



US00D998266S

(12) **United States Design Patent** (10) **Patent No.:** **US D998,266 S**  
**Tukiainen** (45) **Date of Patent:** **\*\* Sep. 5, 2023**

(54) **SEWER CLEANER PART**

(71) Applicant: **BOLDAN OY**, Rajamaki (FI)

(72) Inventor: **Joni Tukiainen**, Helsinki (FI)

(73) Assignee: **BOLDAN OY**, Rajamaki (FI)

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

(21) Appl. No.: **29/786,011**

(22) Filed: **May 28, 2021**

(30) **Foreign Application Priority Data**

Dec. 18, 2020 (EM) ..... 008340244-0001

Dec. 18, 2020 (EM) ..... 008340244-0002

(Continued)

(51) **LOC (14) Cl.** ..... **15-05**

(52) **U.S. Cl.**  
USPC ..... **D32/14**

(58) **Field of Classification Search**  
USPC ..... D32/14, 49, 72, 40, 43, 45, 46, 50-52;  
D21/460, 484-505, 561; D6/524; D28/7

(Continued)

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

2,931,094 A \* 4/1960 Teerlink ..... C21D 9/32  
29/893.34

3,853,509 A \* 12/1974 Leliaert ..... B01D 46/71  
55/378

(Continued)

**OTHER PUBLICATIONS**

Straight Spur Gear, posted Feb. 24, 2017 [online], [retrieved Dec. 29, 2022]. Retrieved from internet, [https://www.amazon.co.uk/10mmx46mmx20mm-Module-Teeth-Metal-Straight/dp/B00NQ0UJA2/ref=sr\\_1\\_21?crid=MX62D91X5CZF&keywords=spur+gear&qid=1672314647&sprefix=spur+gear%2Caps%2C225&sr=8-21](https://www.amazon.co.uk/10mmx46mmx20mm-Module-Teeth-Metal-Straight/dp/B00NQ0UJA2/ref=sr_1_21?crid=MX62D91X5CZF&keywords=spur+gear&qid=1672314647&sprefix=spur+gear%2Caps%2C225&sr=8-21) (Year: 2017).\*

(Continued)

*Primary Examiner* — Khawaja Anwar

*Assistant Examiner* — Taylor O Mortorff

(74) *Attorney, Agent, or Firm* — Jacobson Holman PLLC

(57) **CLAIM**

I claim the ornamental design for sewer cleaner part, as shown and described.

**DESCRIPTION**

FIG. 1 is a front perspective of a sewer cleaner part;  
 FIG. 2 is a back perspective view of FIG. 1;  
 FIG. 3 is a top plan view of FIG. 1;  
 FIG. 4 is a vertical side view of FIG. 1; and  
 FIG. 5 is a vertical side view of FIG. 1 slightly rotated;  
 FIG. 6 is a front perspective view of a sewer cleaner part with different arm shape;  
 FIG. 7 is a back perspective view of FIG. 6;  
 FIG. 8 is a top plan view of FIG. 6;  
 FIG. 9 is a vertical side view of FIG. 6; and  
 FIG. 10 is a vertical side view of FIG. 6 slightly rotated;  
 FIG. 11 is a front perspective of a sewer cleaner part with different arm shape;  
 FIG. 12 is a back perspective view of FIG. 11;  
 FIG. 13 is a top plan view of FIG. 11;  
 FIG. 14 is a vertical side view of FIG. 11; and  
 FIG. 15 is a vertical side view of FIG. 11 slightly rotated;  
 FIG. 16 is a front perspective of a sewer cleaner part with different arm shape;  
 FIG. 17 is a back perspective view of FIG. 16;  
 FIG. 18 is a top plan view of FIG. 16;  
 FIG. 19 is a vertical side view of FIG. 16; and  
 FIG. 20 is a vertical side view of FIG. 16 slightly rotated;  
 FIG. 21 is a front perspective of a sewer cleaner part with different arm shape;  
 FIG. 22 is a back perspective view of FIG. 21;  
 FIG. 23 is a top plan view of FIG. 21;  
 FIG. 24 is a vertical side view of FIG. 21; and  
 FIG. 25 is a vertical side view of FIG. 21 slightly rotated;  
 FIG. 26 is a front perspective of a sewer cleaner part with different arm shape;  
 FIG. 27 is a back perspective view of FIG. 26;  
 FIG. 28 is a top plan view of FIG. 26;  
 FIG. 29 is a vertical side view of FIG. 26; and,

(Continued)

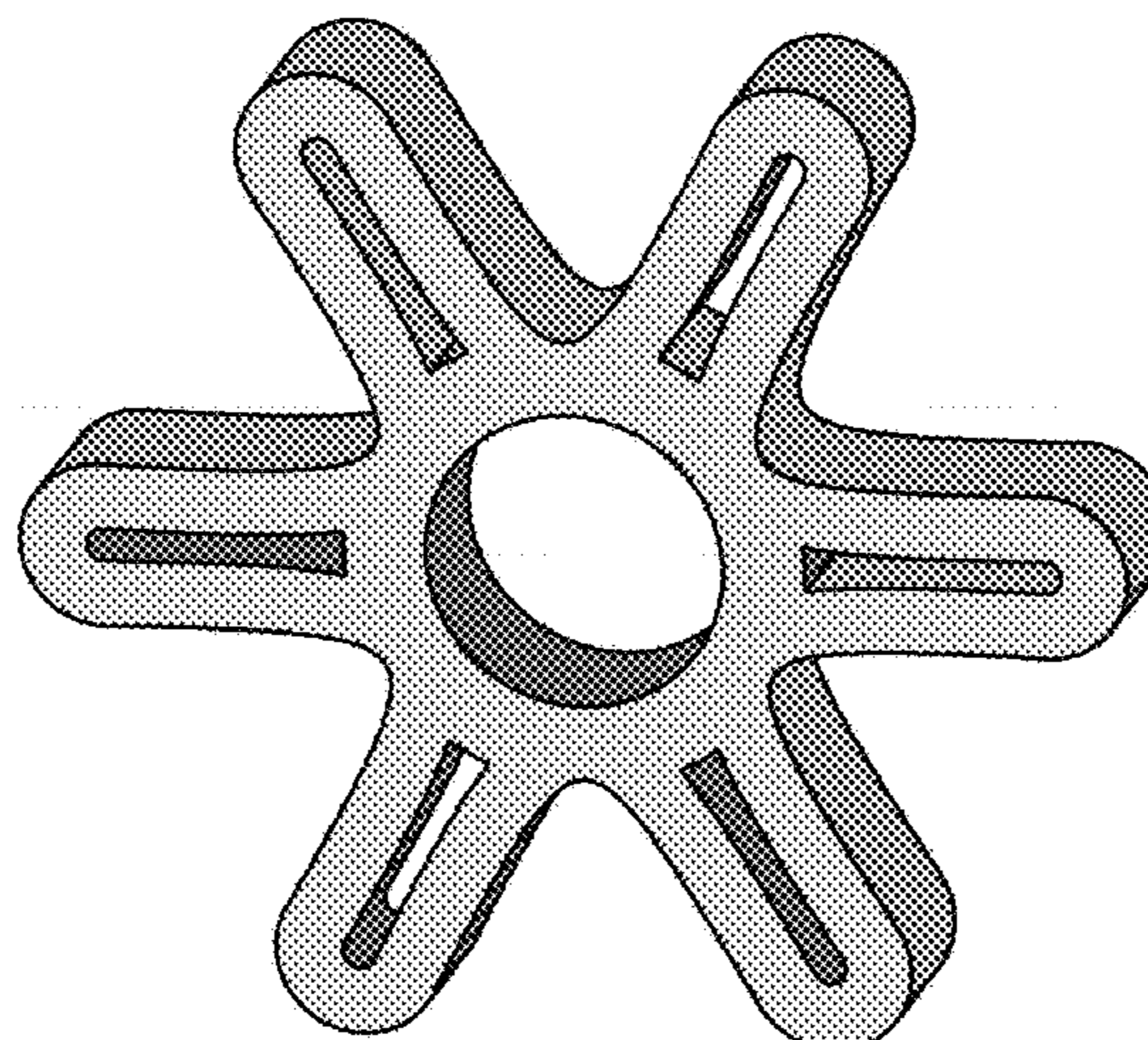


FIG. 30 is a vertical side view of FIG. 26 slightly rotated. The sewer cleaning parts rotate in a sewer pipe to clean out blockage. The six different embodiments shave slightly different arm shapes.

**1 Claim, 24 Drawing Sheets**

(30) **Foreign Application Priority Data**

Dec. 18, 2020 (EM) ..... 008340244-0003  
 Dec. 18, 2020 (EM) ..... 008340244-0004  
 Dec. 18, 2020 (EM) ..... 008340244-0005  
 Dec. 18, 2020 (EM) ..... 008340244-0006

(58) **Field of Classification Search**

CPC ..... F16H 55/171; F16H 7/023  
 See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,072,062 A \* 2/1978 Morling ..... A01D 45/023  
 198/604  
 4,218,932 A \* 8/1980 McComber ..... F16H 7/023  
 180/9.62  
 4,353,705 A \* 10/1982 Scott-Jackson ..... F16H 57/0025  
 474/902  
 D271,817 S \* 12/1983 Collin ..... D32/40

D281,794 S \* 12/1985 Short ..... D21/489  
 5,137,500 A \* 8/1992 Lhotak ..... E05F 15/684  
 474/152  
 5,858,039 A \* 1/1999 Schumann ..... B01D 46/08  
 55/378  
 5,924,945 A \* 7/1999 Ball ..... F16C 17/04  
 474/45  
 D437,972 S \* 2/2001 Harty ..... D28/7  
 D467,629 S \* 12/2002 Manville ..... D21/496  
 D468,778 S \* 1/2003 Manville ..... D21/489  
 D469,822 S \* 2/2003 Manville ..... D21/489  
 D470,194 S \* 2/2003 Manville ..... D21/496  
 D472,281 S \* 3/2003 Manville ..... D21/496  
 D472,589 S \* 4/2003 Manville ..... D21/493  
 D501,896 S \* 2/2005 Manville ..... D21/490  
 D738,439 S \* 9/2015 Kanbar ..... D21/493  
 D781,400 S \* 3/2017 Montoya ..... D23/260  
 D865,074 S \* 10/2019 Holman ..... D21/492  
 2005/0083777 A1 \* 4/2005 Browne ..... A47J 43/1093  
 366/129  
 2018/0354022 A1 \* 12/2018 Ross ..... B25B 15/005

OTHER PUBLICATIONS

Tooth Spur Gear, posted Jun. 15, 2017 [online], [retrieved Dec. 29, 2022]. Retrieved from internet, [https://www.amazon.com/Lippert-Components-122739-Tooth-Gear-12/dp/B077SS3BW9/ref=sr\\_1\\_18?crid=2IFPCR8V7TLOM&keywords=spur+gear+small&qid=1672314812&sprefix=spur+gear+small%2Caps%2C97&sr=8-18](https://www.amazon.com/Lippert-Components-122739-Tooth-Gear-12/dp/B077SS3BW9/ref=sr_1_18?crid=2IFPCR8V7TLOM&keywords=spur+gear+small&qid=1672314812&sprefix=spur+gear+small%2Caps%2C97&sr=8-18) (Year: 2017).\*

\* cited by examiner



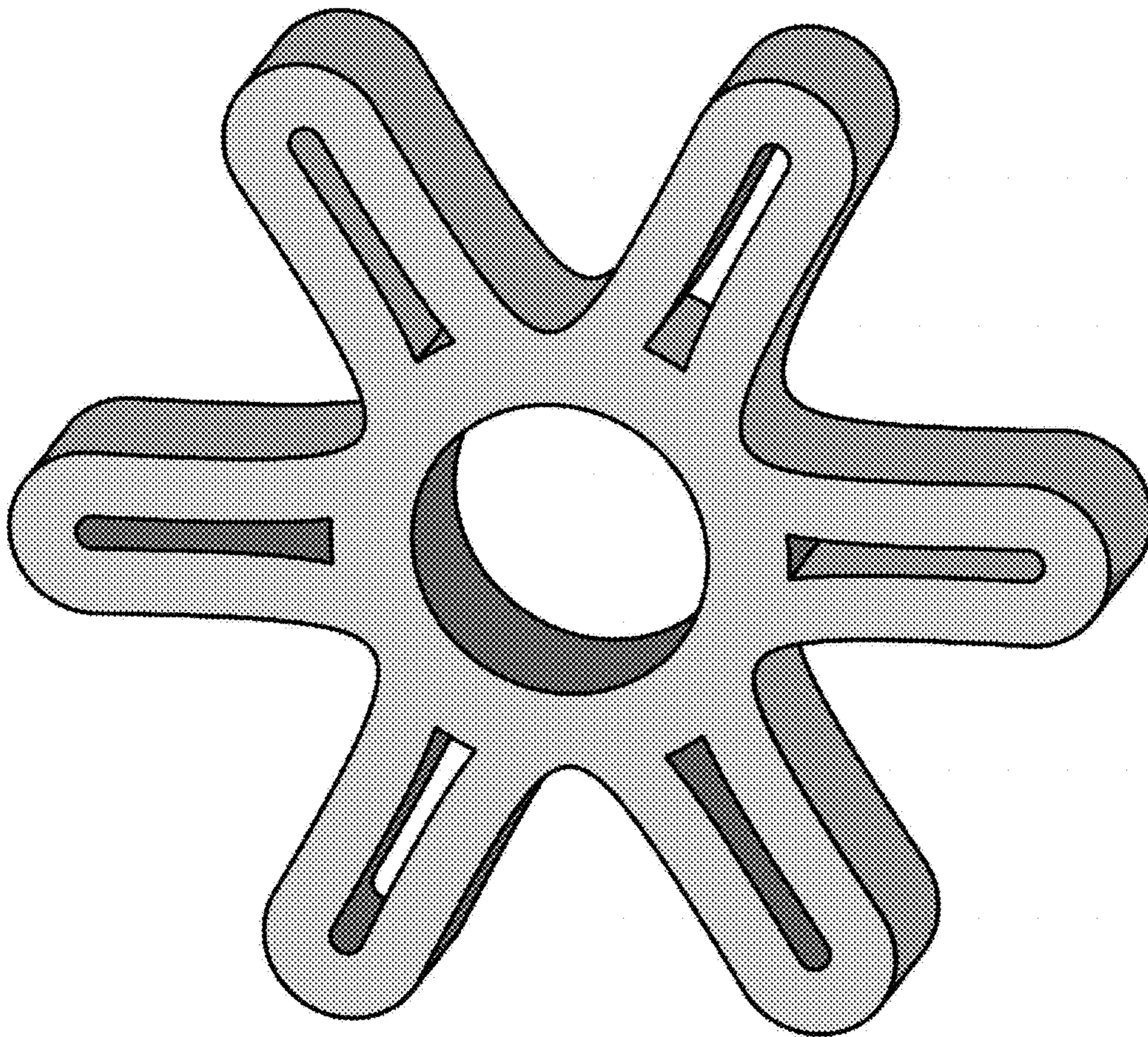


FIG. 1

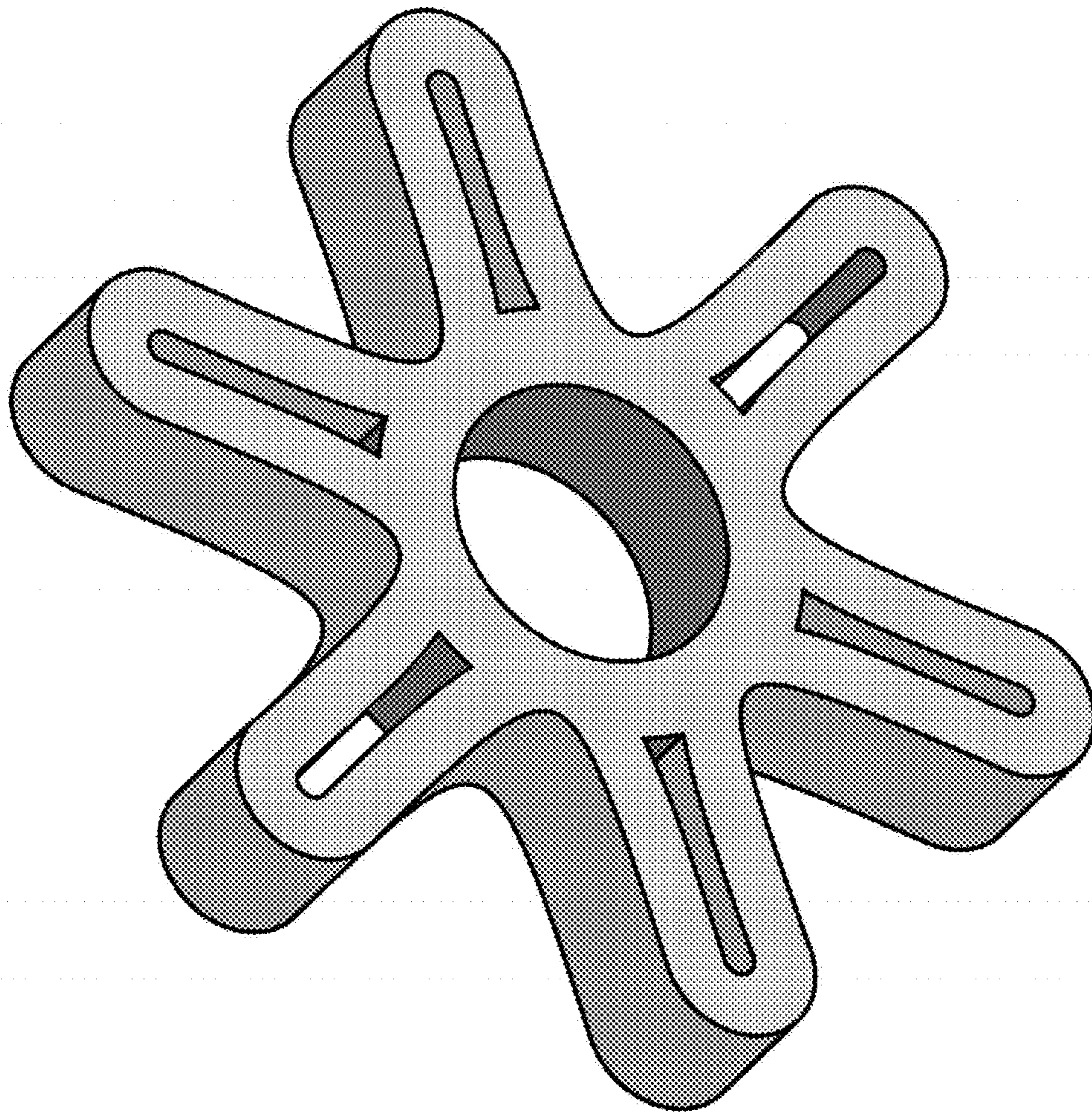


FIG. 2



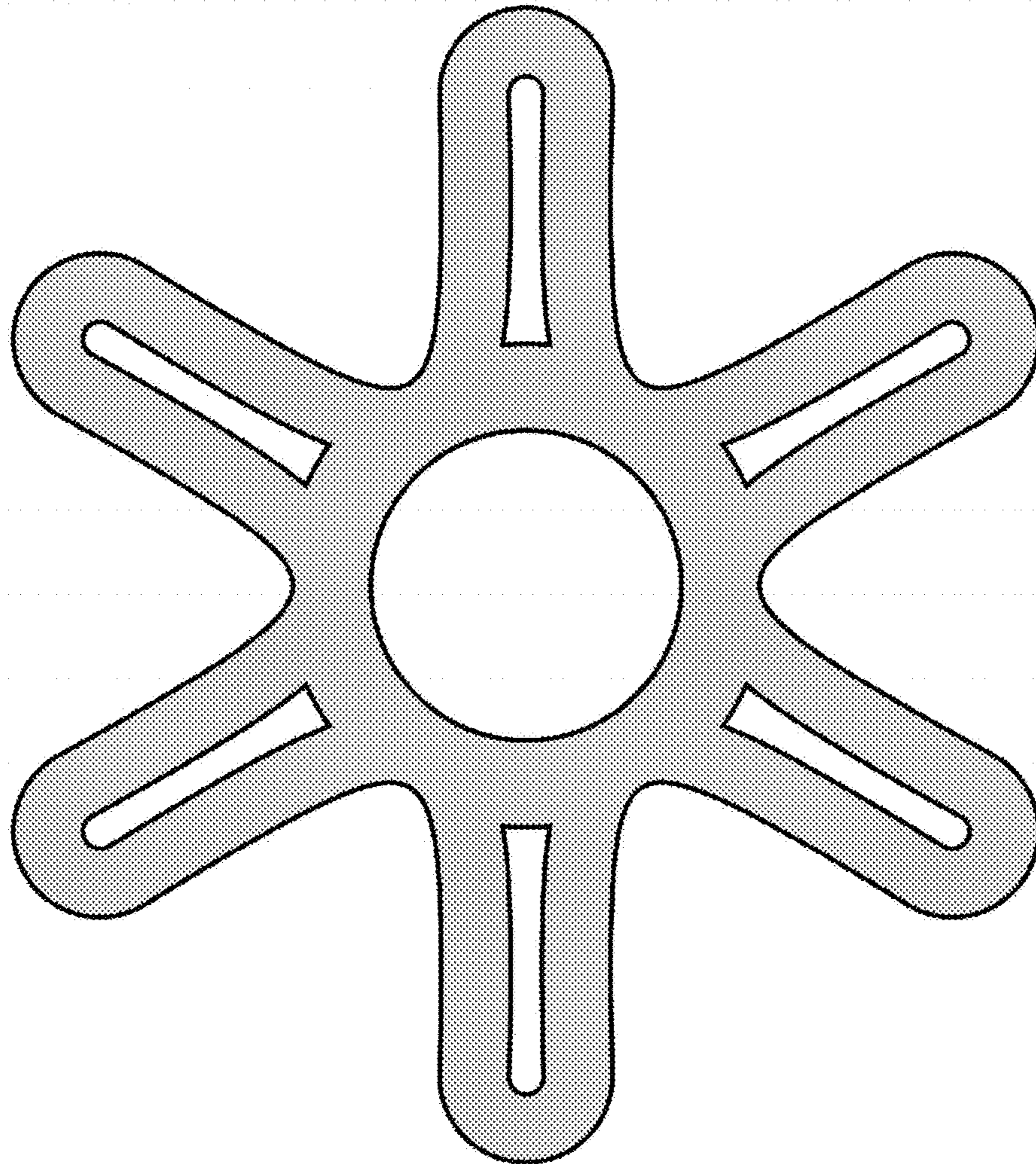


FIG. 3

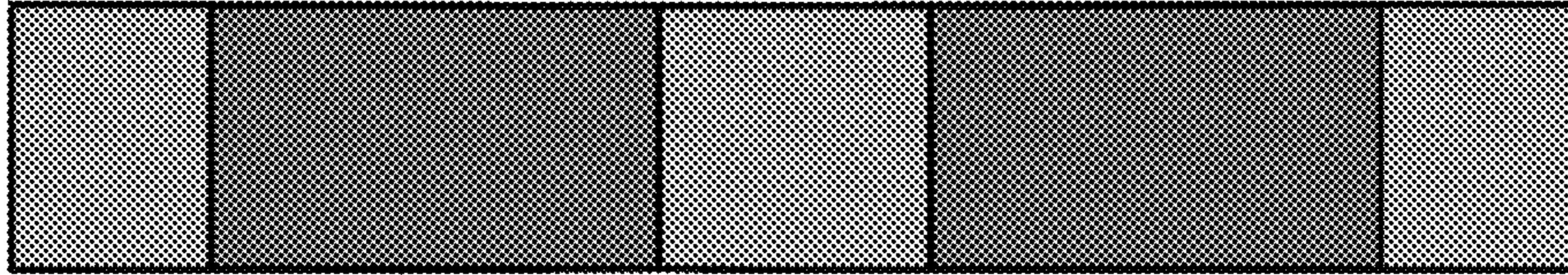


FIG. 4

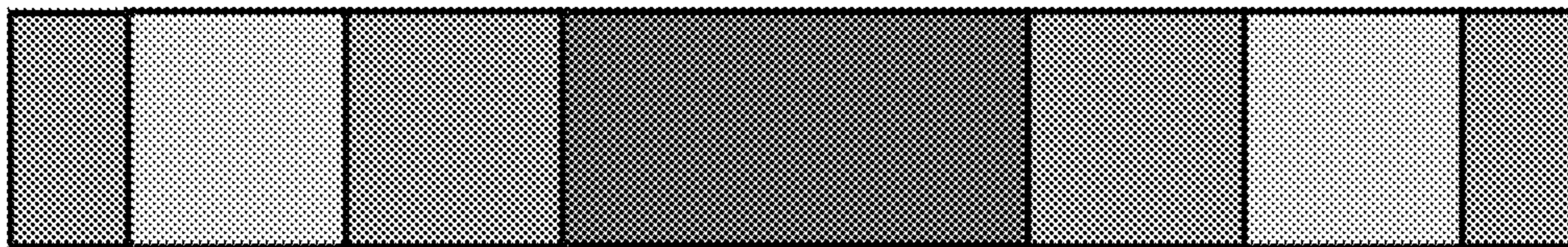


FIG. 5



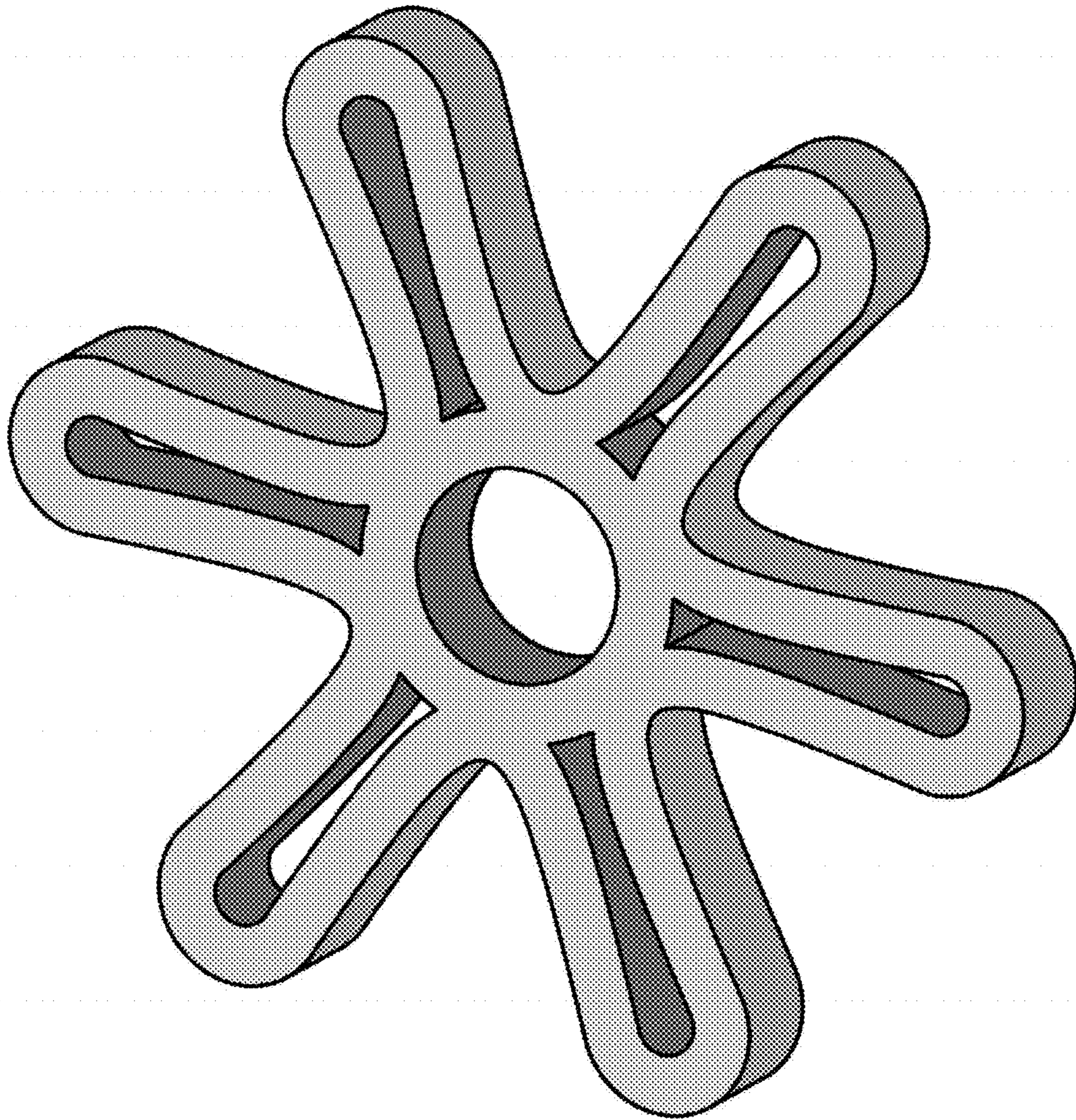


FIG. 6



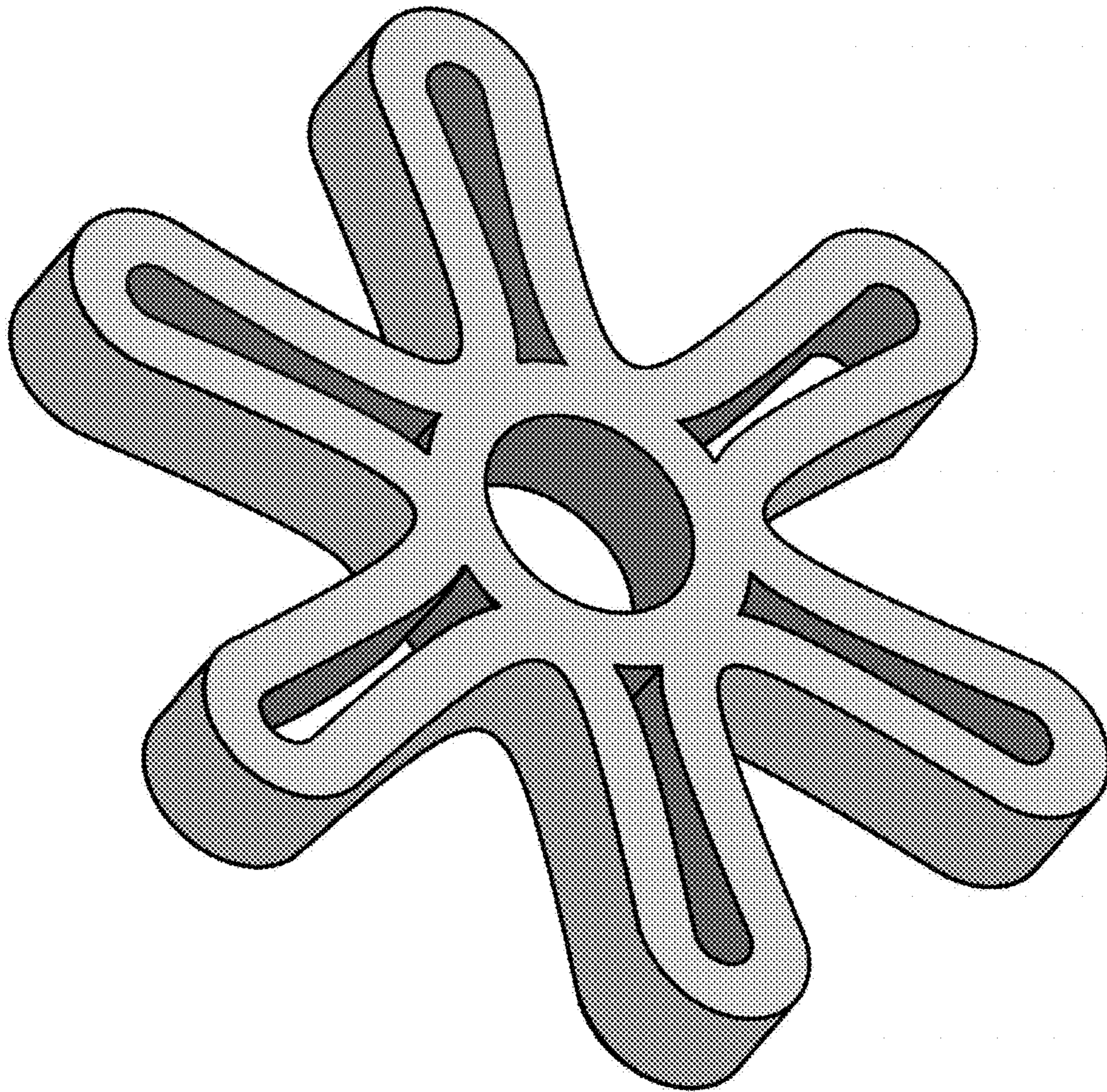


FIG. 7



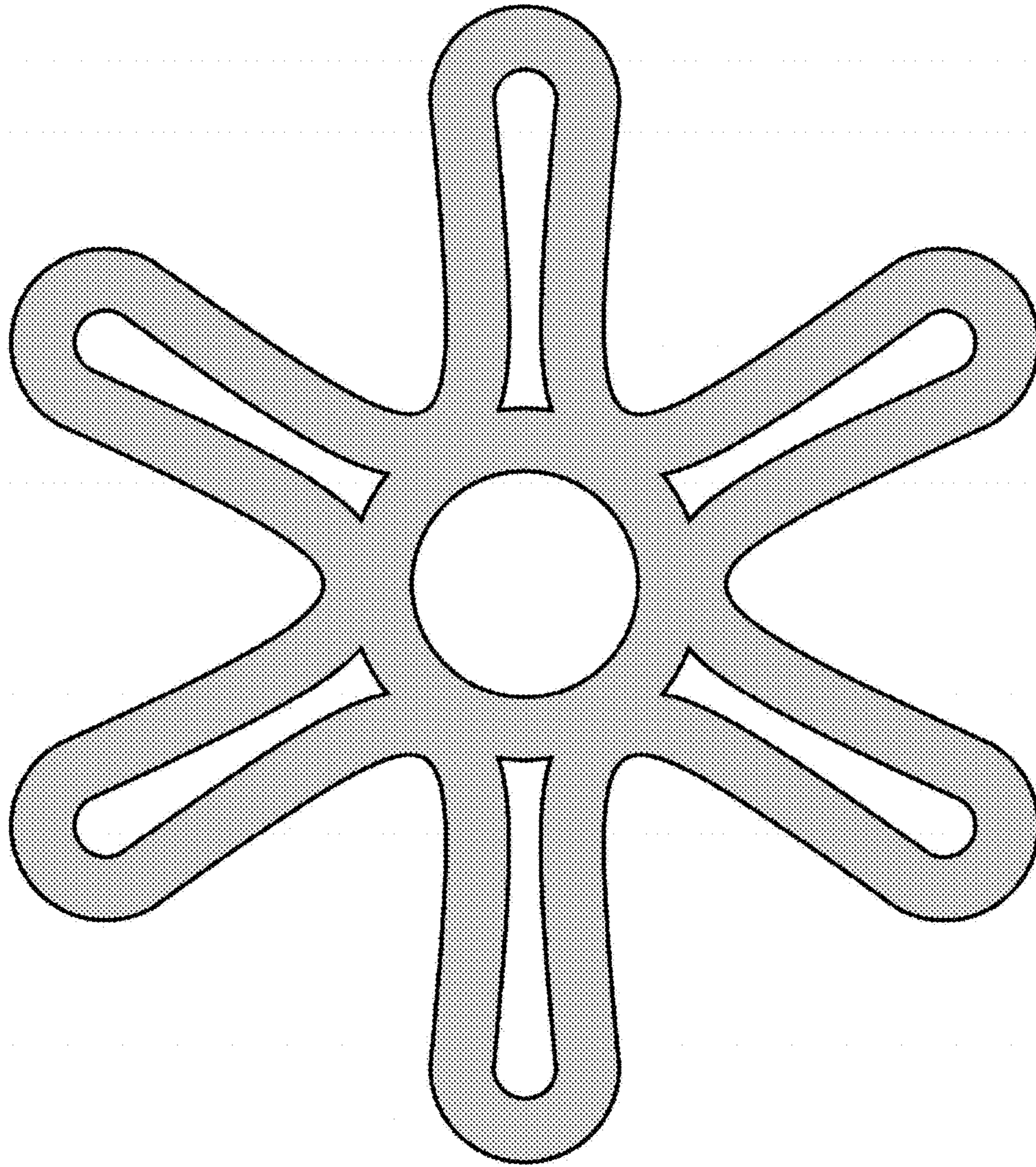


FIG. 8

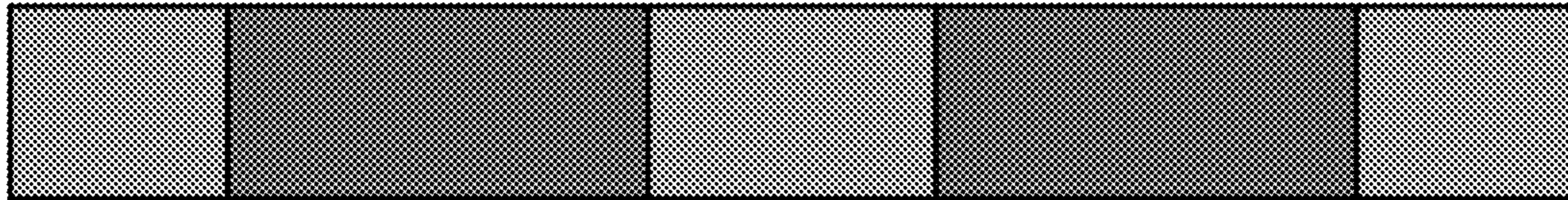


FIG. 9

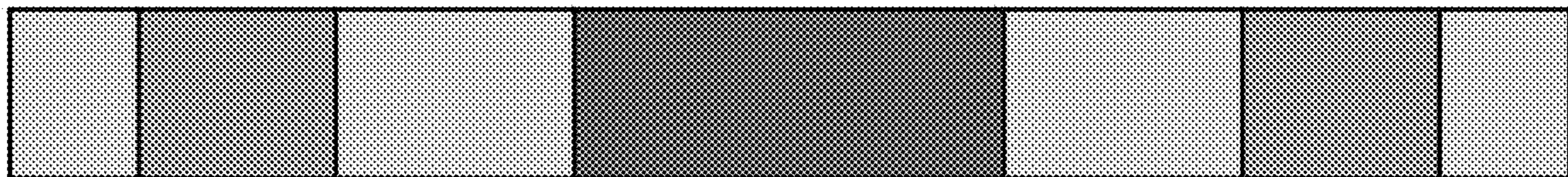


FIG. 10



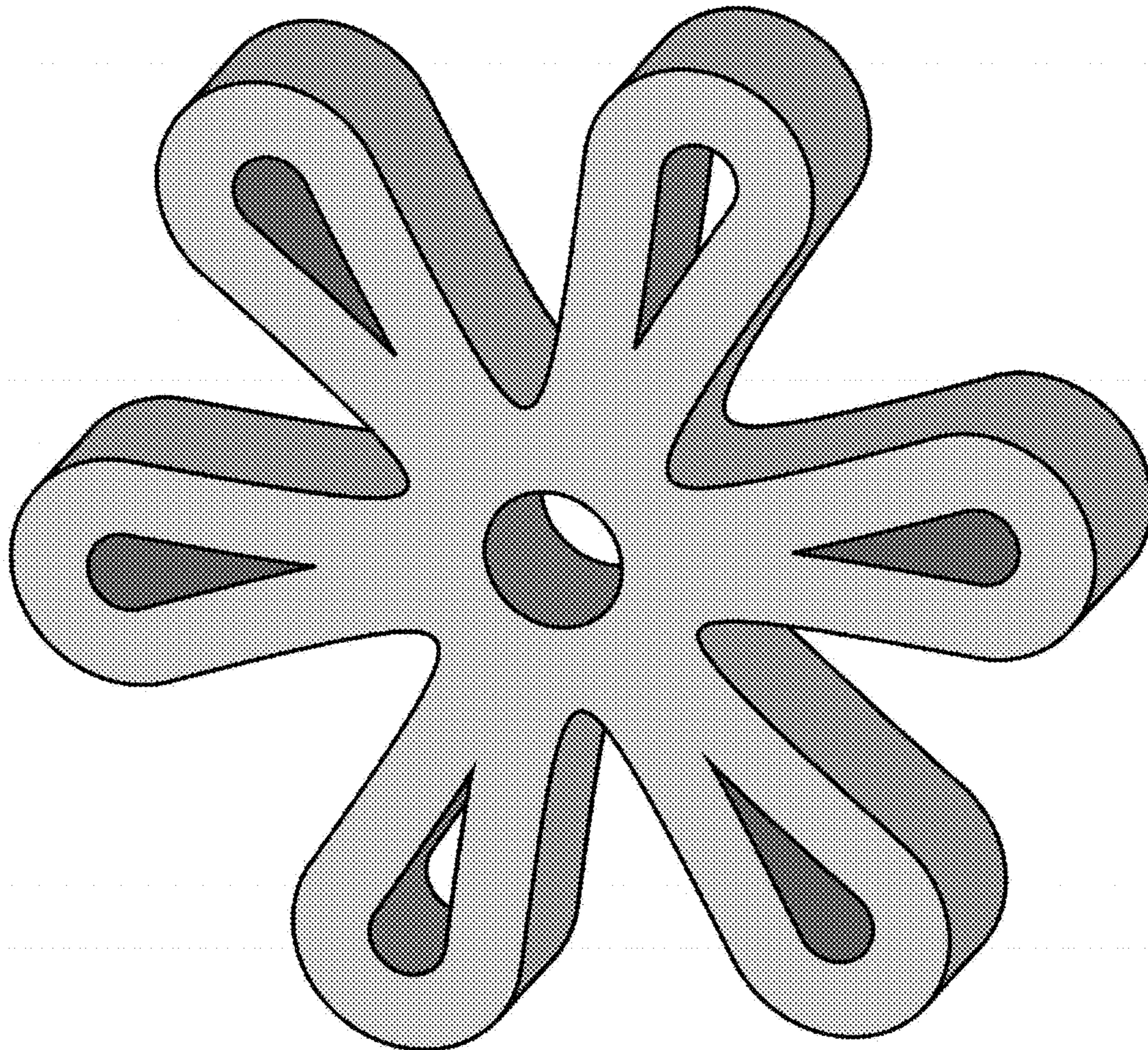


FIG. 11



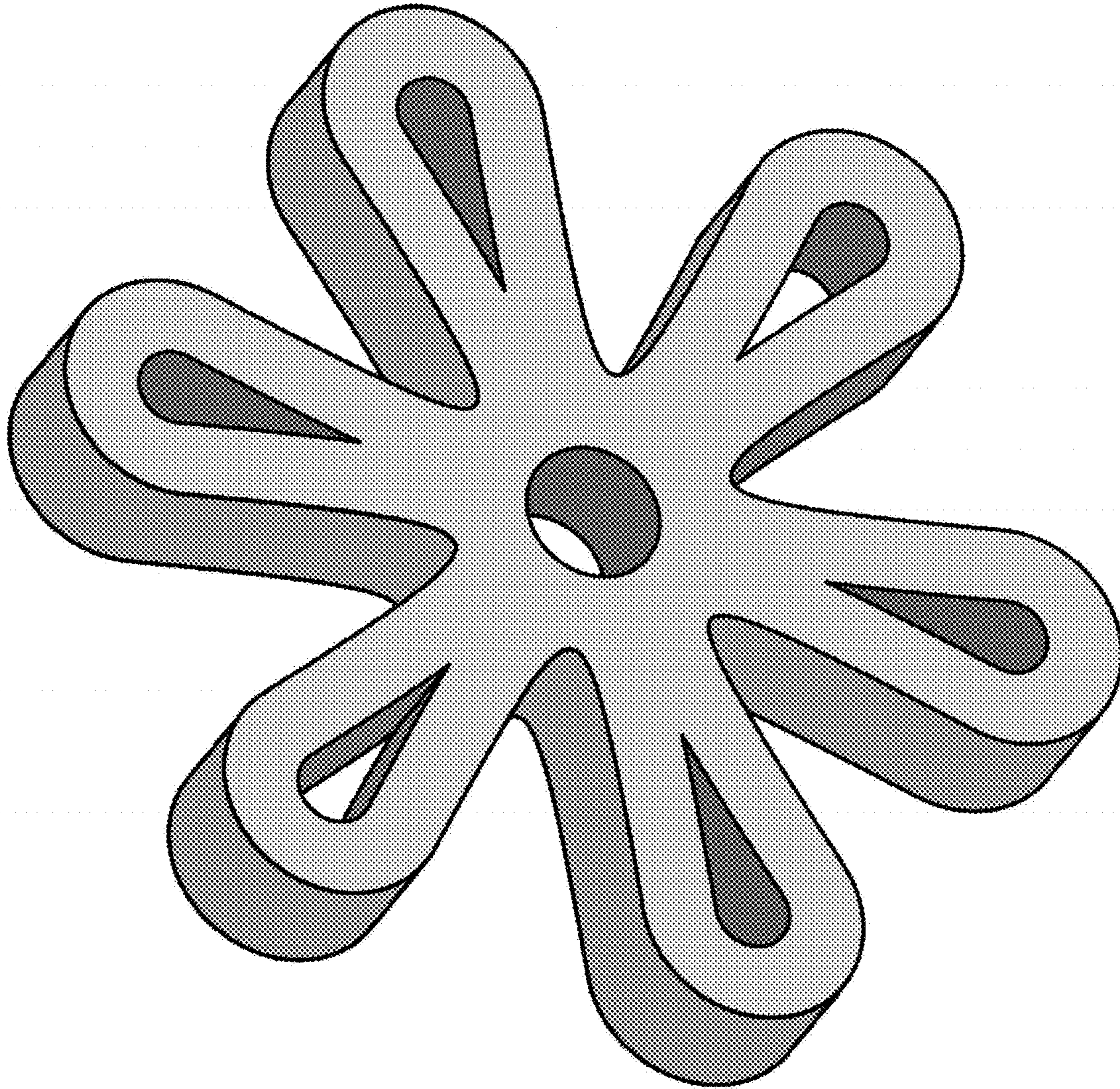


FIG. 12



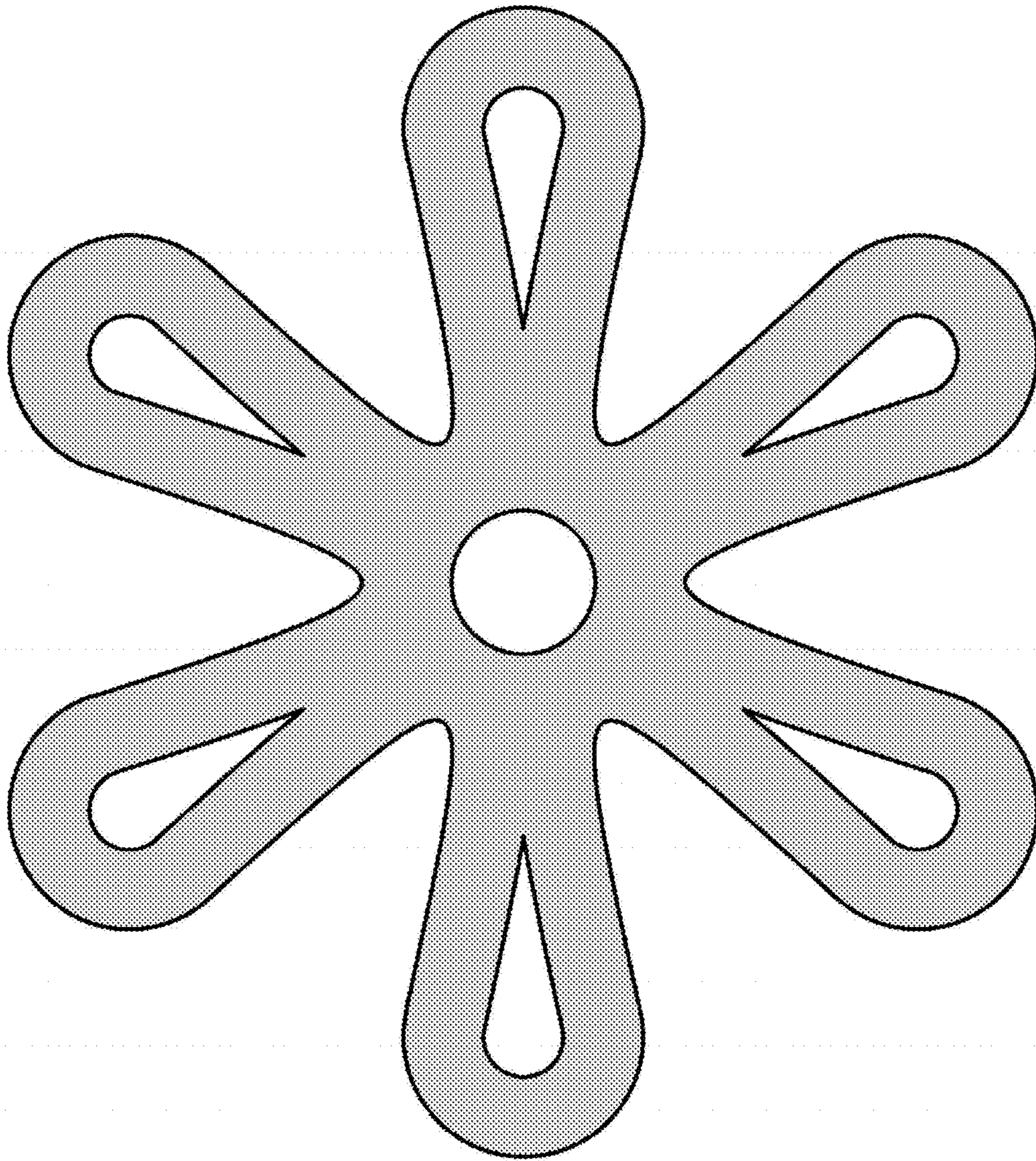


FIG. 13

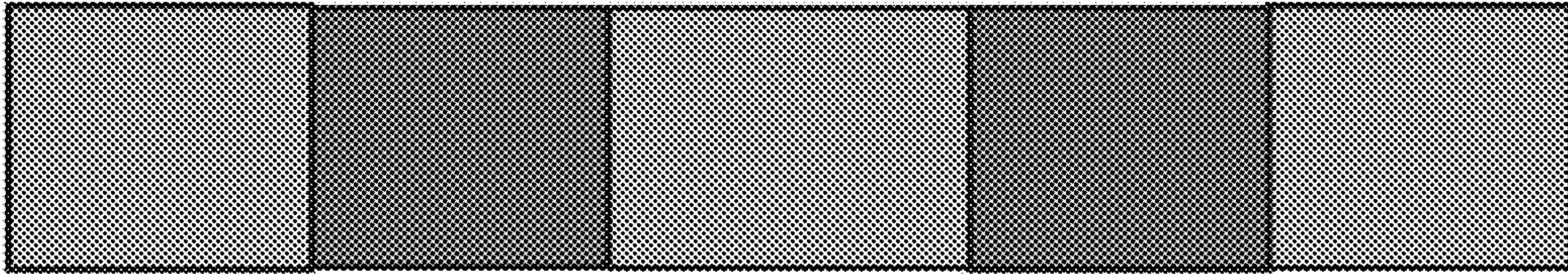


FIG. 14

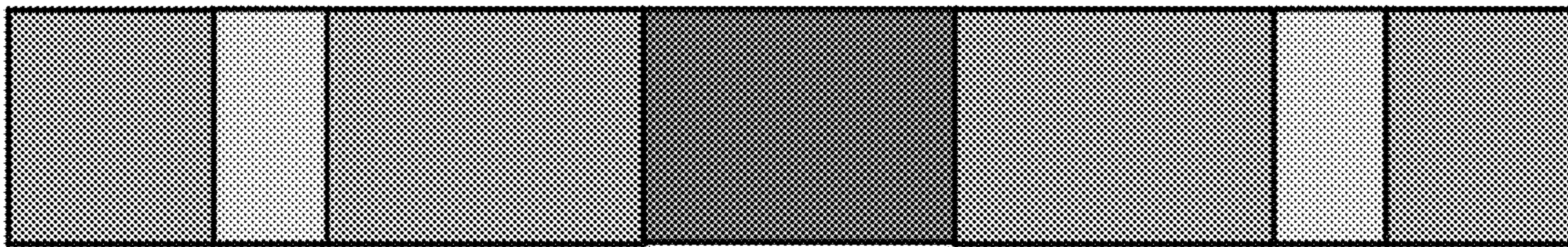


FIG. 15



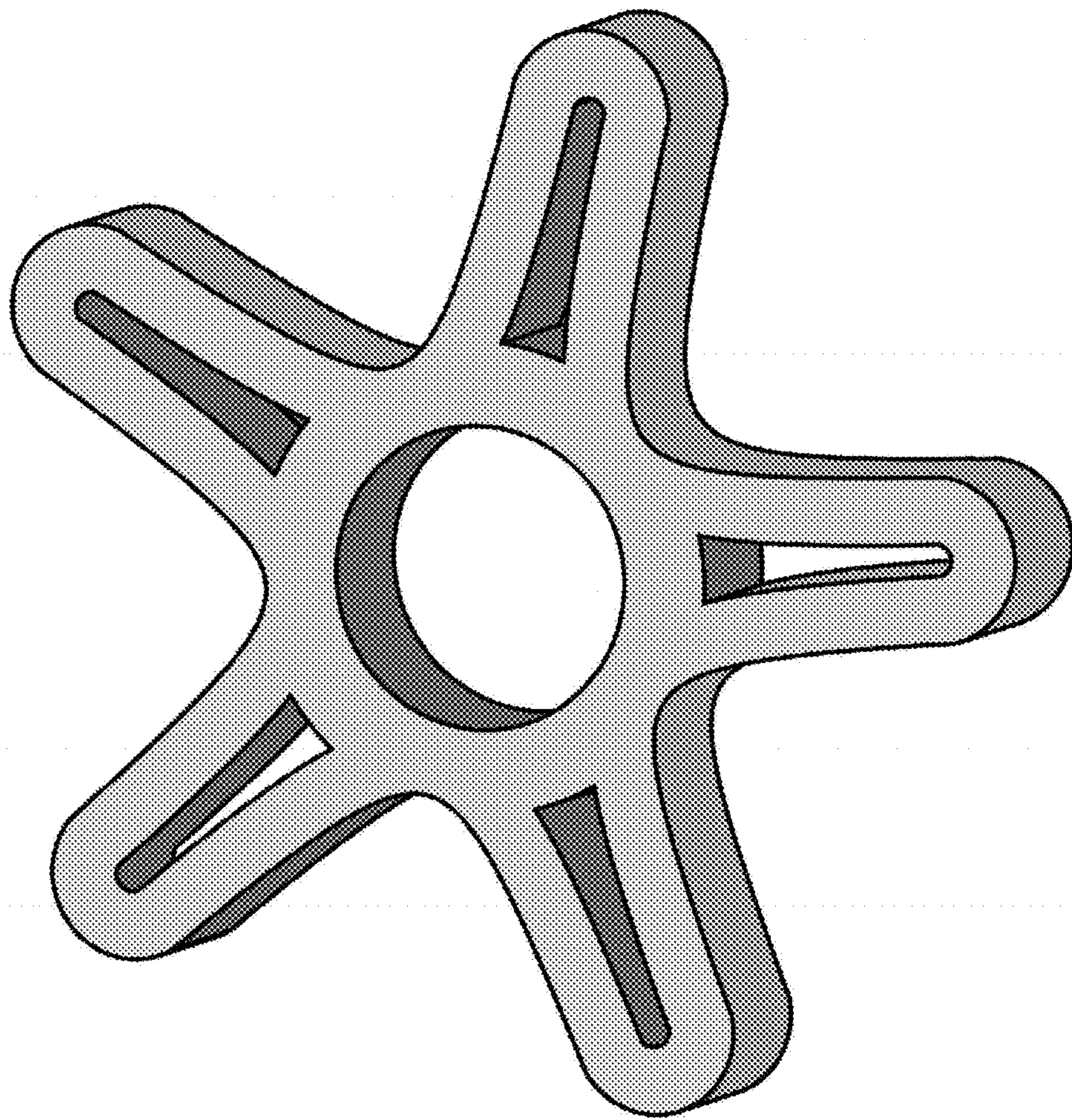


FIG. 16

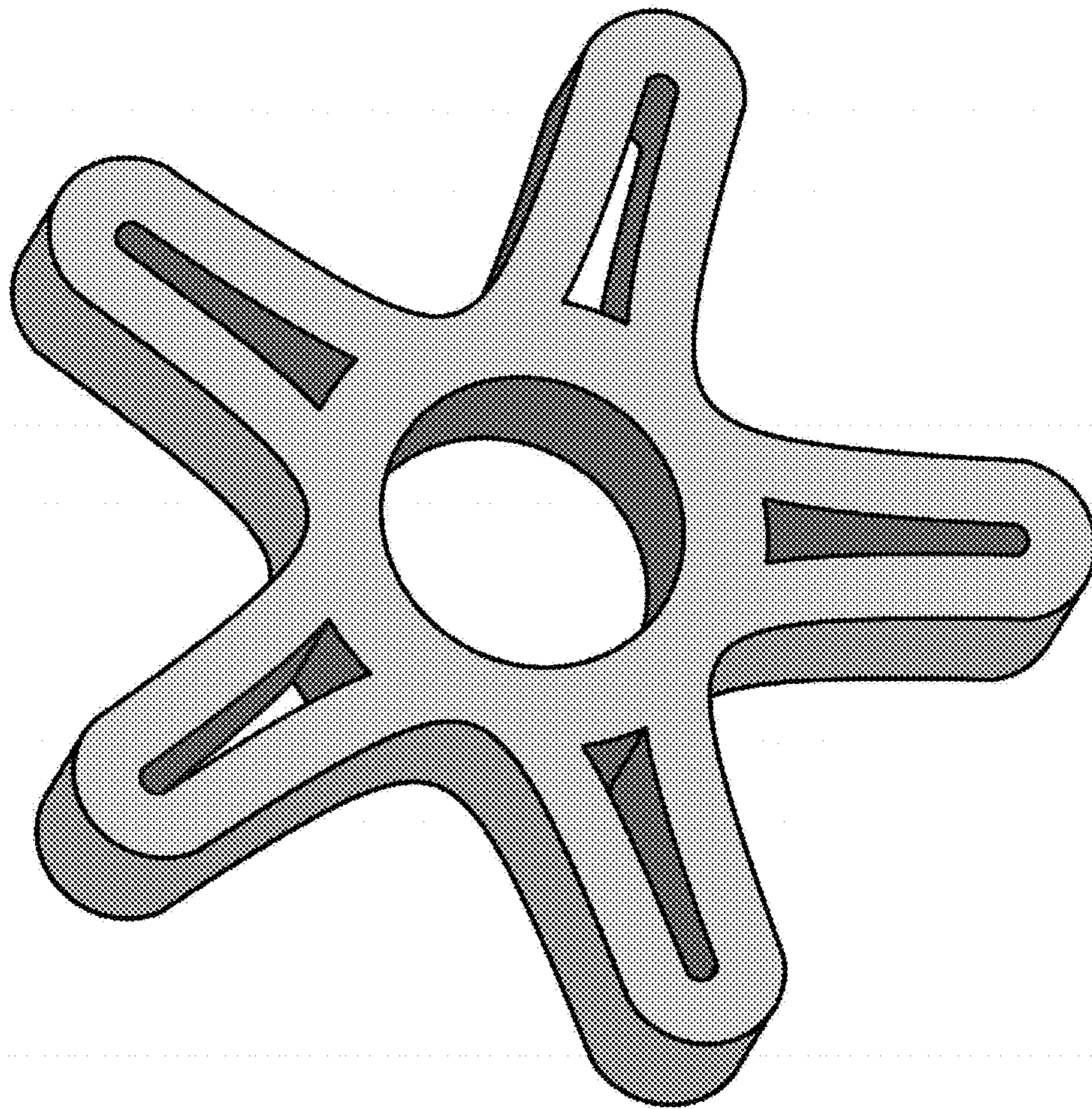


FIG. 17



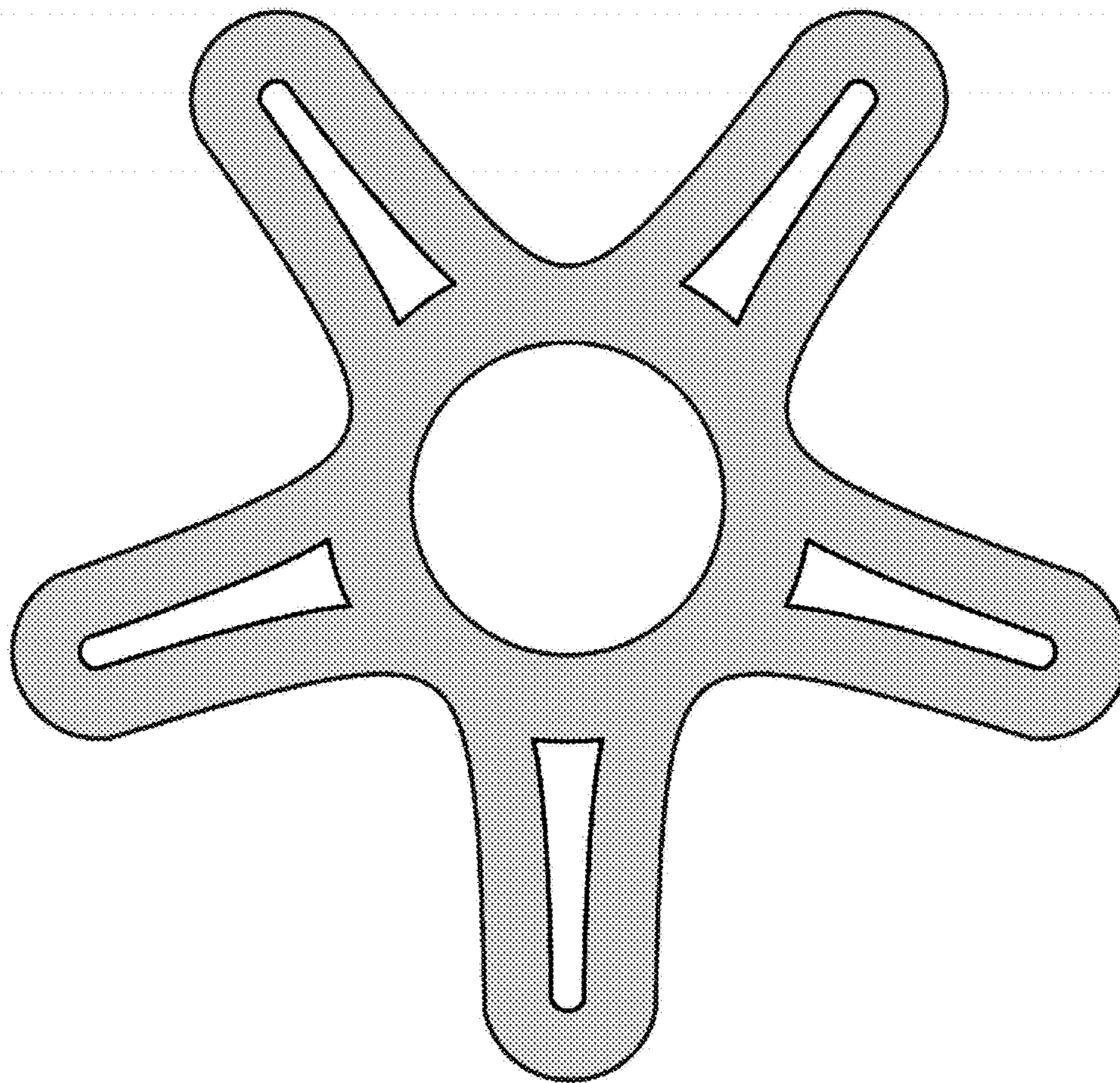


FIG. 18

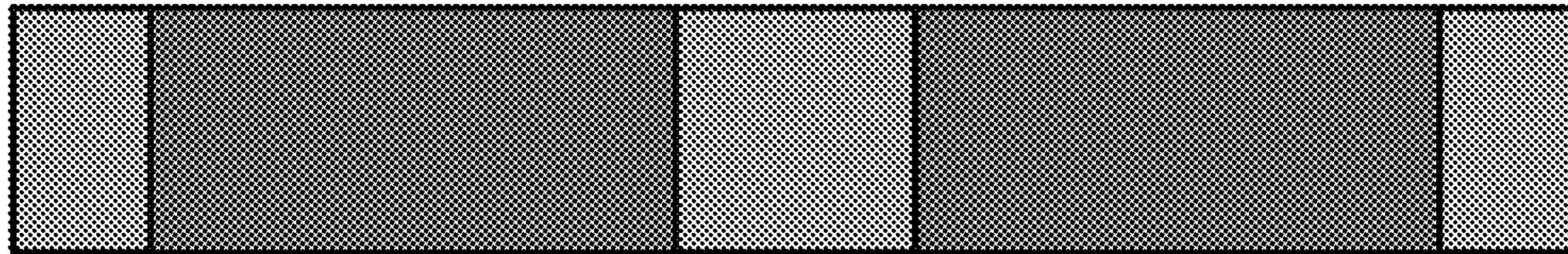


FIG. 19

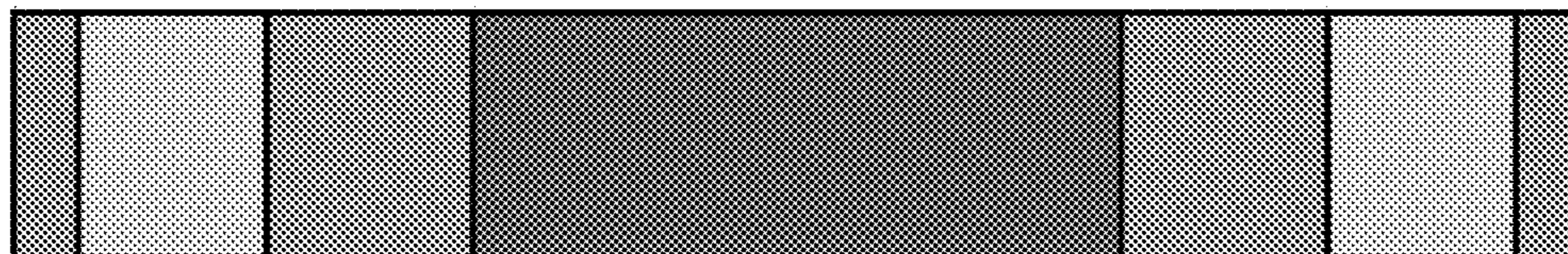


FIG. 20



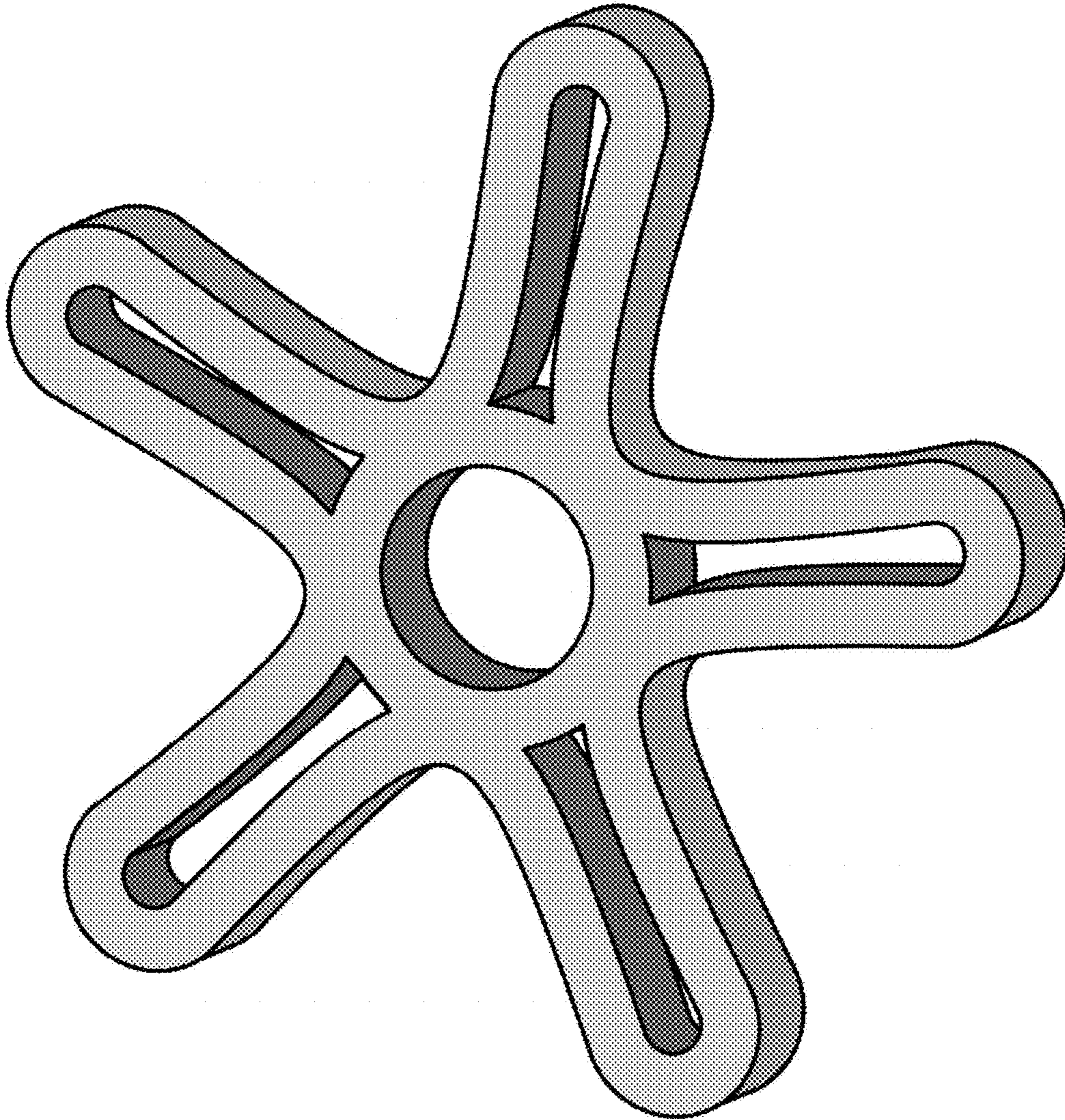


FIG. 21



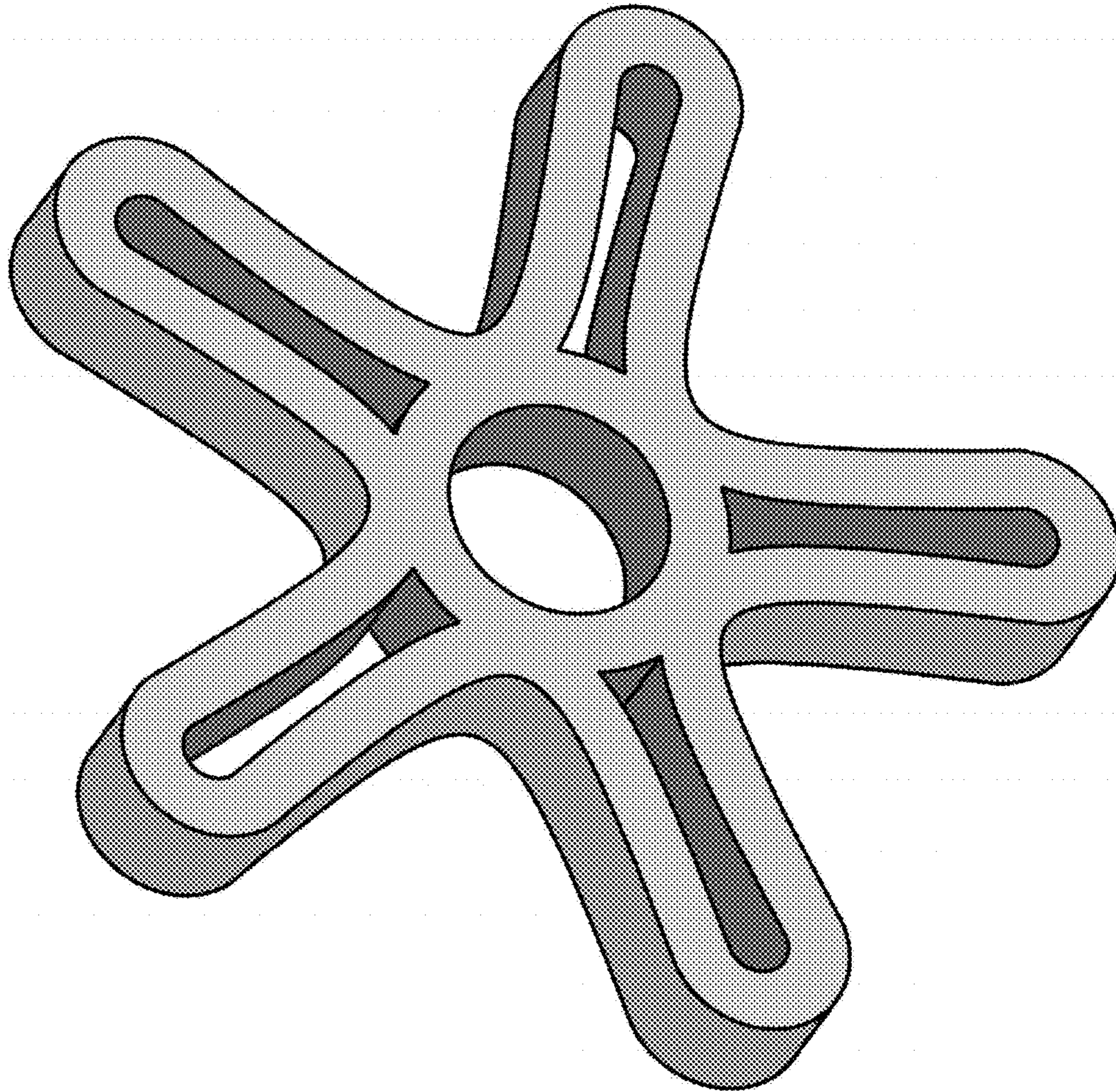


FIG. 22



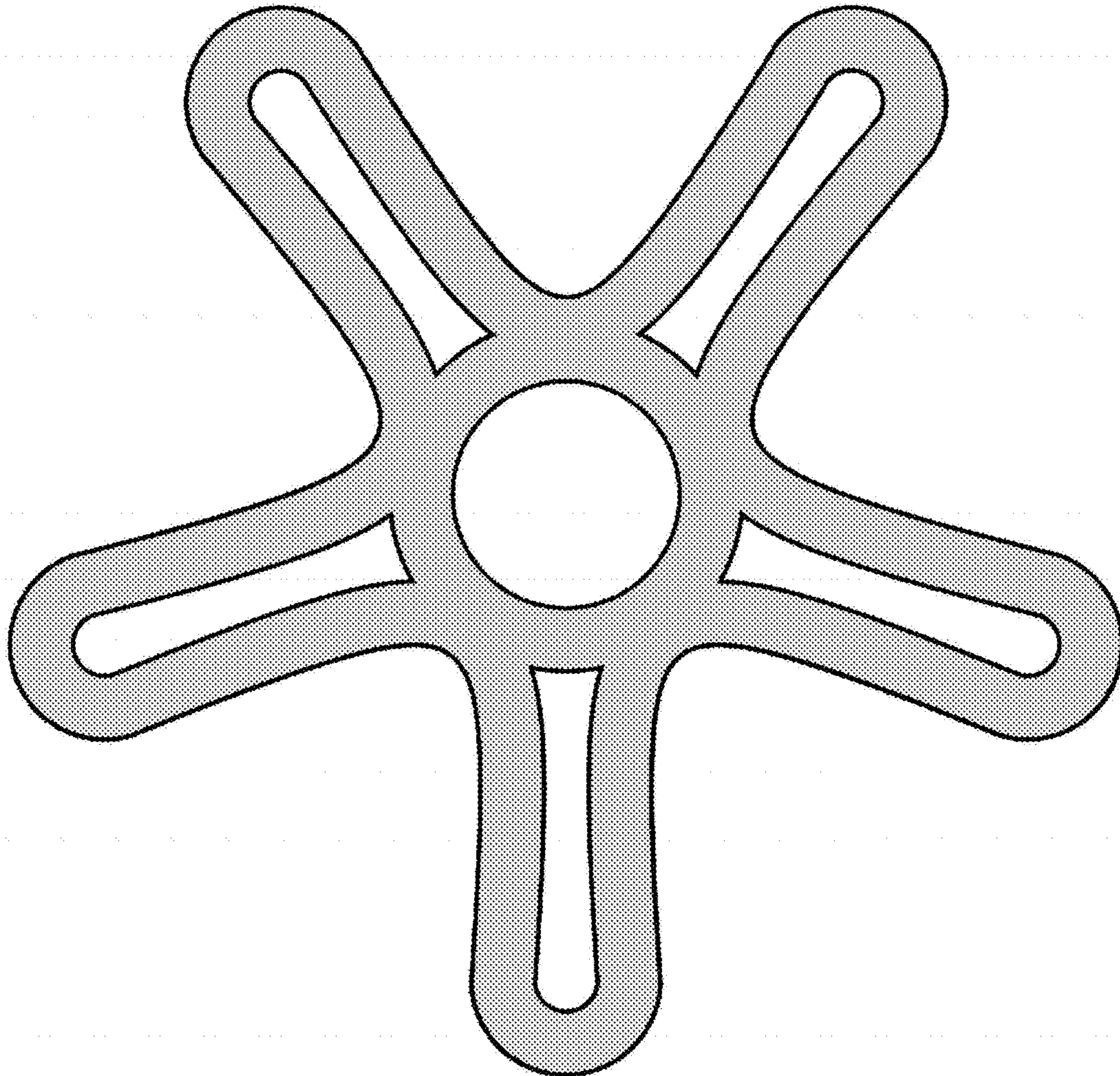


FIG. 23

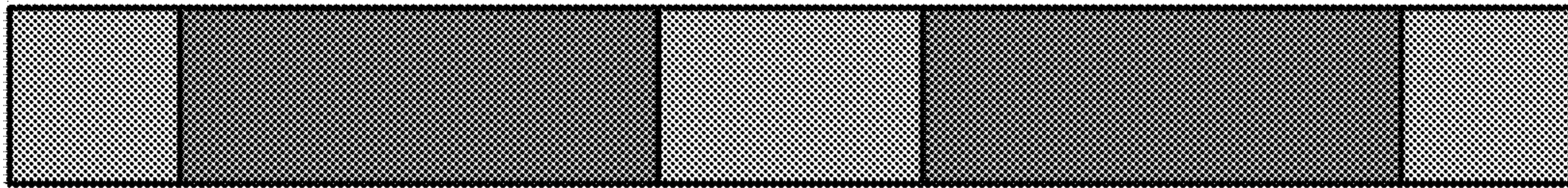


FIG. 24

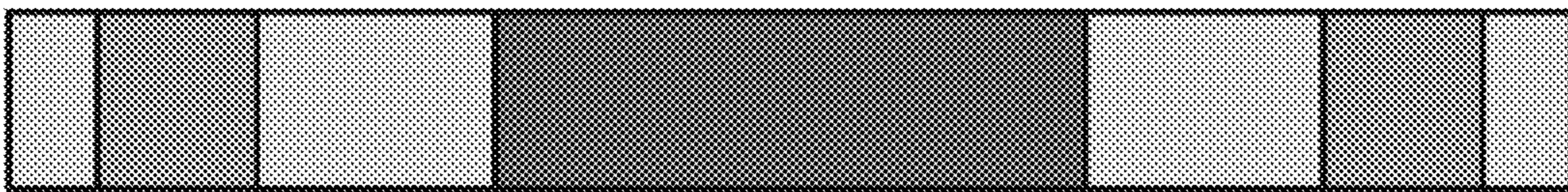


FIG. 25



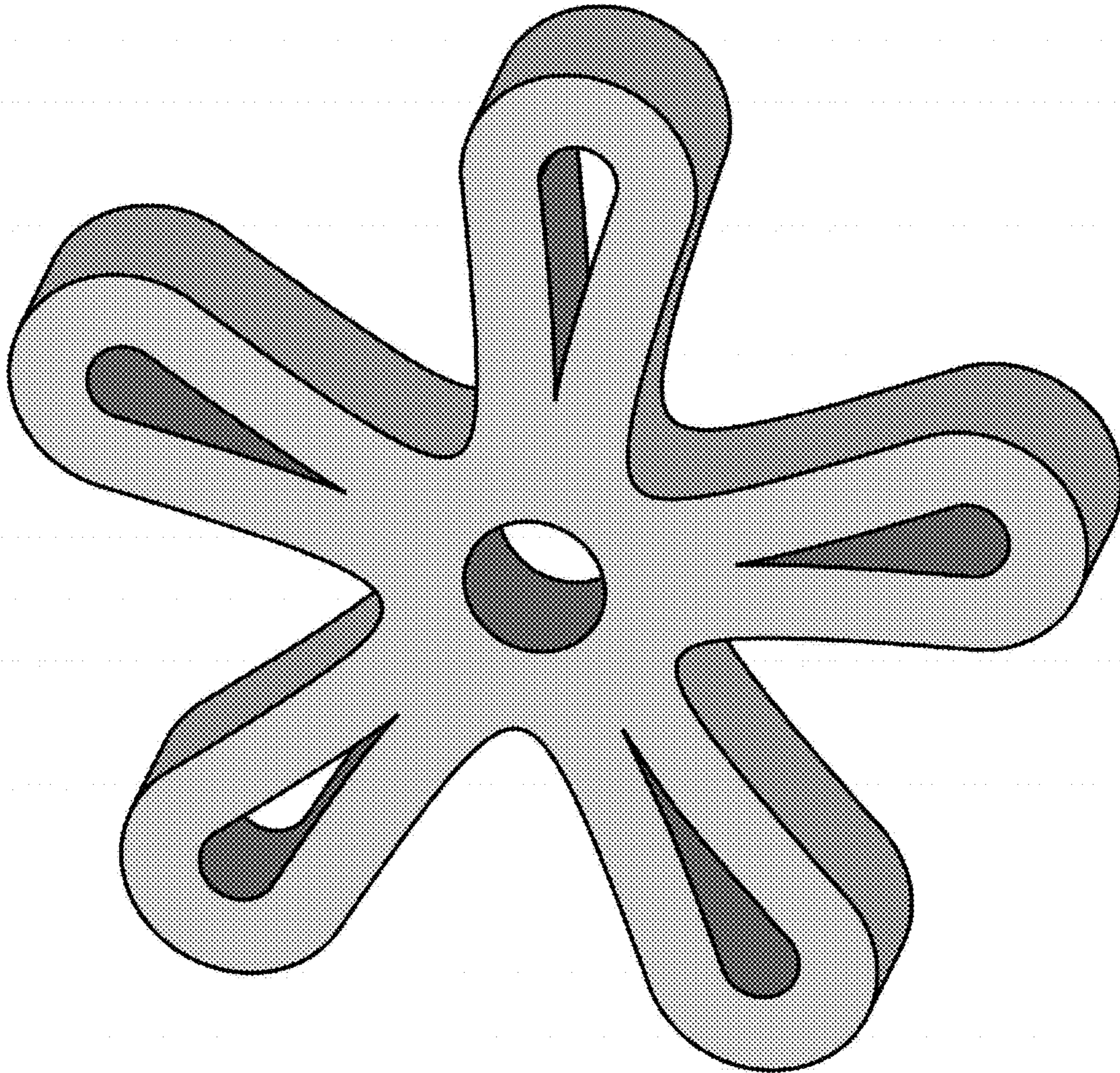


FIG. 26



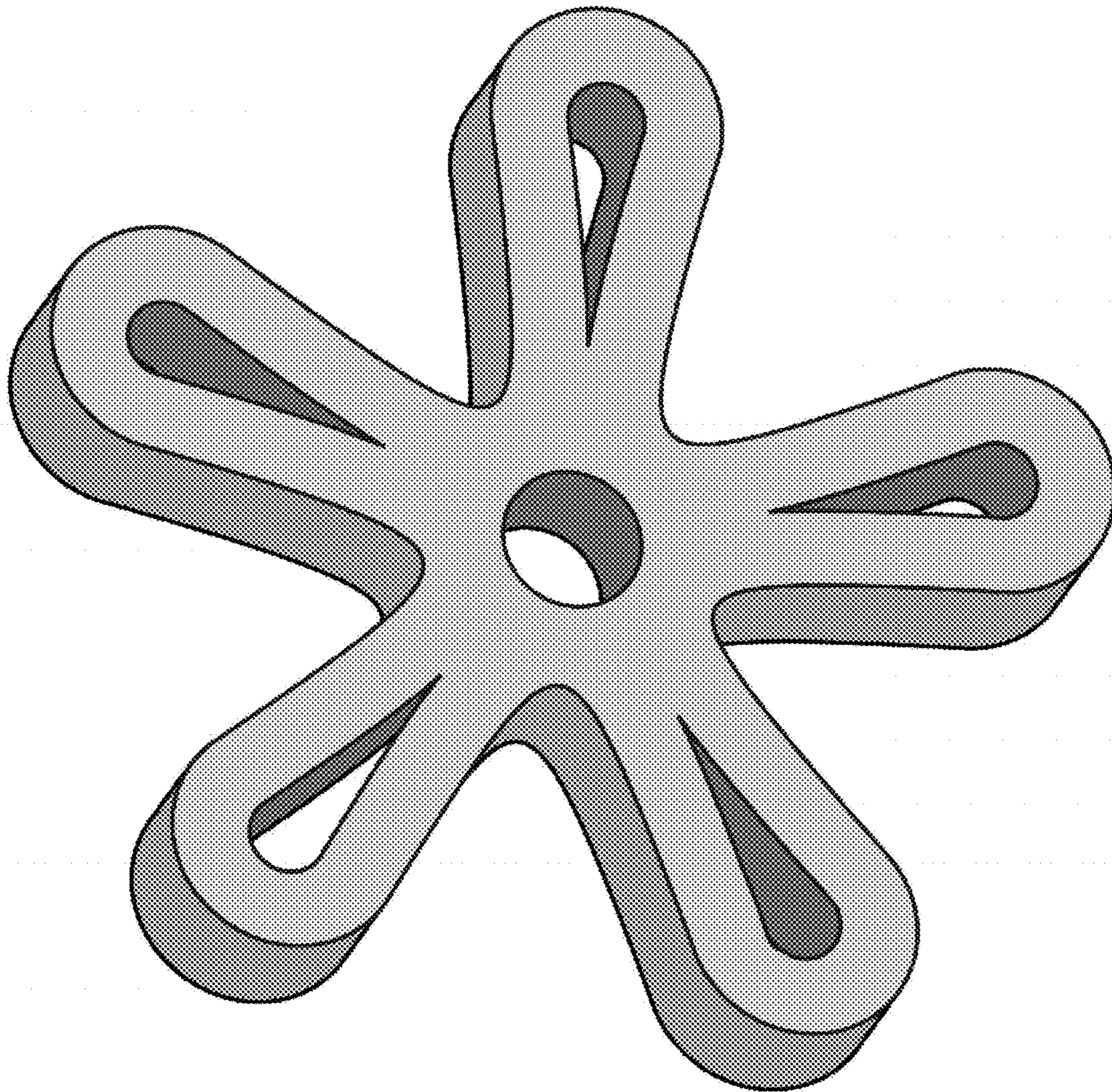


FIG. 27



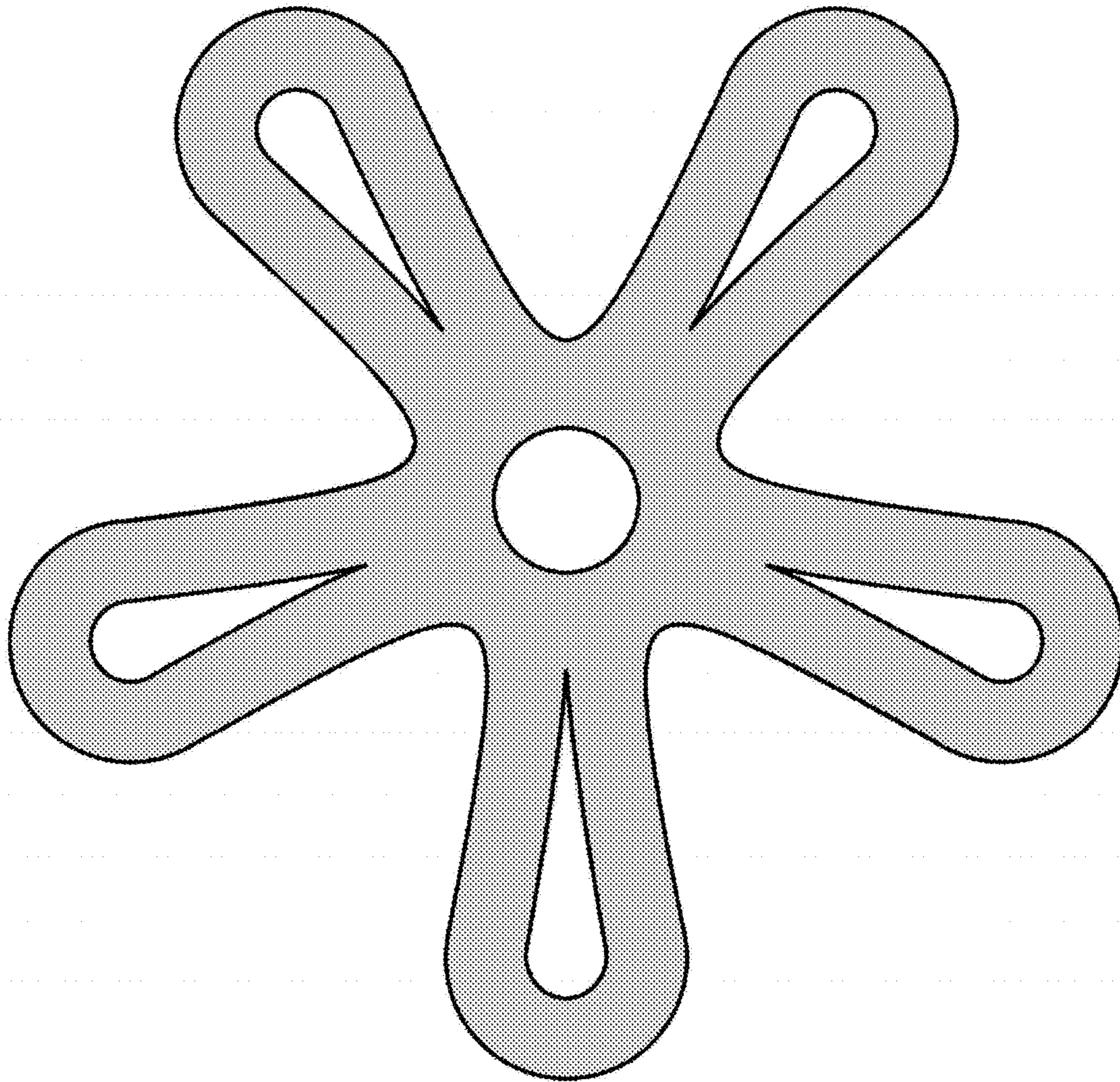


FIG. 28

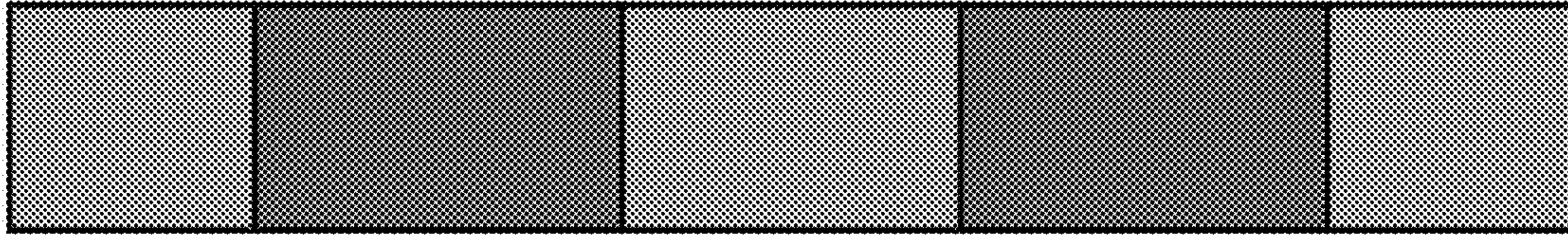


FIG. 29

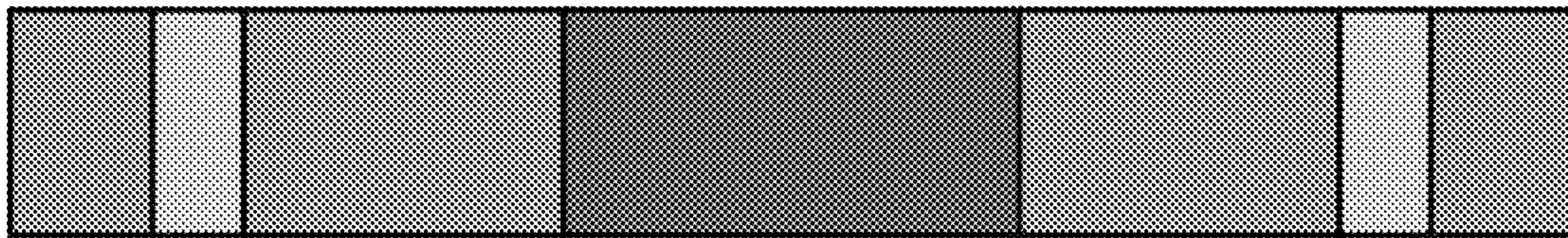


FIG. 30