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(12) **United States Design Patent** (10) **Patent No.:** **US D935,055 S**
Foley et al. (45) **Date of Patent:** **** Nov. 2, 2021**

(54) **HINGE FOR A MULTI-POSITION LADDER**

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

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(52) **U.S. Cl.**
USPC **D25/68**

(58) **Field of Classification Search**
USPC D25/62-65, 68; 403/93, 96; 16/320, 16/231, 328, 326
CPC ... E06C 7/50; E06C 7/00; E06C 1/383; E05D 11/1007; F16C 11/10
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

317,024 A	5/1885	Schumann
445,453 A	1/1891	Nowland
453,193 A	6/1891	Kinser
1,942,210 A	1/1934	Harting
1,973,774 A	9/1934	Pflugradt
2,144,440 A	1/1939	Gaffers
2,186,119 A	1/1940	Moen
2,650,014 A	8/1953	Harrison
3,002,582 A	10/1961	Marcelis
3,318,413 A	5/1967	Werner et al.
3,327,385 A	6/1967	Shaver
3,476,211 A	11/1969	Cormier
3,481,026 A	12/1969	Lindesmith et al.

3,692,143 A	9/1972	Kümmerlin et al.
3,811,151 A	5/1974	Kuemmerlin
3,849,834 A	11/1974	Mayer
3,850,533 A	11/1974	Thielen
4,027,741 A	6/1977	Derrick
4,031,981 A	6/1977	Spencer
4,060,150 A	11/1977	Hughes
4,061,203 A	12/1977	Spencer et al.

(Continued)

FOREIGN PATENT DOCUMENTS

DE	195 39 157 A1	4/1997
EP	0 324 885	7/1989
NL	1002235 C1	8/1997

OTHER PUBLICATIONS

Brochure, "Step Stools—Ladders 2001," Cosco, Inc. (2001), 12 pages.

(Continued)

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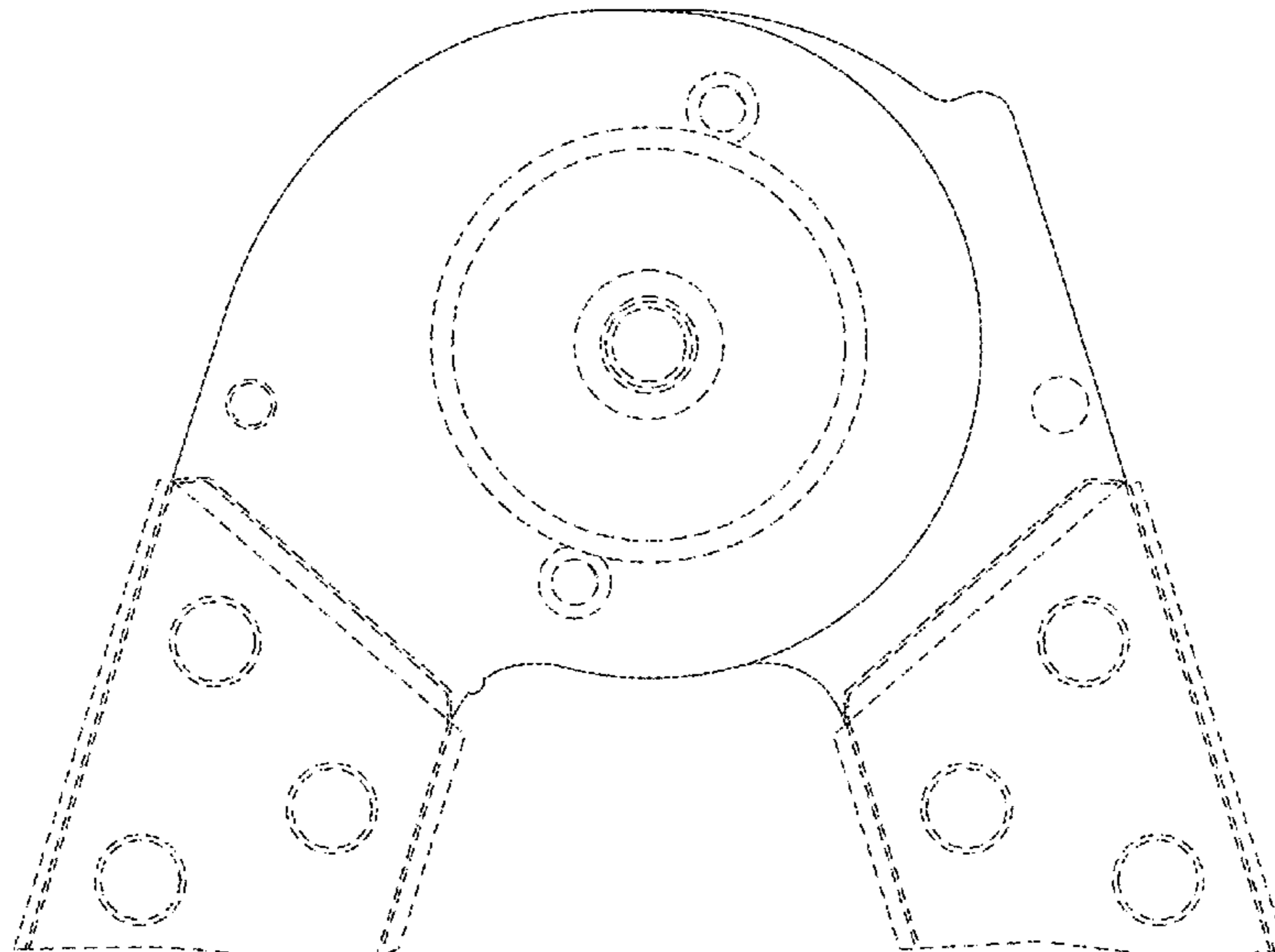
(57) **CLAIM**

We claim the ornamental design for a multi-position ladder, as shown and described.

DESCRIPTION

FIG. 1 is a right side elevation view of a hinge for a multi-position ladder showing our new design; FIG. 2 is a front elevation view thereof; FIG. 3 is a top view thereof; FIG. 4 is a front right perspective view thereof; and, FIG. 5 is a front left perspective view thereof. The broken lines shown in the figures are included for the purpose of illustrating portions of the hinge for a multi-position ladder and form no part of the claimed design.

1 Claim, 5 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D248,777 S 8/1978 Spencer et al.
 RE30,020 E 6/1979 Spencer et al.
 4,182,431 A 1/1980 Wing
 4,210,224 A 7/1980 Kummerlin et al.
 4,216,844 A 8/1980 Klafs
 4,298,093 A 11/1981 Wing
 4,371,055 A 2/1983 Ashton et al.
 4,376,470 A 3/1983 Ashton
 4,407,045 A 10/1983 Boothe
 4,469,193 A 9/1984 Rumsey, Jr.
 4,470,045 A 9/1984 Anderson
 4,474,264 A 10/1984 Krause
 4,483,415 A 11/1984 Disston et al.
 4,502,566 A 3/1985 Wing
 4,540,306 A 9/1985 Wang
 4,566,150 A 1/1986 Boothe
 4,597,687 A 7/1986 Colas
 4,602,889 A 7/1986 Mu-Shan
 4,656,721 A 4/1987 Werner
 4,666,327 A 5/1987 Su
 4,666,328 A 5/1987 Ryu
 4,697,305 A 10/1987 Boothe
 4,698,896 A 10/1987 Osterwald et al.
 4,770,559 A 9/1988 Yoo
 4,774,503 A 9/1988 Bussard
 4,824,278 A 4/1989 Chang
 4,859,109 A 8/1989 Targetti
 4,881,843 A 11/1989 Randleman
 4,890,950 A 1/1990 Yoo
 D309,502 S 7/1990 Wing et al.
 4,947,959 A 8/1990 Yuen
 4,951,780 A 8/1990 Kim
 4,967,879 A 11/1990 Klafs et al.
 4,974,701 A 12/1990 Parise
 5,002,153 A 3/1991 Yuen
 5,026,198 A 6/1991 Lin
 5,074,377 A 12/1991 Krause
 5,163,532 A 11/1992 McCarty
 5,228,535 A 7/1993 McCarty
 5,279,387 A 1/1994 Swiderski et al.
 5,353,892 A 10/1994 Lu
 5,359,812 A 11/1994 Mayfield
 5,366,051 A 11/1994 Bartnicki et al.
 5,419,084 A 5/1995 Sankey et al.
 5,487,207 A 1/1996 Rey
 5,515,942 A 5/1996 Woodfield
 5,620,272 A 4/1997 Sheng
 5,752,579 A 5/1998 Takahashi
 5,775,460 A 7/1998 Stone
 5,954,157 A 9/1999 Grimes et al.
 5,966,777 A 10/1999 Jantschek
 5,992,566 A 11/1999 Yeh
 6,032,759 A 3/2000 Yeh
 6,141,909 A 11/2000 Hanson
 6,220,389 B1 4/2001 Krause
 6,269,909 B1 8/2001 Grimes et al.
 6,298,605 B1 10/2001 Delefosse et al.
 6,343,406 B1 2/2002 Yeh
 6,347,687 B1 2/2002 Alim
 6,390,238 B1 5/2002 Gibson et al.
 6,533,882 B1 3/2003 Woodside
 6,857,503 B2 2/2005 Simpson et al.
 6,866,117 B2 3/2005 Moss

7,047,597 B2 5/2006 Lee
 7,108,103 B2 9/2006 Meeker
 7,140,072 B2 11/2006 Leng
 D554,771 S 11/2007 Skubic et al.
 7,364,017 B2 4/2008 Moss et al.
 D631,562 S * 1/2011 Han D25/68
 7,861,826 B2 1/2011 Meyers et al.
 D710,031 S 7/2014 Simpson et al.
 8,919,497 B2 12/2014 Rund
 8,997,931 B2 4/2015 Parker et al.
 9,404,305 B1 8/2016 Messick
 9,416,591 B2 8/2016 Kieffer et al.
 9,580,959 B2 2/2017 Kieffer et al.
 D860,476 S * 9/2019 Foley D25/68
 10,487,580 B2 * 11/2019 Miao E05D 11/1007
 D908,924 S * 1/2021 Melton D25/64
 D914,912 S * 3/2021 Barker D25/65
 2002/0017431 A1 2/2002 Gibson et al.
 2002/0166727 A1 11/2002 Cramer et al.
 2003/0037412 A1 2/2003 Lee
 2003/0108380 A1 6/2003 Schweitz et al.
 2003/0188923 A1 10/2003 Moss
 2004/0000449 A1 1/2004 Meeker
 2004/0007424 A1 1/2004 Simpson
 2004/0129497 A1 7/2004 Weiss
 2005/0029044 A1 2/2005 Latimer et al.
 2007/0181369 A1 8/2007 Gibson et al.
 2010/0172690 A1 7/2010 Cash et al.
 2011/0024234 A1 2/2011 Lin
 2011/0272923 A1 11/2011 Chen
 2012/0061182 A1 3/2012 Grimes
 2012/0181109 A1 7/2012 Rund
 2014/0224585 A1 8/2014 Russell et al.
 2015/0159434 A1 6/2015 Leng
 2015/0233181 A1 8/2015 Walsh
 2018/0209474 A1 7/2018 Klein et al.

OTHER PUBLICATIONS

Brochure re: The Little Giant, prior to Mar. 2017, 2 pages.
 Brochure, "Ladders," Tricam Industries, prior to Mar. 2017, pp. 1-4.
 Fact Sheet, "Prostep Multi-Folding Ladder, Type I," Tricam Industries, No. 001-1 (Mar. 1994), 2 pages.
 Brochure, "Jaws/Climbing systems for professionals and do-it-yourselfers," Featherlite Industries (1996).
 Spec sheet, "Fiberglass VersaLadder™", Versa Products Inc., prior to Mar. 2017.
 Brochure, "VersaLadder™, The Original, Amazing, Multi-purpose, Heavy-duty, Folding Ladder!" Versa Products Inc., prior to Mar. 2017.
 Brochure, "VersaLadder™" (Jun. 1993).
 Brochure, "Unless your ladder looks like this . . . and does this . . ." Wing Enterprises, Inc., prior to Mar. 2017.
 Operating and Safety Instructions, "Little Giant Ladder Systems, Type IA," Wing Enterprises, Inc. (Aug. 1990), 30 pages.
 Brochure, "Ladders," Keller Ladders, Inc. (1999), 4 pages.
 Keller™ 2000/2001 Product Catalog, p. 8 (2000).
 Brochure, Krause (1997), 6 pages.
 Brochure, "The Little Giant Ladder System® Fiberglass," Wing Enterprises, prior to Mar. 2017.
 Brochure, "Columbia & Blue Ribbon 1999 Ladders," Columbia Ladders/Blue Ribbon Ladders (1999), 4 pages.

* cited by examiner

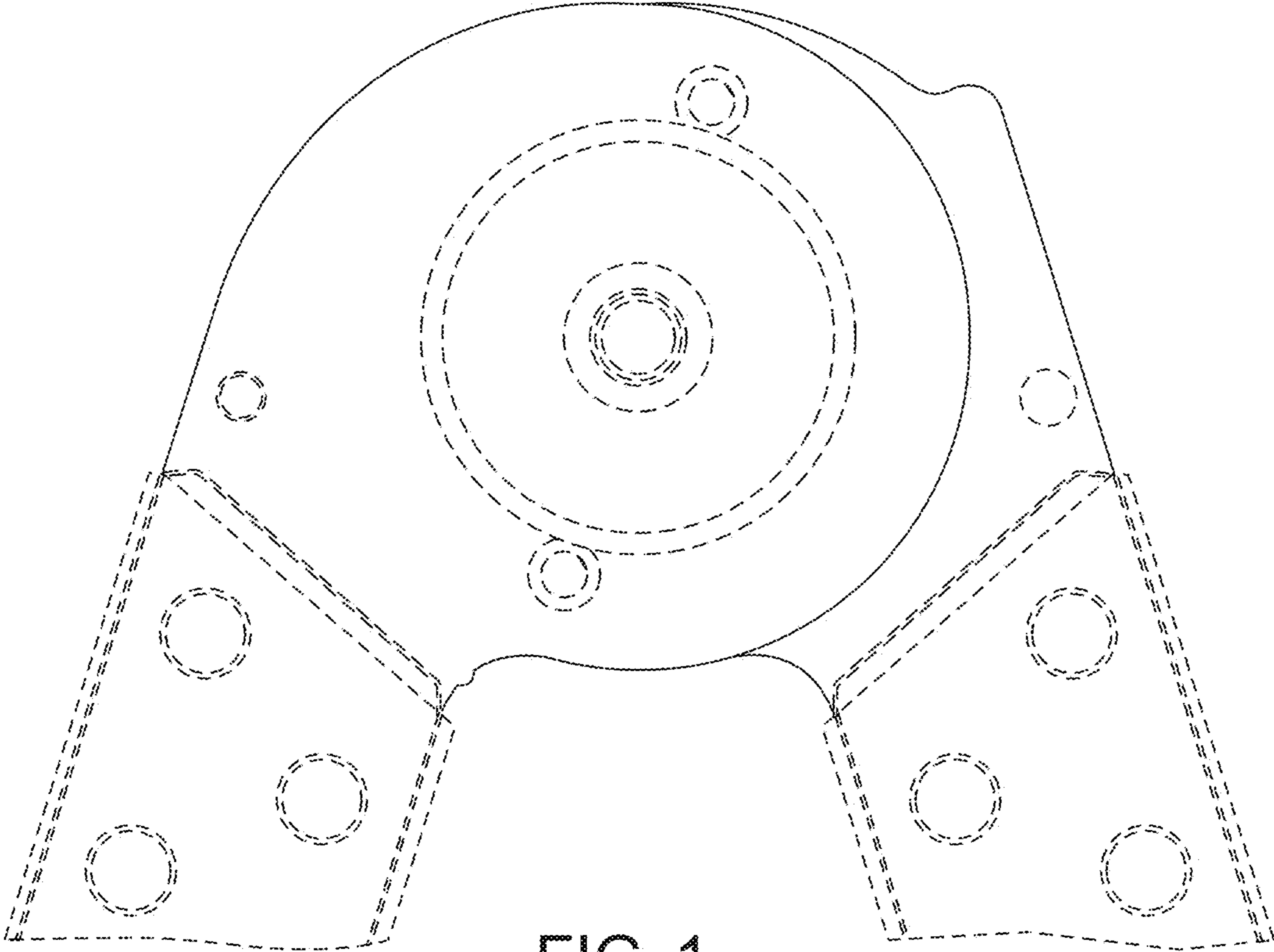


FIG. 1

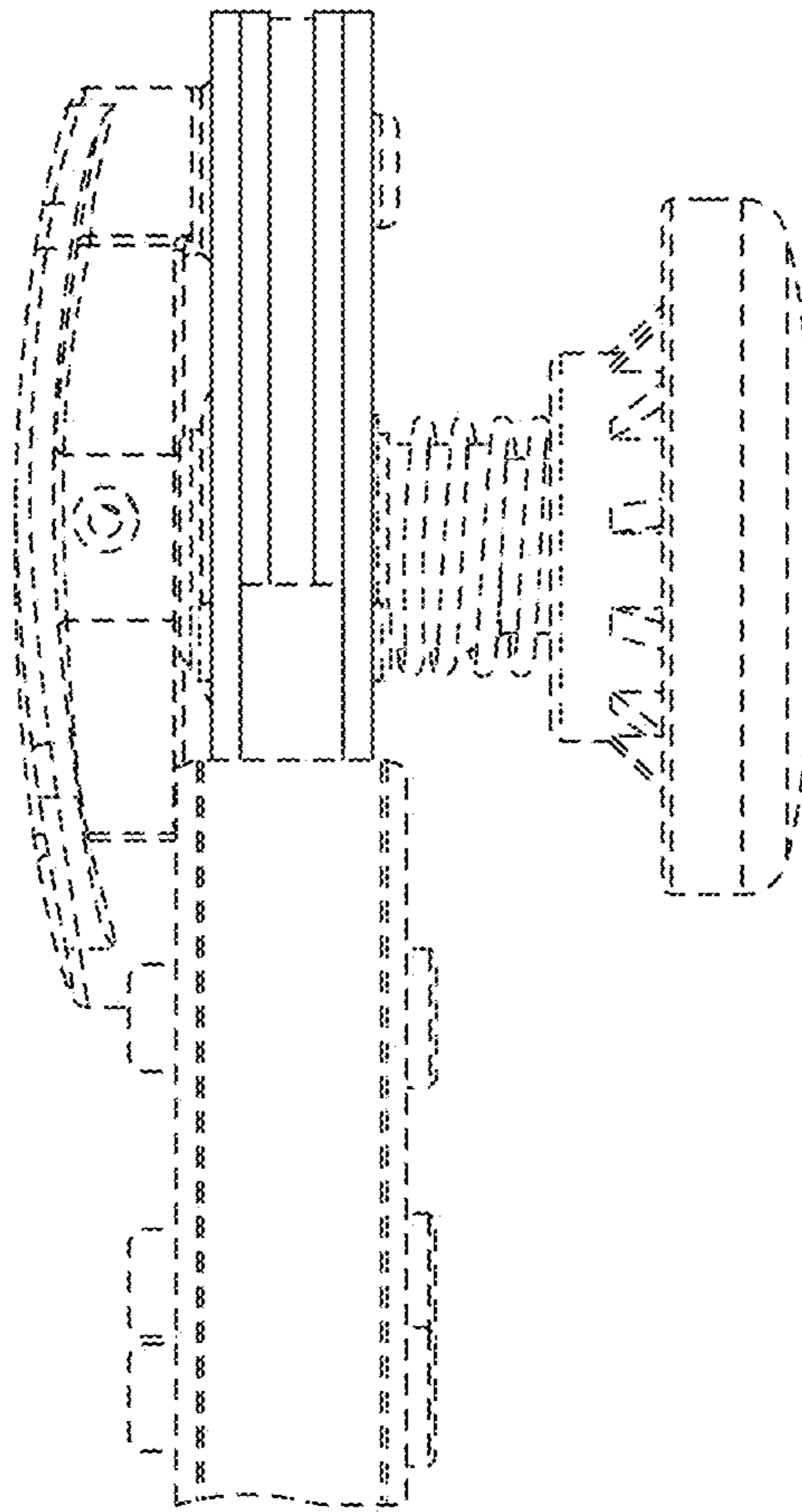


FIG. 2

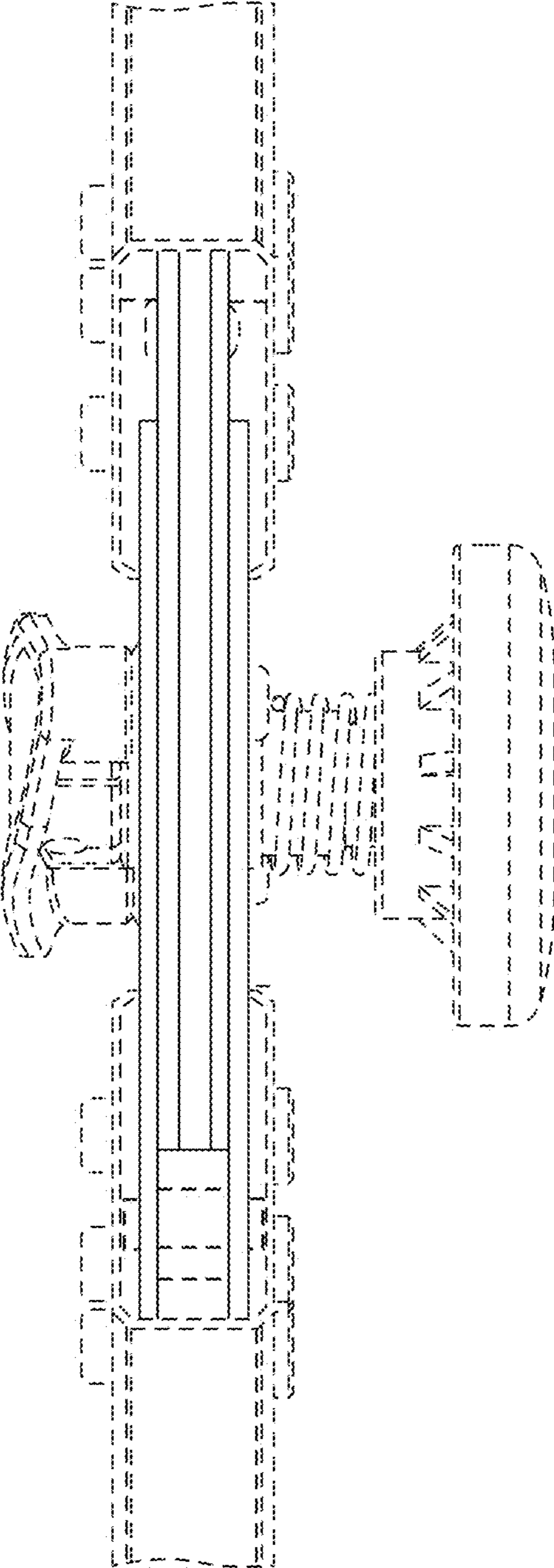


FIG. 3

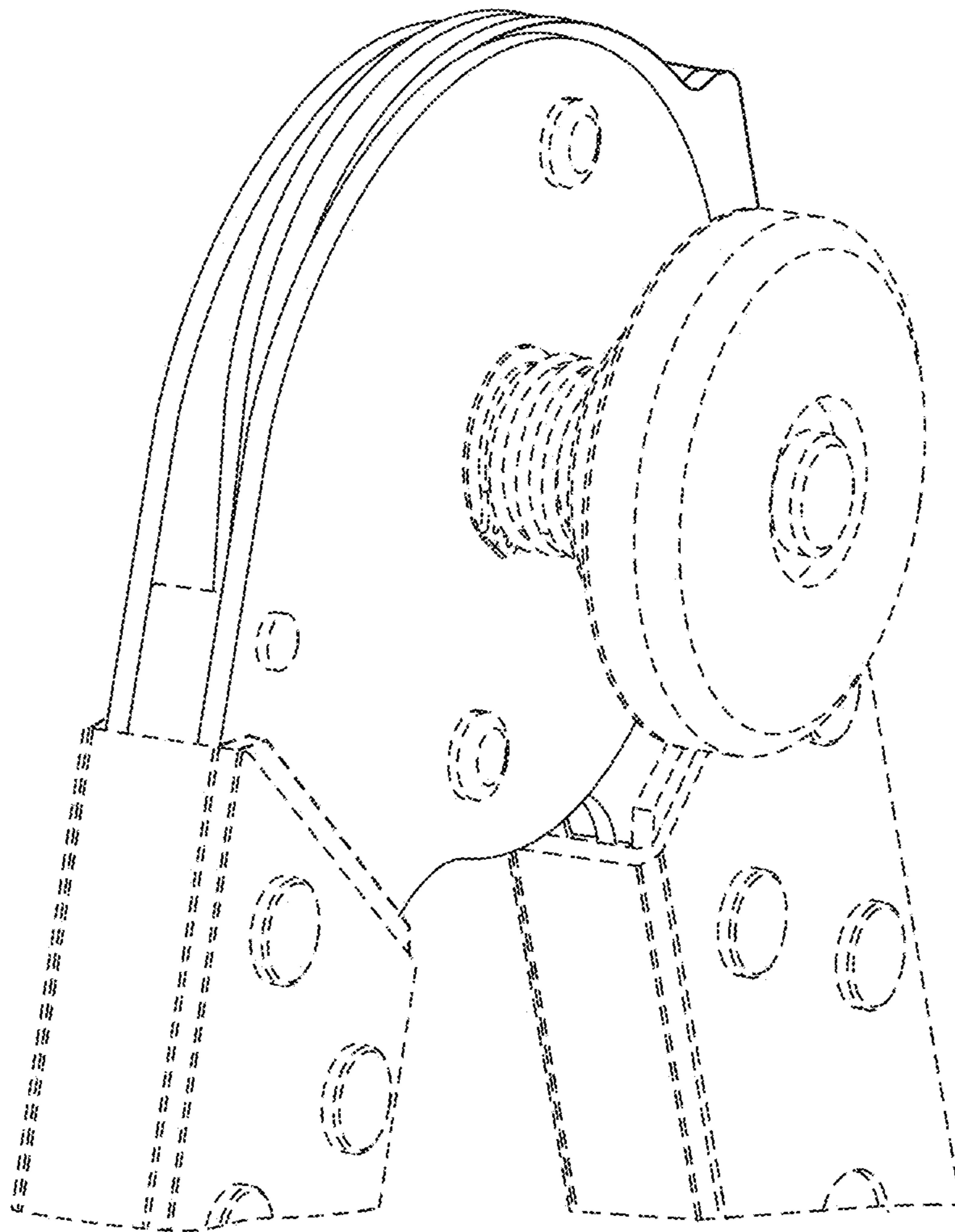


FIG. 4

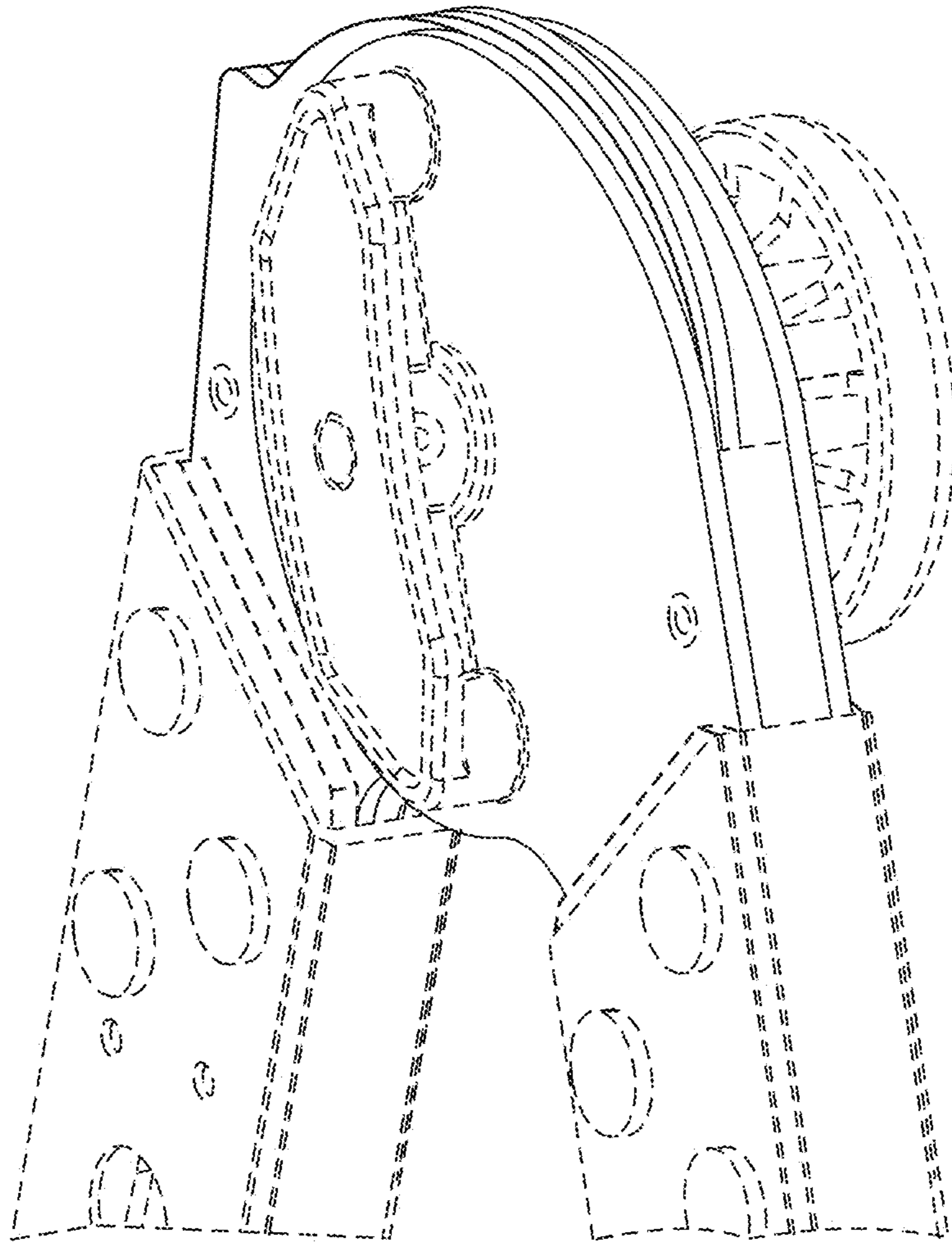


FIG. 5