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(12) **United States Design Patent** (10) **Patent No.:** **US D861,044 S**  
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(54) **CAST CROSS TUBE FOR PRODUCTION CLASS LOADER BOOM**

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(52) **U.S. Cl.**  
USPC ..... **D15/28**

(58) **Field of Classification Search**  
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CPC ..... B66F 9/065; E02F 3/34; E02F 3/38; E02F 3/28; E02F 3/369; E02F 3/627; Y10T 403/7077; Y10T 403/133  
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

- 4,260,322 A \* 4/1981 Cameron ..... E02F 3/36  
212/261
- 4,439,089 A \* 3/1984 Anderson ..... E02F 3/80  
212/261
- 4,798,512 A \* 1/1989 Intveld ..... E02F 3/3411  
414/697
- 4,904,151 A \* 2/1990 Biemans ..... E02F 3/34  
172/817
- 5,611,657 A \* 3/1997 Peterson ..... E02F 3/38  
414/686

- D412,913 S \* 8/1999 Sasaki ..... D15/28
- 6,106,217 A \* 8/2000 Knell ..... B66F 9/065  
414/722
- D449,055 S \* 10/2001 Guiet ..... D15/28
- D645,884 S \* 9/2011 Attwood ..... D15/21
- D646,302 S \* 10/2011 Lanting ..... D15/28
- D646,303 S \* 10/2011 Lanting ..... D15/28
- D646,306 S \* 10/2011 Bradley ..... D15/28
- D649,171 S \* 11/2011 Barba ..... D15/28
- D654,514 S \* 2/2012 Jamieson ..... D15/28
- D665,826 S \* 8/2012 Clarke ..... D15/28
- D672,371 S \* 12/2012 Nakamura ..... D15/28
- D672,791 S \* 12/2012 Nakamura ..... D15/28
- D746,877 S \* 1/2016 Bradley ..... D15/28
- D760,811 S \* 7/2016 Uchijima ..... D15/28
- D769,333 S \* 10/2016 Knobloch ..... D15/28
- D812,111 S \* 3/2018 Sivinski ..... D15/28
- D850,494 S \* 6/2019 Tatsumi ..... D15/28
- 2003/0079379 A1 \* 5/2003 Bares ..... E02F 3/34  
37/405

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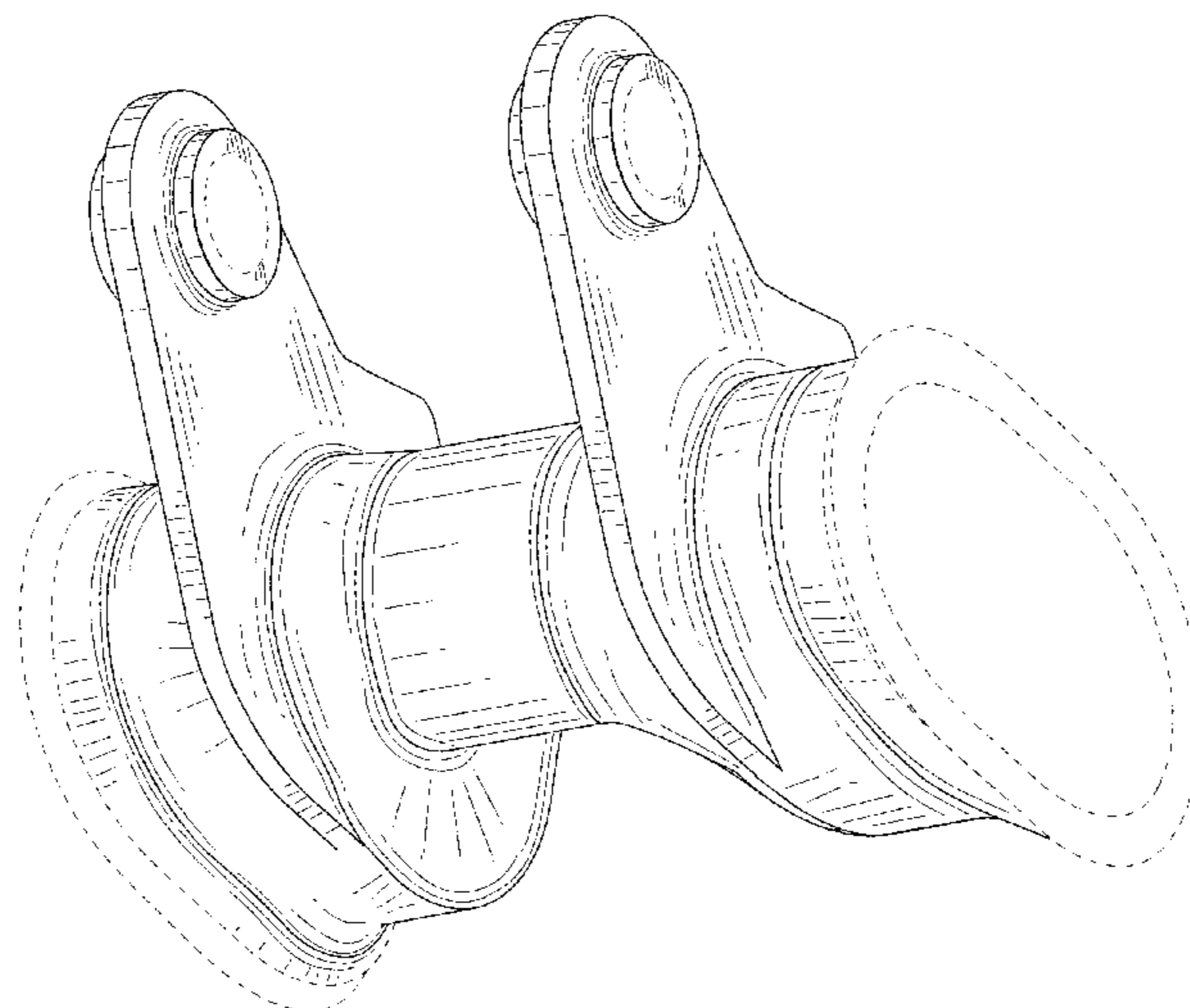
(57) **CLAIM**

The ornamental design for a cast cross tube for production class loader boom, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of a cast cross tube for production class loader boom showing our new design. FIG. 2 is a left side view thereof. FIG. 3 is a right side view thereof. FIG. 4 is a front view thereof. FIG. 5 is a rear view thereof. FIG. 6 is a top view thereof; and, FIG. 7 is a bottom view thereof. The broken line representations of environmental structure in FIGS. 1-7 is for illustrative purposes only and forms no part of the claimed design.

**1 Claim, 7 Drawing Sheets**



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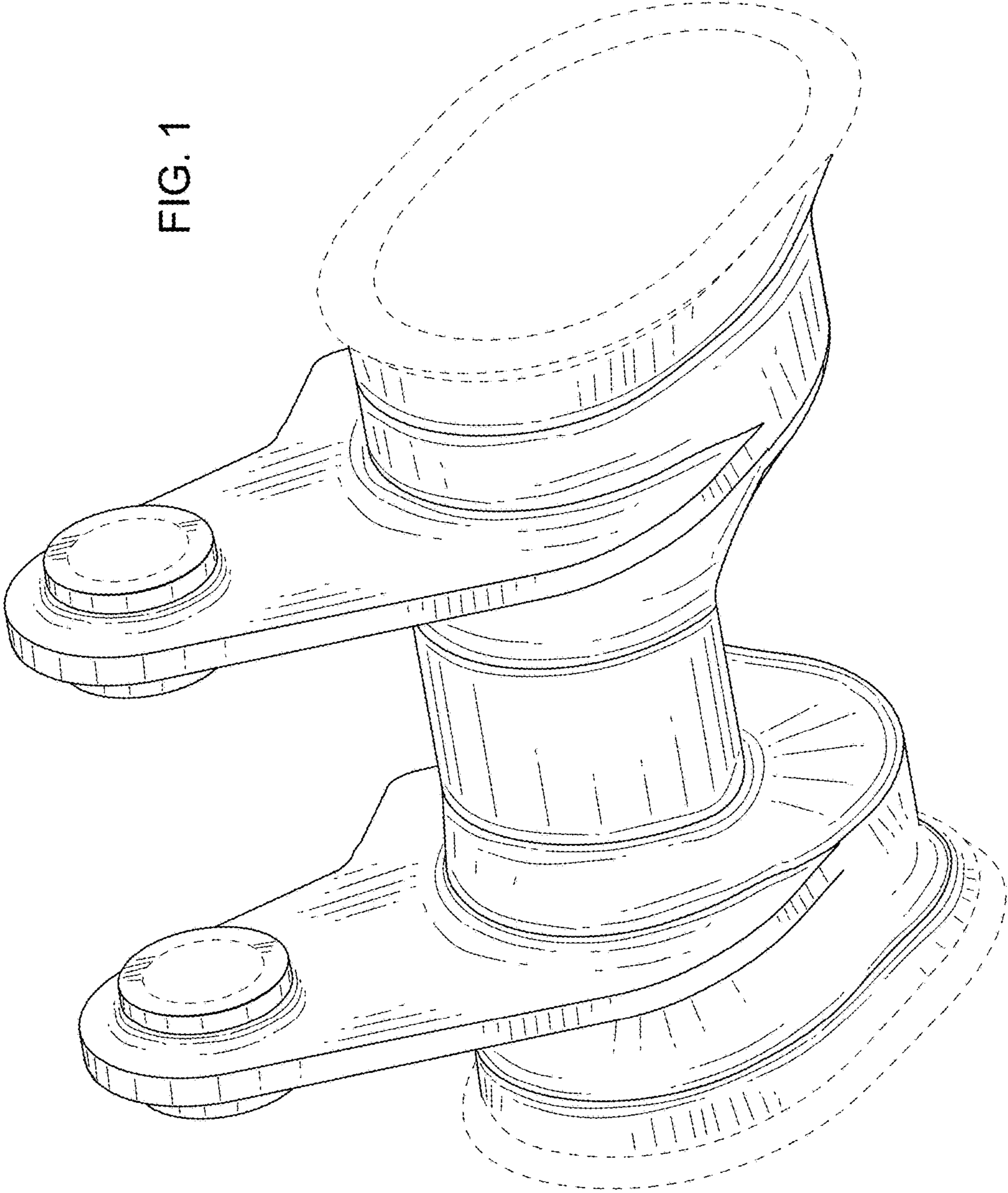
**References Cited**

U.S. PATENT DOCUMENTS

2004/0170472 A1\* 9/2004 Anderson ..... A01B 49/06  
403/355  
2010/0119344 A1\* 5/2010 Nabata ..... E02F 3/38  
414/722  
2010/0303541 A1\* 12/2010 Okumura ..... E02F 3/30  
403/306  
2013/0058748 A1\* 3/2013 Springer ..... E02F 3/38  
414/722  
2013/0177375 A1\* 7/2013 Crane ..... E02F 3/382  
414/722  
2017/0350090 A1\* 12/2017 Claesson ..... A01B 59/06

\* cited by examiner

FIG. 1



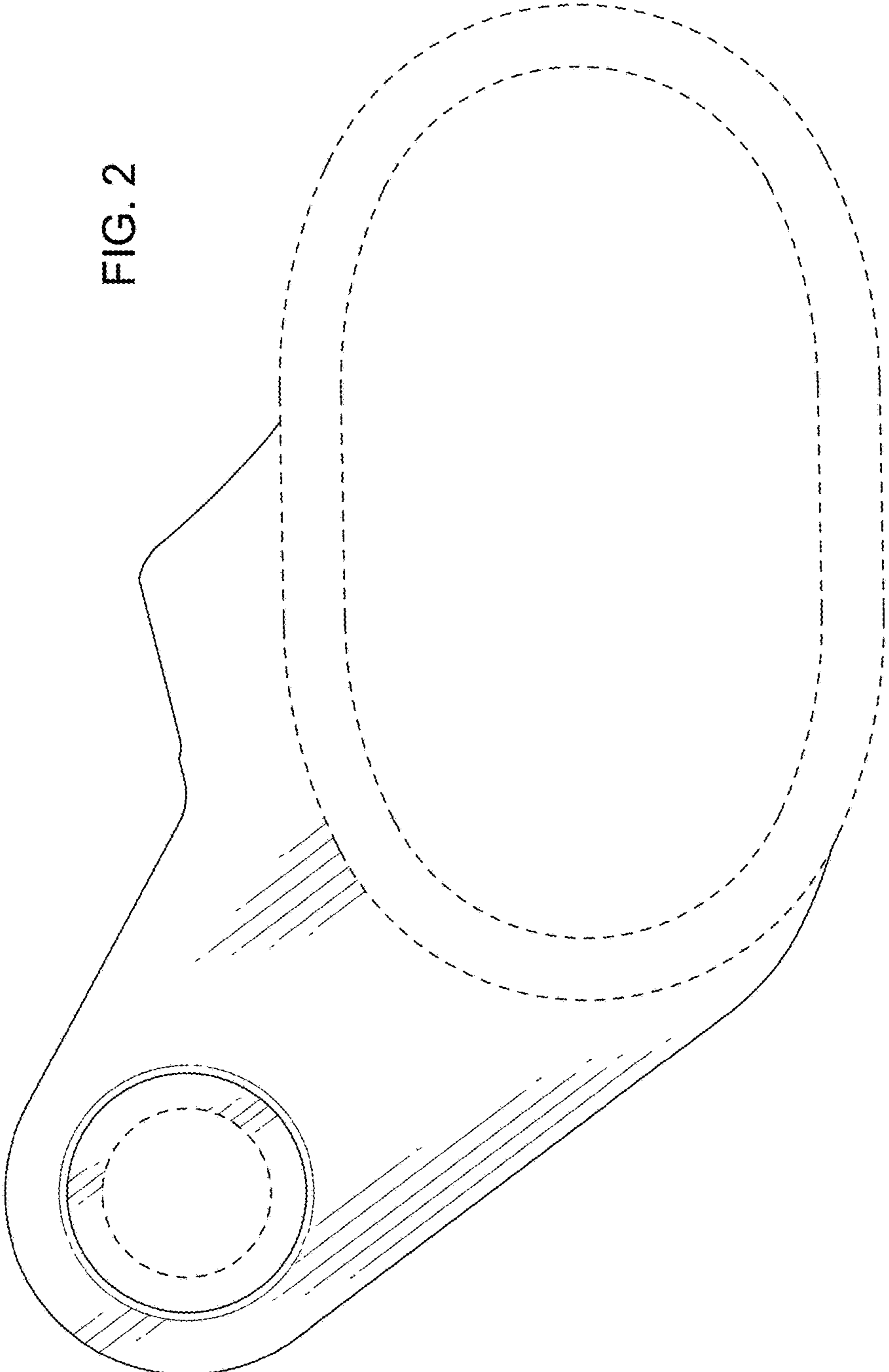


FIG. 2

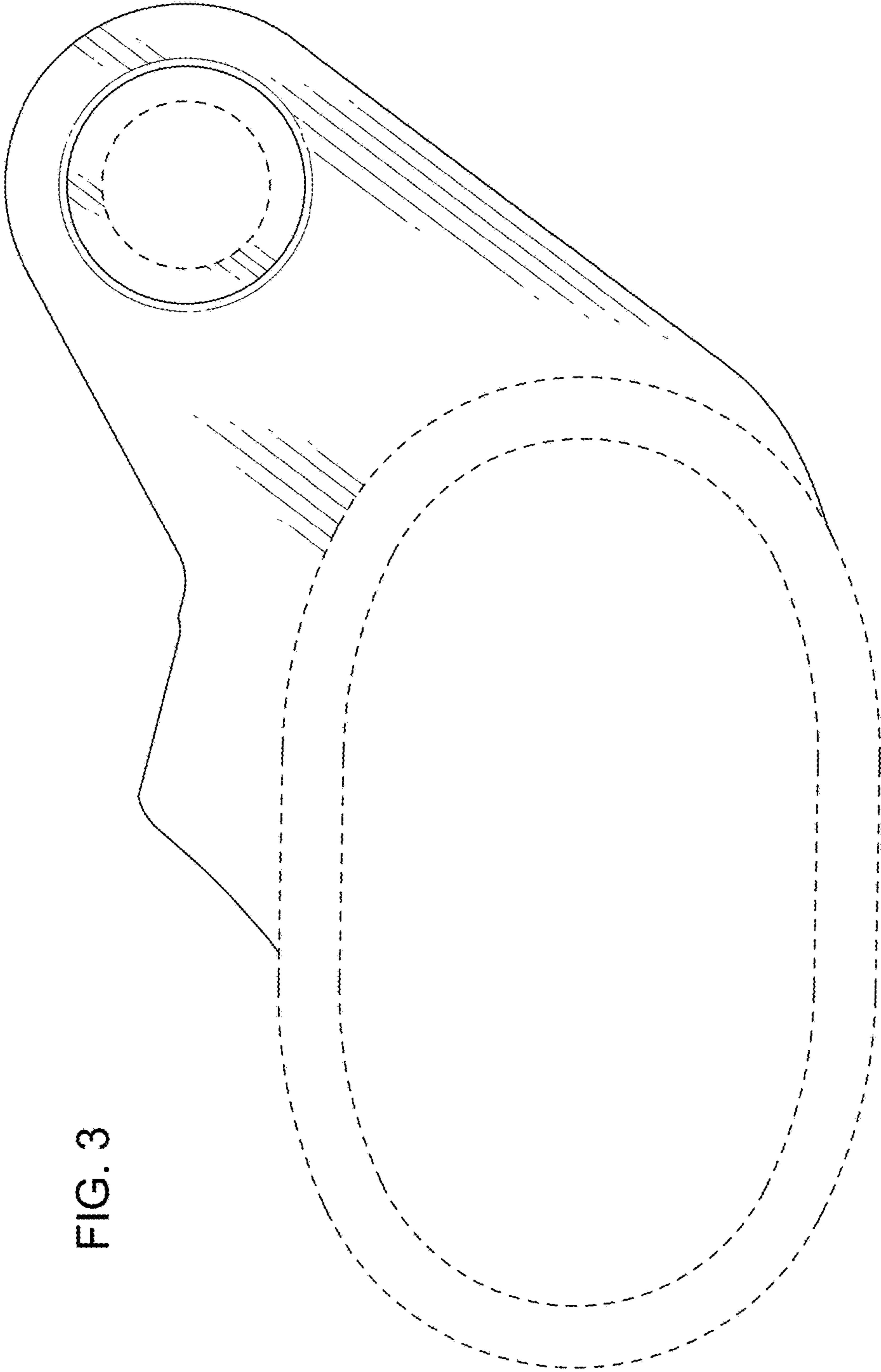


FIG. 3

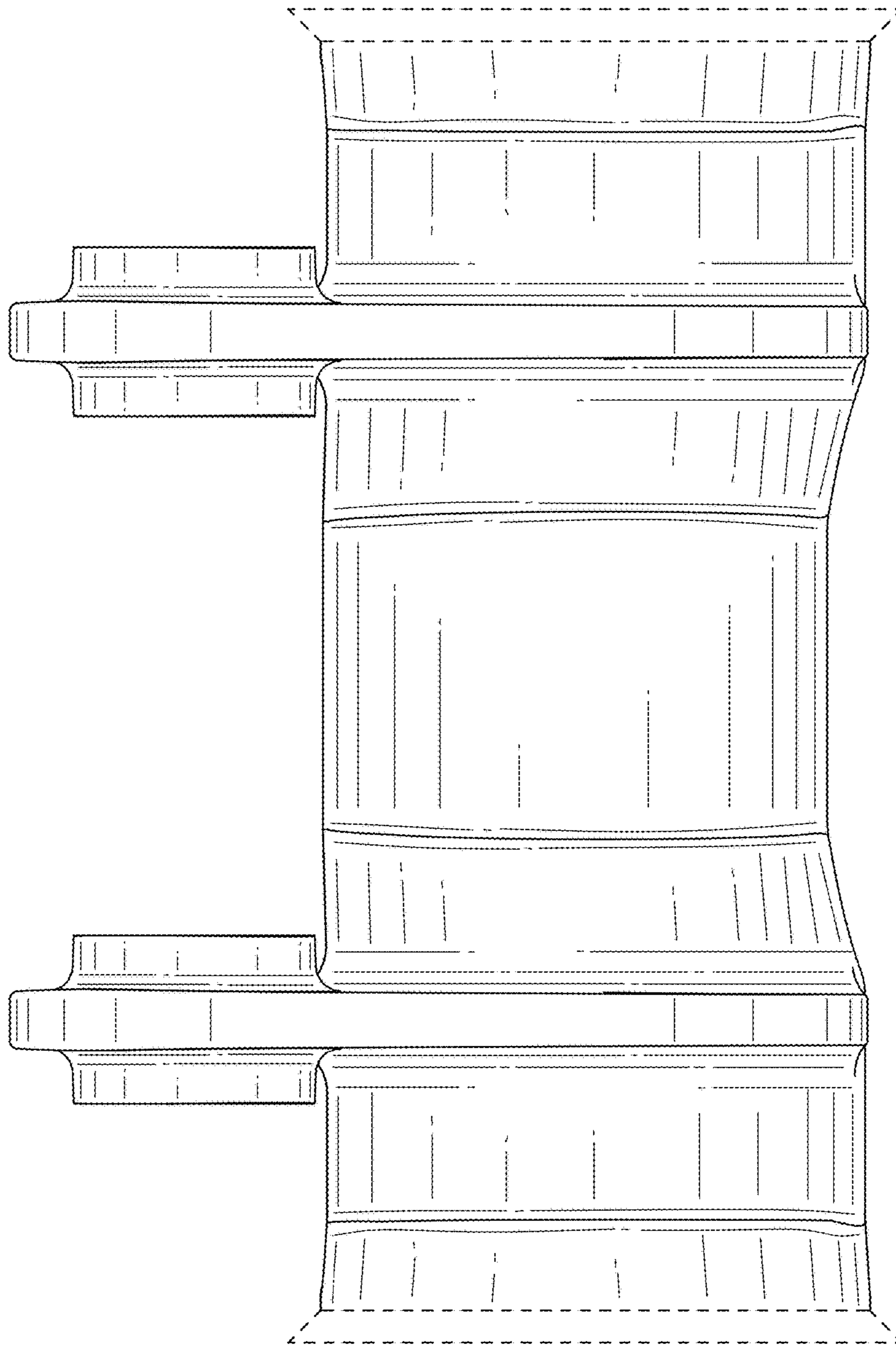


FIG. 4

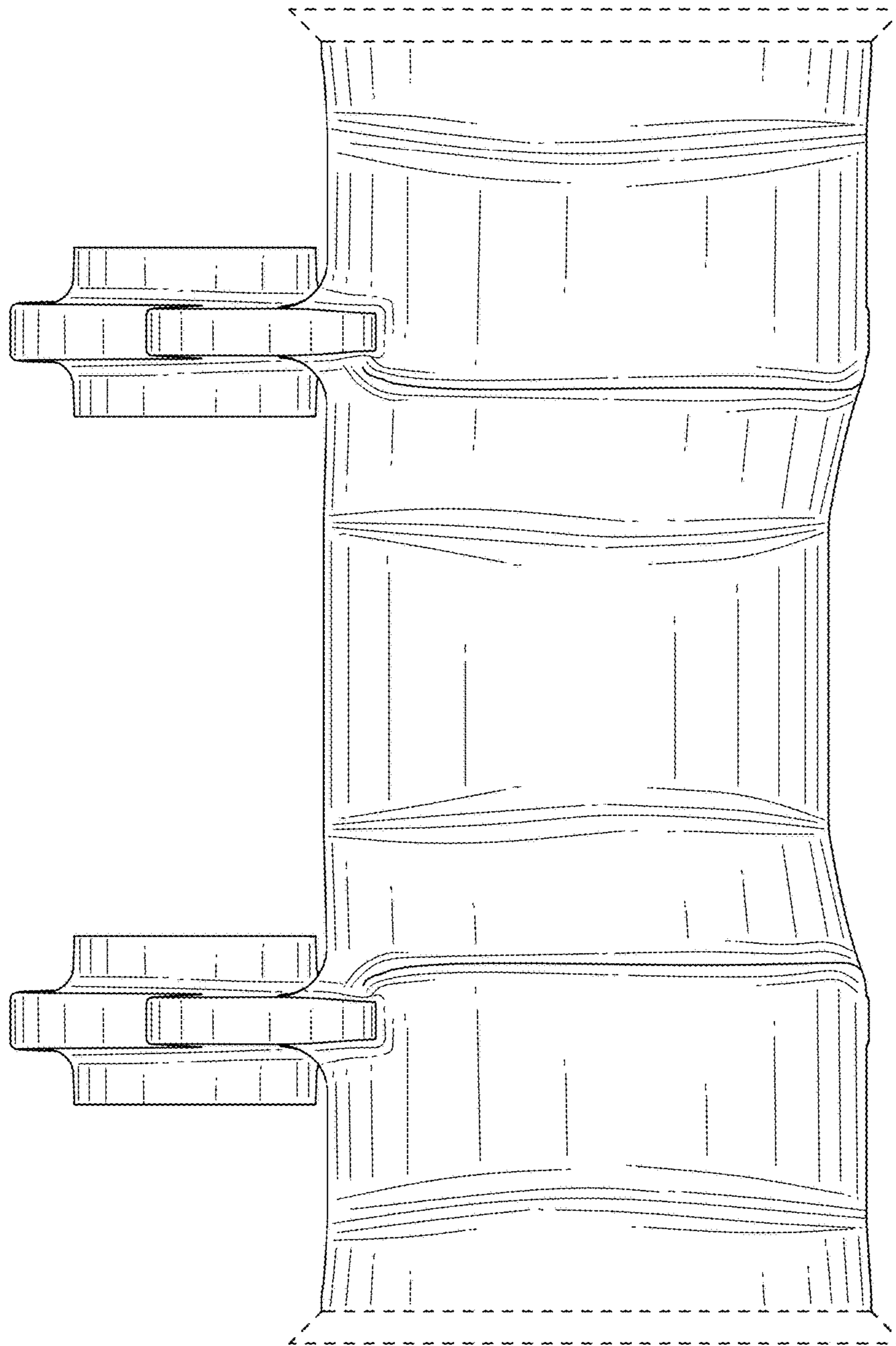


FIG. 5

FIG. 6

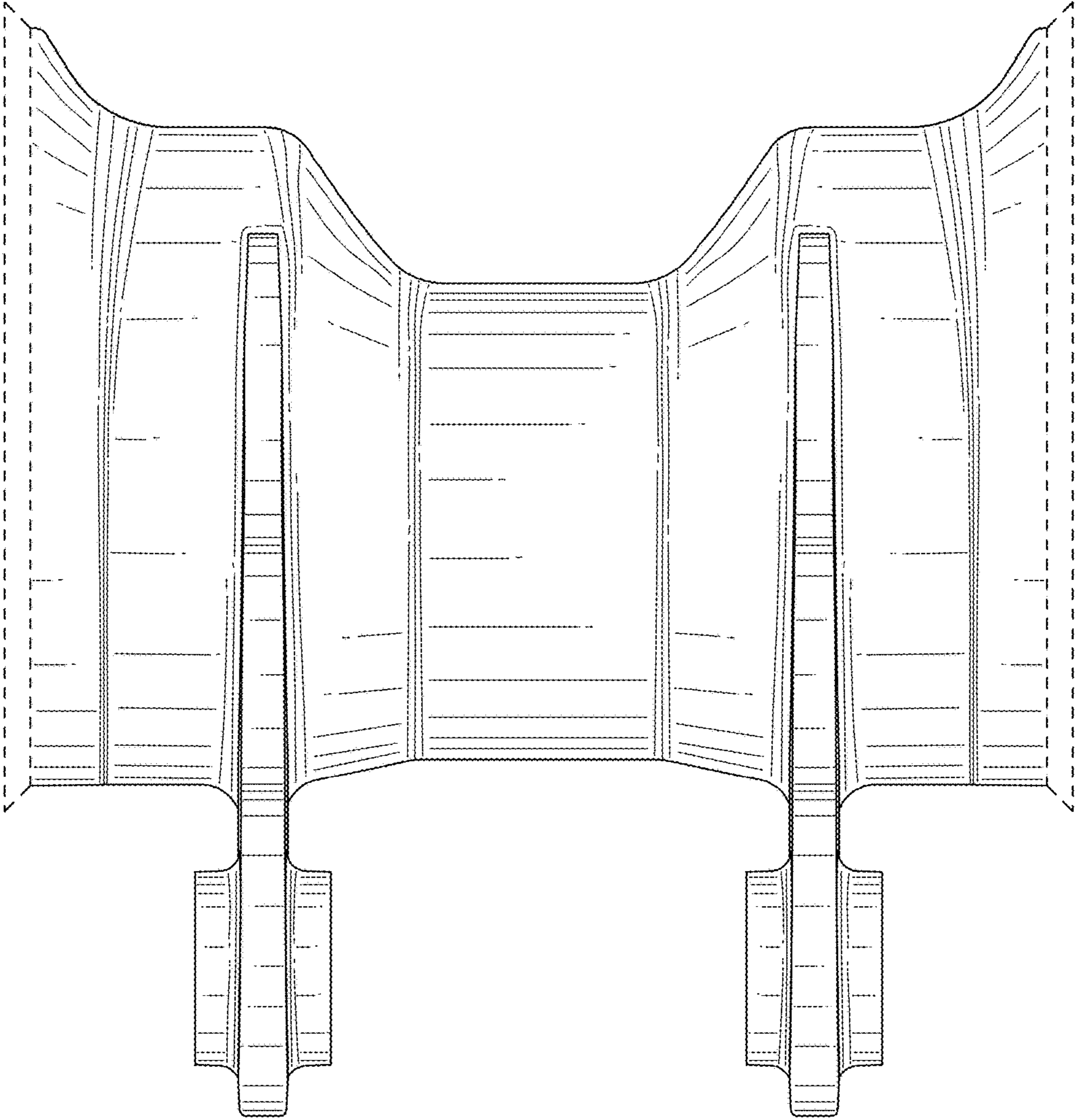




FIG. 7

