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

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(54) **SUCTION CUP**

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

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(51) **LOC (14) Cl.** **07-04**

(52) **U.S. Cl.**
USPC **D7/412**; D15/146

(58) **Field of Classification Search**
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D24/113, 170, 200, 215, 133, 138;
D7/368, 369, 386, 397, 401, 412, 601,
D7/605, 688, 689, 692

CPC A61B 5/0476; A61B 5/165; A61B 5/4836;
A61H 15/0078; B23K 9/133; B23K
9/287; B25J 9/0018; B25J 19/0025
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D79,356 S *	9/1929	Gilbert	.....	D7/412
D120,138 S *	4/1940	Poplawski	.....	D7/412
D359,294 S *	6/1995	Szabo	.....	D15/138
D359,295 S *	6/1995	Szabo	.....	D8/499
D359,970 S *	7/1995	Szabo	.....	D8/499
D366,051 S *	1/1996	Lewis	.....	D15/138
D396,993 S *	8/1998	Ruck	.....	D7/412
D403,203 S *	12/1998	Ruck	.....	D7/412
D520,137 S *	5/2006	Melendez	.....	D24/135
D548,250 S *	8/2007	Baumeister	.....	D15/138
D571,383 S *	6/2008	Ota	.....	D15/138
D571,831 S *	6/2008	Ota	.....	D15/138
D571,832 S *	6/2008	Ota	.....	D15/138
D571,833 S *	6/2008	Ota	.....	D15/138

D576,837 S *	9/2008	Le Vavasseeur	.....	D7/378
D600,498 S *	9/2009	Ma	.....	D7/400
D612,939 S *	3/2010	Boone, III	.....	D24/133
D645,306 S *	9/2011	Lownds	.....	D7/412
D651,860 S *	1/2012	Nie	.....	D7/629

(Continued)

OTHER PUBLICATIONS

“Robot Suction cups SofTouch for handling of patties, pancakes, frozen vegetables” [online]. Gripwiiq Experts in Soft Vacuum Grippers for food. [Published on Apr. 12, 2021]. Retrieved from the Internet: <<https://www.youtube.com/watch?v=118tpp3M0Yg>>.*

(Continued)

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(57) **CLAIM**

The ornamental design for a suction cup, as shown and described.

DESCRIPTION

FIG. 1 is a front, left, bottom perspective view of a suction cup showing our new design;

FIG. 2 is a rear, right, top perspective view of the suction cup shown in FIG. 1;

FIG. 3 is a bottom plan view of the suction cup shown in FIG. 1;

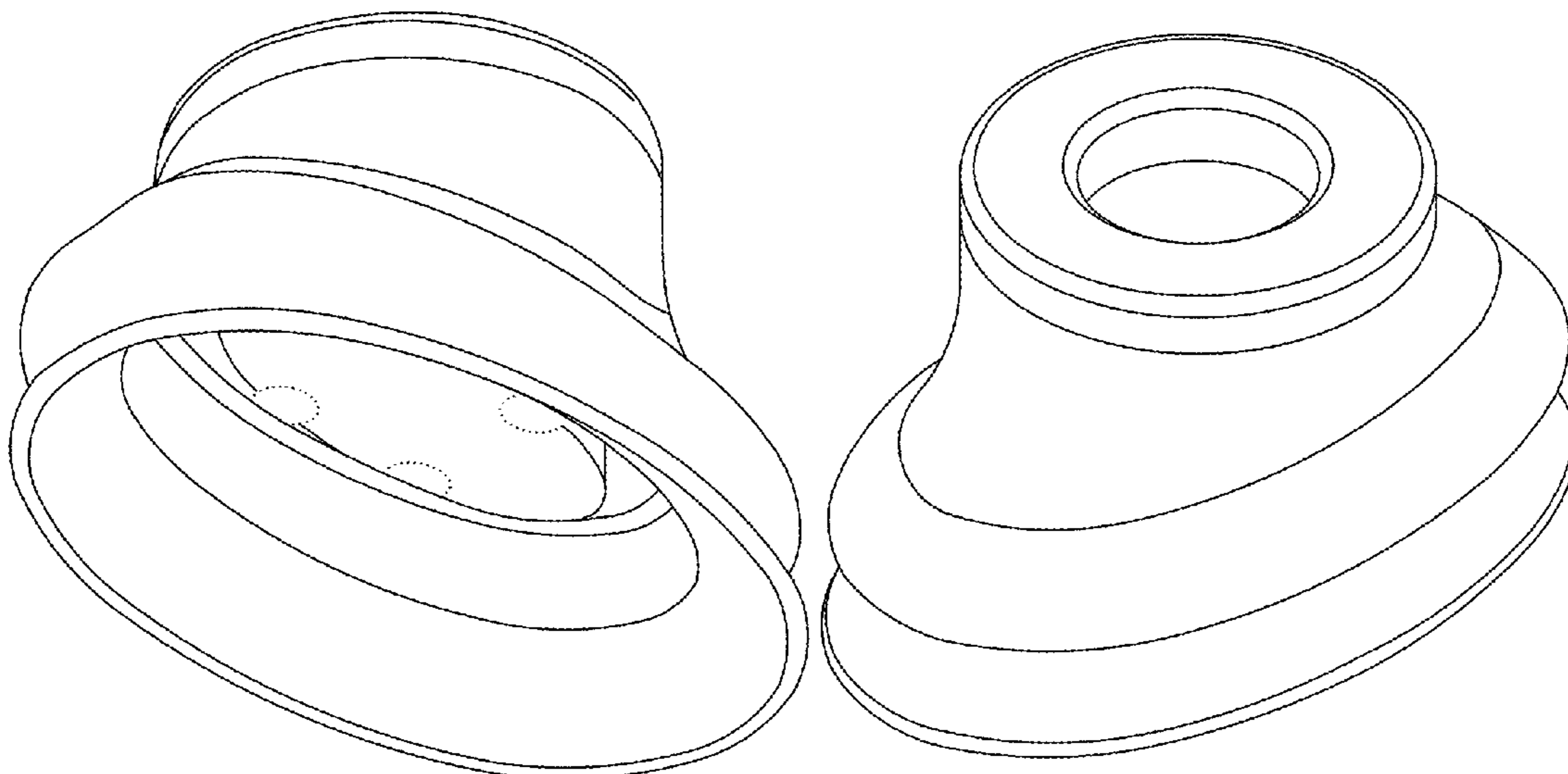
FIG. 4 is a top plan view of the suction cup shown in FIG. 1; and,

FIG. 5 is a left side elevational view of the suction cup shown in FIG. 1, the right side elevational view of which is a mirror image.

Portions of the article not shown in the drawing, if any, form no part of the claimed design.

The broken lines in the drawings depict unclaimed portions of the suction cup only, and form no part of the claimed design.

1 Claim, 3 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D660,076 S * 5/2012 Schramm D7/368
D670,958 S * 11/2012 Picozza D7/378
D707,488 S * 6/2014 Cornu D7/378
D726,316 S * 4/2015 Marquez D24/146
D747,923 S * 1/2016 Cornu D7/378
D752,380 S * 3/2016 Kemker D7/378
D753,949 S * 4/2016 Potter D7/378
D761,616 S * 7/2016 Picozza D7/378
D766,654 S * 9/2016 Forti D7/397
D816,836 S * 5/2018 Mueller D24/133
D823,051 S * 7/2018 Sharma D9/503
D836,394 S * 12/2018 Blofeld D7/378
D874,223 S * 2/2020 Saubert D7/412
D929,799 S * 9/2021 Walter D7/412
D931,452 S * 9/2021 Baba D24/138
D932,006 S * 9/2021 Nicholas D24/113
D946,350 S * 3/2022 Minard D7/412
D946,970 S * 3/2022 Minard D7/412

OTHER PUBLICATIONS

“Vacuum Grippers for the food processing and packaging industry”
[online]. Gripwiq. [Retrieved on Jun. 11, 2022]. Retrieved from the
Internet: <<https://gripwiq.com/cases/>>.*

* cited by examiner

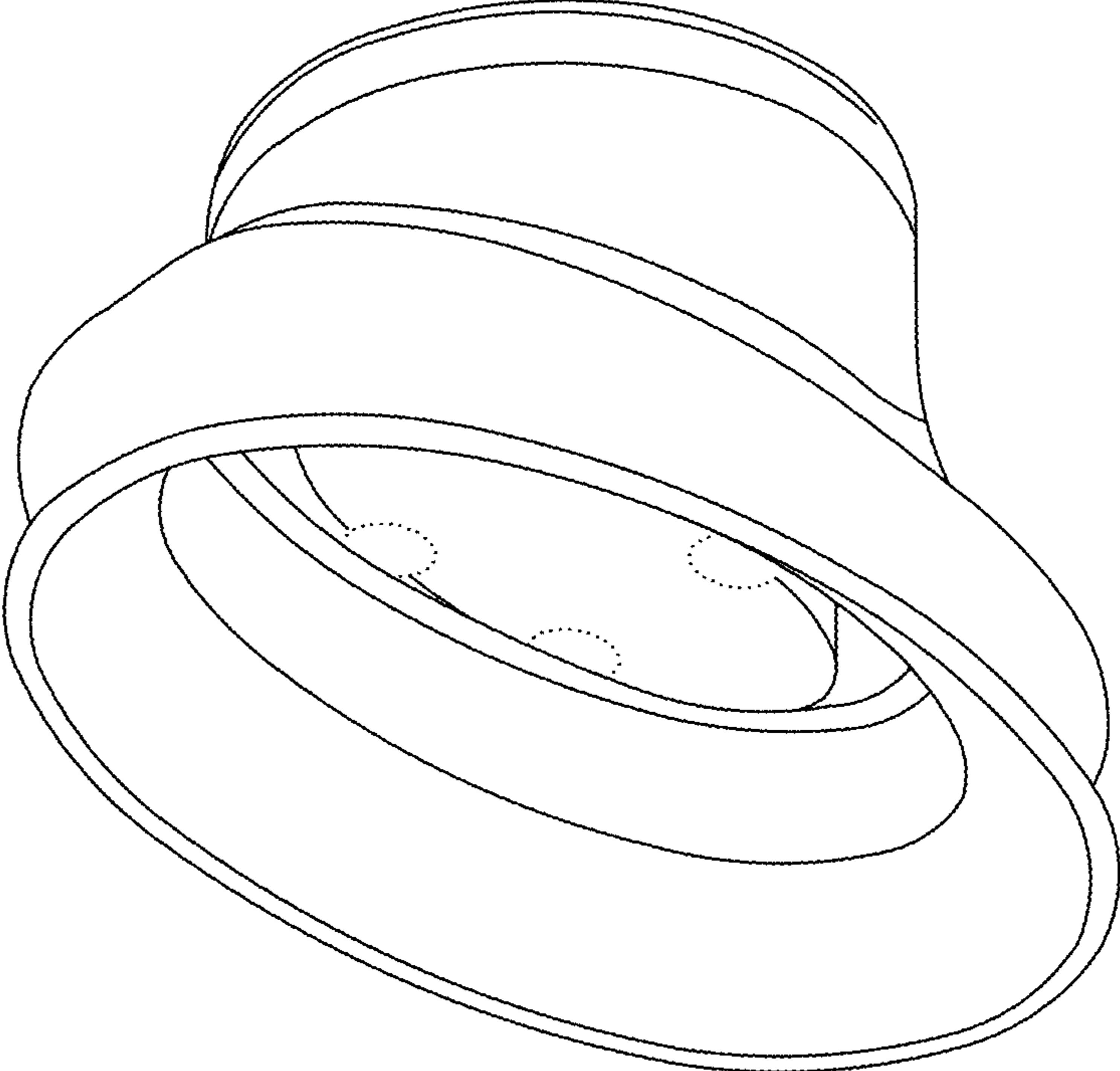


FIG. 1

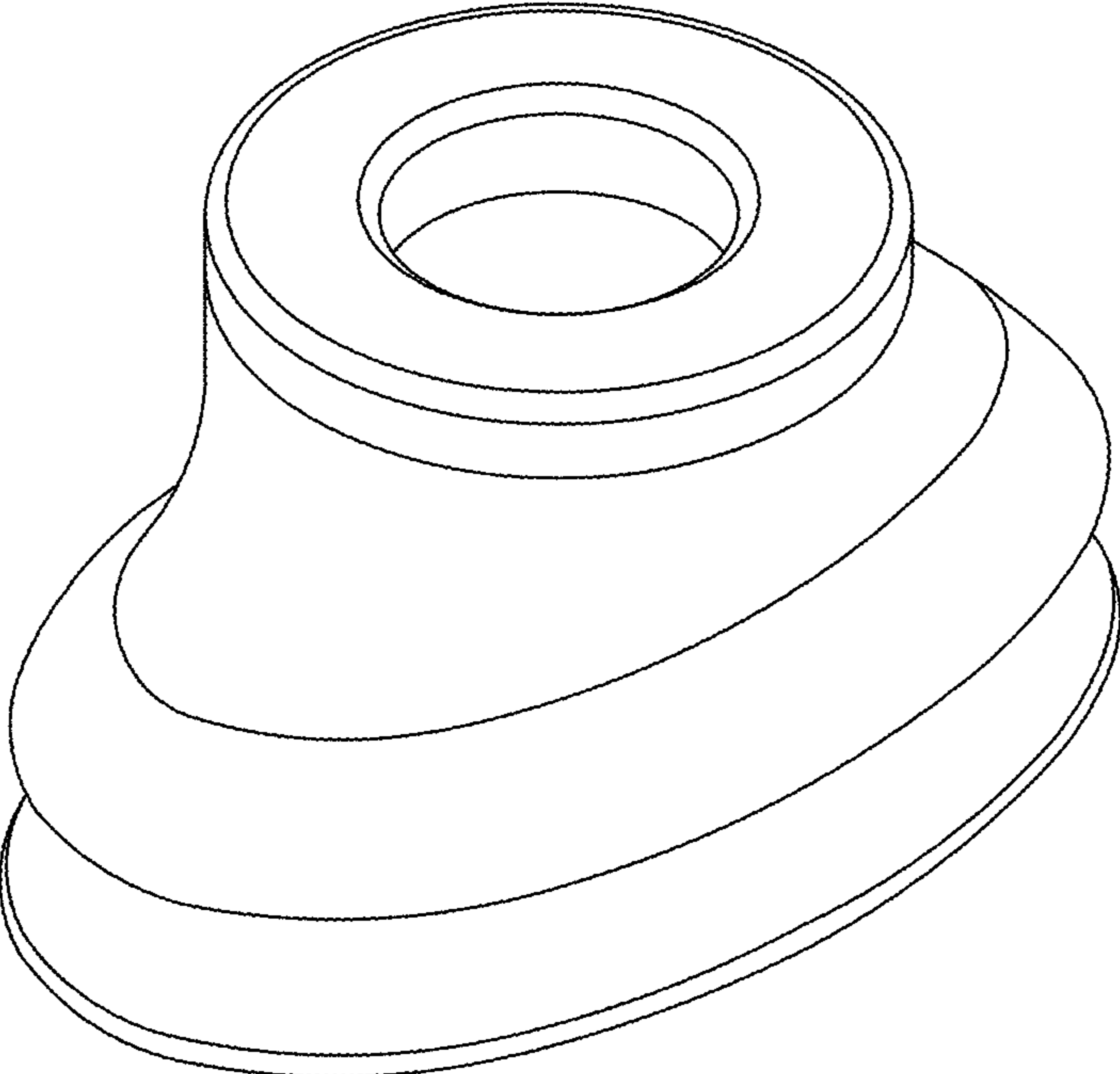


FIG. 2

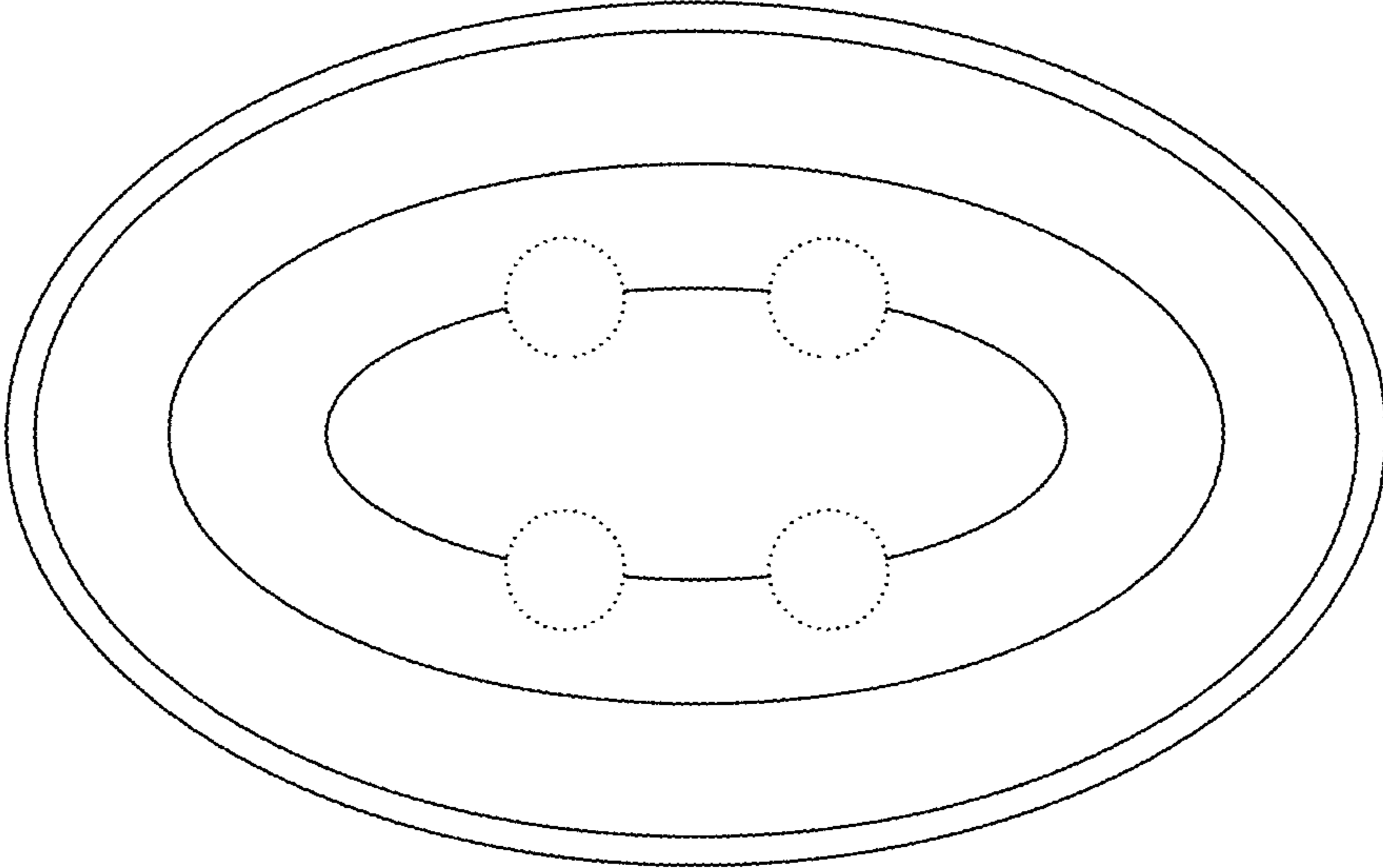


FIG. 3

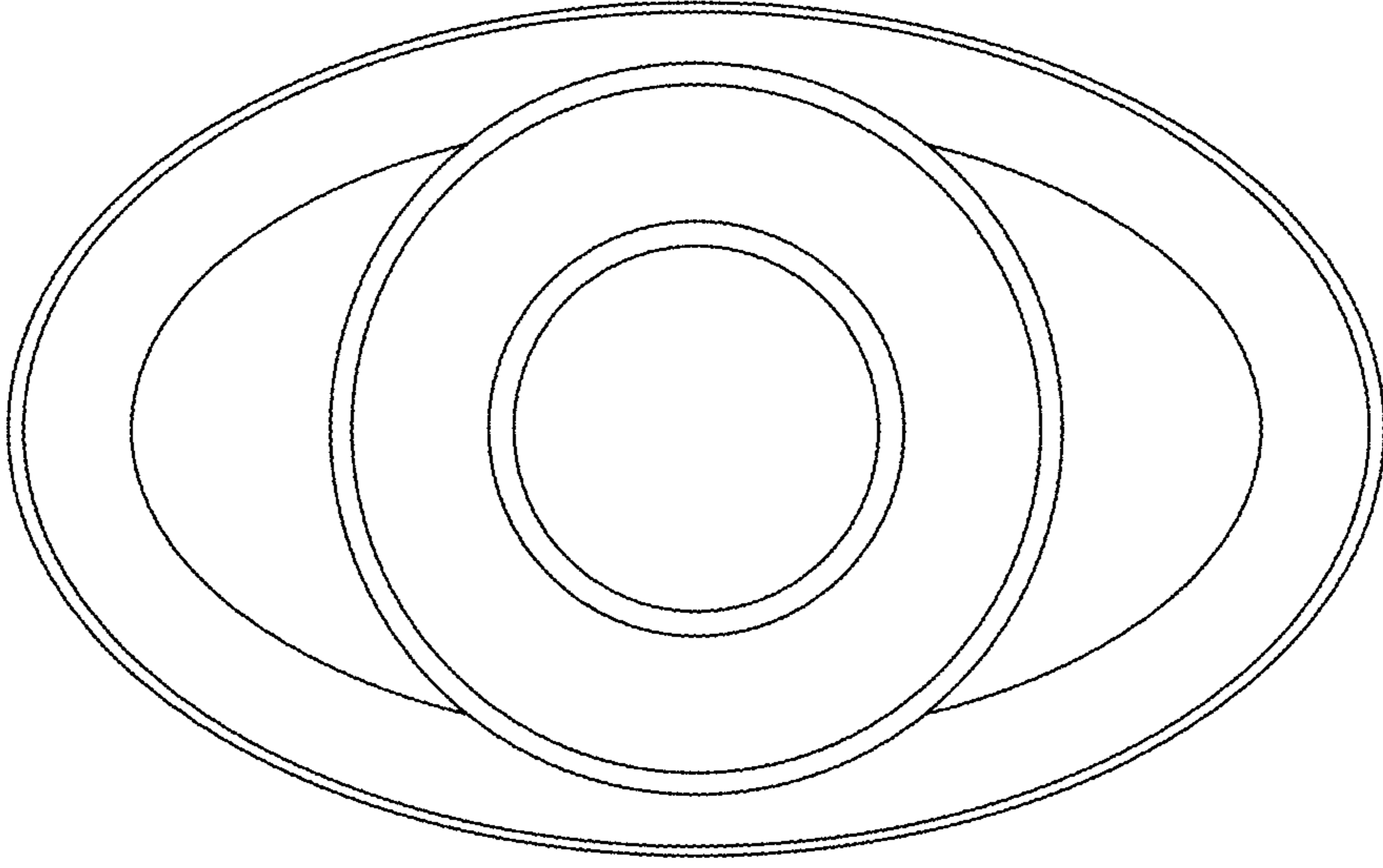


FIG. 4

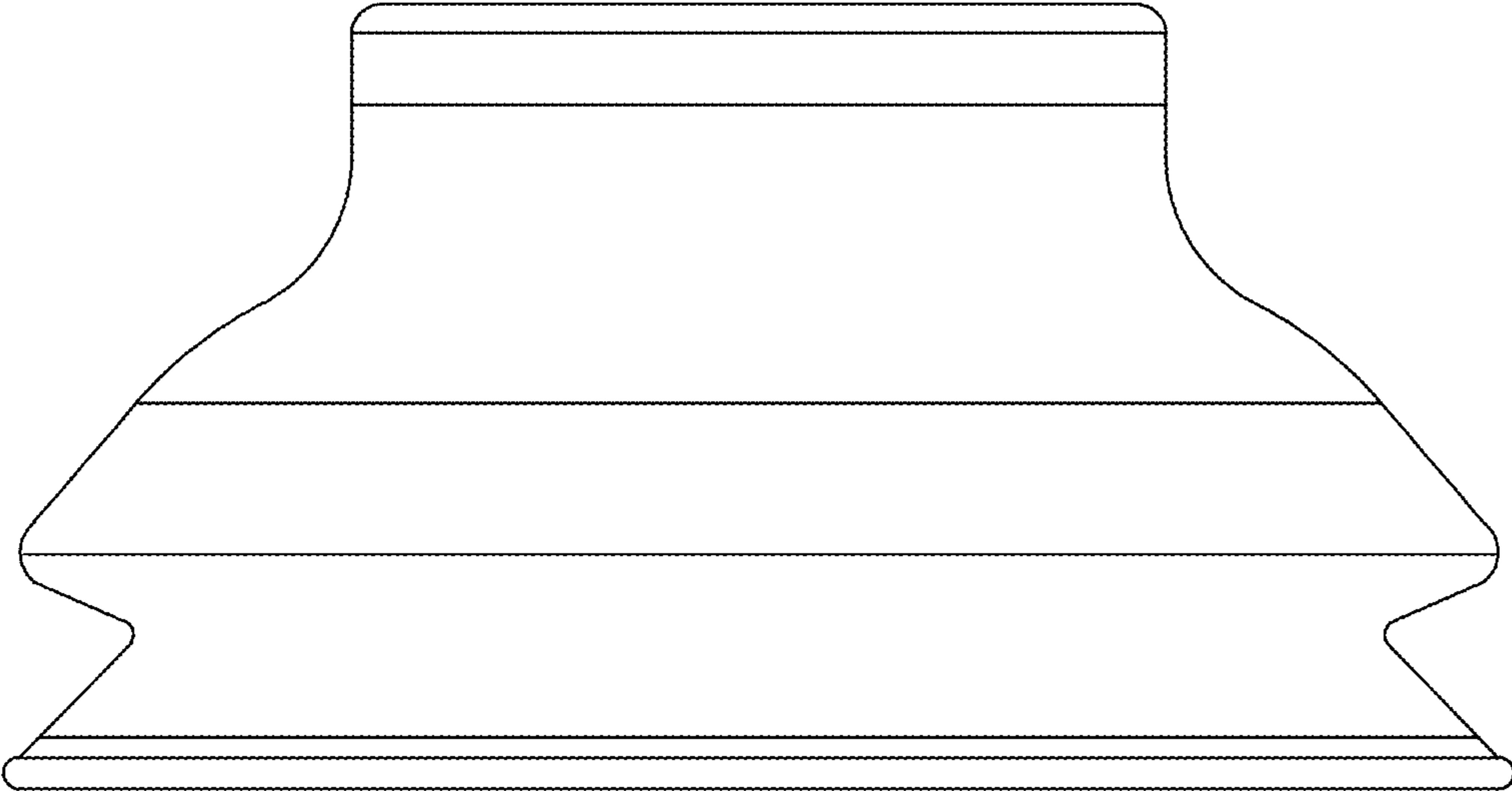


FIG. 5