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(12) **United States Design Patent** (10) **Patent No.:** **US D847,348 S**  
**Wigal** (45) **Date of Patent:** **\*\* \*Apr. 30, 2019**

(54) **ORTHODONTIC ELASTOMERIC LIGATURE TIE**

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(\*) Notice: This patent is subject to a terminal disclaimer.

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

(21) Appl. No.: **29/629,957**

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**Related U.S. Application Data**

(63) Continuation-in-part of application No. 29/574,546, filed on Aug. 16, 2016, now Pat. No. Des. 809,145, which is a continuation-in-part of application No. 15/060,310, filed on Mar. 3, 2016, now Pat. No. 10,034,724.

(51) **LOC (11) Cl.** ..... **24-02**

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

(58) **Field of Classification Search**  
USPC ..... D24/176-182; D21/386; D1/112; D11/56, 103  
CPC ..... A61C 7/125; A61C 7/303; A61C 7/30; A61C 7/306; A61C 7/12; A61C 7/00; A61C 7/14; A61C 7/16; A44C 15/007  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

4,687,441 A \* 8/1987 Klepacki ..... A61C 7/125  
433/8  
5,829,974 A \* 11/1998 Brosius ..... A61C 7/303  
433/15

D412,363 S \* 7/1999 Stevens ..... D24/180  
D412,988 S \* 8/1999 Stevens ..... D24/180  
D447,804 S \* 9/2001 Stevens ..... D24/180  
7,204,691 B2 \* 4/2007 Darling ..... A61C 7/303  
433/11  
7,306,458 B1 \* 12/2007 Lu ..... A61C 7/14  
433/16  
D607,568 S \* 1/2010 Stevens ..... D24/180  
D766,444 S \* 9/2016 Stevens ..... D24/180  
2017/0000587 A1 \* 1/2017 Wigal ..... A61C 7/125  
2017/0086944 A1 \* 3/2017 Hulwi ..... A61C 7/125

\* cited by examiner

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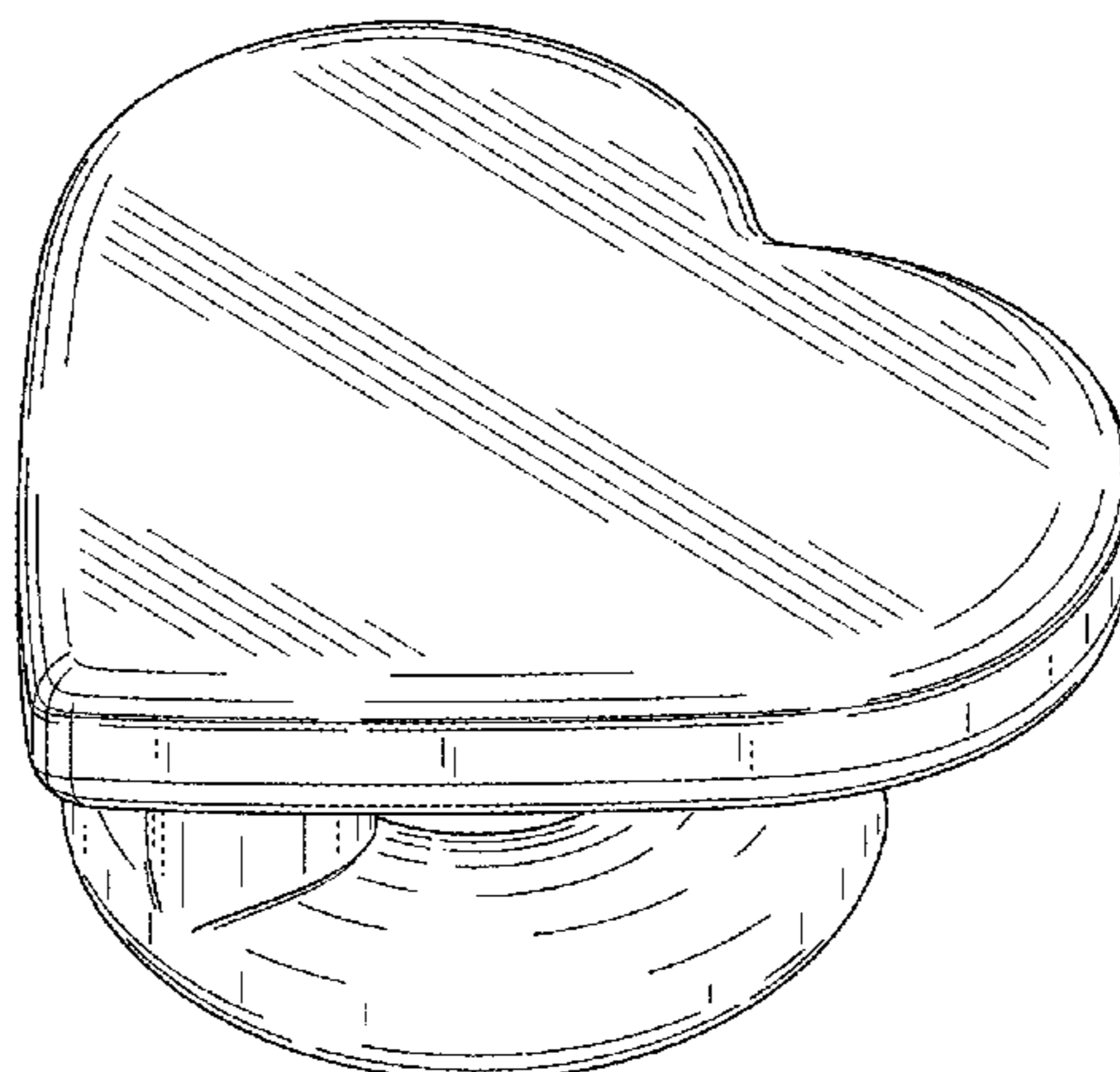
(57) **CLAIM**

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

**DESCRIPTION**

FIG. 1 is a front perspective view of an orthodontic elastomeric ligature tie, showing my new design;  
FIG. 2 is a front elevational view thereof;  
FIG. 3 is a back elevational view thereof;  
FIG. 4 is a side elevational view thereof, and the opposite side elevational view is a mirror image of the side elevational view thereof;  
FIG. 5 is a top elevational view thereof;  
FIG. 6 is a bottom elevational view thereof; and,  
FIG. 7 is a front perspective view thereof, wherein the broken line showing of a mouth is for the purpose of illustrating an environment and forms no part of the claimed design.

**1 Claim, 5 Drawing Sheets**



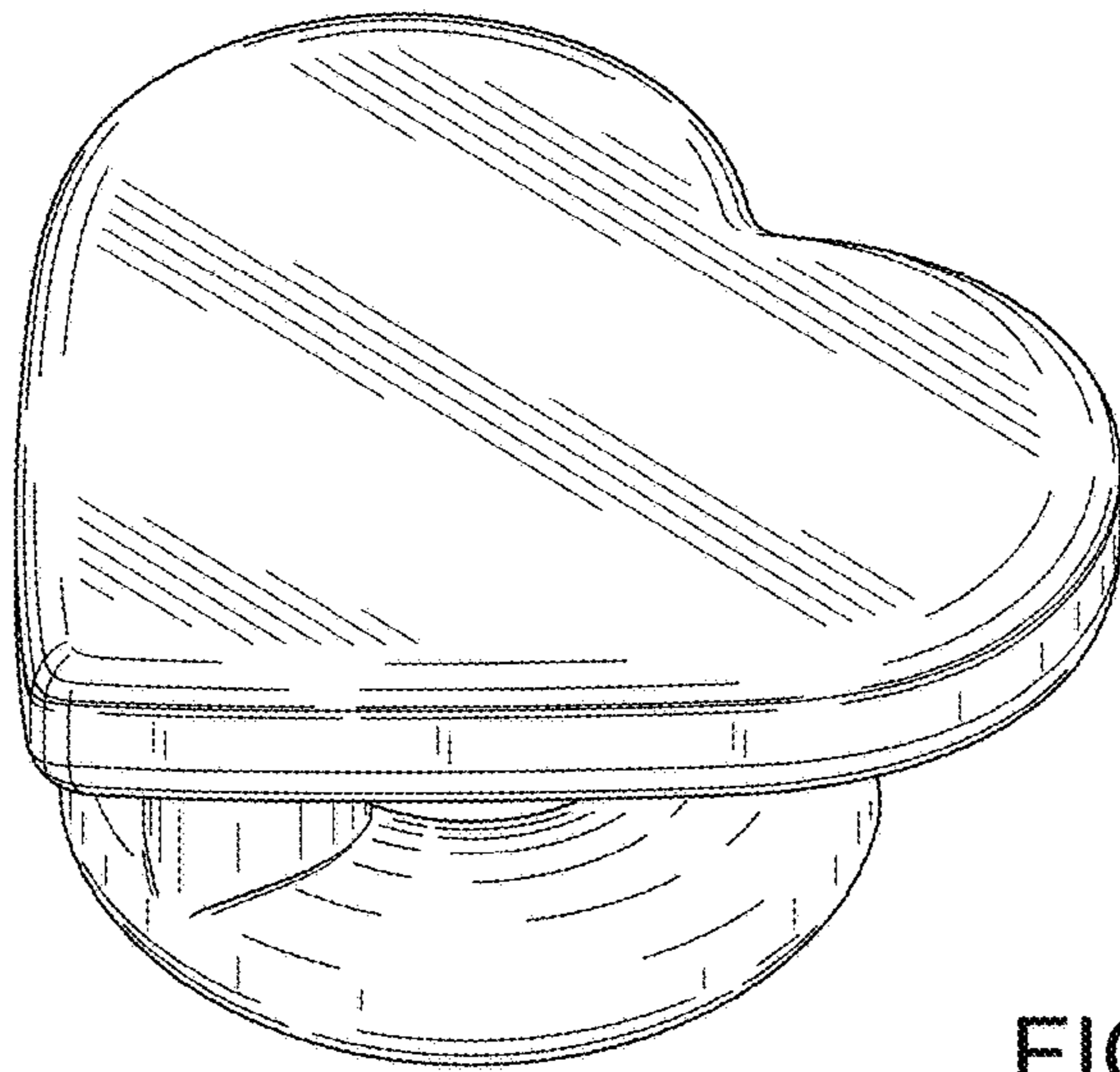


FIG. 1

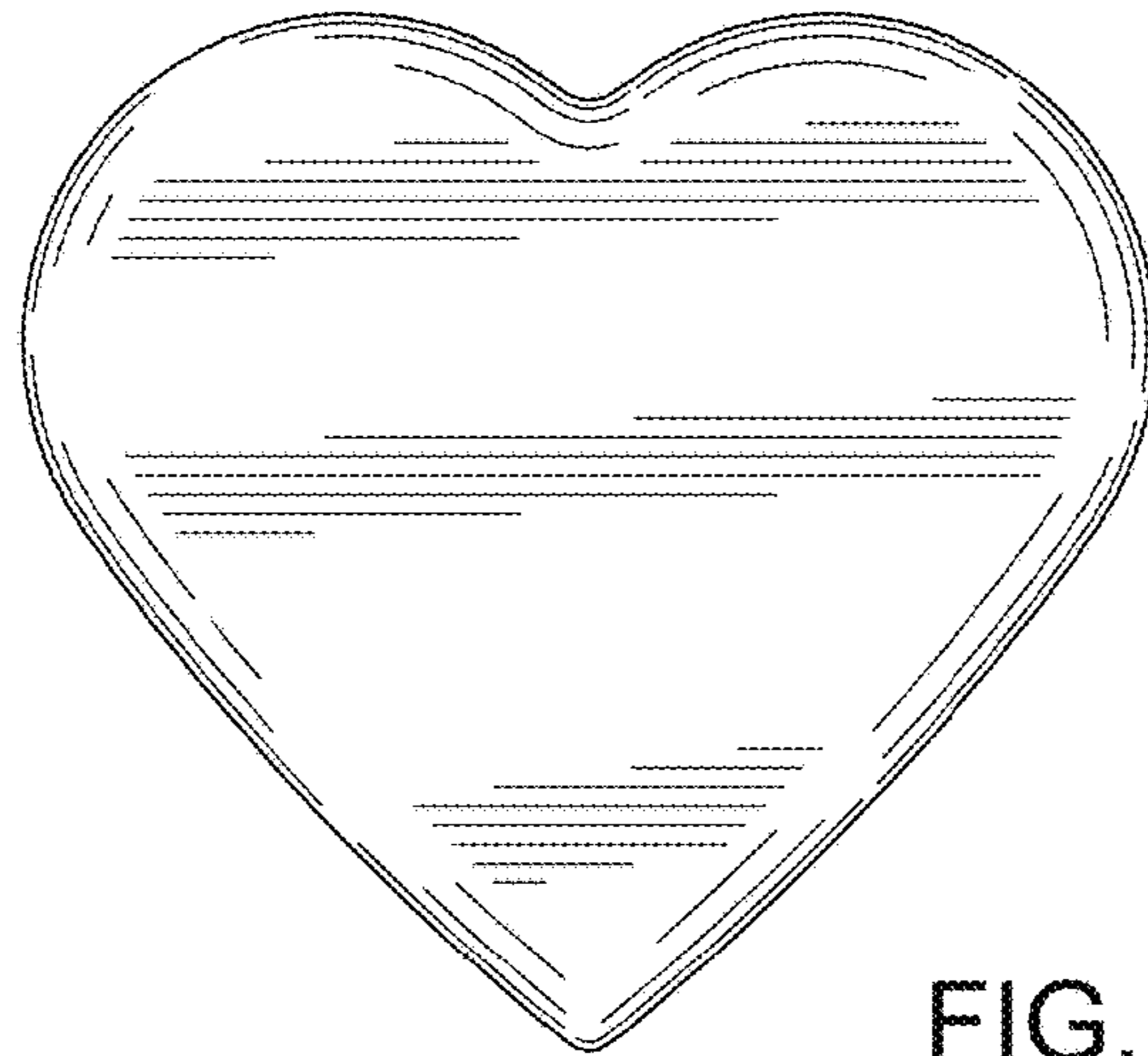


FIG. 2

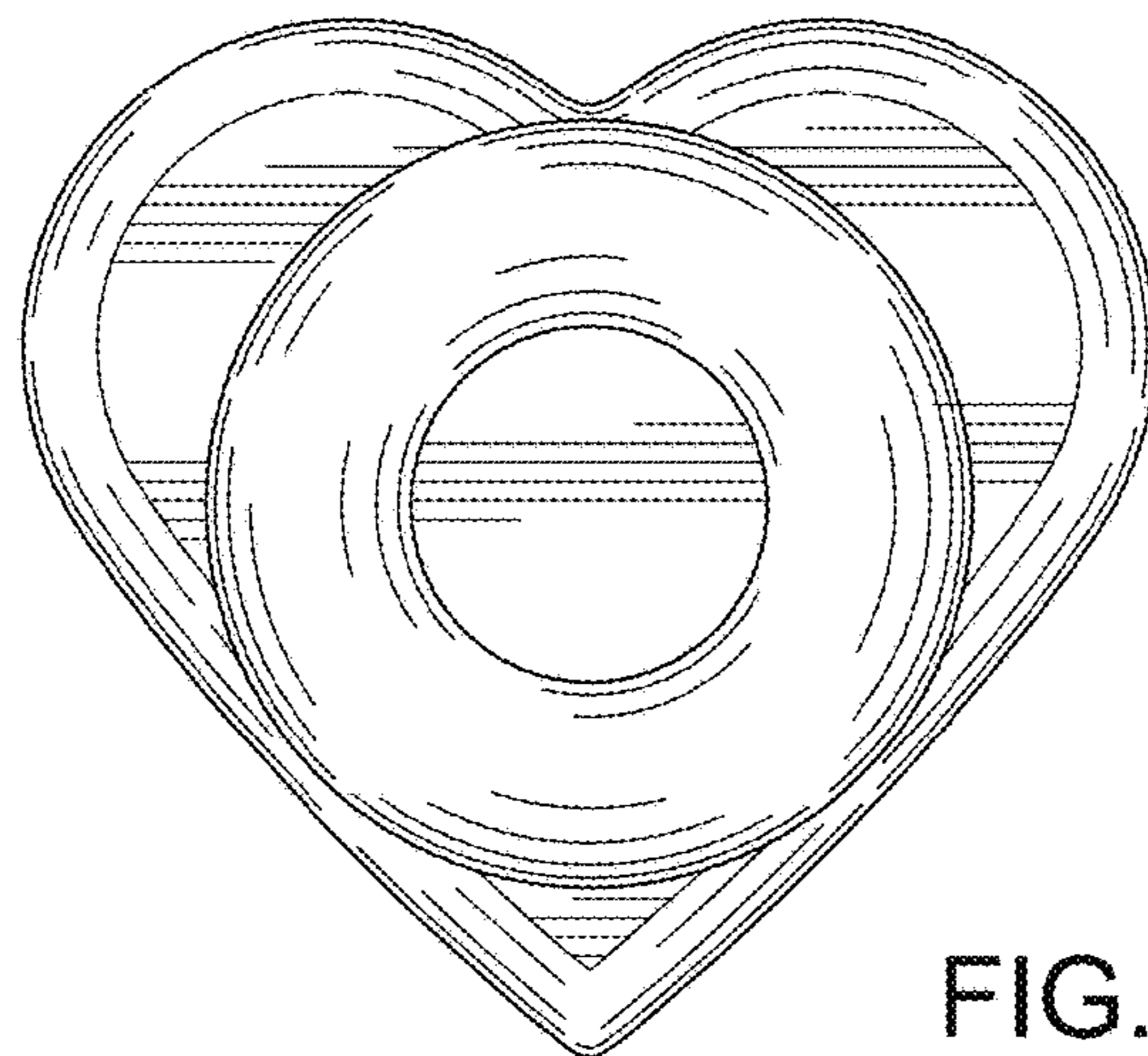


FIG. 3

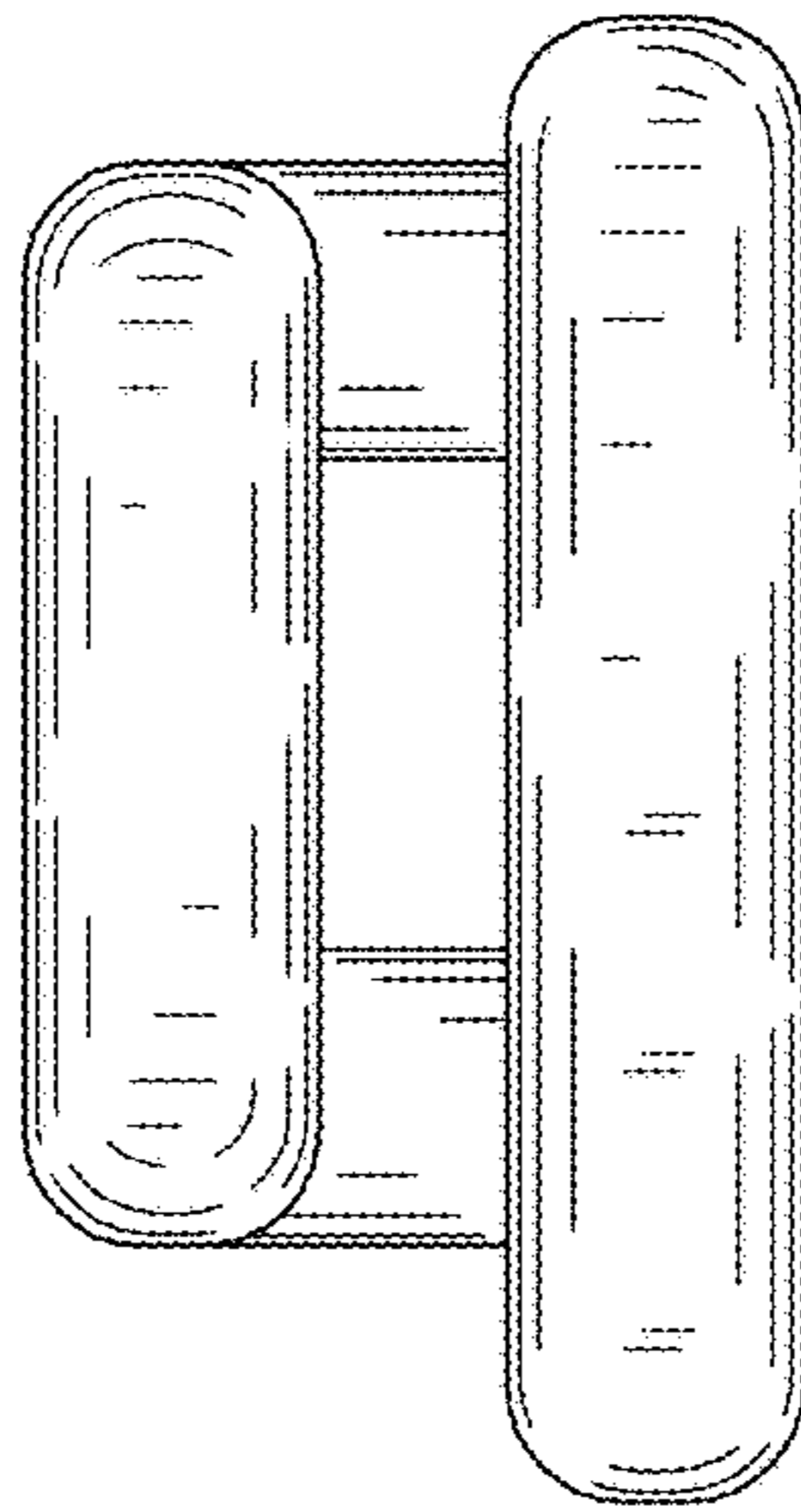


FIG. 4

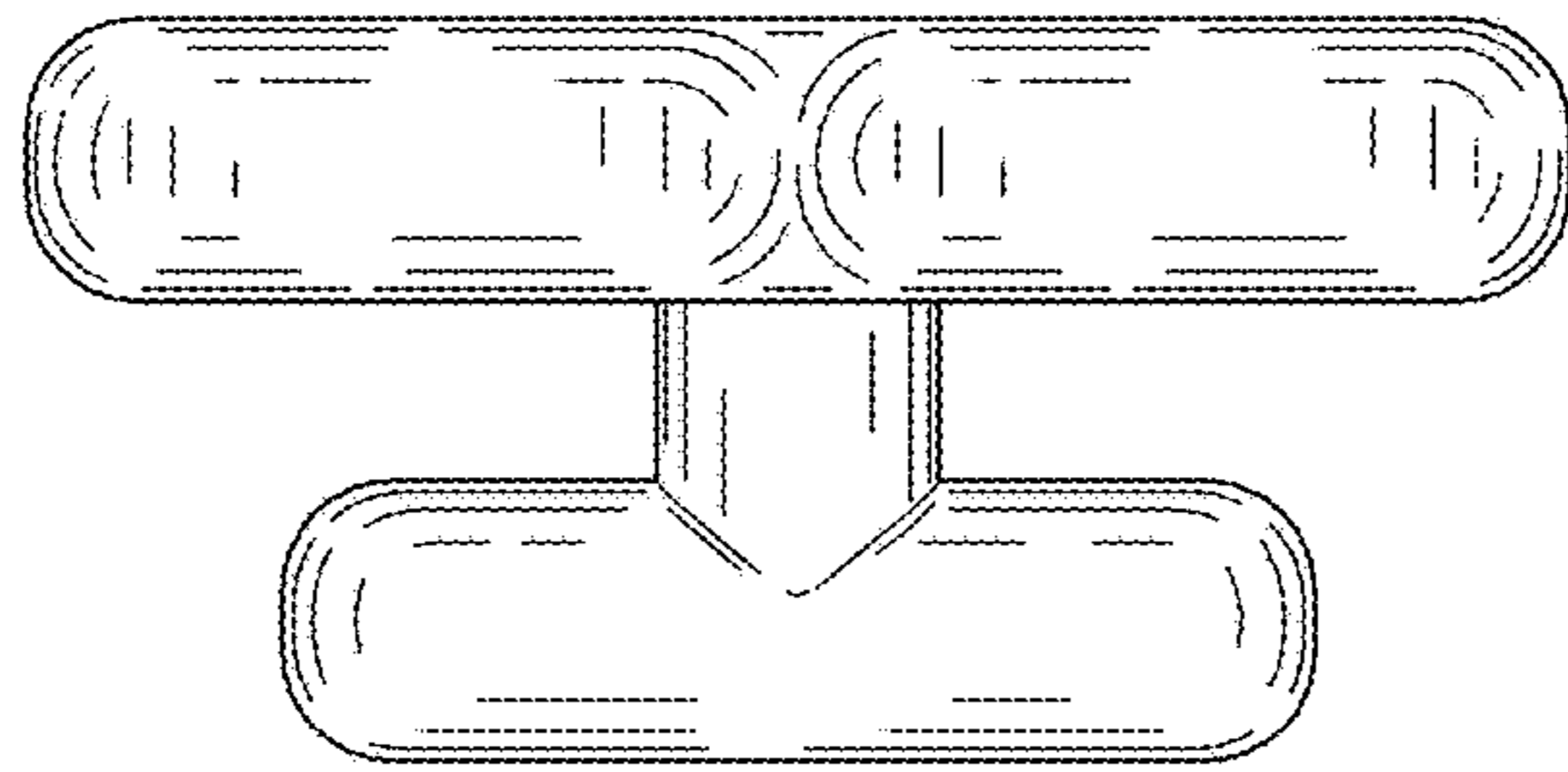


FIG. 5

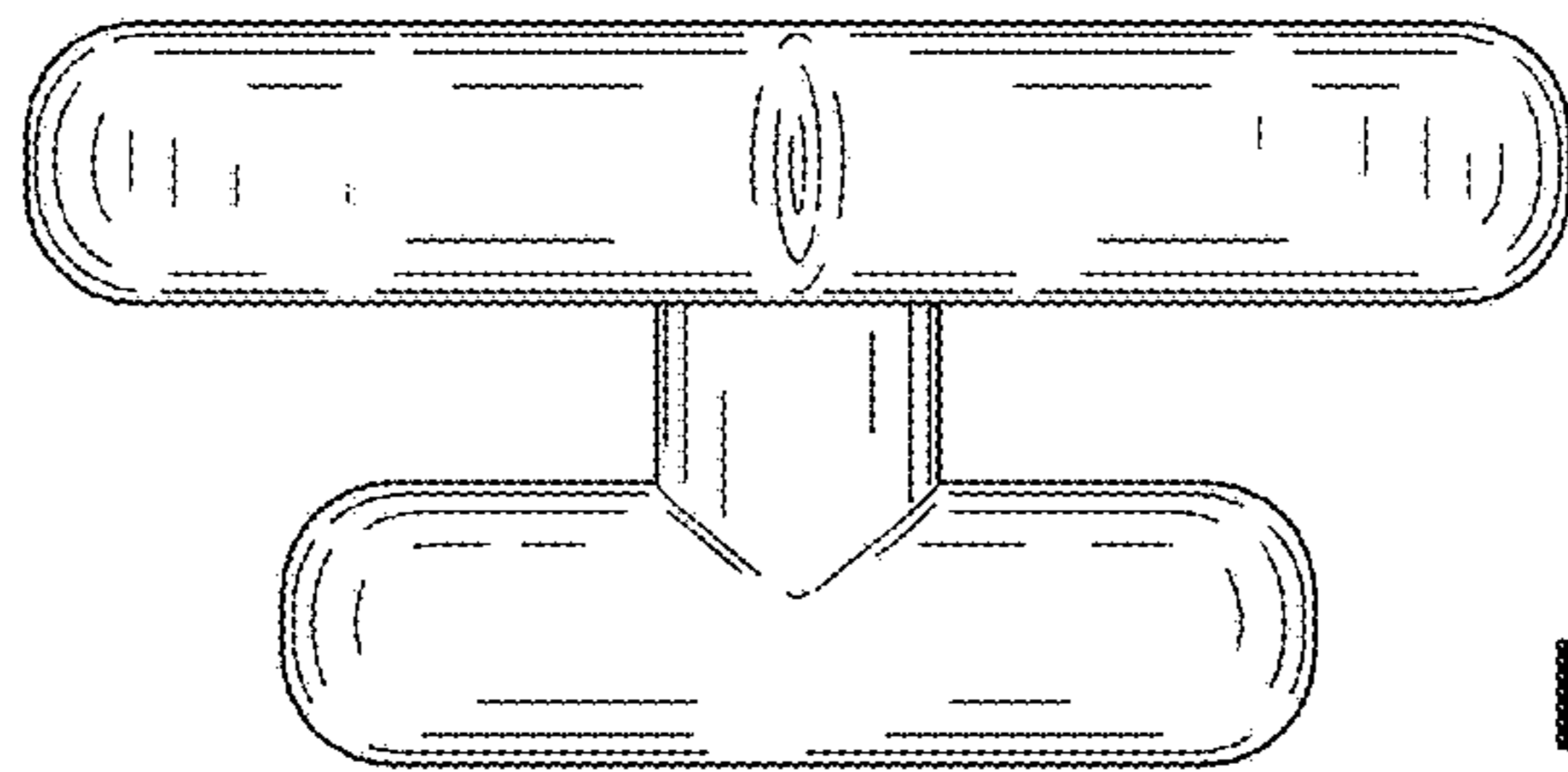


FIG. 6

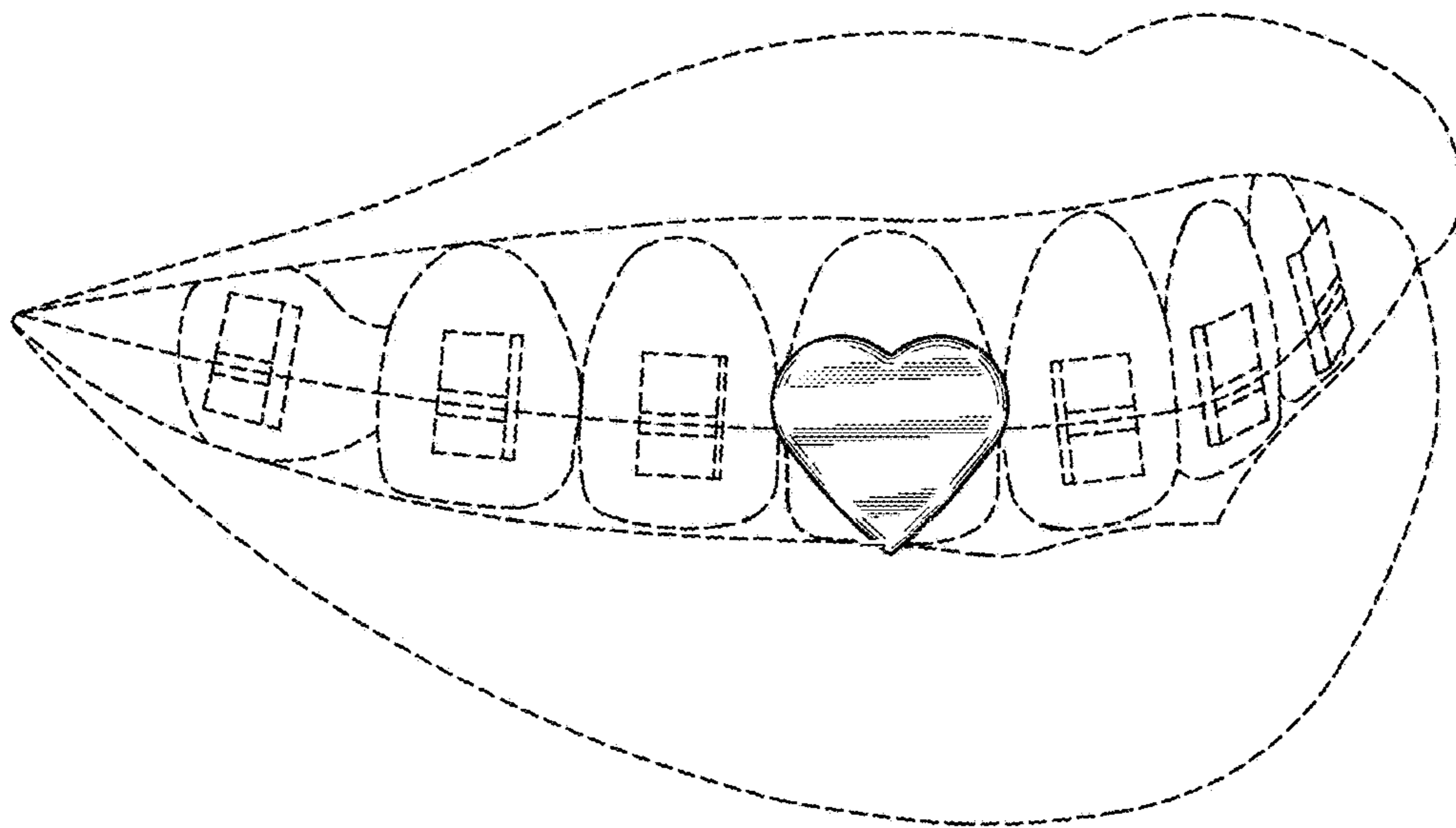


FIG. 7