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(12) **United States Design Patent** (10) **Patent No.:** **US D930,549 S**
Bochud et al. (45) **Date of Patent:** **** Sep. 14, 2021**

(54) **AIRCRAFT WINGLET**

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

(21) Appl. No.: **29/718,857**

(22) Filed: **Dec. 30, 2019**

(51) **LOC (13) Cl.** **12-07**

(52) **U.S. Cl.**
USPC **D12/345**

(58) **Field of Classification Search**
USPC D12/1, 2, 3, 4, 16.1, 174, 319-345;
D21/436-455; D13/109
CPC B64C 29/0033; B64C 2201/021; B64C
29/02; B64C 2201/088; B64C 2201/104;
B64C 2201/141
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,674,709 A 6/1987 Welles
4,722,499 A * 2/1988 Klug B64C 23/076
244/199.4

(Continued)

FOREIGN PATENT DOCUMENTS

WO 2012007358 A1 1/2012
WO 2020146399 A1 1/2020

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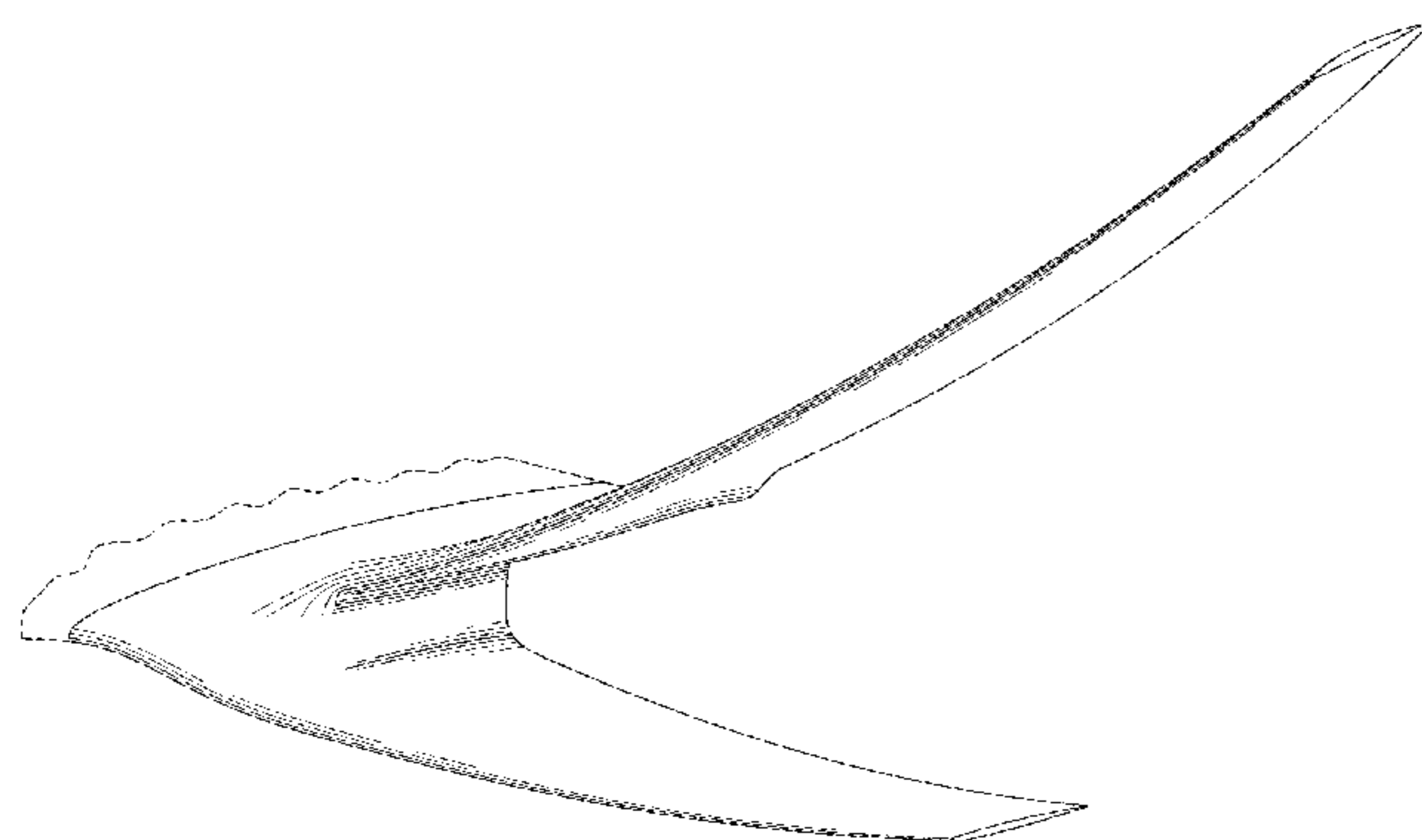
(57) **CLAIM**

We claim the ornamental design for an aircraft winglet, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of an aircraft illustrating an aircraft winglet according to a first embodiment of our new design in use;
FIG. 2 is a perspective view of the aircraft winglet according to the first embodiment;
FIG. 3 is a front view thereof;
FIG. 4 is a rear view thereof;
FIG. 5 is a top view thereof;
FIG. 6 is a bottom view thereof;
FIG. 7 is a right side view thereof;
FIG. 8 is a left side view thereof;
FIG. 9 is a perspective view of an aircraft illustrating an aircraft winglet according to a second embodiment of our new design in use;
FIG. 10 is a perspective view of the aircraft winglet according to the second embodiment;
FIG. 11 is a front view thereof;
FIG. 12 is a rear view thereof;
FIG. 13 is a top view thereof;
FIG. 14 is a bottom view thereof;
FIG. 15 is a right side view thereof;
FIG. 16 is a left side view thereof;
FIG. 17 is a perspective view of an aircraft illustrating an aircraft winglet according to a third embodiment of our new design in use;
FIG. 18 is a perspective view of the aircraft winglet according to the third embodiment;
FIG. 19 is a front view thereof;
FIG. 20 is a rear view thereof;
FIG. 21 is a top view thereof;
FIG. 22 is a bottom view thereof;
FIG. 23 is a right side view thereof; and,
FIG. 24 is a left side view thereof.
The broken lines illustrate environmental structure and form no part of the claimed design.

1 Claim, 24 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

5,275,358 A * 1/1994 Goldhammer B64C 23/069
244/91
7,900,876 B2 3/2011 Eberhardt
7,988,099 B2 * 8/2011 Bray B64C 13/16
244/199.4
8,366,056 B2 * 2/2013 Garang B64C 23/069
244/199.4
8,936,219 B2 1/2015 Roman et al.
8,944,386 B2 2/2015 Gratzner
9,302,766 B2 * 4/2016 Gratzner B64C 23/069
9,908,612 B2 * 3/2018 Fox B64C 3/56
9,988,142 B2 6/2018 Heller
10,287,002 B2 * 5/2019 Guida B64C 23/069
10,336,440 B2 * 7/2019 Williams B64C 23/069
10,501,170 B2 * 12/2019 Lynas B64C 3/546
10,538,307 B2 * 1/2020 Dees B64C 3/58
10,625,847 B2 * 4/2020 Dhandhanian B64C 27/463

2009/0039204 A1 * 2/2009 Eberhardt B64C 23/069
244/199.4
2009/0084904 A1 4/2009 Detert
2011/0024573 A1 * 2/2011 Kirk B64C 23/069
244/199.4
2012/0312928 A1 * 12/2012 Gratzner B64C 23/065
244/199.4
2013/0092797 A1 * 4/2013 Wright B64C 3/58
244/199.4
2013/0139421 A1 * 6/2013 Edmond G09F 21/10
40/212
2013/0256460 A1 * 10/2013 Roman B64C 3/58
244/199.4
2015/0041597 A1 * 2/2015 Theurich B64C 23/069
244/199.4
2015/0203190 A1 * 7/2015 Witte B64C 5/08
244/199.4
2016/0009379 A1 * 1/2016 Witte B64C 5/08
244/1 A

* cited by examiner

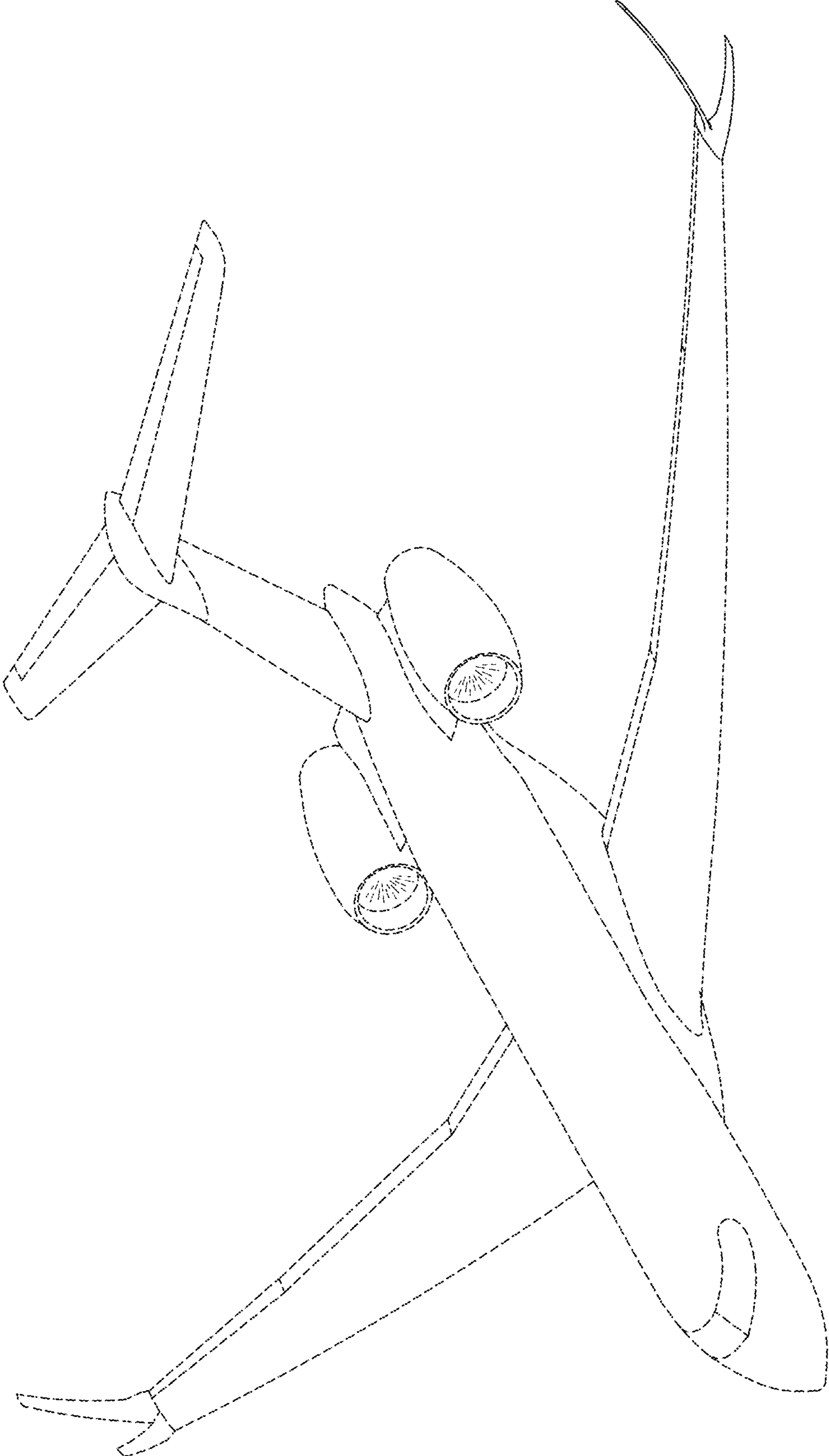


FIG. 1

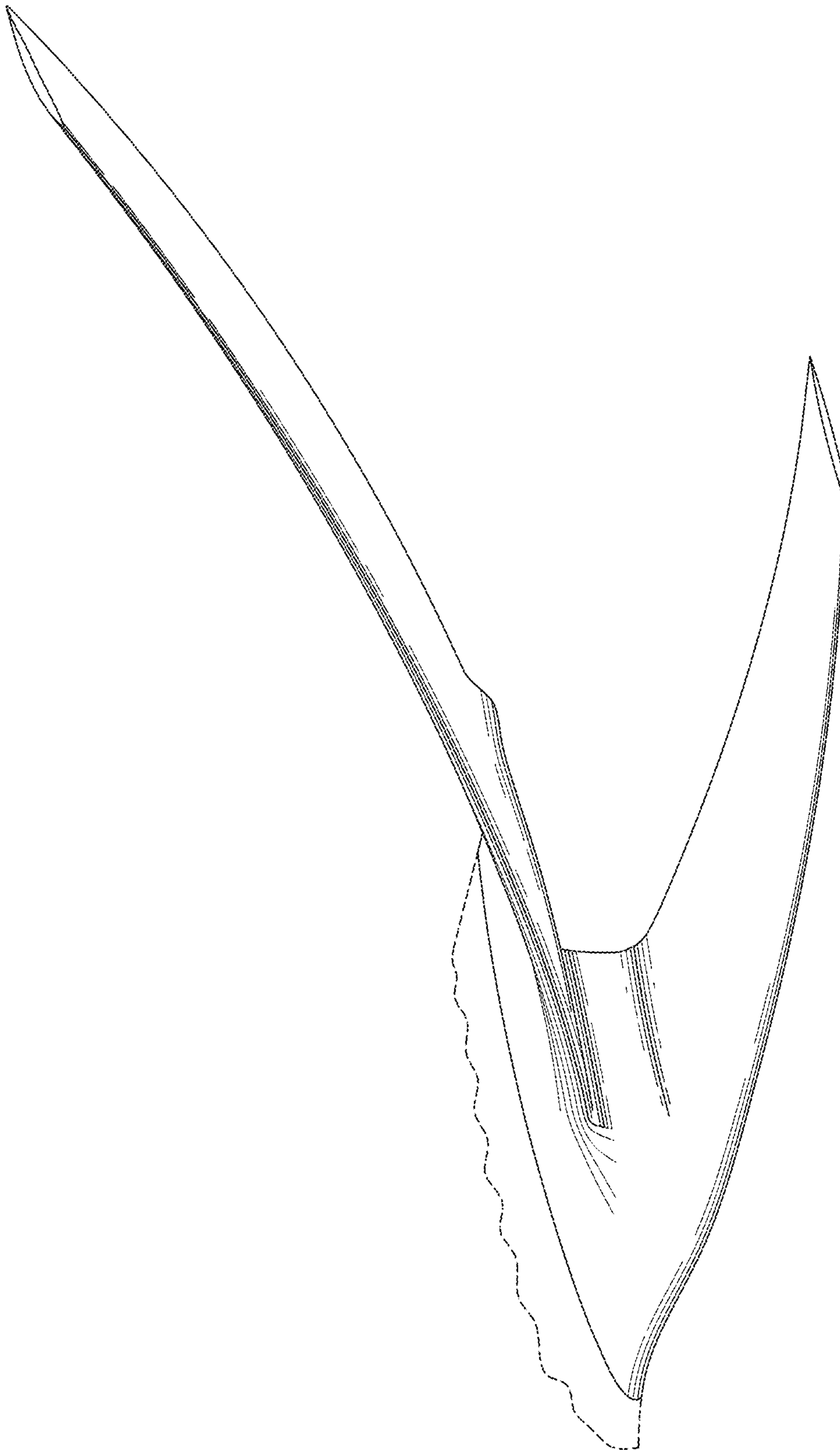


FIG. 2

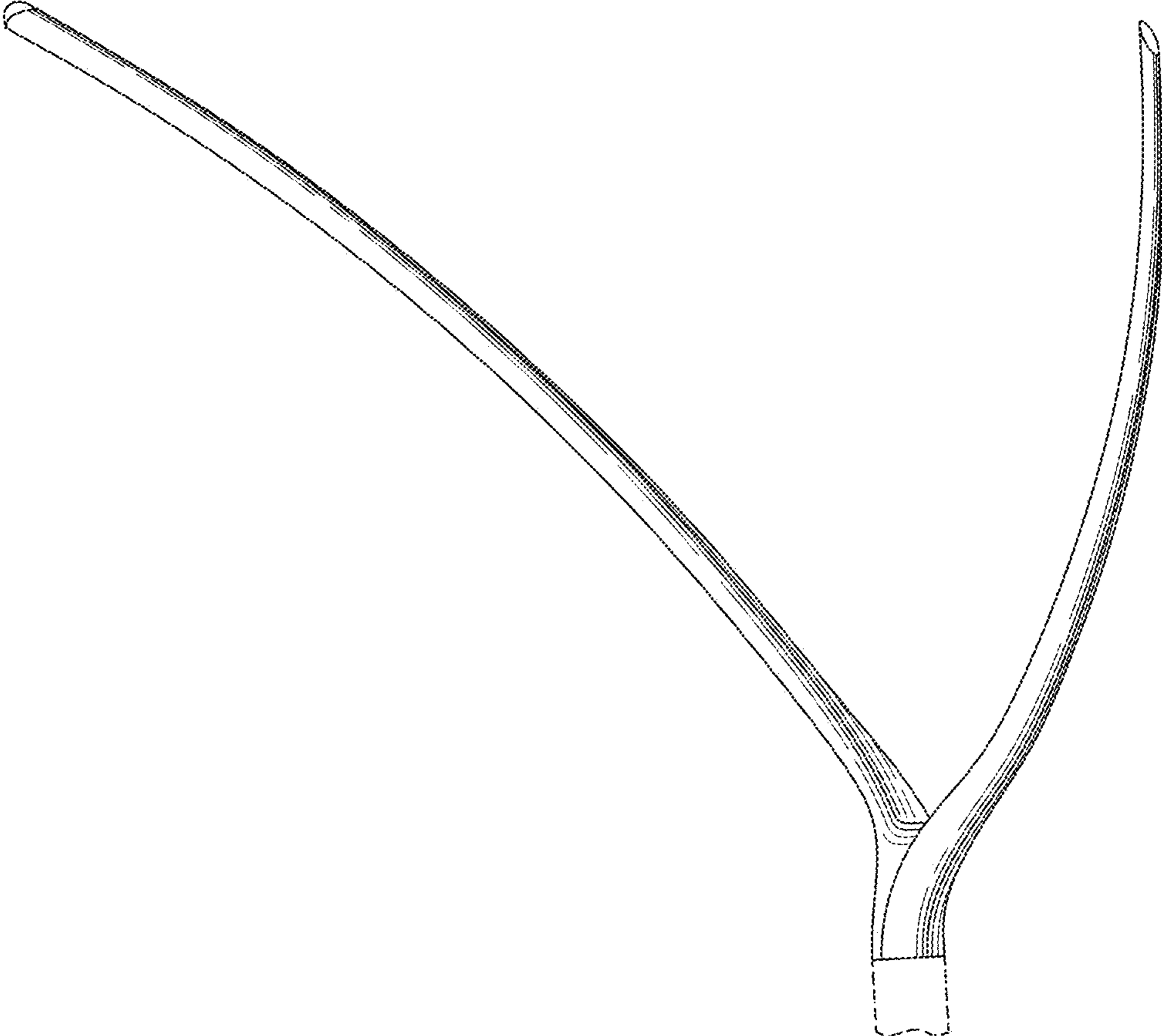


FIG. 3

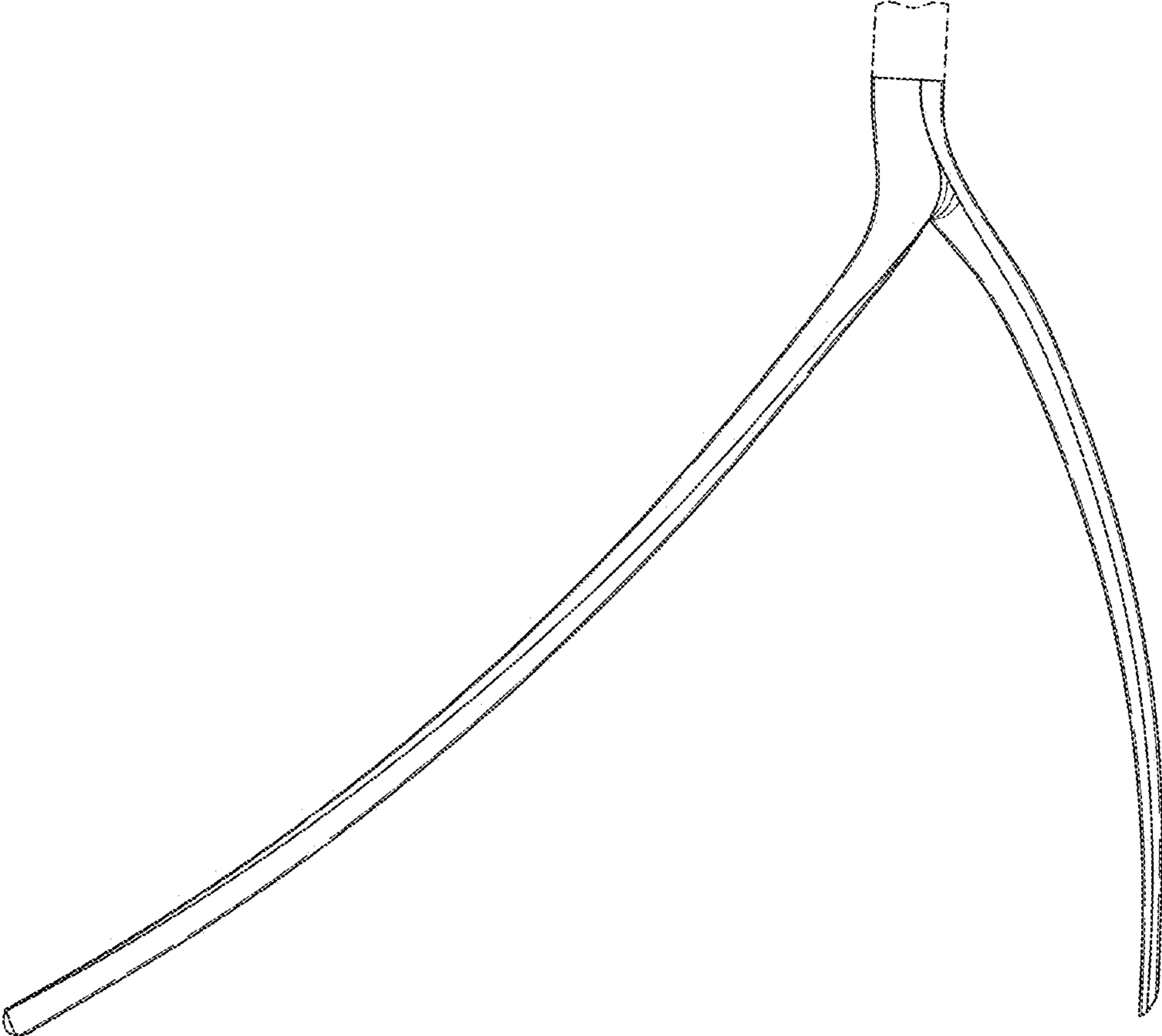


FIG. 4

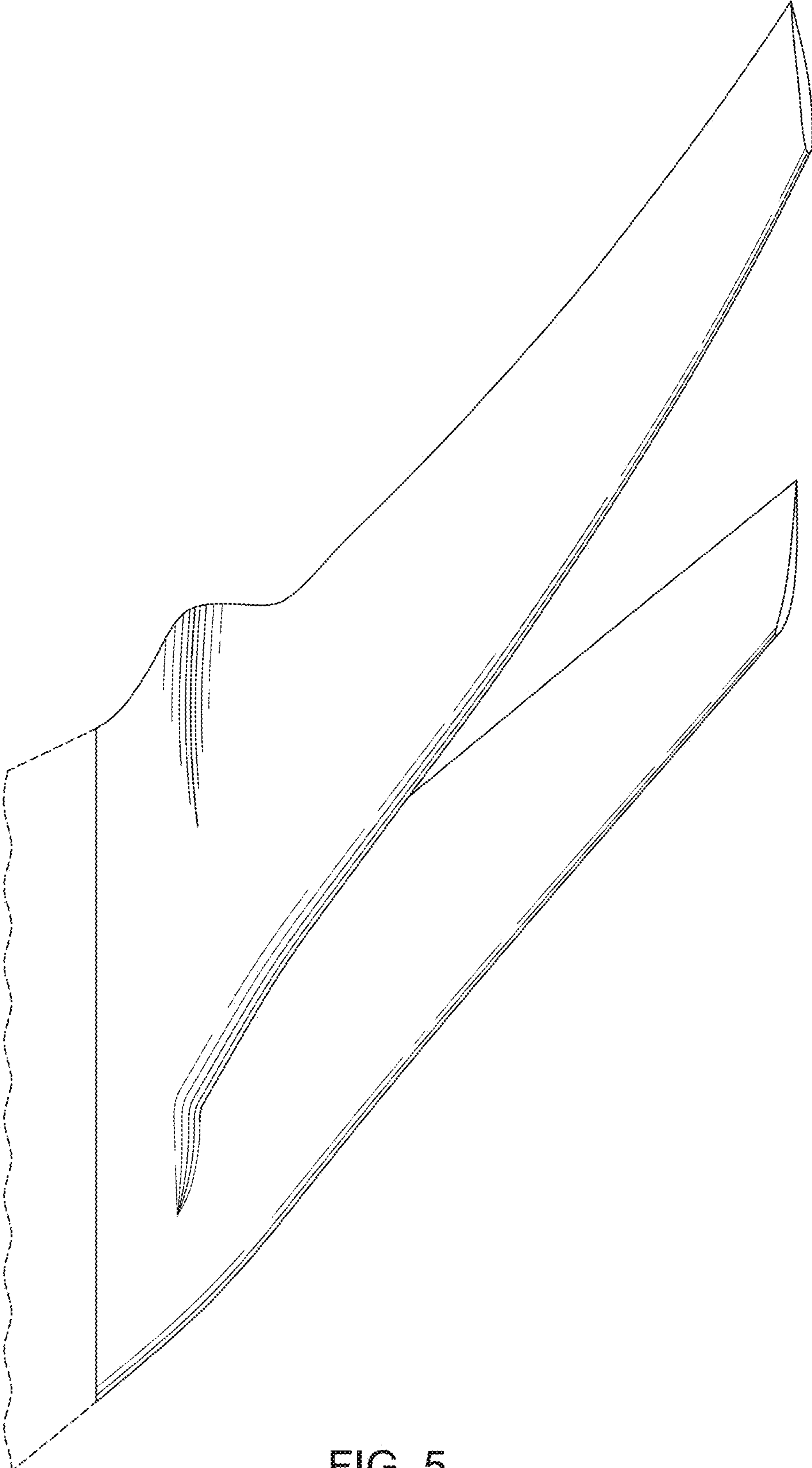


FIG. 5

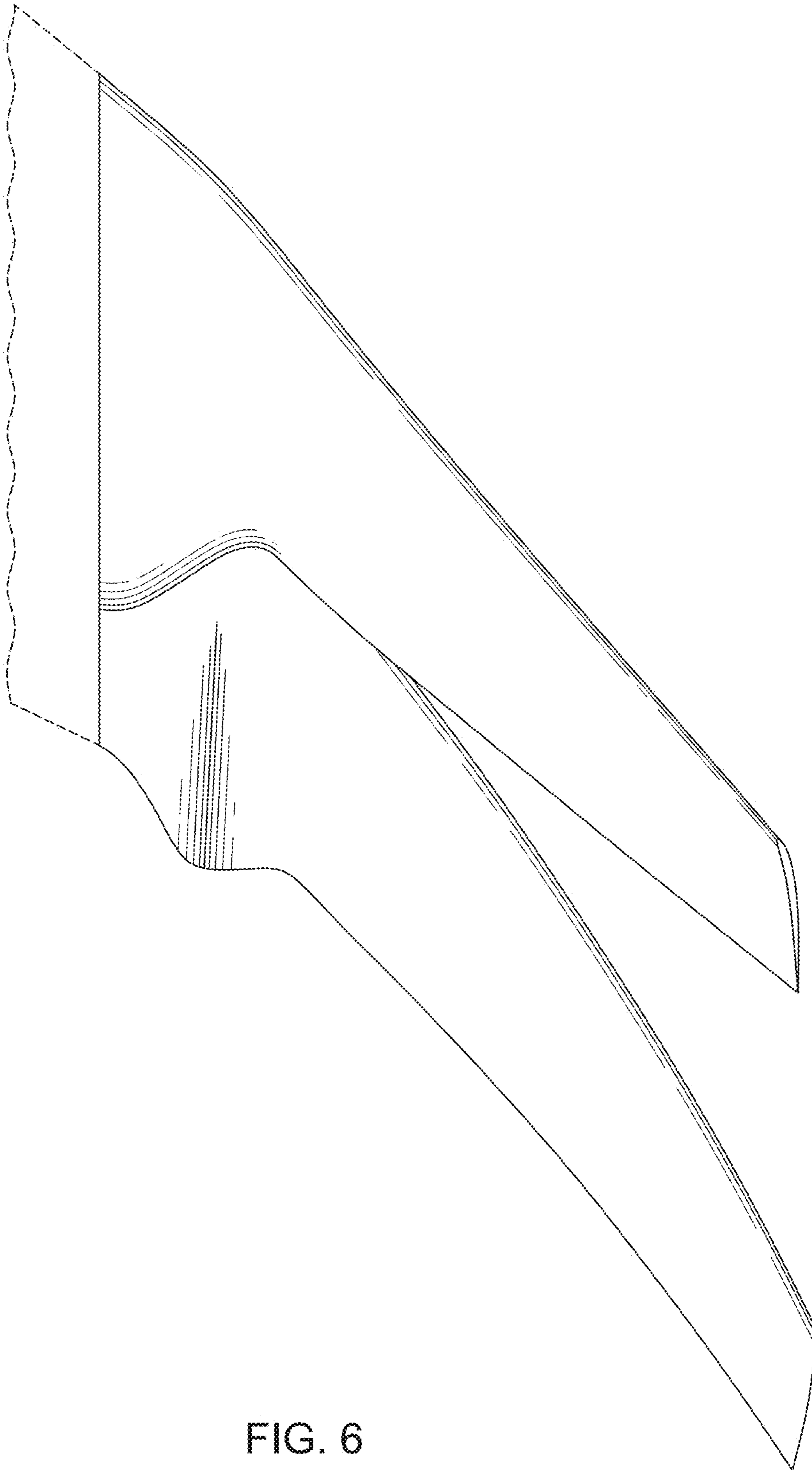


FIG. 6



FIG. 7

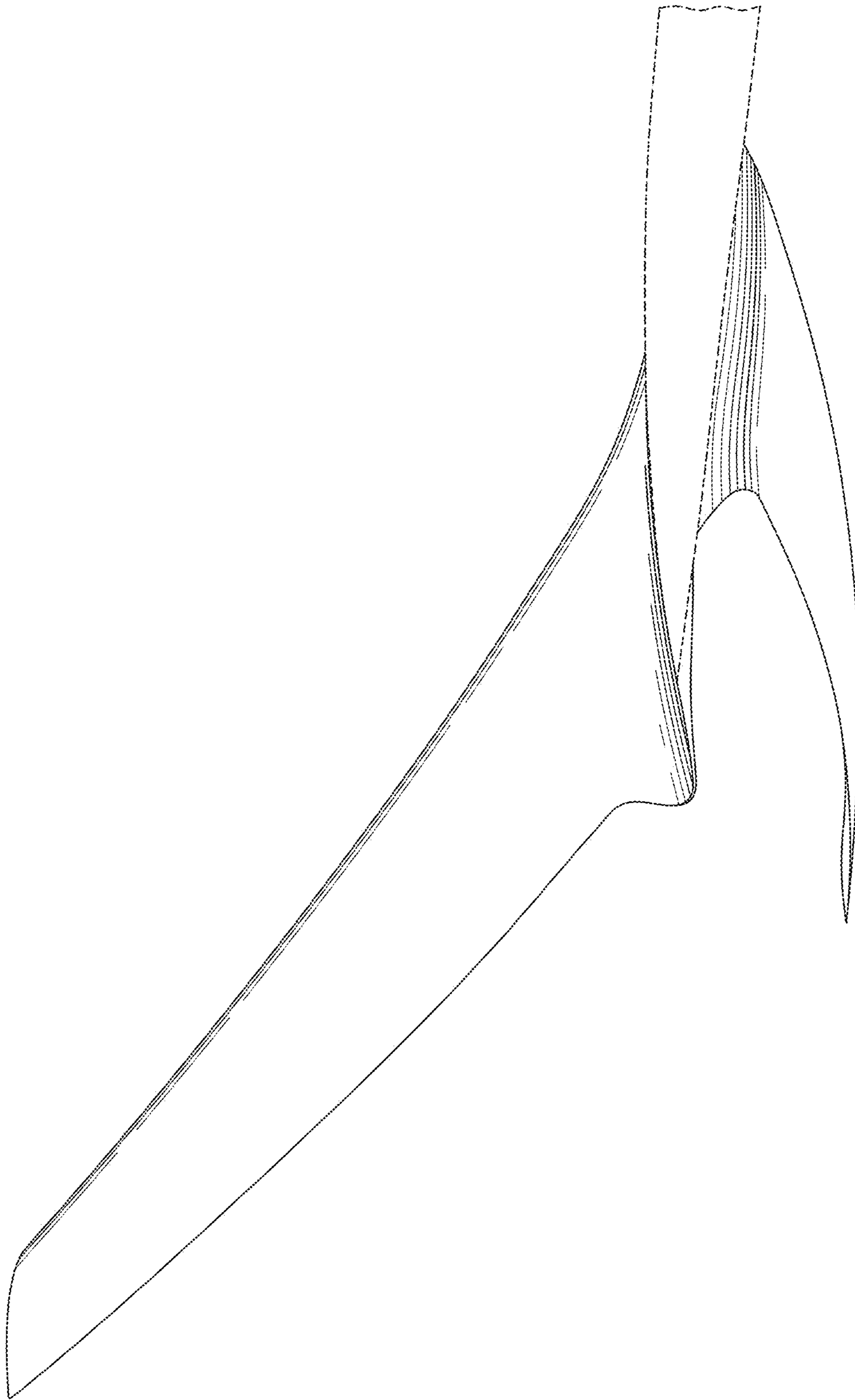


FIG. 8

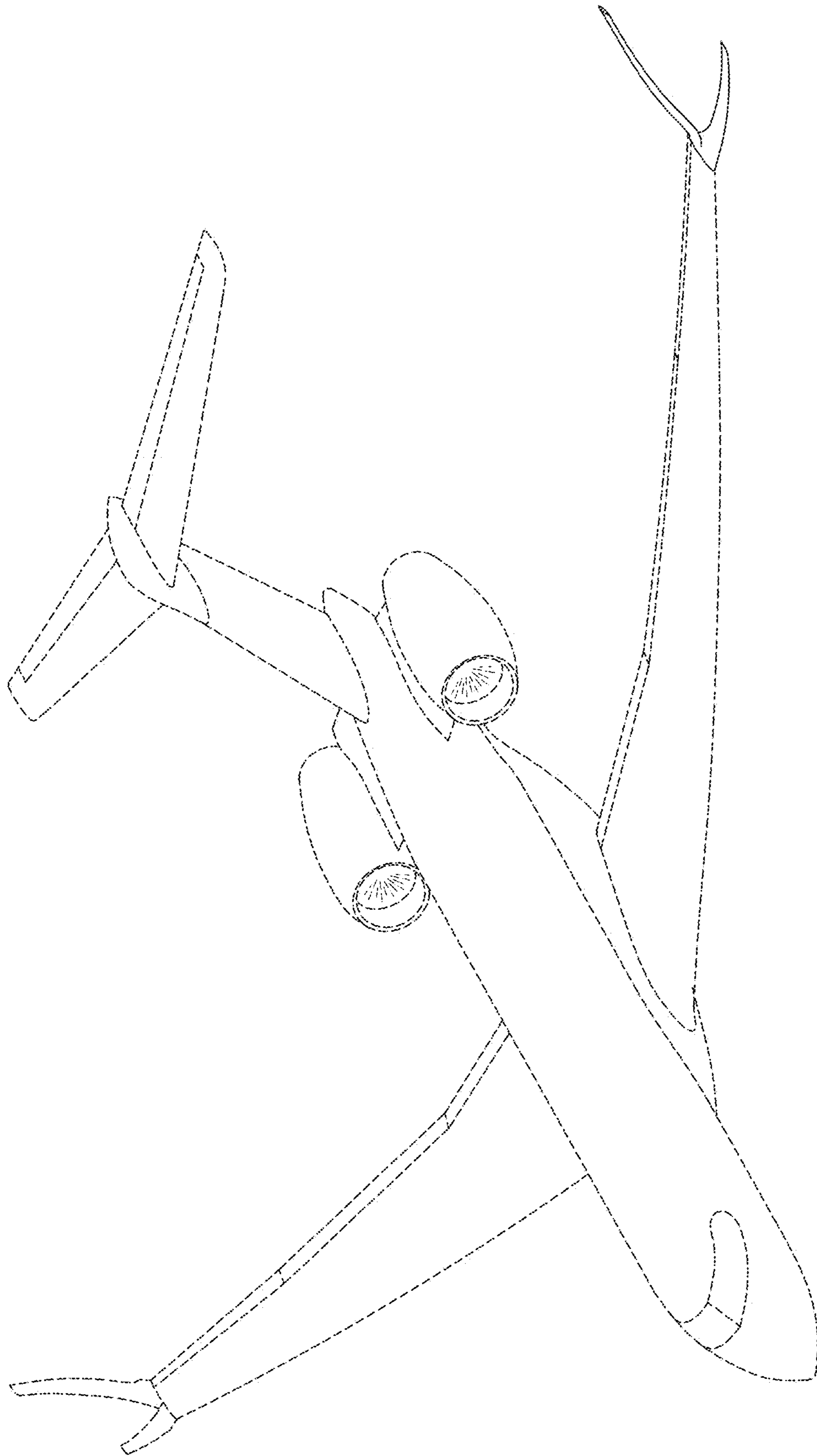


FIG. 9



FIG. 10

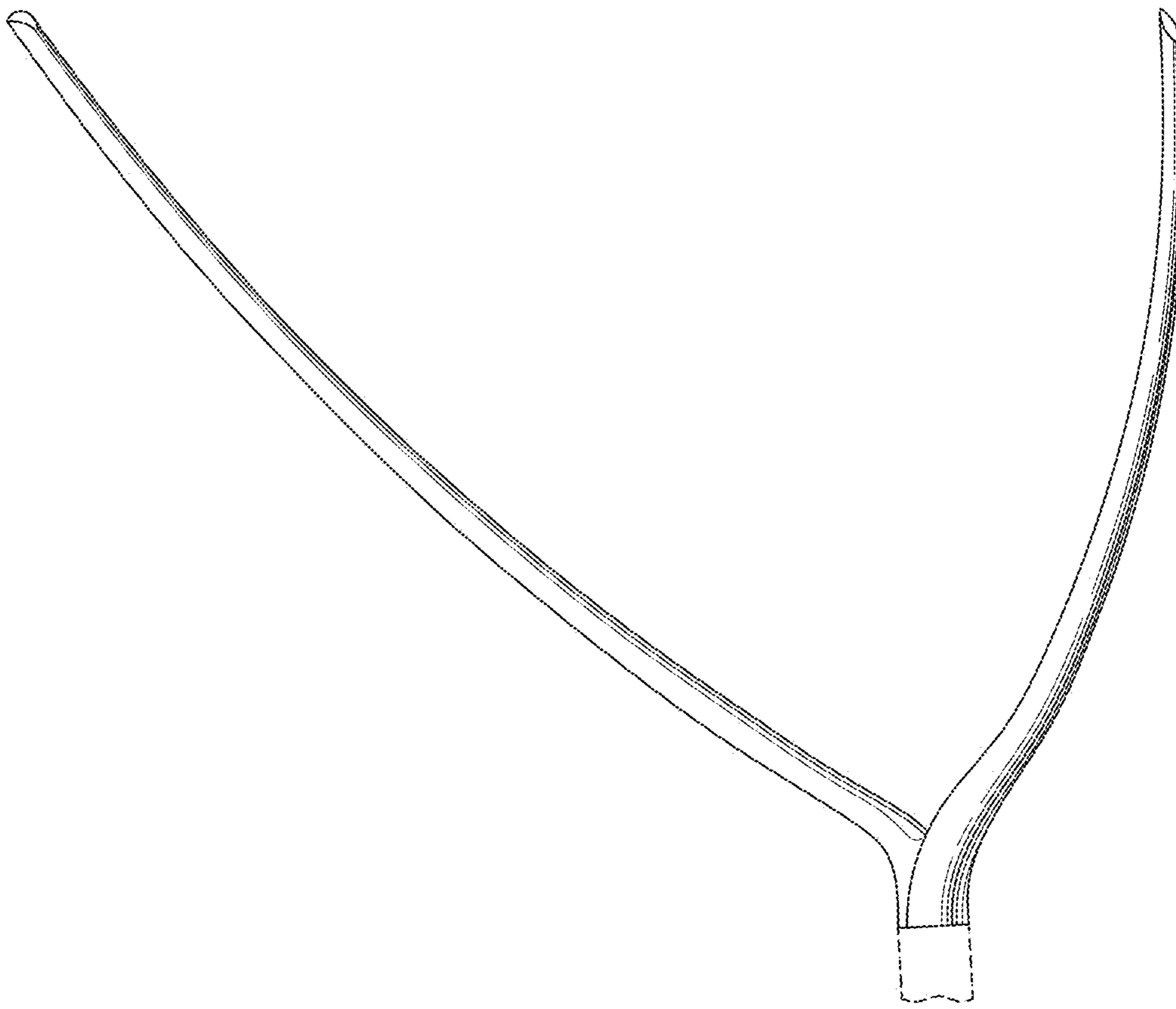


FIG. 11

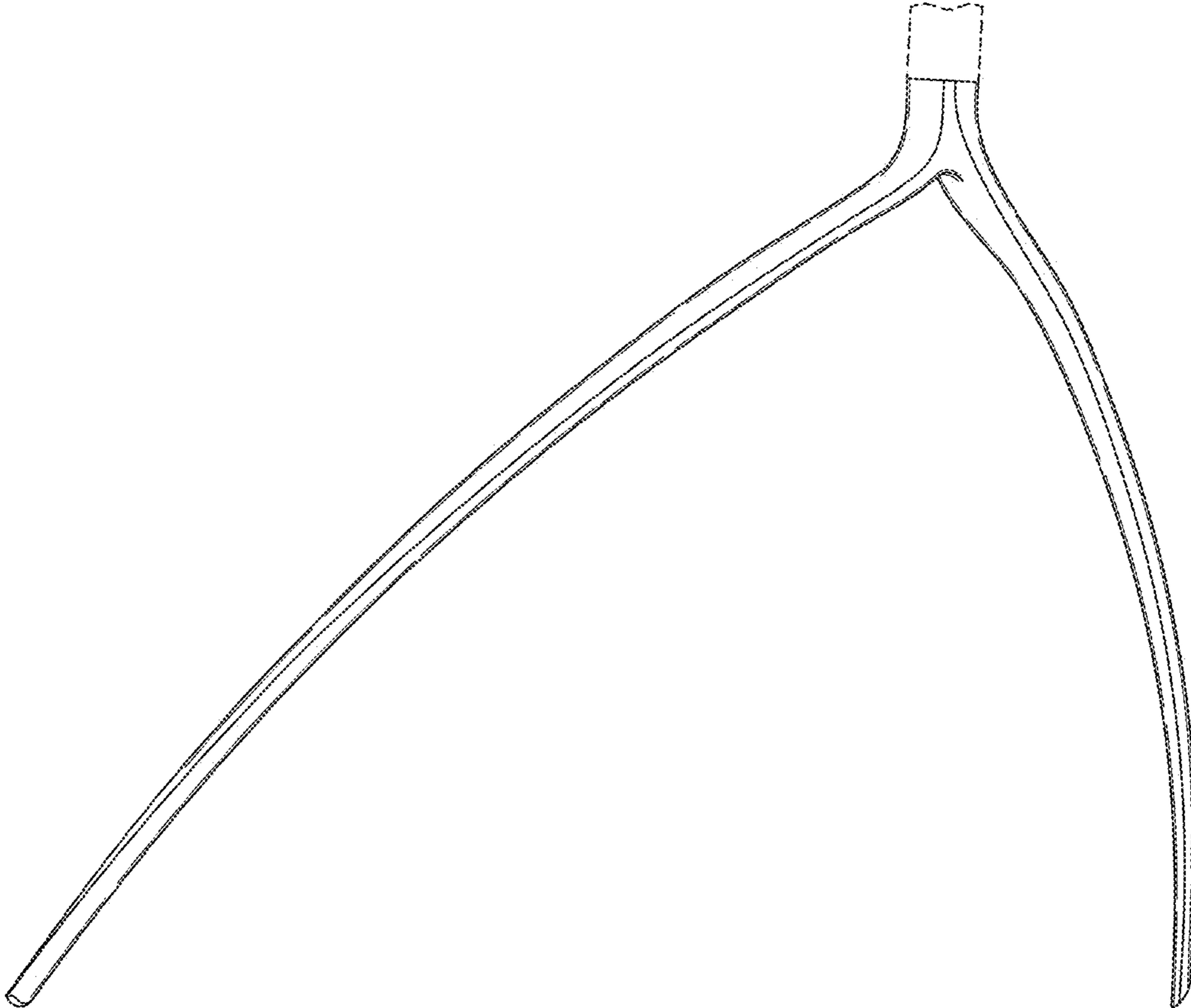


FIG. 12

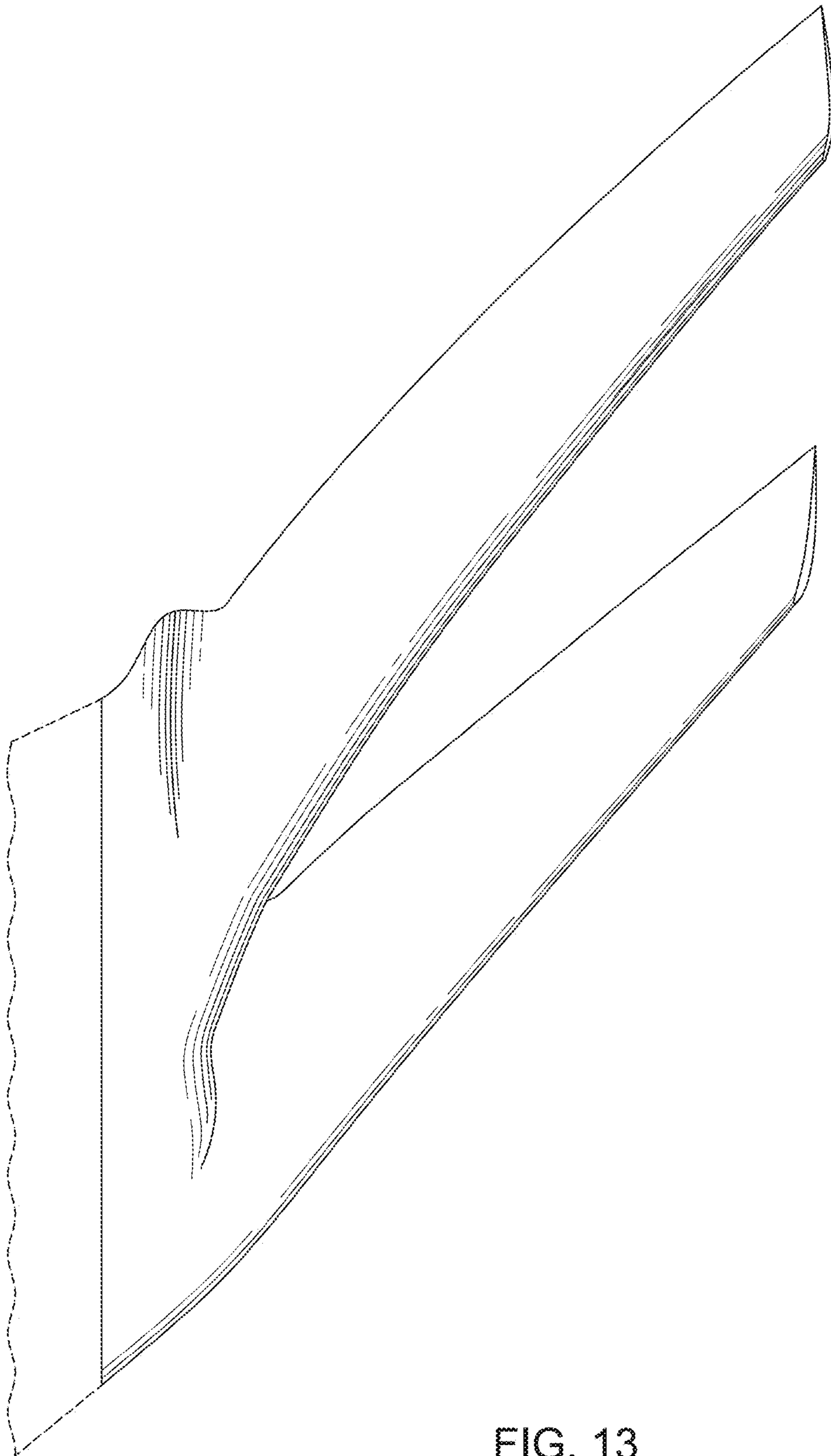


FIG. 13

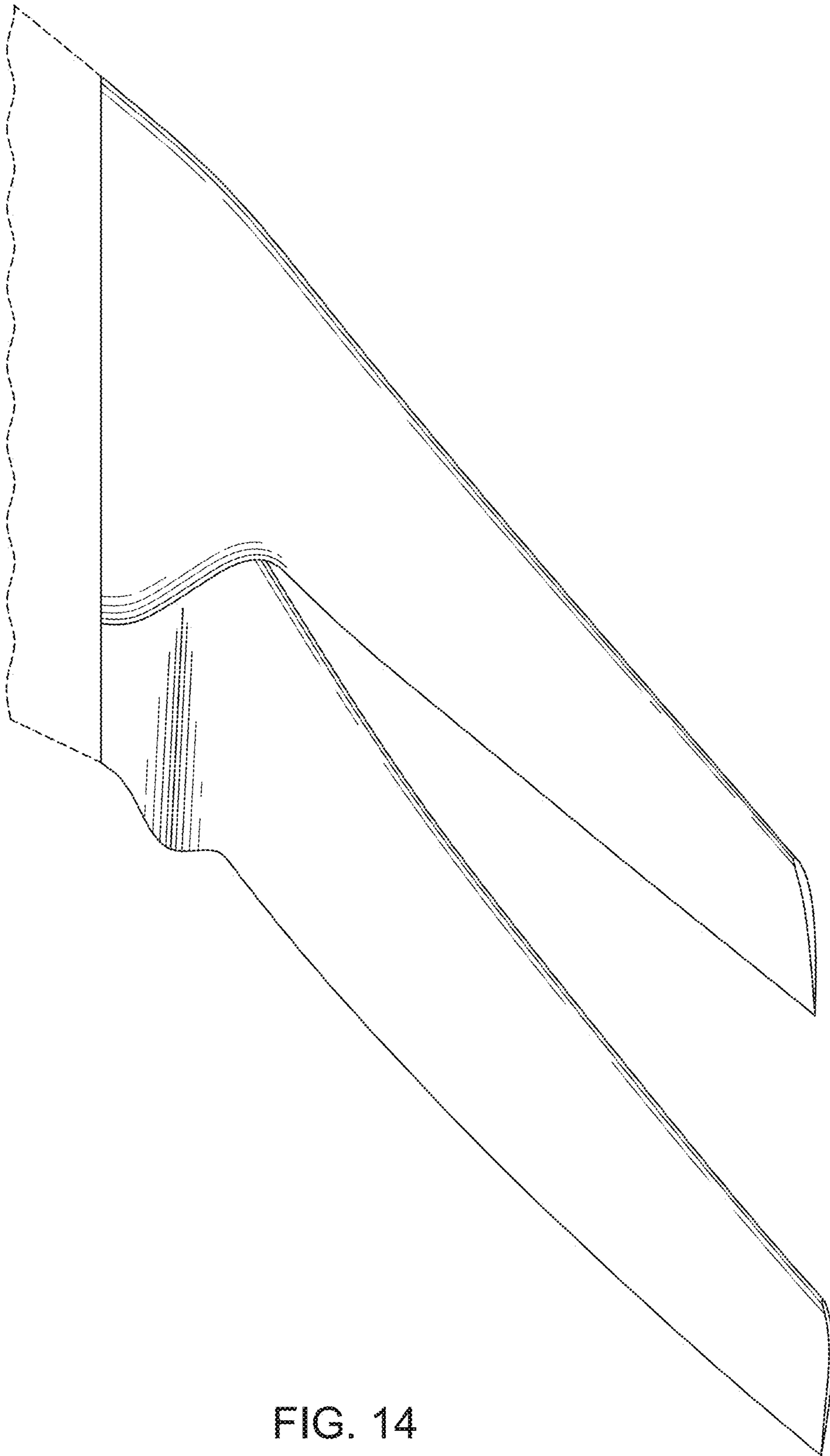


FIG. 14



FIG. 15

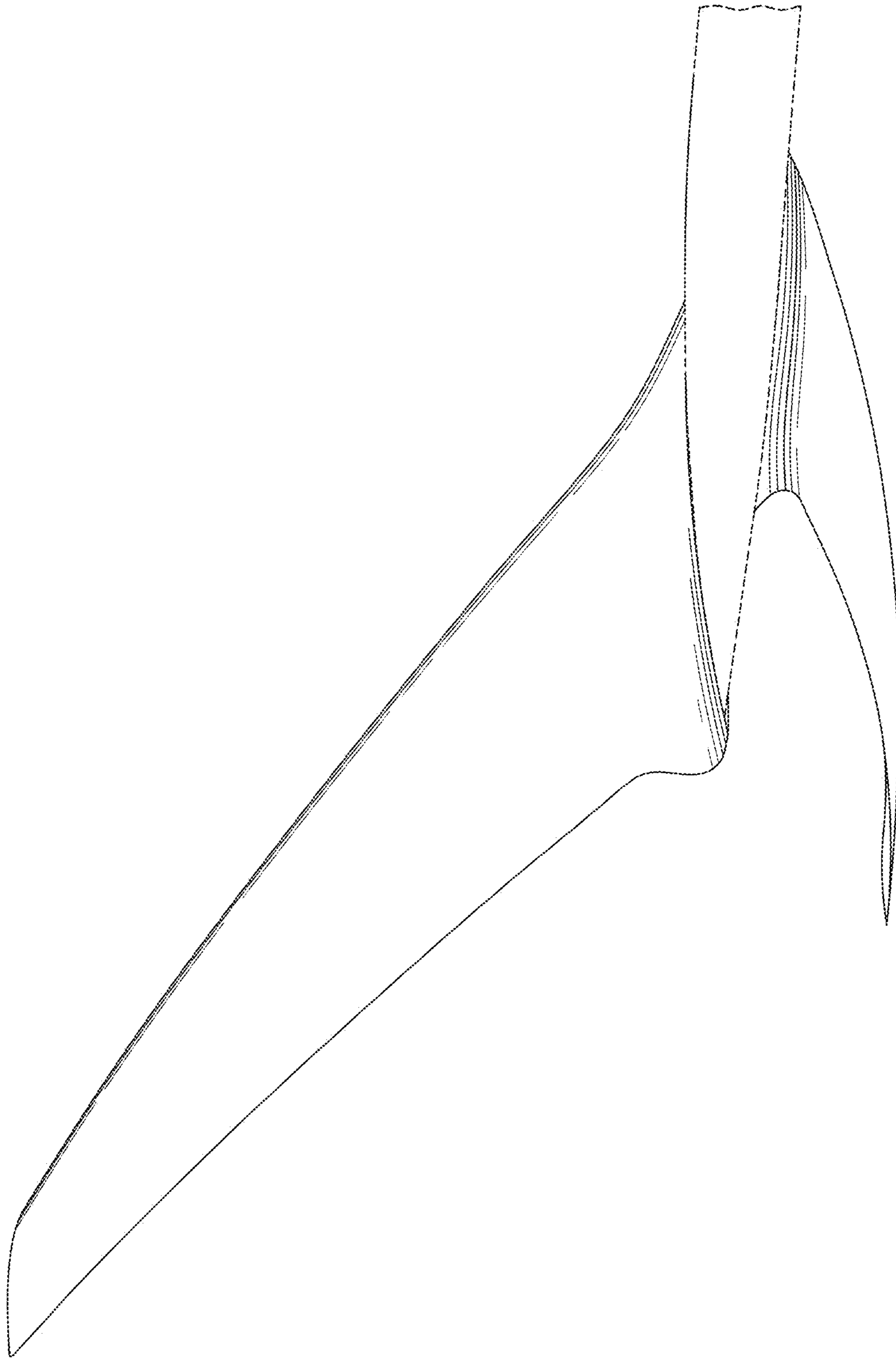


FIG. 16

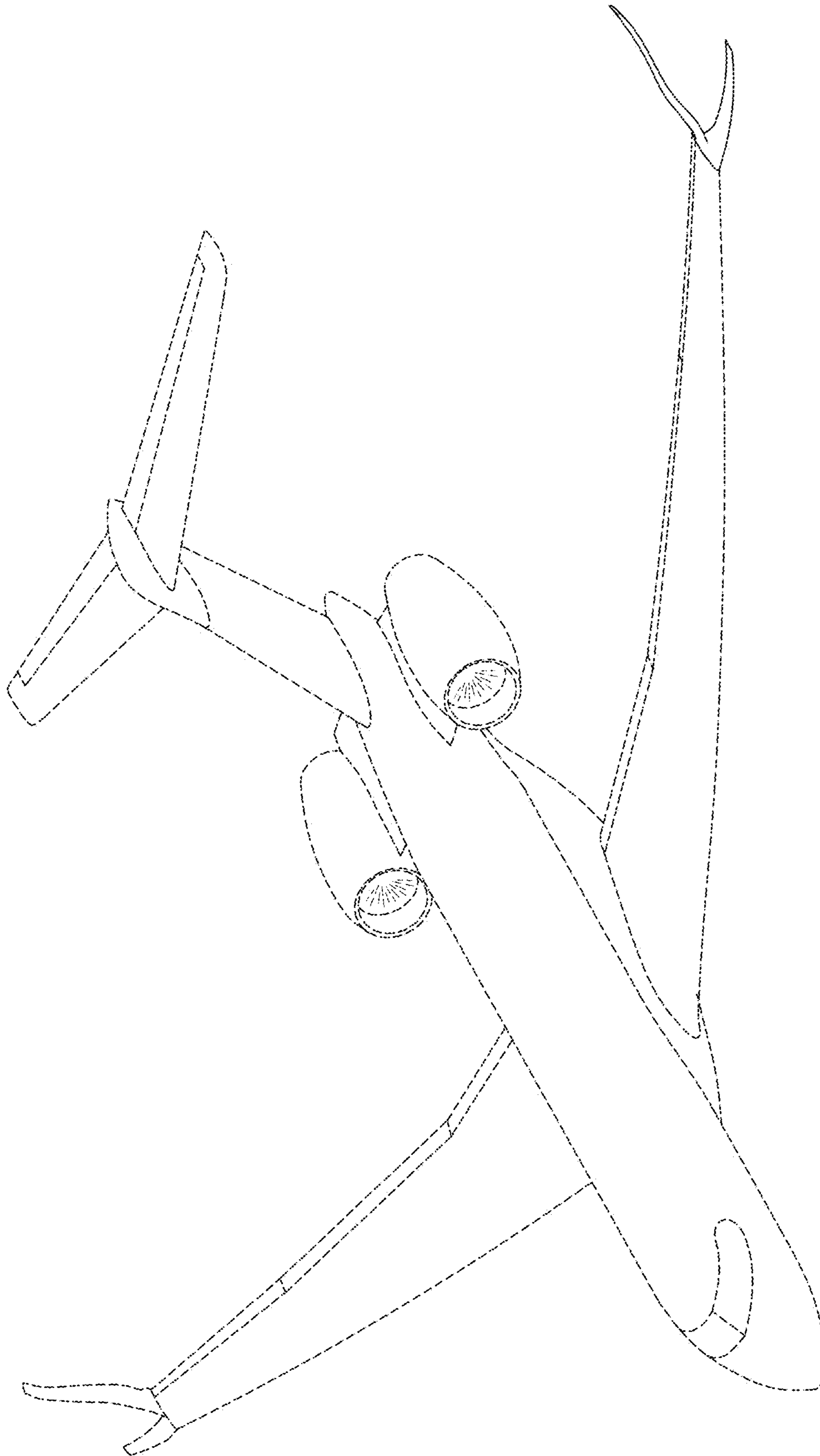


FIG. 17

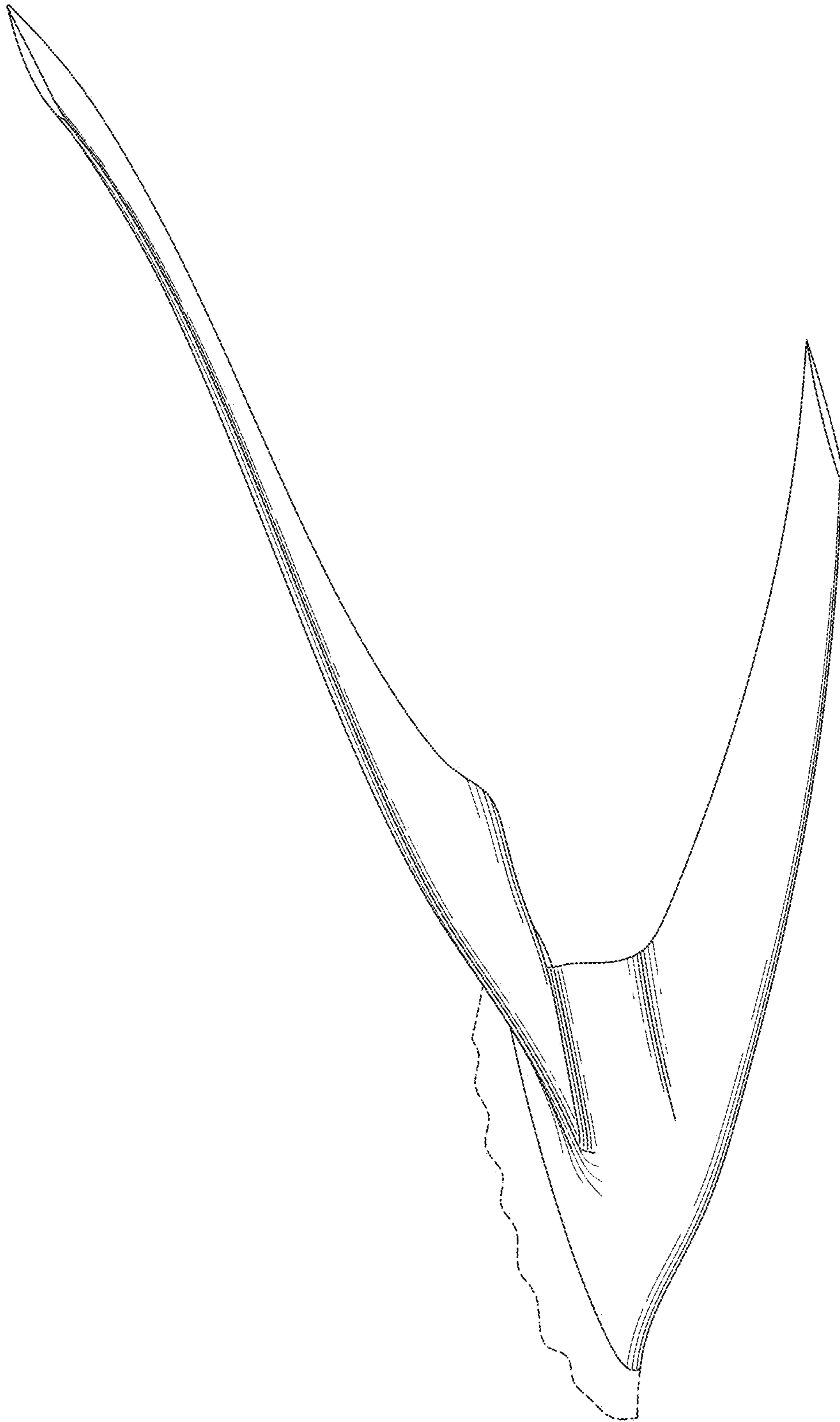


FIG. 18

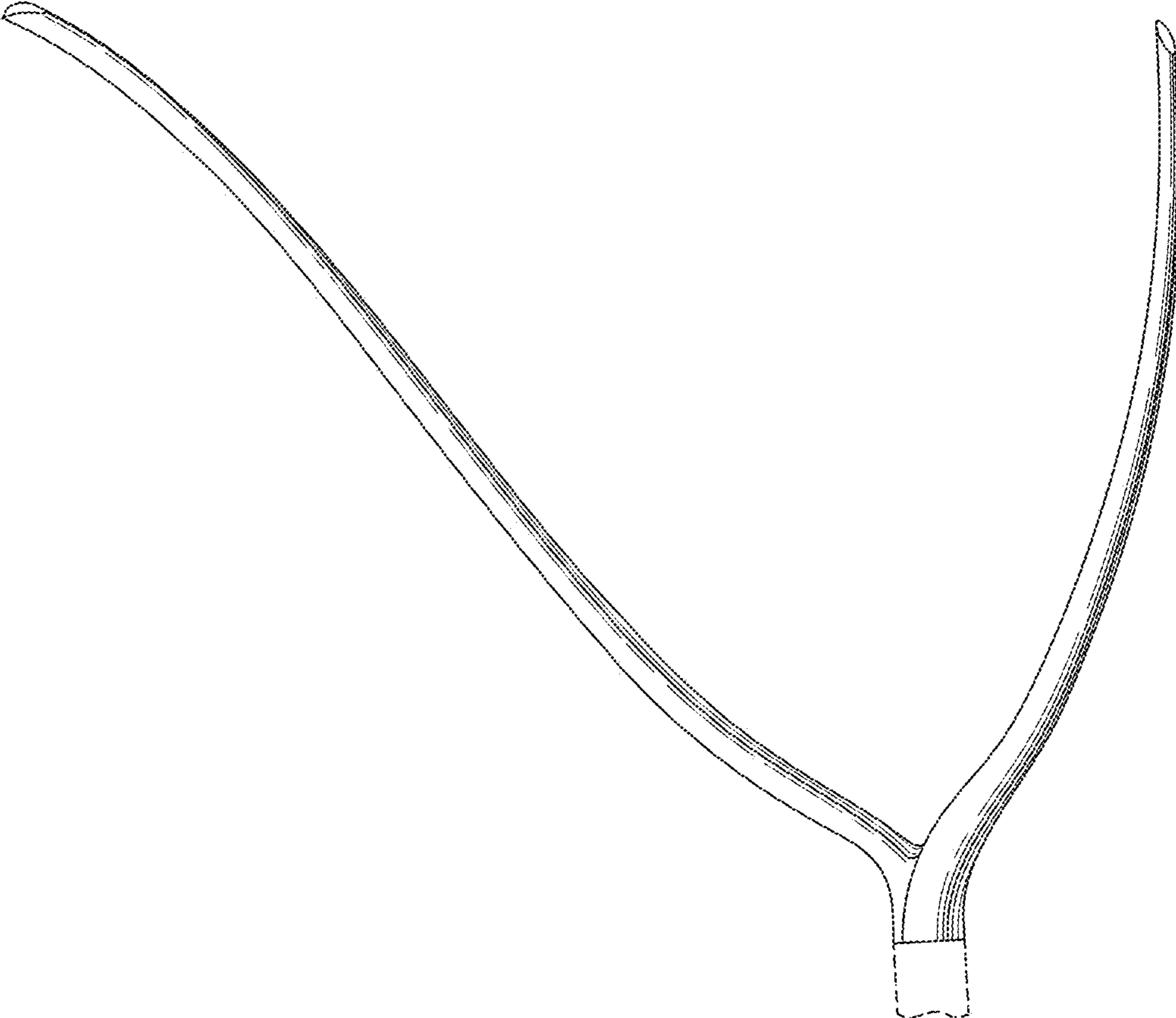


FIG. 19

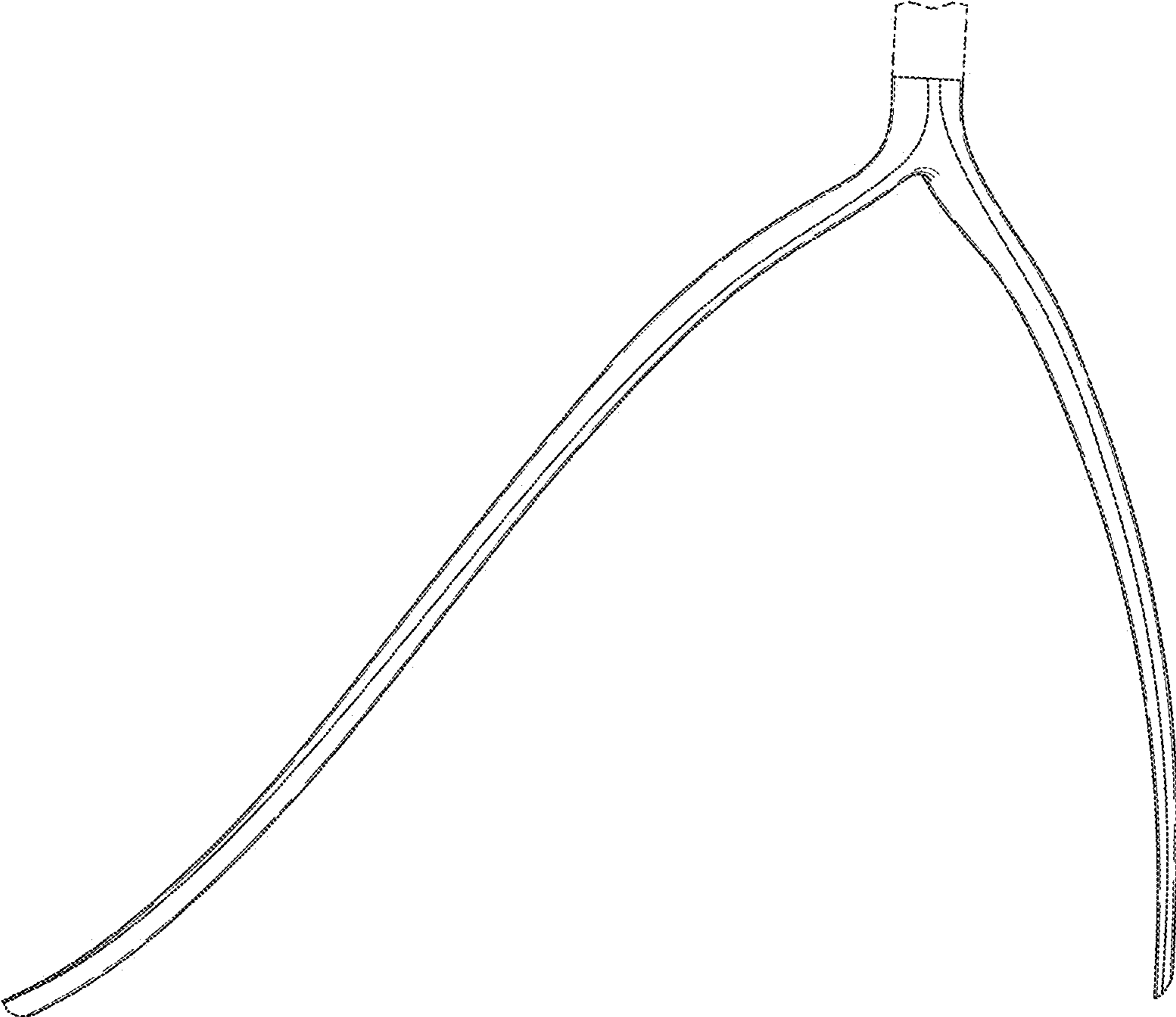


FIG. 20

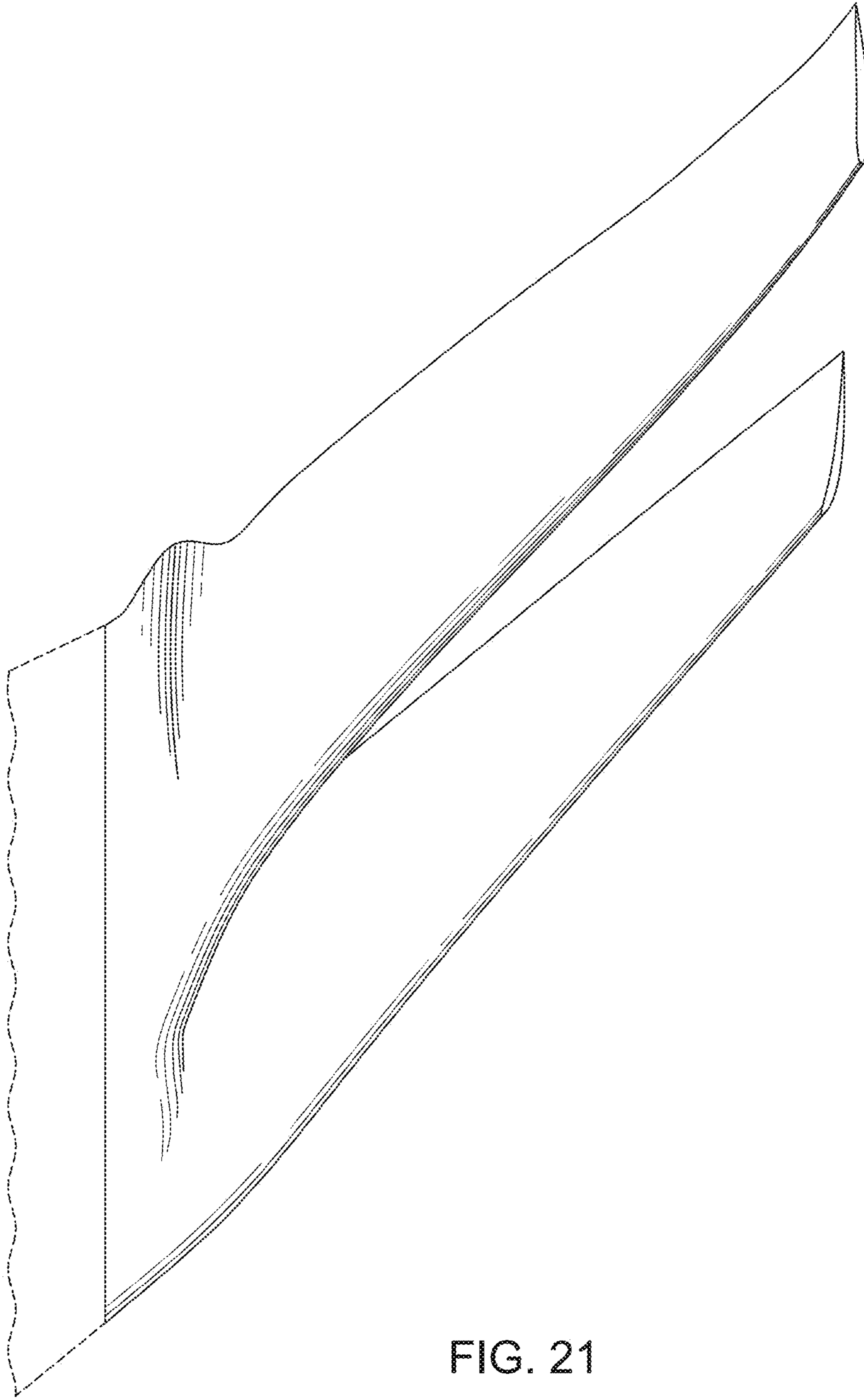


FIG. 21

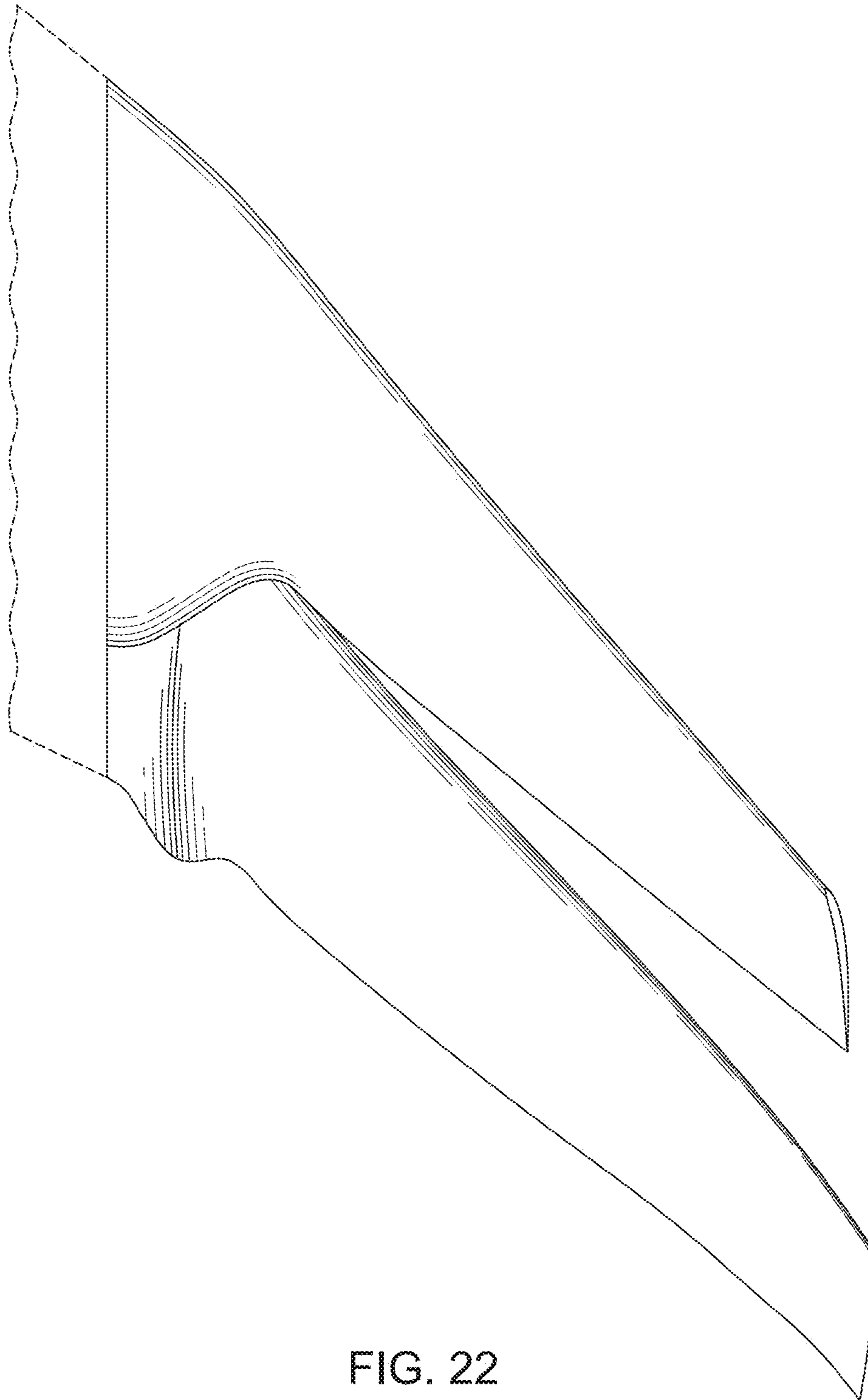


FIG. 22



FIG. 23

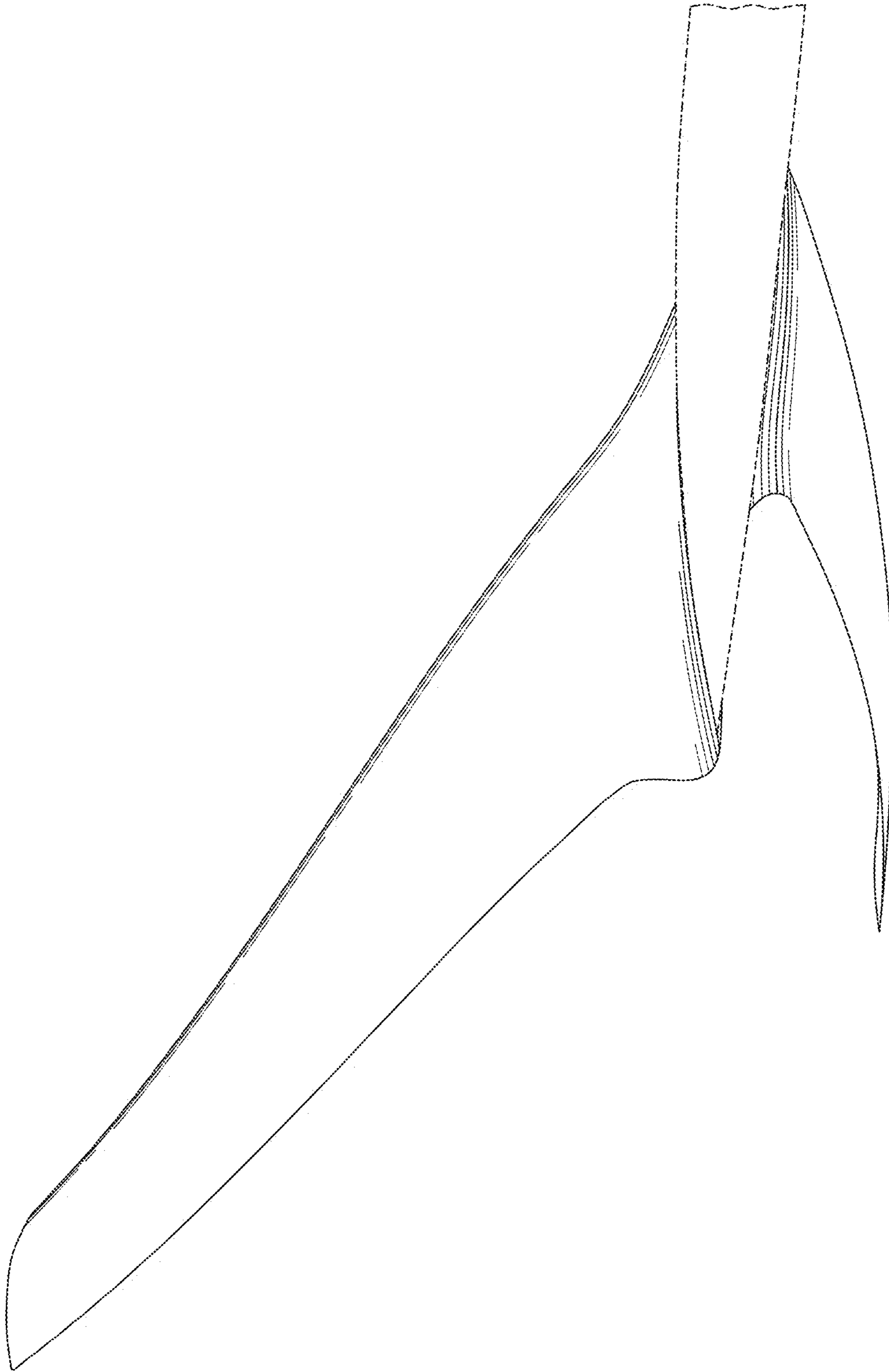


FIG. 24