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

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(54) **BRAKE ADJUSTER**

3,356,188 A \* 12/1967 Goldman ..... F16D 66/02  
116/208

(71) Applicant: **Haldex Brake Products AB**,  
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3,690,418 A \* 9/1972 Devitt ..... F16D 65/56  
188/196 BA

(Continued)

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**OTHER PUBLICATIONS**

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Slack Adjusters, image post date 2008, site visited Jun. 27, 2016,  
(online), <<http://www.brakeadjusters.com/sell-2409163-haldex-automatic-slack-adjuster-for-kamaz-truck-parts-79258.html>>.\*

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

(Continued)

(21) Appl. No.: **29/530,372**

*Primary Examiner* — Kevin Rudzinski

(22) Filed: **Jun. 16, 2015**

*Assistant Examiner* — Sean D Lough

(51) **LOC (10) Cl.** ..... **12-16**

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(52) **U.S. Cl.**

USPC ..... **D12/180**

(58) **Field of Classification Search**

USPC ..... D12/160, 174, 177, 179, 180, 189, 223,  
D12/400, 408, 420

CPC .. F16D 55/22; F16D 55/226; F16D 55/2262;  
F16D 65/14; F16D 65/16; F16D 65/18;  
F16D 65/22; F16D 65/38; F16D 65/56;  
F16D 65/567; F16D 66/02

See application file for complete search history.

(57) **CLAIM**

I claim the ornamental design for a brake adjuster, as shown  
and described.

**DESCRIPTION**

FIG. 1 is a first perspective view of the claimed design;

FIG. 2 is a second perspective view thereof;

FIG. 3 is a top view thereof;

FIG. 4 is a bottom view thereof;

FIG. 5 is a front view thereof;

FIG. 6 is a rear view thereof;

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

FIG. 8 is a left side view thereof.

The broken lines in the drawings illustrate portions of the  
brake adjuster that form no part of the claimed design.

(56) **References Cited**

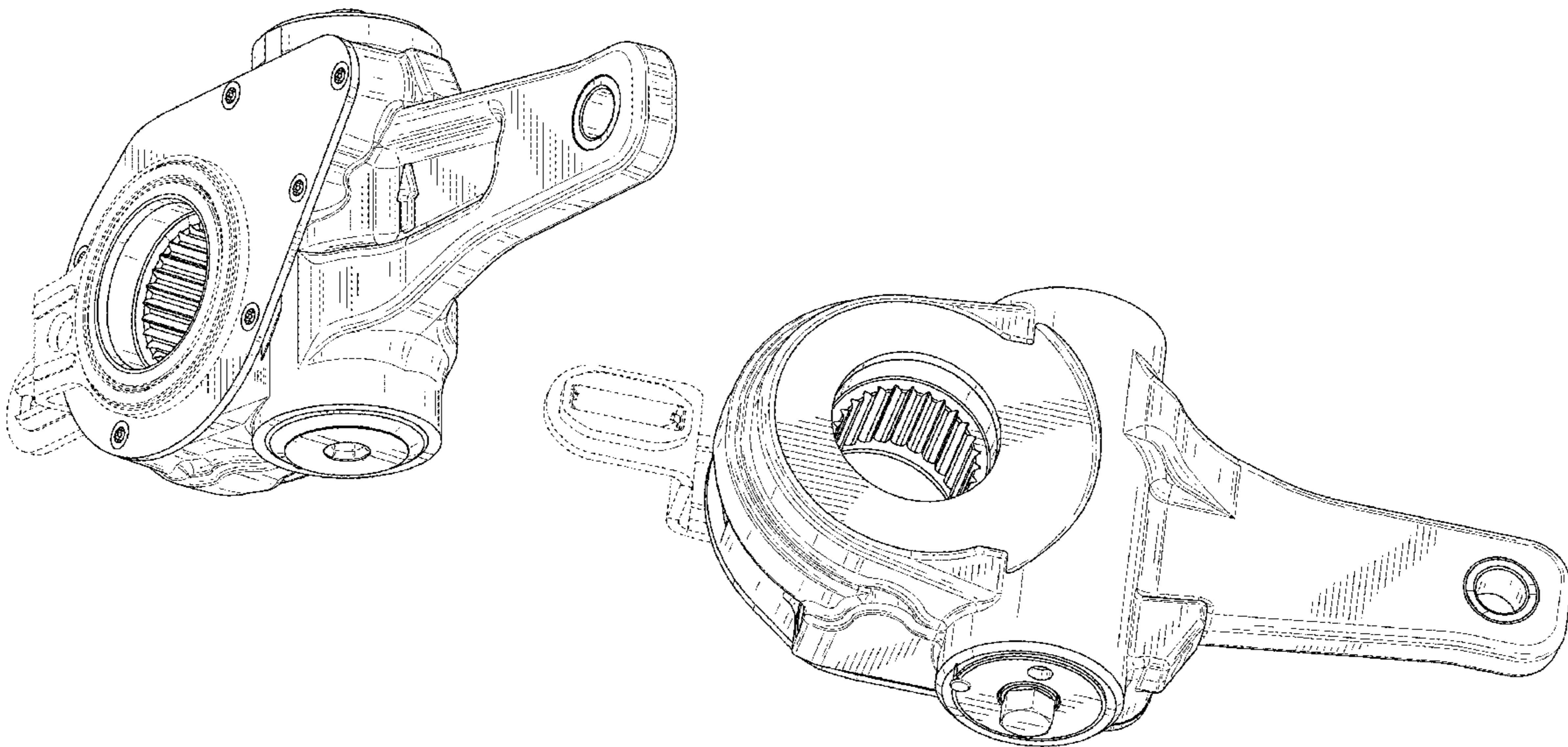
**U.S. PATENT DOCUMENTS**

2,379,796 A \* 7/1945 Freeman ..... F16D 65/60  
188/196 BA

2,522,903 A \* 9/1950 Shively ..... F16D 65/60  
188/196 BA

3,008,344 A \* 11/1961 Dracka ..... F16D 65/50  
74/522

**1 Claim, 7 Drawing Sheets**



(56)

References Cited

U.S. PATENT DOCUMENTS

3,807,535 A \* 4/1974 Shimada ..... F16D 65/561  
188/325  
3,949,840 A \* 4/1976 Cumming ..... F16D 65/22  
188/196 BA  
4,170,926 A \* 10/1979 Emmett ..... F16D 65/14  
188/370  
4,319,668 A \* 3/1982 Johnson ..... F16D 55/2262  
188/72.4  
D268,831 S \* 5/1983 Potter ..... D12/180  
4,394,890 A \* 7/1983 Kleinhagen, Jr. .... F16D 65/567  
188/71.9  
4,623,047 A \* 11/1986 Kleinhagen, Jr. .... F16D 65/22  
188/196 BA  
4,632,229 A \* 12/1986 Kleinhagen, Jr. .... F16D 65/18  
188/196 D  
4,683,991 A \* 8/1987 Kanjo ..... B61H 15/00  
188/197  
4,809,820 A \* 3/1989 Smith ..... F16D 65/50  
188/196 M  
4,844,211 A \* 7/1989 Nosse ..... F16B 21/183  
188/330  
4,880,085 A \* 11/1989 Taylor ..... F16D 65/22  
188/196 V  
5,022,500 A \* 6/1991 Wang ..... F16D 55/226  
188/71.1  
5,327,999 A \* 7/1994 Nelander ..... F16D 65/60  
188/196 BA  
5,358,076 A \* 10/1994 Lucas ..... F16D 66/02  
116/208  
D372,035 S \* 7/1996 Casey ..... D15/11  
5,535,854 A \* 7/1996 Prince ..... F16D 66/02  
188/1.11 R  
D374,205 S \* 10/1996 Levinkron ..... D12/179  
5,689,231 A \* 11/1997 Olson ..... B60Q 1/441  
116/208  
D391,824 S \* 3/1998 Larson ..... D8/303  
5,913,385 A \* 6/1999 Thibodeau ..... B60T 17/08  
116/208  
6,059,074 A \* 5/2000 Crewson ..... F16D 65/60  
188/1.11 R  
6,105,730 A \* 8/2000 Ekeroth ..... F16D 65/60  
188/1.11 L  
6,250,438 B1 \* 6/2001 Chern ..... B62L 1/00  
188/72.3  
6,390,244 B1 \* 5/2002 Sitter ..... F16D 66/02  
188/1.11 W  
6,408,993 B1 \* 6/2002 Truvert ..... F16D 65/60  
188/196 BA  
D462,256 S \* 9/2002 Jaynes ..... D12/160  
D467,534 S \* 12/2002 Tomlinson ..... D12/419  
D468,666 S \* 1/2003 Miller ..... D12/174  
6,585,086 B2 \* 7/2003 Ortégren ..... F16D 65/183  
188/71.1  
D491,500 S \* 6/2004 Fujiwara ..... D12/180  
D491,509 S \* 6/2004 Bundy ..... D12/203  
7,032,717 B2 \* 4/2006 Gripemark ..... F16D 65/847  
188/18 A  
D526,950 S \* 8/2006 Bareket ..... D12/223  
D540,244 S \* 4/2007 Racek ..... D12/223  
D543,492 S \* 5/2007 Lyew ..... D12/159  
D553,054 S \* 10/2007 Kuo ..... D12/114  
7,353,917 B2 \* 4/2008 Gripemark ..... F16D 55/24  
188/18 A  
7,445,093 B2 \* 11/2008 Kaell ..... F16D 55/00  
188/72.3  
D590,309 S \* 4/2009 Higashikawa ..... D12/174  
D595,627 S \* 7/2009 Danielsson ..... D12/180  
7,559,414 B2 \* 7/2009 Lumpkin ..... B60T 7/102  
188/24.11  
D605,985 S \* 12/2009 Pennala ..... D12/160  
D607,794 S \* 1/2010 Bridge ..... D12/180  
7,681,698 B2 \* 3/2010 Gripemark ..... F16D 65/12  
188/18 A

D624,004 S \* 9/2010 Farber ..... D12/408  
D632,625 S \* 2/2011 Tezak ..... D12/195  
D658,038 S \* 4/2012 Ghatikar ..... D8/354  
D658,480 S \* 5/2012 Pratt ..... D8/349  
D659,164 S \* 5/2012 Tomlinson ..... D15/5  
D663,913 S \* 7/2012 Alder ..... D34/35  
8,220,681 B2 \* 7/2012 Farber ..... B60R 9/06  
224/532  
D686,113 S \* 7/2013 Lin ..... D12/114  
D686,551 S \* 7/2013 Lyle ..... D12/181  
D687,353 S \* 8/2013 Dunn ..... D12/162  
D688,171 S \* 8/2013 Cirino ..... D12/162  
D690,246 S \* 9/2013 Giordano ..... D12/187  
D695,207 S \* 12/2013 Dams ..... D10/98  
D696,098 S \* 12/2013 Wada ..... D8/354  
D696,100 S \* 12/2013 Wada ..... D8/354  
D727,361 S \* 4/2015 Rabbitt ..... D15/5  
9,097,305 B2 \* 8/2015 Onnestam ..... F16D 65/60  
D738,184 S \* 9/2015 Harvey ..... D8/303  
D753,473 S \* 4/2016 Pirolo ..... D12/223  
D754,042 S \* 4/2016 Pennington ..... D12/181  
D755,683 S \* 5/2016 Goodlow ..... D12/114  
9,353,814 B2 \* 5/2016 Seglo ..... F16D 66/025  
2002/0153772 A1 \* 10/2002 Bunker ..... B60T 7/042  
303/186  
2002/0162709 A1 \* 11/2002 Drennen ..... F16D 65/18  
188/72.1  
2003/0106748 A1 \* 6/2003 Bunker ..... F16D 55/28  
188/72.6  
2004/0011603 A1 \* 1/2004 Yokoyama ..... B60T 13/741  
188/72.7  
2004/0040793 A1 \* 3/2004 Feng ..... B60T 11/046  
188/2 D  
2005/0211506 A1 \* 9/2005 Painchaud ..... F16D 65/28  
184/104.1  
2006/0076195 A1 \* 4/2006 Salazar ..... F16D 66/02  
188/1.11 R  
2007/0045060 A1 \* 3/2007 Pettersson ..... B60T 17/22  
188/72.1  
2008/0000732 A1 \* 1/2008 Chen ..... F16D 49/16  
188/74  
2010/0170757 A1 \* 7/2010 Dhawan ..... F16D 55/22  
188/73.39  
2014/0015214 A1 \* 1/2014 Galazin ..... B60G 9/003  
280/124.128  
2014/0216865 A1 \* 8/2014 Gripemark ..... F16D 65/60  
188/79.55  
2015/0260245 A1 \* 9/2015 Usui ..... F16D 65/22  
188/78  
2016/0017946 A1 \* 1/2016 Sandberg ..... F16D 65/18  
188/71.8

OTHER PUBLICATIONS

Various Slack Adjusters, image post date 2011, site visited Jun. 27, 2016, (online), <<http://www.everychina.com/m-volvo-automatic-slack-adjuster-for-truck-parts>>.\*  
Automatic Slack Adjusters, image post date 2016, site visited Jun. 27, 2016, (online), <<http://www.wsaslackadjuster.com/manufacturer-154151-automatic-slack-adjuster-for-truck>>.\*  
Self-Setting Brake Adjuster, image post date Sep. 29, 2014, site visited Jun. 27, 2016, (online), <<http://web.archive.org/web/20140929200126/http://www.vehicleservicepros.com/company/10121485/haldex-brake-products>>.\*  
Genuine Spicer Slack Adjuster, image post date Jan. 18, 2016, site visited Jun. 27, 2016, (online), <<http://www.ebay.ca/itm/GENUINE-SPICER-SLACK-ADJUSTER-975715-ETN0975715-4C4Z-2308-BA-7B09-10096-/191496383217>>.\*  
Truck slack adjusters, image post date Jul. 4, 2015, site visited Jun. 27, 2016, (online), <<http://web.archive.org/web/20150704065557/http://www.lulusoso.com/products/Truck-Slack-Adjuster.html>>.\*  
Haldex, “Automatic Brake Adjusters” brochure, copyright 2008, last revised Jan. 2009, 4 pages.

\* cited by examiner

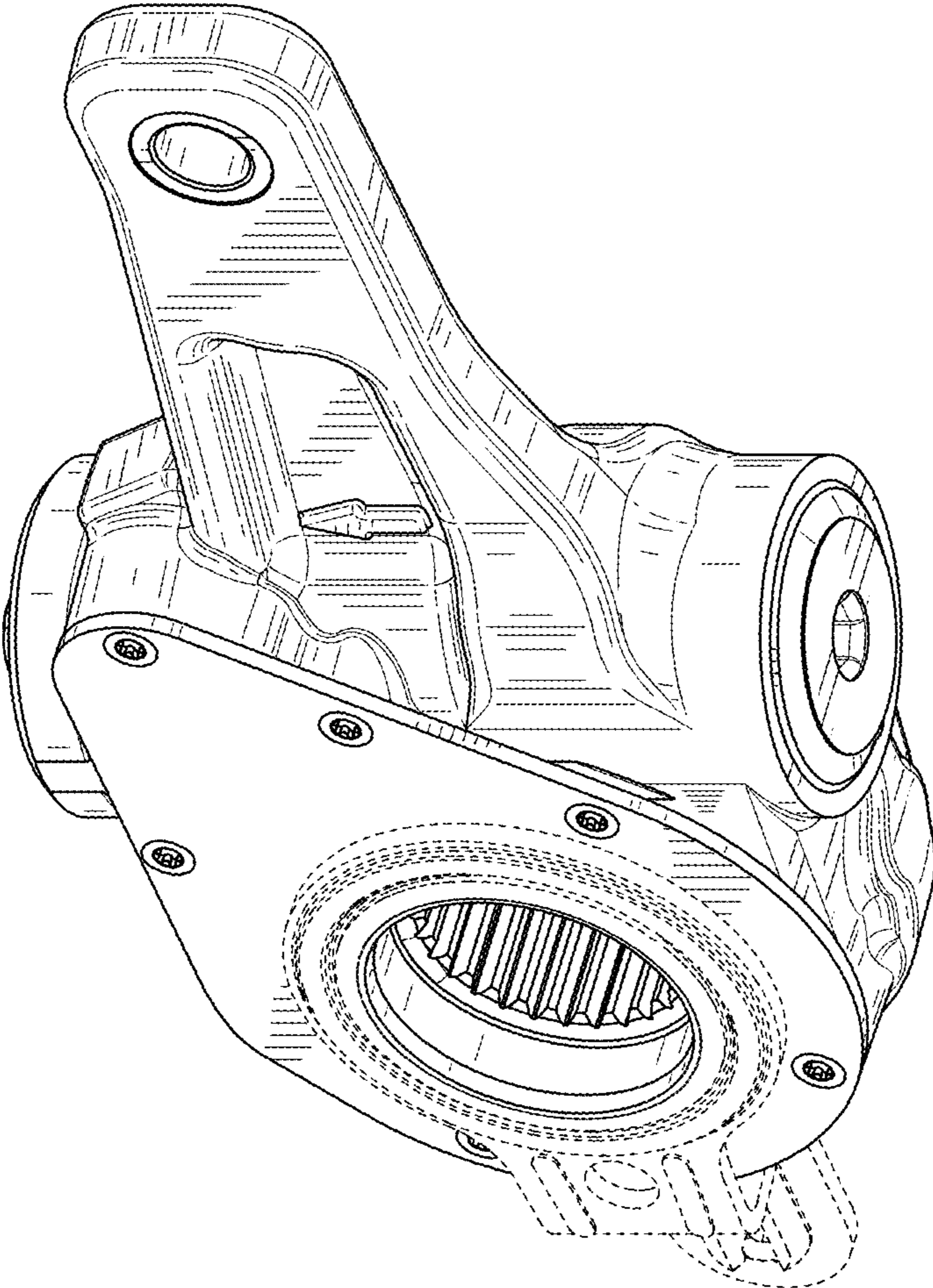


FIG. 1

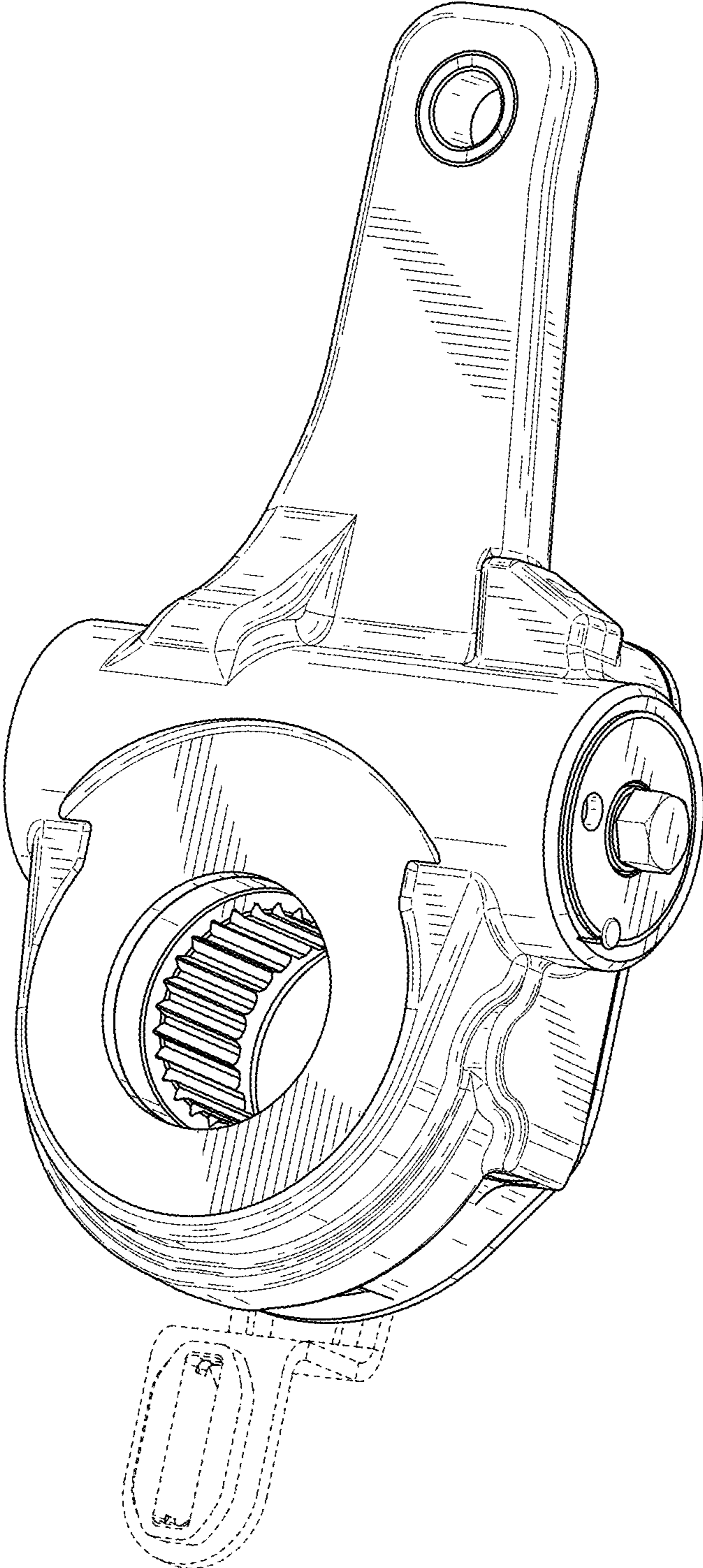


FIG. 2

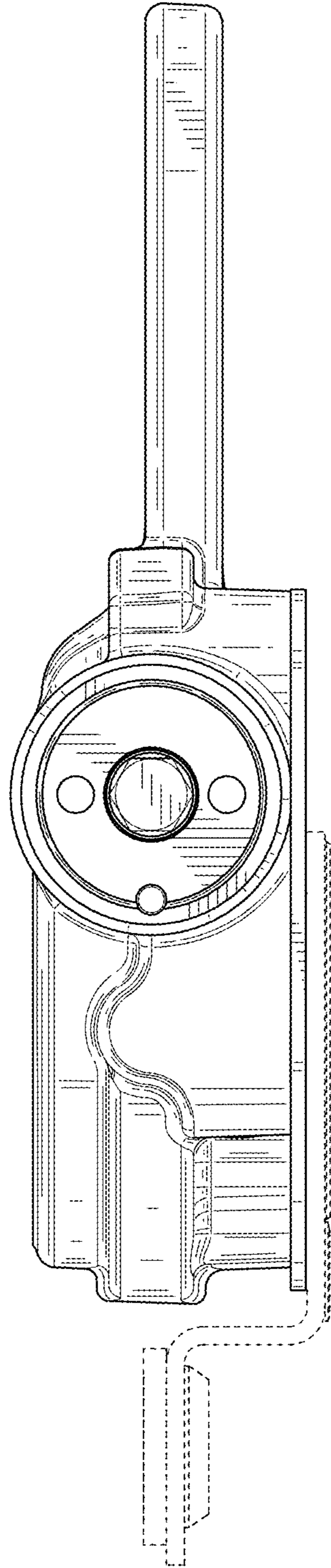


FIG. 3

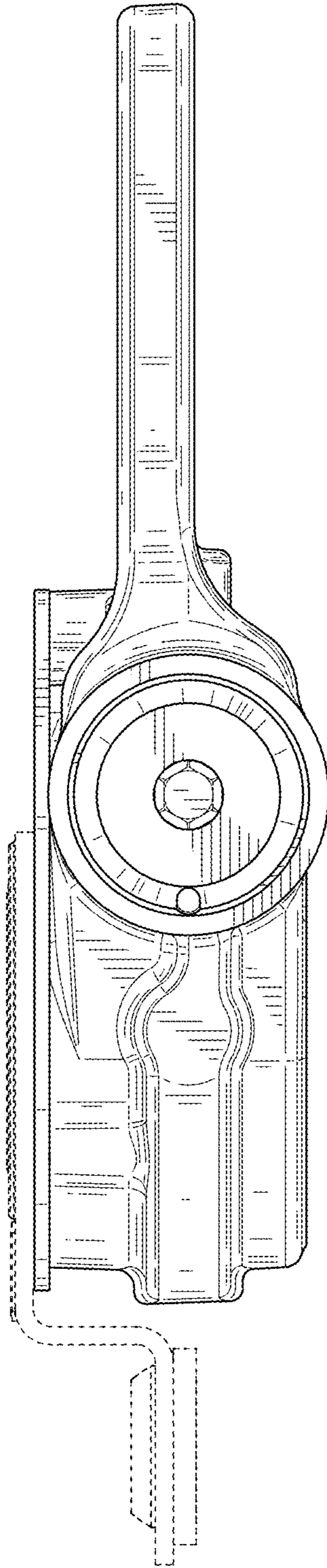


FIG. 4

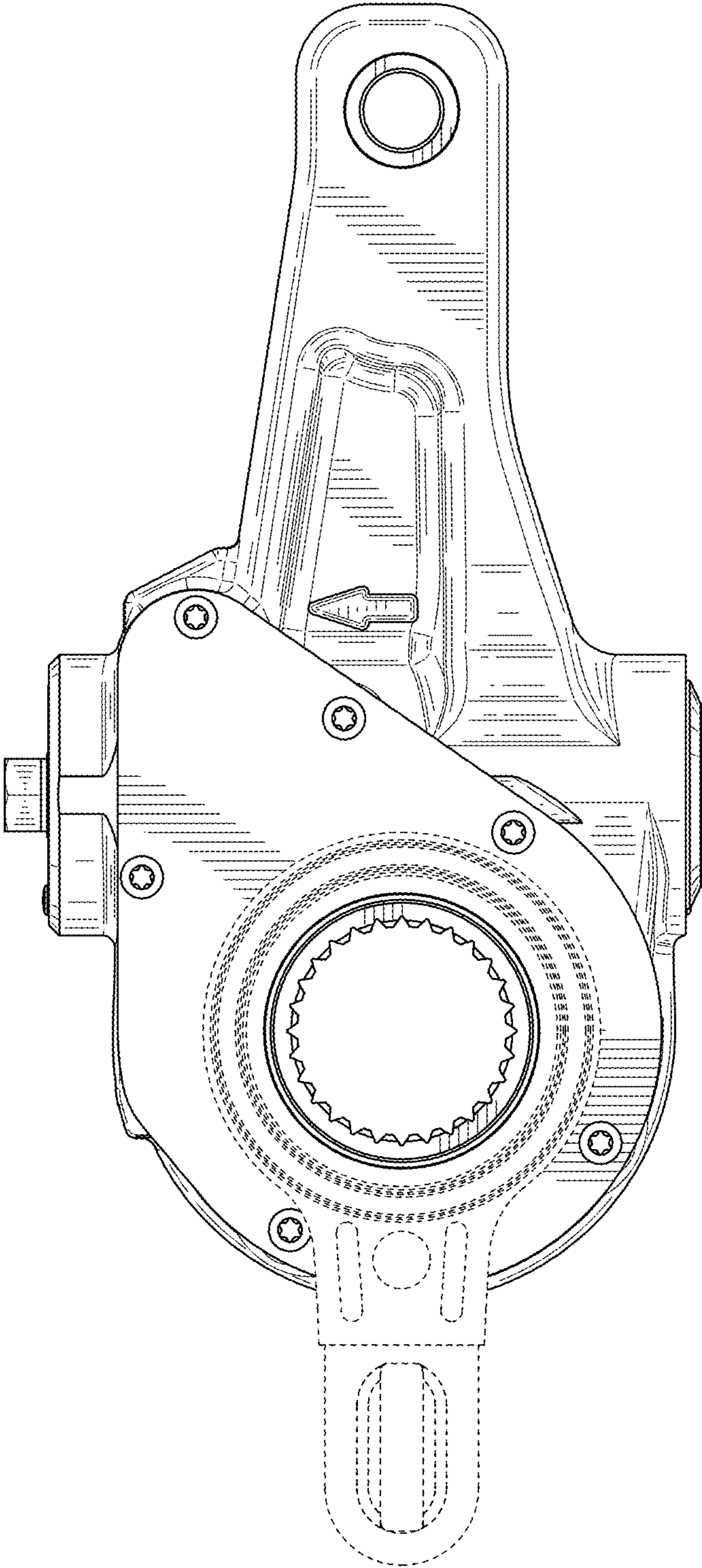


FIG. 5

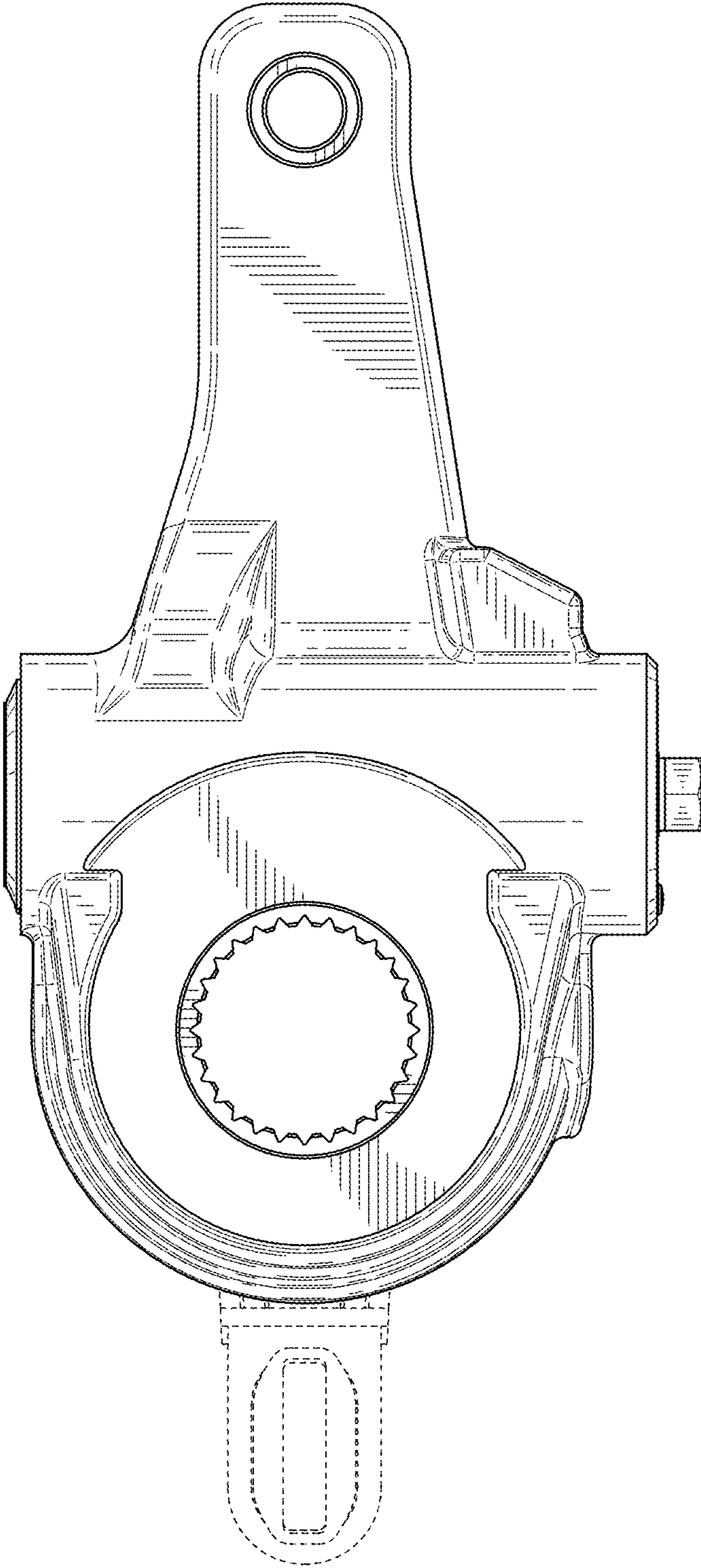


FIG. 6



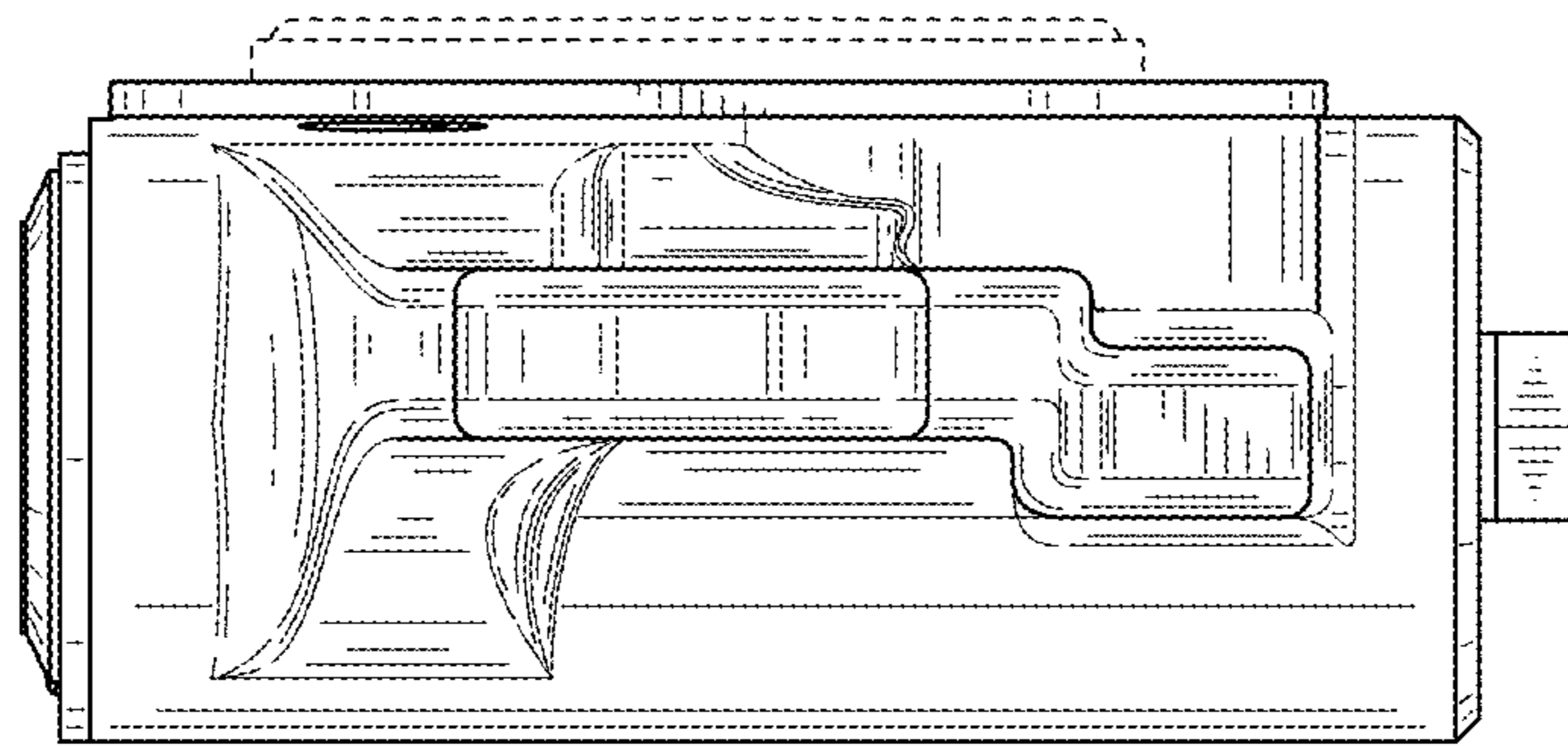


FIG. 7

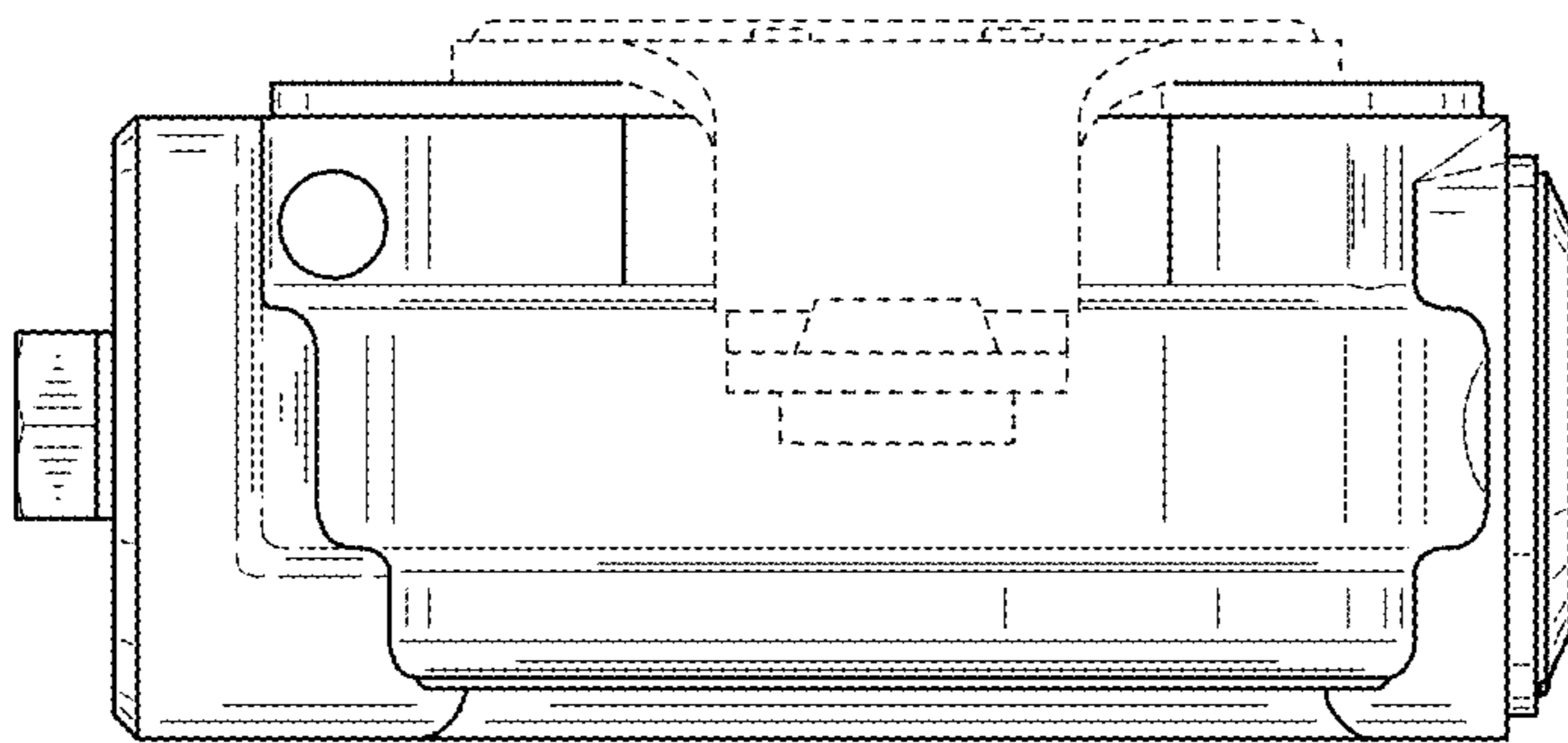


FIG. 8