



US00D931916S

(12) **United States Design Patent** (10) **Patent No.:** **US D931,916 S**
Shimamoto et al. (45) **Date of Patent:** **** Sep. 28, 2021**

(54) **CUTTING INSERT**

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**HARTMETALL-WERKZEUGFABRIK
PAUL HORN GMBH**, Tuebingen (DE)

(57) **CLAIM**

The ornamental design for a cutting insert, as shown and described.

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Yasuyuki Kanada, Itami (JP);
Matthias Luik, Reutlingen (DE)

DESCRIPTION

(73) Assignees: **SUMITOMO ELECTRIC
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**HARTMETALL-WERKZEUGFABRIK
PAUL HORN GMBH**, Tuebingen (DE)

FIG. 1 is a front view of a cutting insert in accordance with a first embodiment of the present design;
FIG. 2 is a rear view thereof;
FIG. 3 is a right side view thereof;
FIG. 4 is a left side view thereof;
FIG. 5 is a top view thereof;
FIG. 6 is a bottom view thereof;
FIG. 7 is a first perspective view thereof;
FIG. 8 is a second perspective view thereof;
FIG. 9 is a referential perspective view showing the state in use of the cutting insert attached to the holder by fixing member, for cutting a work piece;
FIG. 10 is a front view of a cutting insert in accordance with a second embodiment of the present design;
FIG. 11 is a rear view thereof;
FIG. 12 is a right side view thereof;
FIG. 13 is a left side view thereof;
FIG. 14 is a top view thereof;
FIG. 15 is a bottom view thereof;
FIG. 16 is a first perspective view thereof;
FIG. 17 is a second perspective view thereof;
FIG. 18 is a referential perspective view showing the state in use of the cutting insert attached to the holder by fixing member, for cutting a work piece;
FIG. 19 is a front view of a cutting insert in accordance with a third embodiment of the present design;
FIG. 20 is a rear view thereof;
FIG. 21 is a right side view thereof;
FIG. 22 is a left side view thereof;
FIG. 23 is a top view thereof;
FIG. 24 is a bottom view thereof;
FIG. 25 is a first perspective view thereof;
FIG. 26 is a second perspective view thereof;

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

(21) Appl. No.: **29/685,646**

(22) Filed: **Mar. 29, 2019**

(30) **Foreign Application Priority Data**

Oct. 1, 2018 (JP) 2018-021408
Oct. 1, 2018 (JP) 2018-021409

(Continued)

(51) **LOC (13) Cl.** **15-03**

(52) **U.S. Cl.**
USPC **D15/139**

(58) **Field of Classification Search**
USPC D15/124–144; D8/70, 90, 98, 120

(Continued)

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Primary Examiner — Khawaja Anwar

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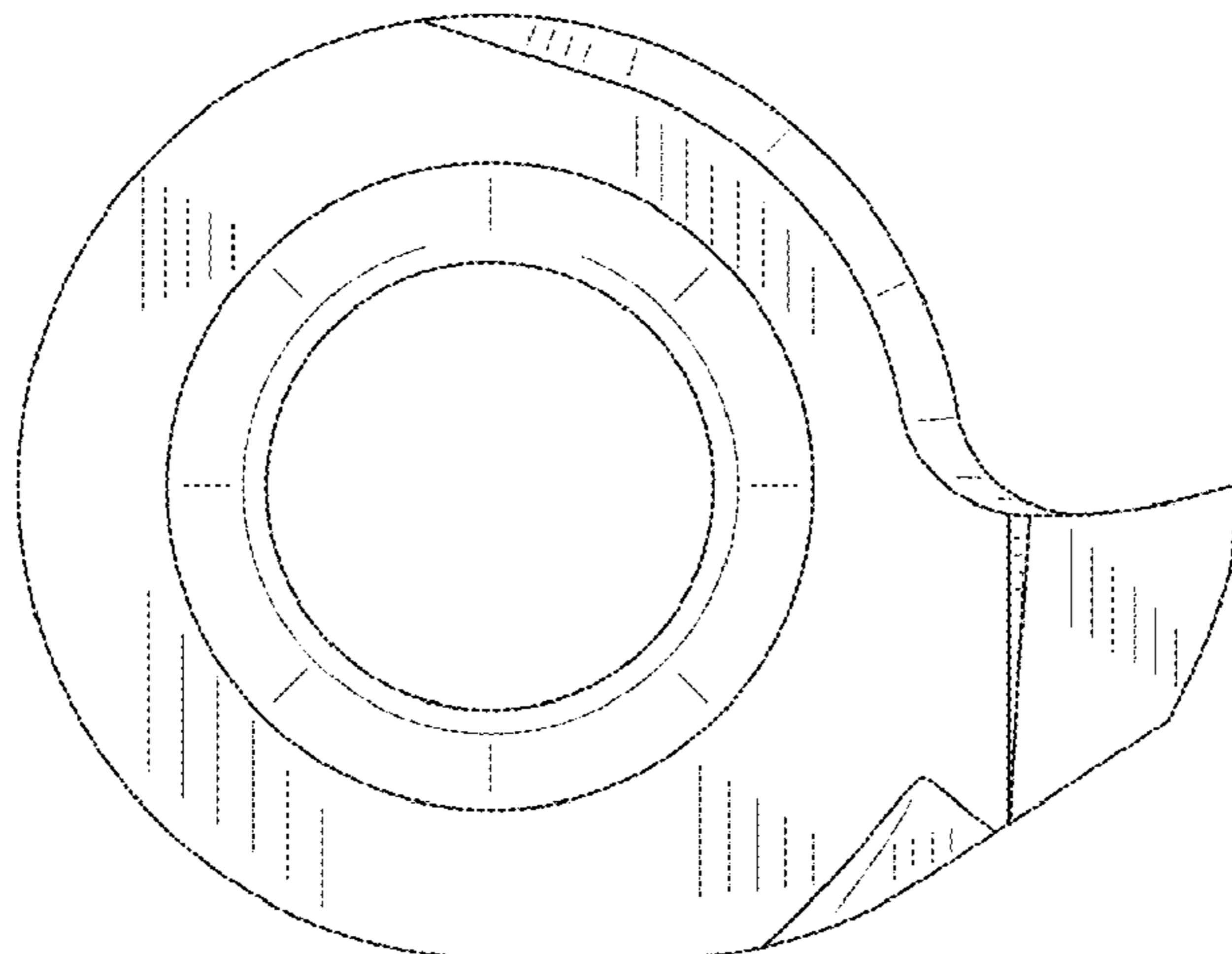


FIG. 27 is a referential perspective view showing the state in use of the cutting insert attached to the holder by fixing member, for cutting a work piece;
 FIG. 28 is a front view of a cutting insert in accordance with a fourth embodiment of the present design;
 FIG. 29 is a rear view thereof;
 FIG. 30 is a right side view thereof;
 FIG. 31 is a left side view thereof;
 FIG. 32 is a top view thereof;
 FIG. 33 is a bottom view thereof;
 FIG. 34 is a first perspective view thereof;
 FIG. 35 is a second perspective view thereof; and,
 FIG. 36 is a referential perspective view showing the state in use of the cutting insert attached to the holder by fixing member, for cutting a work piece.
 The broken lines in the referential perspective view depict unclaimed environmental subject matter.

1 Claim, 19 Drawing Sheets

(30) **Foreign Application Priority Data**

Oct. 1, 2018	(JP)	.....	2018-021410
Oct. 1, 2018	(JP)	.....	2018-021411
Oct. 1, 2018	(JP)	.....	2018-021412
Oct. 1, 2018	(JP)	.....	2018-021413
Oct. 1, 2018	(JP)	.....	2018-021414
Oct. 1, 2018	(JP)	.....	2018-021415

(58) **Field of Classification Search**

CPC B23C 2200/0411; B23C 2200/0416; B23C 2200/0433; B23C 2200/164; B23C 2200/361; B23C 2210/0457; B23C 5/006; B23C 2200/168; B23C 2210/163; B23C 2226/125; B23C 5/10; B23C 2200/081; B23C 2200/087; B23C 2200/161; B23C 2200/206; B23C 2210/02; B23C 2210/03; B23C 2210/166; B23C 2210/50; B23C 2226/315; B23C 5/2208; B23C 5/2472; B23C 2200/0477; B23C 2200/0483; B23C 2200/083; B23C 2200/121; B23C 2200/362; B23C 2210/0428; B23C 2210/0435; B23C 2210/16; B23C 2220/36; B23C 2220/44; B23C 2240/08; B23C 2250/12; B23C 2270/06; B23C 5/2204; B23C 5/2213; B23C 5/2247; B23C 5/2427; B23C 2200/0422; B23C 2200/08; B23C 2200/086; B23C 2200/123

See application file for complete search history.

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* cited by examiner

FIG.1

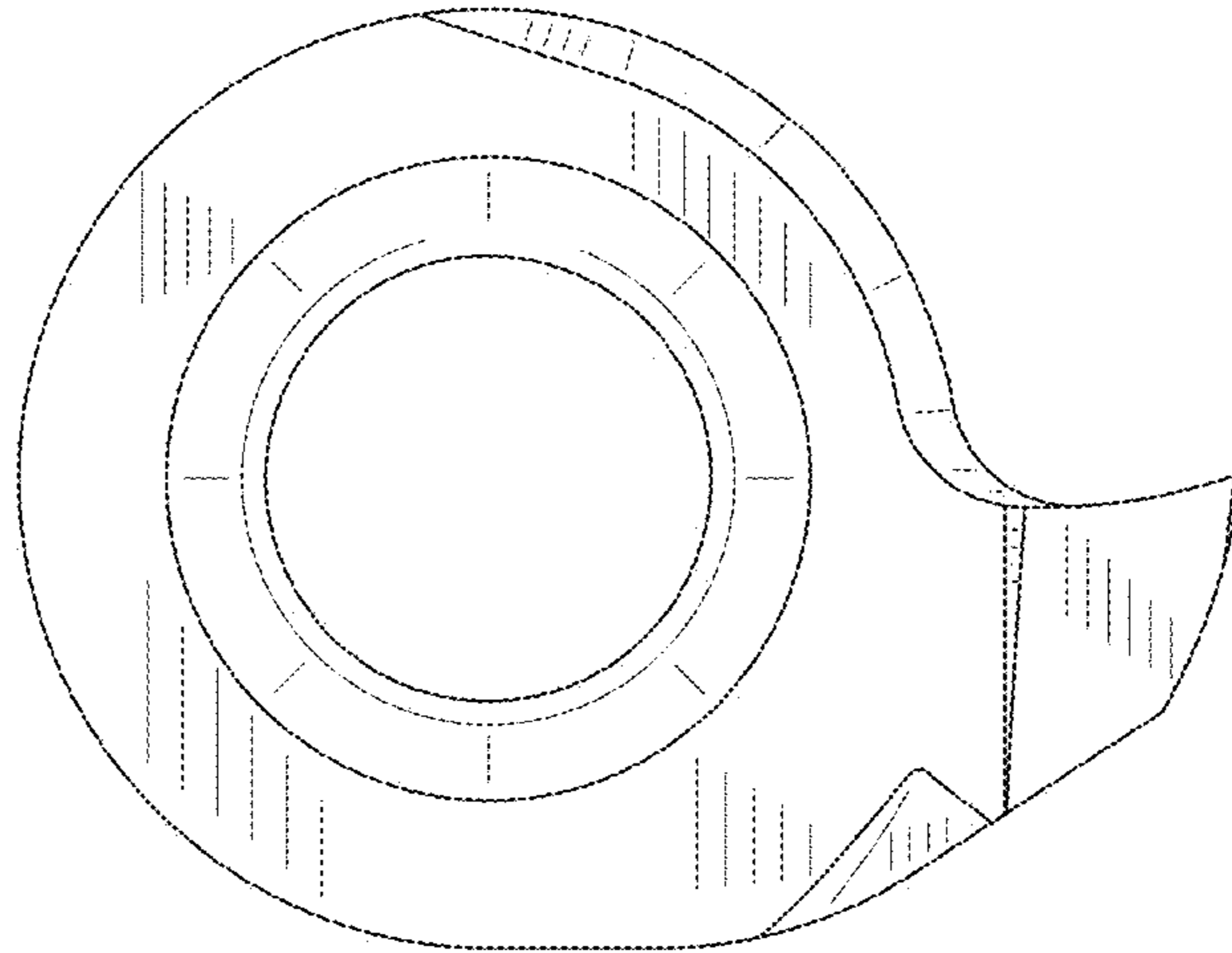


FIG.2

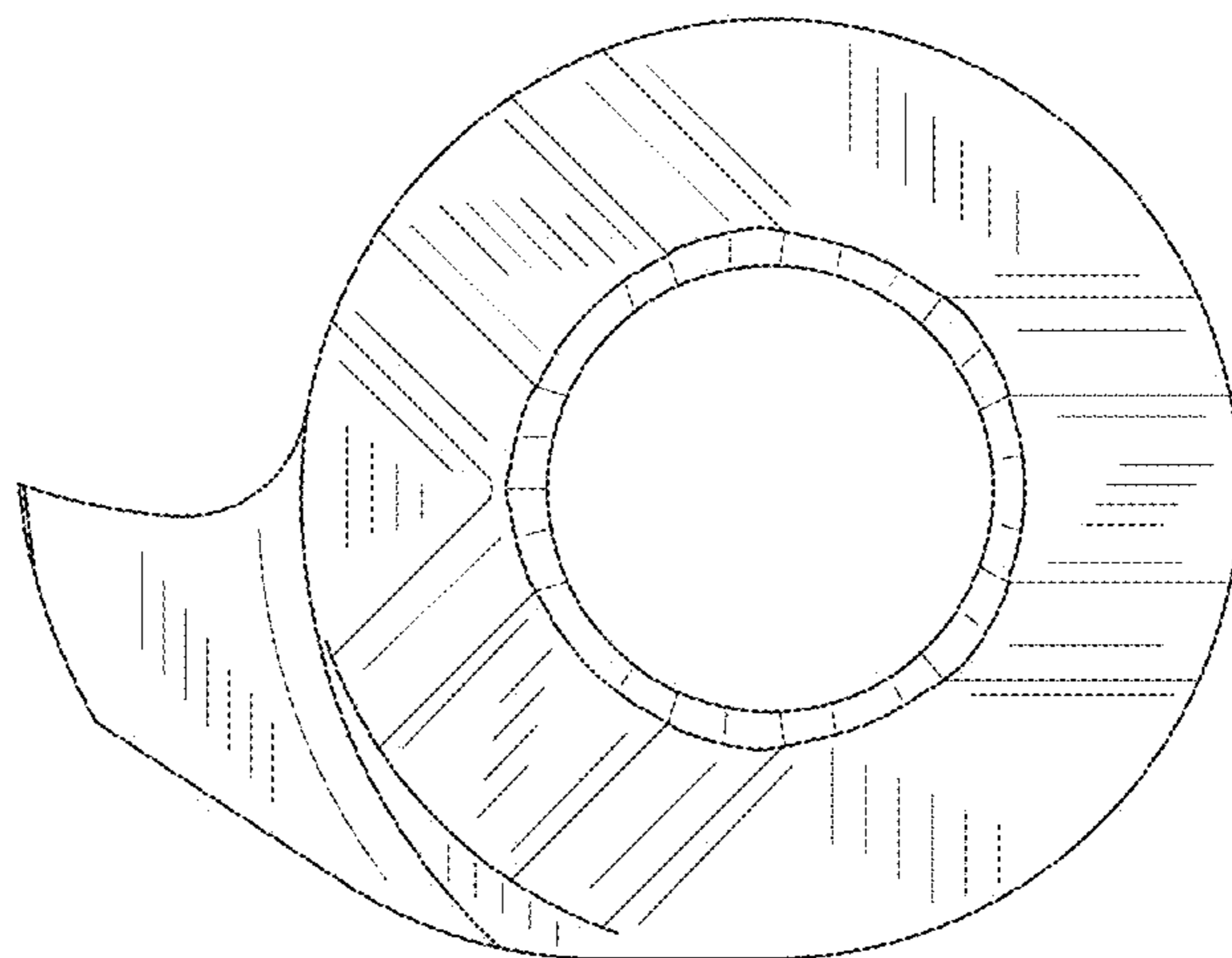


FIG.3

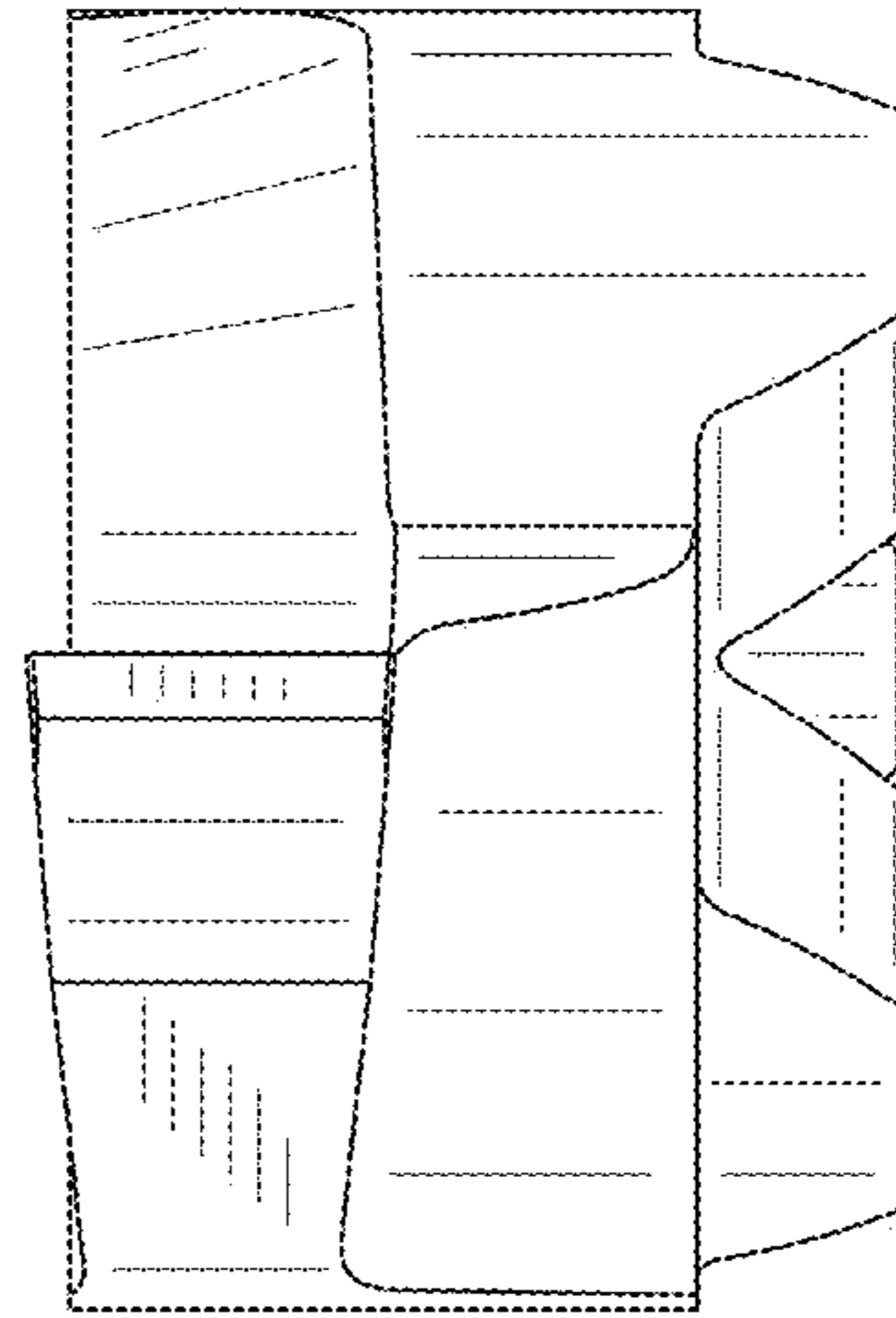


FIG.4

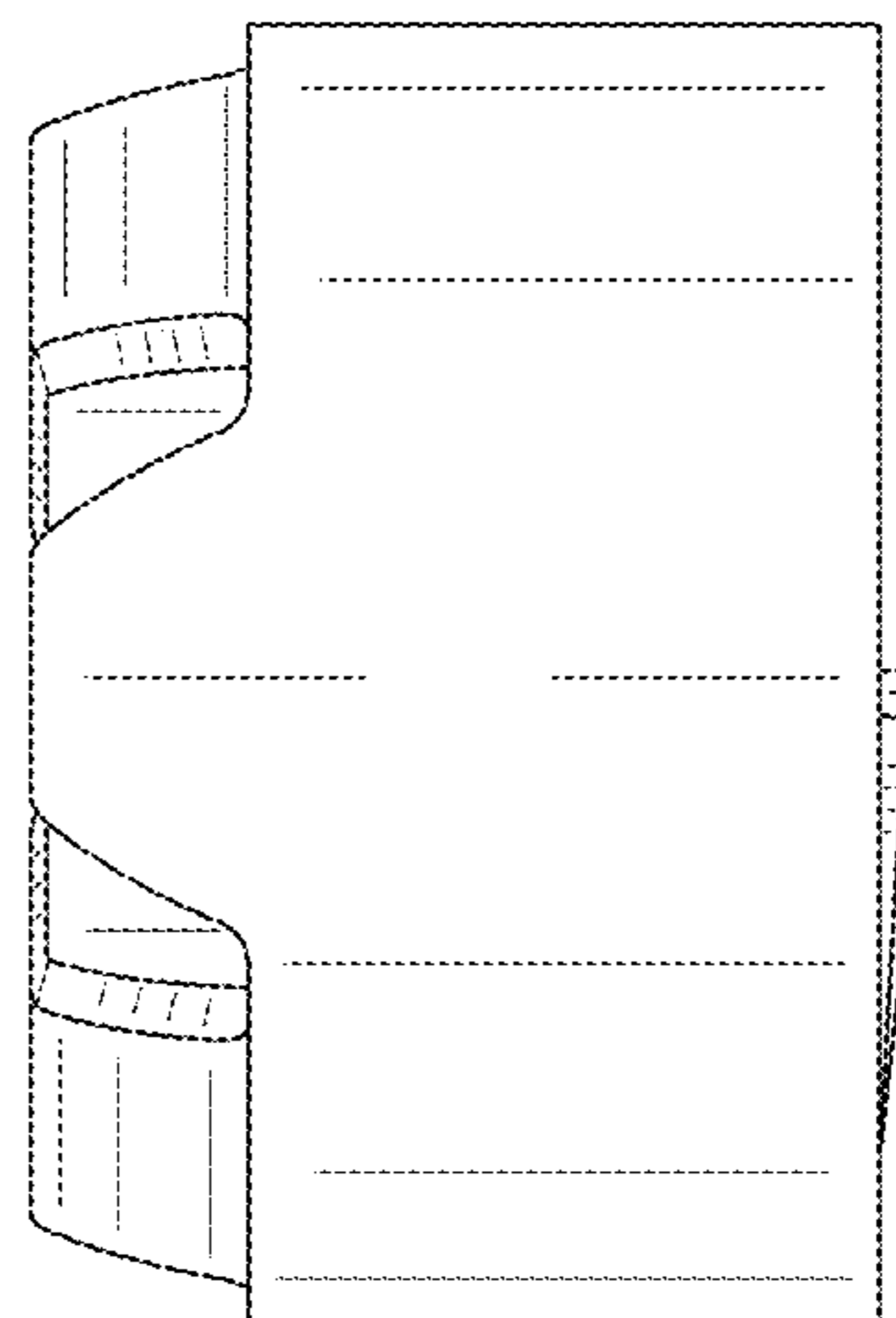


FIG.5

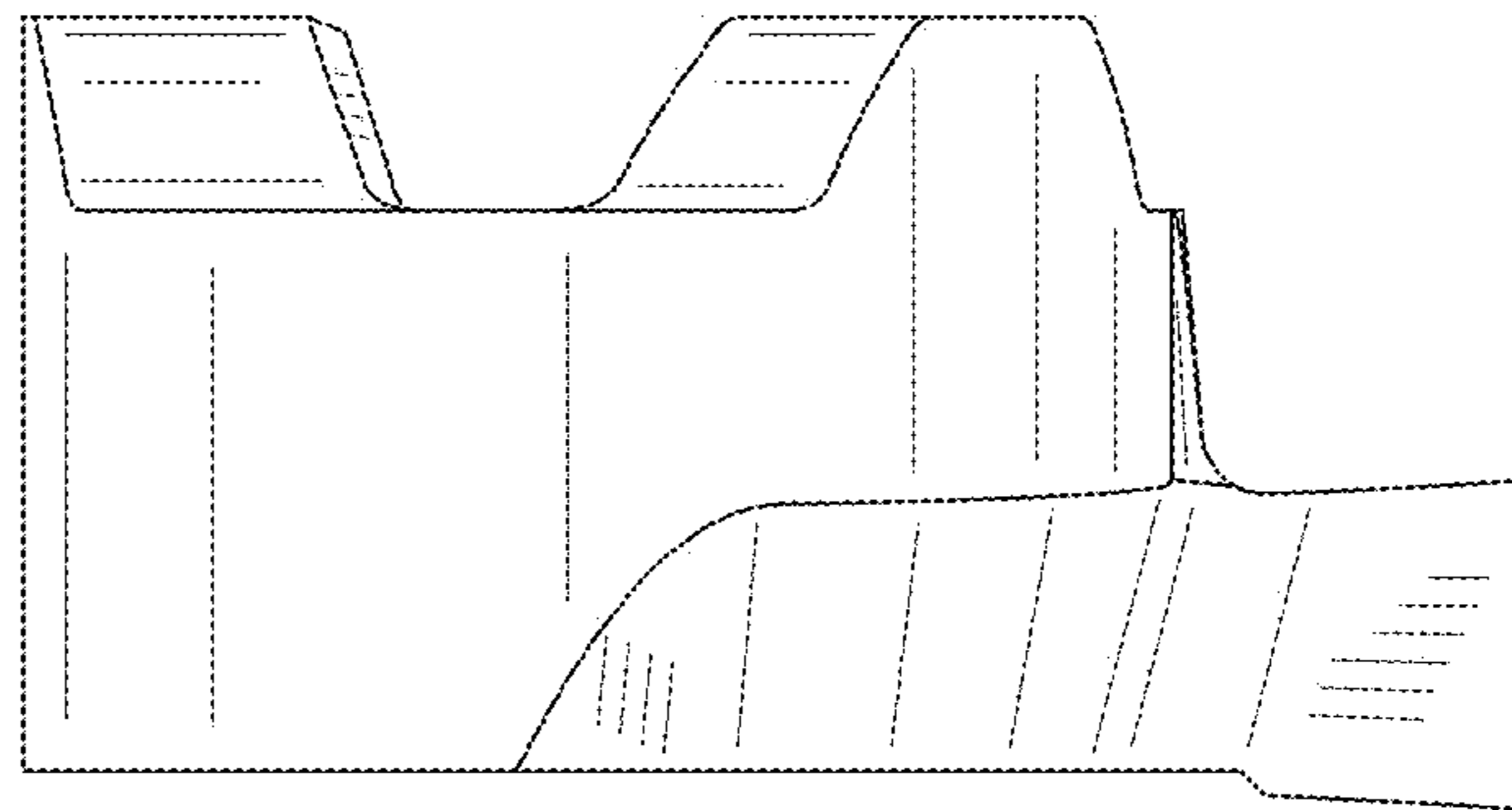


FIG.6

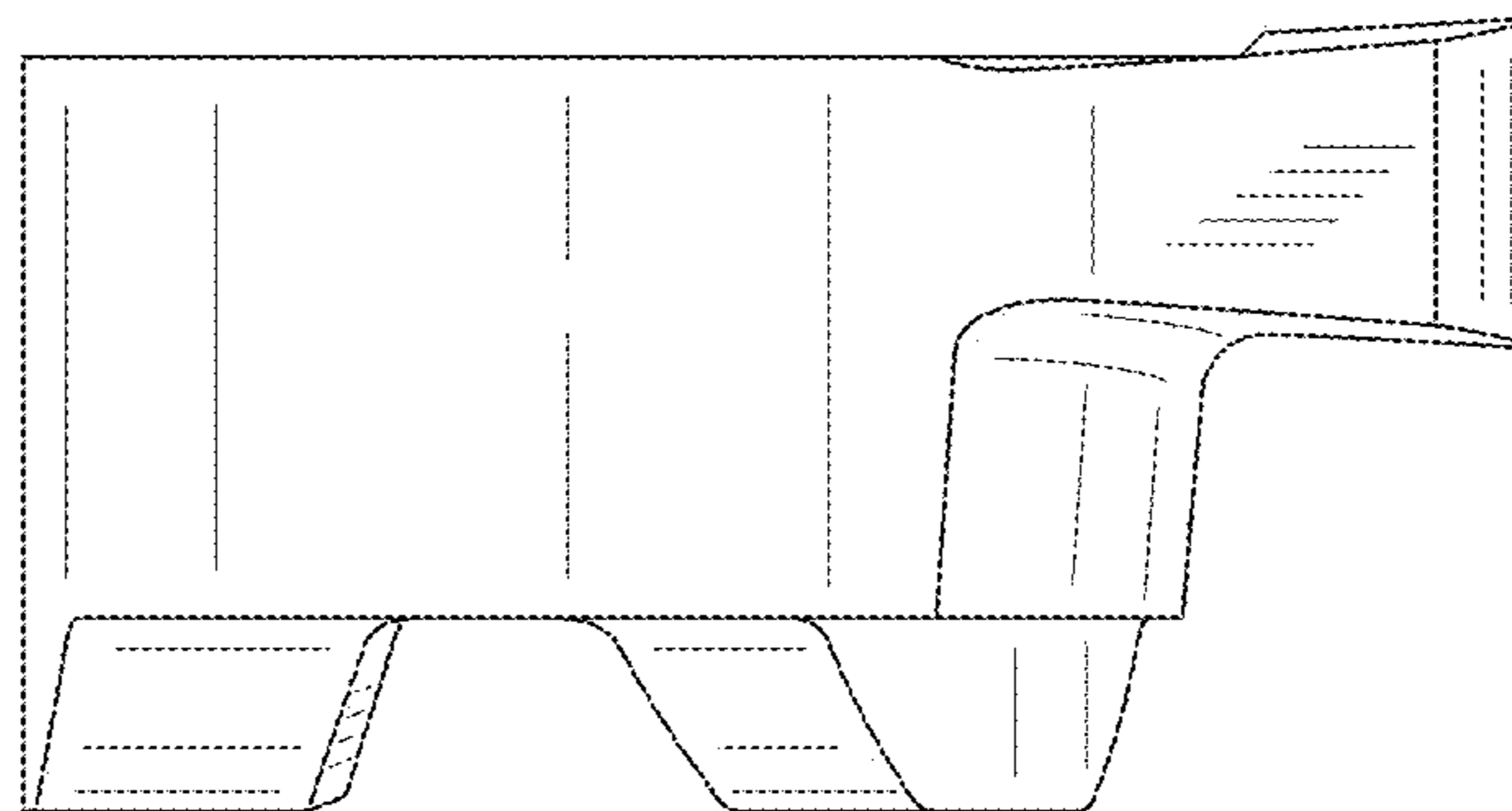


FIG.7

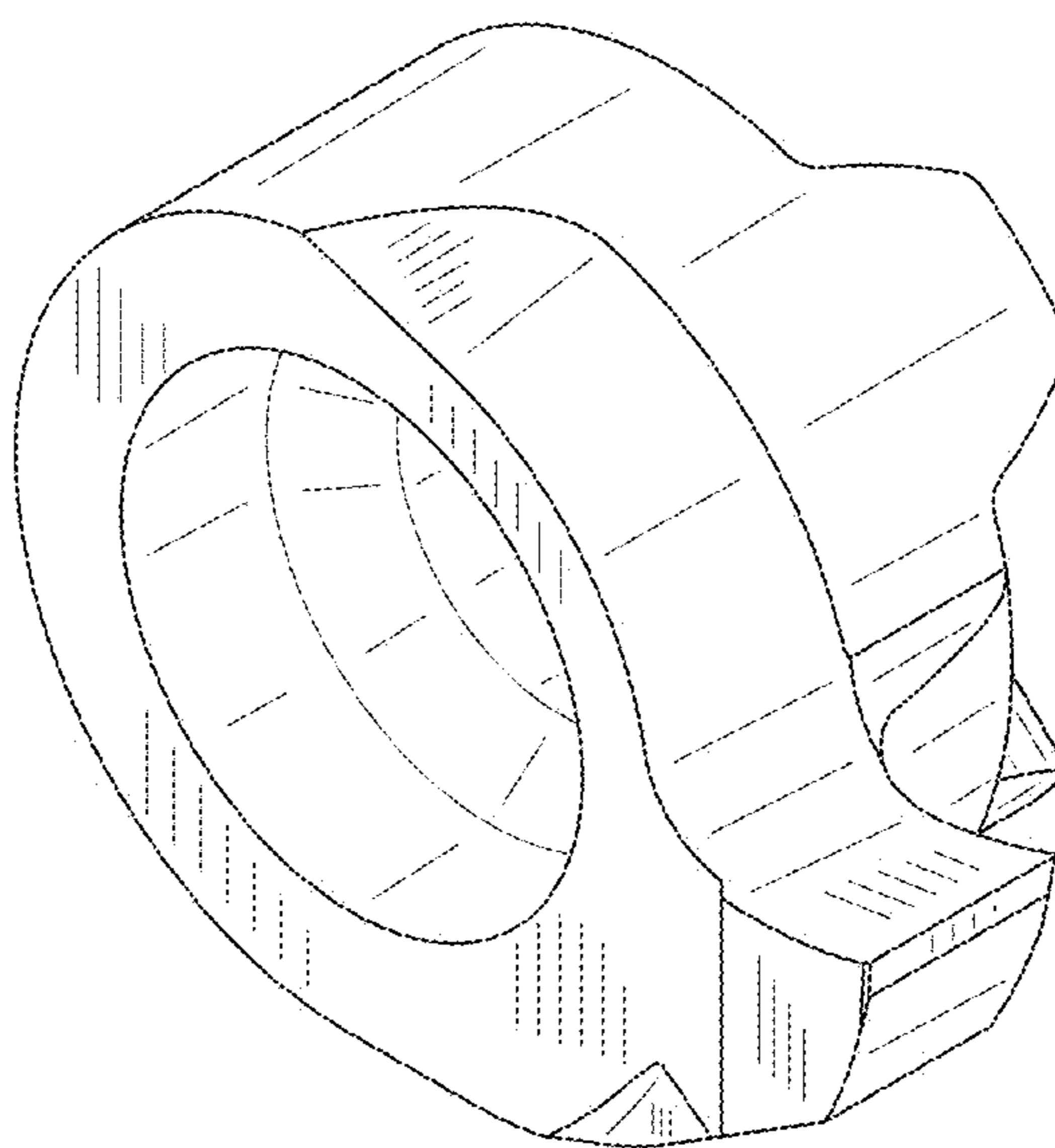


FIG.8

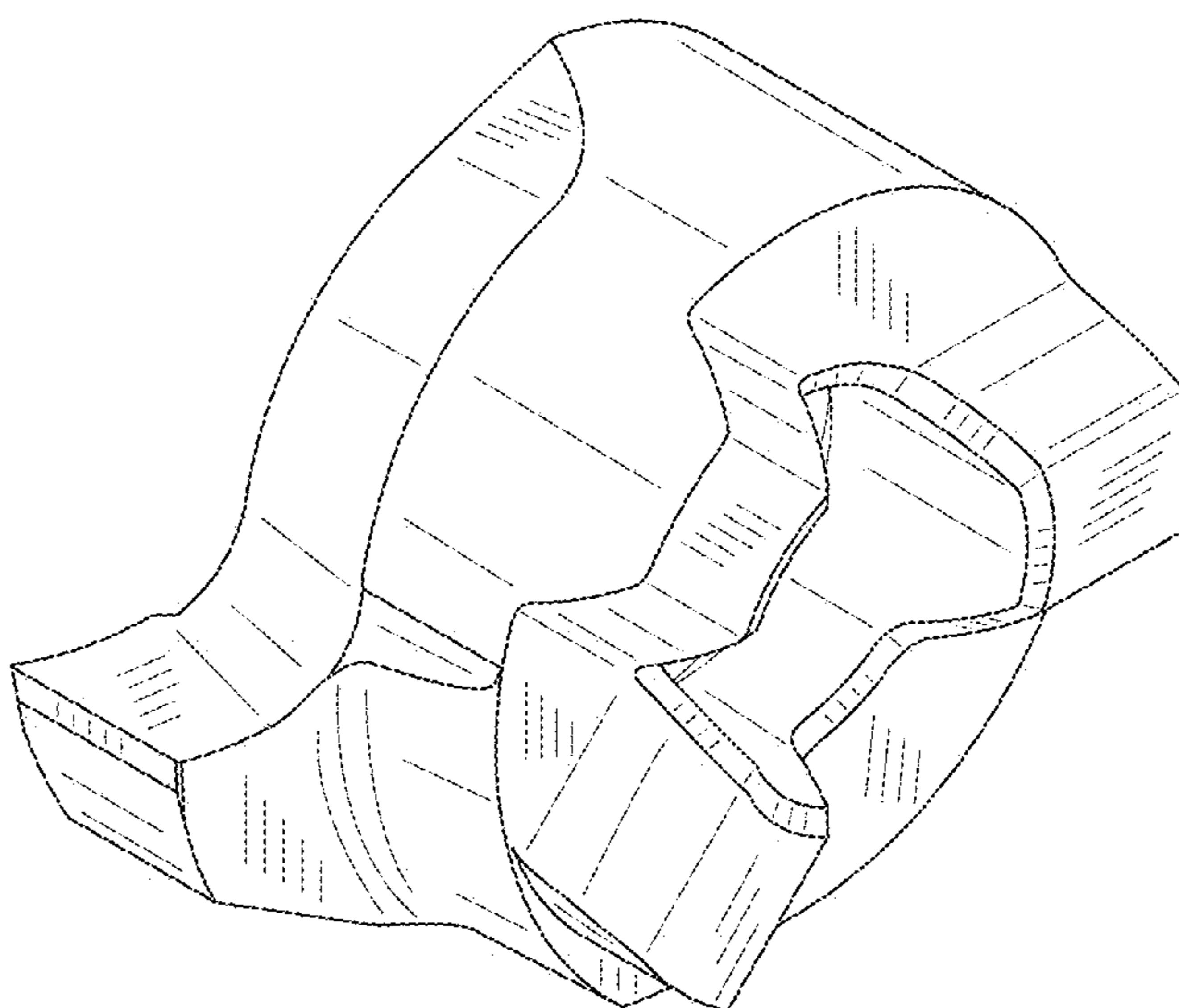


FIG.9

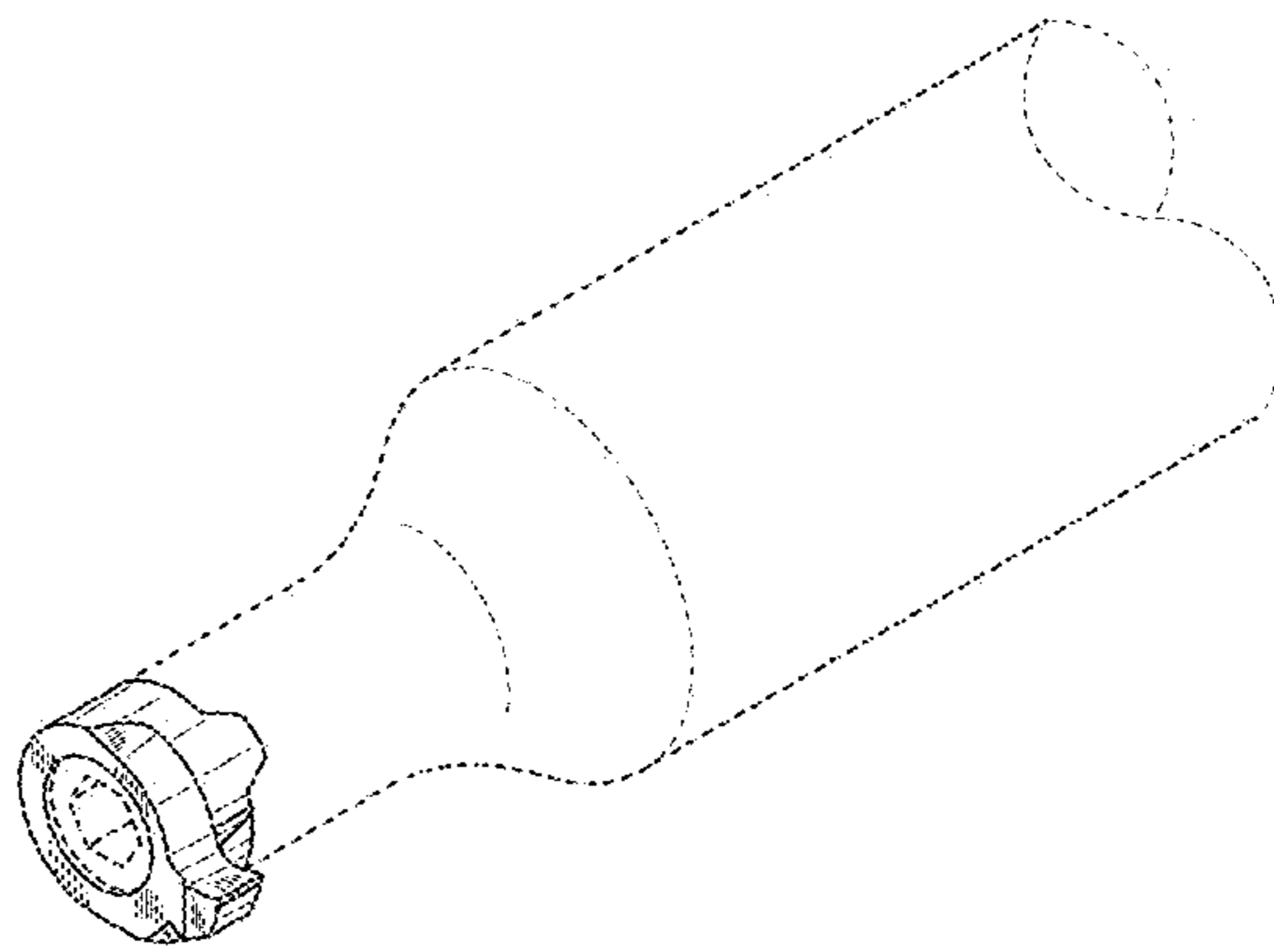


FIG.10

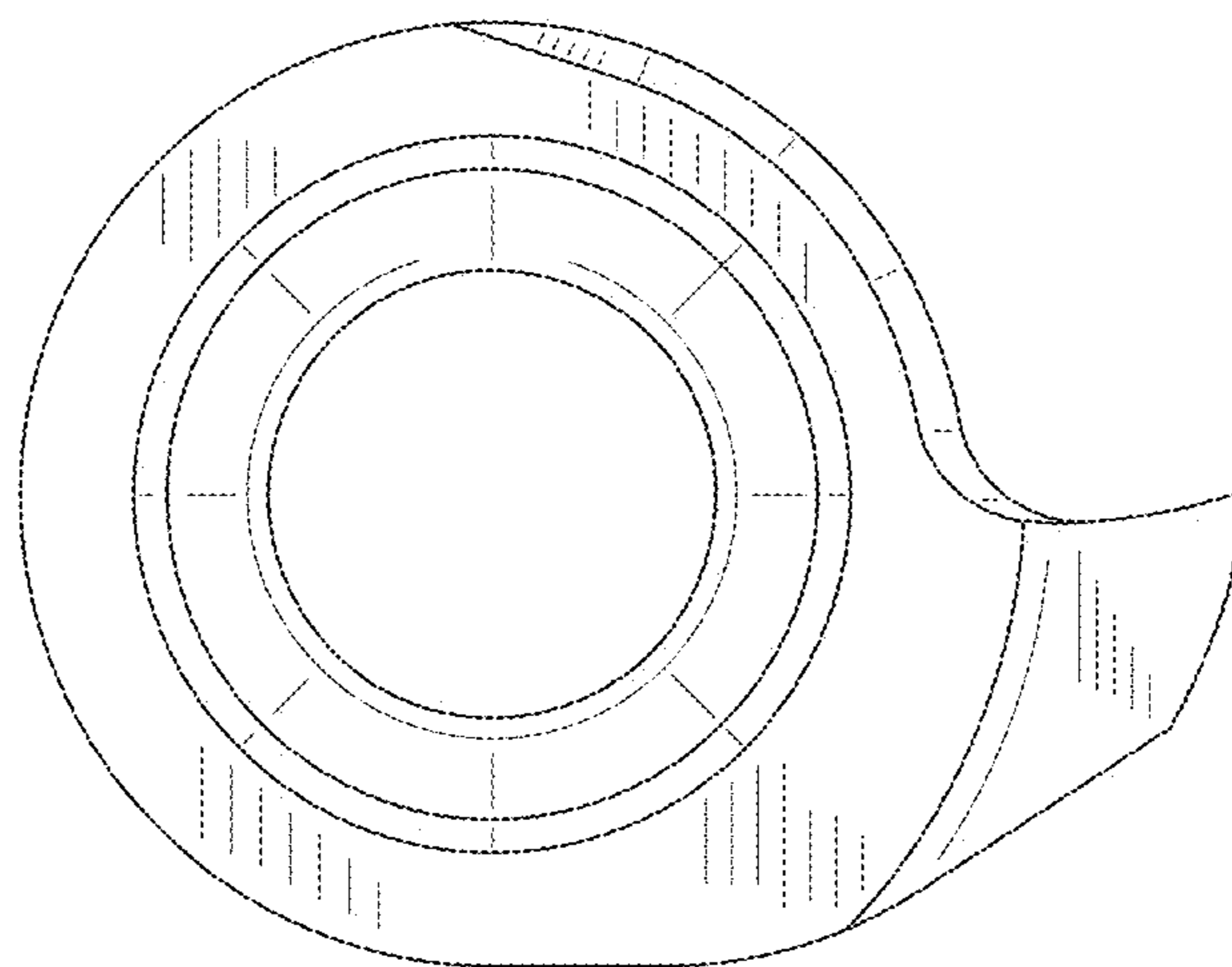


FIG.11

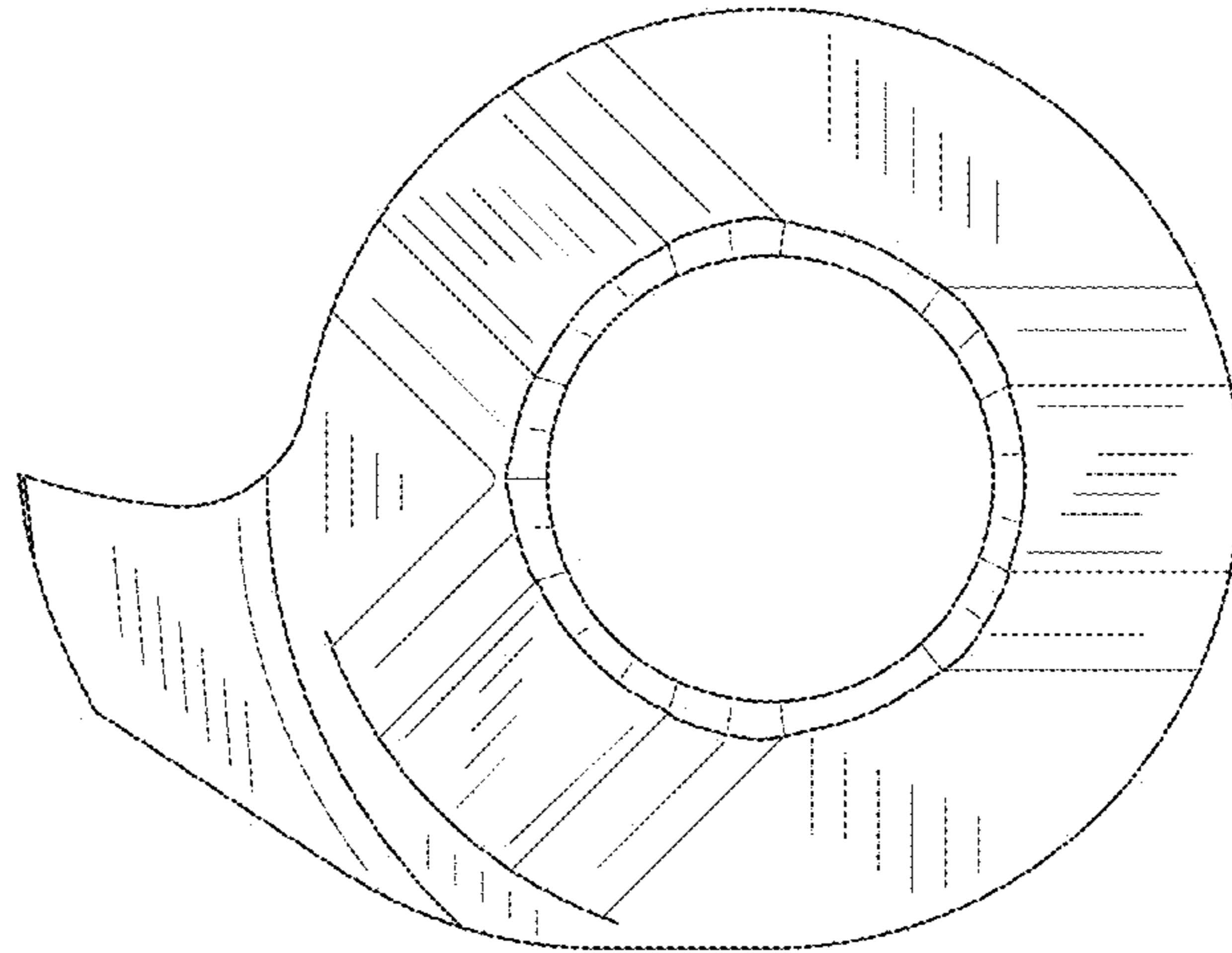


FIG.12

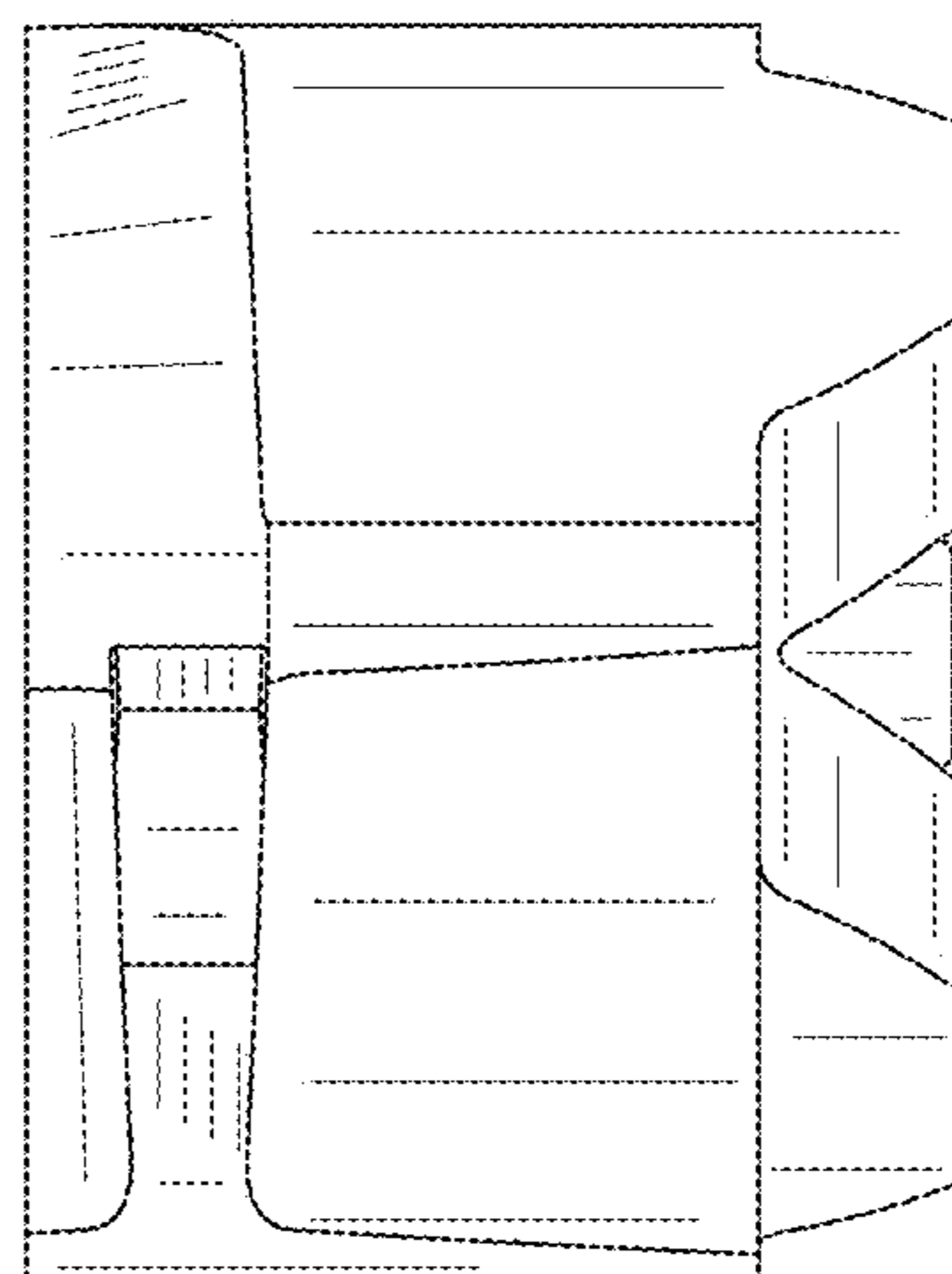


FIG. 13

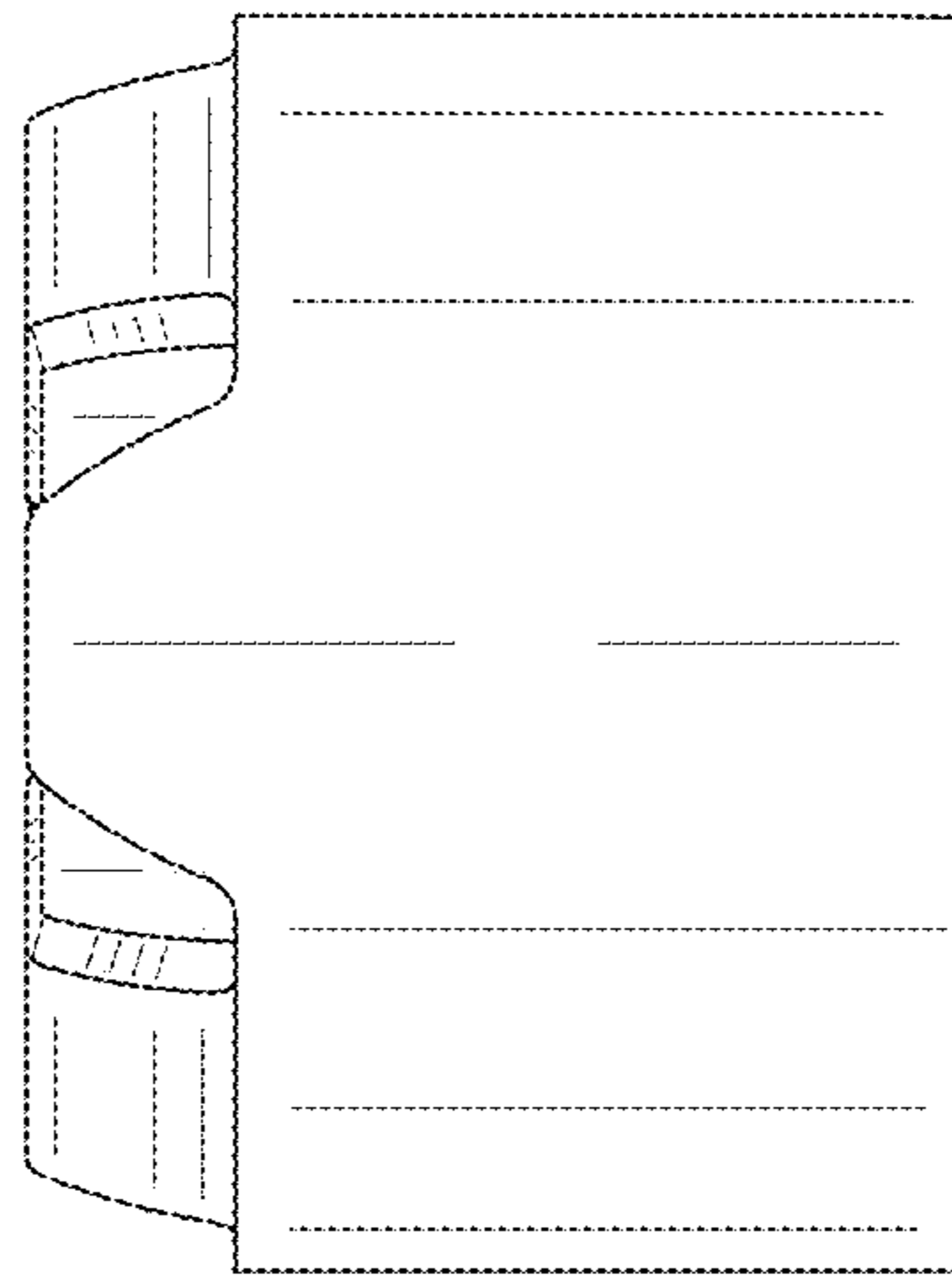


FIG. 14

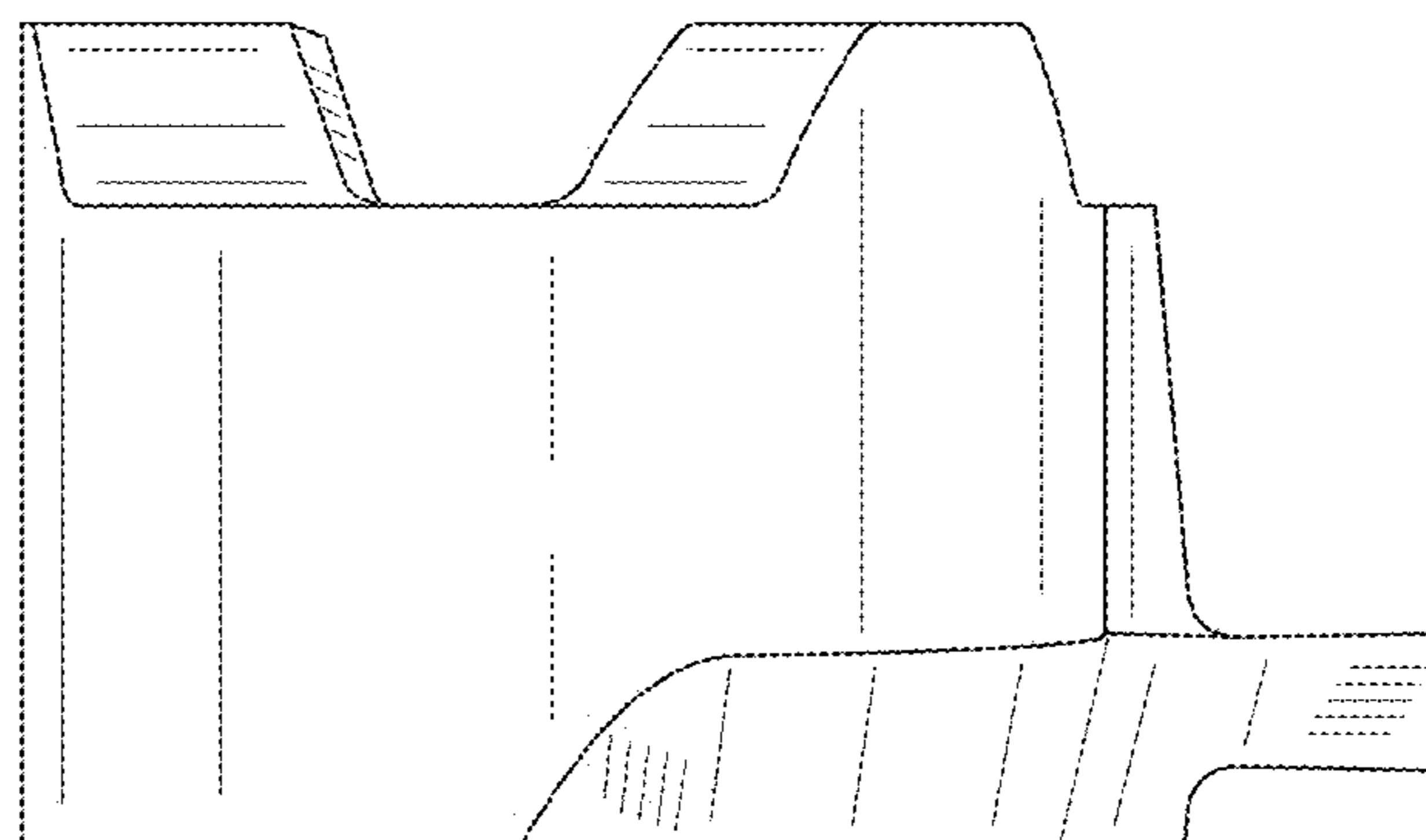


FIG.15

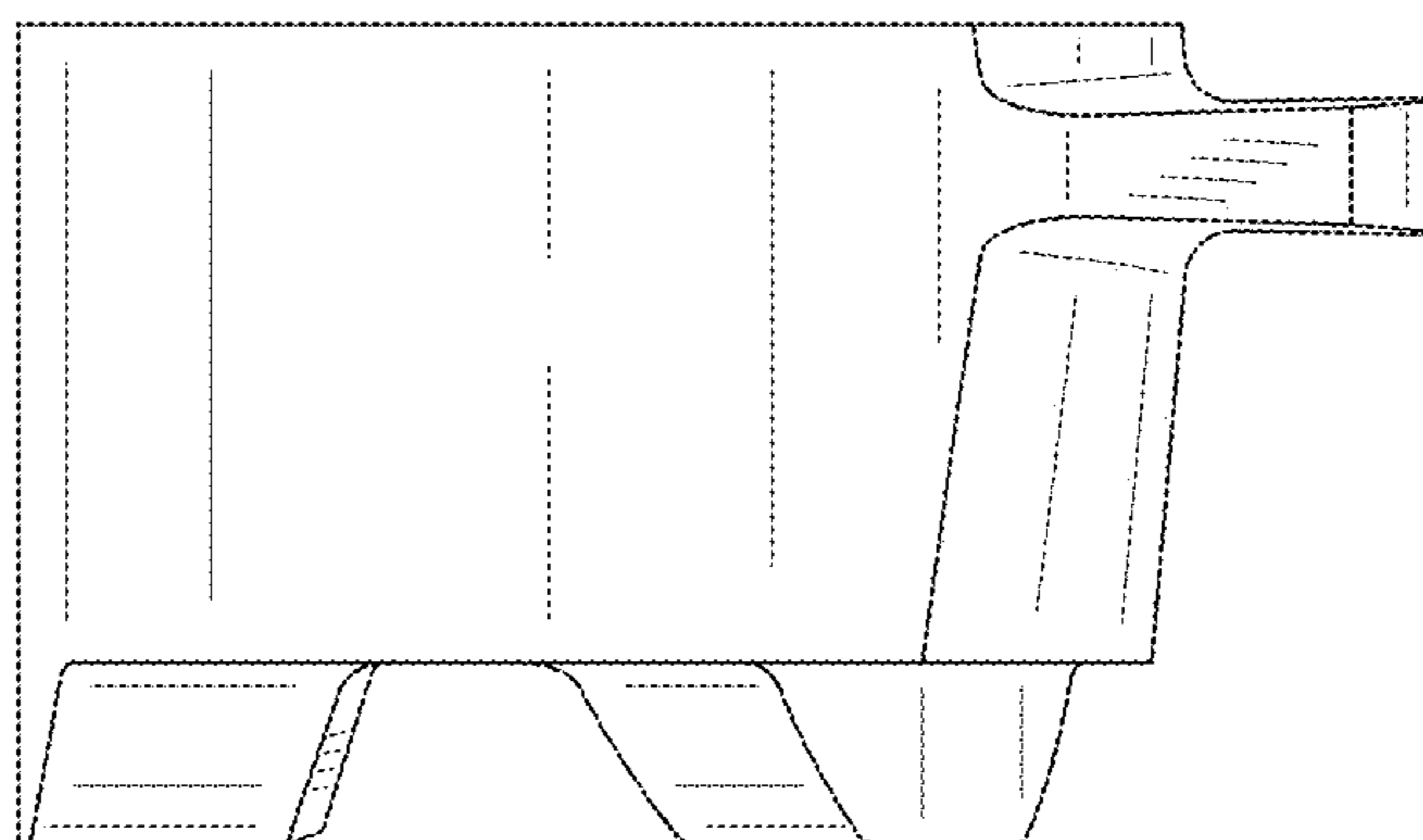


FIG.16

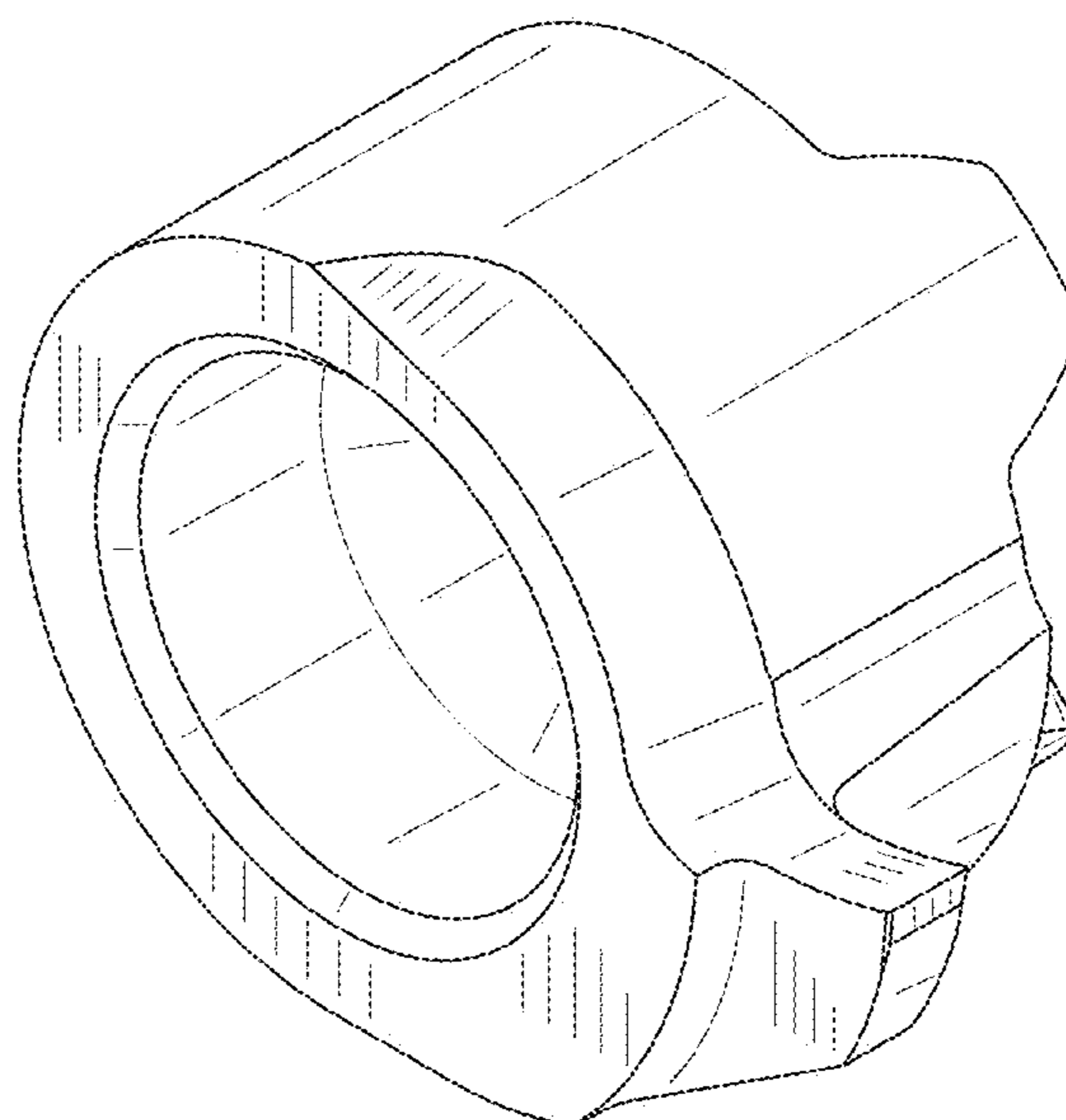


FIG.17

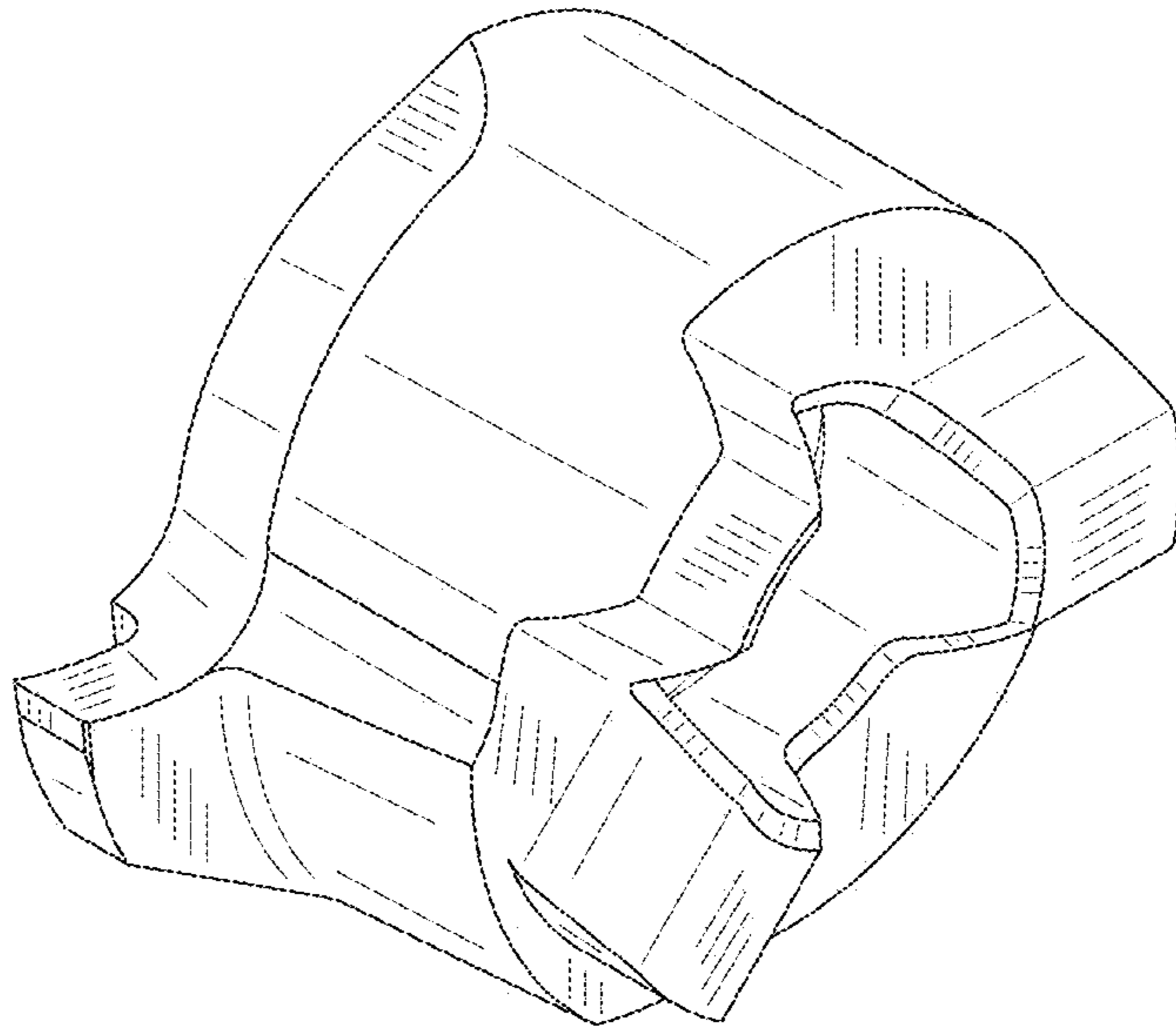


FIG.18

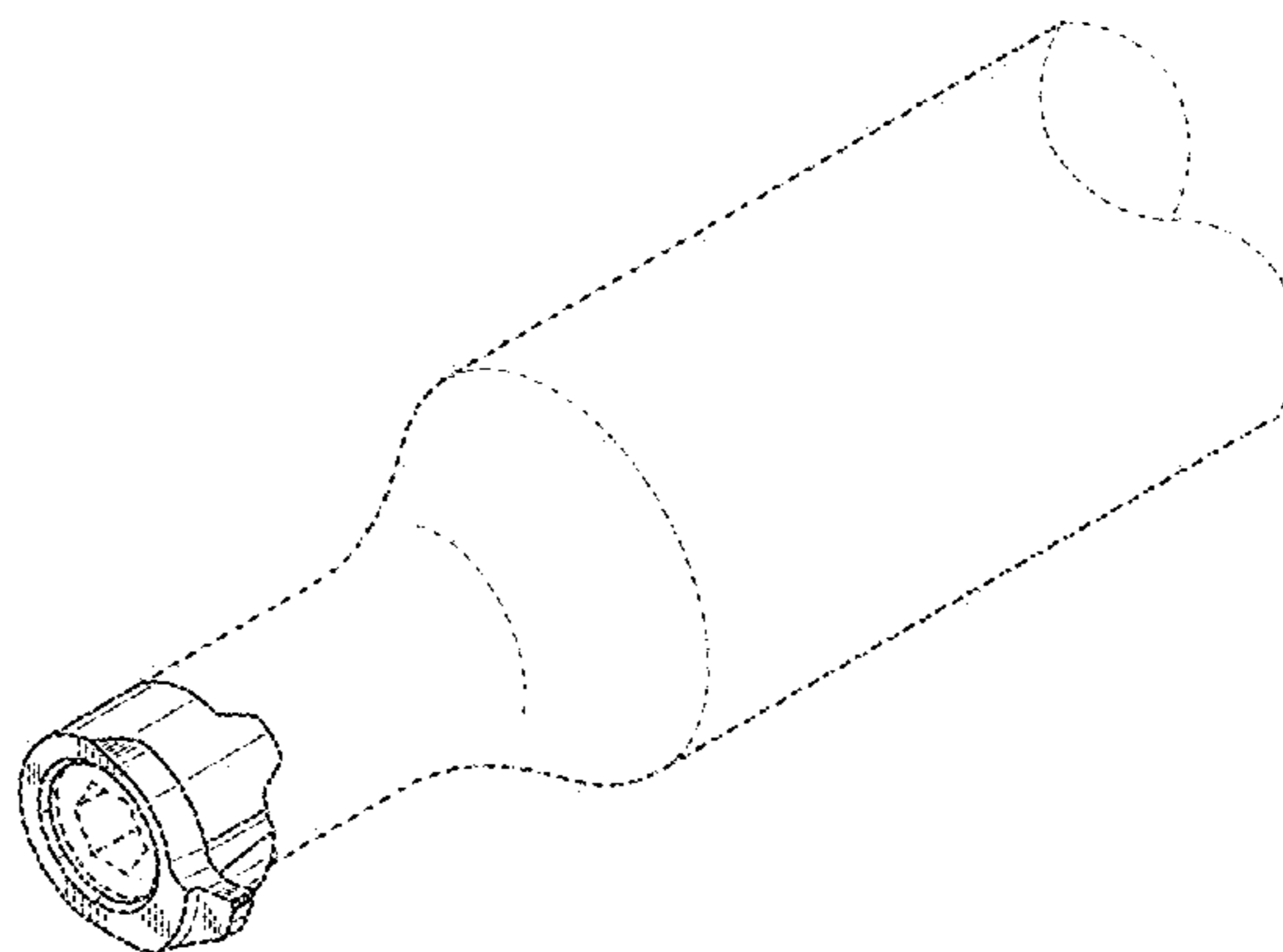


FIG.19

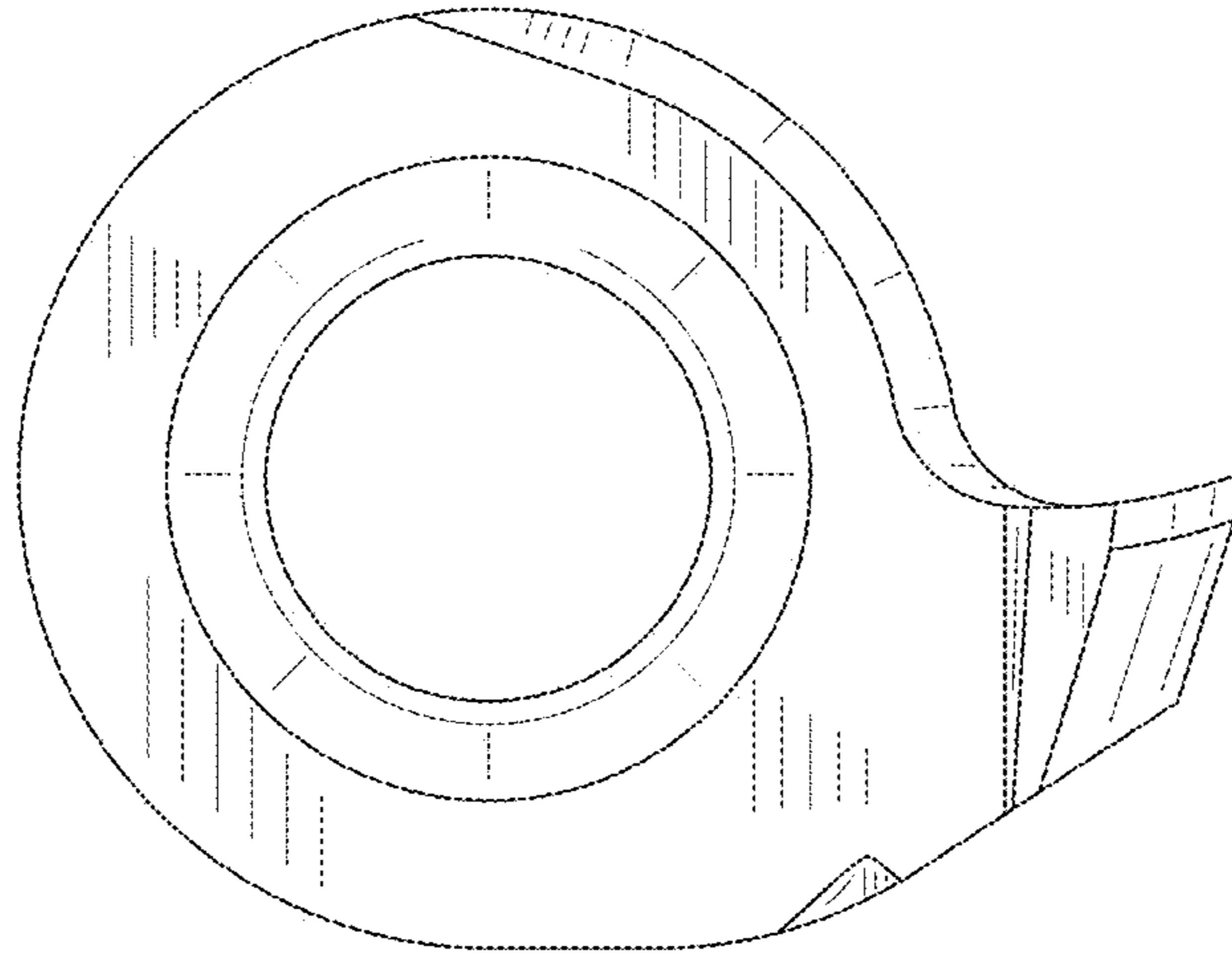


FIG.20

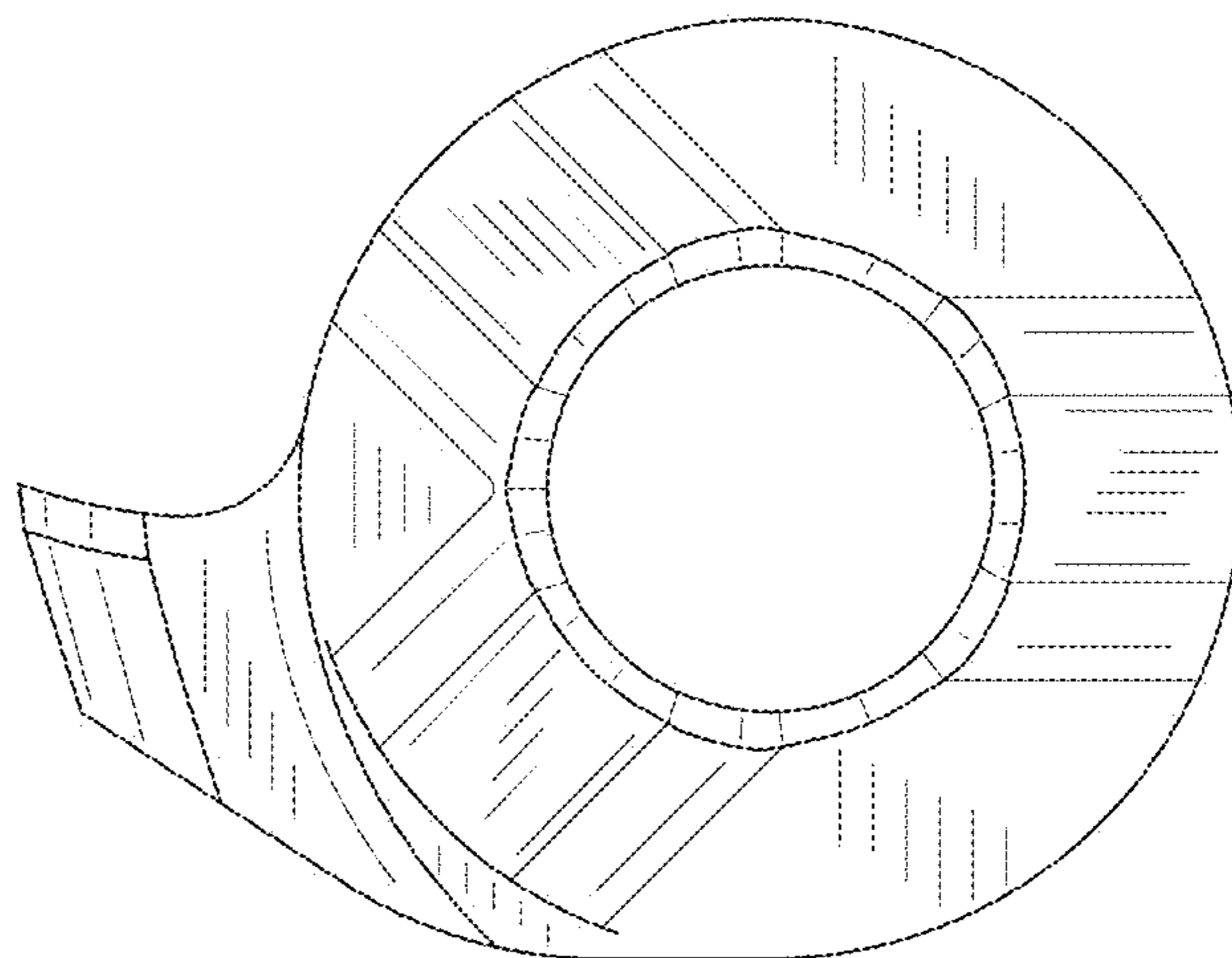


FIG.21

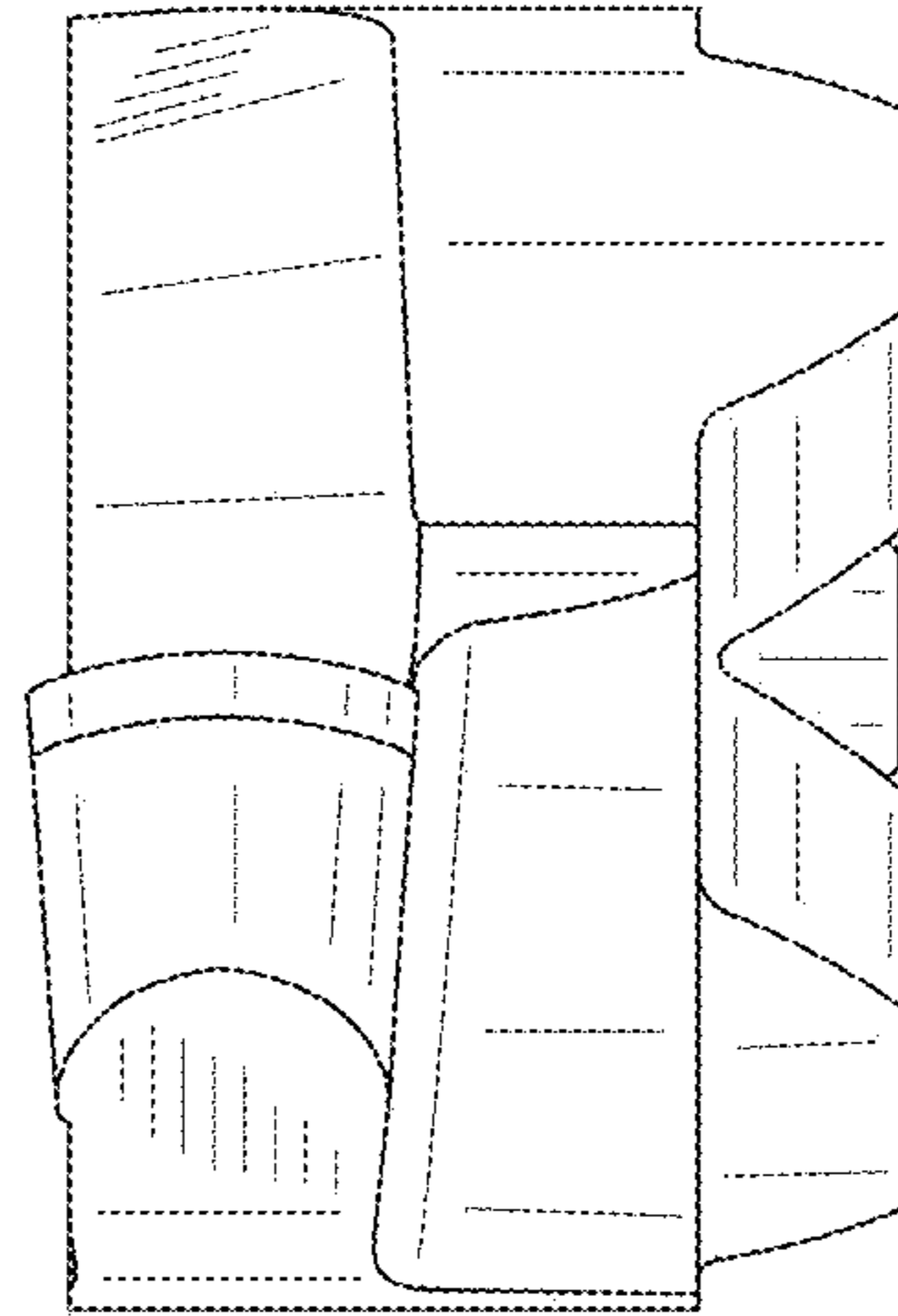


FIG.22

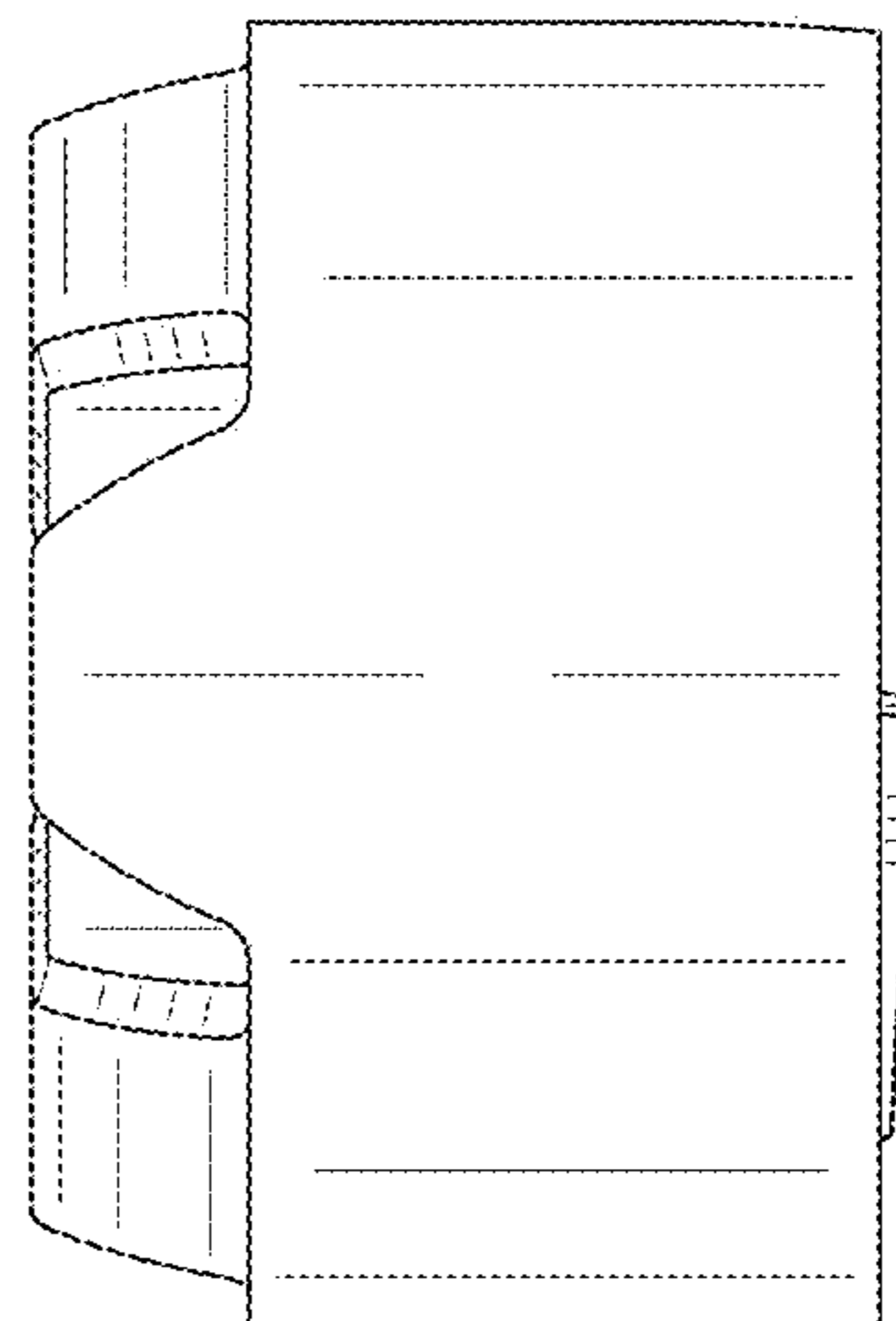


FIG.23

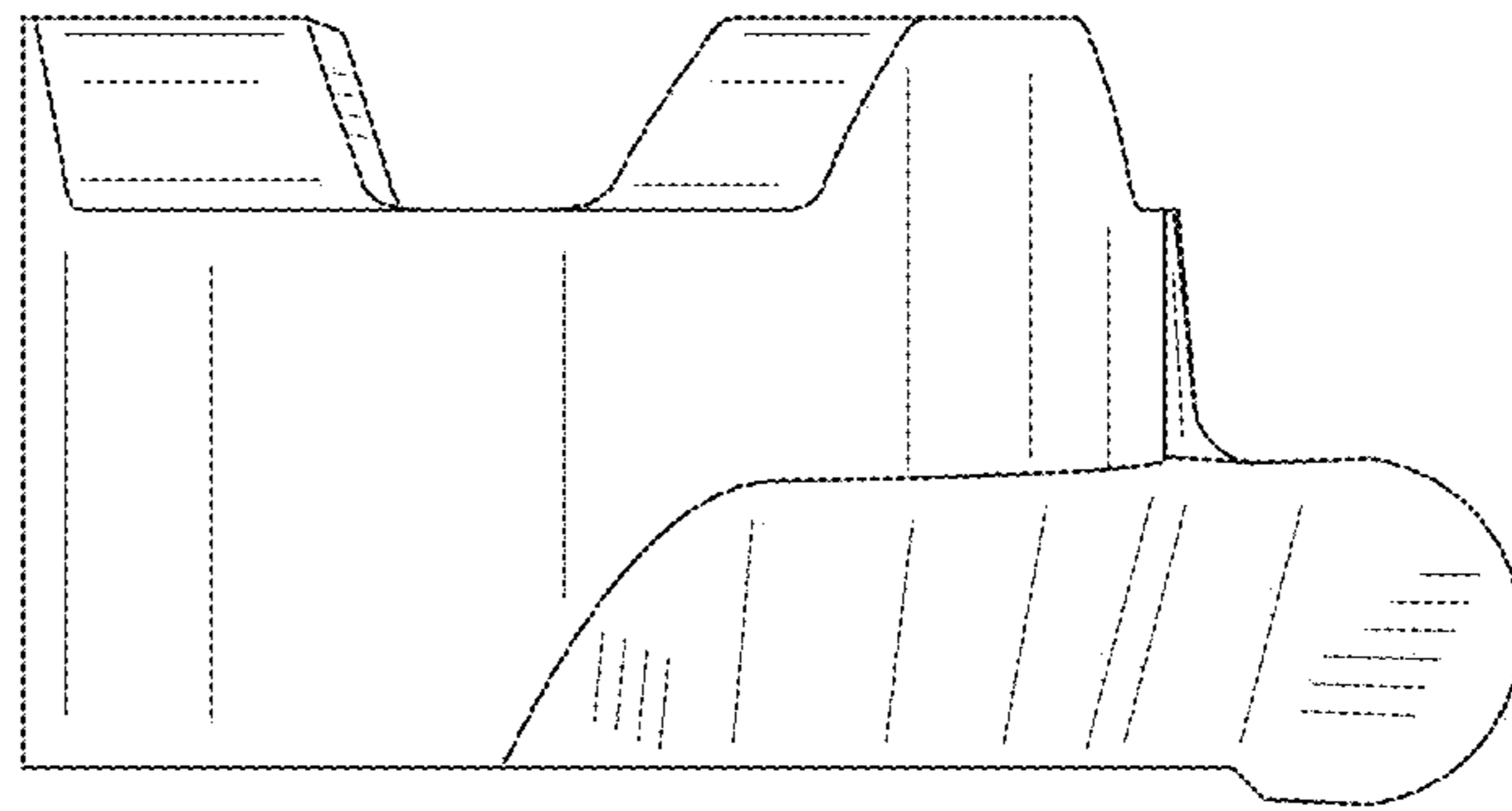


FIG.24

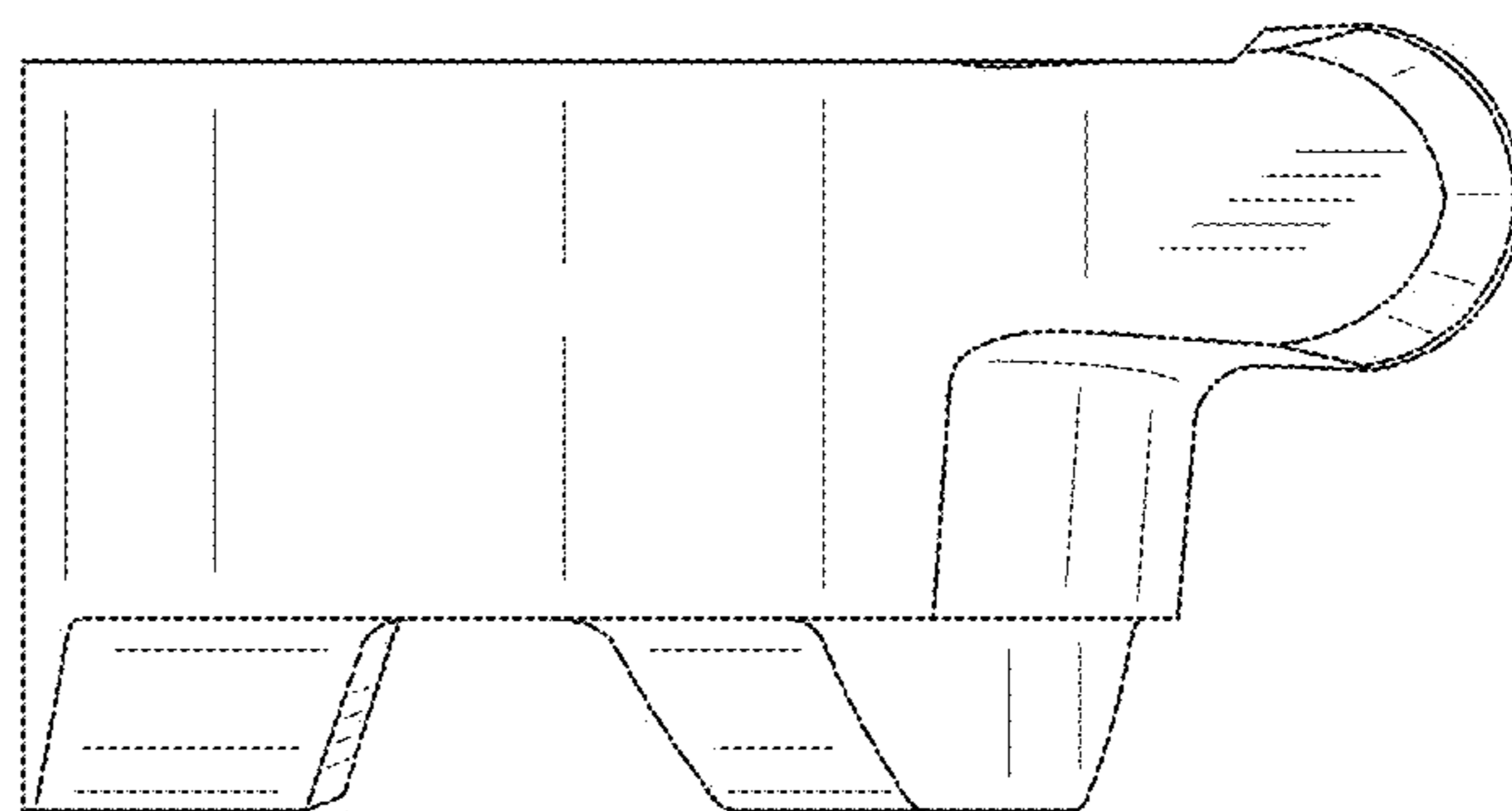


FIG.25

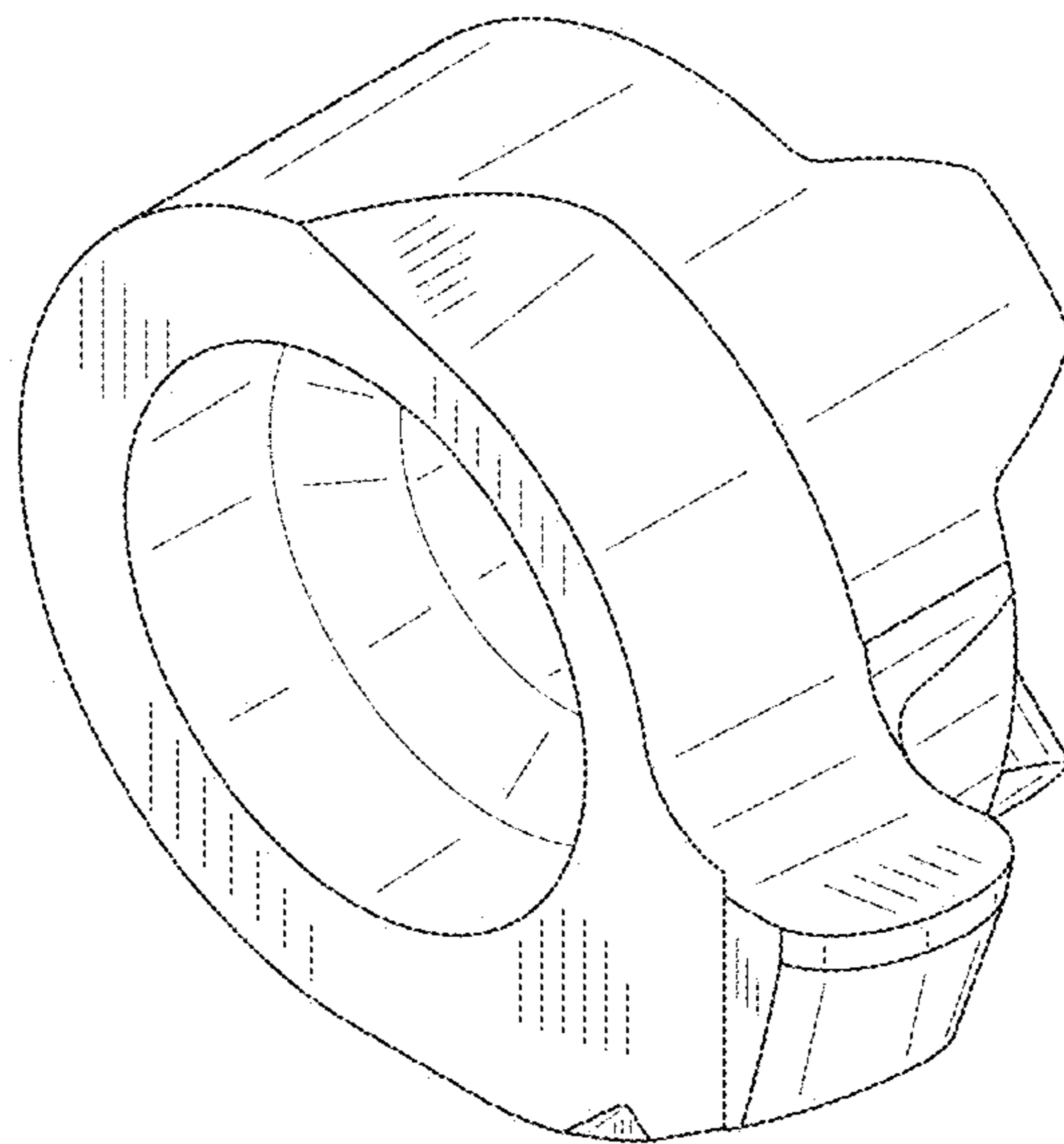


FIG.26

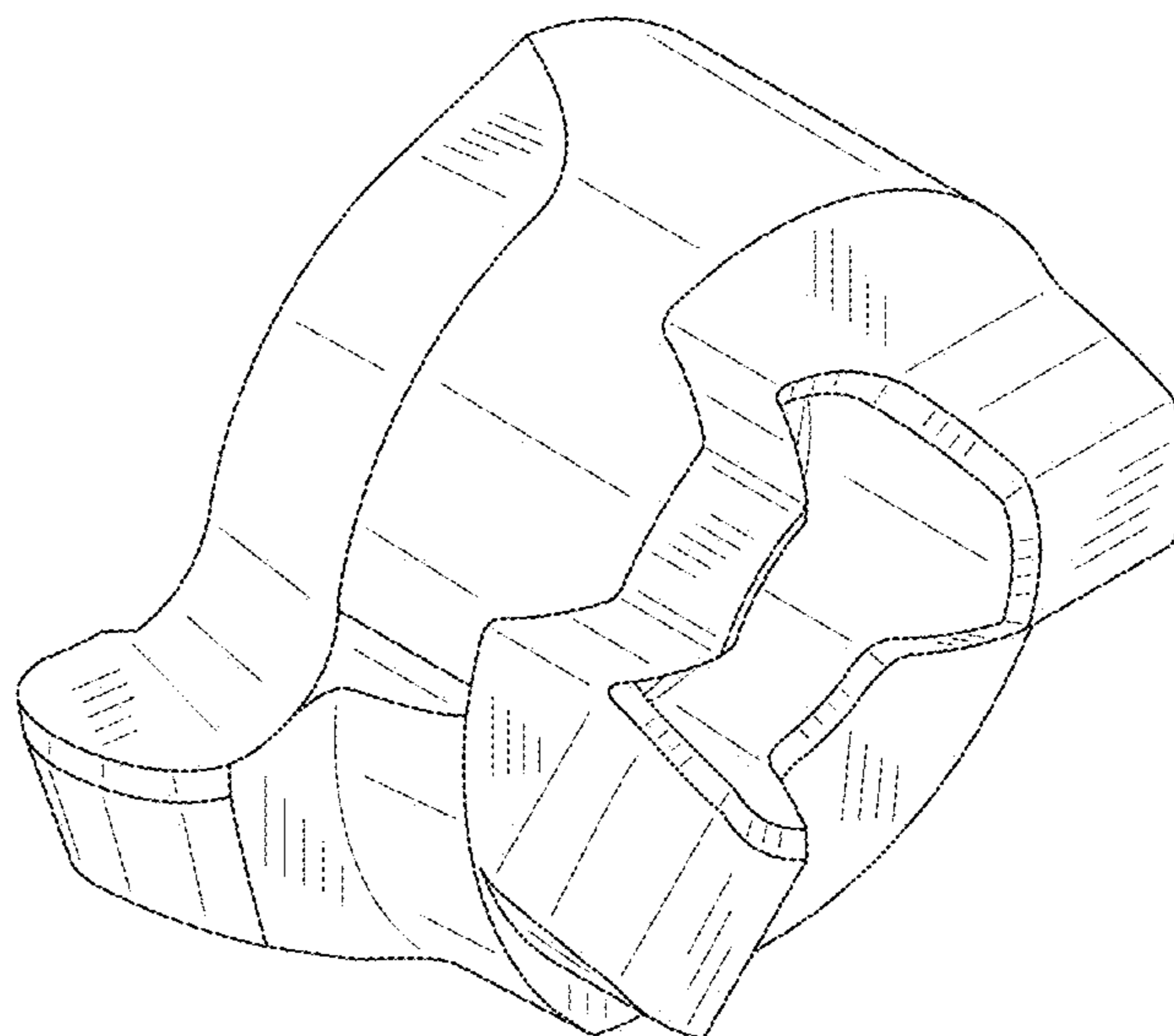


FIG. 27

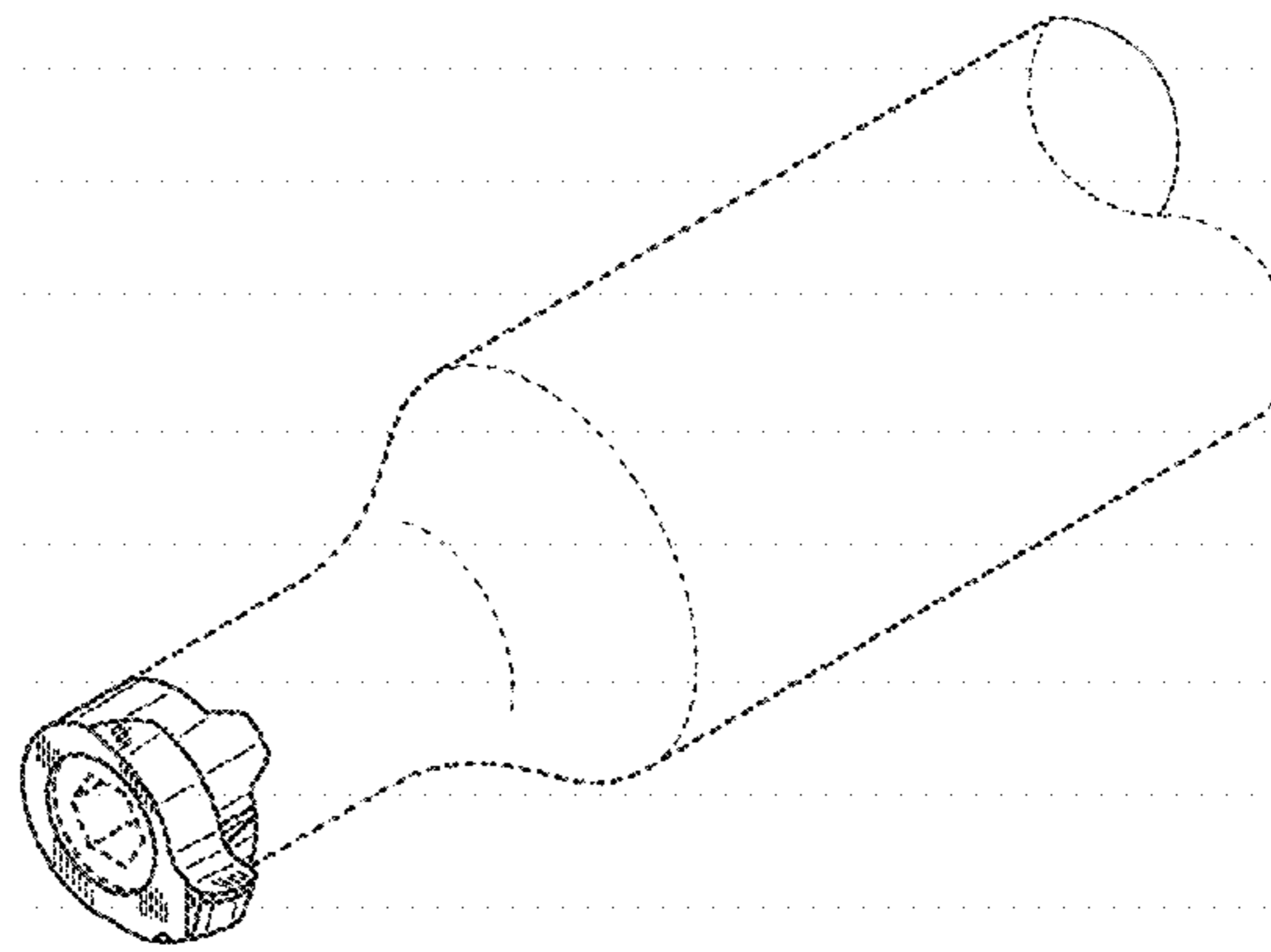


FIG. 28

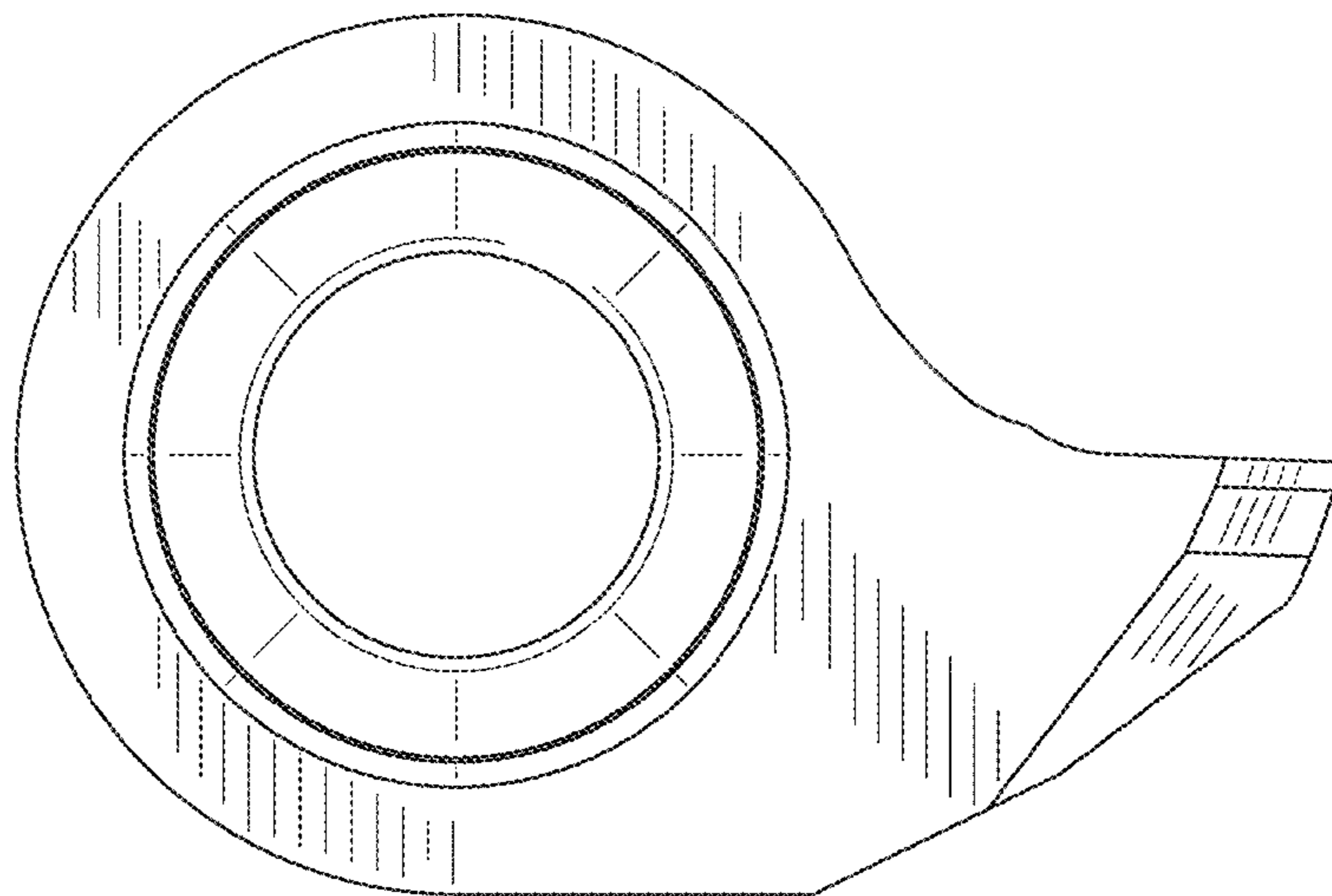


FIG. 29

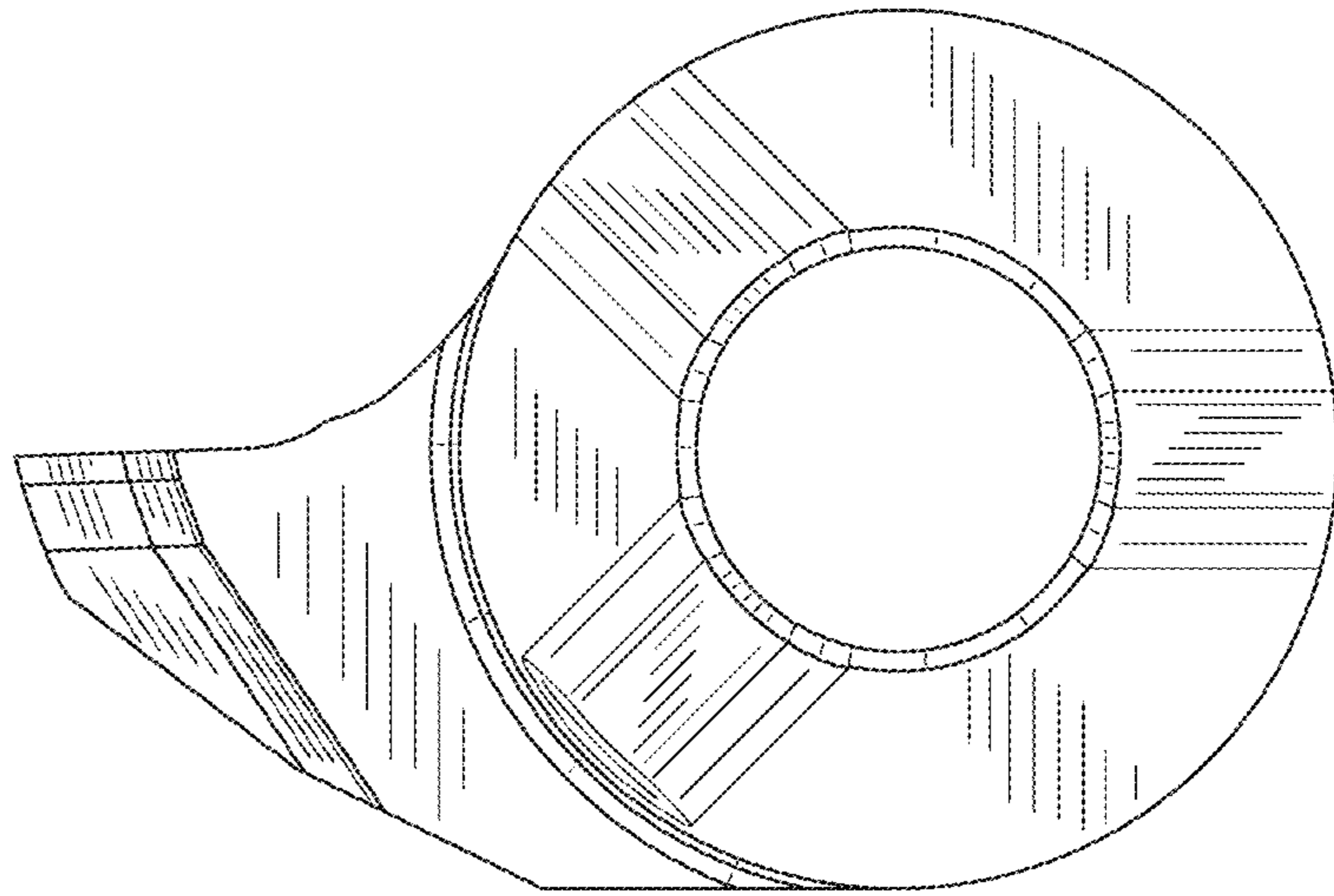


FIG. 30

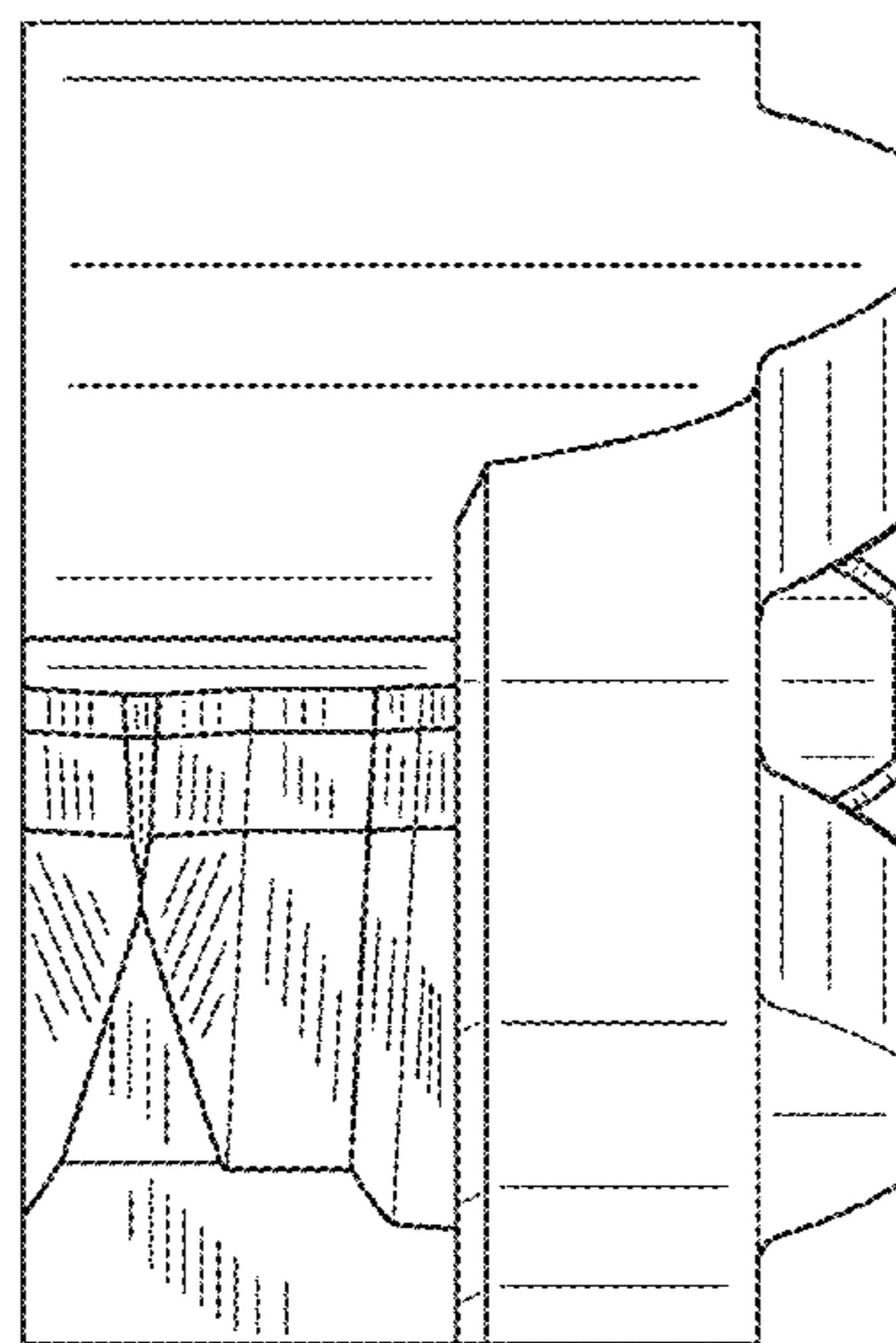


FIG. 31

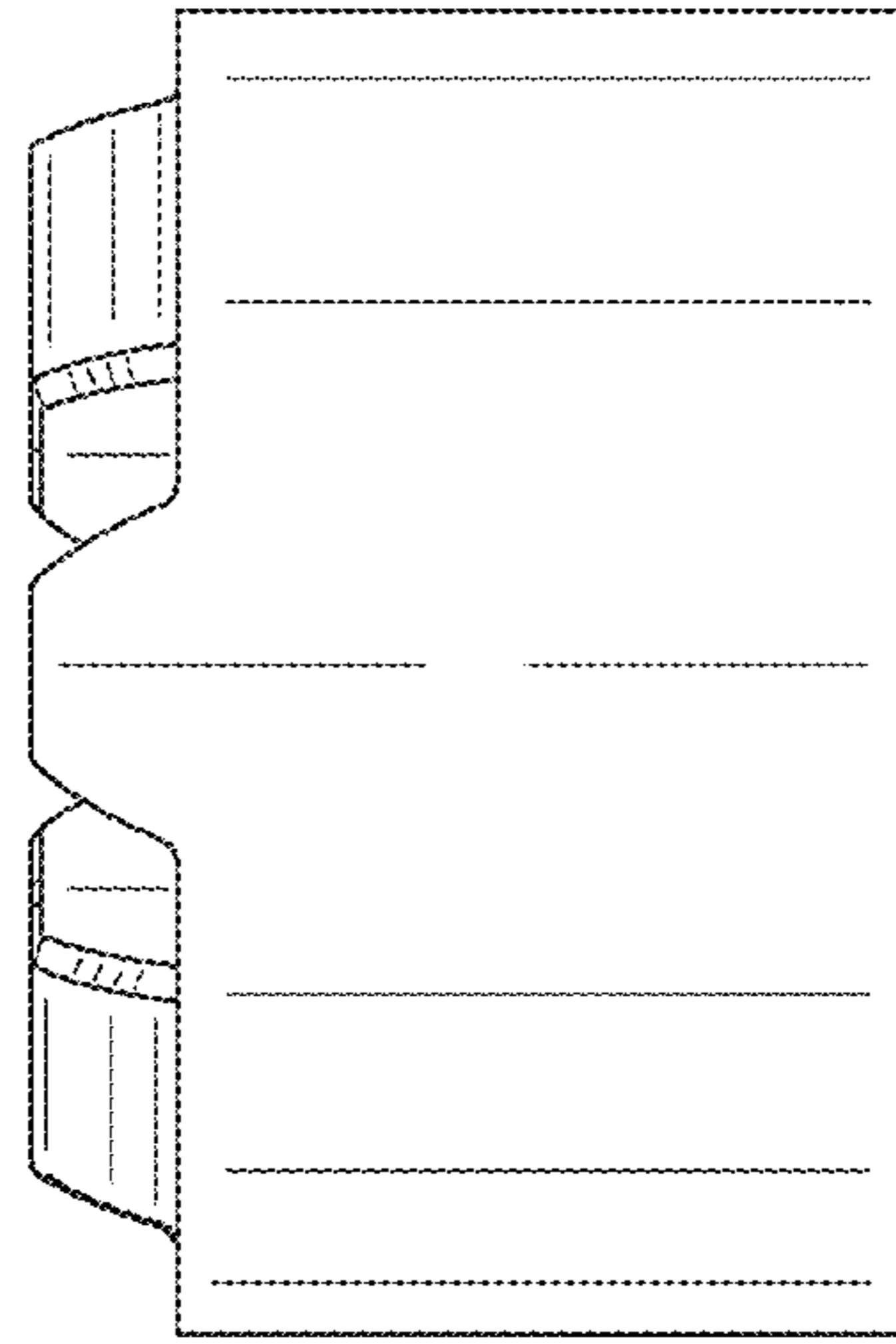


FIG. 32

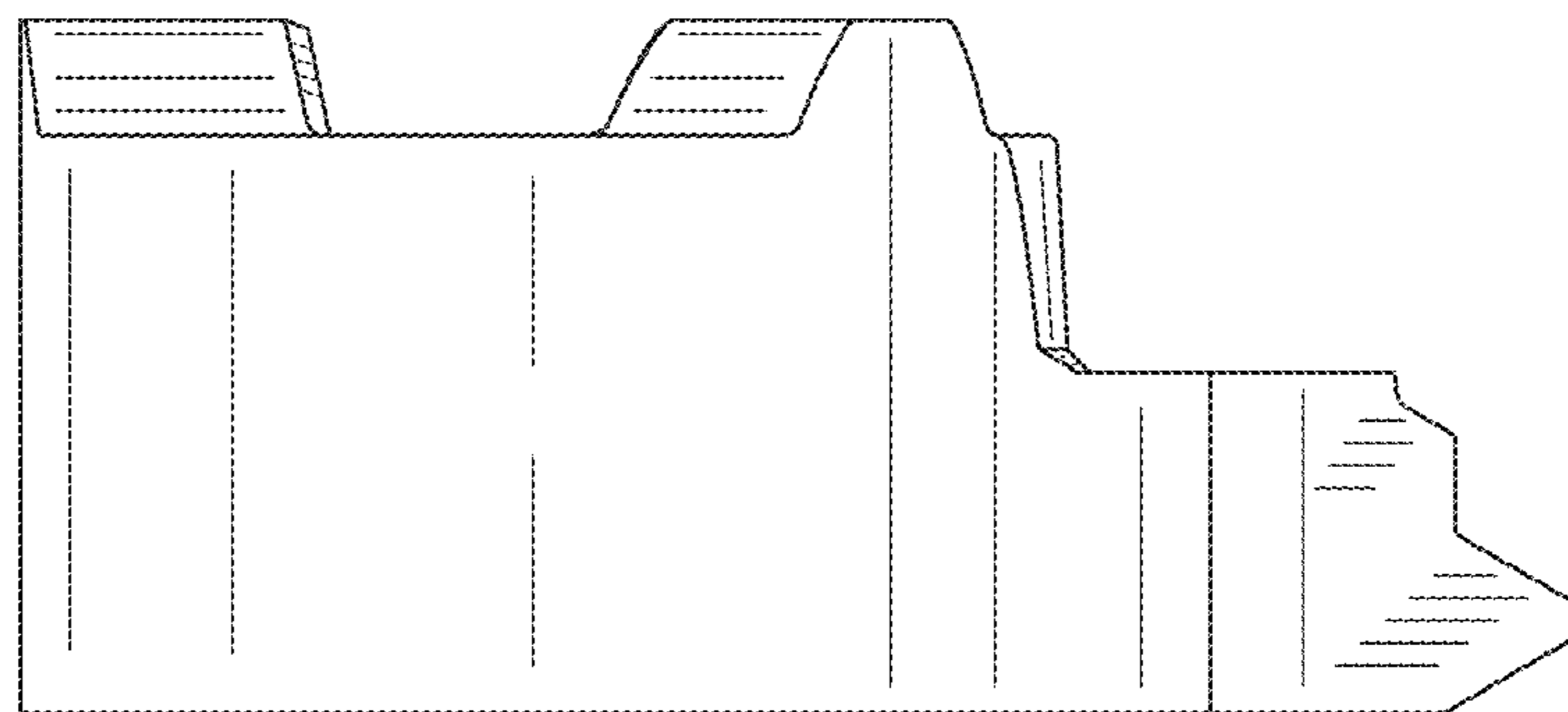


FIG. 33

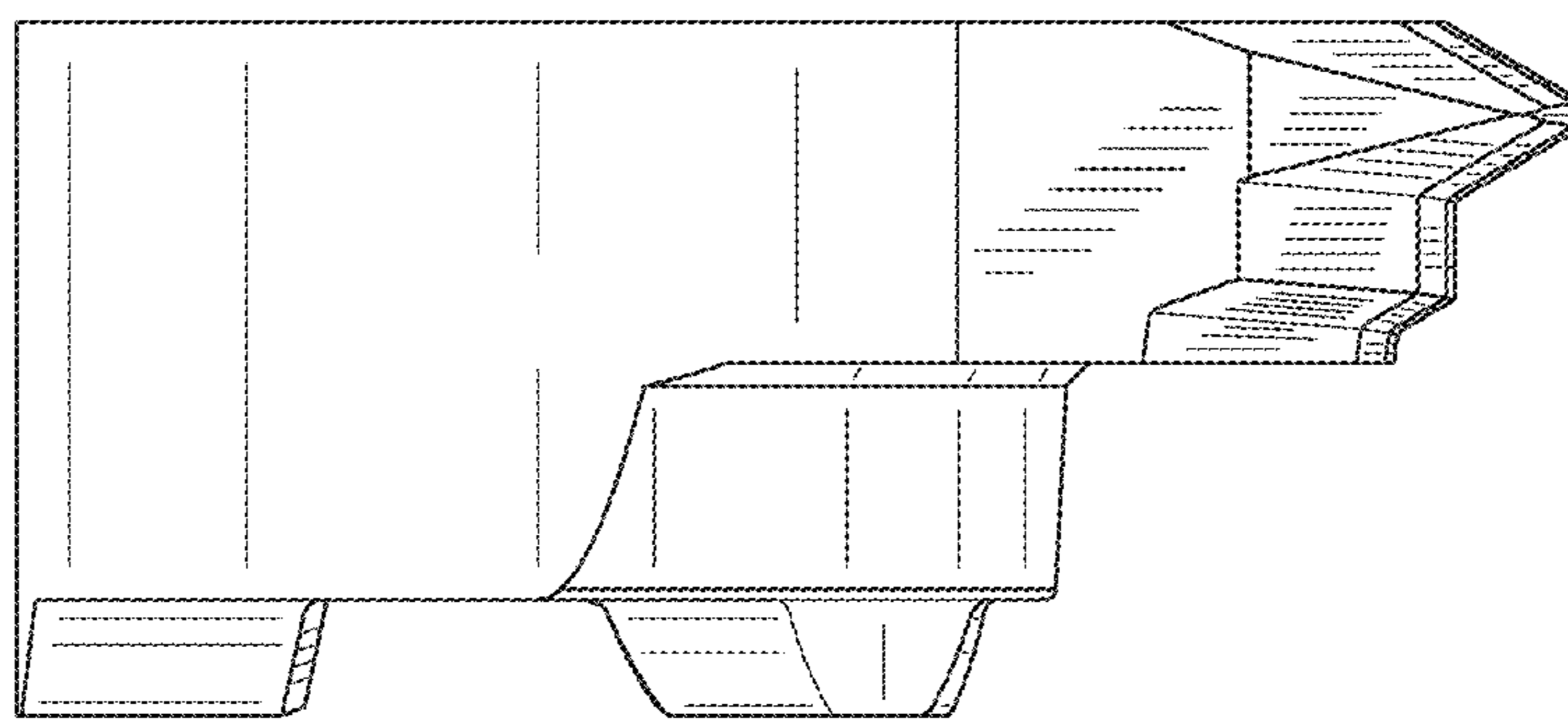


FIG. 34

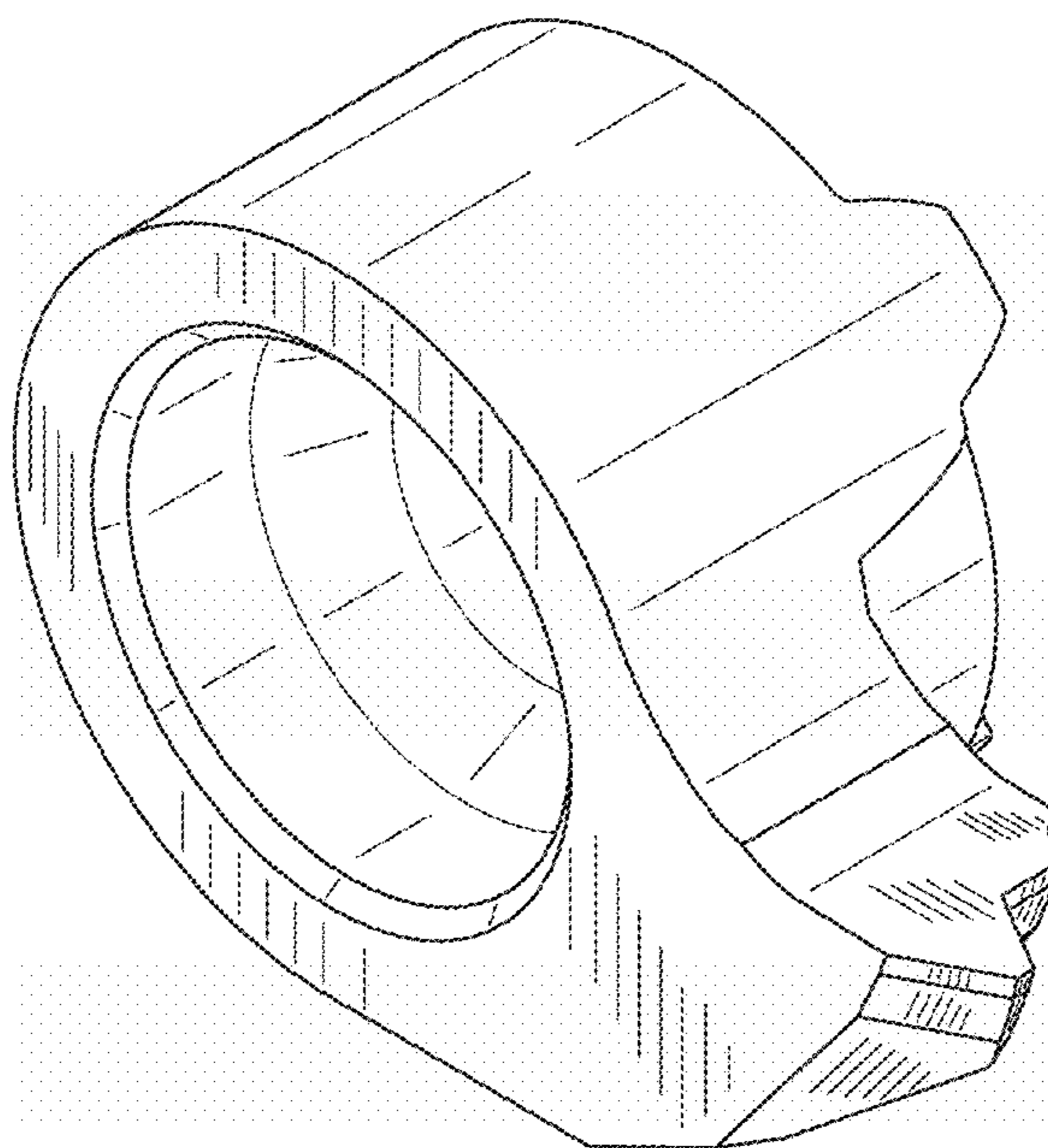


FIG. 35

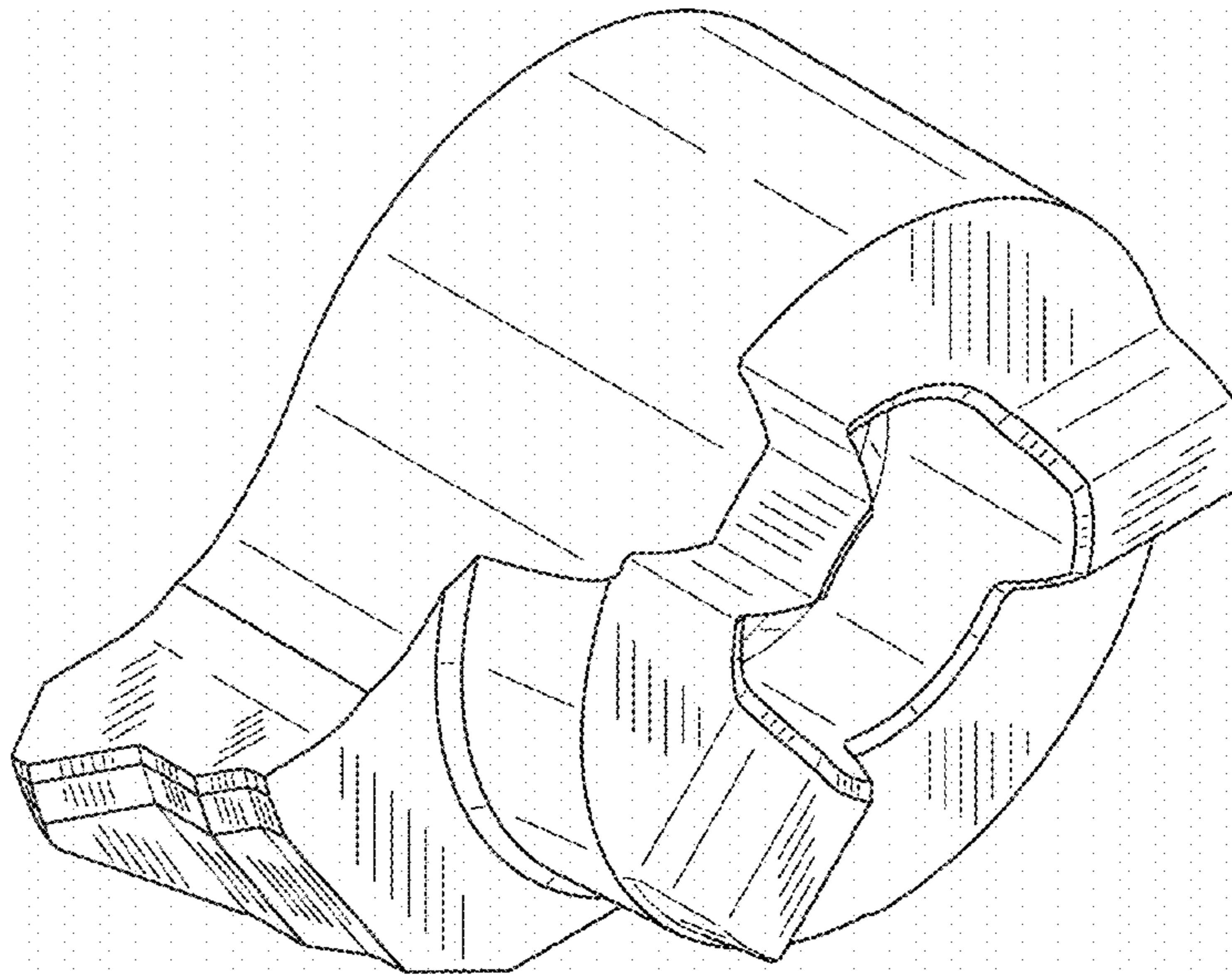


FIG. 36

