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(12) United States Design Patent

Pfeiffer

(10) Patent No.: US D1,009,943 S
(45) Date of Patent: ** Jan. 2, 2024

(54) **AIR BAG DETONATOR**

(71) Applicant: **SCHOTT AKTIENGESELLSCHAFT**, Mainz (DE)

(72) Inventor: **Thomas Pfeiffer**, Mainz (DE)

(73) Assignee: **Schott AG**, Mainz (DE)

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

(21) Appl. No.: **35/514,204**

(22) Filed: **Mar. 22, 2022**

(80) **Hague Agreement Data**

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(51) **LOC (14) Cl.** **22-03**

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

USPC **D22/112**; D29/122; D29/128; D12/177; D13/126; D13/199

(58) **Field of Classification Search**

USPC D15/5, 7, 9, 199; D14/175, 177; D13/124, 125, 162, 165, 166, 171, D13/182–184, 126, 199; D29/122, 128; D12/177; D22/112

CPC B60R 2021/26029; B60R 2021/26064; B60R 21/017; B60R 21/01; B60R 21/16; B60R 21/2644; F42B 3/103

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D100,508	S *	7/1936	Shrader	D13/182	
4,573,411	A *	3/1986	Liebhardt	F42C 15/31	102/222
D300,528	S *	4/1989	Drane	D13/171	
5,489,220	A *	2/1996	Hanna	H03H 1/0007	439/736
5,752,716	A *	5/1998	Fukawatase	B60R 21/26	374/106
6,467,414	B1 *	10/2002	Fisher	H05K 1/026	102/202.3
6,492,588	B1 *	12/2002	Grandy	H01B 7/0807	280/728.1
D501,652	S *	2/2005	Pierson	D13/171	
D505,664	S *	5/2005	Takagi	D13/182	
D515,516	S *	2/2006	Mayo	D13/171	
8,113,542	B1 *	2/2012	Stevens	B60R 21/274	280/737
8,127,681	B2 *	3/2012	Fink	F42B 3/198	102/202.5
D741,823	S *	10/2015	Tateno	D13/182	
D805,041	S *	12/2017	Koskinen	D13/171	
D852,150	S *	6/2019	Turksu	D13/183	
D856,169	S *	8/2019	Libson	D10/49	
D908,647	S *	1/2021	Itakura	D13/182	
D916,670	S *	4/2021	Knupfer	D13/171	
D938,912	S *	12/2021	Stockman	D13/124	
D961,525	S *	8/2022	Arbel	D13/158	
11,460,277	B2 *	10/2022	Kadavanich	F42B 3/10	
2006/0207469	A1 *	9/2006	Fink	F42B 3/103	102/530
2017/0363396	A1 *	12/2017	Dürschinger	B60R 21/26	
2020/0041238	A1 *	2/2020	Zuriaga Gascón	F42B 3/26	
2021/0140745	A1 *	5/2021	Pfeiffer	B60R 22/34	

OTHER PUBLICATIONS

K.G. Ewsuk, "Glass Density Effects in Glass-To-Metal Sealing", (Published Oct. 6, 2014), Rio Grande Regional Symposium on Advanced Materials, URL:<https://www.osti.gov/servlets/purl/1241768> (Year: 2014).*

Electrovac, "Glasdurchführungen für Zünder mit industrieller Endanwendung", (posted Oct. 25, 2018), Facebook.com, URL:<https://www.facebook.com/photo/?fbid=950281485160959&set=pb.100057158512322.-2207520000.> (Year: 2018).*

Electrovac, "The art of hermetic packages", (site visited Dec. 5, 2022), Facebook.com, URL:<https://www.electrovac.com/en/products/igniter-sockets/> (Year: 2022).*

* cited by examiner

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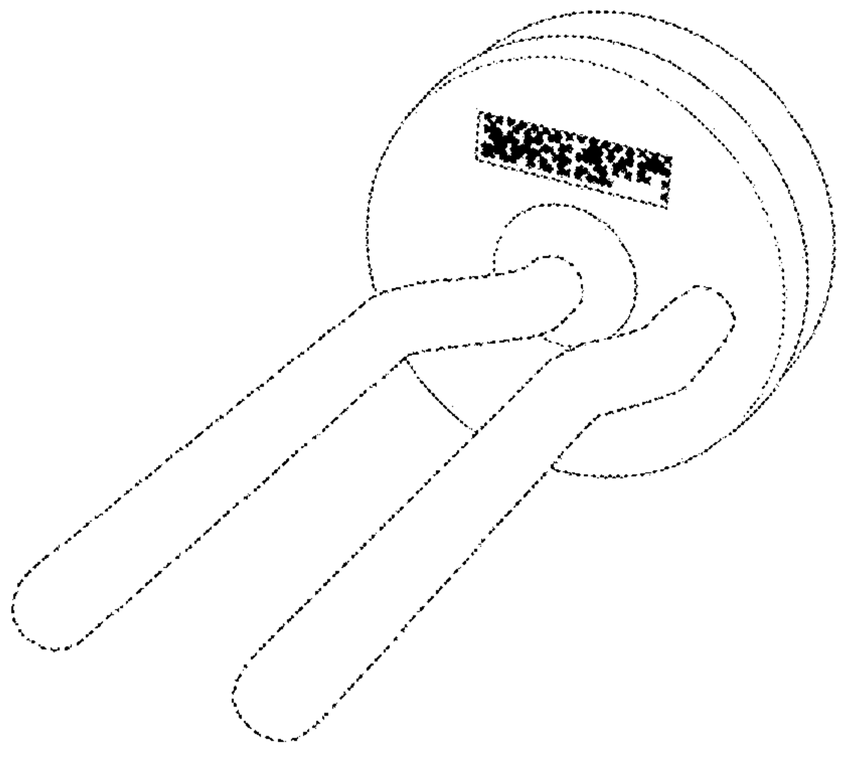
(57) **CLAIM**

The ornamental design for an air bag detonator, as shown and described.

DESCRIPTION

1. Air bag detonator
2. Air bag detonator



3. Air bag detonator
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17. Air bag detonator
18. Air bag detonator

1.1 : Perspective
1.2 : Front
1.3 : Right
1.4 : Left
1.5 : Back
1.6 : Top
1.7 : Bottom
2.1 : Perspective
2.2 : Front
2.3 : Right
2.4 : Left
2.5 : Back
2.6 : Top
2.7 : Bottom
3.1 : Perspective
3.2 : Front
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17.2 : Front

17.3 : Right
17.4 : Left
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17.6 : Top
17.7 : Bottom
18.1 : Perspective
18.2 : Front
18.3 : Right
18.4 : Left
18.5 : Back
18.6 : Top
18.7 : Bottom

The representations of the designs 1, 7 and 13 are in greyscale; the representations of the designs 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 14, 15, 16, 17 and 18 are in black and white; the designs do not claim protection for a specific coloring; the broken lines and the area within the broken lines in the figures show portions of the product which form no part of the claimed designs.

1 Claim, 126 Drawing Sheets

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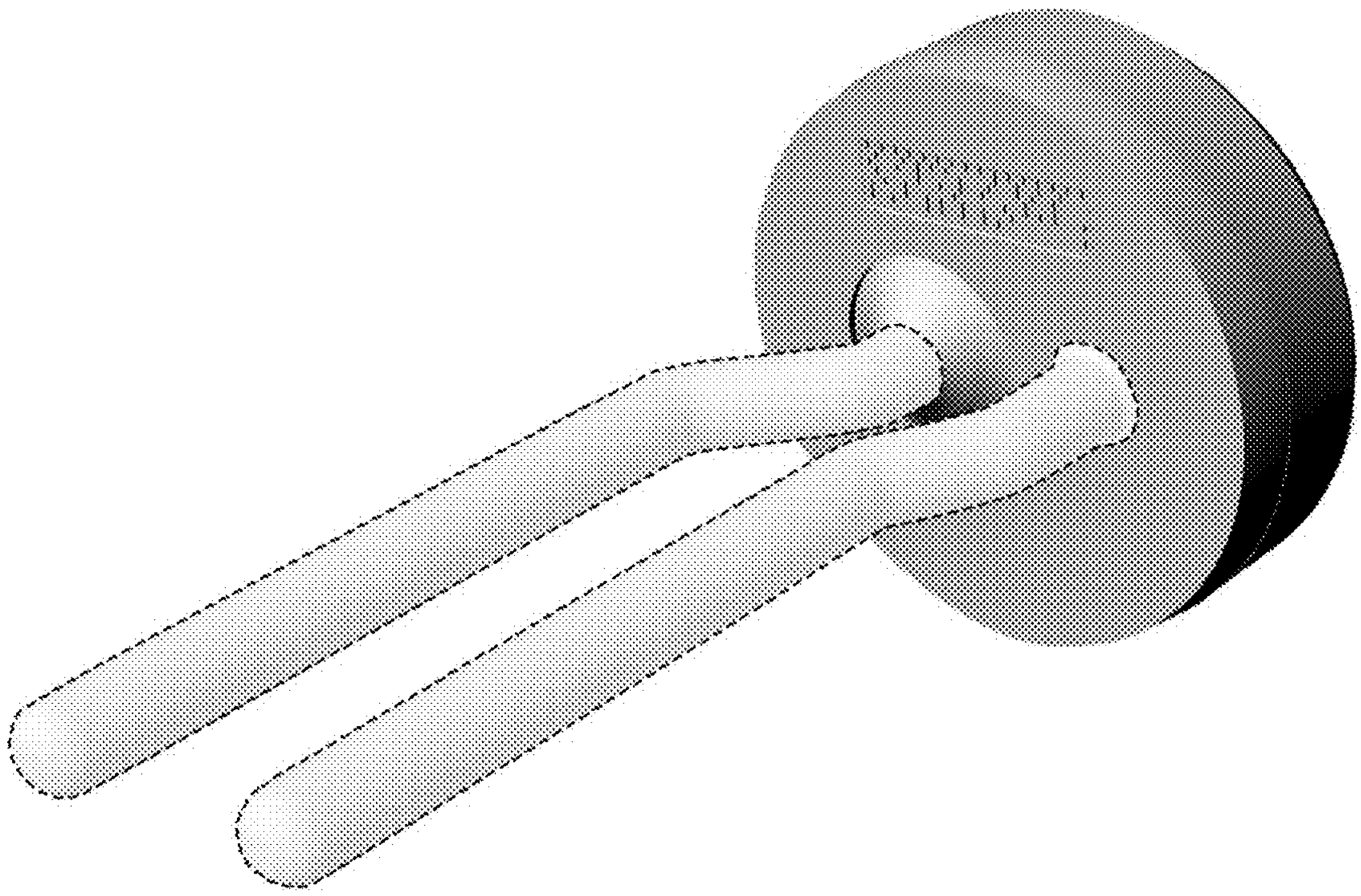

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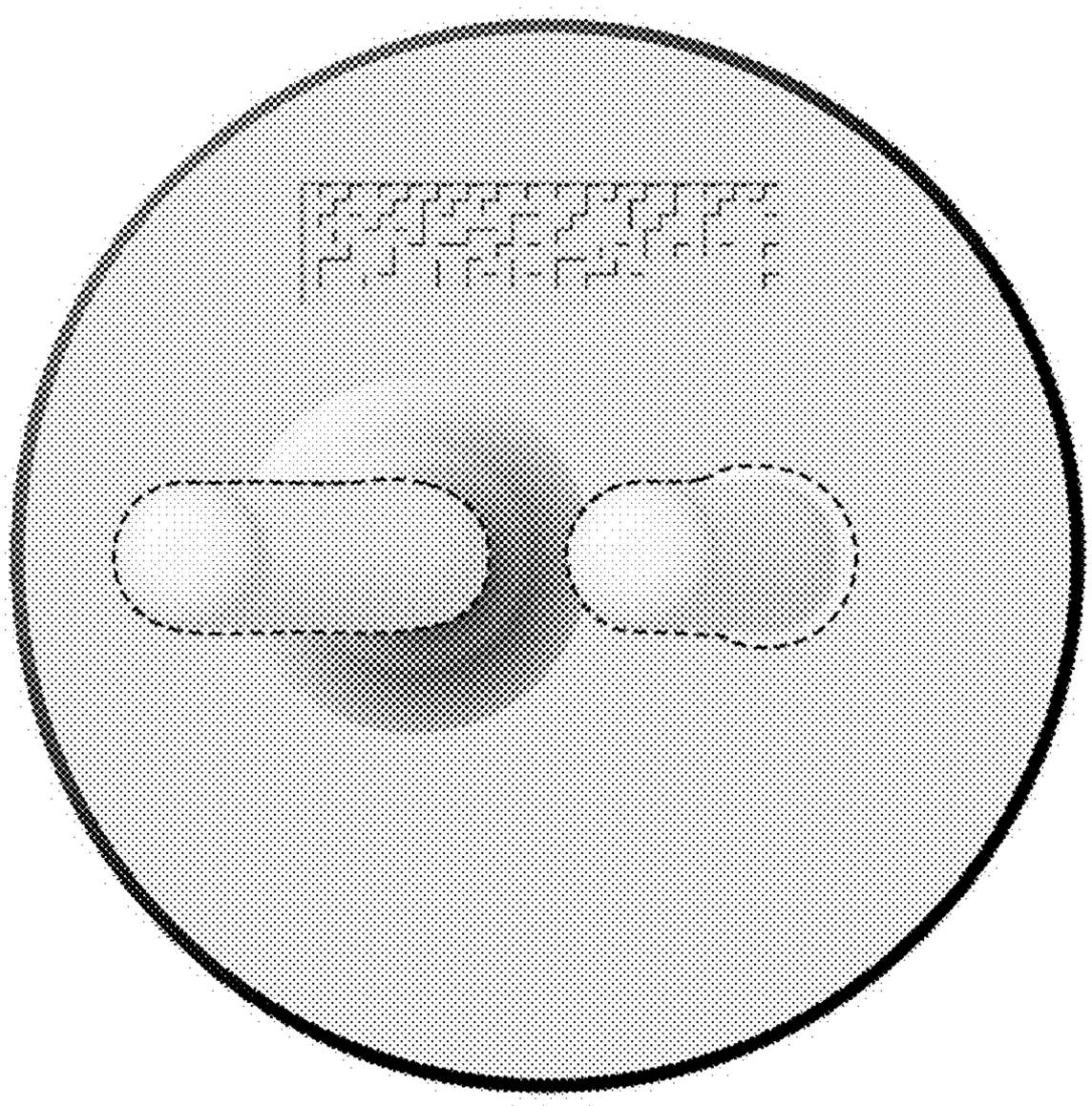

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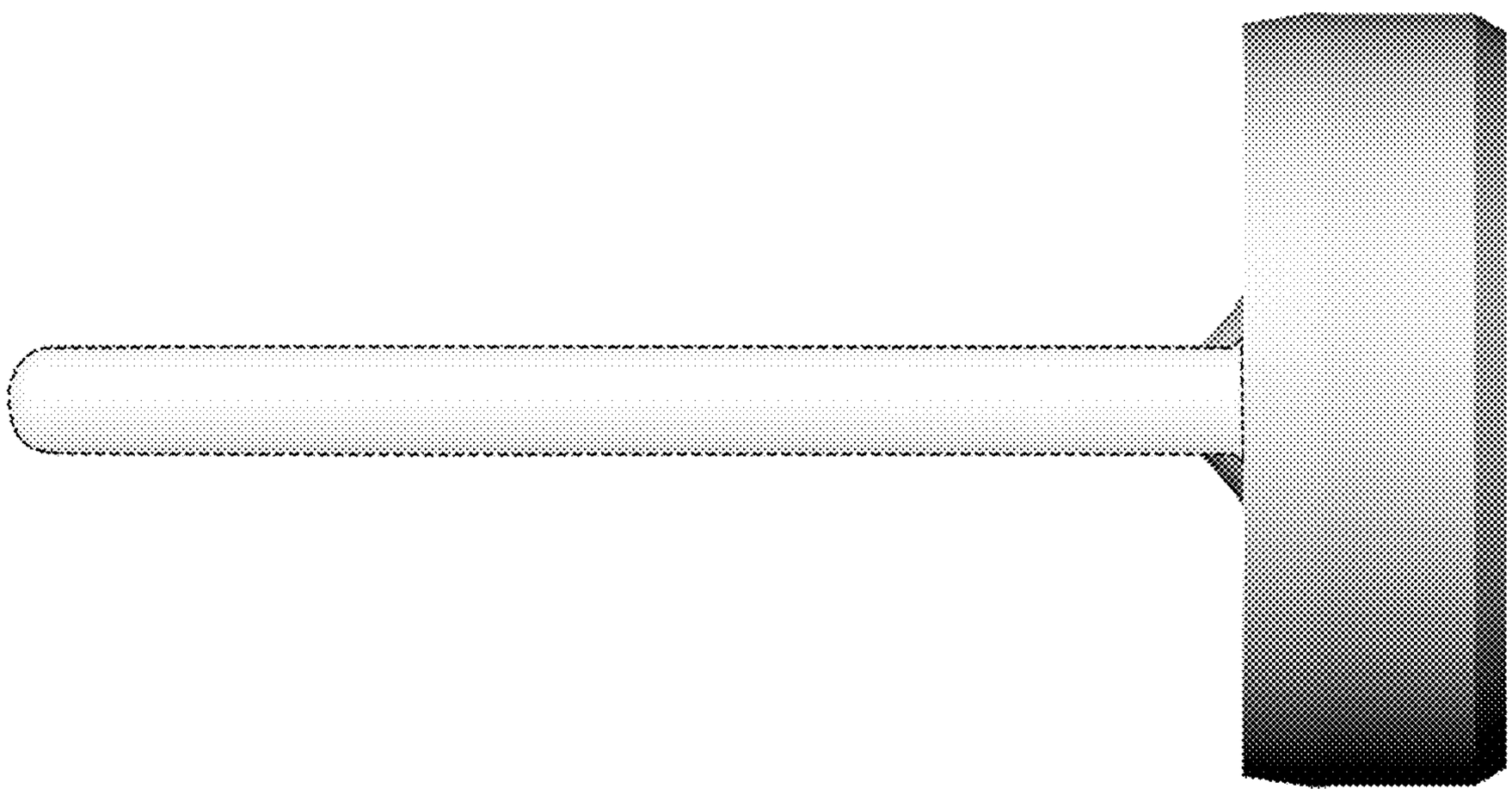

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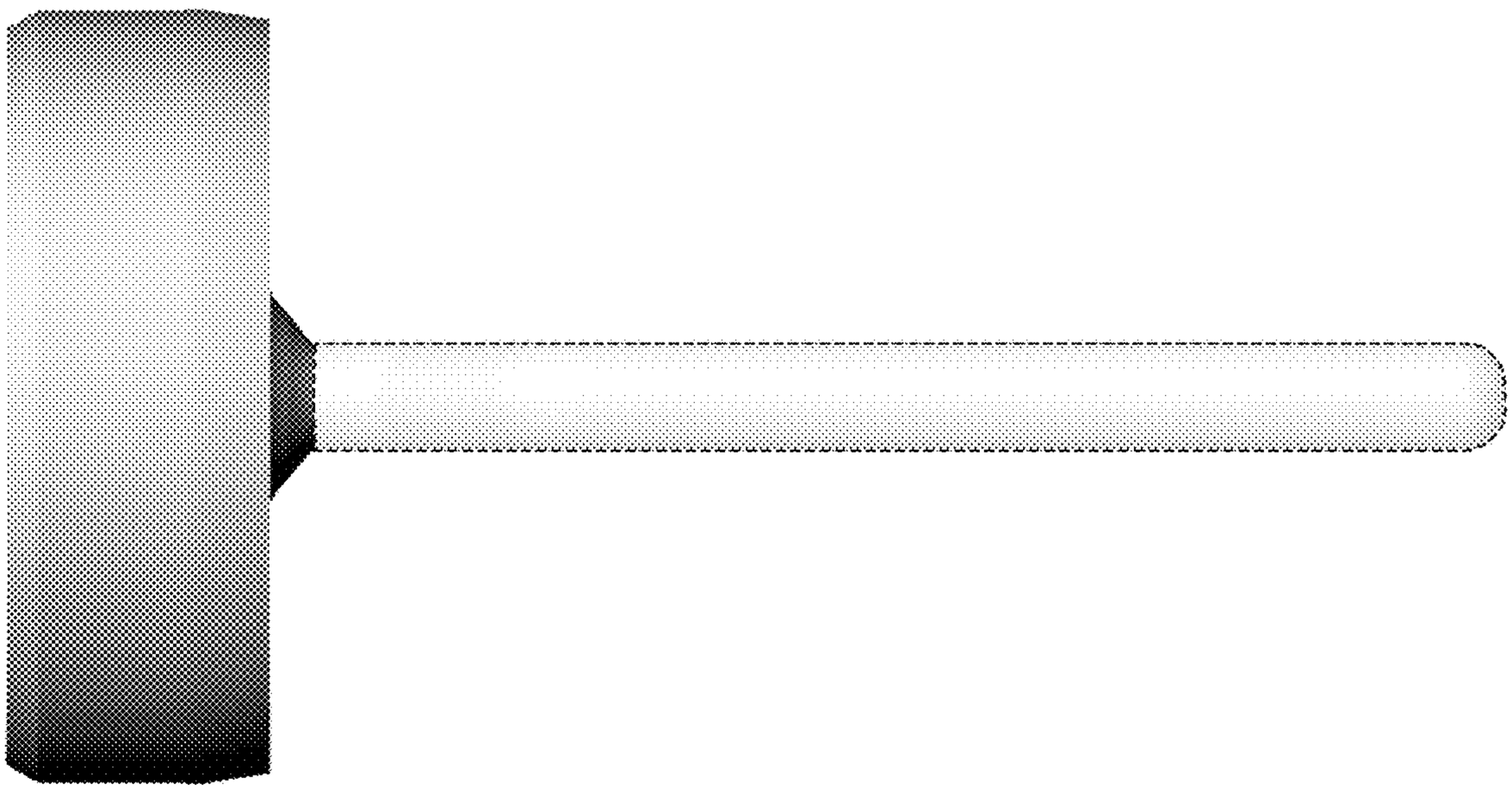

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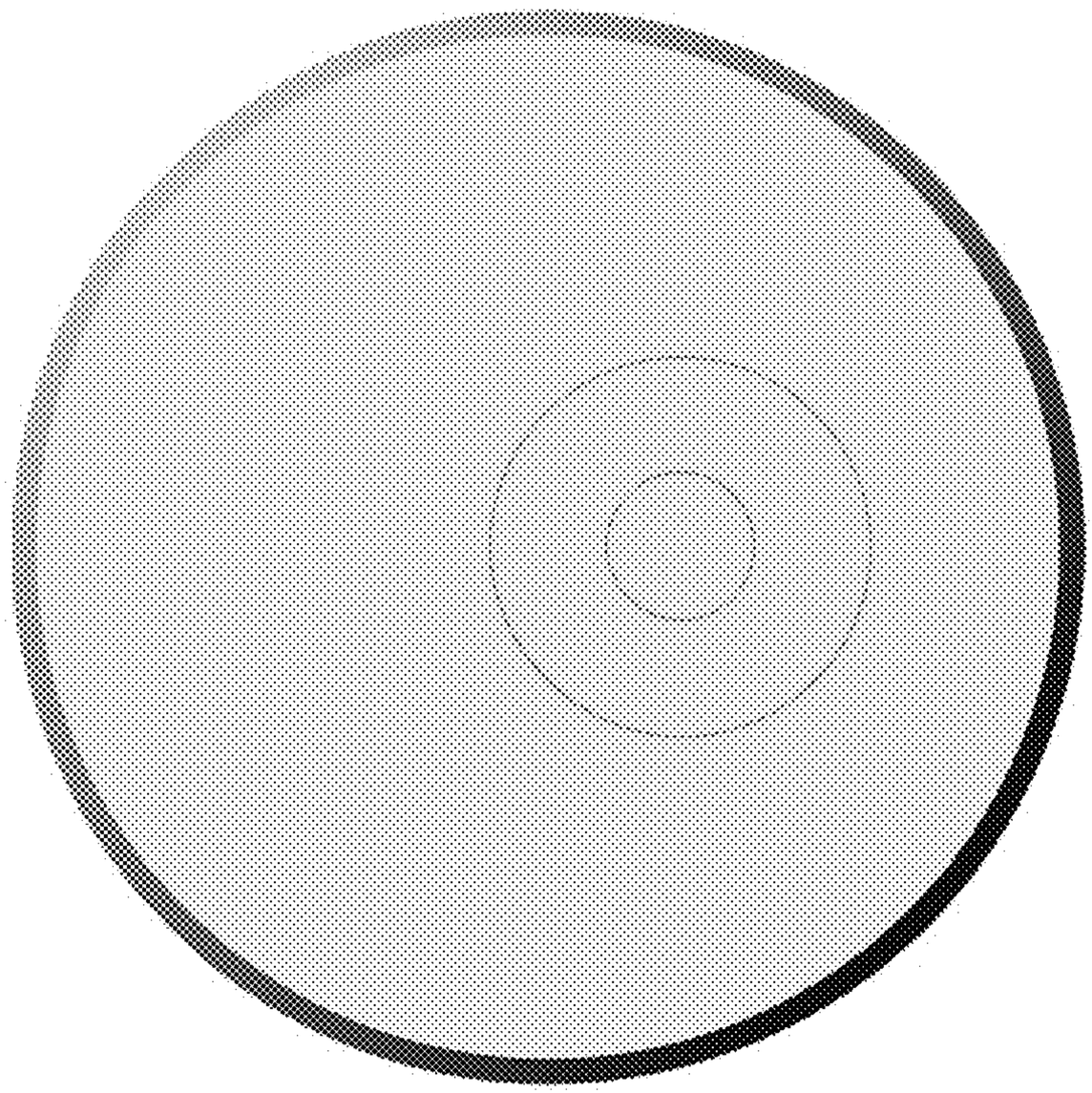

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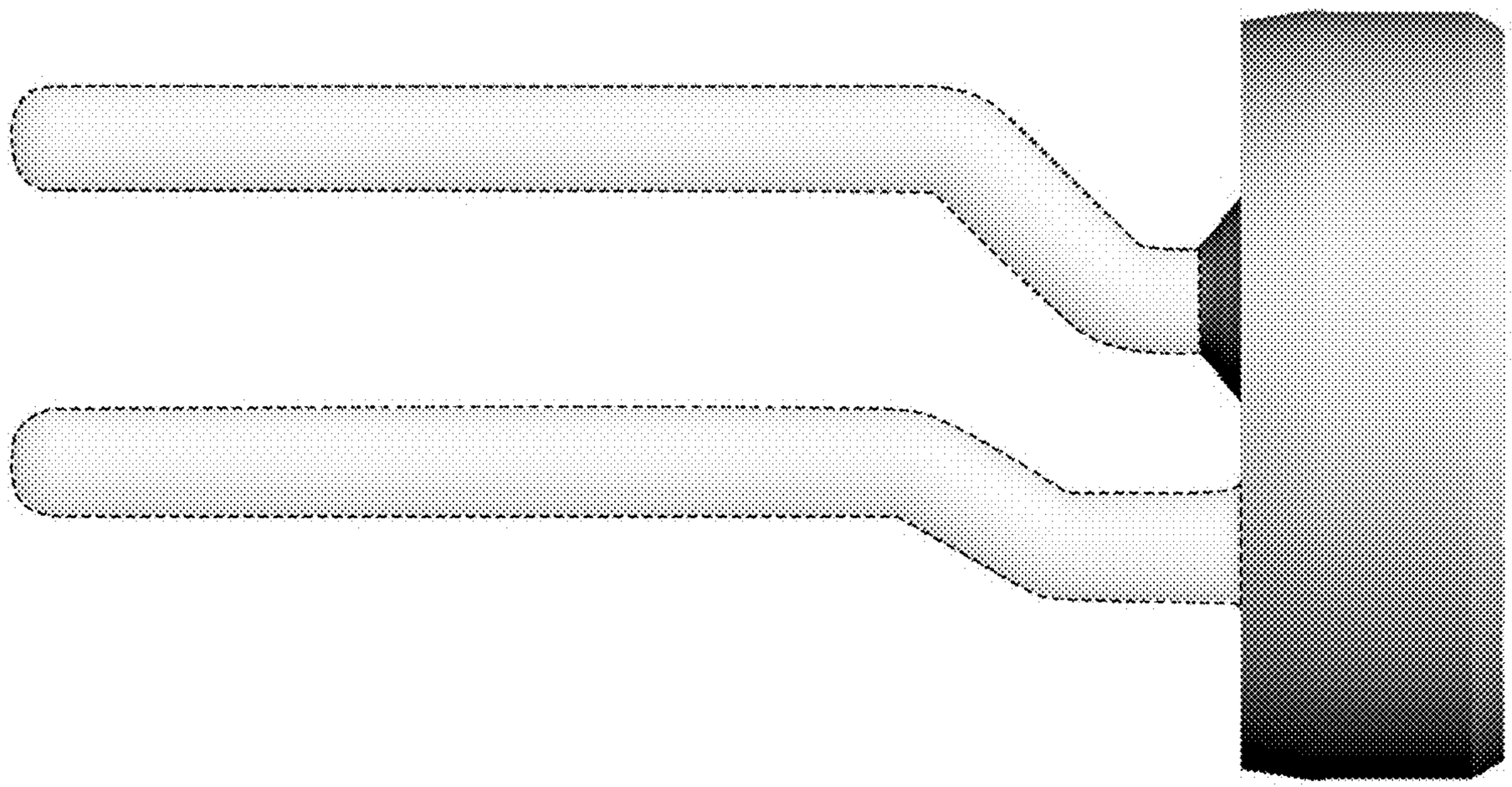

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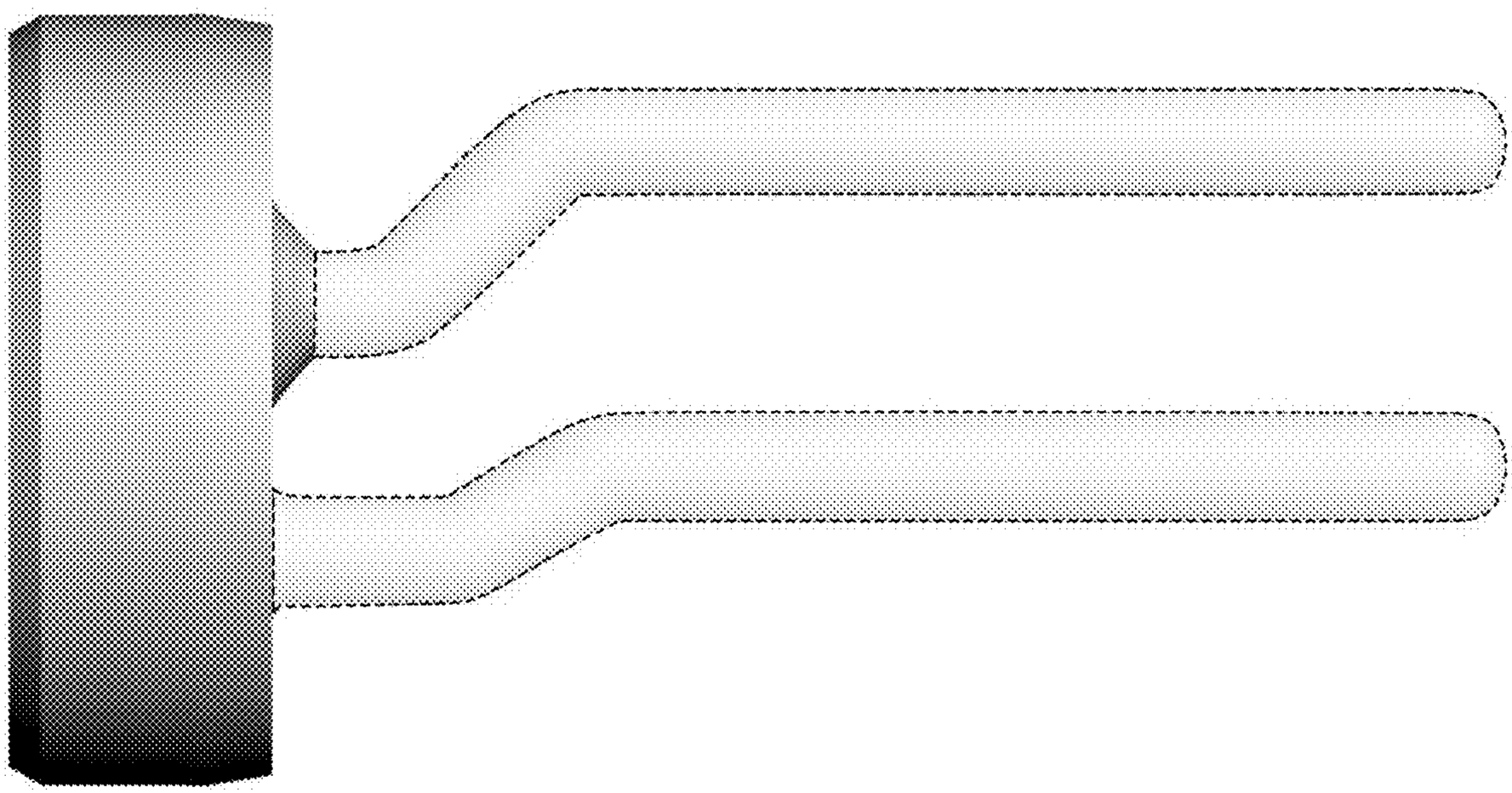

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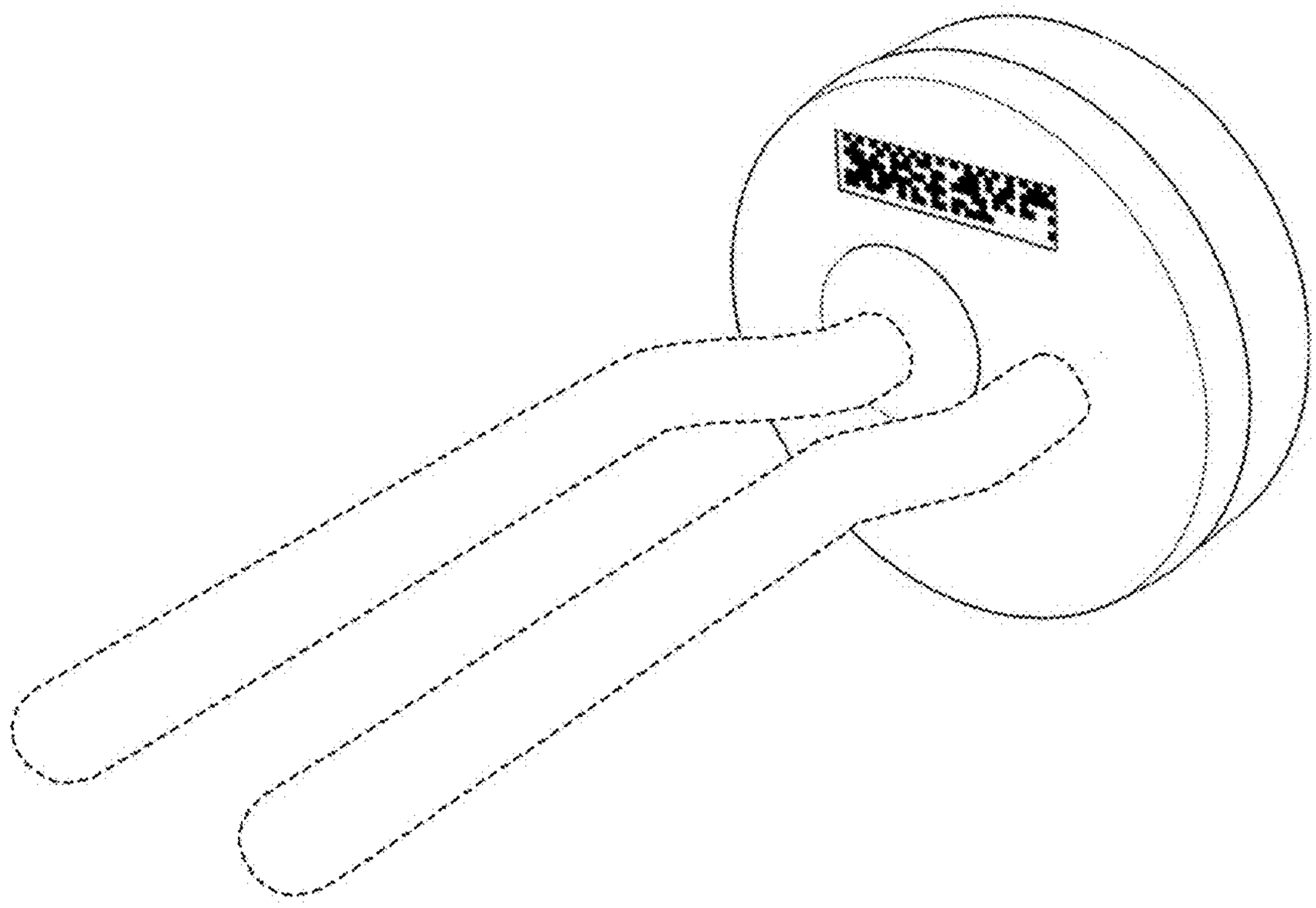

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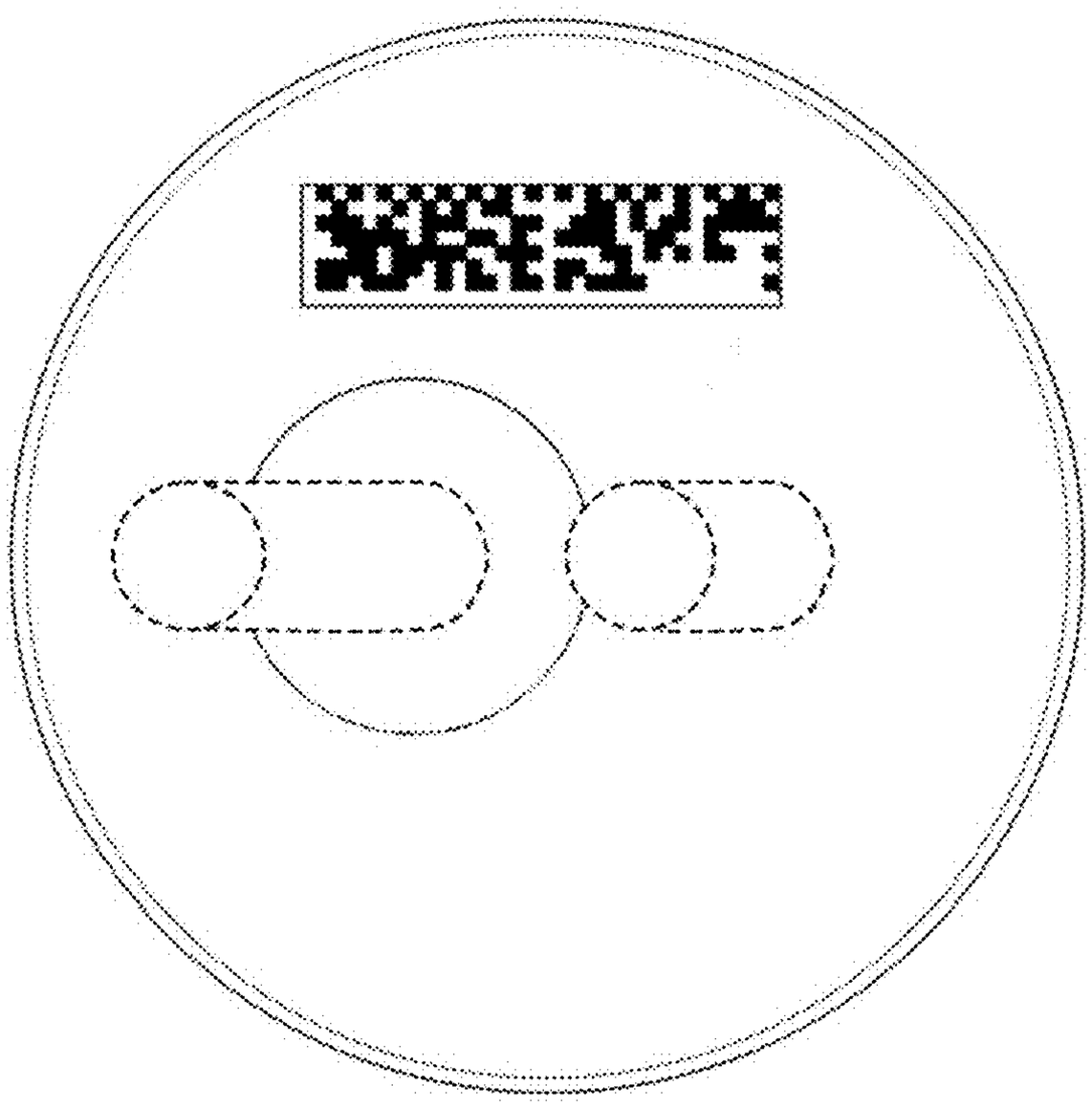

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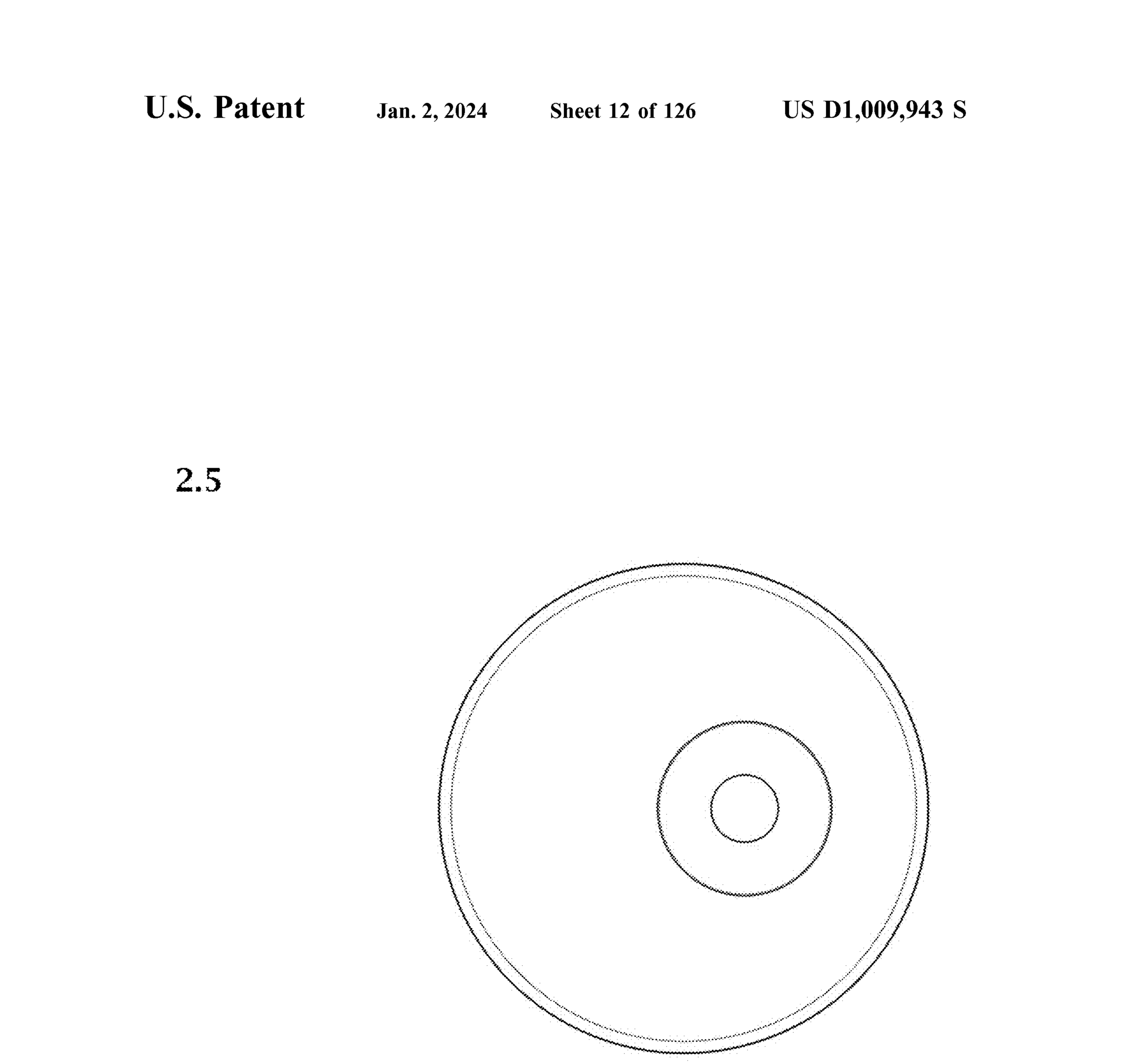
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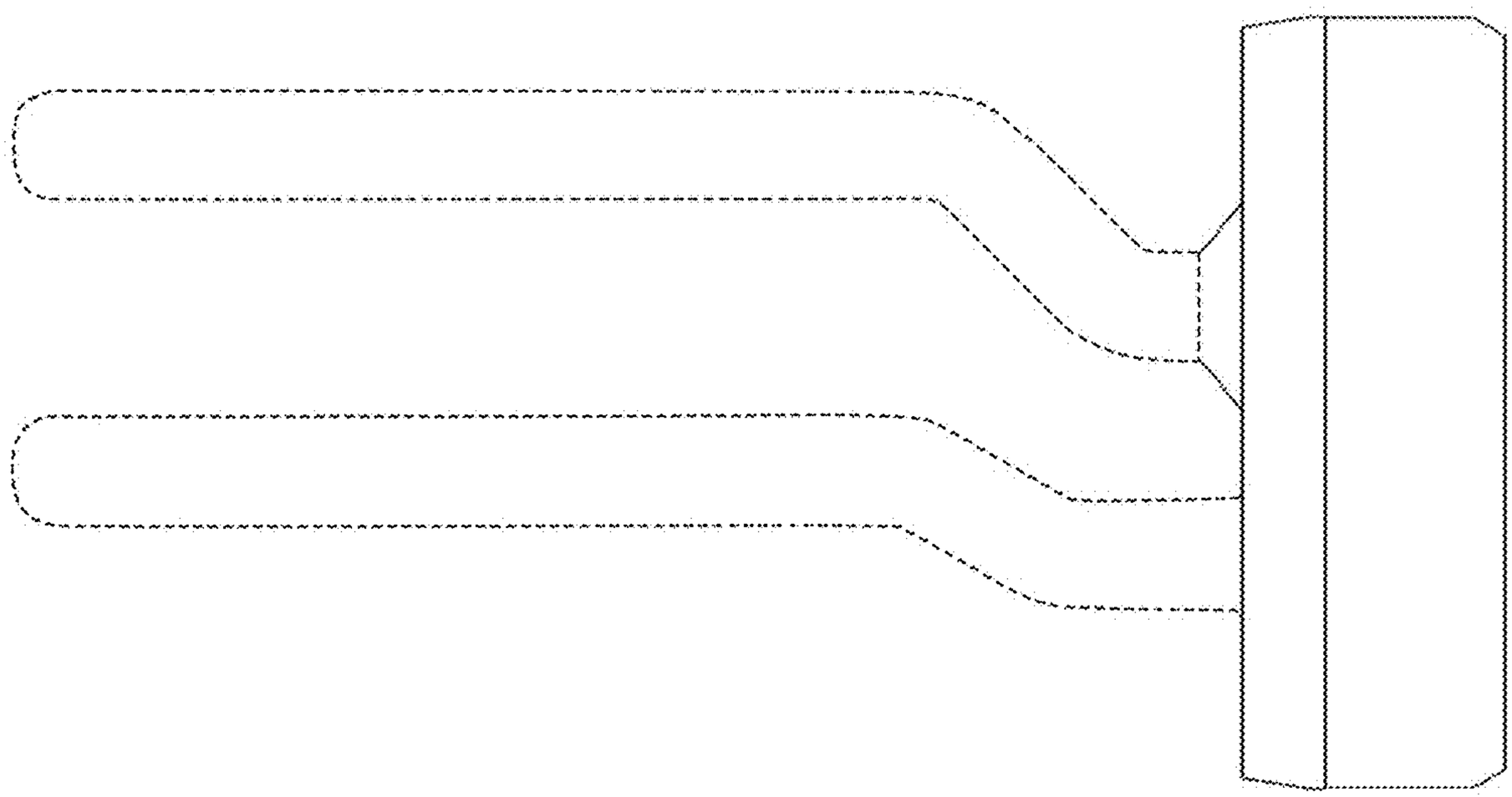

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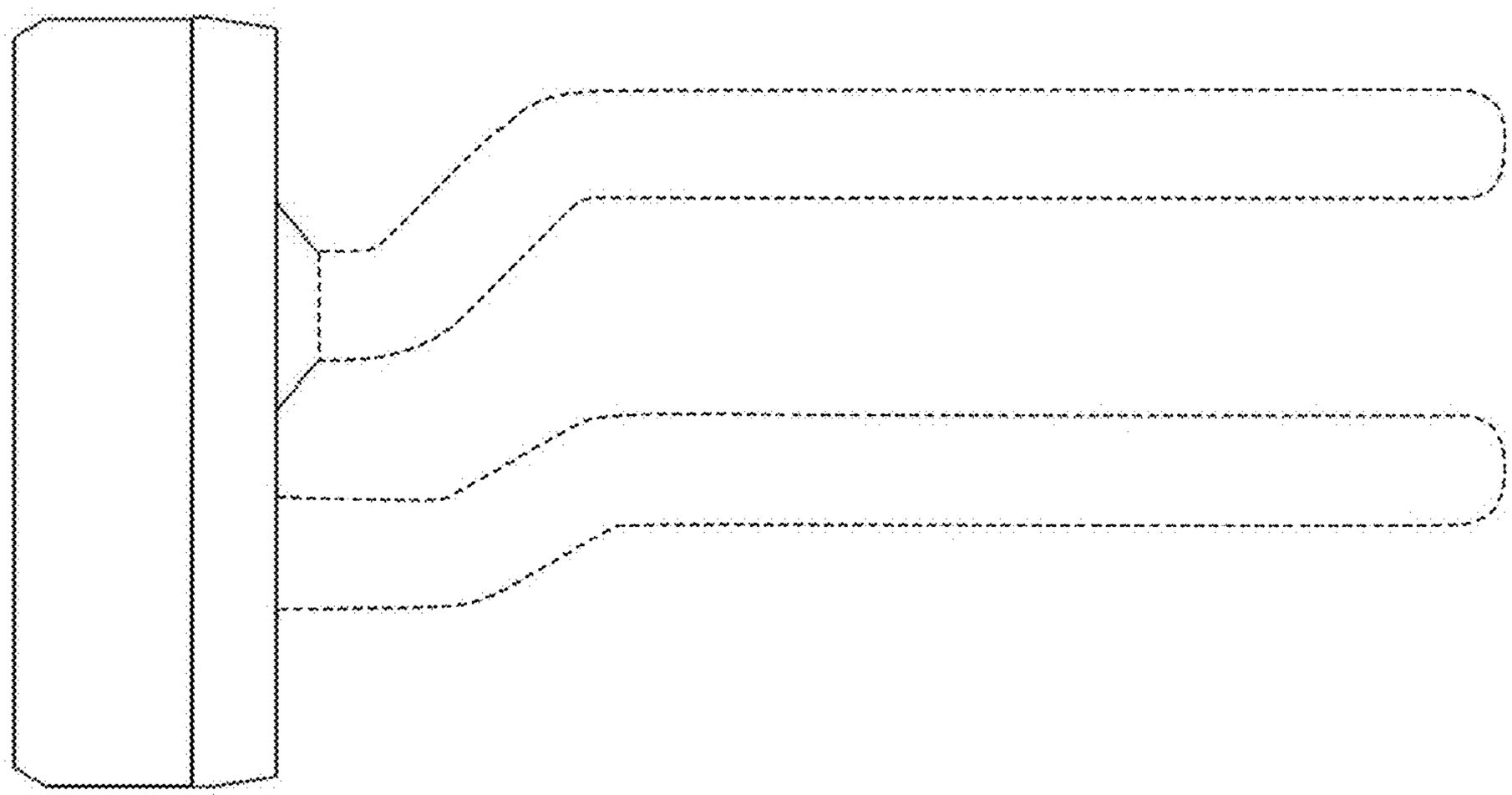

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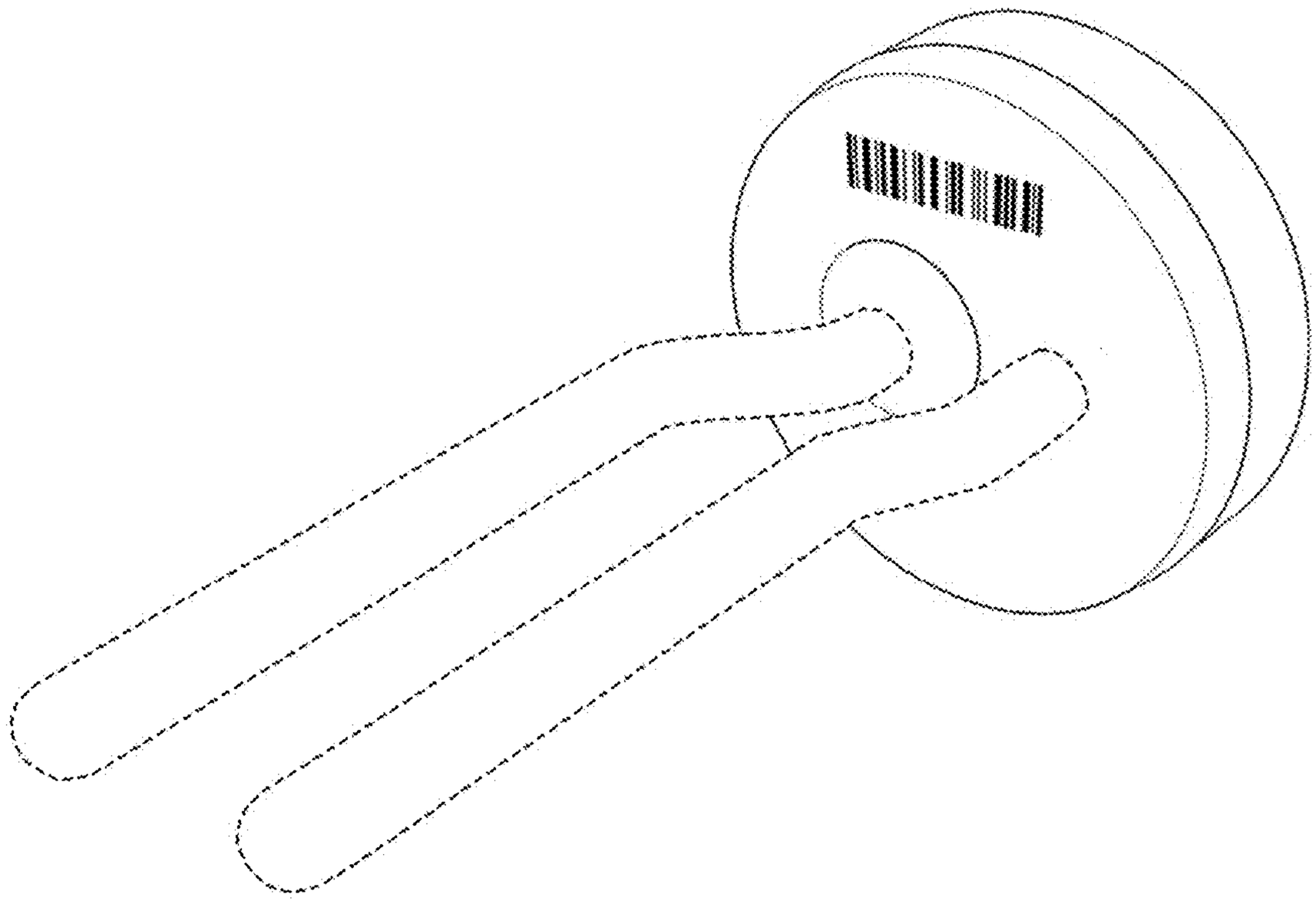

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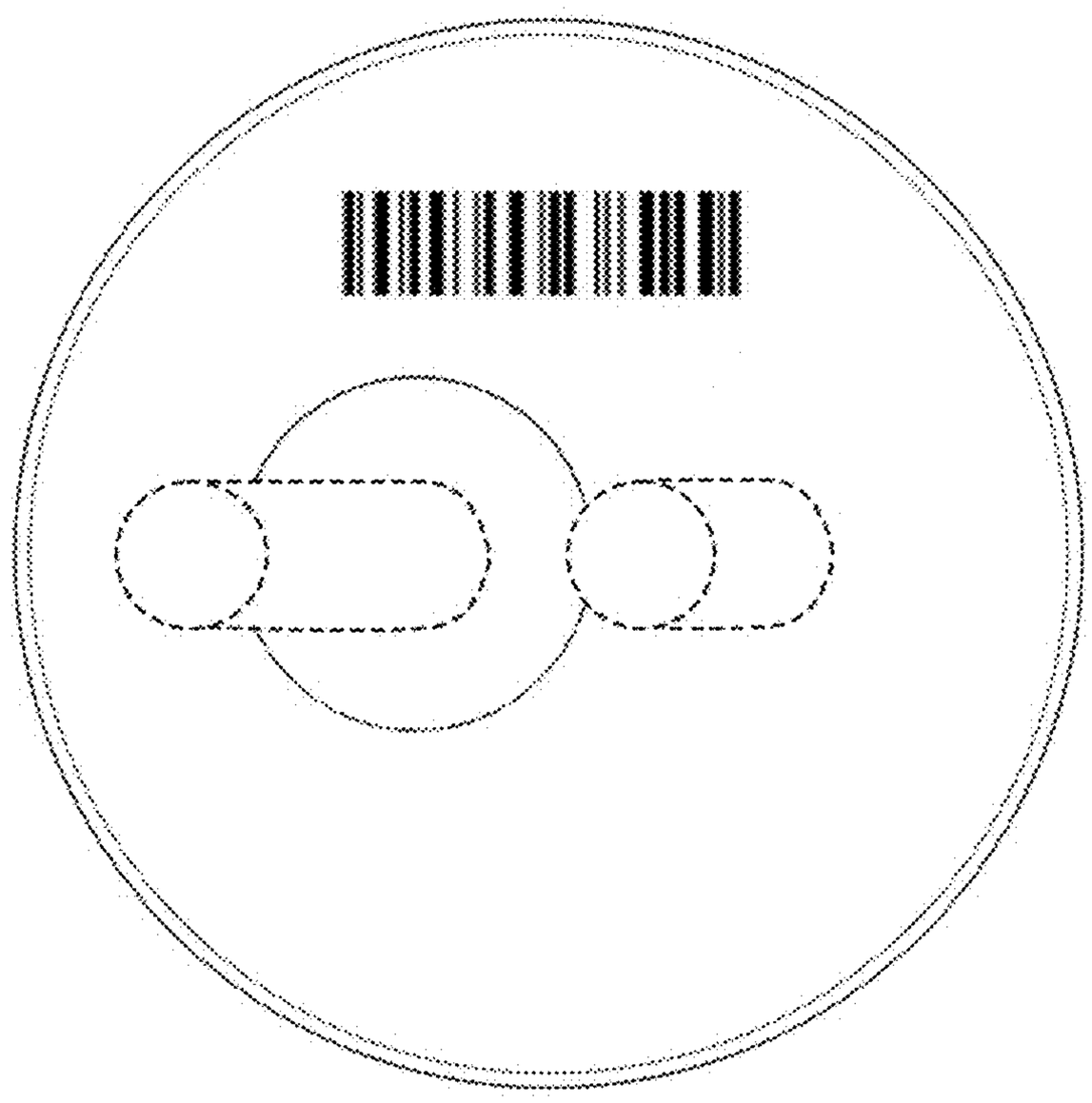

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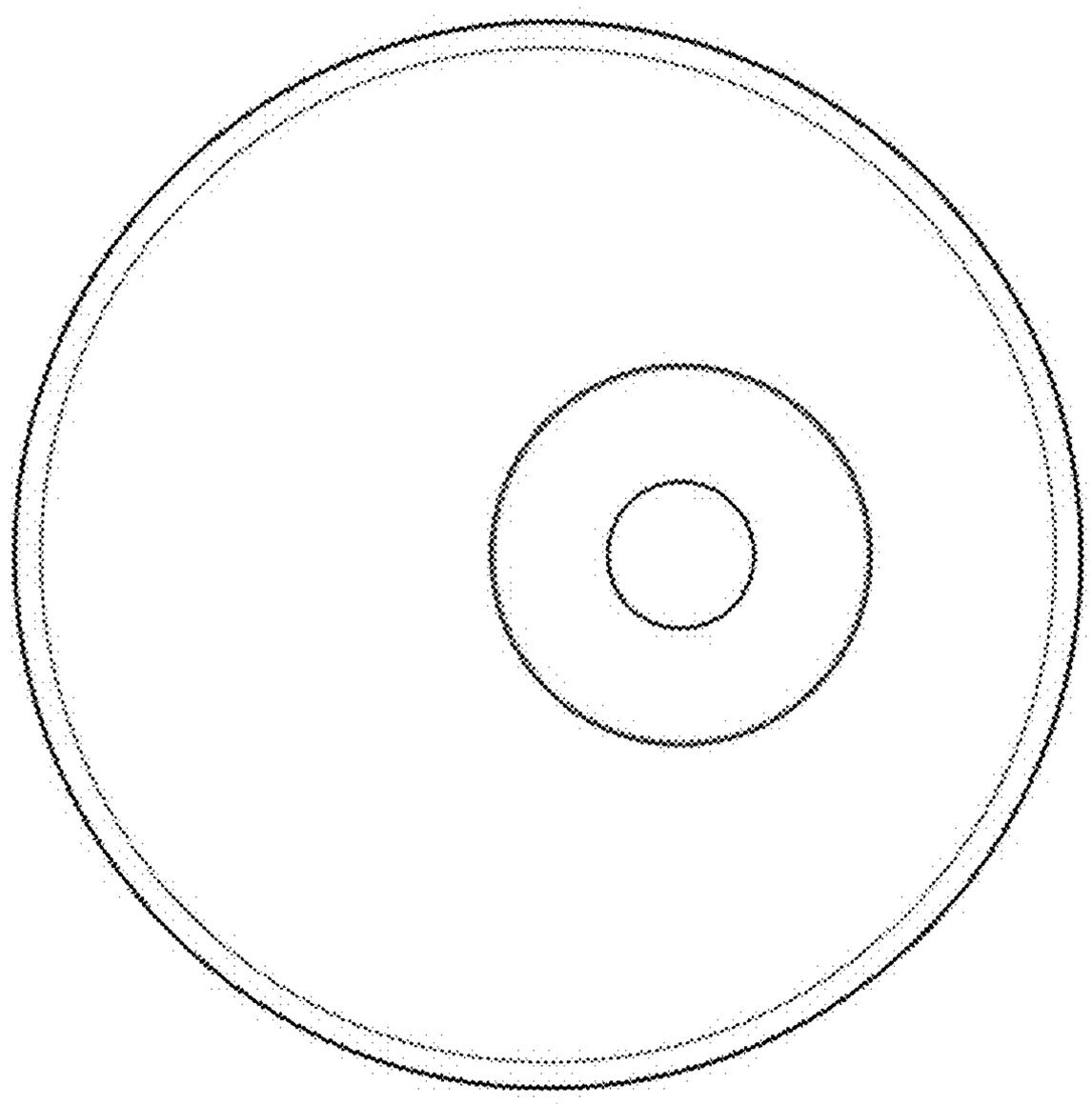

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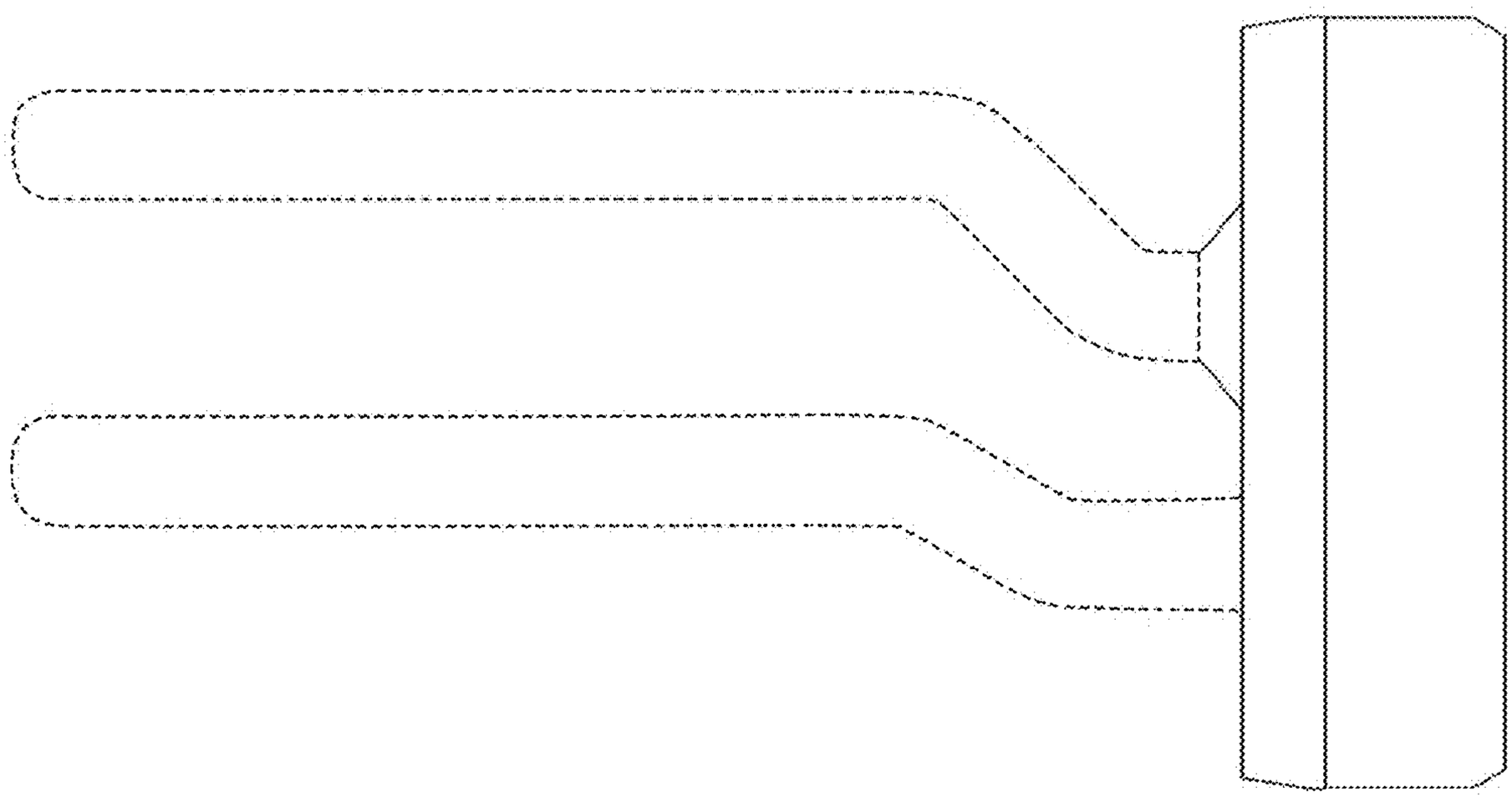

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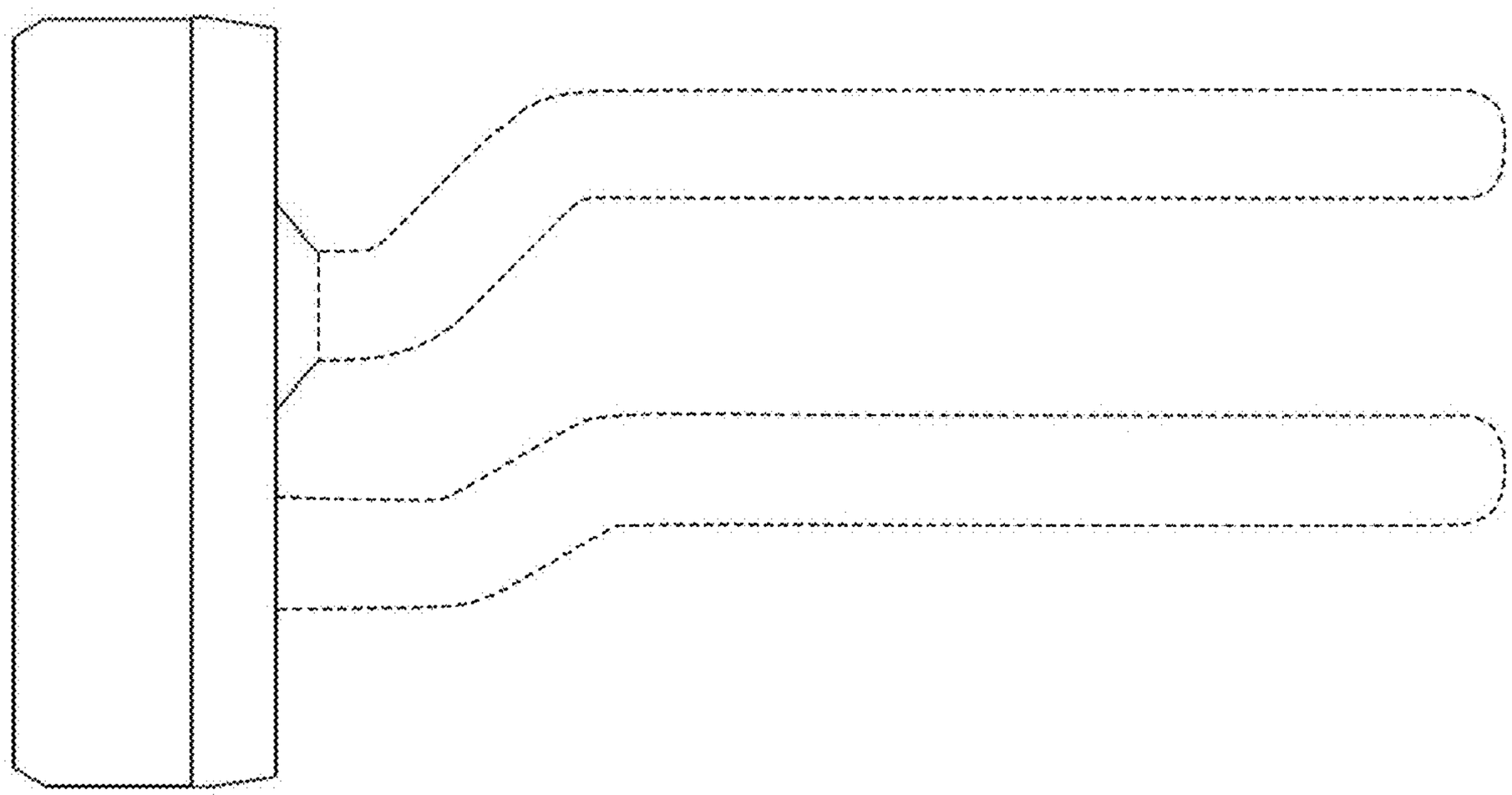

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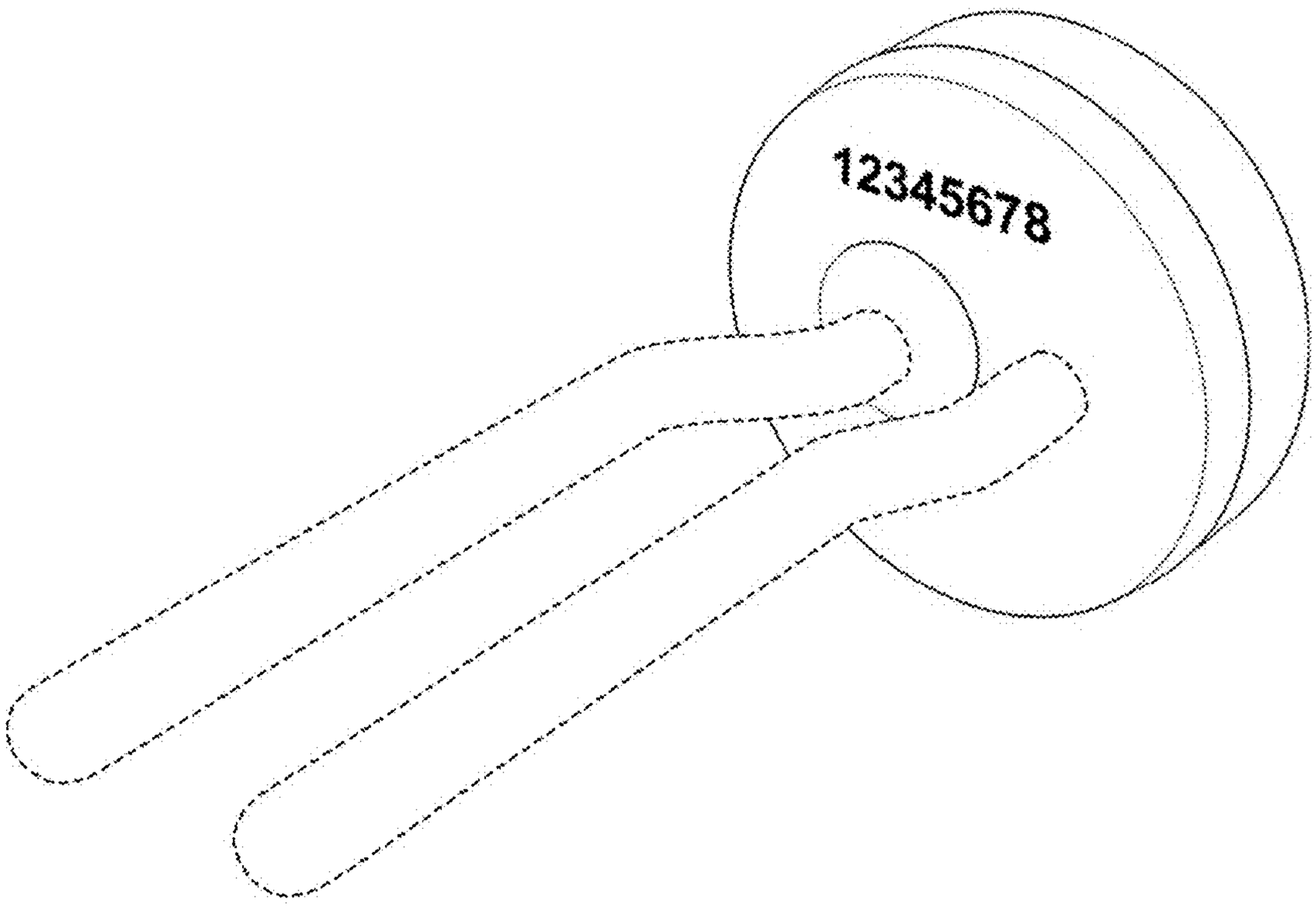

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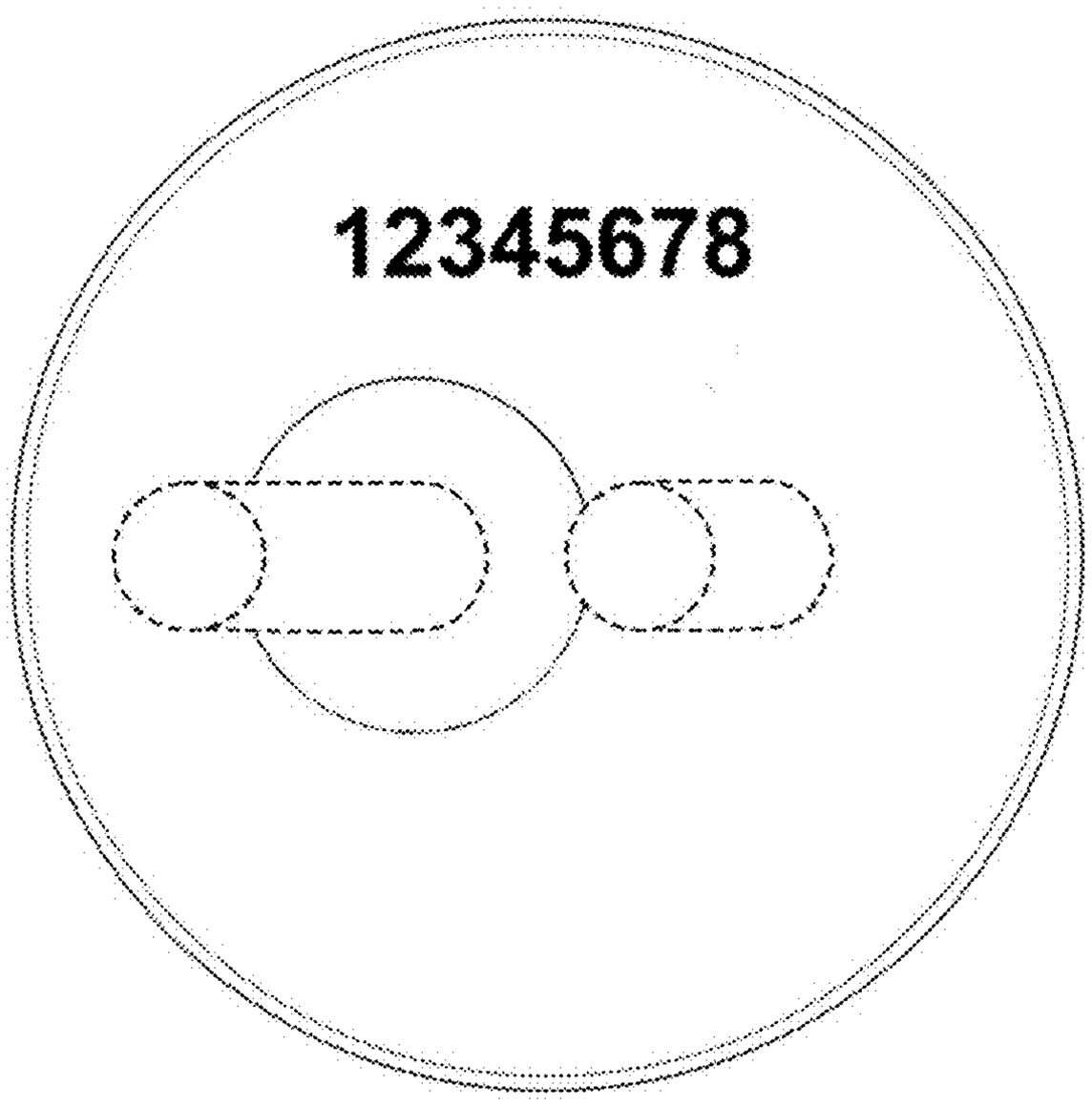

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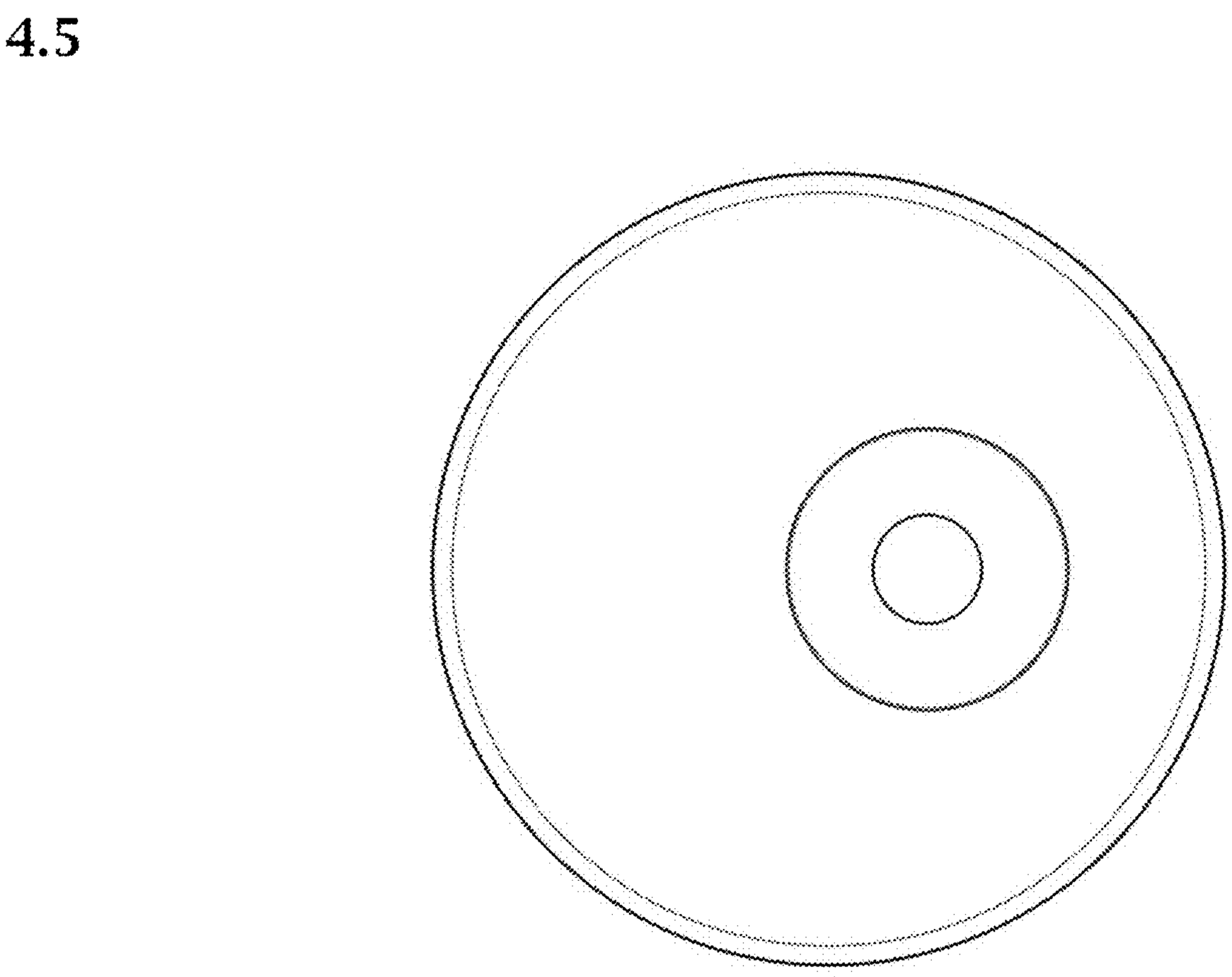
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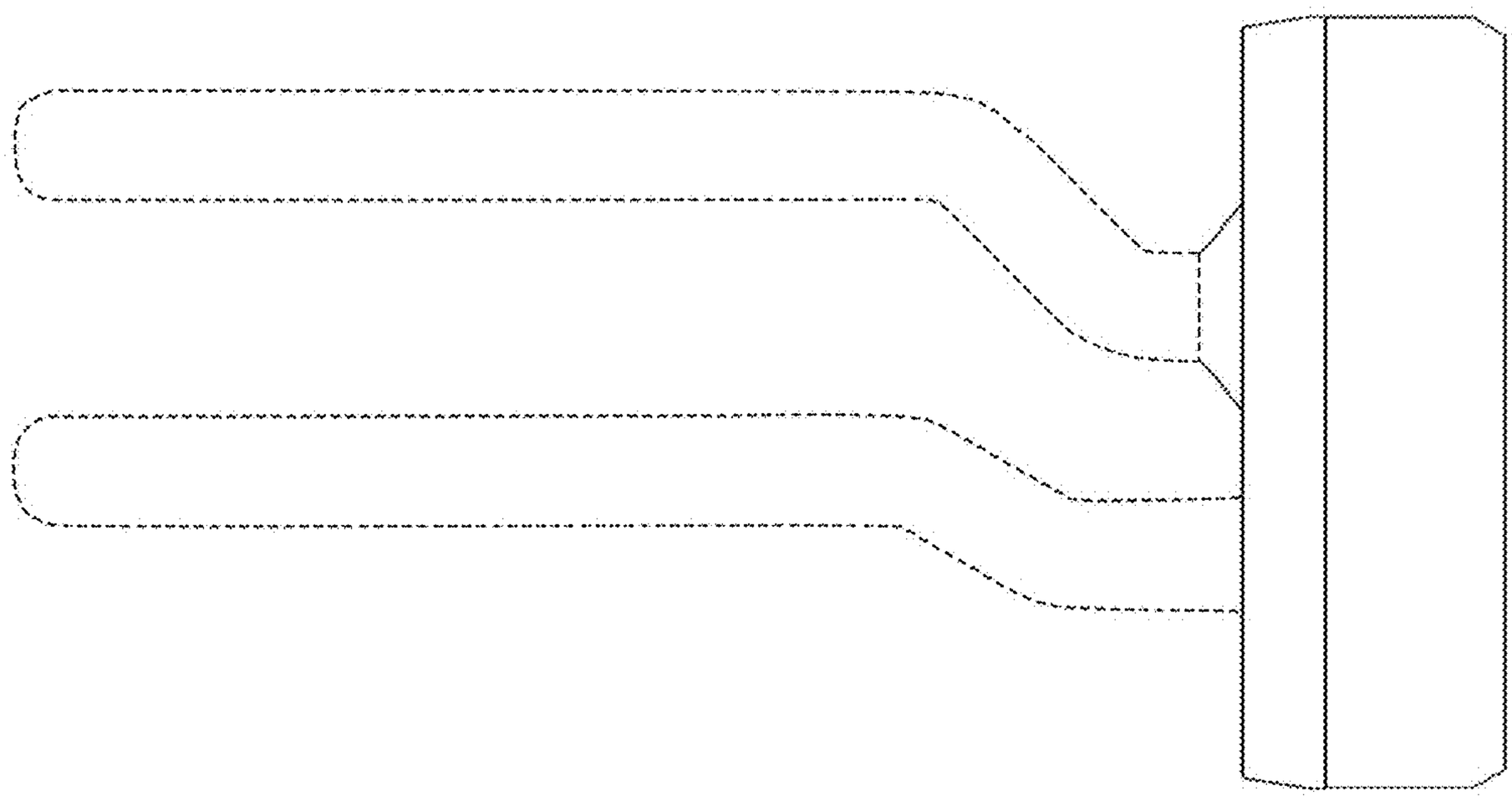

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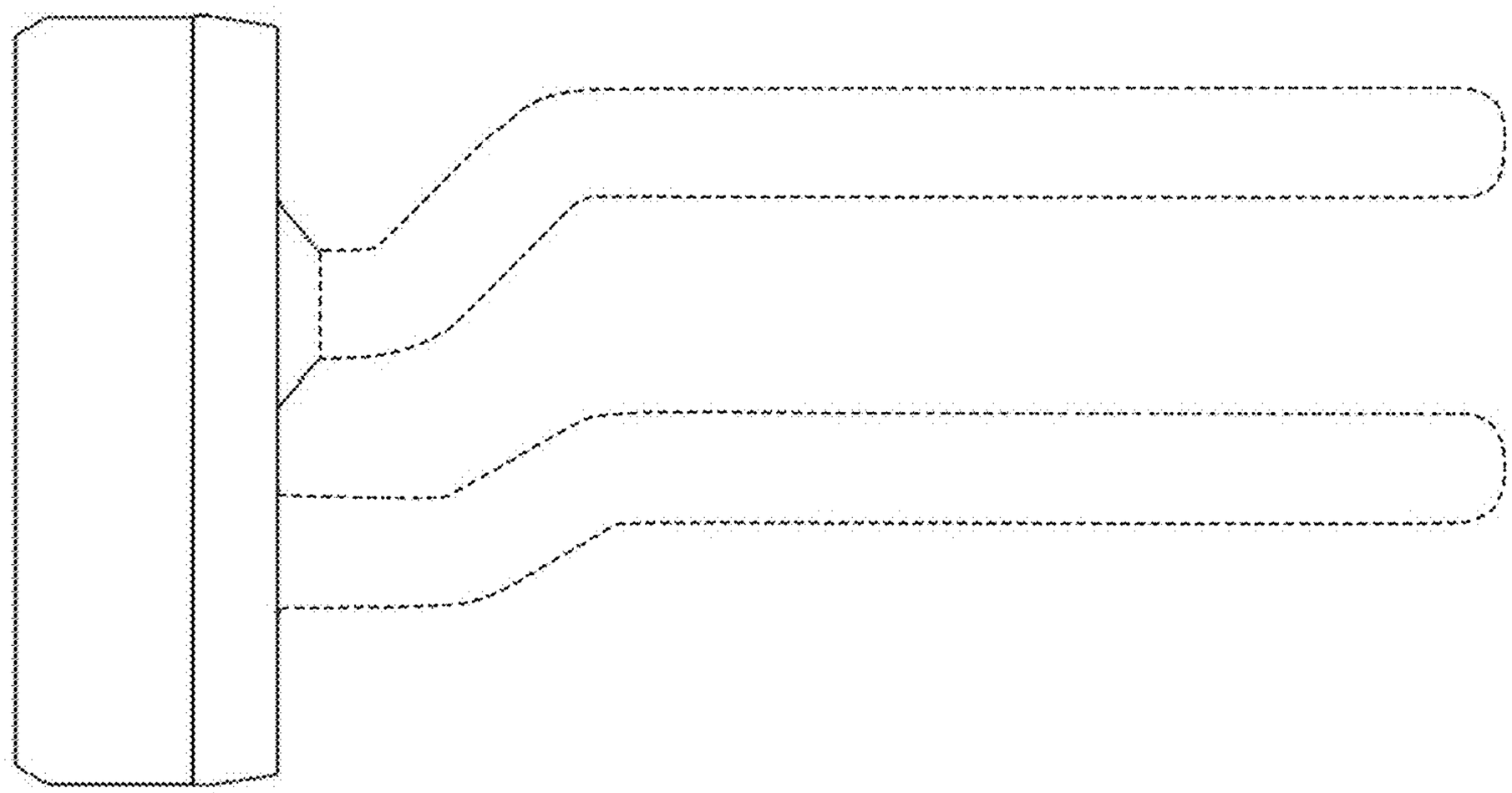

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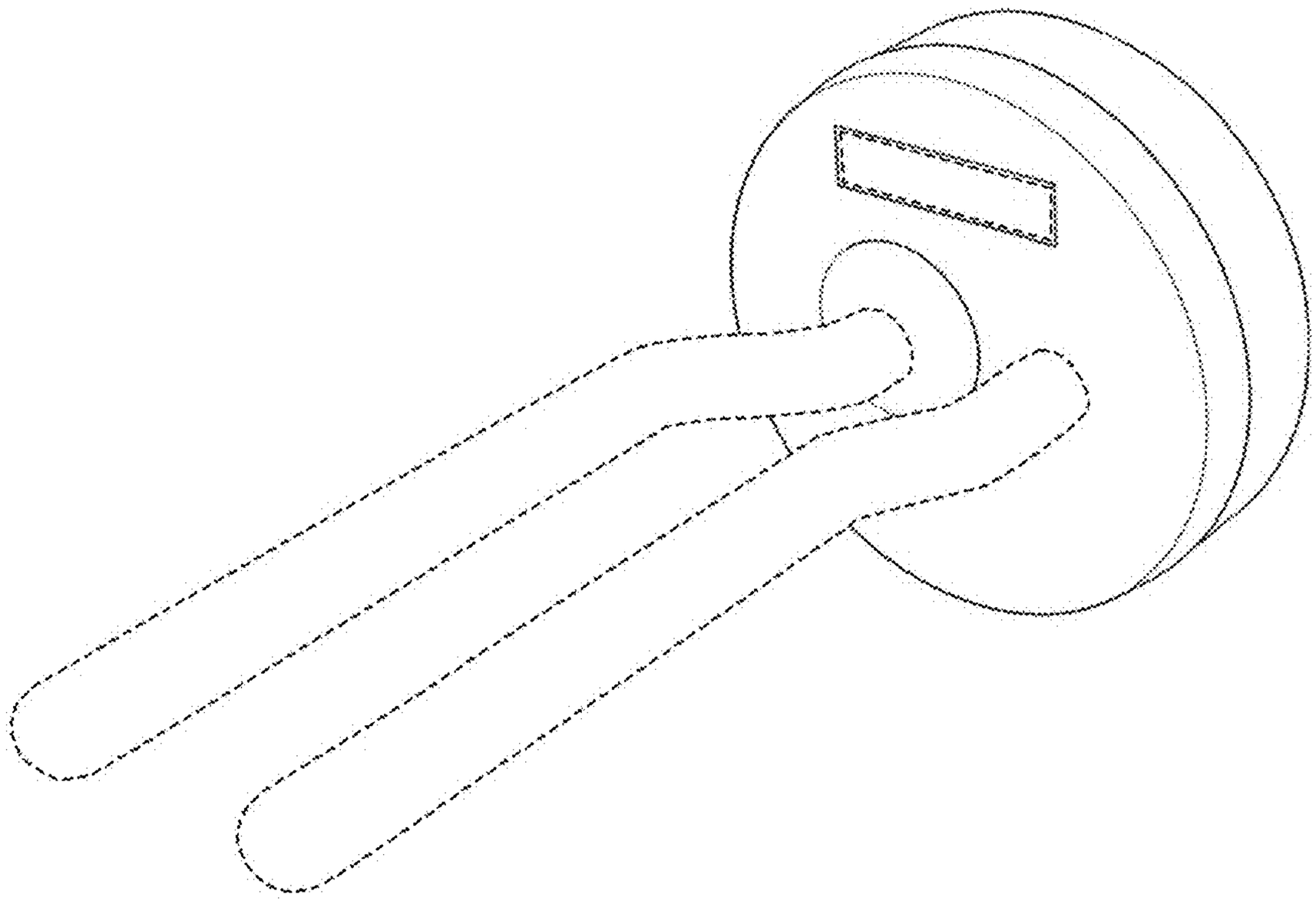

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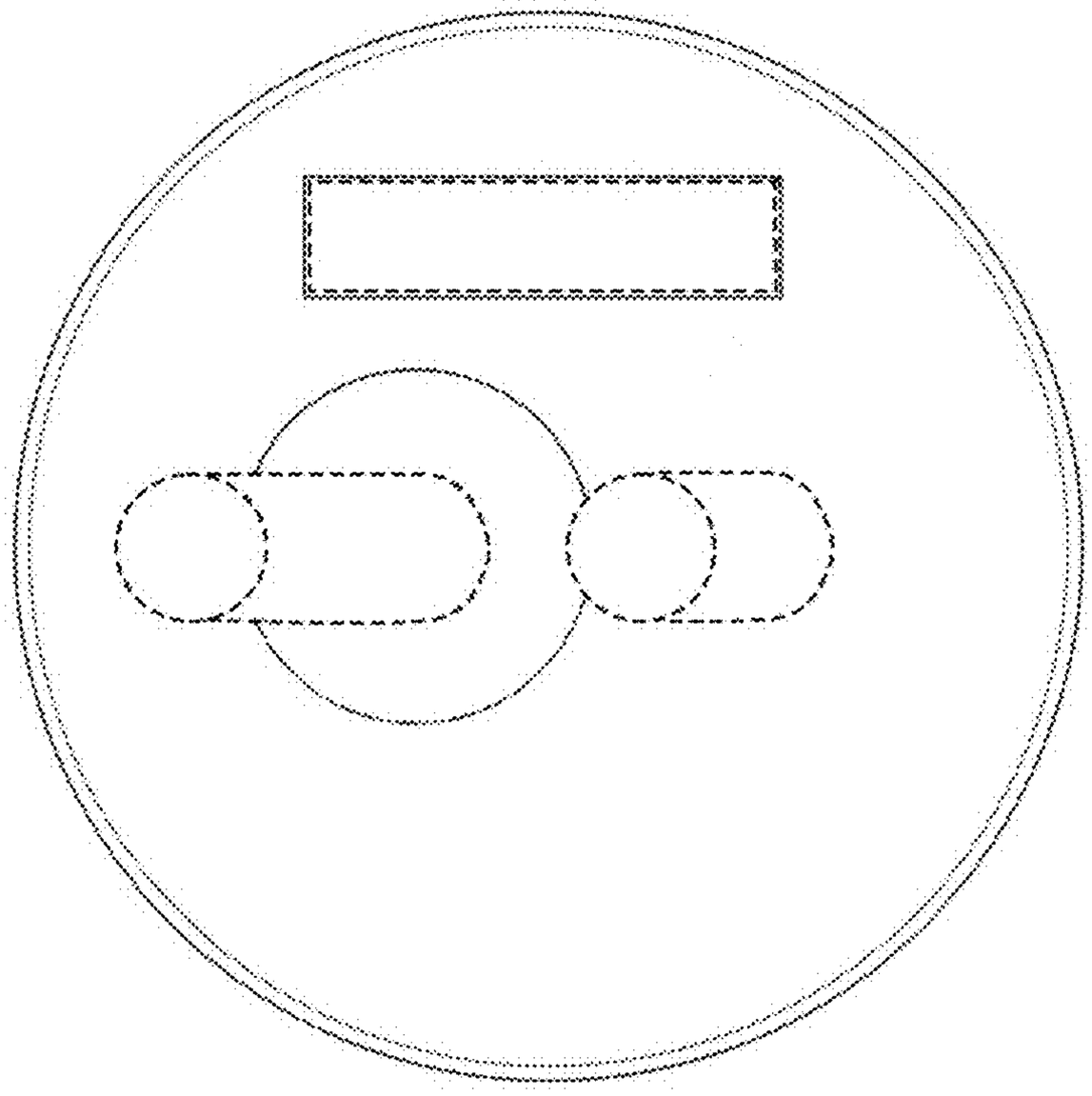

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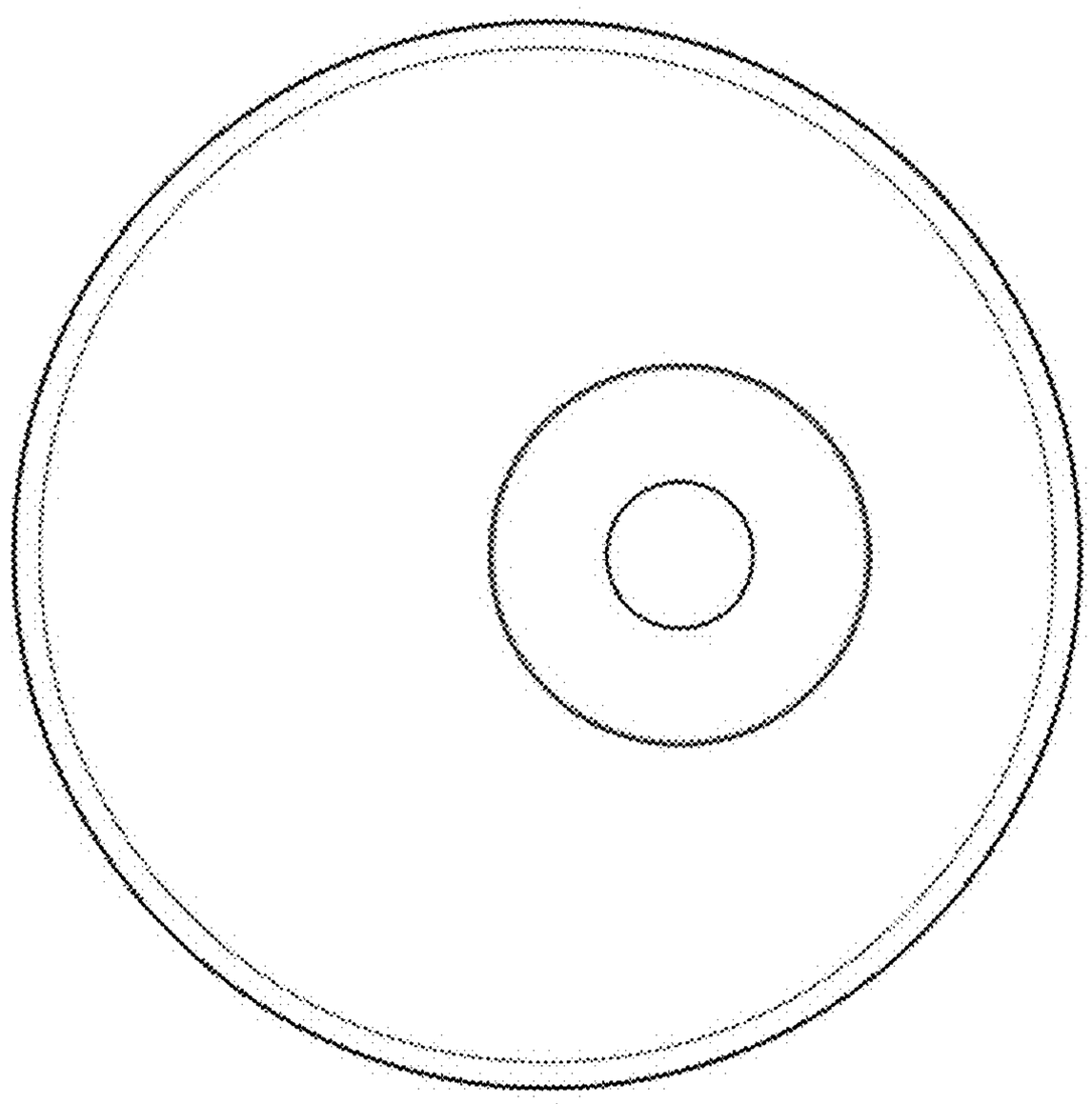

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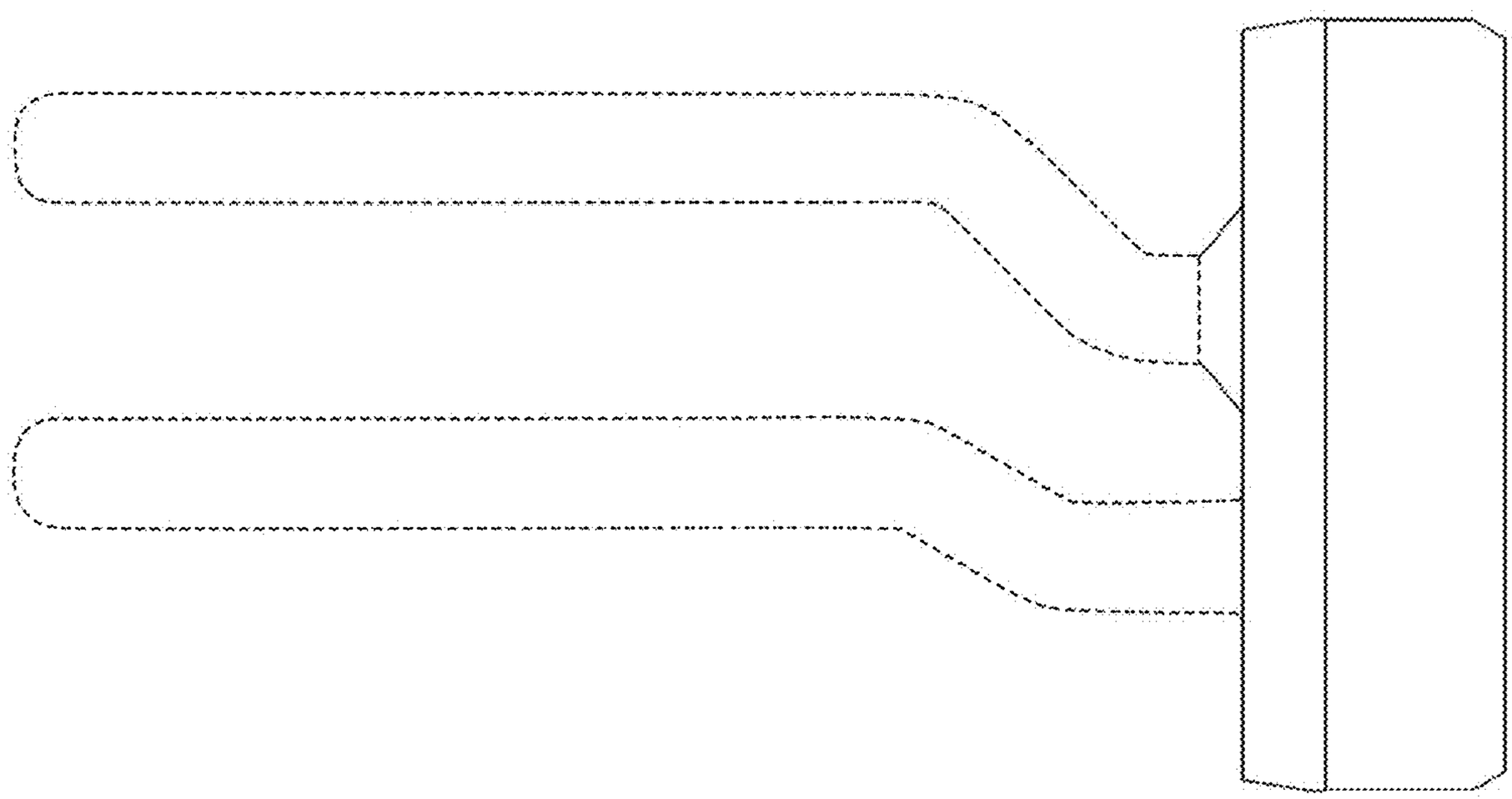

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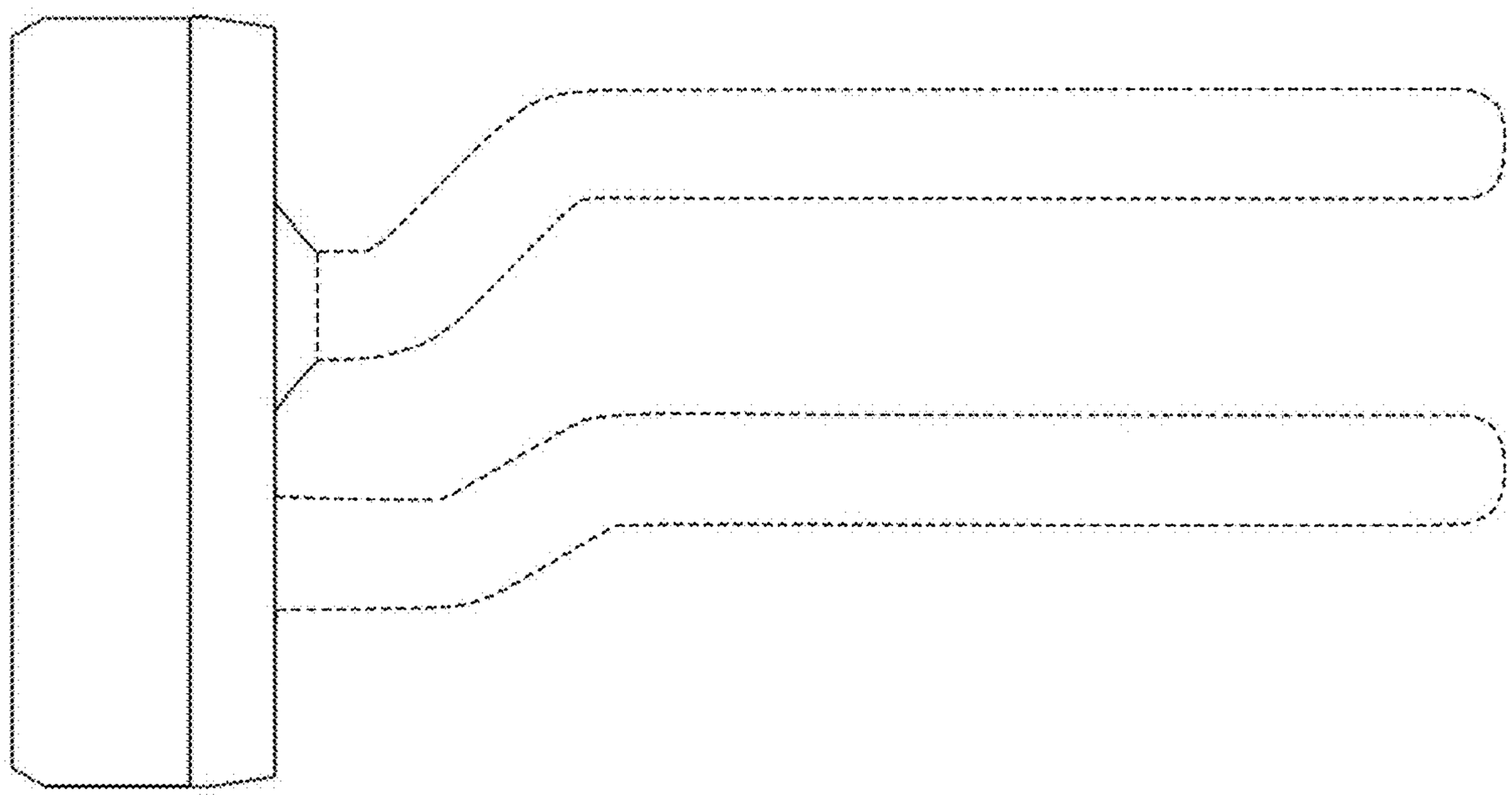

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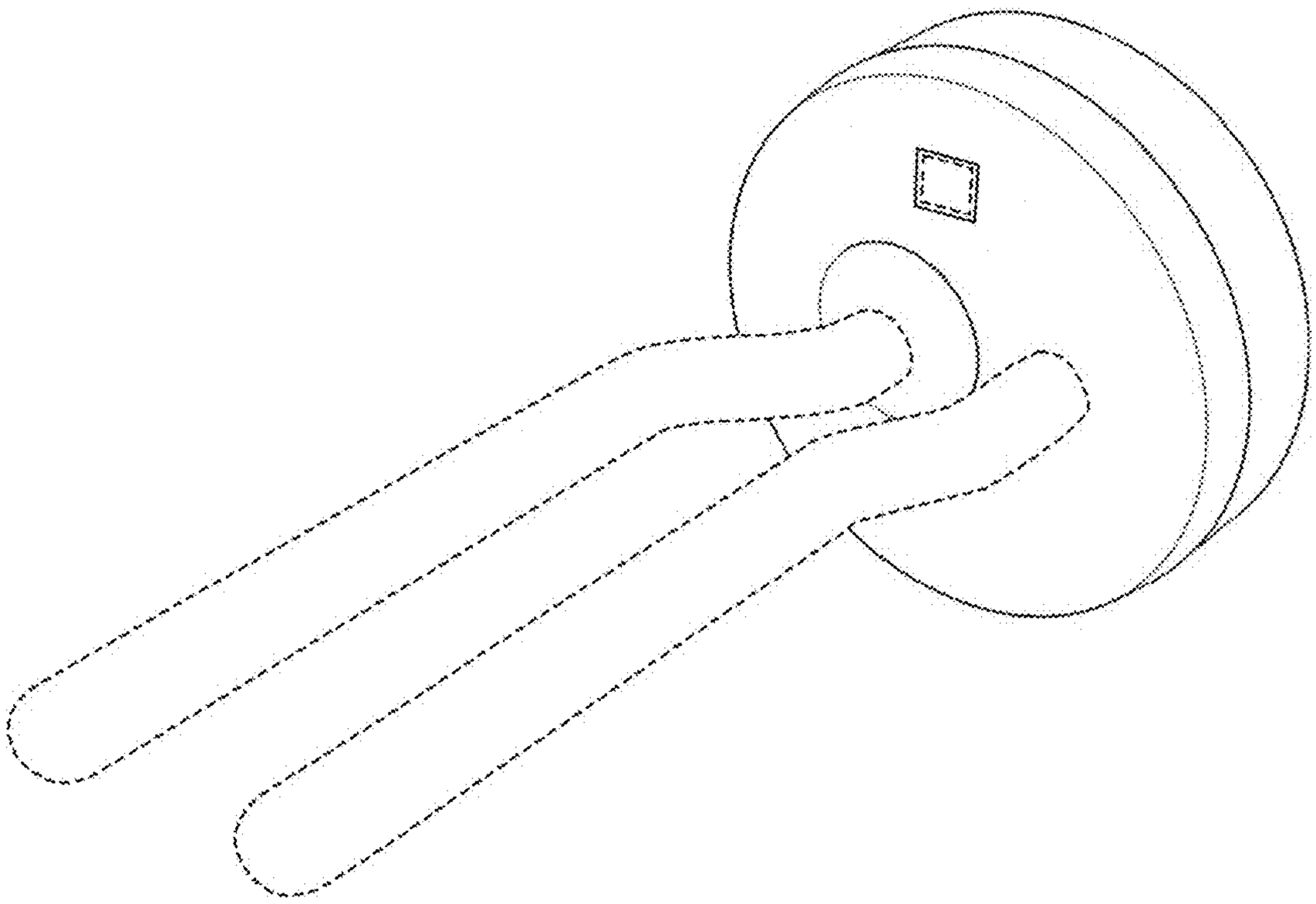

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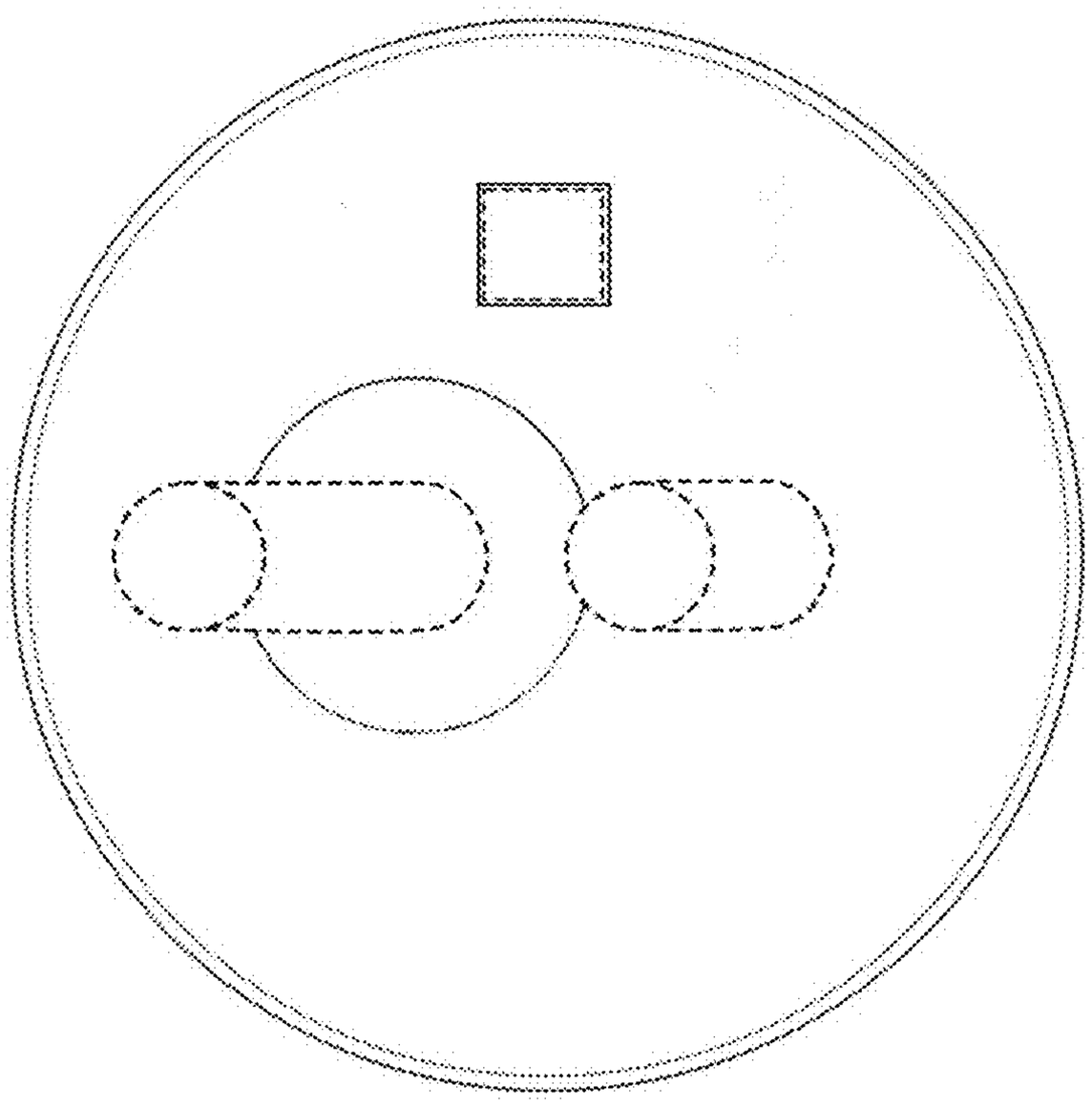

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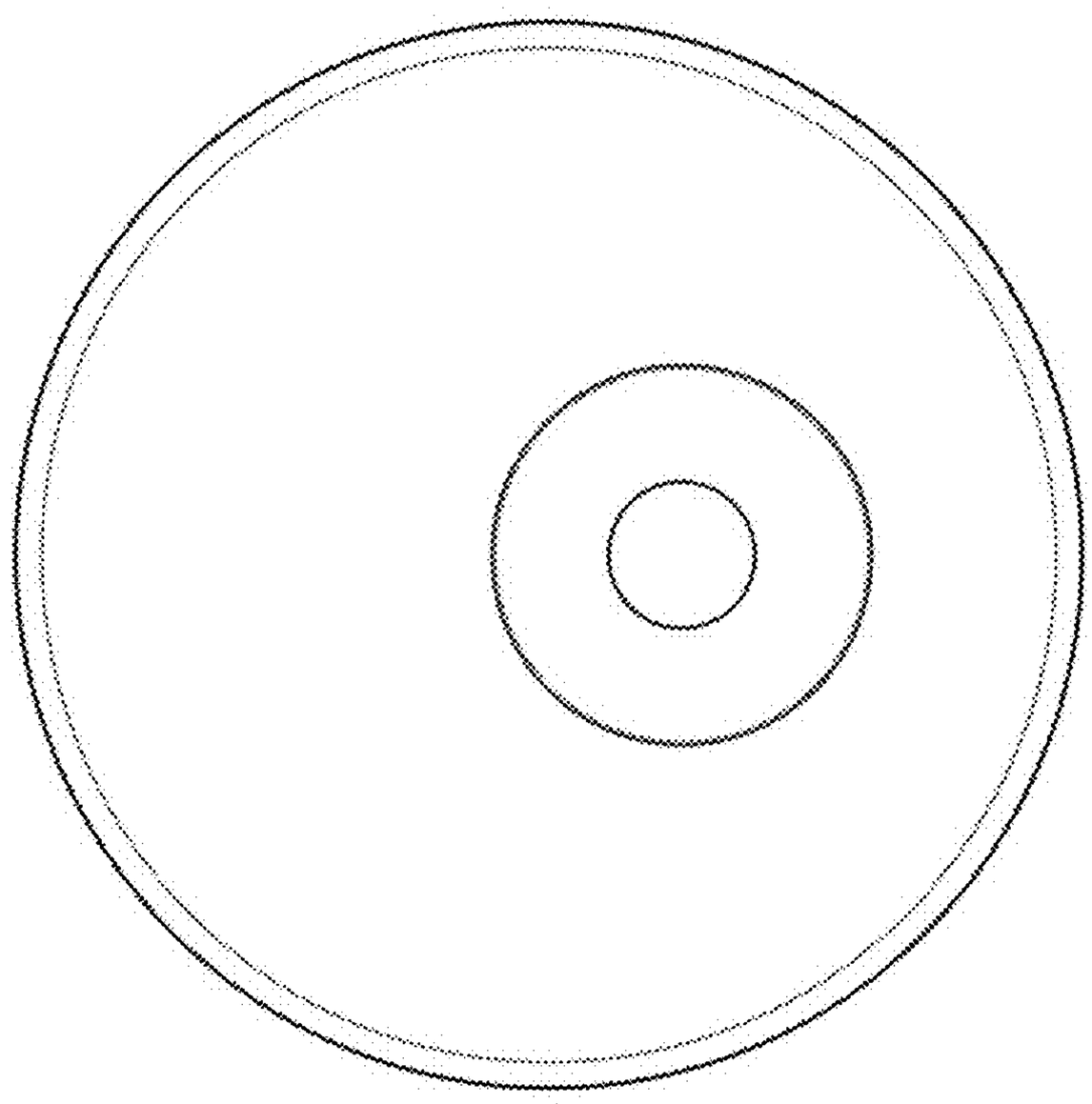

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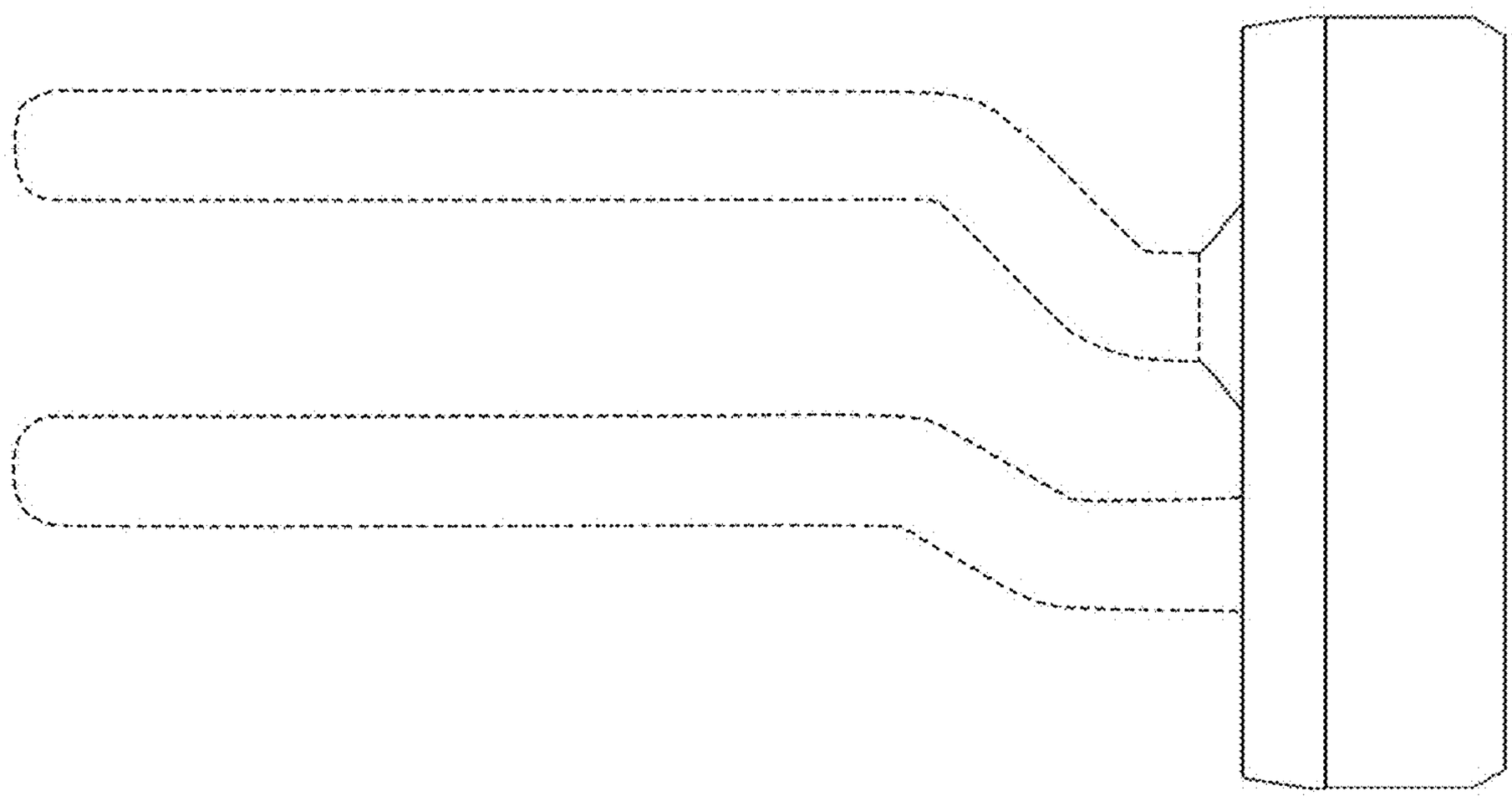

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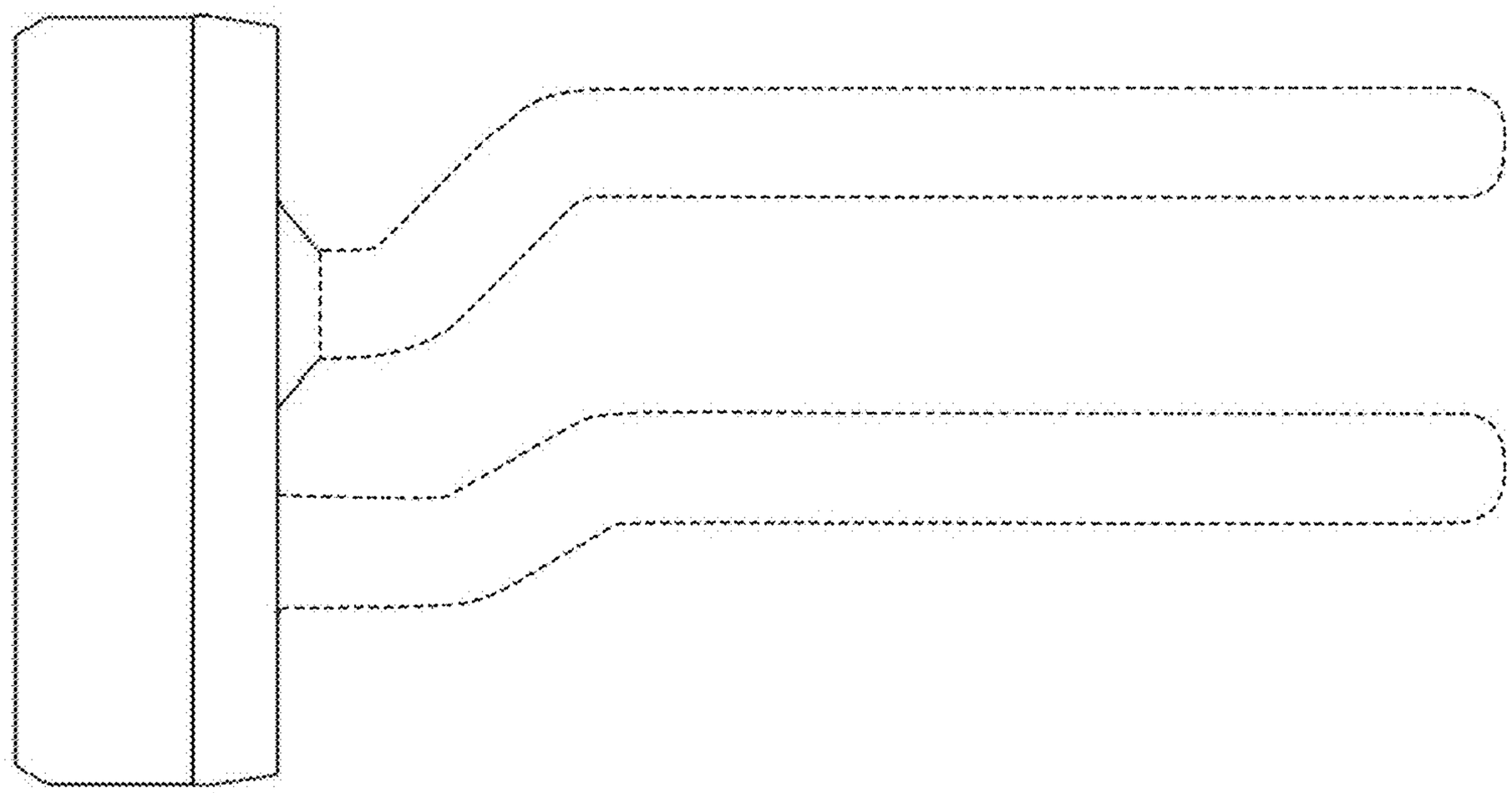

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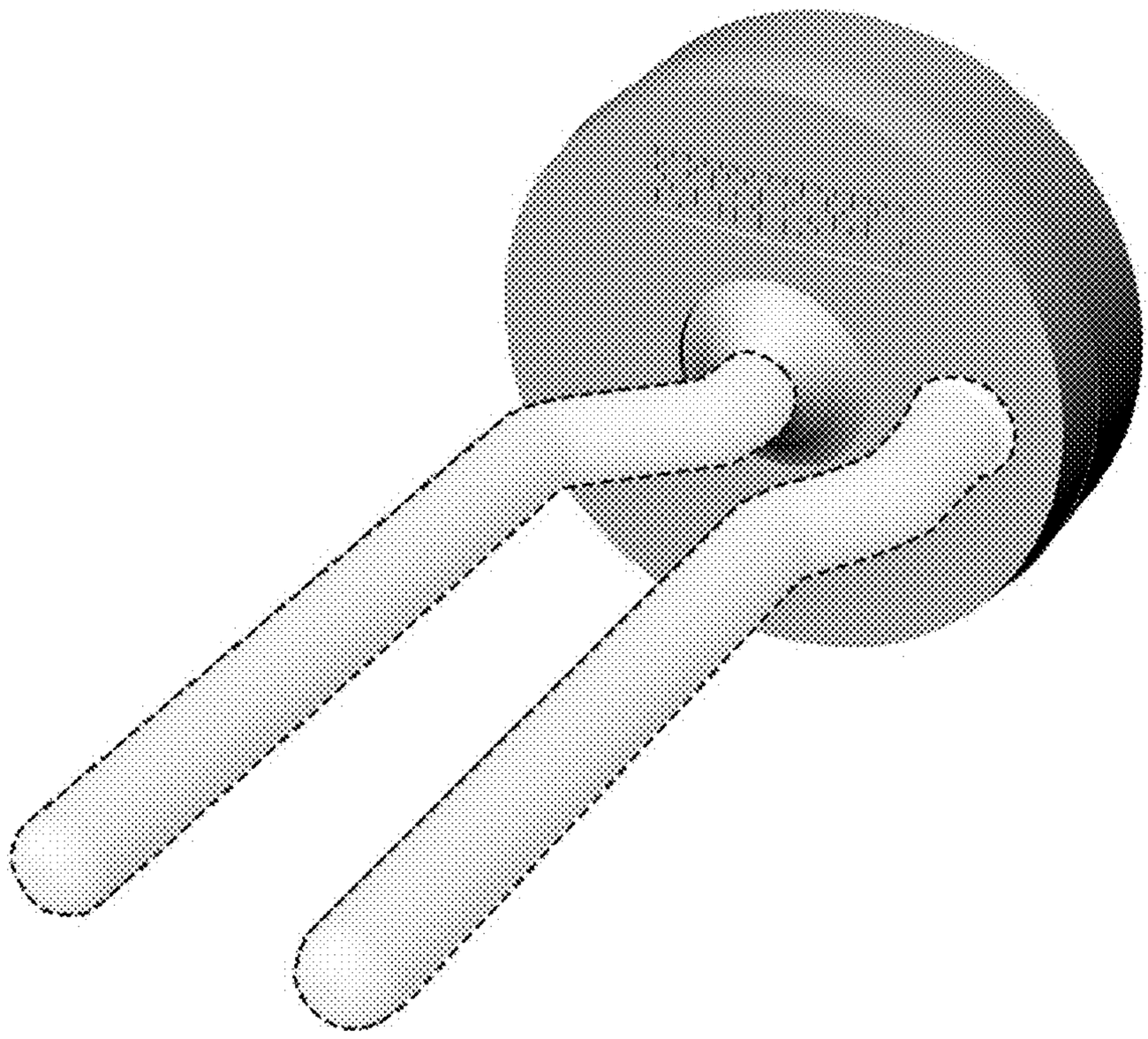

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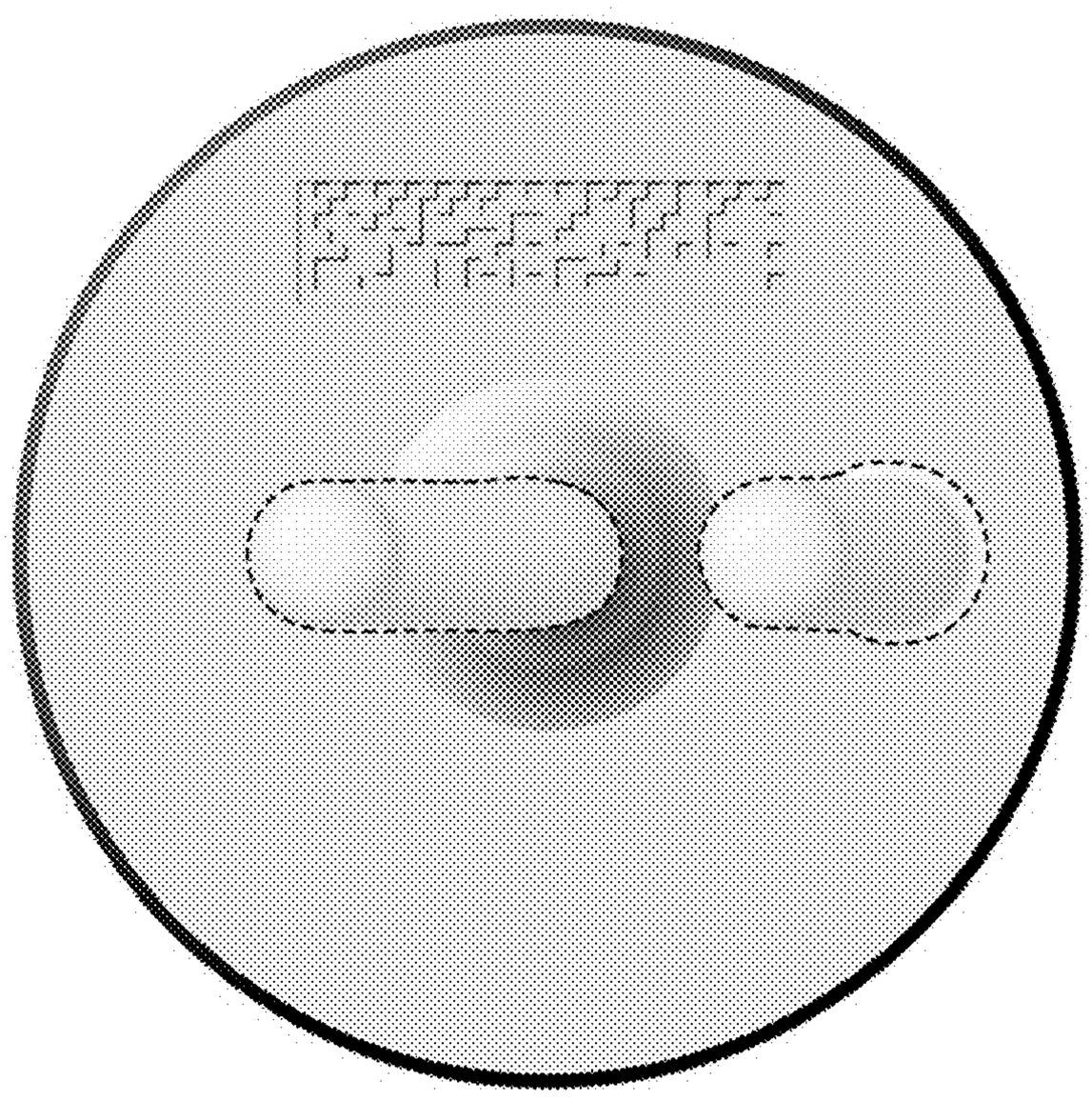

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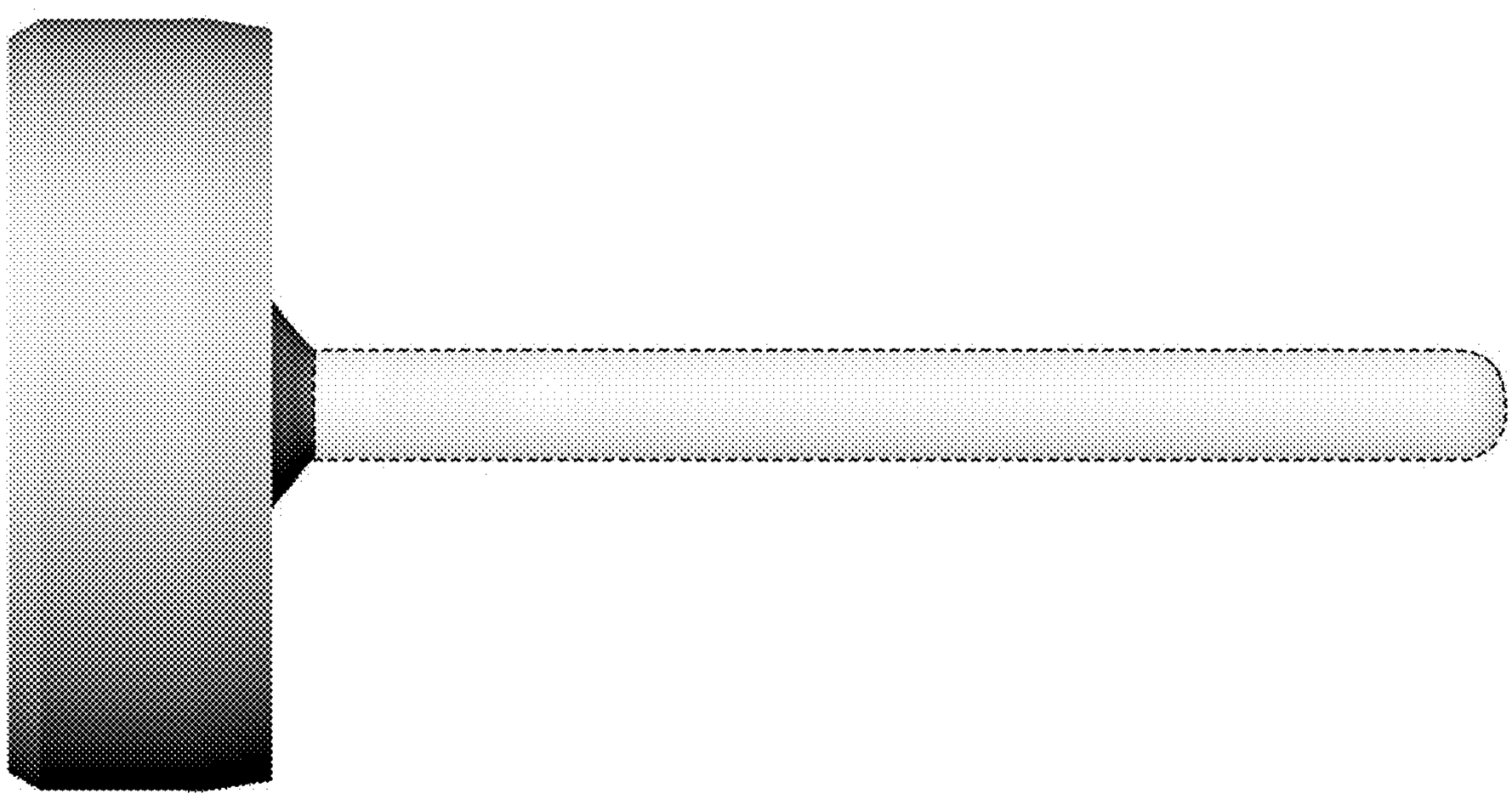

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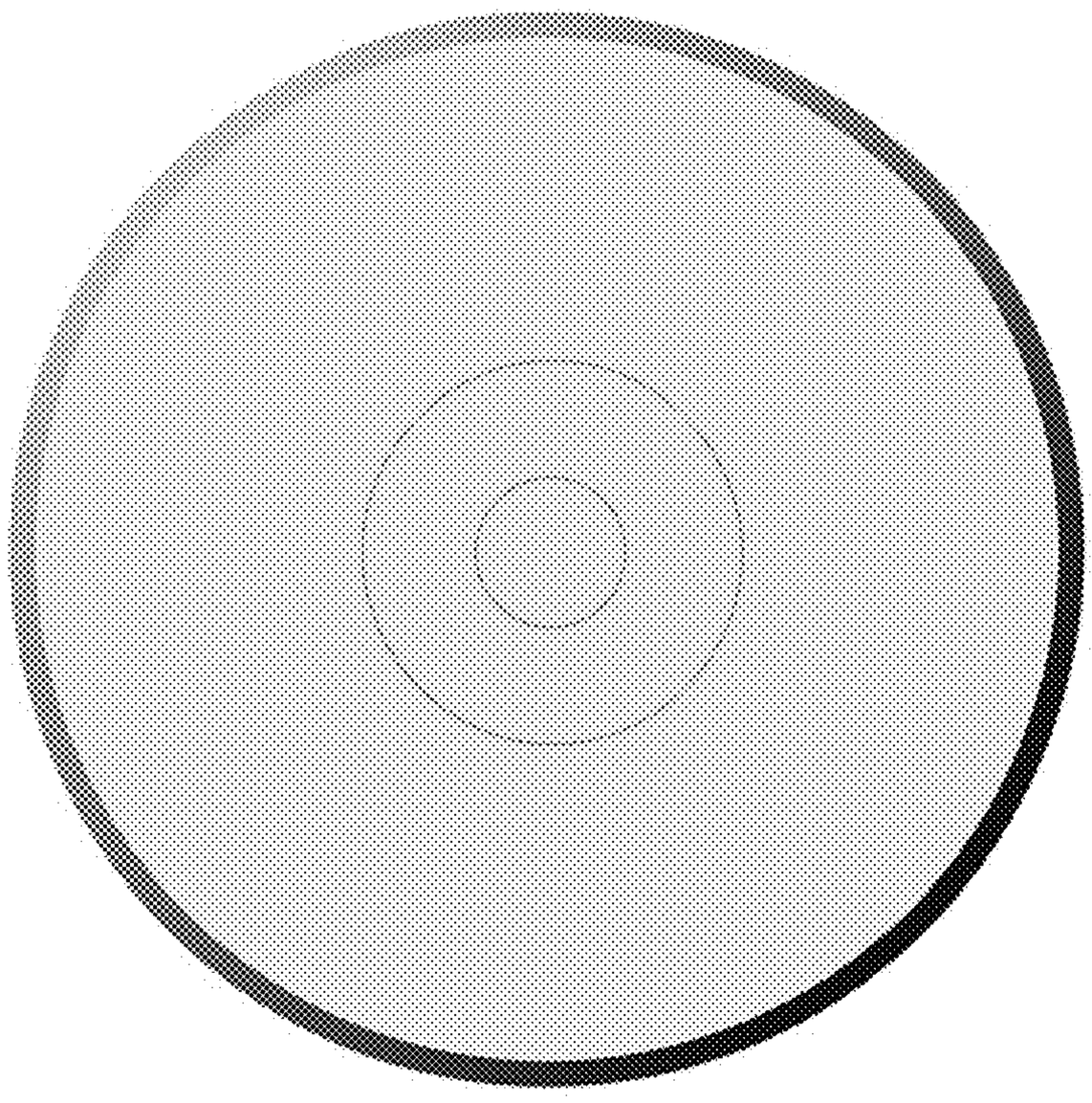

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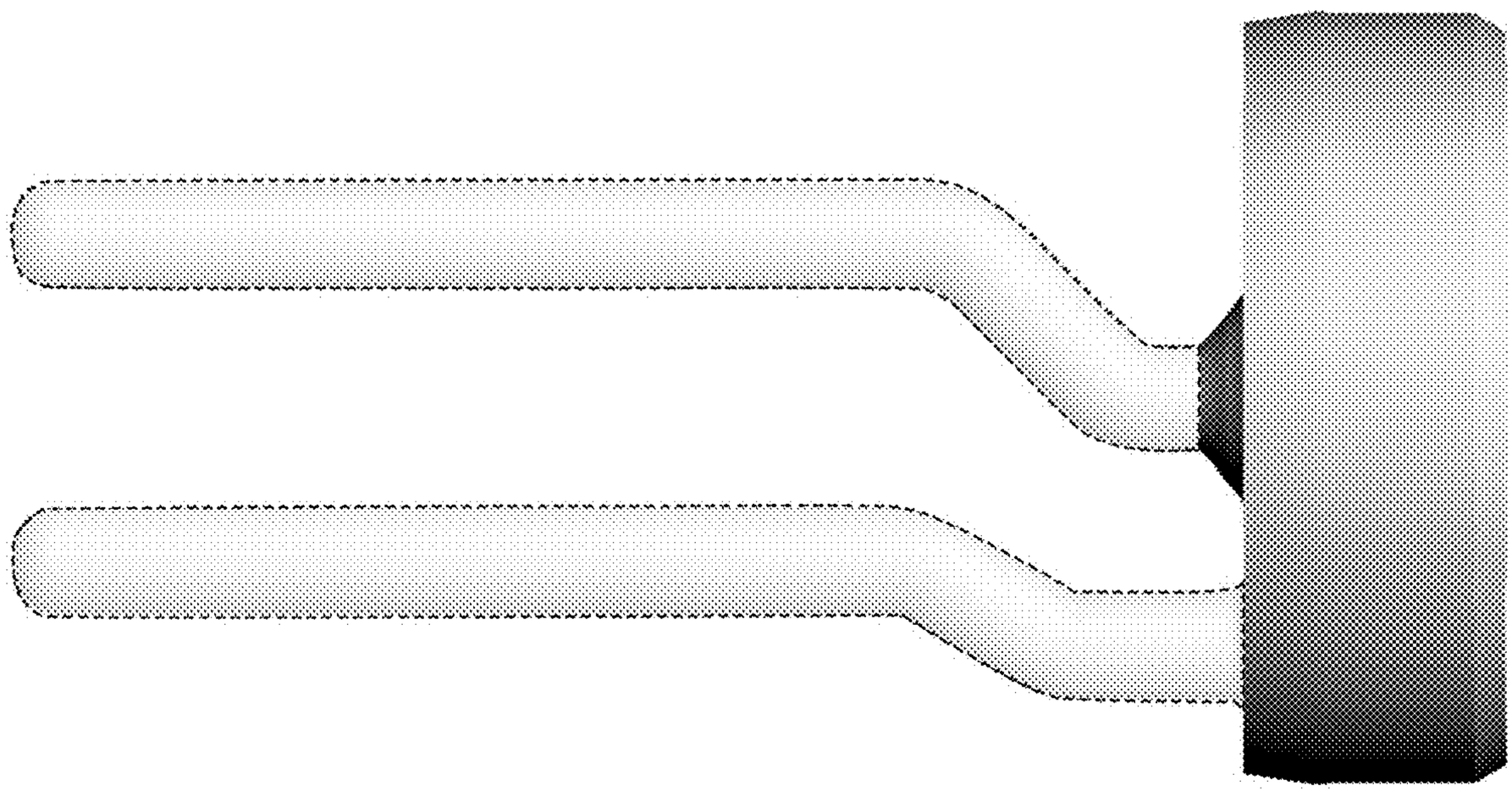

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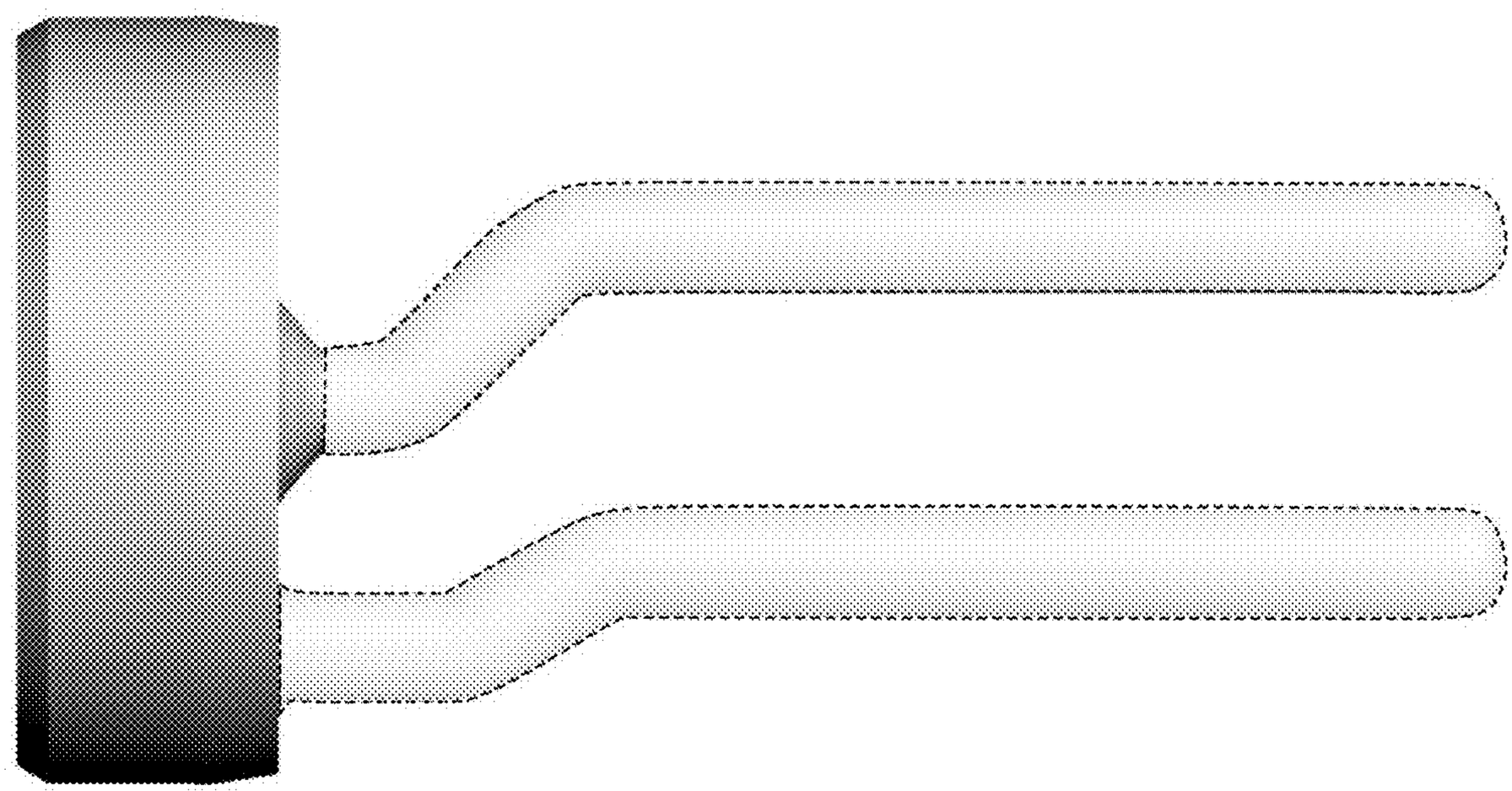

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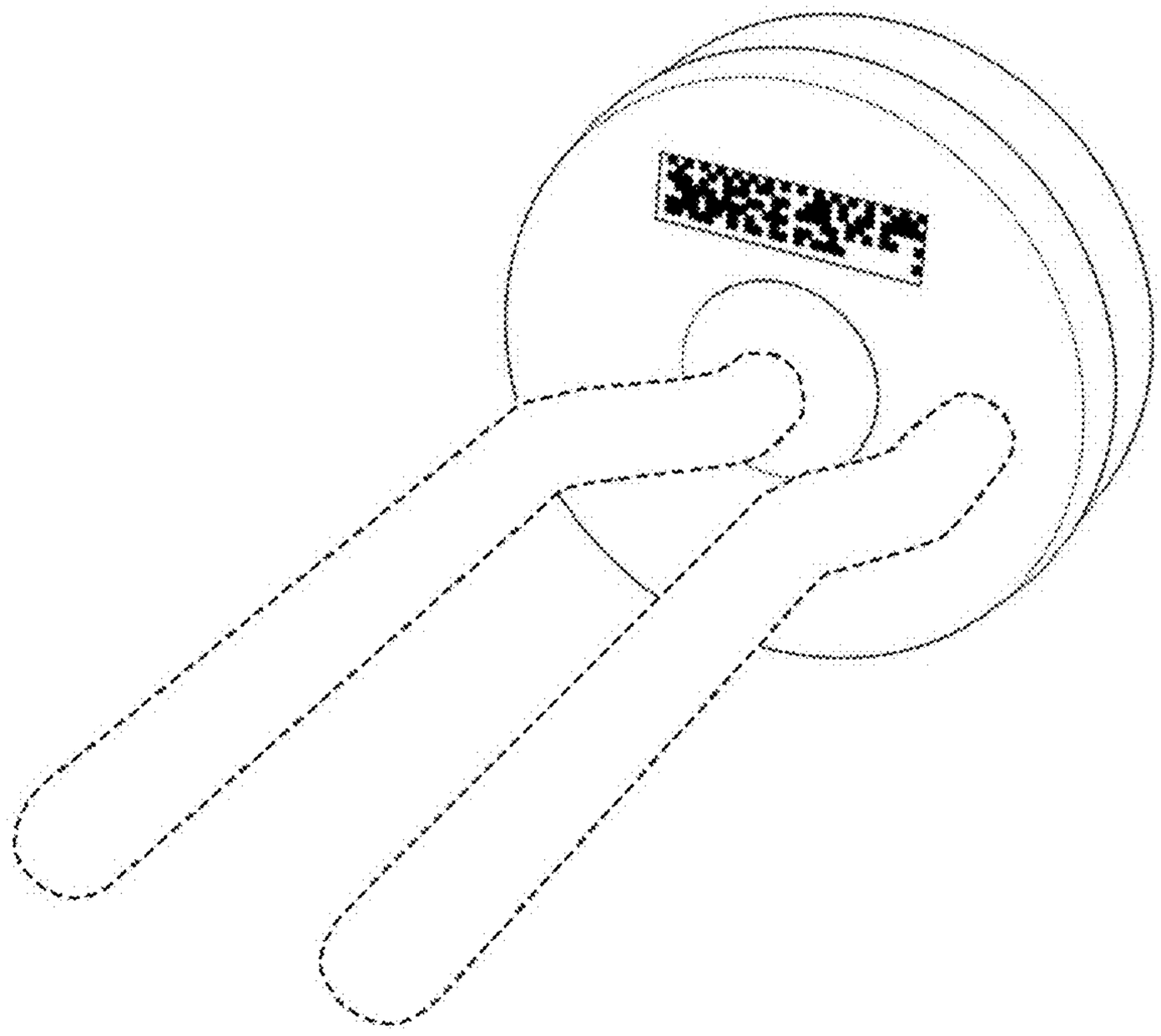

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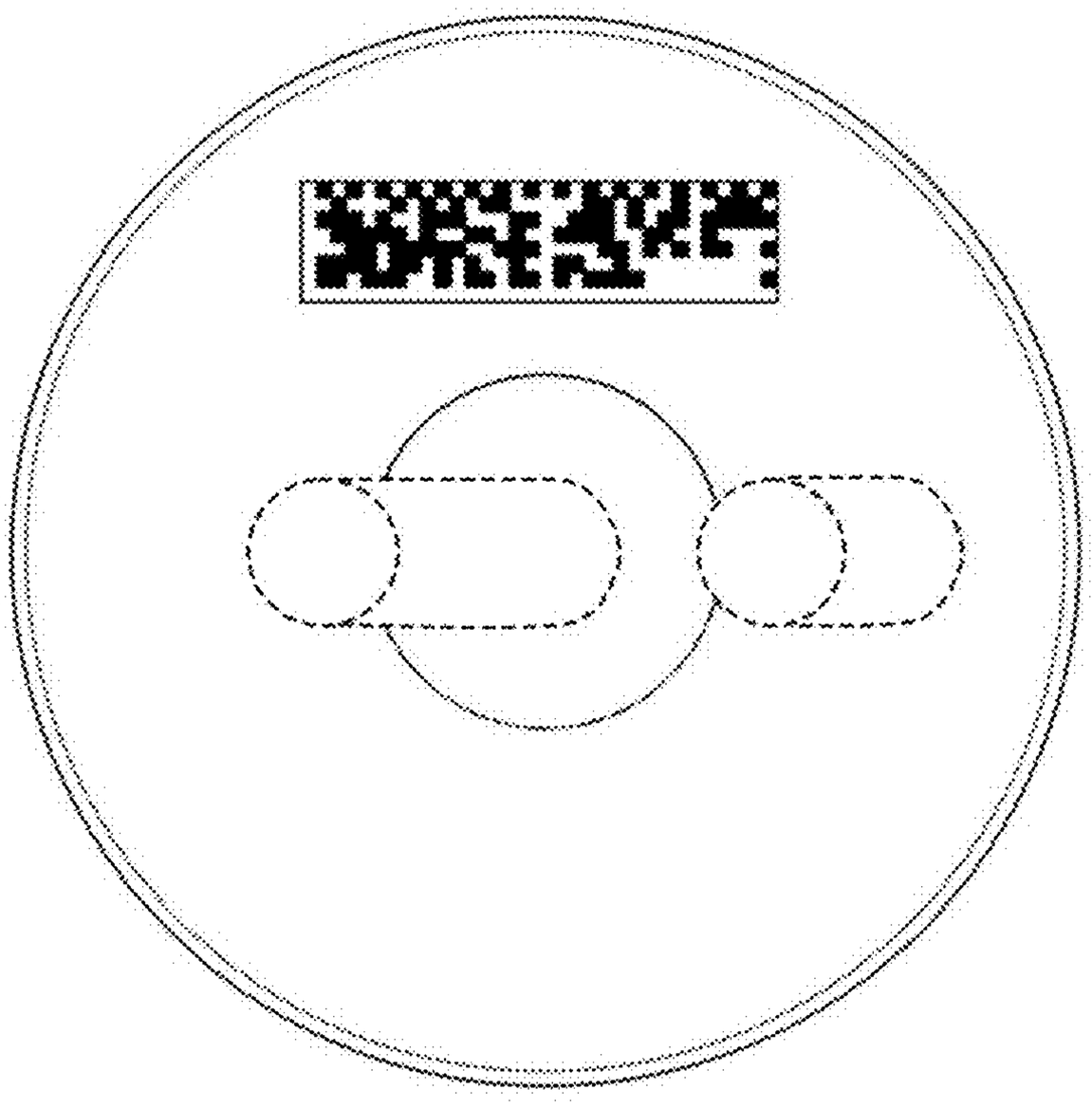

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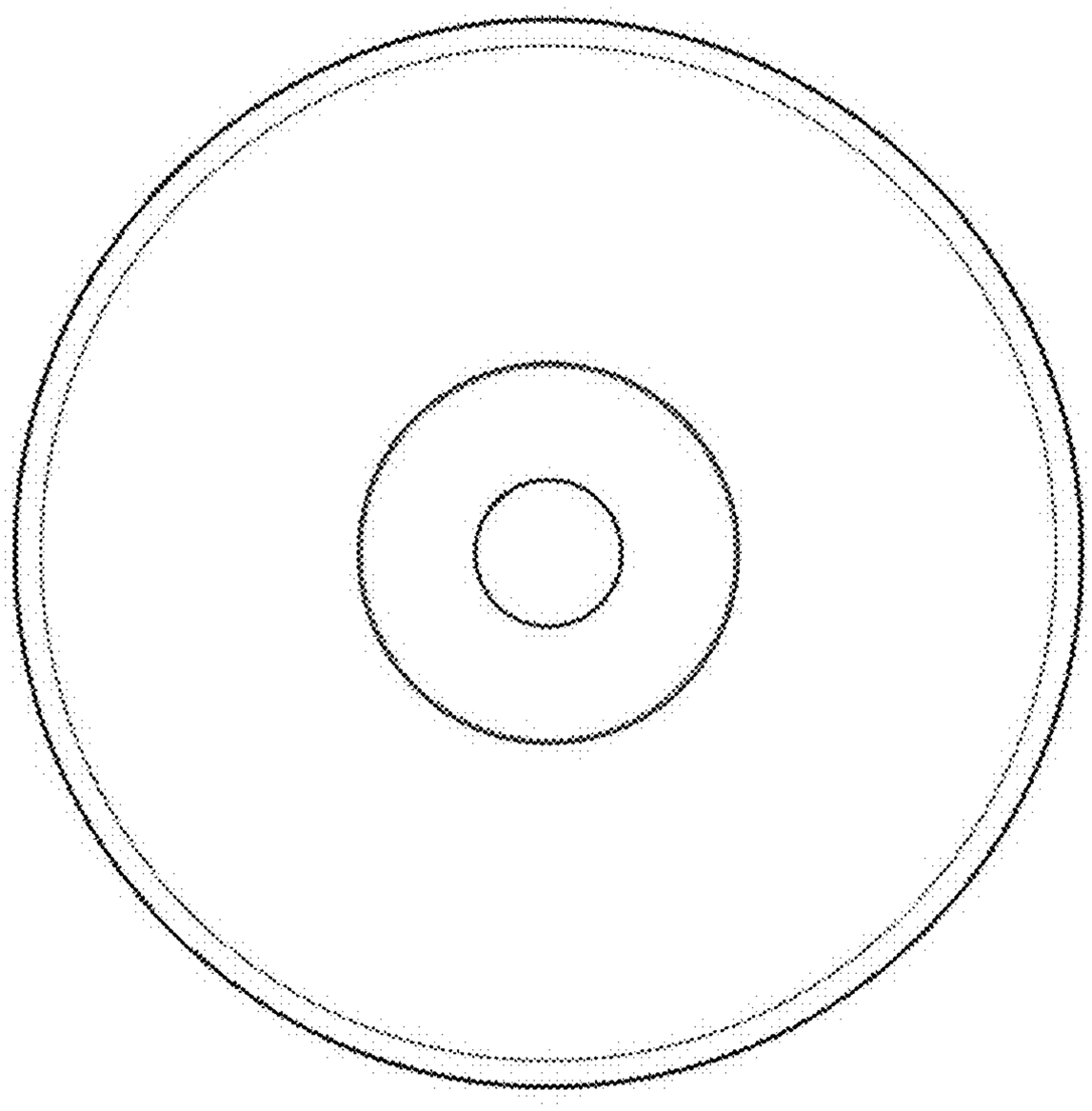

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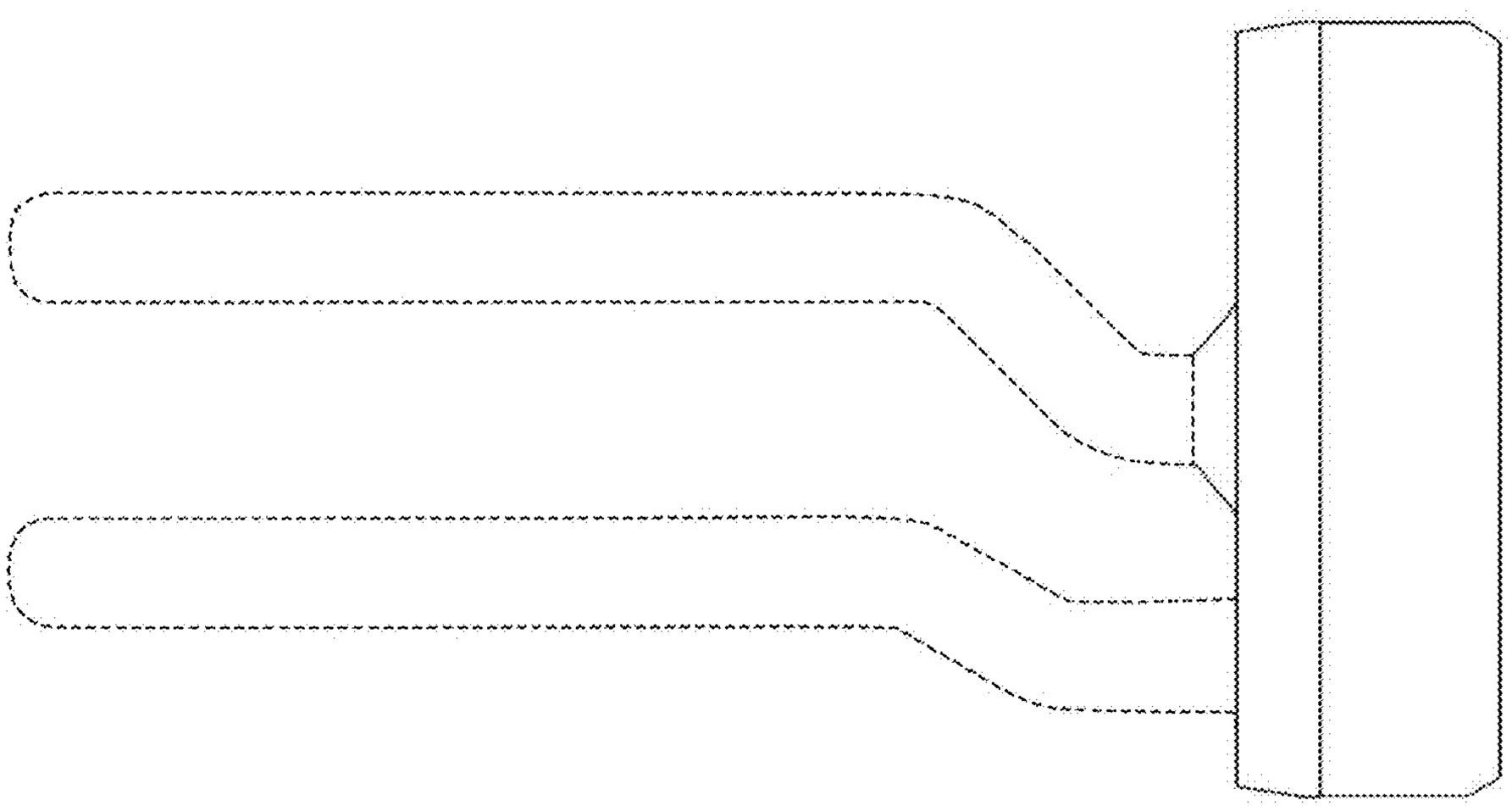

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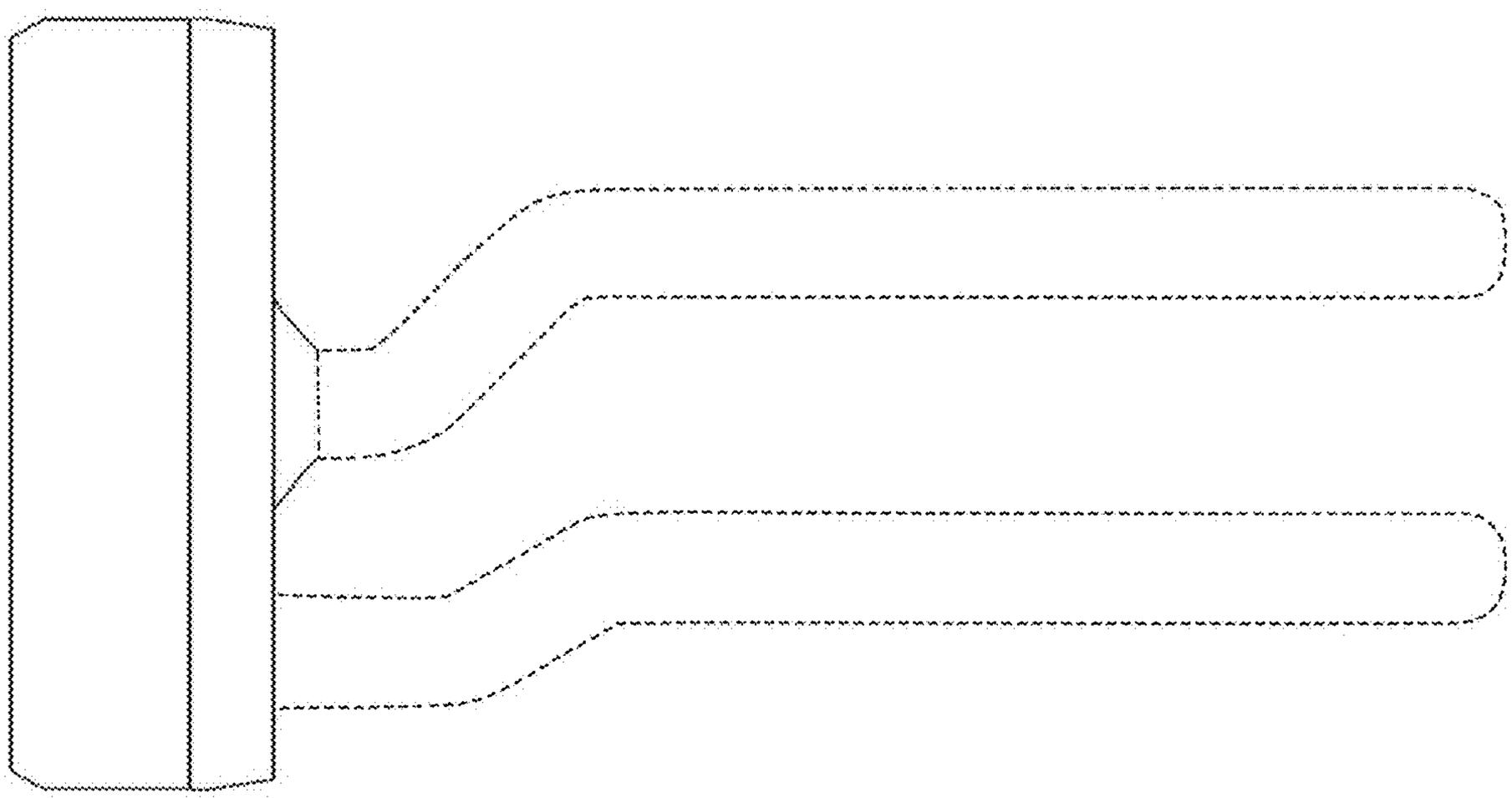

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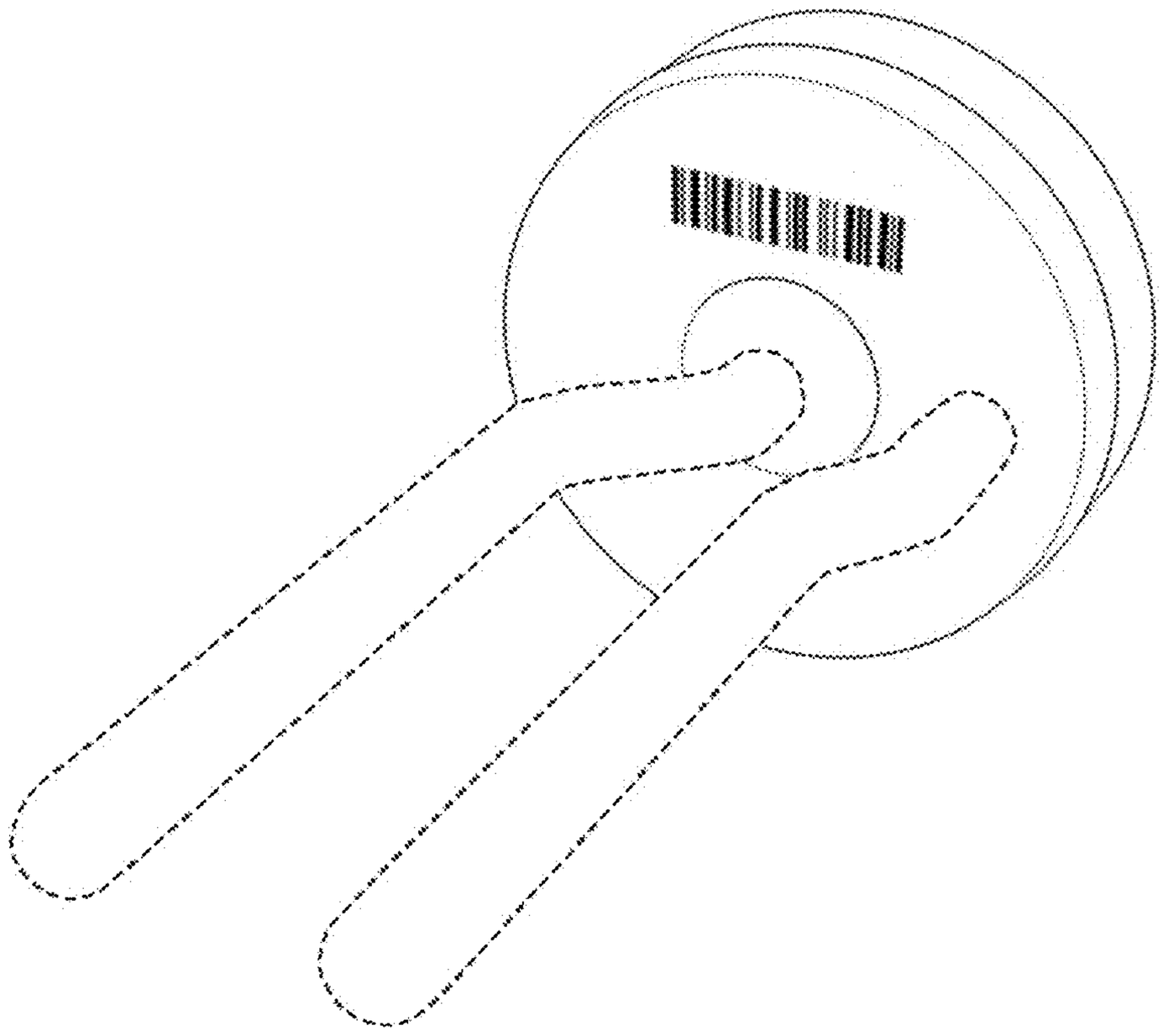

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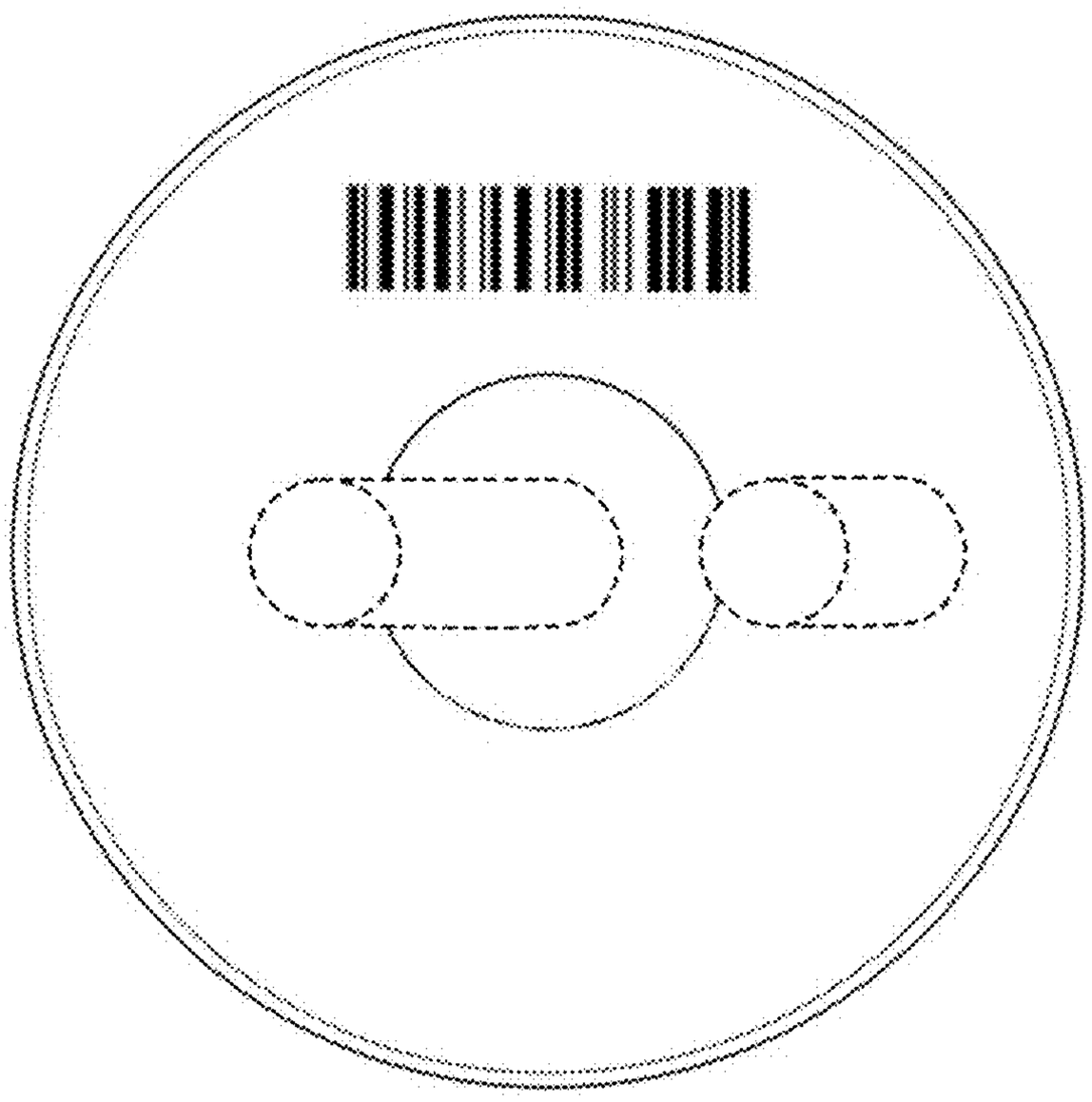

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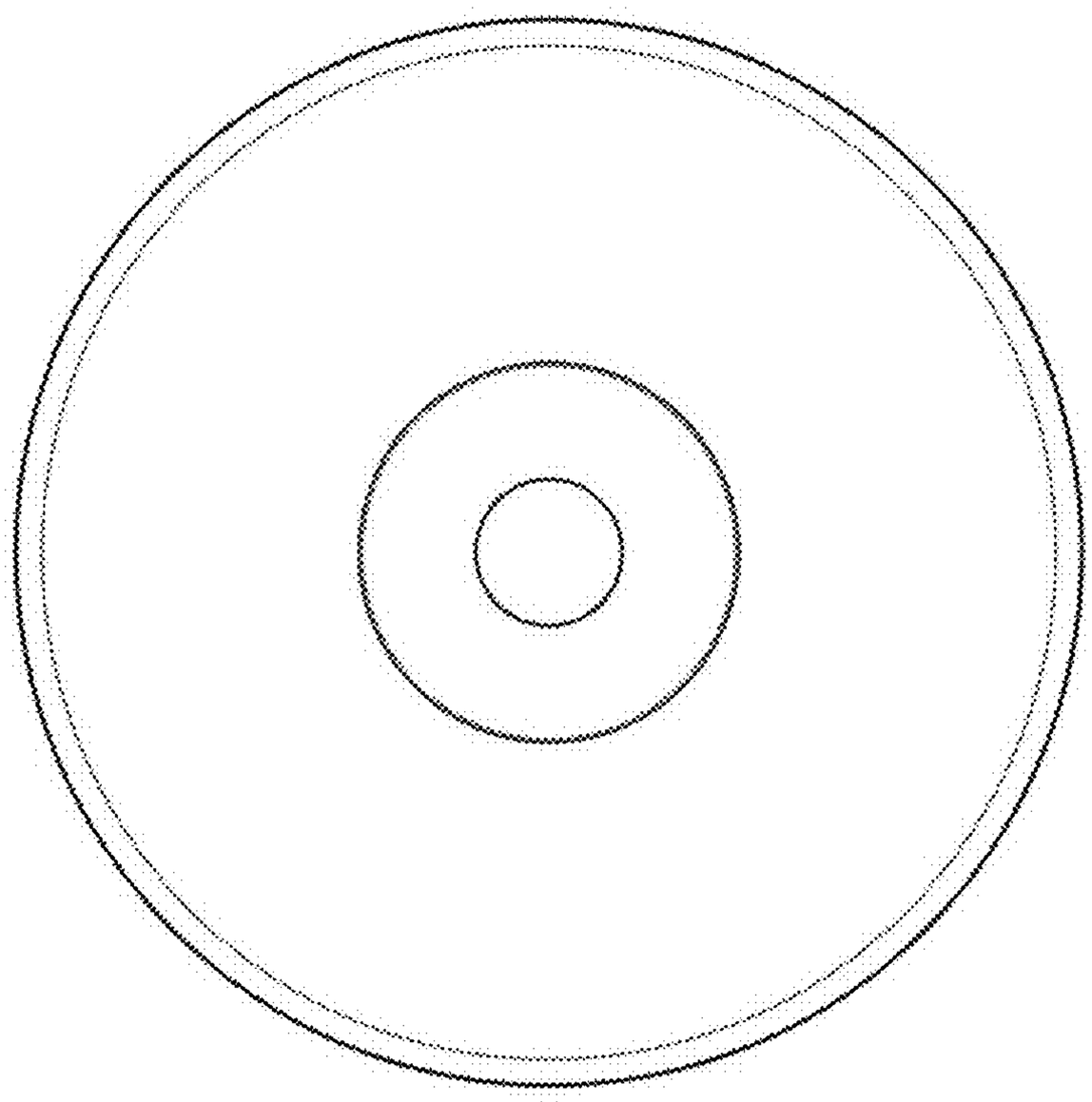

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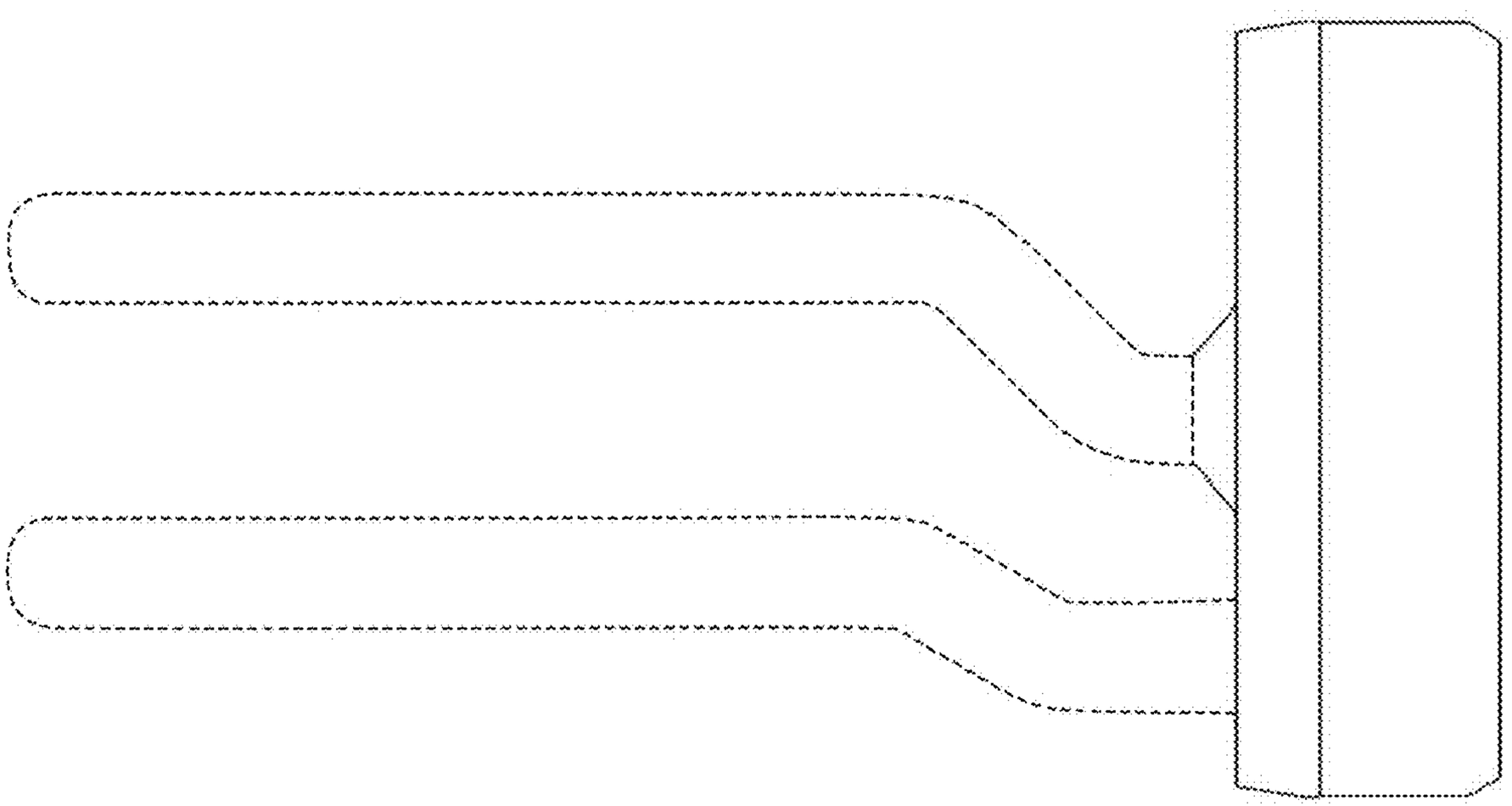

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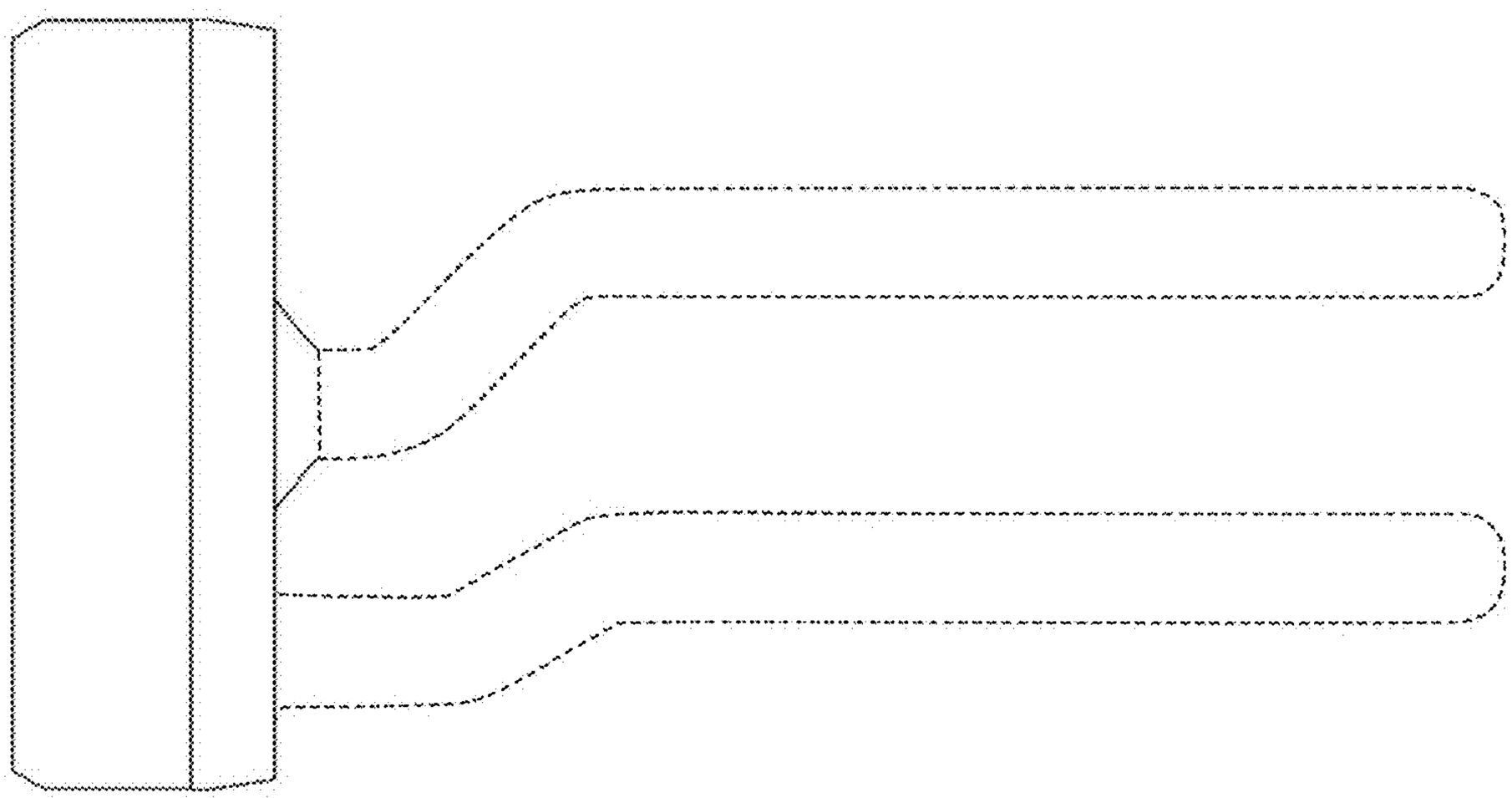

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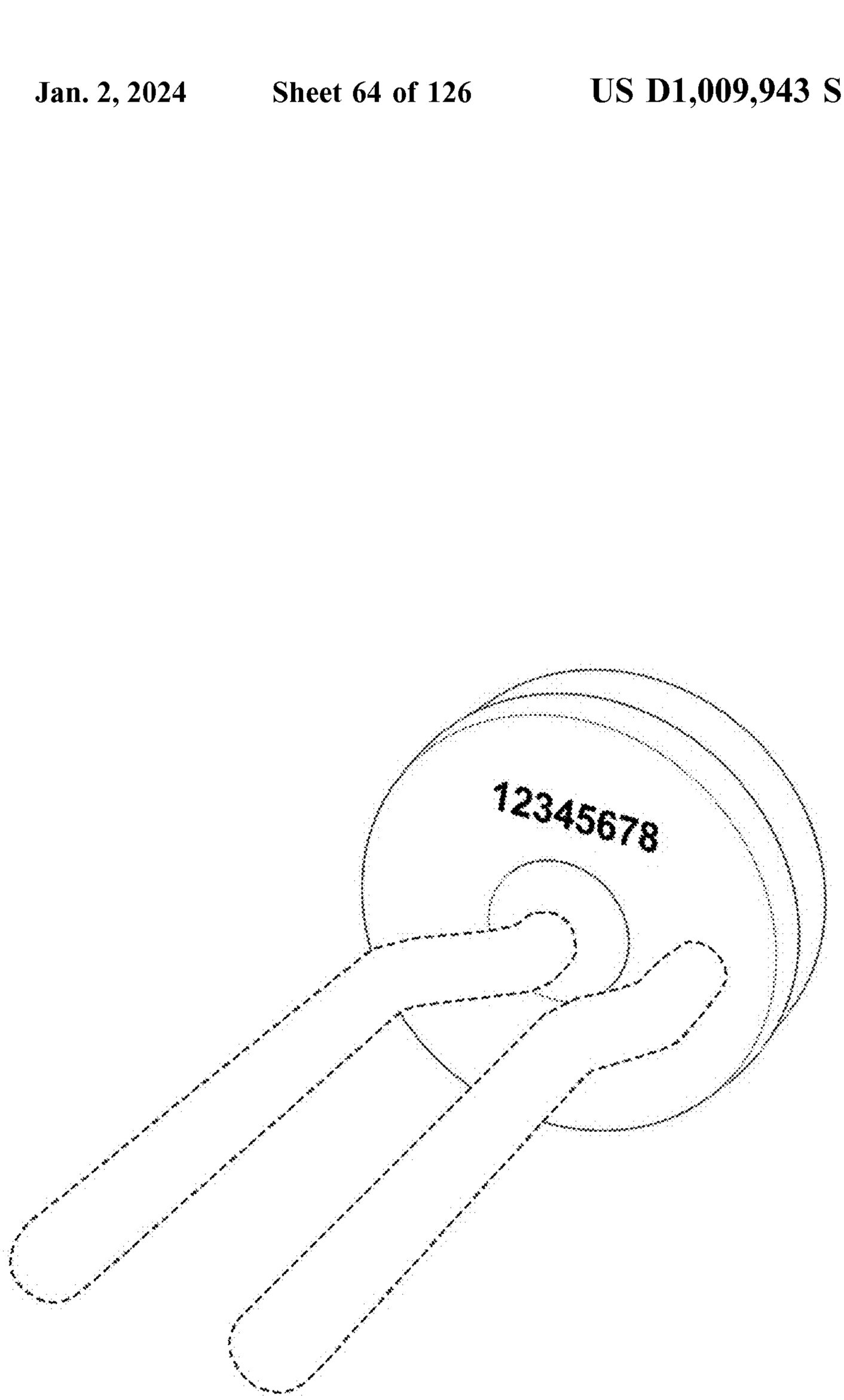

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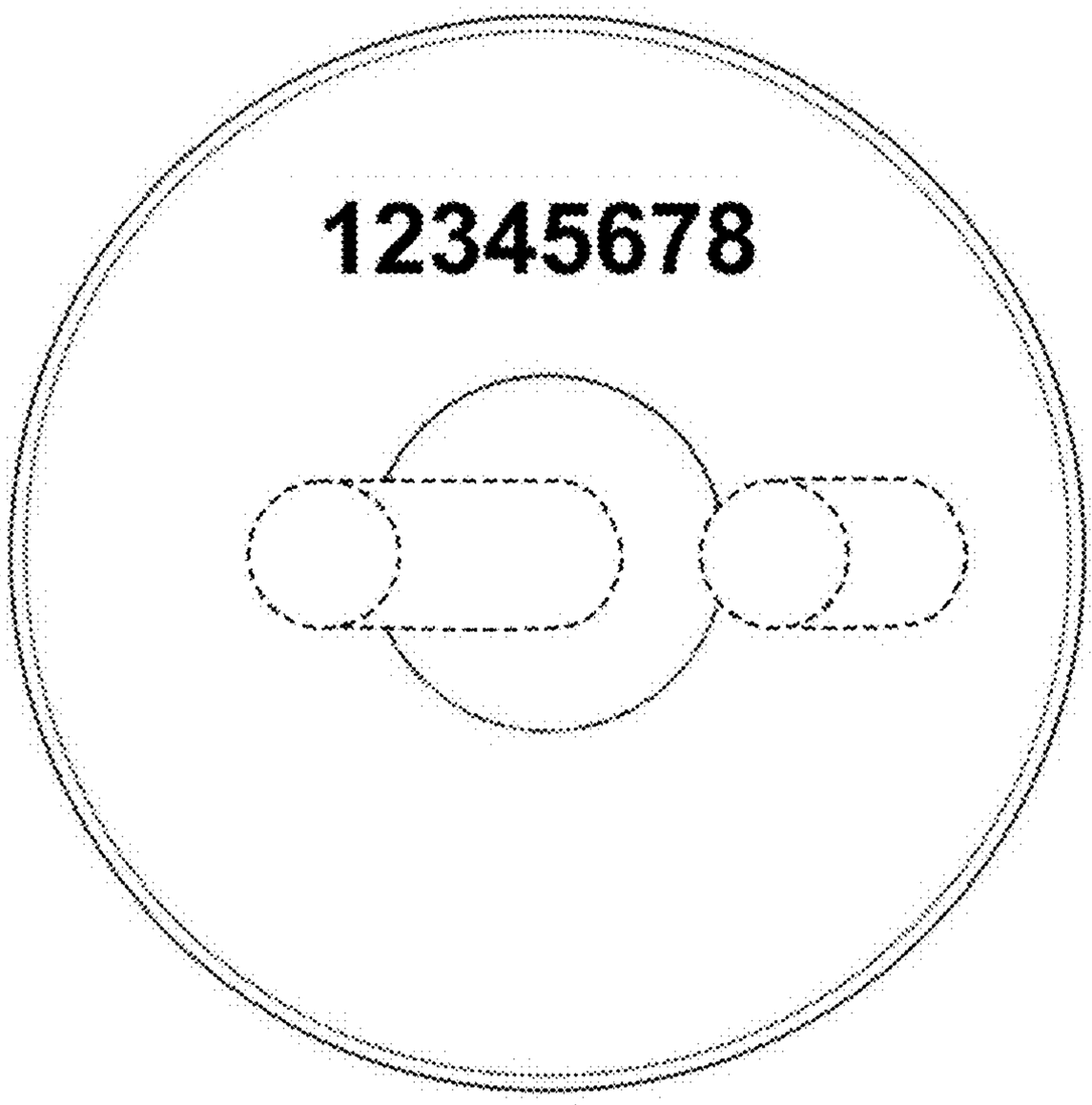

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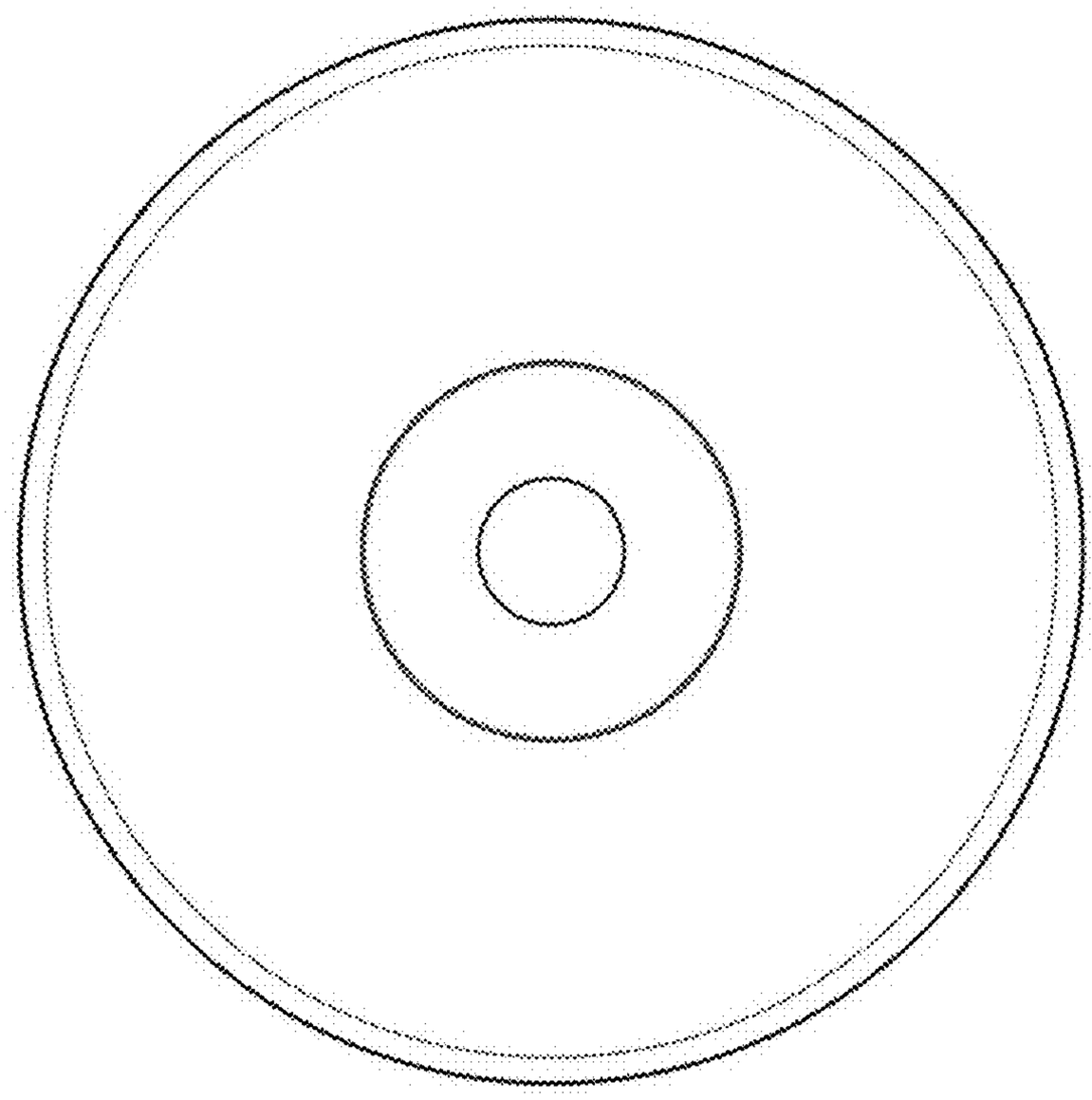

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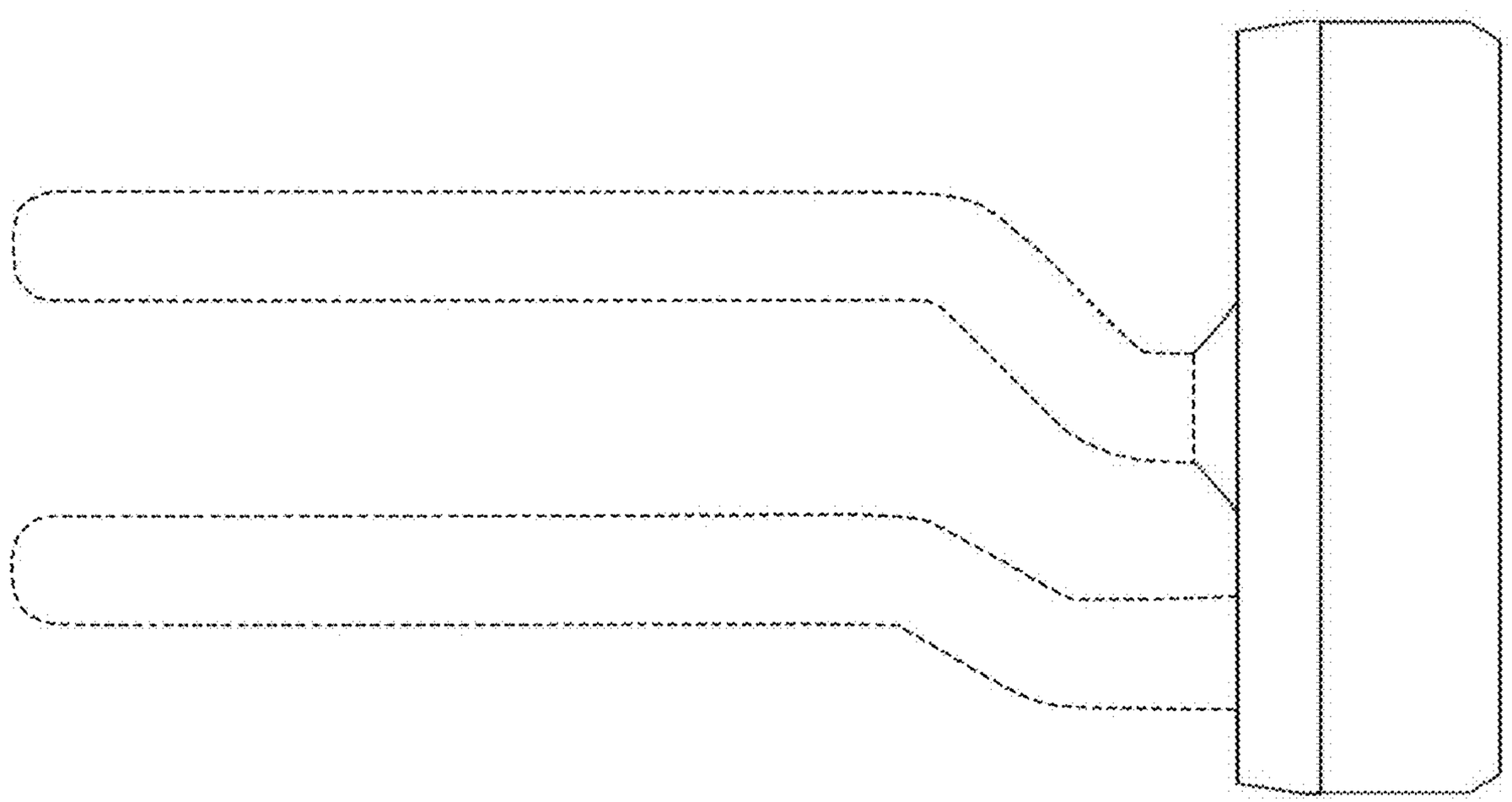

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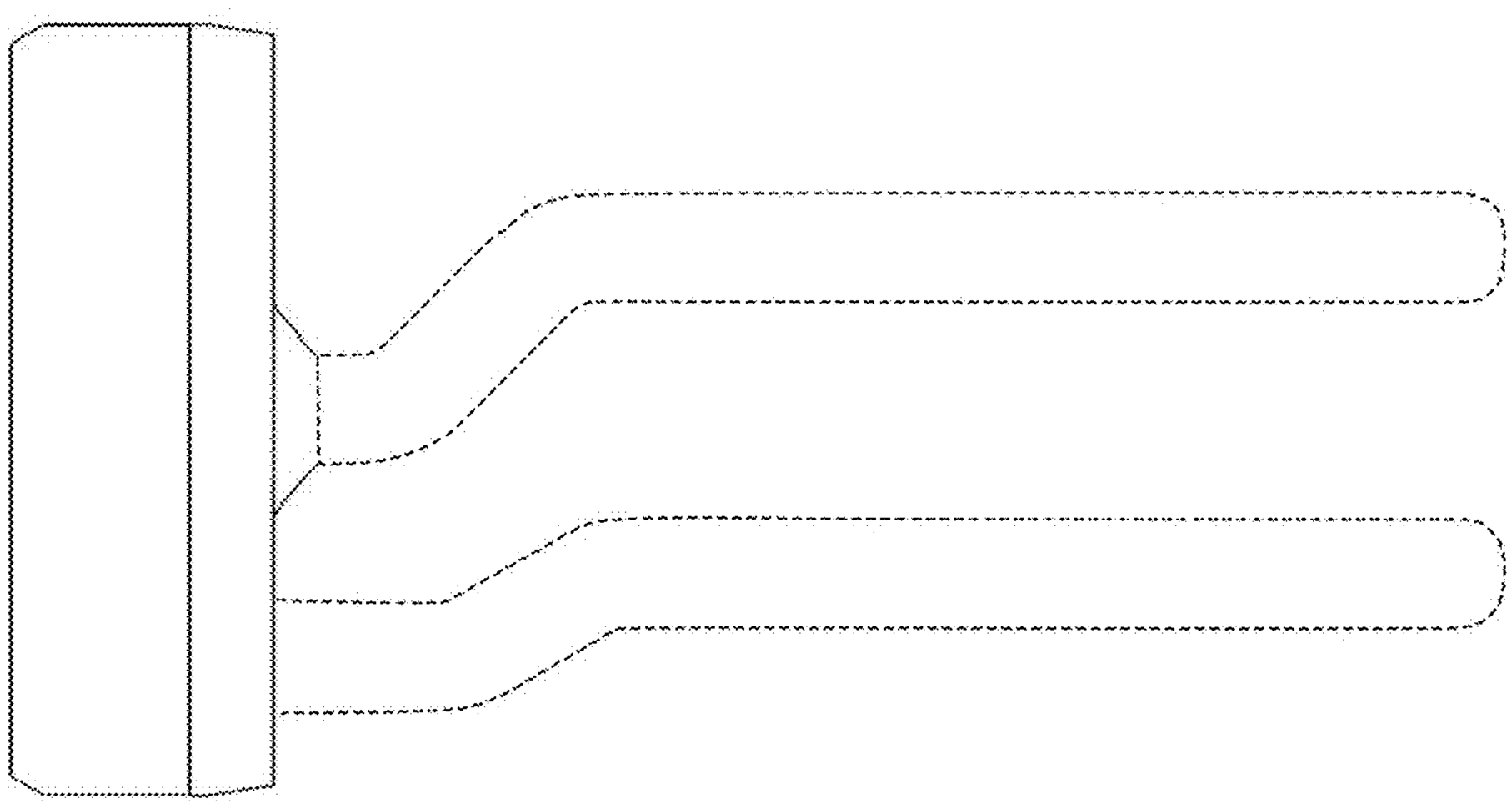

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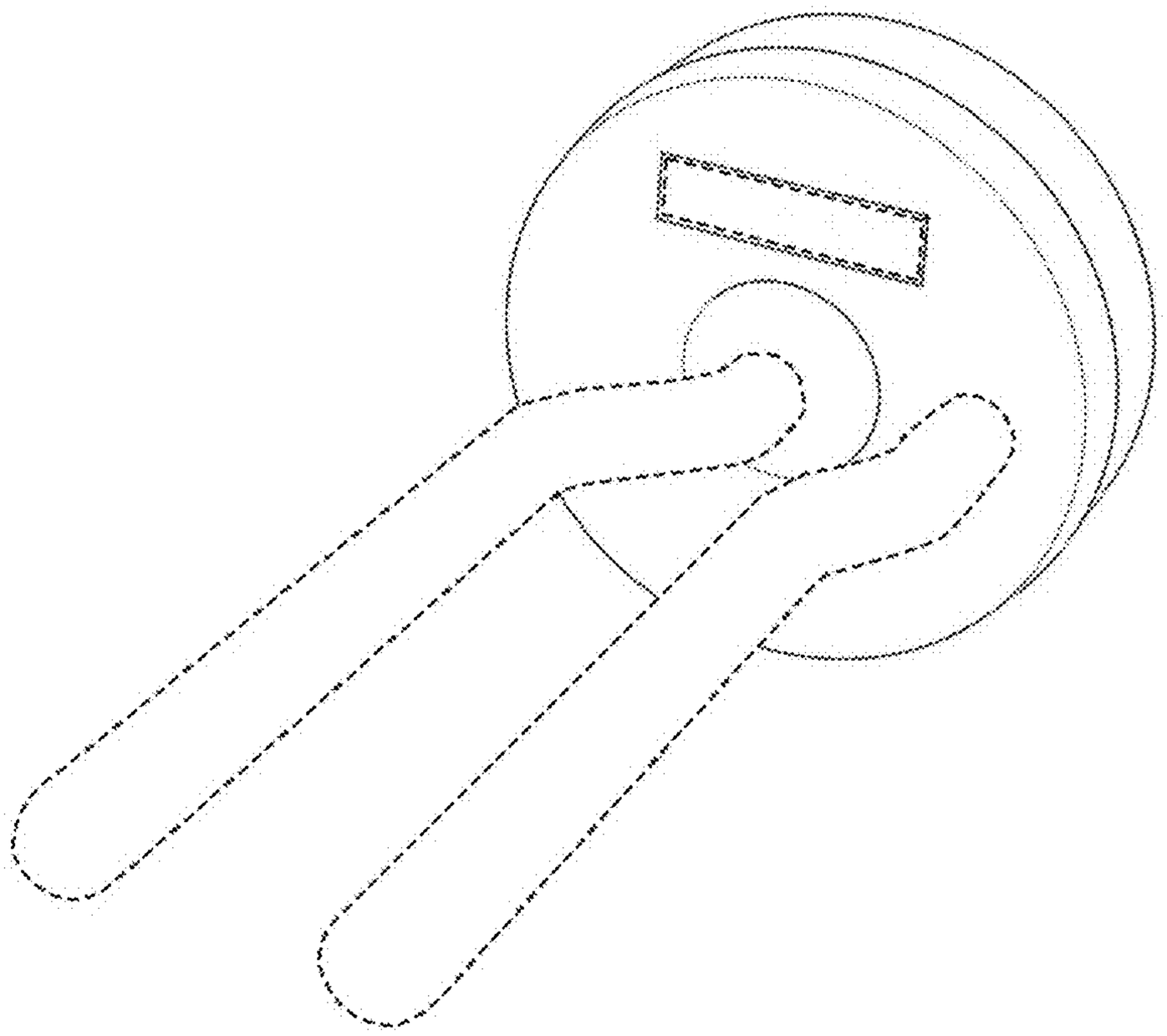

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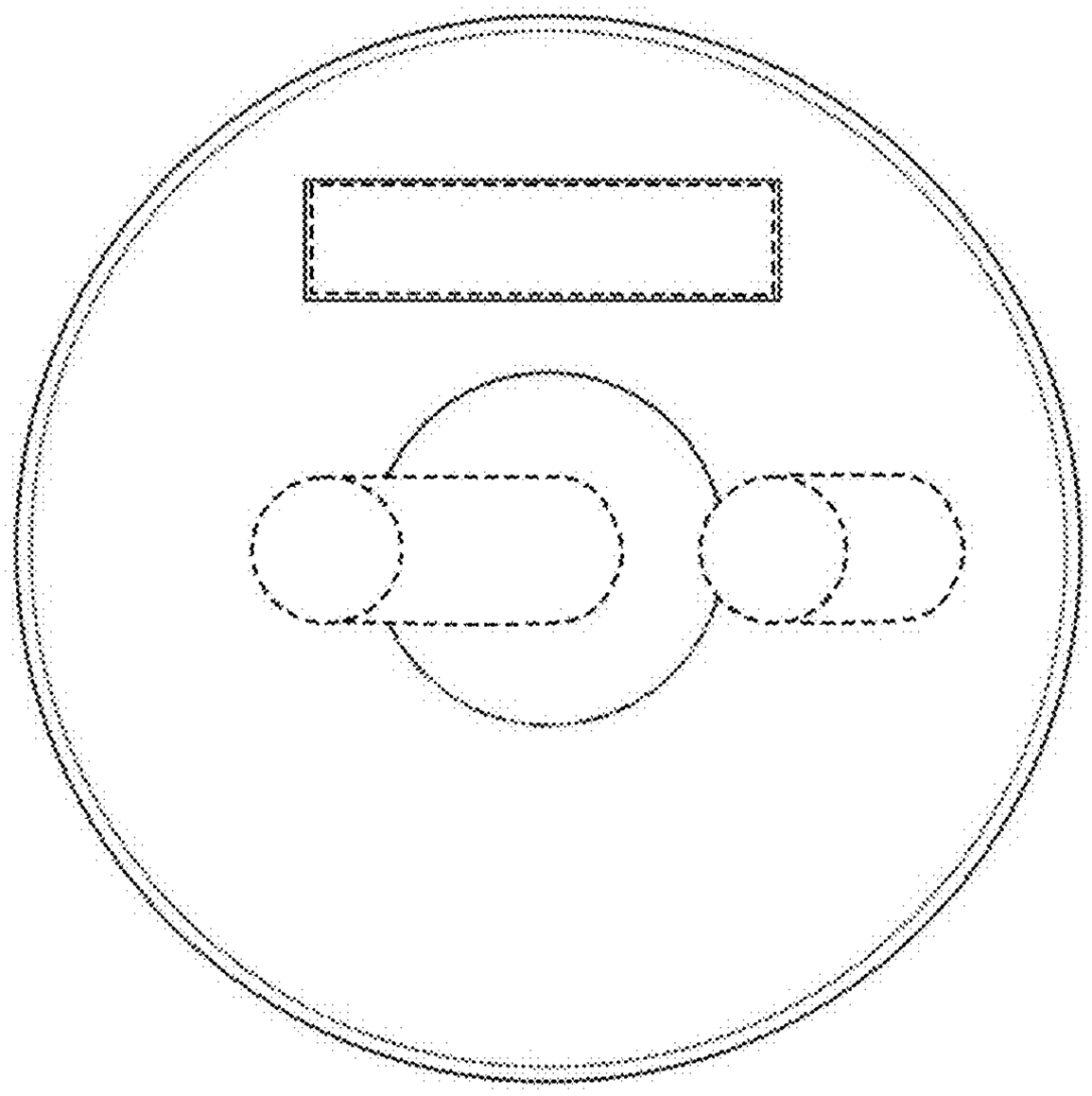

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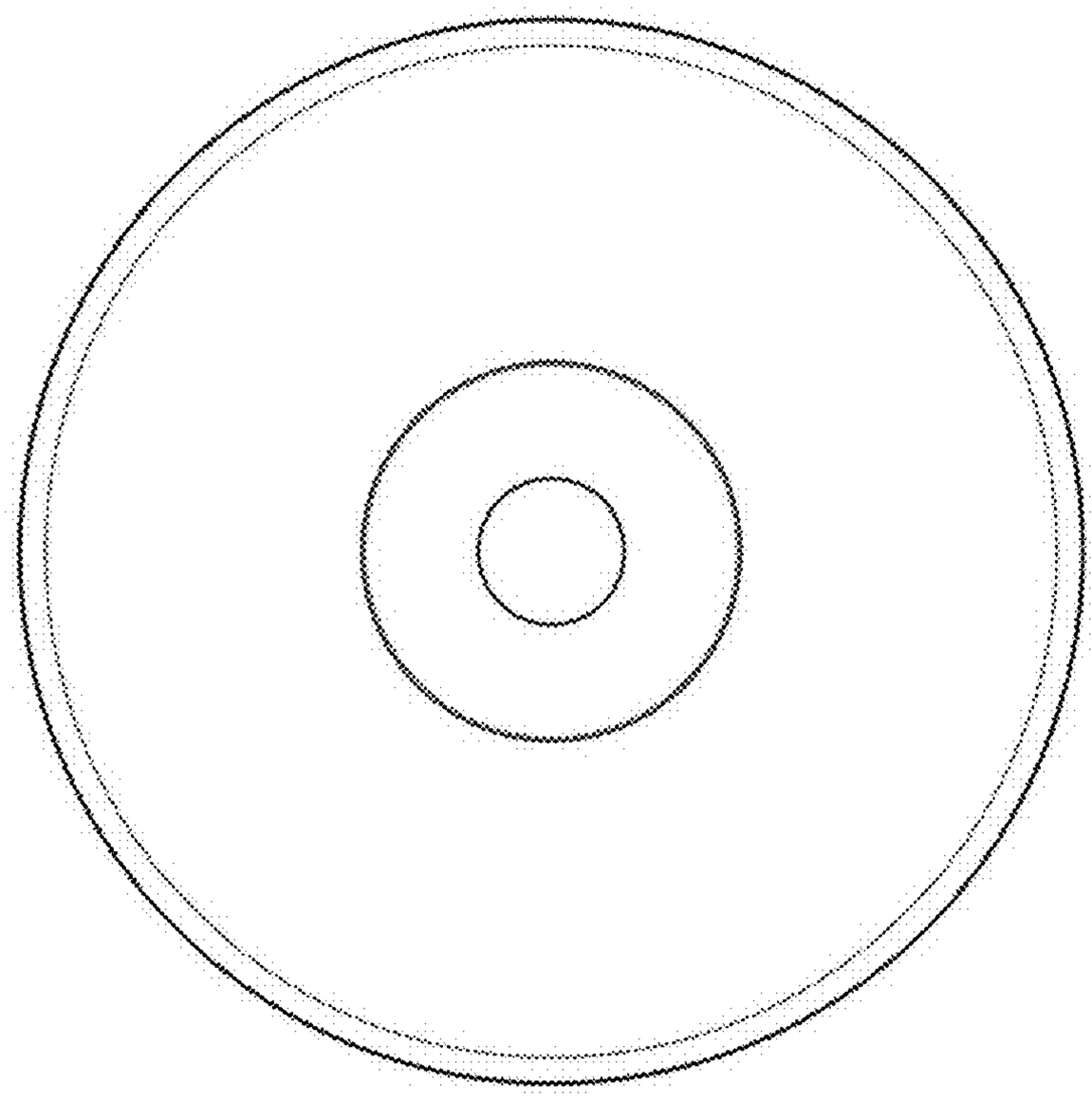

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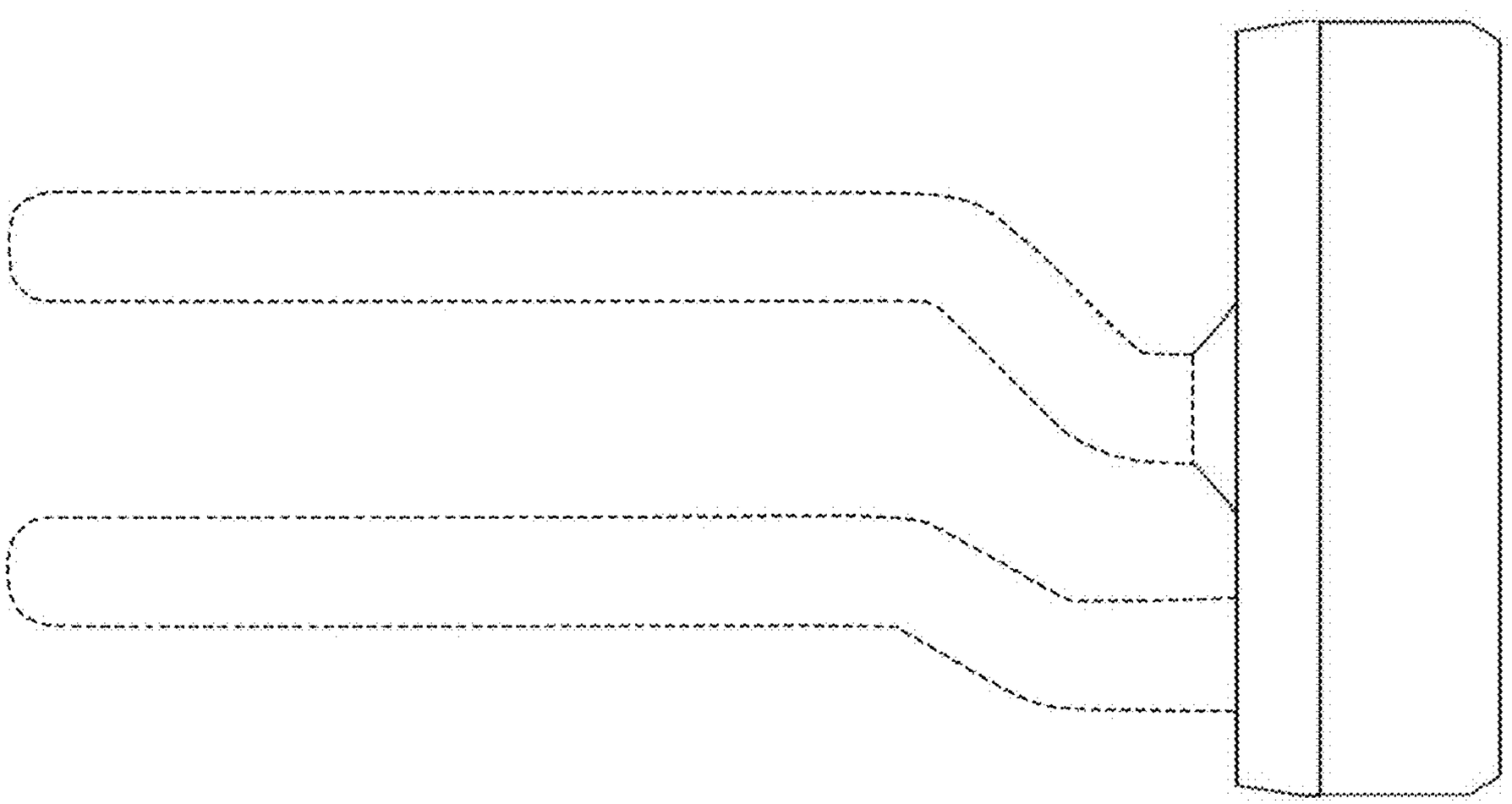

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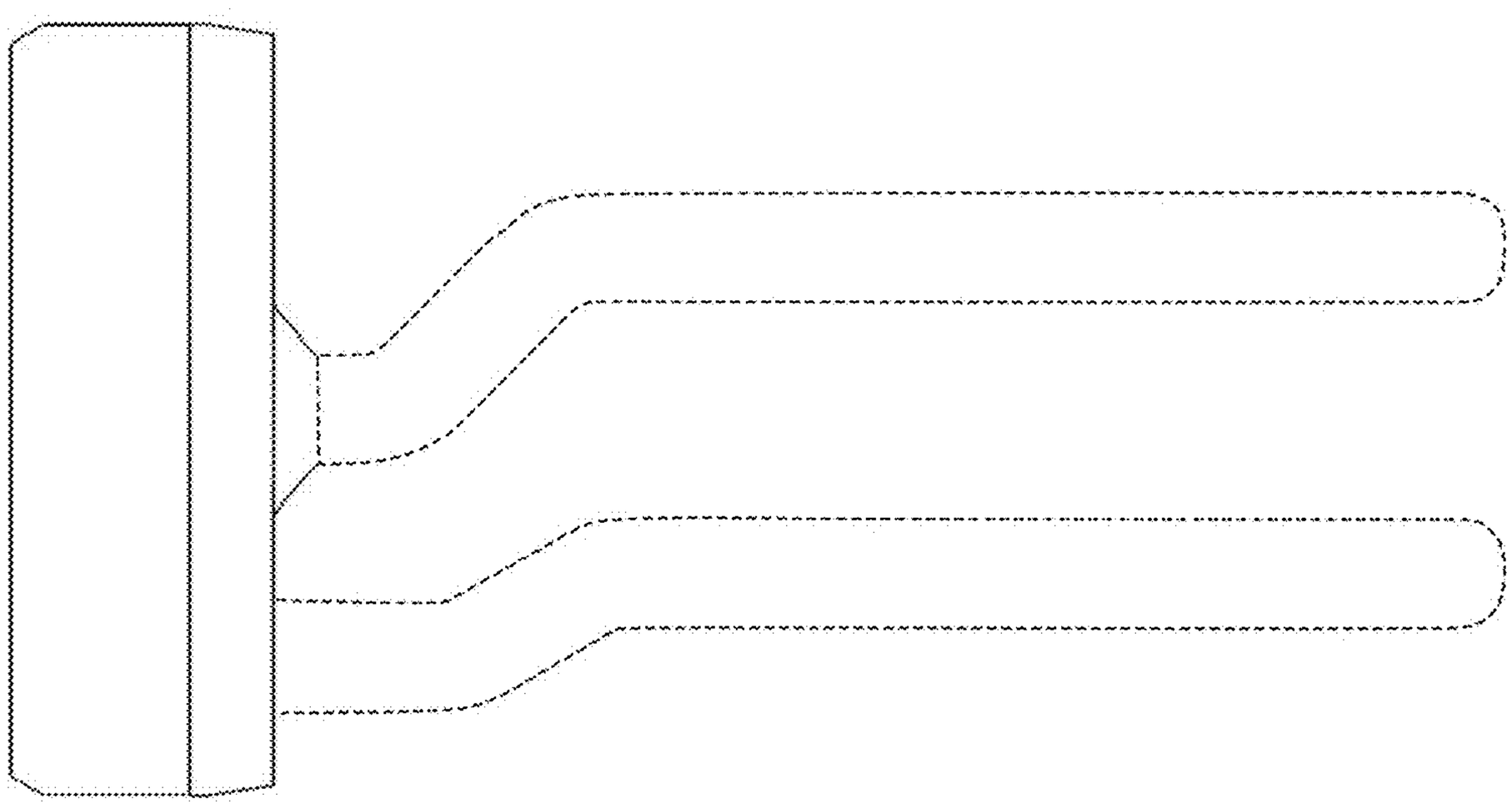

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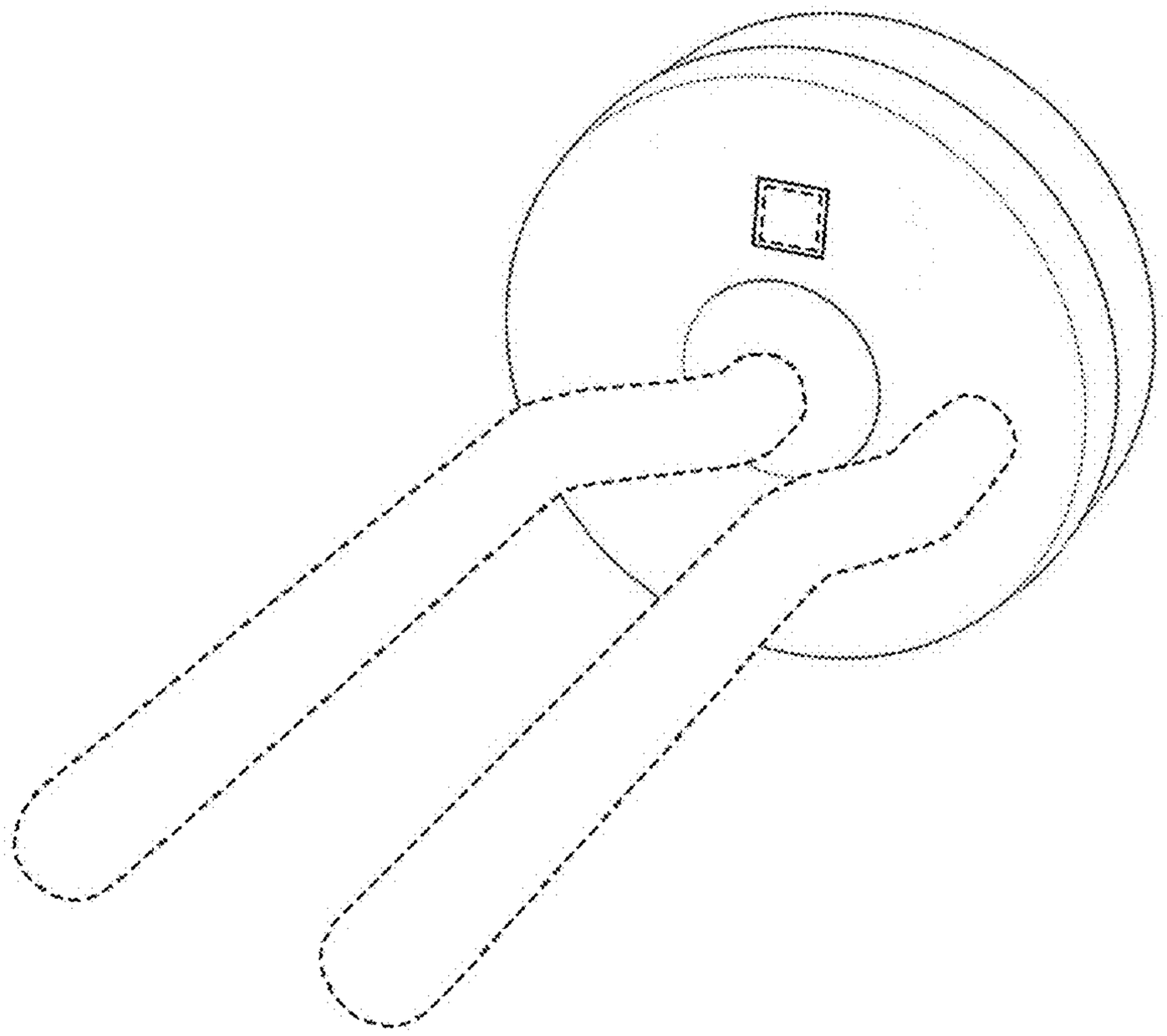

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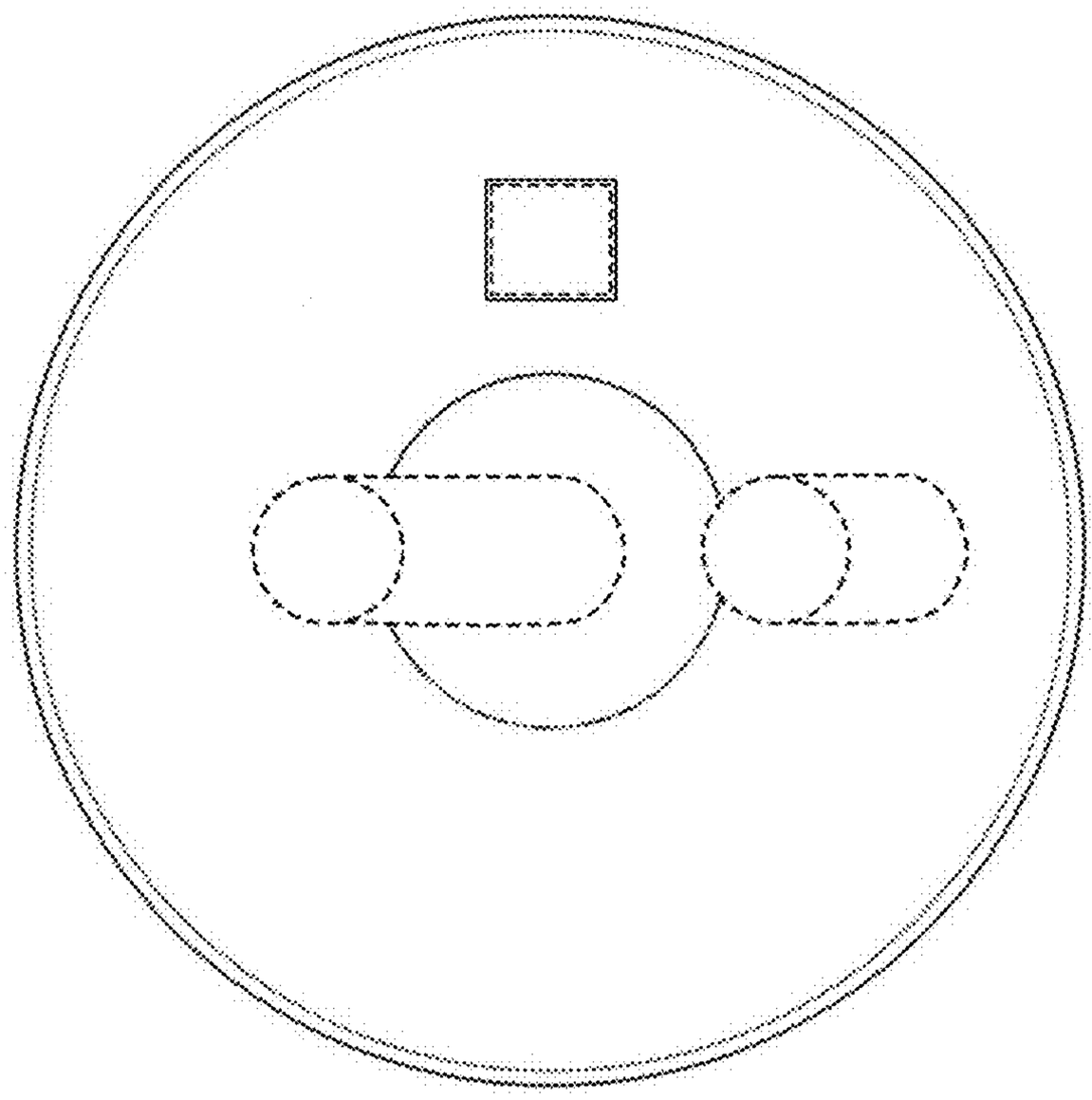

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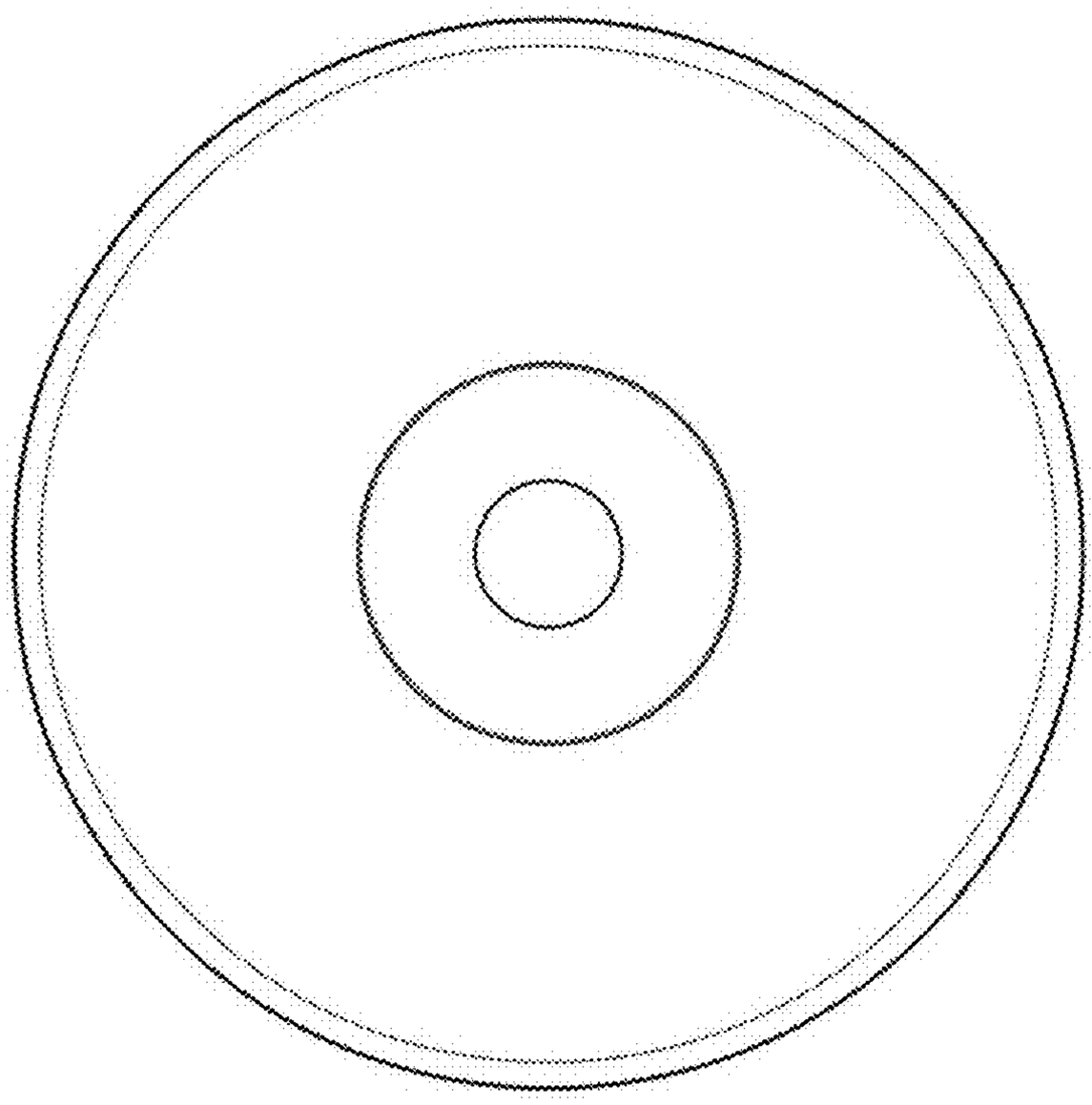

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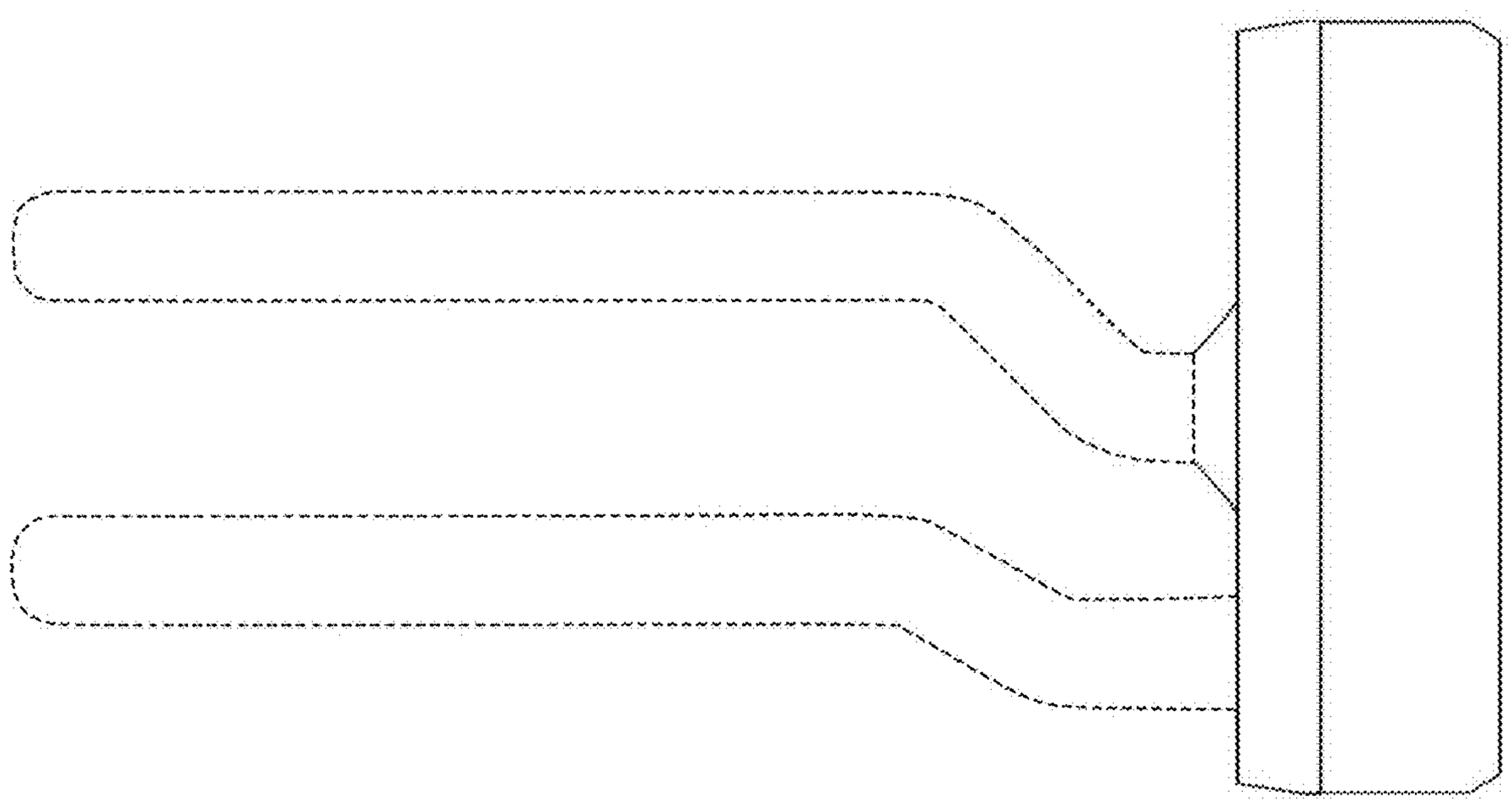

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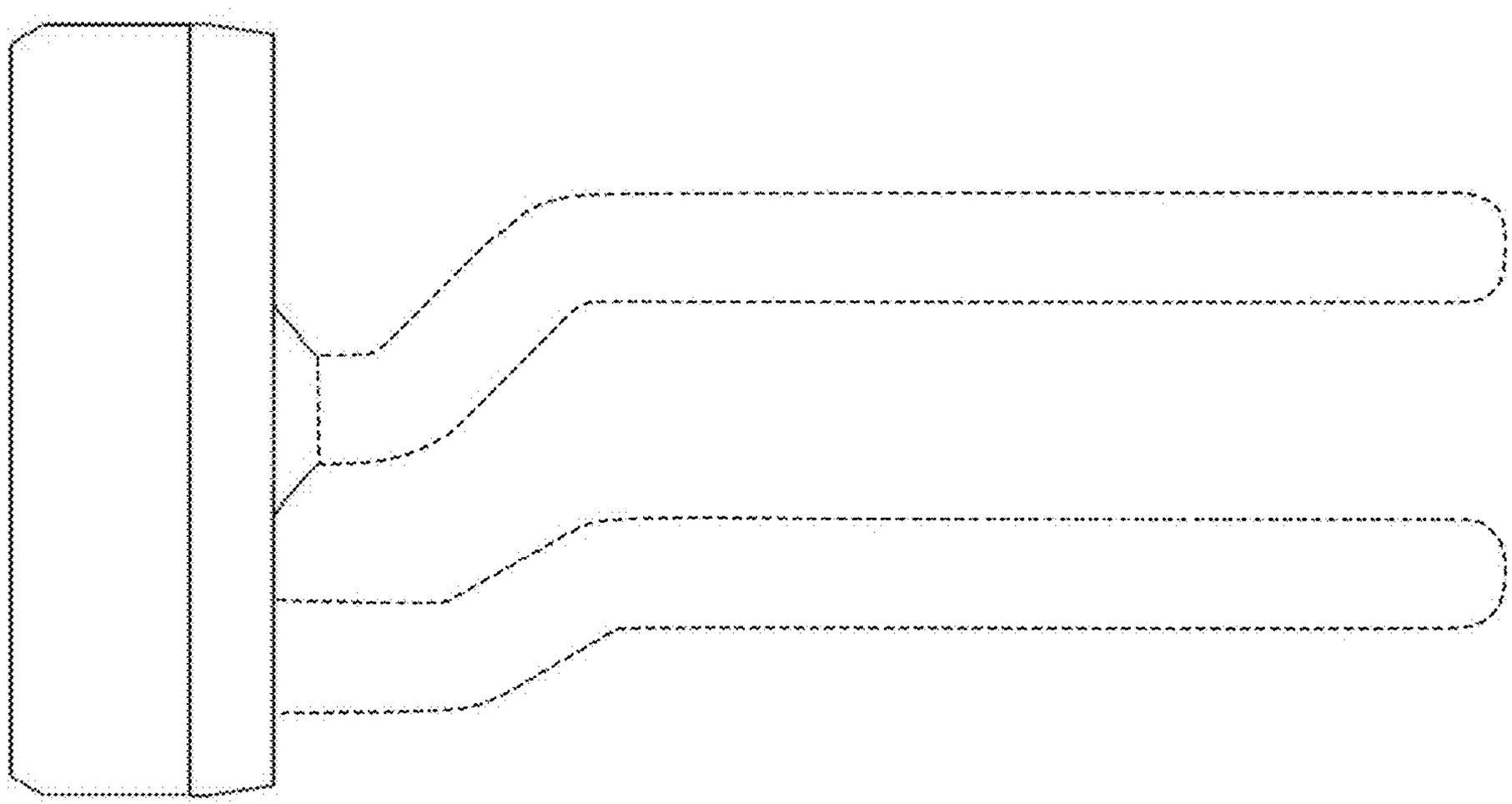

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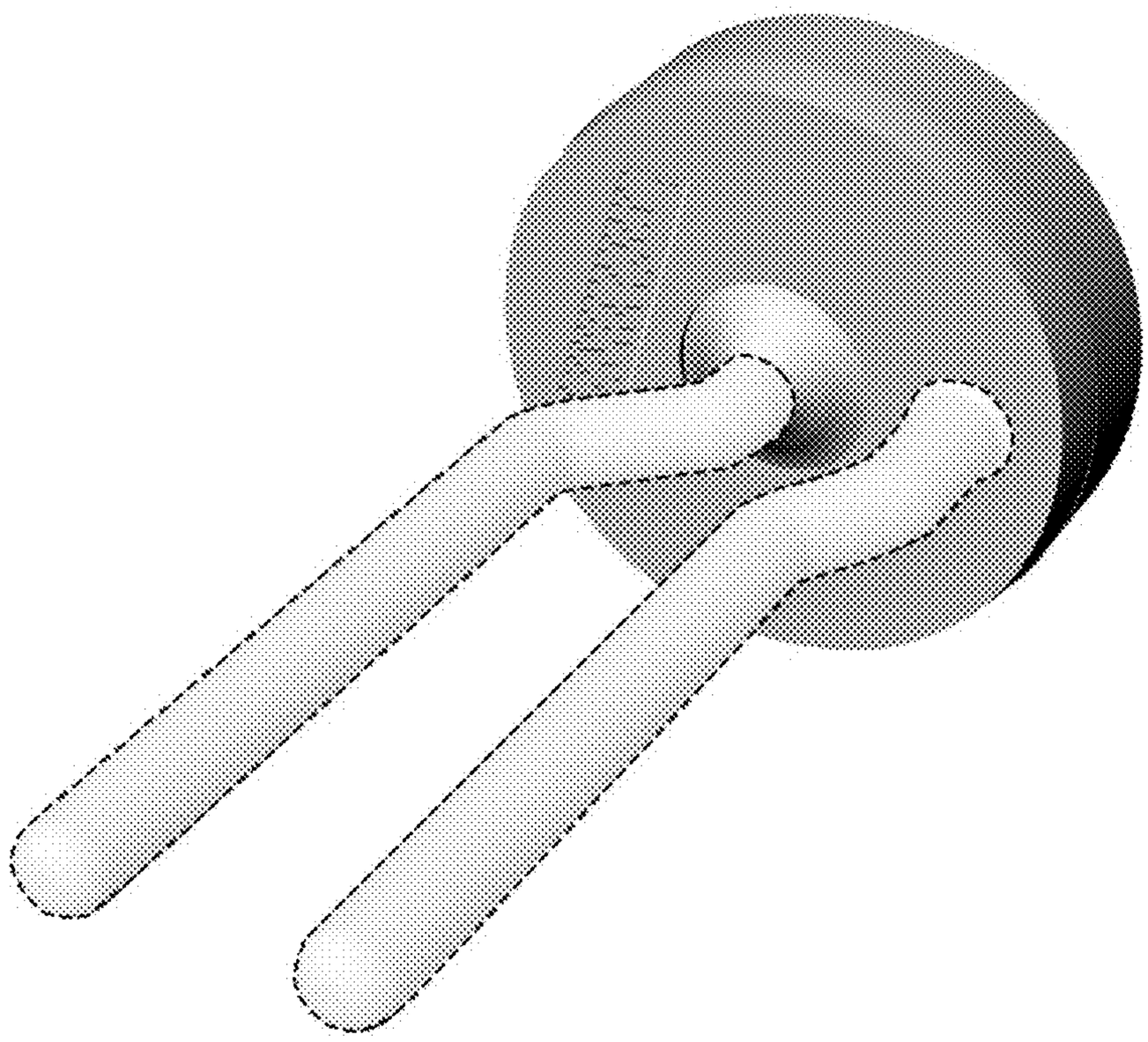

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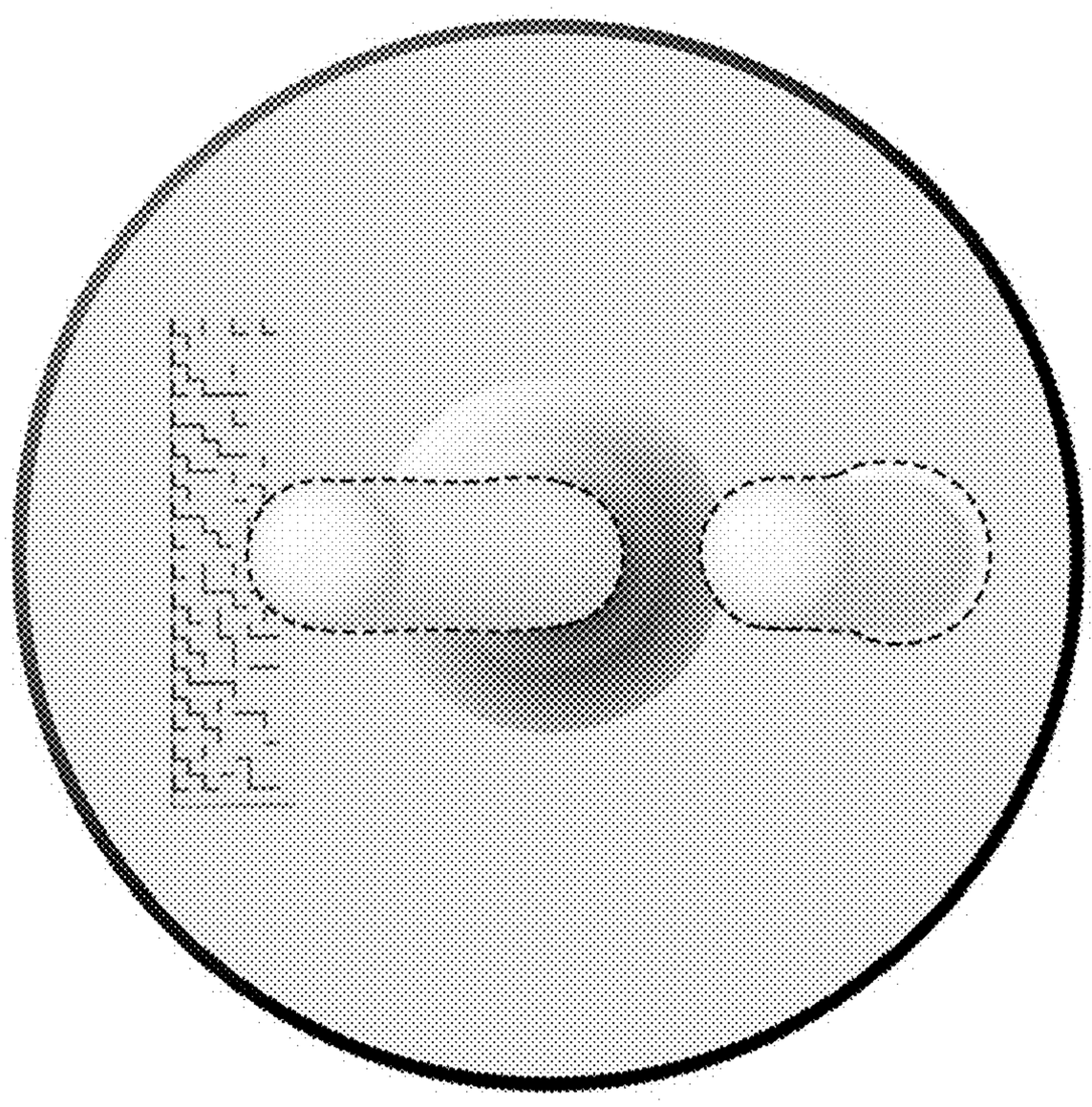

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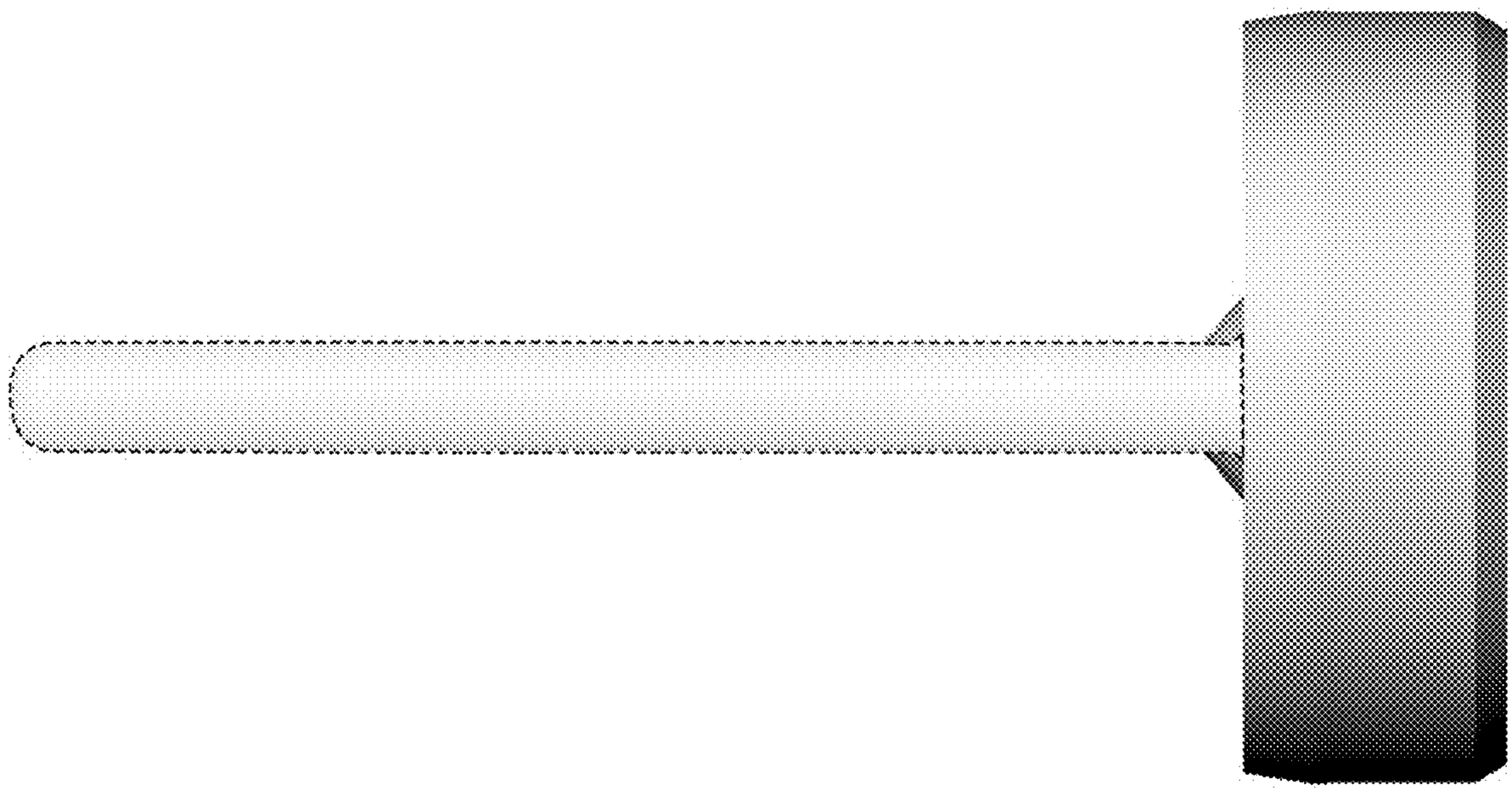

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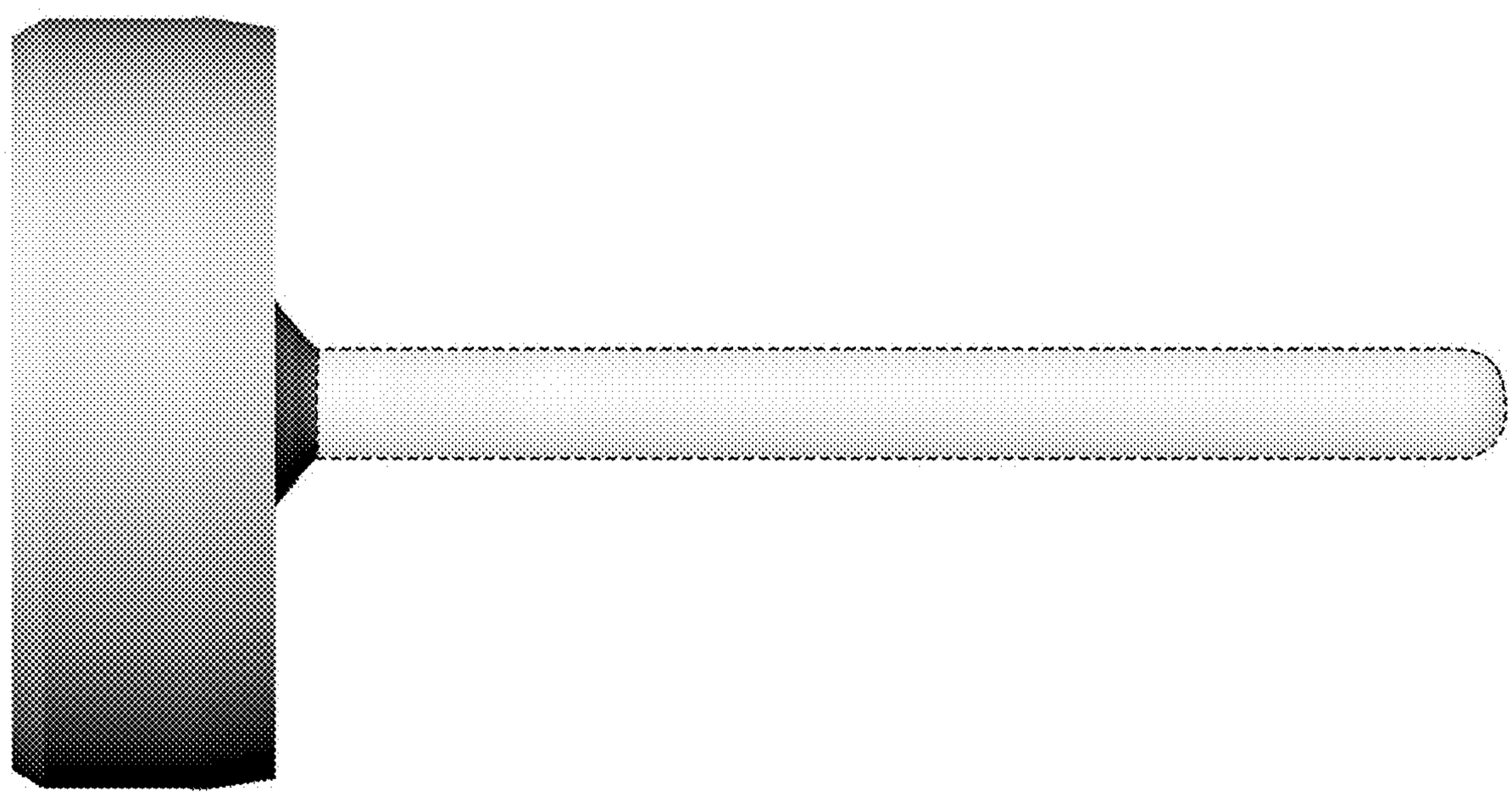

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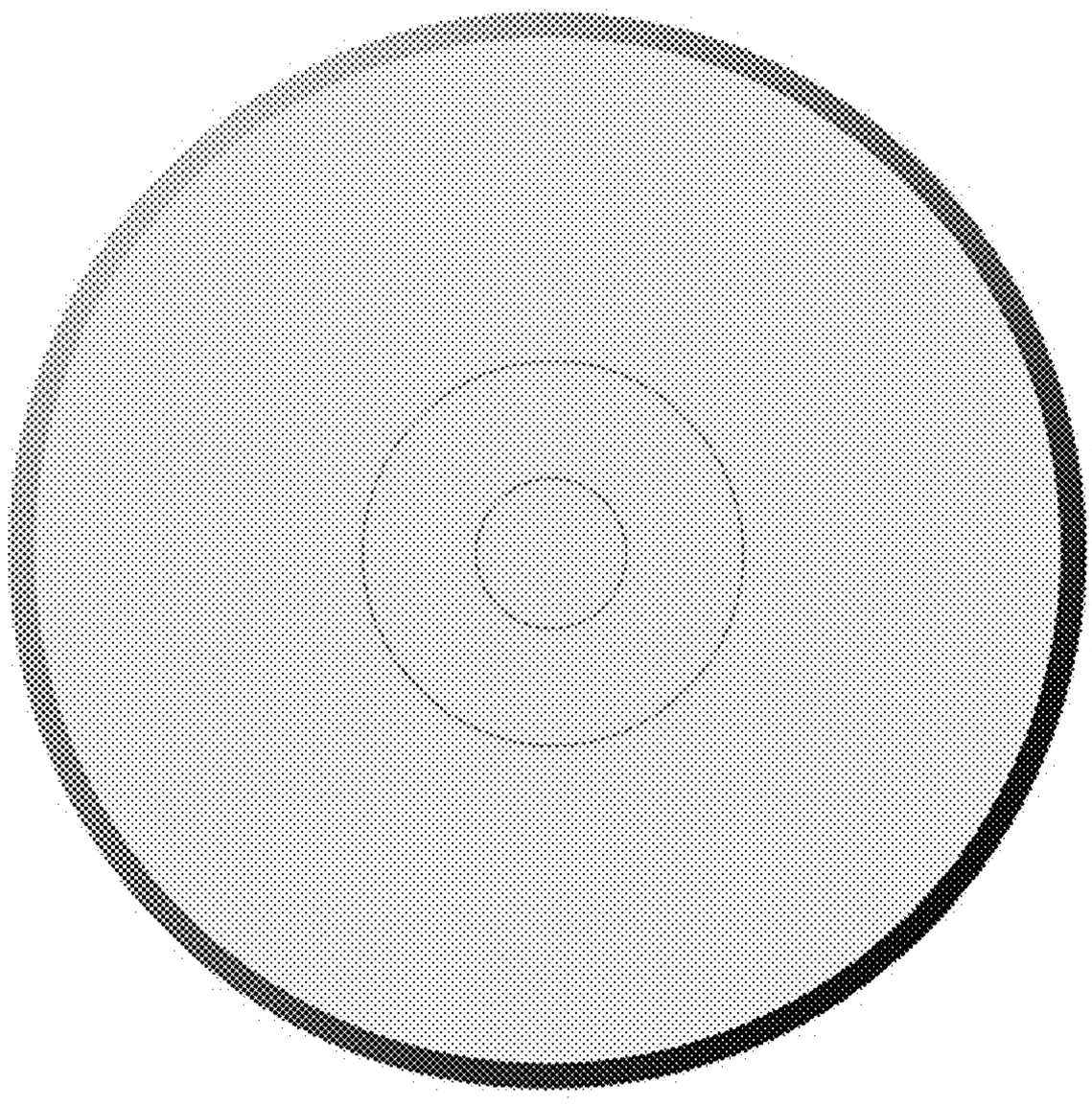

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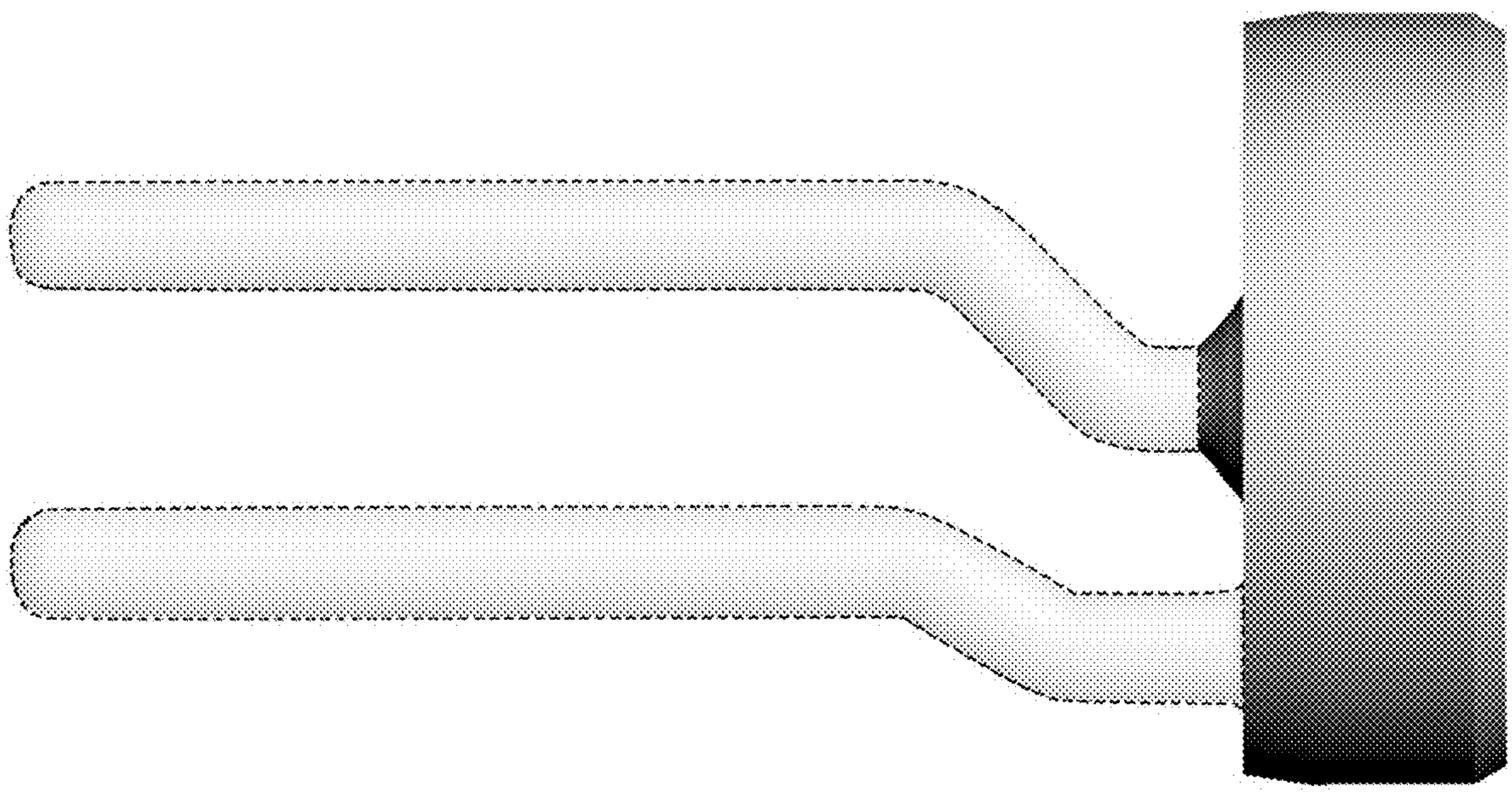

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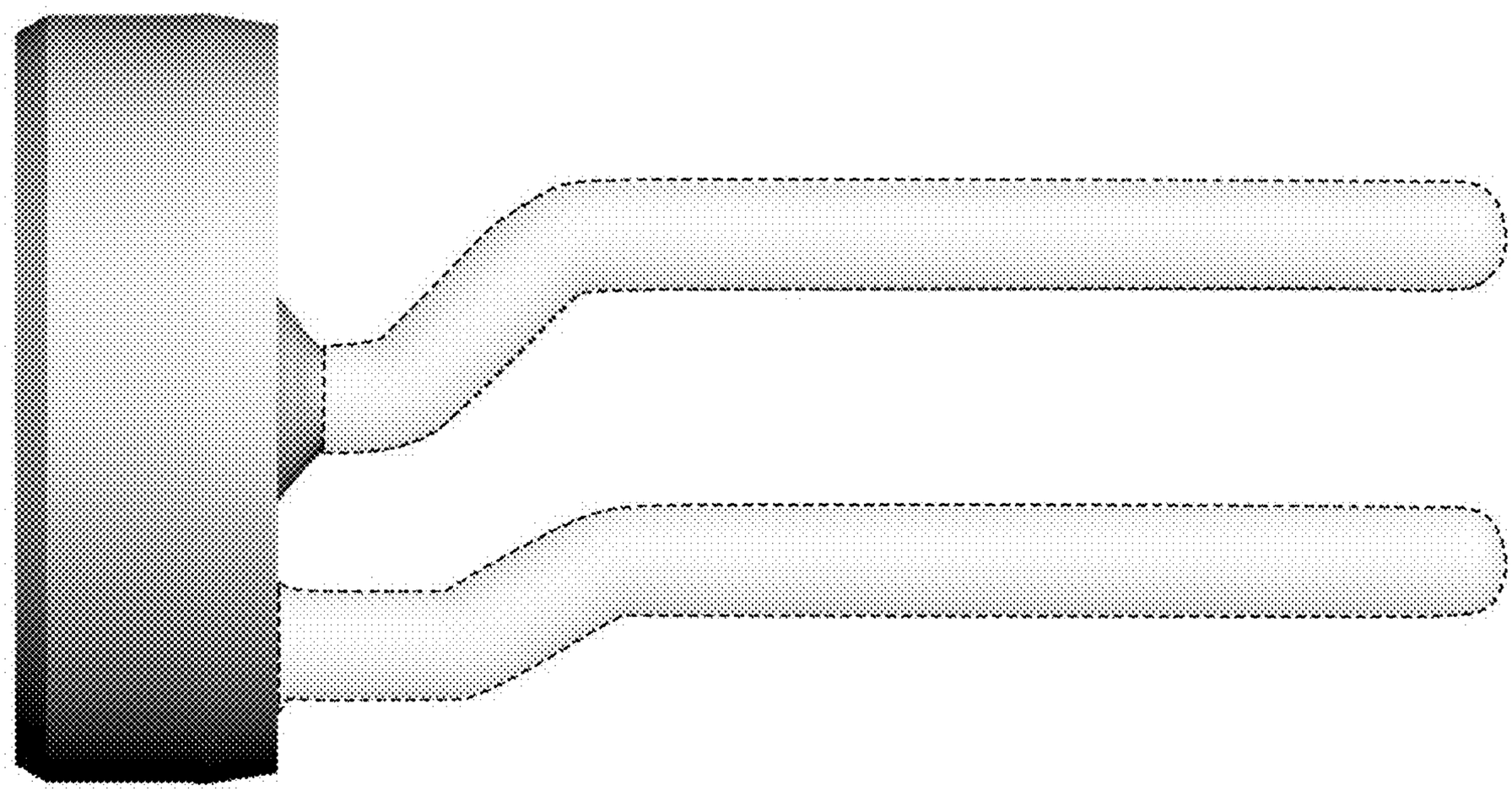

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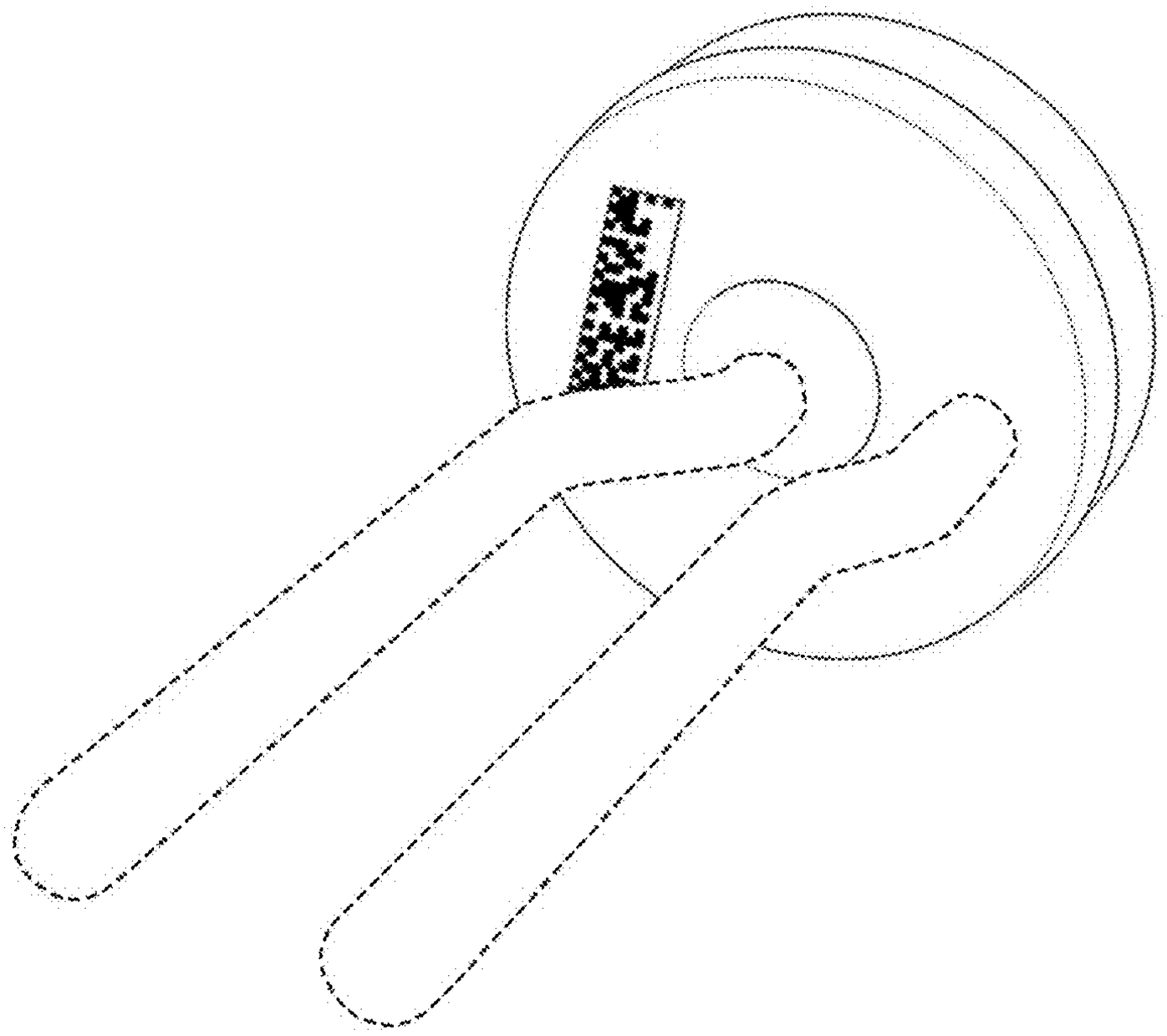

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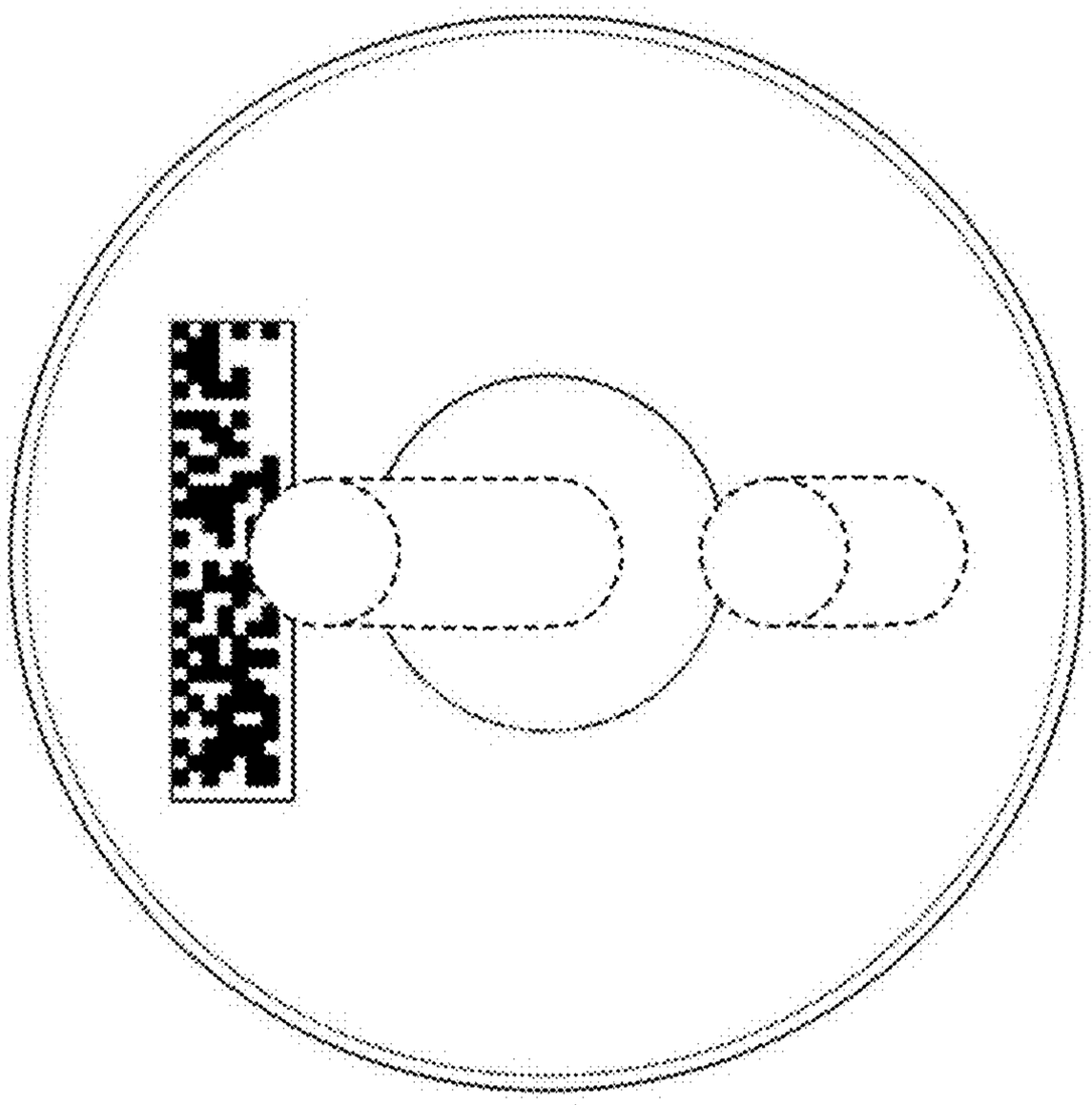

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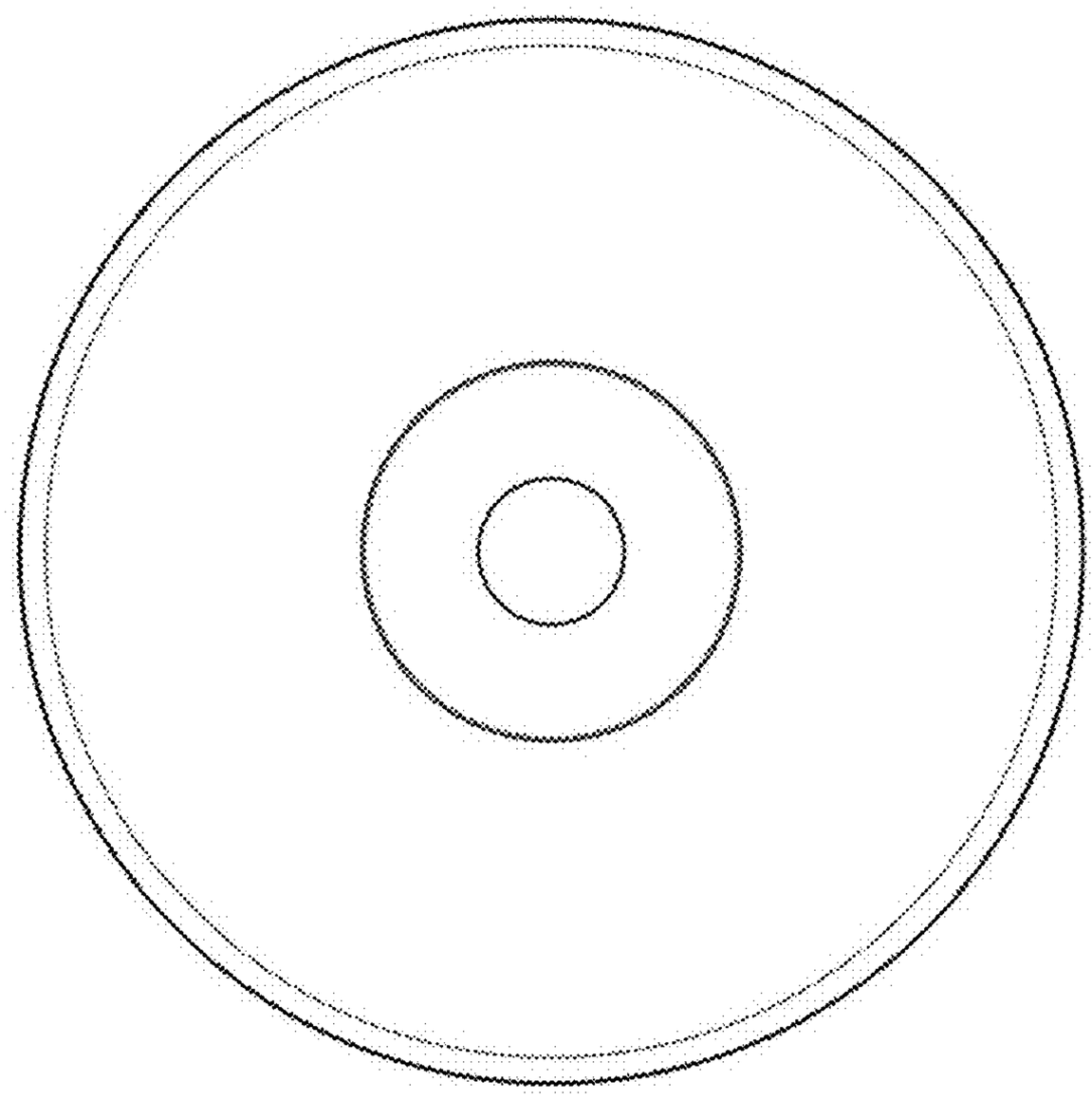

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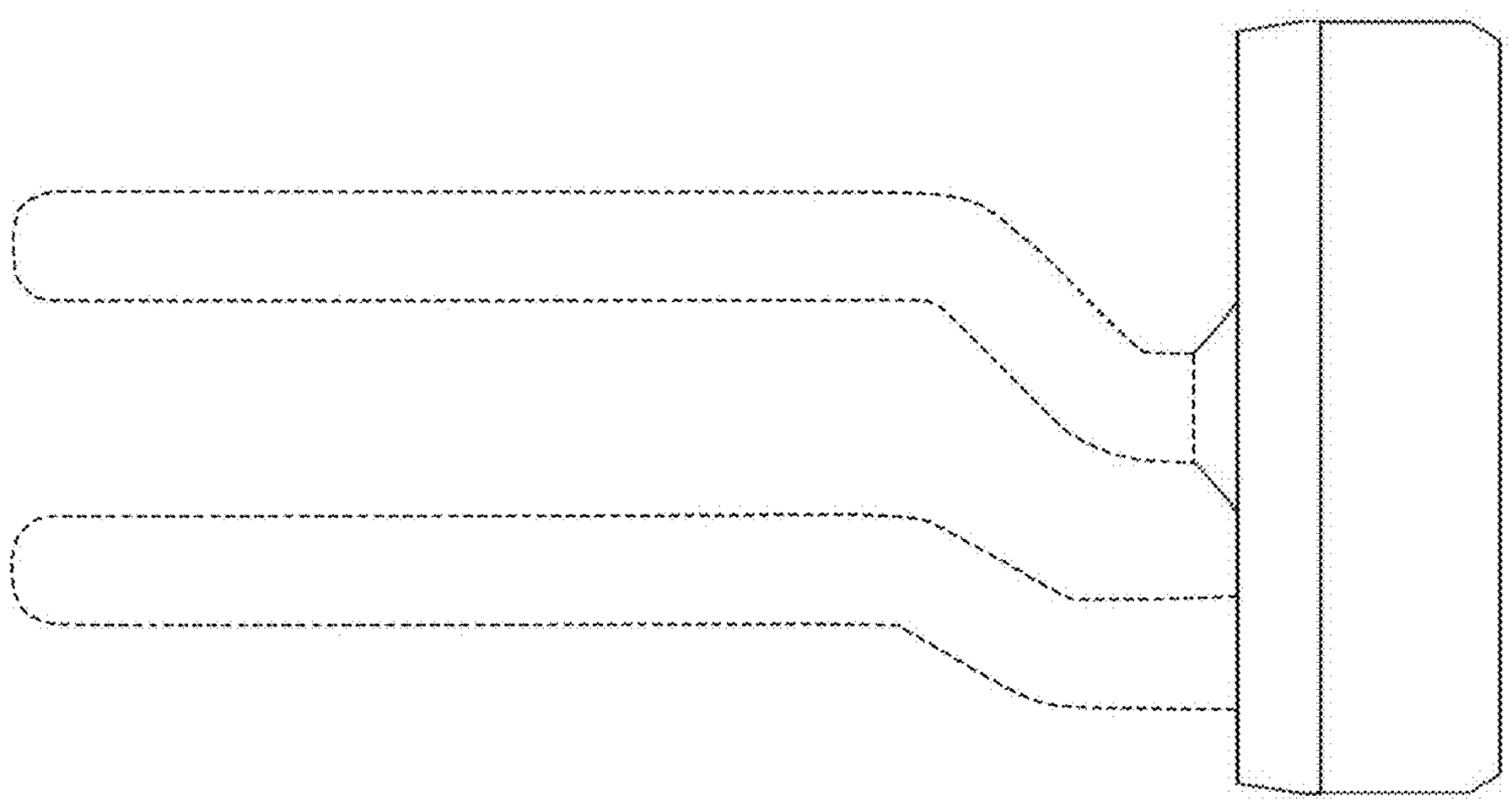

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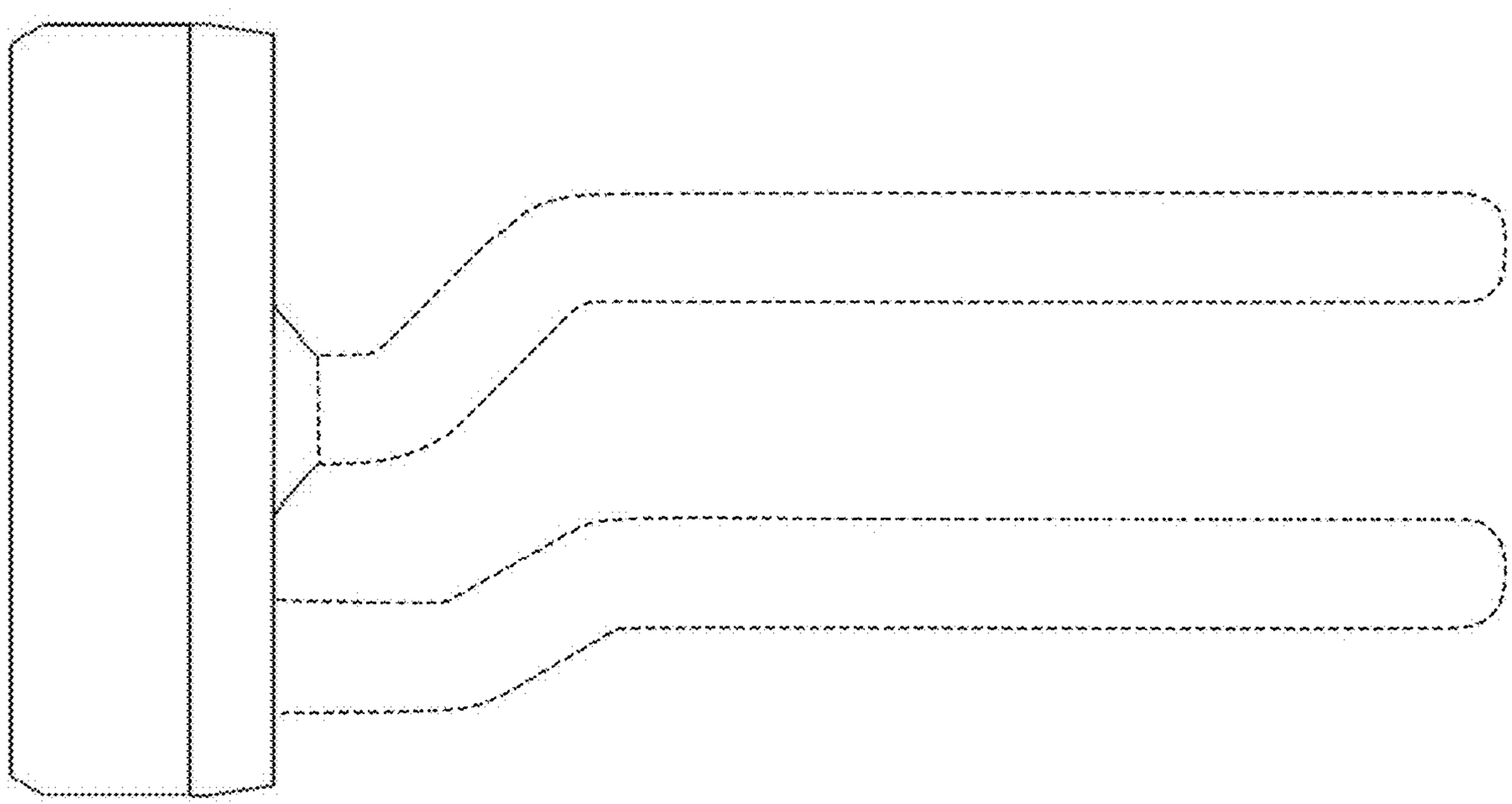

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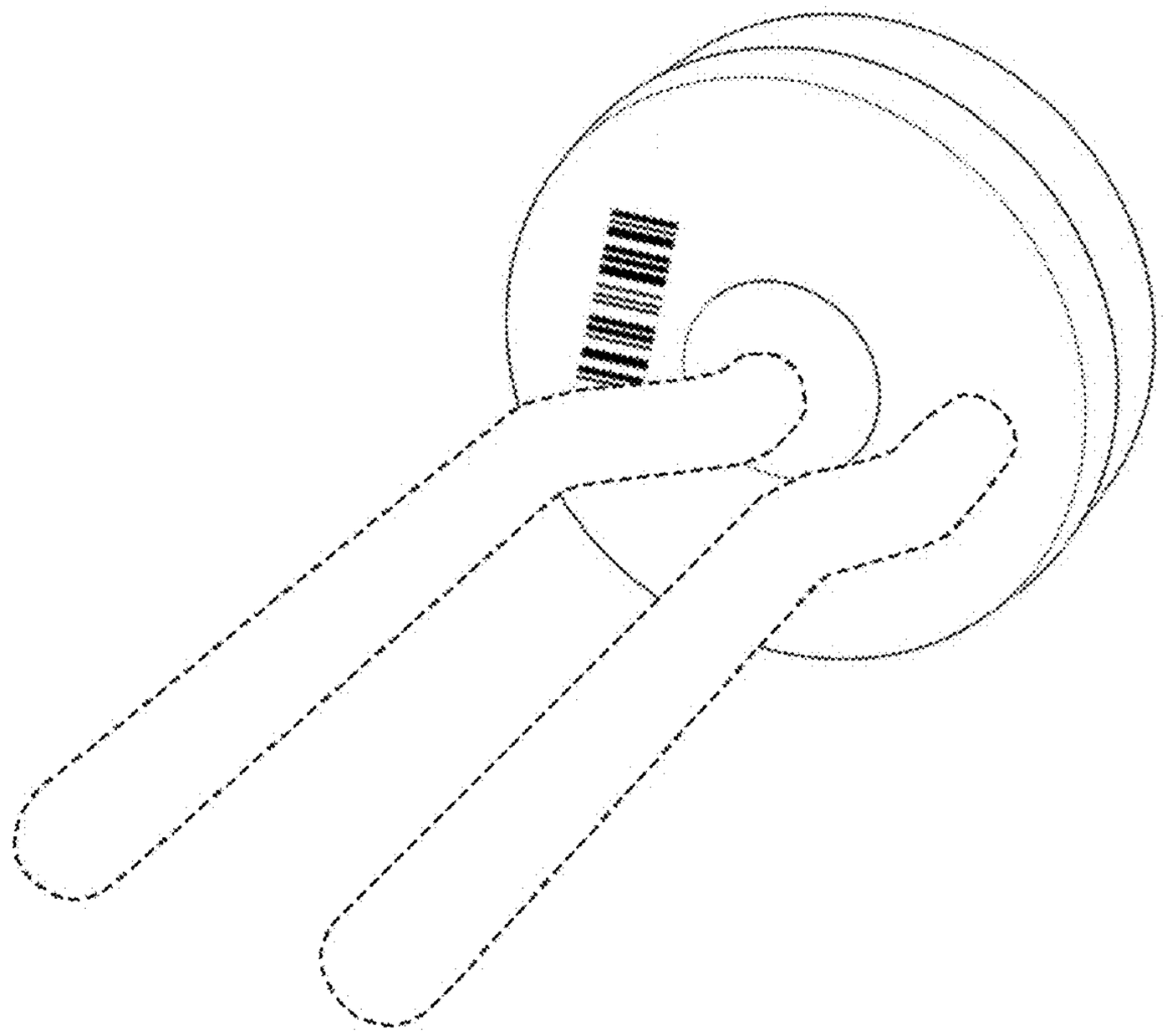

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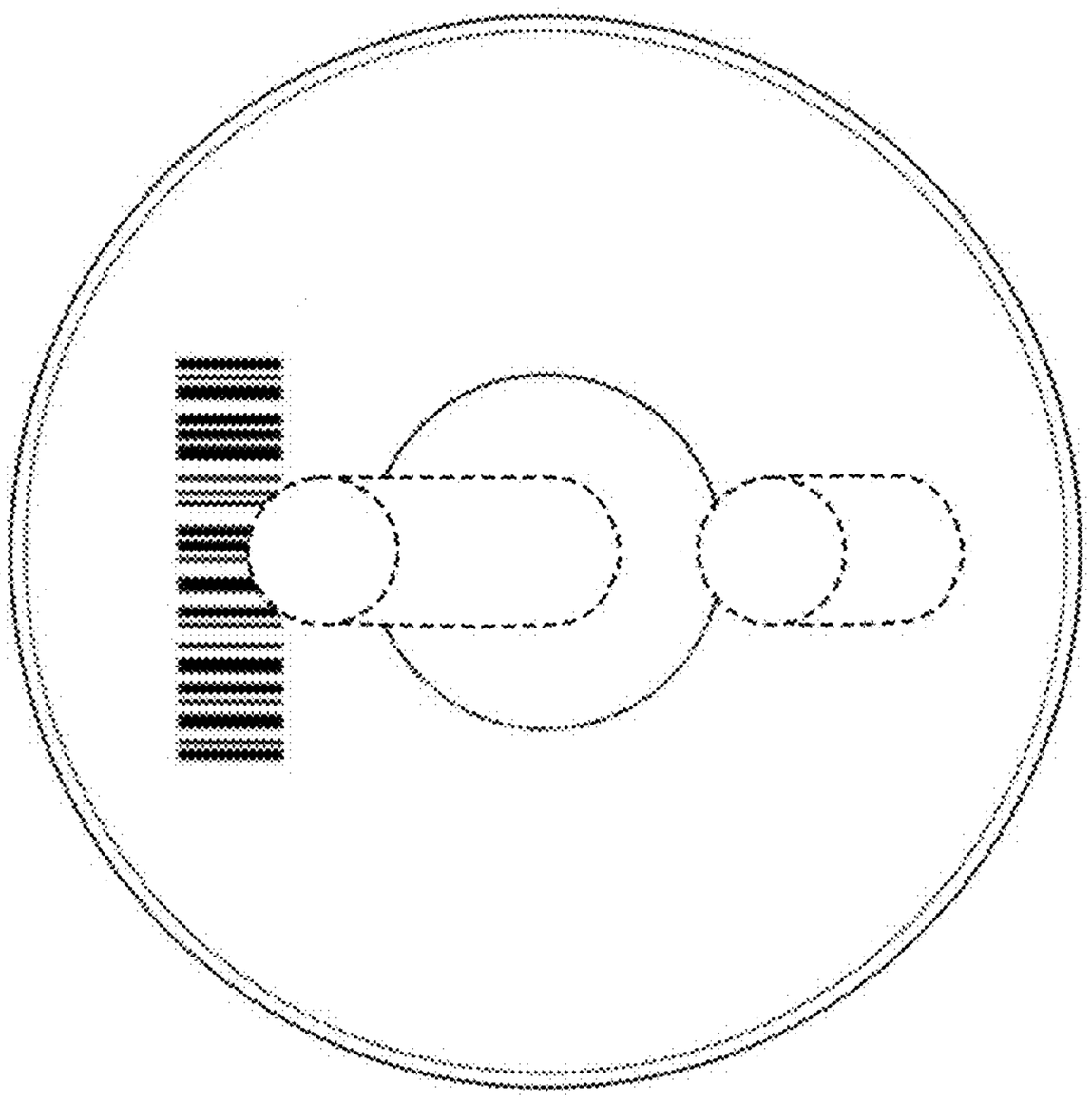

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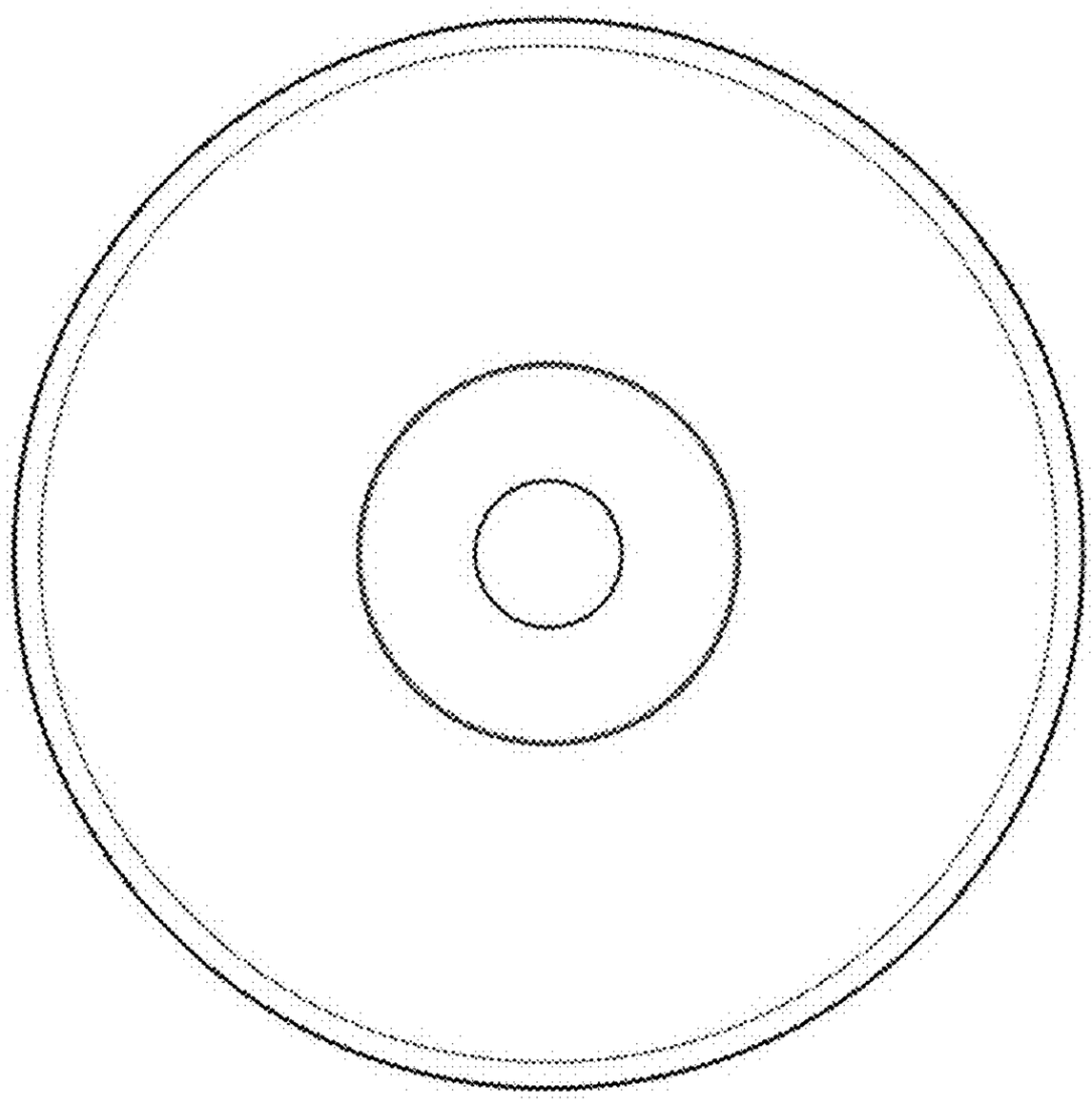

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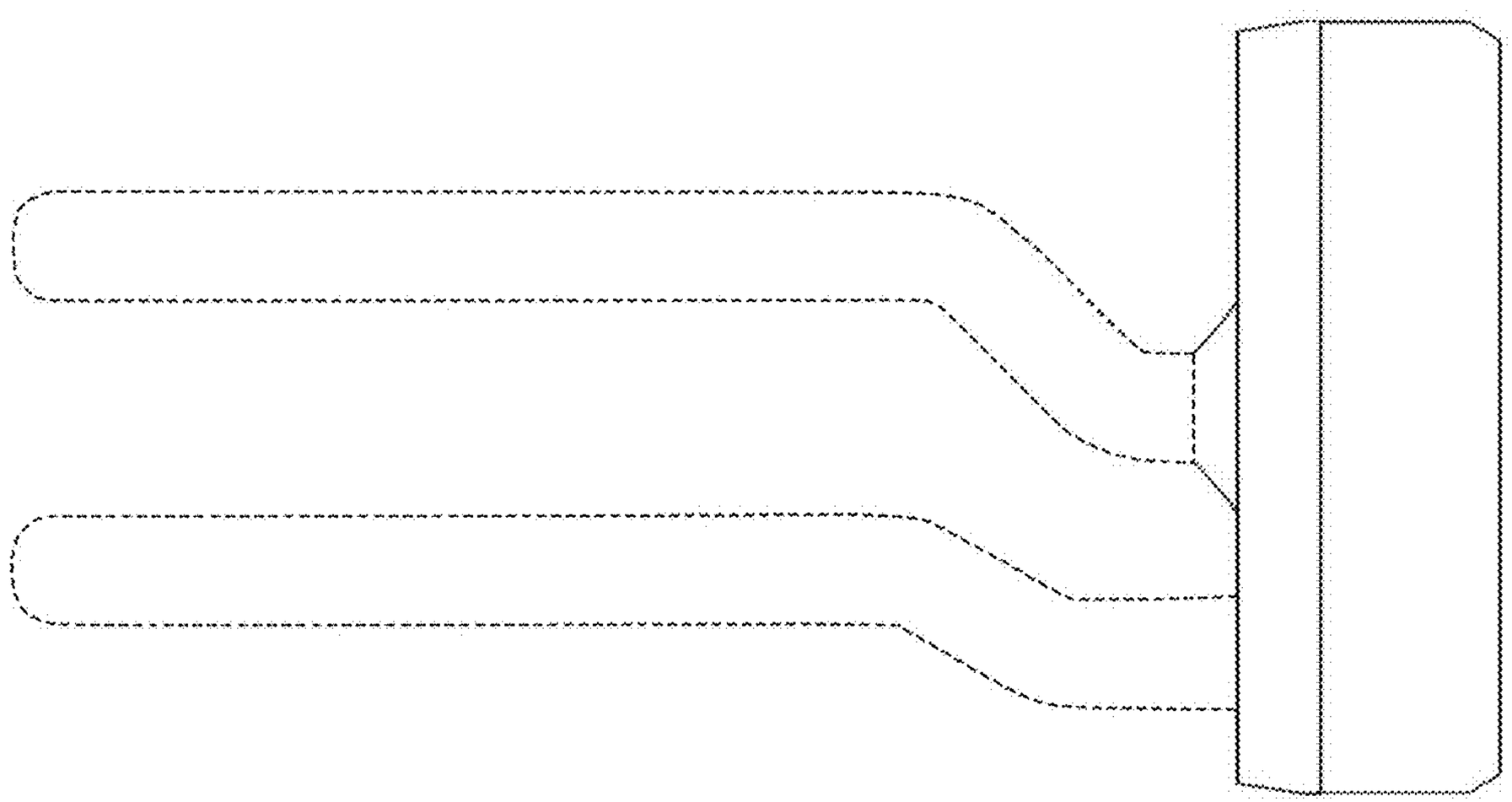

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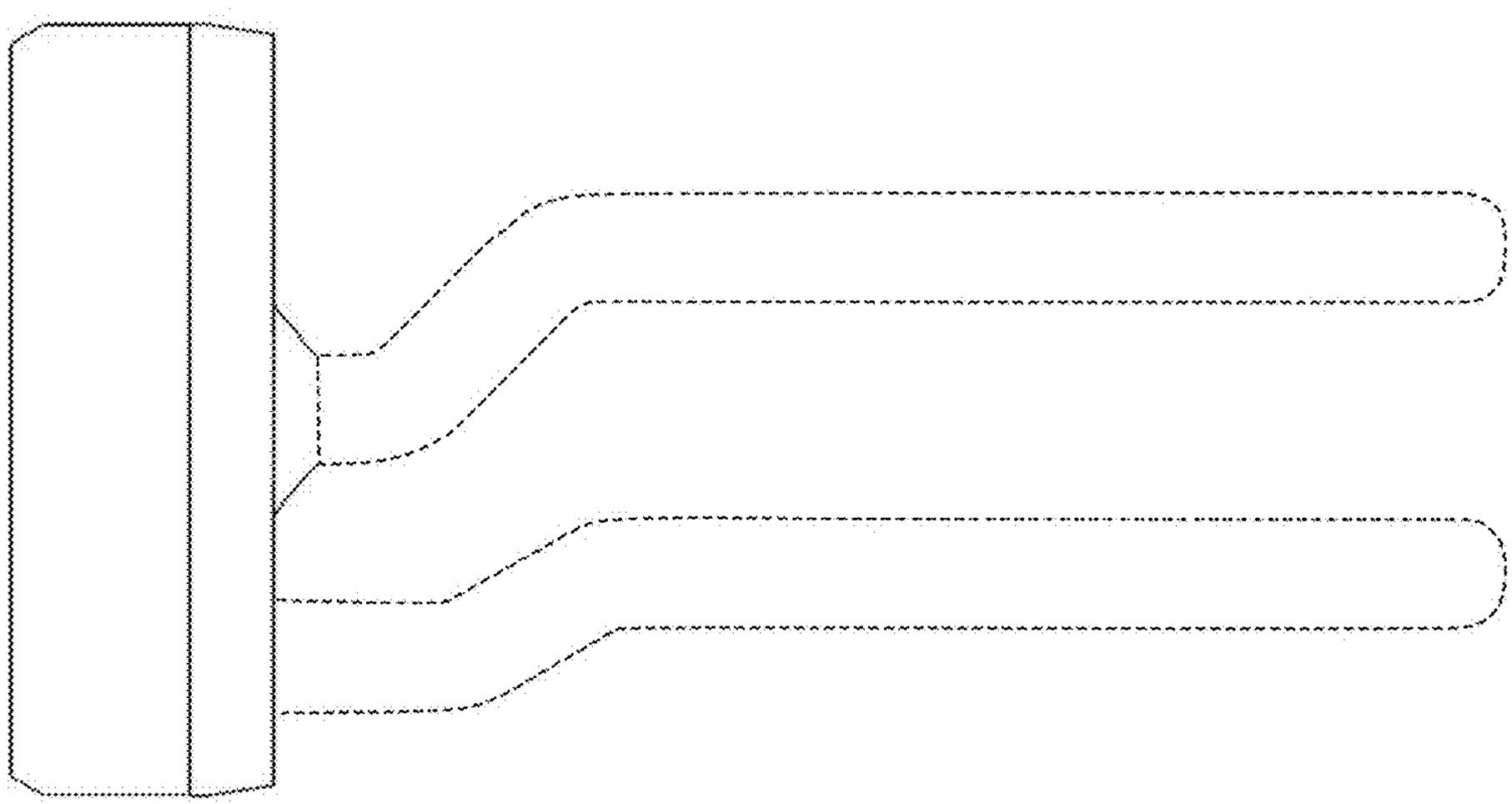

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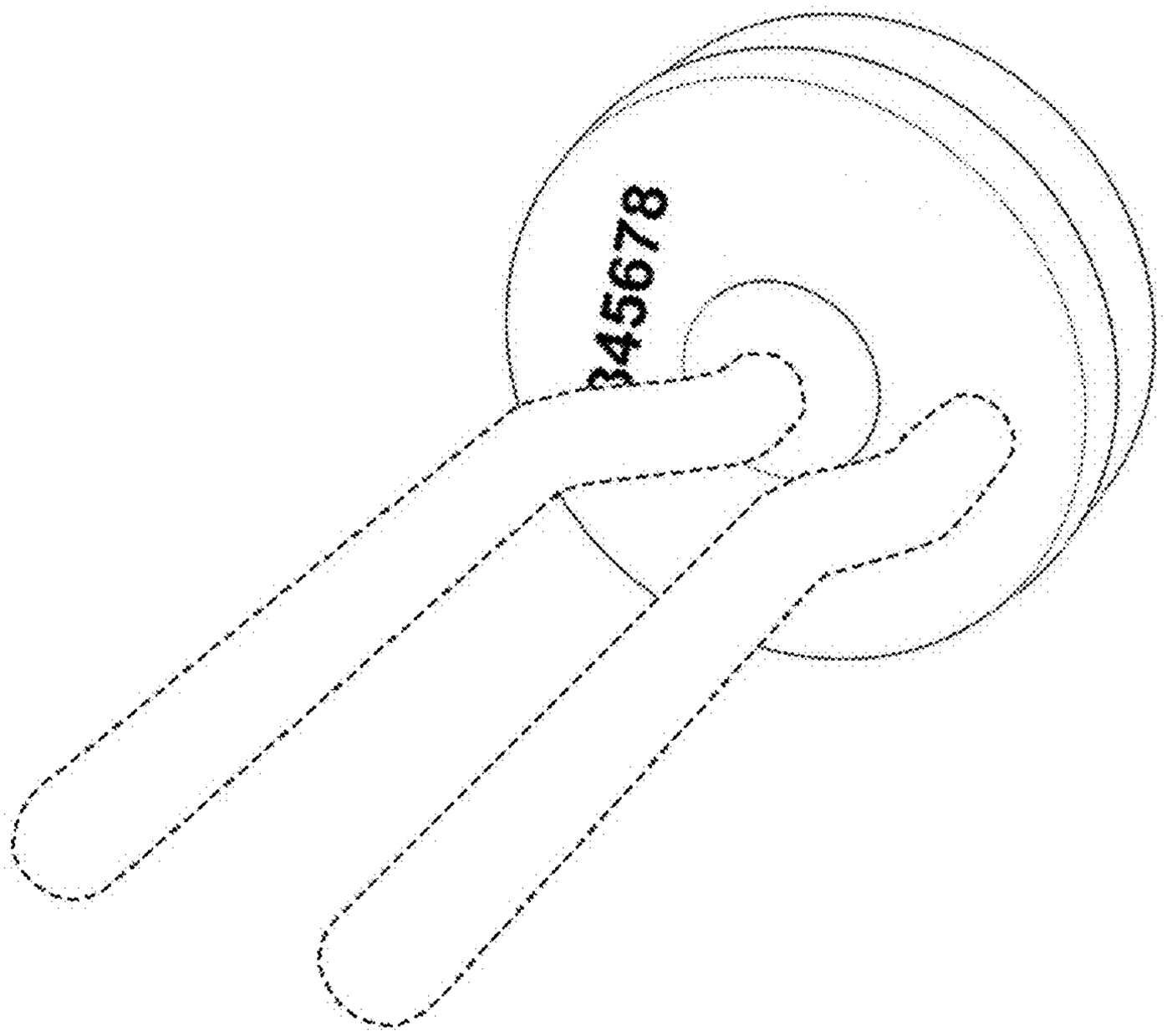

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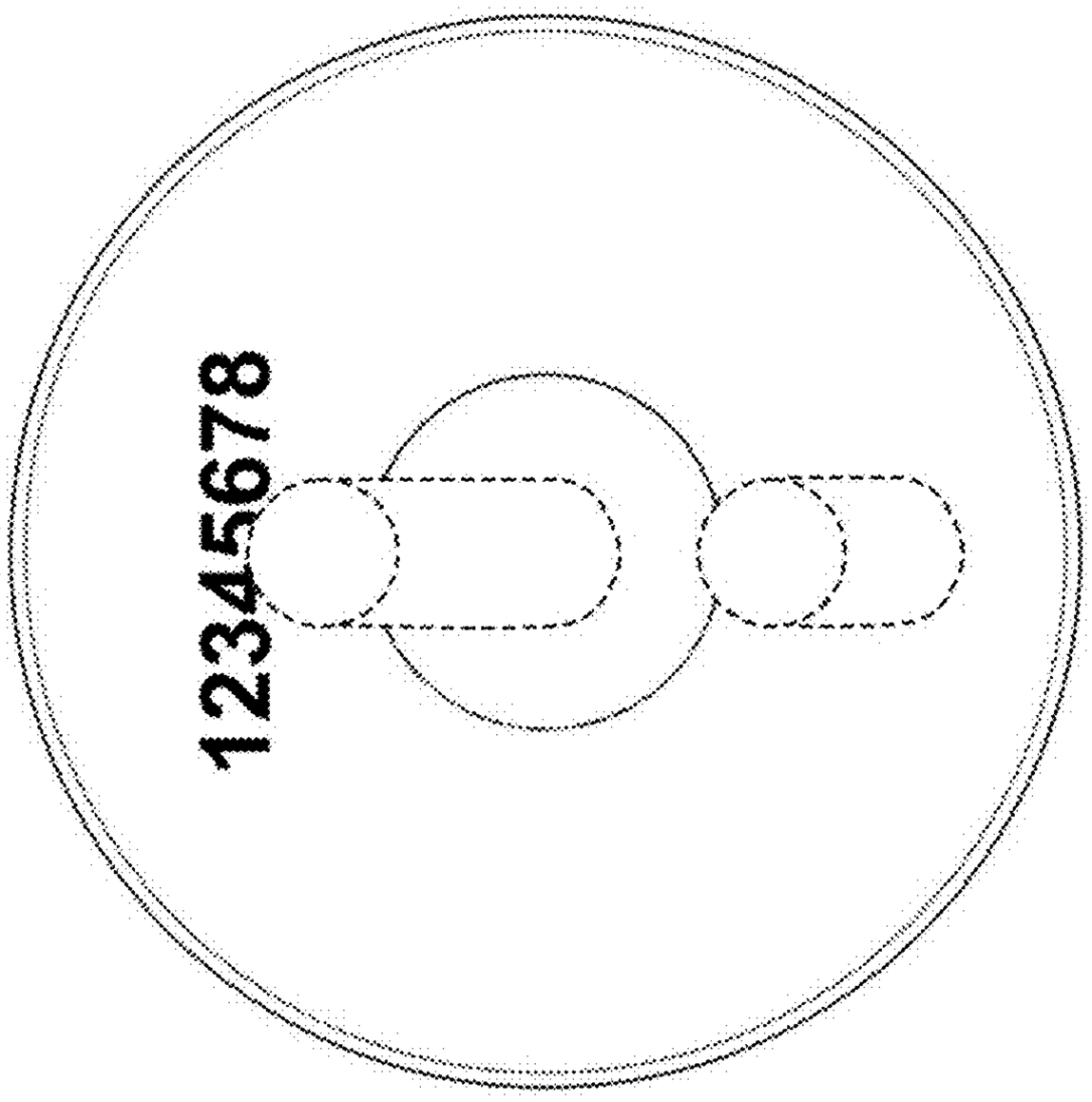

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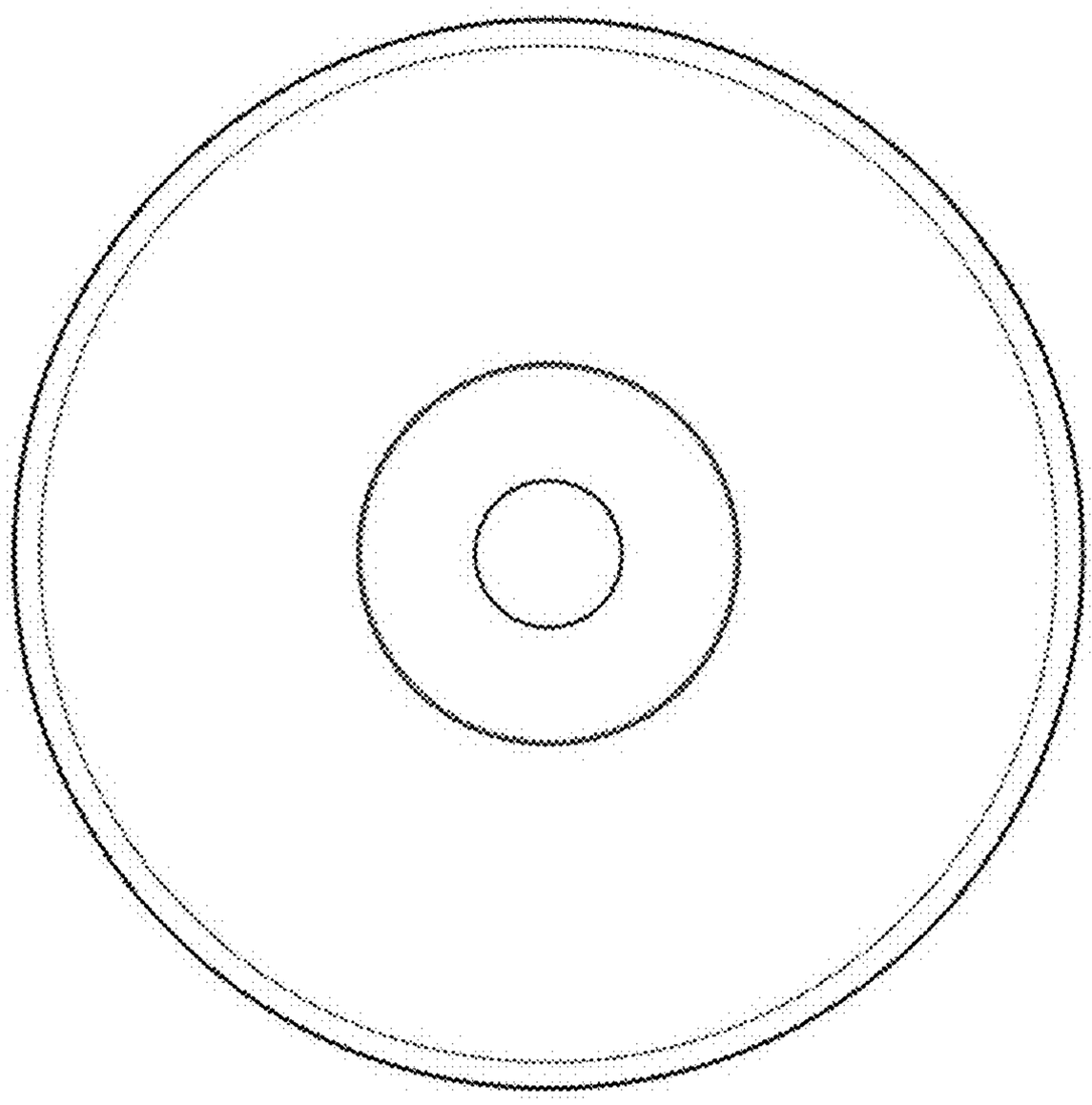

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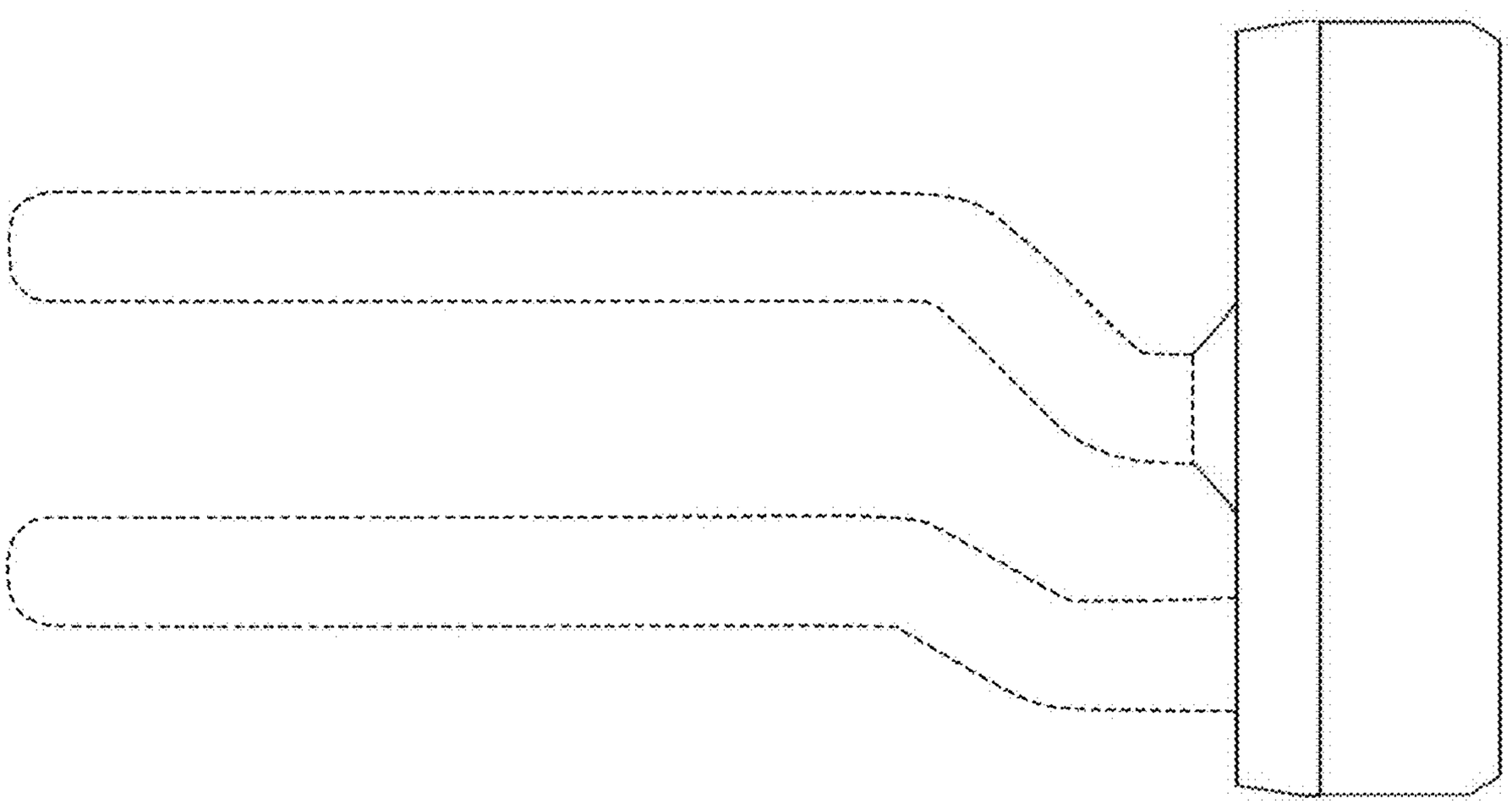

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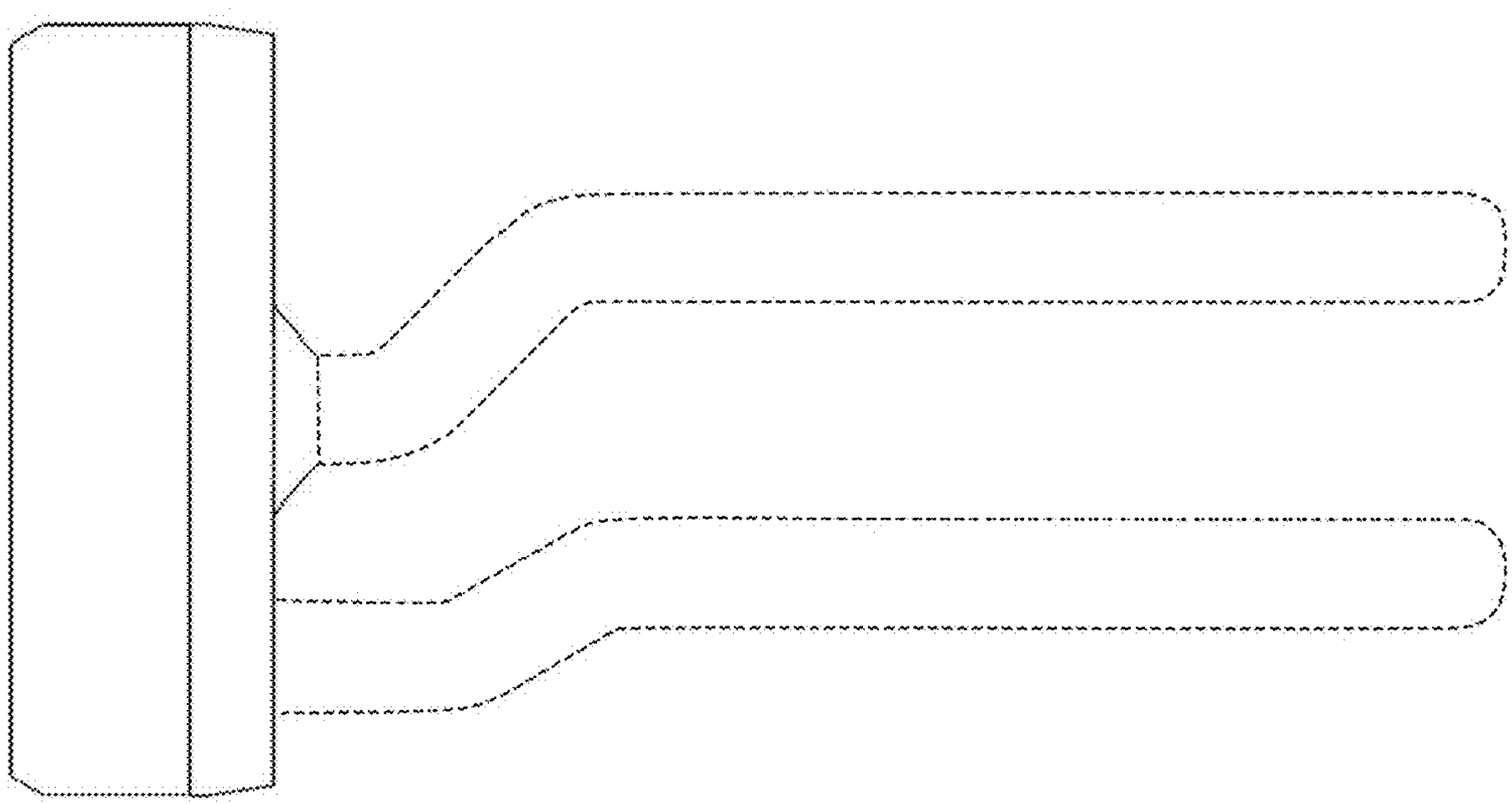

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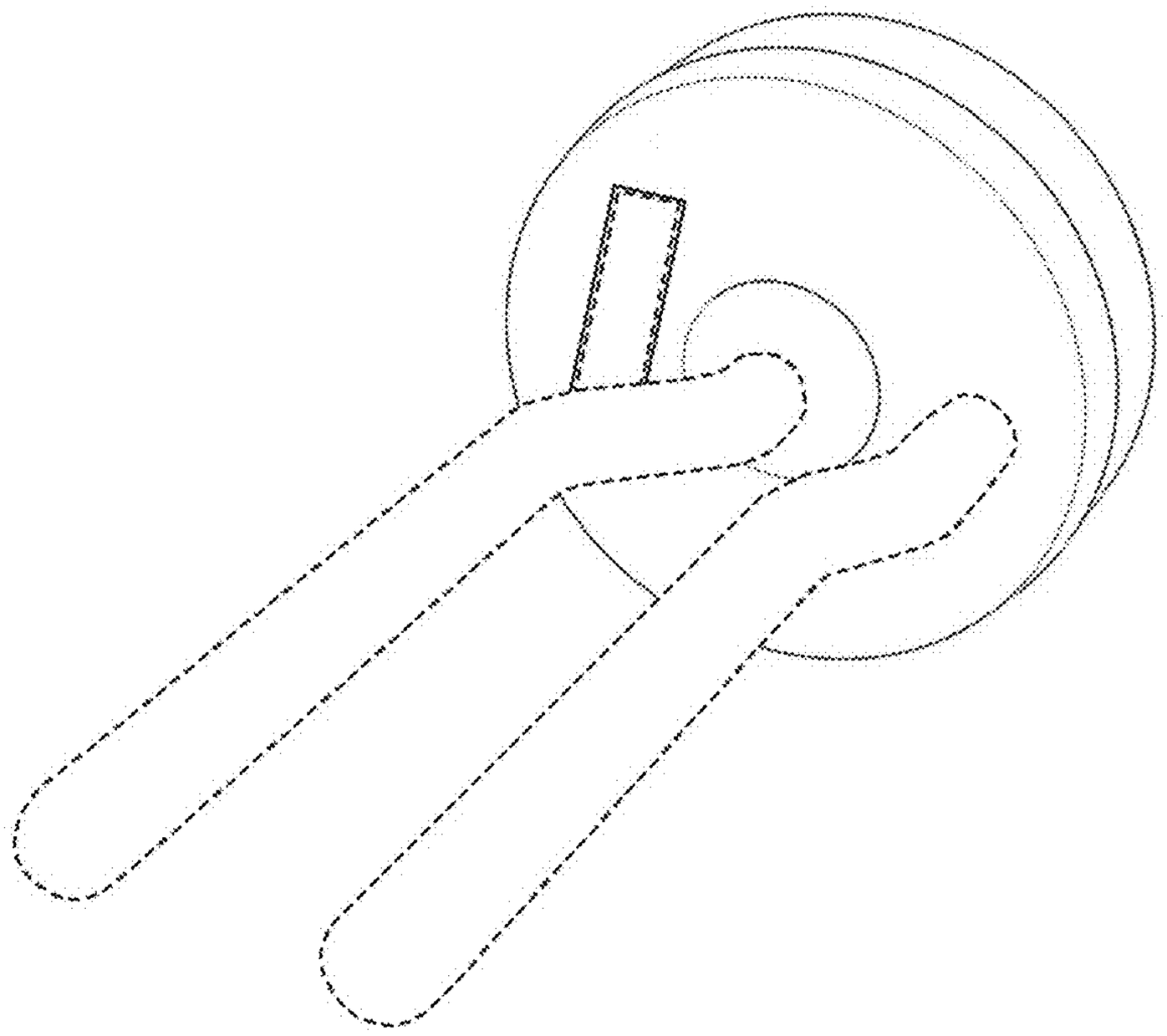

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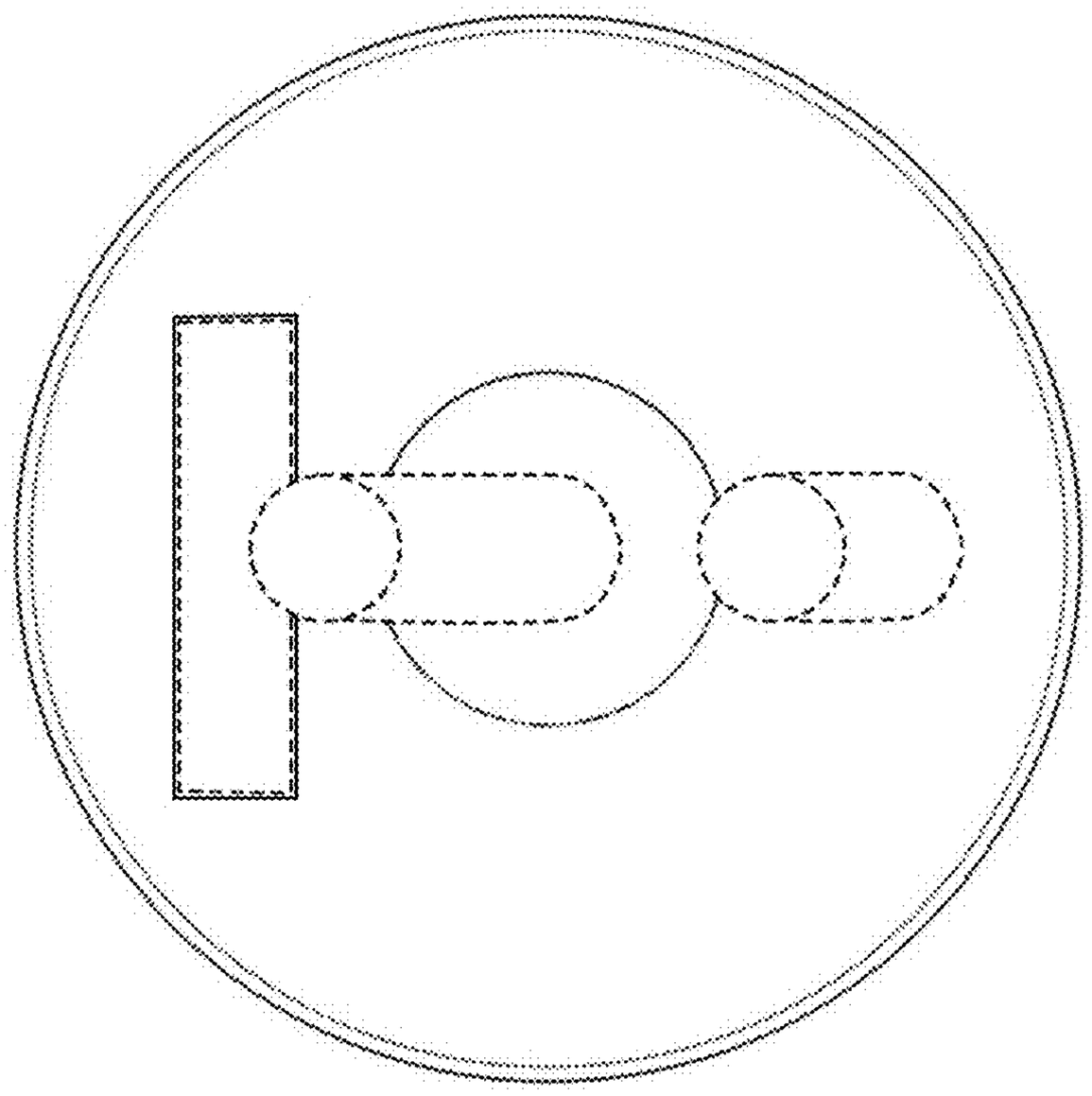

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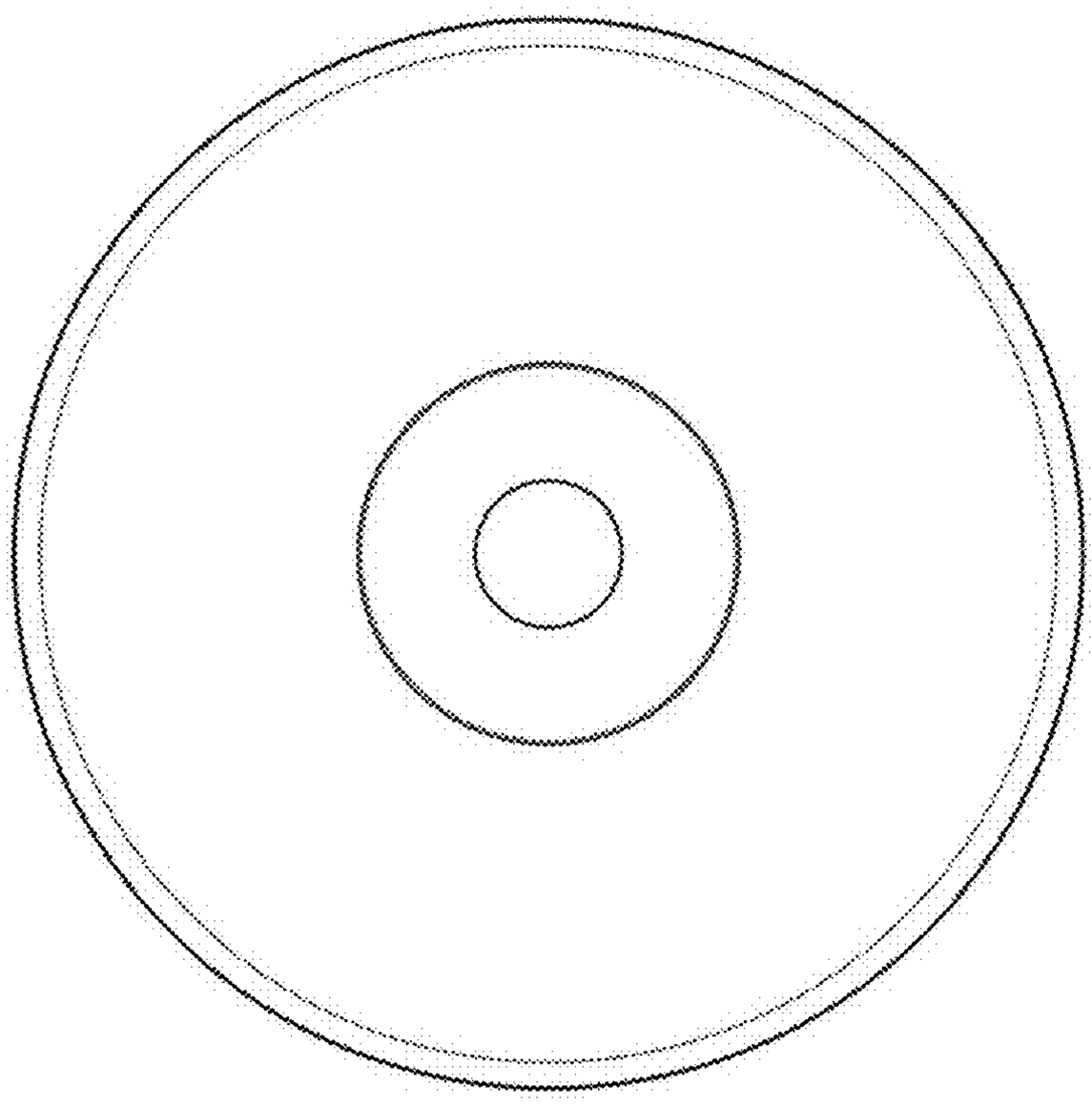

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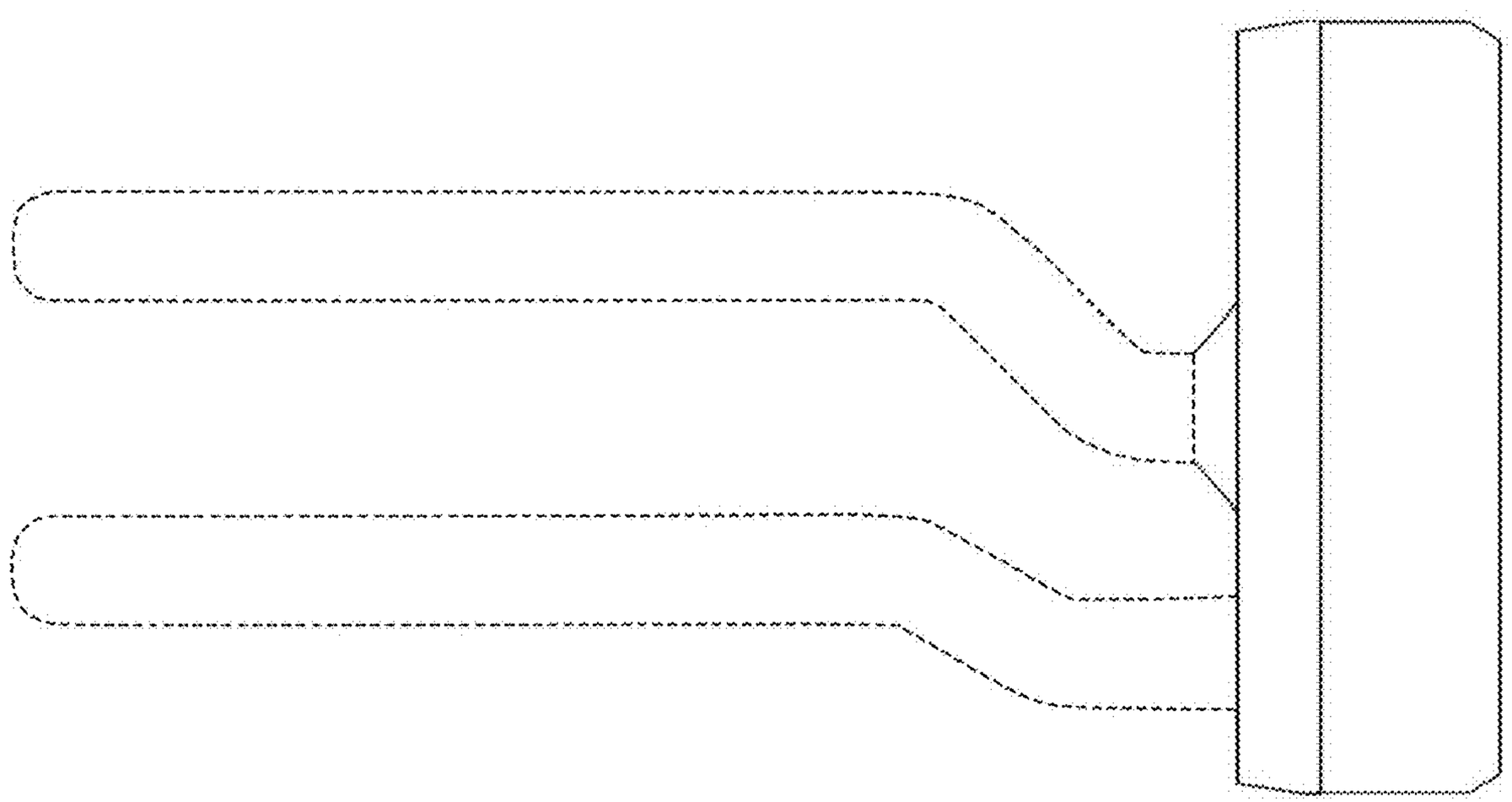

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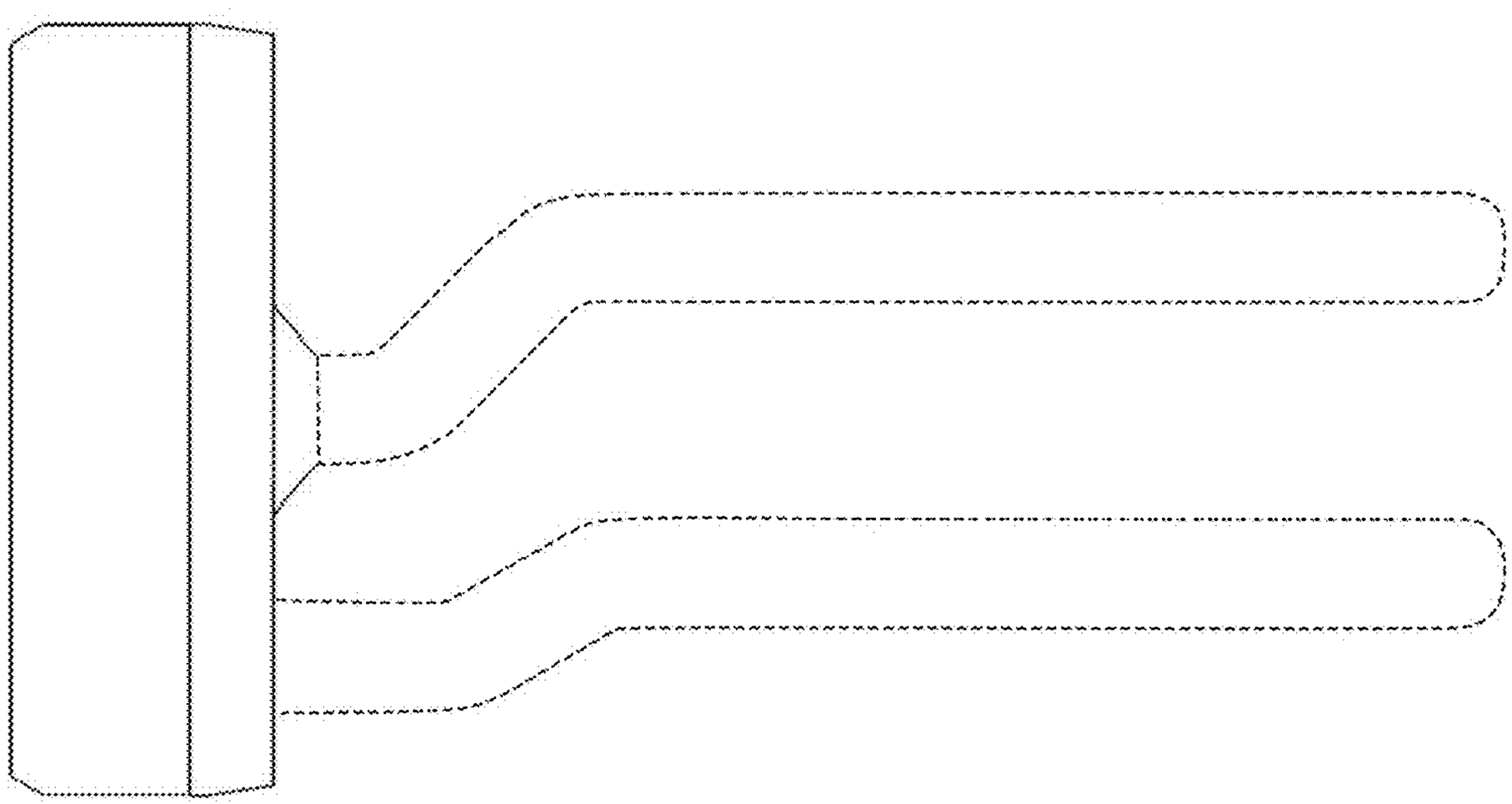

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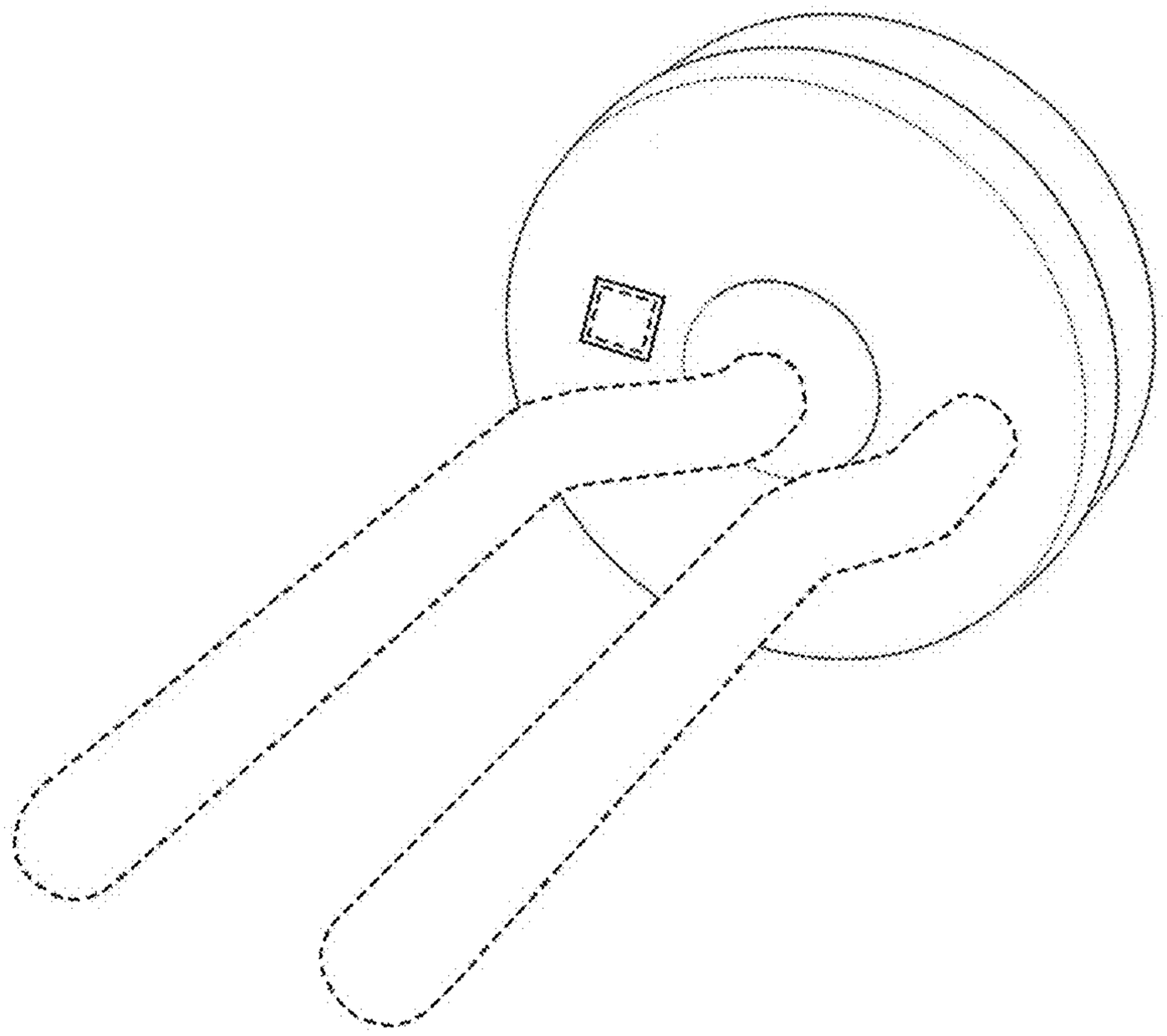

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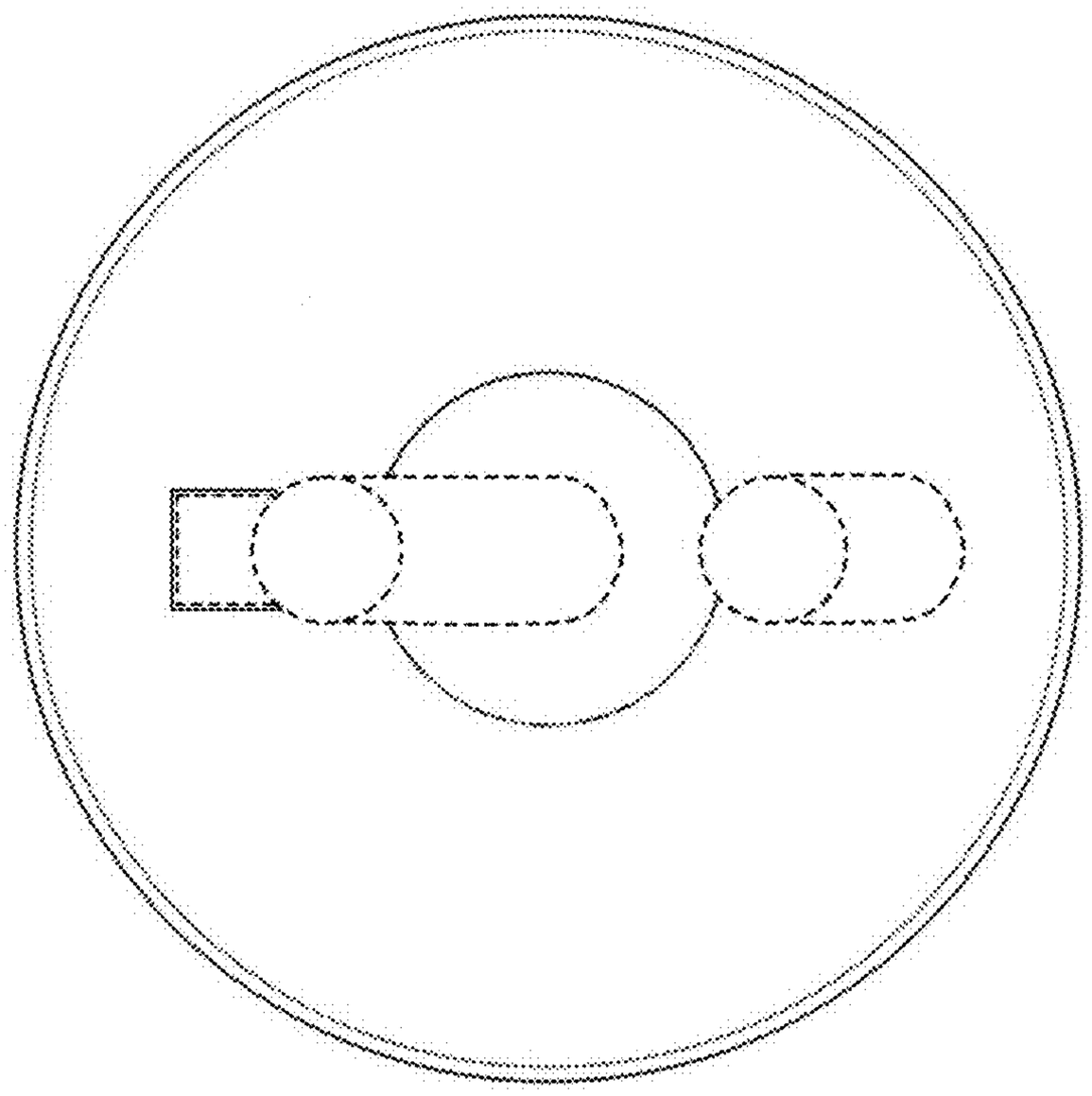

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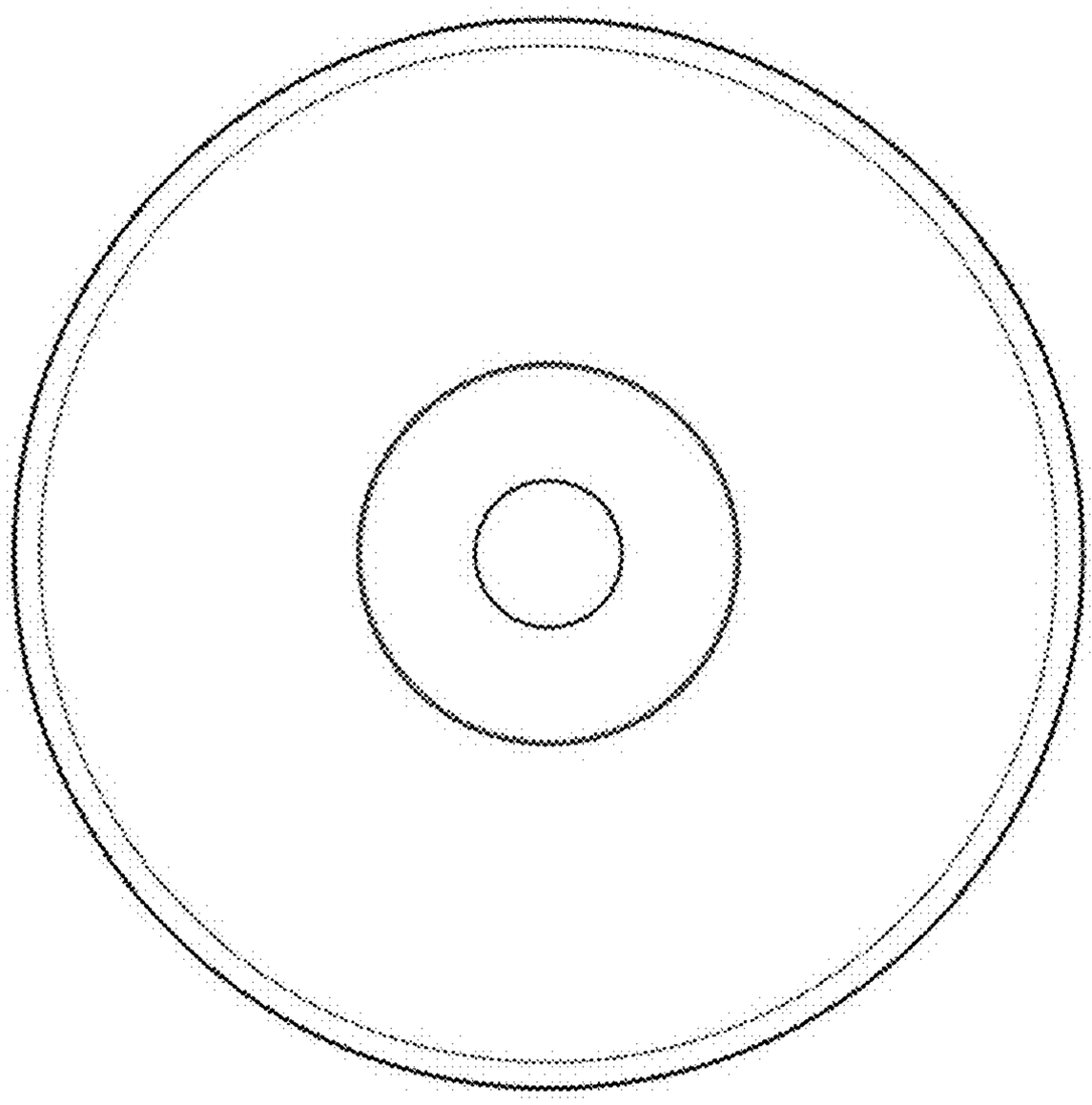

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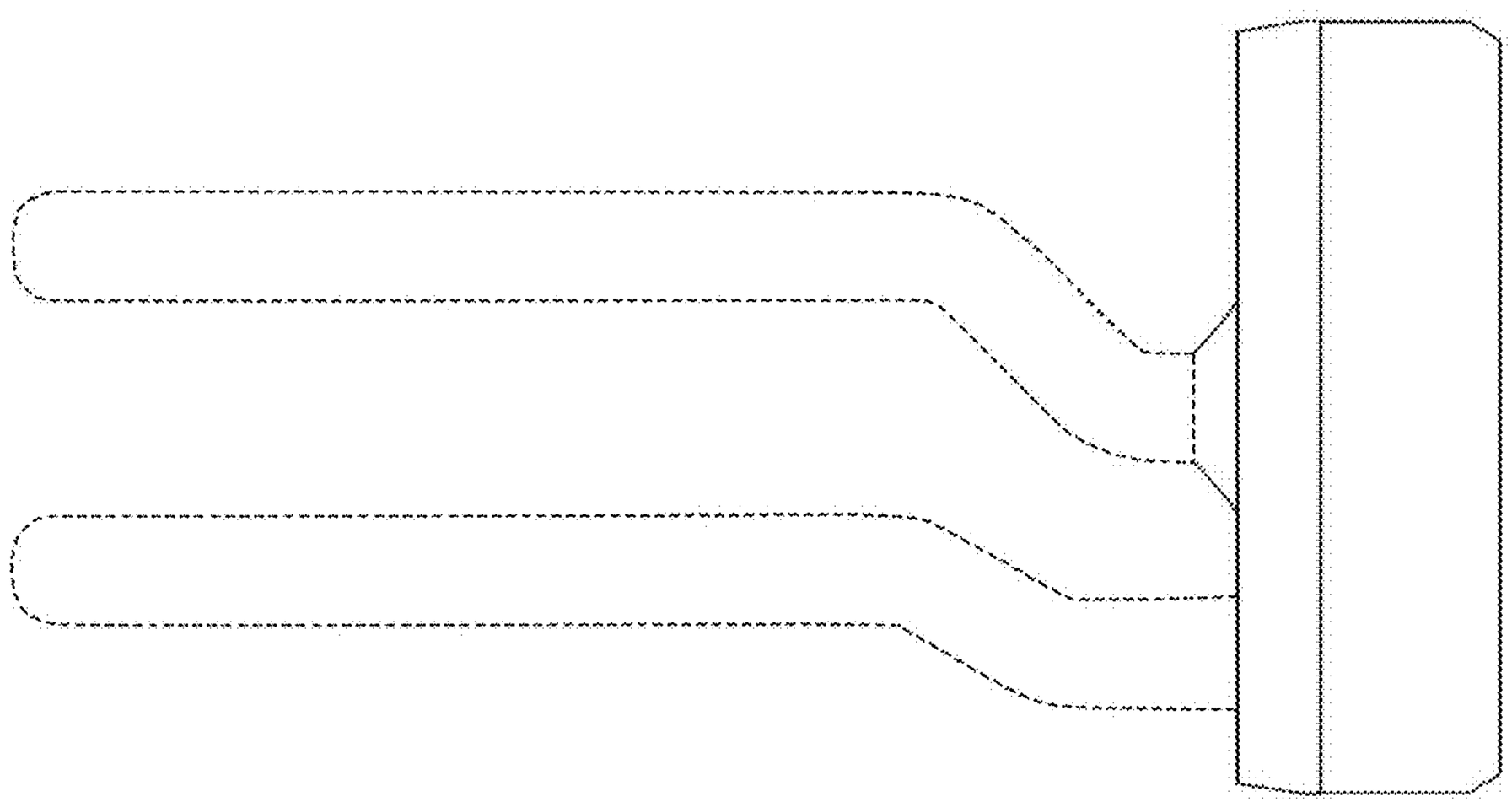

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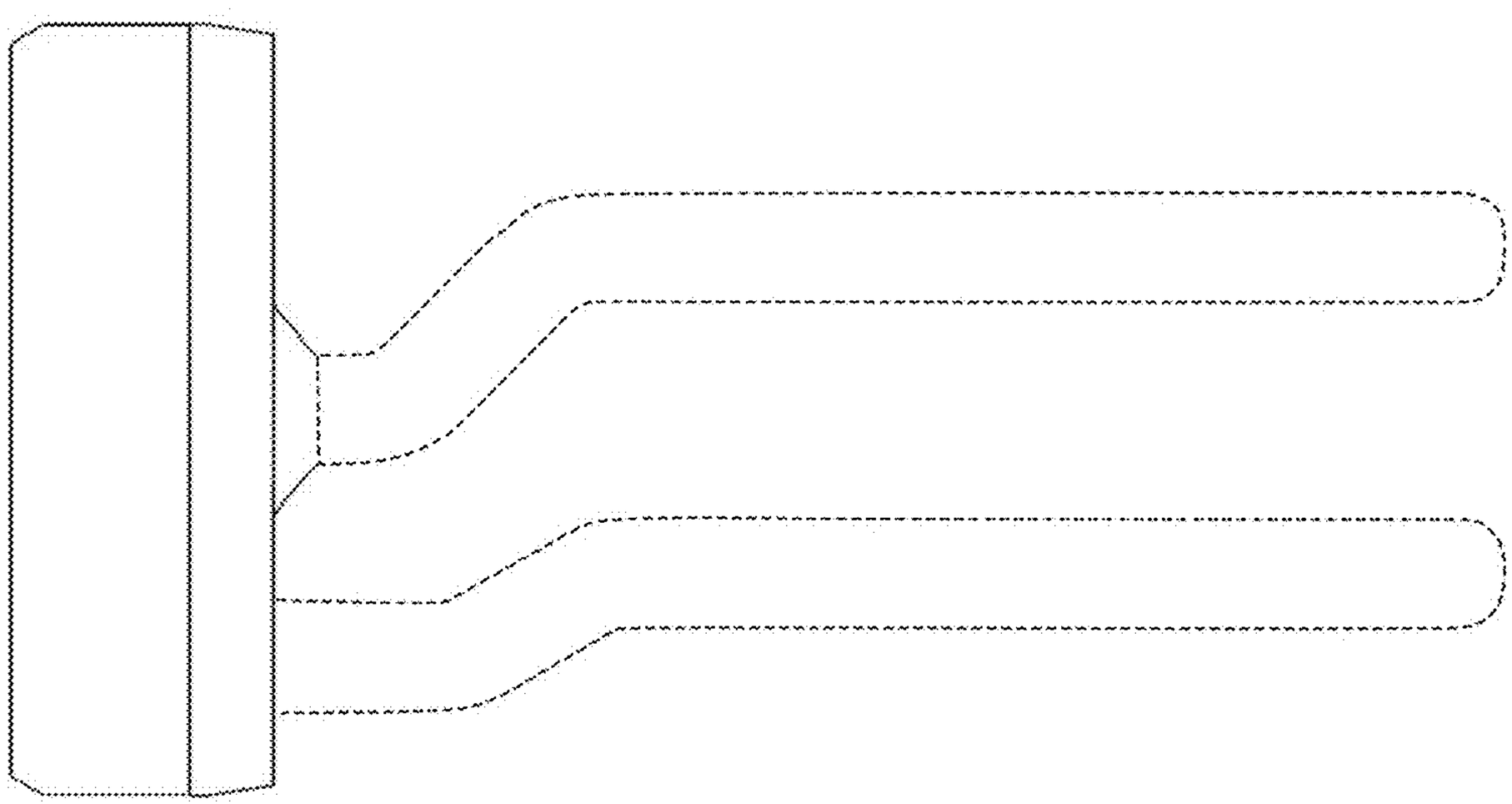

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : D1,009,943 S
APPLICATION NO. : 35/514204
DATED : January 2, 2024
INVENTOR(S) : Thomas Pfeiffer

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the Title Page

Just after Item (80) Hague Agreement Information and immediately before Item (51), please insert the following:
--(30) Foreign Application Priority Data
Sep. 30, 2021 (EP).....008712392--.

Signed and Sealed this
Fifth Day of March, 2024

Katherine Kelly Vidal

Katherine Kelly Vidal
Director of the United States Patent and Trademark Office

UNITED STATES PATENT AND TRADEMARK OFFICE

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