



US00D859634S

(12) **United States Design Patent**
Hochman et al.

(10) **Patent No.:** **US D859,634 S**

(45) **Date of Patent:** **** Sep. 10, 2019**

(54) **INTRA-ARTICULAR INJECTION DEVICE**

(71) Applicant: **Milestone Scientific Inc.**, Livingston, NJ (US)

(72) Inventors: **Mark N. Hochman**, Lake Success, NY (US); **Stephen R. Solomon**, Cranford, NJ (US); **Richard Kenneth Buck**, Crystal Lake, IL (US); **Robert John Allen**, Crystal Lake, IL (US)

(73) Assignee: **MILESTONE SCIENTIFIC INC.**, Livingston, NJ (US)

(**) Term: **14 Years**

(21) Appl. No.: **29/513,585**

(22) Filed: **Jan. 2, 2015**

(51) **LOC (12) Cl.** **24-02**

(52) **U.S. Cl.**
USPC **D24/108**; D24/111

(58) **Field of Classification Search**
USPC D24/107, 108, 111, 185, 188
CPC A61M 5/20; A61M 5/30; A61M 5/142;
A61M 5/14228; A61M 2005/14208;
A61M 1/1039; A61M 5/14248; A61M
5/172; A61M 5/14566; A61M 5/14244;
A61M 2205/502; A61M 5/14232; A61B
17/3403; A61B 2090/064

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,988,337 A * 1/1991 Ito A61M 5/1456
128/DIG. 12
D348,101 S * 6/1994 Poli D24/108
5,378,231 A * 1/1995 Johnson A61M 5/16827
128/DIG. 12
D360,259 S * 7/1995 Ijiri D24/111

D390,654 S * 2/1998 Alsberg D24/111
6,942,637 B2 9/2005 Cartledge
D556,910 S 12/2007 Reihanifam
7,449,008 B2 * 11/2008 Hochman A61M 5/1456
604/67
D630,727 S 1/2011 Petrovic
8,002,736 B2 * 8/2011 Patrick A61M 5/1452
604/82
8,256,984 B2 9/2012 Fathallah
D669,096 S 10/2012 Katsura
D669,165 S 10/2012 Estes
D679,379 S 4/2013 Katsura
D687,536 S 8/2013 Guarraia
8,545,440 B2 * 10/2013 Patrick A61B 8/00
604/131
D730,514 S 5/2015 Boaz
9,044,542 B2 * 6/2015 Patrick A61B 8/00
(Continued)

Primary Examiner — Lilyana Bekic

(74) *Attorney, Agent, or Firm* — Dann, Dorfman, Herrell and Skillman; Stephen Eland

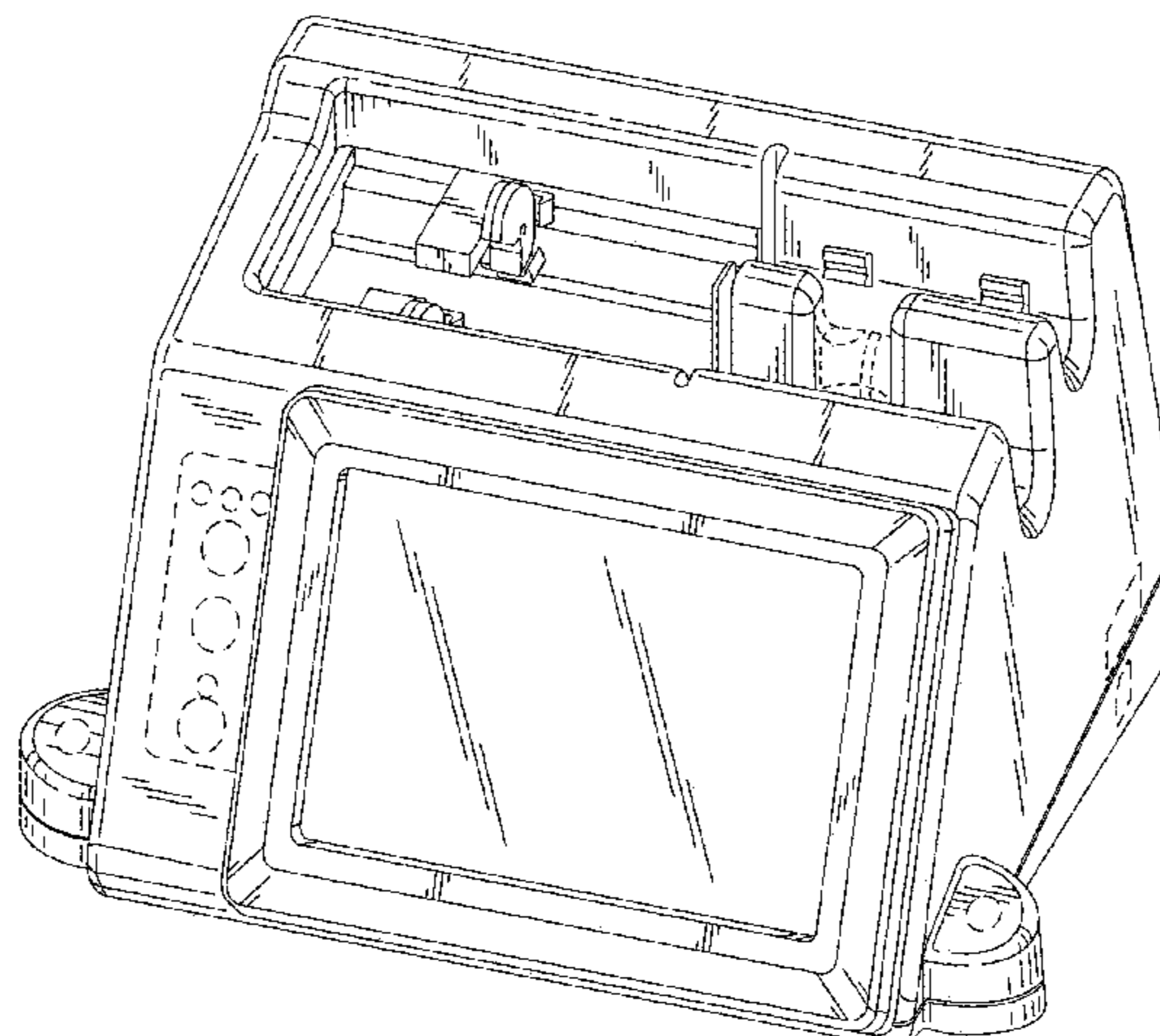
(57) **CLAIM**

The ornamental design for an intra-articular injection device, as shown and described.

DESCRIPTION

FIG. 1 is a front, top, left perspective view of an intra-articular injection device showing our design therefor; FIG. 2 is a bottom, rear, right perspective view thereof; FIG. 3 is a front elevational view thereof; FIG. 4 is a rear elevational view thereof; FIG. 5 is a right side elevational view thereof; FIG. 6 is a left side elevational view thereof; FIG. 7 is a top plan view thereof; and, FIG. 8 is a bottom plan view thereof. Throughout the drawings, broken lines depict portions of the intra-articular injection device that form no part of the design.

1 Claim, 8 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D734,475 S *	7/2015	Ross	.....	D24/185	2010/0274191 A1*	10/2010	Ting	.....	A61B 17/3403
D736,370 S	8/2015	Sabin							604/116
D760,888 S *	7/2016	Gill	.....	D24/108	2011/0021905 A1*	1/2011	Patrick	.....	A61B 8/00
D765,832 S *	9/2016	Hochman	.....	D24/111					600/424
D801,519 S *	10/2017	Sabin	.....	D24/108	2011/0087166 A1*	4/2011	Davis	.....	A61M 5/1456
D803,386 S *	11/2017	Sabin	.....	D24/108					604/155
D803,387 S *	11/2017	Bodwell	.....	D24/108	2011/0298628 A1	12/2011	Vad		
9,956,341 B2 *	5/2018	Hockman	.....	A61M 5/168	2012/0083760 A1*	4/2012	Ledford	.....	A61M 5/14
2002/0022807 A1*	2/2002	Duchon	.....	A61M 5/14216					604/500
				604/228	2012/0259237 A1*	10/2012	Axelrod	.....	A61M 5/1452
2005/0096593 A1*	5/2005	Pope	.....	A61M 5/1452					600/506
				604/122	2013/0041258 A1*	2/2013	Patrick	.....	A61B 8/00
2006/0122555 A1	6/2006	Hochman							600/439
2009/0171191 A1*	7/2009	Patrick	.....	A61M 5/1452	2014/0012226 A1*	1/2014	Hochman	.....	A61M 5/168
				600/424					604/506
2009/0221914 A1*	9/2009	Barrett	.....	A61M 5/007	2016/0228633 A1*	8/2016	Welsch	.....	A61M 5/142
				600/431	2017/0106142 A1*	4/2017	Hochman	.....	A61M 5/172

* cited by examiner

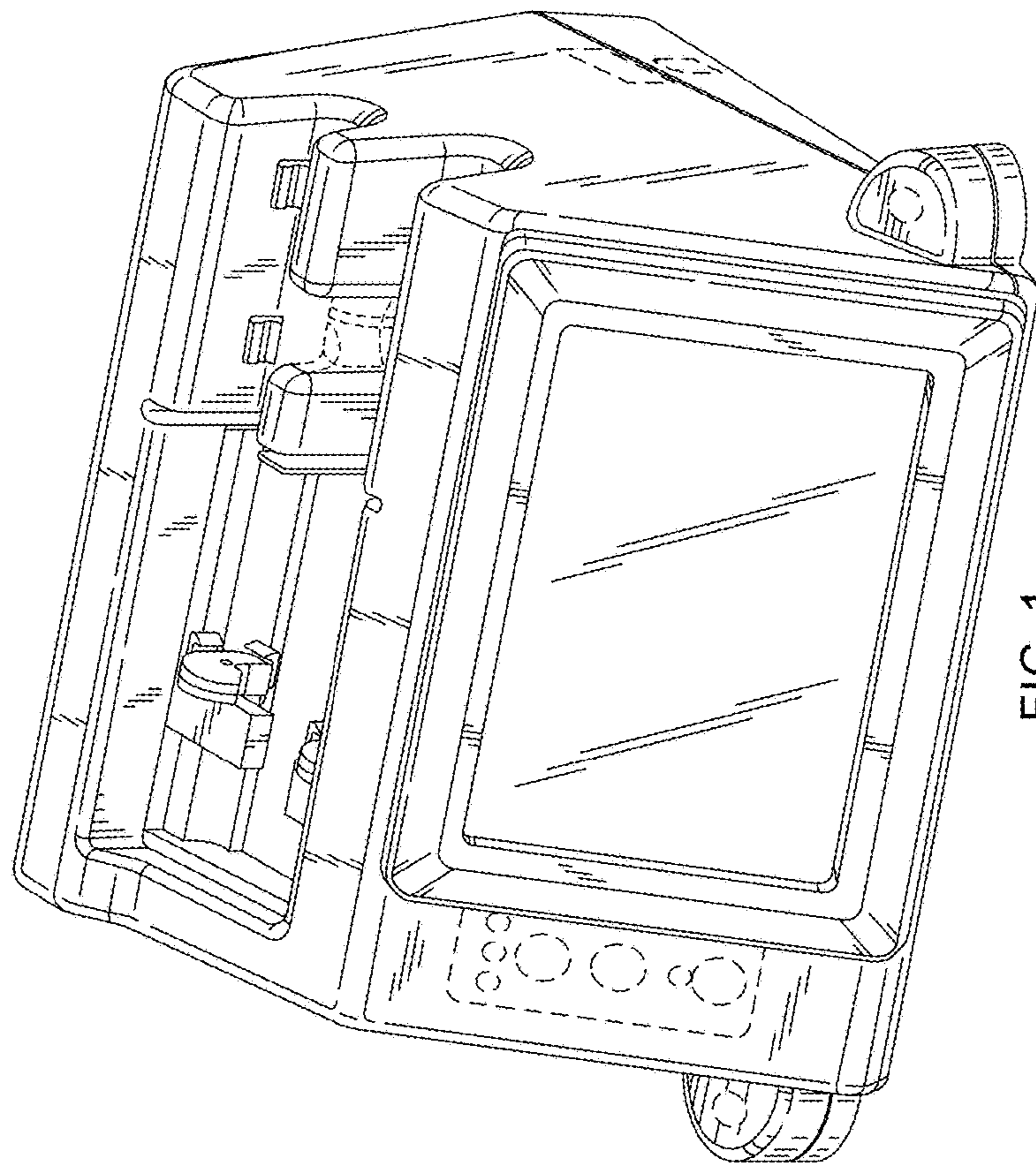
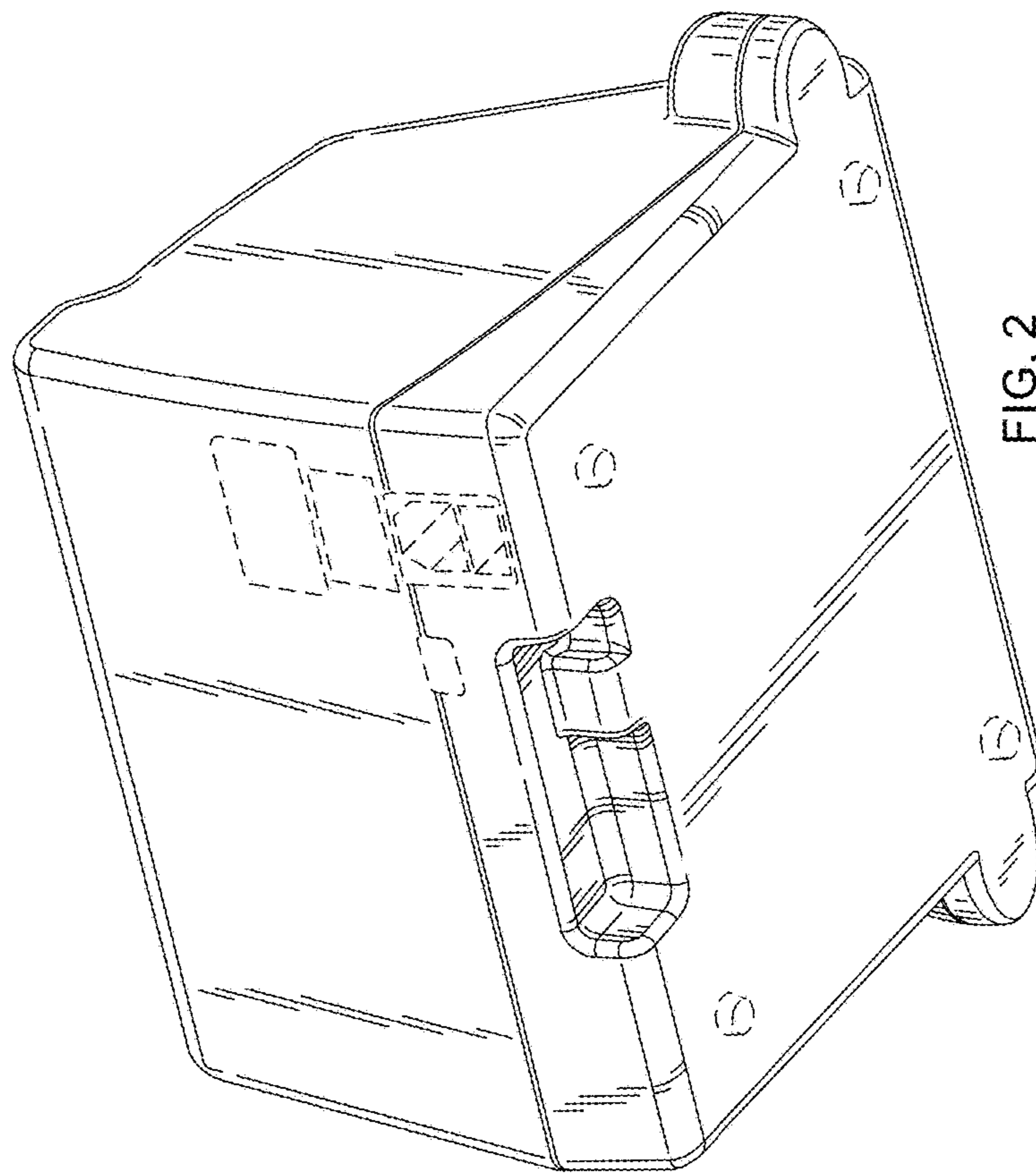


FIG. 1



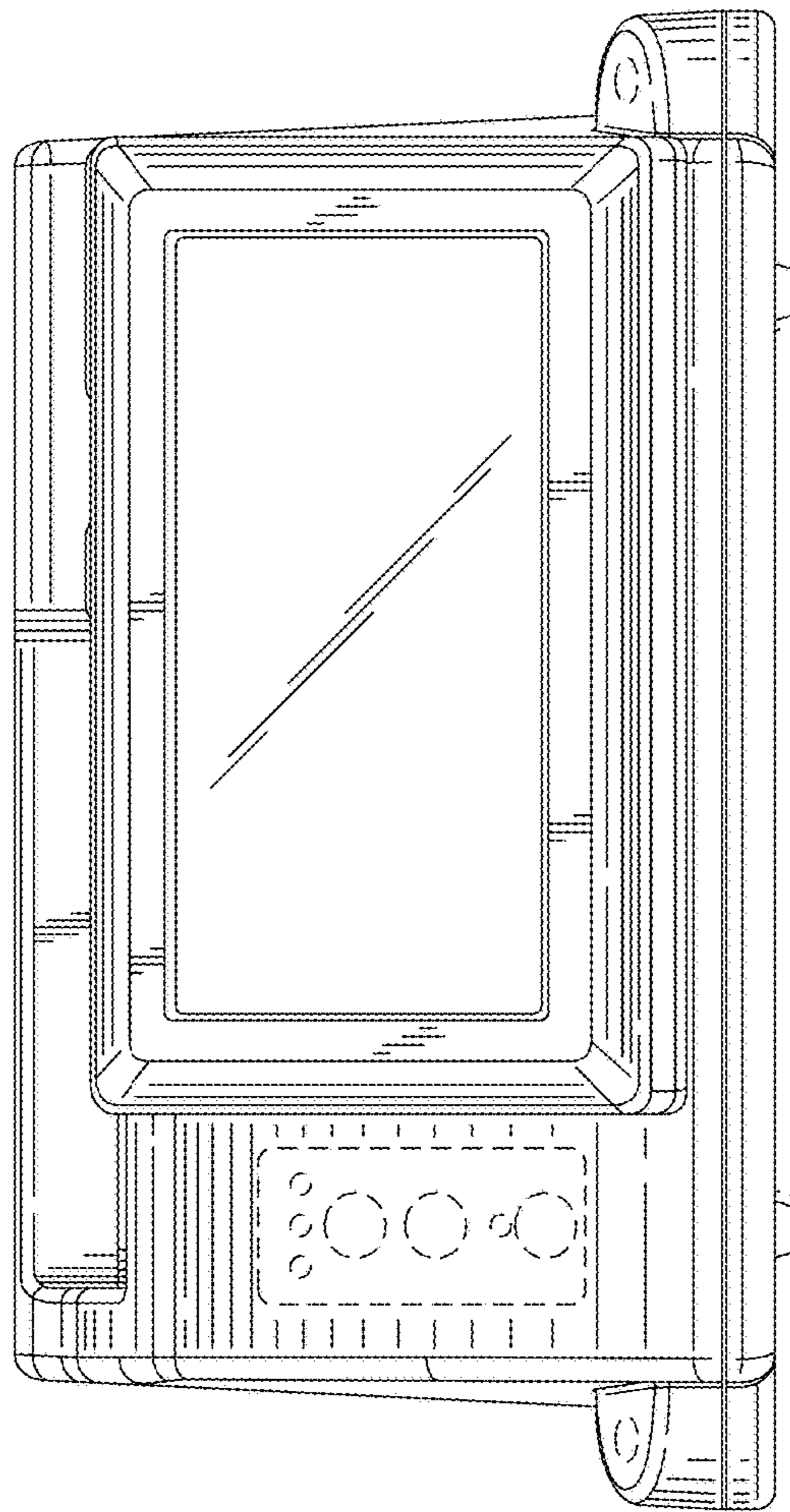


FIG. 3

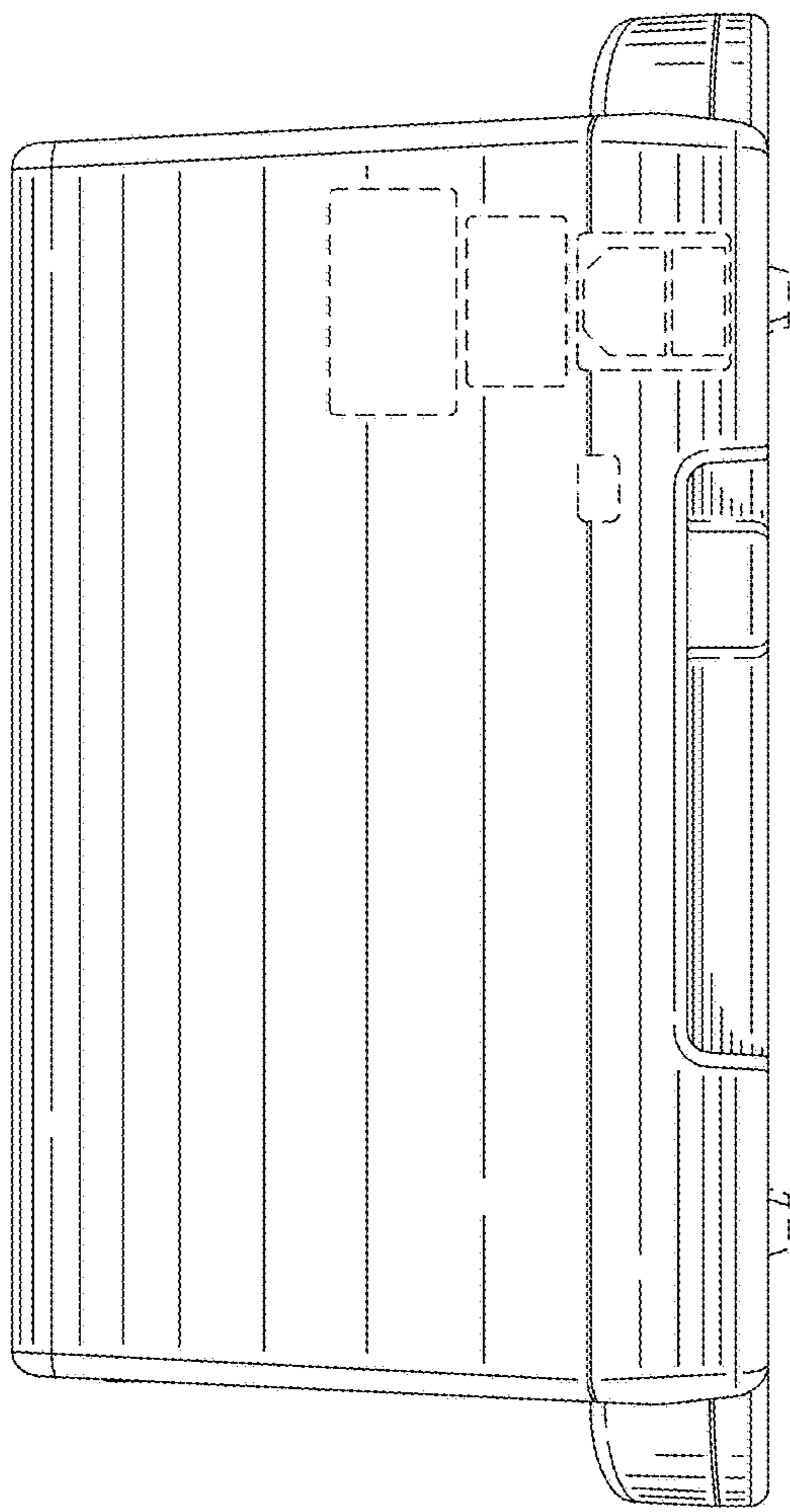


FIG. 4

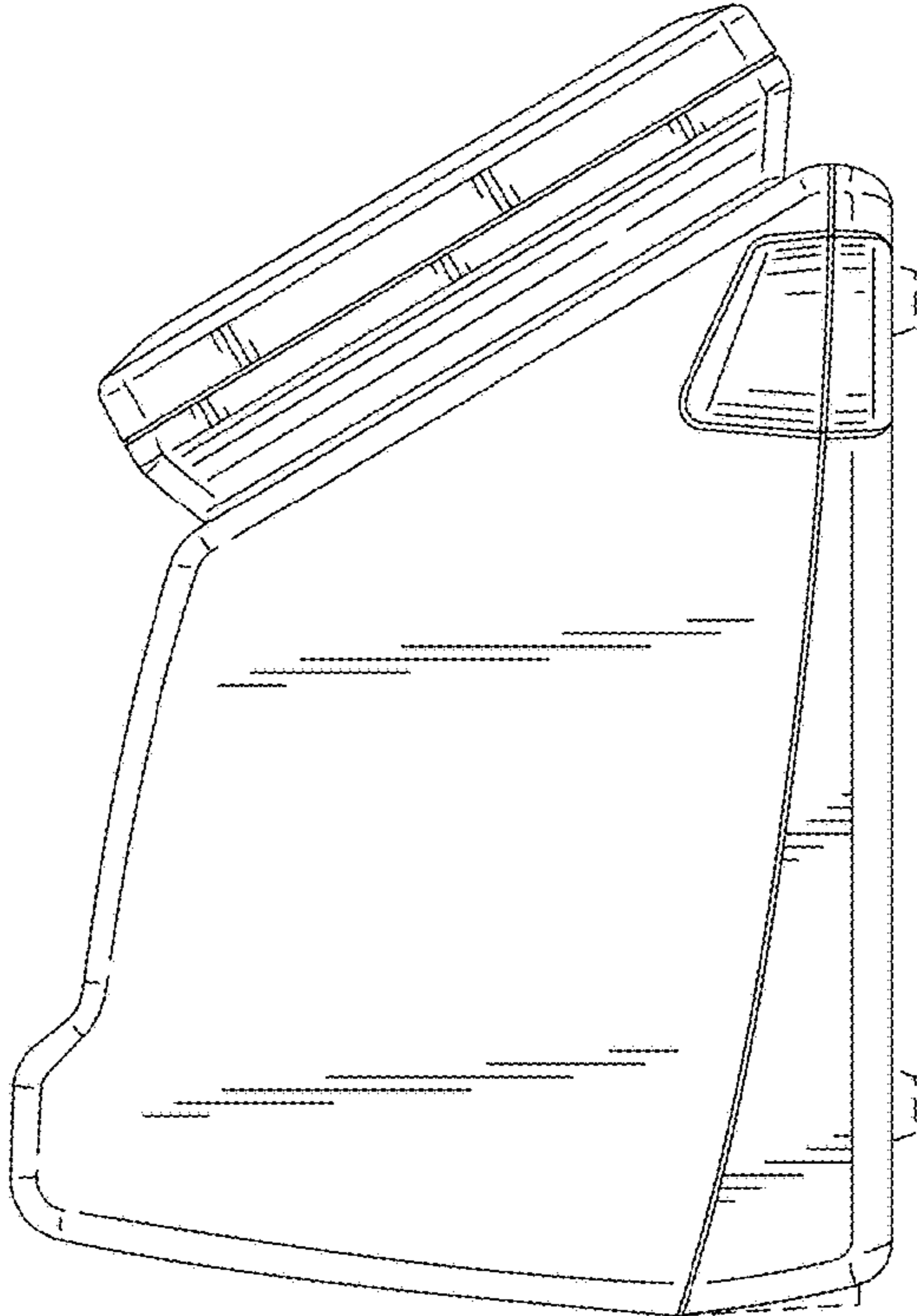


FIG. 5

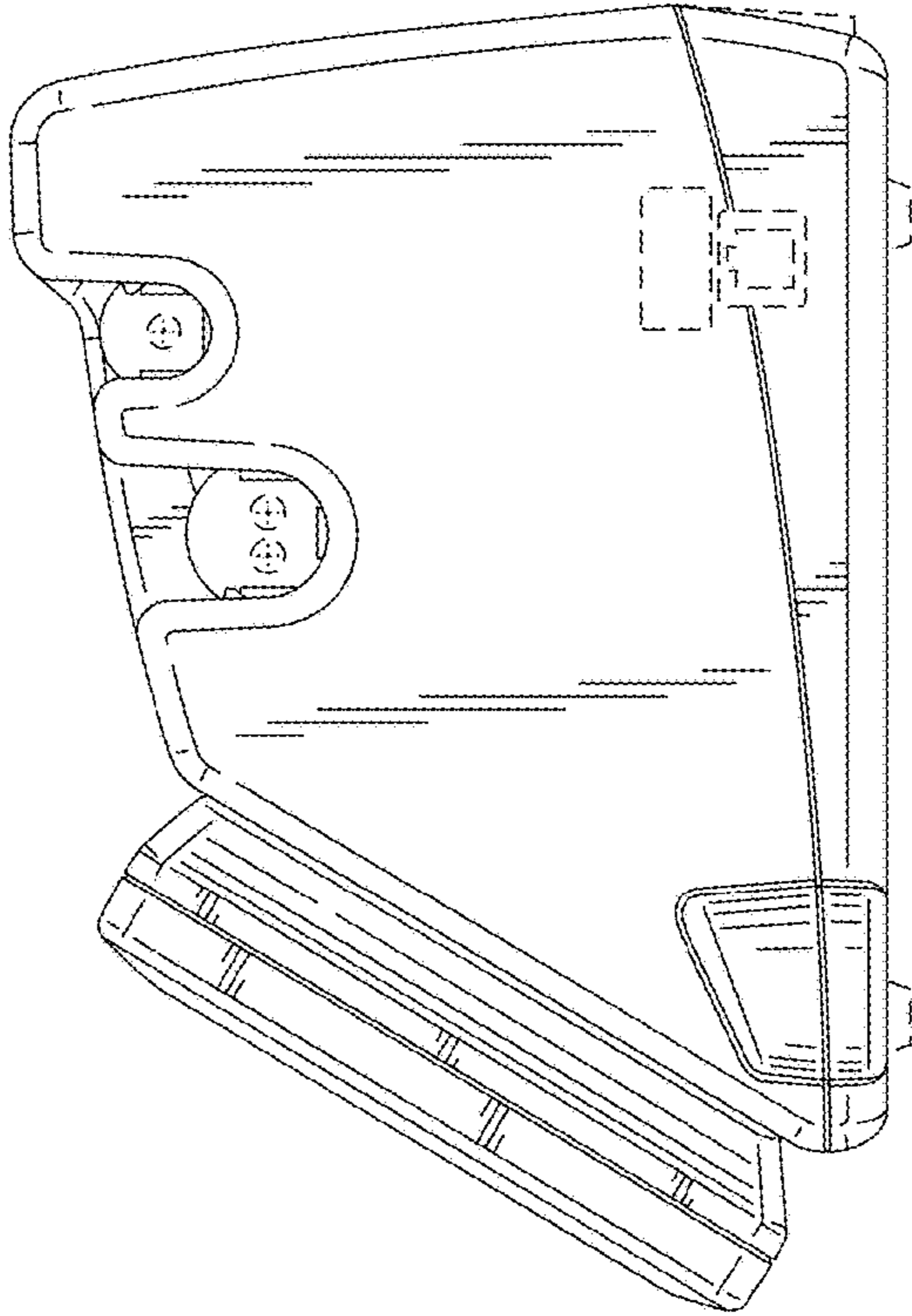


FIG. 6

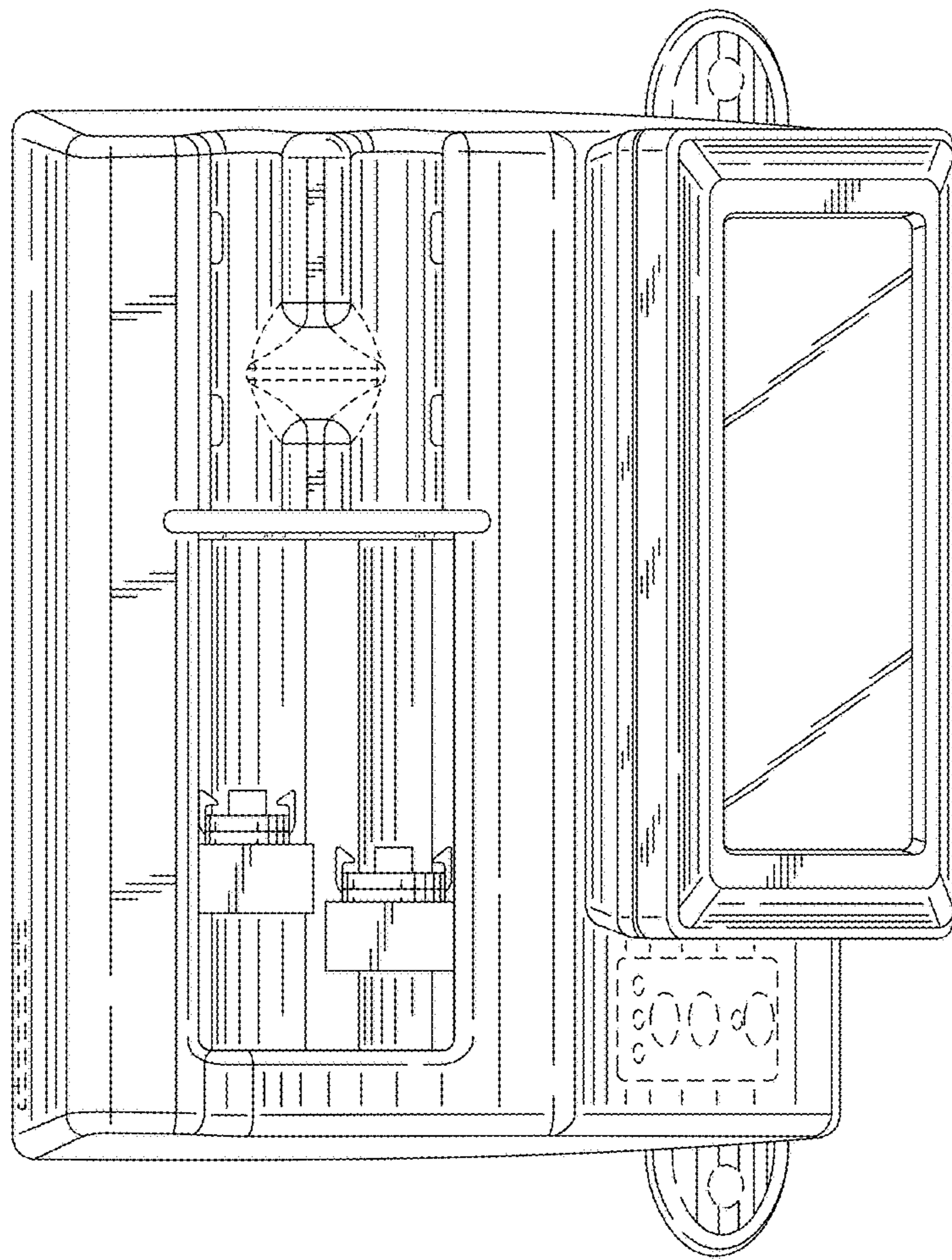


FIG. 7

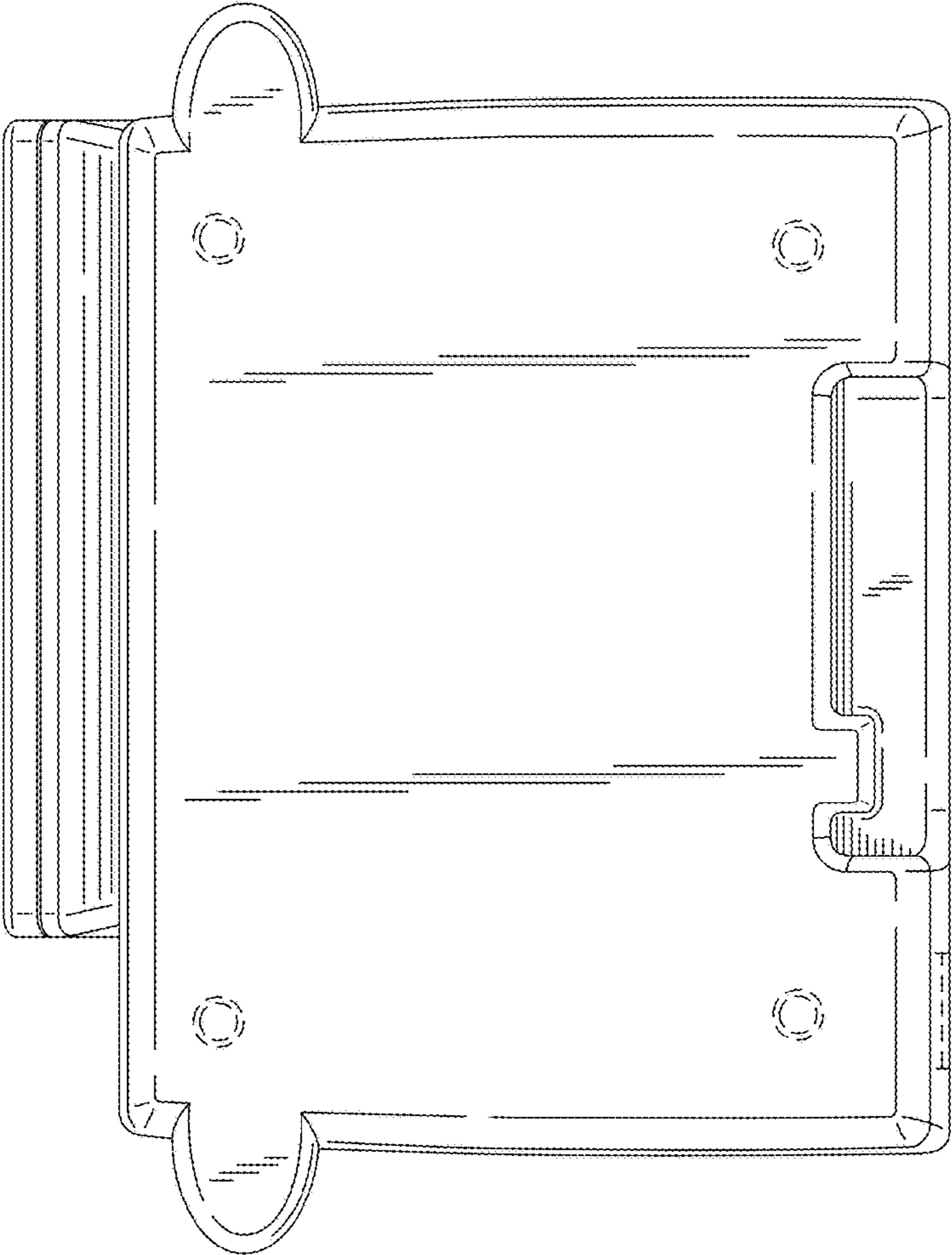


FIG. 8