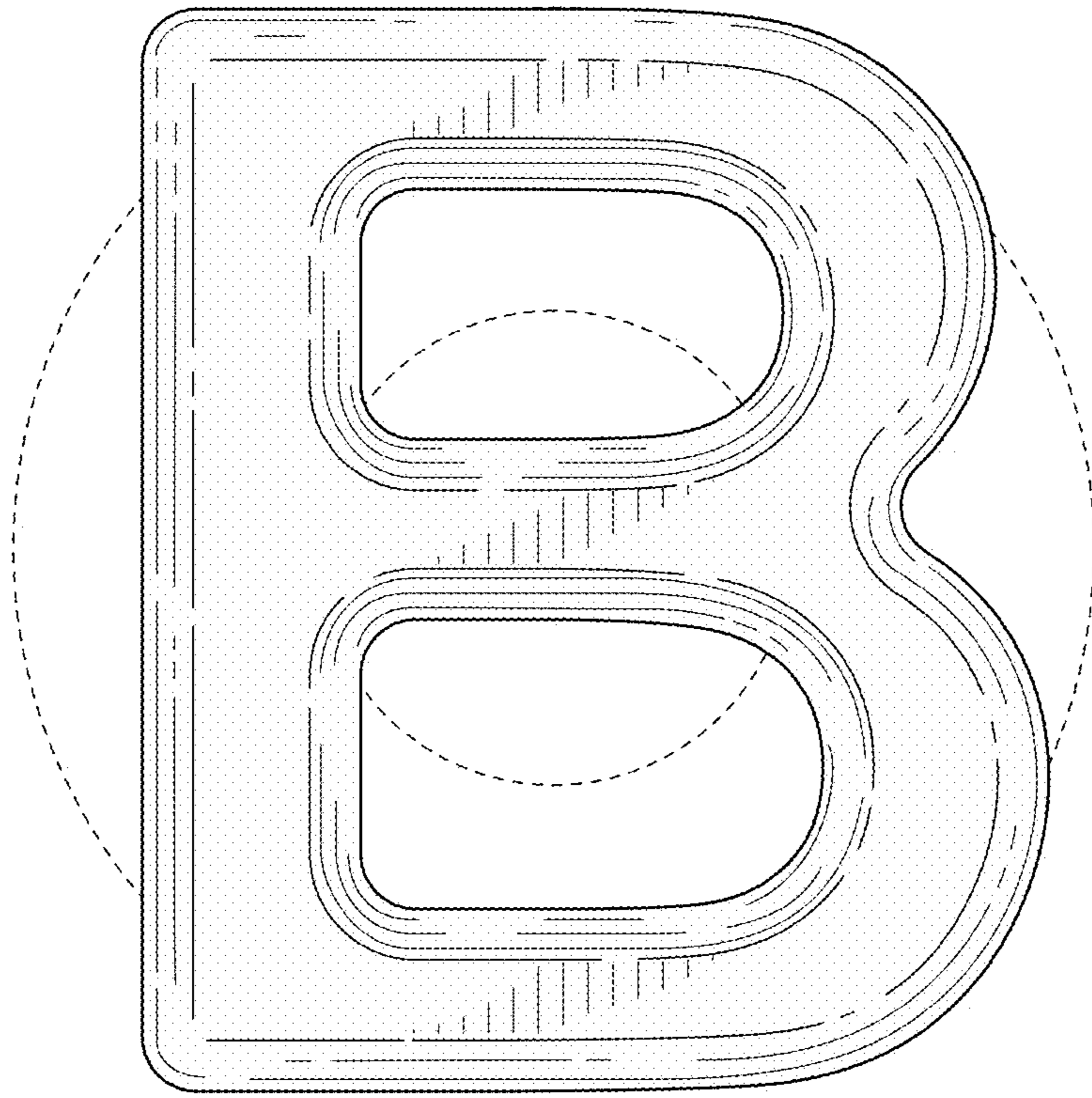


FIG. 10

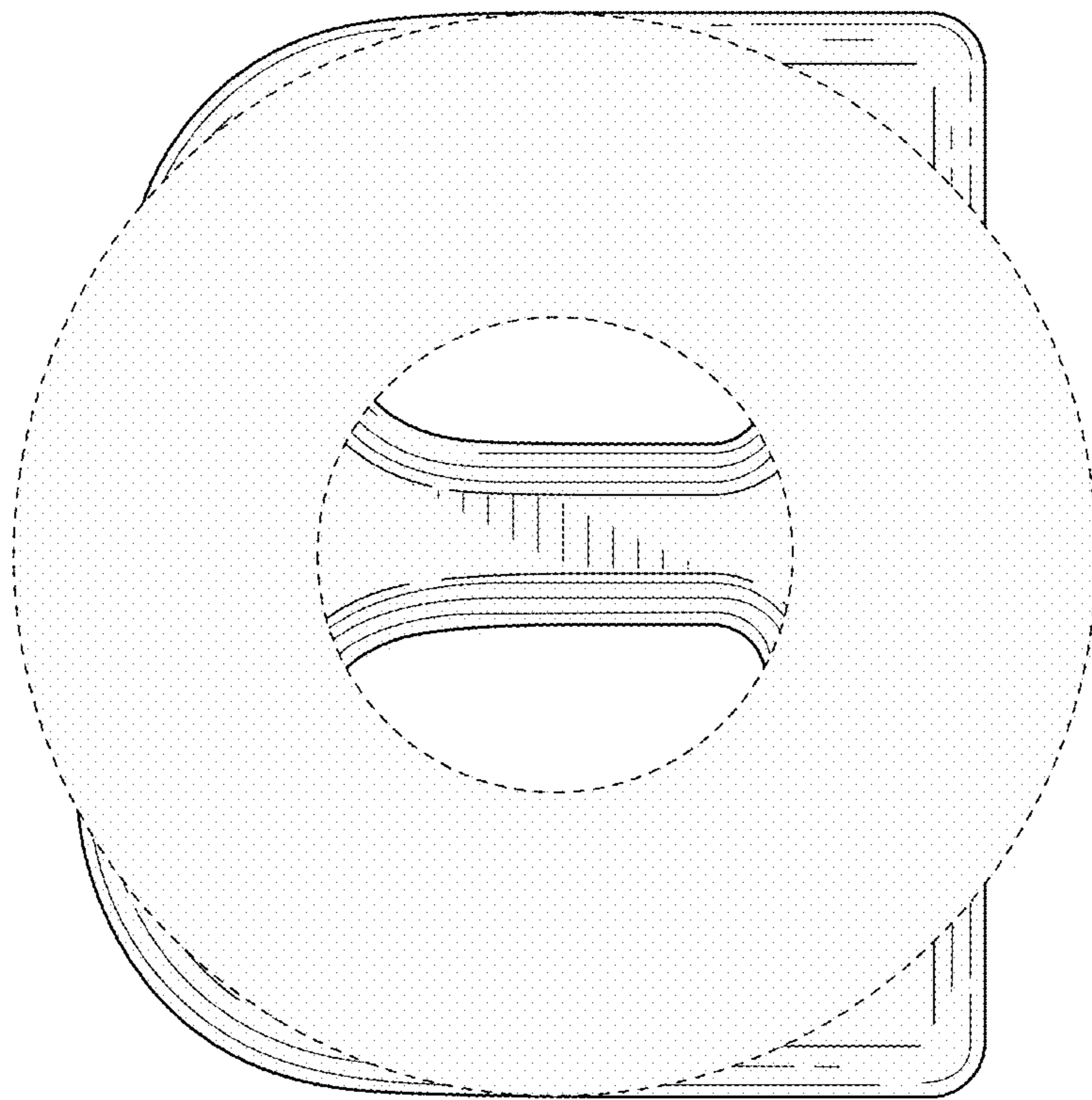


FIG. 11

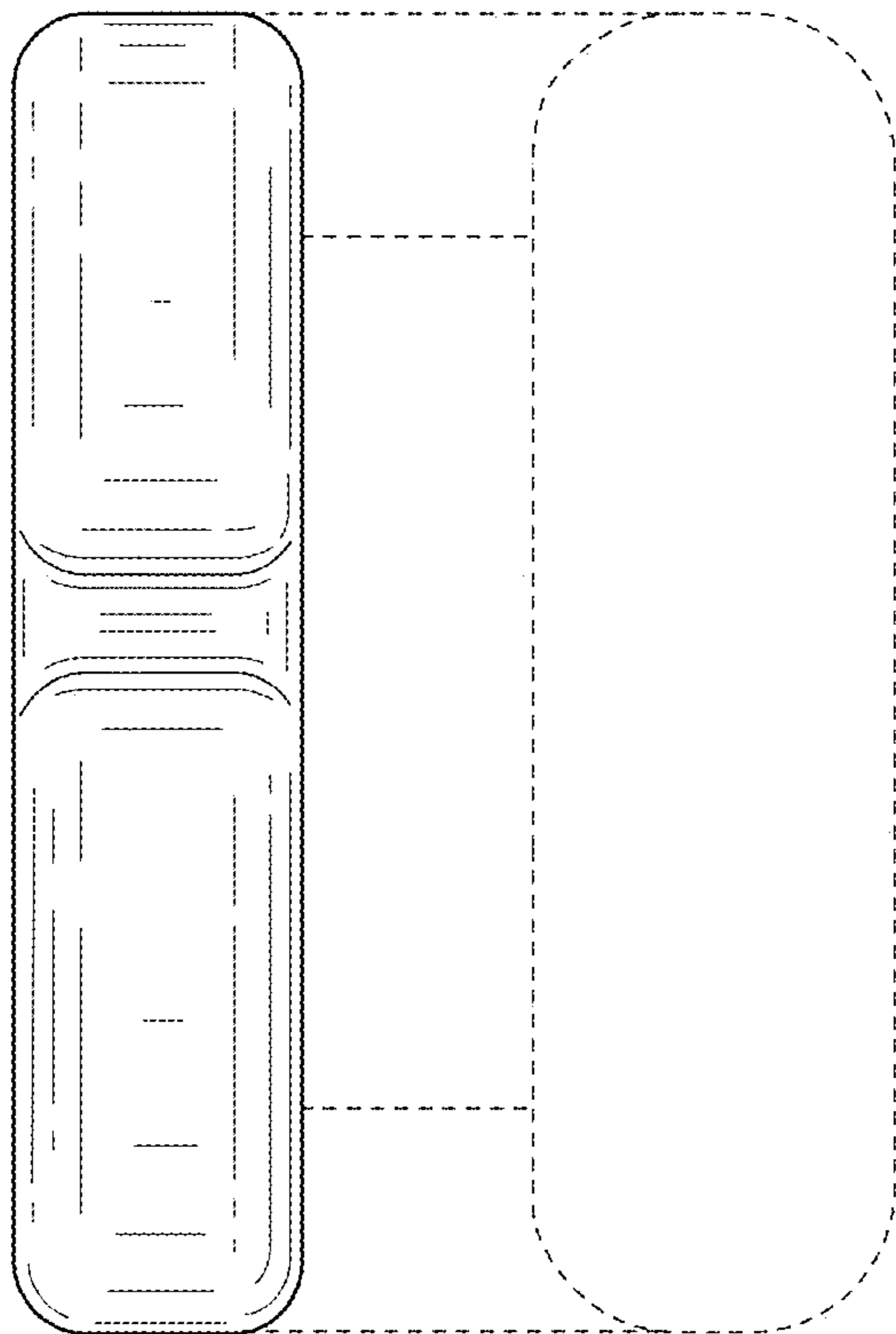


FIG. 12

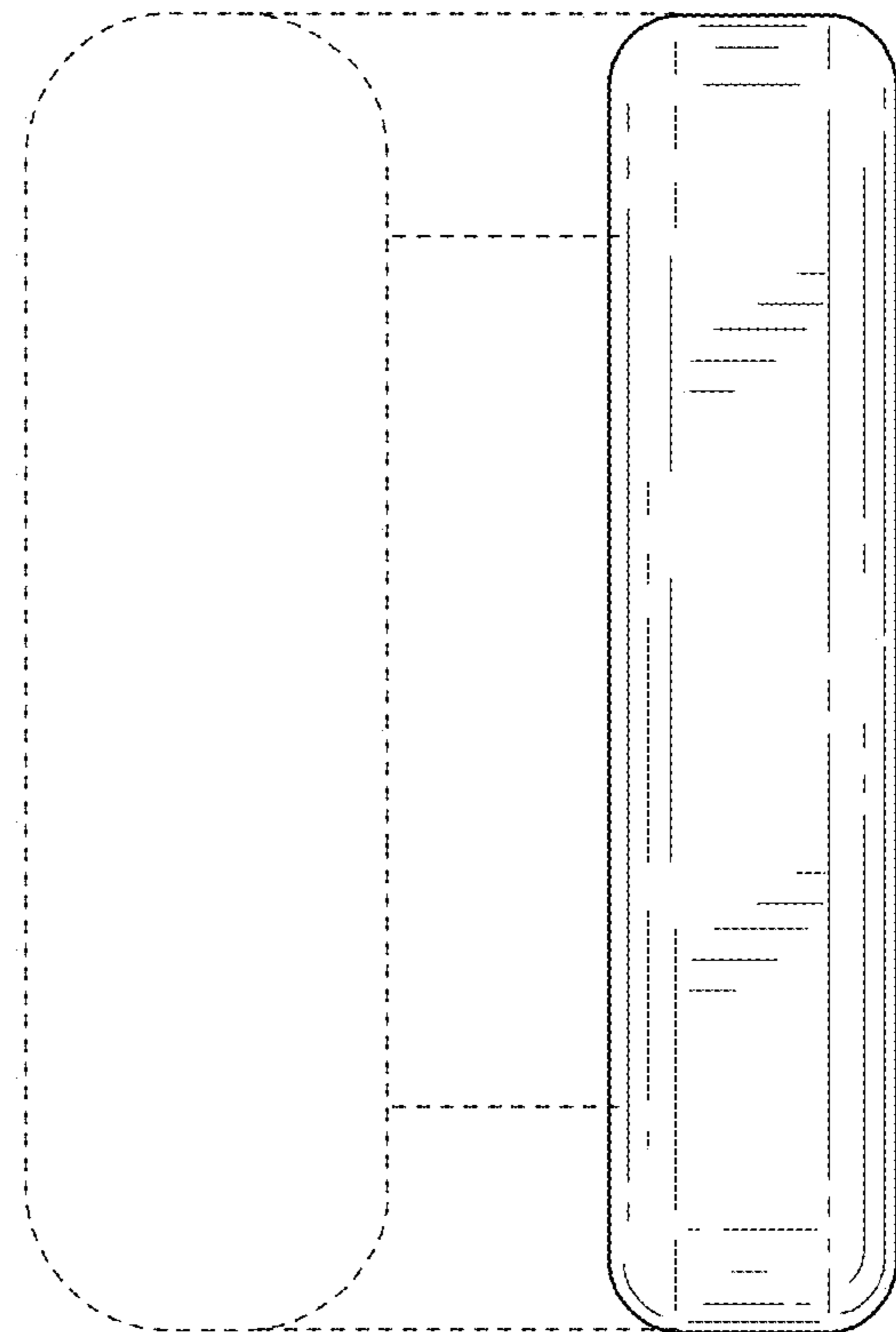


FIG. 13

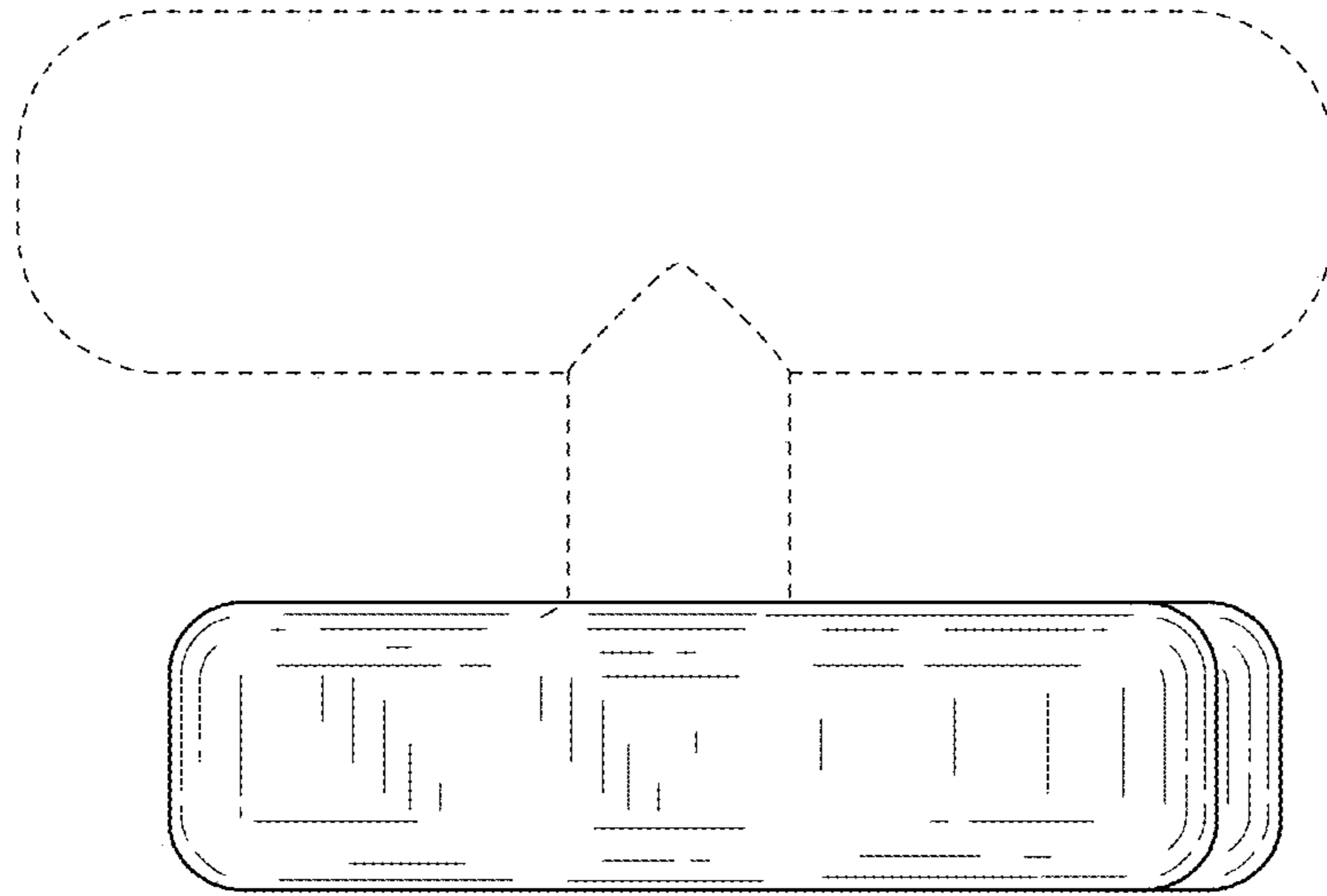


FIG. 14

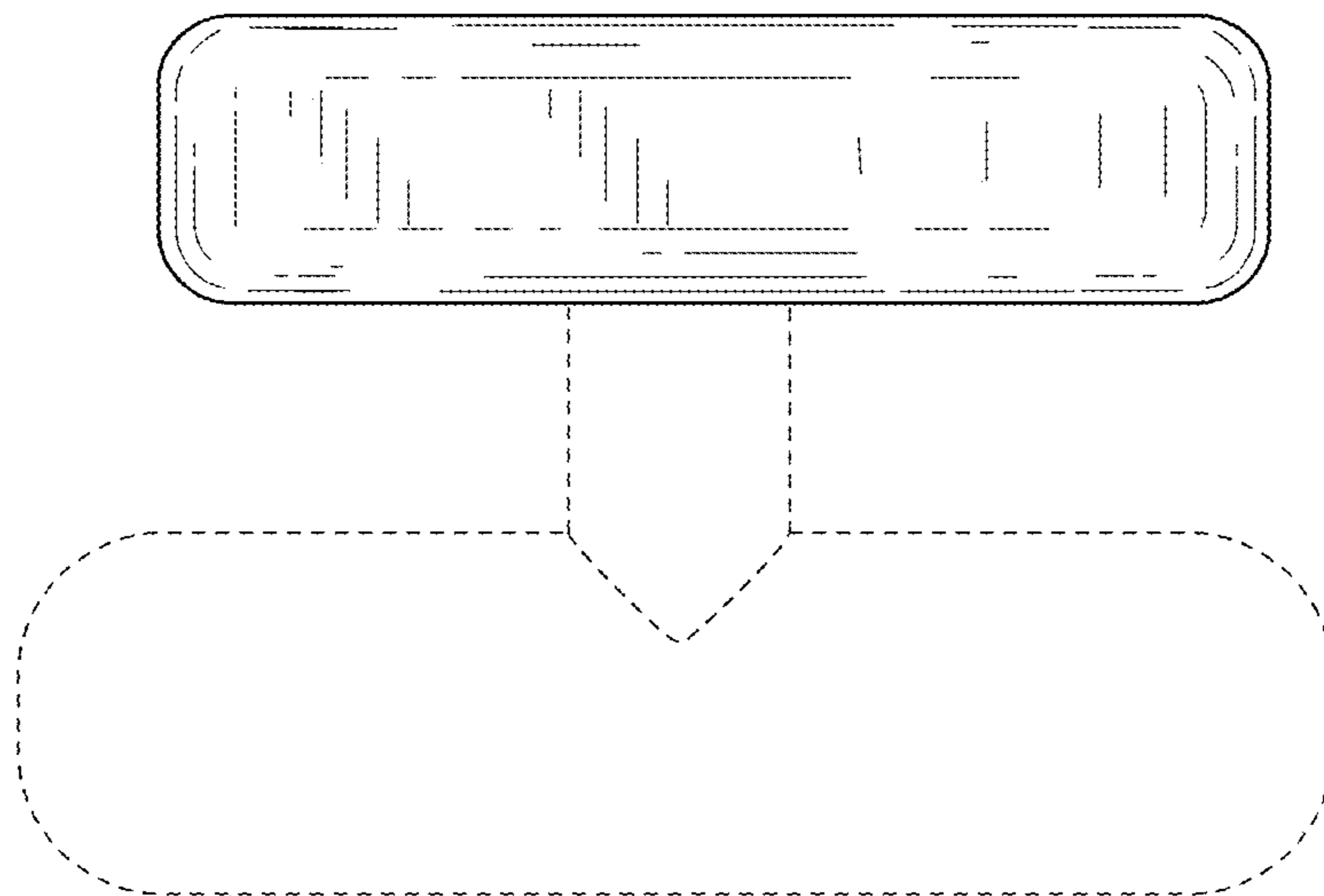


FIG. 15

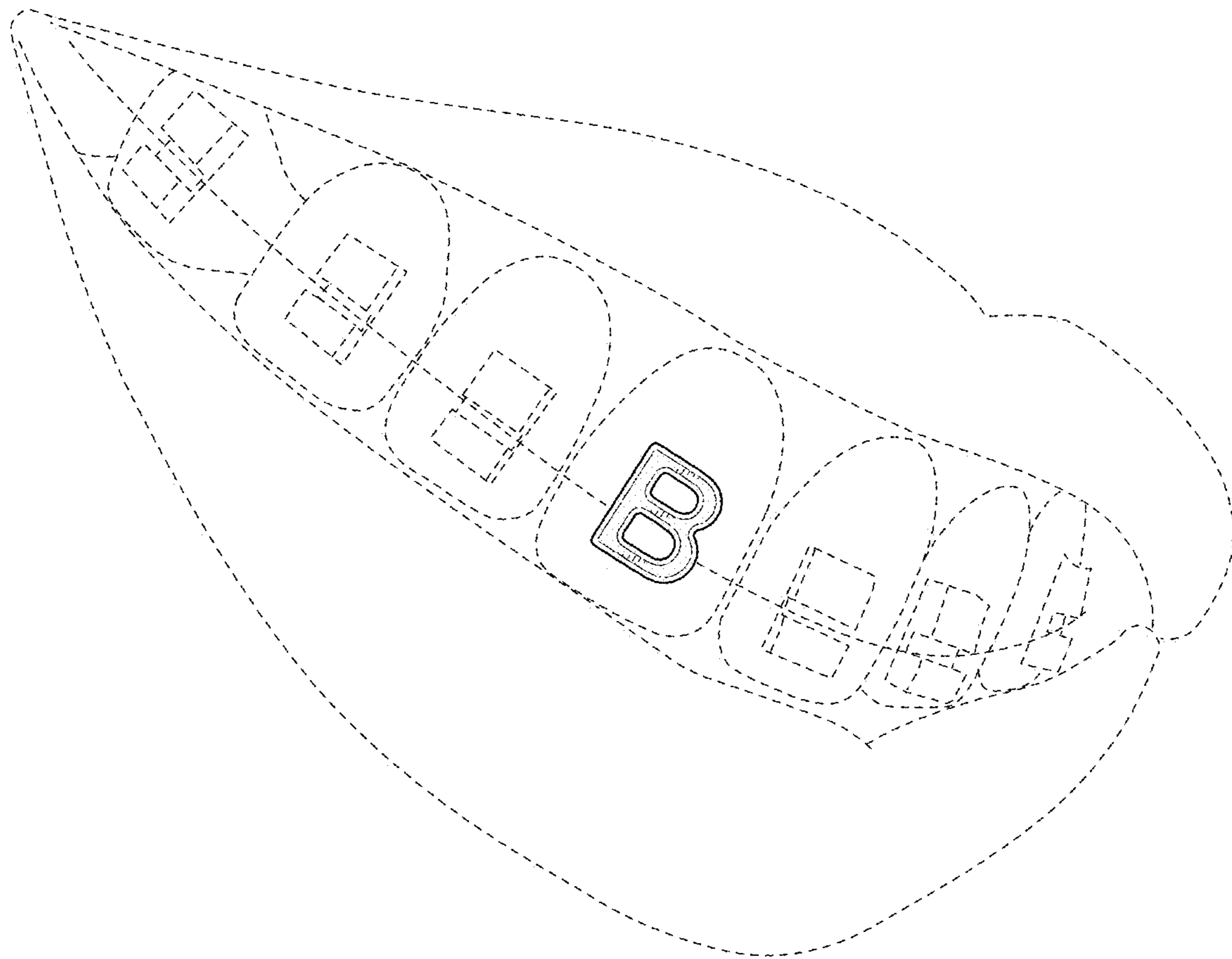


FIG. 16

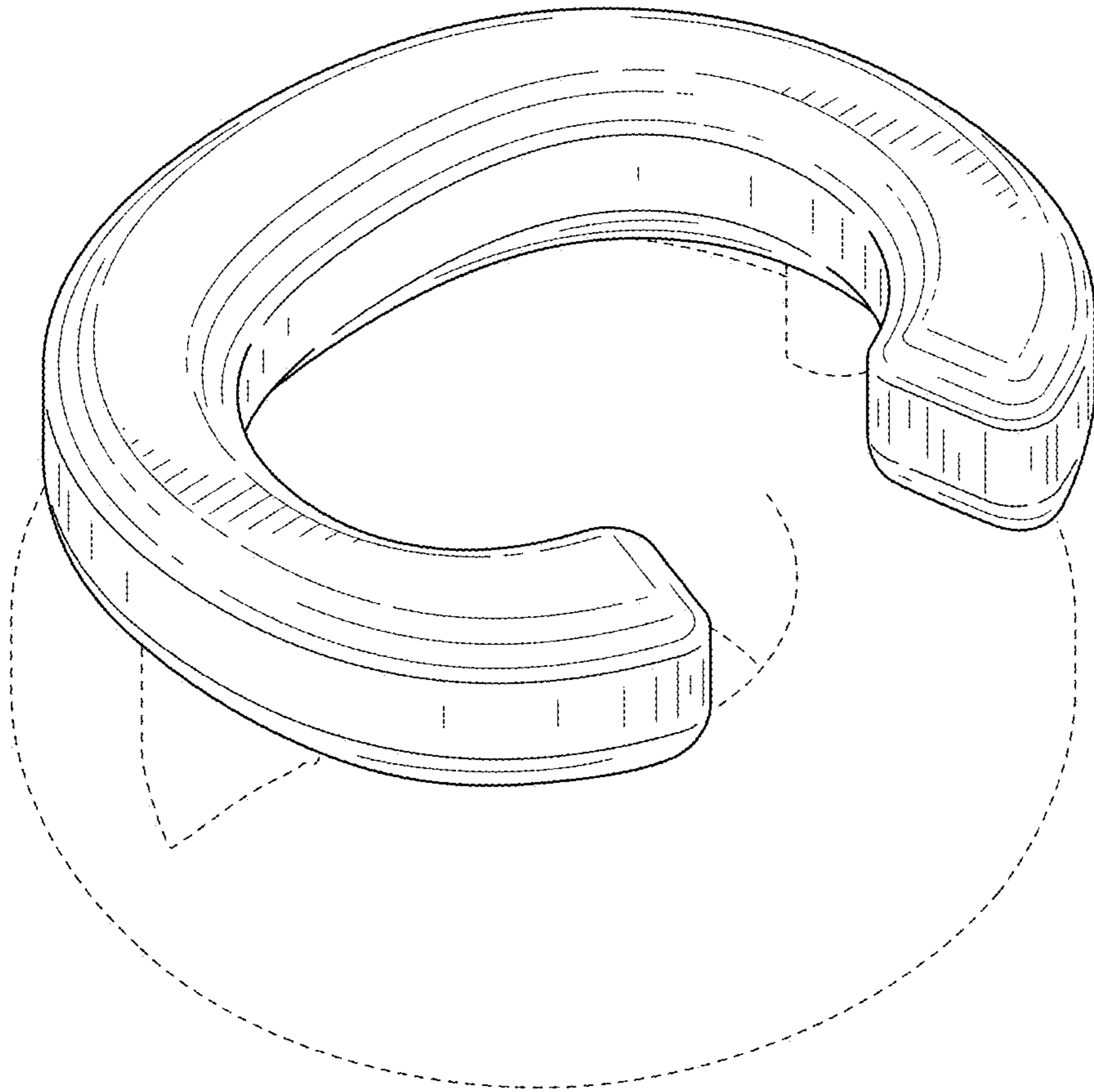


FIG. 17

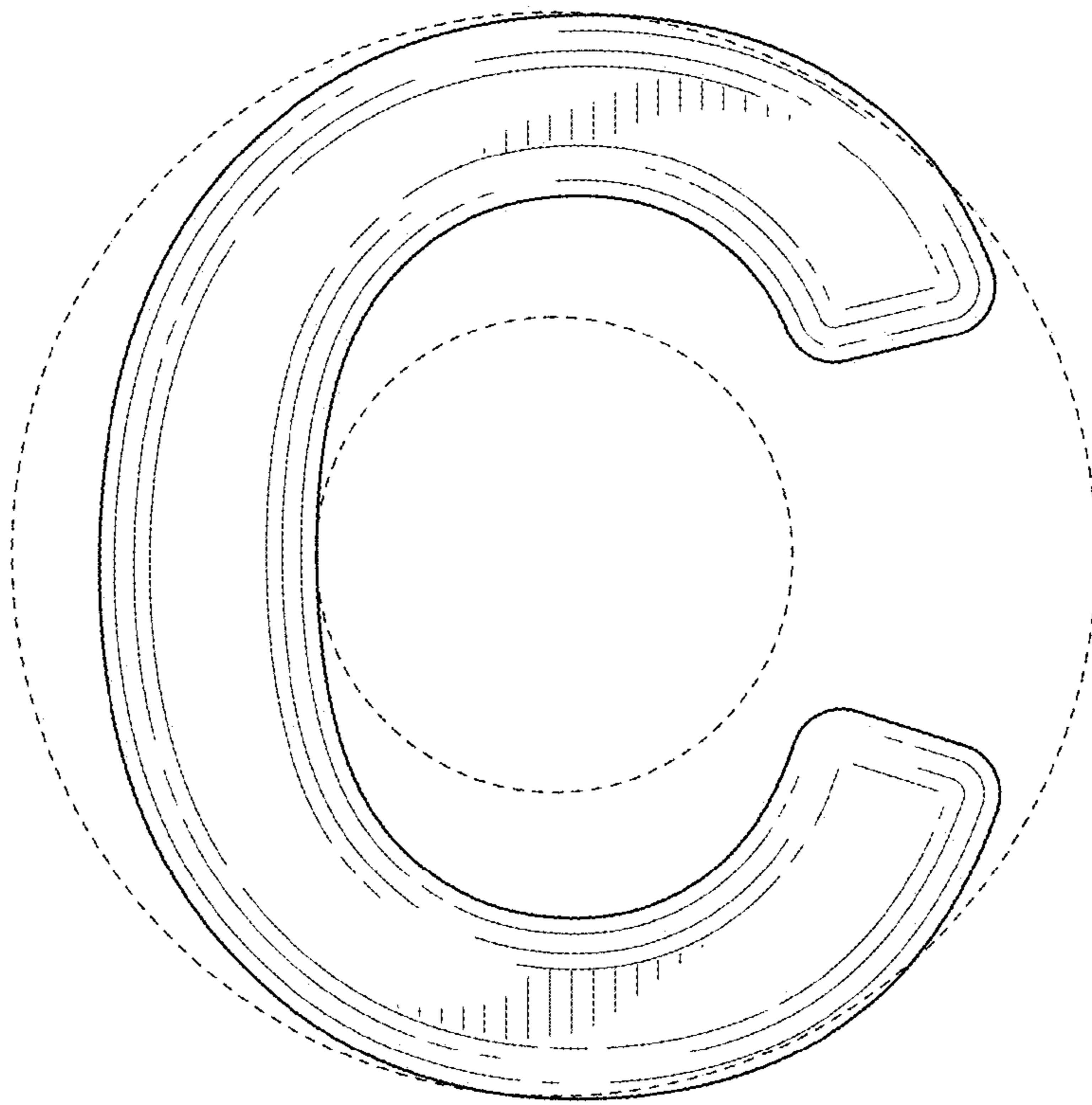


FIG. 18

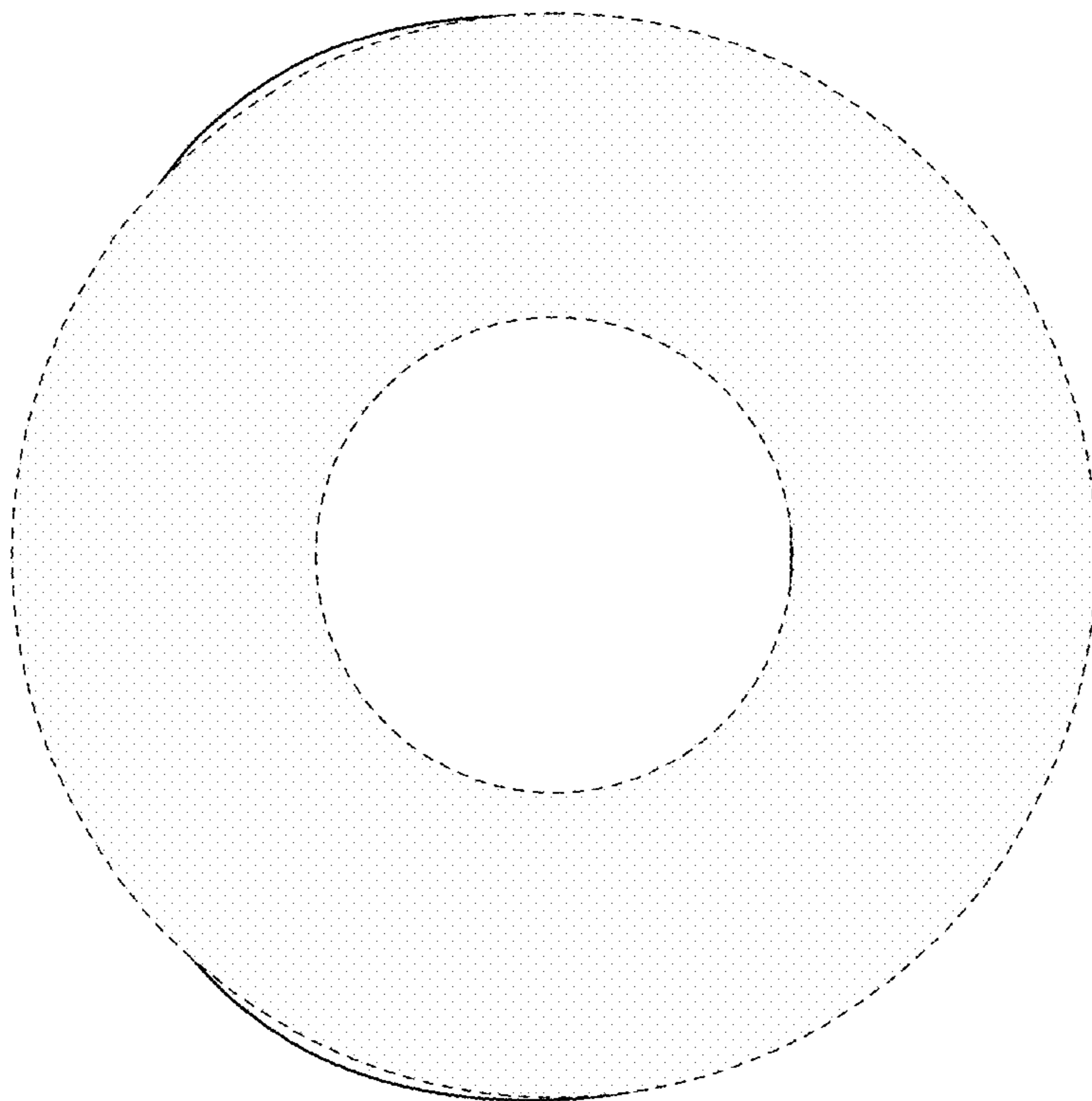


FIG. 19

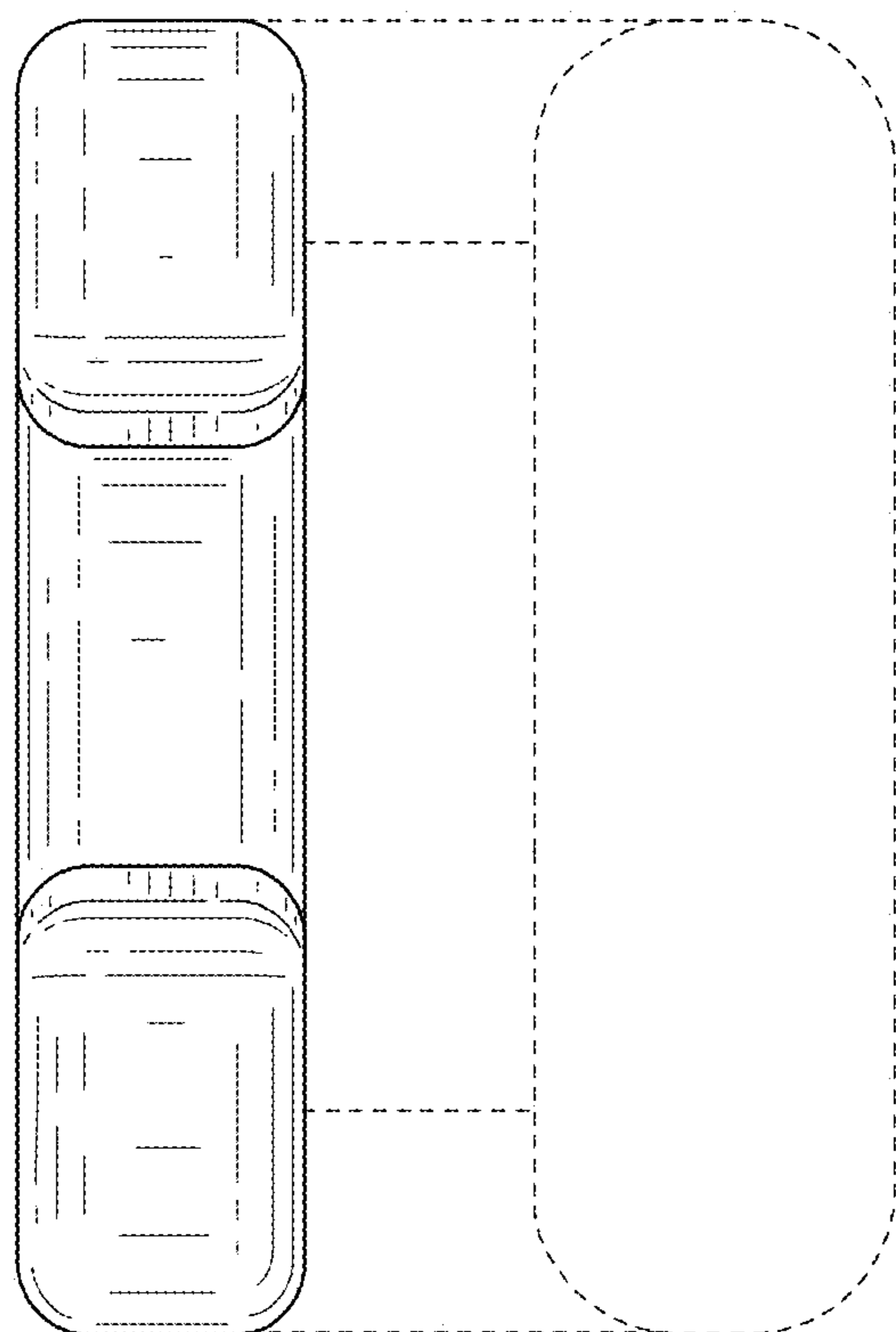


FIG. 20

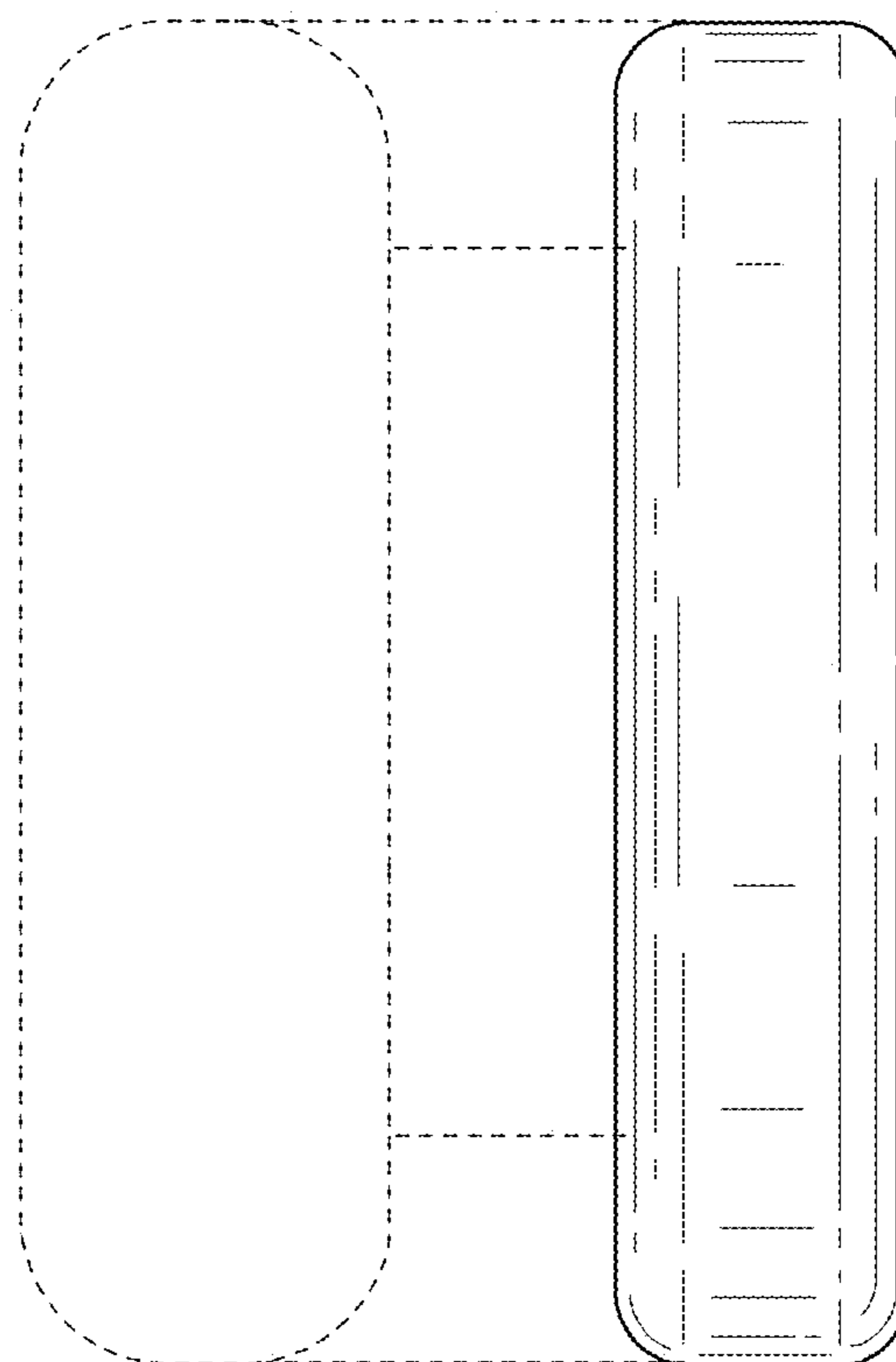


FIG. 21

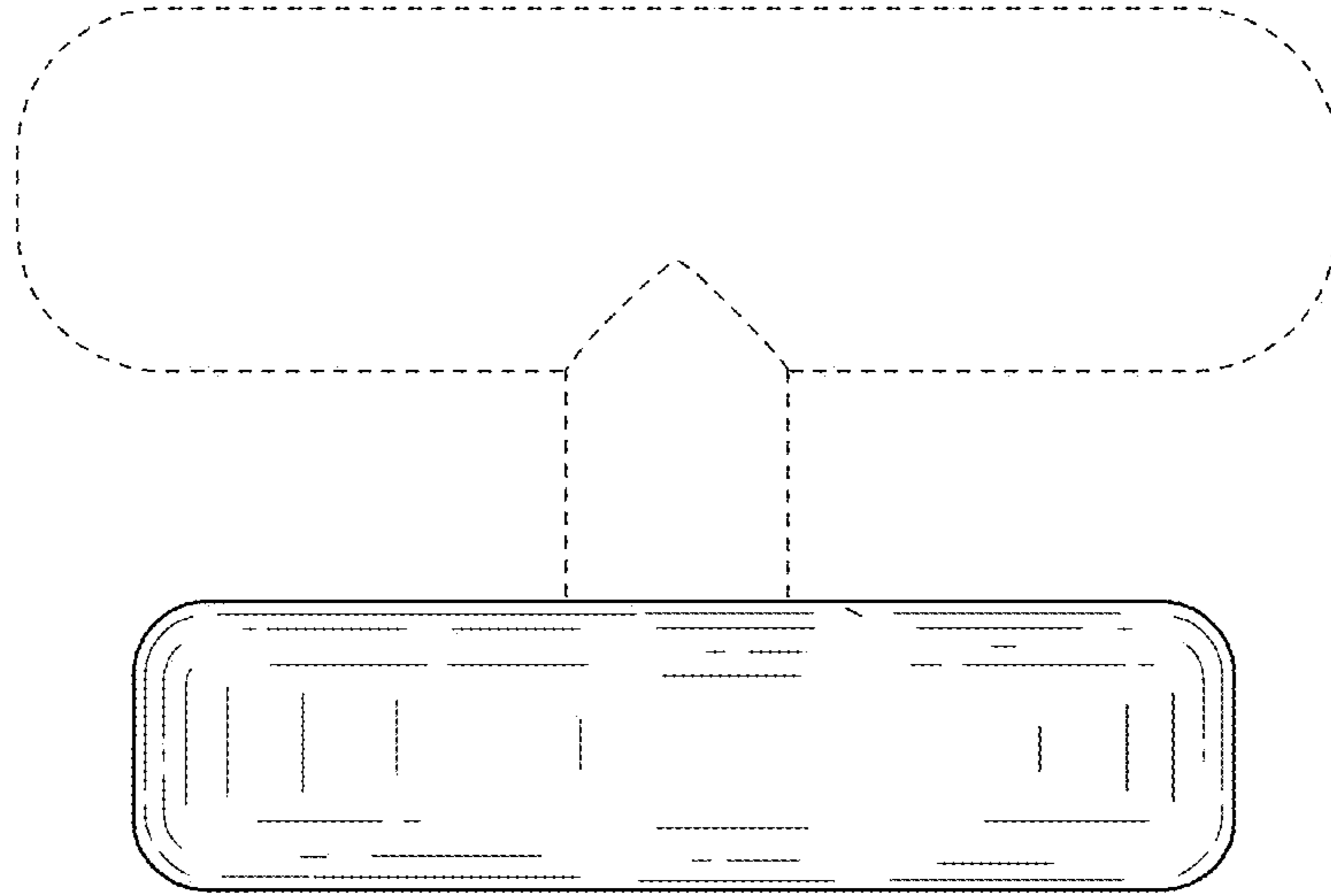


FIG. 22

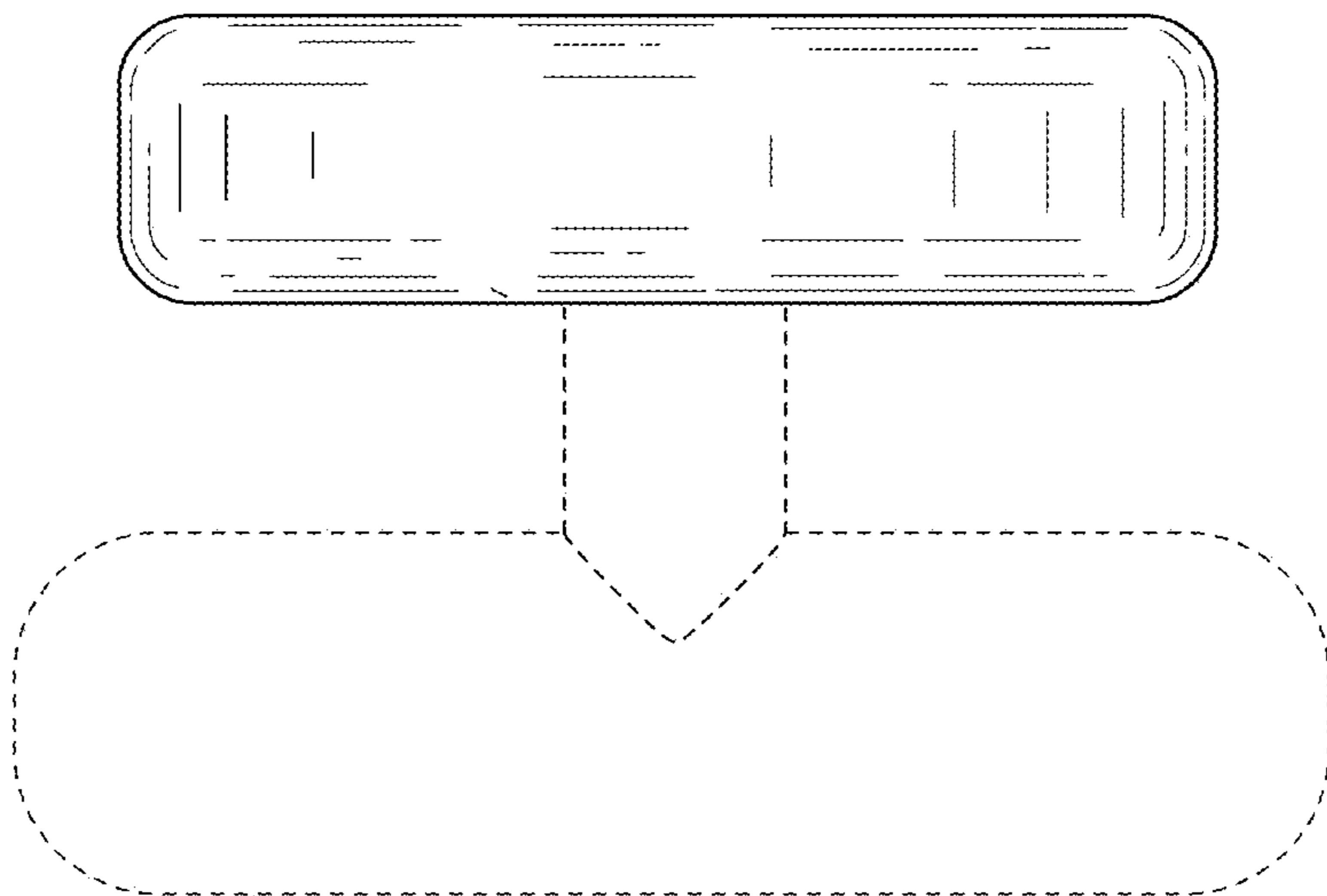


FIG. 23

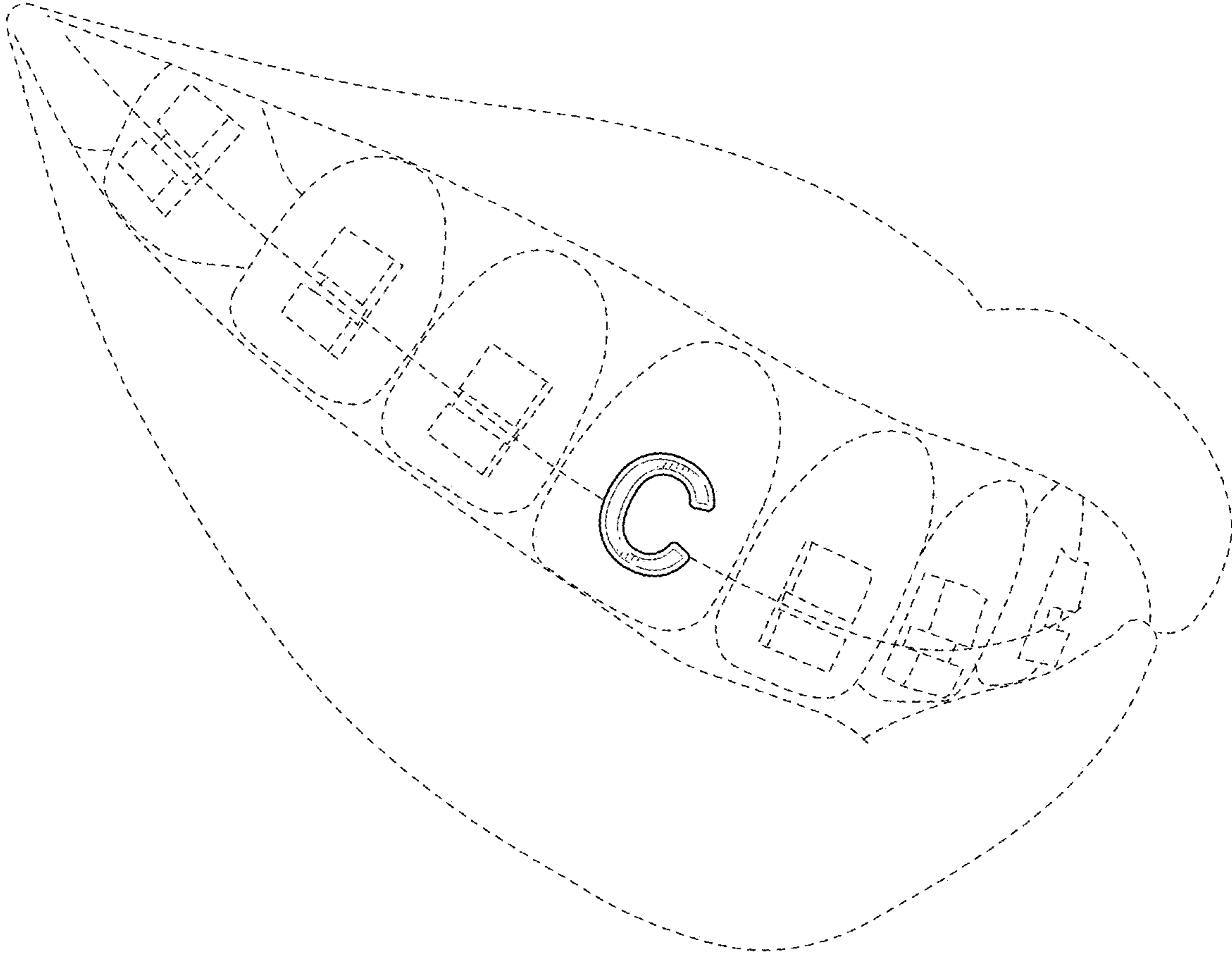


FIG. 24

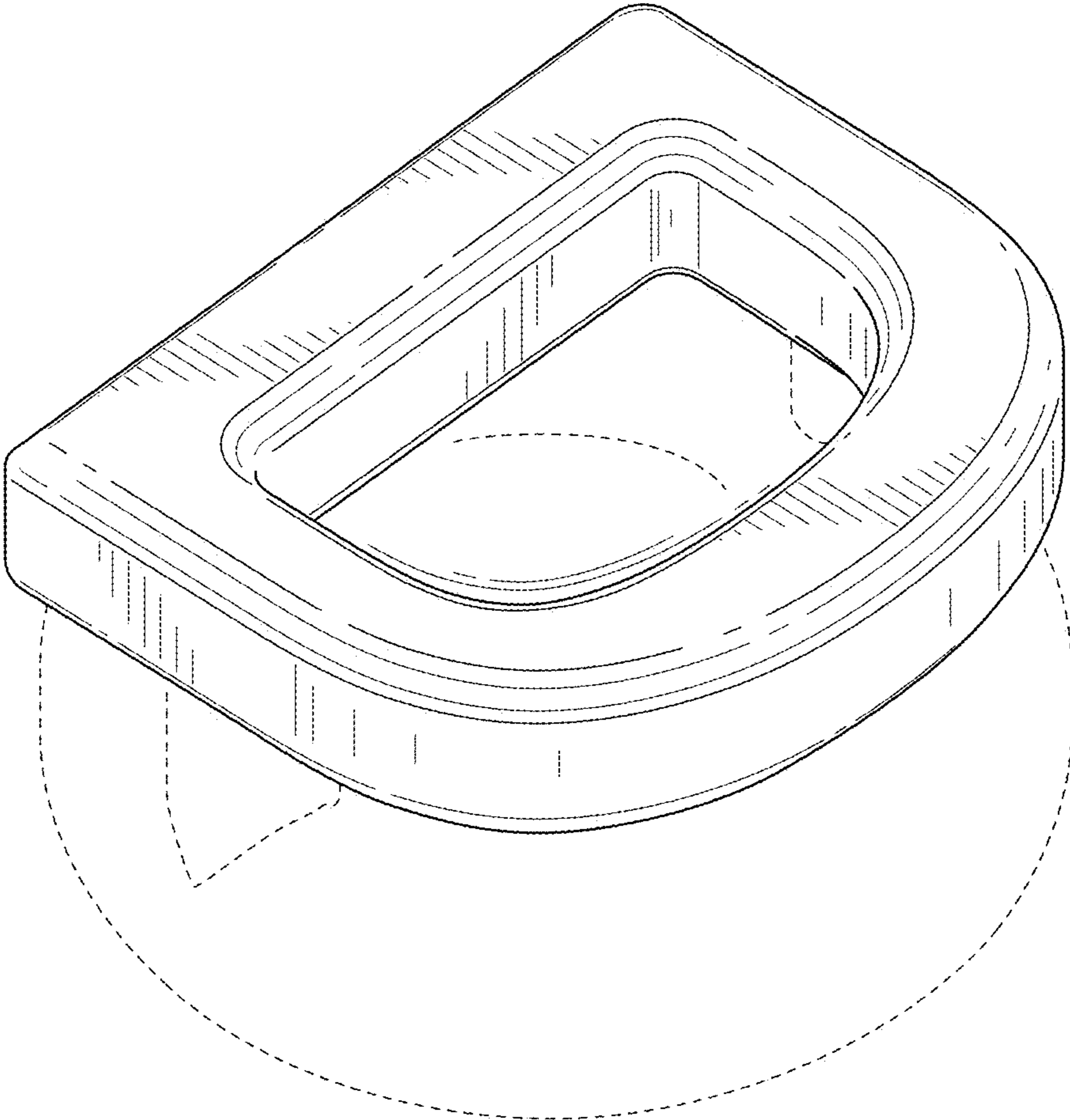


FIG. 25

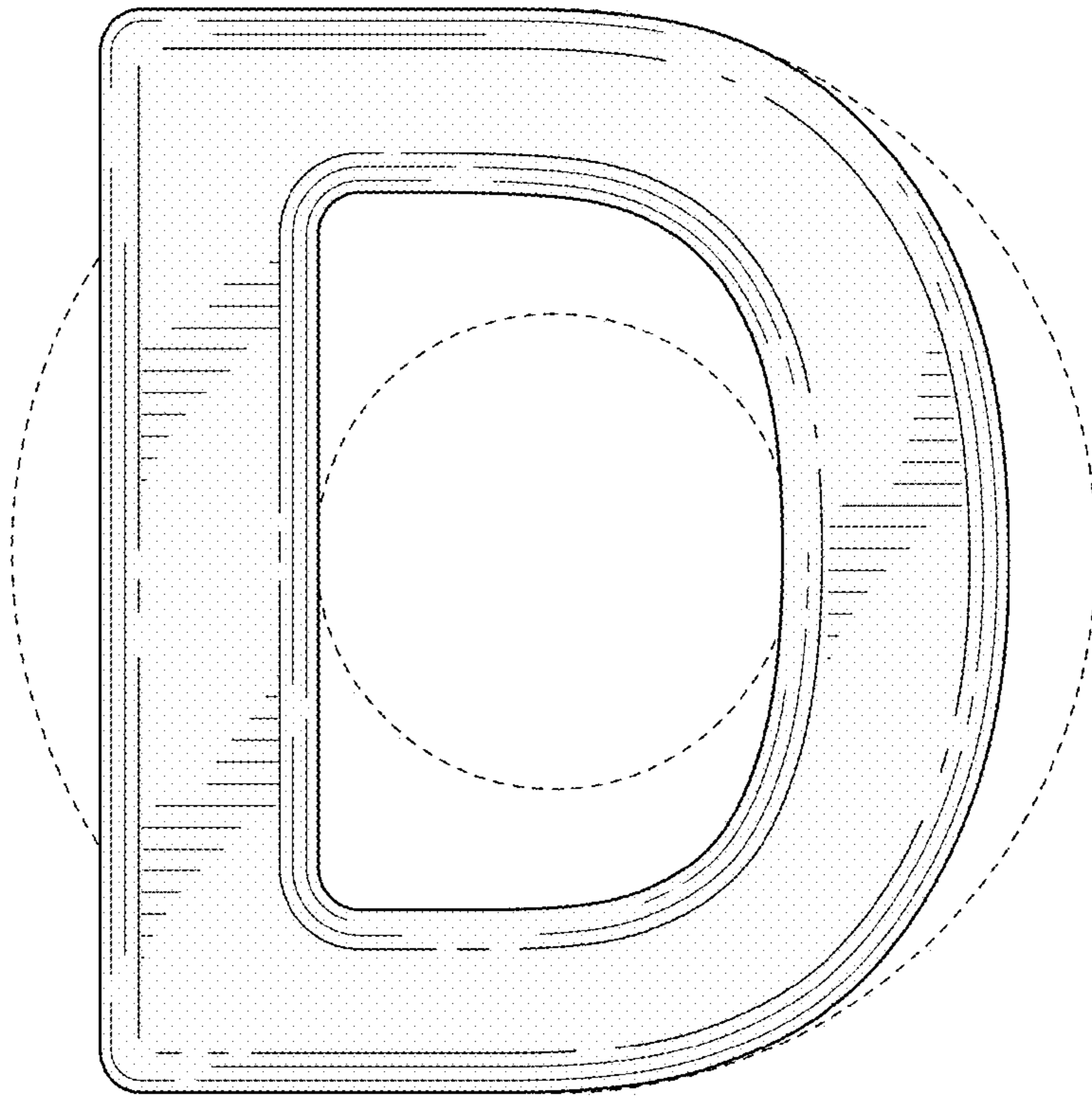


FIG. 26

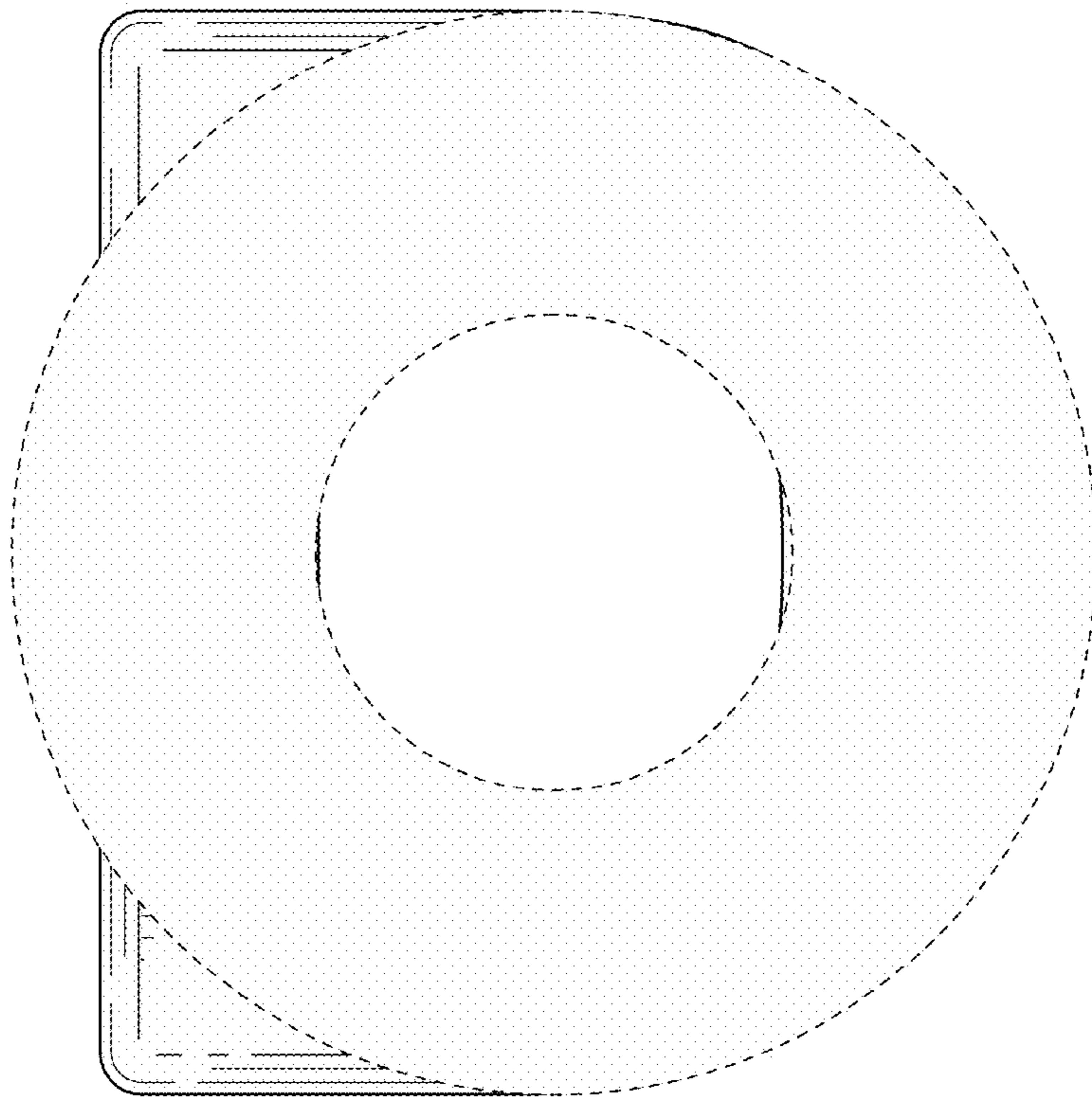


FIG. 27

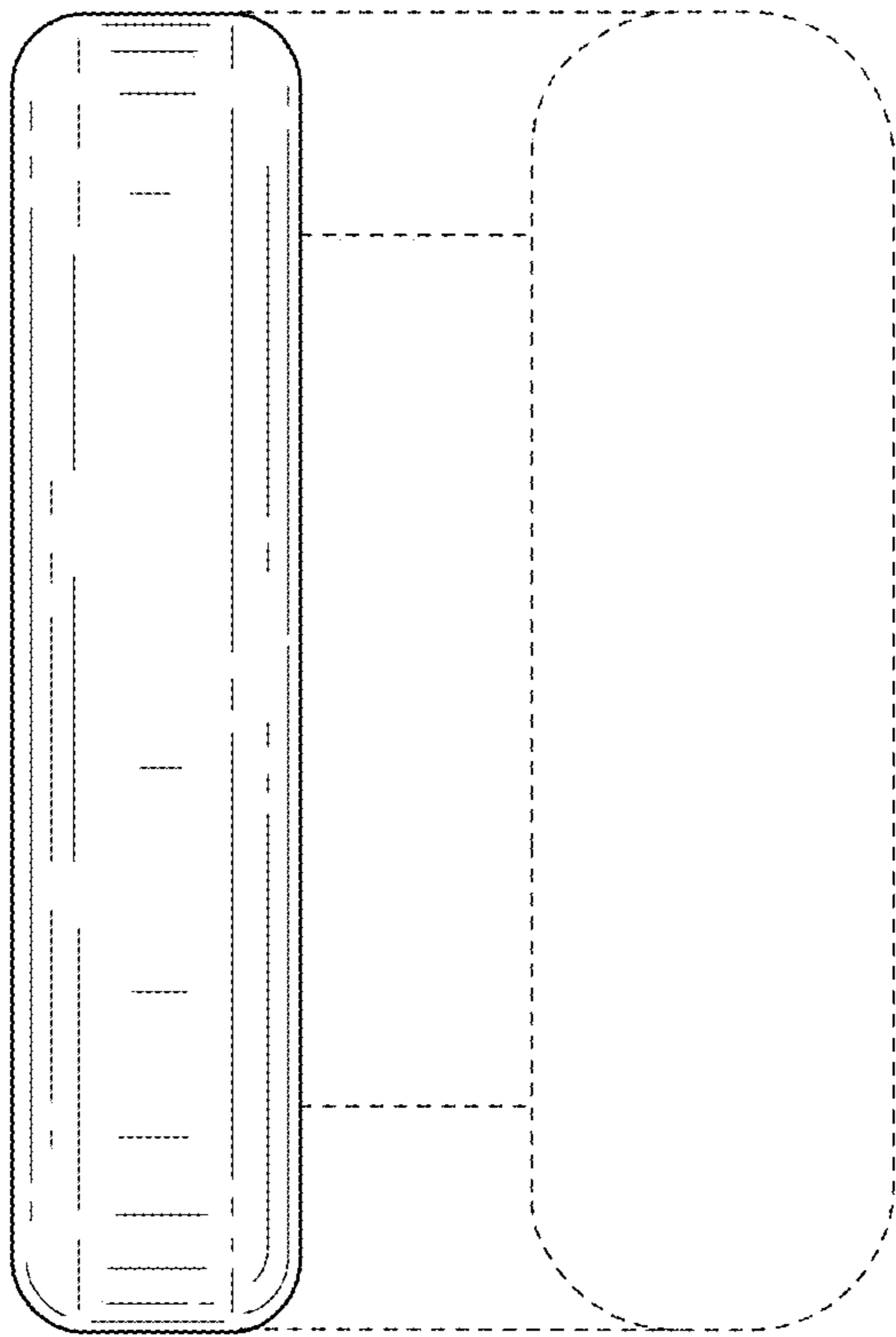


FIG. 28

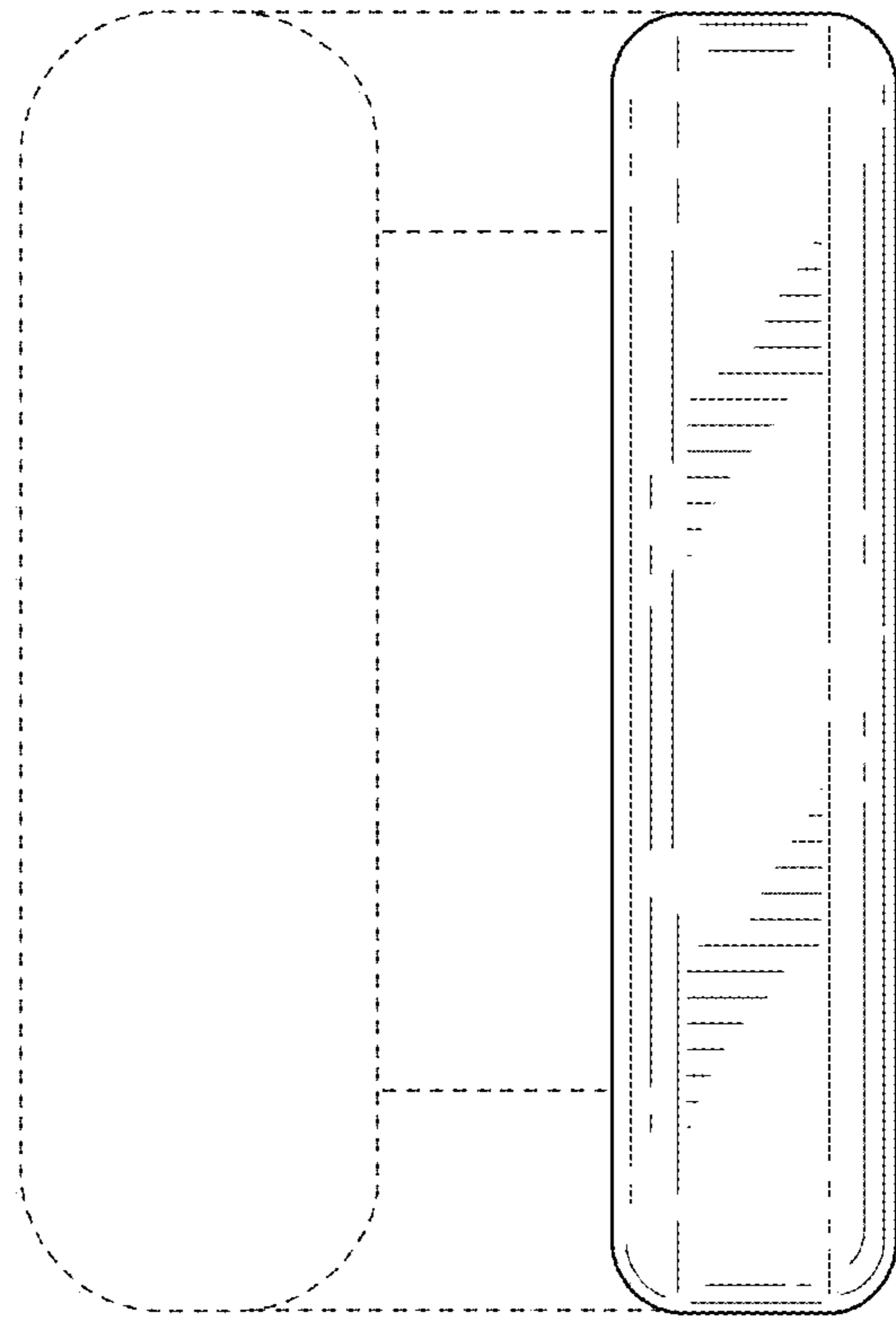


FIG. 29

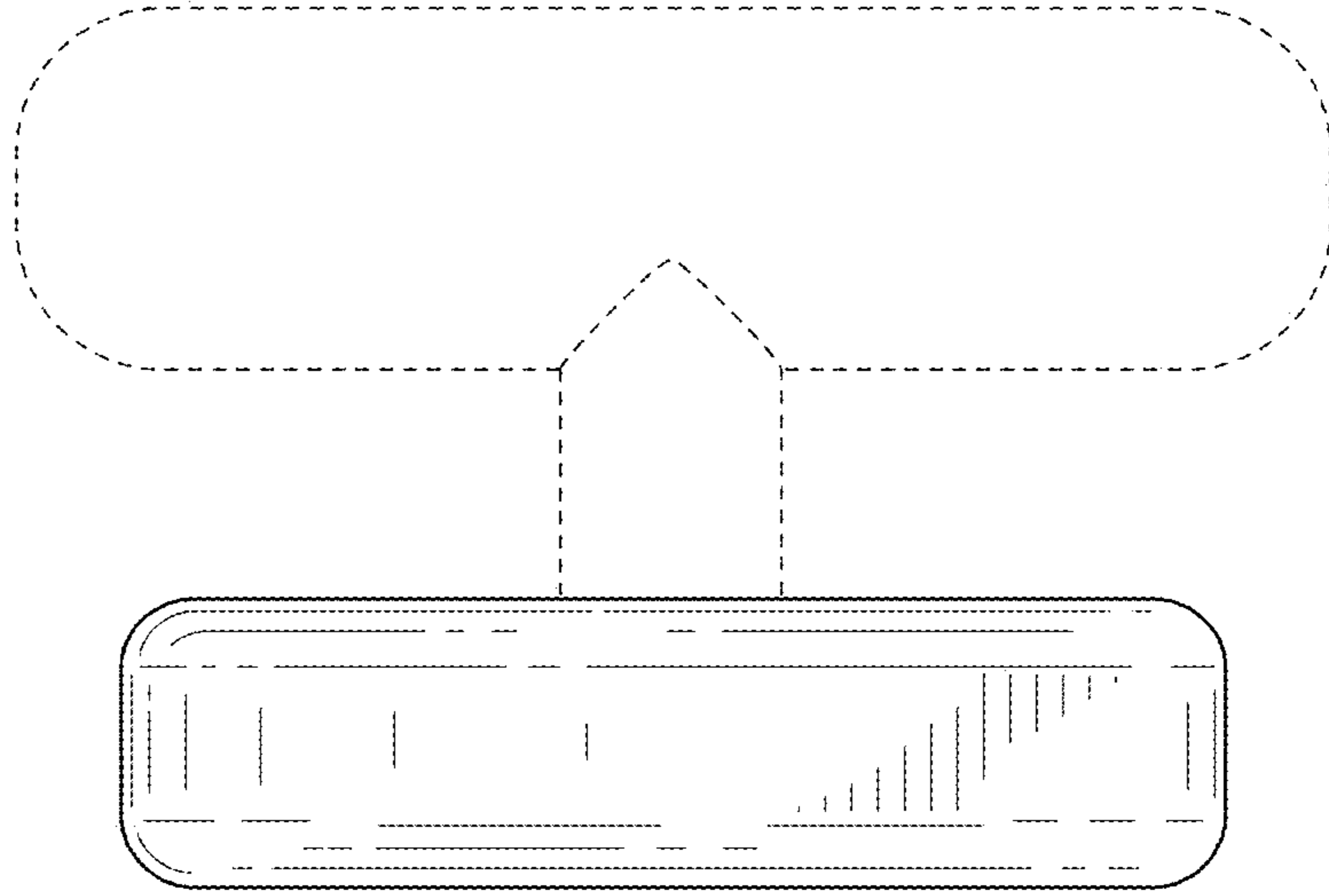


FIG. 30

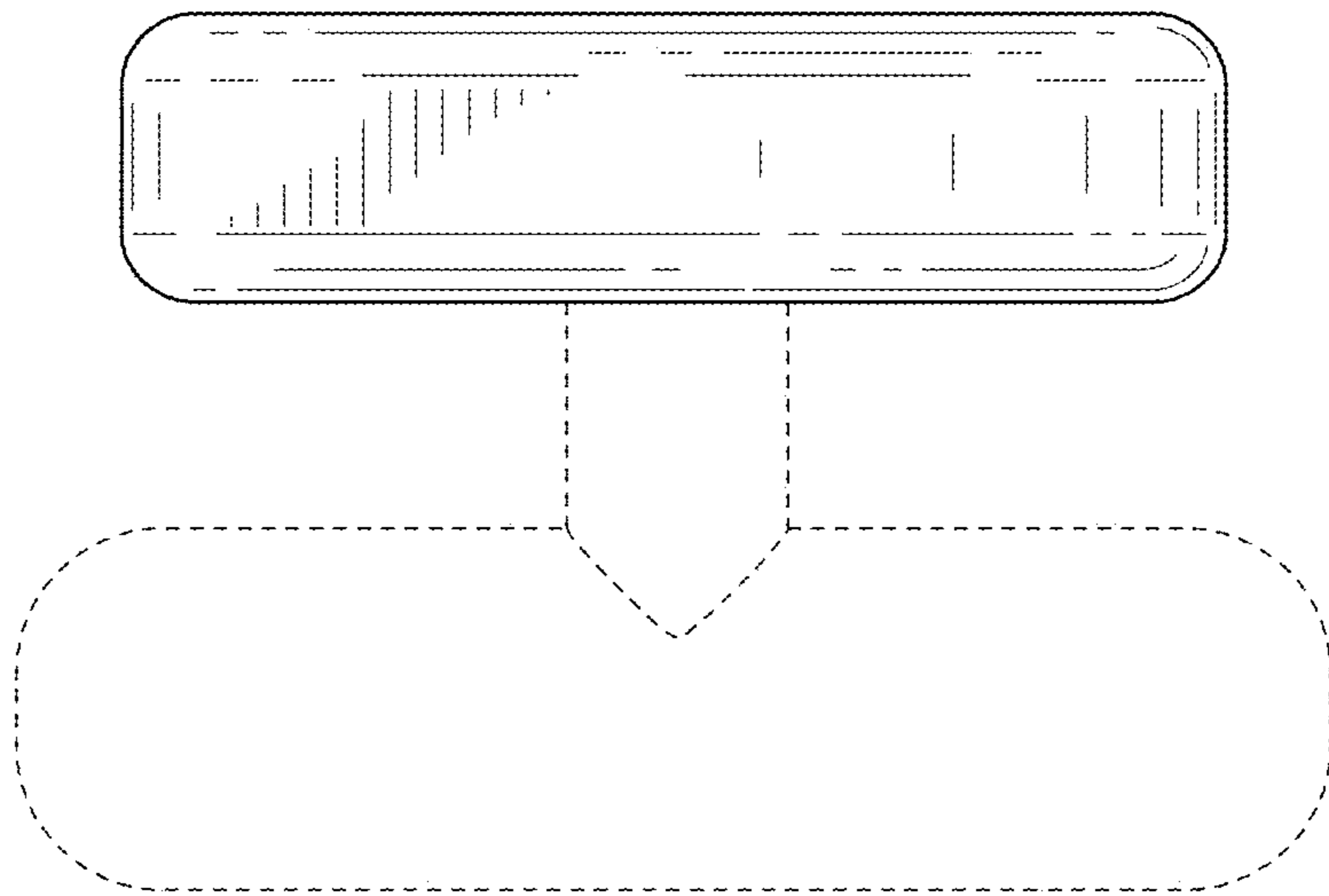


FIG. 31

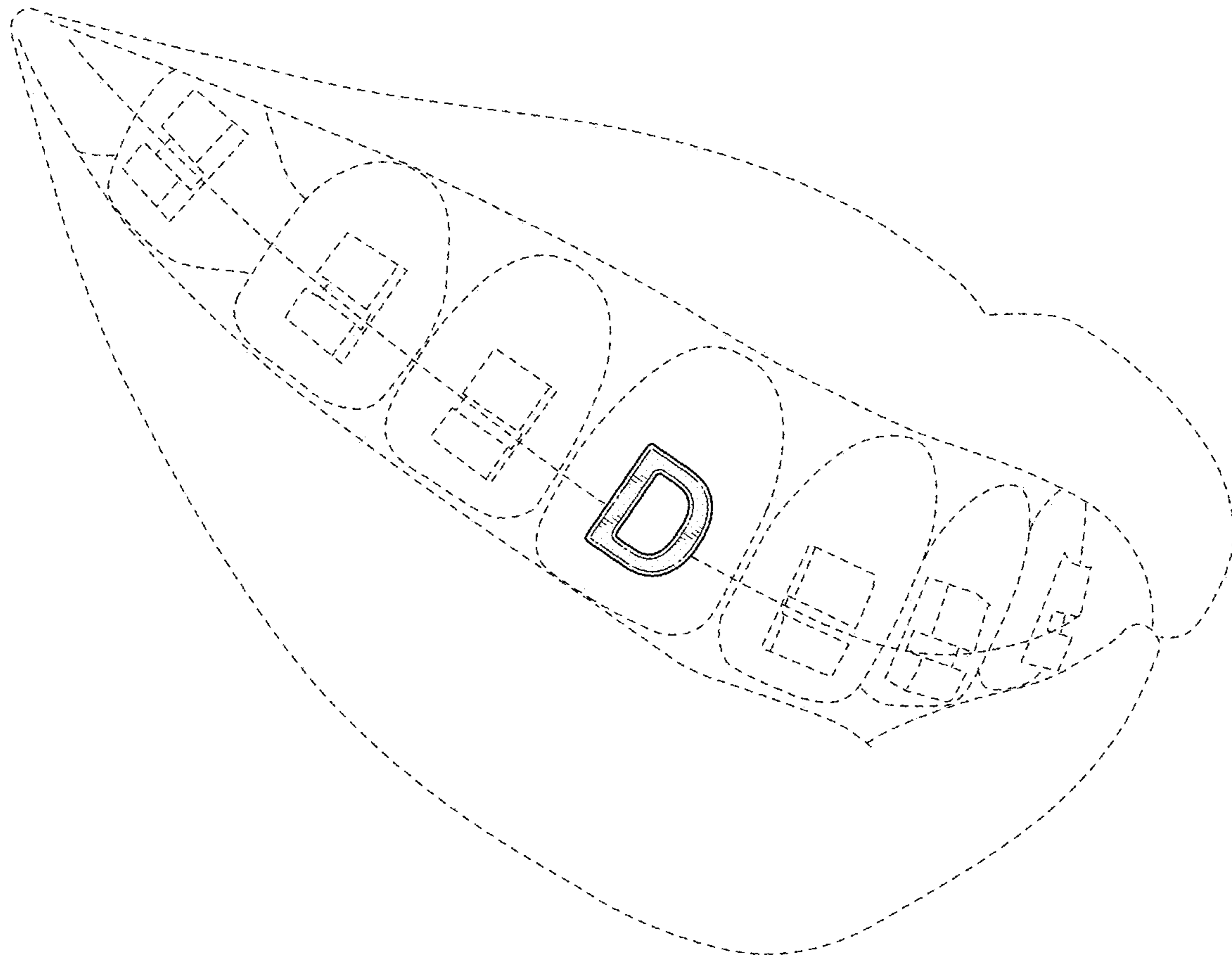


FIG. 32

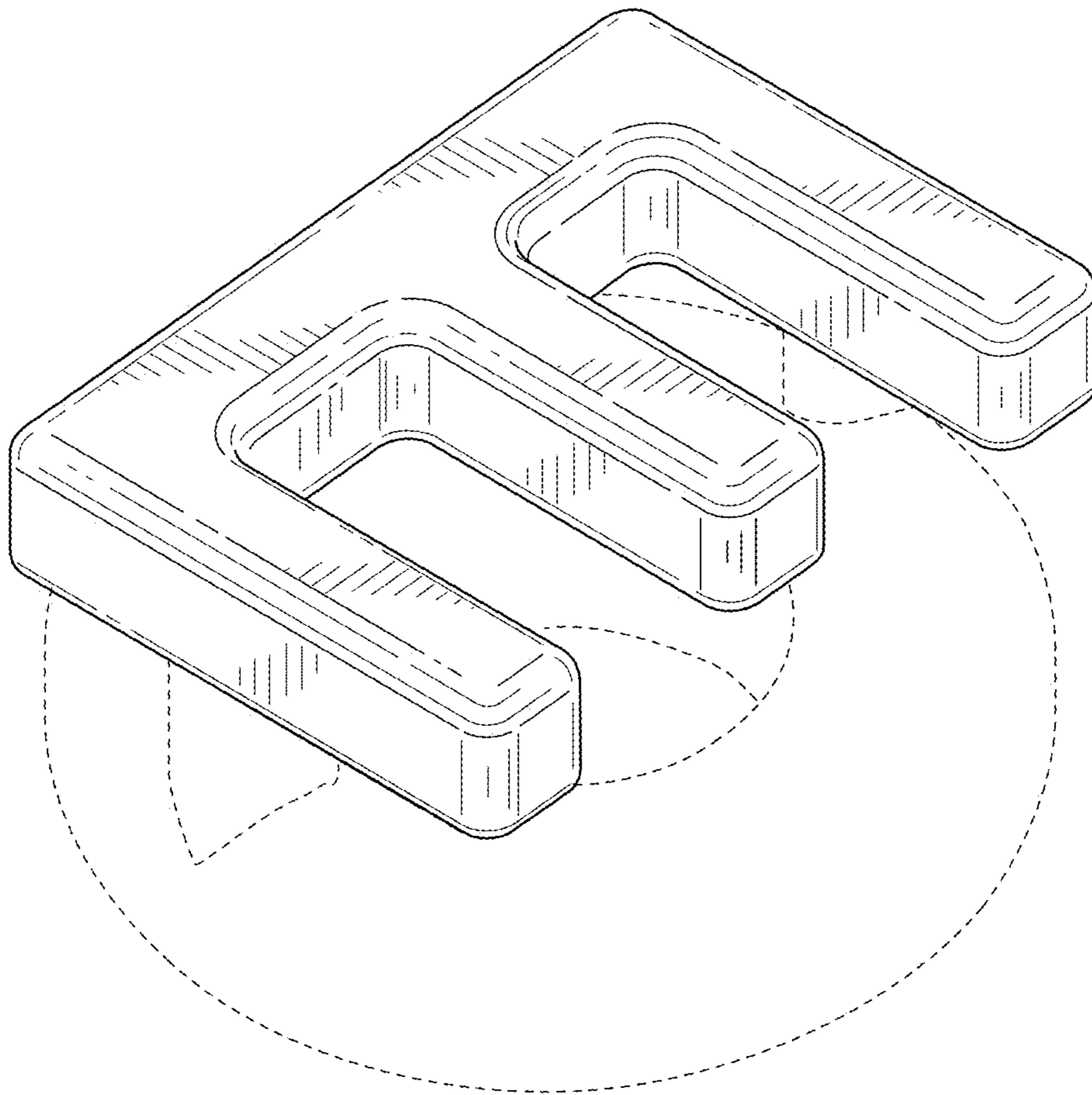


FIG. 33

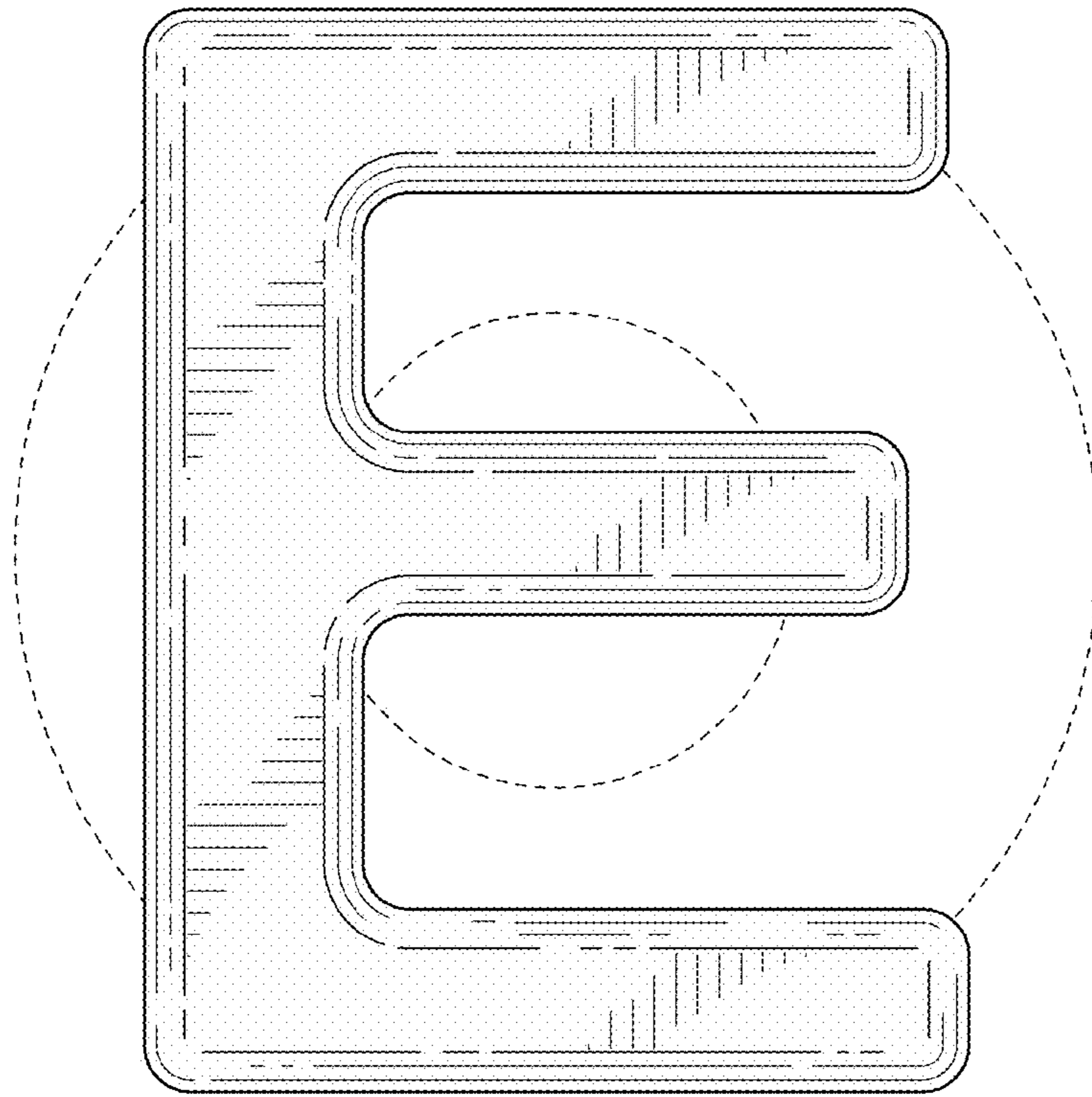


FIG. 34

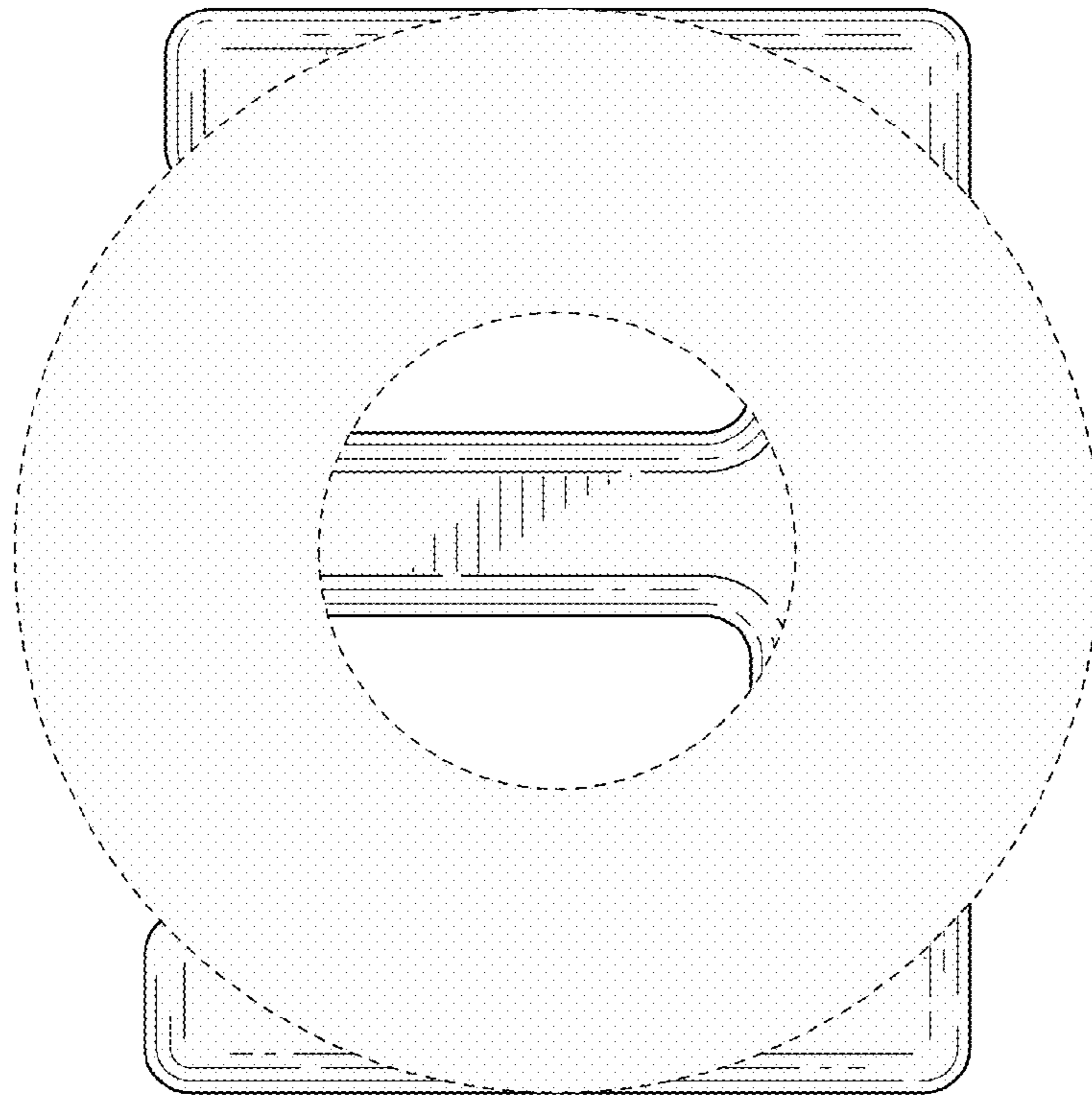


FIG. 35

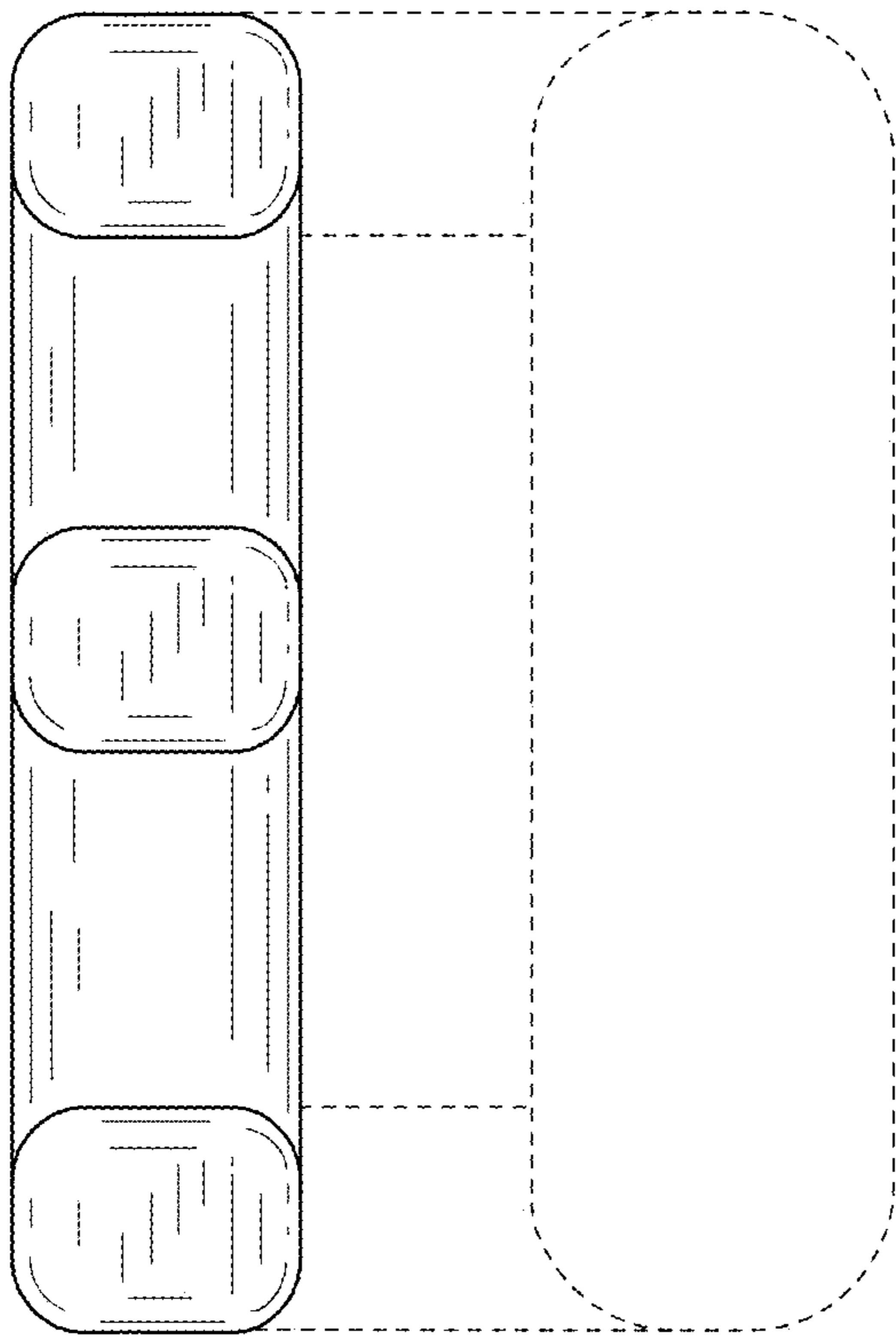


FIG. 36

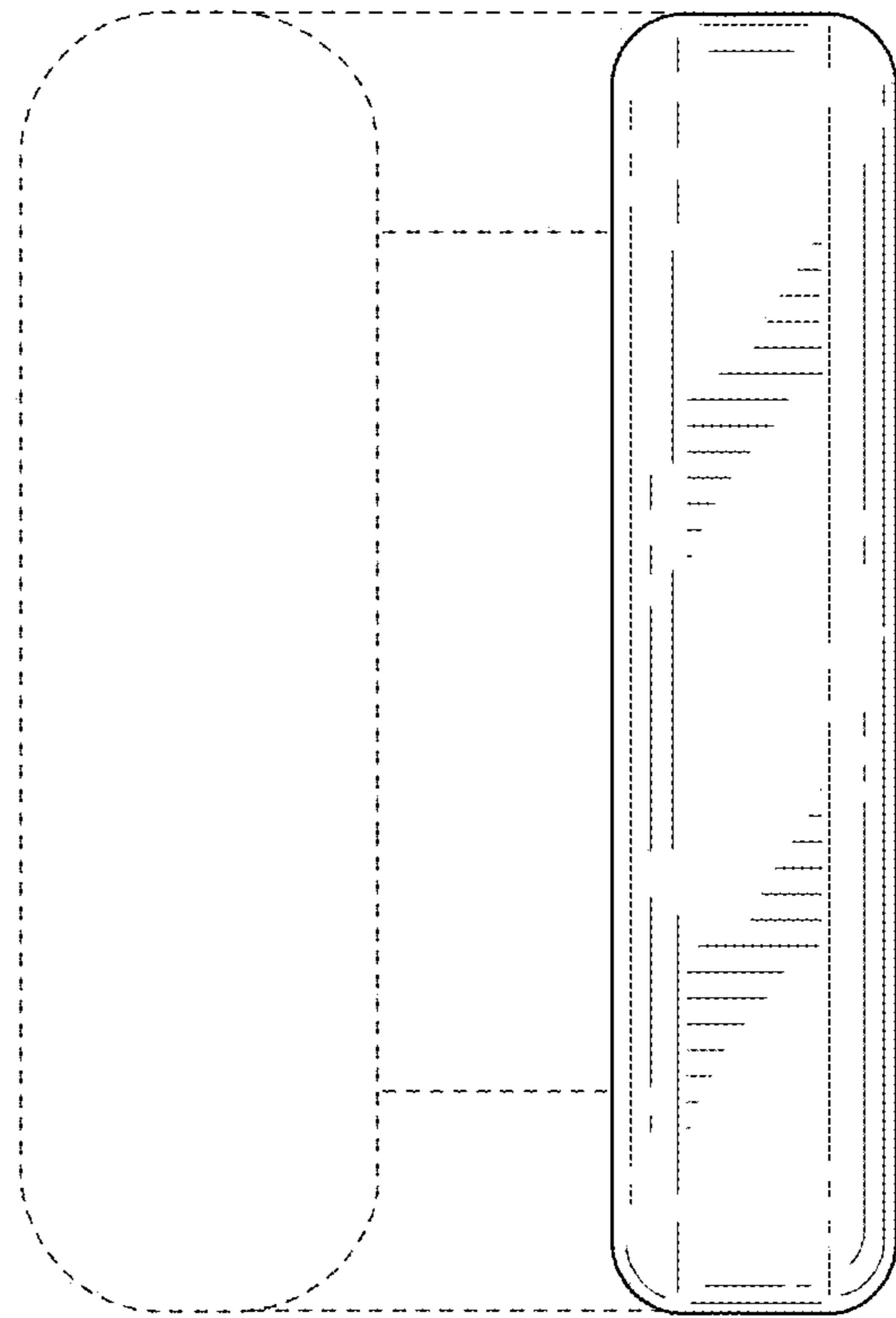


FIG. 37

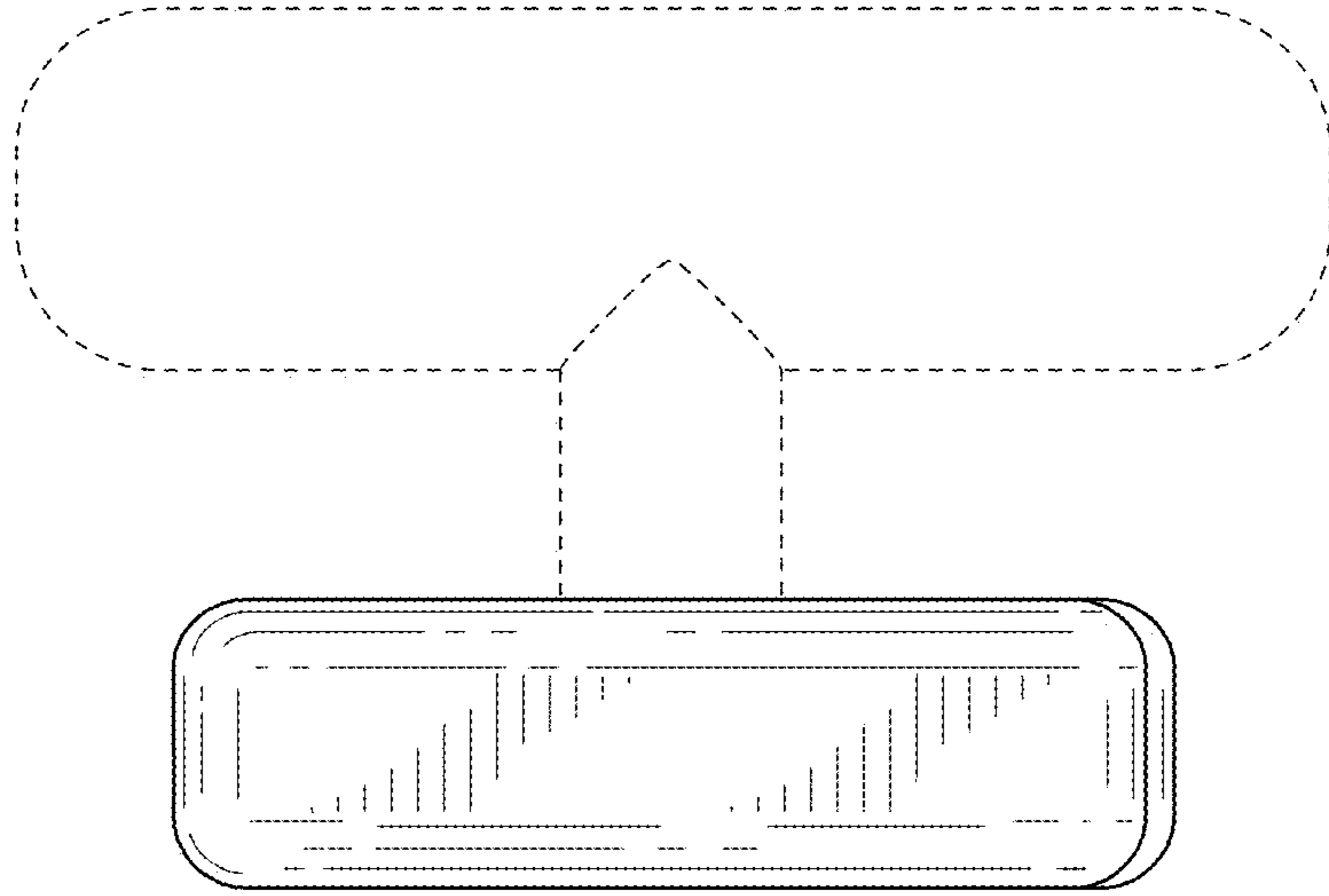


FIG. 38

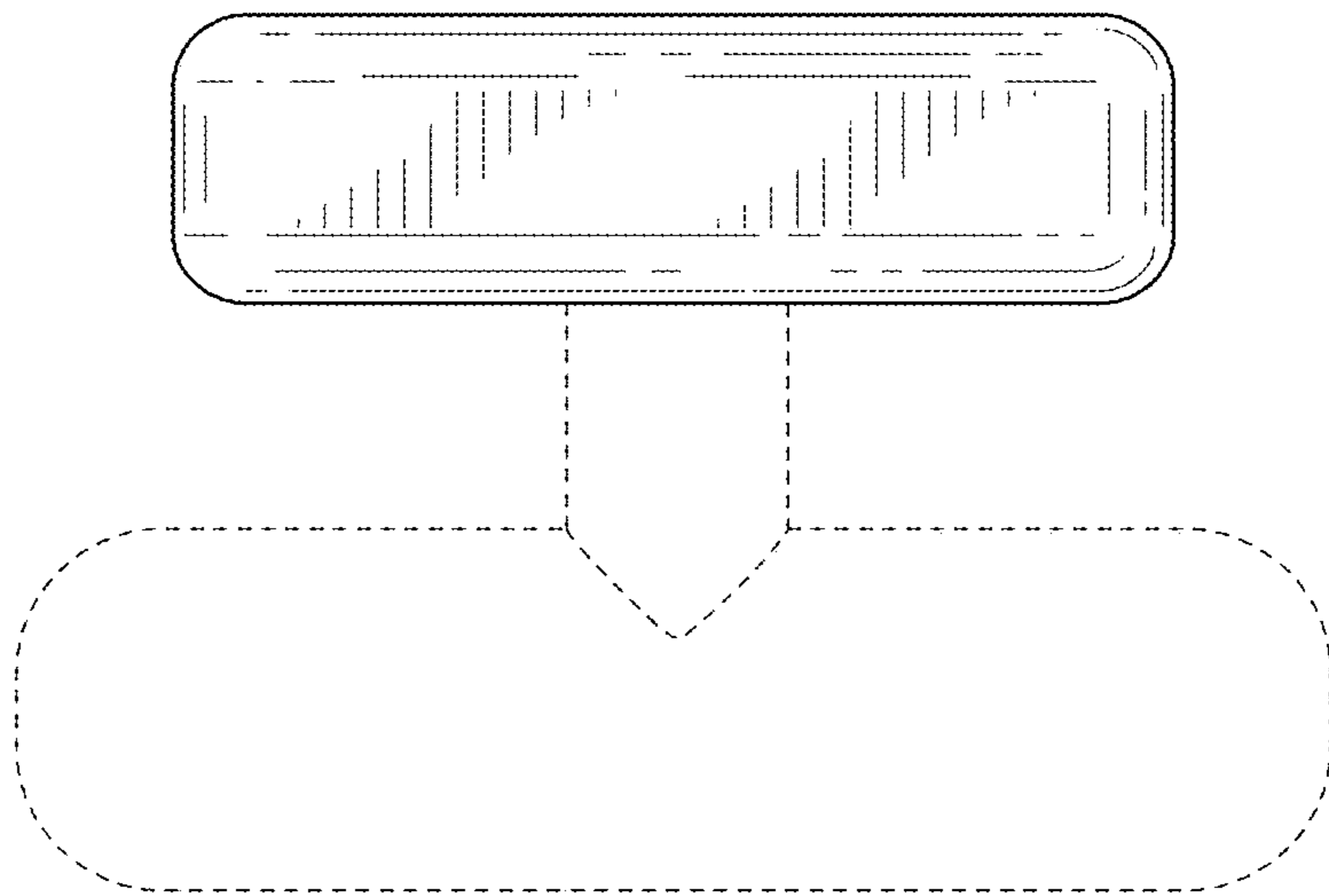


FIG. 39

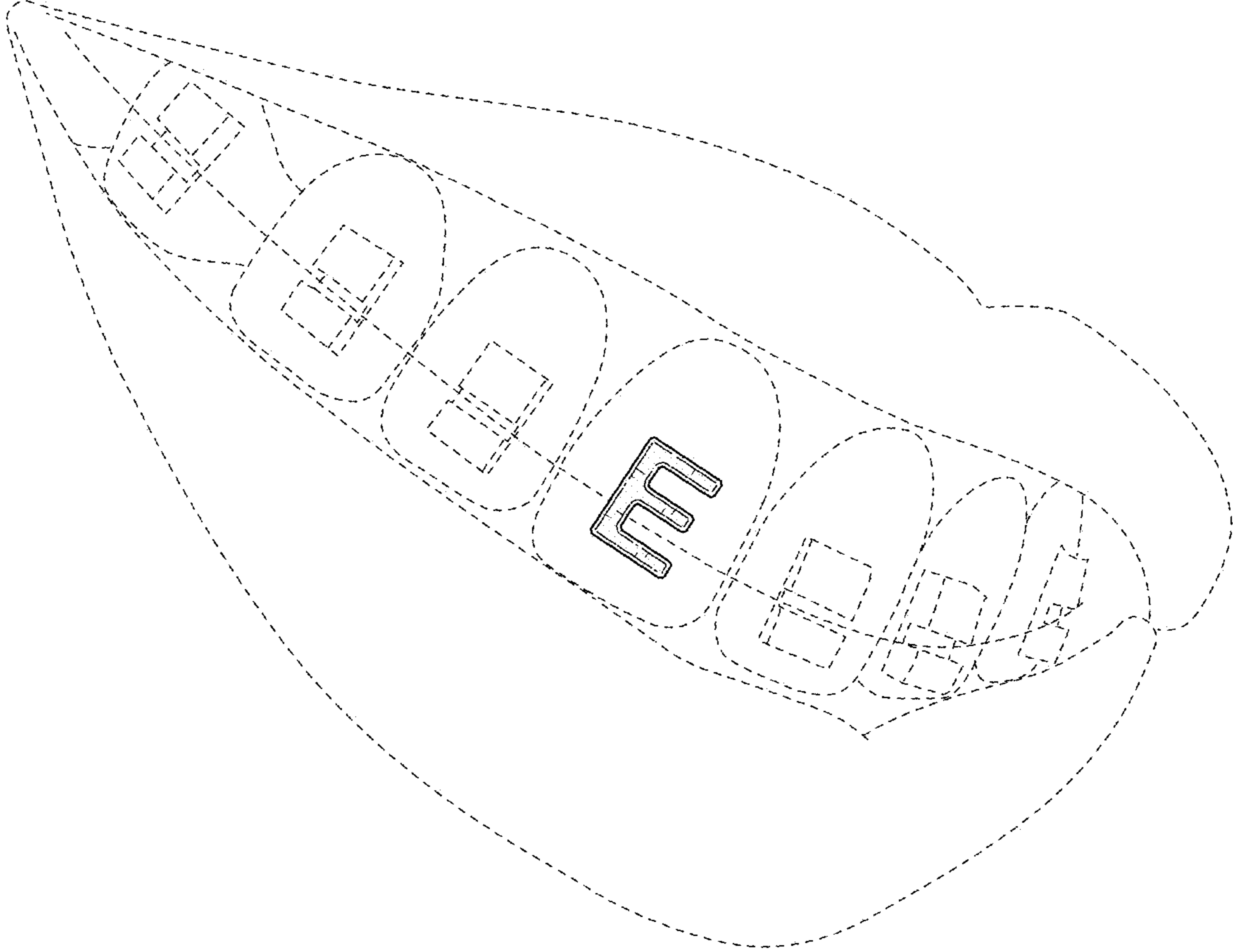


FIG. 40

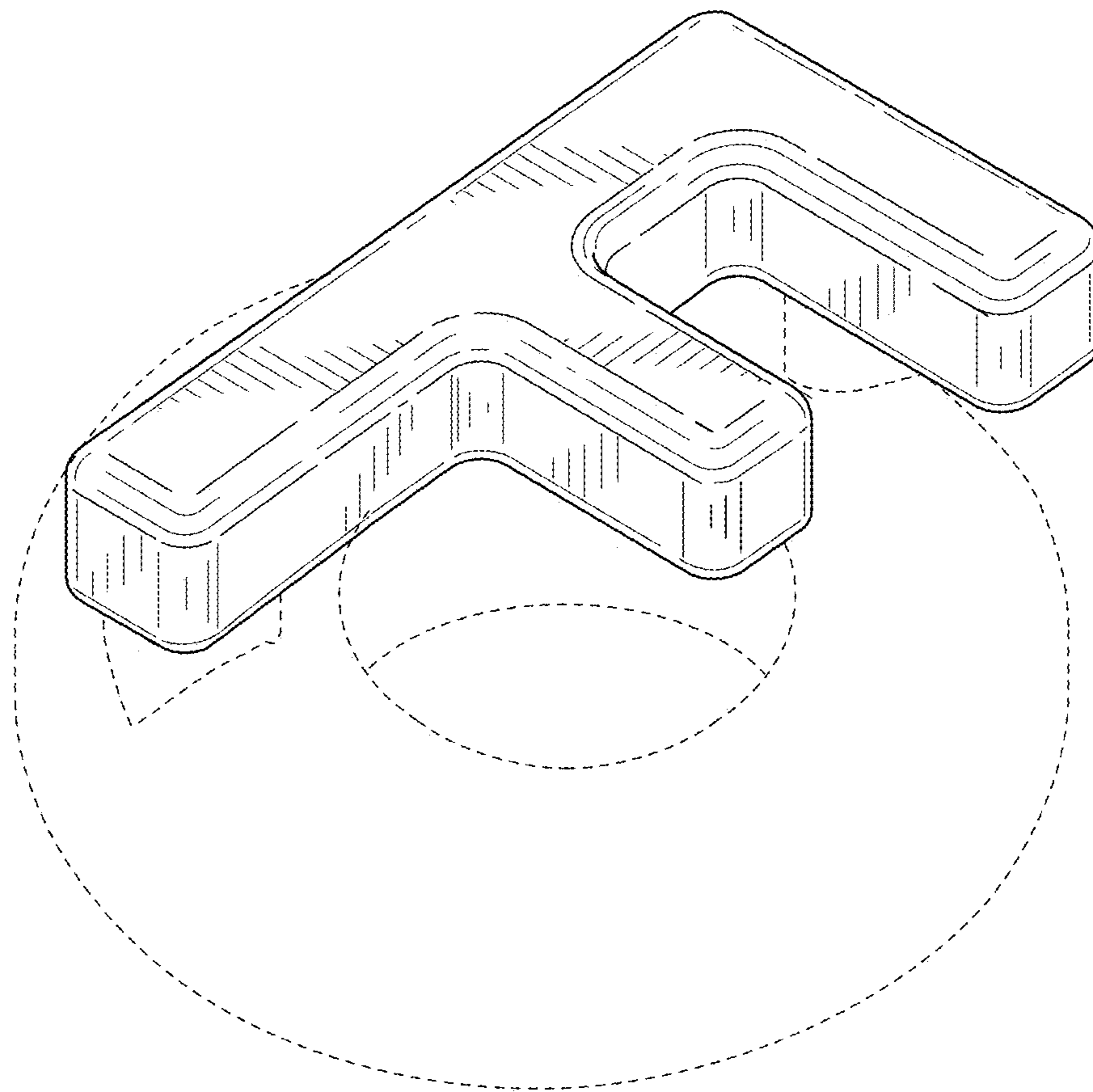


FIG. 41

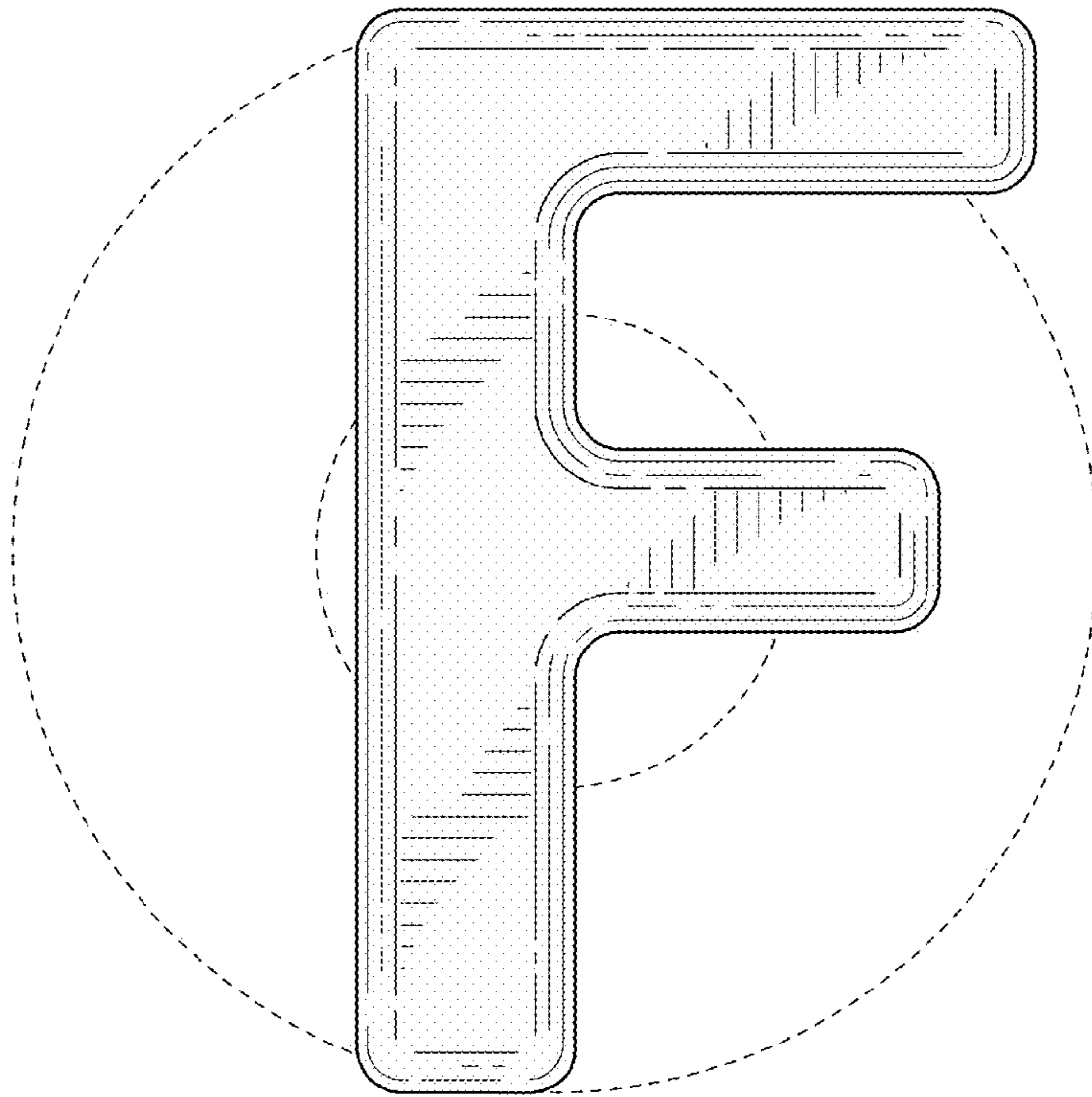


FIG. 42

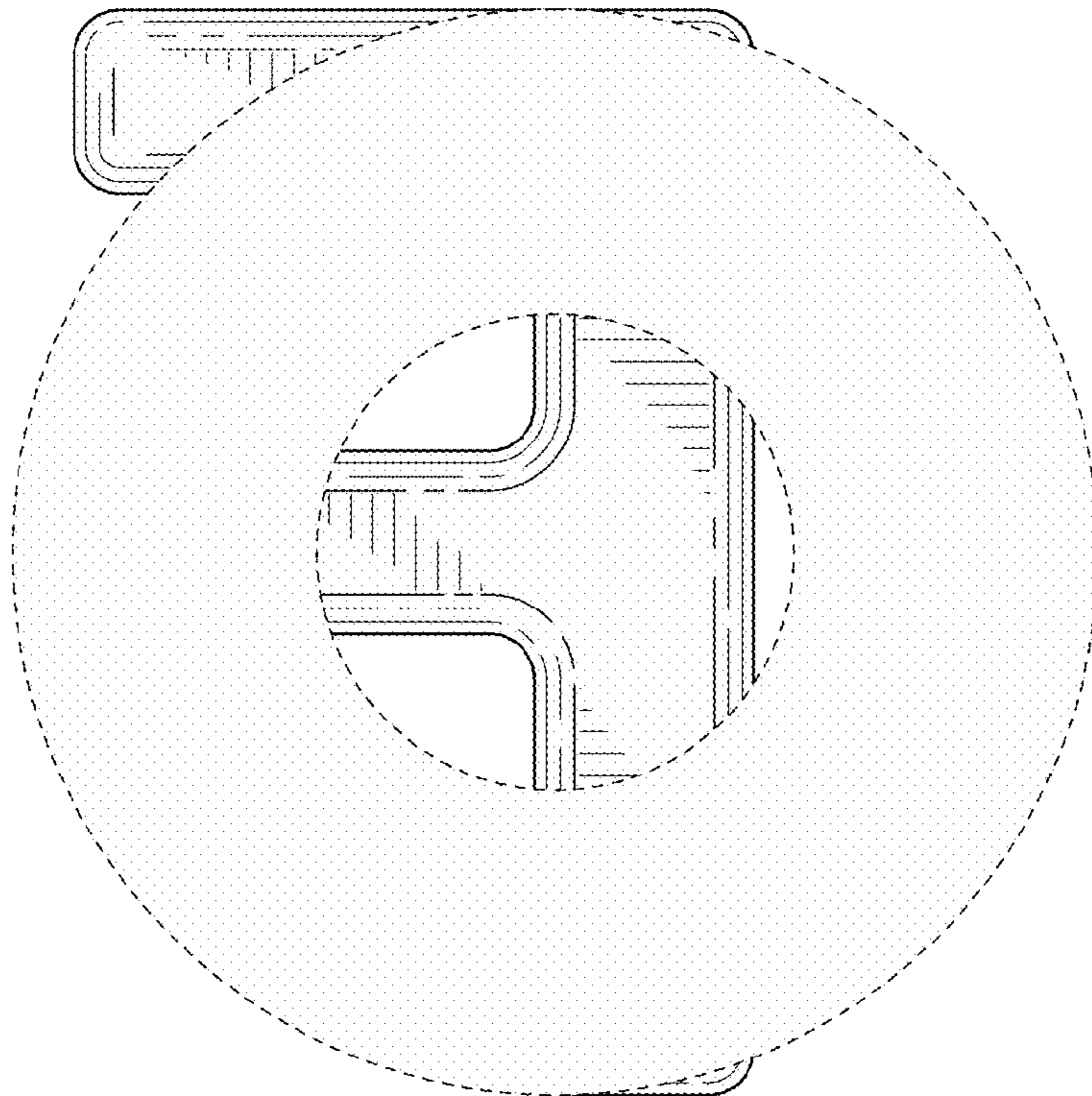


FIG. 43

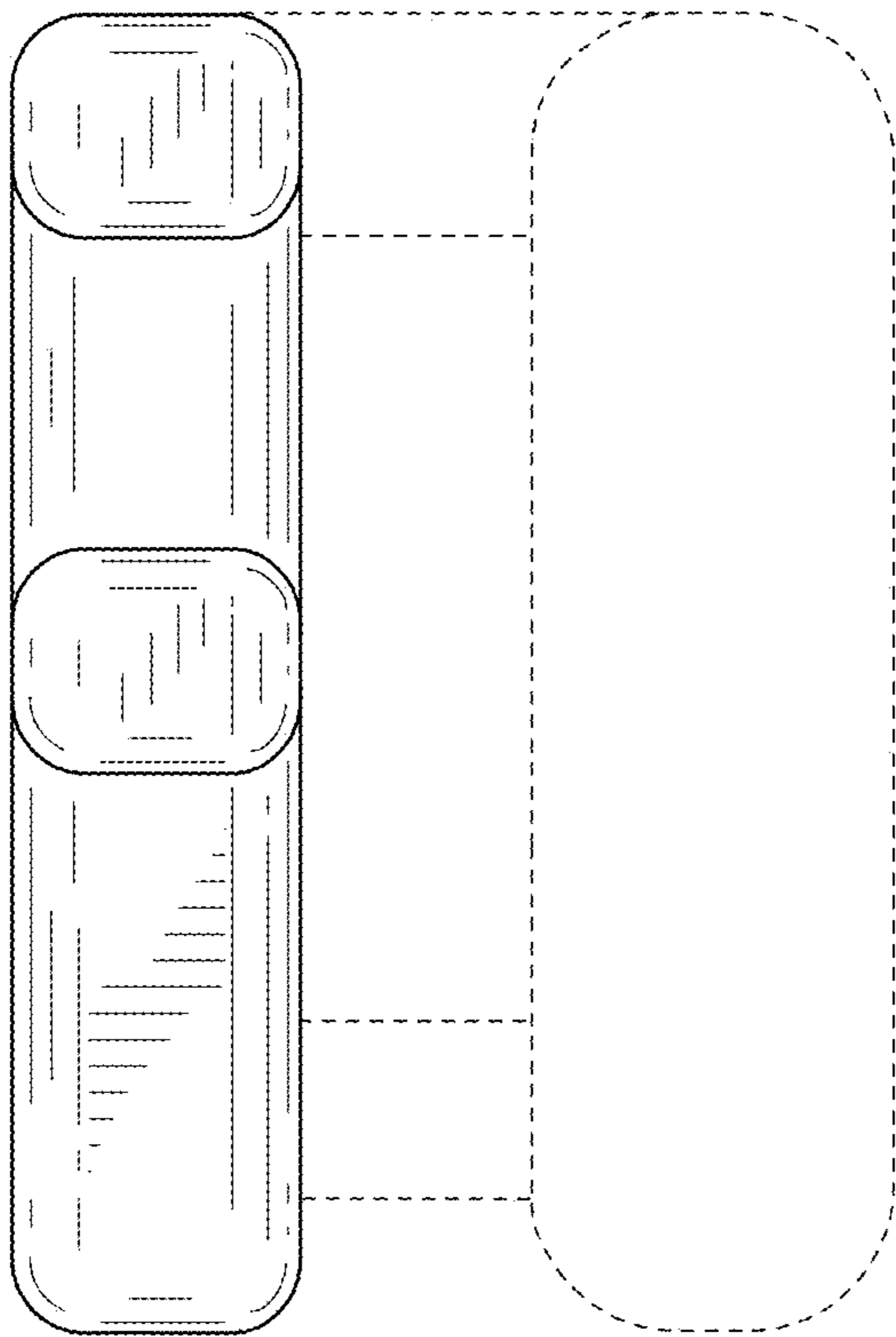


FIG. 44

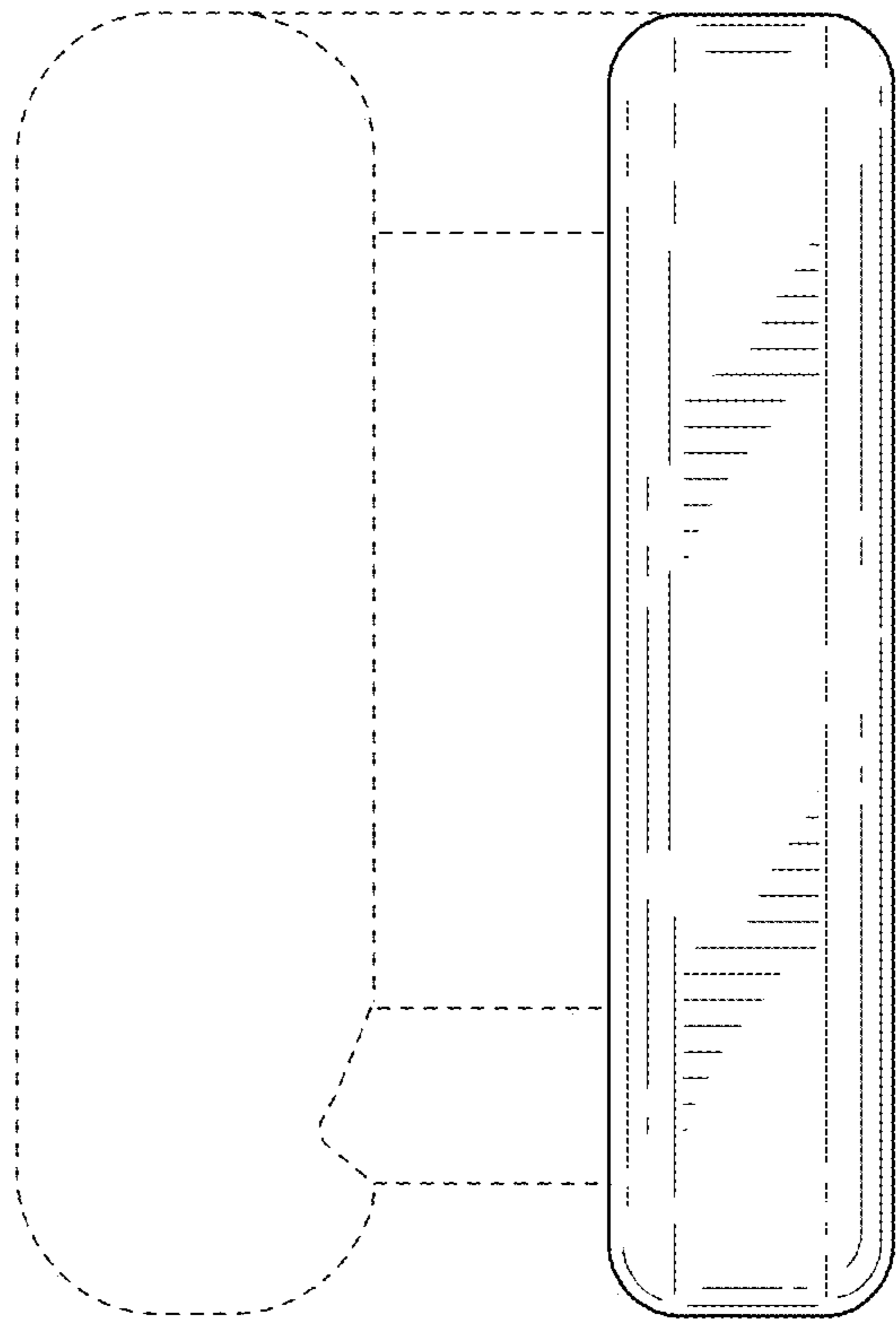


FIG. 45

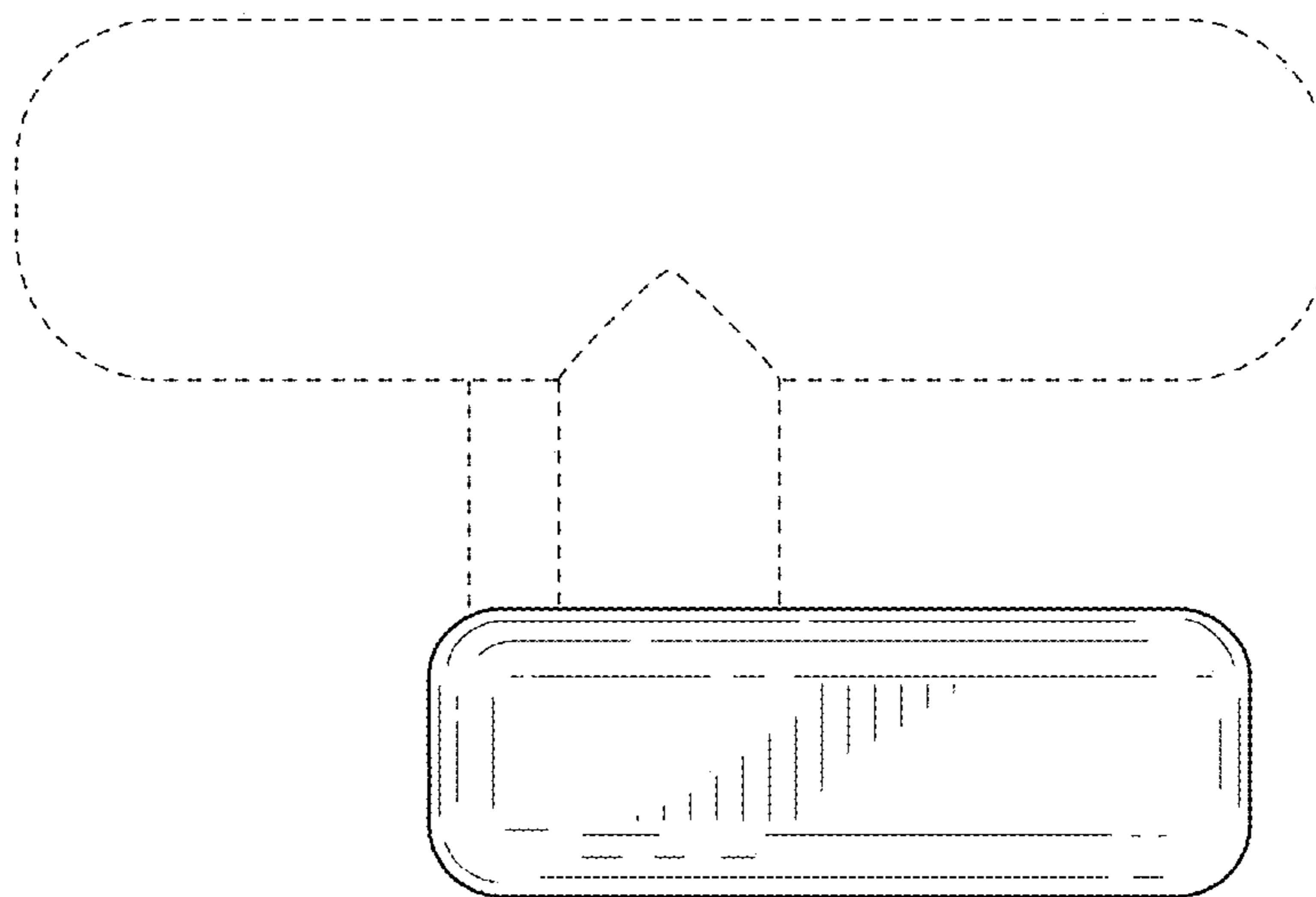


FIG. 46

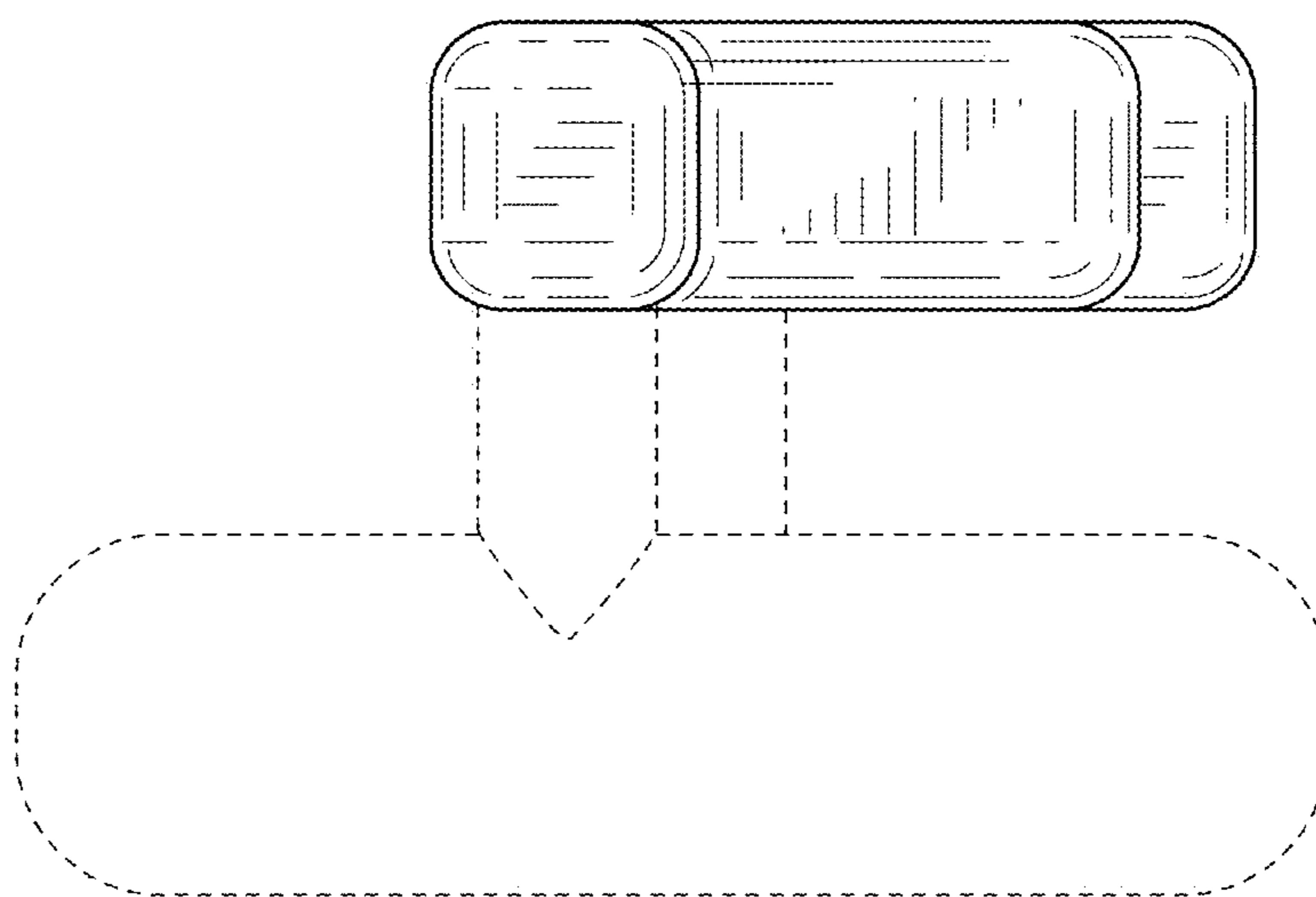


FIG. 47

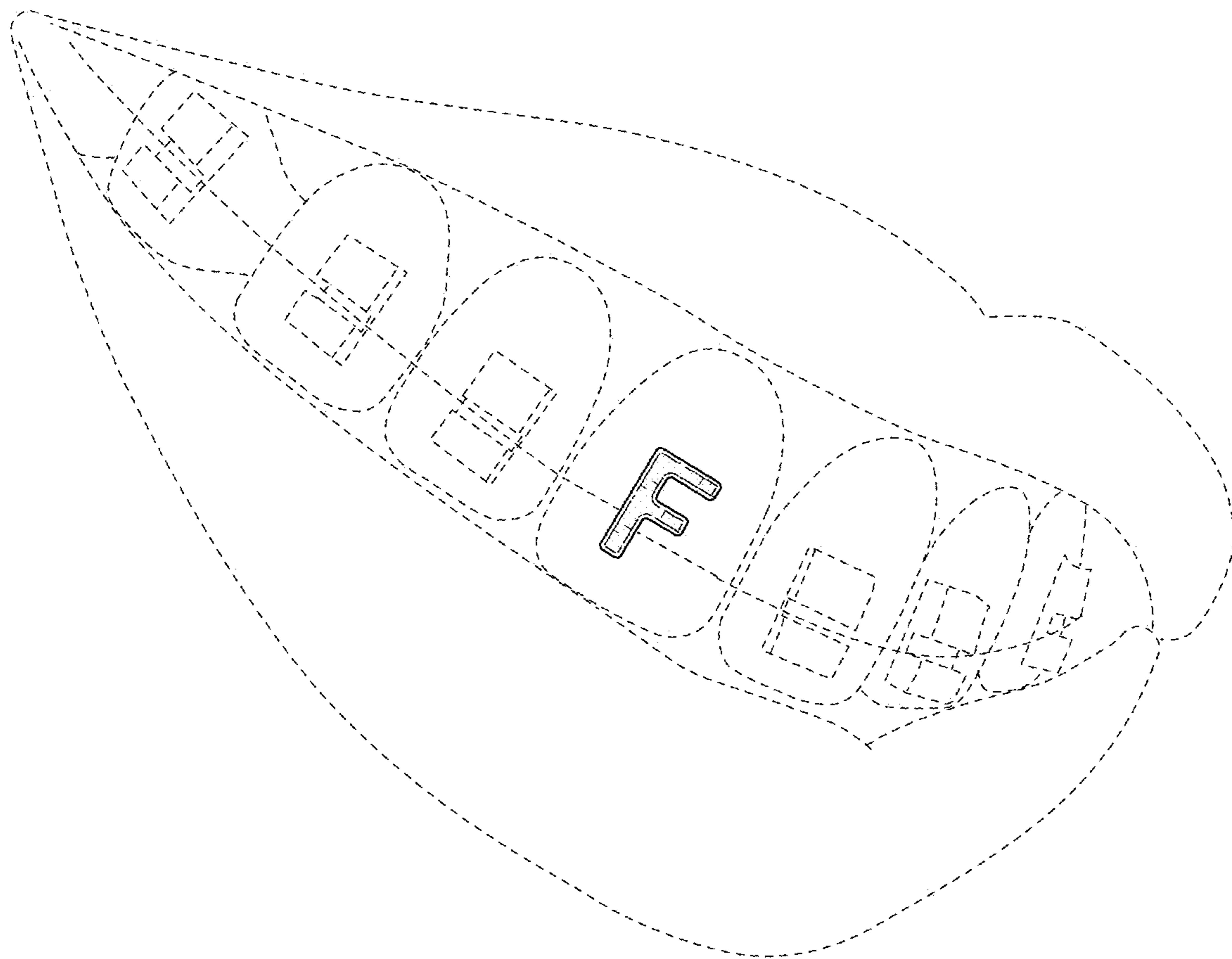


FIG. 48

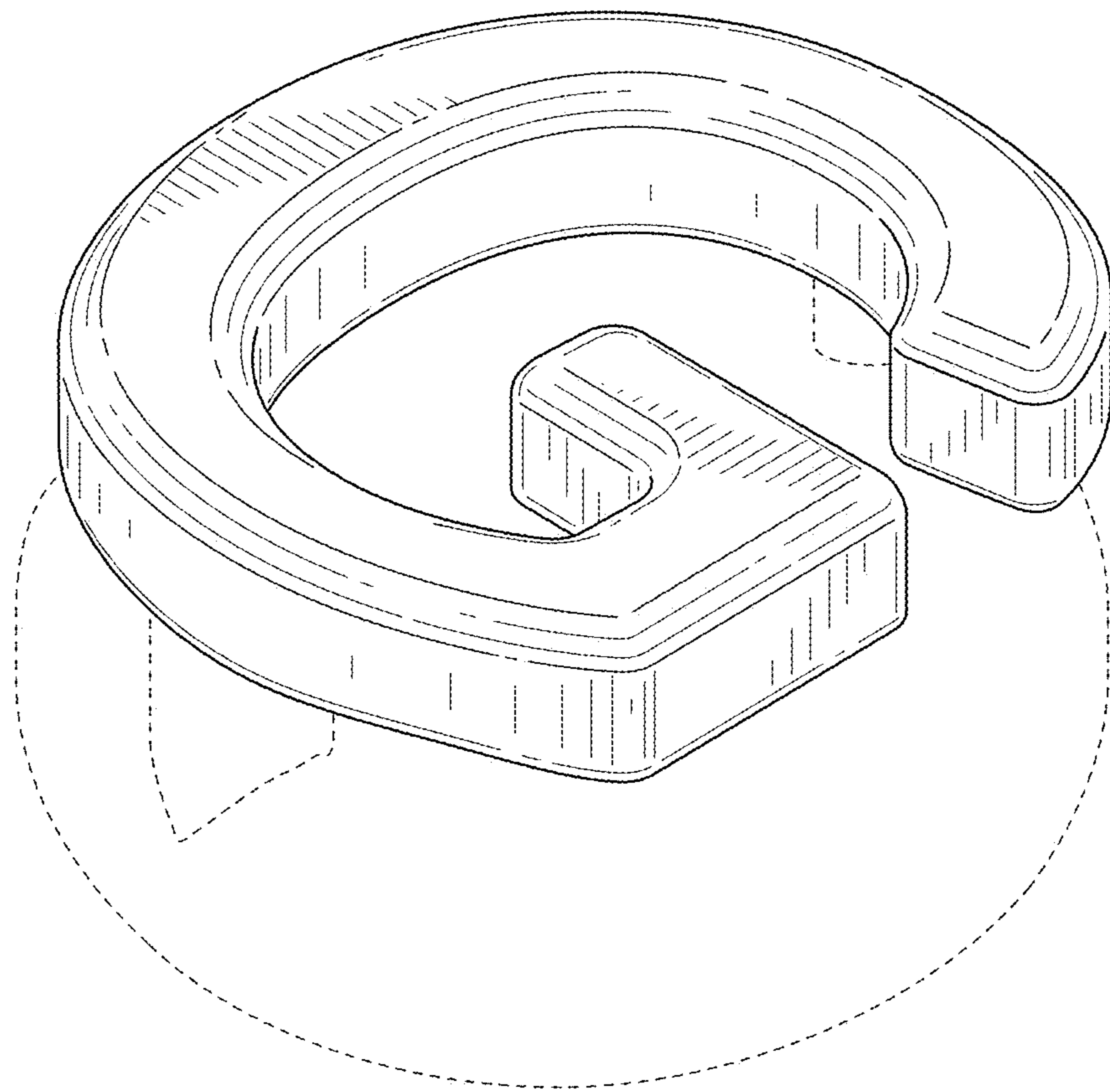


FIG. 49

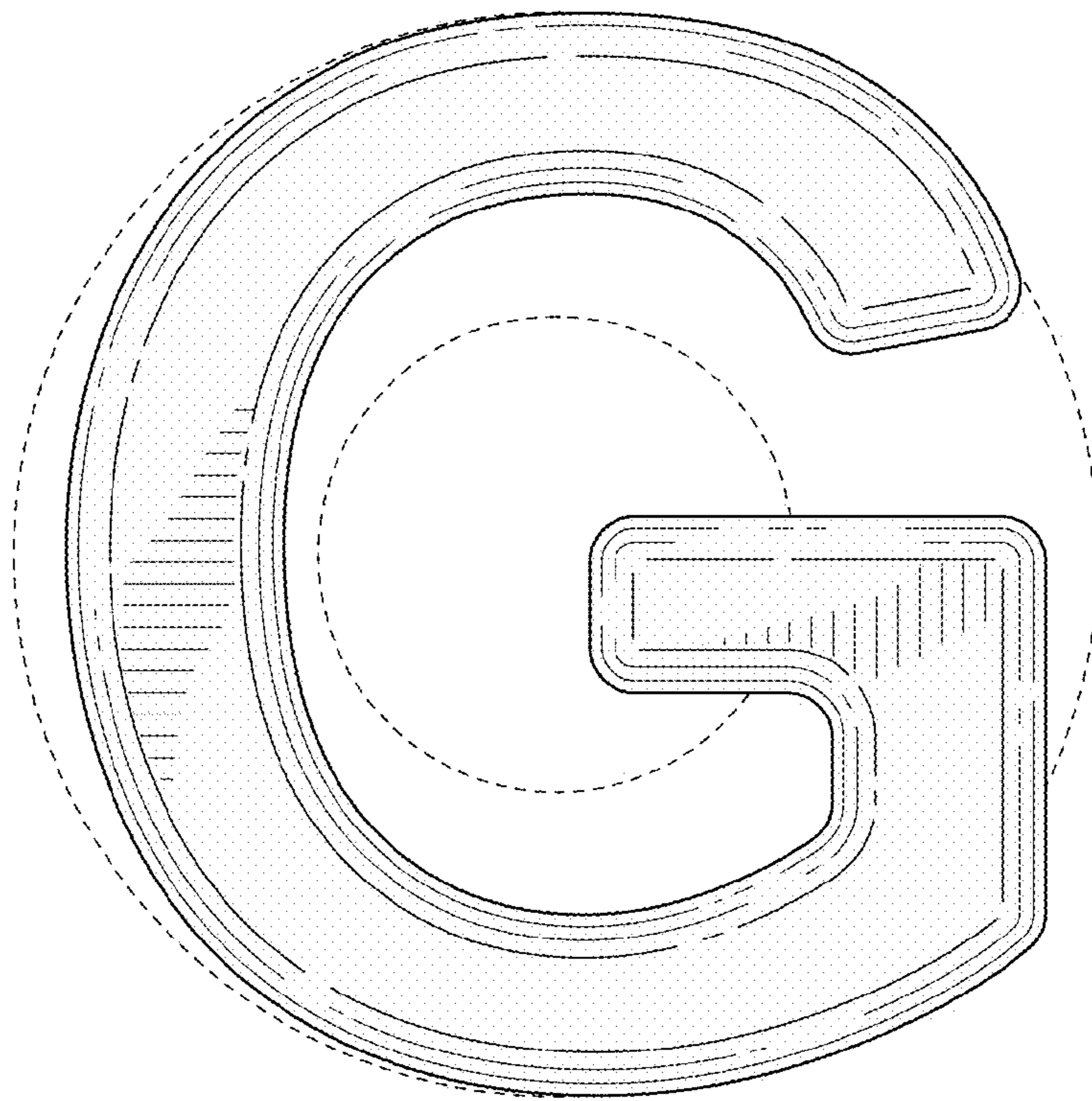


FIG. 50

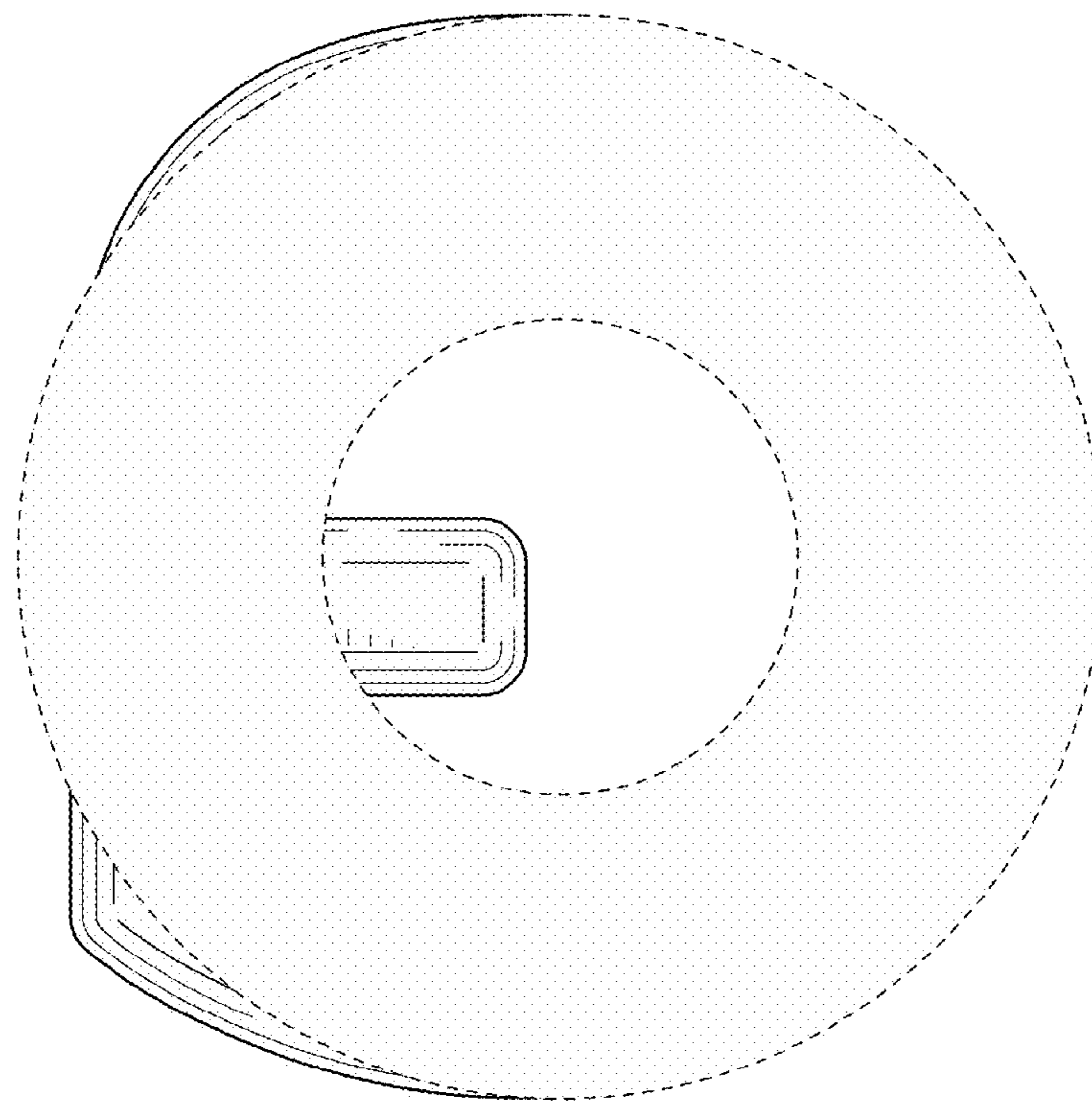


FIG. 51

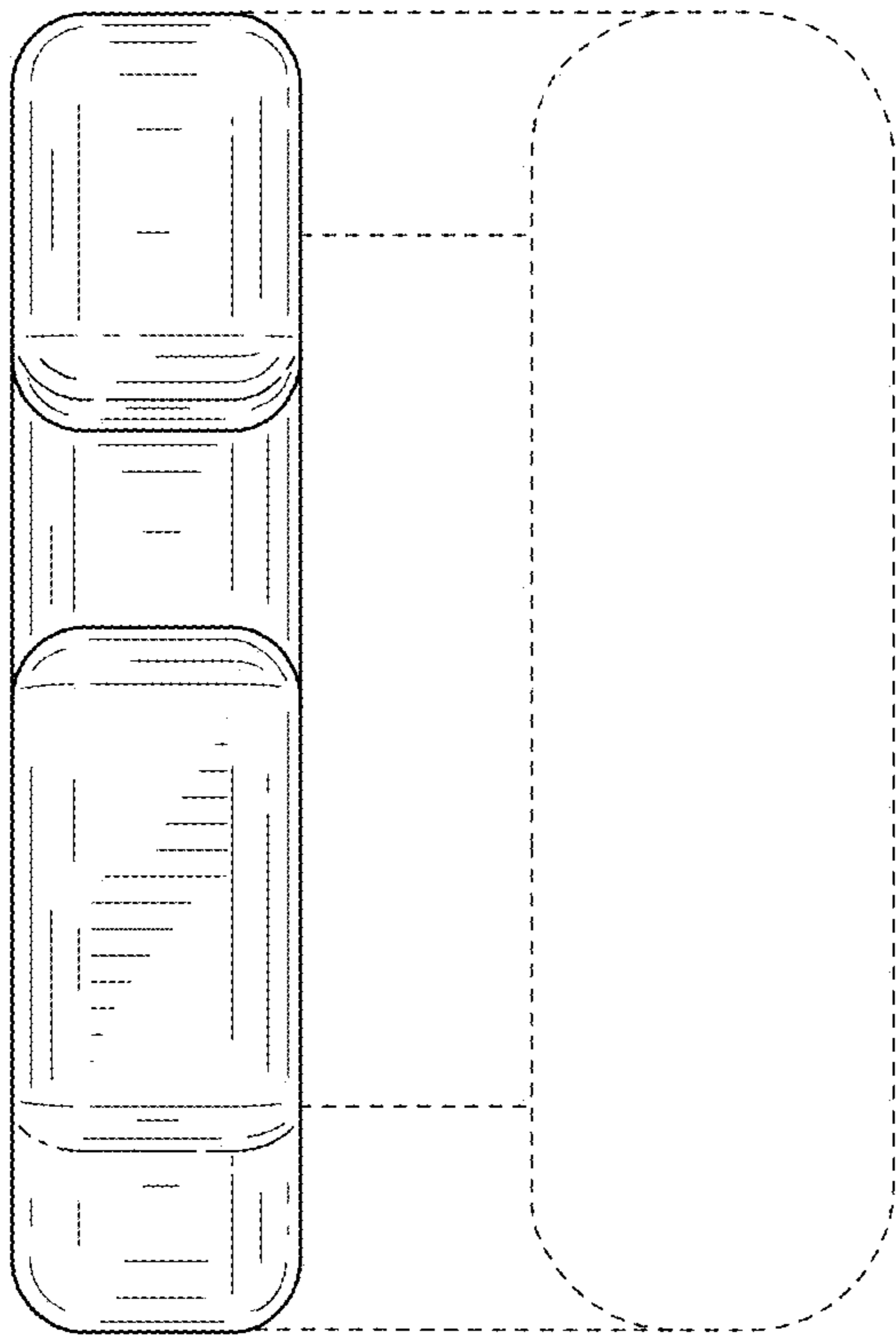


FIG. 52

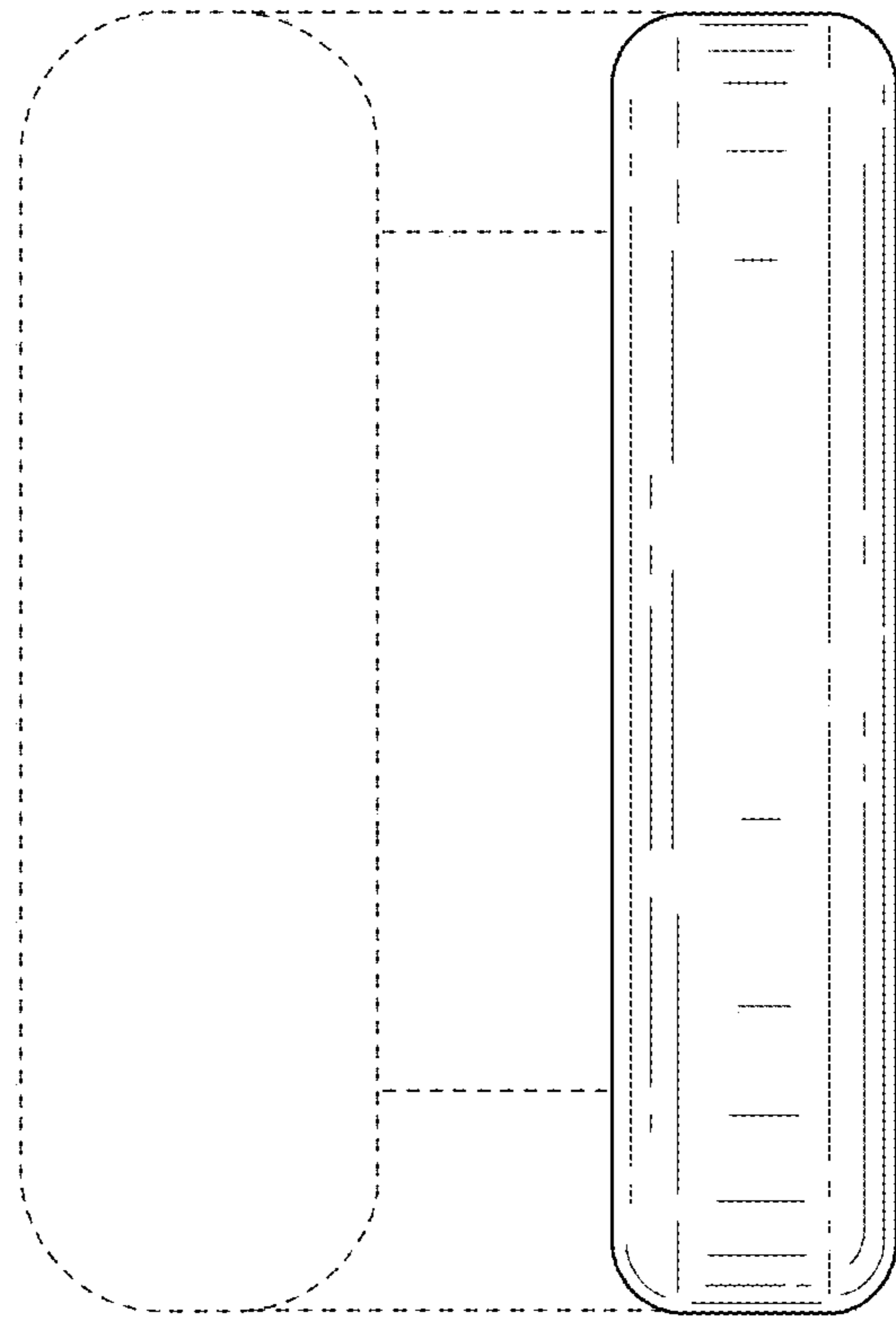


FIG. 53

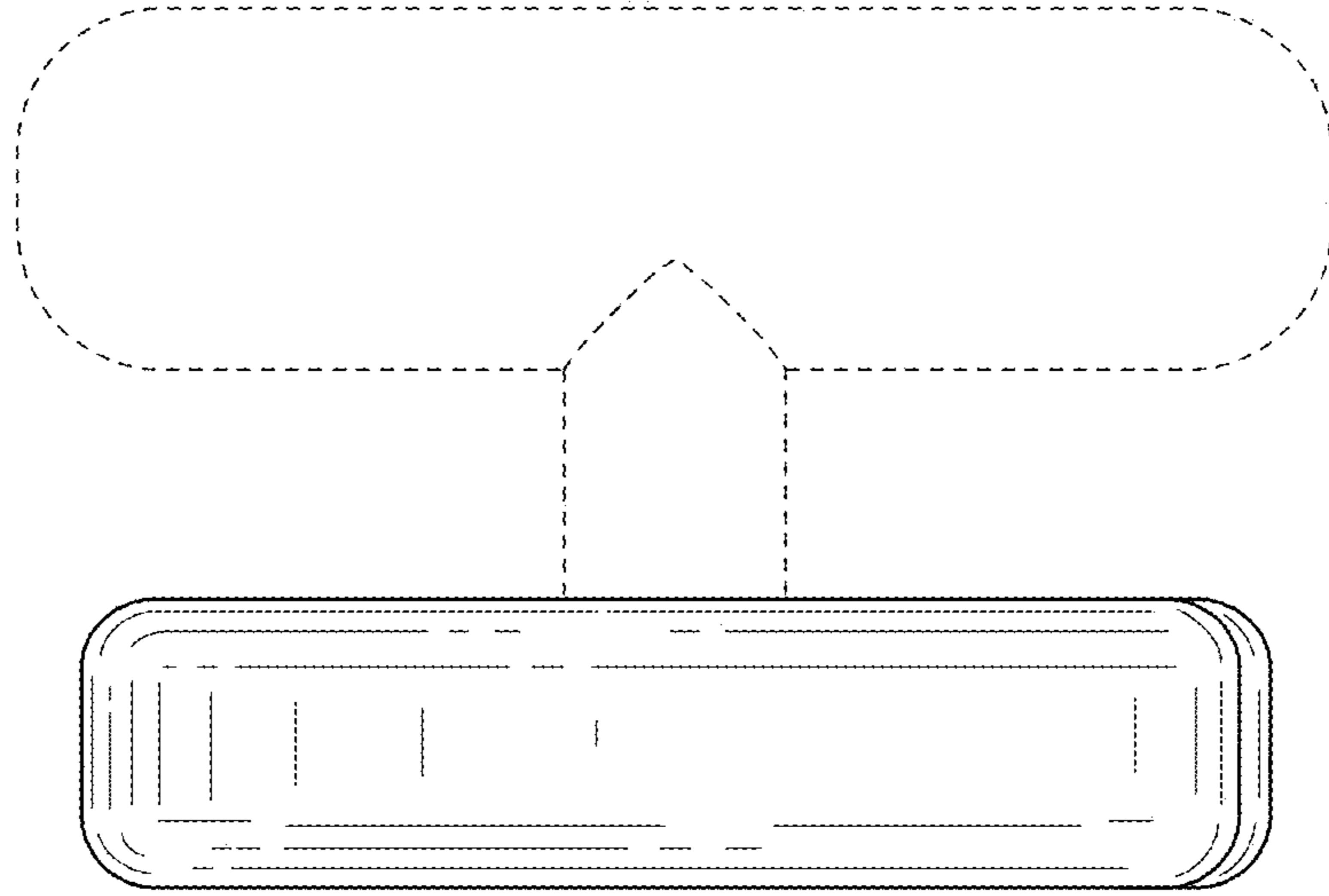


FIG. 54

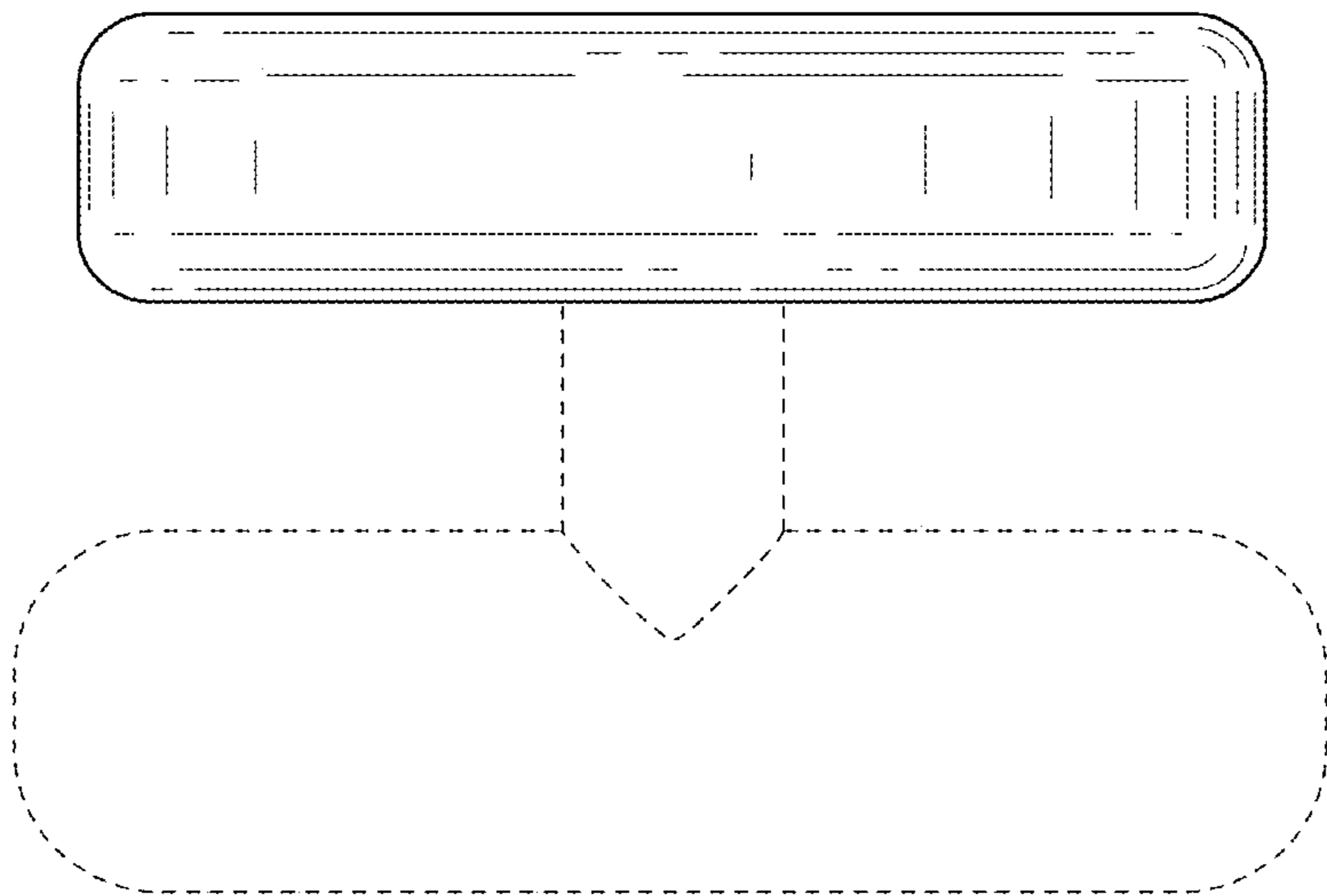


FIG. 55

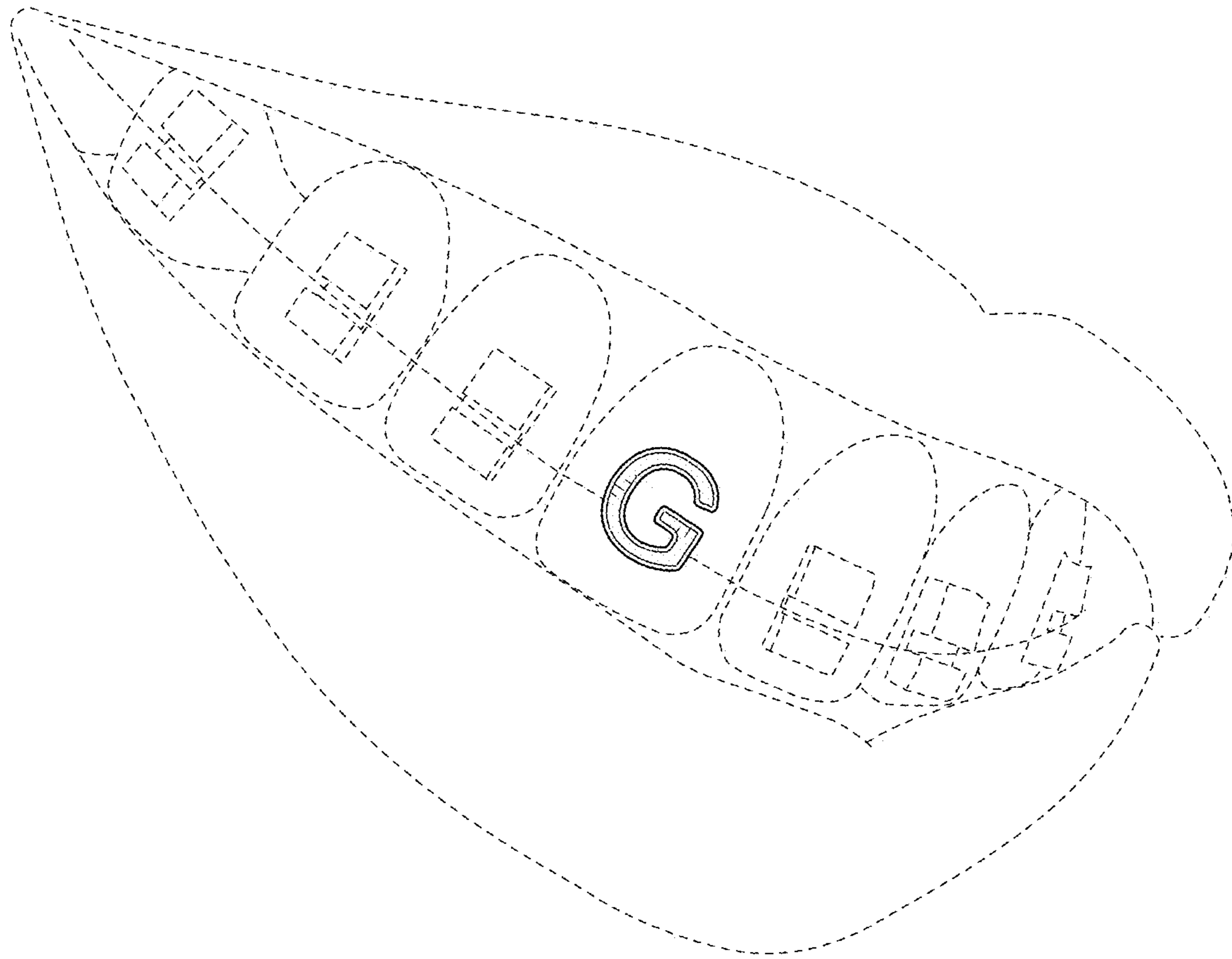


FIG. 56

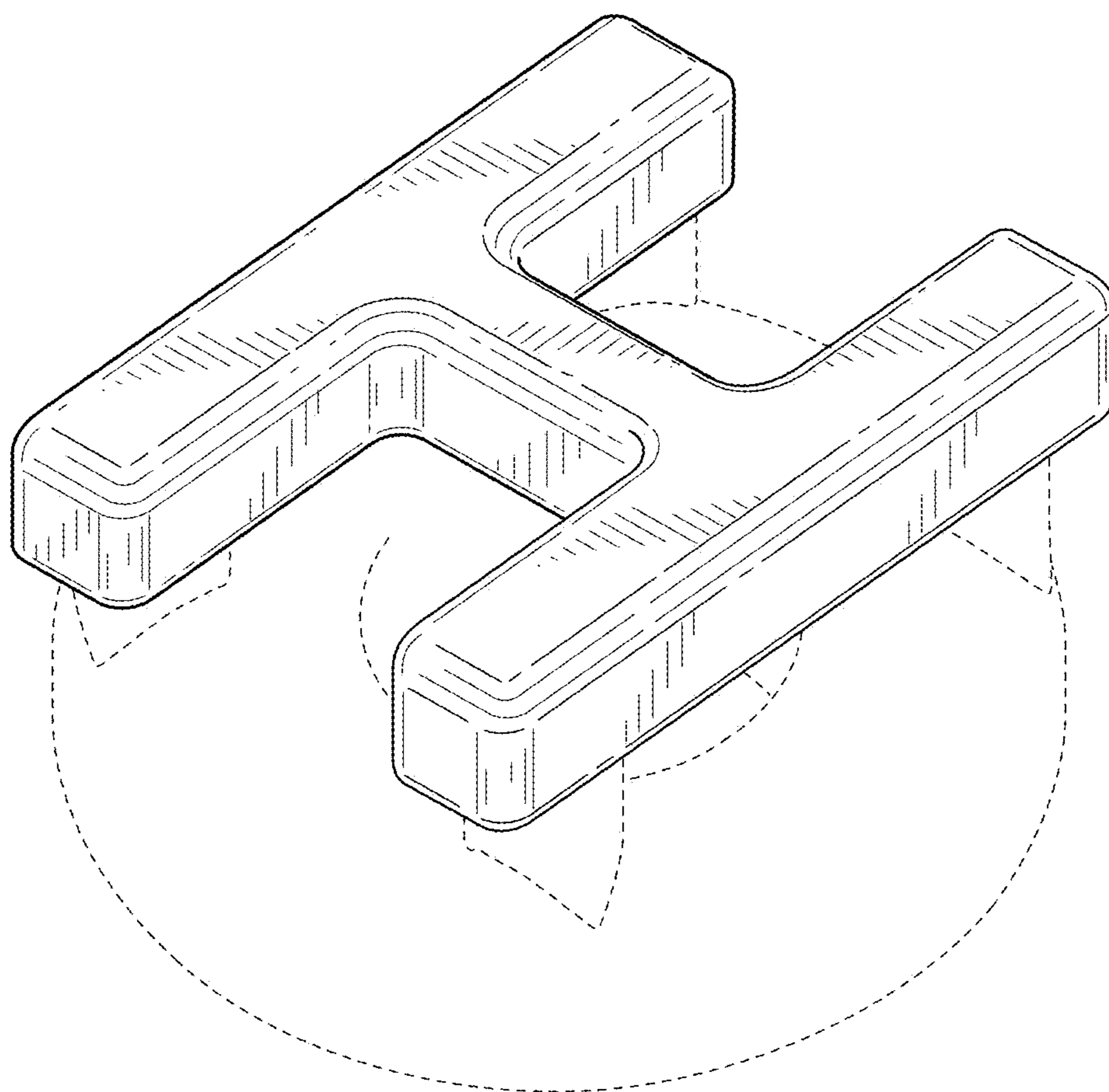


FIG. 57

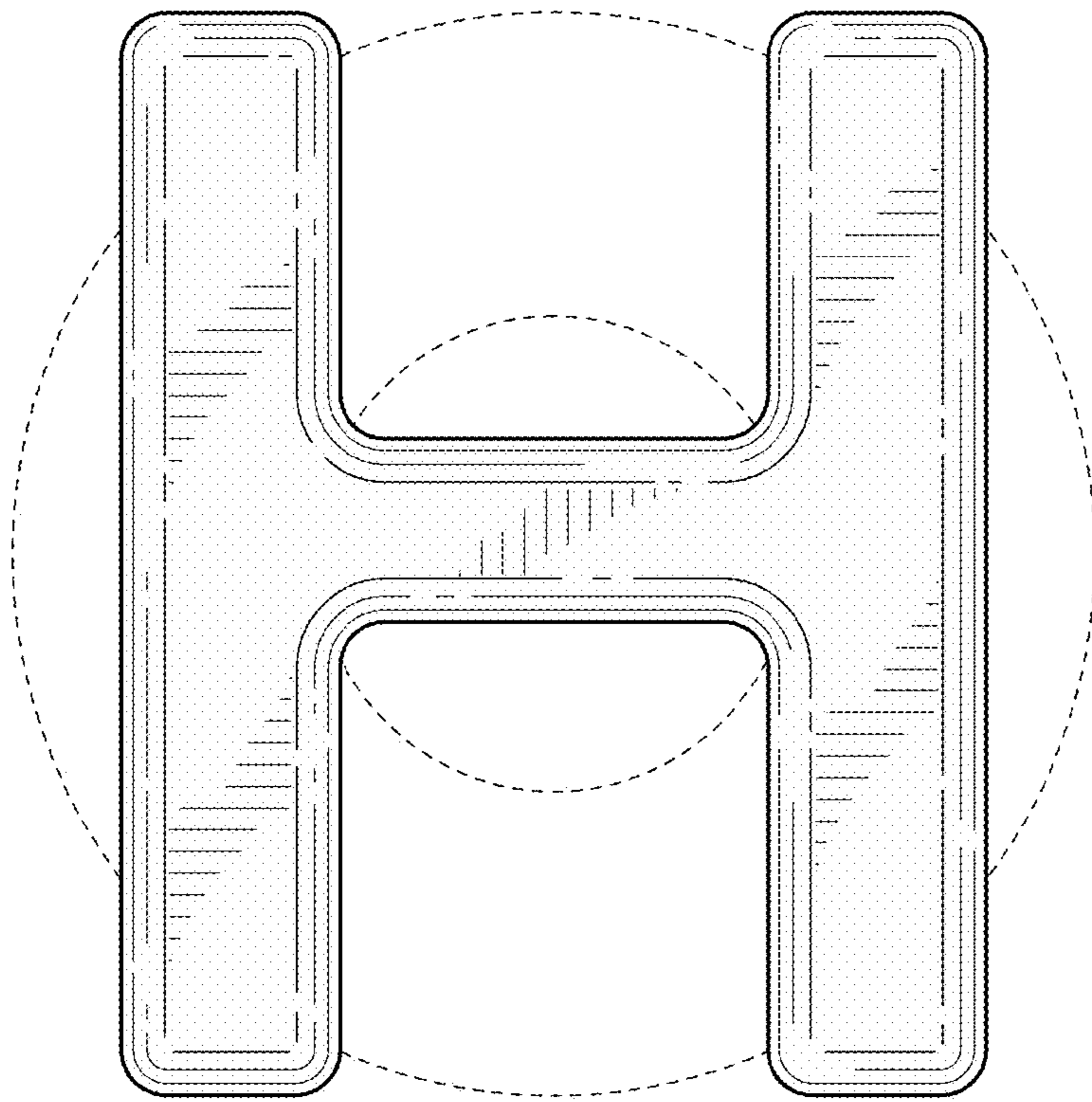


FIG. 58

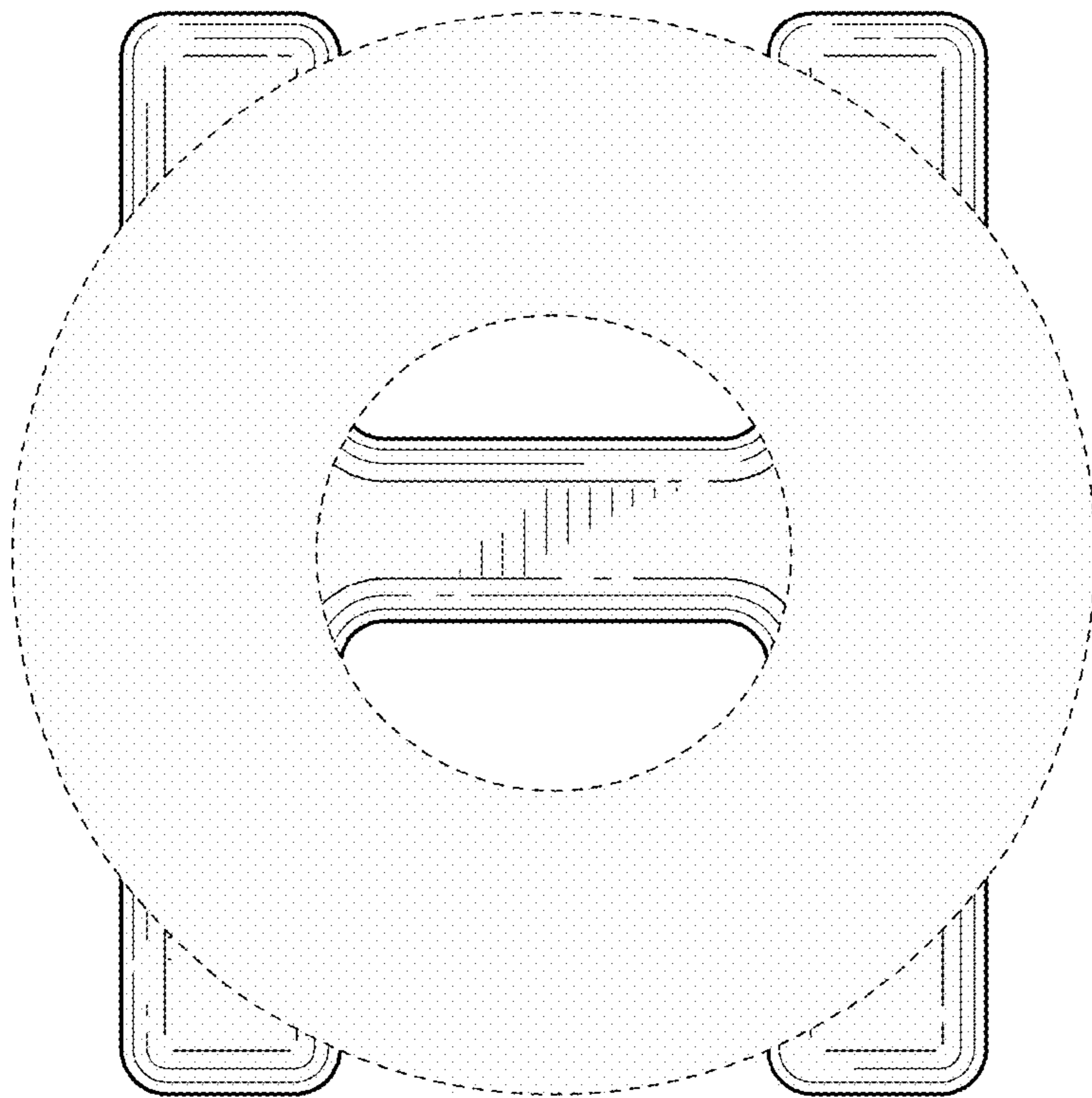


FIG. 59

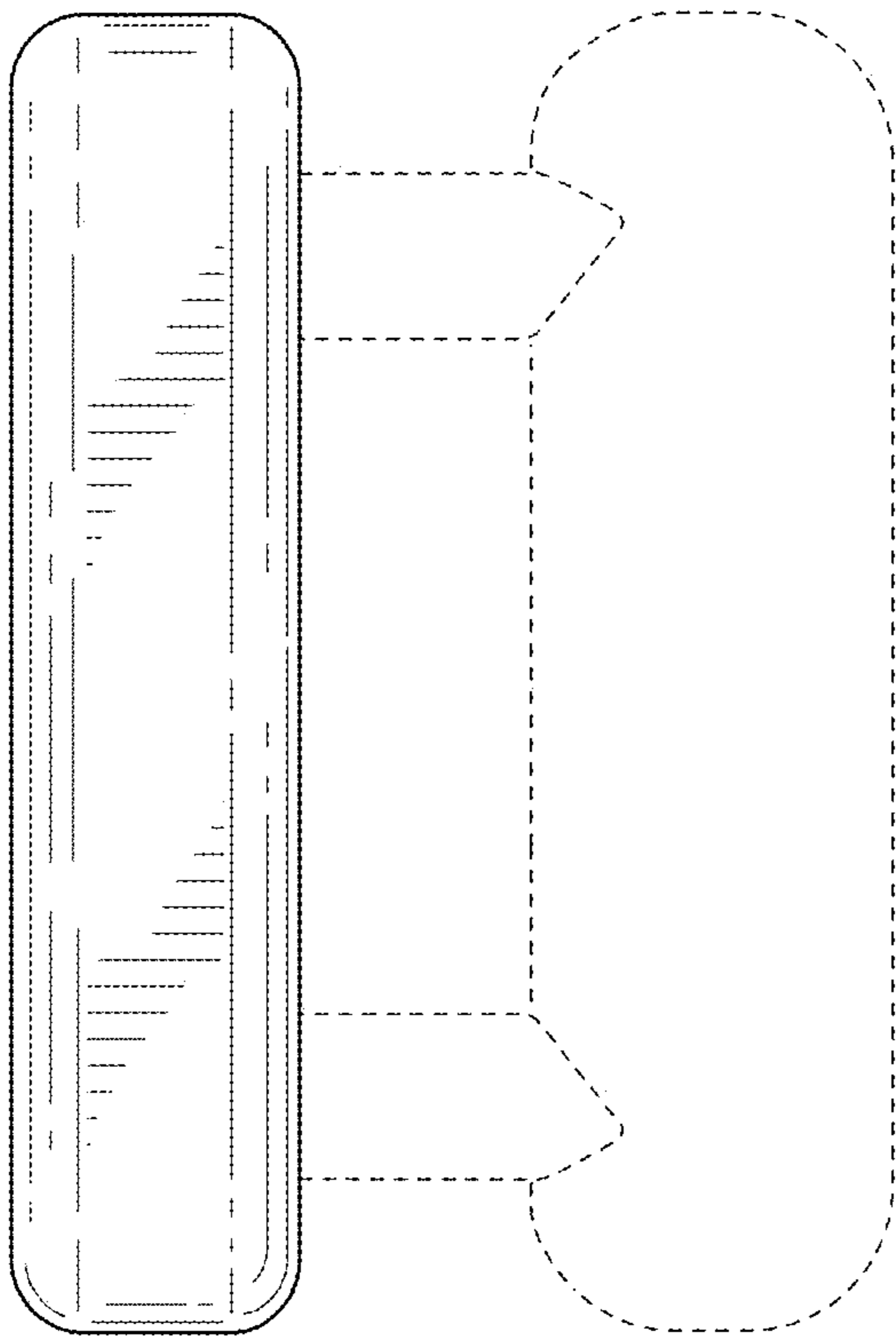


FIG. 60

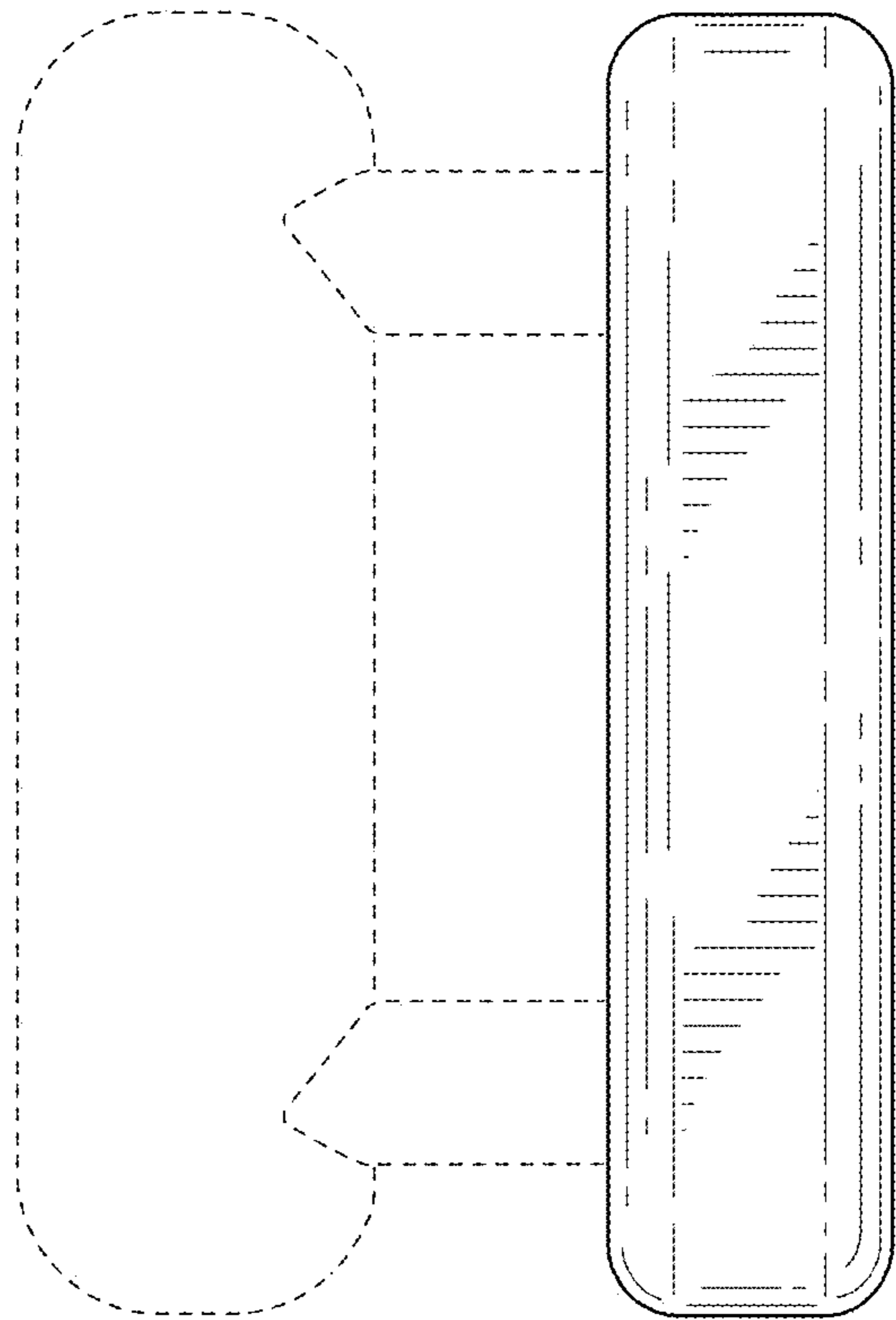


FIG. 61

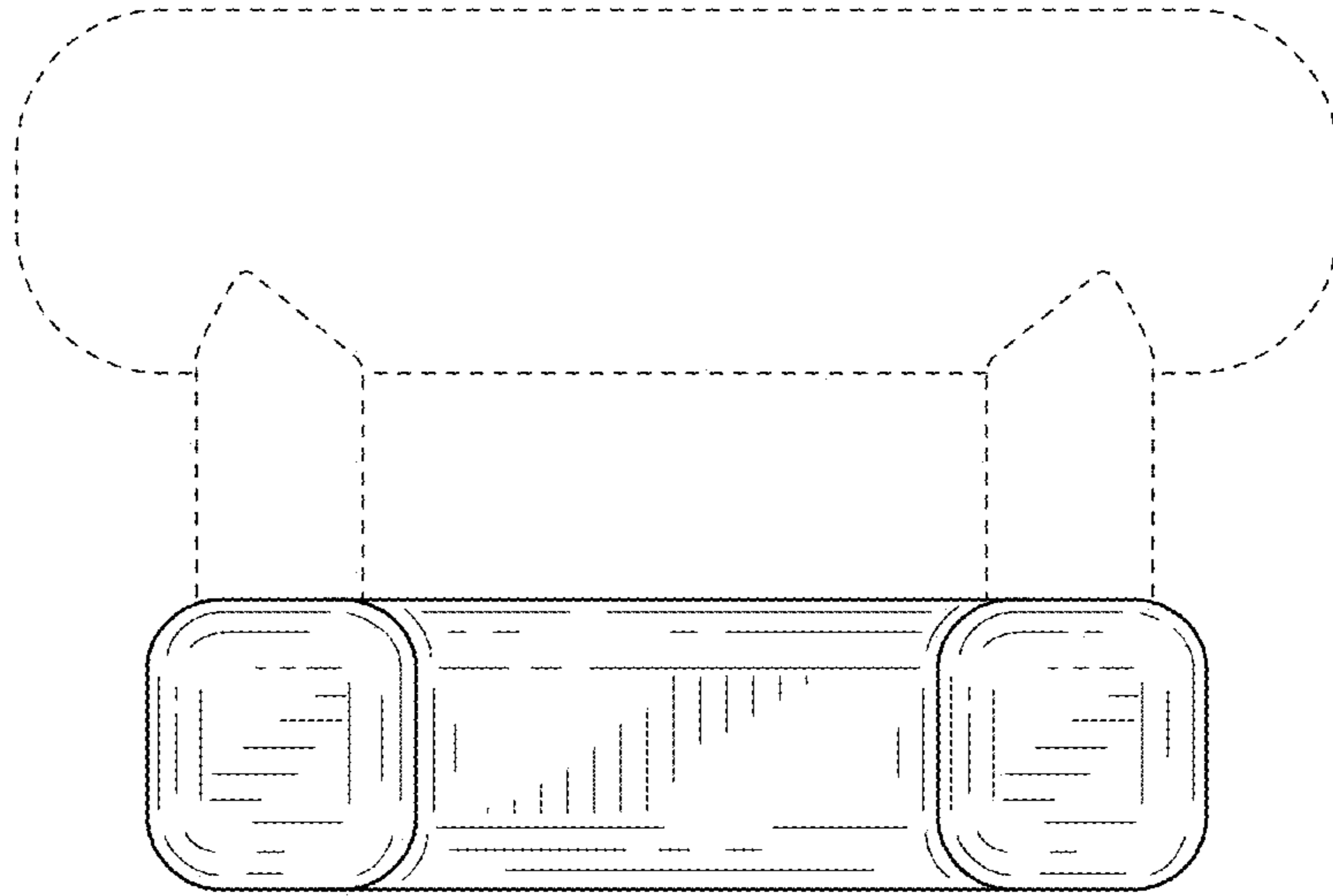


FIG. 62

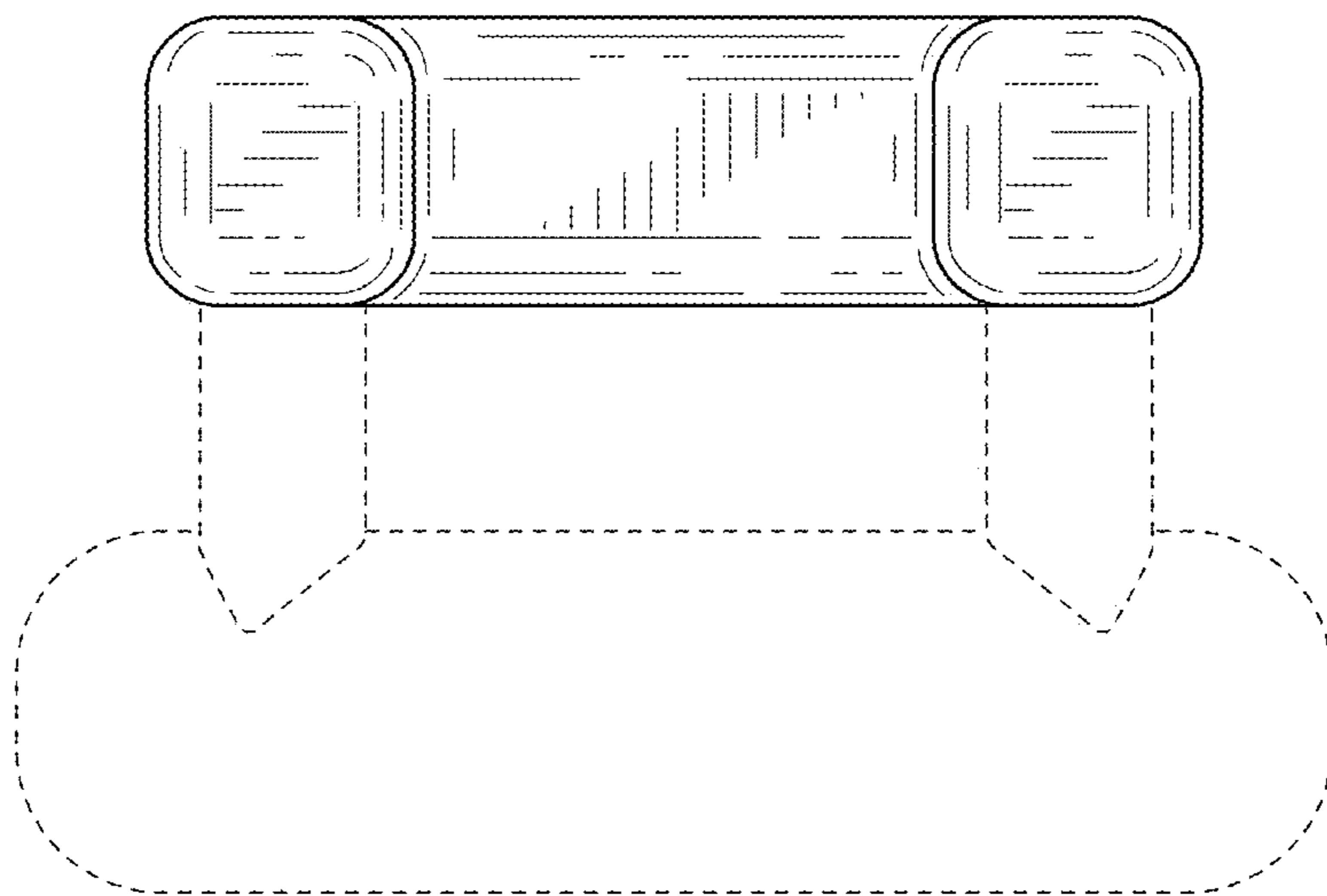


FIG. 63

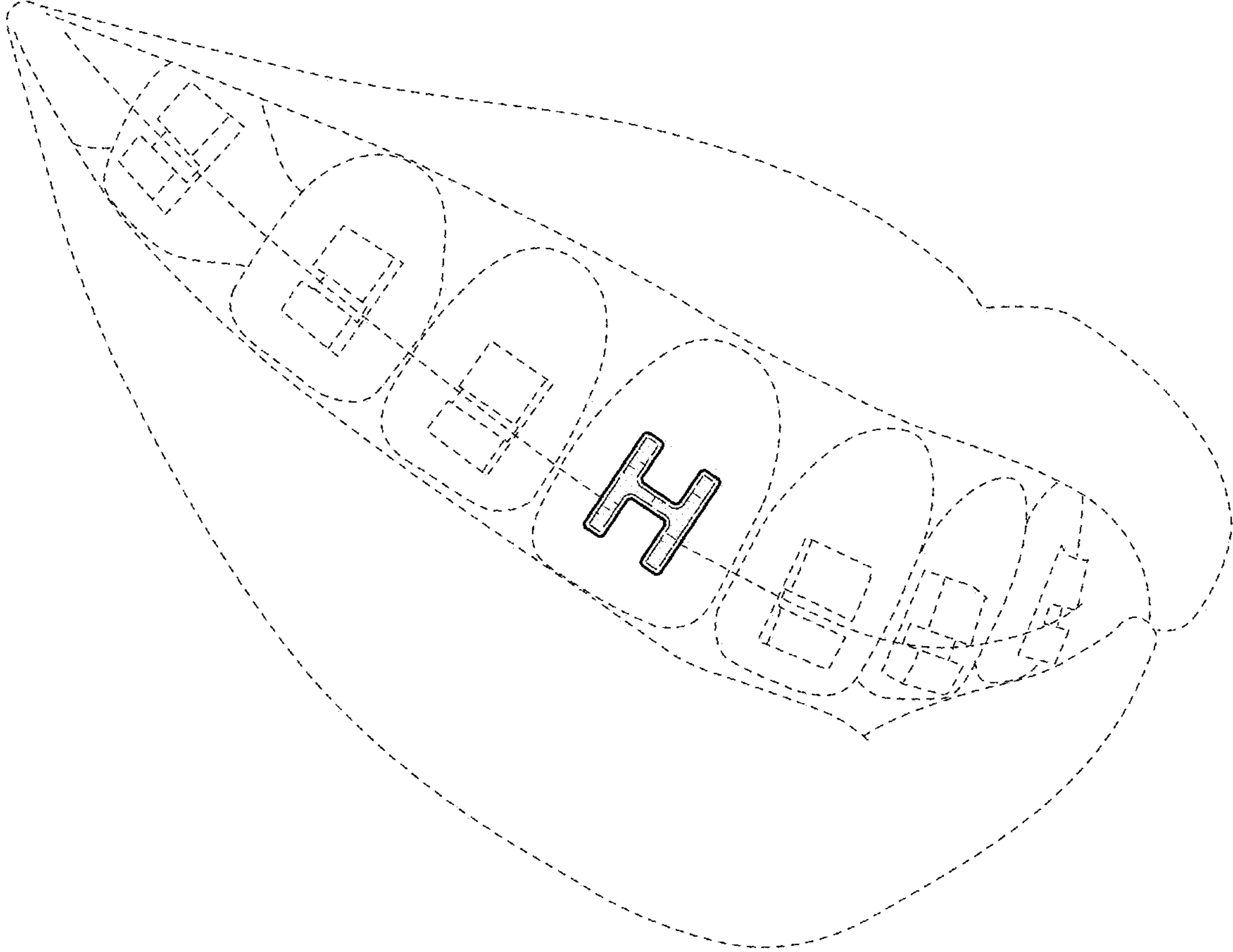


FIG. 64

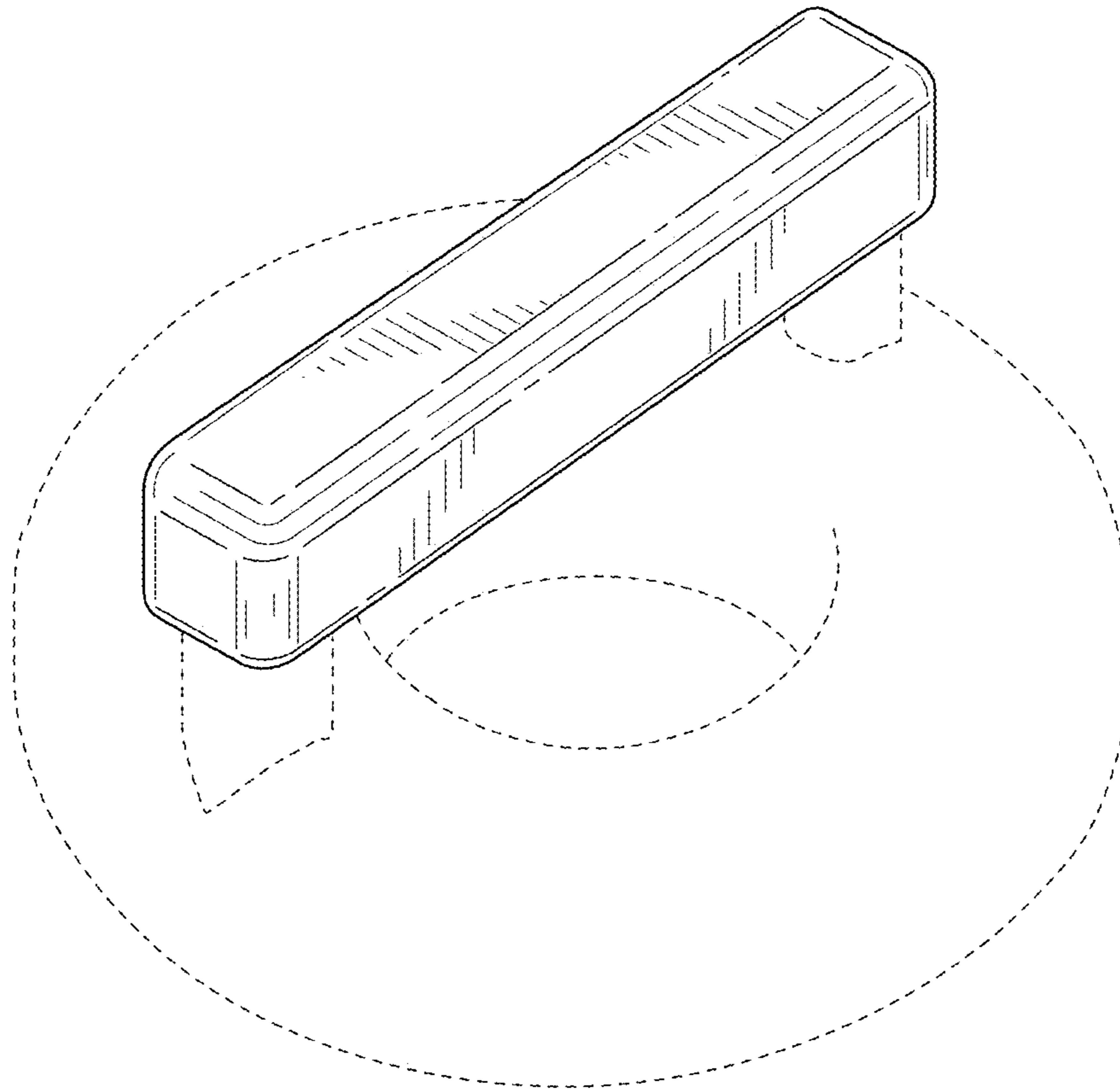


FIG. 65

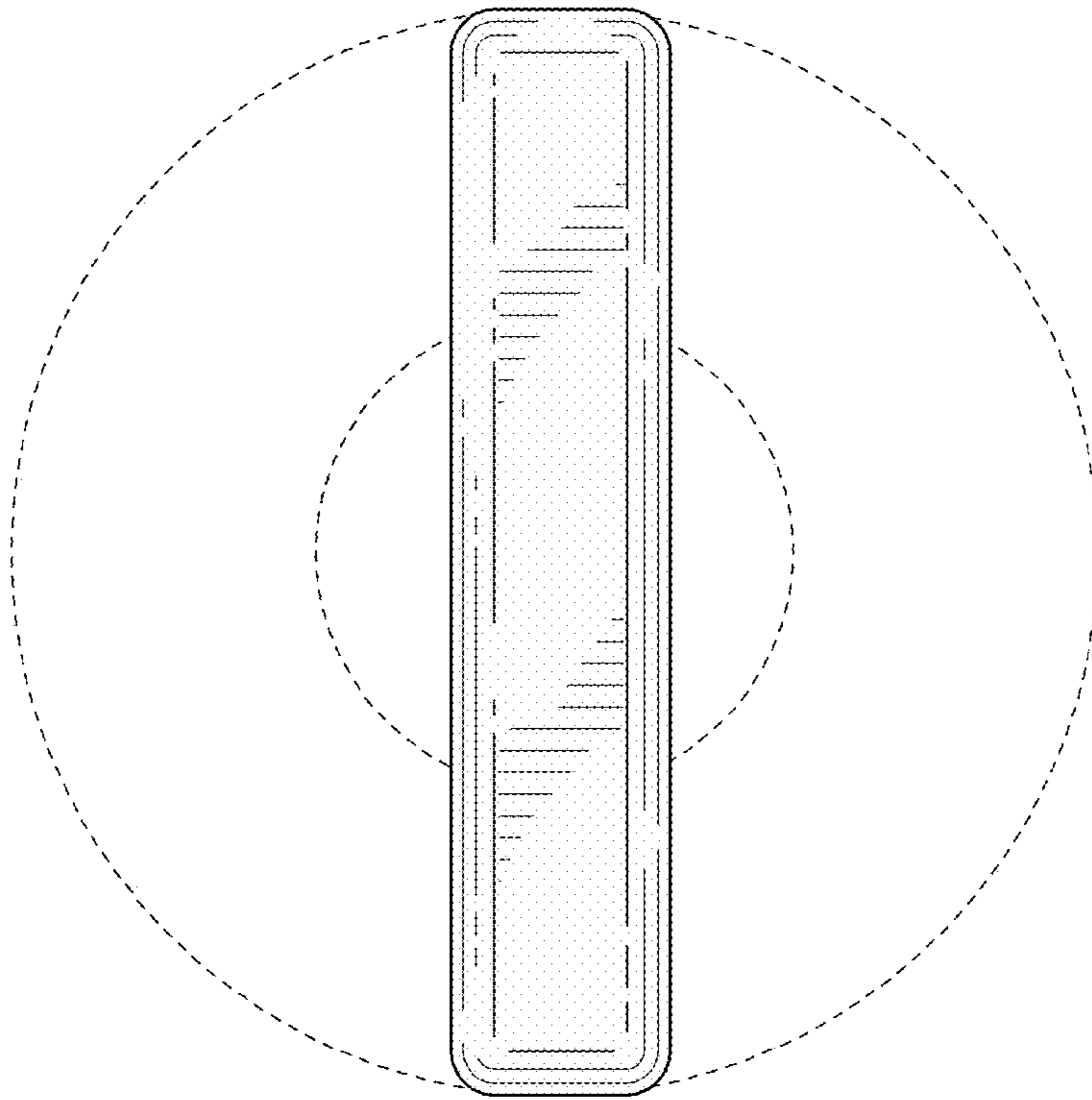


FIG. 66

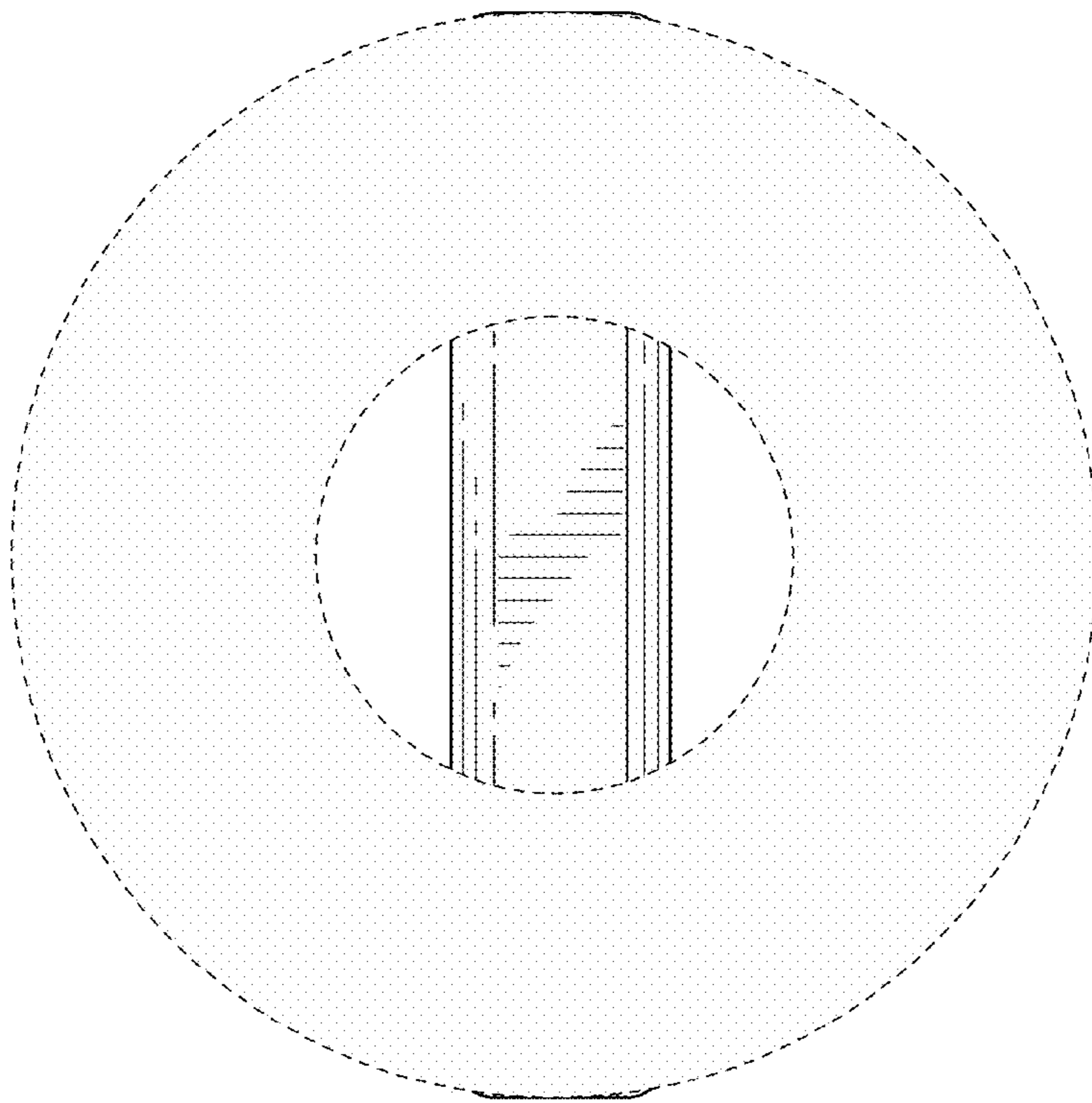


FIG. 67

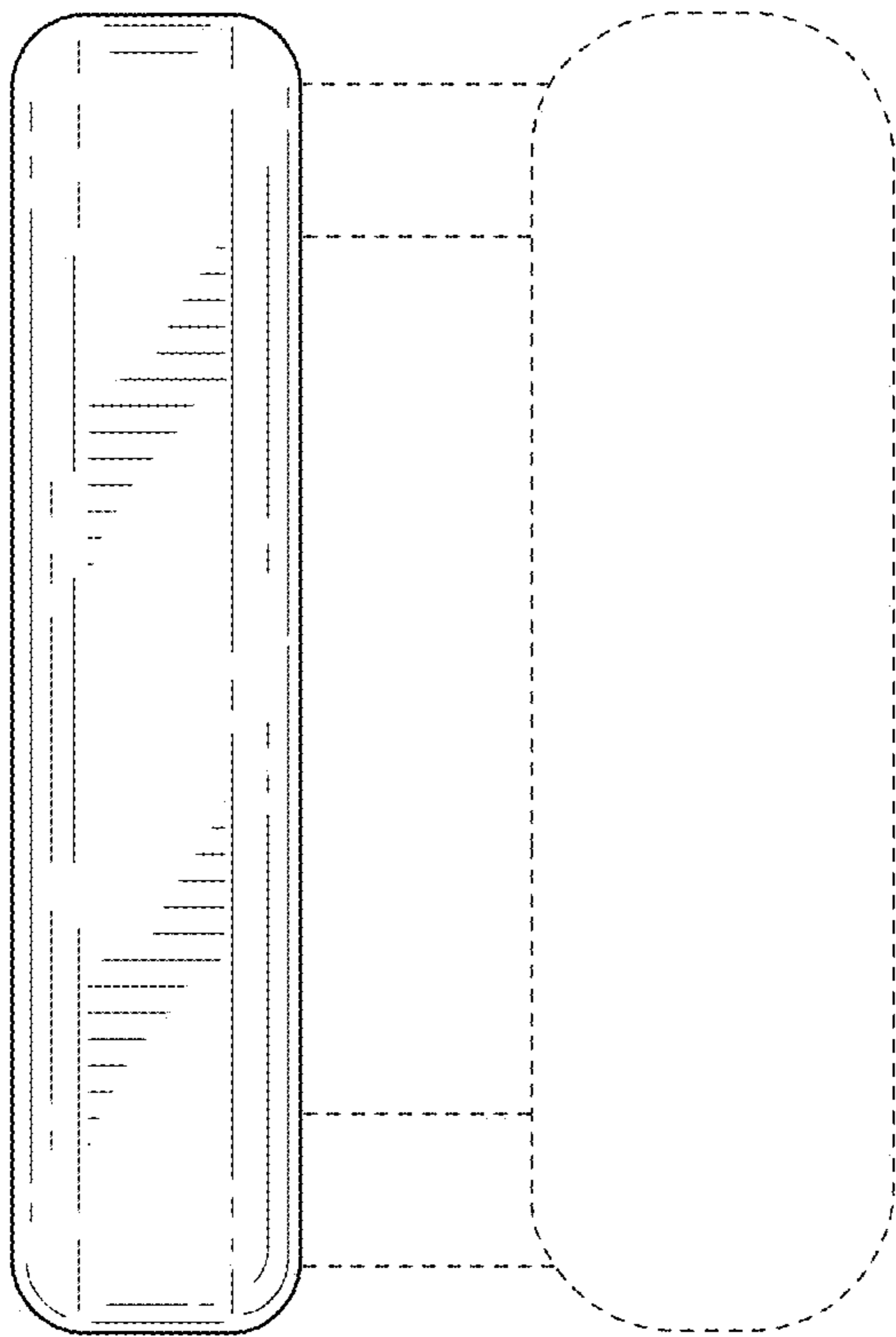


FIG. 68

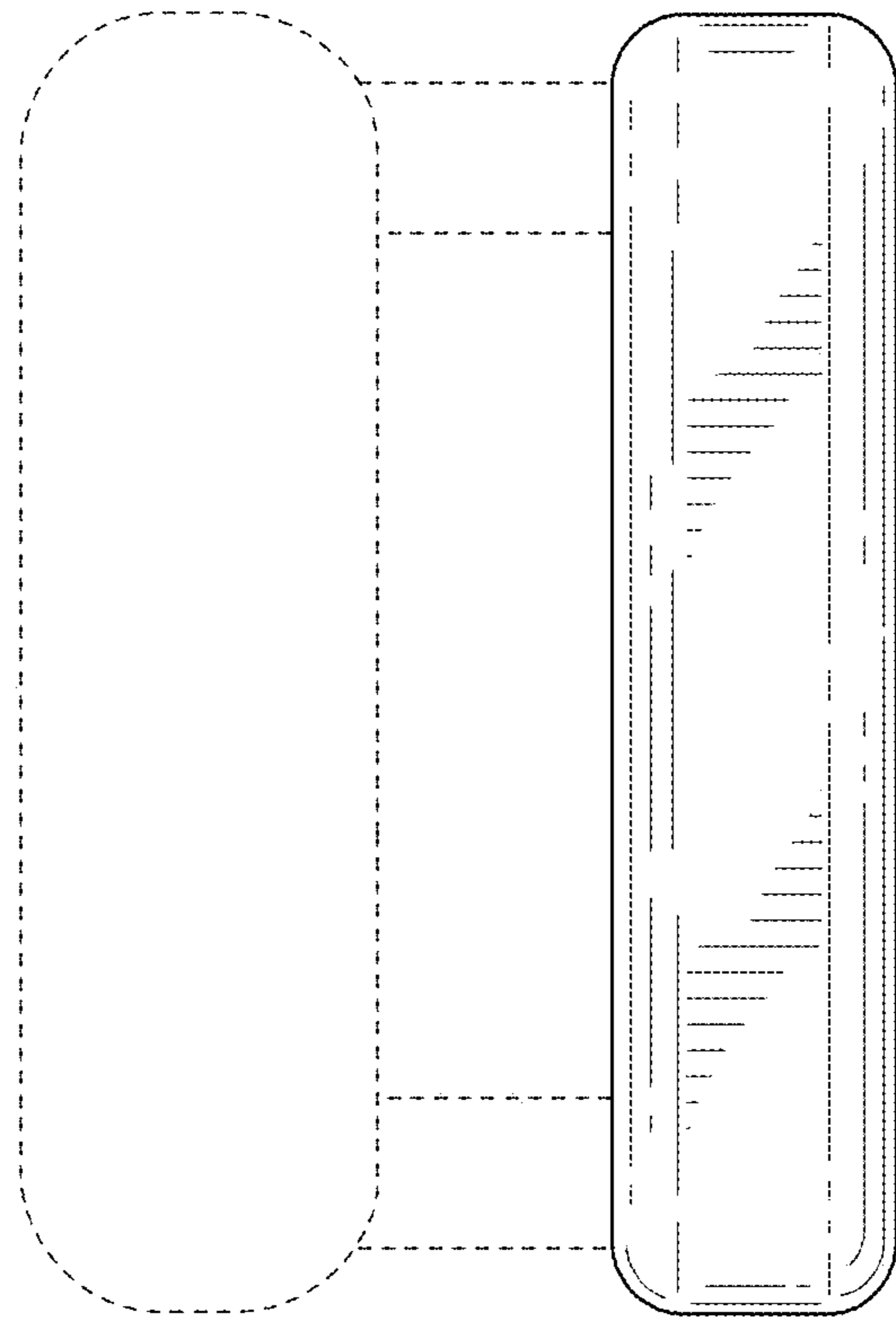


FIG. 69

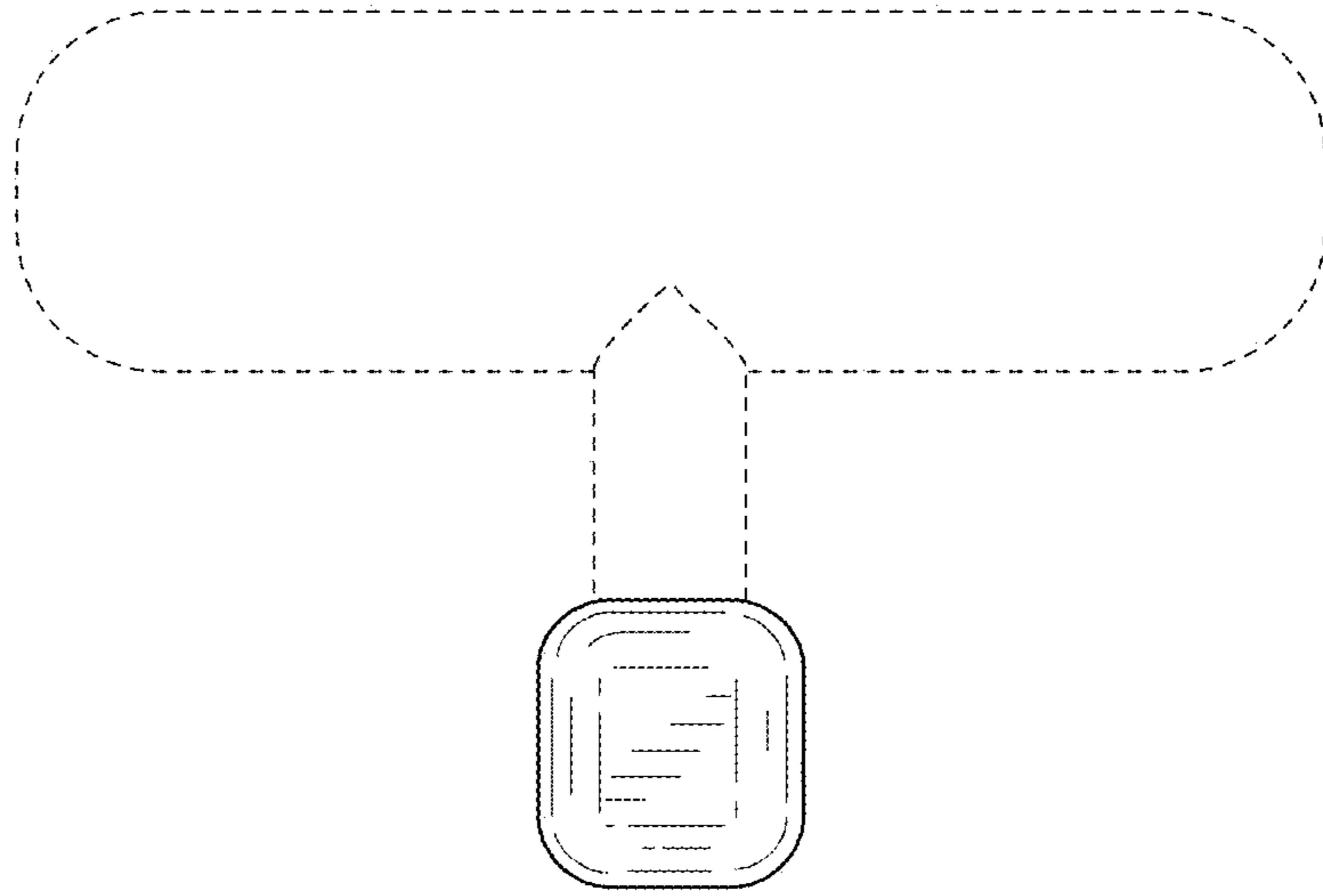


FIG. 70

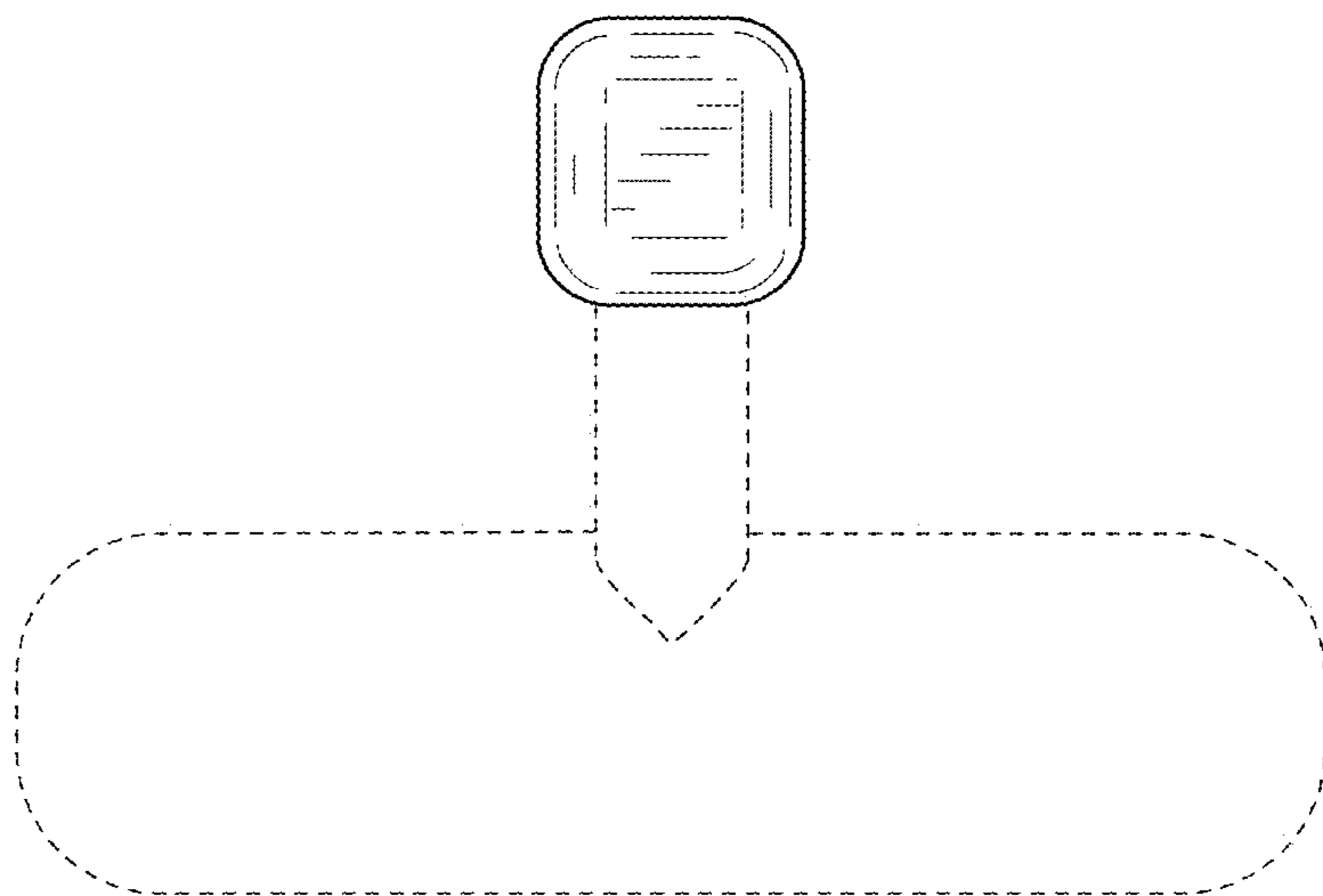


FIG. 71

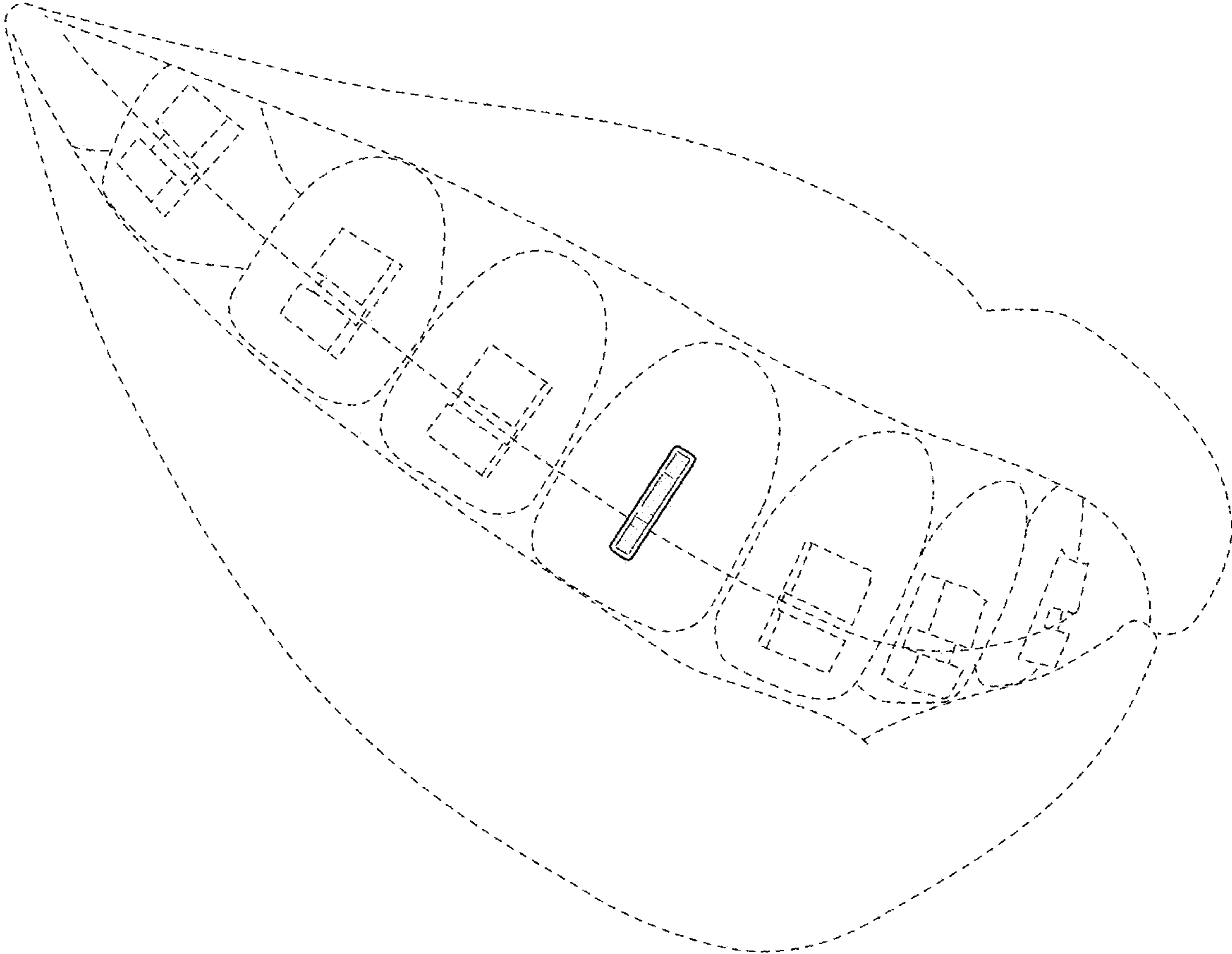


FIG. 72

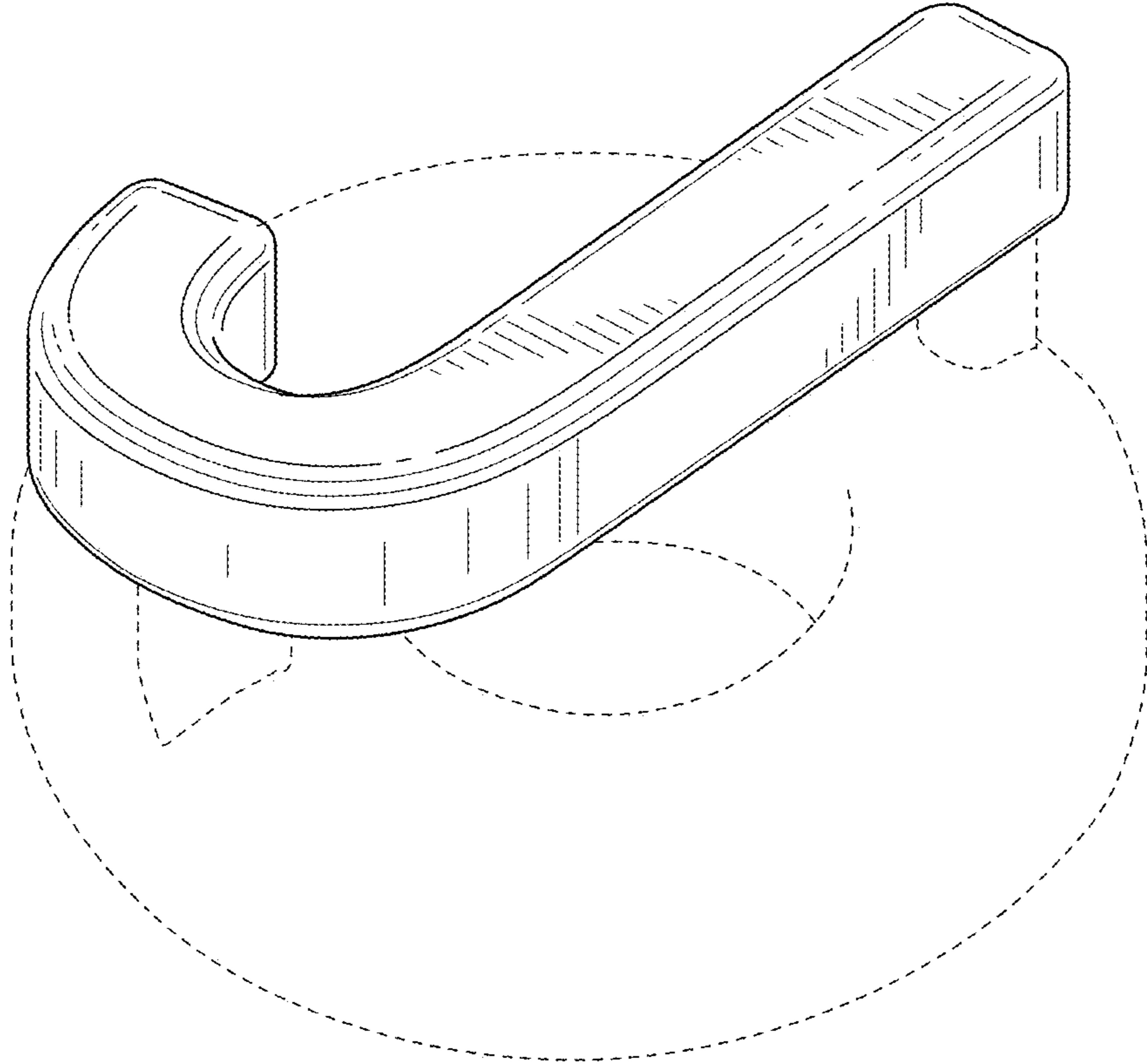


FIG. 73

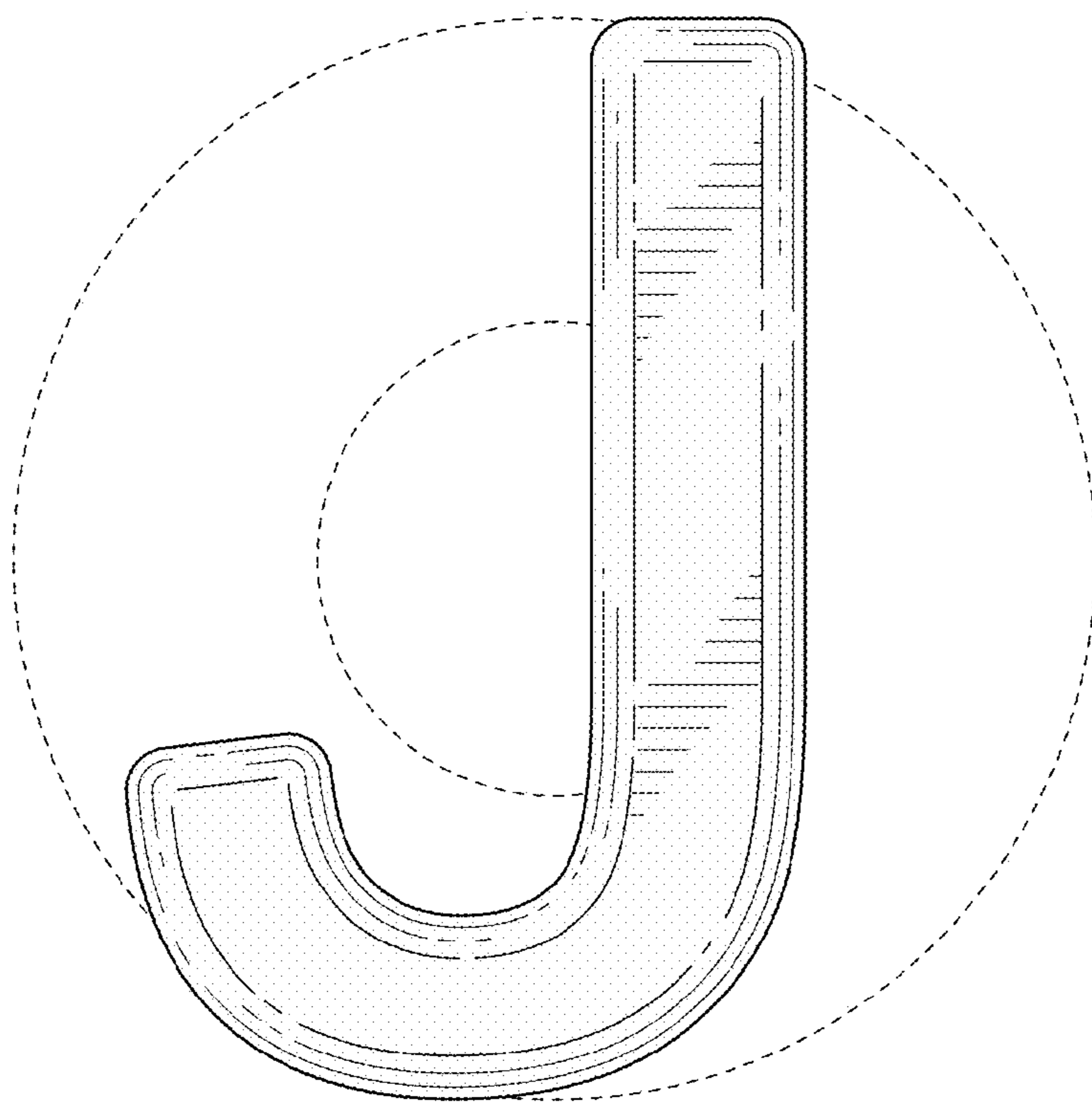


FIG. 74

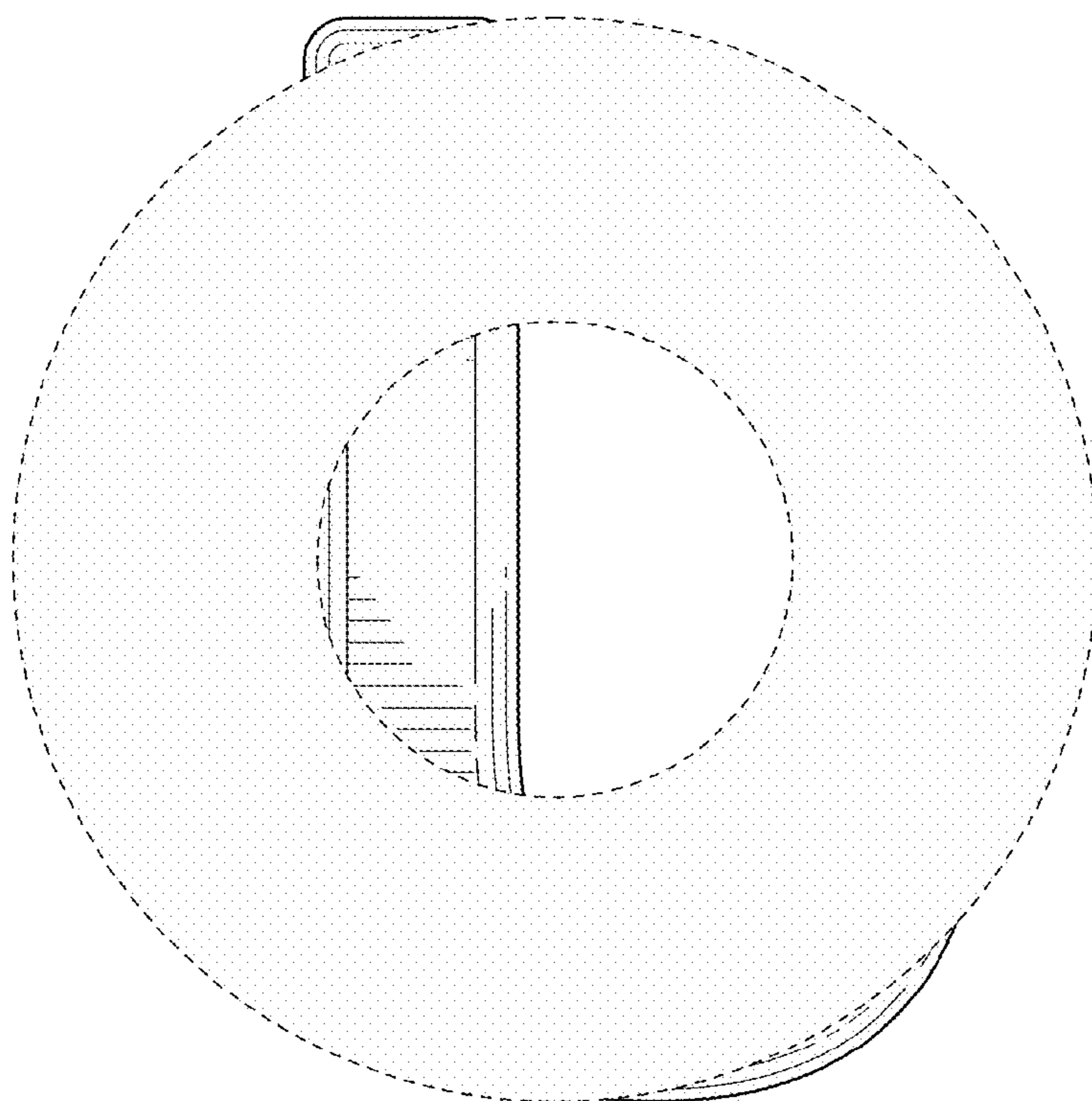


FIG. 75

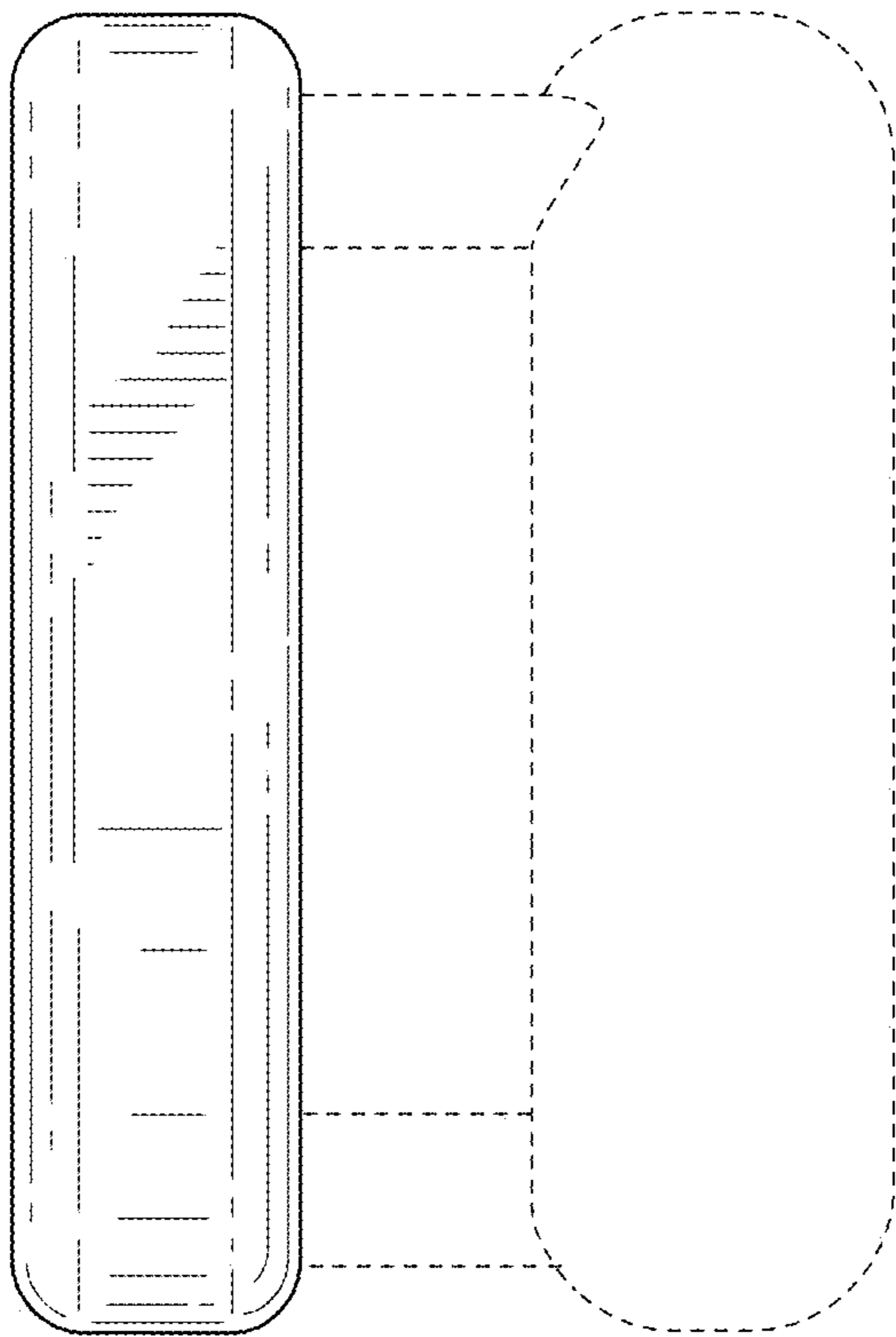


FIG. 76

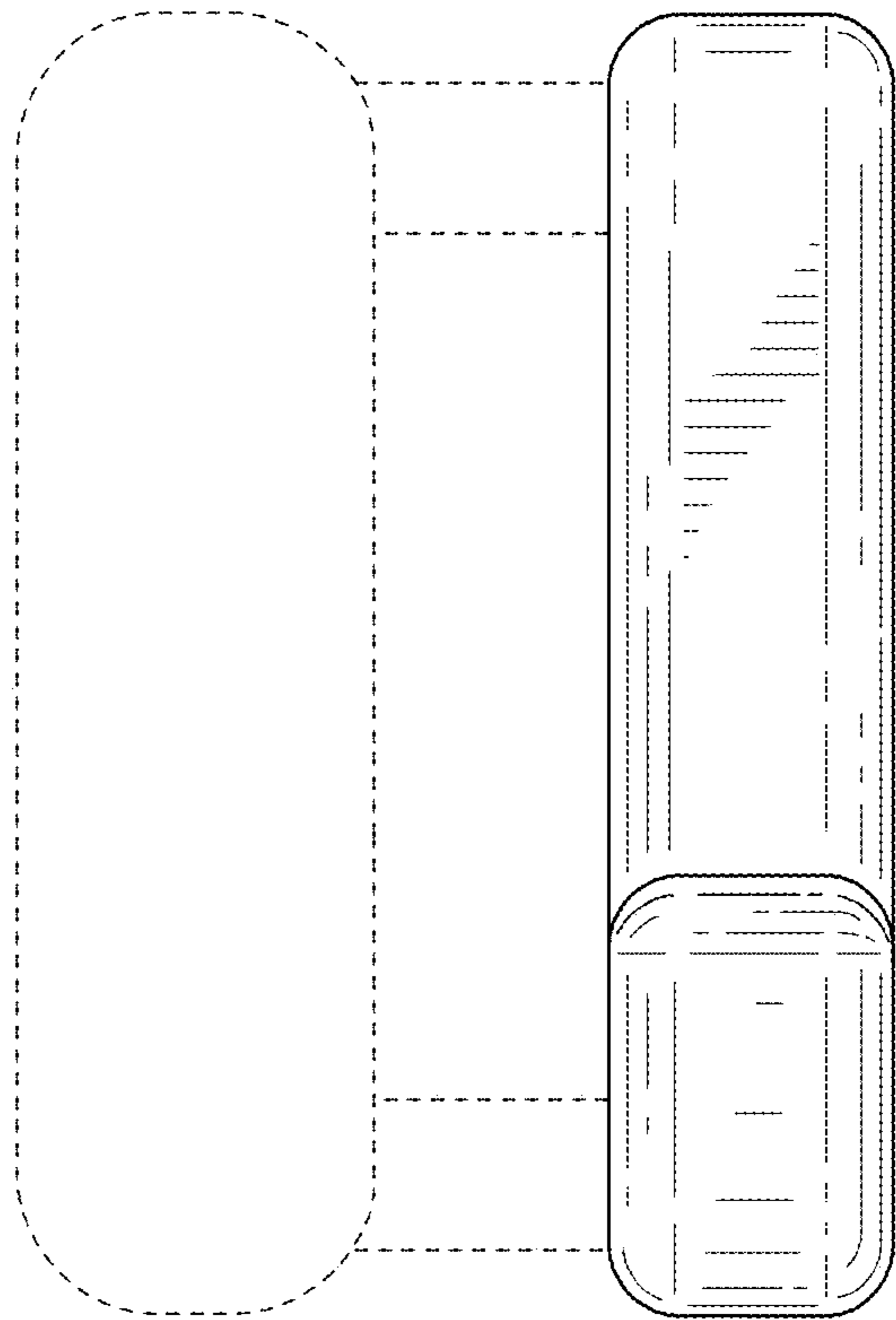


FIG. 77

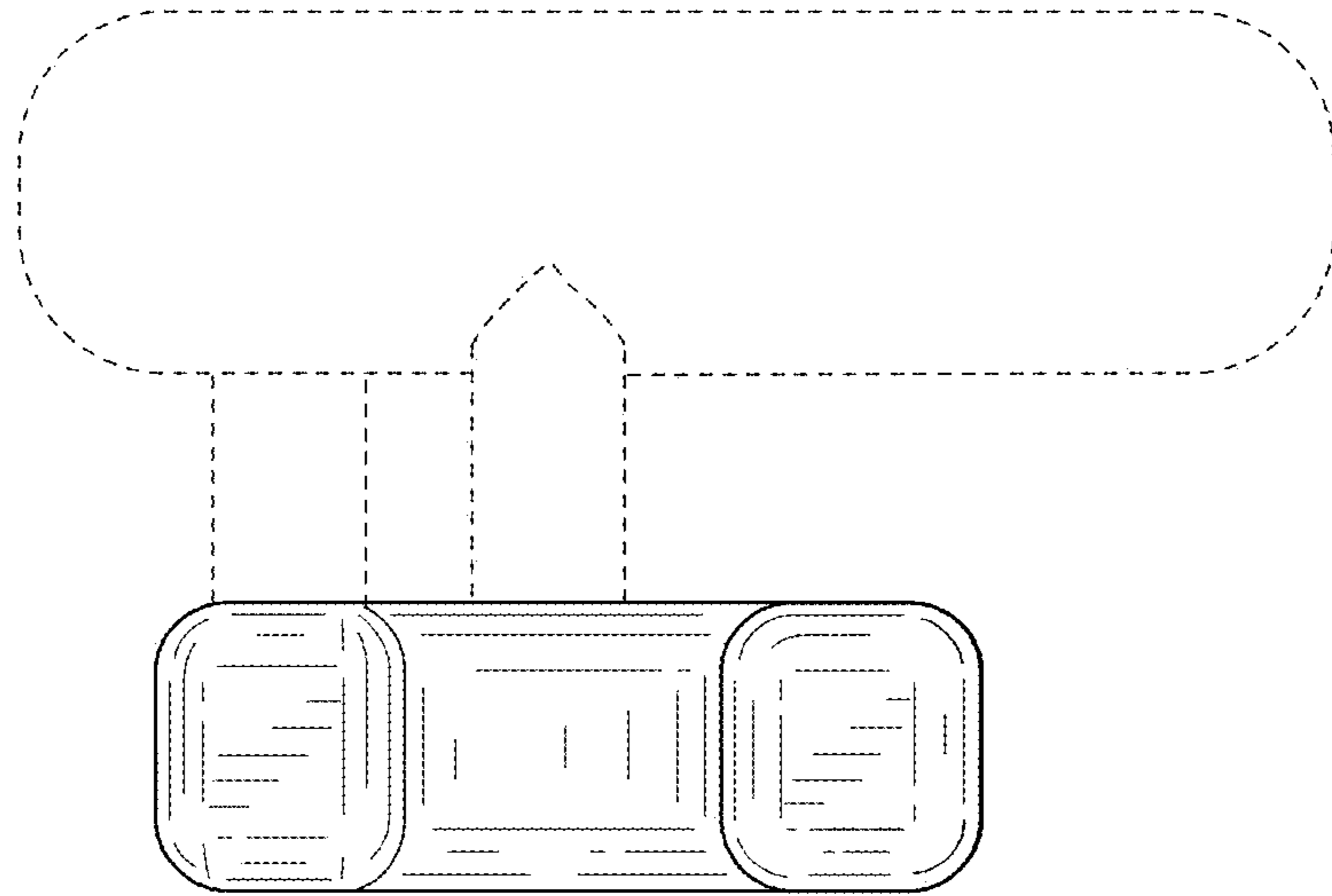


FIG. 78

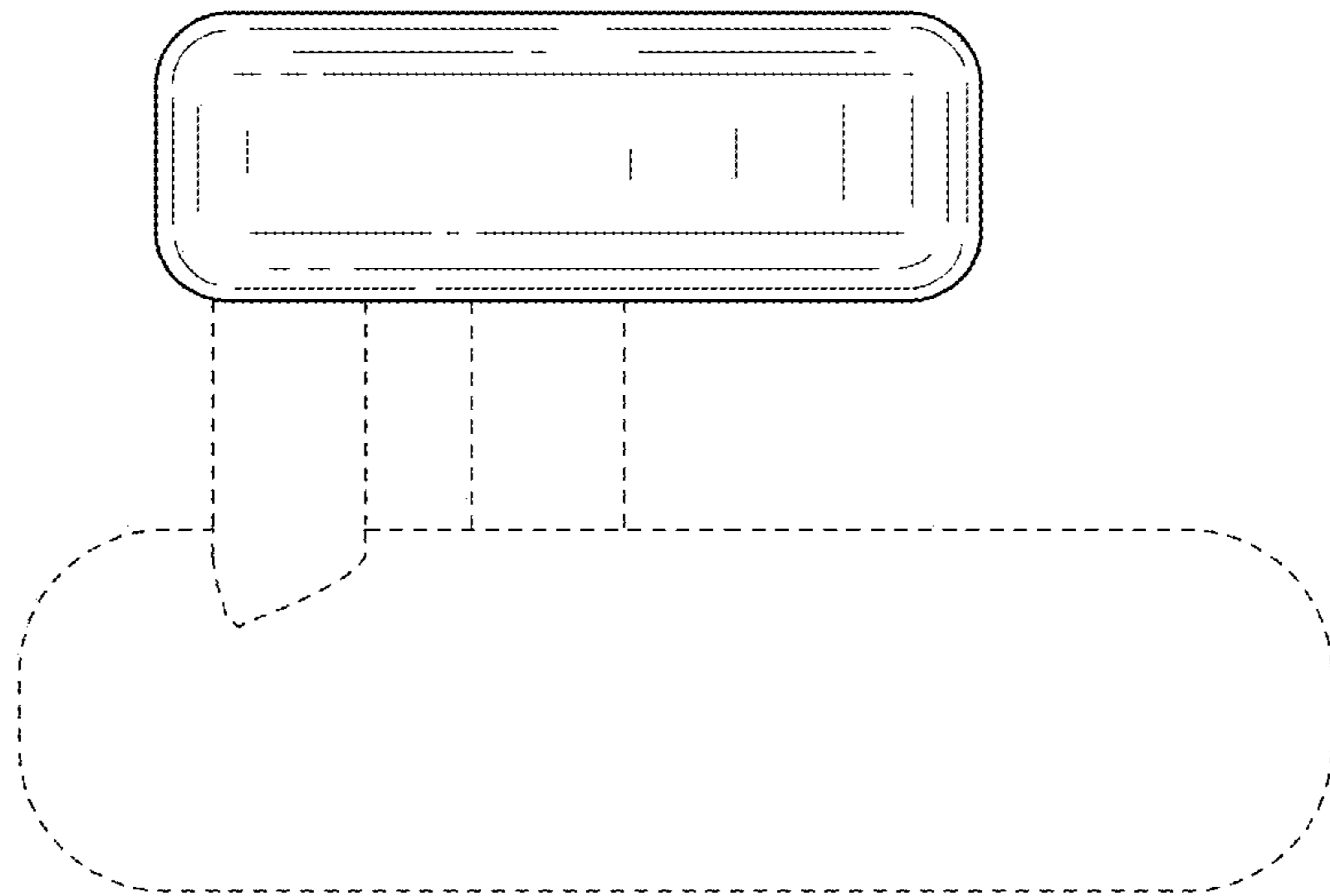


FIG. 79

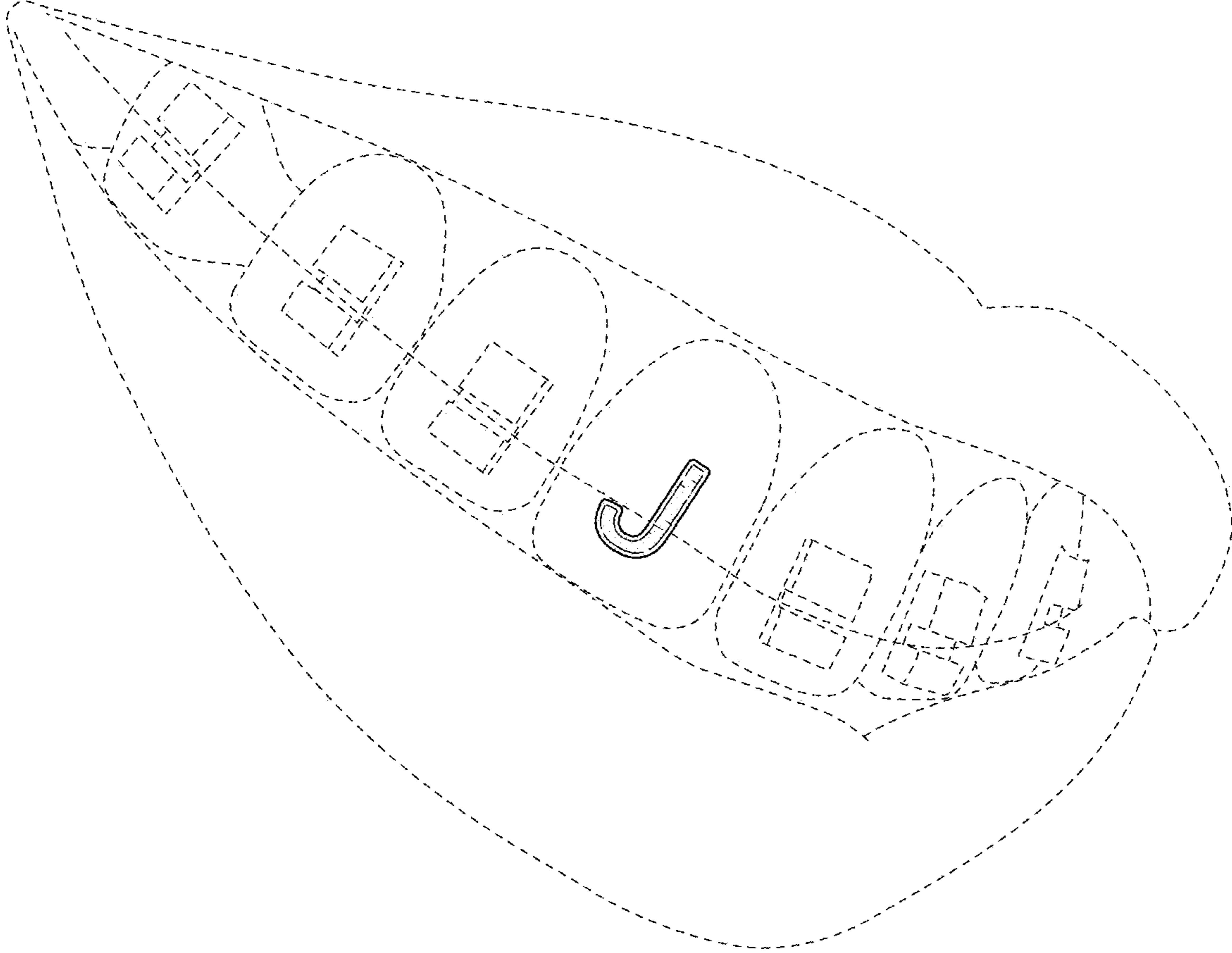


FIG. 80

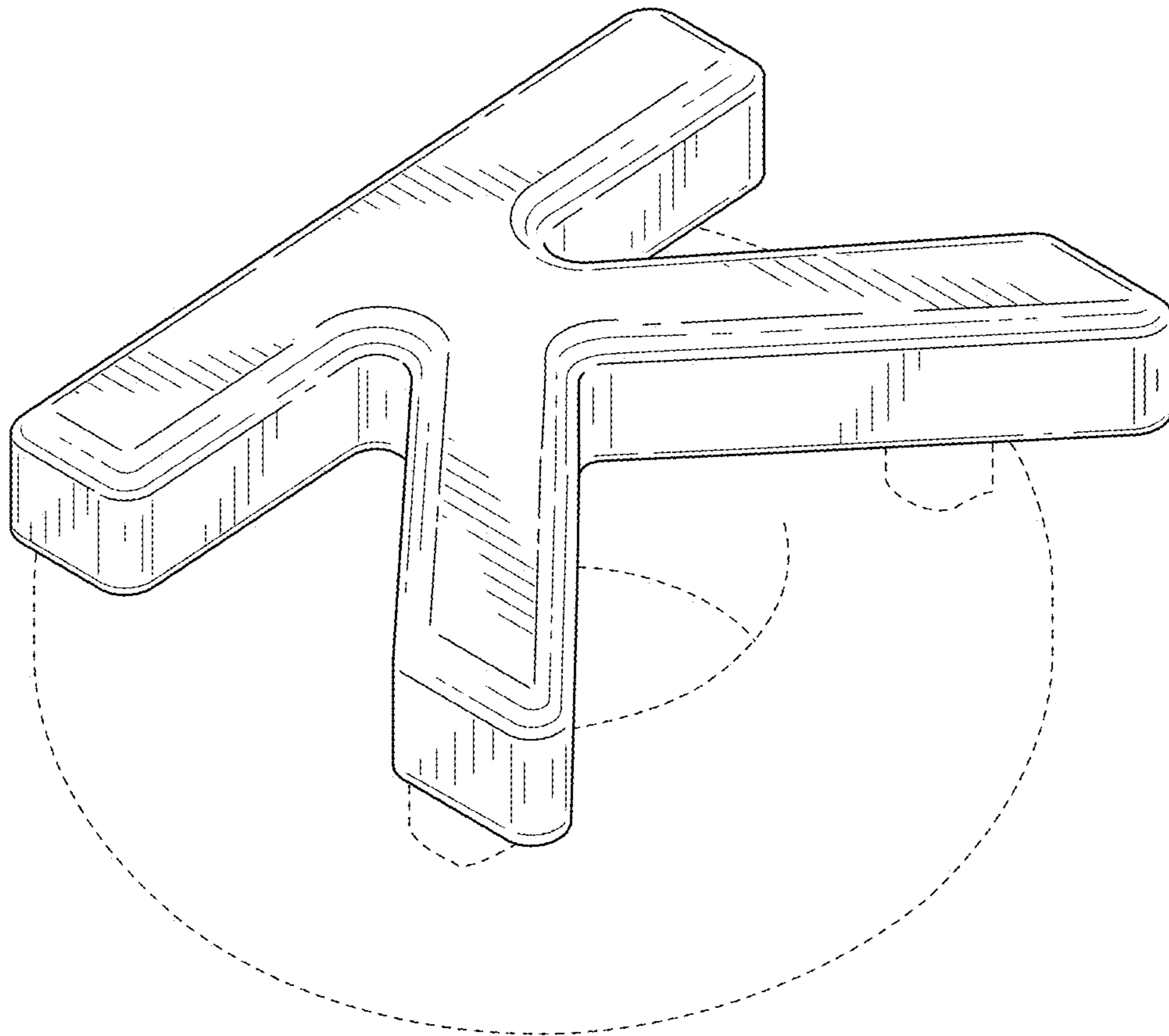


FIG. 81

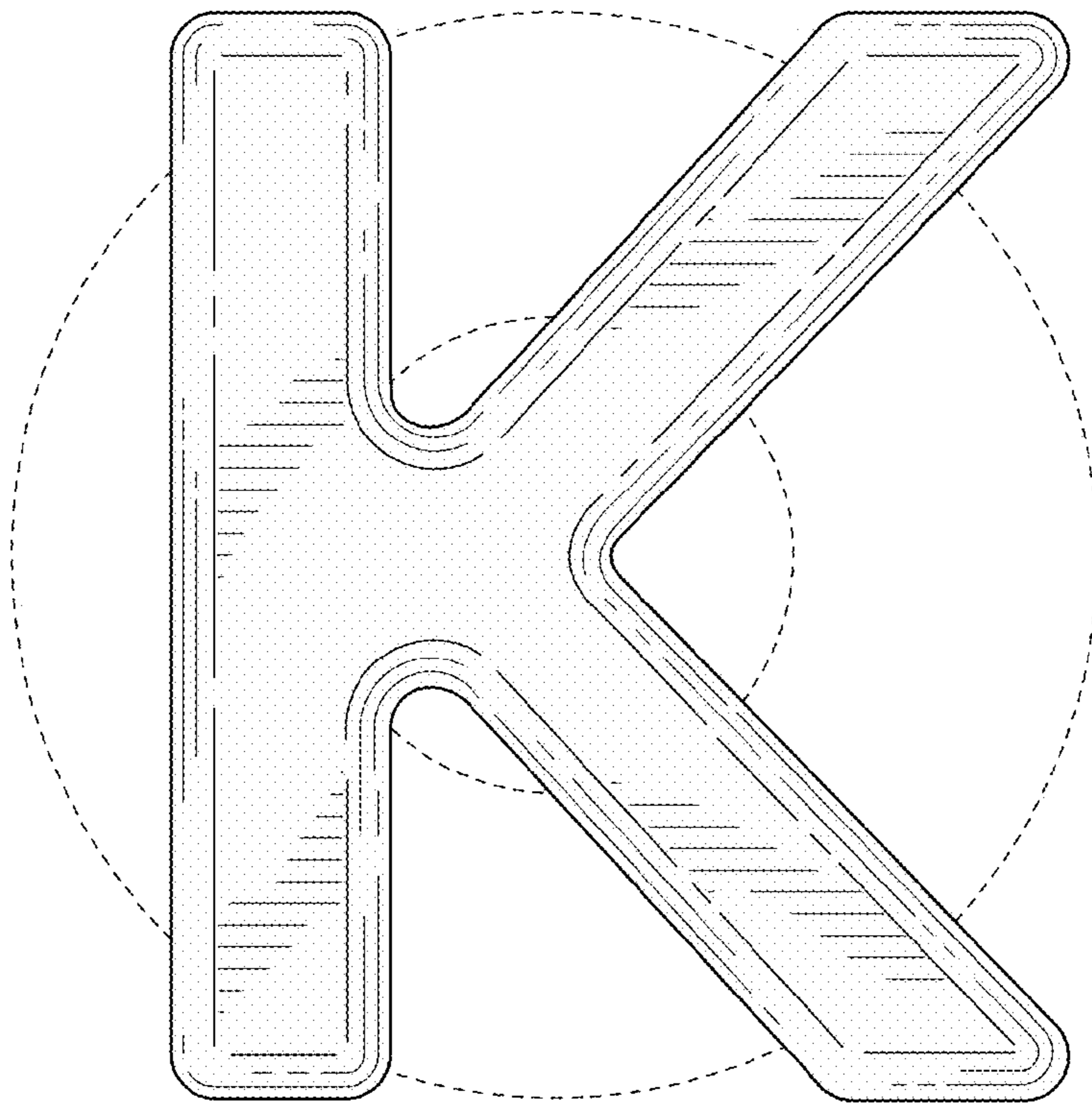


FIG. 82

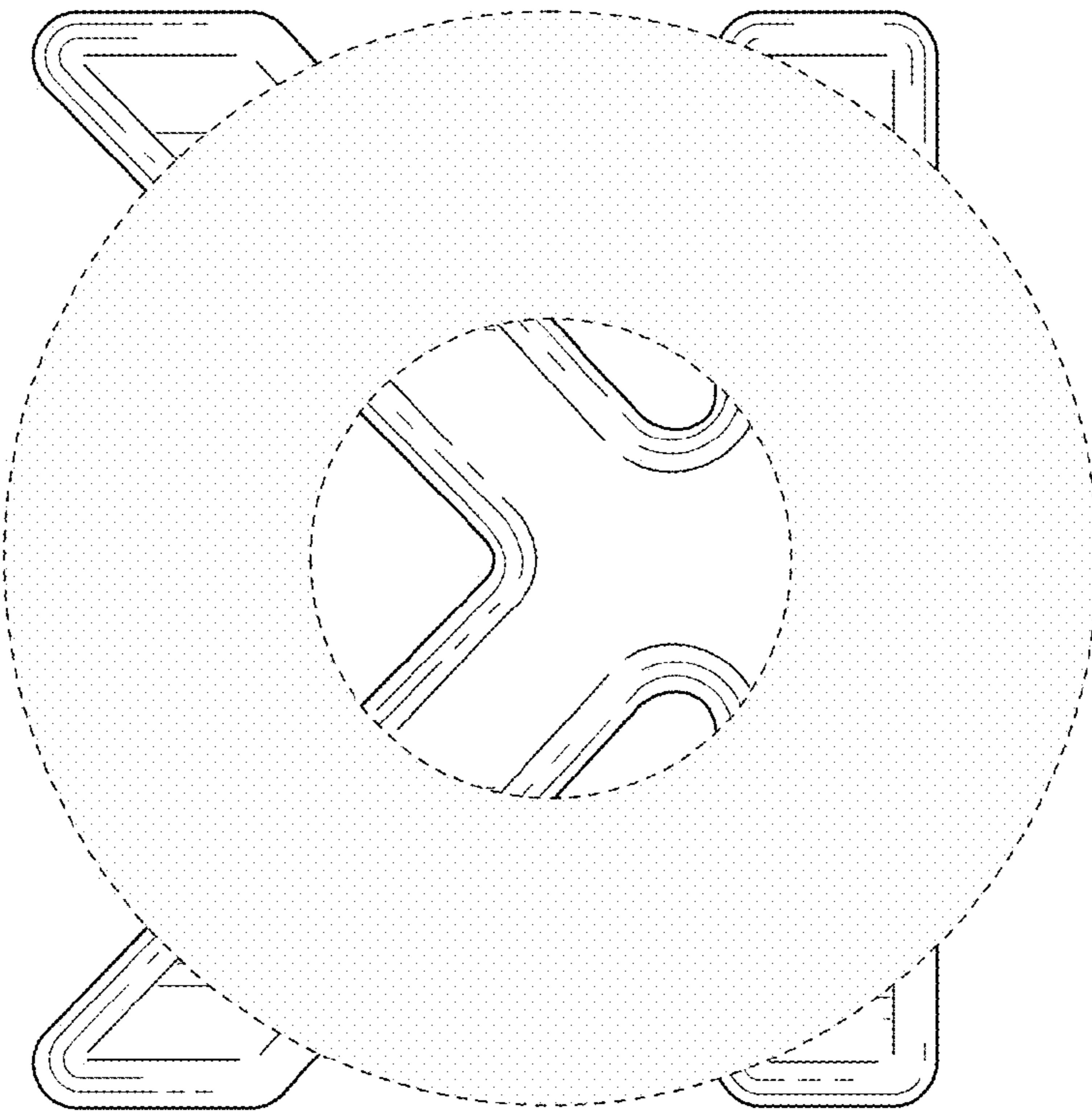


FIG. 83

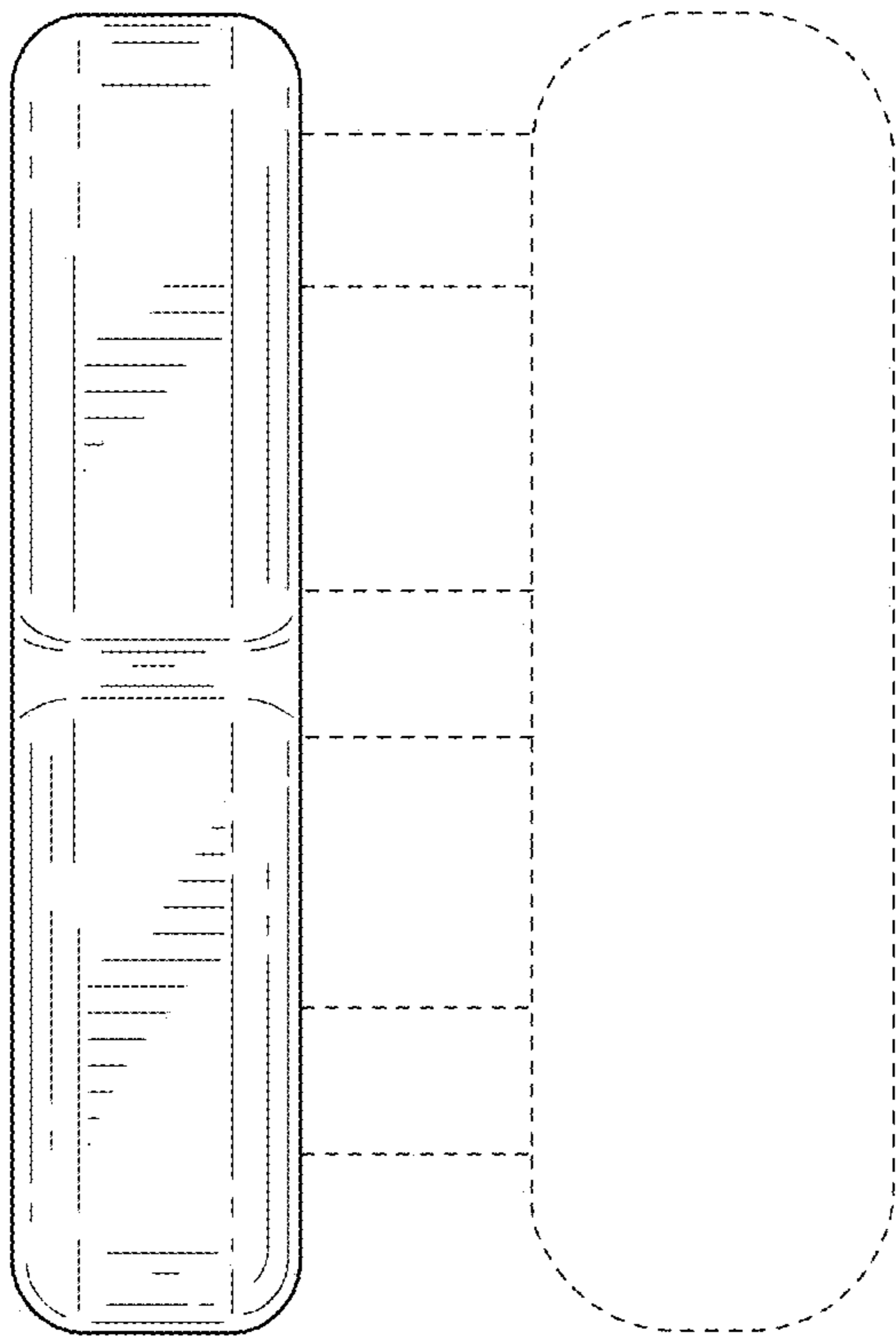


FIG. 84

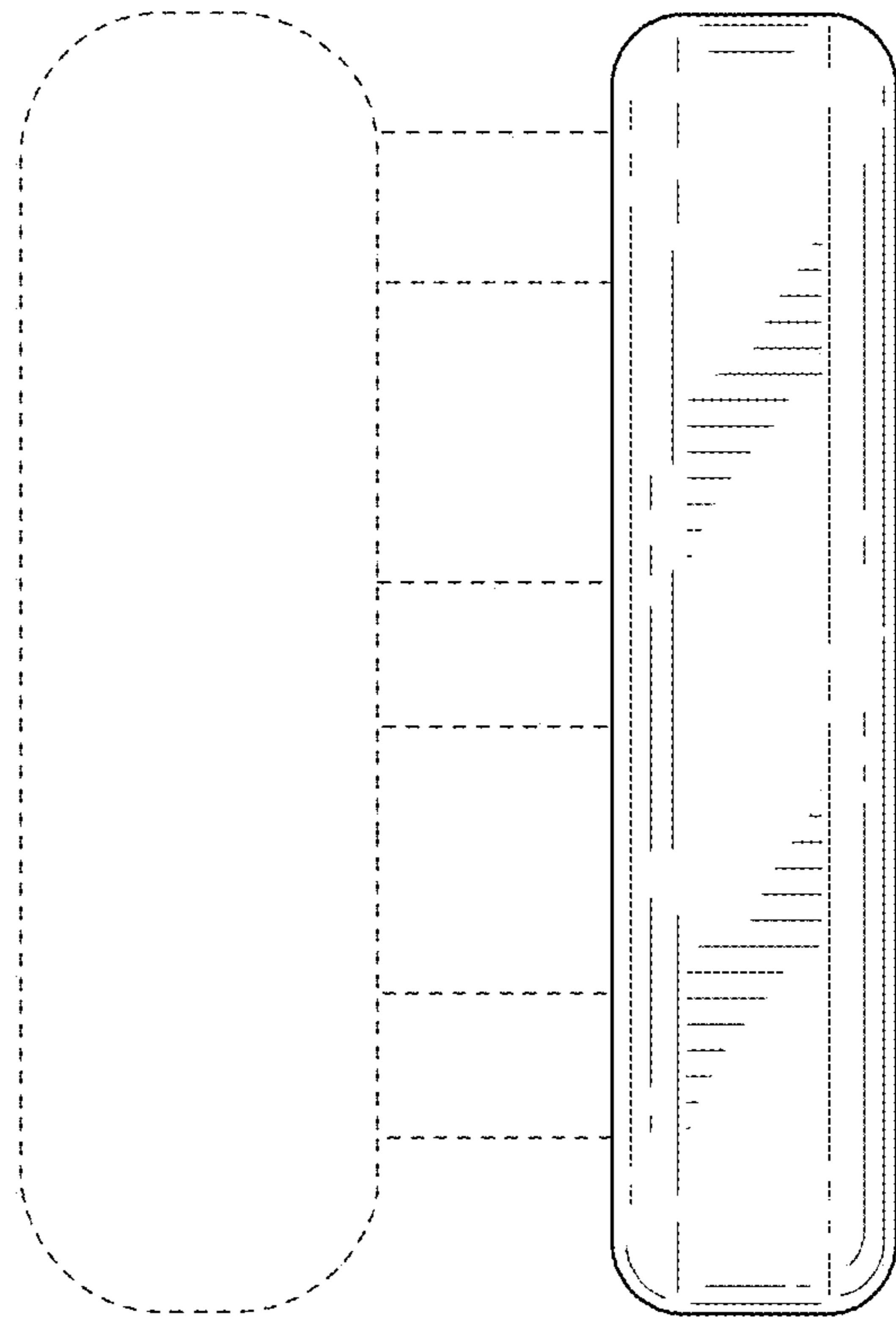


FIG. 85

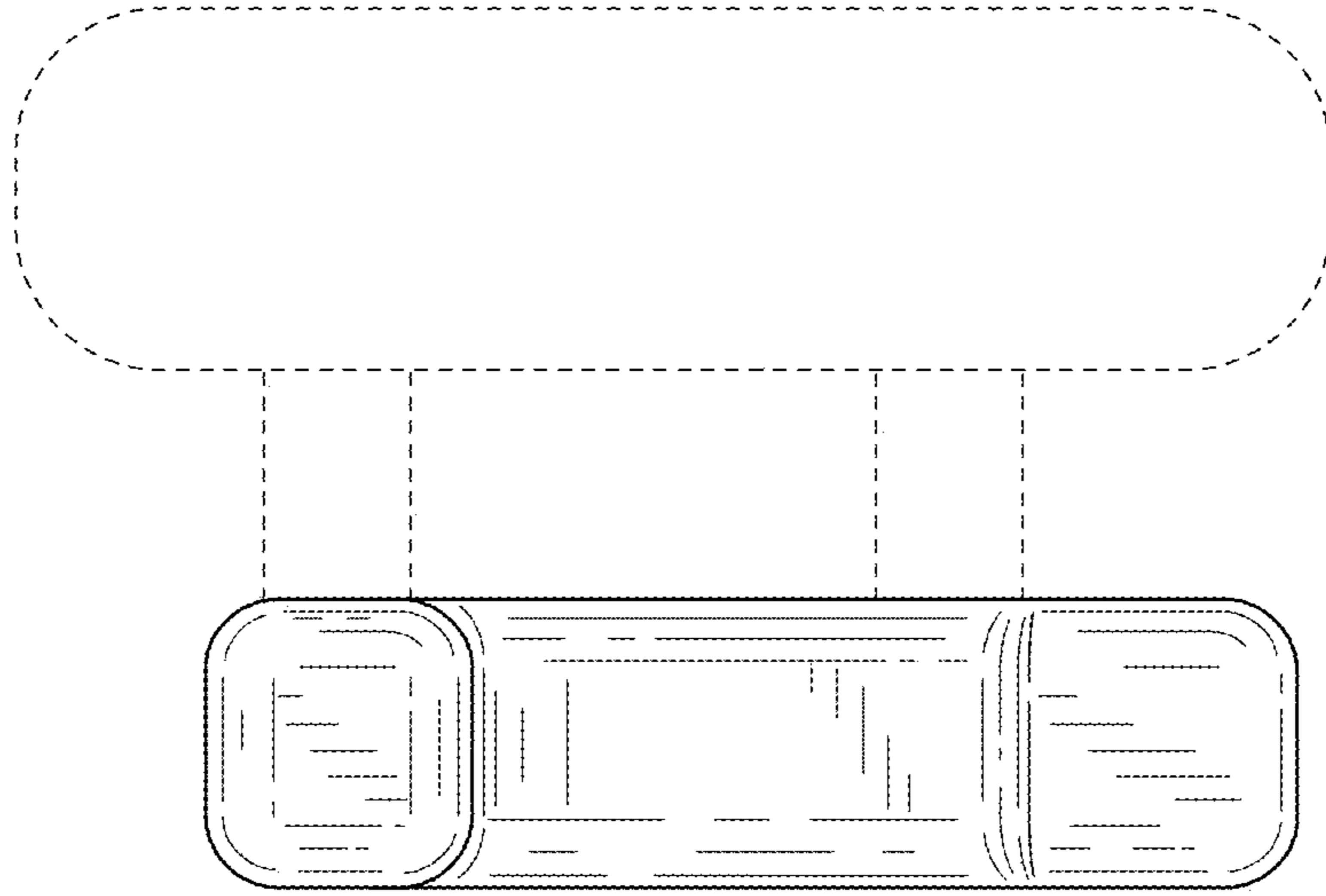


FIG. 86

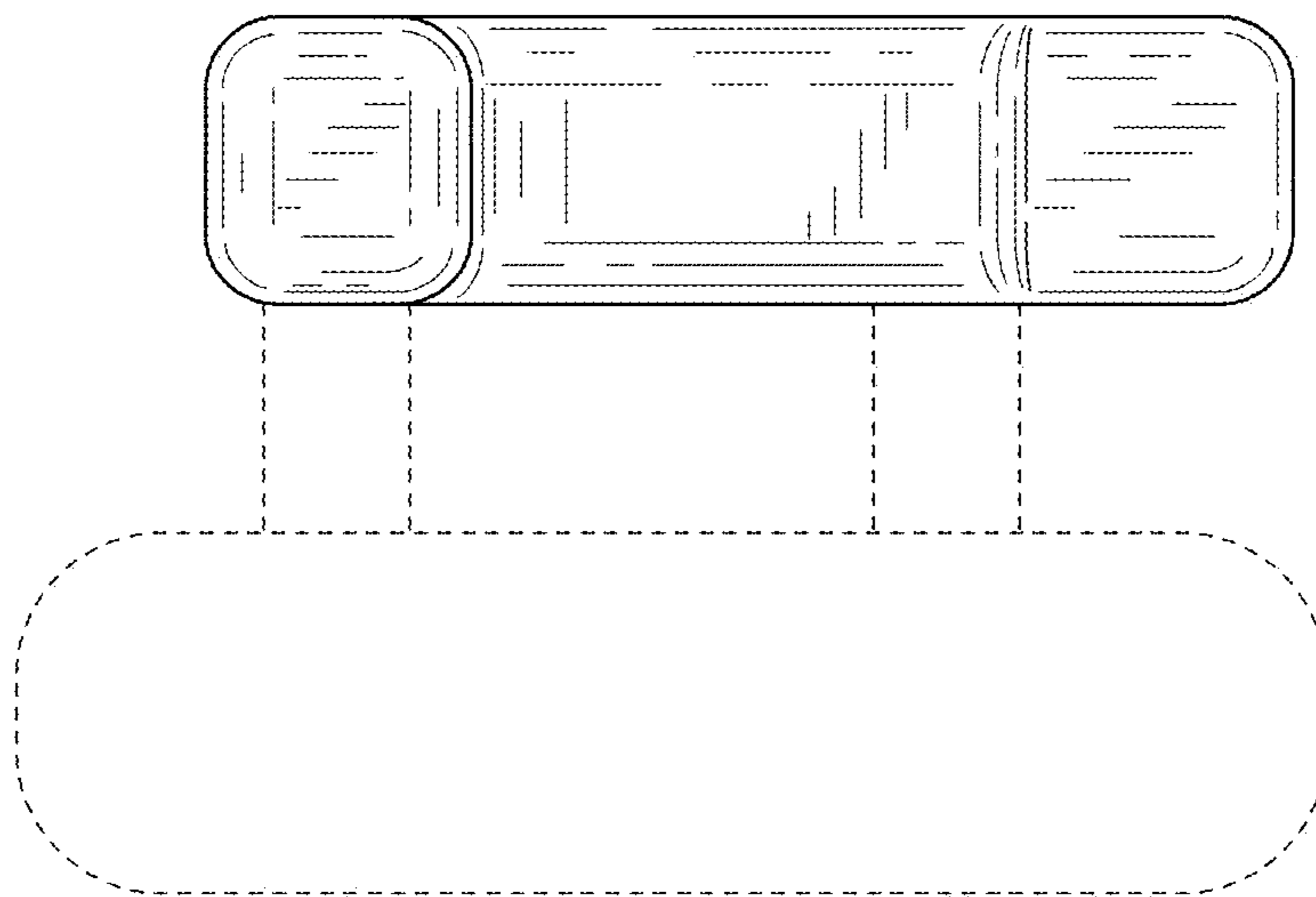


FIG. 87

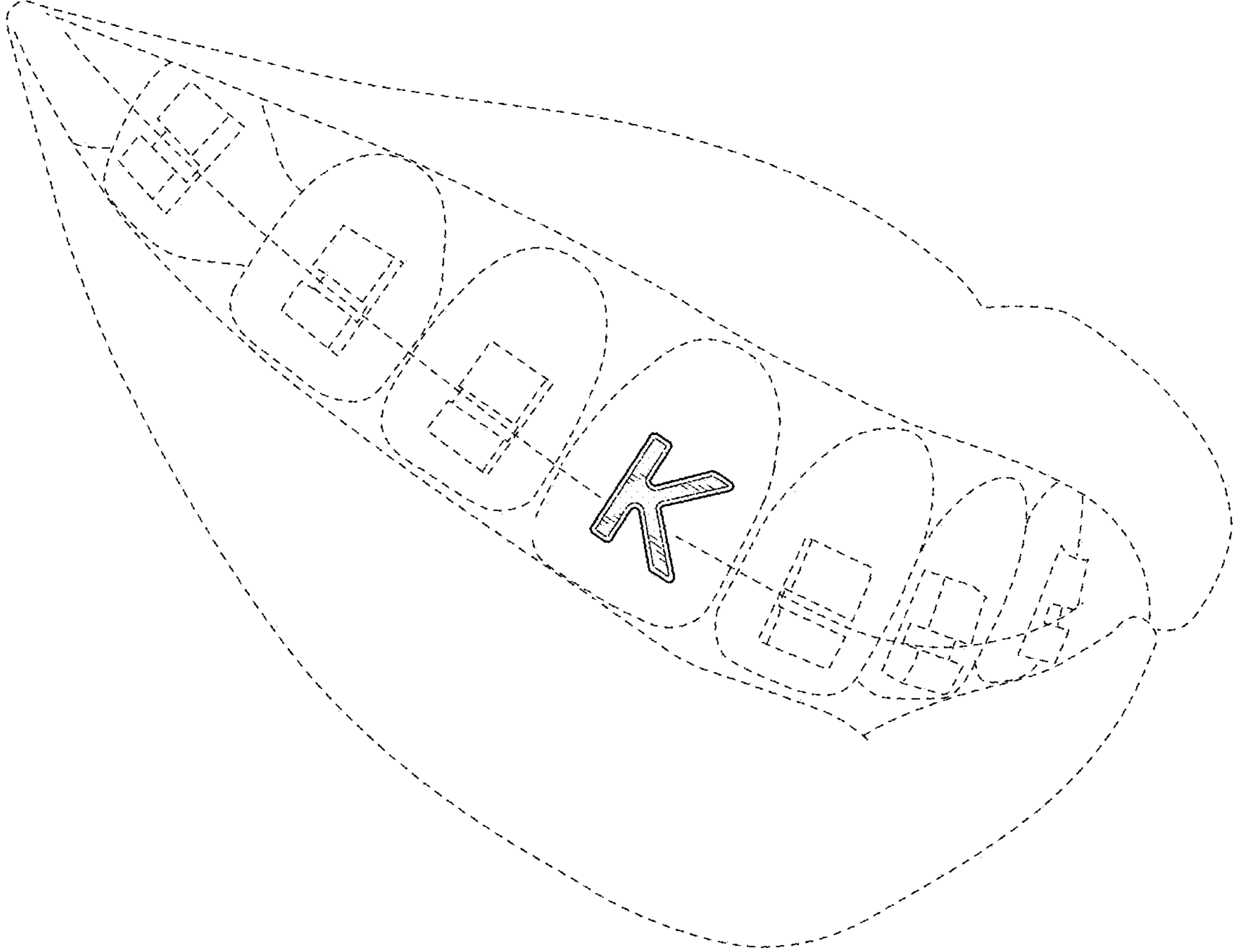


FIG. 88

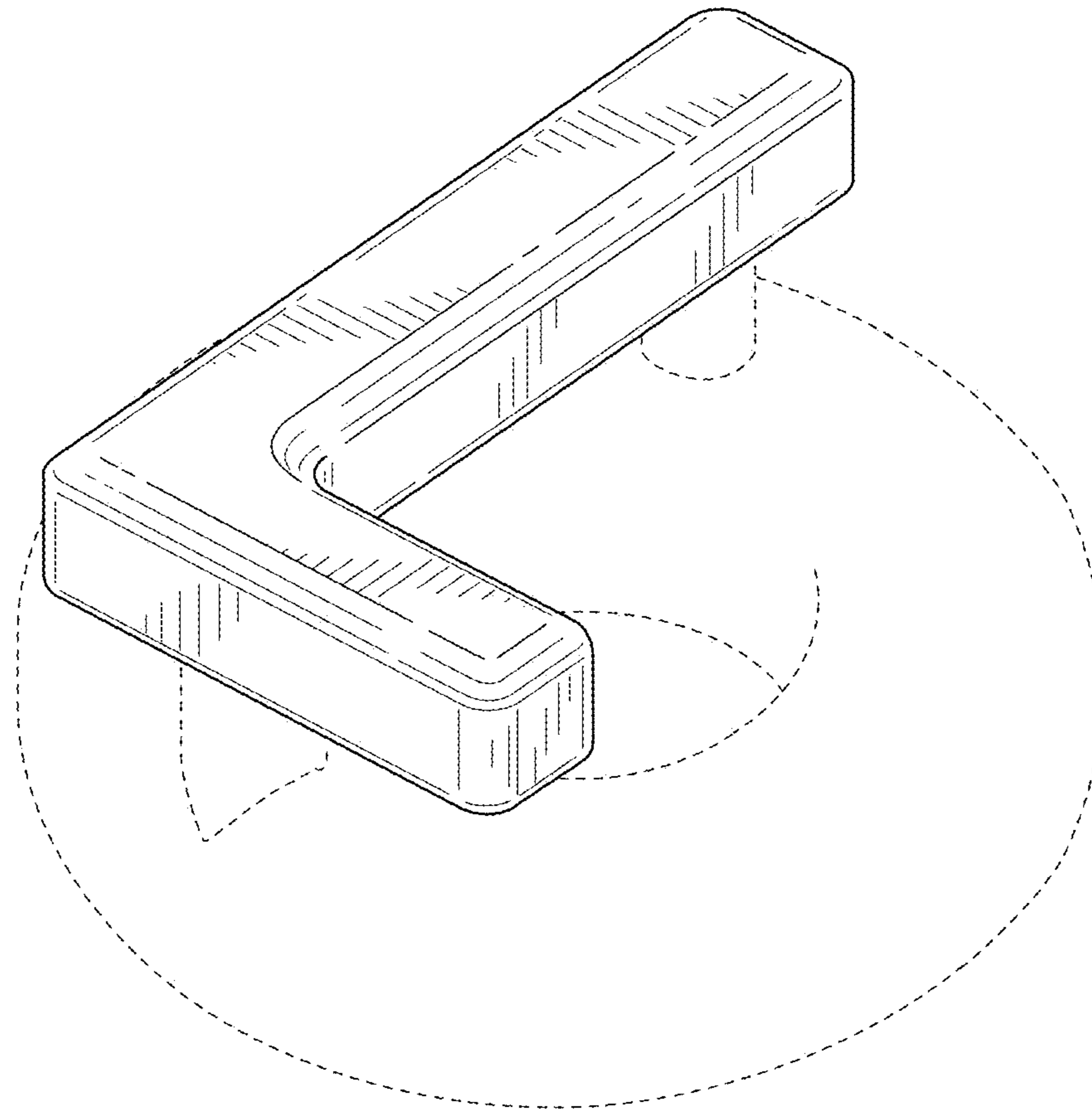


FIG. 89

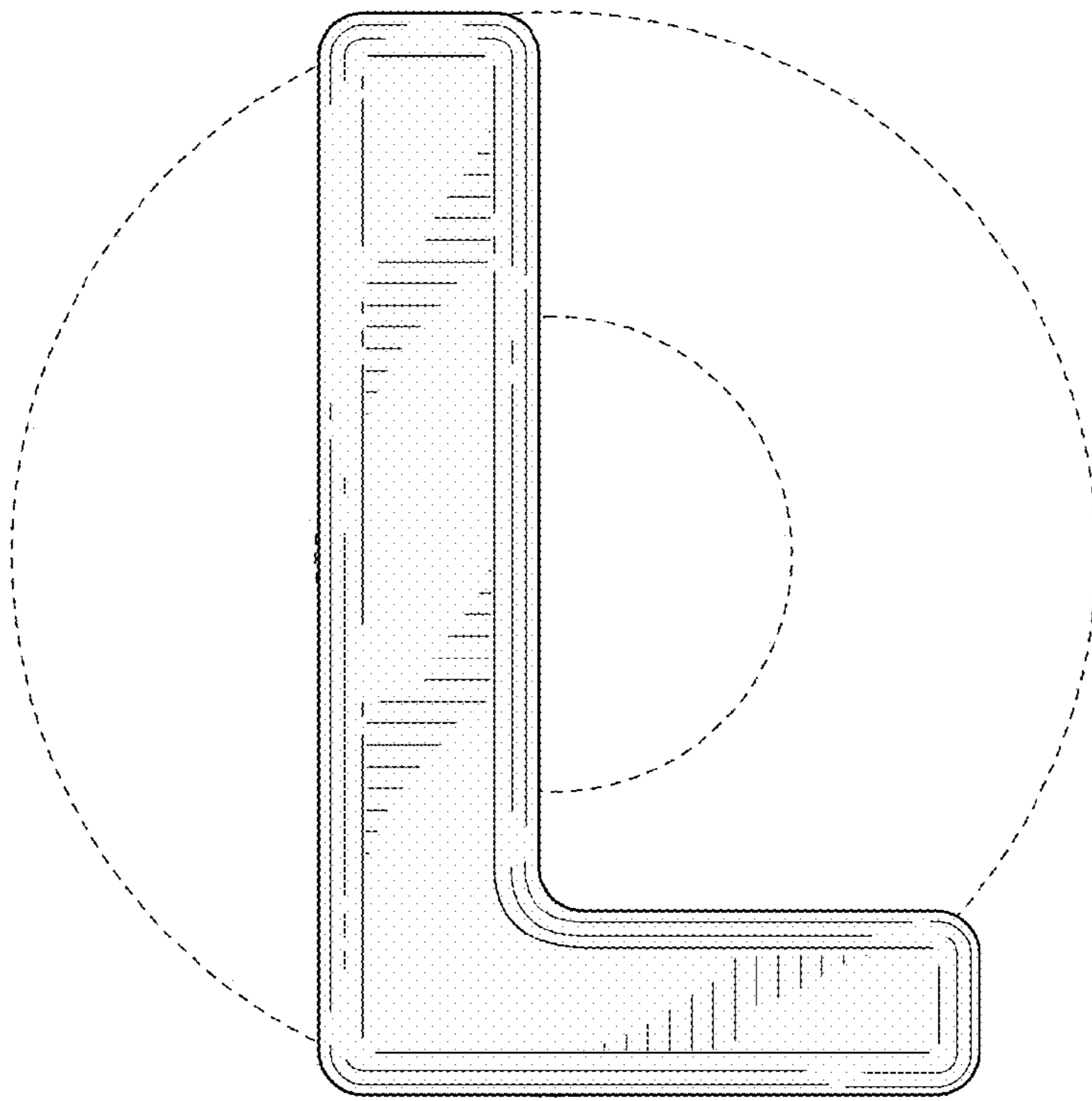


FIG. 90

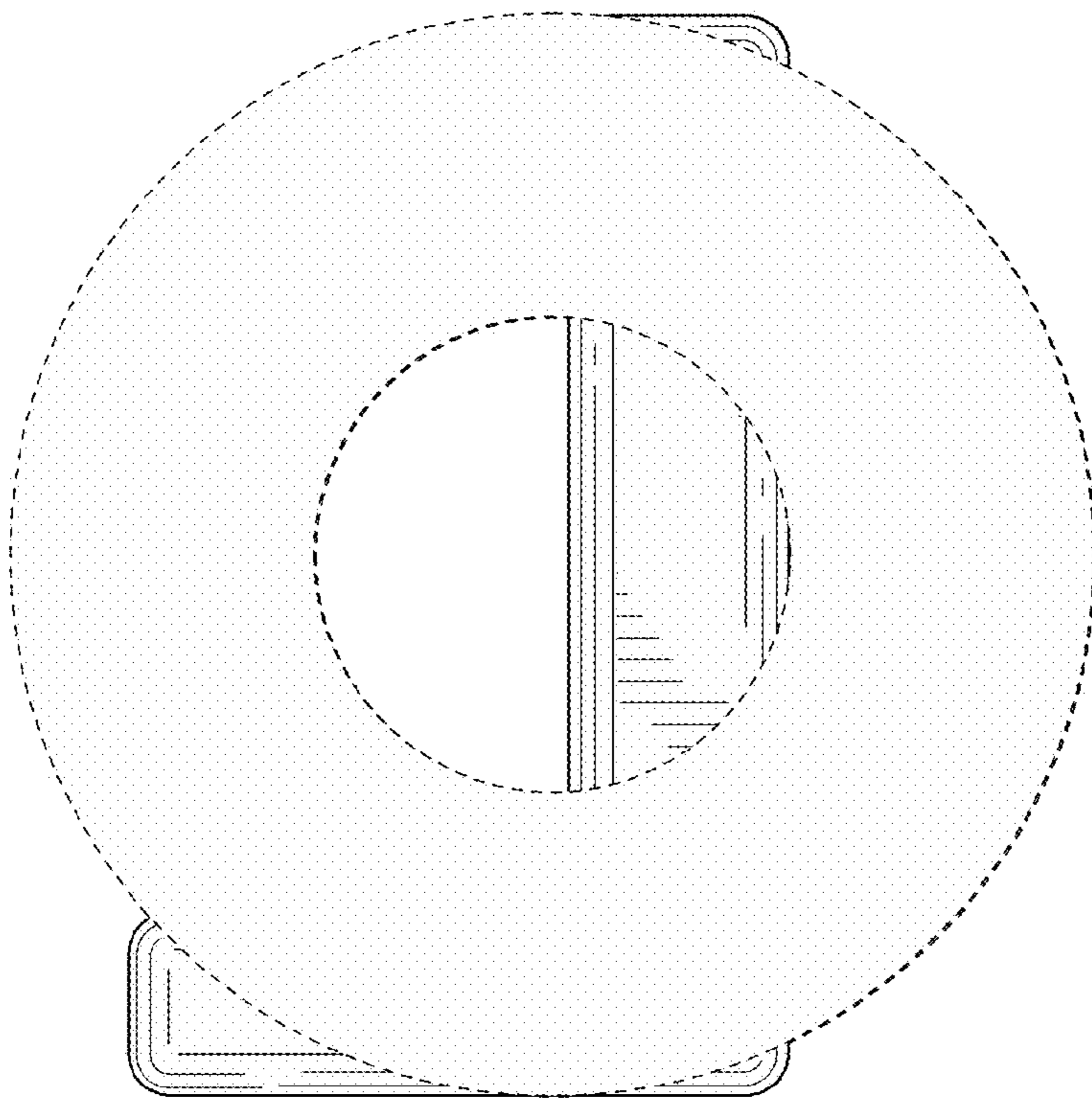


FIG. 91

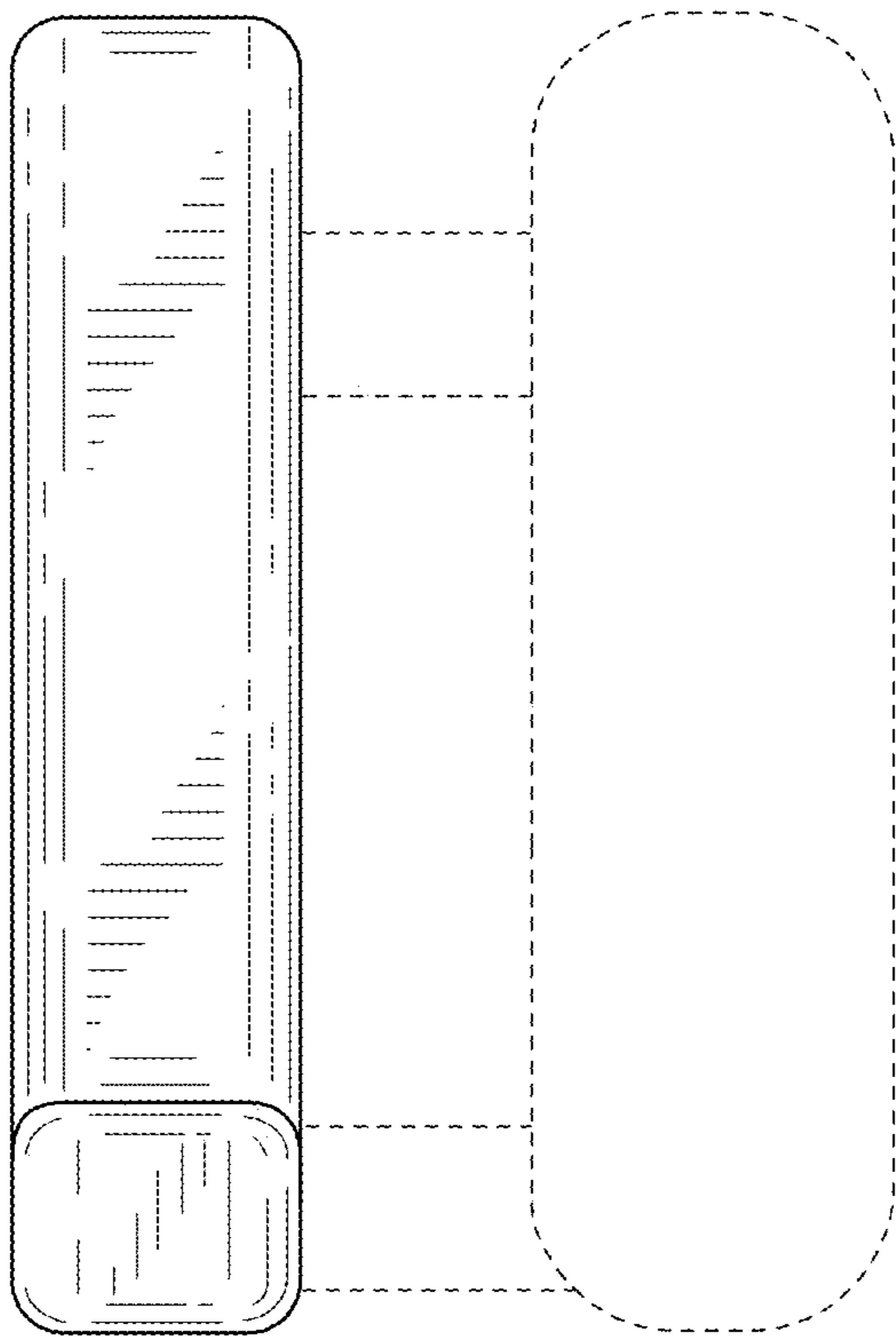


FIG. 92

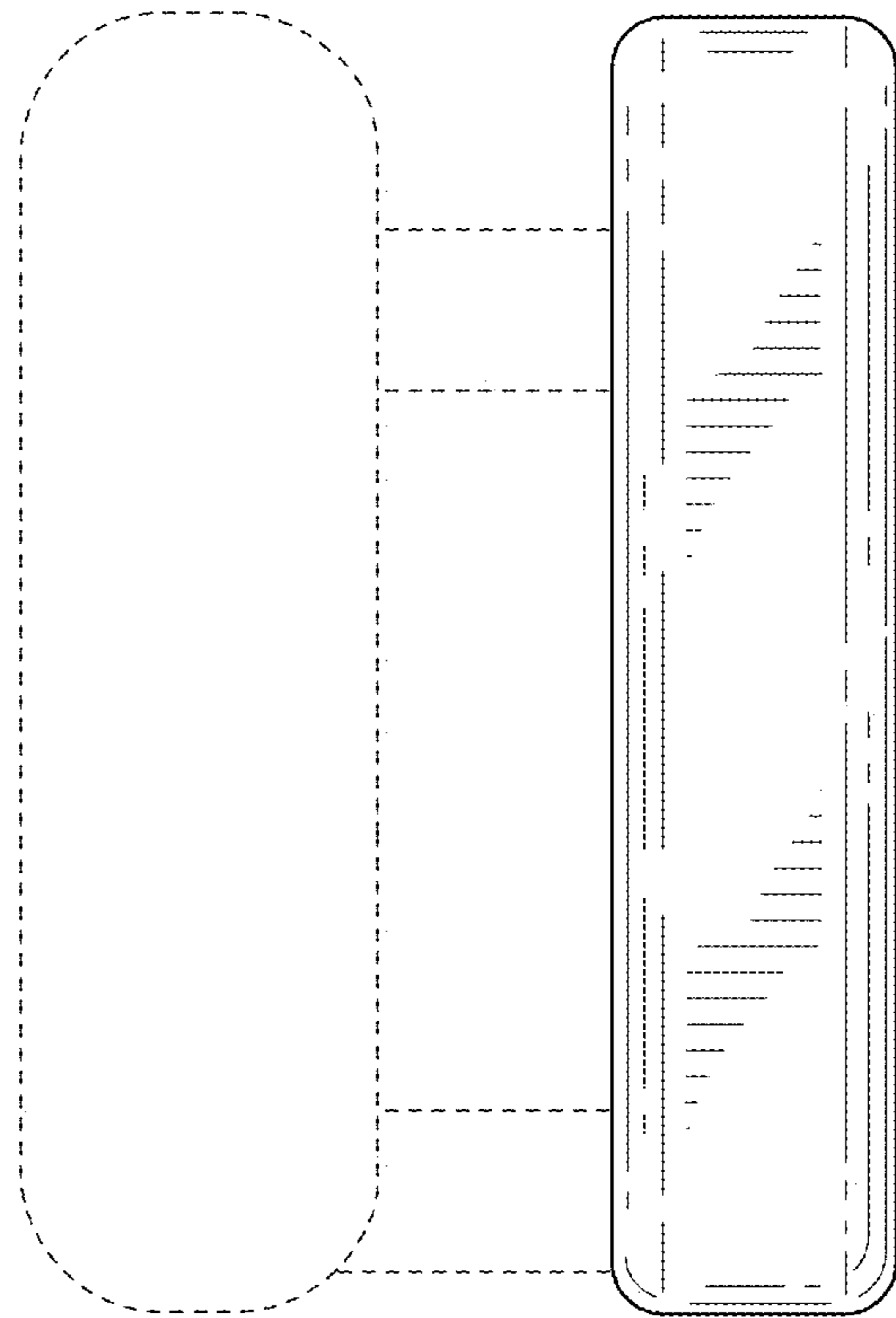


FIG. 93

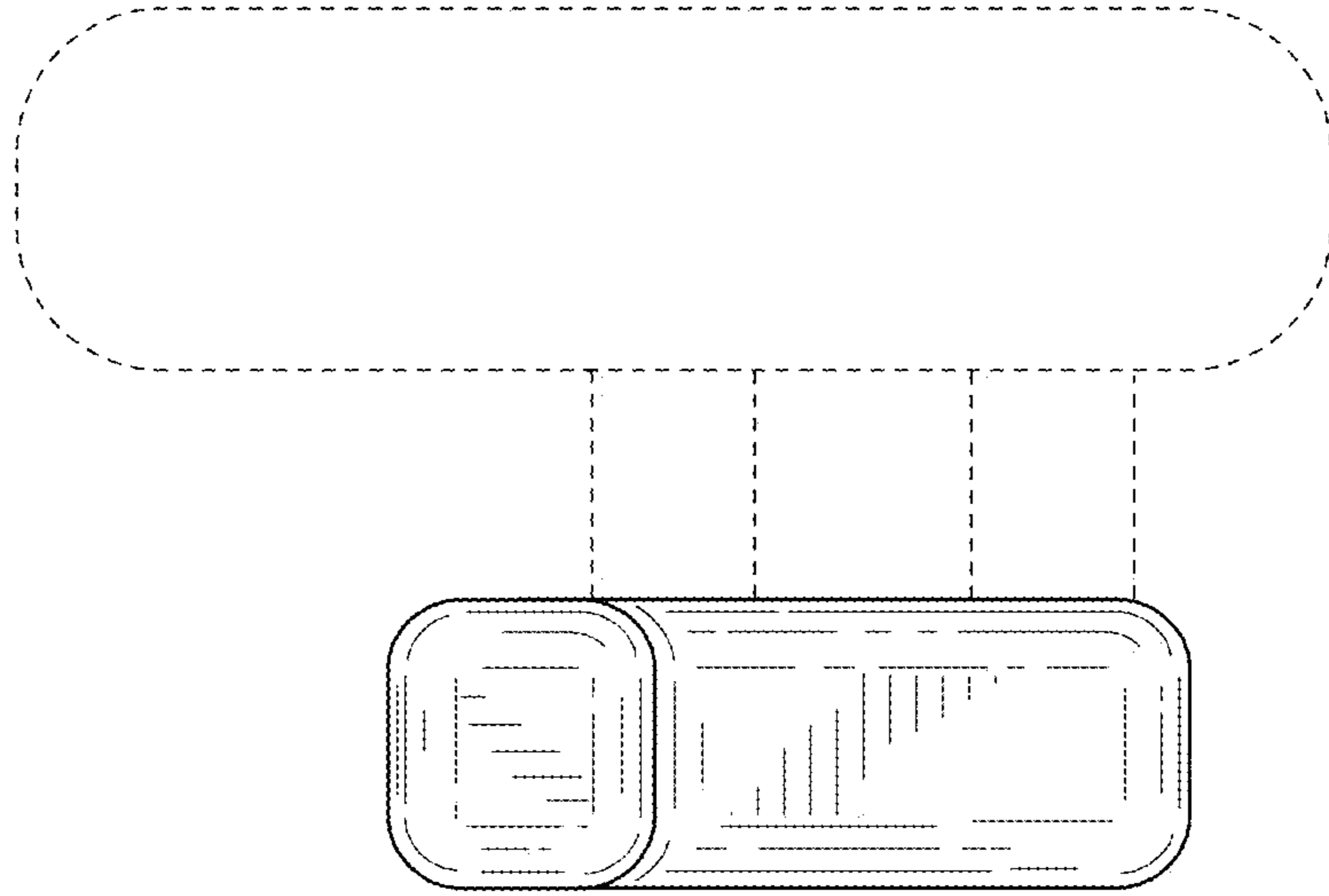


FIG. 94

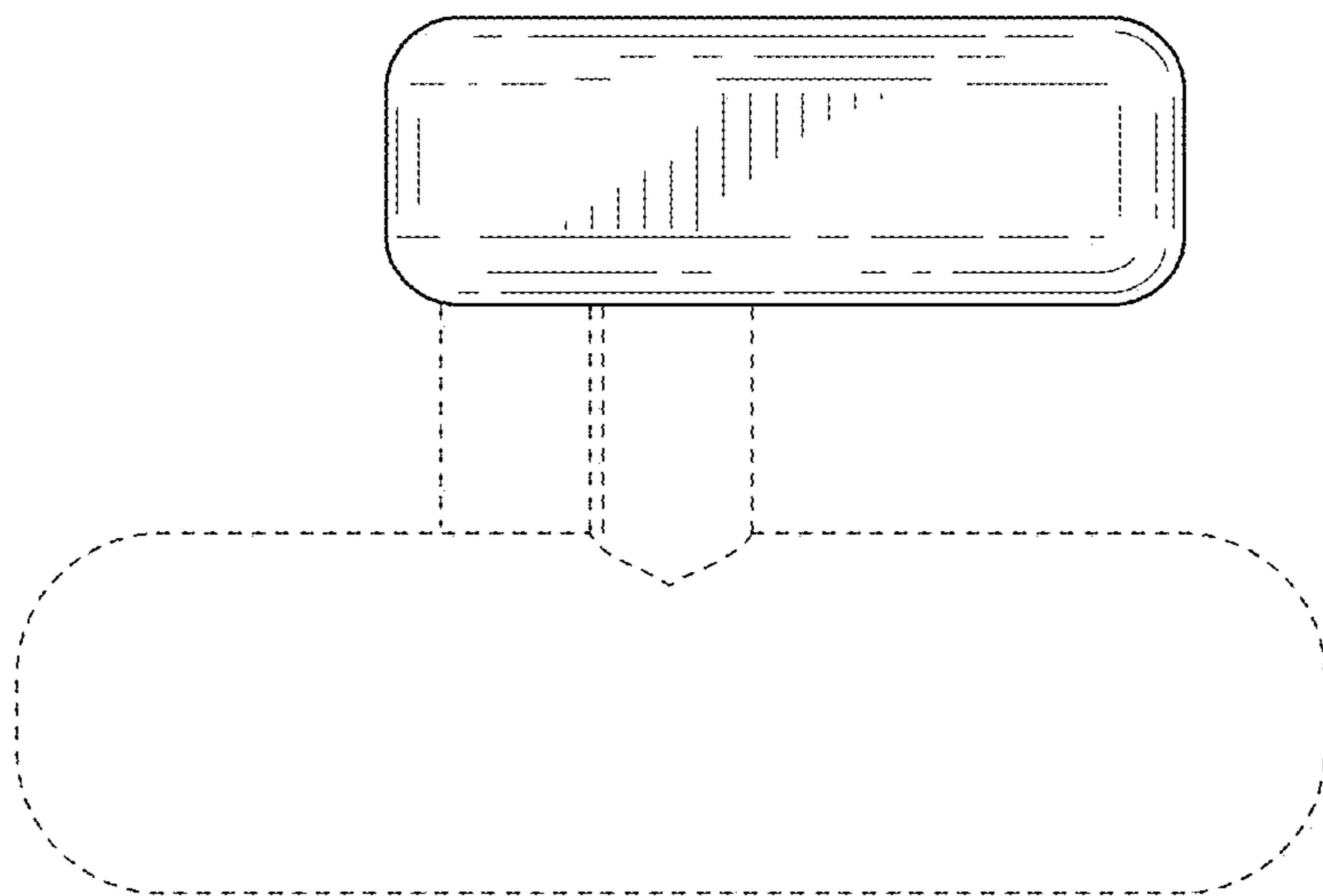


FIG. 95

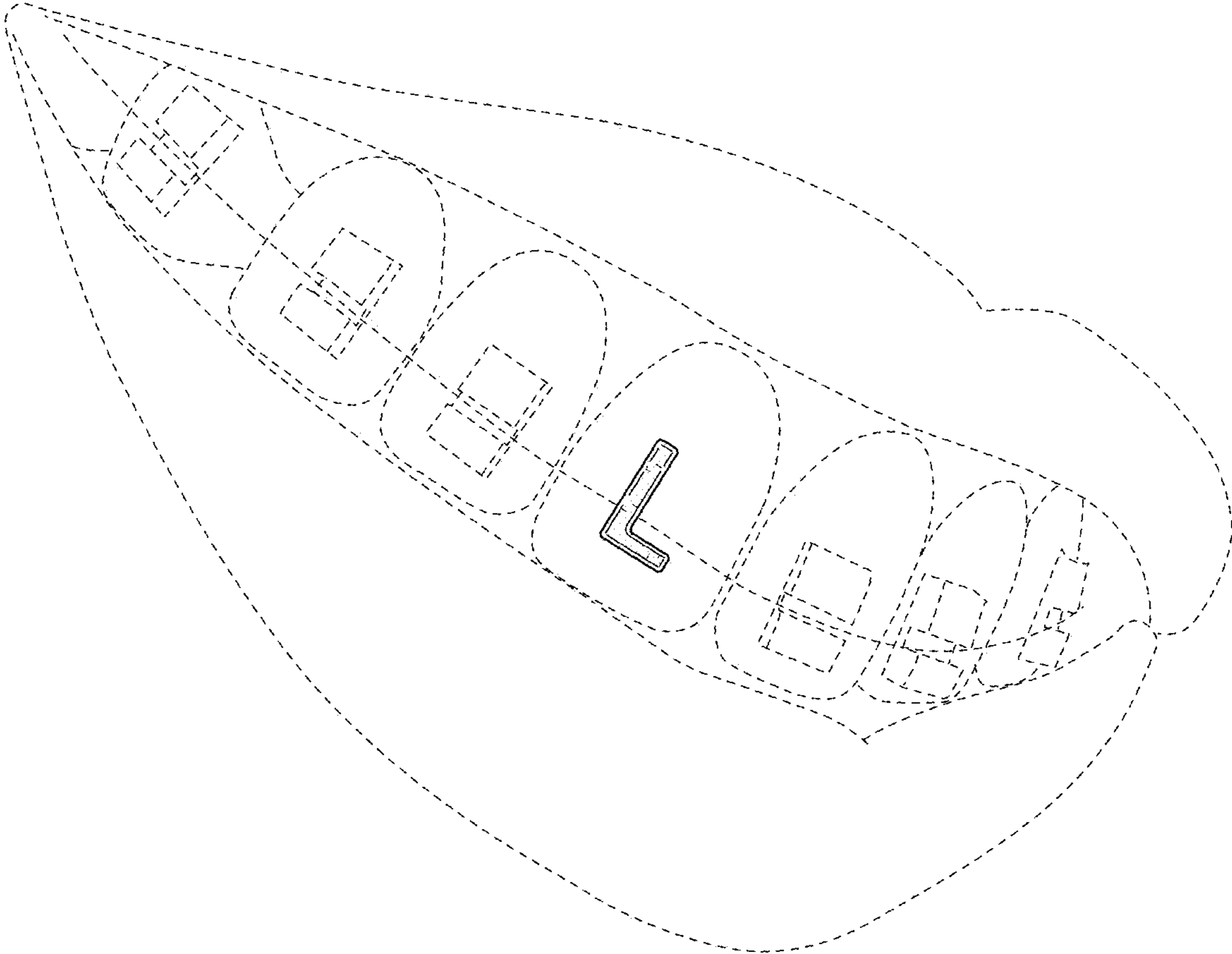


FIG. 96

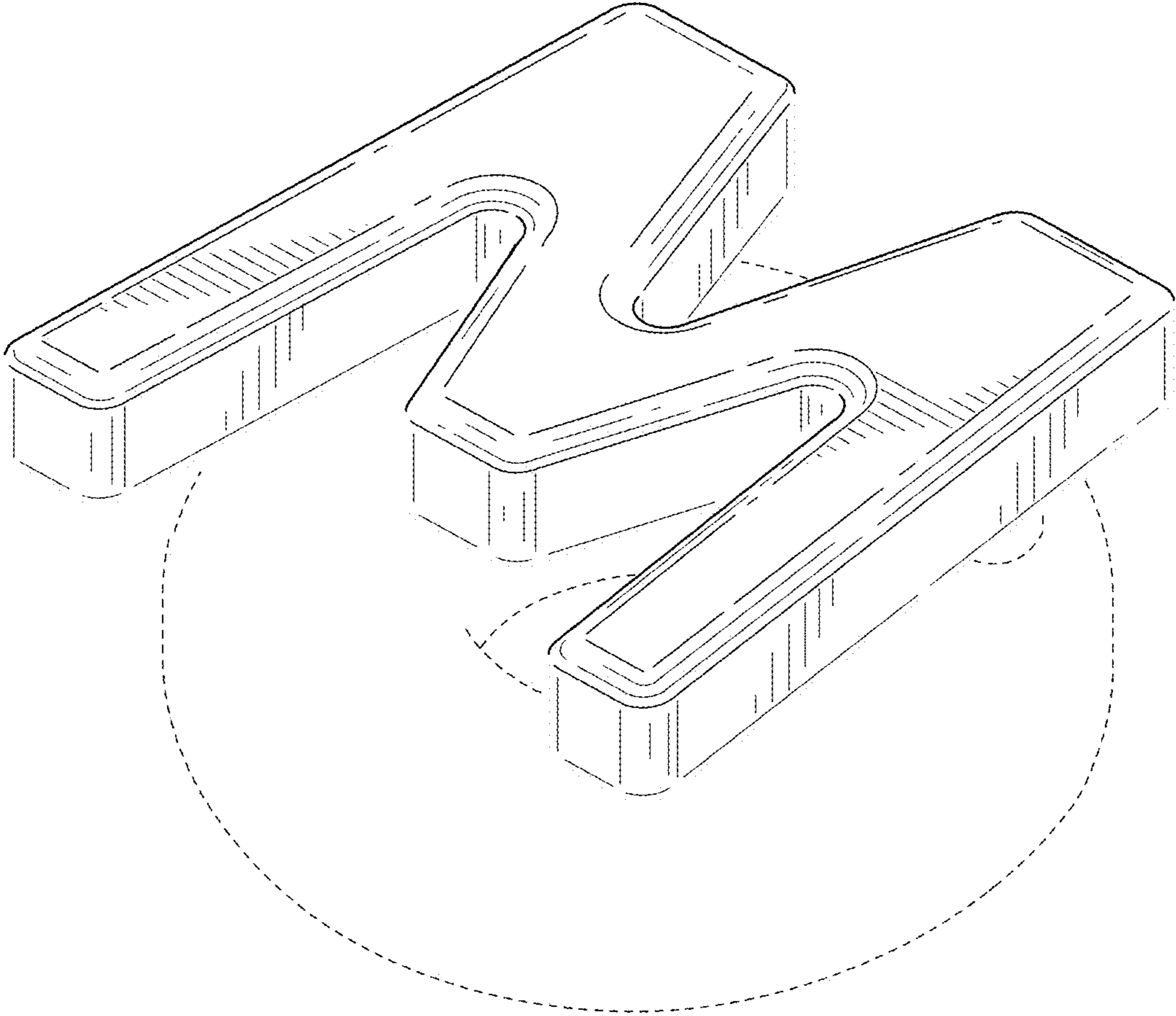


FIG. 97

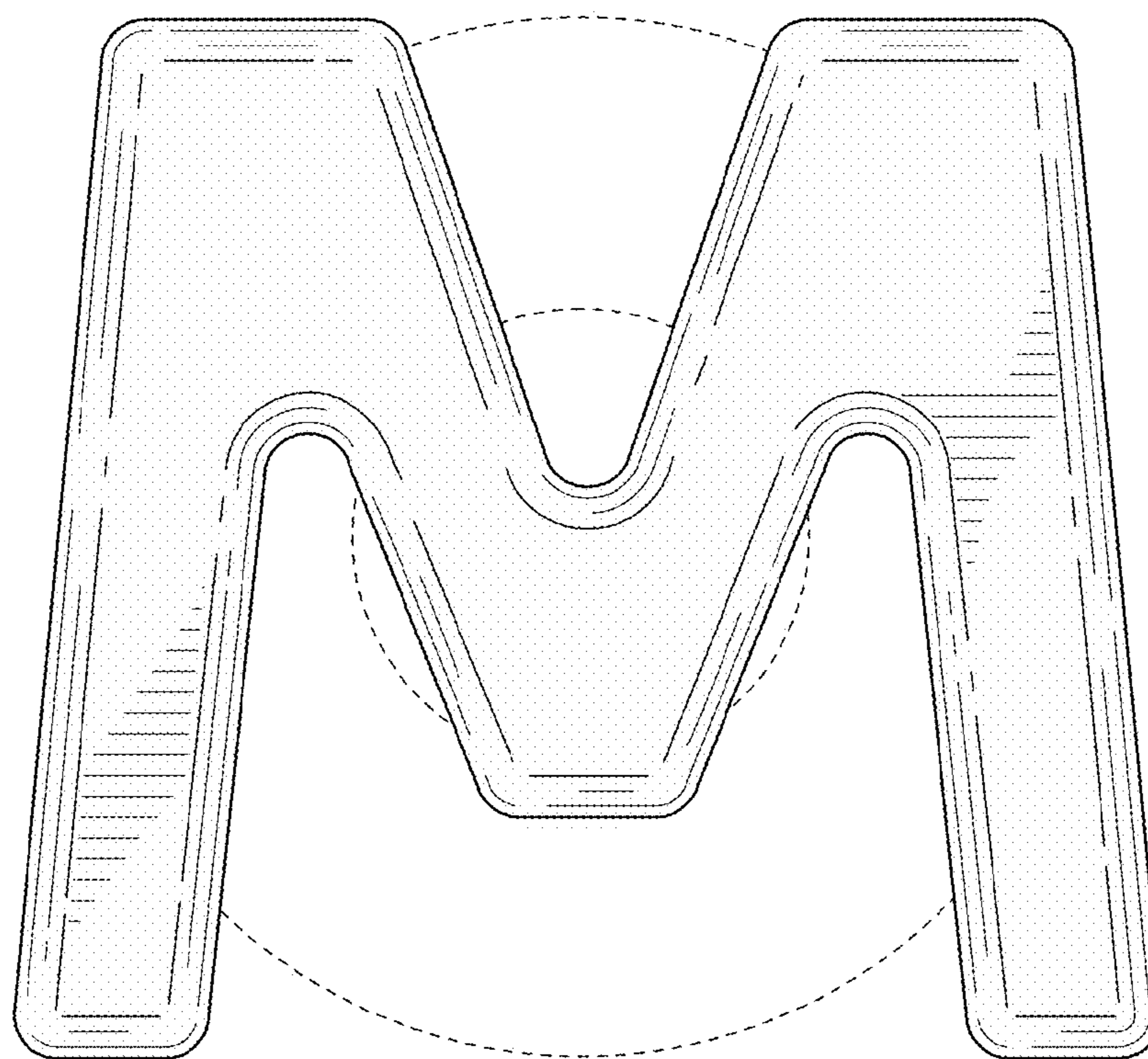


FIG. 98

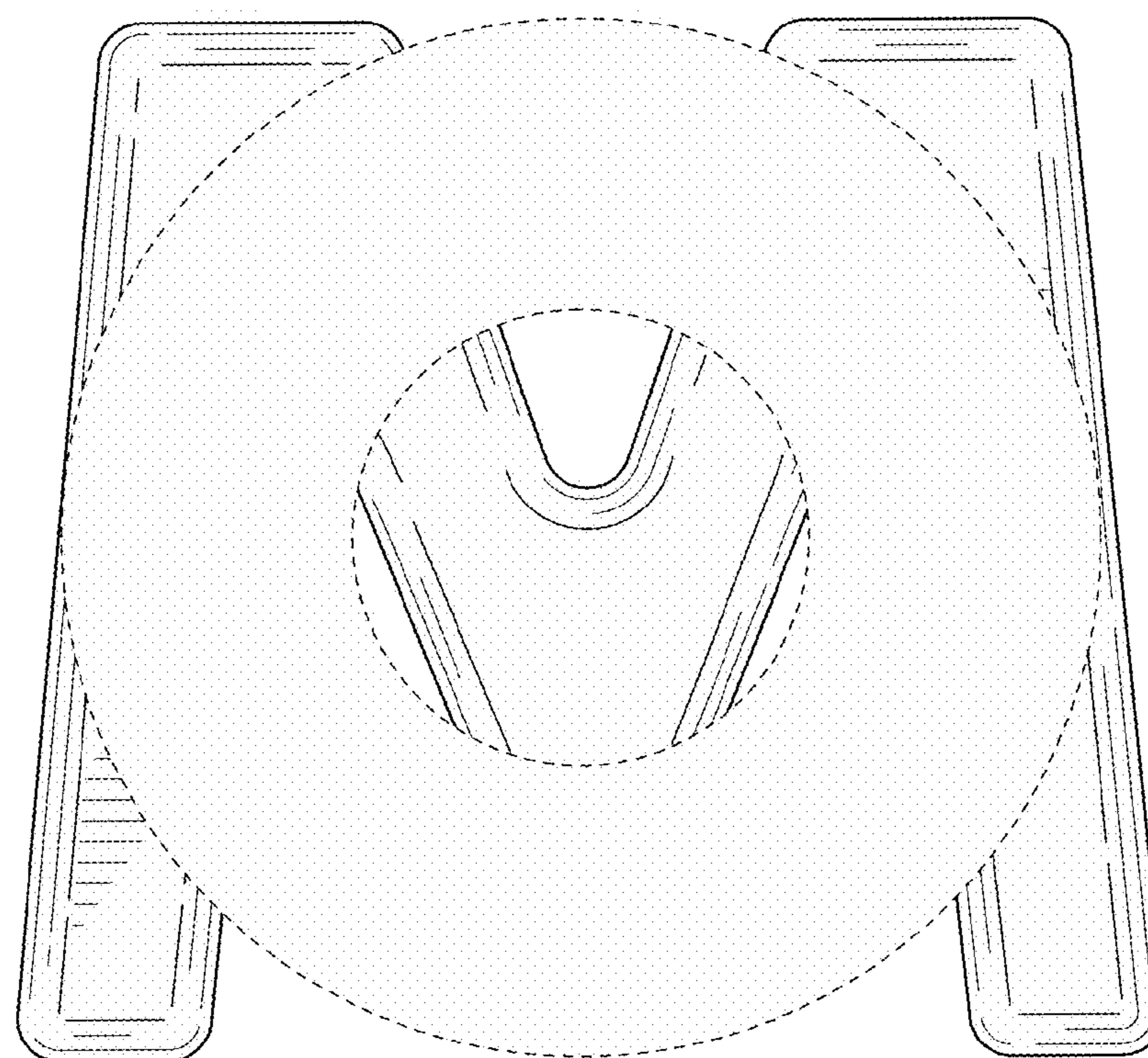


FIG. 99

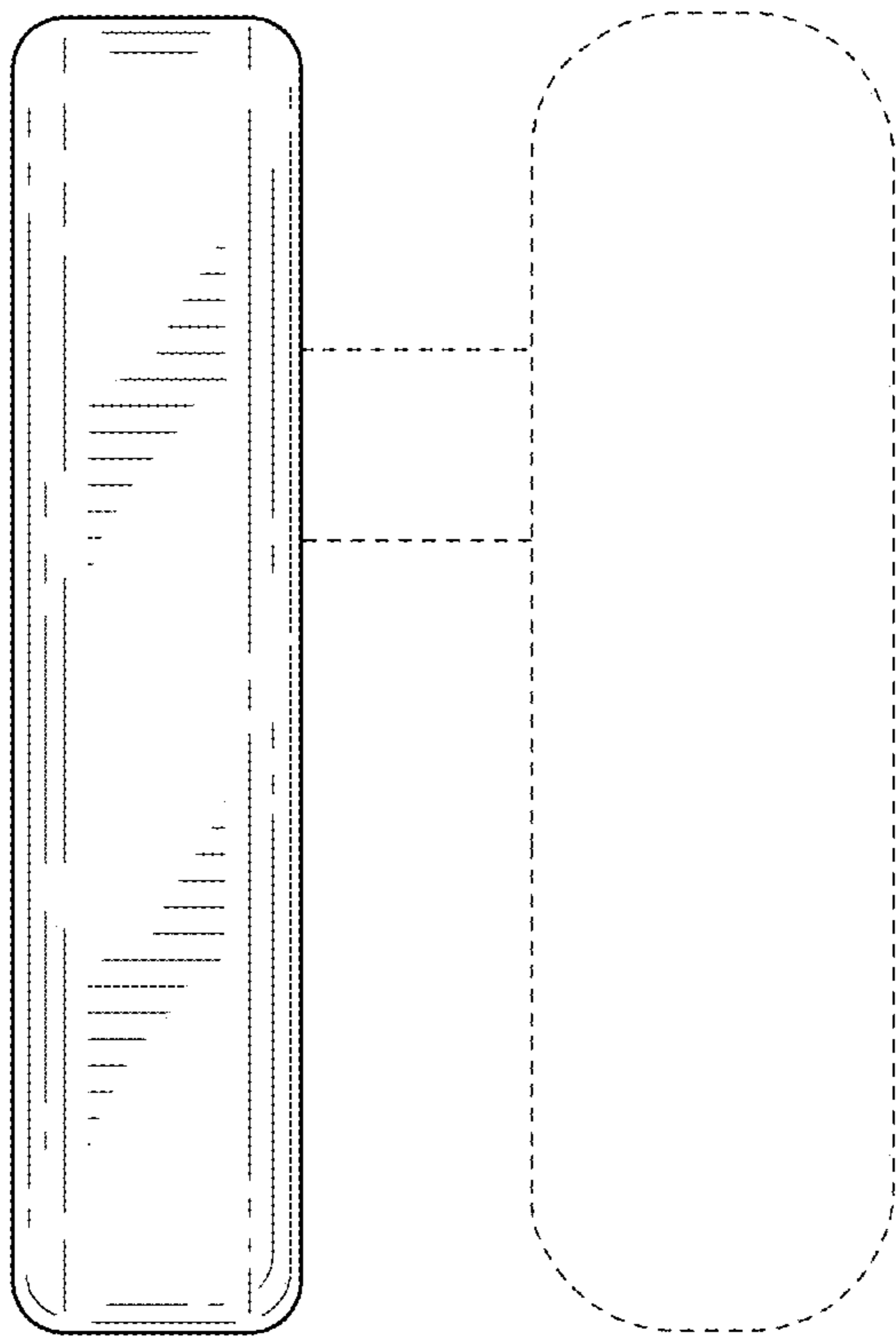


FIG. 100

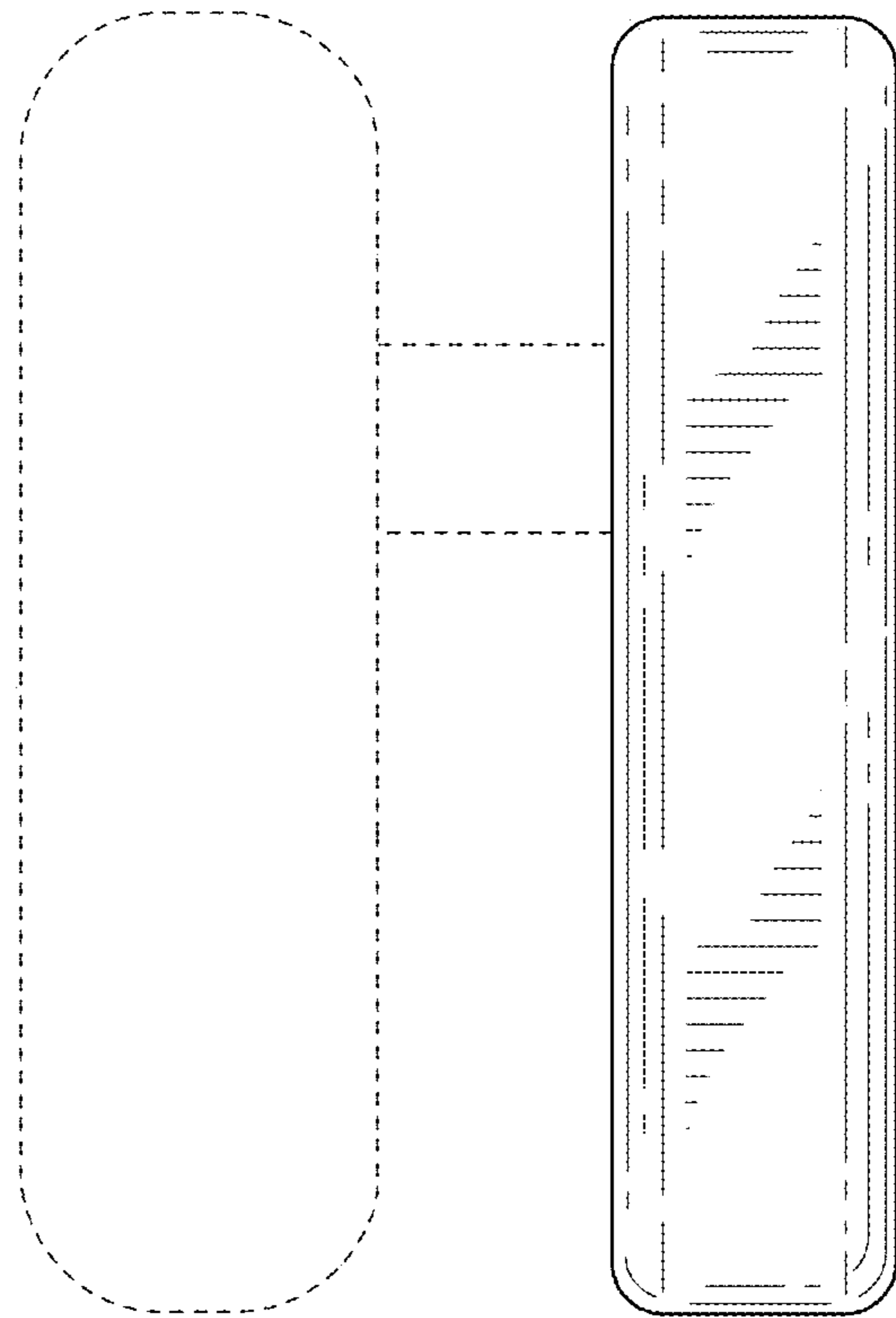


FIG. 101

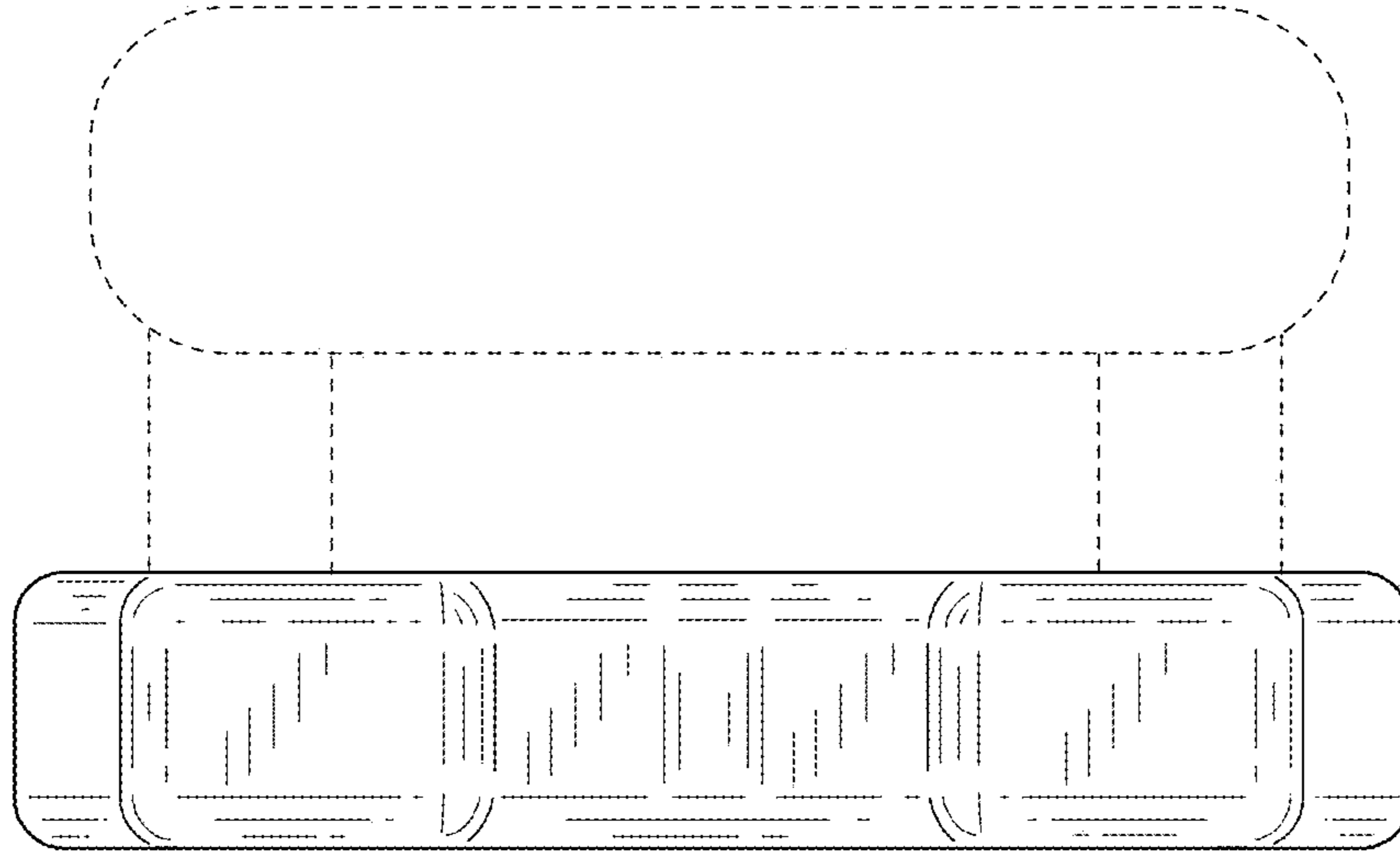


FIG. 102

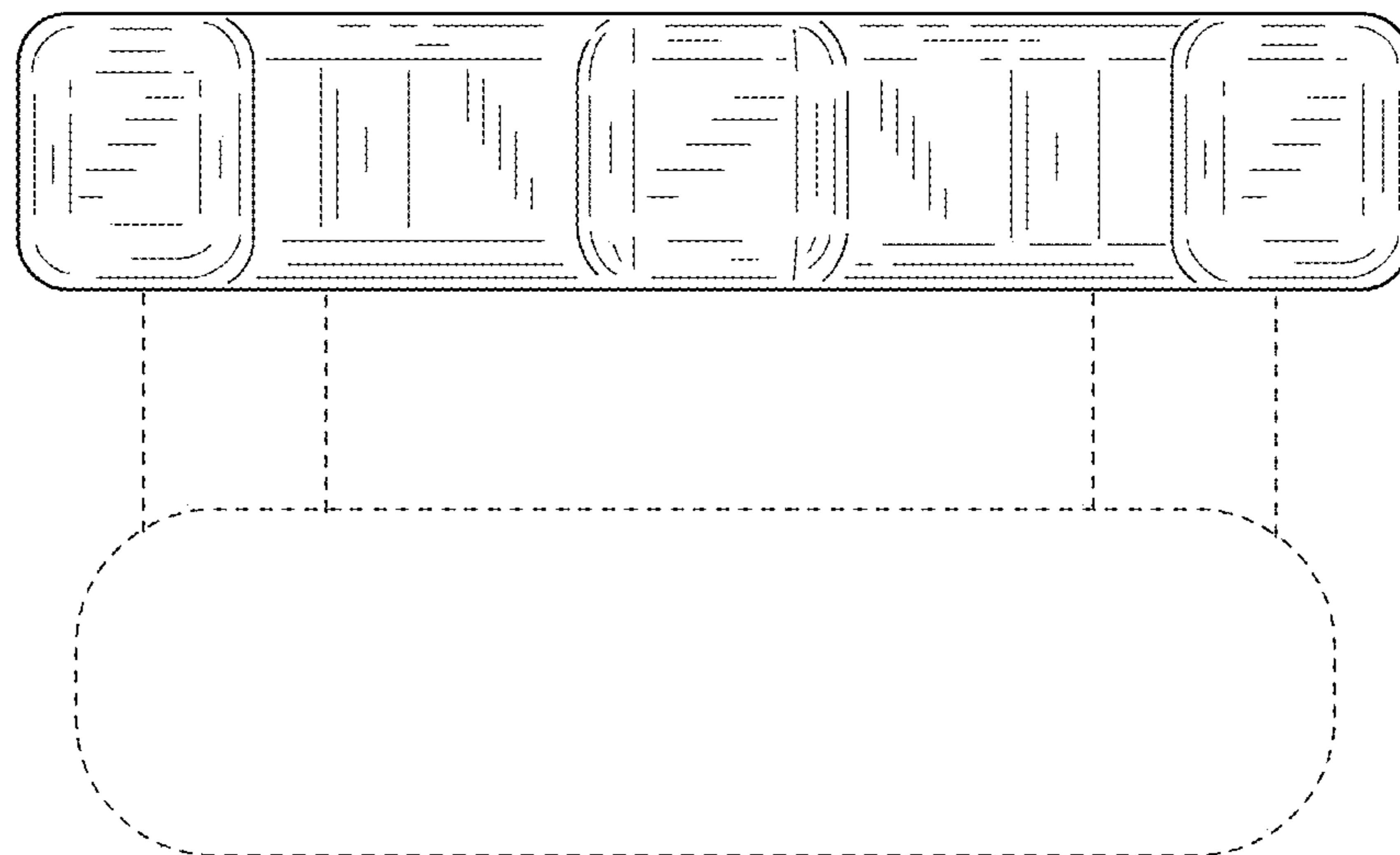


FIG. 103

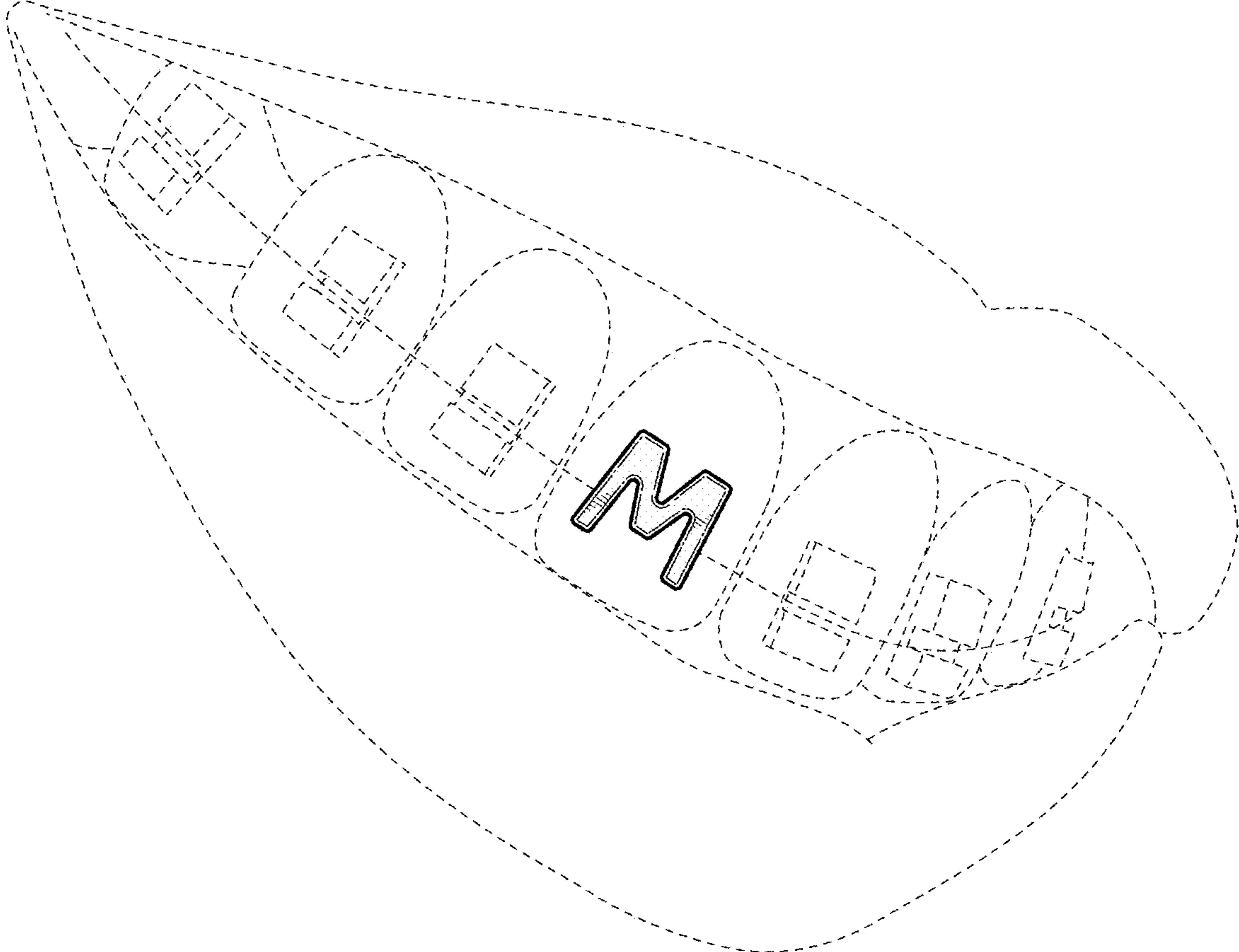


FIG. 104

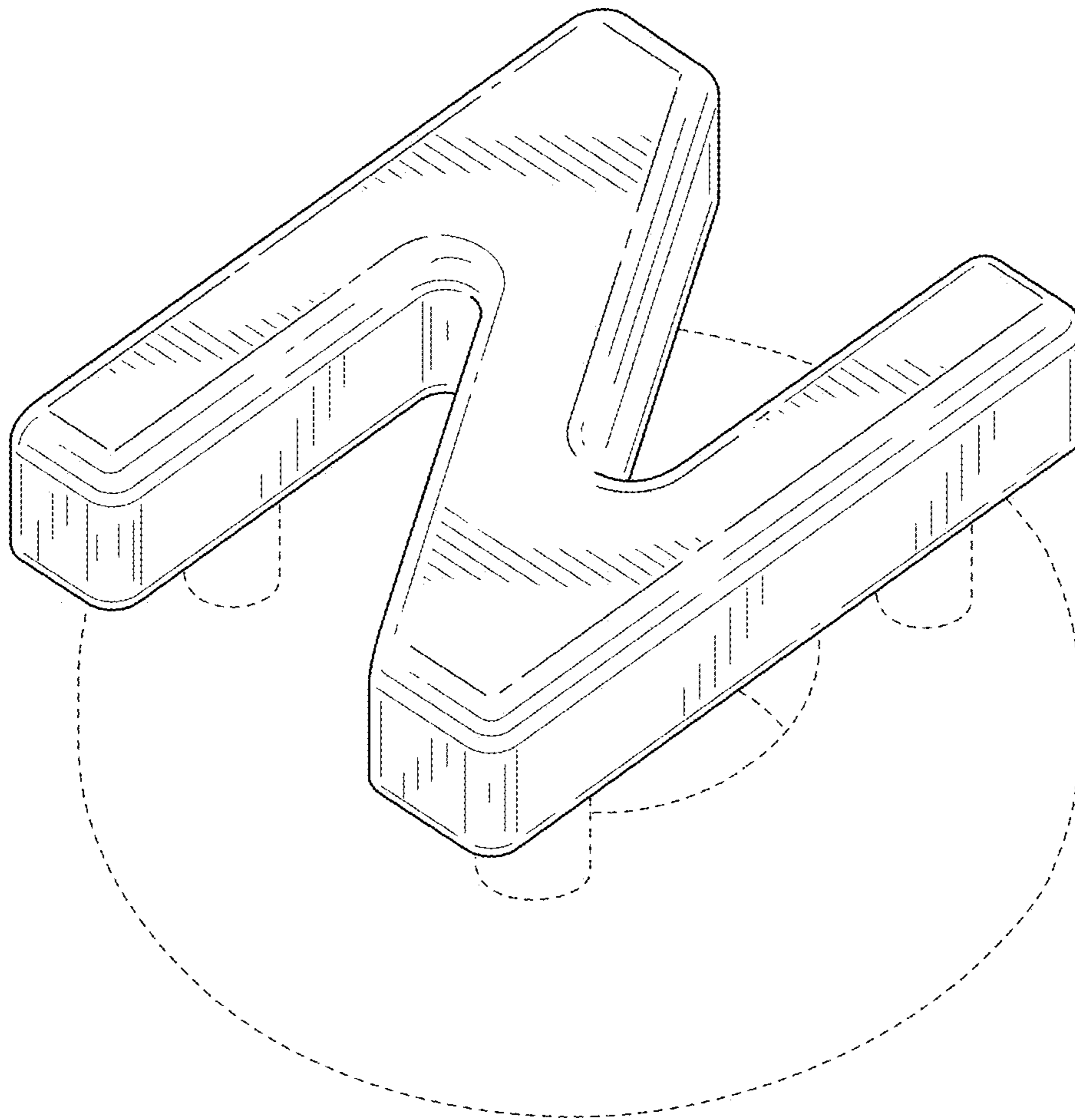


FIG. 105

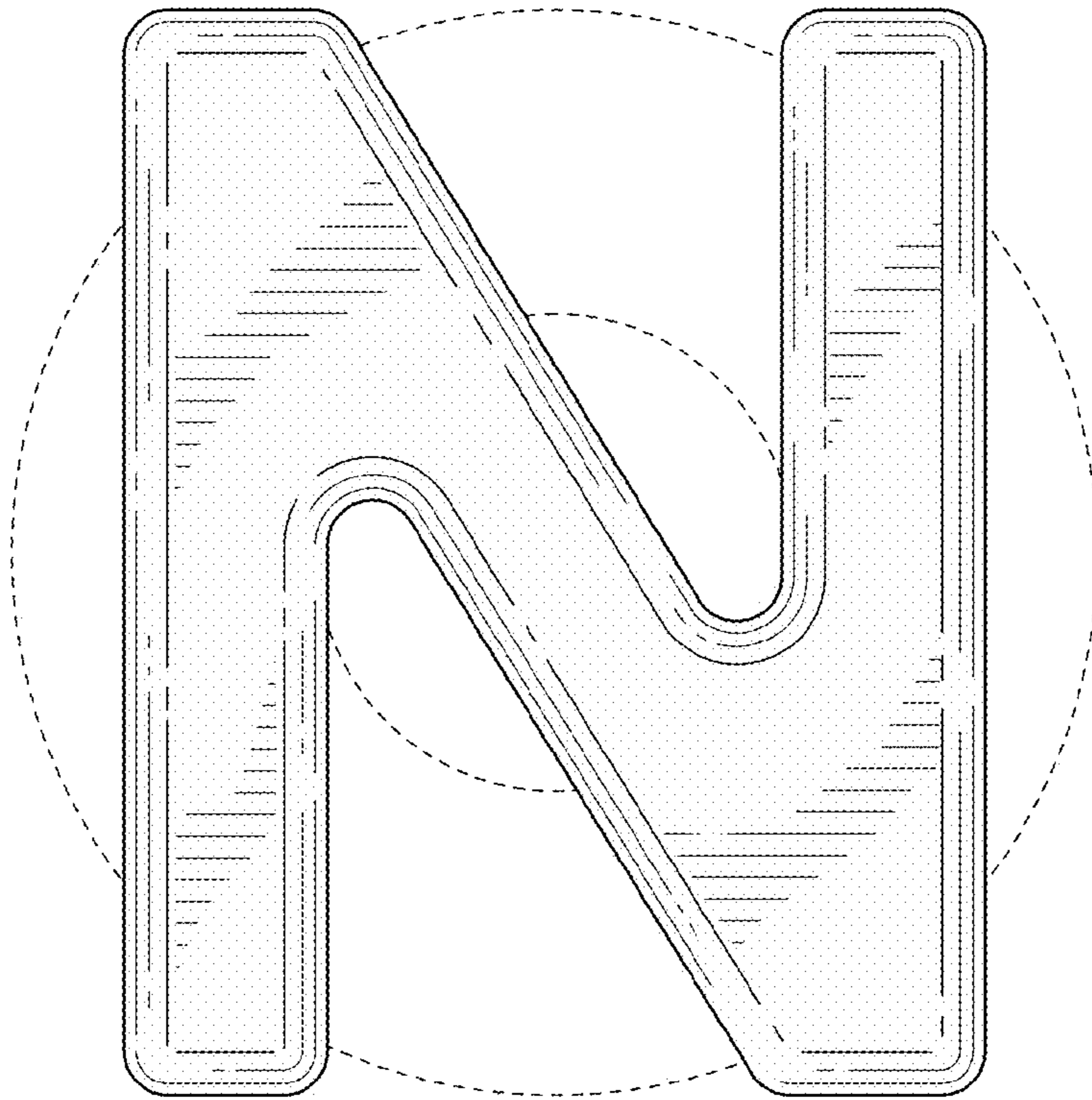


FIG. 106

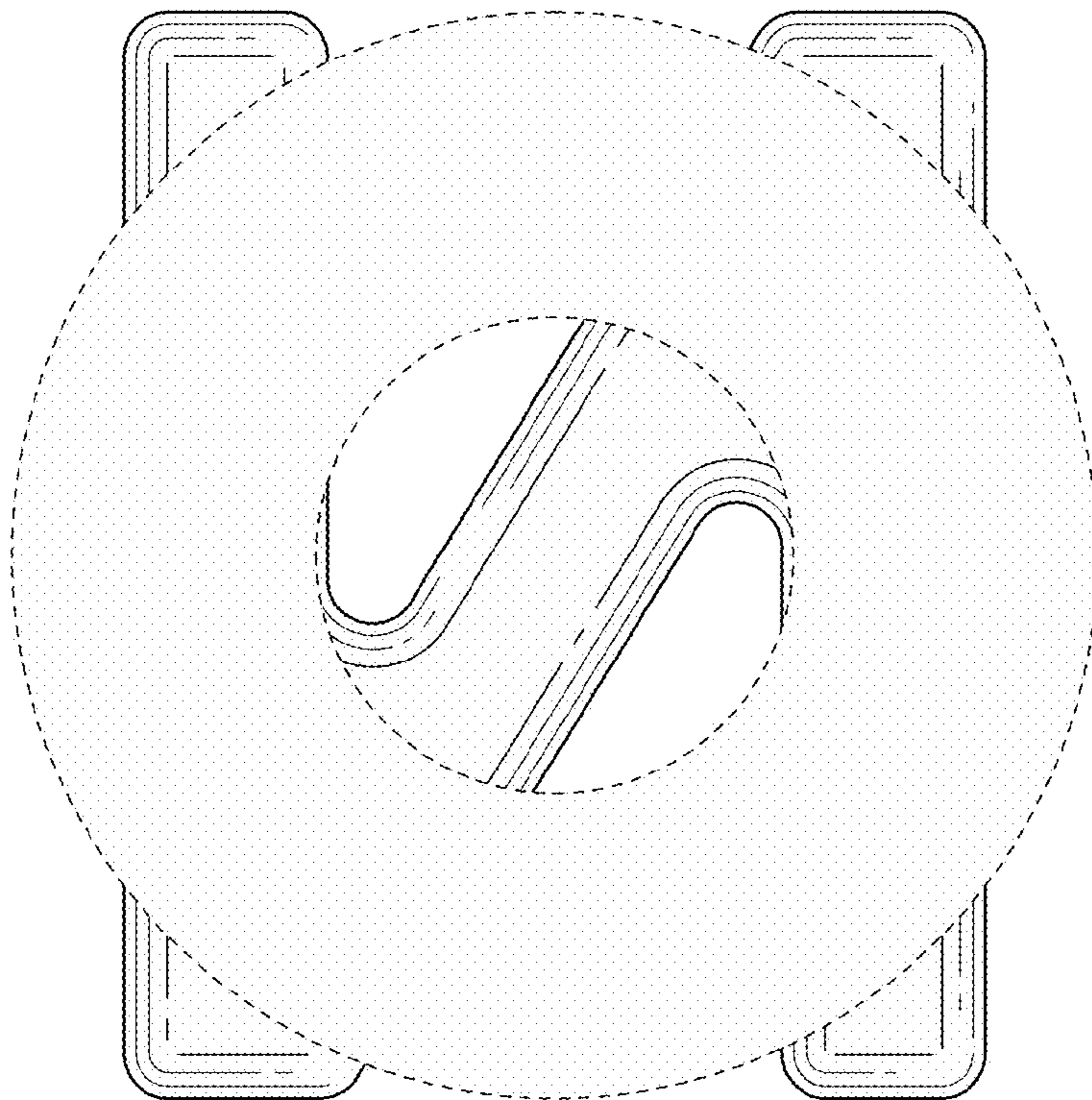


FIG. 107

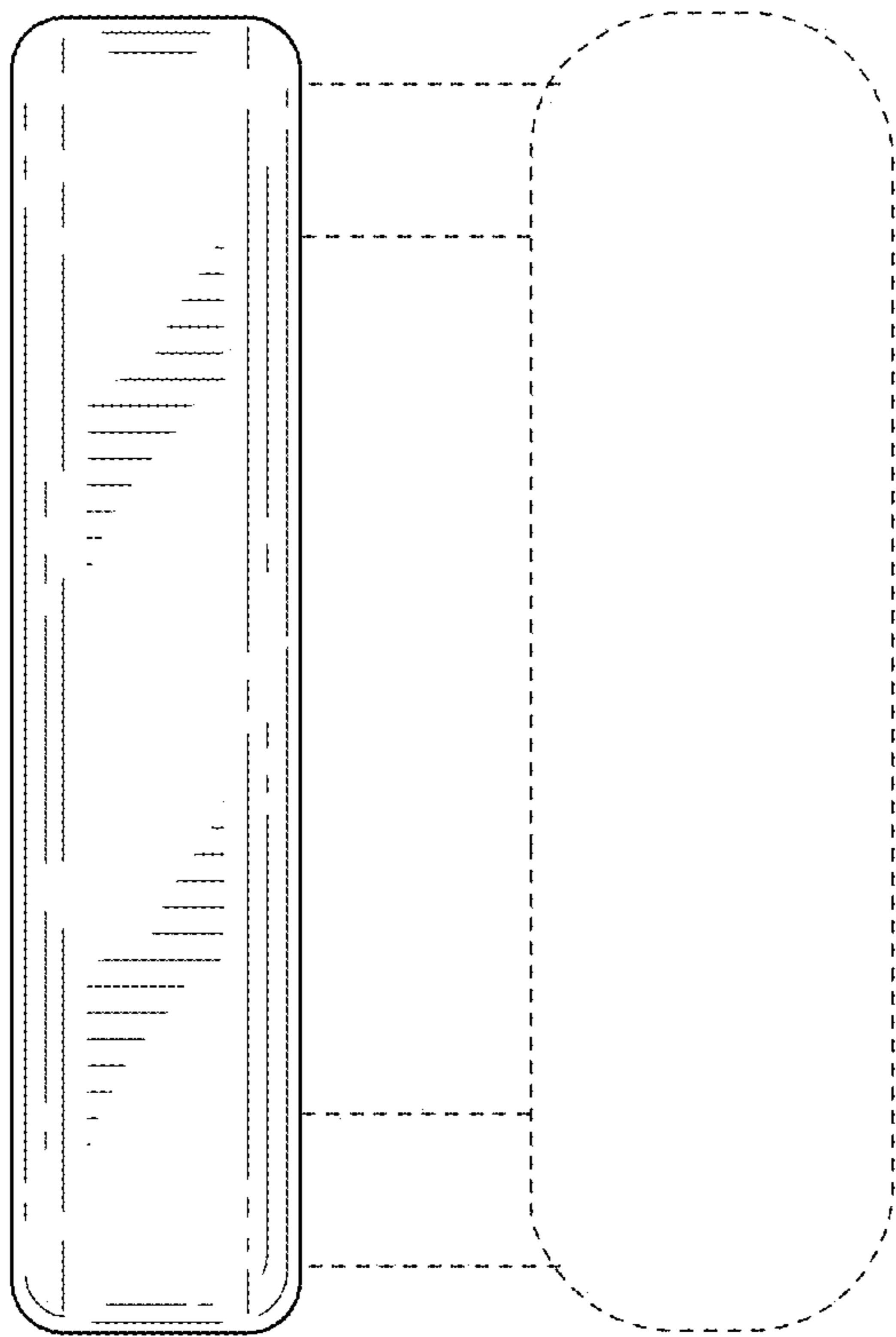


FIG. 108

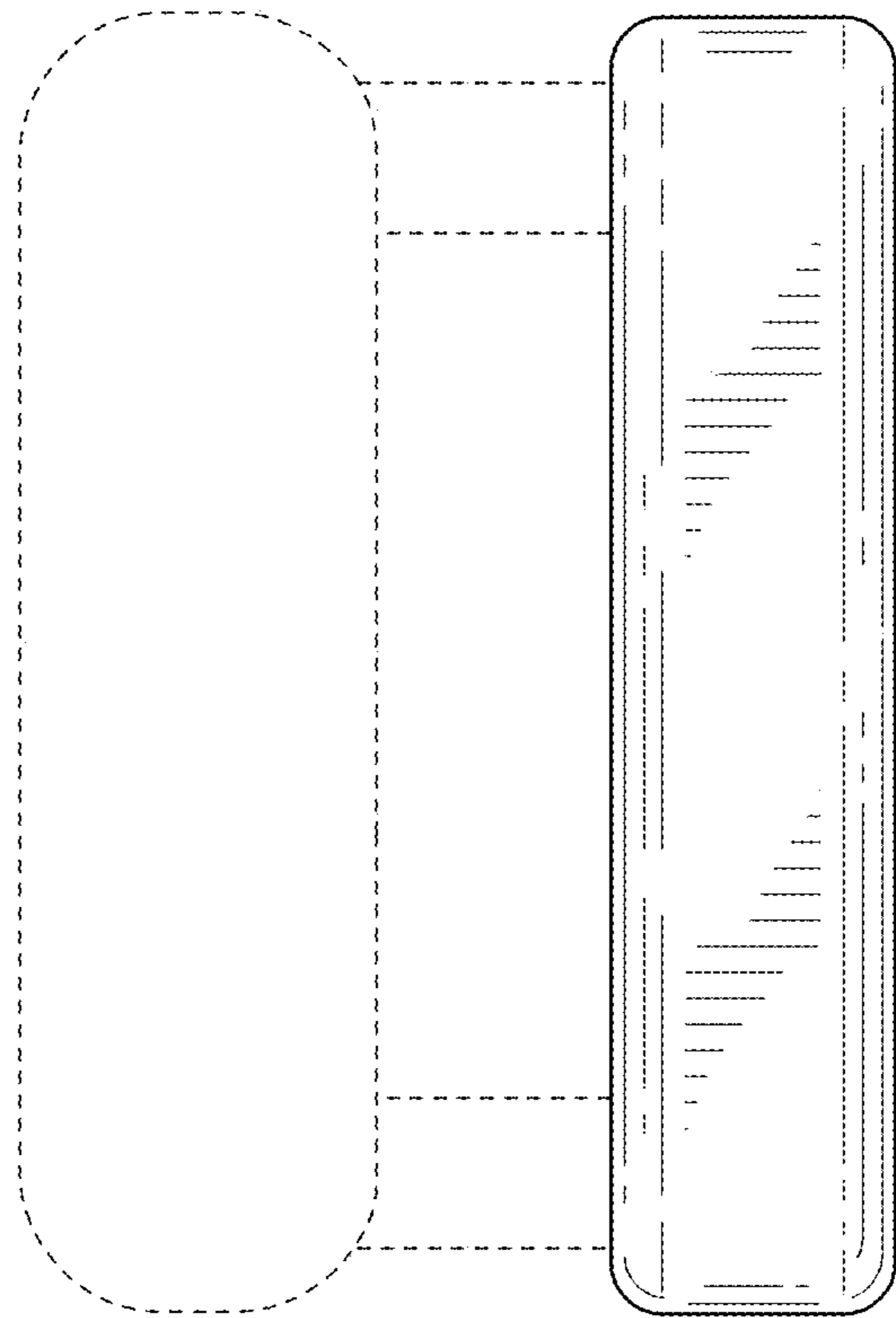


FIG. 109

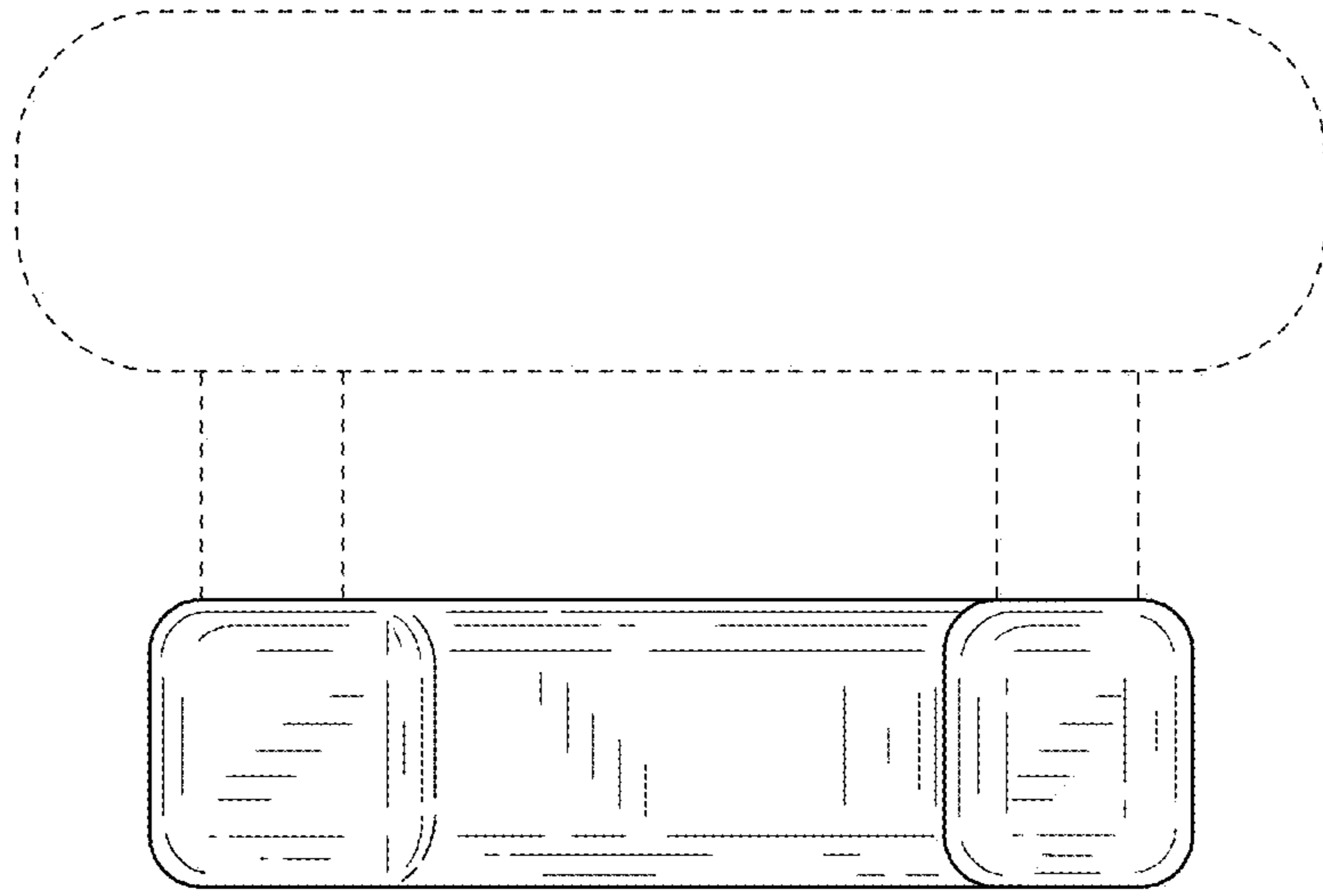


FIG. 110

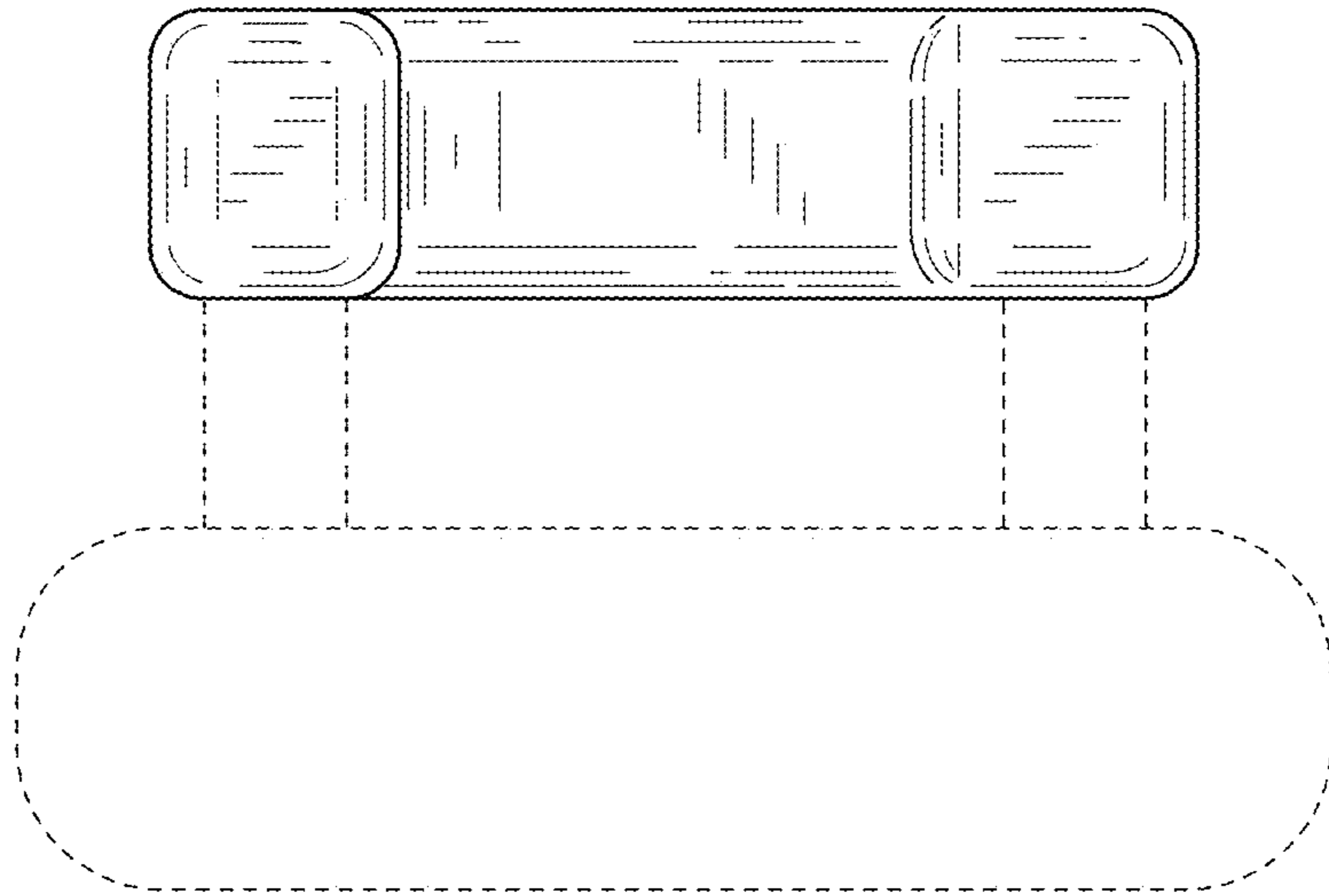


FIG. 111

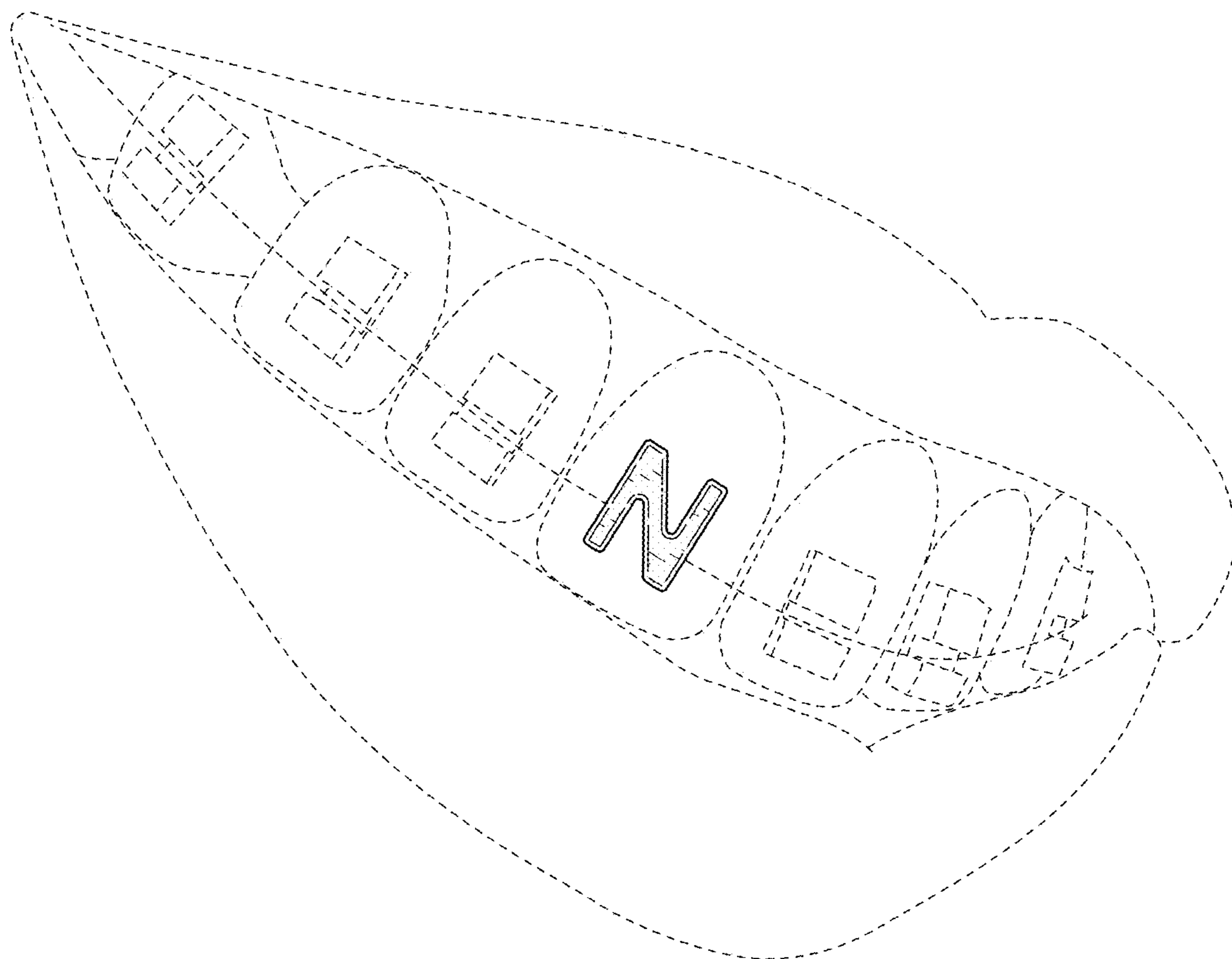


FIG. 112

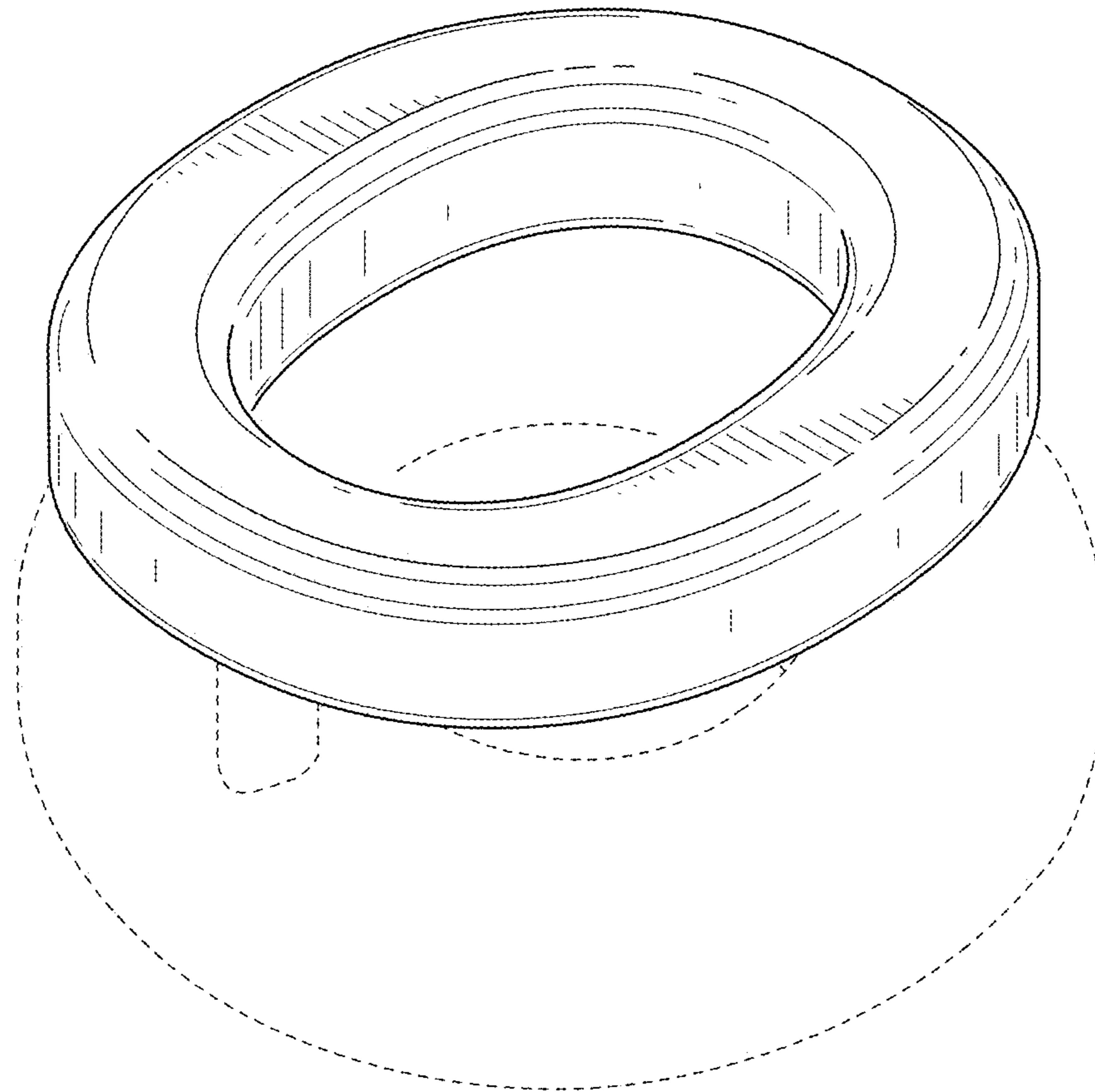


FIG. 113

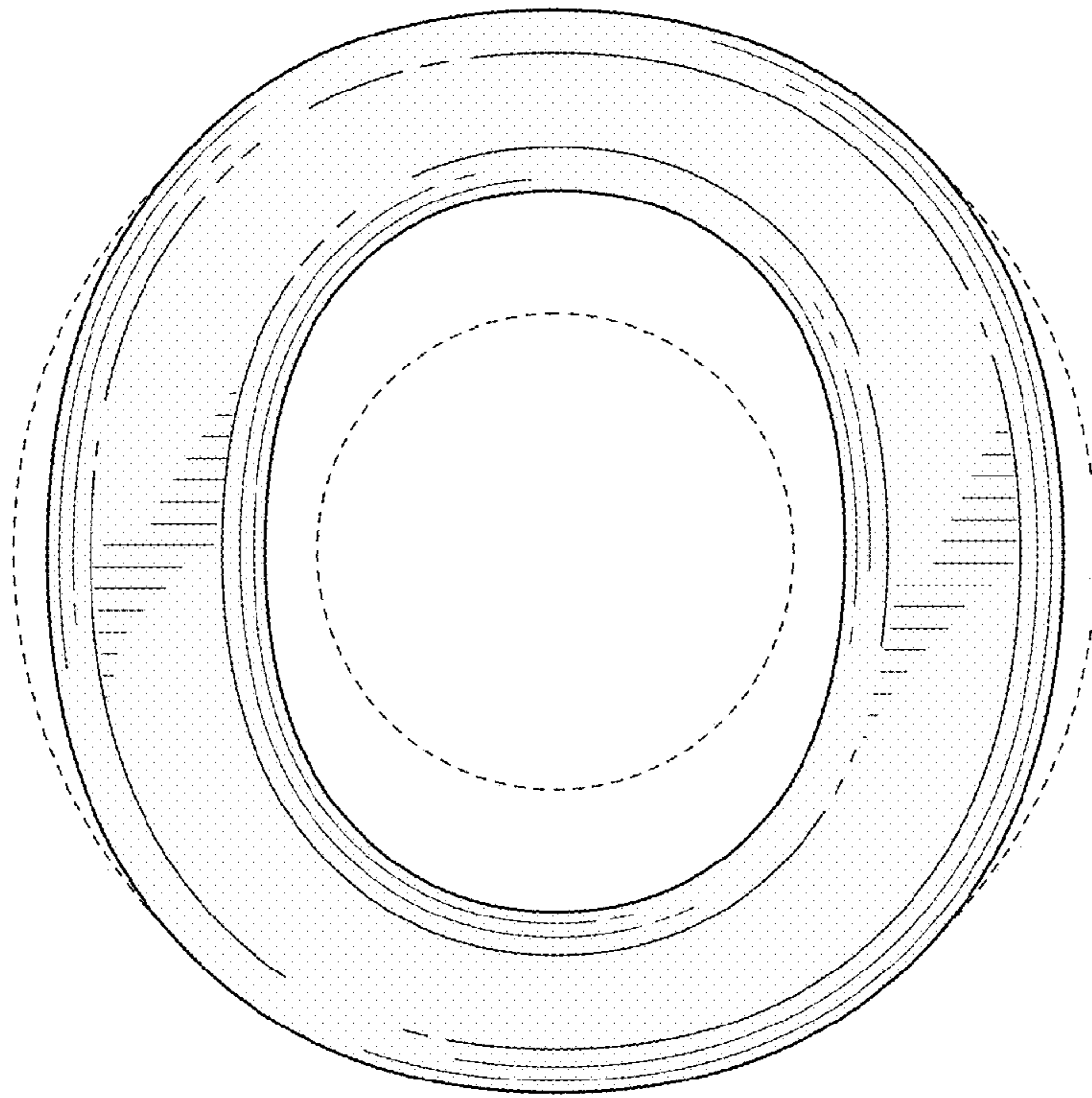


FIG. 114

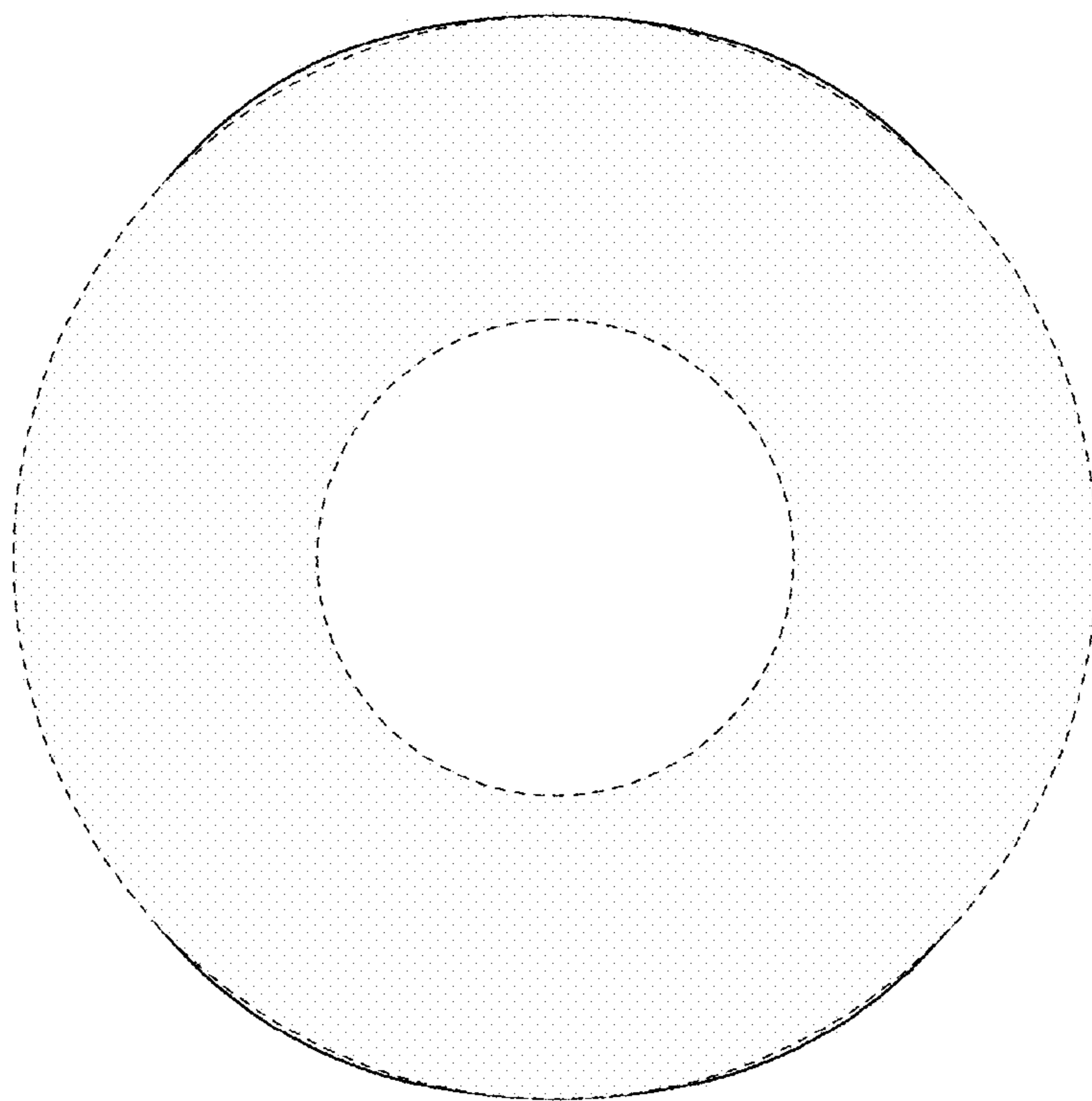


FIG. 115

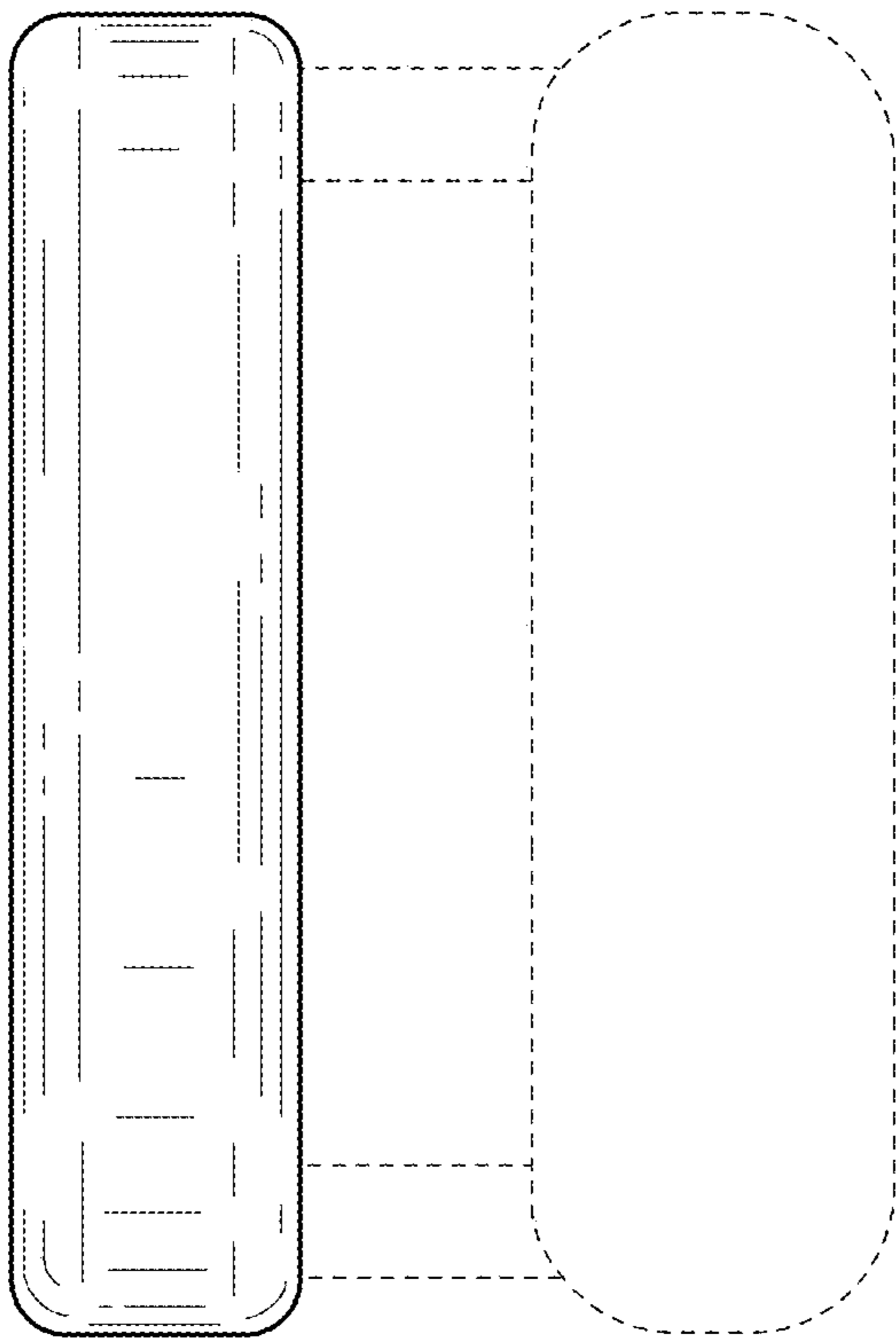


FIG. 116

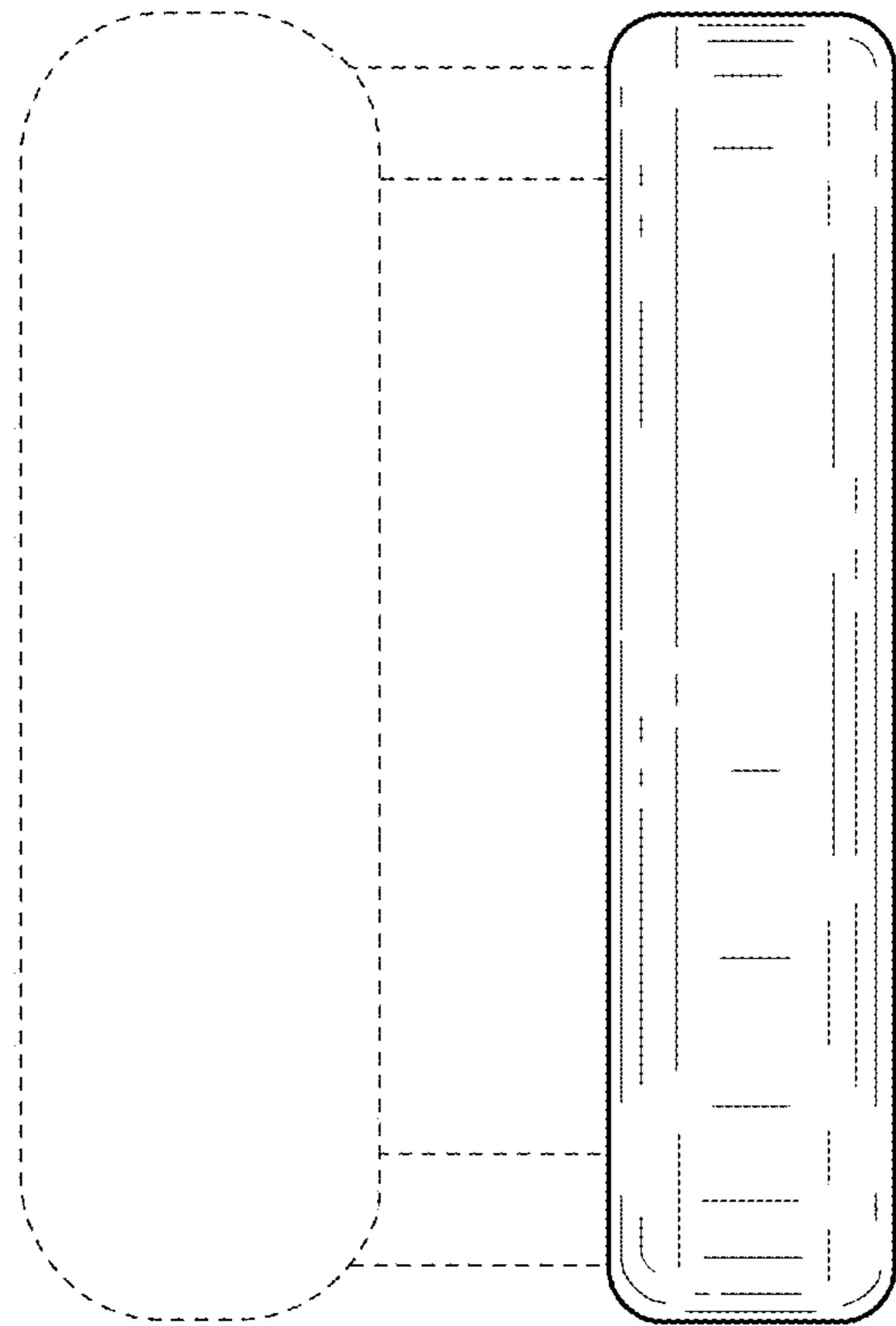


FIG. 117

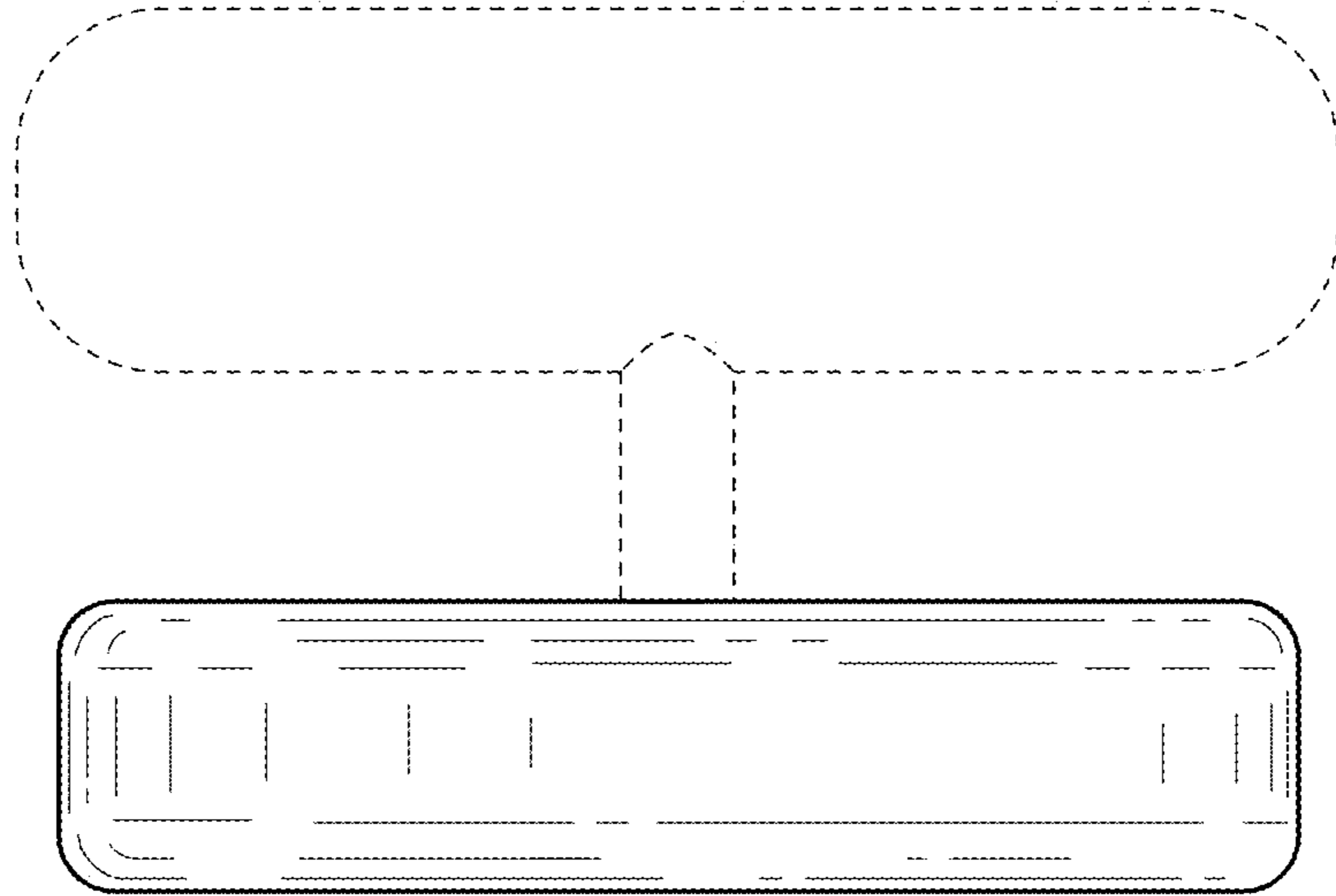


FIG. 118

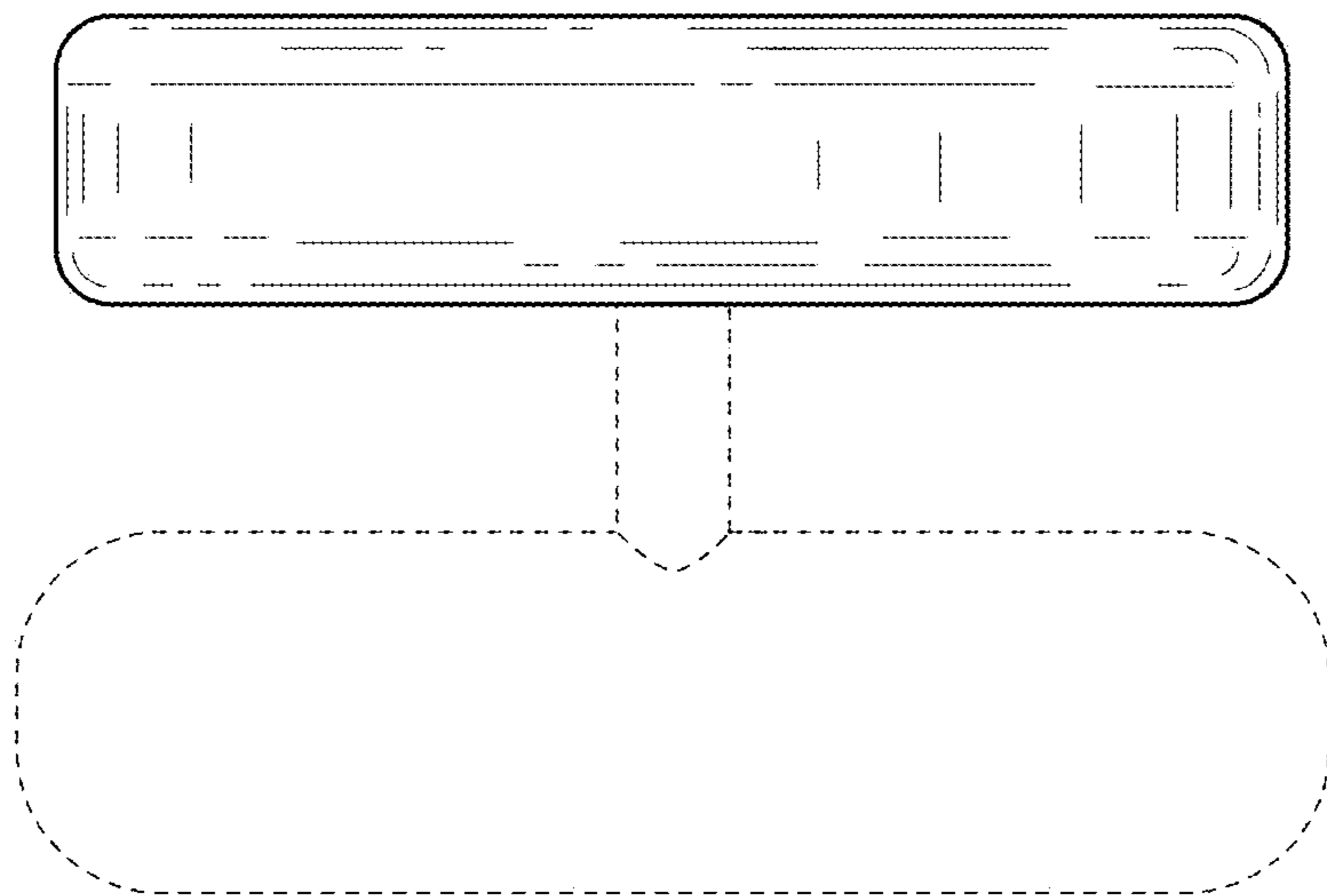


FIG. 119

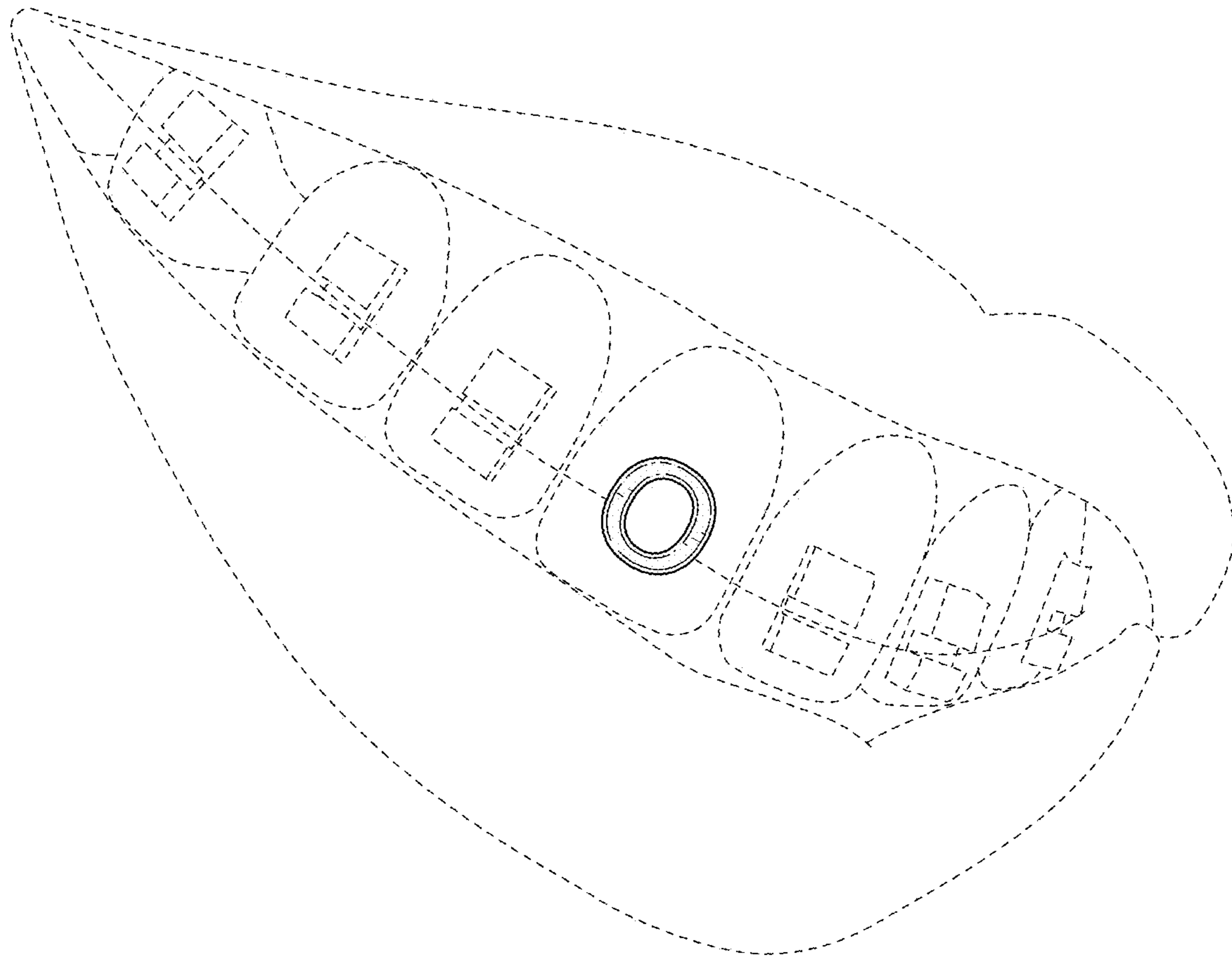


FIG. 120

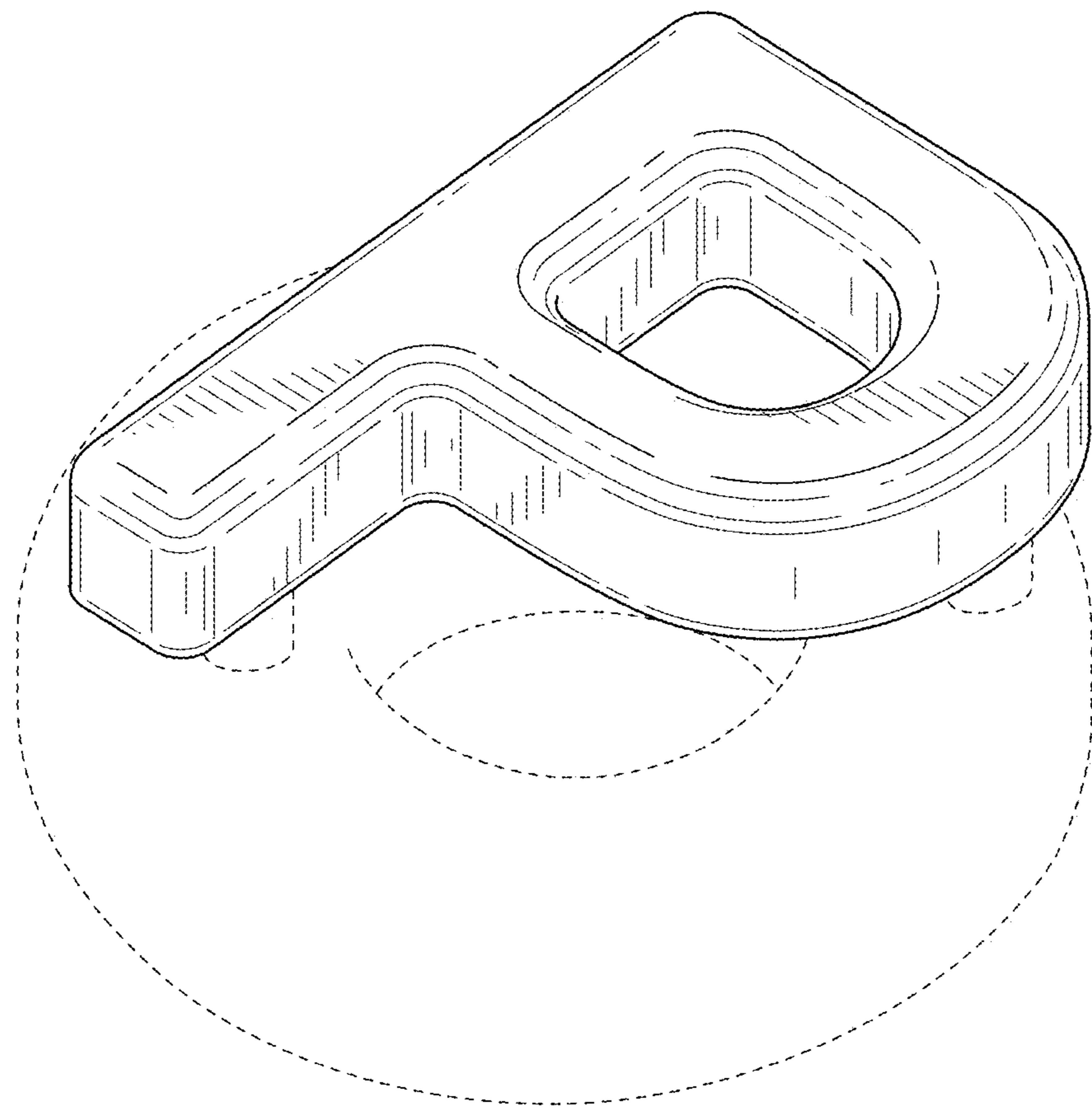


FIG. 121

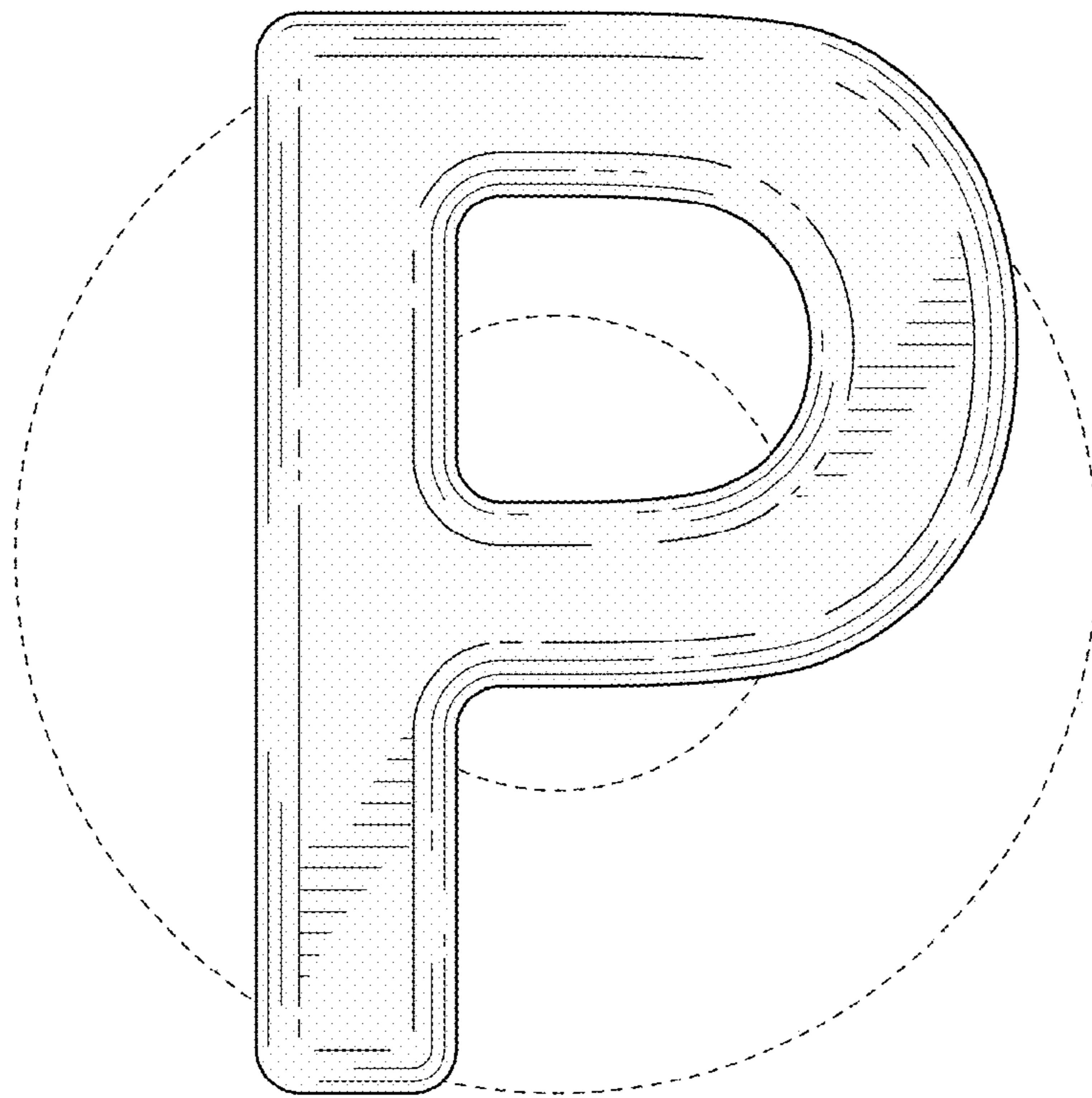


FIG. 122

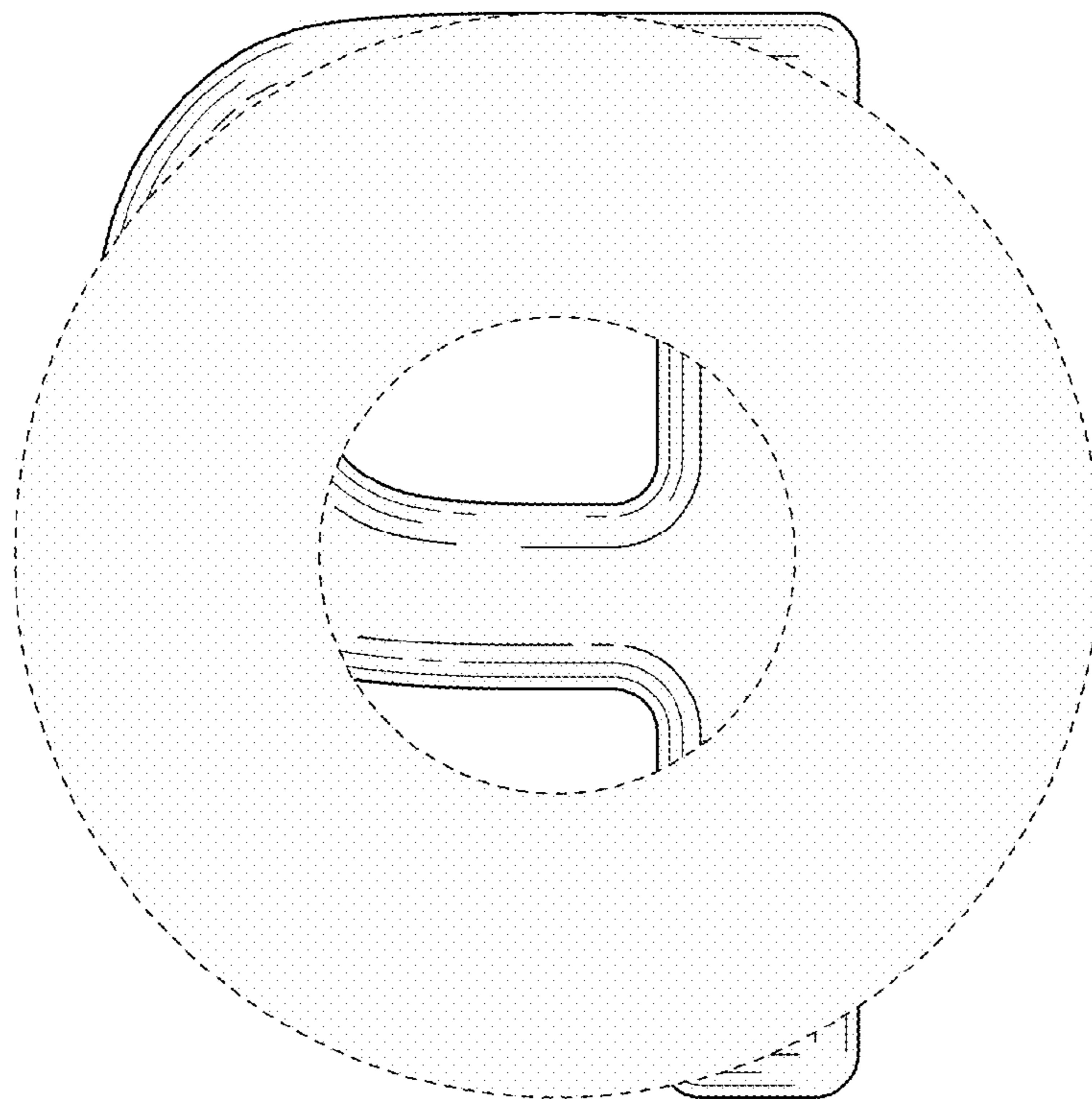


FIG. 123

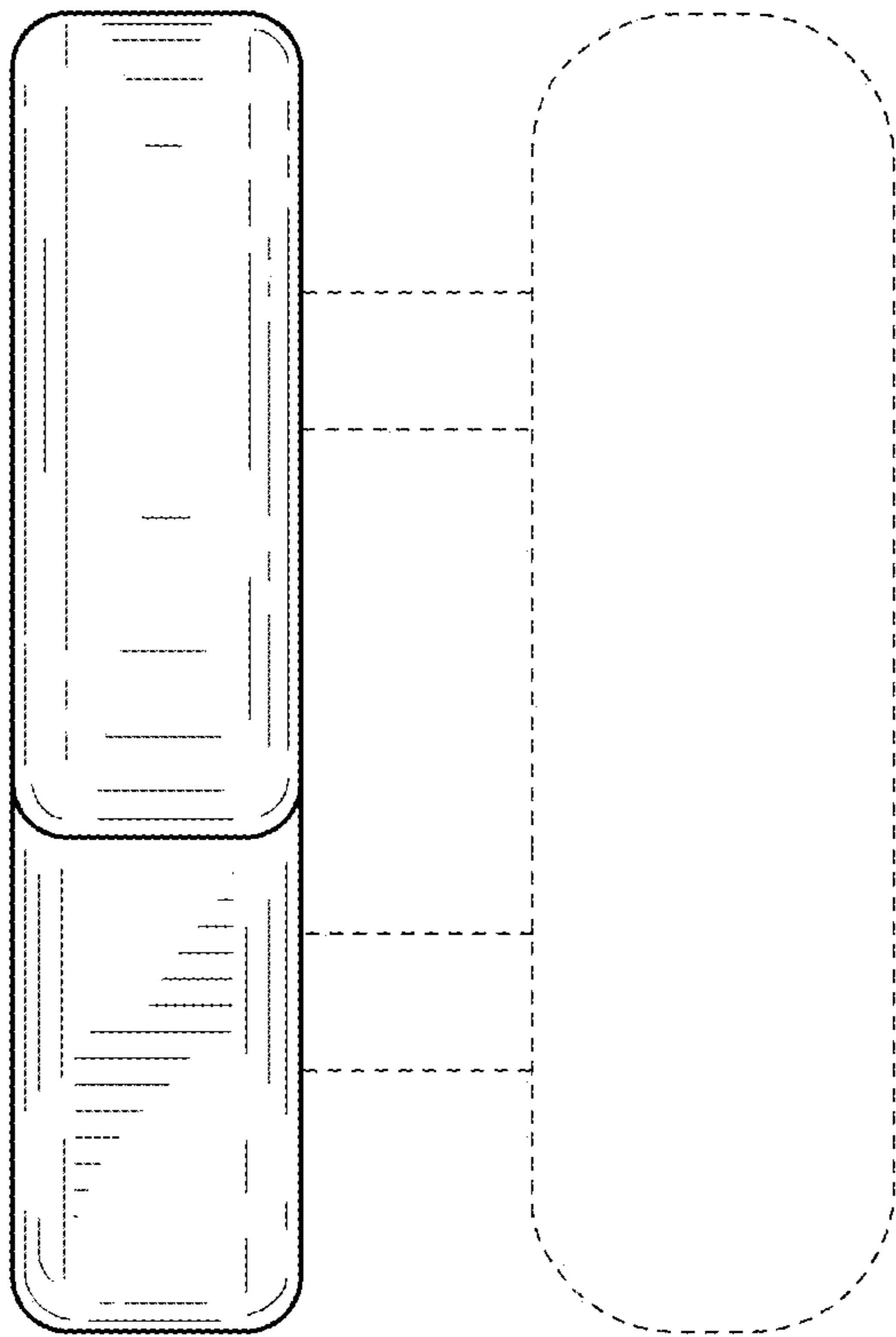


FIG. 124

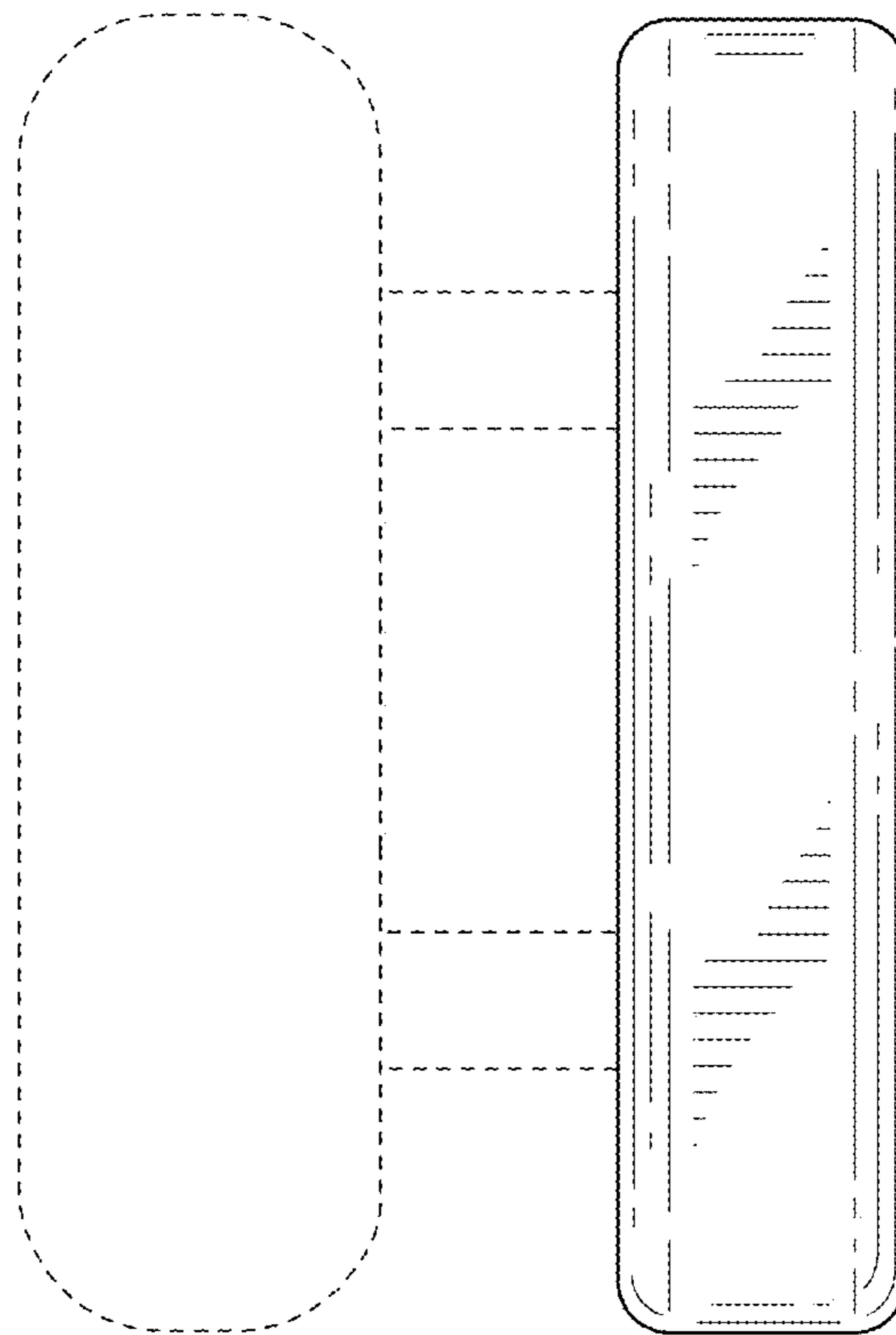


FIG. 125

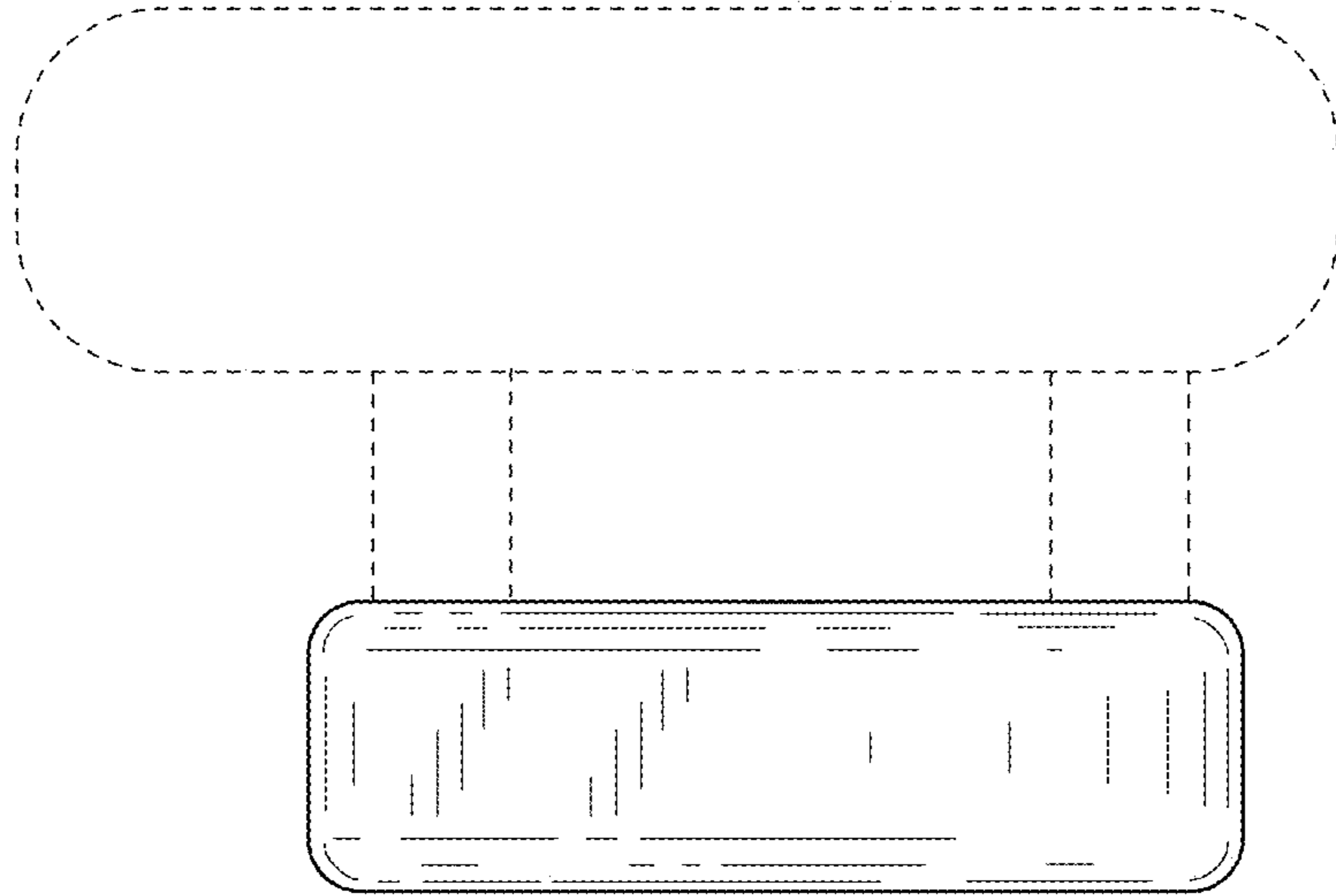


FIG. 126

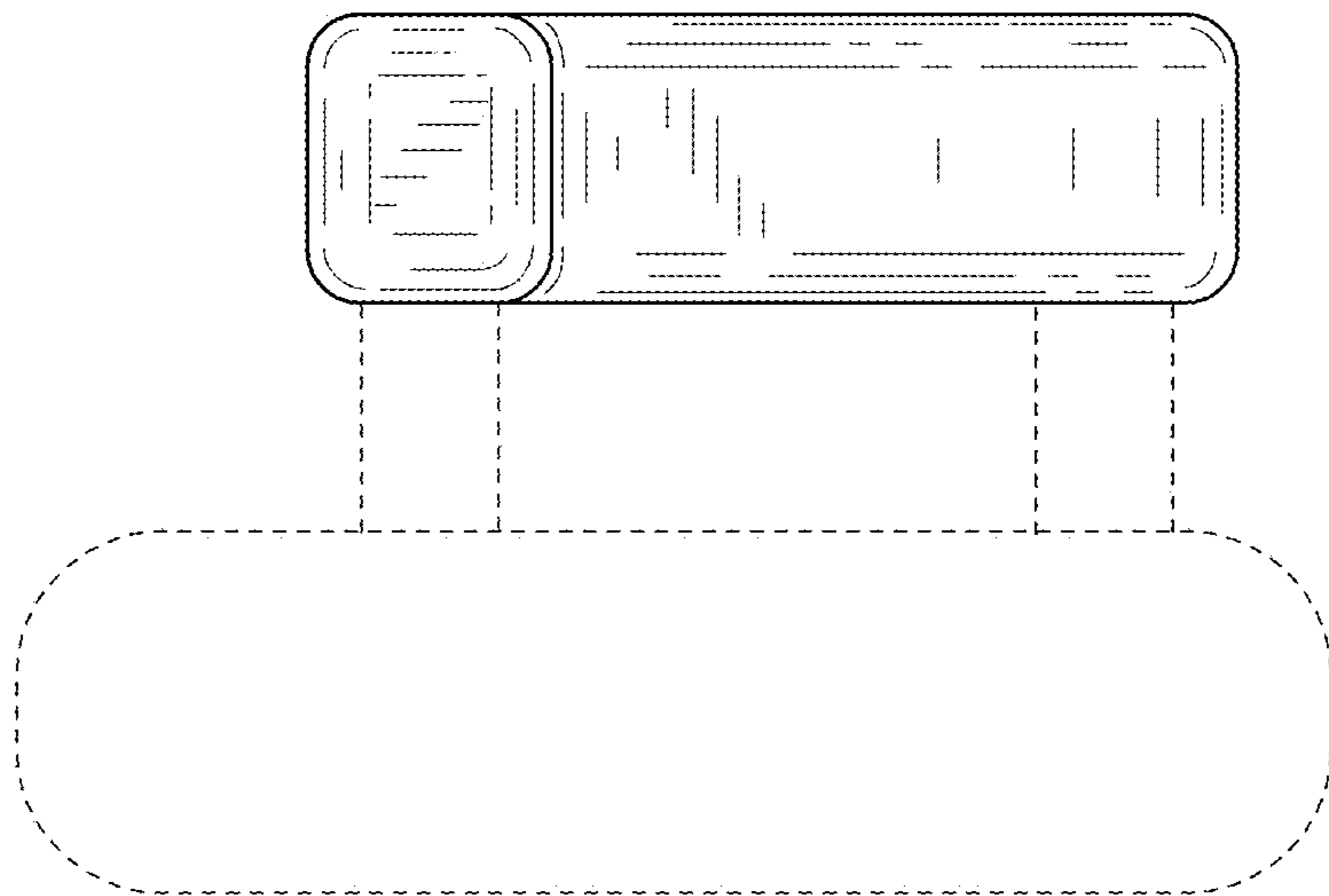


FIG. 127

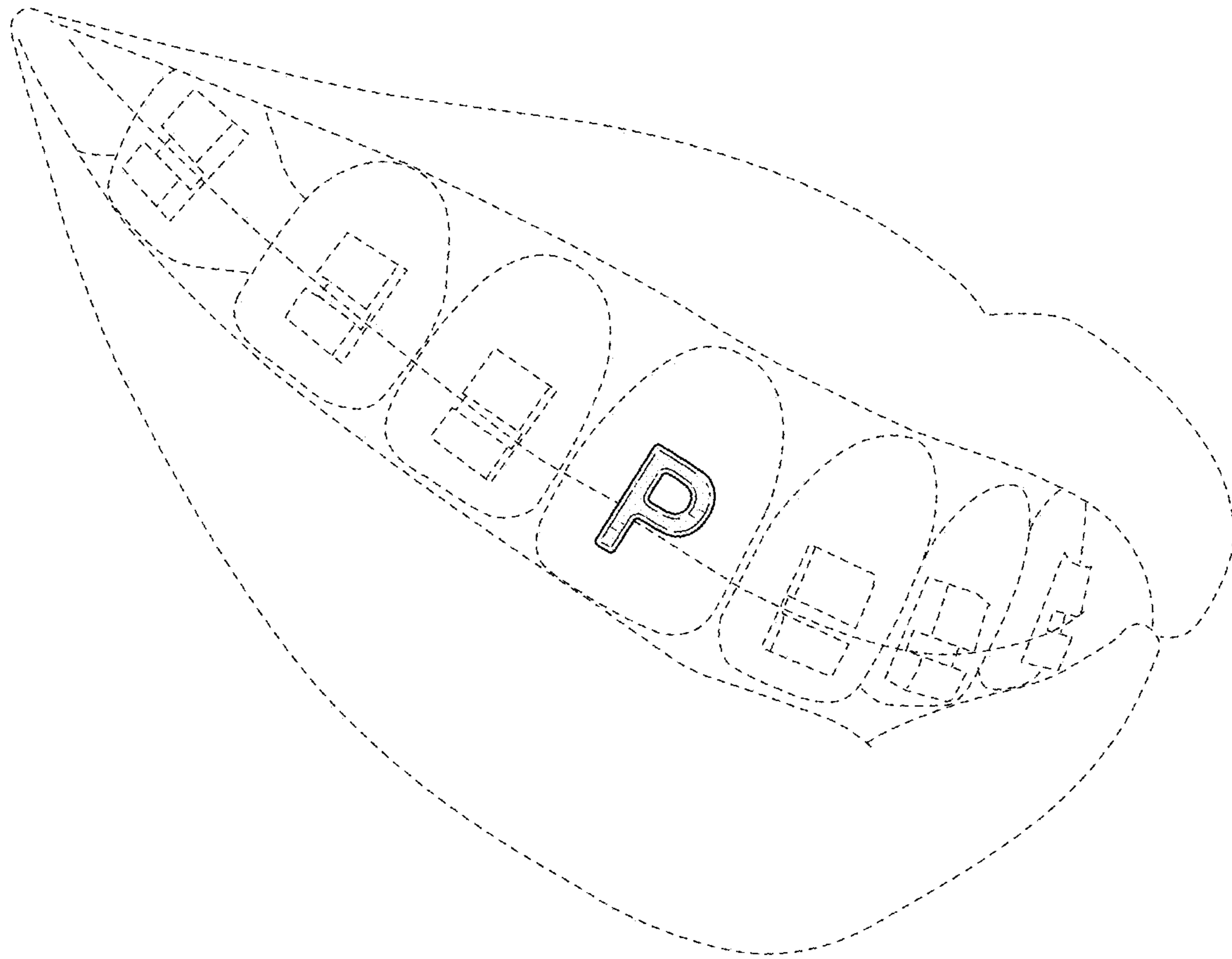


FIG. 128

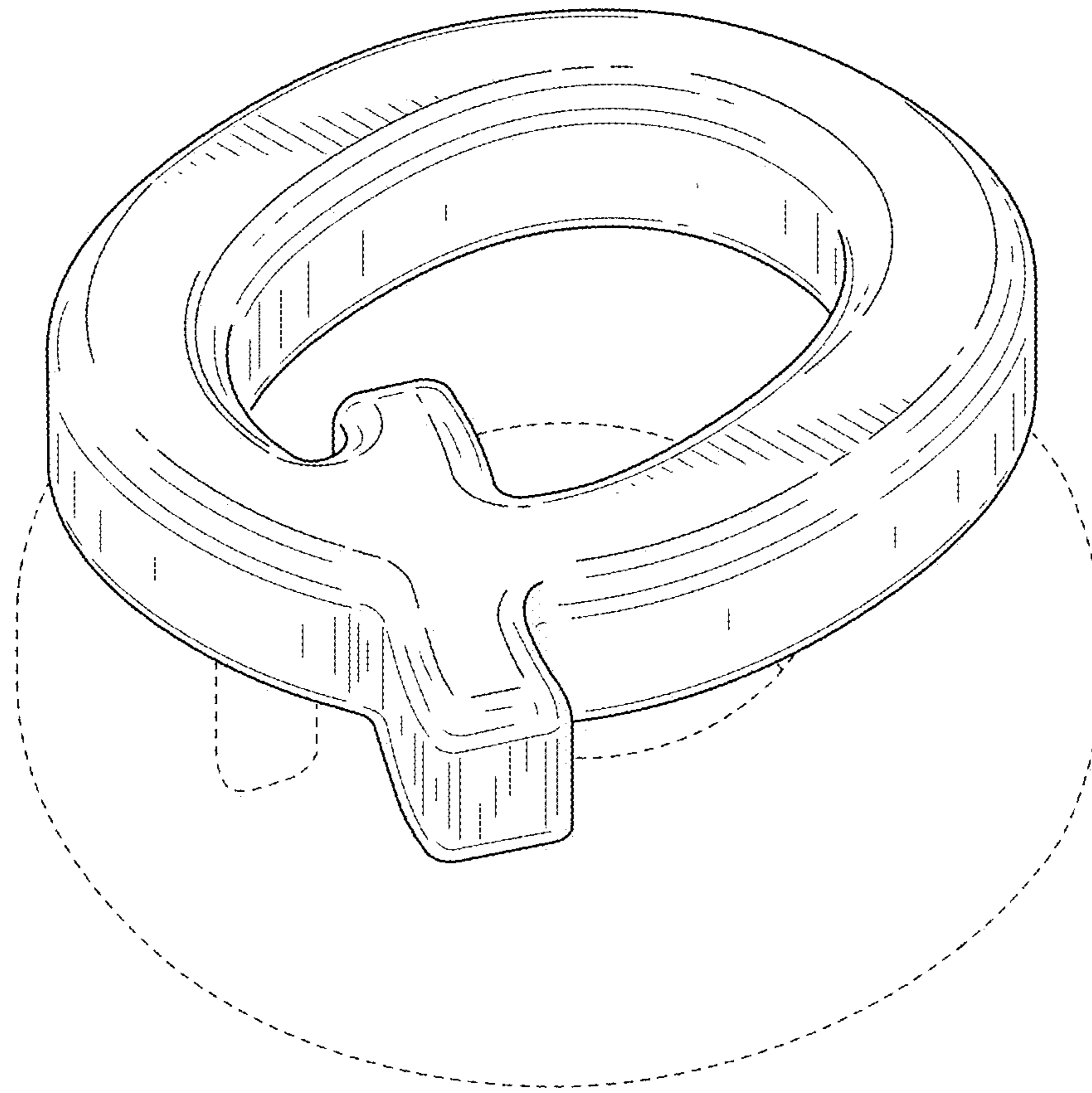


FIG. 129

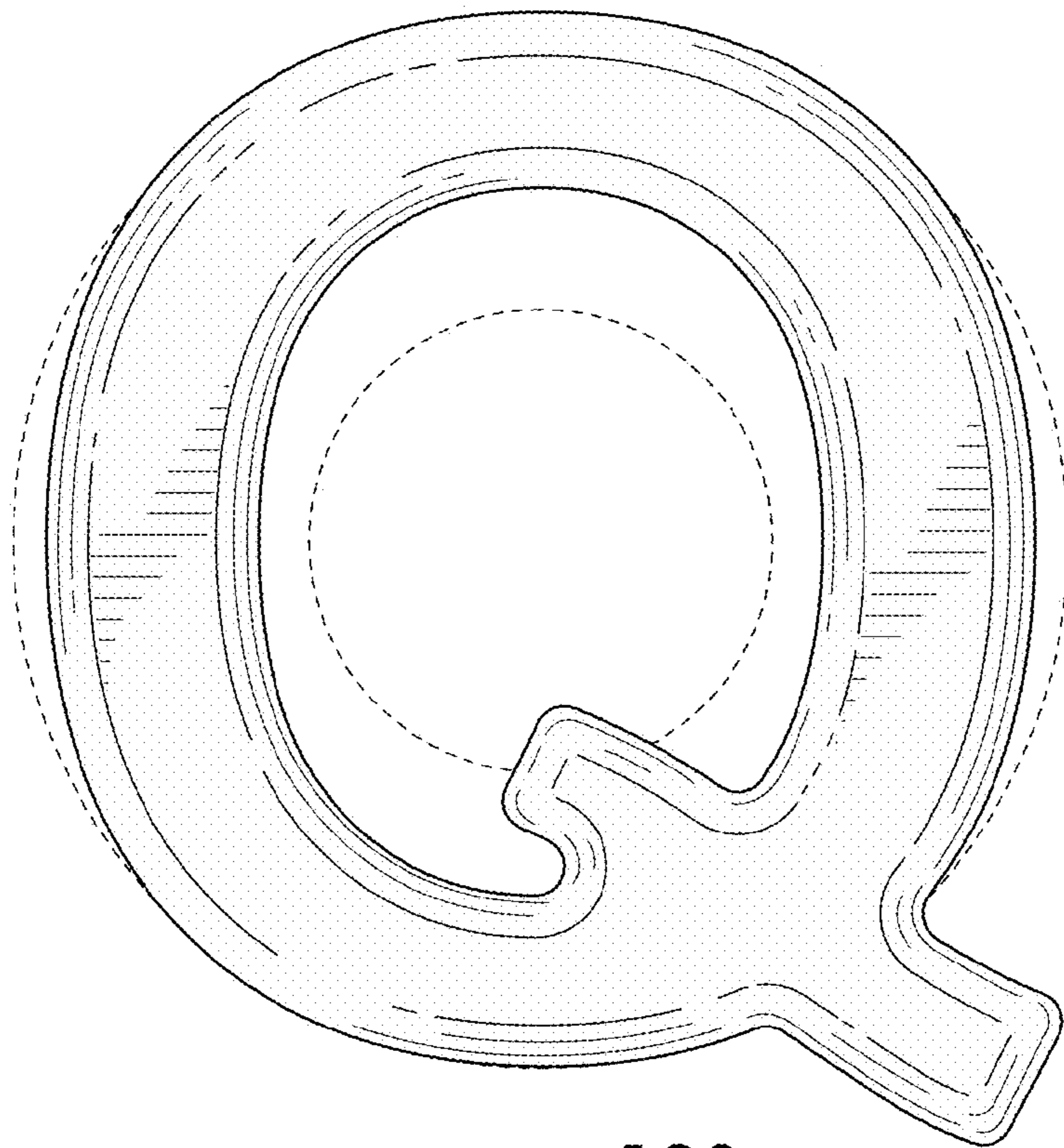


FIG. 130

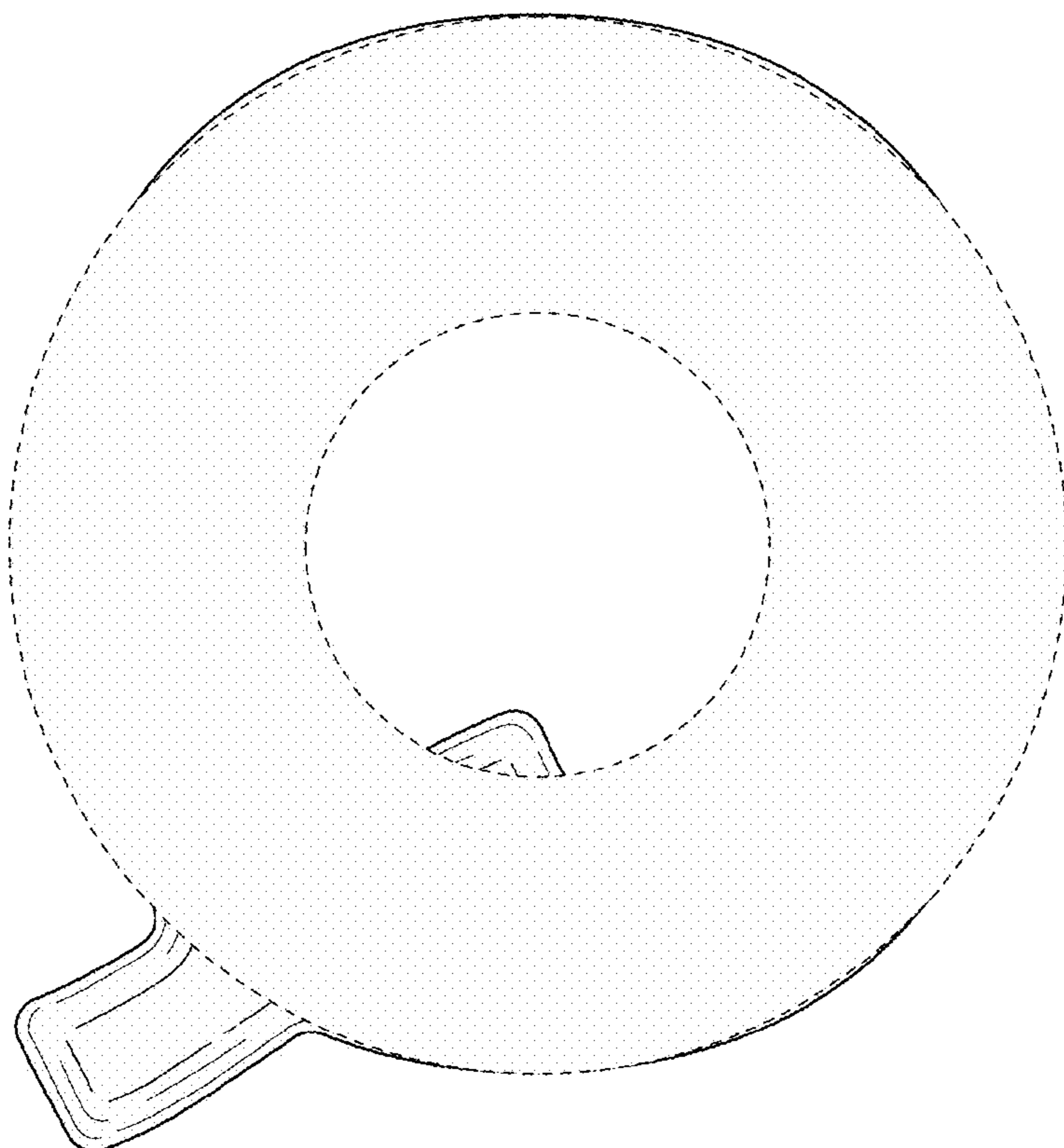


FIG. 131

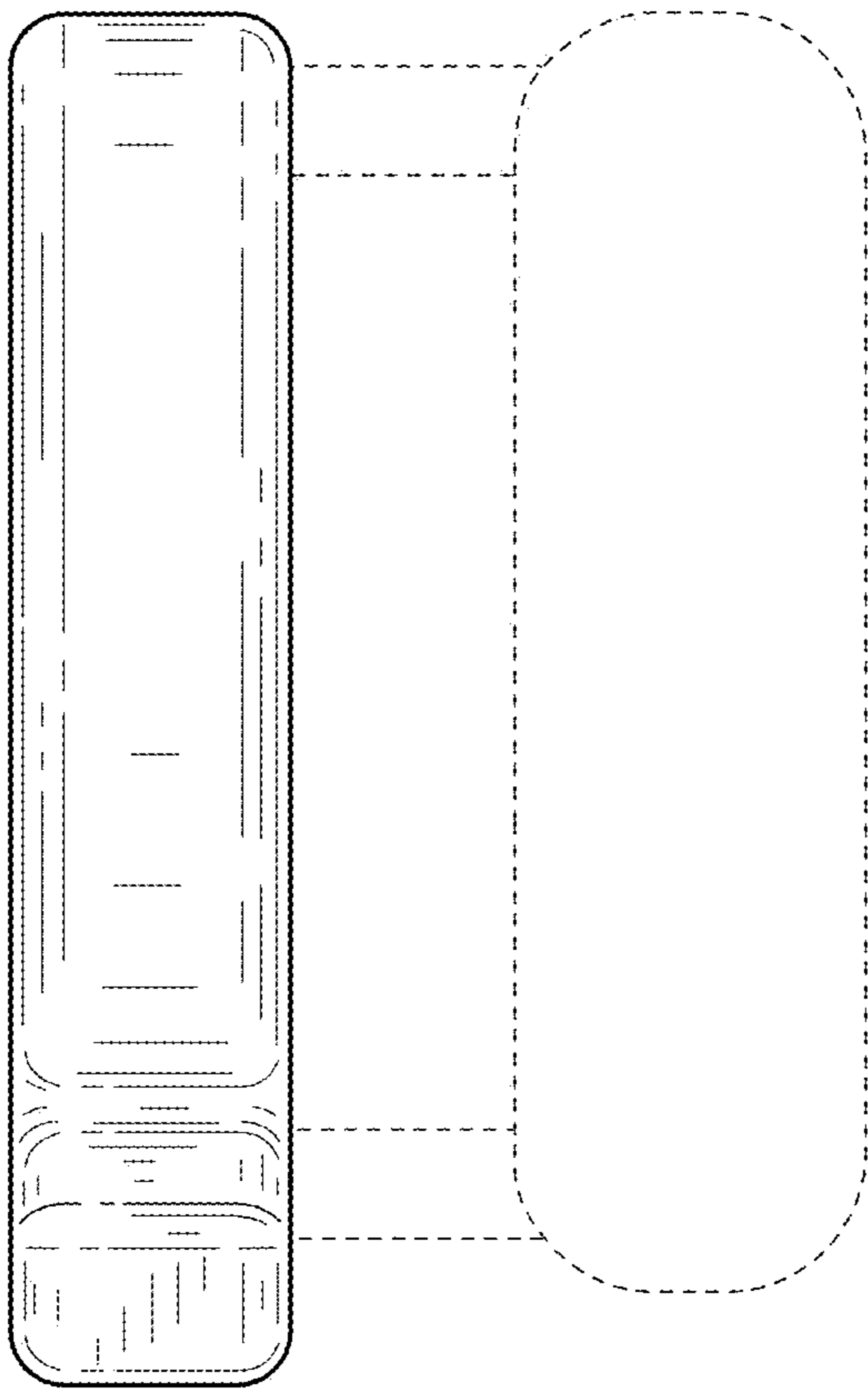


FIG. 132

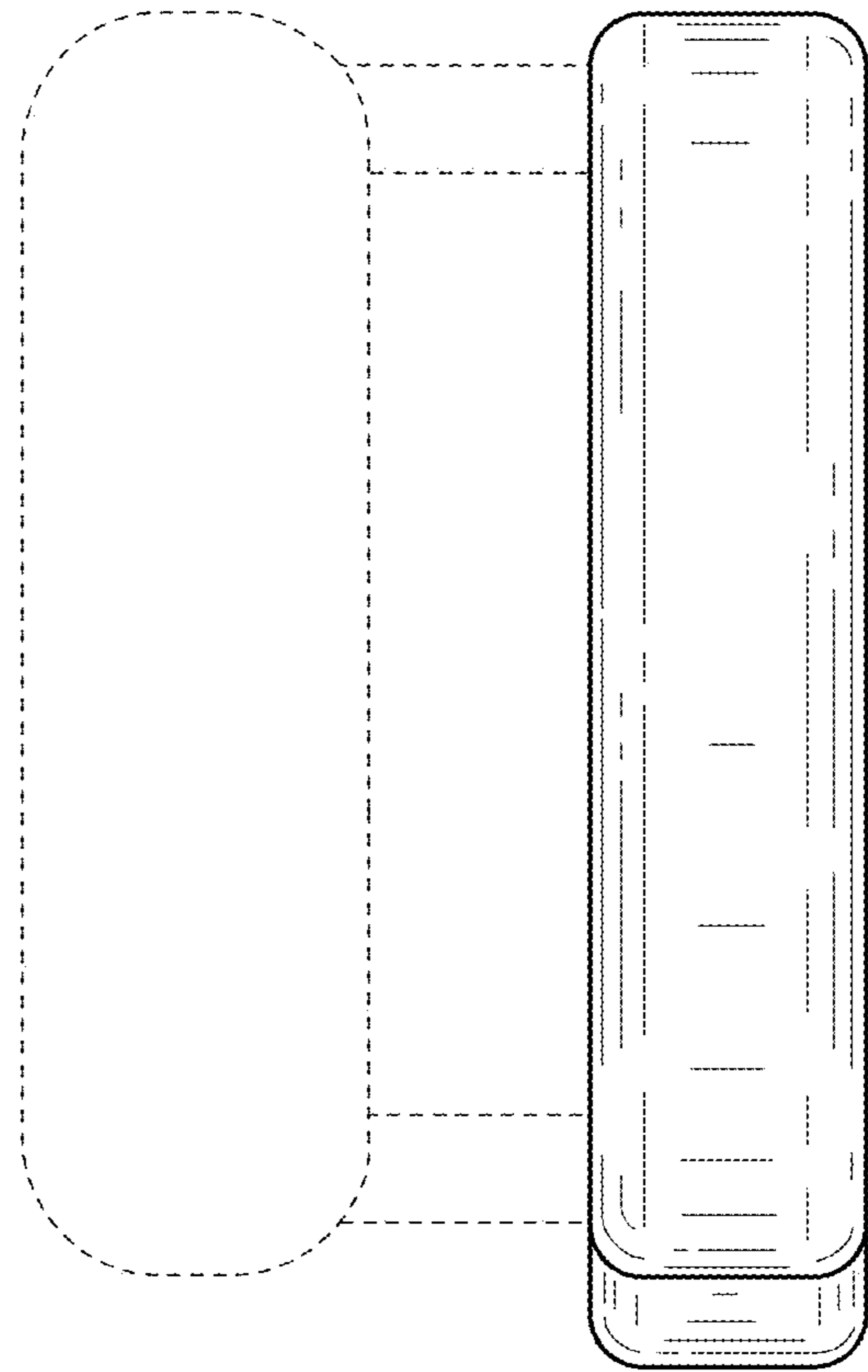


FIG. 133

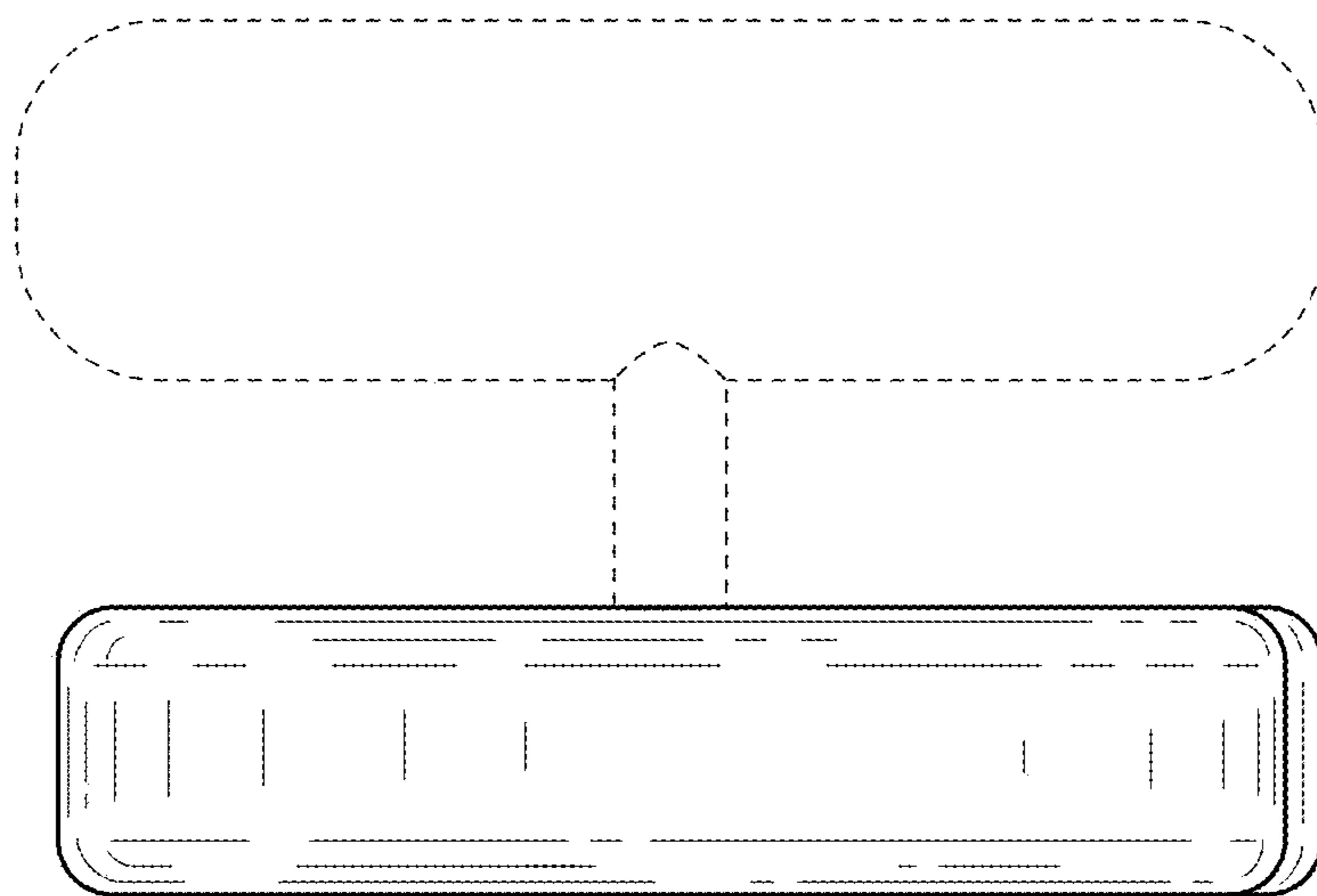


FIG. 134

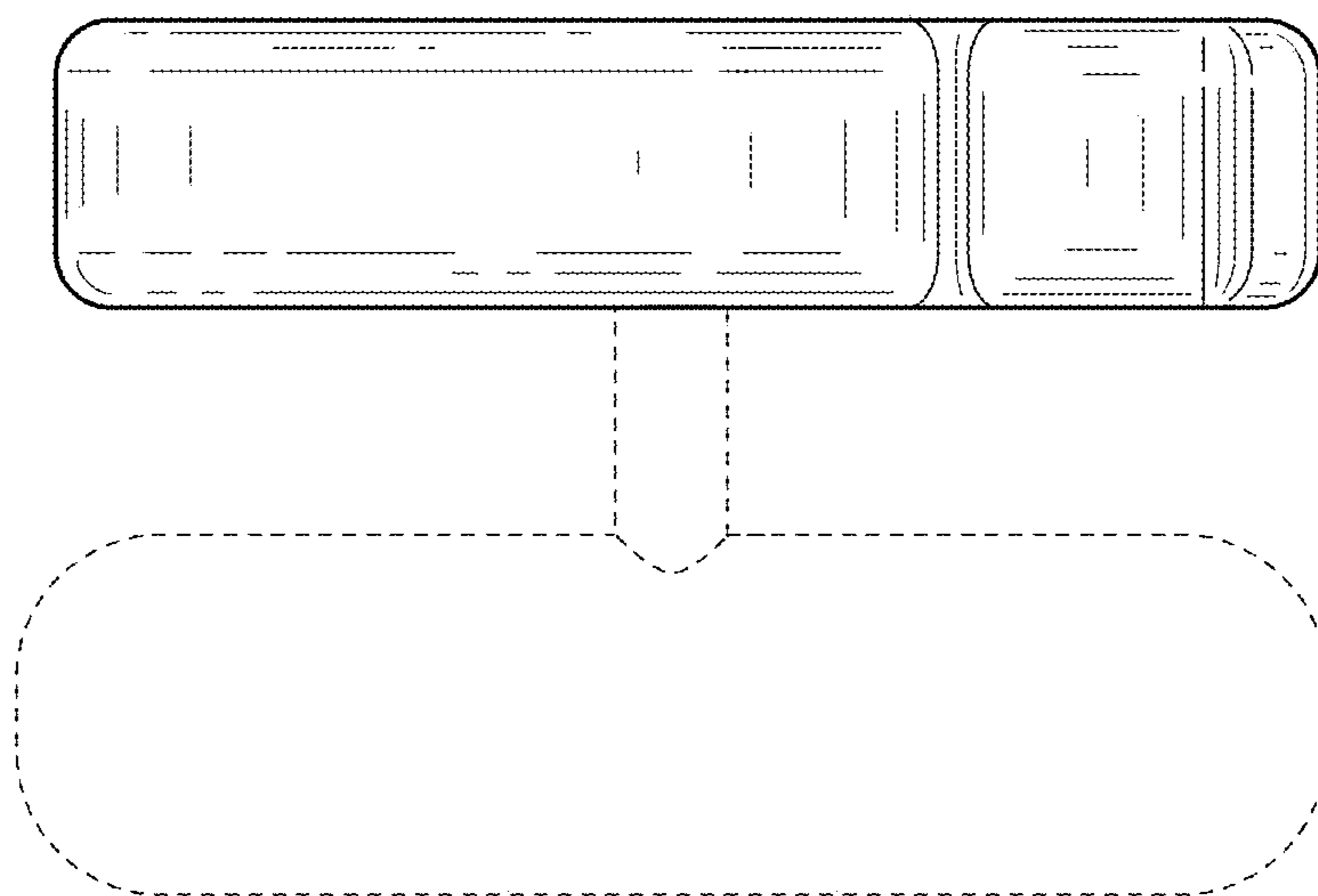


FIG. 135

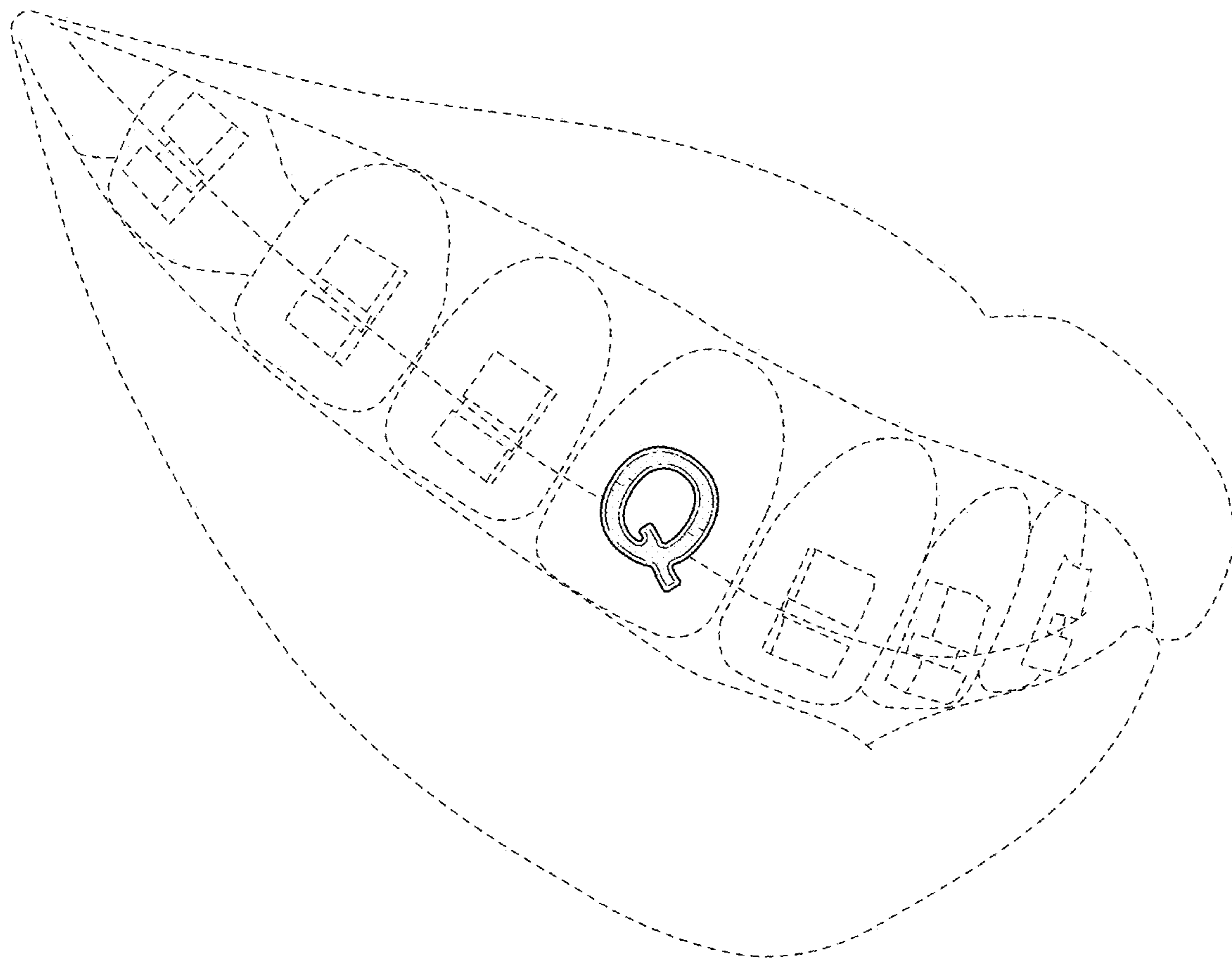


FIG. 136

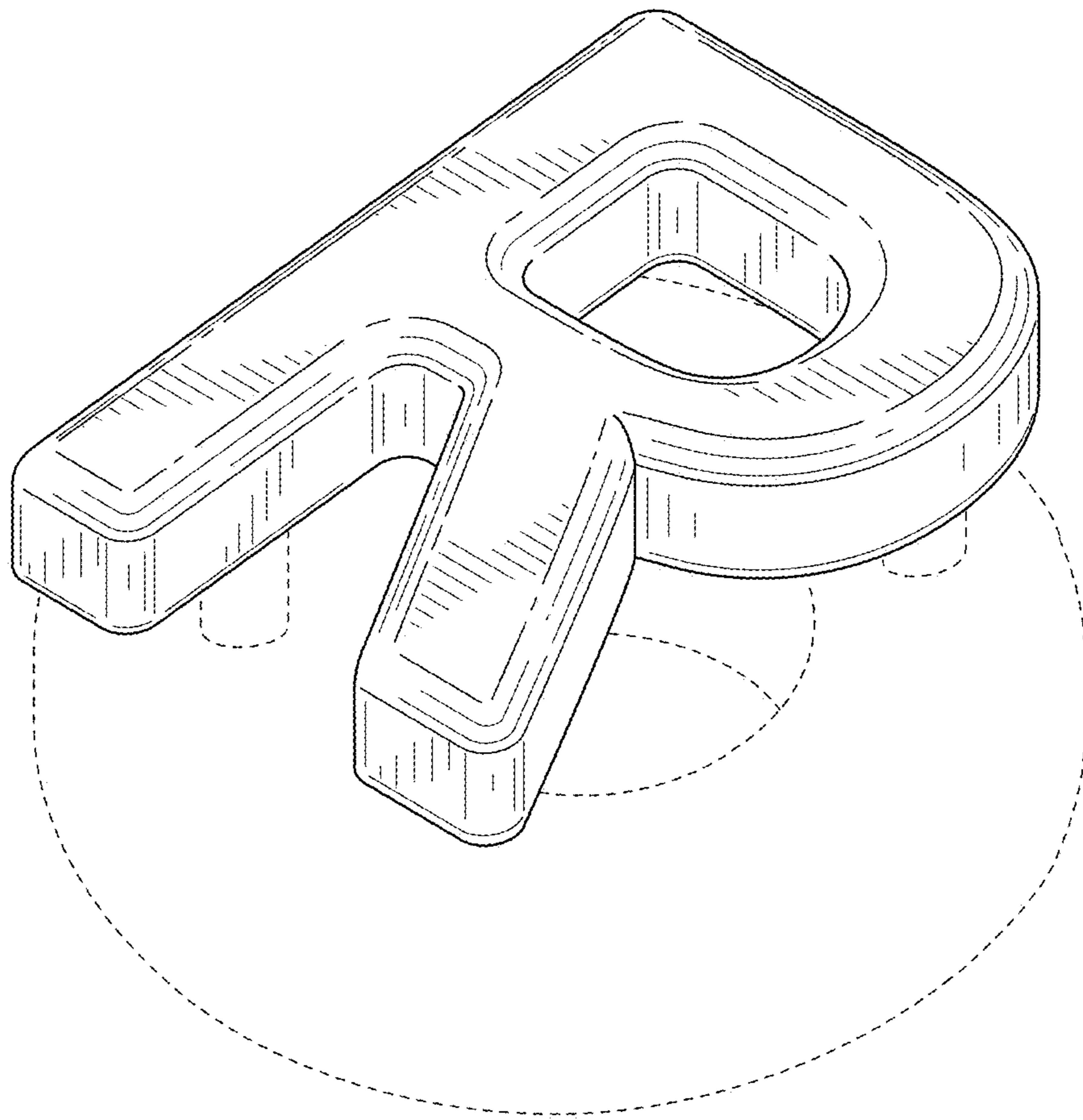


FIG. 137



FIG. 138

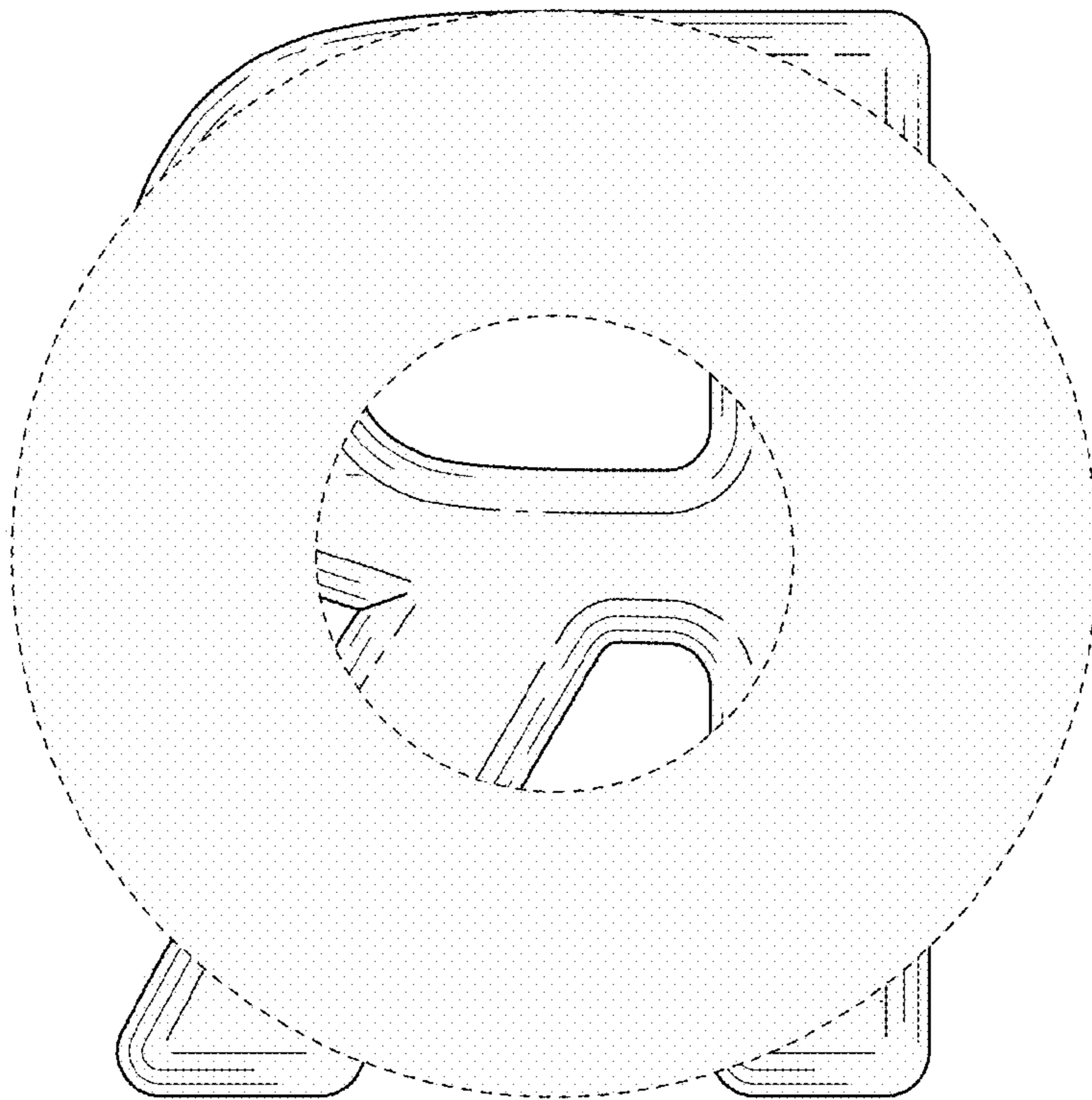


FIG. 139

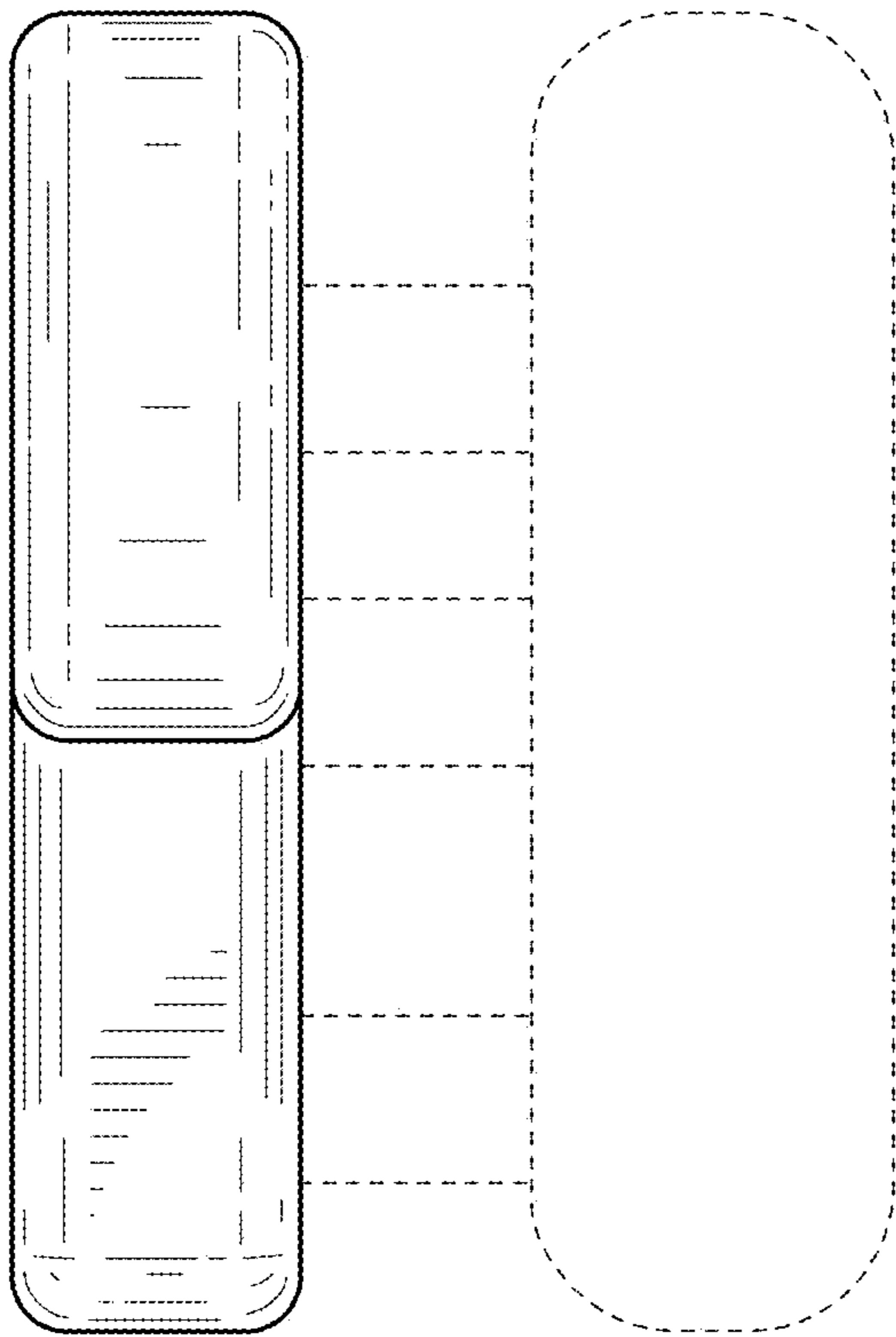


FIG. 140

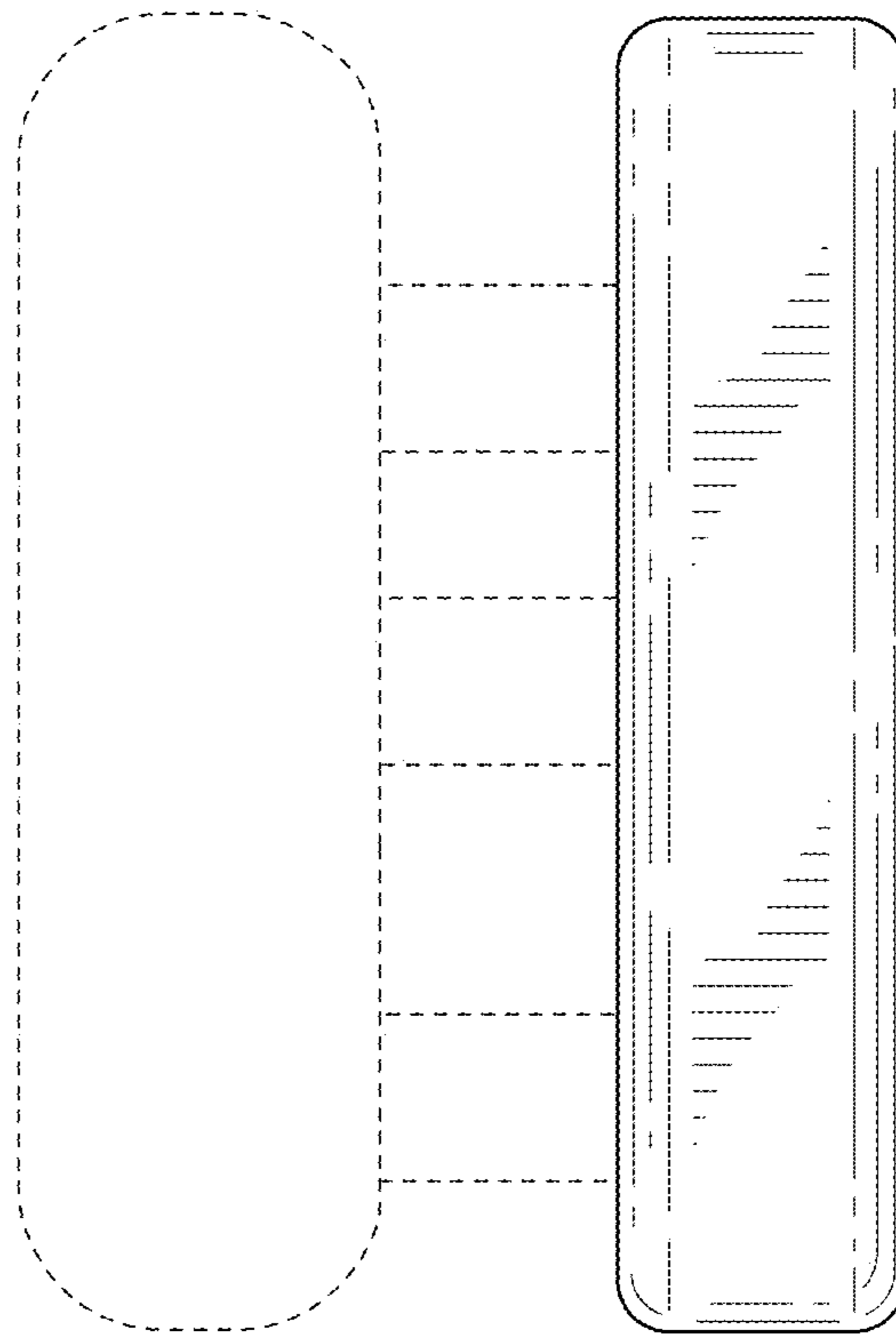


FIG. 141

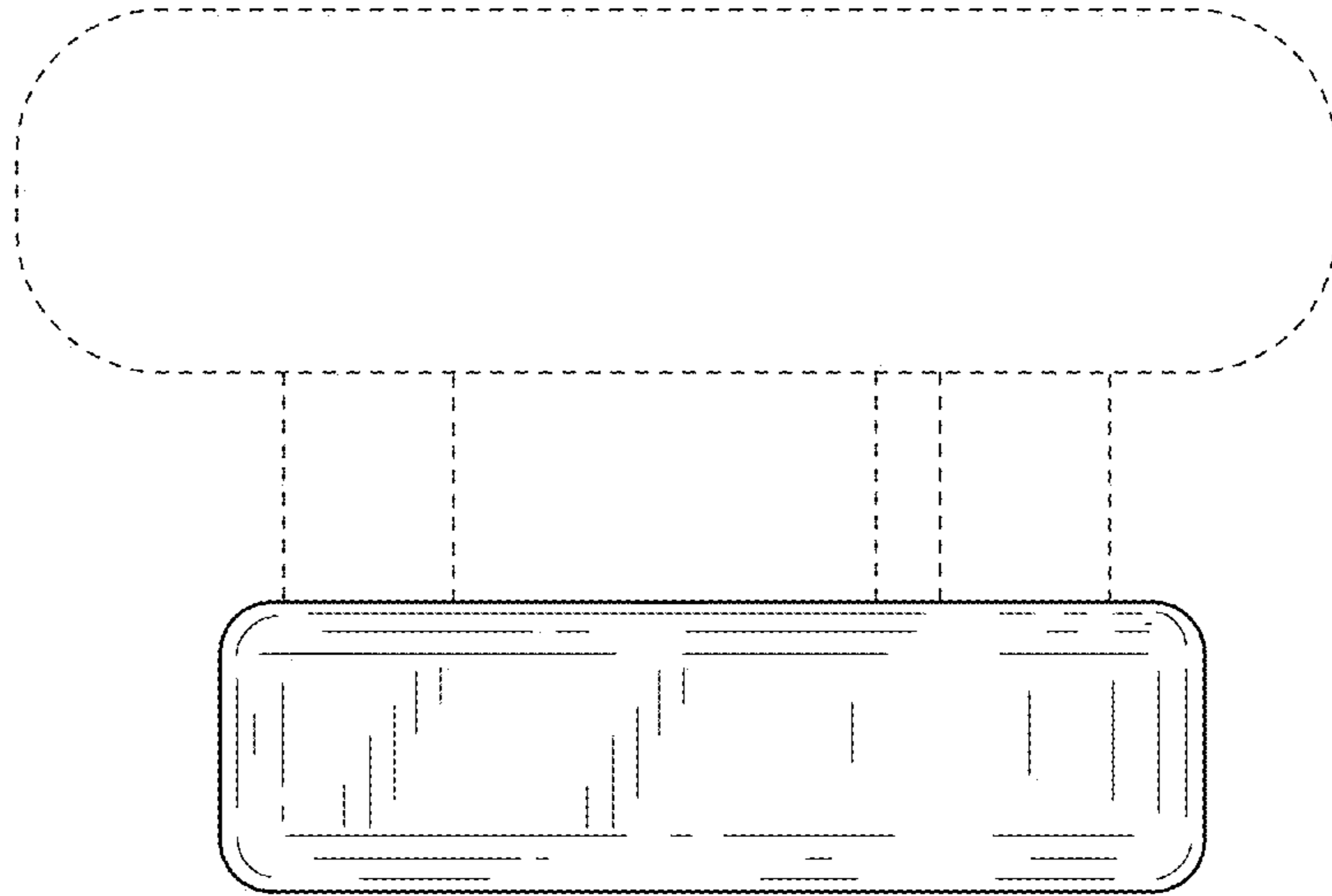


FIG. 142

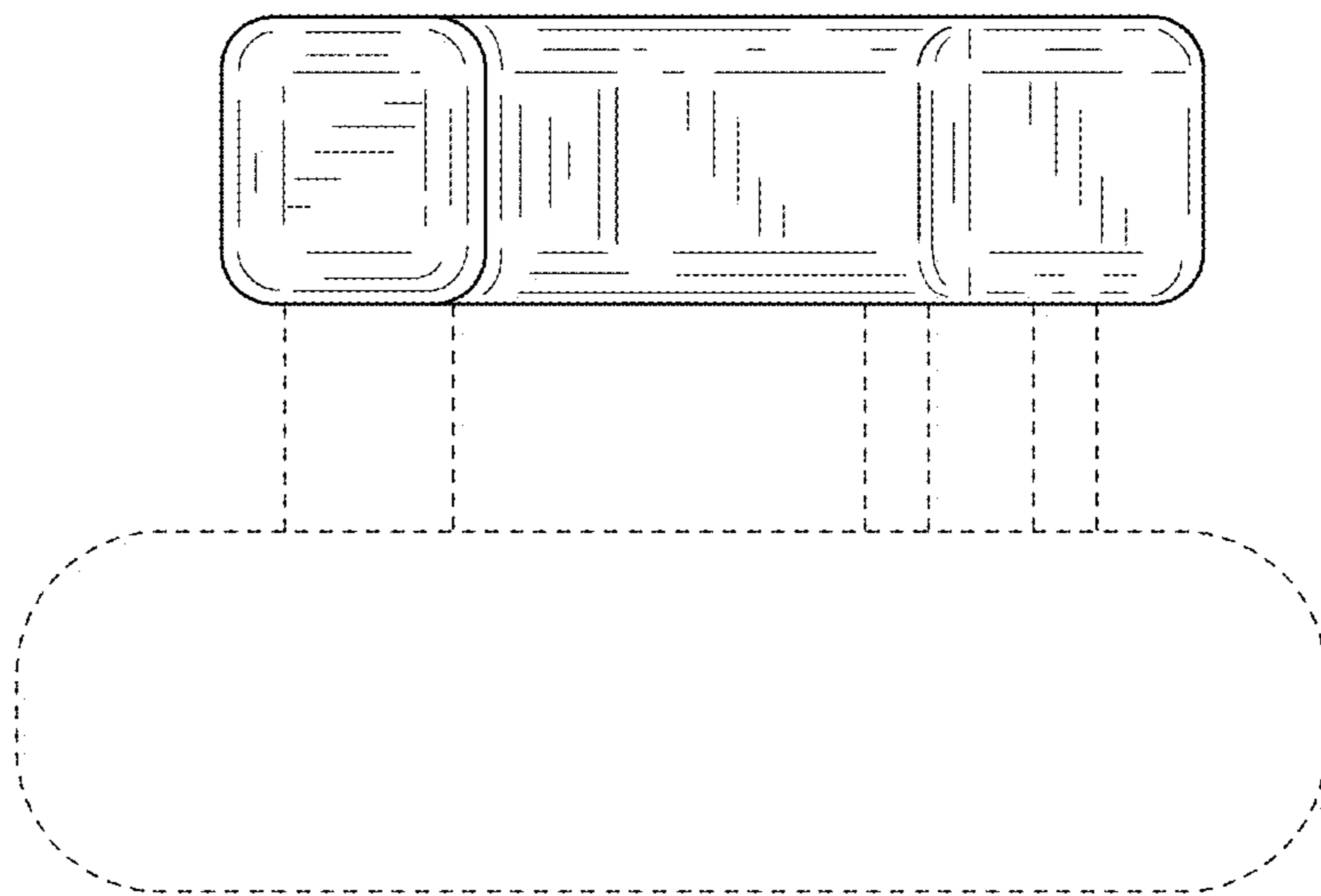


FIG. 143

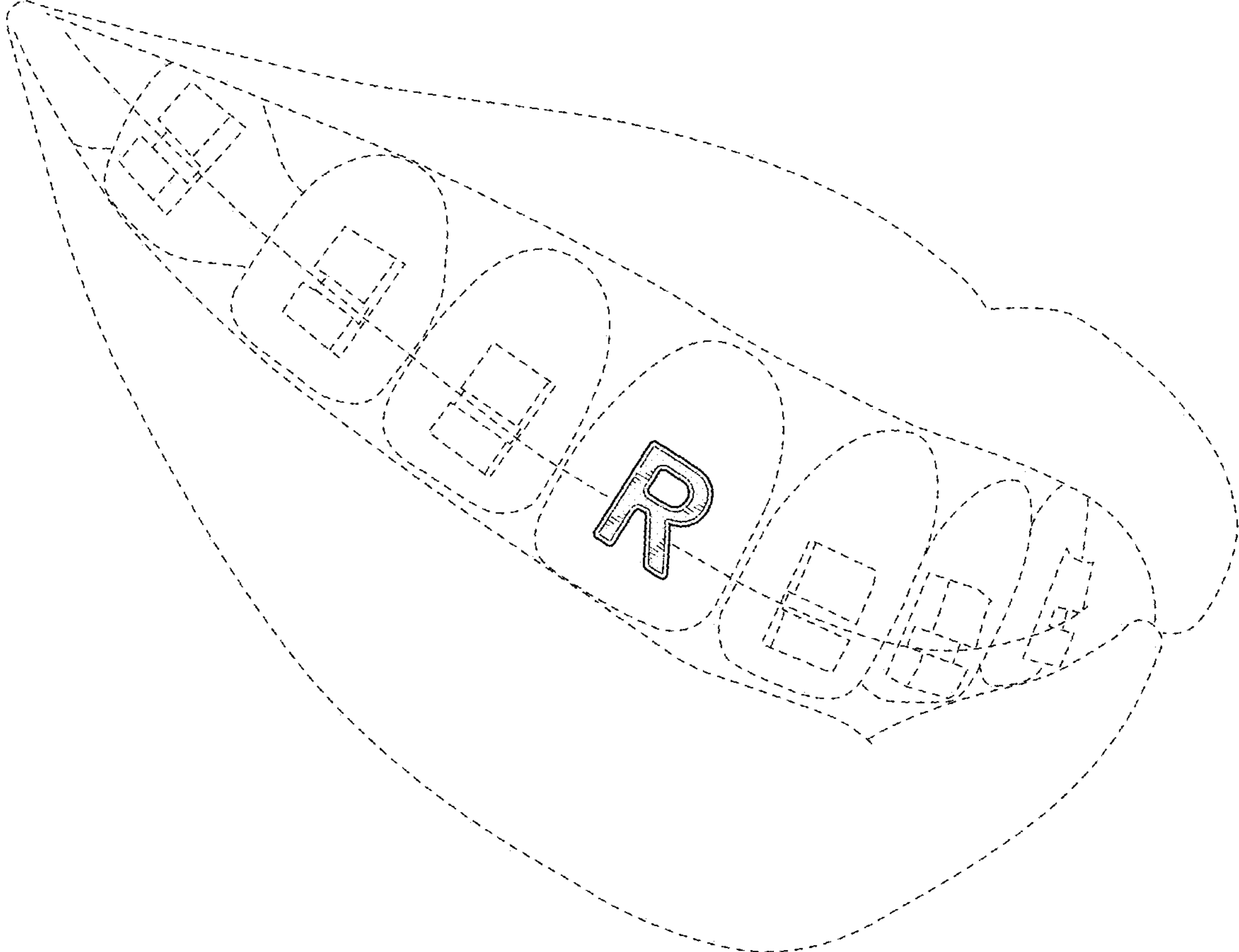


FIG. 144

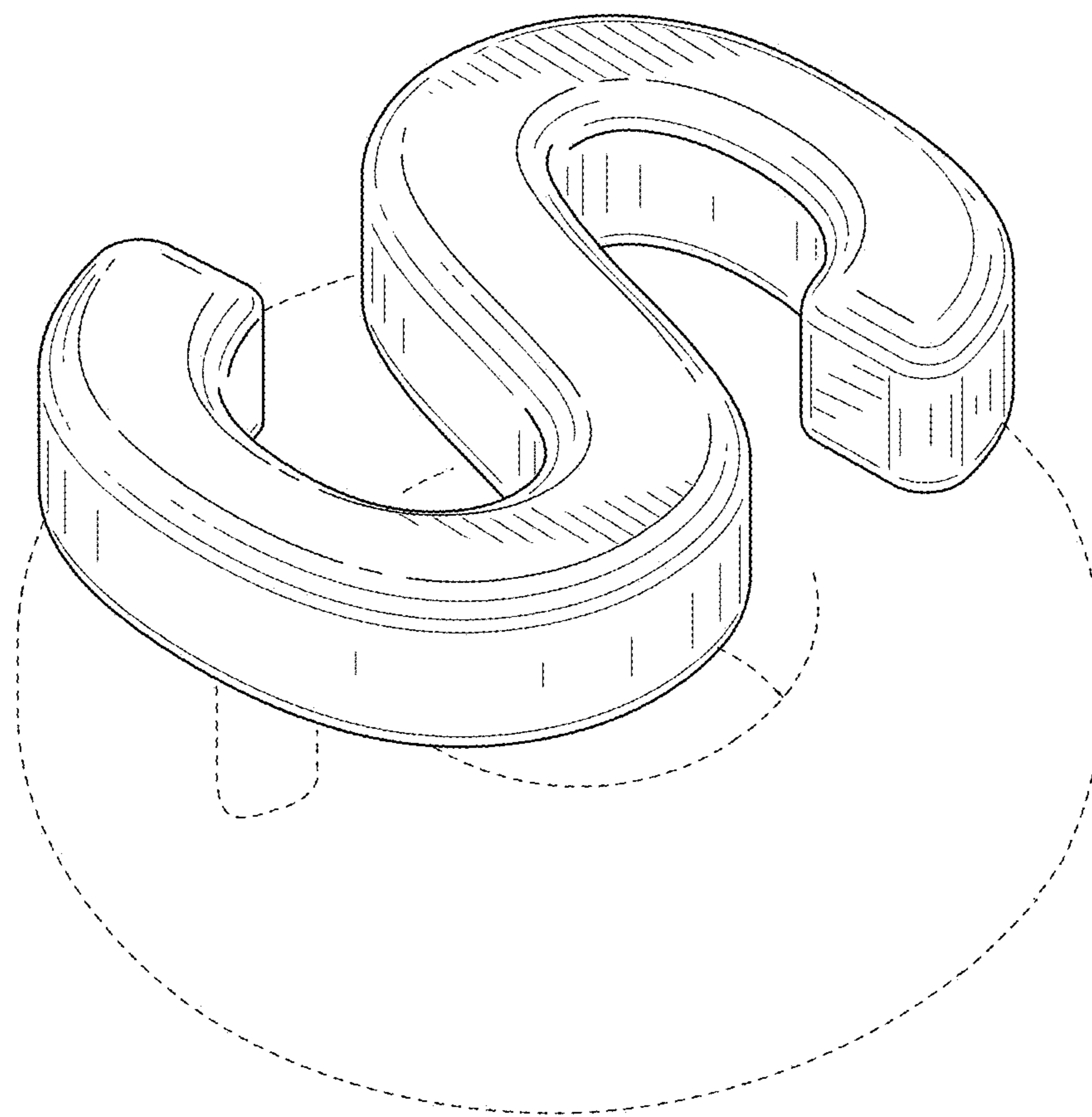


FIG. 145

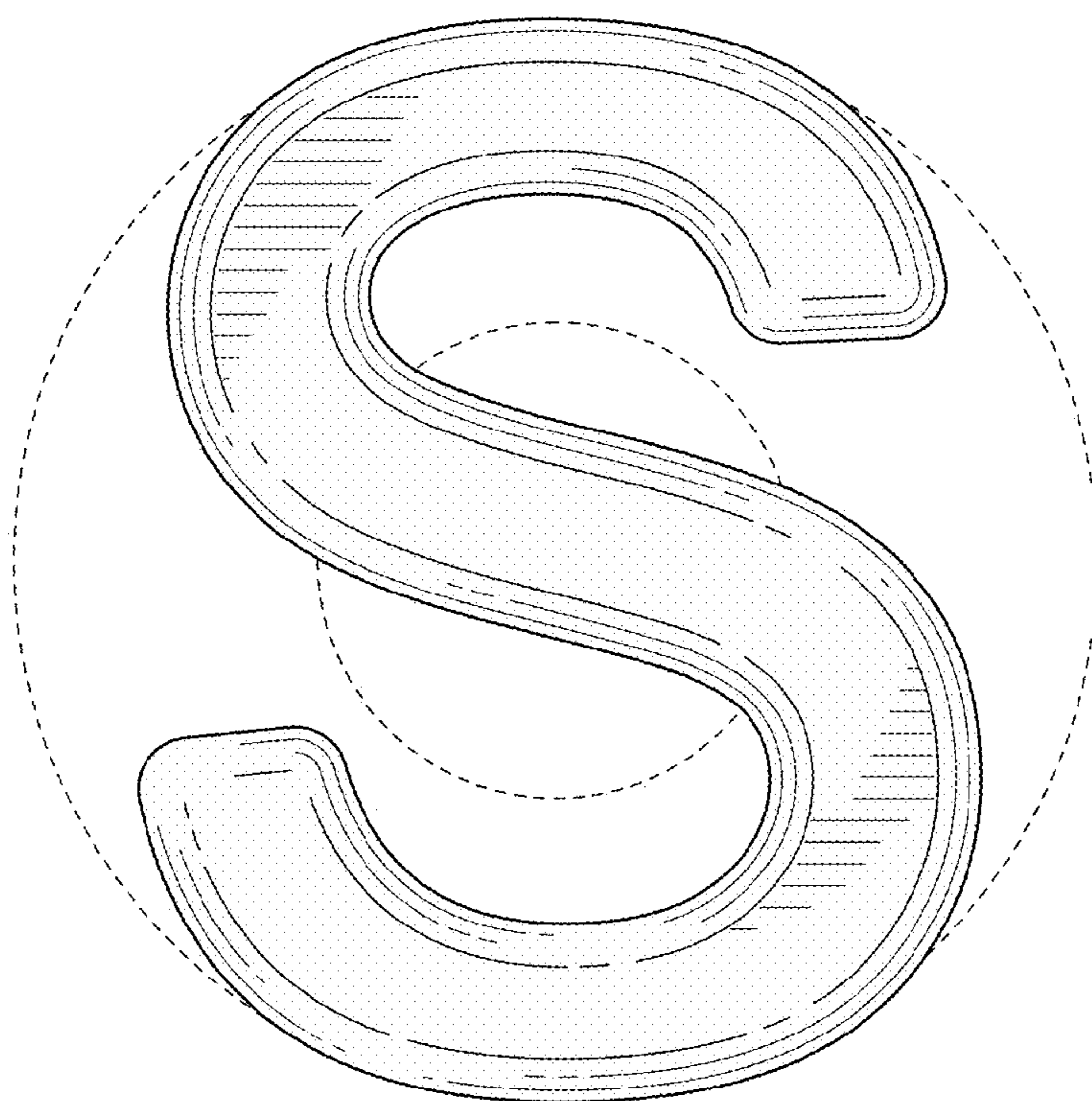


FIG. 146

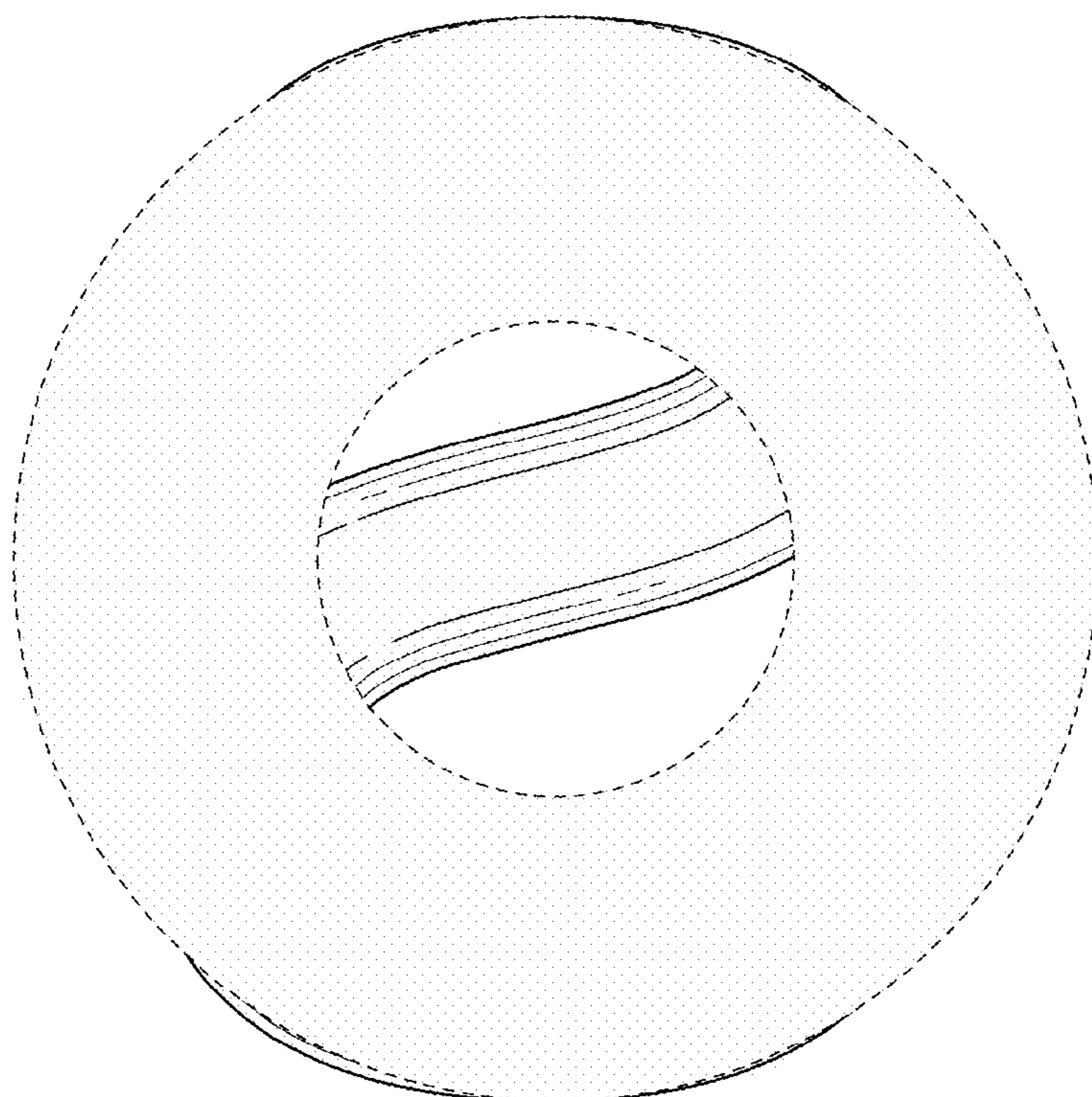


FIG. 147

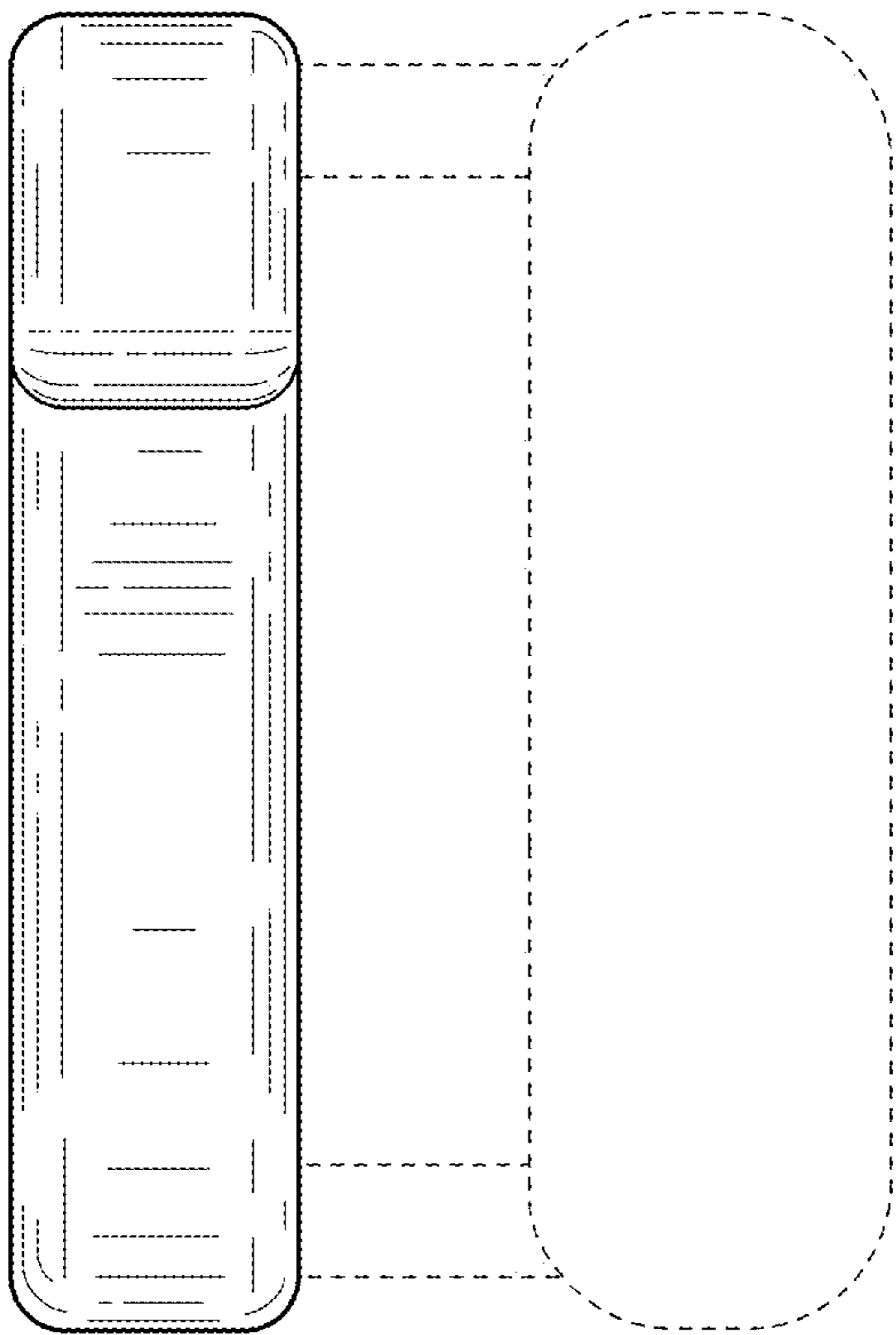


FIG. 148

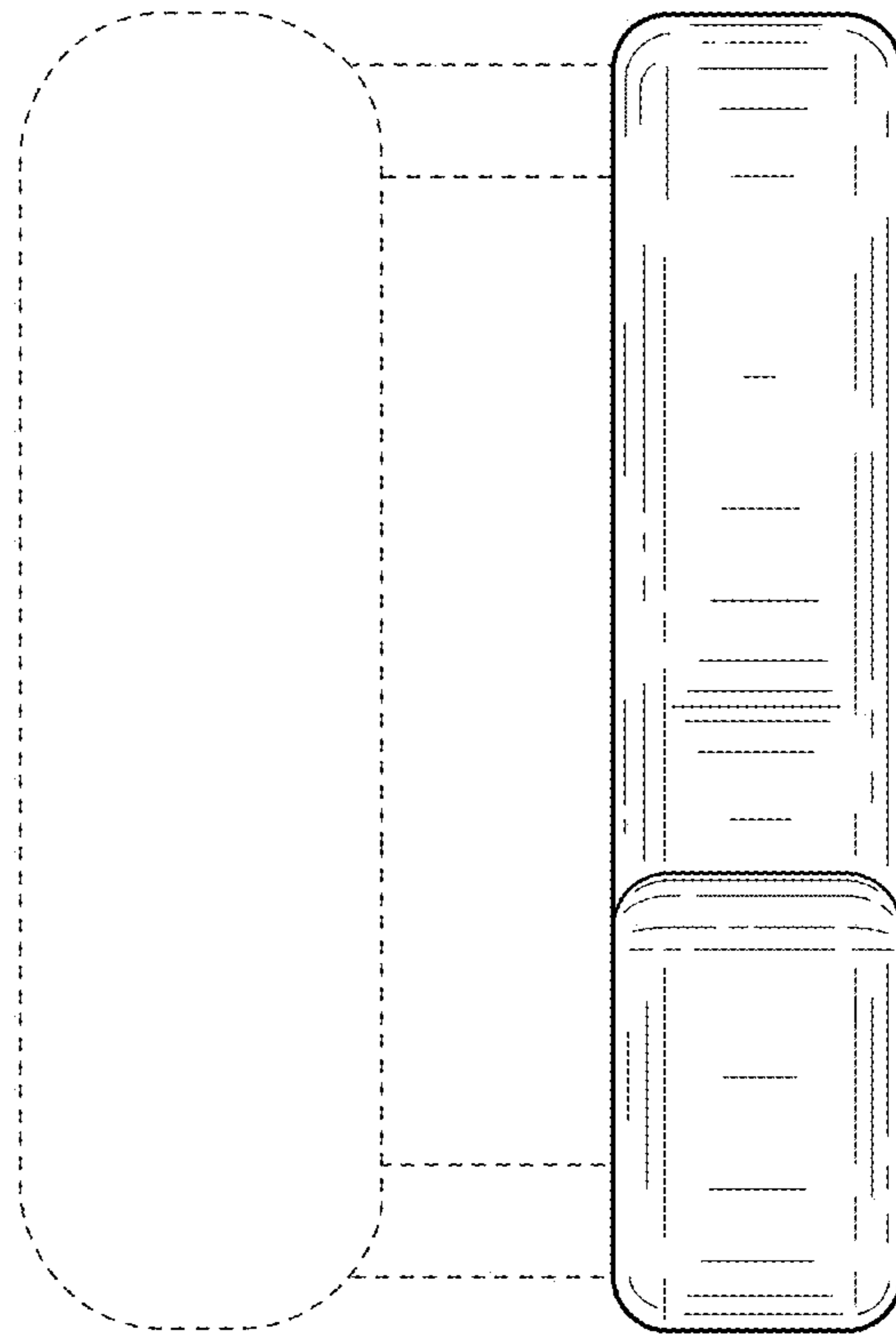


FIG. 149

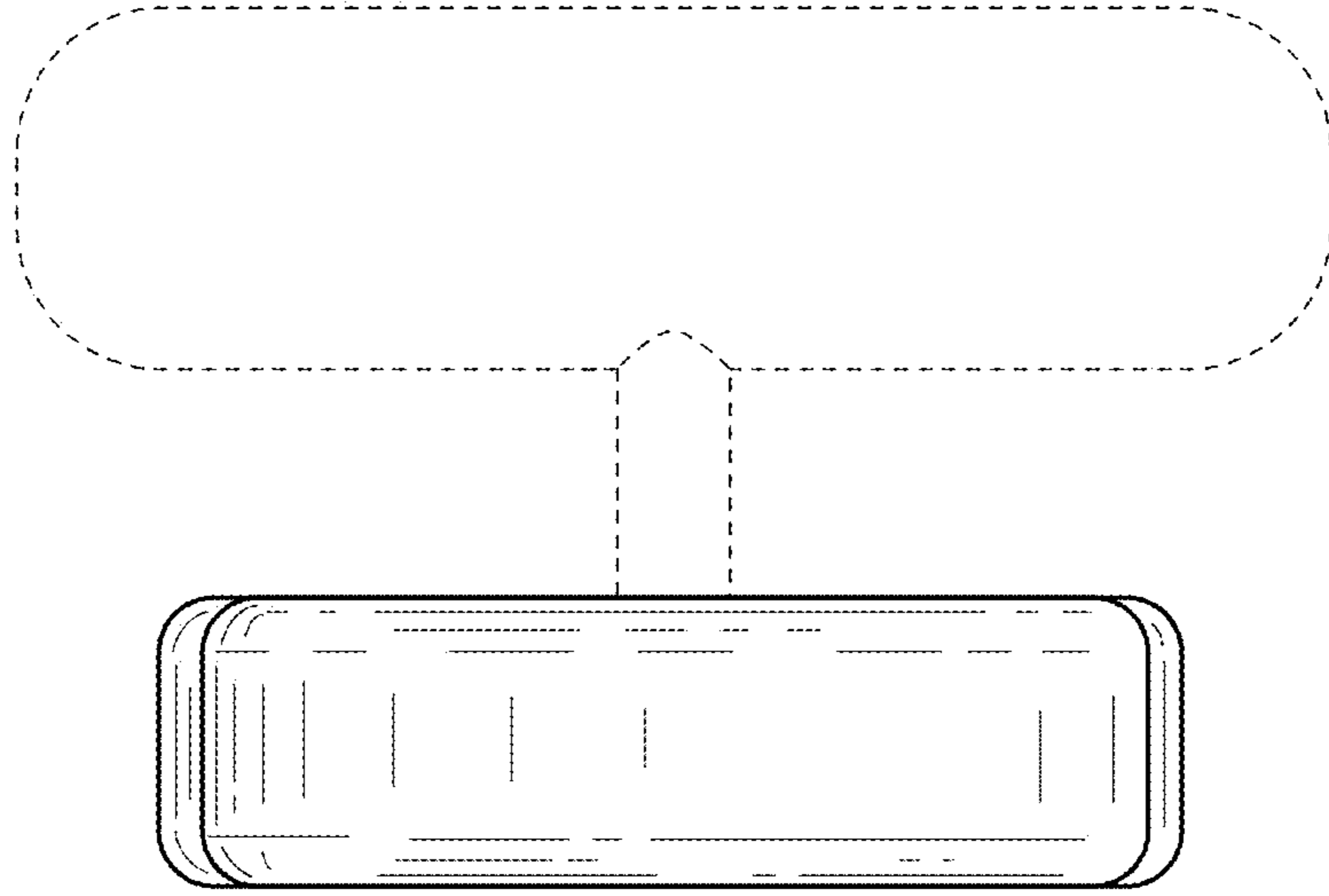


FIG. 150

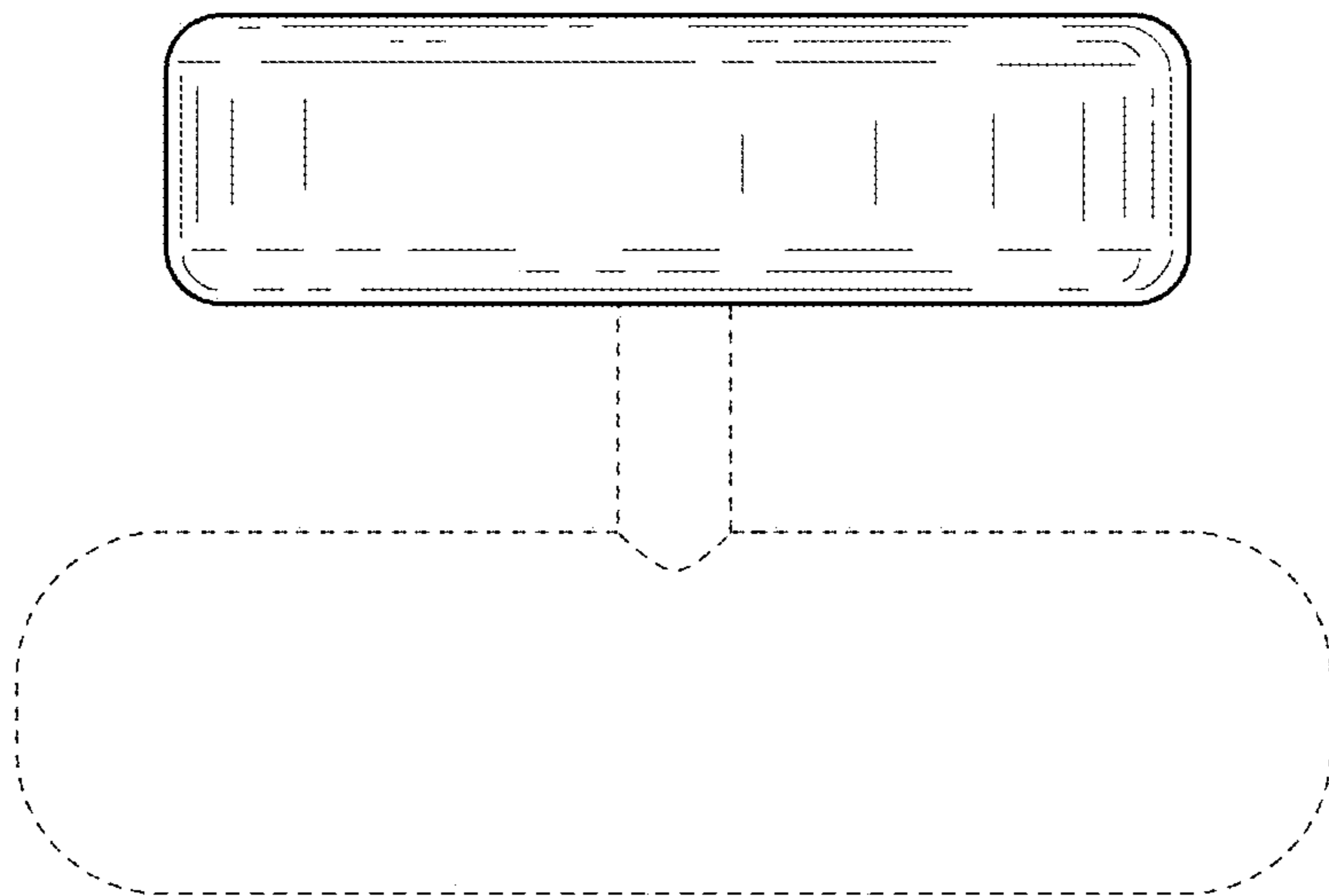


FIG. 151

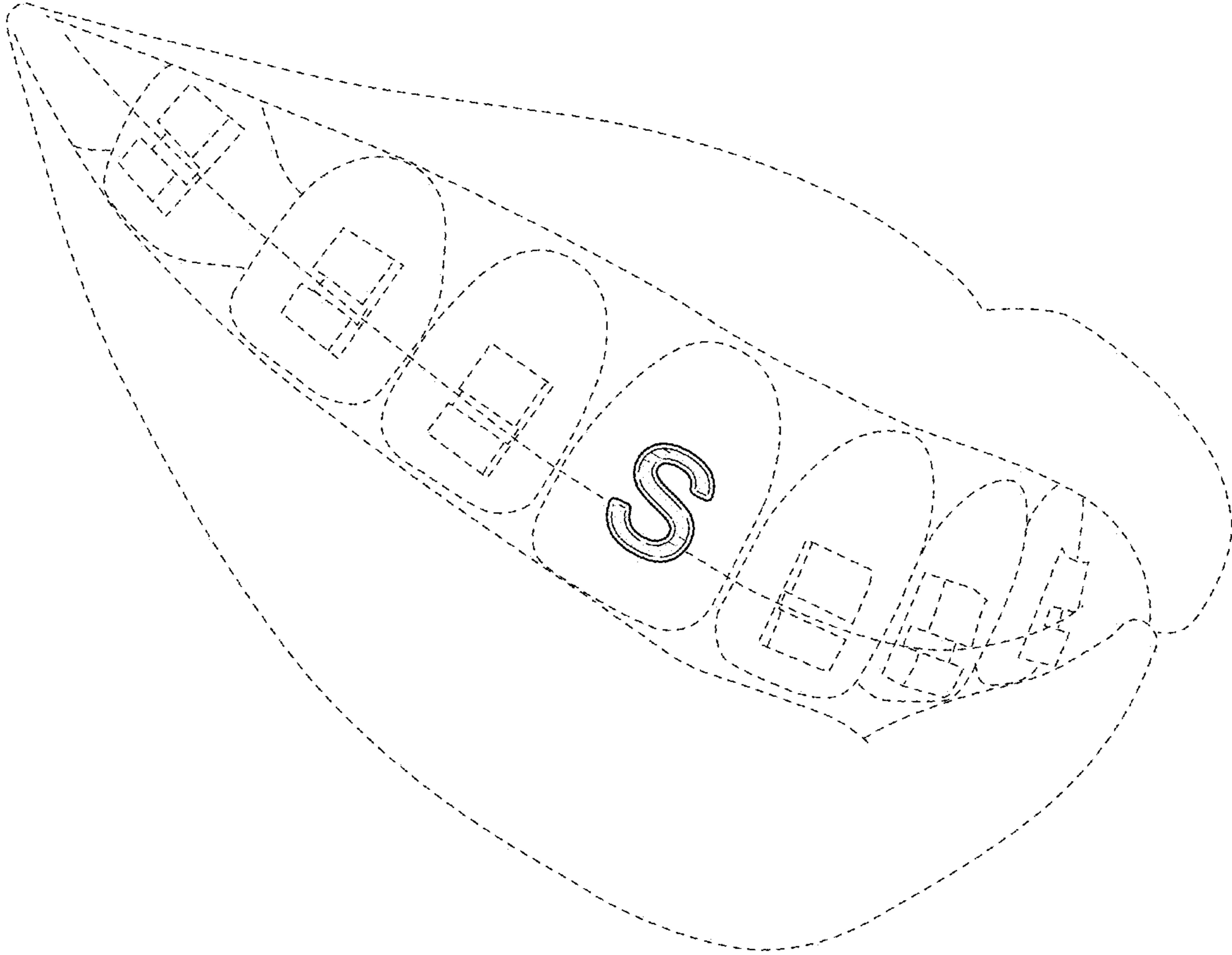


FIG. 152

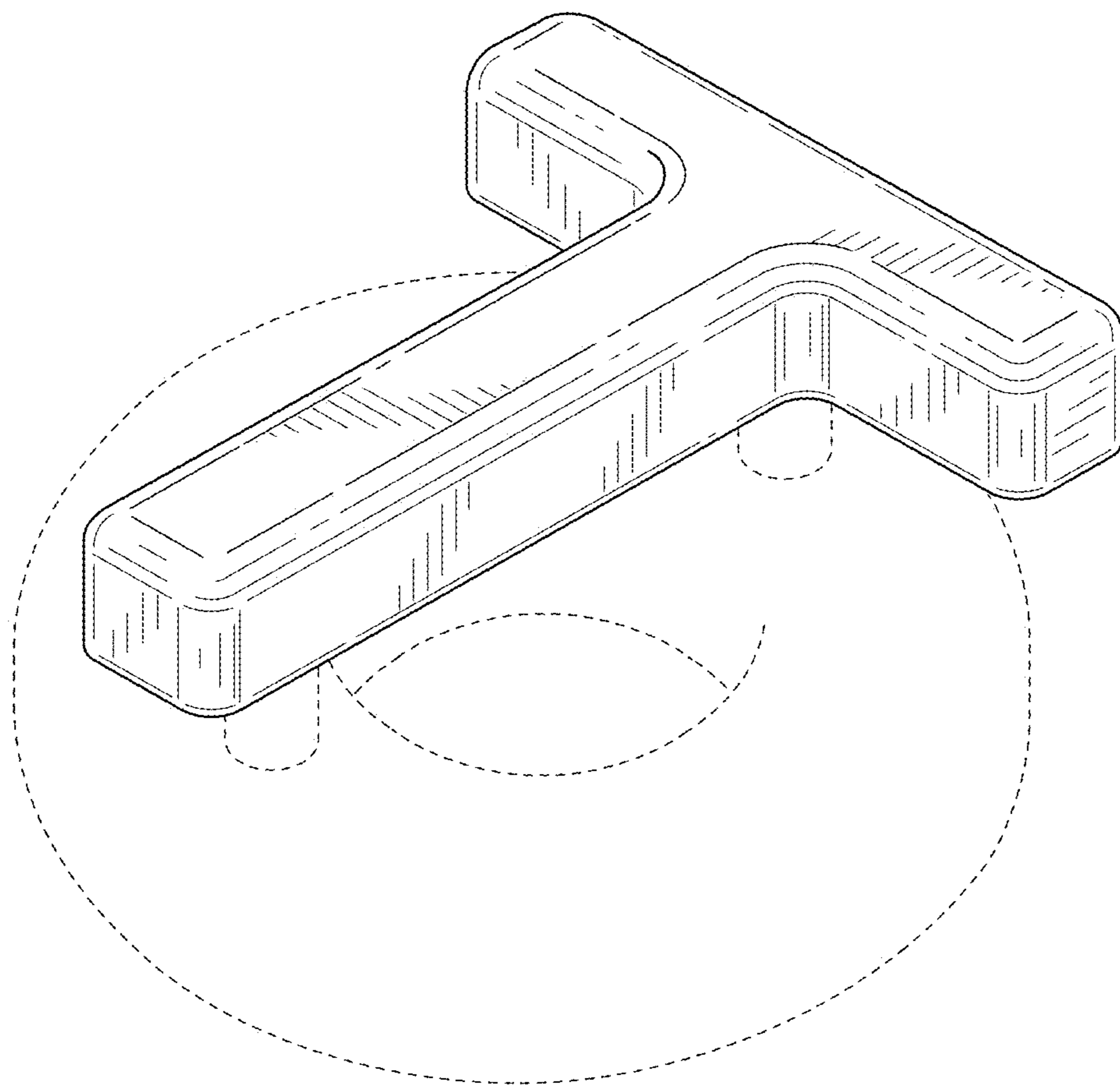


FIG. 153

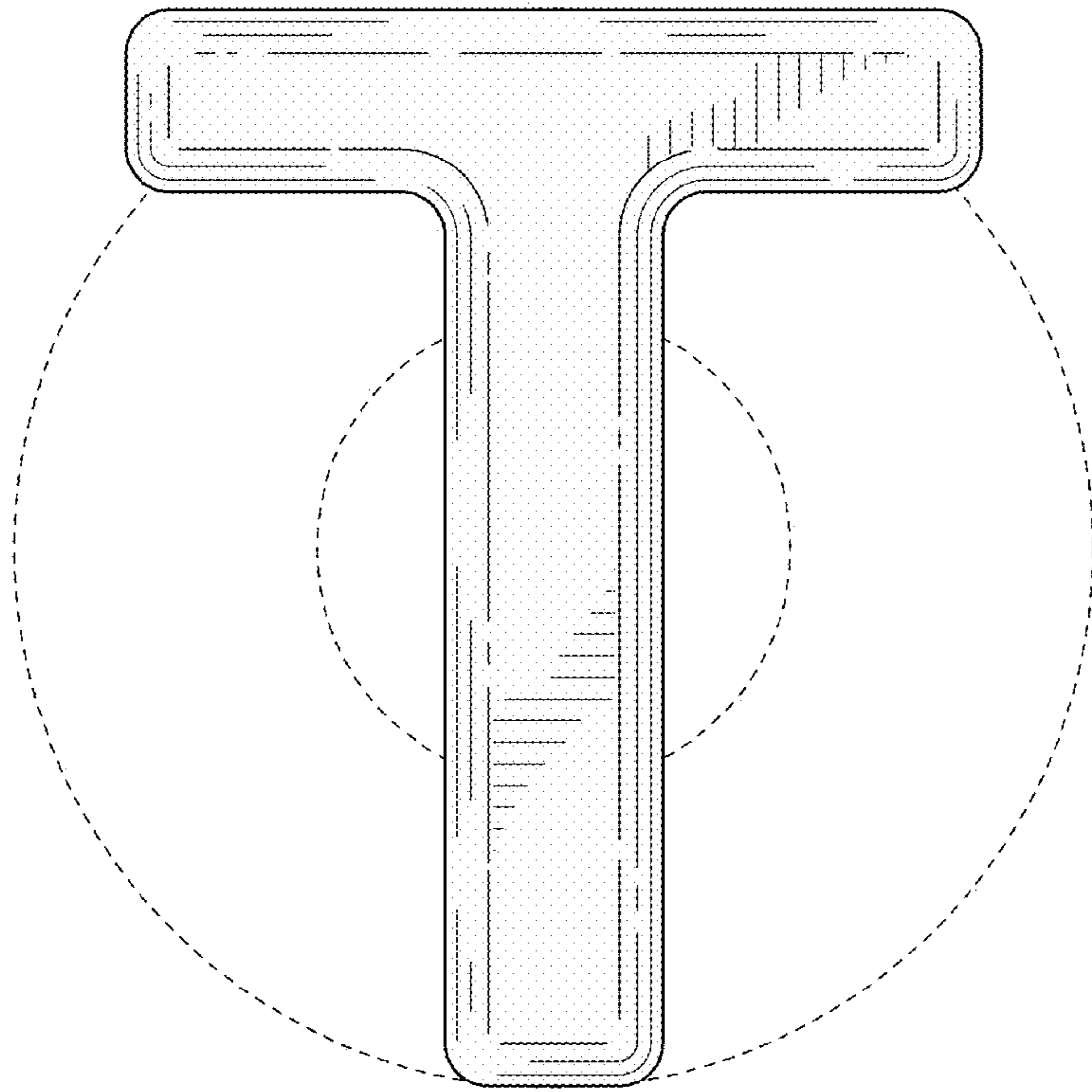


FIG. 154

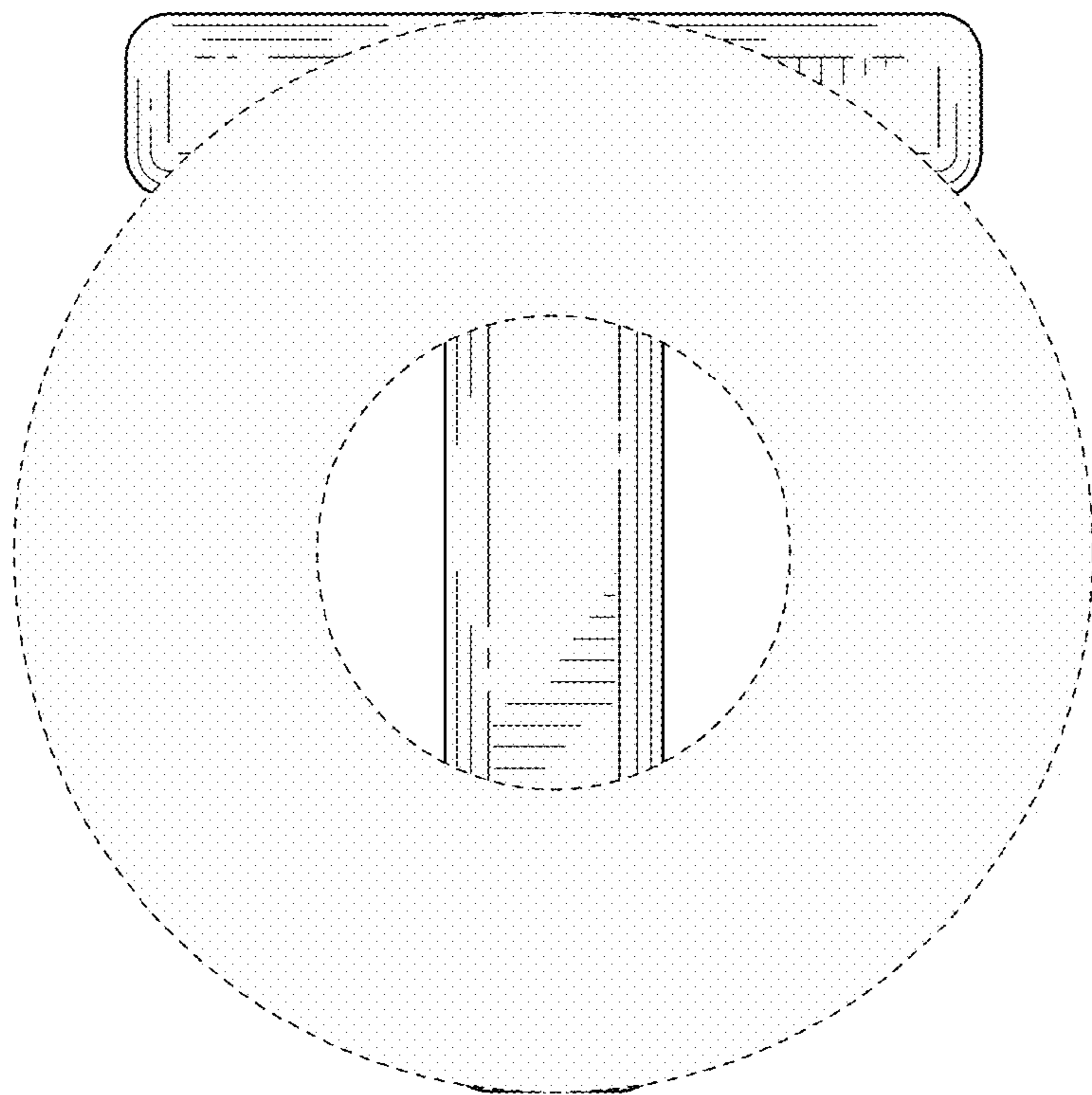


FIG. 155

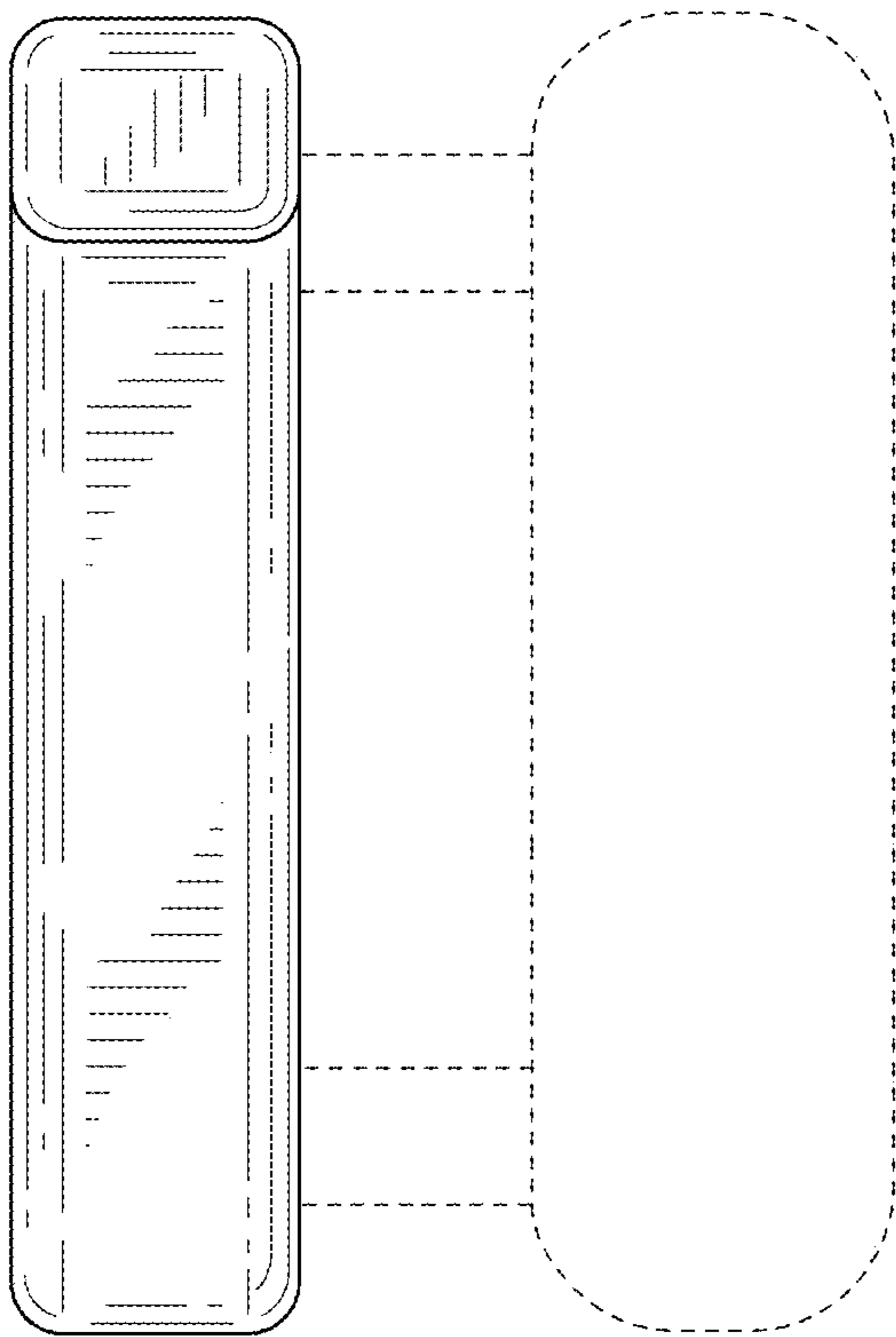


FIG. 156

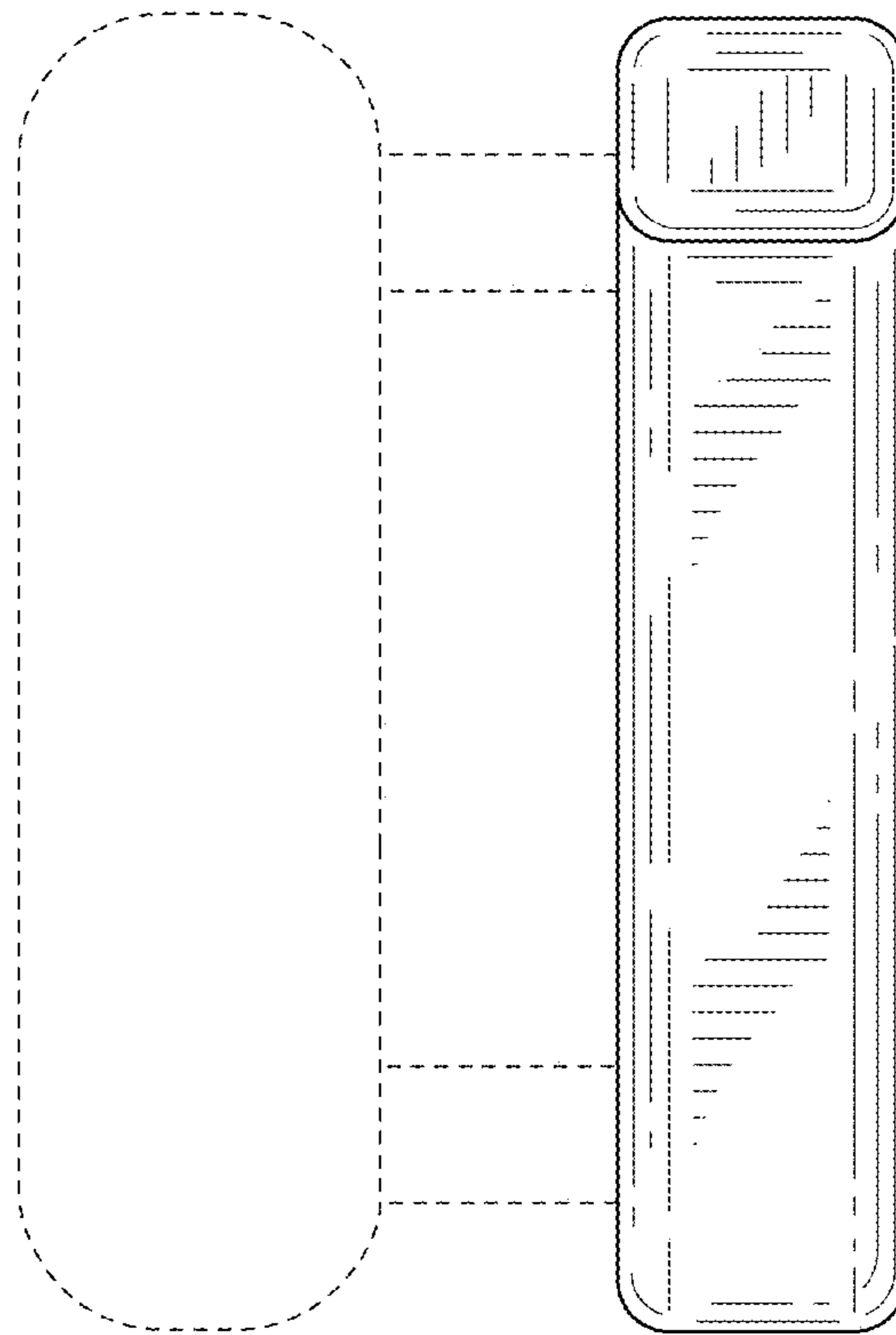


FIG. 157

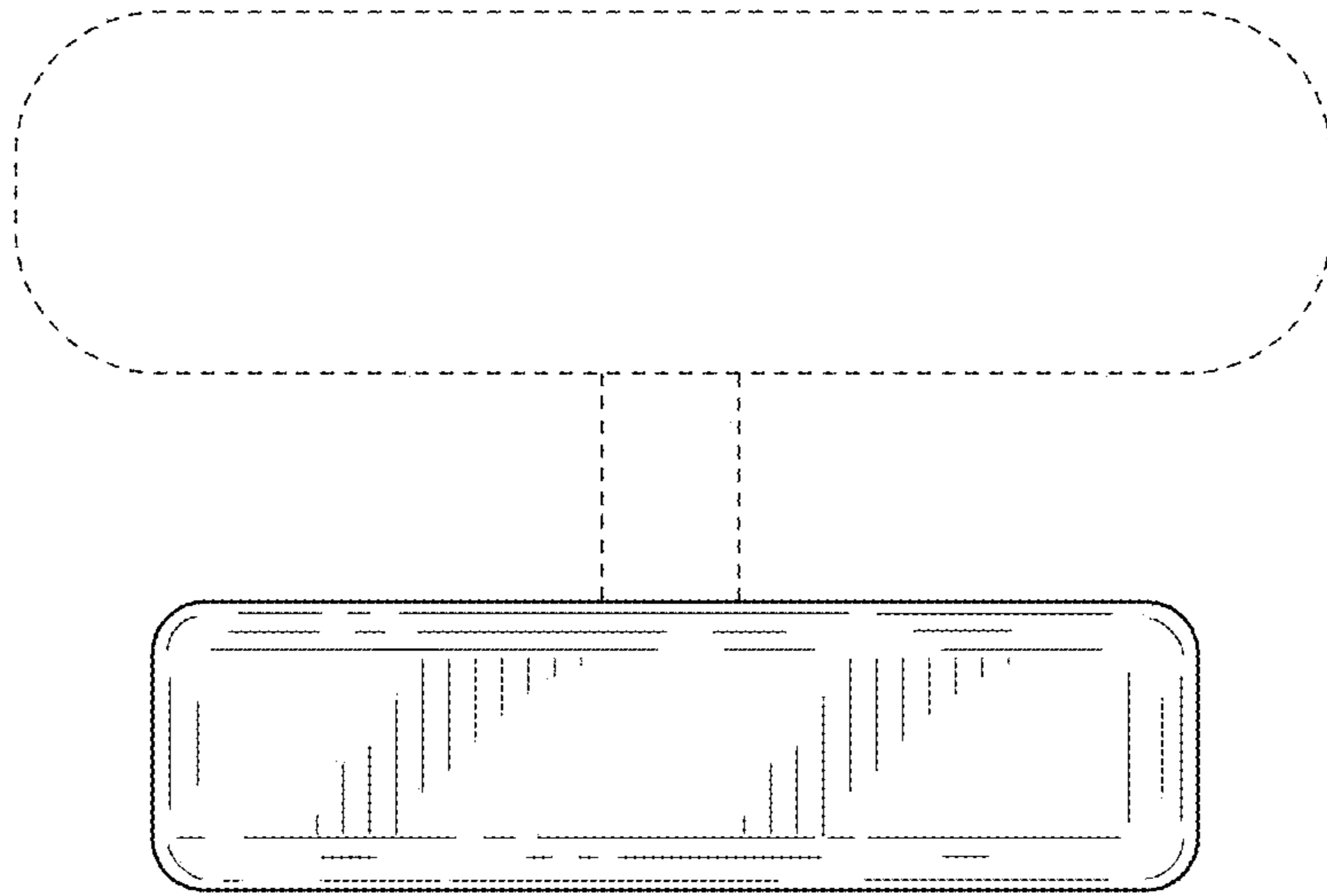


FIG. 158

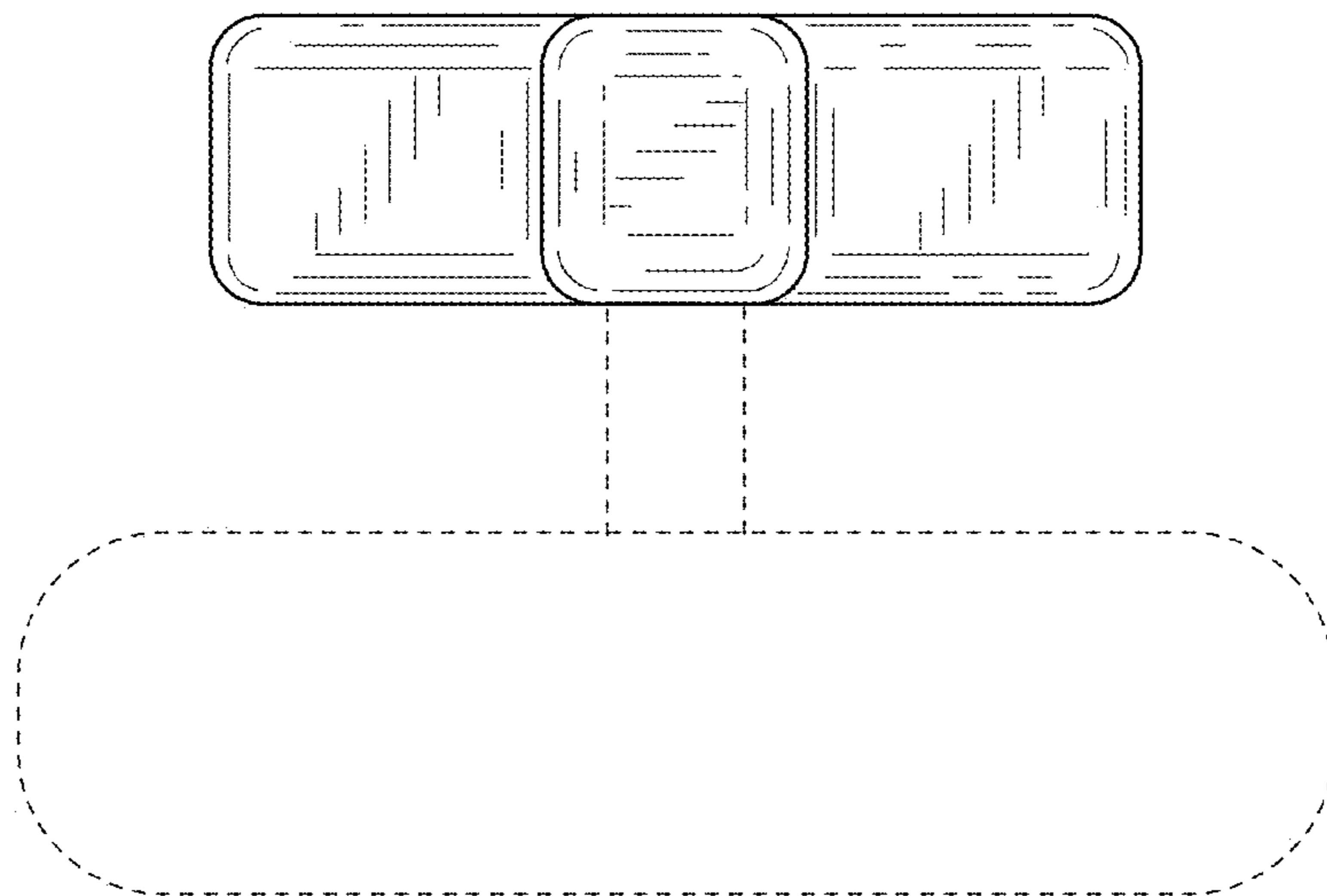


FIG. 159

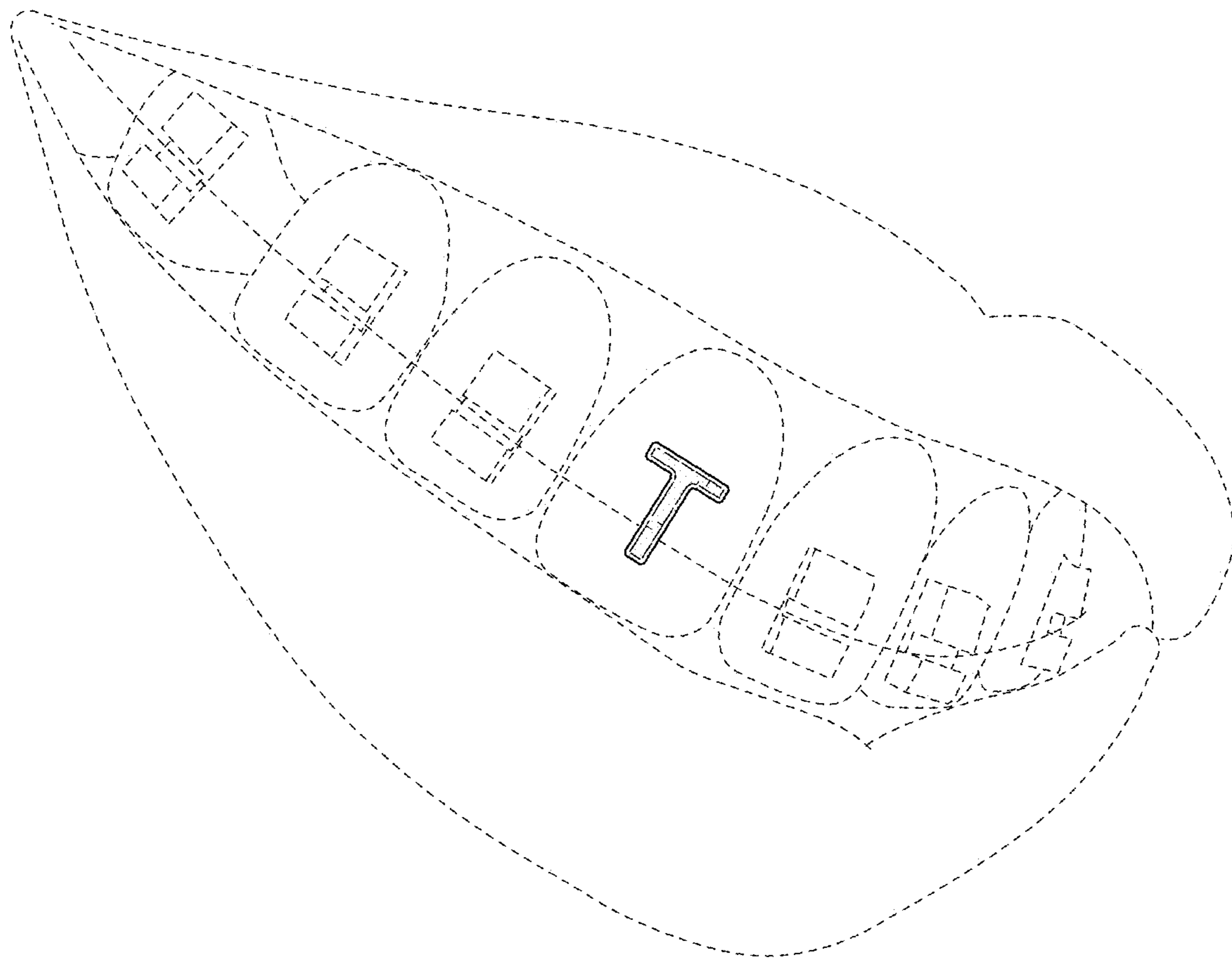


FIG. 160

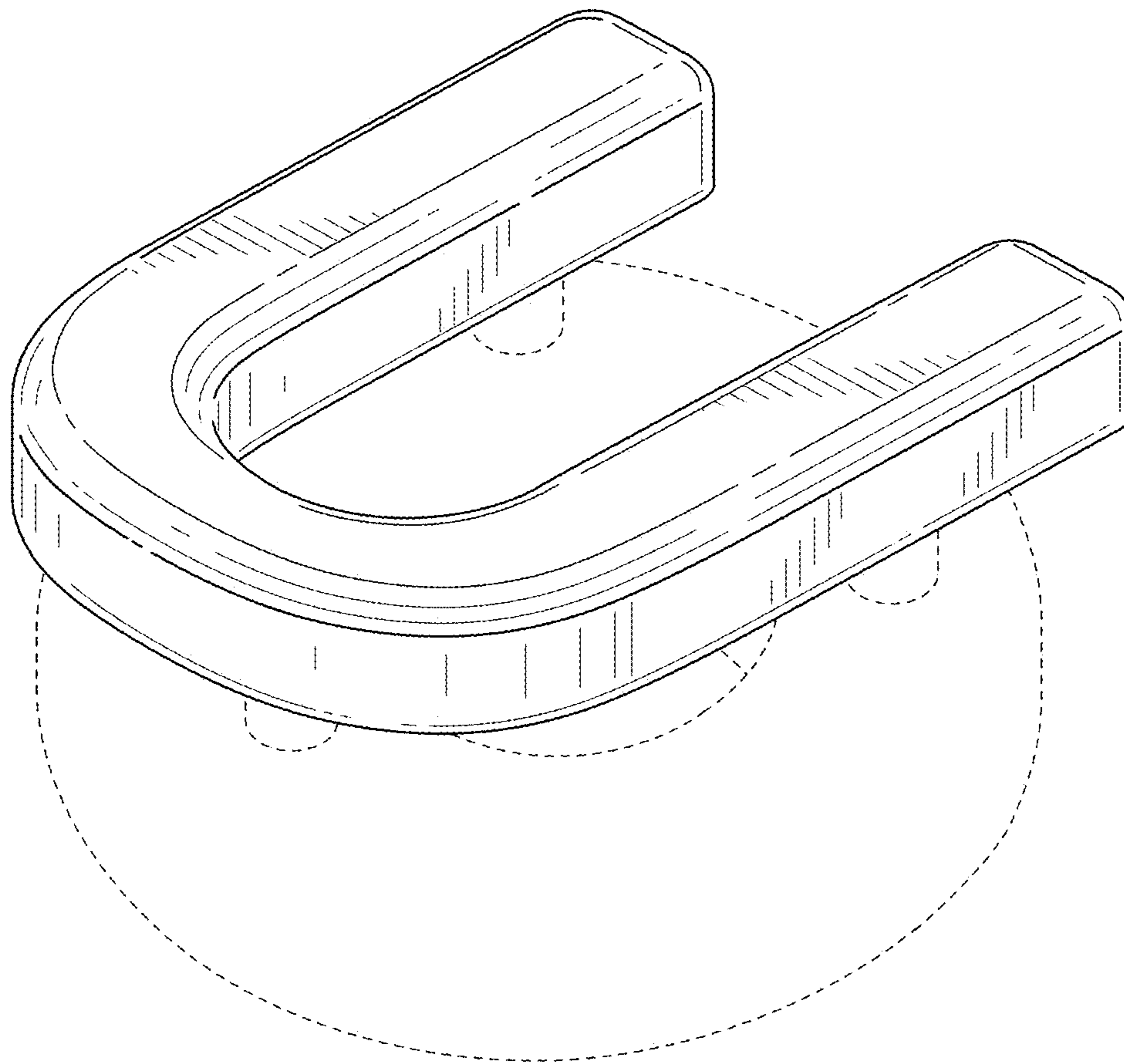


FIG. 161

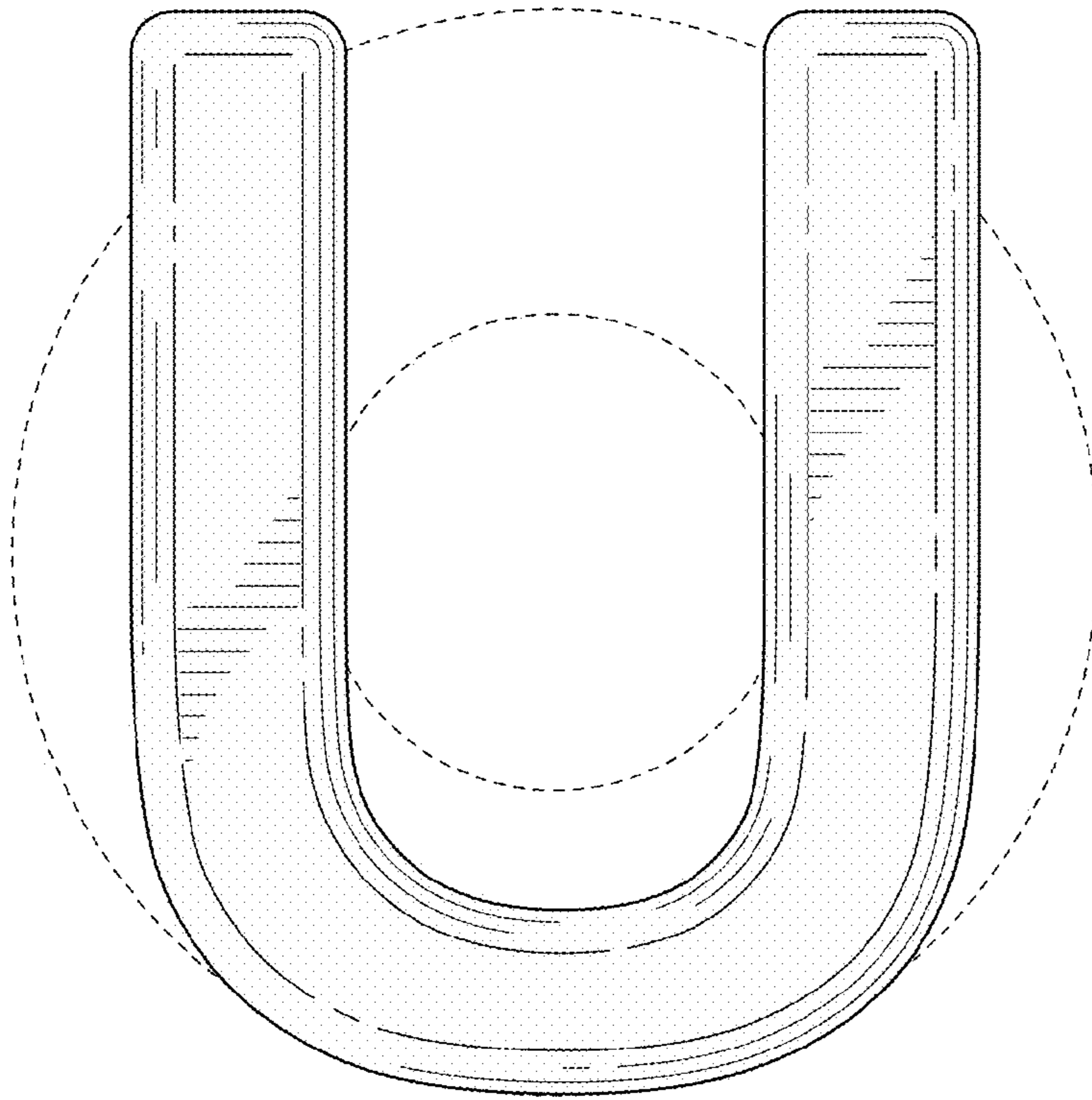


FIG. 162

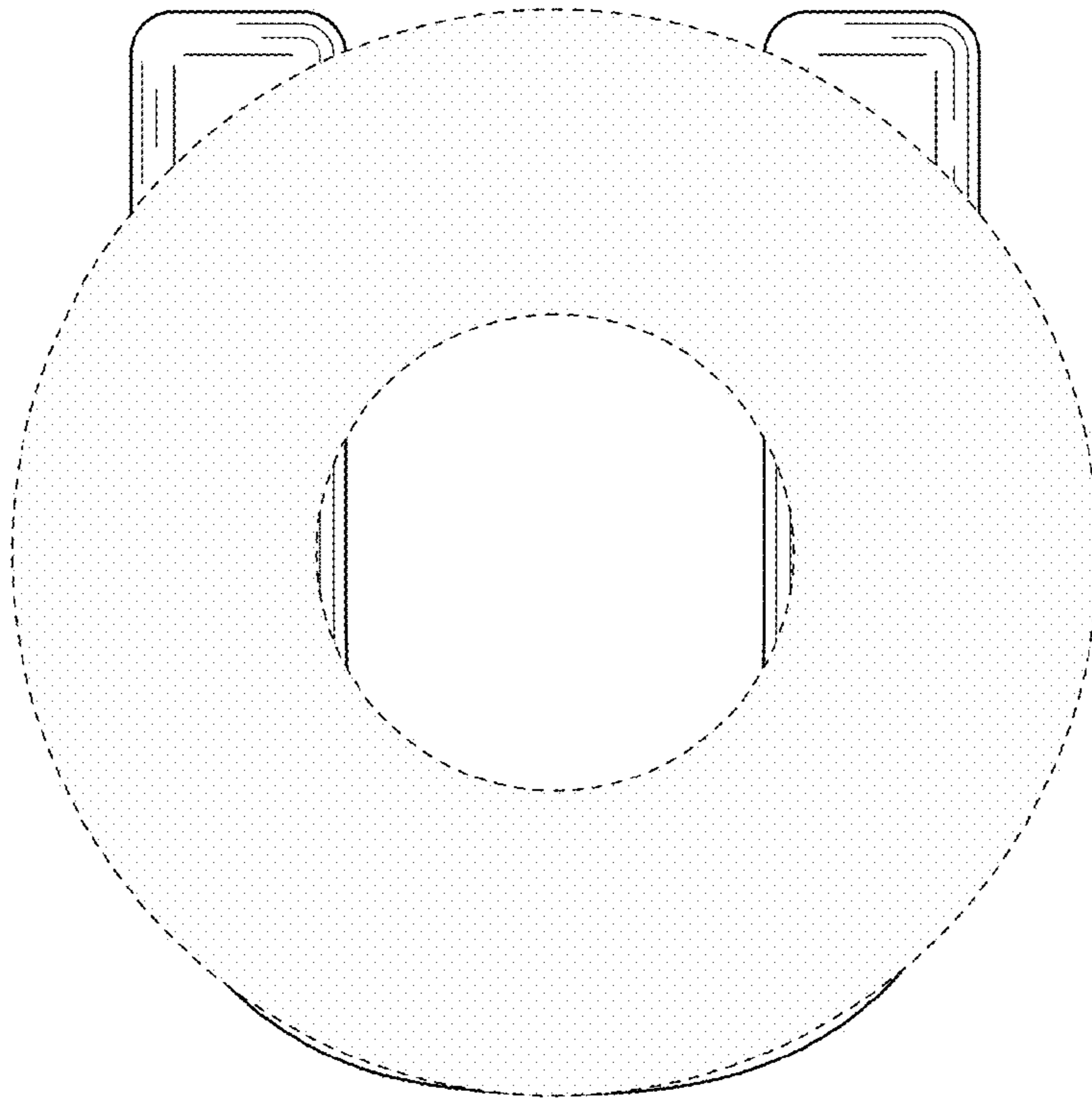


FIG. 163

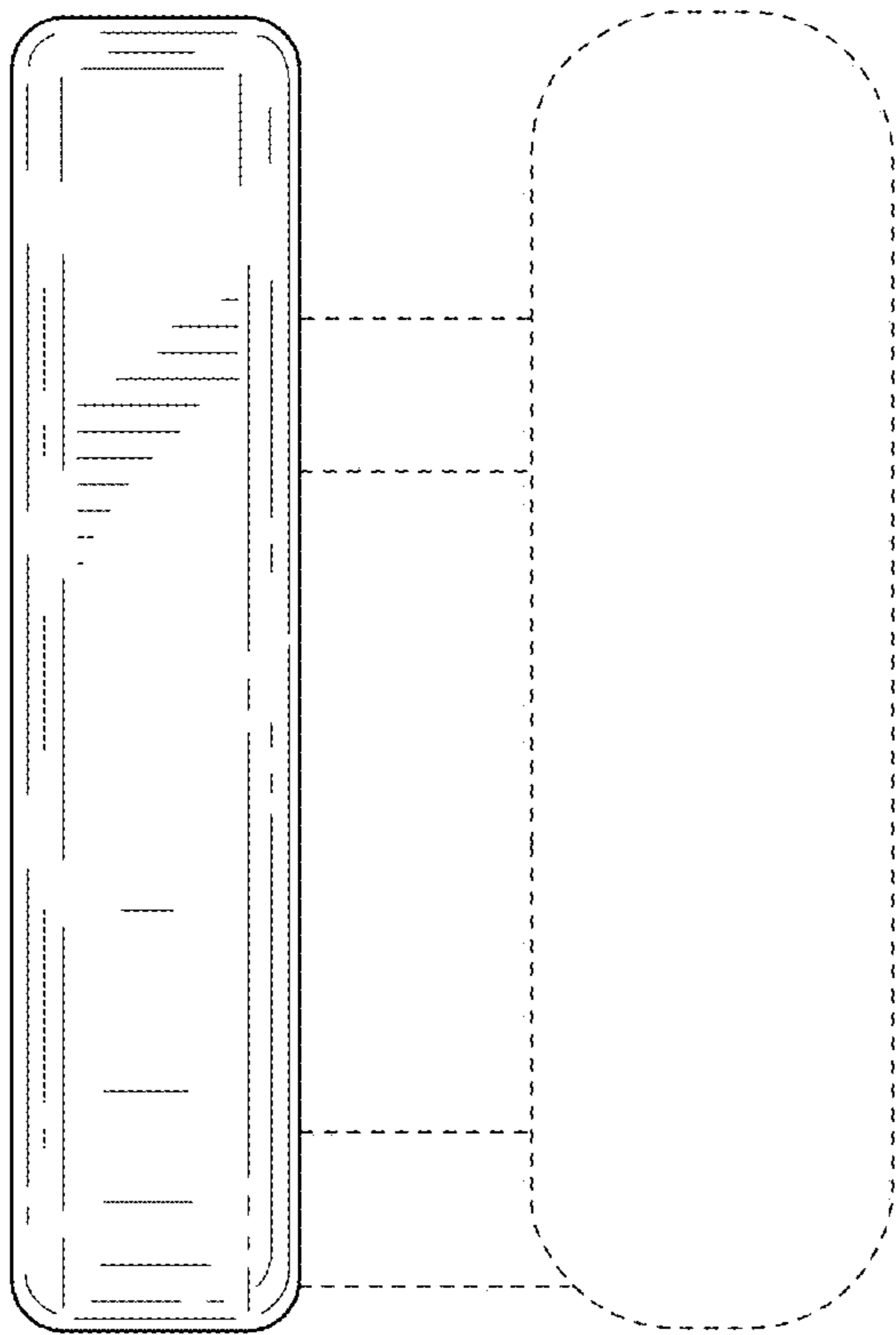


FIG. 164

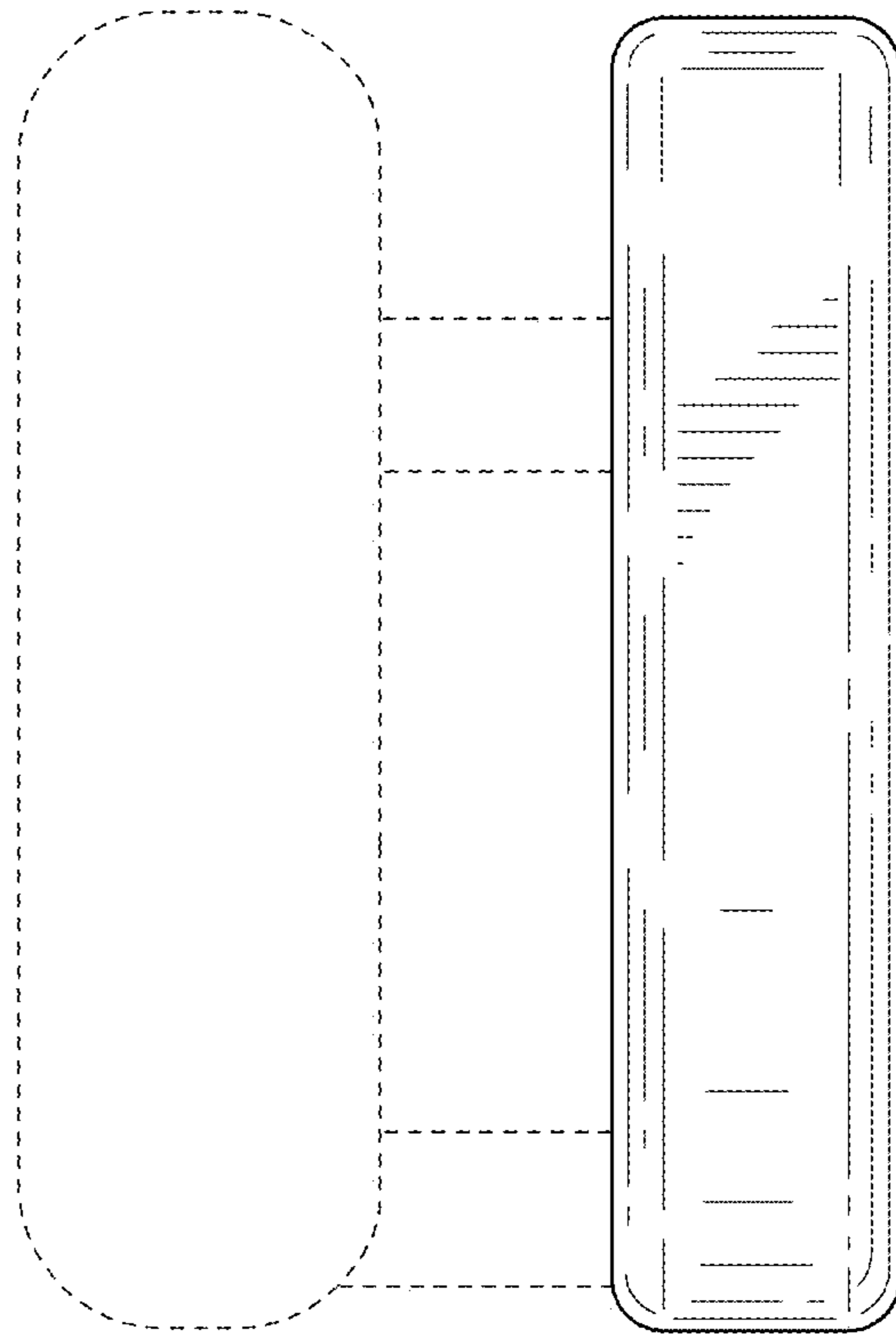


FIG. 165

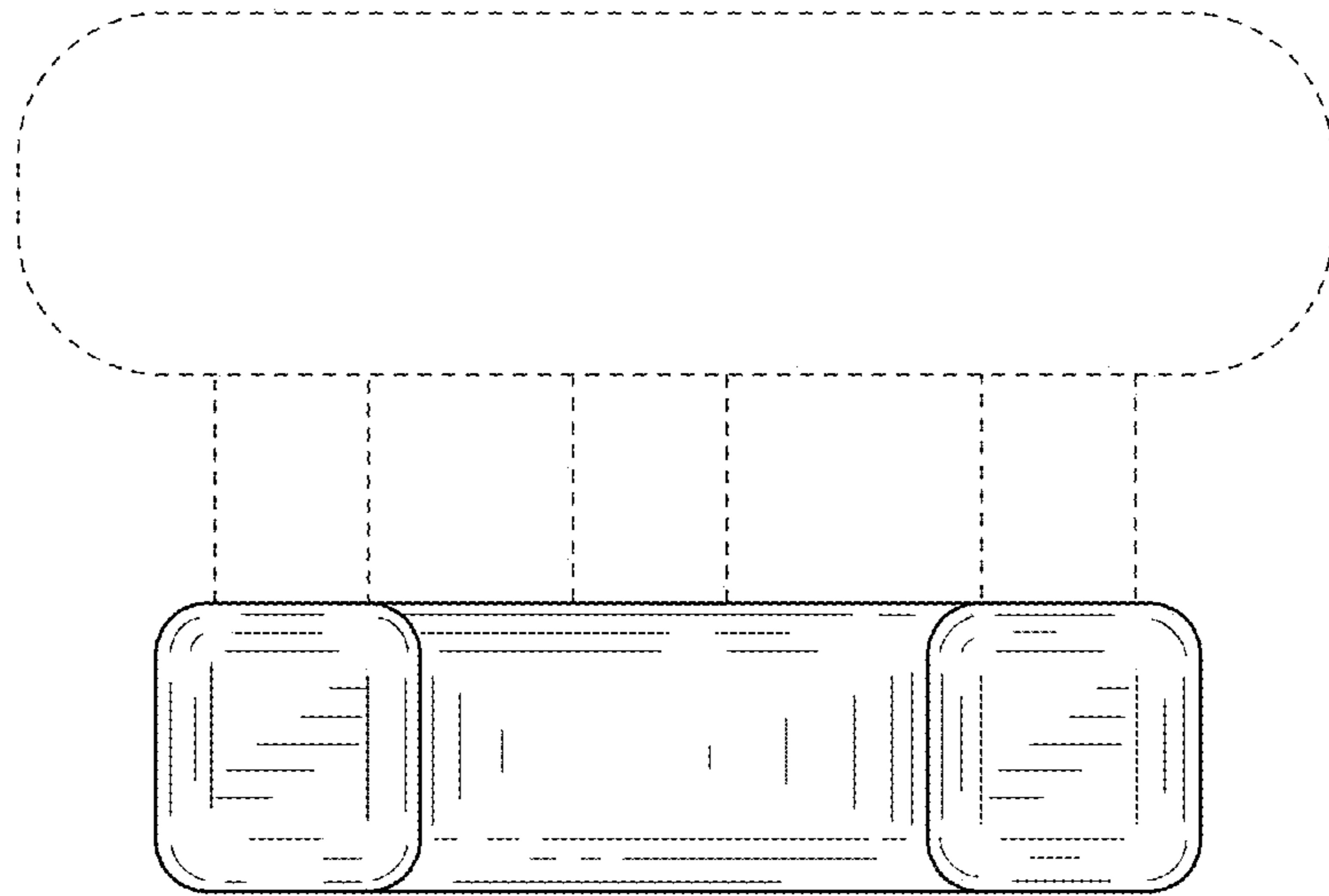


FIG. 166

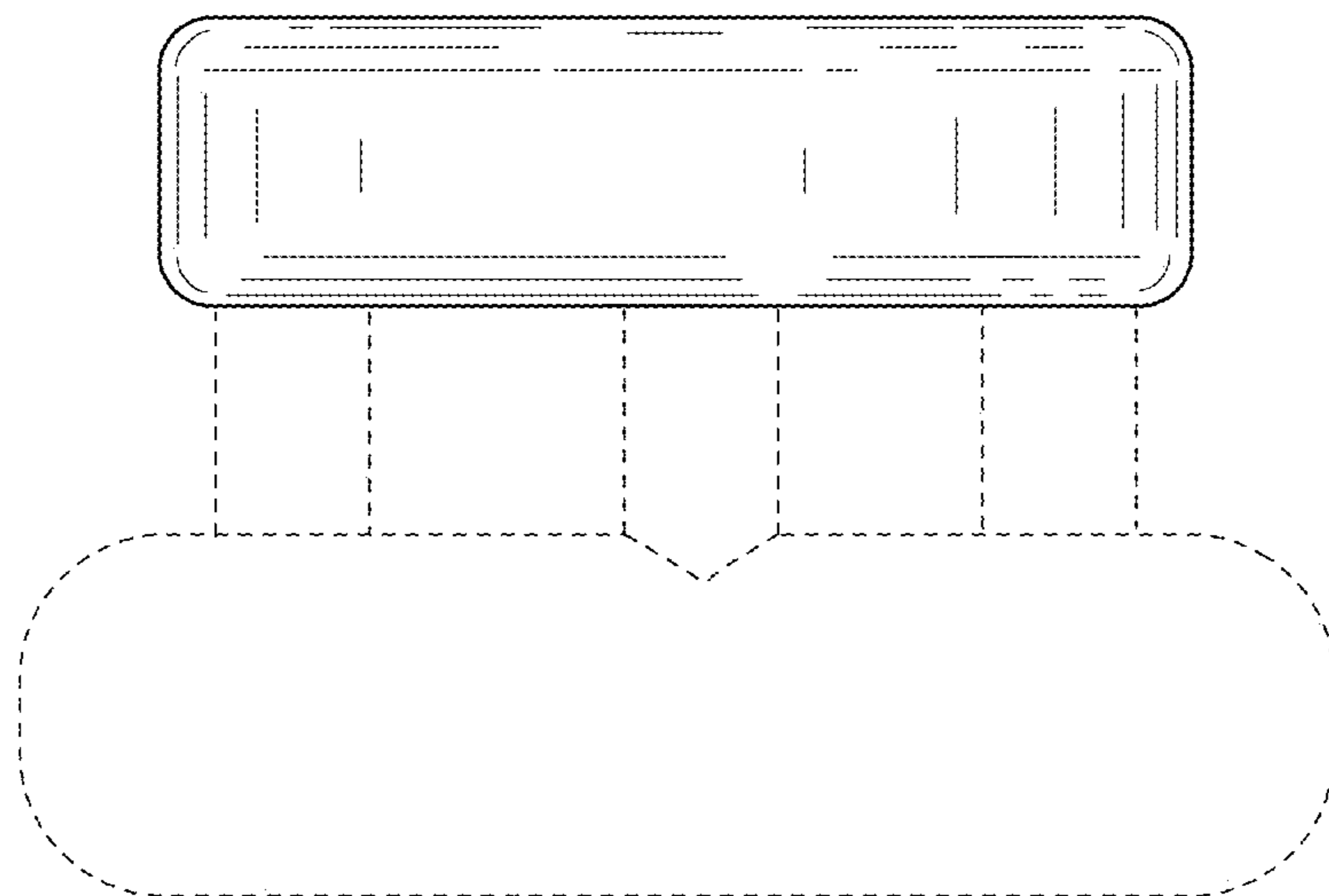


FIG. 167

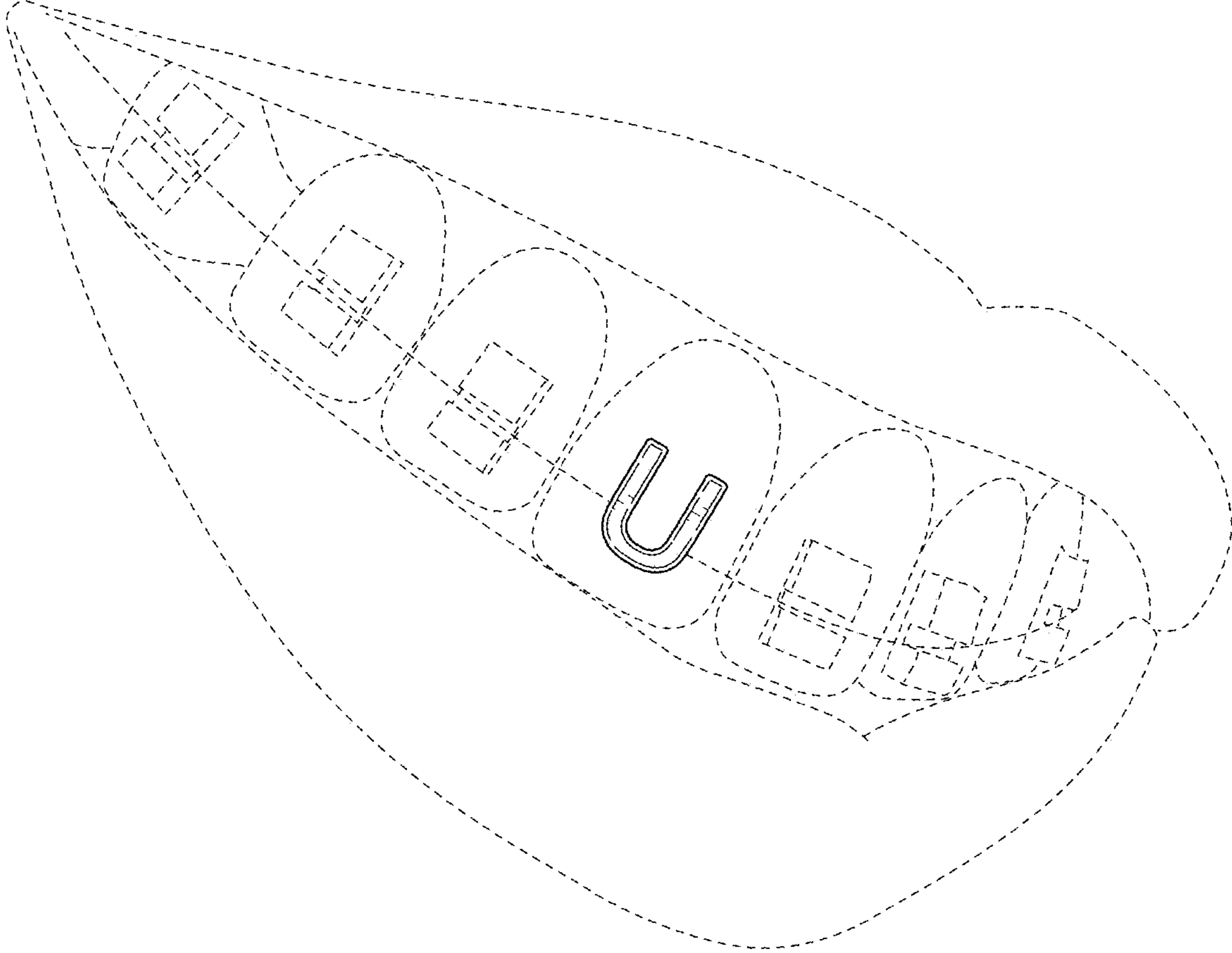


FIG. 168

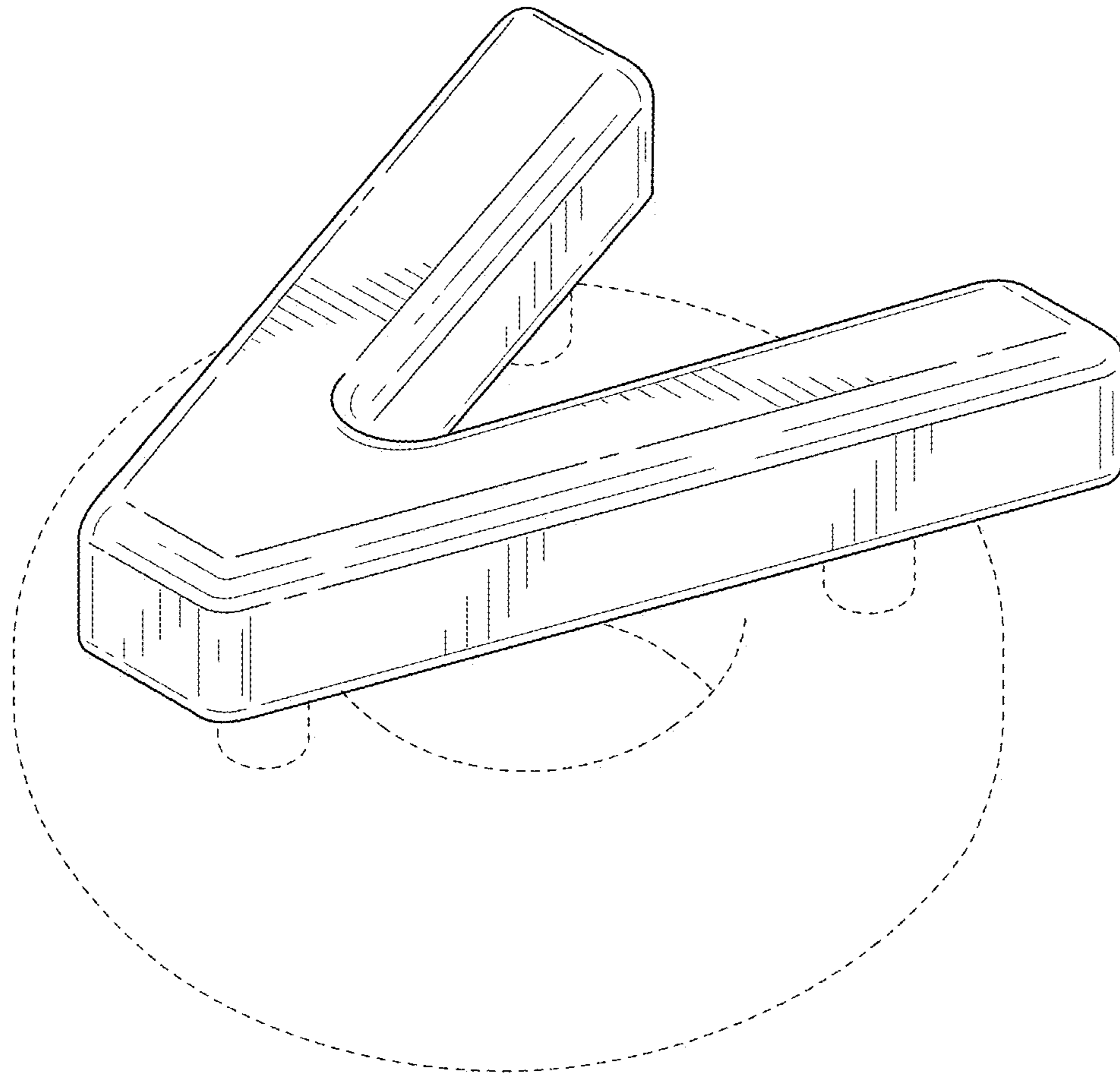


FIG. 169



FIG. 170

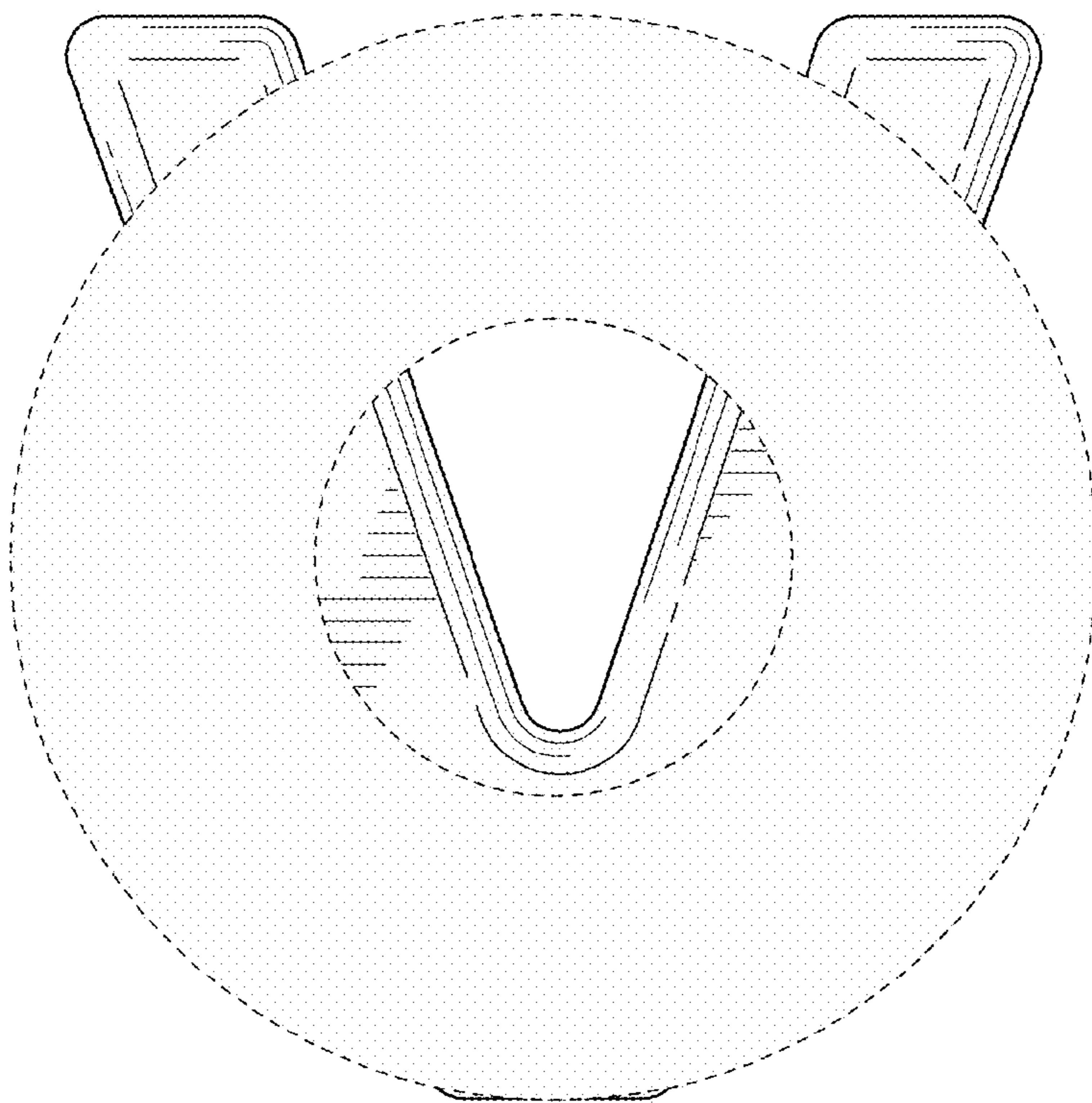


FIG. 171

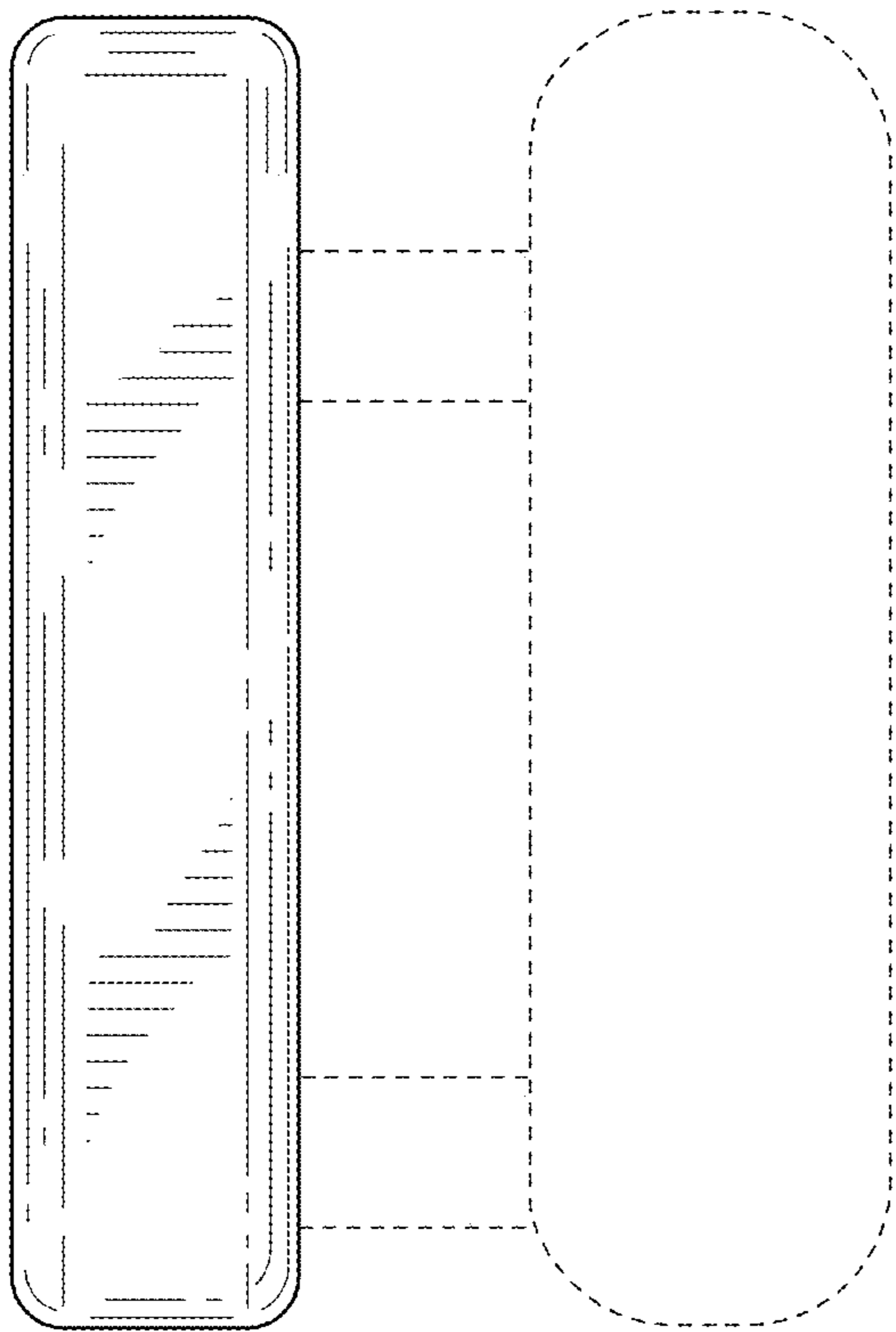


FIG. 172

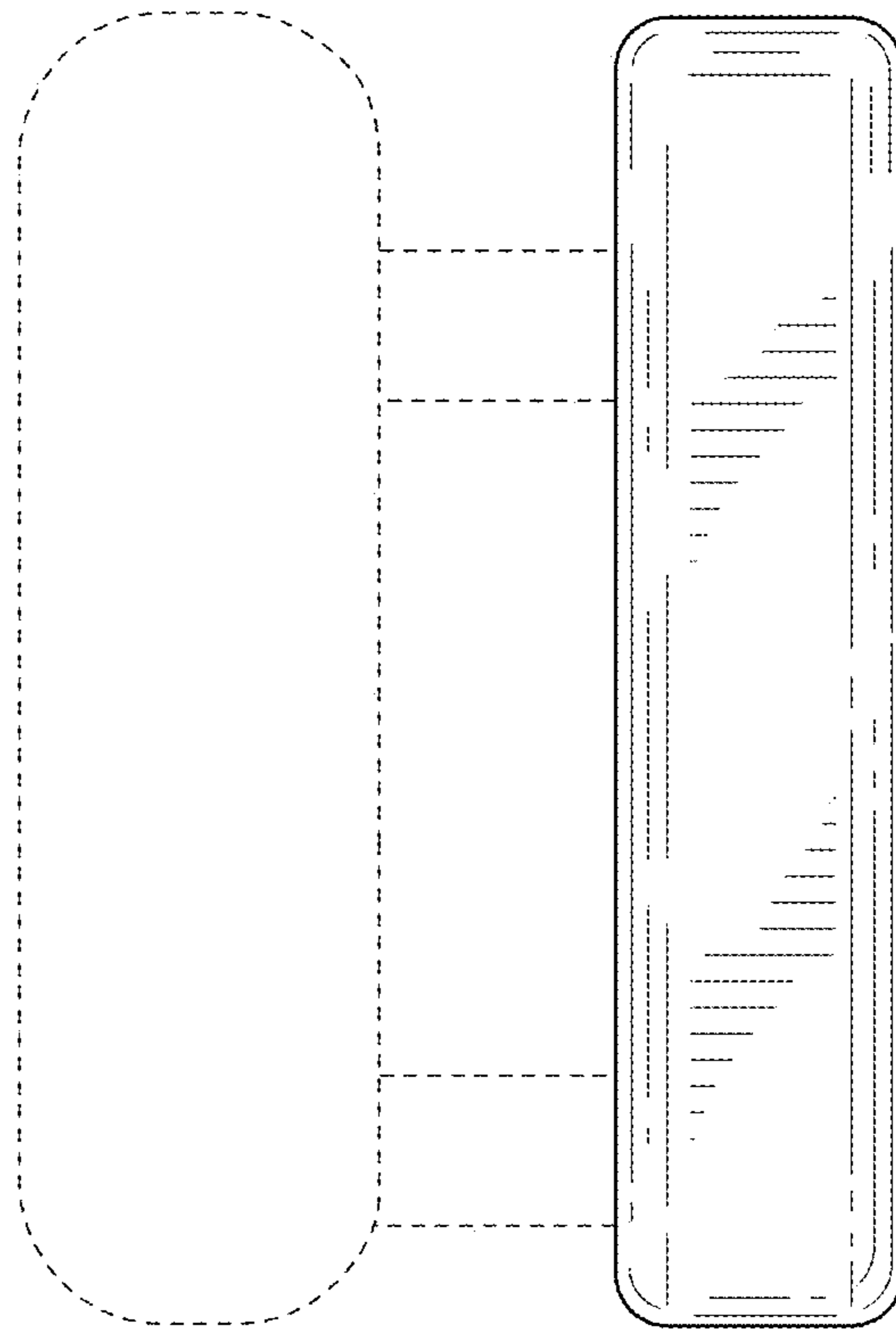


FIG. 173

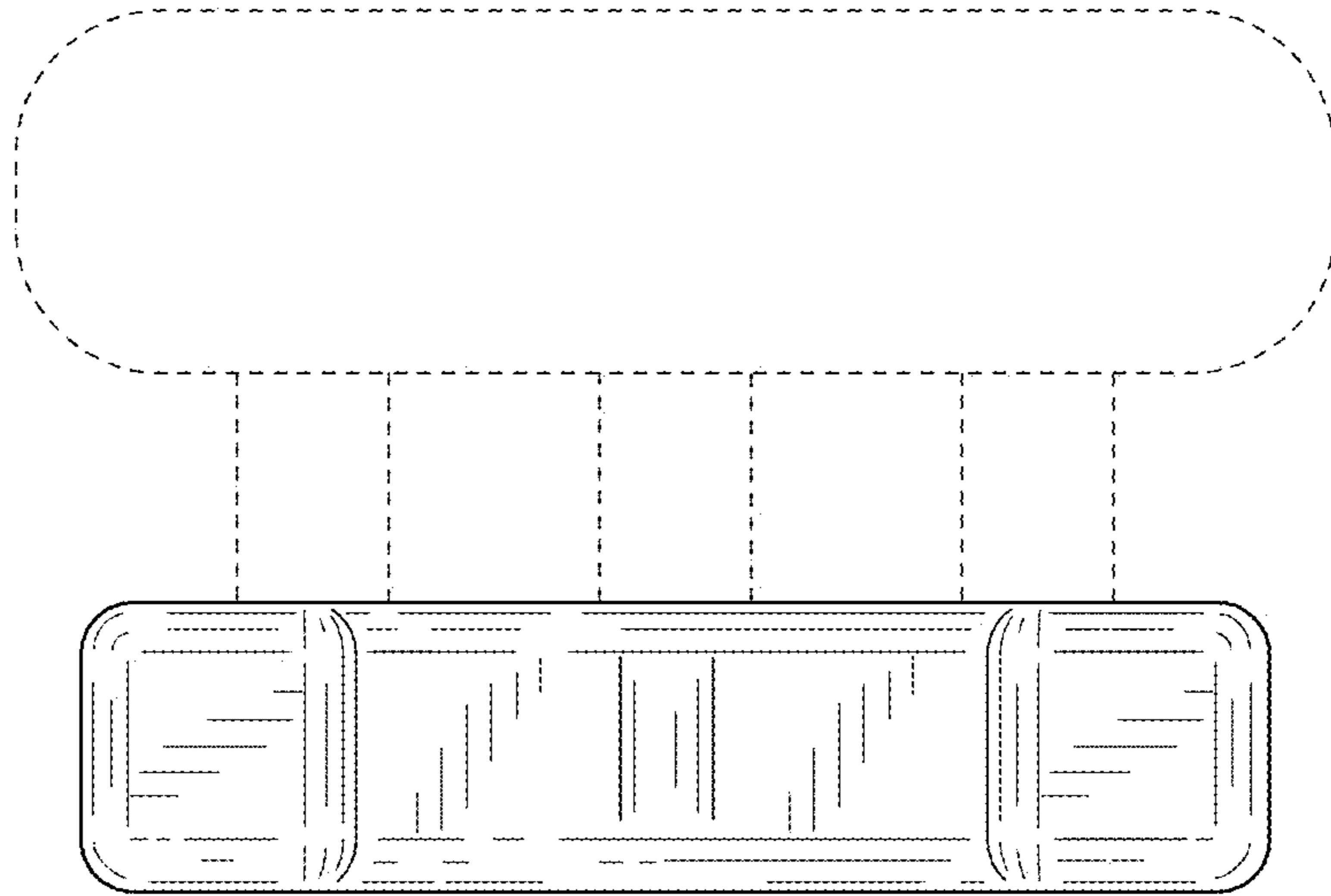


FIG. 174

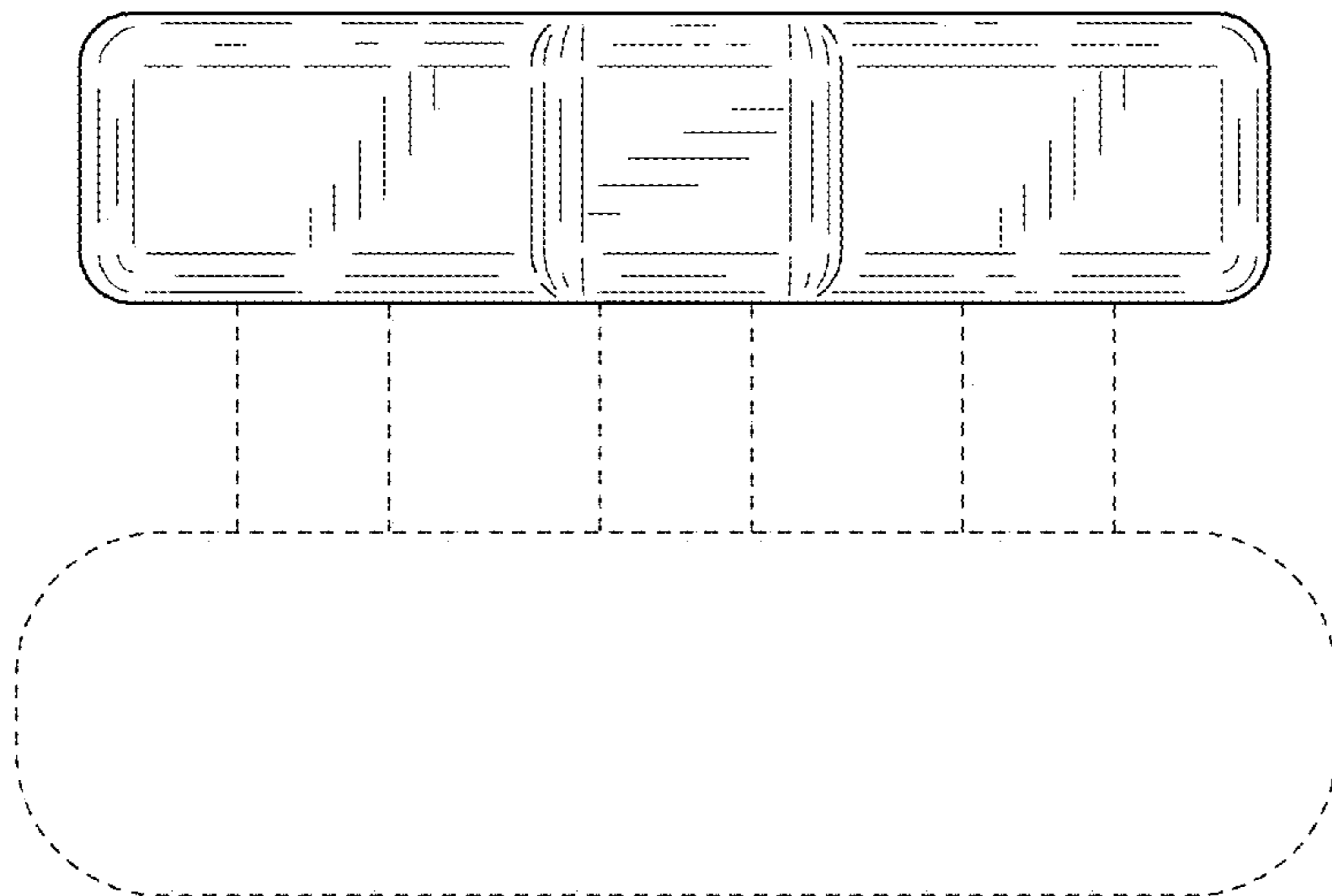


FIG. 175

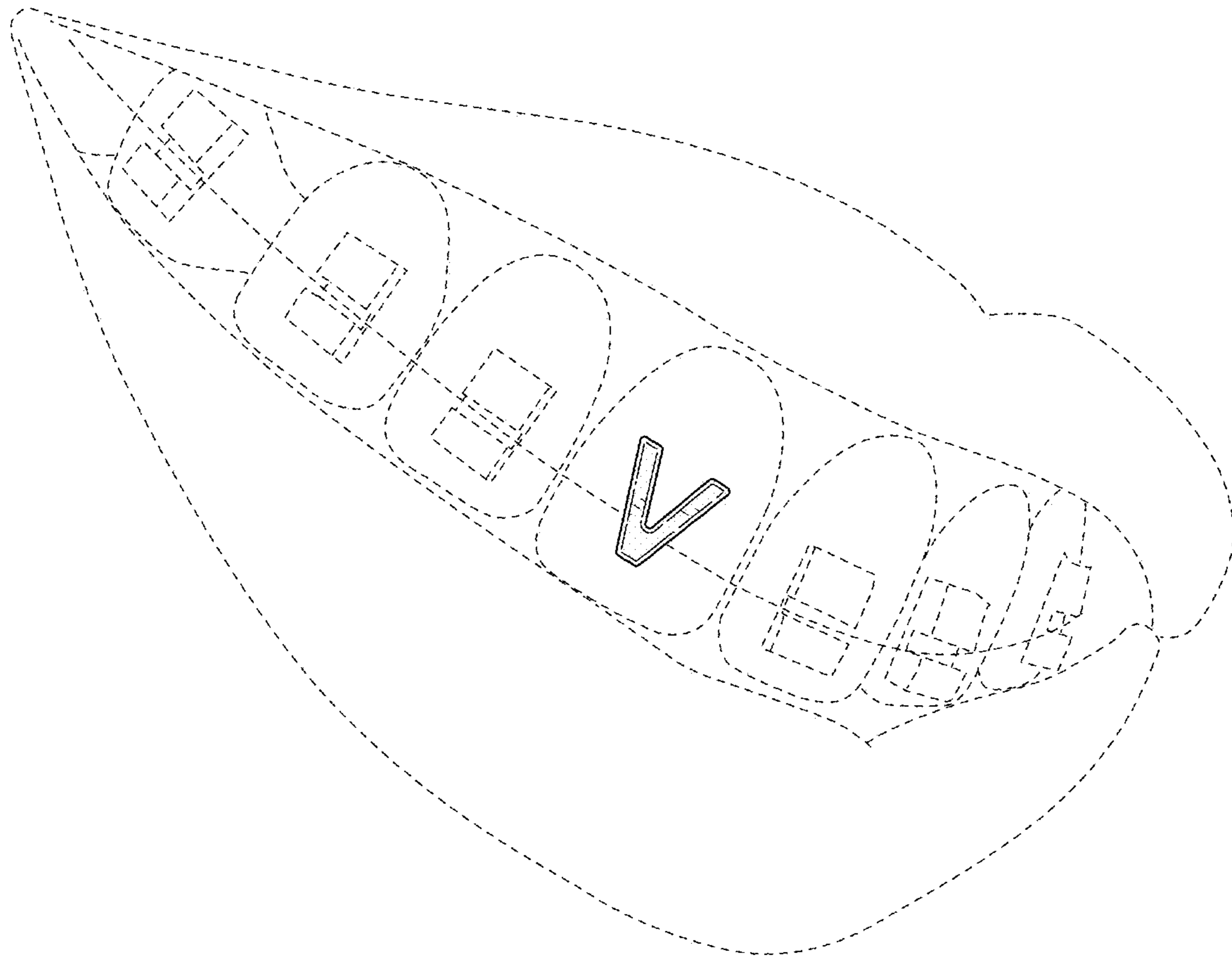


FIG. 176

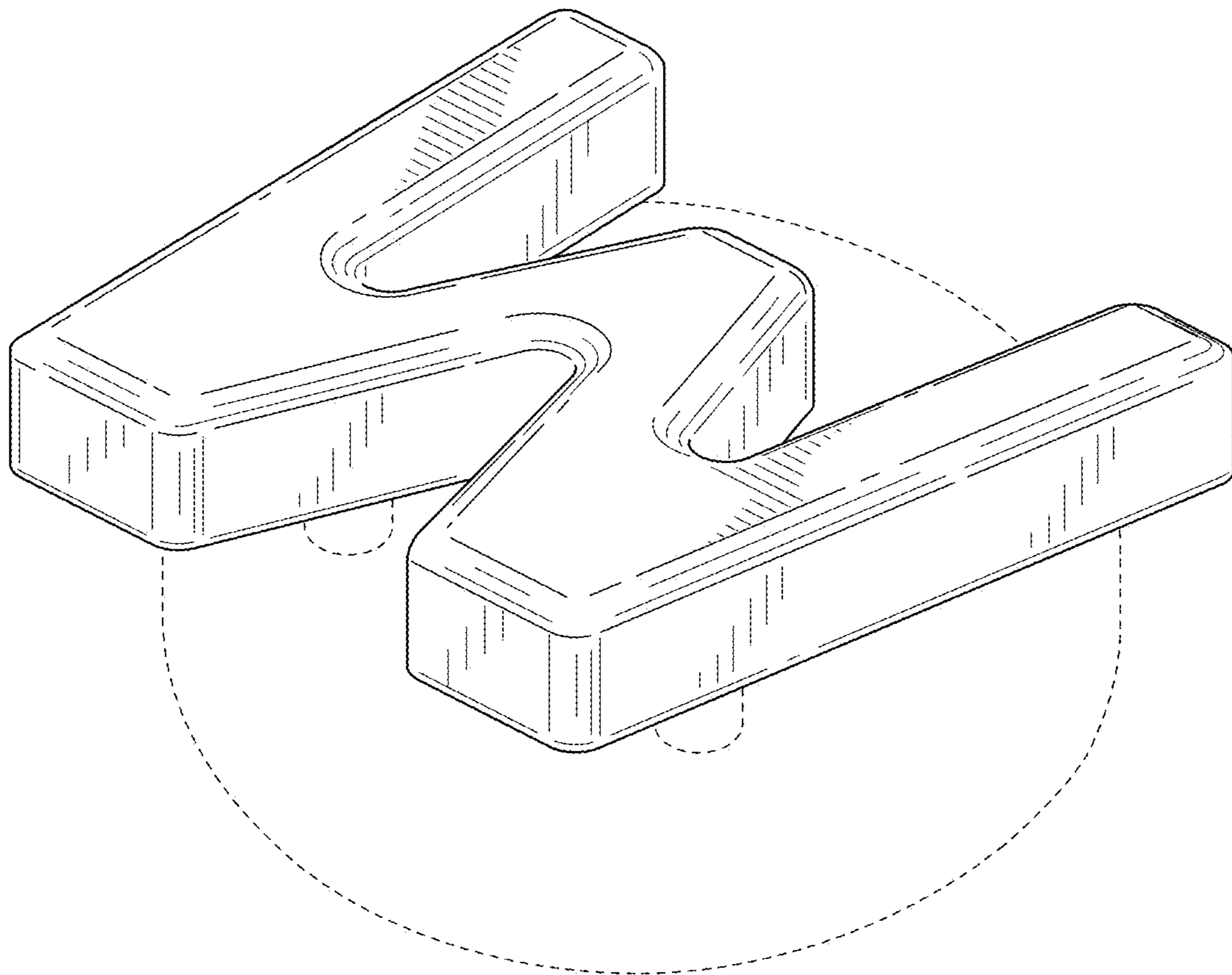


FIG. 177

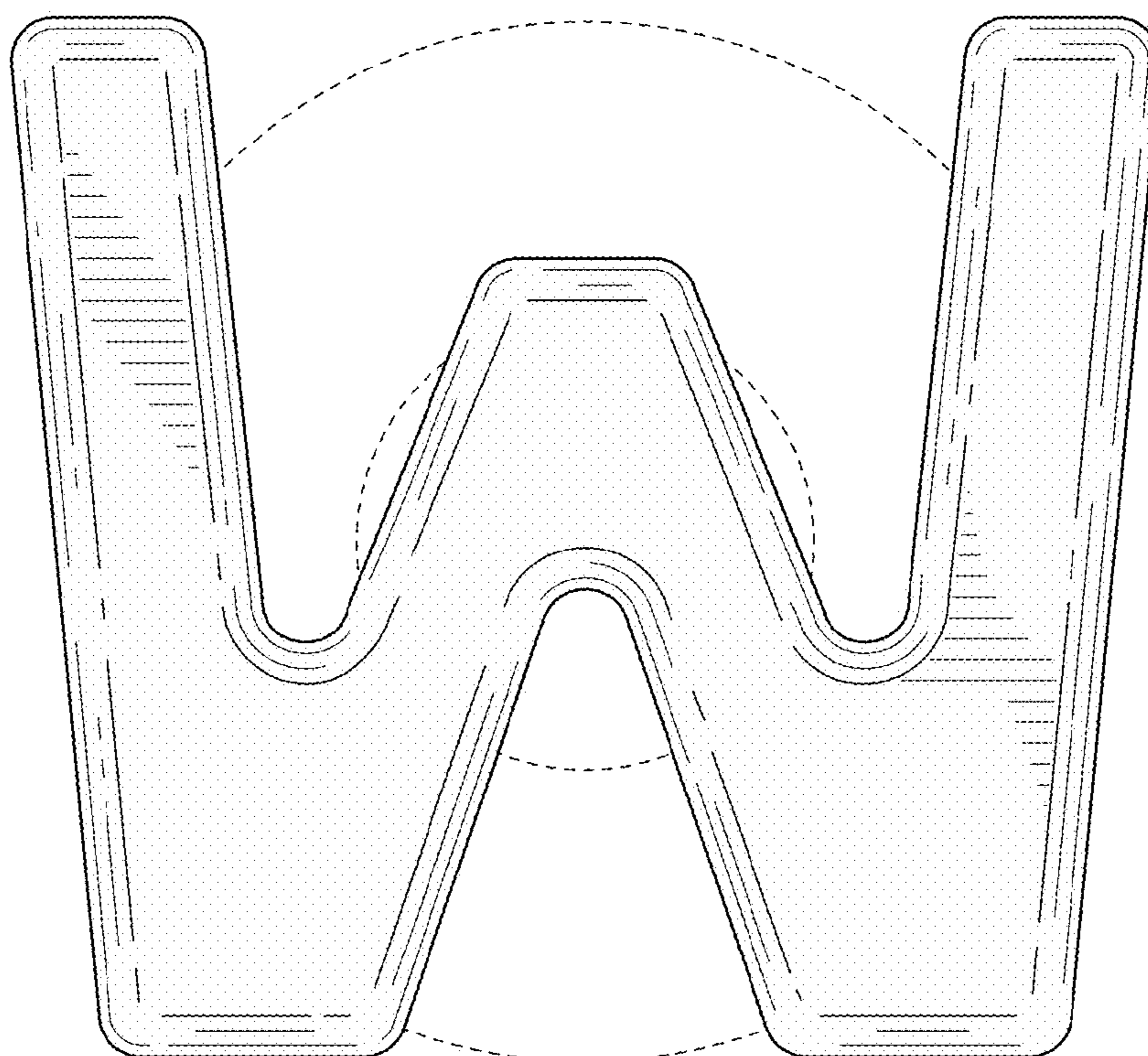


FIG. 178

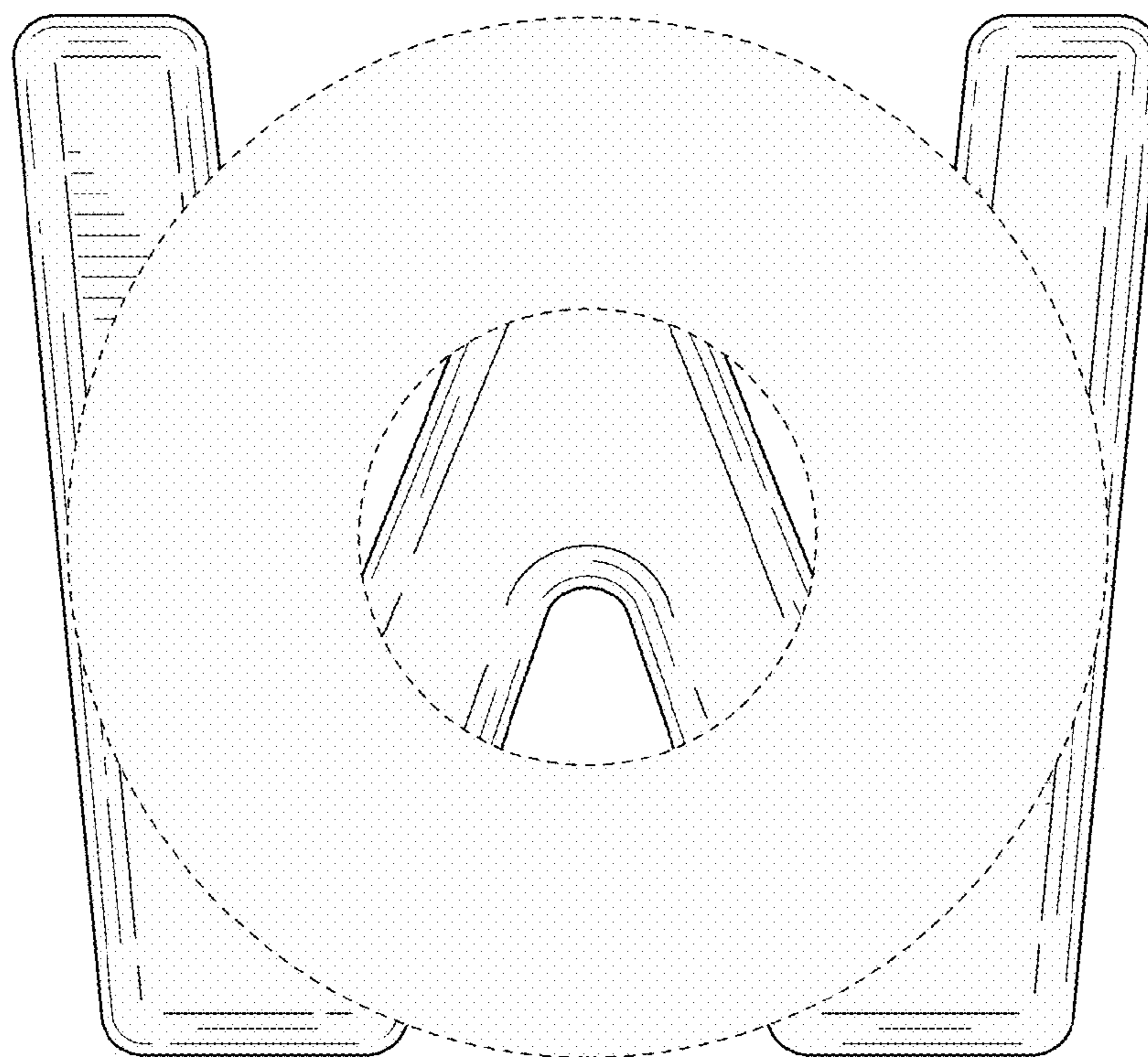


FIG. 179

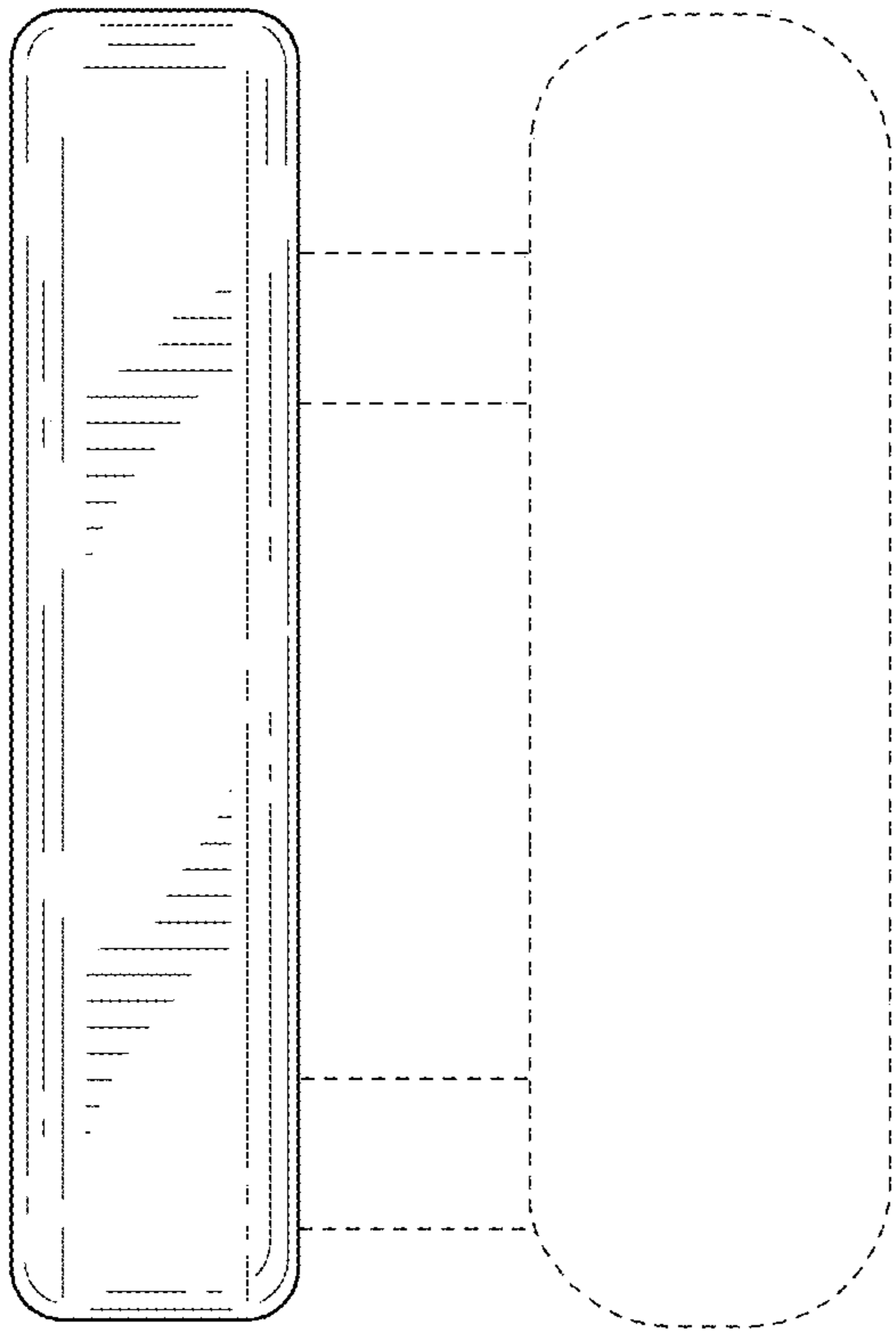


FIG. 180

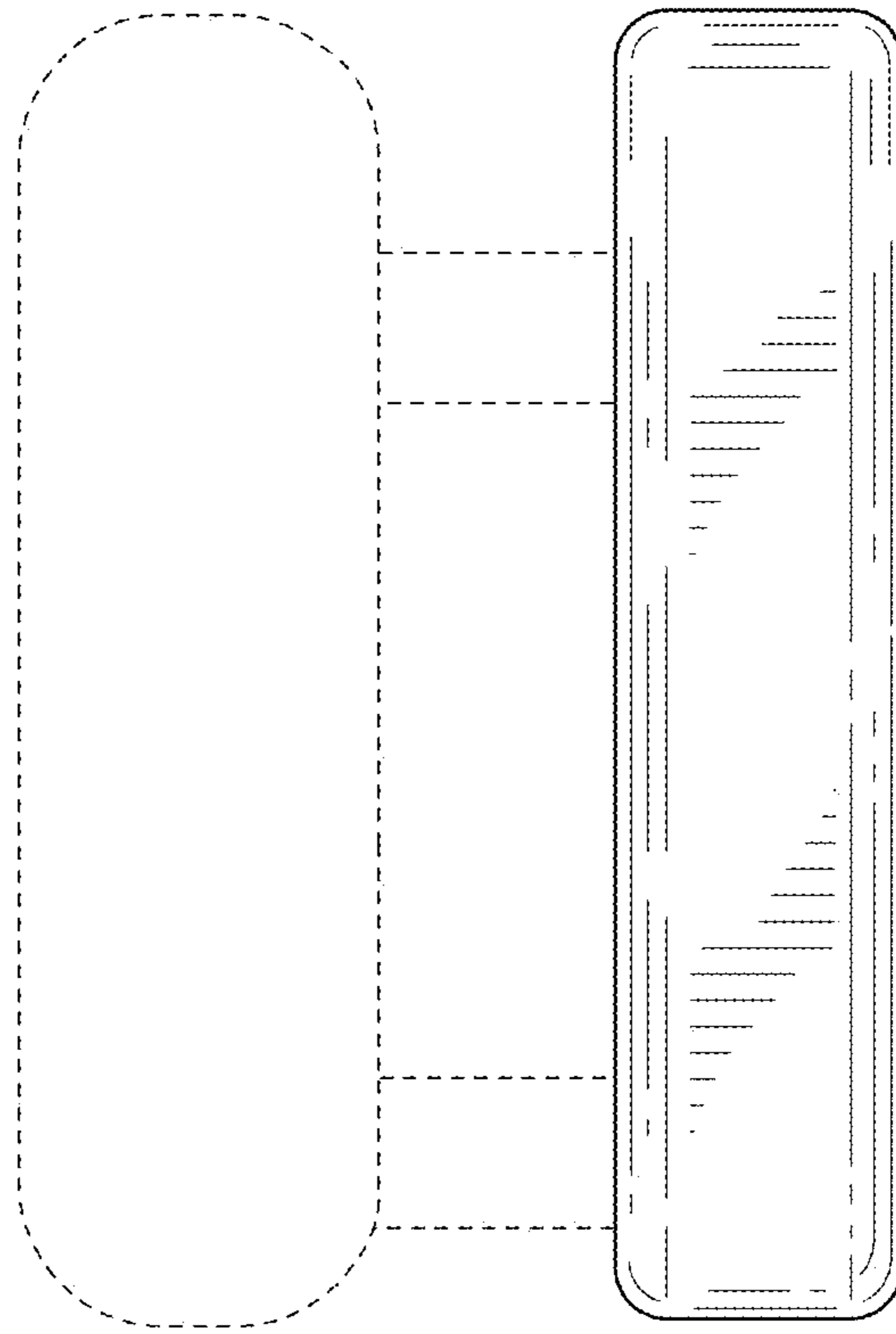


FIG. 181

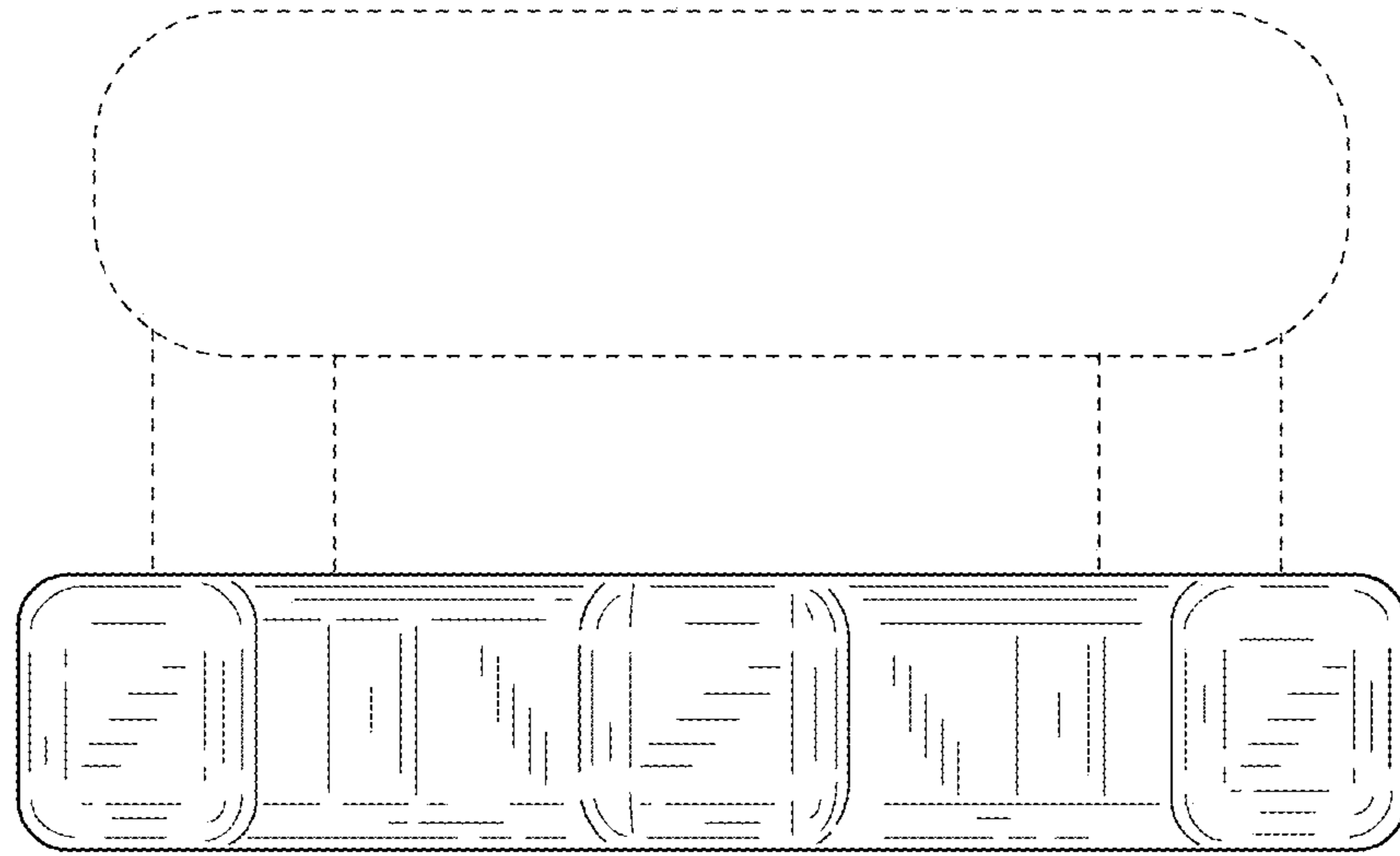


FIG. 182

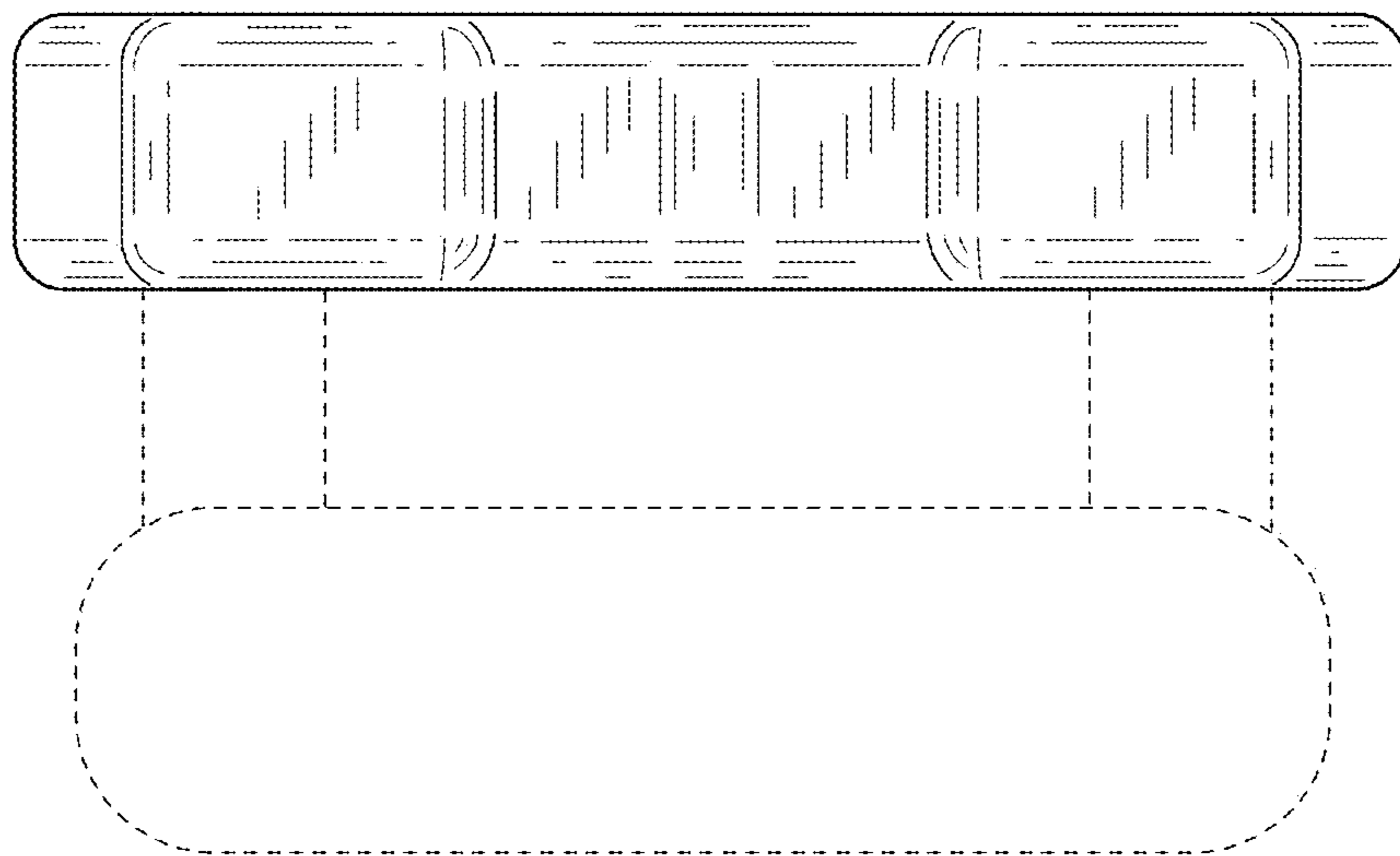


FIG. 183

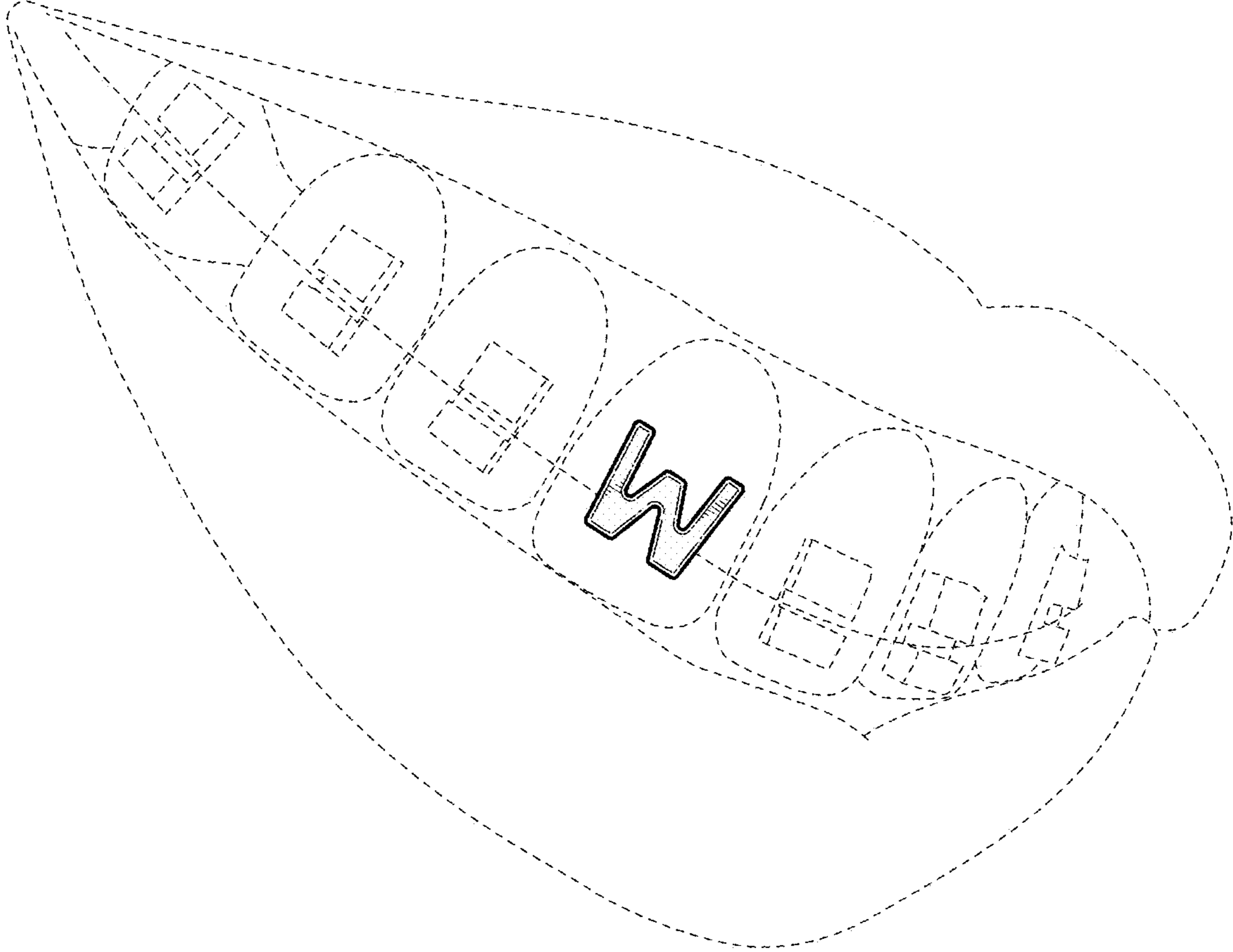


FIG. 184

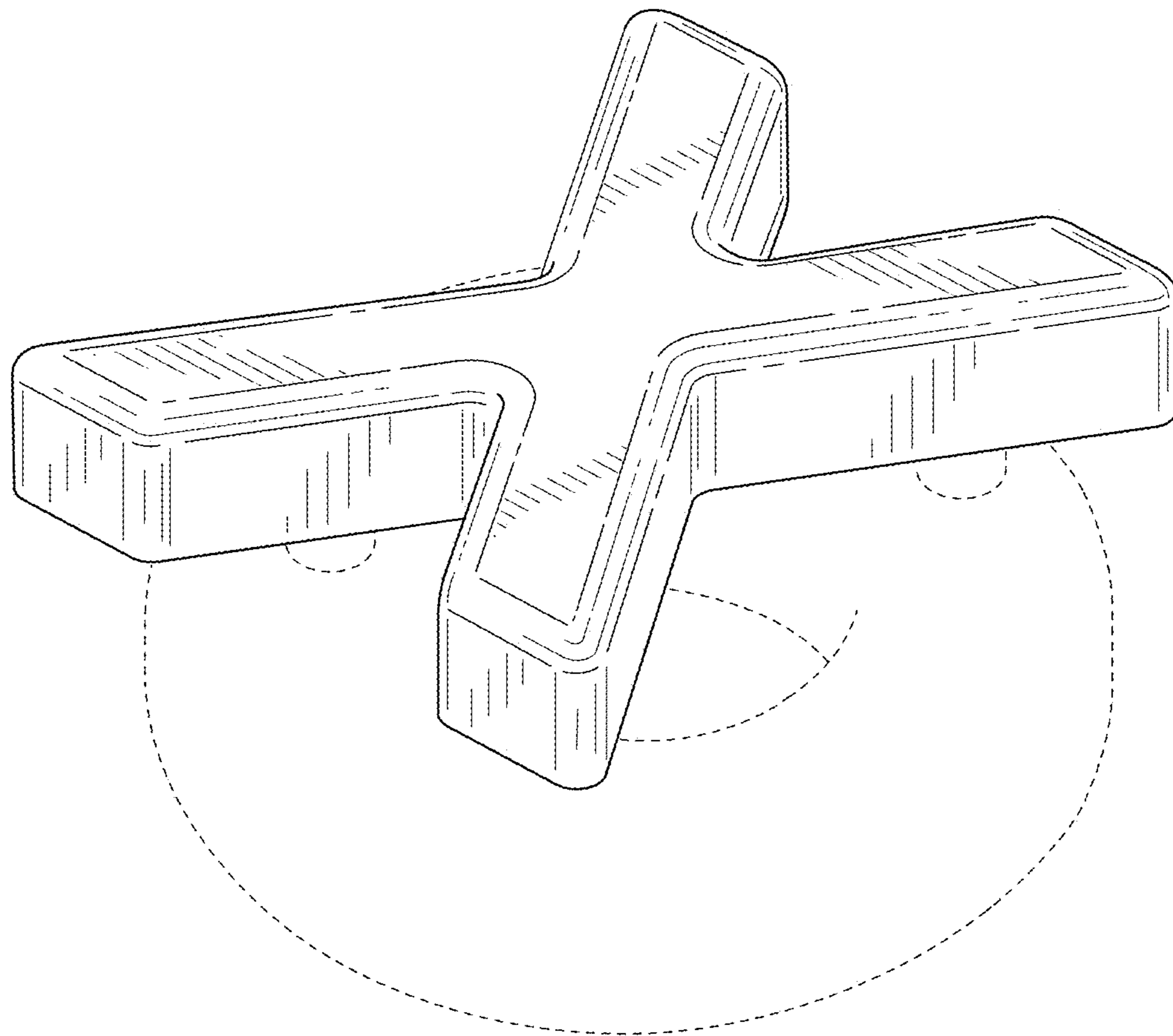


FIG. 185

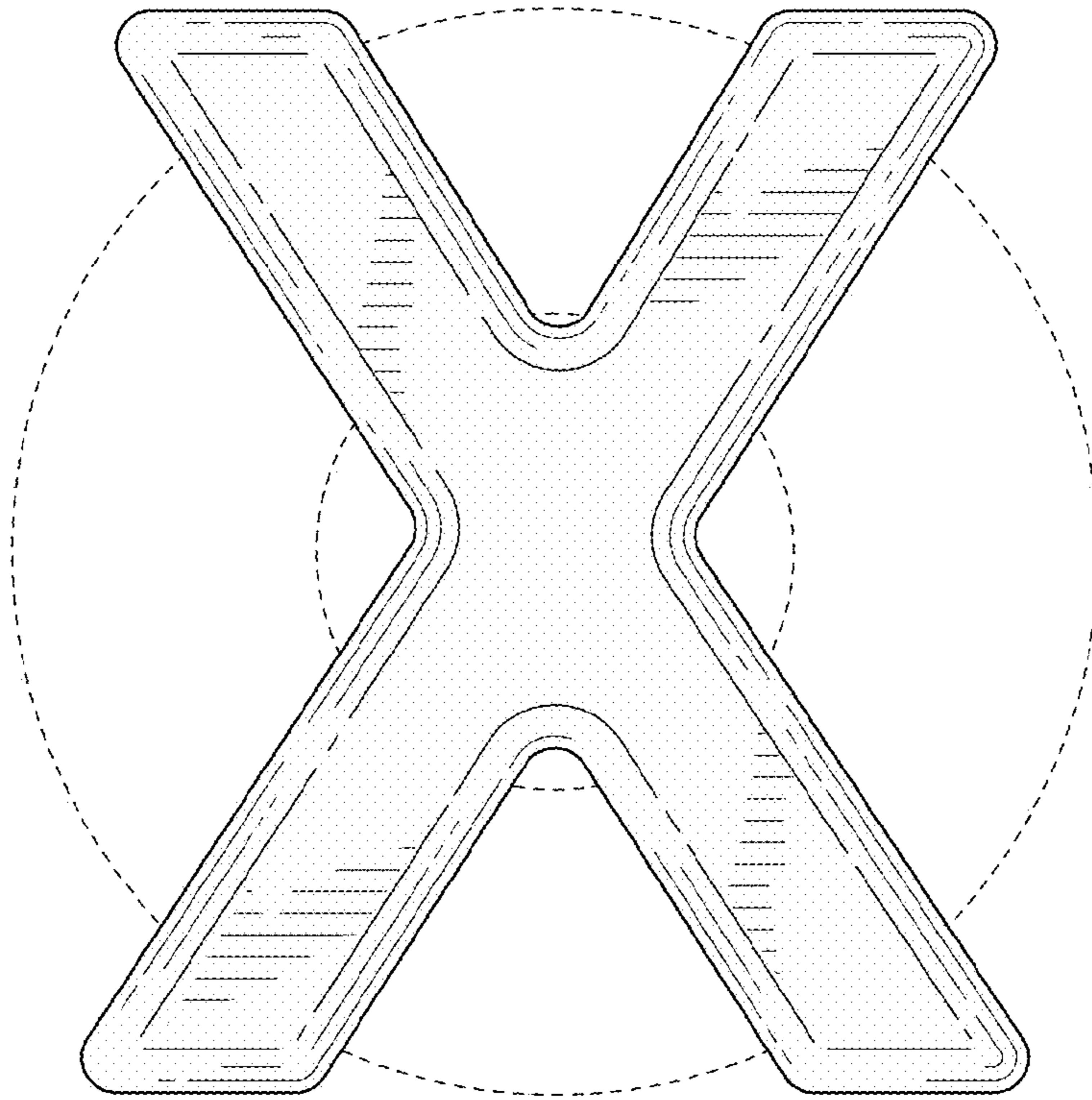


FIG. 186

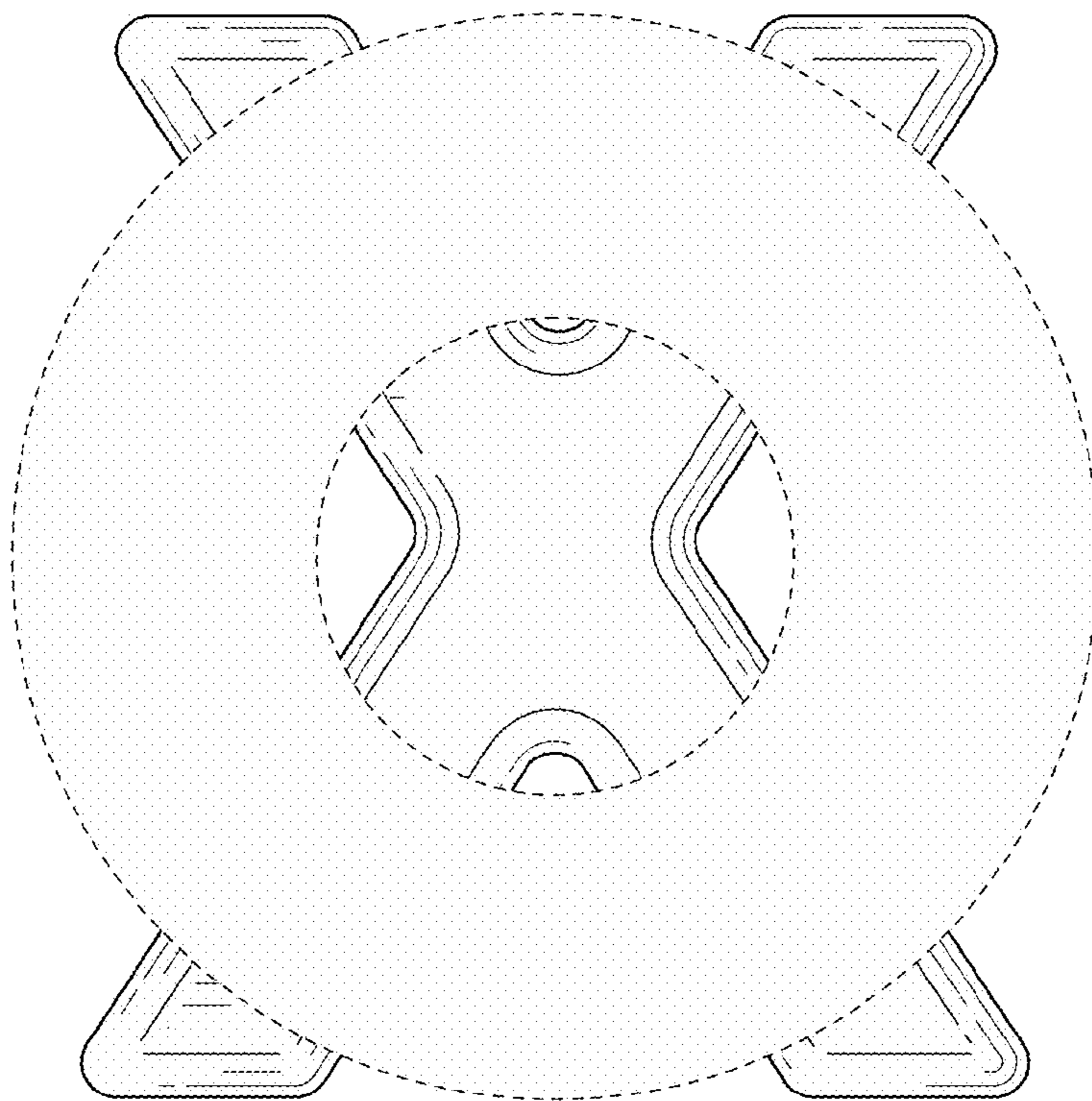


FIG. 187

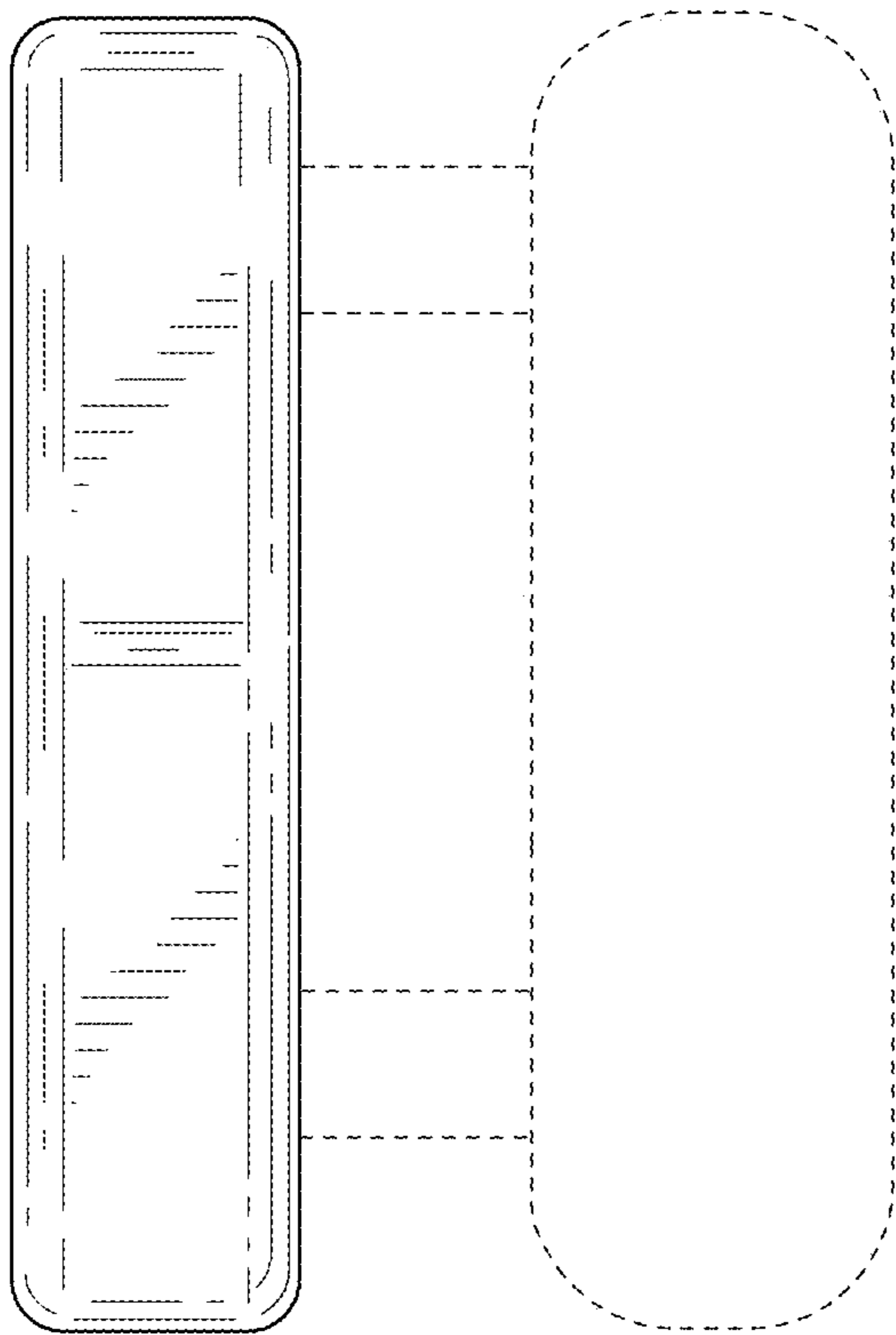


FIG. 188

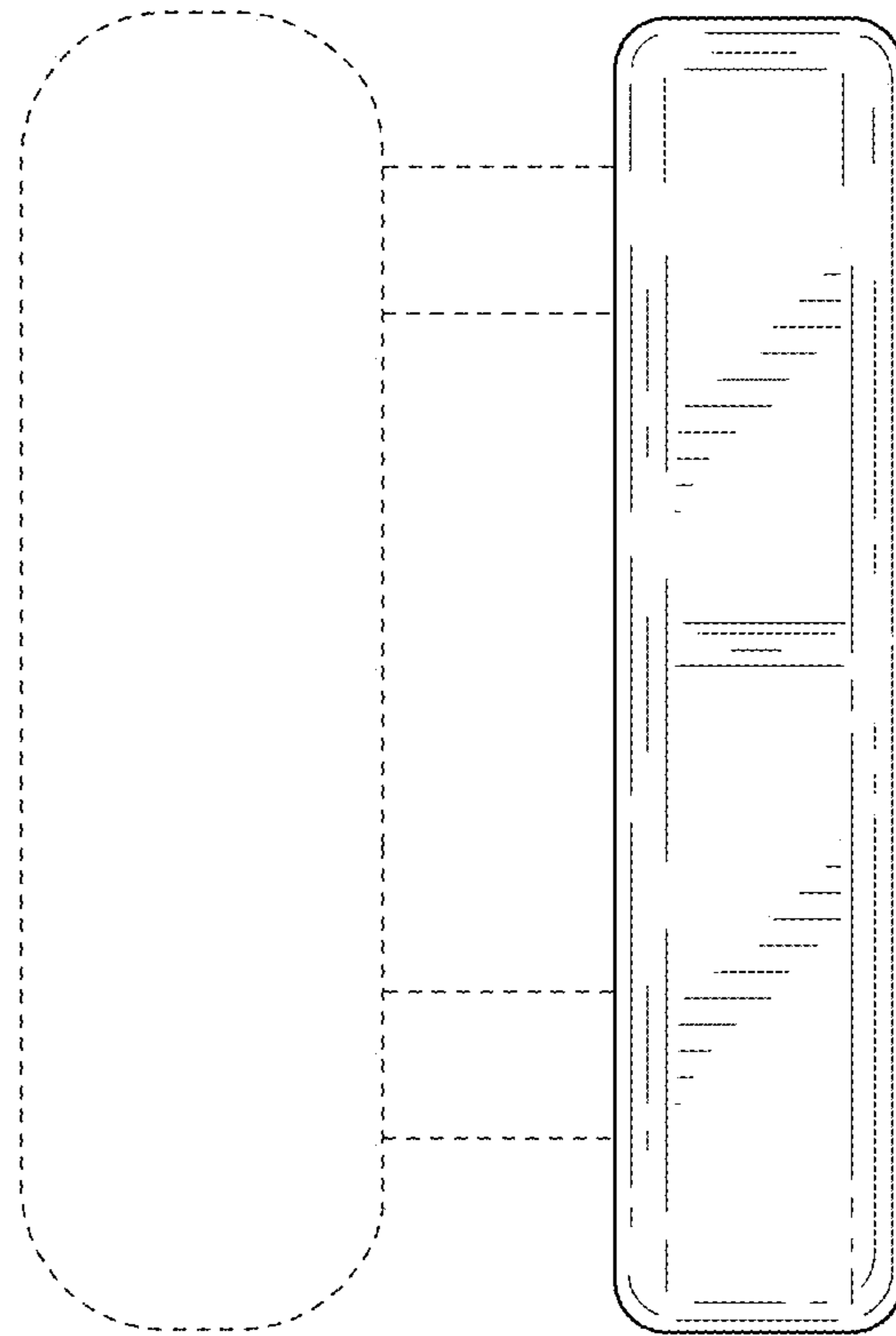


FIG. 189

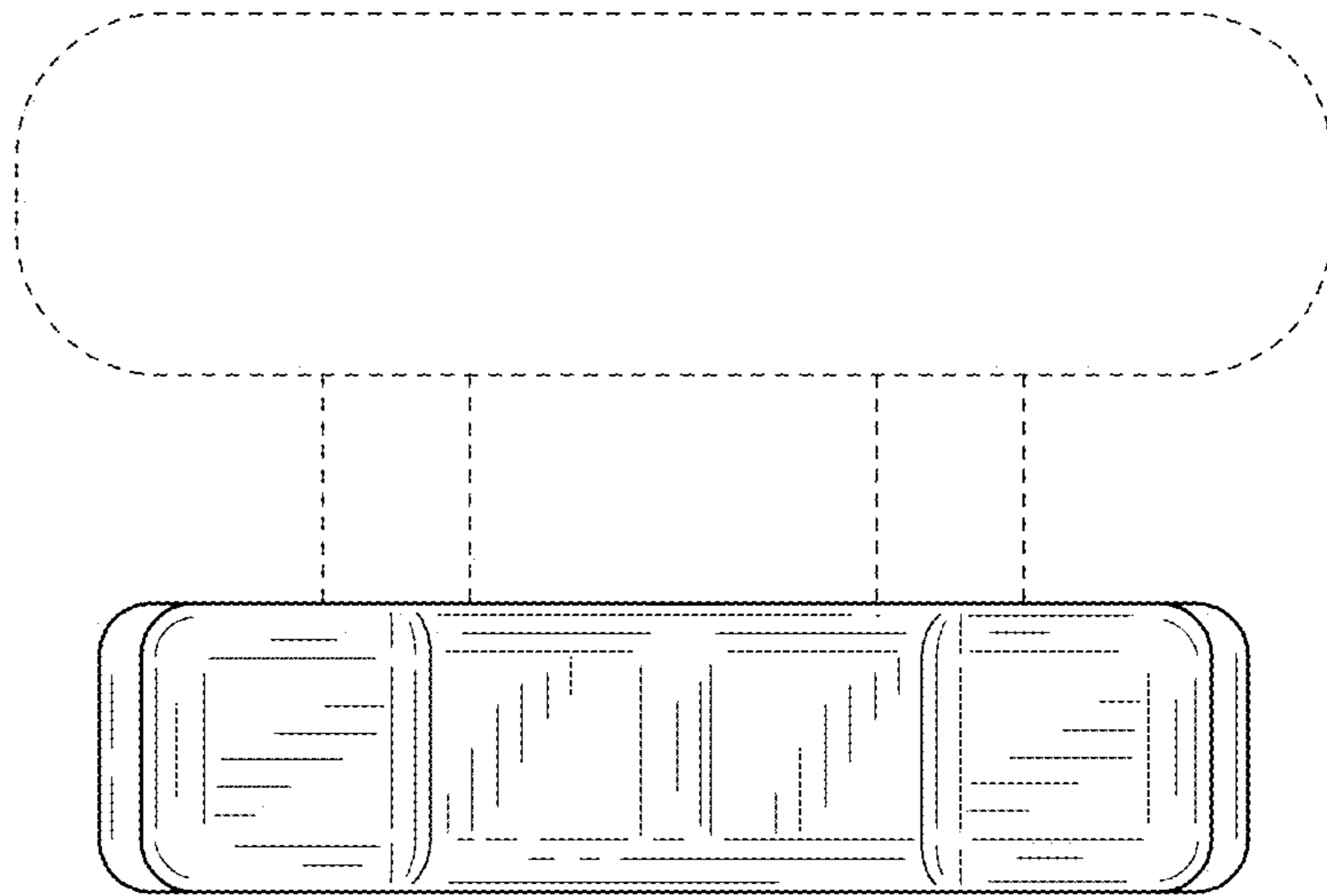


FIG. 190

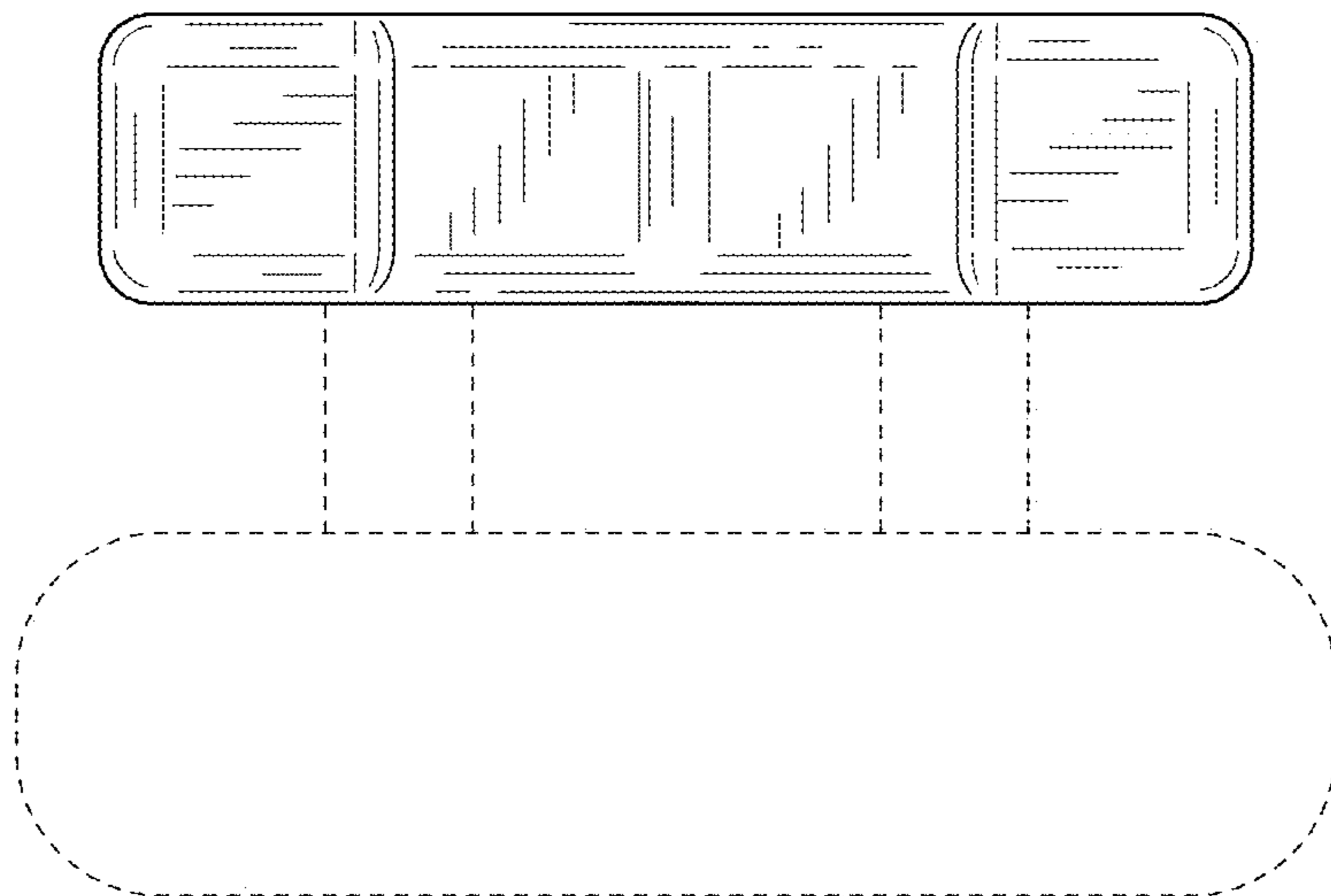


FIG. 191

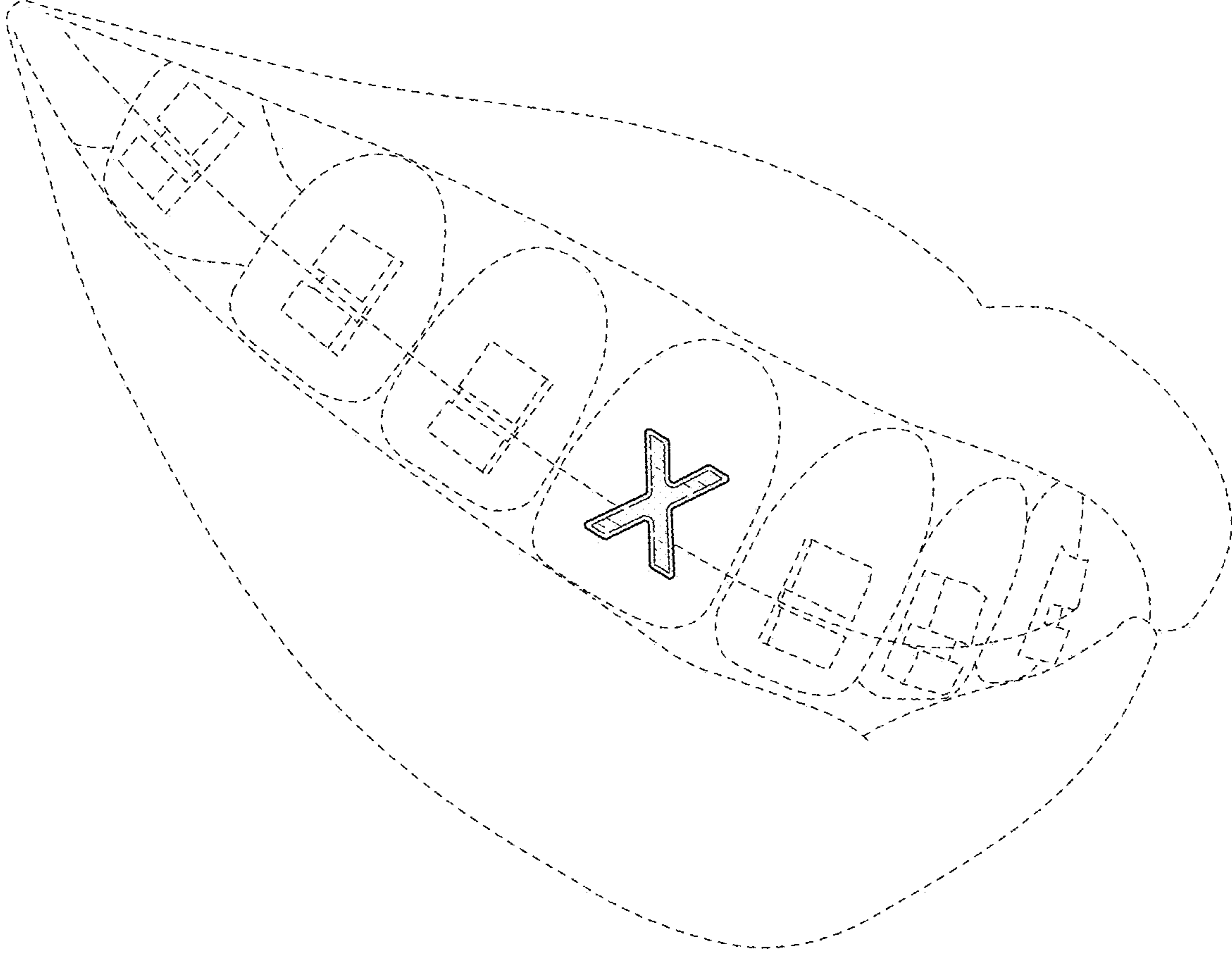


FIG. 192

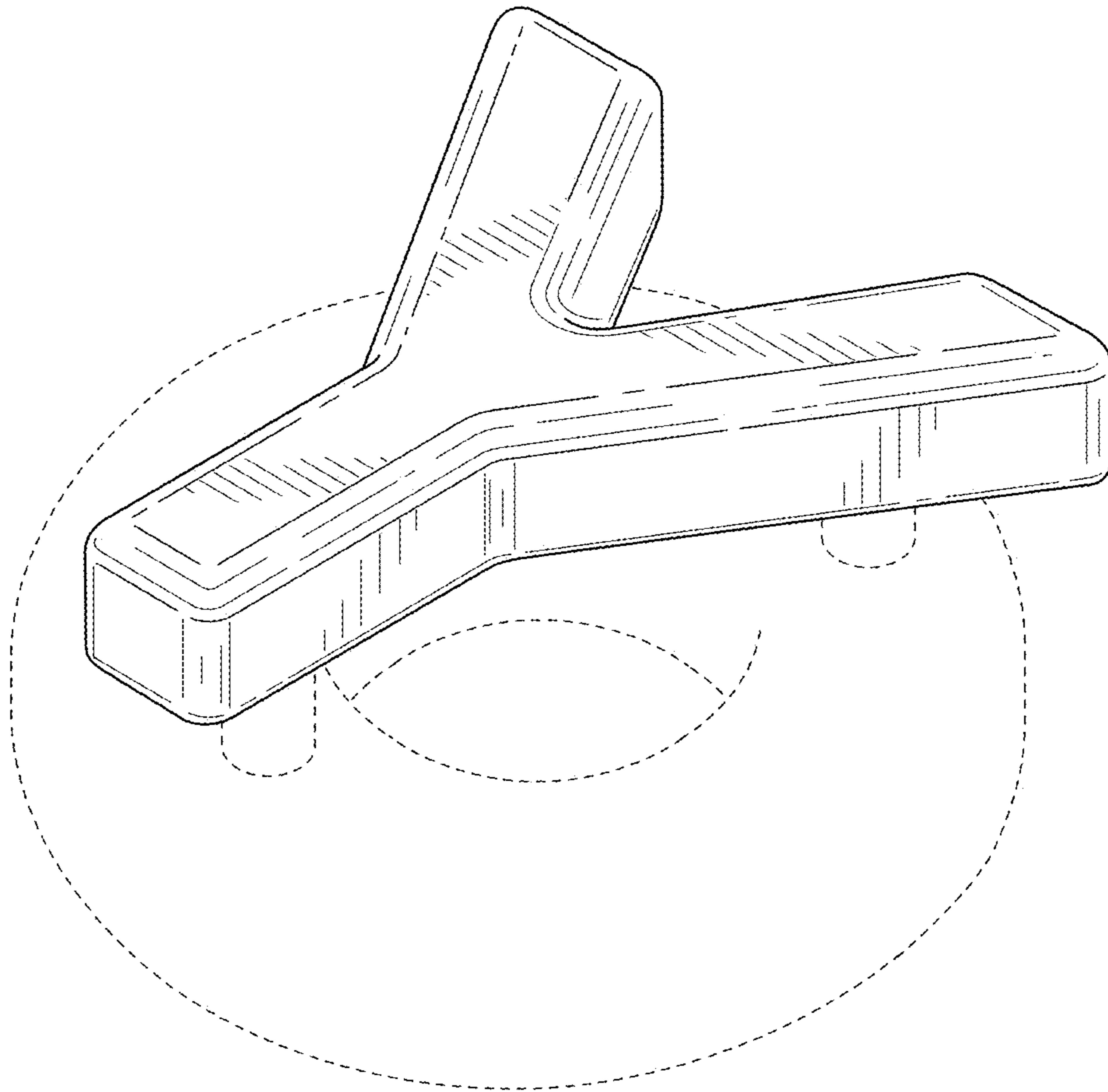


FIG. 193

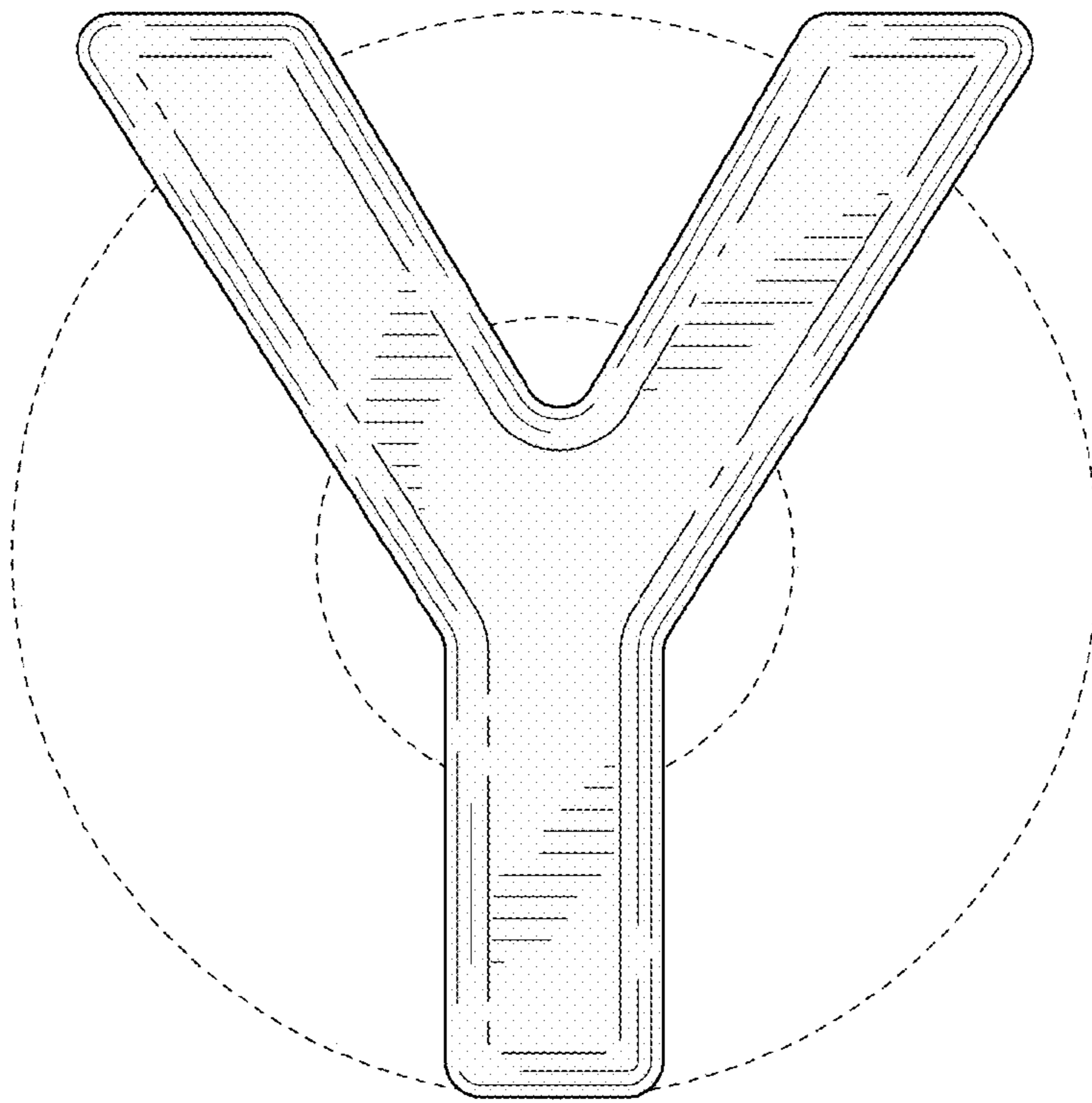


FIG. 194

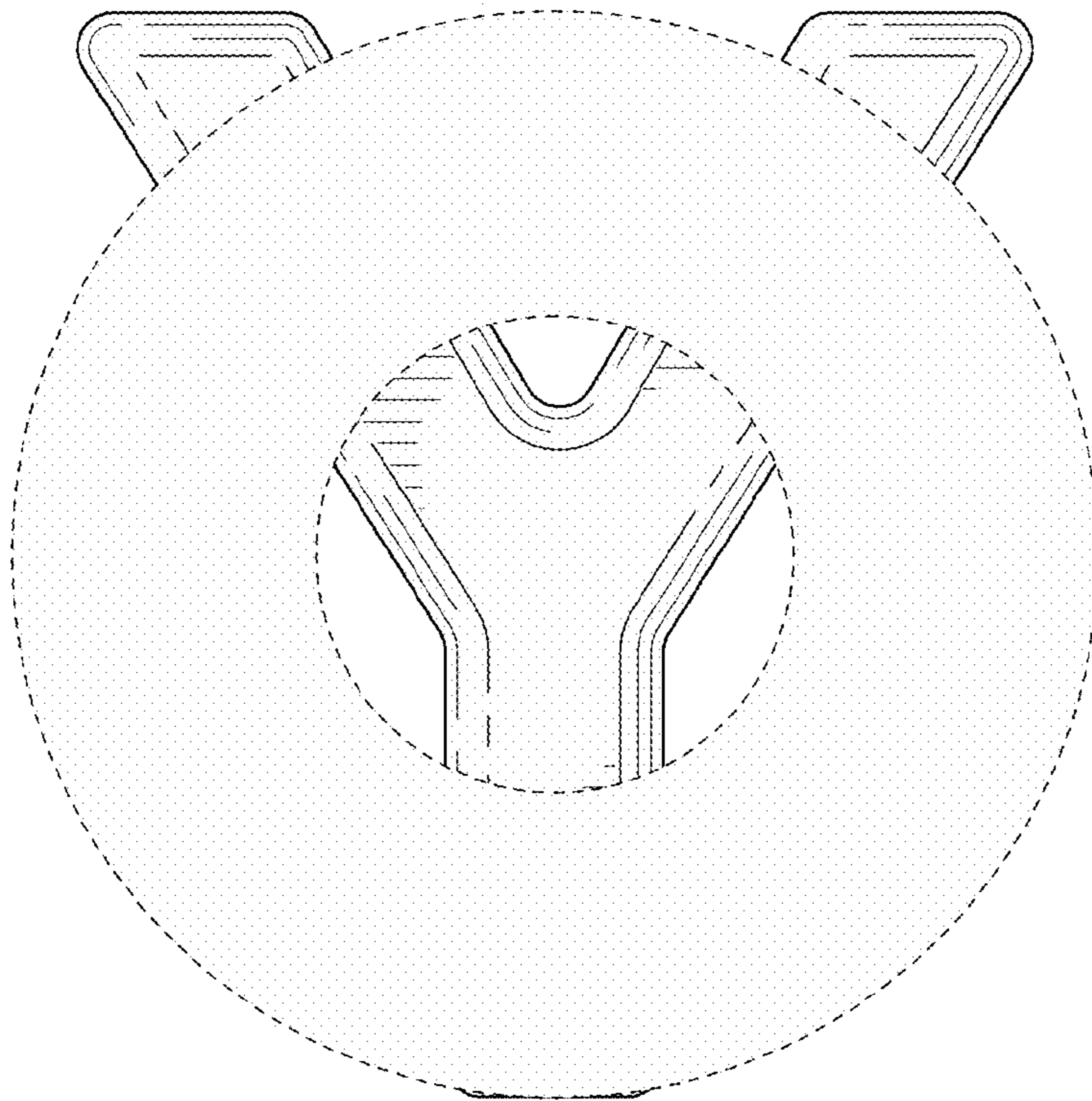


FIG. 195

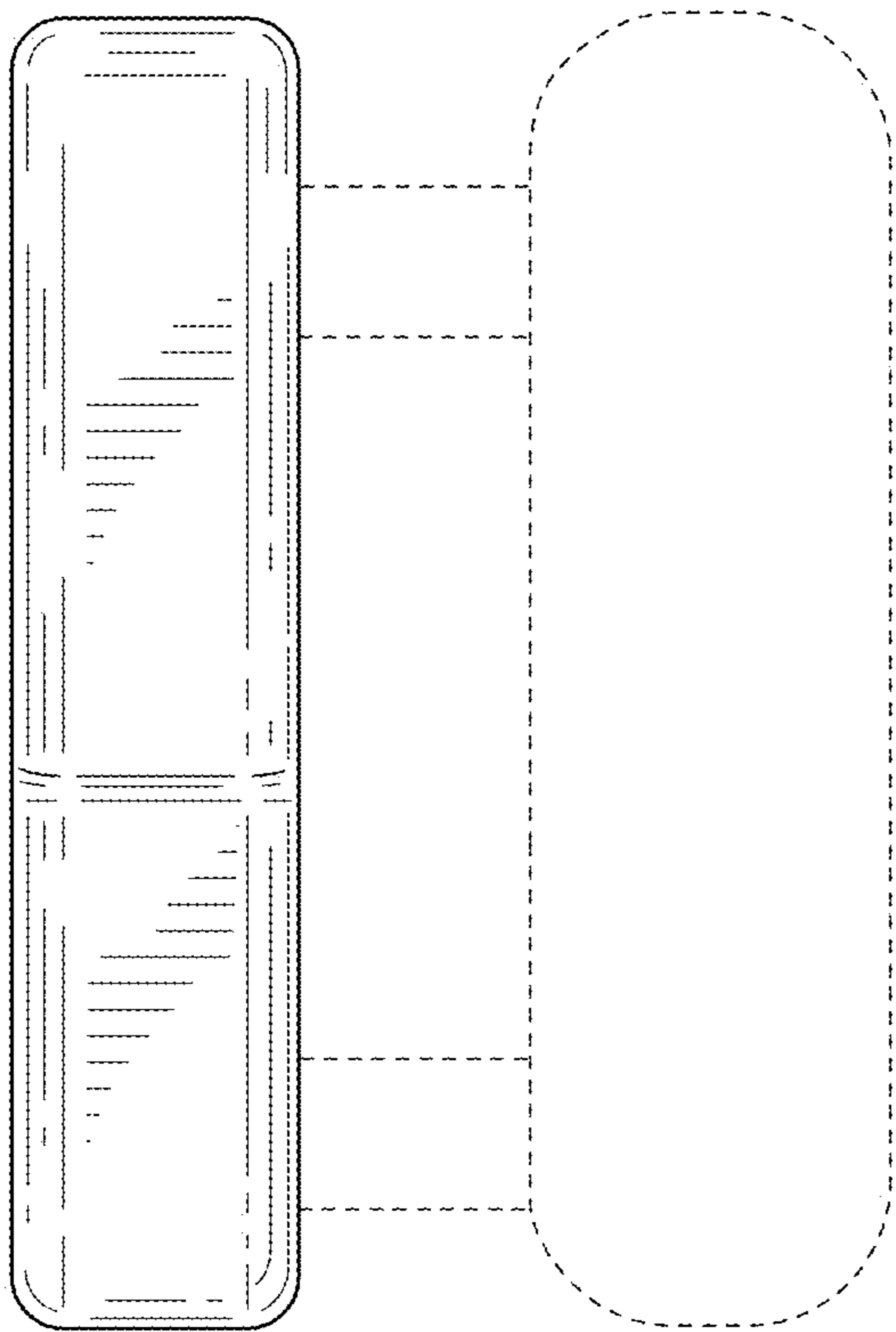


FIG. 196

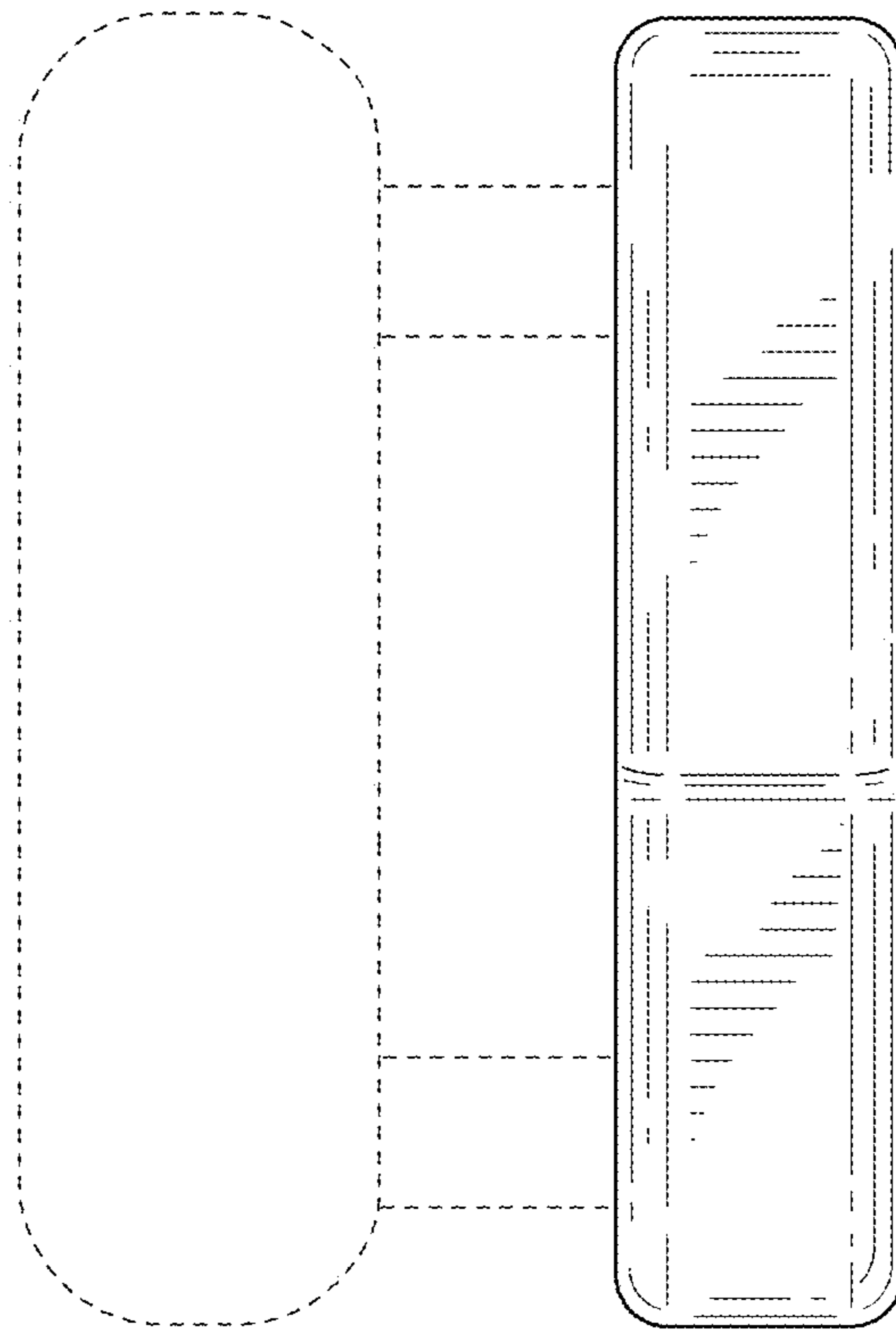


FIG. 197

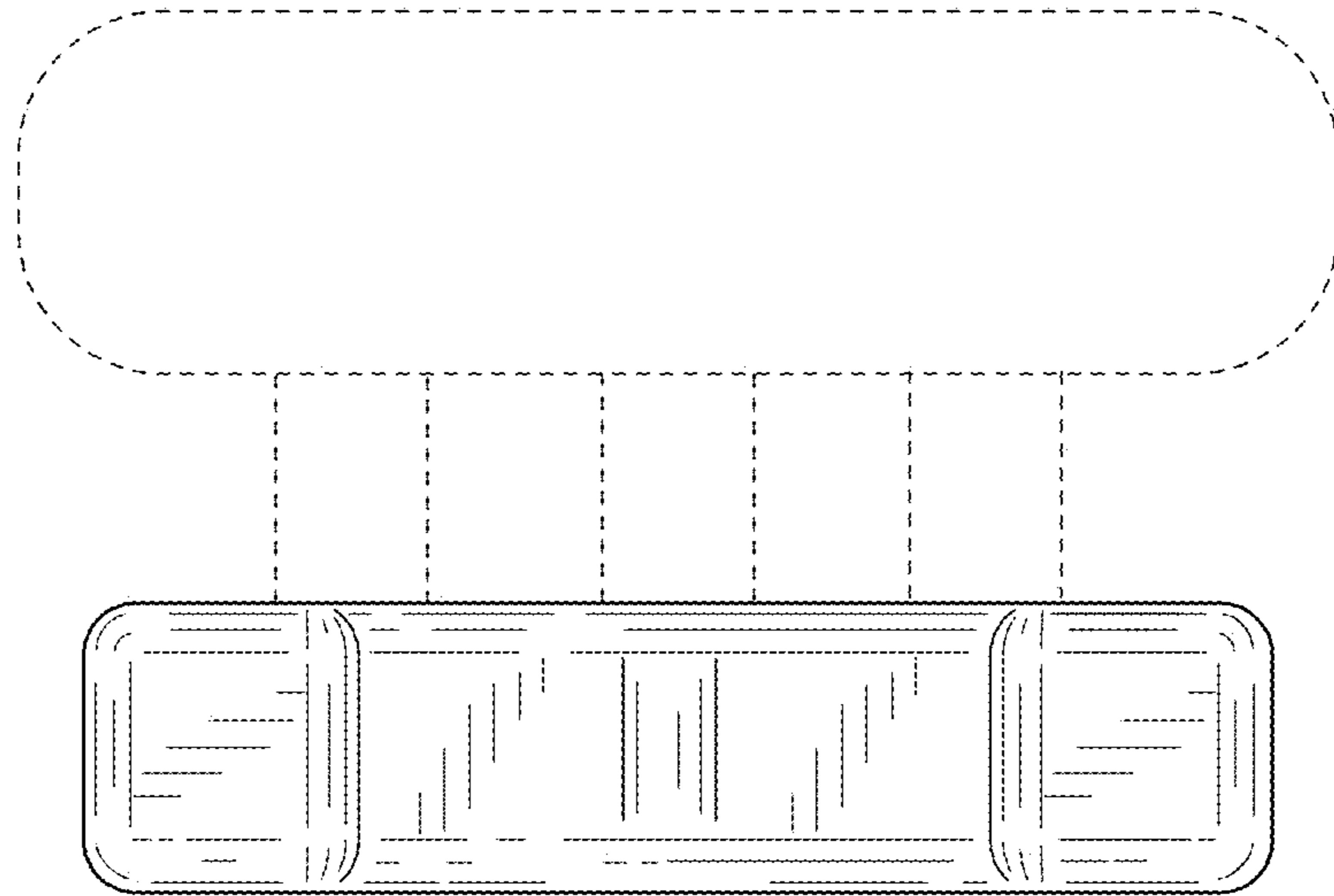


FIG. 198

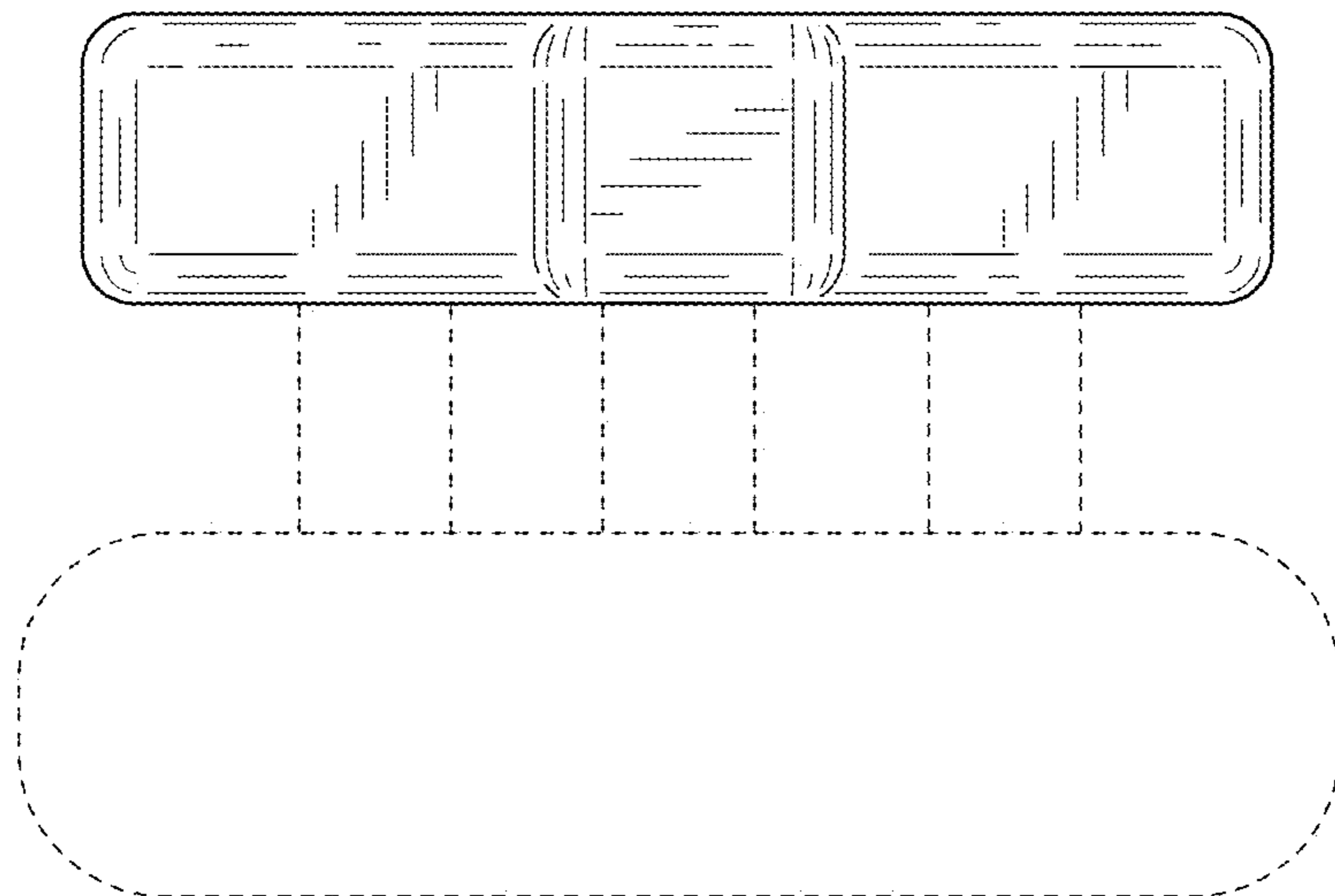


FIG. 199

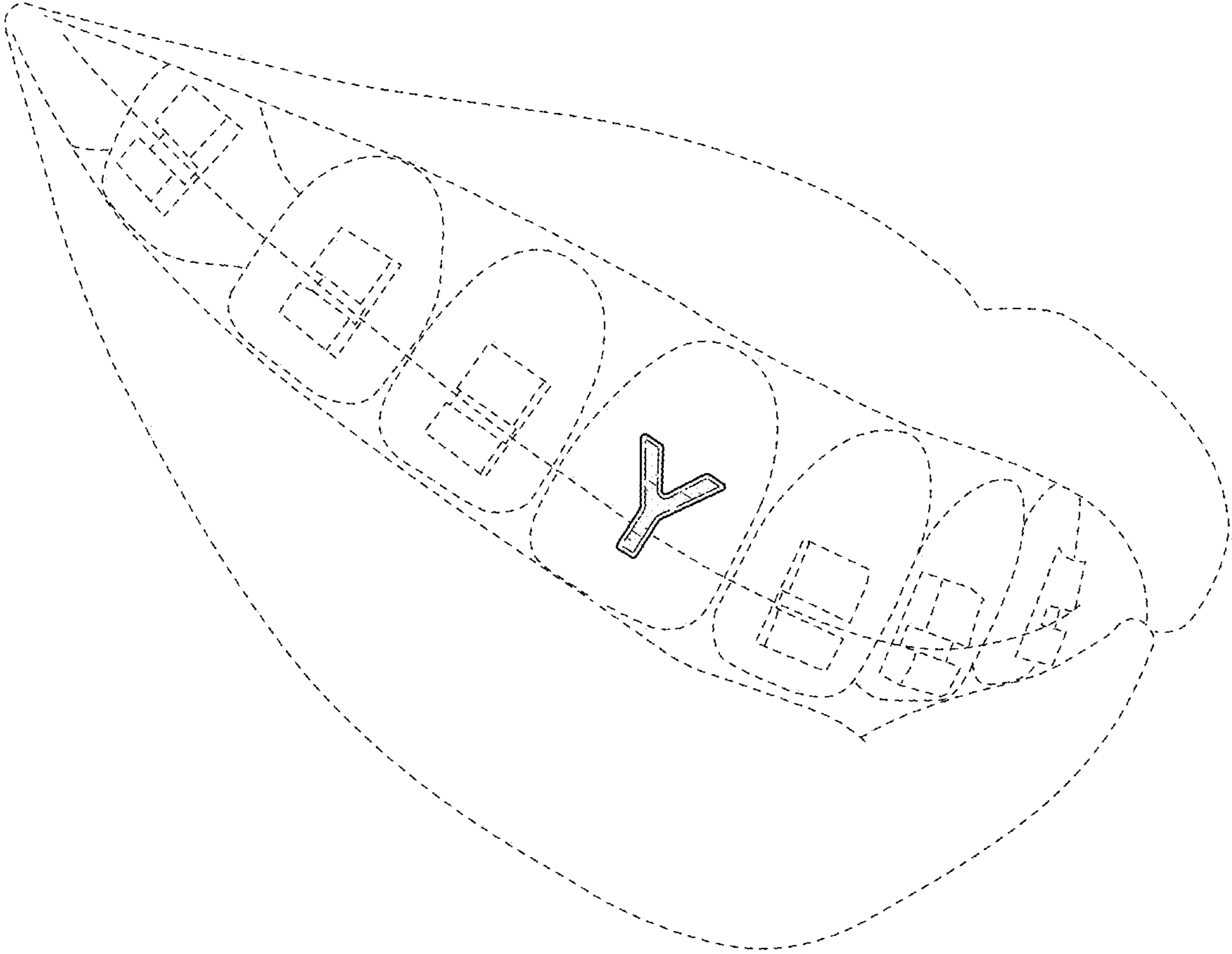


FIG. 200

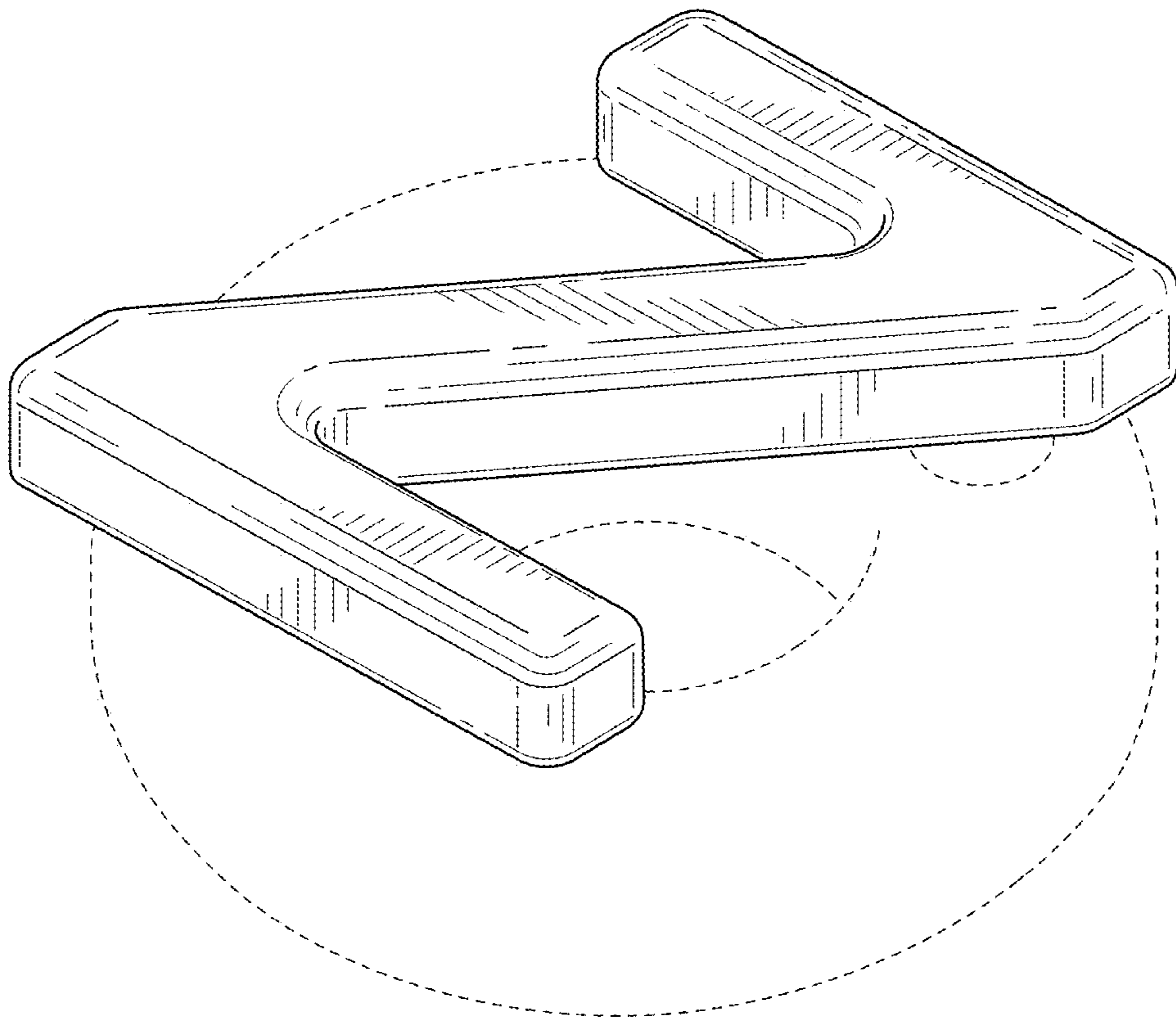


FIG. 201

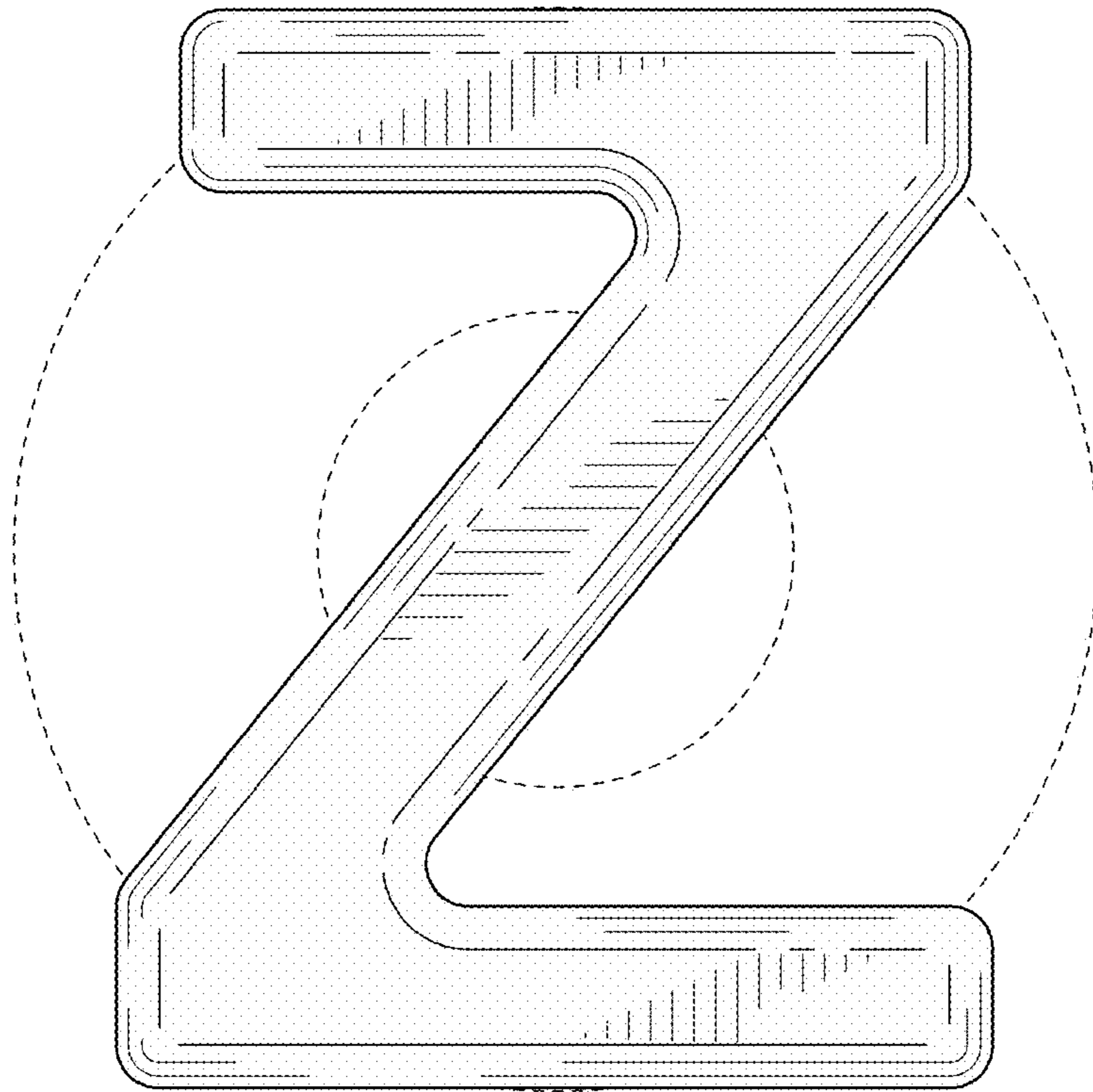


FIG. 202

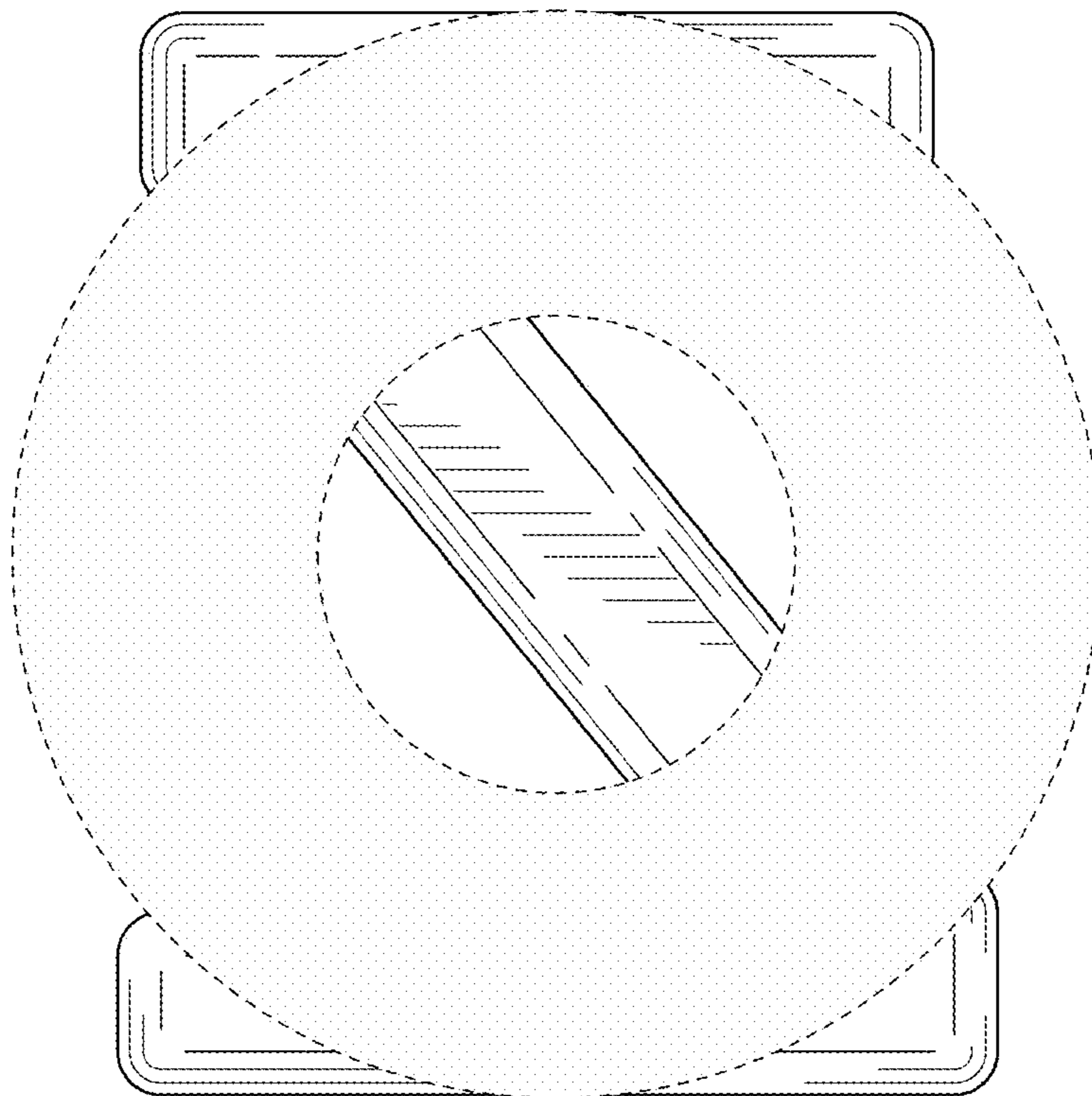


FIG. 203

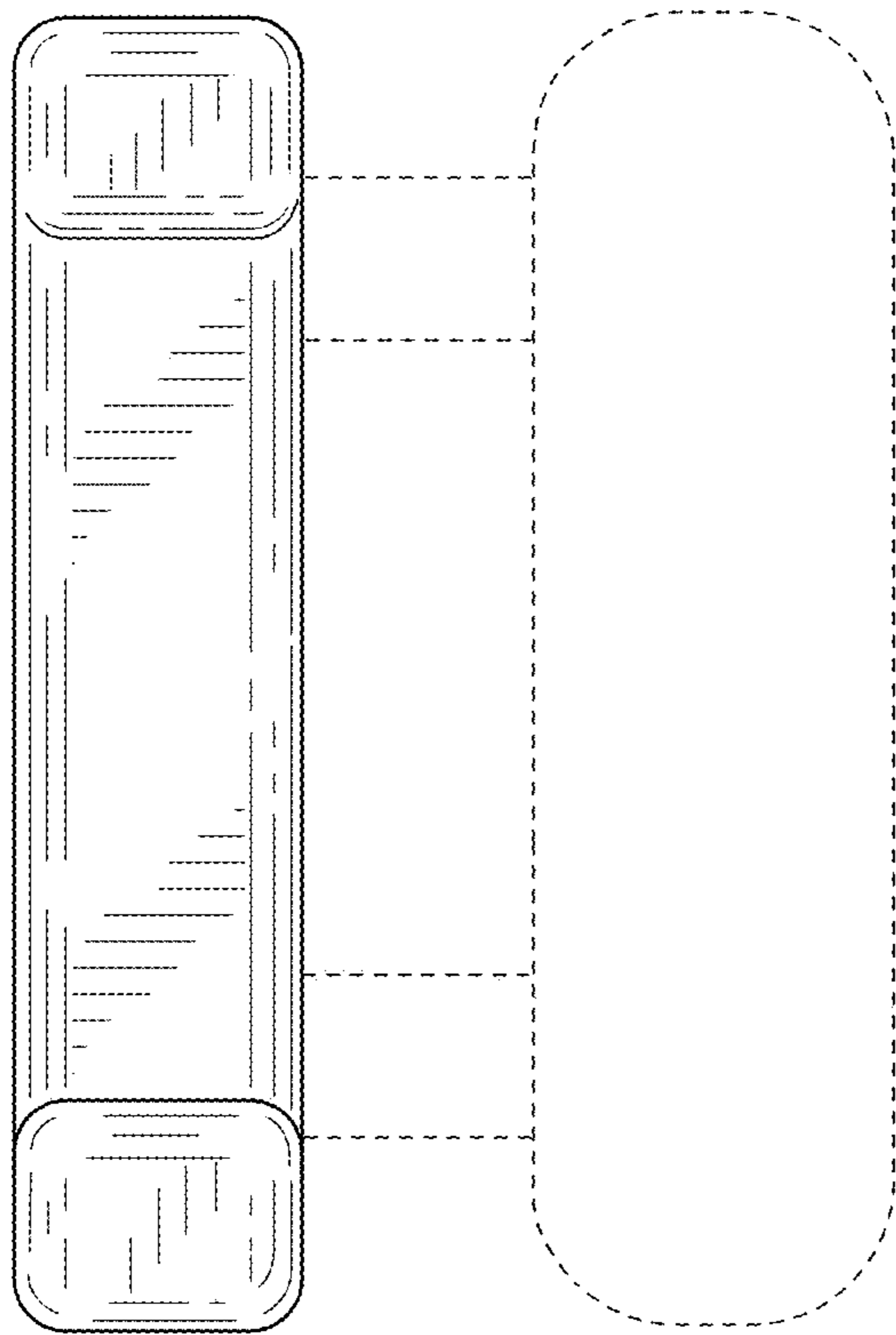


FIG. 204

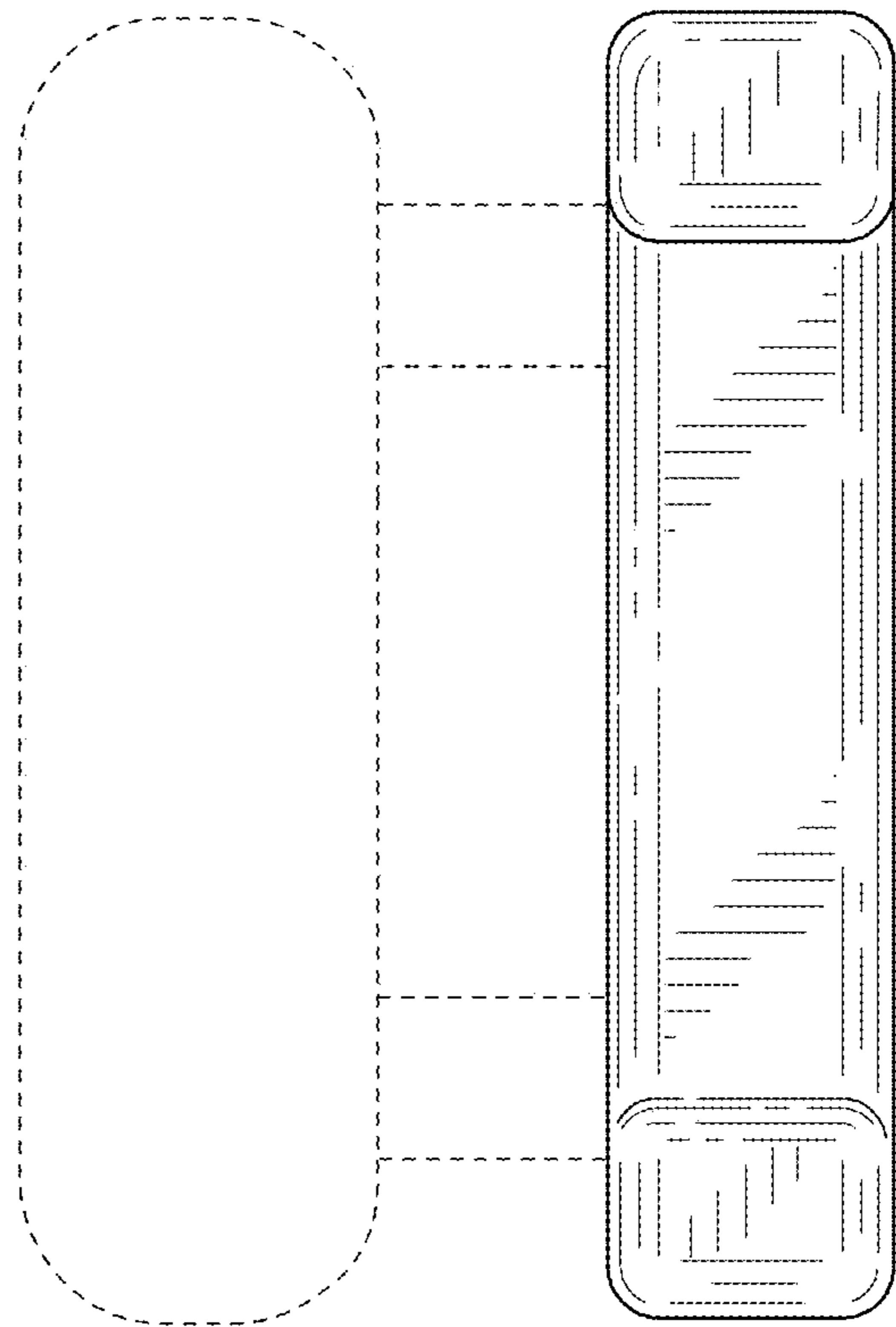


FIG. 205

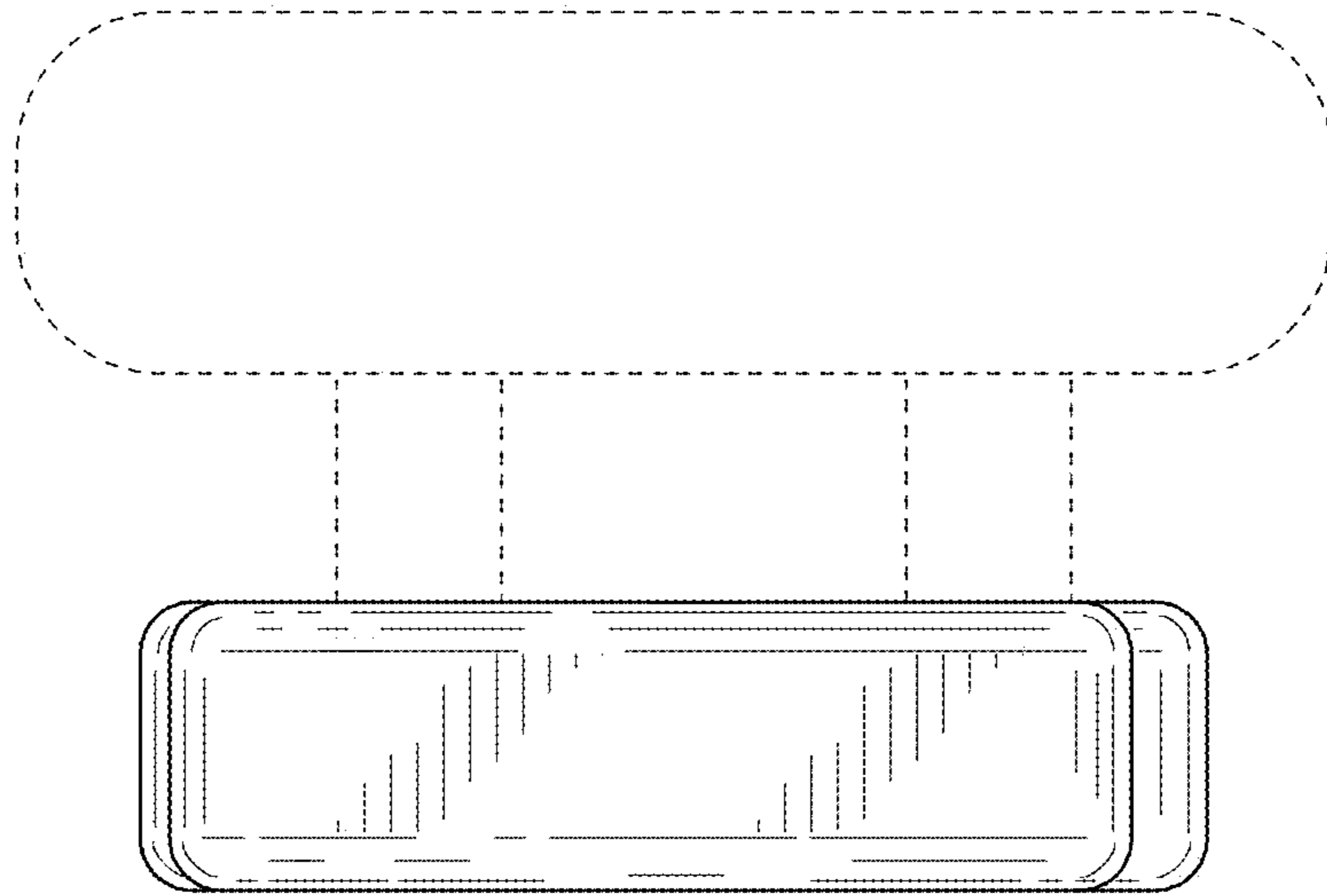


FIG. 206

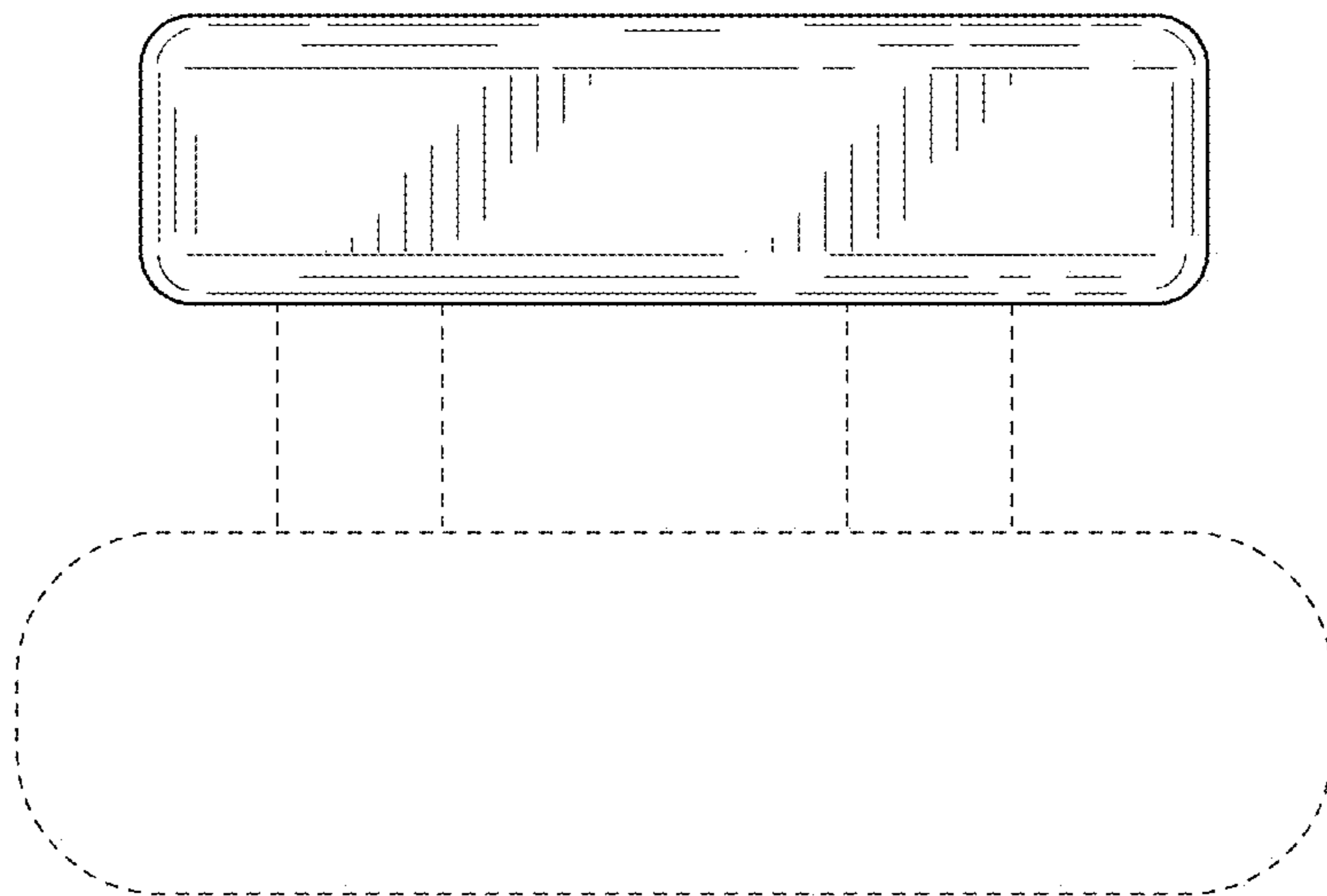


FIG. 207

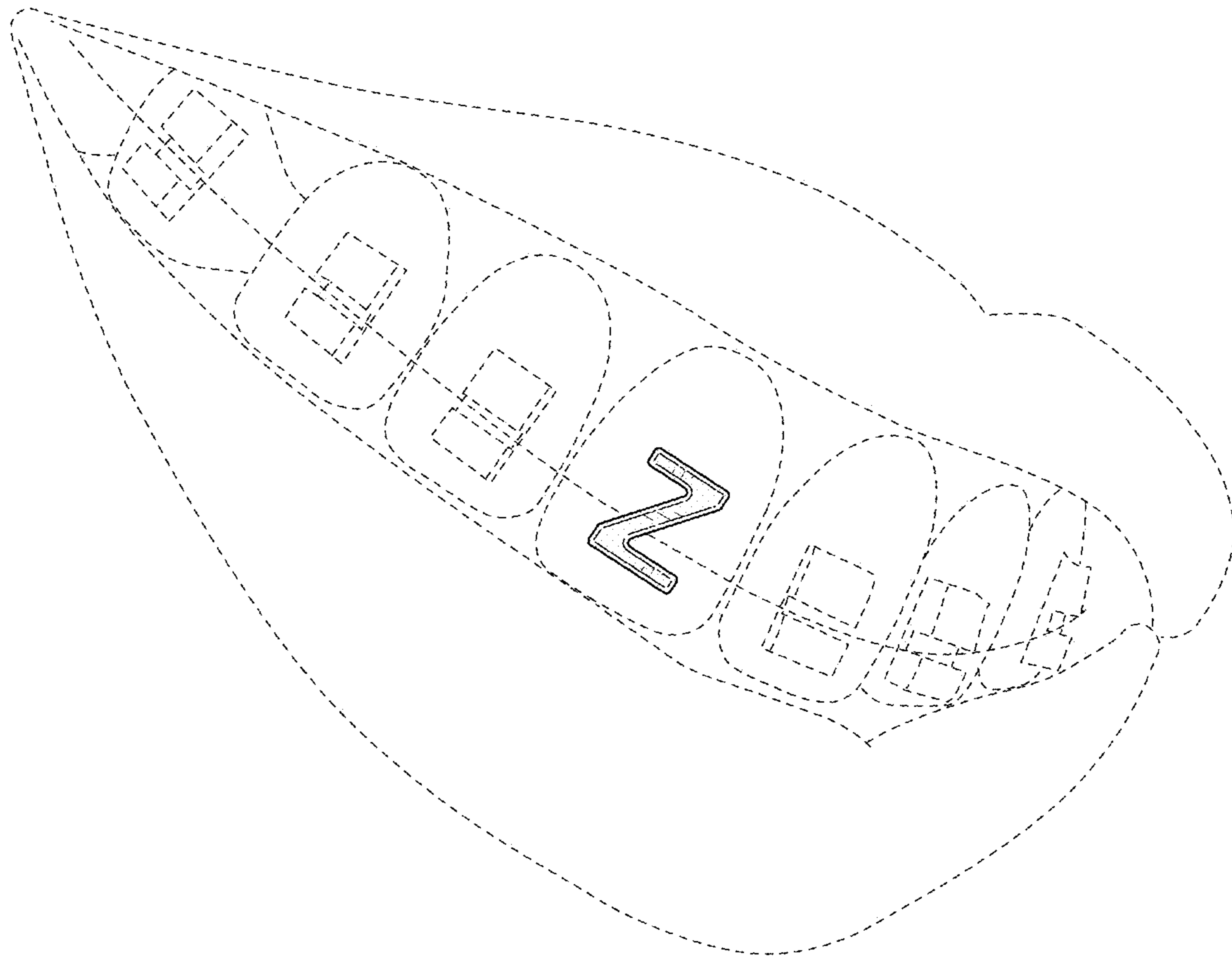


FIG. 208