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

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(54) **SEAL FOR HEAD ASSEMBLY**

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(\* ) Notice: This patent is subject to a terminal disclaimer.

(\*\*) Term: **14 Years**

(21) Appl. No.: **29/378,942**

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(51) **LOC (9) Cl.** ..... **23-01**

(52) **U.S. Cl.** ..... **D23/259**

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D15/21, 28; 175/403, 58, 236, 246, 317,  
175/44, 255, 234, 230, 19, 249, 285, 258,  
175/72, 251, 247; 166/214, 237, 285, 177.4,  
166/98; 173/137

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D83,420	S	*	2/1931	Baird	.....	D23/262
2,251,679	A		8/1941	Kinnear		
2,638,362	A	*	5/1953	Sherman et al.	.....	285/5
D188,087	S	*	5/1960	Rowell	.....	D23/260
D194,015	S	*	11/1962	Stringham	.....	D23/262
D227,888	S	*	7/1973	Felix	.....	D23/262
3,845,815	A	*	11/1974	Garwood	.....	166/154
D234,847	S	*	4/1975	Hoffman	.....	D23/262
3,989,106	A		11/1976	Taylor		
4,805,696	A	*	2/1989	Henderson	.....	166/114
4,834,198	A		5/1989	Thompson		
D334,046	S	*	3/1993	Klose	.....	D23/213
5,224,715	A		7/1993	Downes et al.		
5,267,620	A		12/1993	Lee		
D372,516	S	*	8/1996	Nimmo	.....	D23/213
D372,765	S	*	8/1996	Sisk	.....	D23/269

D372,960	S	*	8/1996	Allmon et al.	.....	D23/260
D383,053	S	*	9/1997	Schrader et al.	.....	D8/382
D383,378	S	*	9/1997	Schrader et al.	.....	D8/382
5,934,393	A		8/1999	Marshall		
D446,298	S	*	8/2001	Thurman	.....	D23/393
6,425,449	B1		7/2002	Marshall		

(Continued)

FOREIGN PATENT DOCUMENTS

CA 2138201 C 1/1997

OTHER PUBLICATIONS

Bal Seal Engineering Company, Inc., Bal Seal Catalog, 1995, (8 pages).

(Continued)

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(57) **CLAIM**

The ornamental design for a seal for head assembly, as shown and described.

**DESCRIPTION**

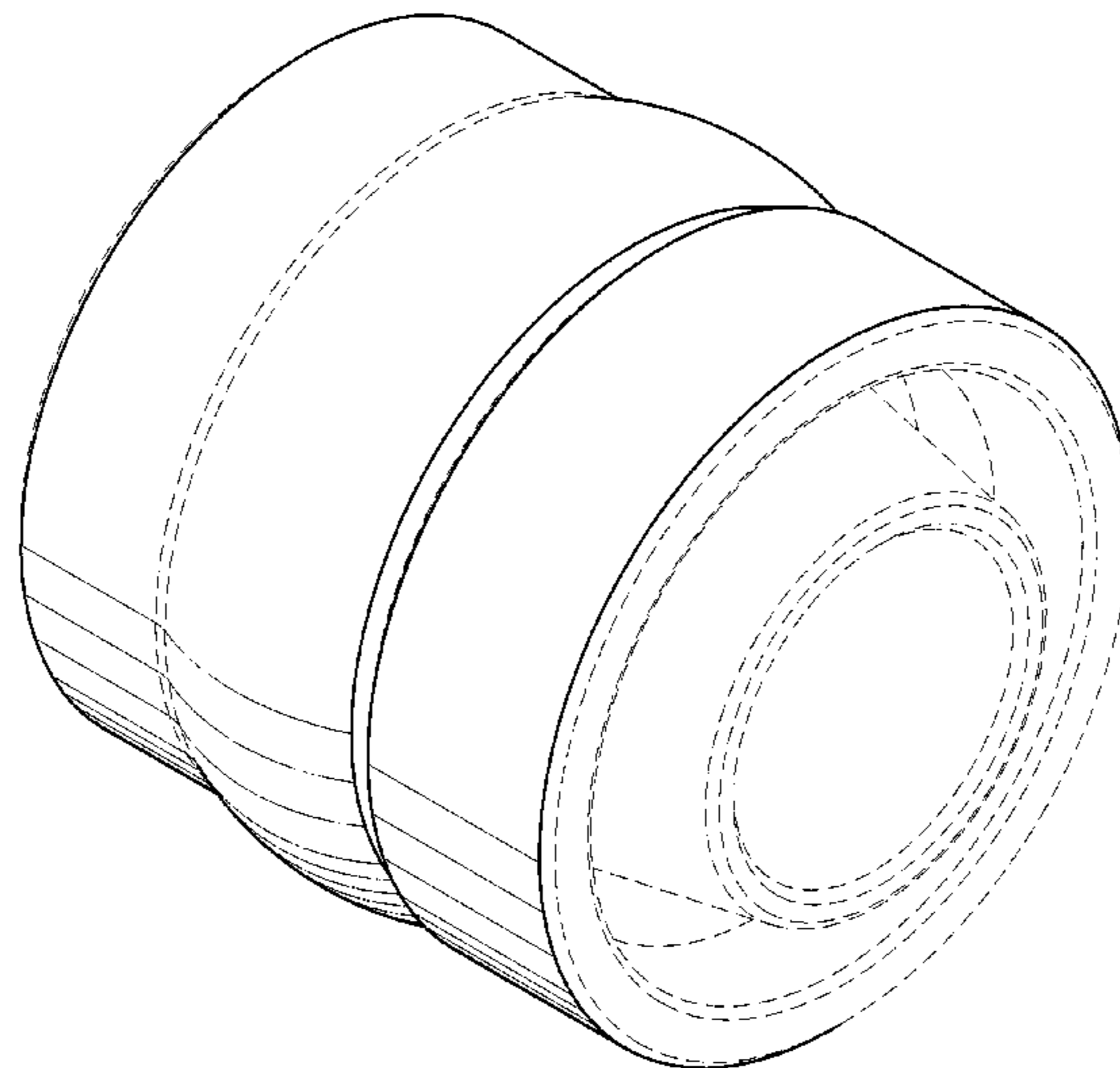
FIG. 1 is a perspective view of a seal for head assembly showing the new design;

FIG. 2 is a front elevational view of the seal for head assembly of FIG. 1, the top plan and bottom plan views being identical thereto and the rear elevational view being a minor image thereof;

FIG. 3 is a cross-sectional view of the seal for head assembly along line 3-3 as shown in FIG. 2, wherein the seal for head assembly has a substantially constant cross section; and, FIG. 4 is an exploded view of the seal for head assembly of FIG. 1.

The phantom, broken lines form no part of the claimed design.

**1 Claim, 4 Drawing Sheets**



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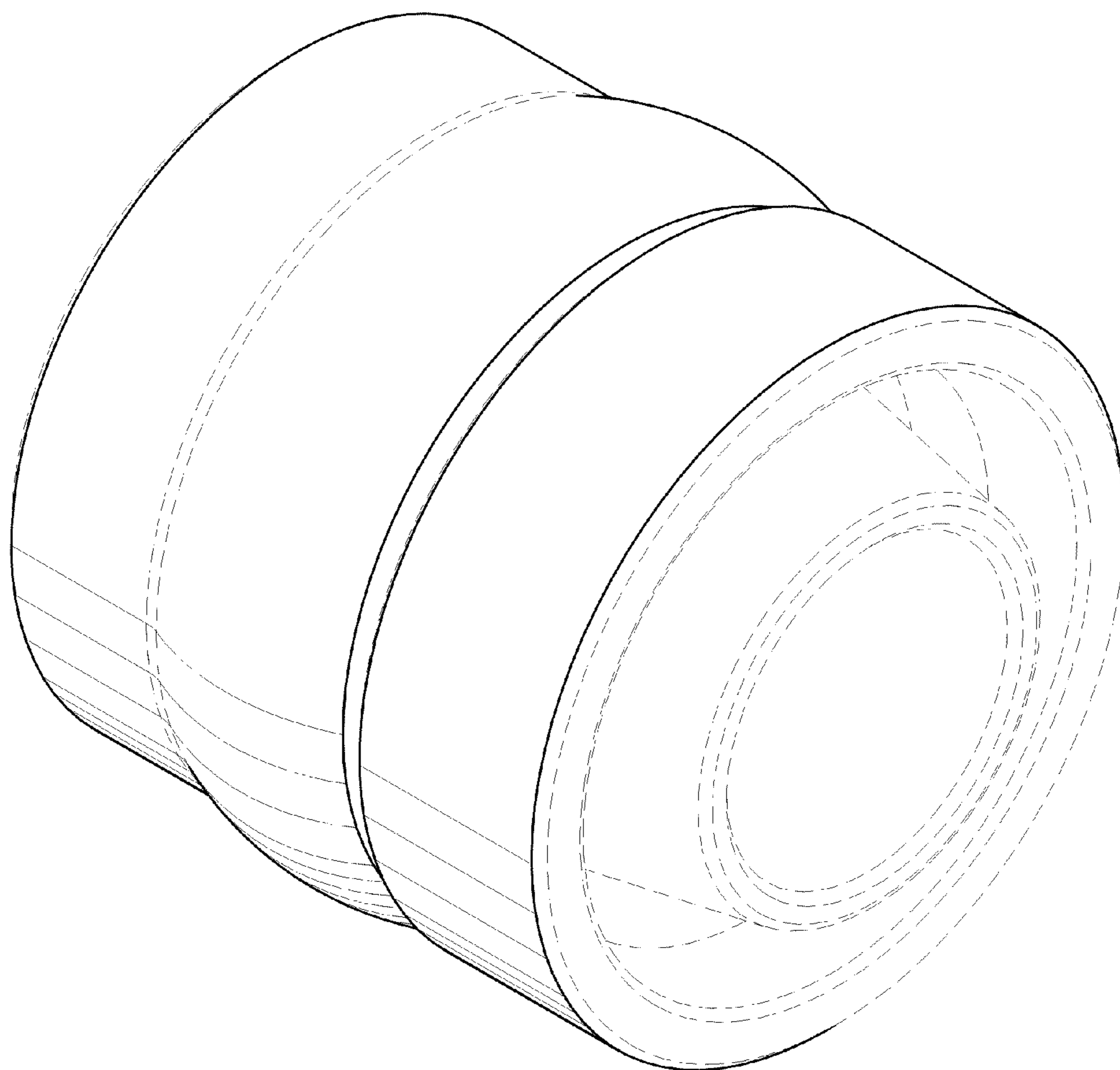
## U.S. PATENT DOCUMENTS

D461,545 S \* 8/2002 Nishio ..... D23/266  
6,564,885 B2 5/2003 Attwater  
6,681,872 B2 \* 1/2004 Radtke et al. .... 175/20  
D518,559 S \* 4/2006 Ostergaard et al. .... D23/262  
7,380,603 B2 \* 6/2008 Jeffrey et al. .... 166/285  
7,913,760 B2 \* 3/2011 Robichaux et al. .... 166/291  
D637,697 S 5/2011 Steiner  
D638,918 S 5/2011 Grether  
7,975,784 B2 7/2011 Purcell  
2003/0121671 A1 \* 7/2003 Bailey et al. .... 166/387  
2004/0007359 A1 \* 1/2004 Stevens et al. .... 166/285  
2005/0199426 A1 \* 9/2005 Smith et al. .... 175/57  
2005/0241825 A1 11/2005 Burris, II et al.  
2006/0037784 A1 \* 2/2006 Walter et al. .... 175/71  
2008/0190616 A1 \* 8/2008 Watson ..... 166/298  
2010/0096132 A1 \* 4/2010 Mosing et al. .... 166/285  
2010/0126718 A1 \* 5/2010 Lilley ..... 166/253.1  
2010/0206580 A1 \* 8/2010 Tessari et al. .... 166/377  
2011/0030954 A1 \* 2/2011 Allison et al. .... 166/285

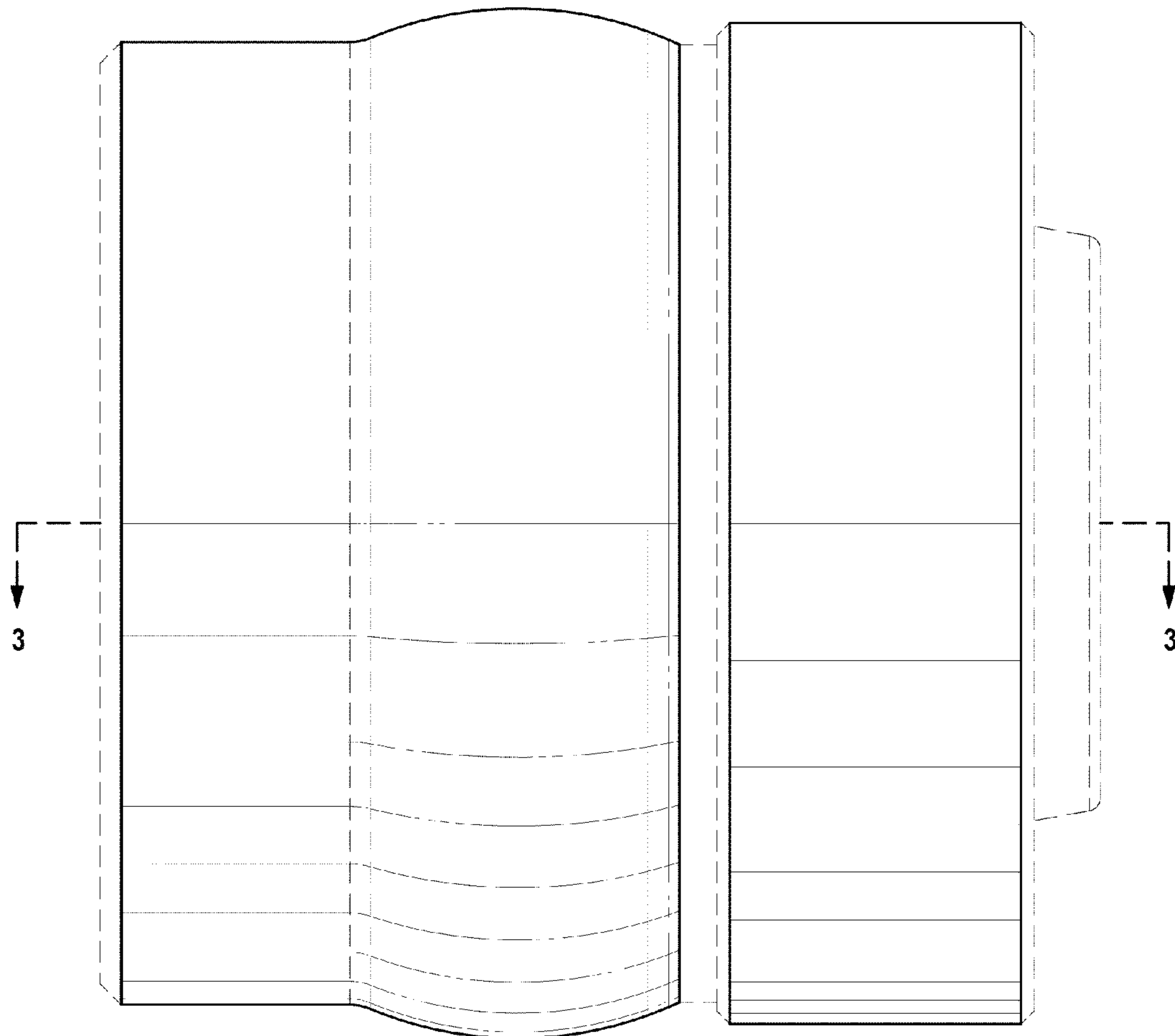
## OTHER PUBLICATIONS

Longyear Company, Longyear Heat-Treated CQ Wireline Drill Rods, 1991, (7 pages).  
Longyear Company, Underground Wireline Core Barrels, Jun. 1, 1989 (4 pages).  
Bal Seal Engineering Company, Inc., Rotary Seal Catalog, 2001 (7 pages).  
Notice of Allowance dated Apr. 27, 2011 from U.S. Appl. No. 29/378,943, filed Nov. 11, 2010 (11 pages).  
Notice of Allowance dated Apr. 27, 2011 from U.S. Appl. No. 29/381,037, filed Dec. 14, 2010 (12 pages).  
Notice of Allowance dated Aug. 10, 2011 from U.S. Appl. No. 29/381,037, filed Dec. 14, 2010 (6 pages).  
Notice of Allowance dated Aug. 18, 2011 from U.S. Appl. No. 29/378,943, filed Nov. 11, 2010 (6 pages).

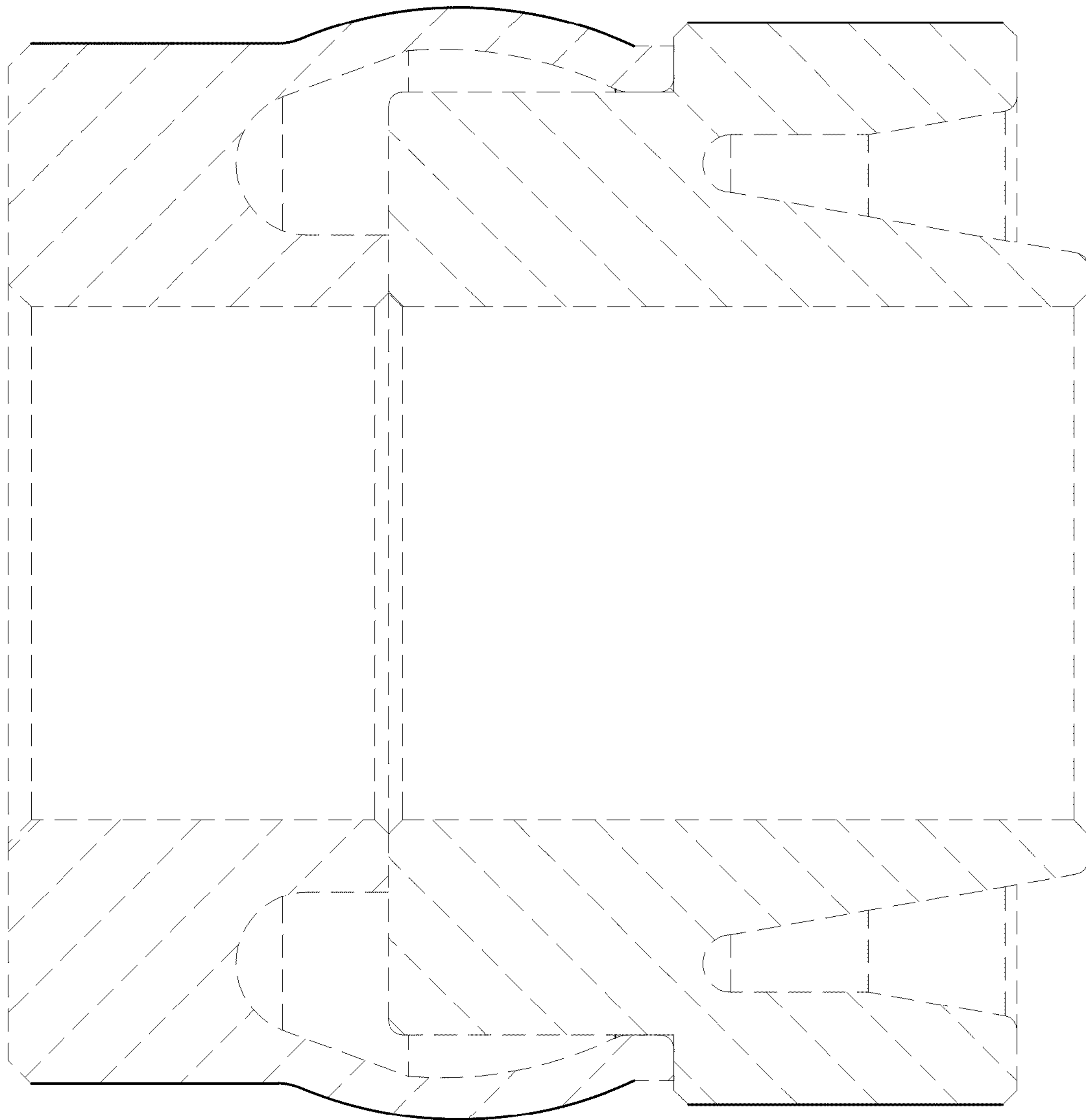
\* cited by examiner



**Fig. 1**



*Fig. 2*



**Fig. 3**

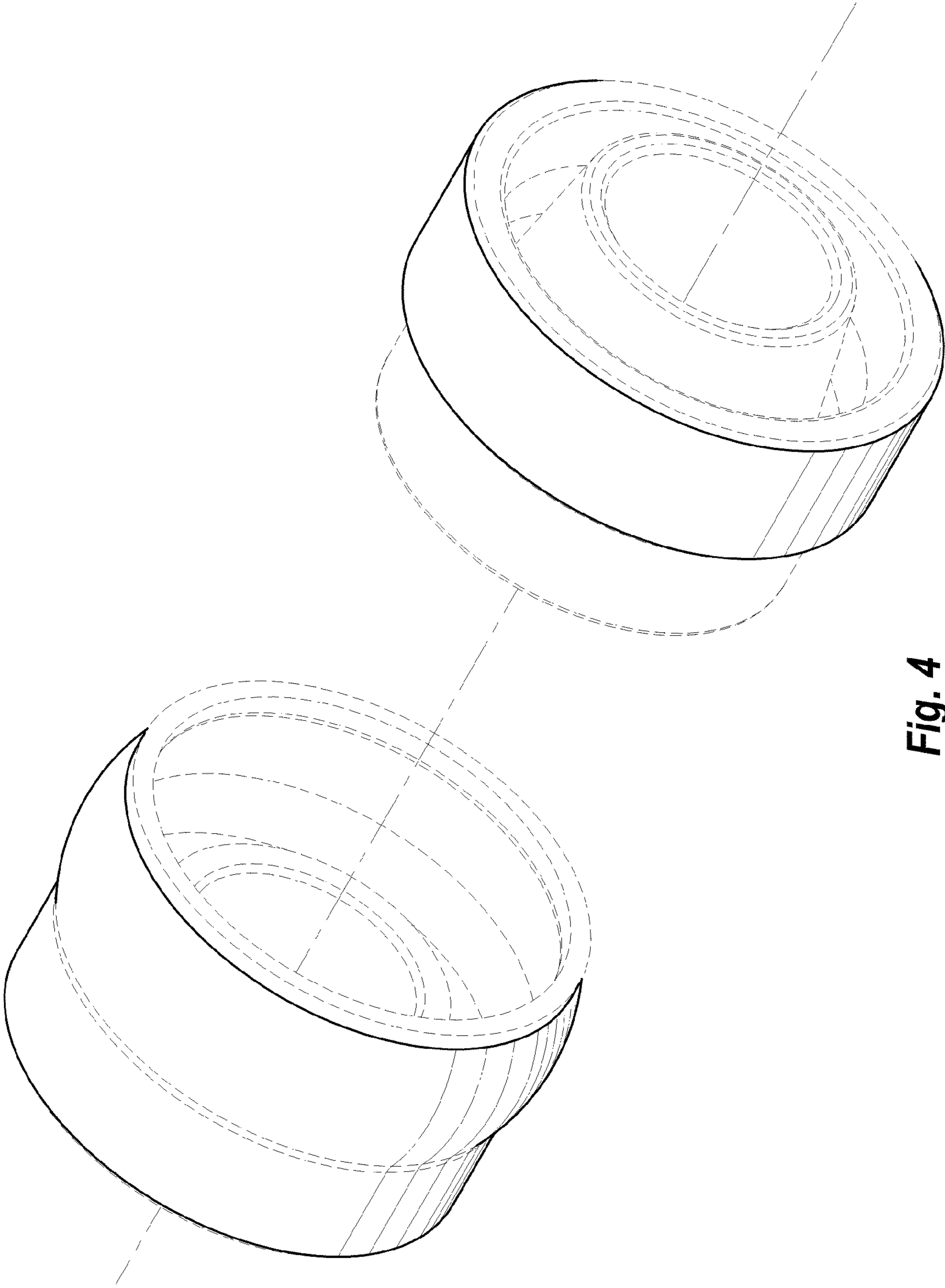


Fig. 4