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Kuroda et al.

US D895,076 S

(45) Date of Patent: Sep. 1, 2020 **

COMPOSITE SEAL MEMBER FOR SEMICONDUCTOR PRODUCTION **APPARATUS**

- Applicant: Valqua, Ltd., Tokyo (JP)
- Inventors: Michi Kuroda, Gojo (JP); Sangho
 - Kim, Gojo (JP)
- (73) Assignee: Valqua, Ltd., Tokyo (JP)
- 15 Years Term:
- Appl. No.: 35/506,451
- Aug. 3, 2018 Filed: (22)

Hague Agreement Data (80)

Int. Filing Date: Aug. 3, 2018 DM/102525 Int. Reg. No.: Int. Reg. Date: Aug. 3, 2018 Int. Reg. Pub. Date: Feb. 8, 2019

(30)Foreign Application Priority Data

F	eb. 8, 2018 (JP)	2018-002526
(51)	LOC (12) Cl	23-01
(52)	U.S. Cl.	
	USPC	D23/269
(58)	Field of Classification Search	
	USPC	. D23/269; D8/382
	(Continued)	

(56)**References Cited**

U.S. PATENT DOCUMENTS

2,622,905	A	*	12/1952	Heinrich	F16J 15/32
3,990,711	A	*	11/1976	Hill	277/380 F16J 15/32 277/451

(Continued)

FOREIGN PATENT DOCUMENTS

JP 9/2017 D1612684 S JP D1589474 S 10/2017 (Continued)

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(57)**CLAIM**

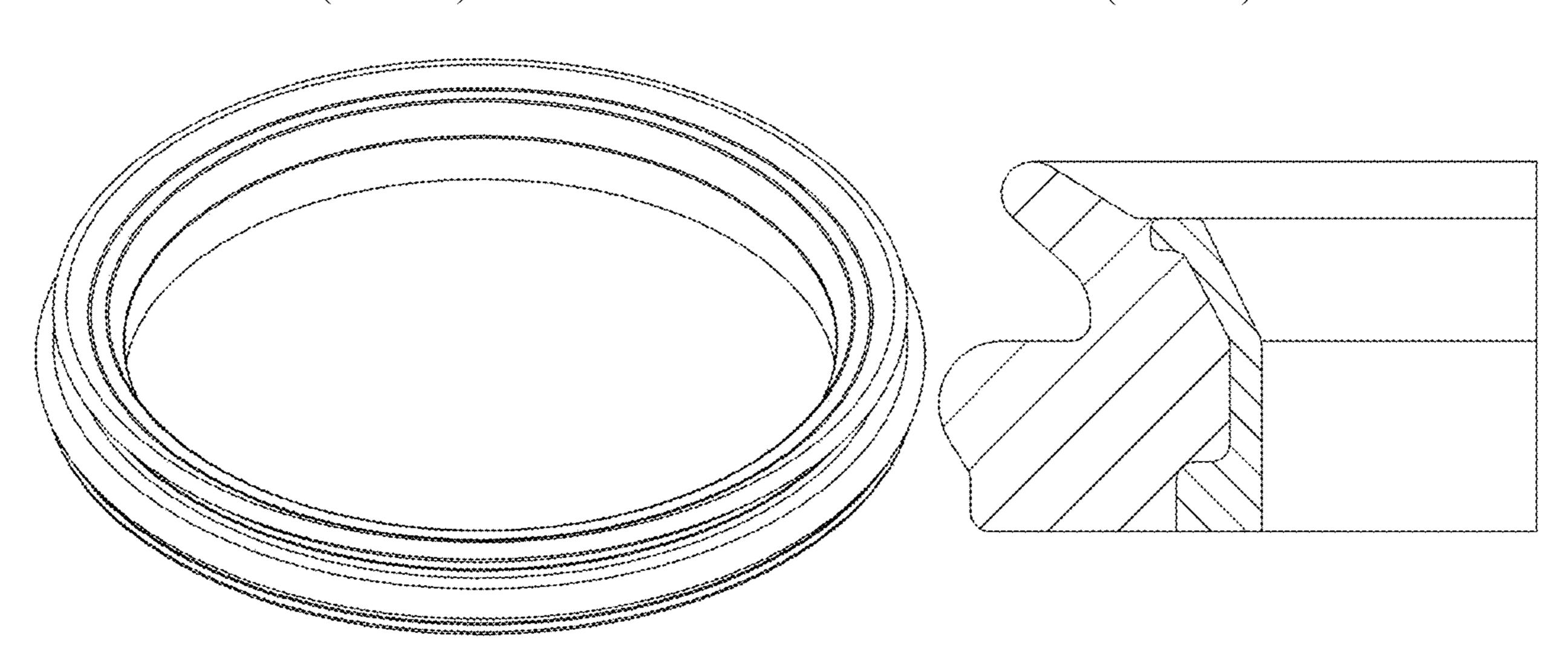
The ornamental design for a composite seal member for semiconductor production apparatus, as shown and described.

DESCRIPTION

- 1. Composite seal member for semiconductor production apparatus
- 1.1 : Perspective
- **1.2** : Front
- 1.3 : Back
- **1.4** : Left
- 1.5 : Right
- **1.6** : Top
- **1.7** : Bottom
- 1.8 : Cross-sectional
- 1.9 : Partial enlargement of cross-sectional view 1.8
- 1.10 : Reference

The present article is a composite seal member for semiconductor production apparatuses, such as chemical vapor deposition apparatuses and dry etching apparatuses; as illustrated in the reproduction 1.10, the article is composed of a first component formed of rubber occupying a major part of the article and a second component formed of a synthetic resin, and is to be inserted into the groove of a semiconductor production apparatus; the semiconductor production apparatus itself forms no part of the claimed design; the reproduction 1.8 shows a transverse cross-sectional front view taken along the horizontal center of the reproduction 1.6; and the reproduction 1.9 is an enlarged view showing a left end portion of the cross-sectional view 1.8.

(Continued)



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The broken lines shown in Reproduction 1.10 are for the purposes of illustrating environmental structure and form no part of the claimed design.

1 Claim, 10 Drawing Sheets

(58)	Field of Classification Search						
	CPC	F16J 15/32; Y10T 428/215					
	See application file for o	complete search history.					

(56) References Cited

U.S. PATENT DOCUMENTS

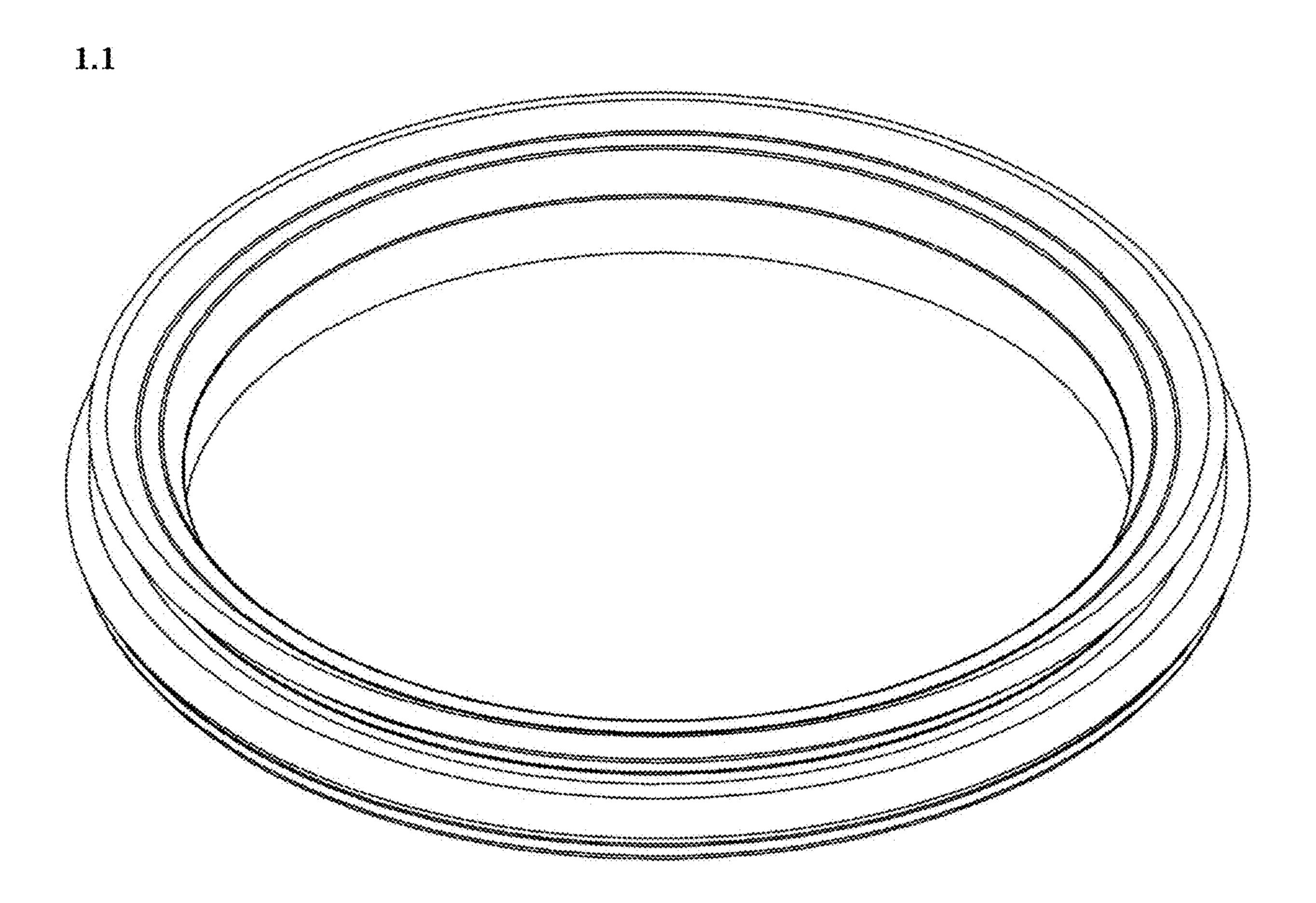
4,421,330 A *	12/1983	Burke F16J 15/166
		277/572
4,466,624 A *	8/1984	Panigati F16J 15/48
		277/448
4,582,366 A *	4/1986	Burfield B62D 55/0887
		277/402
D289,078 S *	3/1987	Vassallo D23/269
/		Gotoh F16J 15/32
		277/438
		= : : : = =

D379,493	S	*	5/1997	Woods D23/269
D498,826	S	*	11/2004	Takahiro D23/269
D646,764	S	*	10/2011	Rusconi D23/269
D696,751	S	*	12/2013	Beagen, Jr D23/269
D728,182	S	*	4/2015	Cook
D728,757	S	*	5/2015	Graham D23/269
D796,012	S	*	8/2017	Hagano D23/269
D818,089	S	*	5/2018	Kim D23/269
D821,552	S	*	6/2018	Nakagawa D23/269
D822,181	S	*	7/2018	Nakagawa D23/269
D846,095	S	*	4/2019	Copeland D23/269
D846,096	S	*	4/2019	Copeland
D846,097	S	*	4/2019	Copeland
D846,098	S	*	4/2019	Copeland D23/269
D852,335	S	*	6/2019	Copeland D23/269
D852,935	S	*	7/2019	Copeland
D857,859	S	*	8/2019	Copeland D23/269
2015/0362075	\mathbf{A}	1 *	12/2015	Kubota F16F 9/36
				280/276

FOREIGN PATENT DOCUMENTS

ΓW	D150427	S	11/2012
ΓW	D163769	S	10/2014
ΓW	D183446	S	6/2017

^{*} cited by examiner



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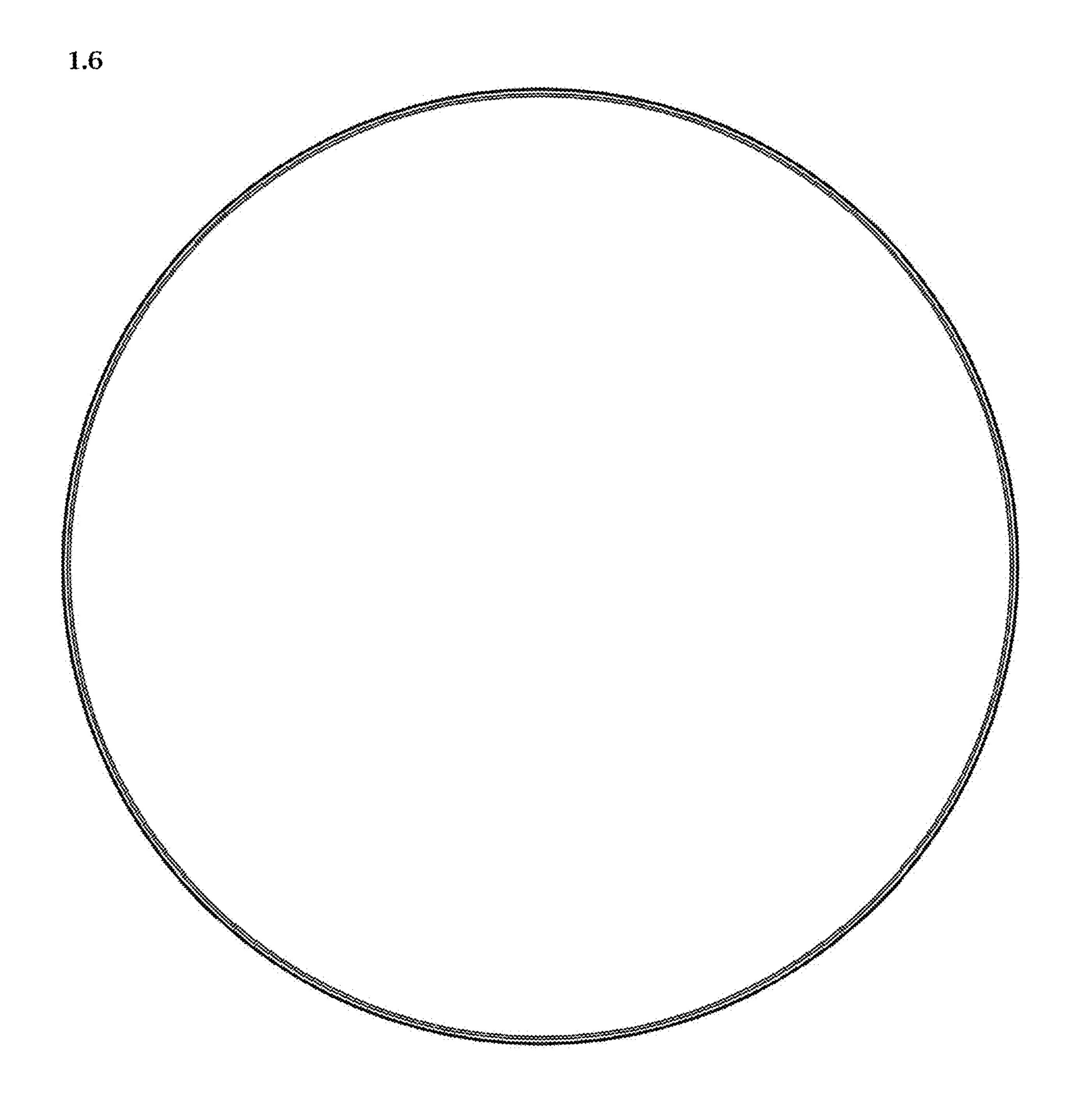
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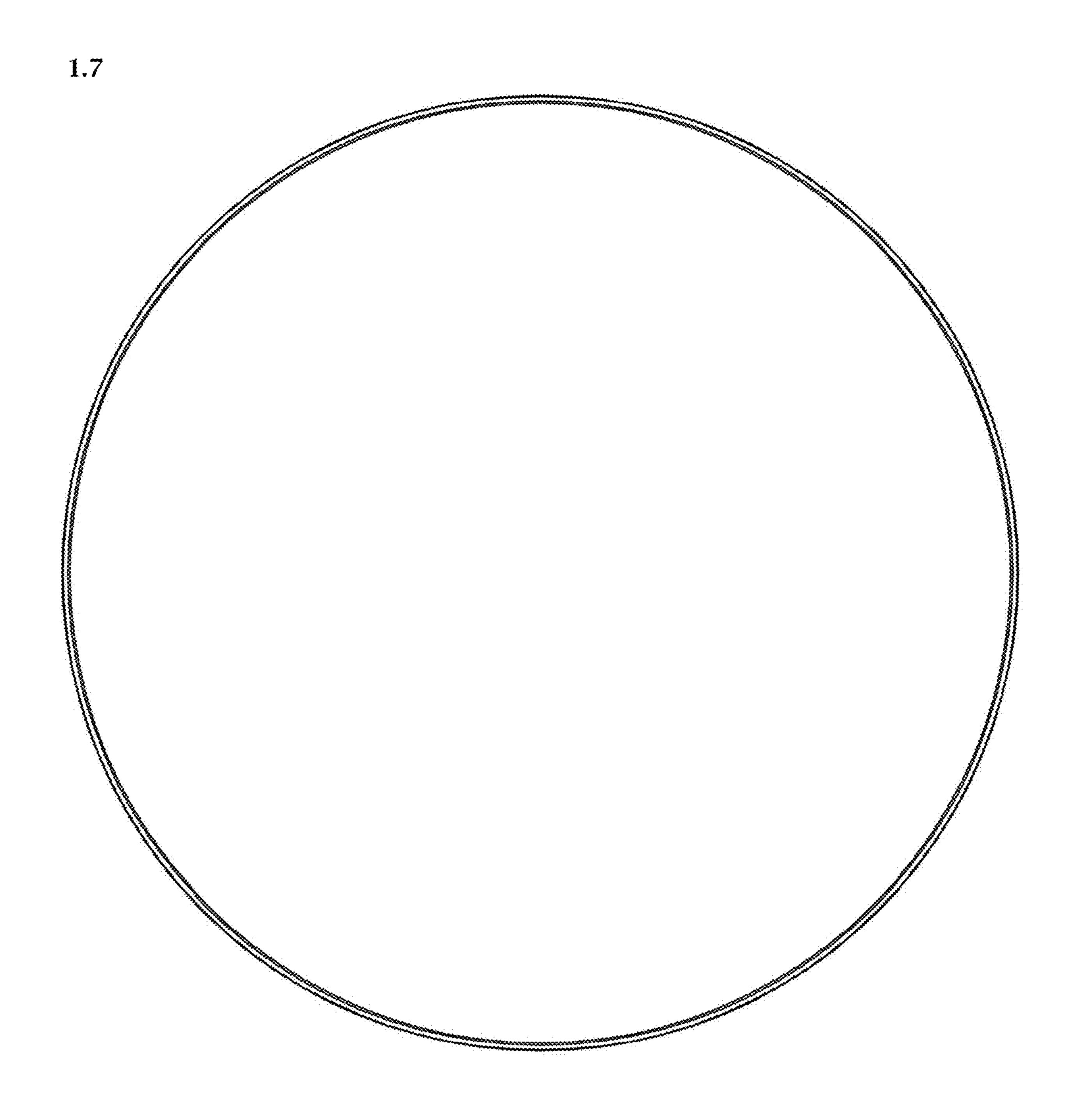
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