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(12) **United States Design Patent** (10) **Patent No.:** **US D891,351 S**  
**Foskey et al.** (45) **Date of Patent:** **\*\* Jul. 28, 2020**

(54) **ROTOR BLADE**

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

(21) Appl. No.: **29/636,525**

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**Related U.S. Application Data**

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(51) **LOC (12) Cl.** ..... **12-16**

(52) **U.S. Cl.**  
USPC ..... **D12/214**

(58) **Field of Classification Search**  
USPC ..... D12/214, 317, 319, 344, 16.1, 328, 330, D12/345; D15/4, 5; D13/115; D21/441, D21/442; D23/411, 413  
CPC ..... B64C 11/00; B64C 11/02; B64C 11/16; B64C 27/08; B64C 39/024; B64C 2201/108  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

D172,121 S \* 5/1954 Apostolescu ..... D12/214  
4,976,587 A 12/1990 Johnston et al.  
D344,487 S \* 2/1994 Iwamoto ..... D12/214  
D439,324 S \* 3/2001 Wood ..... D23/413  
D517,986 S \* 3/2006 Wobben ..... D13/115  
7,594,625 B2 9/2009 Robertson et al.

D633,956 S \* 3/2011 Cheng ..... D21/442  
D639,239 S \* 6/2011 Gudewer ..... D13/115  
8,016,566 B2 9/2011 Agnihotri et al.  
D646,728 S \* 10/2011 Cheng ..... D21/442  
8,303,250 B2 11/2012 Mohammed et al.  
(Continued)

**FOREIGN PATENT DOCUMENTS**

EP 2078852 A2 7/2009  
EP 2341245 A2 7/2011  
(Continued)

**OTHER PUBLICATIONS**

CA Office Action, dated Dec. 3, 2019, by the CIPO, re CA Patent App No. 2,995,889.  
(Continued)

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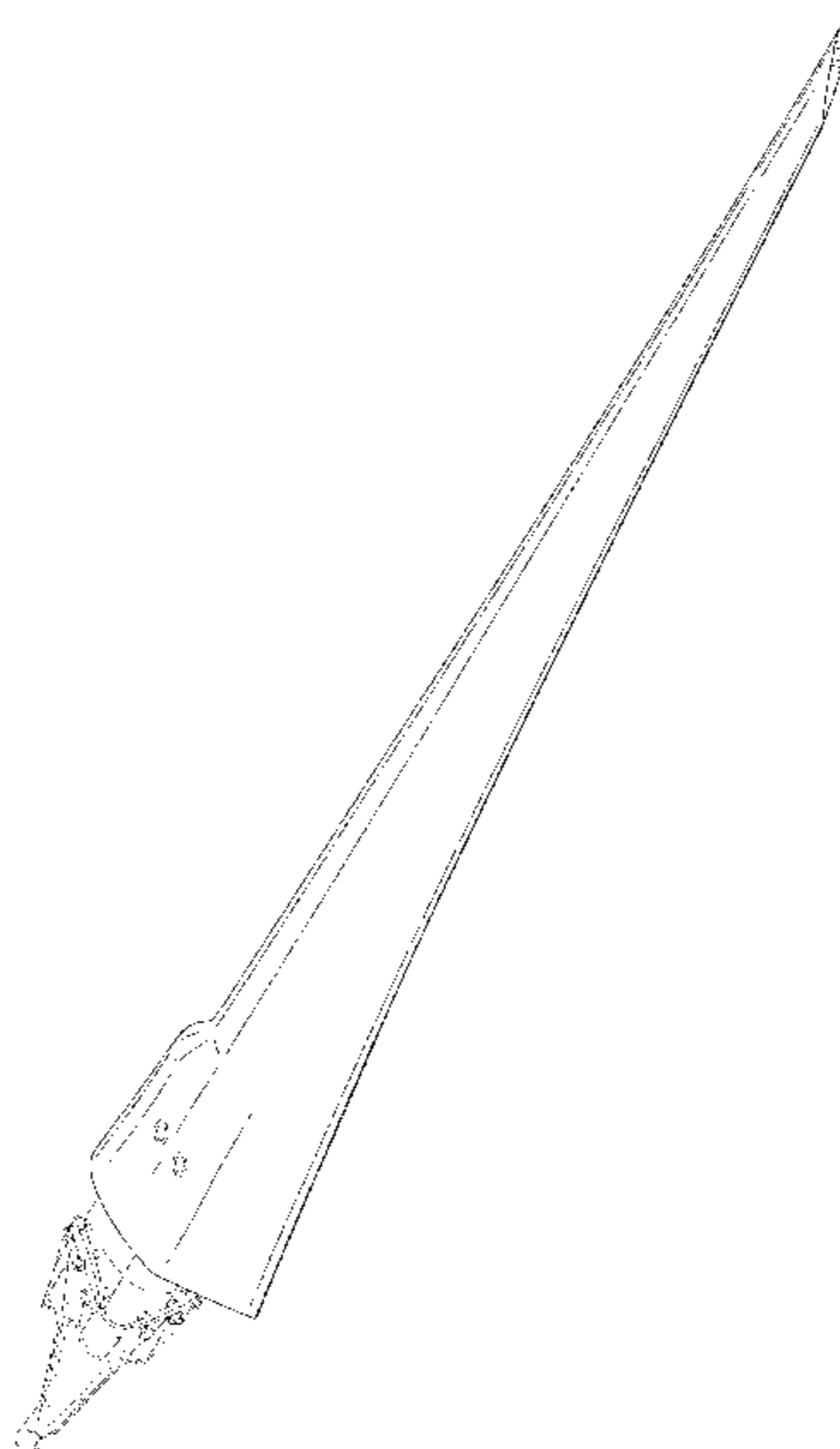
(57) **CLAIM**

The ornamental design for a rotor blade, as shown and described.

**DESCRIPTION**

FIG. 1 is a front perspective view of a rotor blade showing our new design;  
FIG. 2 is a front elevation view thereof;  
FIG. 3 is a rear elevation view thereof;  
FIG. 4 is a right side view thereof;  
FIG. 5 is a left side view thereof;  
FIG. 6 is a top view thereof;  
FIG. 7 is a bottom view thereof; and,  
FIG. 8 is a bottom perspective view thereof.  
The broken lines in the drawings depict portions of the rotor blade that form no part of the claimed design.

**1 Claim, 5 Drawing Sheets**



(56)

References Cited

U.S. PATENT DOCUMENTS

D678,837 S \* 3/2013 Ruiz de Gordejuela Diaz de Tuesta ..... D12/214  
 8,403,642 B2 3/2013 Carroll et al.  
 8,622,707 B2 1/2014 Mashue  
 D706,705 S \* 6/2014 Long ..... D12/345  
 D721,329 S \* 1/2015 Rebsdorf ..... D13/115  
 D721,800 S \* 1/2015 Busta ..... D23/413  
 9,056,674 B2 6/2015 White  
 D738,824 S \* 9/2015 Hoffmann ..... D13/115  
 9,120,564 B1 9/2015 White  
 D742,500 S \* 11/2015 Pan ..... D23/413  
 D743,530 S \* 11/2015 Pan ..... D23/413  
 D750,560 S \* 3/2016 Altmikus ..... D13/115  
 D792,318 S \* 7/2017 Du ..... D12/214  
 D806,227 S \* 12/2017 Ruan ..... D23/413  
 D807,823 S \* 1/2018 Suzuki ..... D13/115  
 10,604,234 B2 3/2020 Foskey et al.  
 2009/0252614 A1 \* 10/2009 Schibsbye ..... B23C 3/12  
 416/248  
 2010/0215494 A1 8/2010 Bech et al.  
 2013/0209264 A1 8/2013 Mashue et al.  
 2014/0271215 A1 9/2014 Measom et al.  
 2014/0301856 A1 10/2014 Oldroyd et al.

FOREIGN PATENT DOCUMENTS

EP 3415422 A1 12/2018  
 EP 3415422 BI 7/2019

ES 2333929 A1 3/2010  
 WO 2004067380 A1 8/2004  
 WO 2007105174 A1 9/2007  
 WO 2012051717 A1 4/2012  
 WO 2016075619 A1 5/2016

OTHER PUBLICATIONS

Notice of Allowance, dated Jan. 14, 2020, by the USPTO, re U.S. Appl. No. 15/843,039.  
 Communication under Rule 71(3) EPC—Intention to Grant, dated Apr. 17, 2019, by the EPO re EP Patent App No. 18157738.8.  
 Decision to Grant, dated Jul. 4, 2019, by the EPO, re EP Patent App No. 18157738.8.  
 European Search Report, dated Apr. 16, 2018, by the EPO, re EP Patent Application No. 18157738.8.  
 EP Exam Report, dated Oct. 25, 2018, by the EPO, re EP Patent App No. 18157738.8.  
 Defense News; Bell Helicopter ‘within days’ of first ground trials for V-280 Valor tilt-rotor; <https://www.defensenews.com/land/2017/09/08/bell-helicopter-within-days-of-first-ground-runs-for-v-280-valor/>; Sep. 7, 2017.  
 CA Office Action, dated Feb. 13, 2019, by the CIPO, re CA Patent App No. 2,995,889.  
 European Exam Report, dated May 8, 2018, by the EPO, re EP Application No. 18157738.8.  
 Office Action, dated Sep. 6, 2019, by the USPTO, re U.S. Appl. No. 15/843,039.

\* cited by examiner

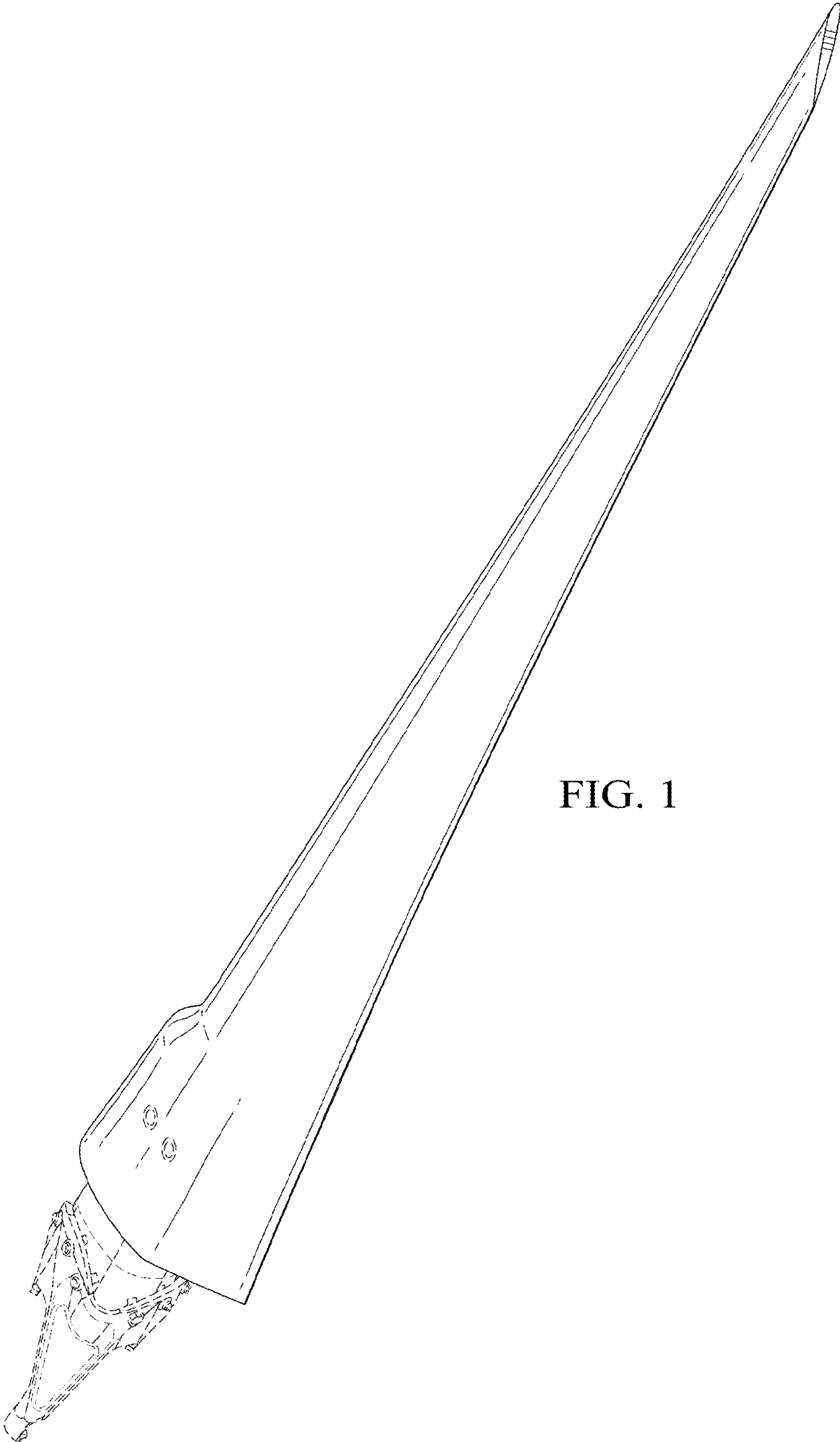


FIG. 1

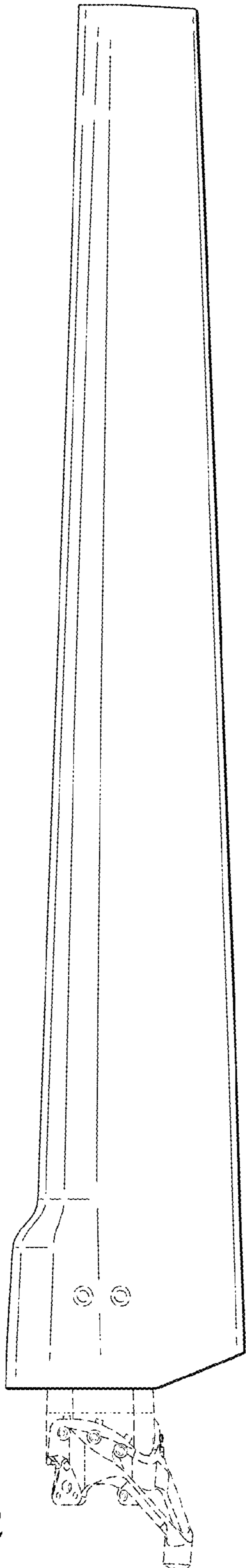


FIG. 2

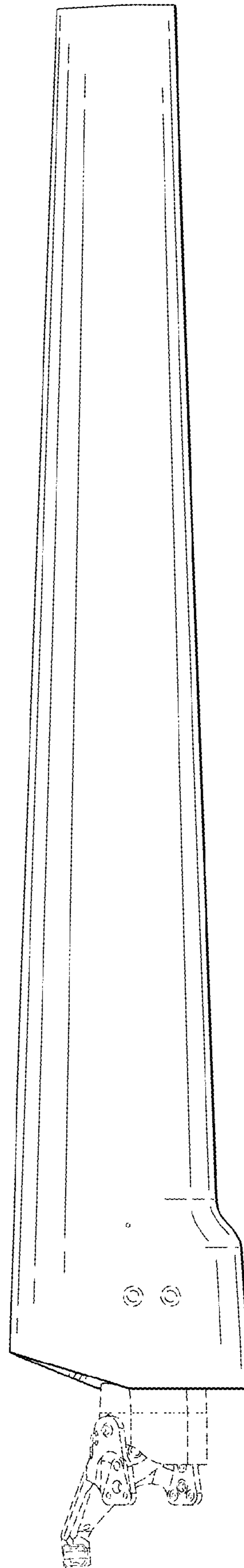


FIG. 3

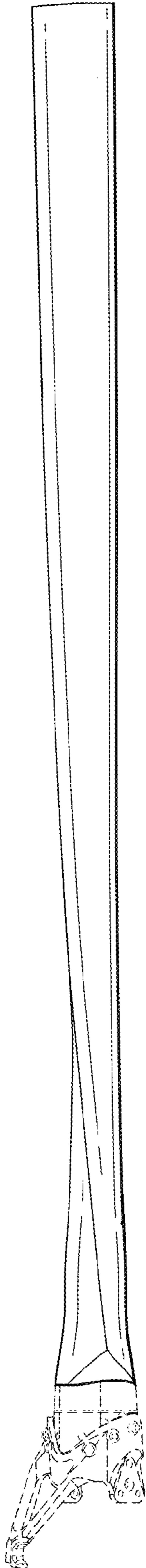


FIG. 4

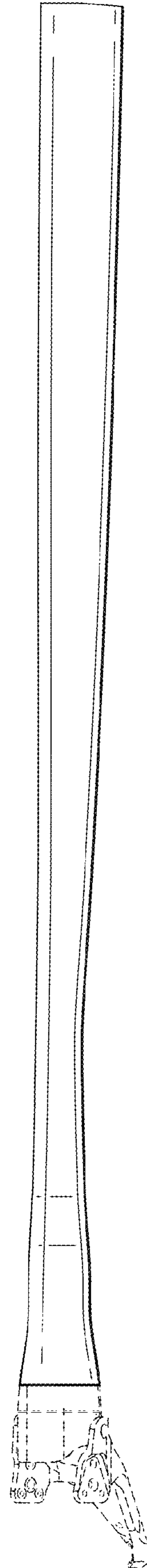


FIG. 5

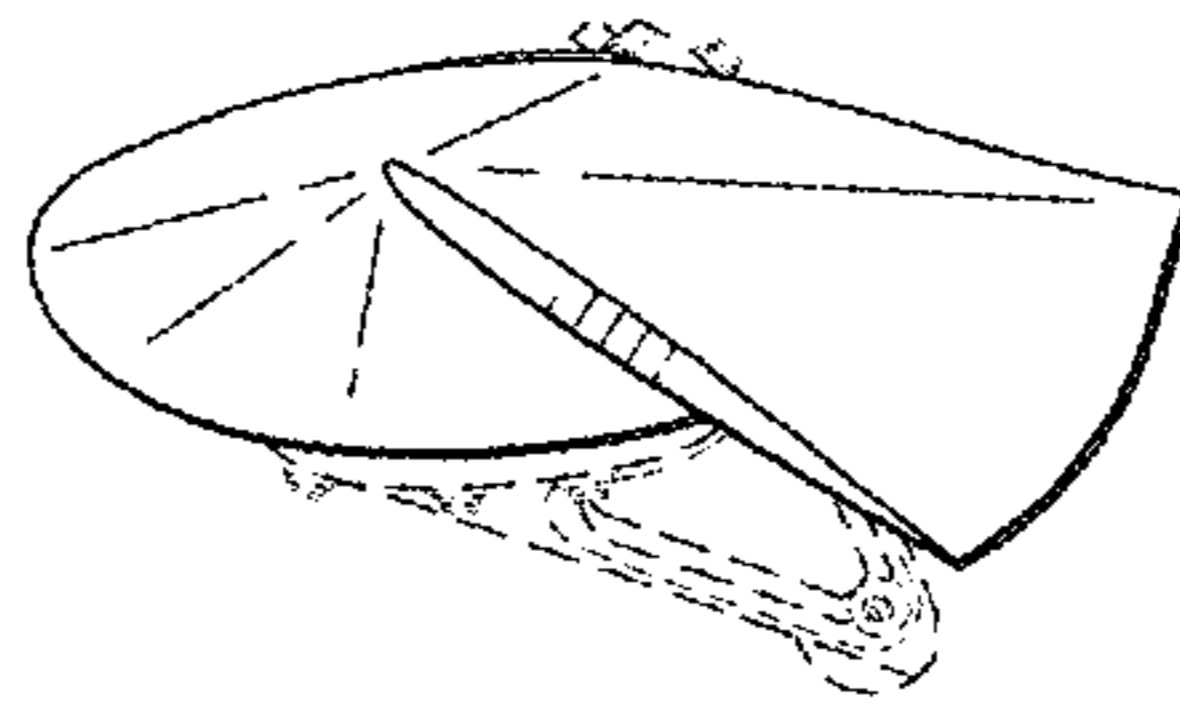


FIG. 6

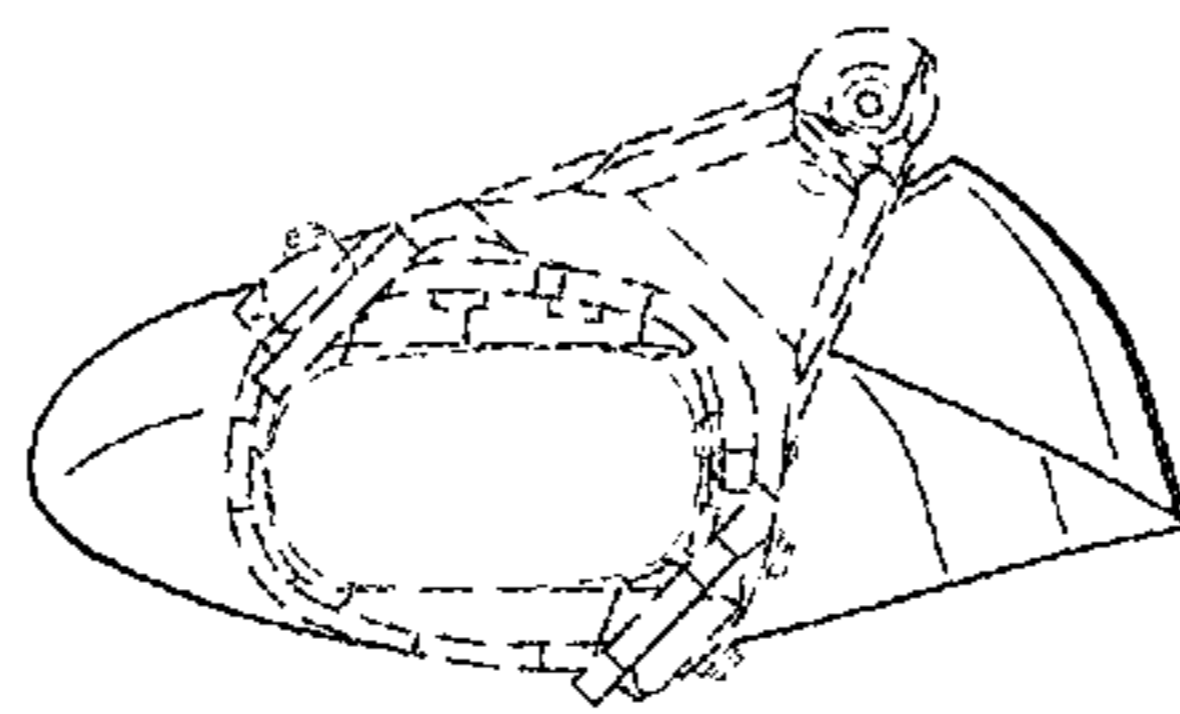


FIG. 7

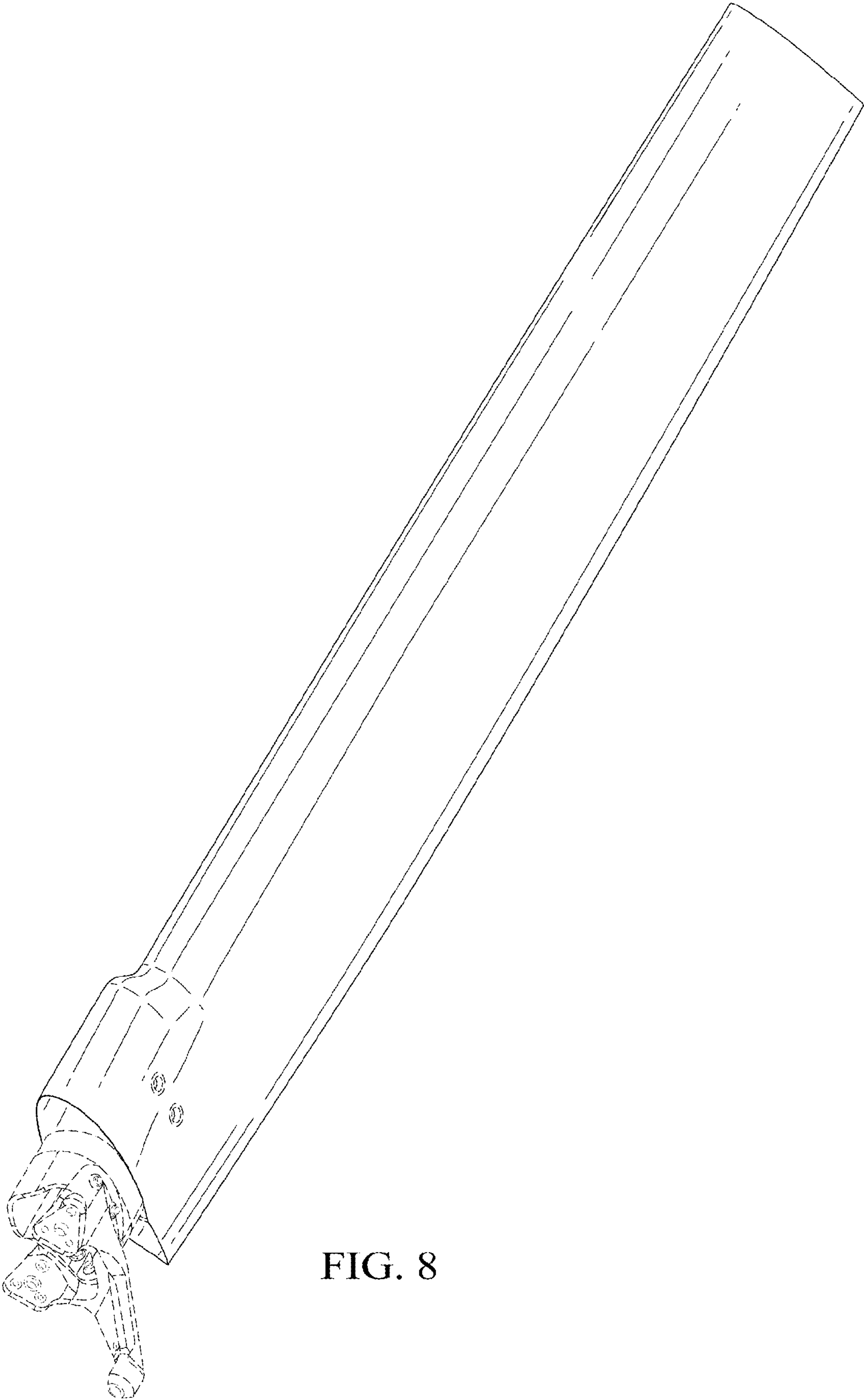


FIG. 8