



US00D979611S

(12) **United States Design Patent**  
**Sullivan**

(10) **Patent No.:** **US D979,611 S**  
(45) **Date of Patent:** **\*\* Feb. 28, 2023**

- (54) **BRIDGED MINI-BULKHEADS**
- (71) Applicant: **XConnect, LLC**, Denver, CO (US)
- (72) Inventor: **Shelby L. Sullivan**, Minot, ND (US)
- (73) Assignee: **XConnect, LLC**, Denver, CO (US)
- (\*\*) Term: **15 Years**
- (21) Appl. No.: **29/803,664**
- (22) Filed: **Aug. 14, 2021**

**Related U.S. Application Data**

- (63) Continuation-in-part of application No. 29/744,986, filed on Aug. 3, 2020, now Pat. No. Des. 947,253.
- (51) **LOC (14) Cl.** ..... **15-03**
- (52) **U.S. Cl.**  
USPC ..... **D15/21**
- (58) **Field of Classification Search**  
USPC ..... D15/21  
CPC ..... E21B 43/11; E21B 43/112; E21B 43/114;  
E21B 43/116; E21B 43/117; E21B  
43/119; E21B 43/00; F42D 1/04; F42D  
1/05; F42D 1/043  
See application file for complete search history.

**References Cited**

**U.S. PATENT DOCUMENTS**

|              |         |                   |
|--------------|---------|-------------------|
| 3,945,322 A  | 5/1976  | Carlson et al.    |
| 4,007,796 A  | 2/1977  | Boop              |
| 4,100,978 A  | 7/1978  | Boop              |
| 4,234,768 A  | 11/1980 | Boop              |
| 4,266,613 A  | 5/1981  | Boop              |
| 4,457,383 A  | 7/1984  | Boop              |
| 4,759,291 A  | 7/1988  | Barker et al.     |
| 6,557,650 B2 | 5/2003  | Fayard et al.     |
| 7,591,212 B2 | 9/2009  | Myers, Jr. et al. |
| 7,902,469 B2 | 3/2011  | Hurst             |
| 8,074,737 B2 | 12/2011 | Hill et al.       |
| 8,256,337 B2 | 9/2012  | Hill et al.       |

|              |         |                |
|--------------|---------|----------------|
| 8,395,878 B2 | 3/2013  | Stewart et al. |
| 8,714,251 B2 | 5/2014  | Glenn et al.   |
| 8,714,252 B2 | 5/2014  | Glenn et al.   |
| 8,875,787 B2 | 11/2014 | Tassaroli      |
| 9,145,764 B2 | 9/2015  | Burton et al.  |

(Continued)

**OTHER PUBLICATIONS**

GEODynamics' EPIC™ Switches Brochure; GEODynamics; Copyright 2020; v.03; 1 page.  
(Continued)

*Primary Examiner* — Mark A Goodwin

(74) *Attorney, Agent, or Firm* — Peter L. Brewer; Thrive IP

(57) **CLAIM**

The ornamental design for bridged mini-bulkheads, as shown and described.

**DESCRIPTION**

FIG. 1 is a first perspective view of bridged mini-bulkheads, showing my new design. The view is taken from a top, front and right side.

FIG. 2 is a second perspective view of the bridged mini-bulkheads of FIG. 1. Here, the view is taken from a bottom, rear and left side.

FIG. 3 is a top plan view of the bridged mini-bulkheads of FIG. 1. Features that were shown in dashed lines in FIGS. 1 and 2 have been removed for clarity.

FIG. 4 is a bottom plan view thereof.

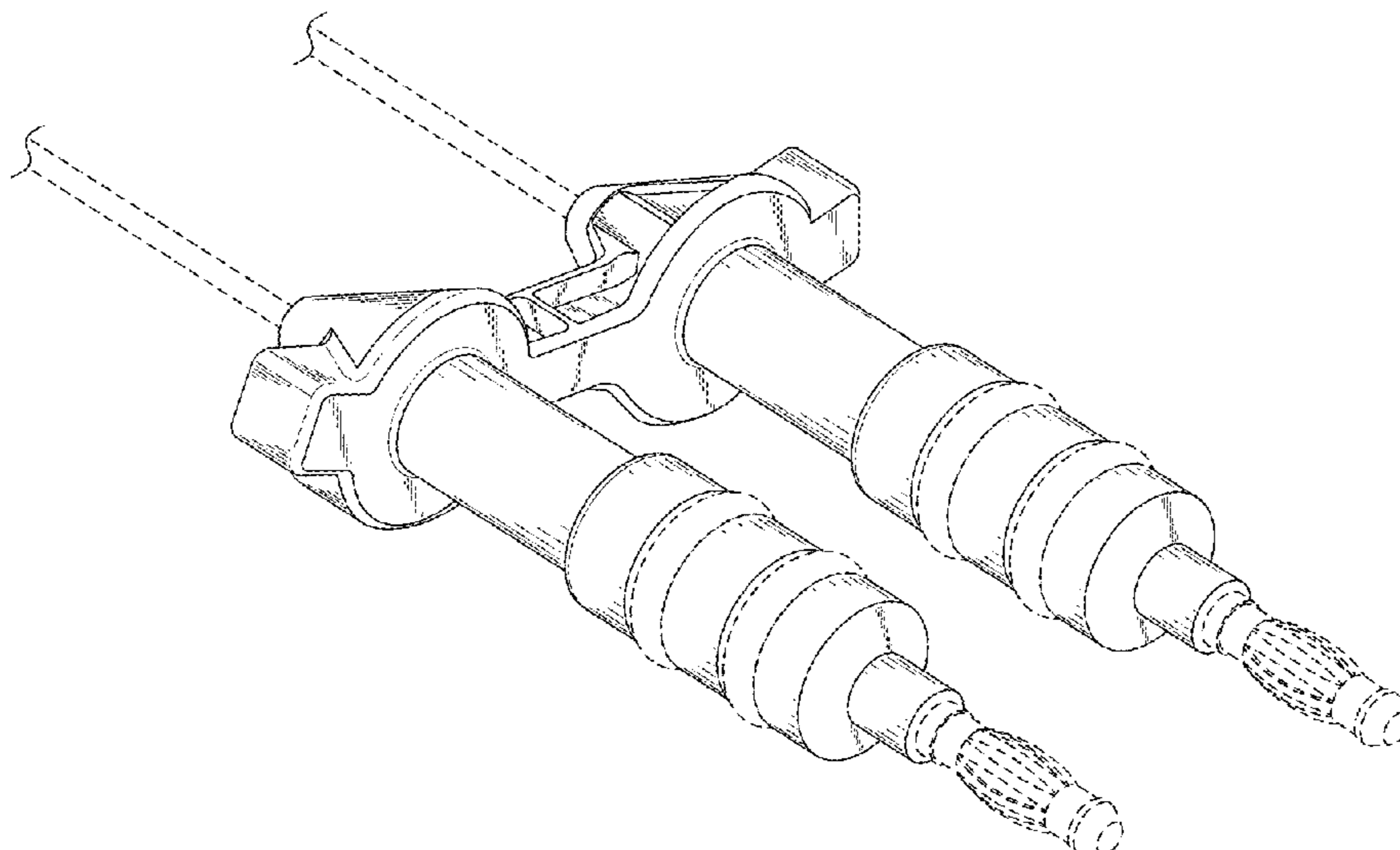
FIG. 5 is a front plan view thereof.

FIG. 6 is a rear plan view thereof.

FIG. 7 is a right side elevation view thereof; and, FIG. 8 is a left side elevation view thereof.

The broken lines in the drawings depict portions of the bridged min-bulkheads that form no part of the claimed designs. Particularly, in FIGS. 1 and 2 the electrical wires on the end are included simply to show environment.

**1 Claim, 6 Drawing Sheets**



(56)

References Cited

U.S. PATENT DOCUMENTS

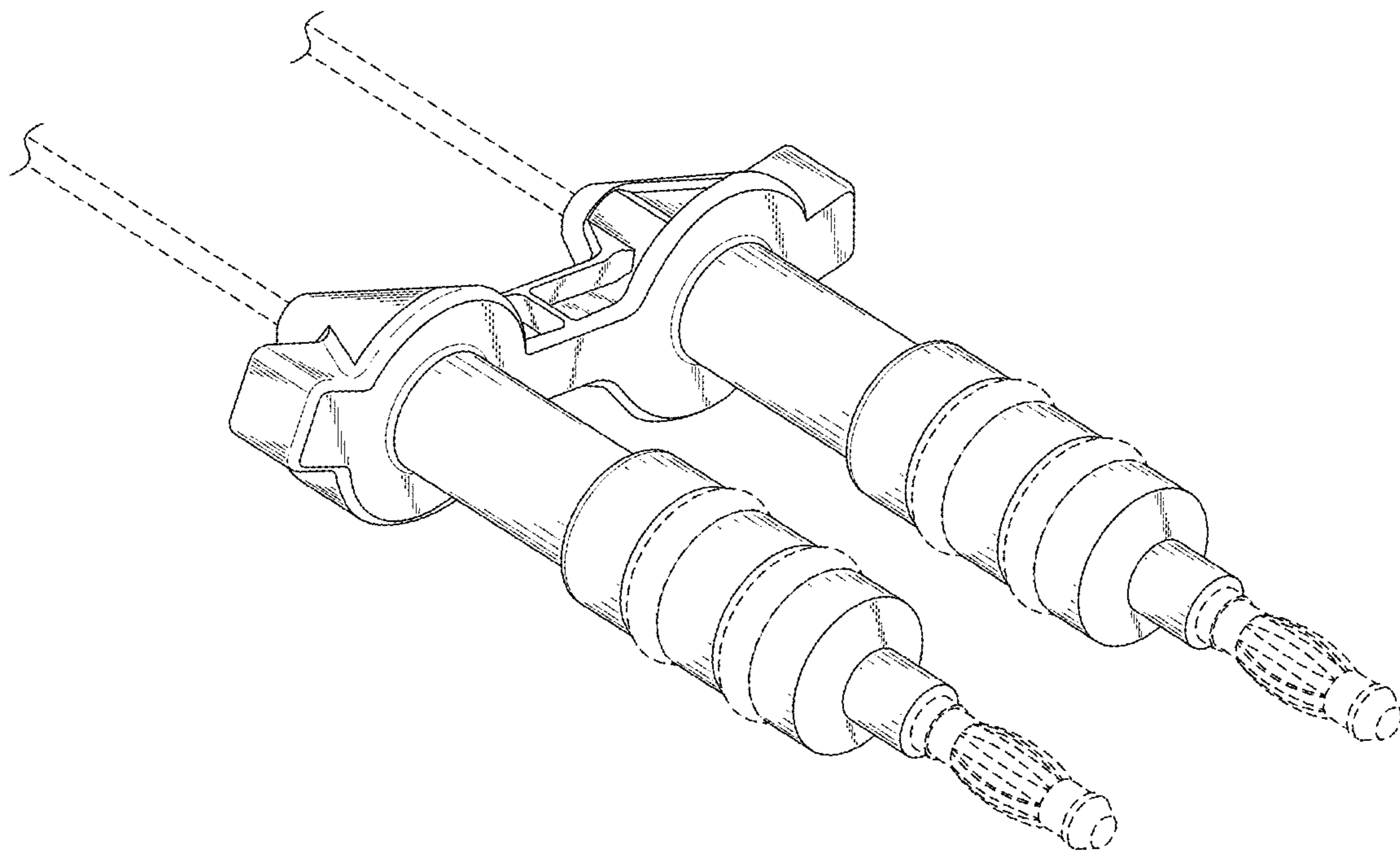
9,447,678 B2 9/2016 Walter et al.  
 9,581,422 B2 2/2017 Preiss et al.  
 9,605,937 B2 3/2017 Eitschberger et al.  
 9,702,680 B2 7/2017 Parks et al.  
 9,845,666 B2 12/2017 Hardesty et al.  
 9,909,408 B2 3/2018 Rodgers et al.  
 9,926,777 B2 3/2018 Rodgers et al.  
 10,066,921 B2 9/2018 Eitschberger  
 10,161,733 B2 12/2018 Eitschberger et al.  
 10,184,326 B2 1/2019 Flores  
 10,188,990 B2 1/2019 Burmeister et al.  
 10,246,975 B2 4/2019 Spring et al.  
 10,273,788 B2 4/2019 Bradley et al.  
 10,352,136 B2 7/2019 Goyeneche  
 10,352,674 B2 7/2019 Eitschberger  
 10,365,078 B2 7/2019 Eitschberger  
 10,458,213 B1 10/2019 Eitschberger et al.  
 10,472,938 B2 11/2019 Parks et al.  
 10,507,433 B2 12/2019 Eitschberger et al.  
 10,519,733 B2 12/2019 Rosenthal et al.  
 10,584,950 B2 3/2020 Saltarelli et al.  
 10,597,987 B2 3/2020 Escudero et al.  
 10,689,955 B1 6/2020 Mauldin et al.  
 D892,278 S 8/2020 Eitschberger  
 10,731,444 B2\* 8/2020 Wells ..... E21B 47/092  
 10,767,452 B2 9/2020 Arsalan et al.  
 D903,064 S 11/2020 Mulhern et al.  
 10,844,697 B2 11/2020 Preiss et al.  
 10,845,178 B2 11/2020 Eitschberger et al.  
 D904,475 S 12/2020 Preiss et al.

10,858,919 B2\* 12/2020 Anthony ..... E21B 43/1185  
 D908,754 S 1/2021 Eitschberger  
 10,900,334 B2 1/2021 Knight et al.  
 10,900,335 B2 1/2021 Knight et al.  
 10,914,145 B2\* 2/2021 Sullivan ..... E21B 43/1185  
 10,920,543 B2 2/2021 Eitschberger et al.  
 10,975,671 B2 4/2021 Bradley et al.  
 10,975,672 B2 4/2021 Spring et al.  
 10,982,941 B2 4/2021 Eitschberger  
 D920,402 S 5/2021 Eitschberger  
 11,009,330 B2 5/2021 Saltarelli et al.  
 D921,858 S 6/2021 Eitschberger et al.  
 D922,541 S 6/2021 Mulhern et al.  
 11,078,763 B2\* 8/2021 Anthony ..... E21B 43/119  
 11,078,765 B2 8/2021 Davis et al.  
 11,085,278 B2 8/2021 Akkerman et al.  
 11,091,987 B1\* 8/2021 Benker ..... E21B 43/119  
 D935,574 S 11/2021 Eitschberger et al.  
 2012/0199352 A1\* 8/2012 Lanclos ..... F42D 1/05  
 166/297  
 2020/0217635 A1\* 7/2020 Eitschberger ..... F42D 1/04  
 2020/0308938 A1\* 10/2020 Sullivan ..... E21B 43/116

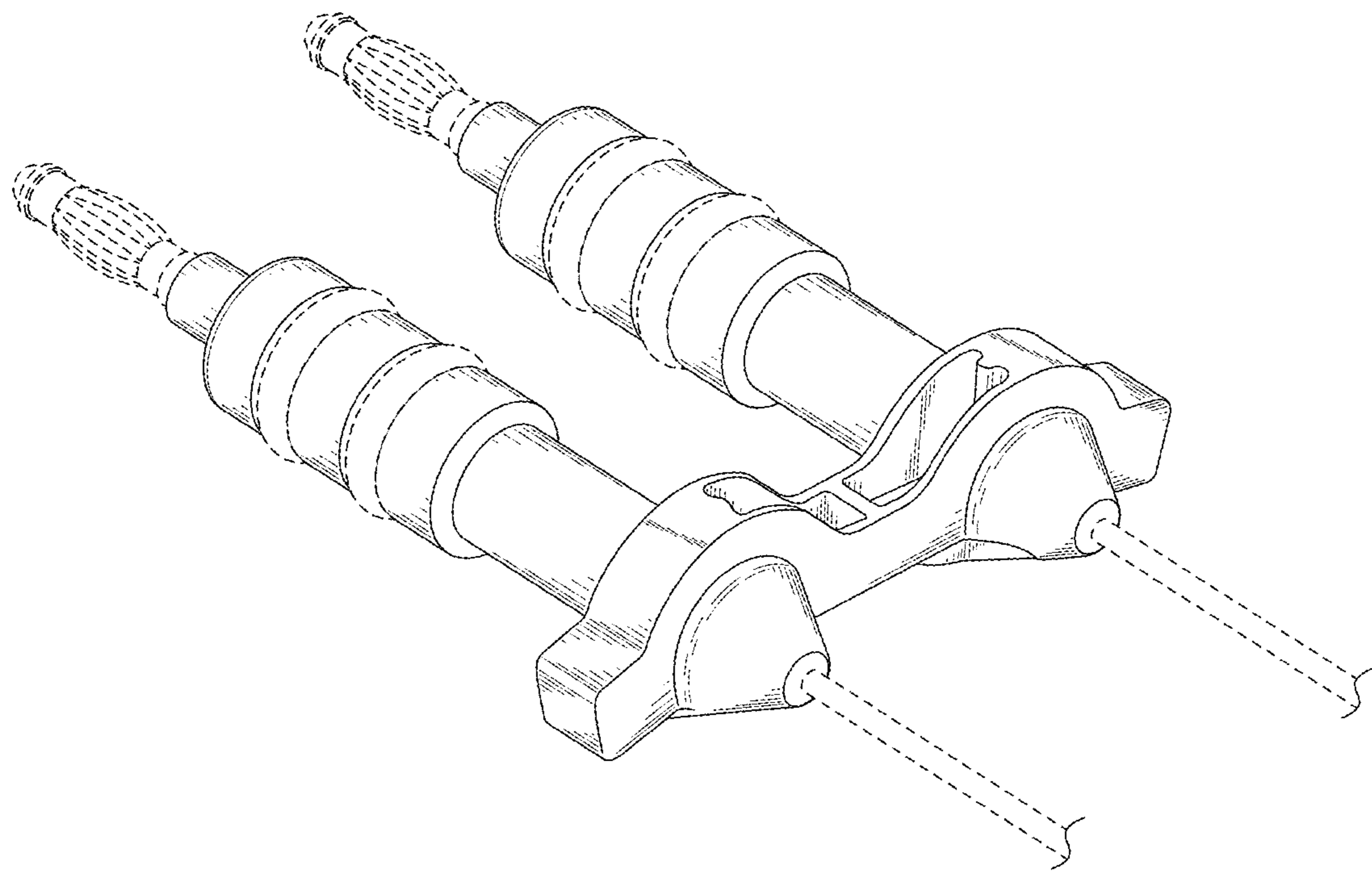
OTHER PUBLICATIONS

Josh Howk and Adam Dyess; "Mitigating the Problems in Select-Fire Perforating Operations" IPS 16-22; 2016 International Perforating Symposium Galveston; May 10, 2016; 15 pages.  
 Hunting Titan Brochure; Hunting Energy Services; Copyright 2020; v.9.1; 27 pages.

\* cited by examiner



**FIG. 1**



**FIG. 2**

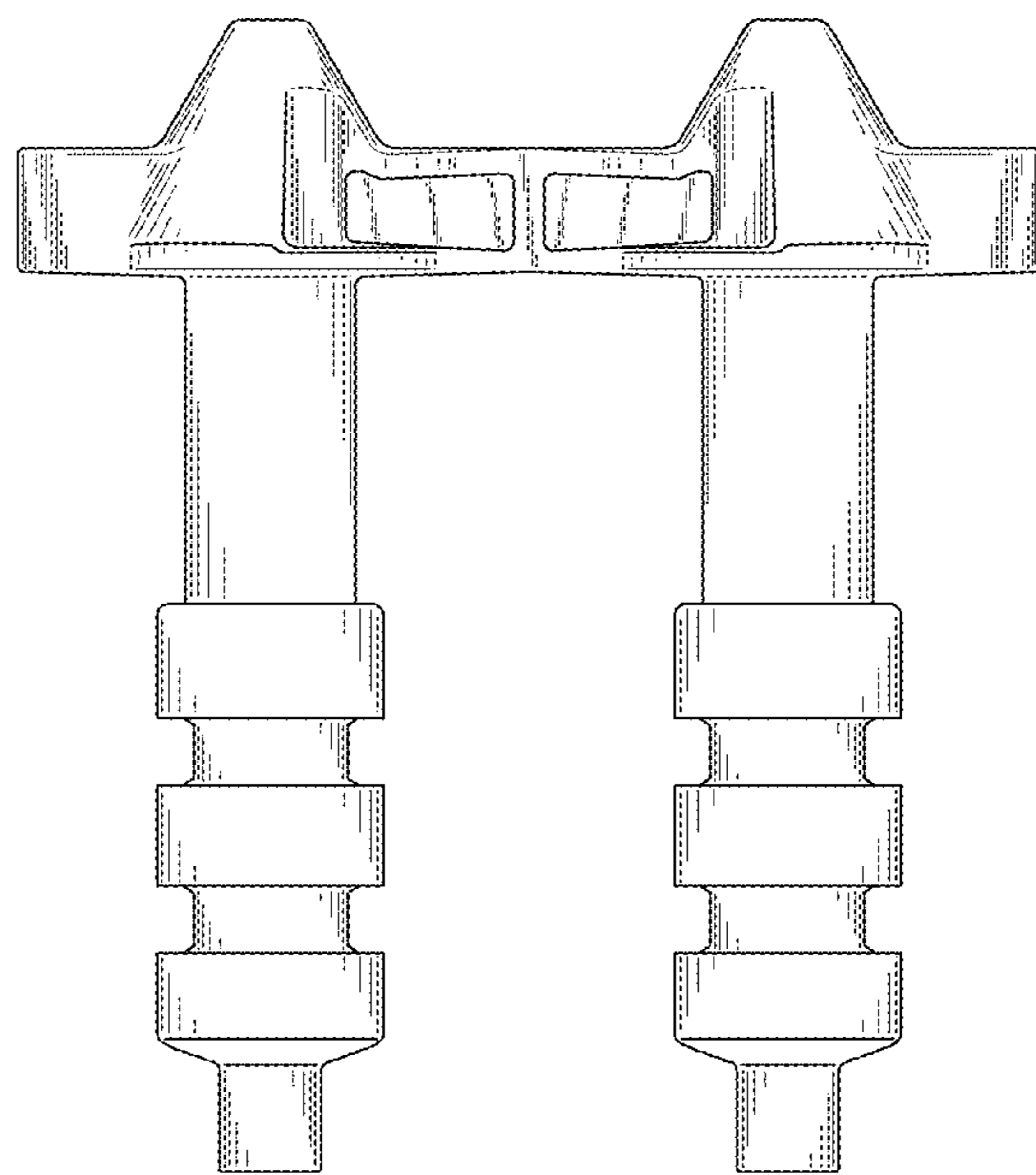


FIG. 3

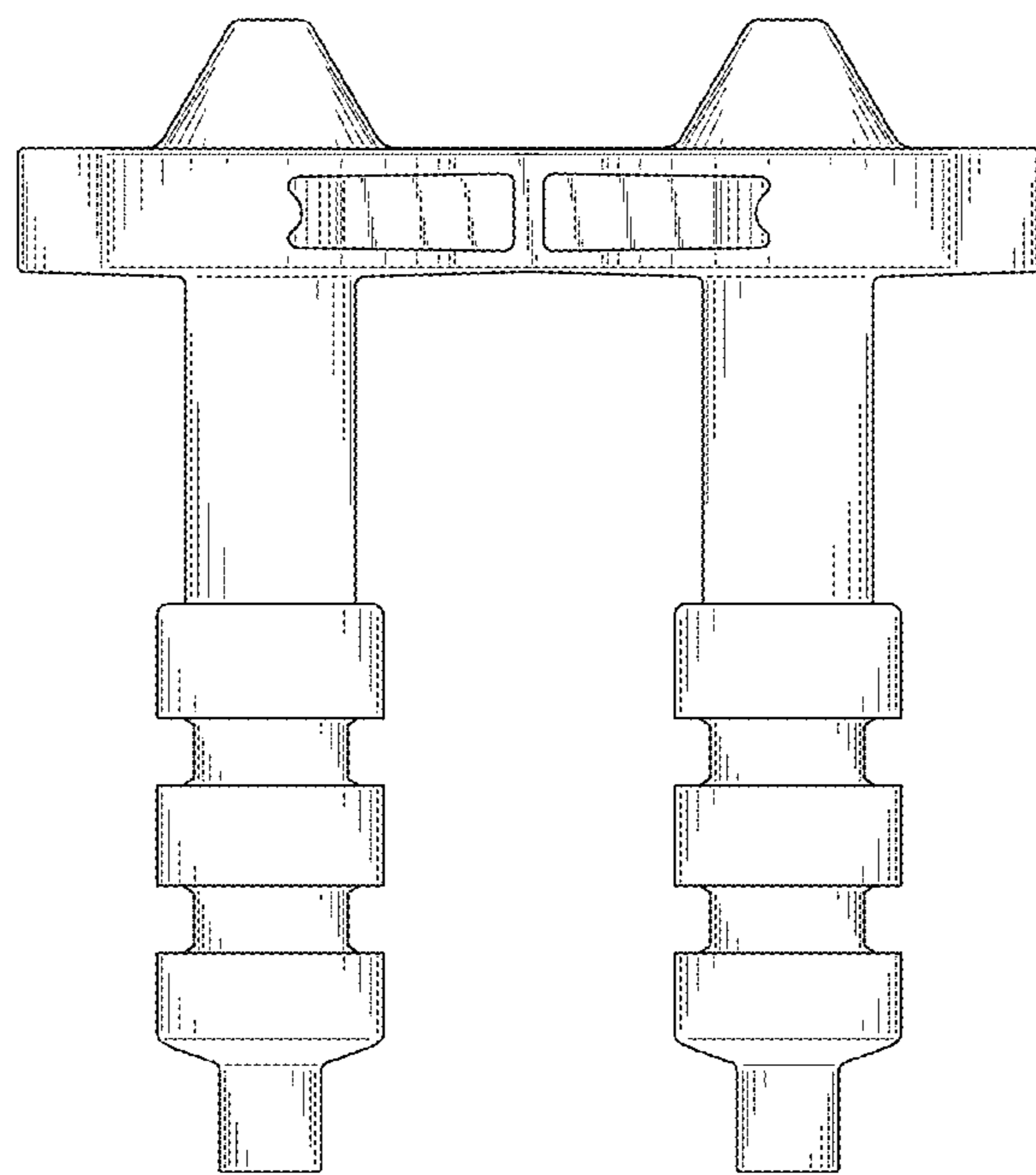
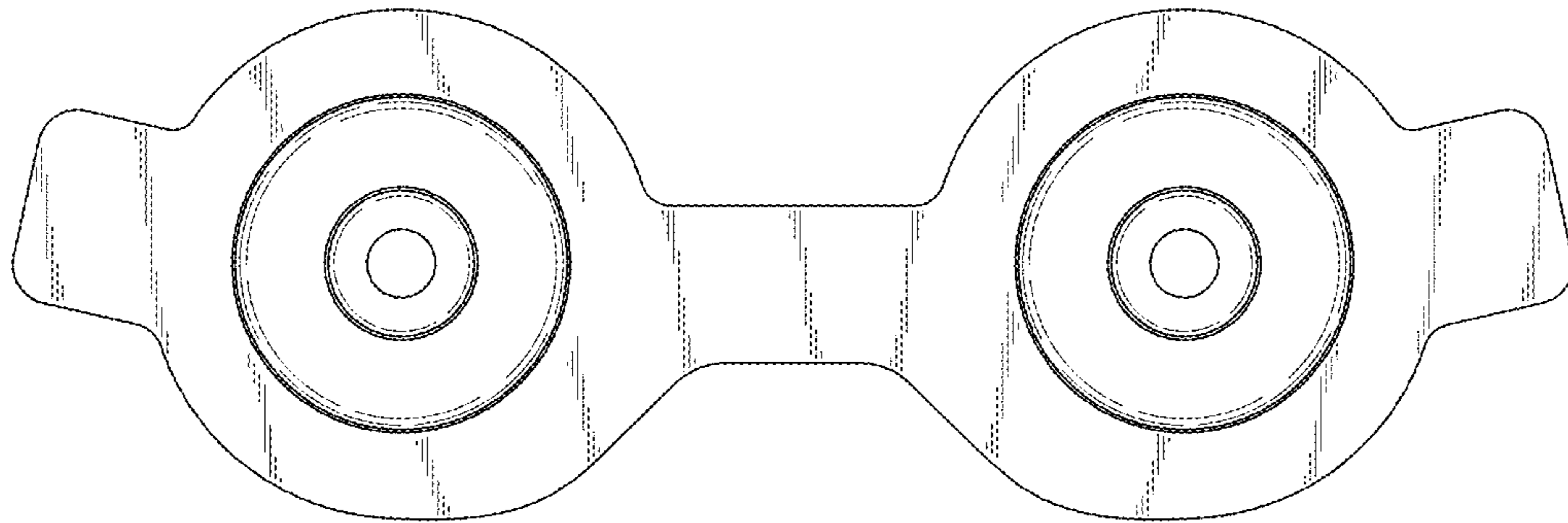
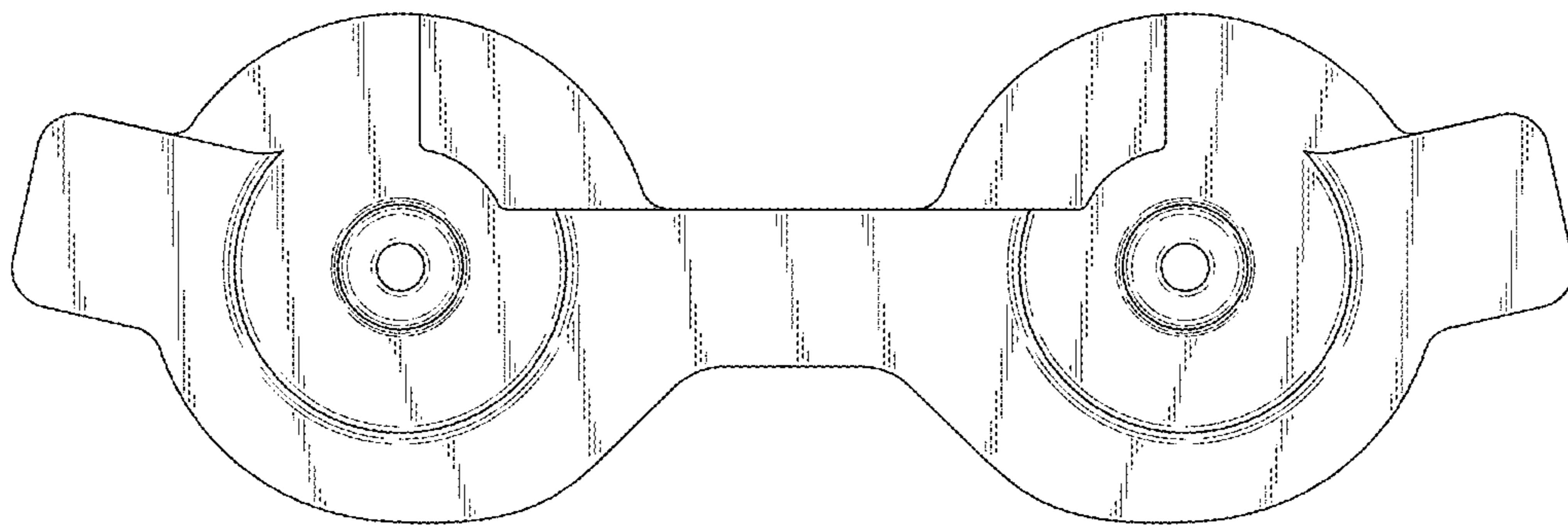


FIG. 4



**FIG. 5**



**FIG. 6**

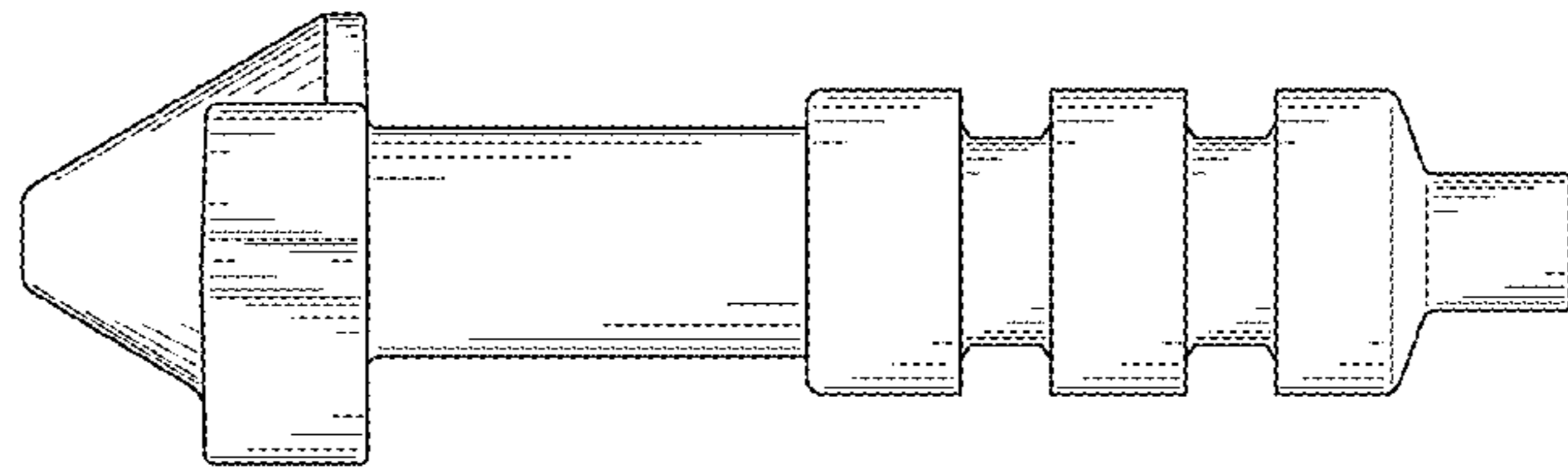


FIG. 7

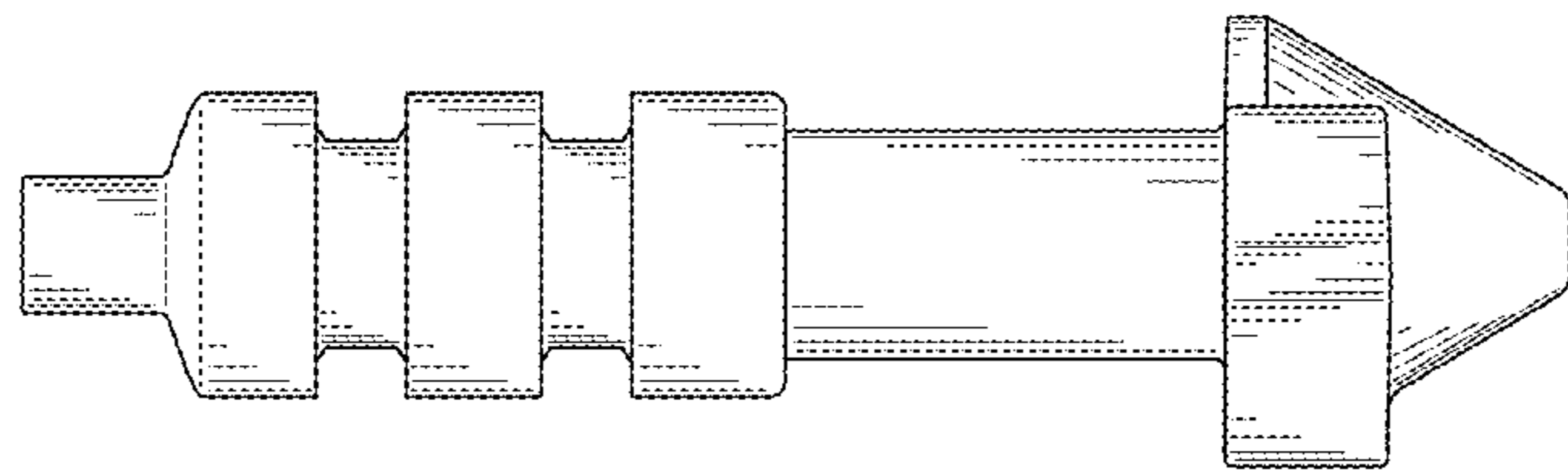


FIG. 8