



US00D871479S

(12) **United States Design Patent** (10) **Patent No.:** **US D871,479 S**
Hatano et al. (45) **Date of Patent:** **** Dec. 31, 2019**

(54) **GRIPPER FOR INDUSTRIAL ROBOT**

(71) Applicant: **NITTA CORPORATION**, Osaka-Shi (JP)

(72) Inventors: **Itaru Hatano**, Yamatokoriyama (JP);
Hirokazu Nitta, Yamatokoriyama (JP)

(73) Assignee: **Nitta Corporation**, Osaka-Shi (JP)

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

(21) Appl. No.: **29/693,808**

(22) Filed: **Jun. 5, 2019**

Related U.S. Application Data

(62) Division of application No. 29/598,296, filed on Mar. 24, 2017.

(30) **Foreign Application Priority Data**

Nov. 21, 2016	(JP)	2016-025256
Nov. 21, 2016	(JP)	2016-025257
Jan. 17, 2017	(JP)	2017-000644
Jan. 17, 2017	(JP)	2017-000645
Jan. 17, 2017	(JP)	2017-000646
Jan. 17, 2017	(JP)	2017-000647
Jan. 17, 2017	(JP)	2017-000648
Jan. 17, 2017	(JP)	2017-000649
Jan. 17, 2017	(JP)	2017-000650
Jan. 17, 2017	(JP)	2017-000651
Jan. 17, 2017	(JP)	2017-000652
Jan. 17, 2017	(JP)	2017-000653
Jan. 17, 2017	(JP)	2017-000654
Jan. 17, 2017	(JP)	2017-000655
Jan. 17, 2017	(JP)	2017-000656
Jan. 17, 2017	(JP)	2017-000657
Jan. 17, 2017	(JP)	2017-000658
Jan. 17, 2017	(JP)	2017-000659

(51) **LOC (12) Cl.** **15-99**

(52) **U.S. Cl.**
USPC **D15/199**

(58) **Field of Classification Search**

USPC D8/51; D15/199; D24/133
CPC B25J 11/0045; B25J 15/08; B25J 15/024;
B25J 15/026; B25J 15/0475; B25J
15/0042; B65G 47/90; H05K 13/02;
Y10S 294/902; Y10S 294/907

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,172,693 A	3/1965	Hansen
3,322,455 A	5/1967	Gressbach
3,851,769 A	12/1974	Noguchi et al.
4,461,608 A	7/1984	Boda

(Continued)

Primary Examiner — Patricia A Palasik

(74) *Attorney, Agent, or Firm* — Burr & Brown, PLLC

(57) **CLAIM**

The ornamental design for a gripper for industrial robot, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a gripper for industrial robot illustrating our new design;

FIG. 2 is a bottom perspective view thereof;

FIG. 3 is a front view thereof;

FIG. 4 is a rear view thereof;

FIG. 5 is a right view thereof;

FIG. 6 is a left view thereof;

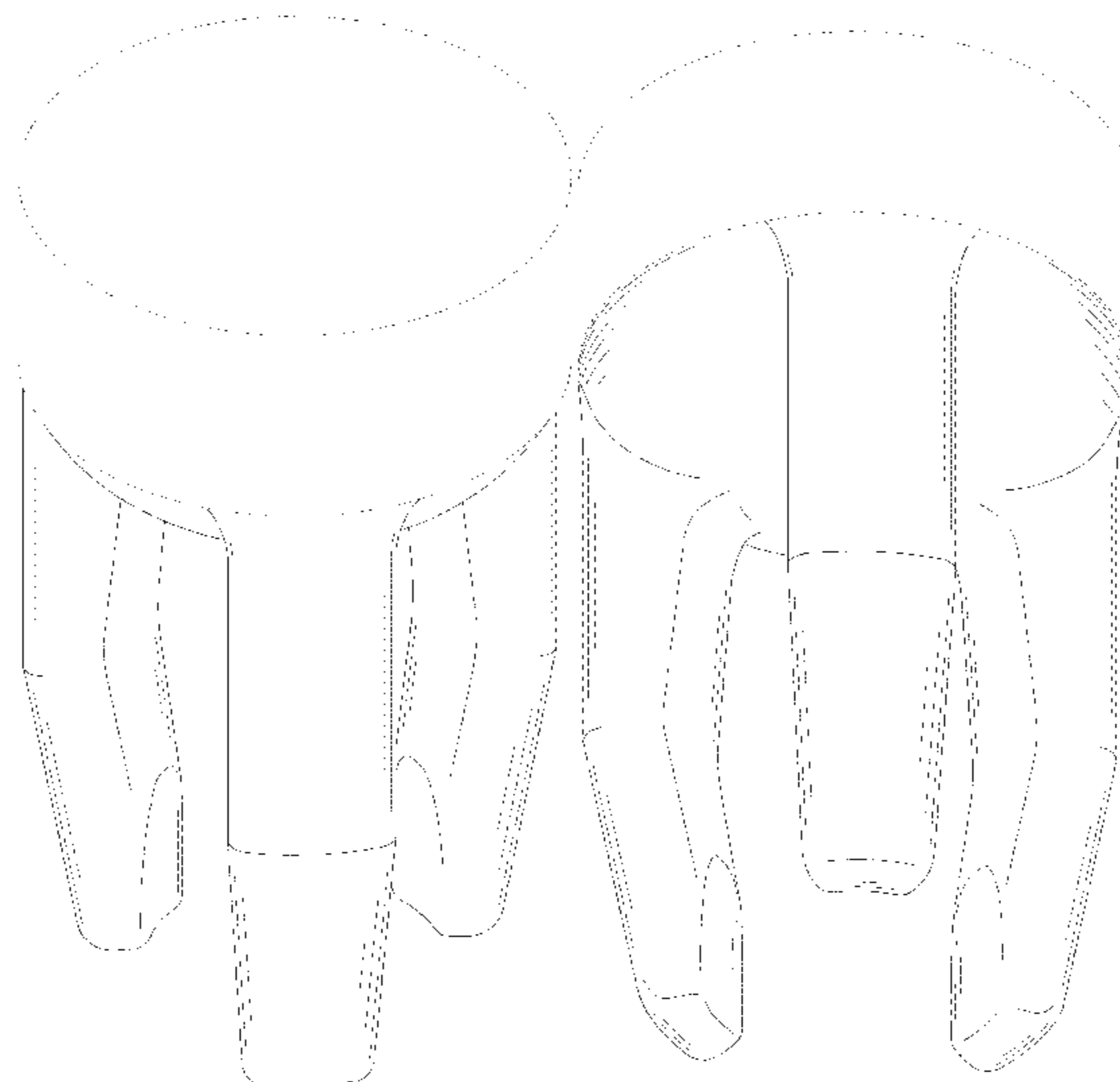
FIG. 7 is a top view thereof; and,

FIG. 8 is a bottom view thereof.

The gripper for industrial robot comprises a finger portion to grip an object.

The broken lines in the drawings depict portions of the gripper for industrial robot which form no part of the claimed design.

1 Claim, 8 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

4,699,414 A	10/1987	Jones	8,328,258 B2	12/2012	Kjol
4,725,087 A	2/1988	Kato	8,474,893 B2	7/2013	Kawanami et al.
4,819,184 A	4/1989	Jonsson et al.	8,833,823 B2 *	9/2014	Price B66C 1/44 294/198
4,888,708 A	12/1989	Brantmark et al.	8,840,344 B2 *	9/2014	Stenman B23B 51/05 408/186
5,026,104 A	6/1991	Pickrell	D769,095 S *	10/2016	De Bruin D8/51
5,398,983 A	3/1995	Ahrens	9,912,130 B1	3/2018	Burns
5,562,386 A	10/1996	Browning	9,956,691 B1	5/2018	Pentzer et al.
5,582,397 A	12/1996	Lanvin	D841,277 S	2/2019	Chintalapalli et al.
6,249,950 B1 *	6/2001	Brask B23B 27/04 29/434	D845,372 S *	4/2019	Pentzer D15/199
D459,806 S	7/2002	Webb	D853,811 S *	7/2019	Gunder D8/51
D459,807 S *	7/2002	Webb D24/133	2004/0070225 A1	4/2004	Meinicke et al.
6,739,637 B2 *	5/2004	Hsu B25G 3/18 294/115	2008/0275593 A1	11/2008	Johansson
6,857,831 B2 *	2/2005	Davis B23B 51/0433 408/204	2012/0146353 A1	6/2012	Lunde
D617,619 S *	6/2010	Bensussan D8/51	2015/0028609 A1	1/2015	Hansen et al.
8,152,214 B2 *	4/2012	Williams F16C 29/126 294/119.1	2016/0107317 A1 *	4/2016	Hashimoto B25J 9/042 414/744.2
			2017/0217023 A1 *	8/2017	Smith B25J 15/0066
			2018/0318984 A1	11/2018	Tarbell et al.
			2018/0345483 A1	12/2018	Sirkett et al.
			2018/0354130 A1	12/2018	Preisinger et al.

* cited by examiner

Fig. 1

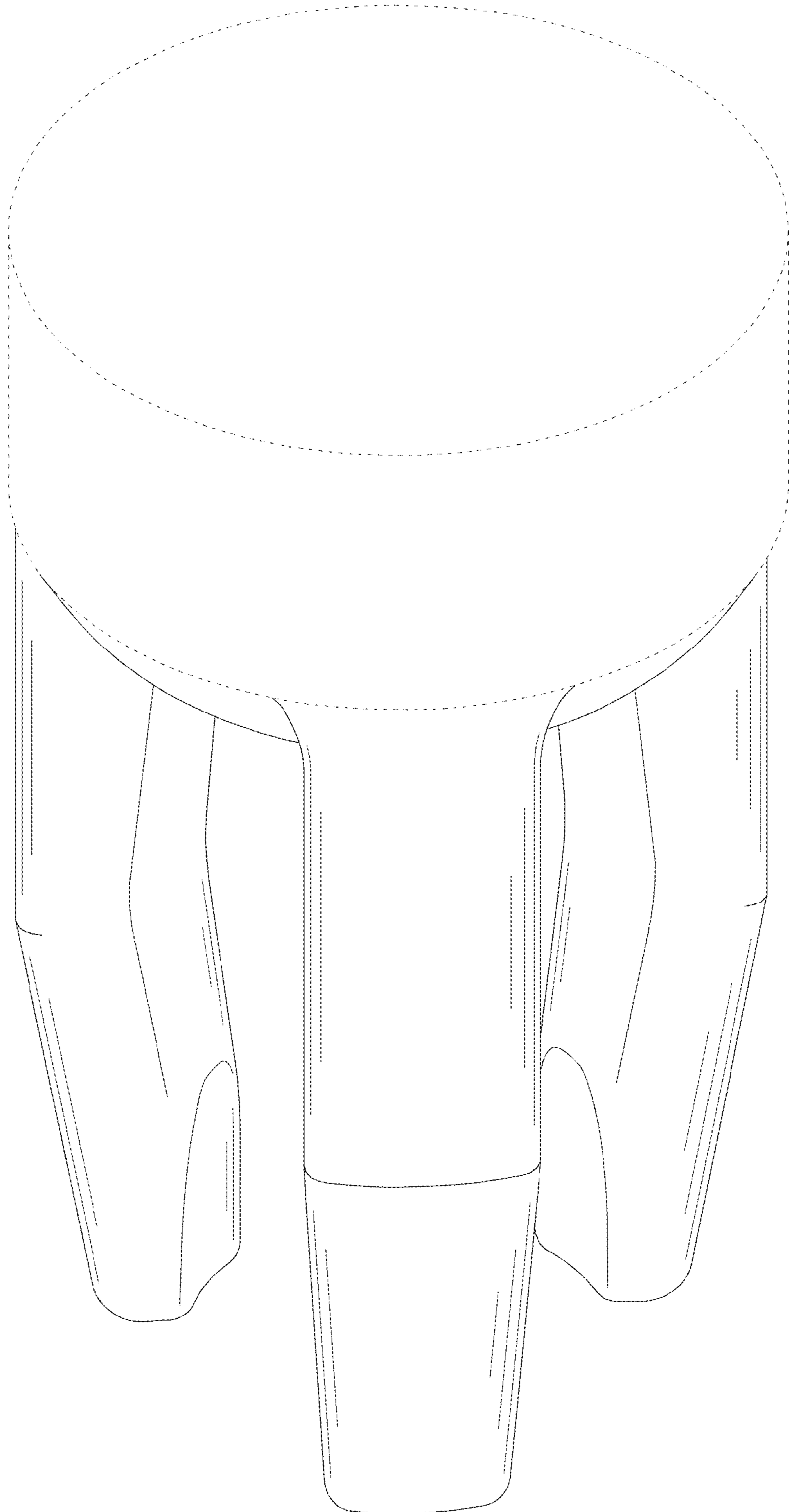


Fig. 2

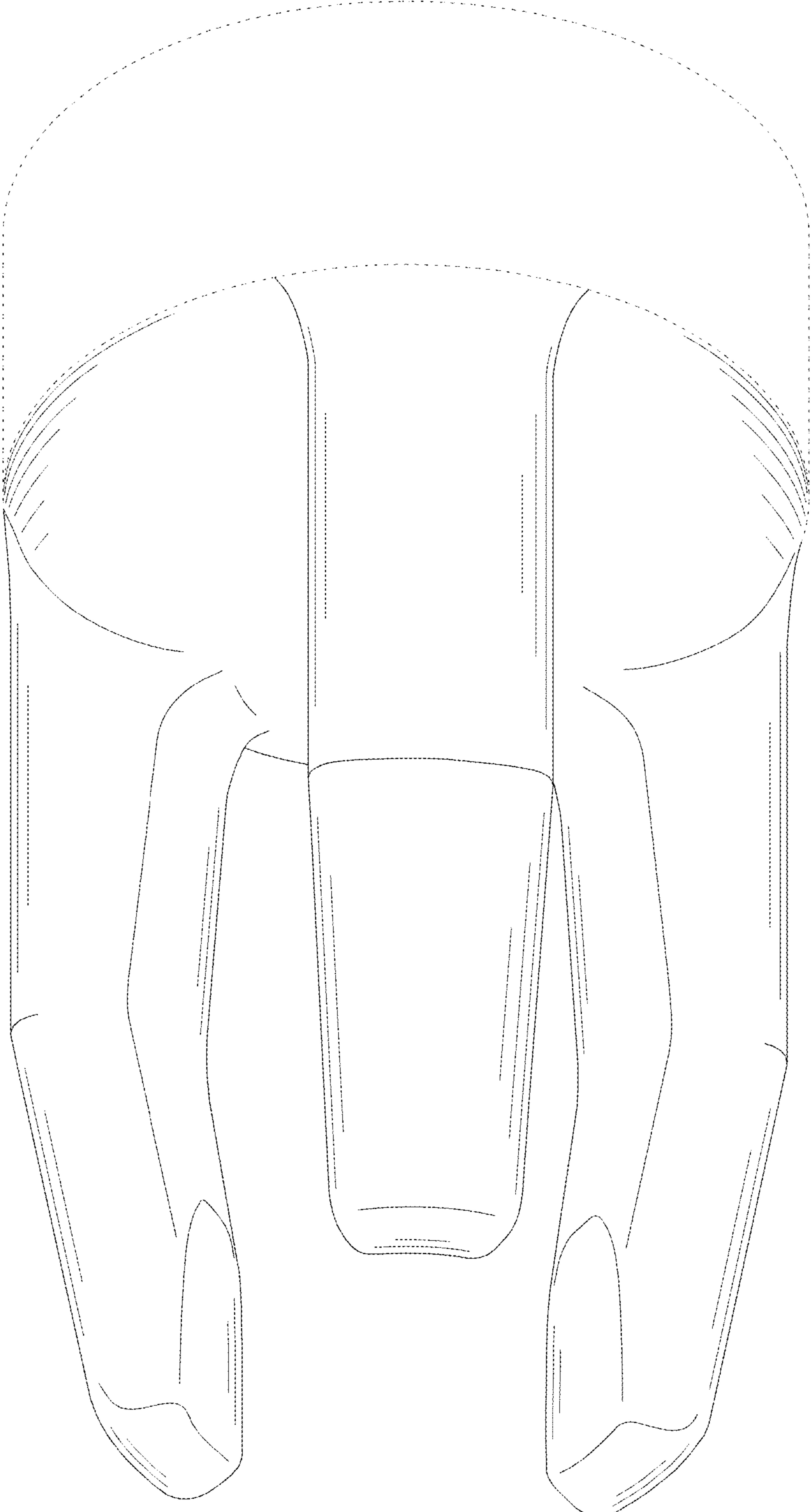


Fig. 3

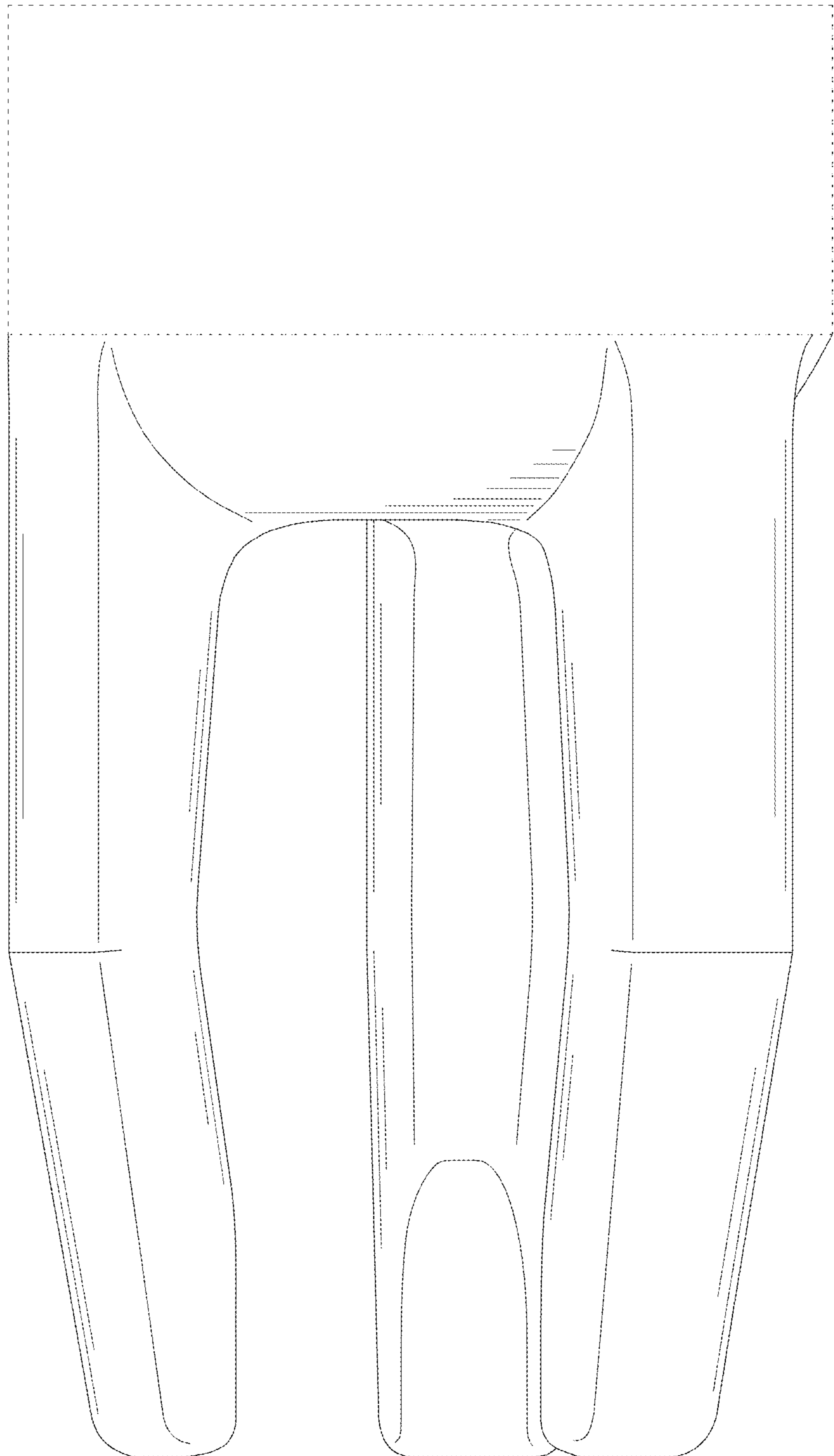


Fig. 4

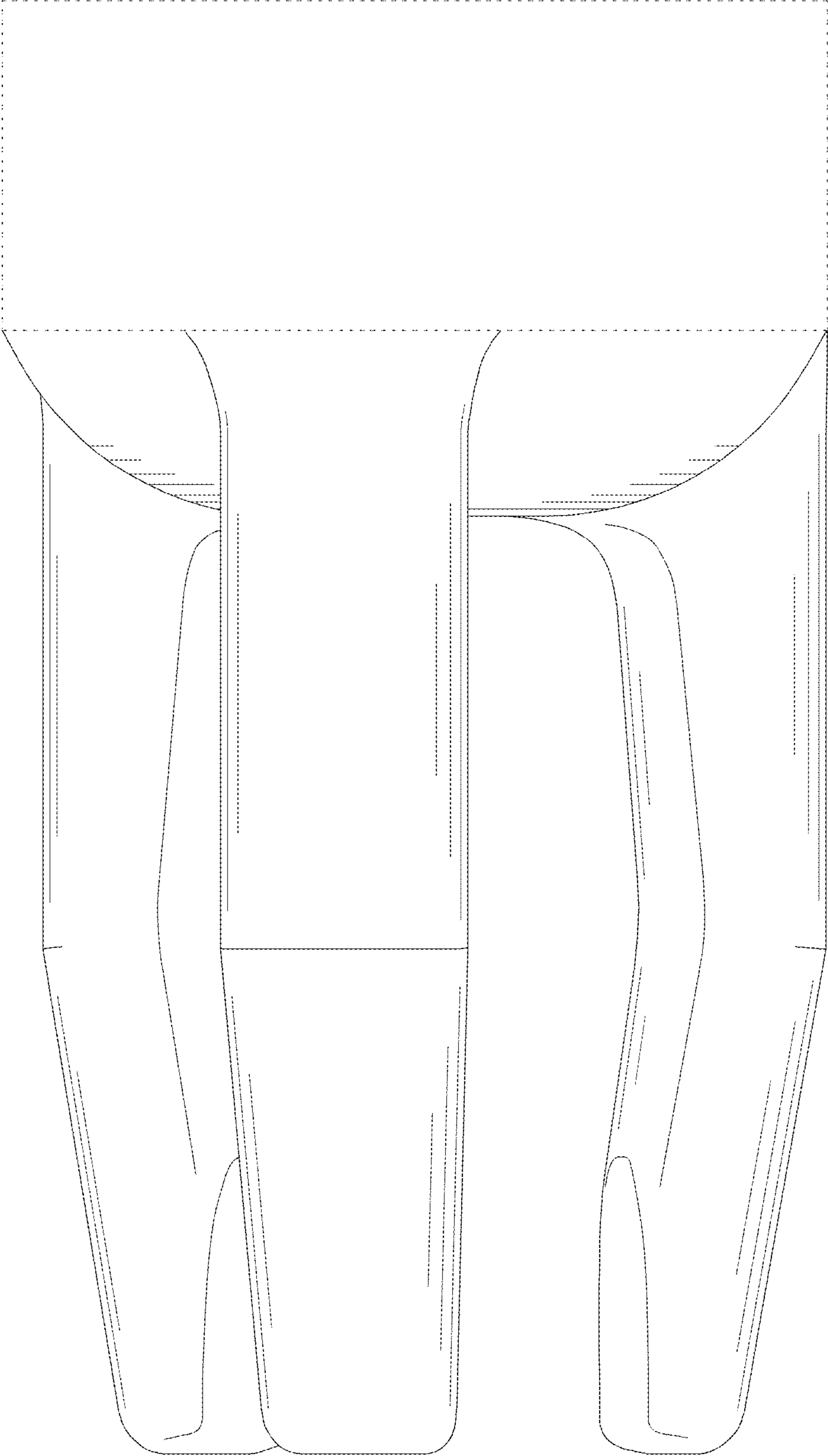


Fig. 5

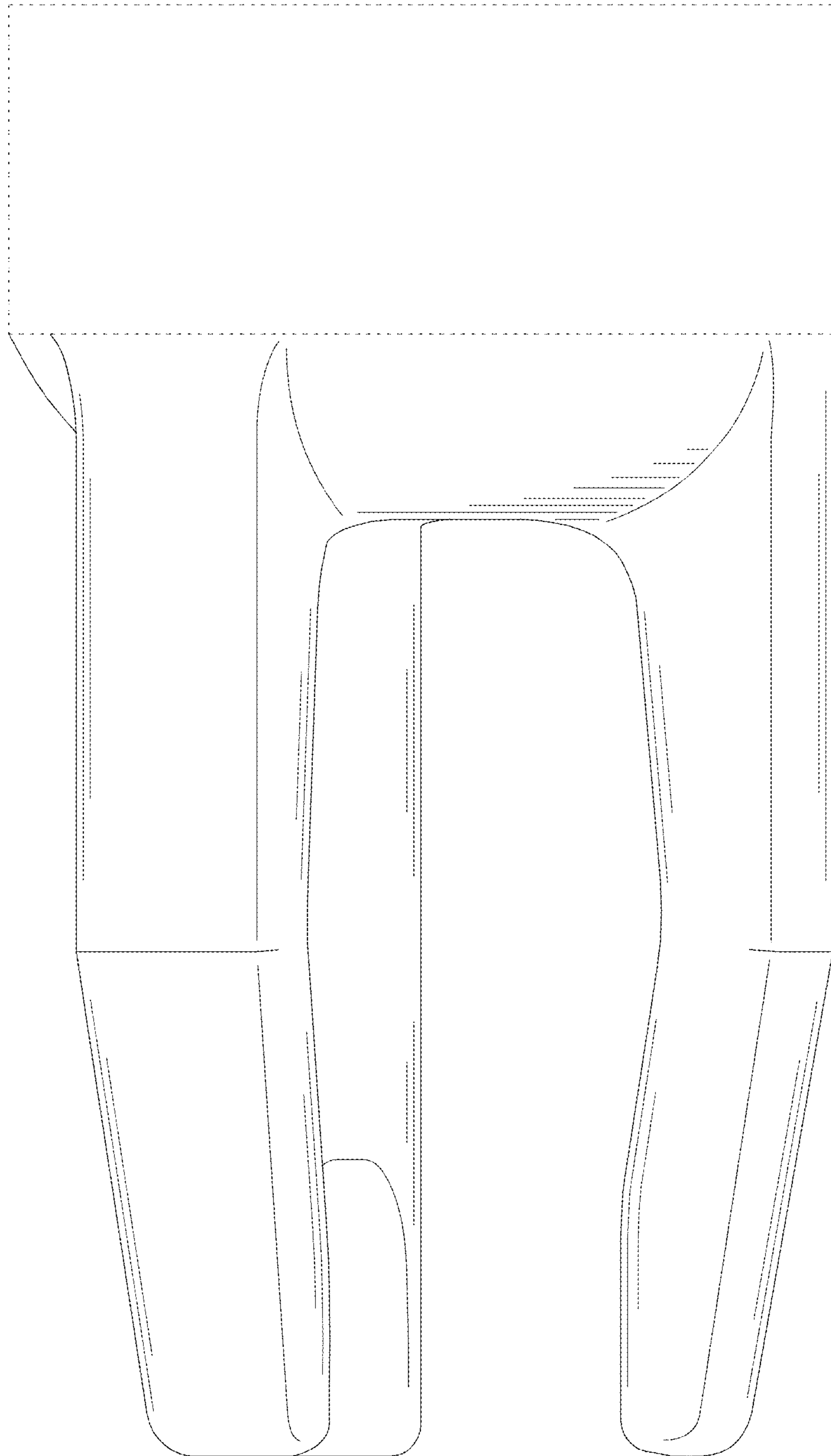


Fig. 6

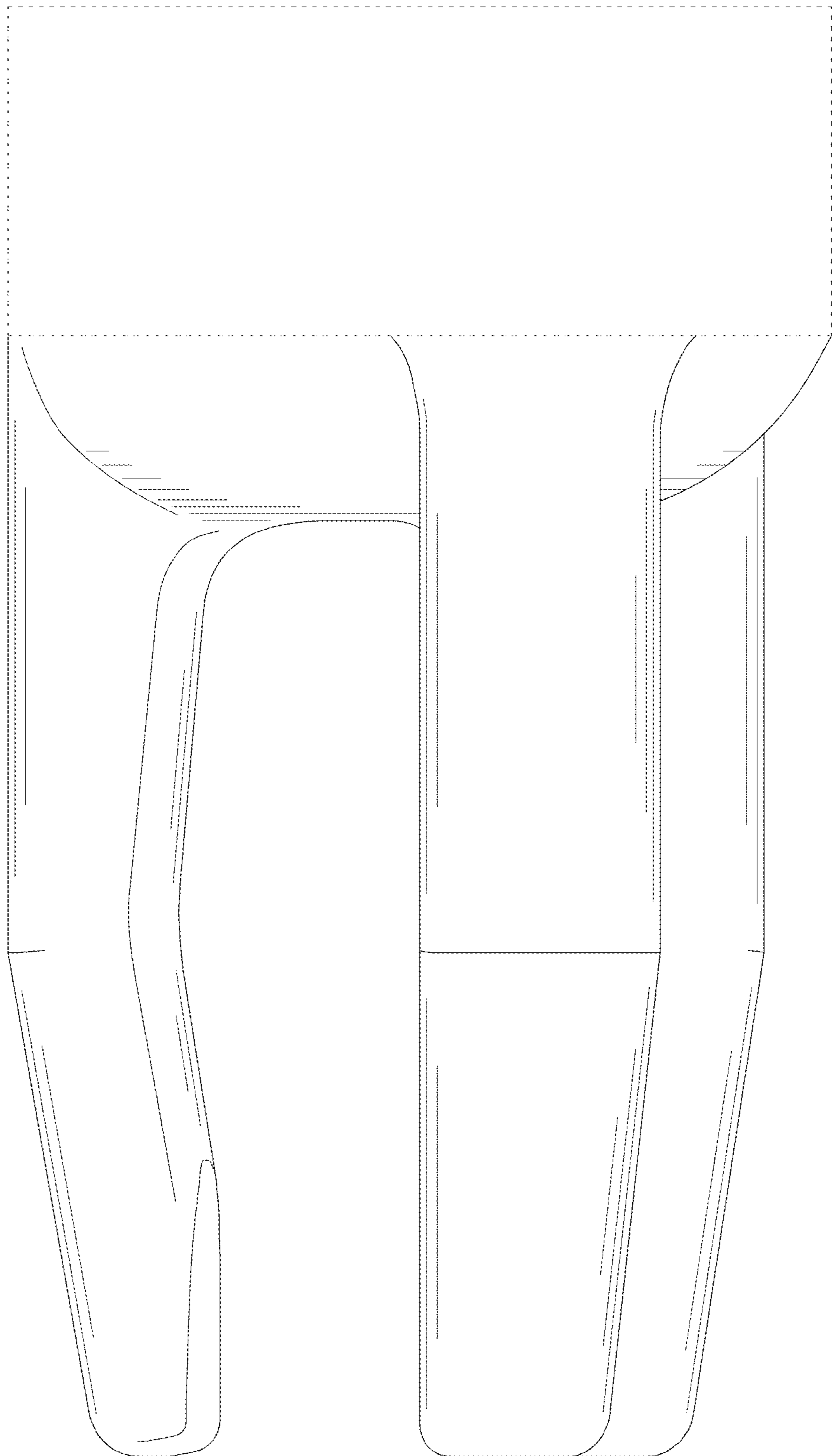


Fig. 7

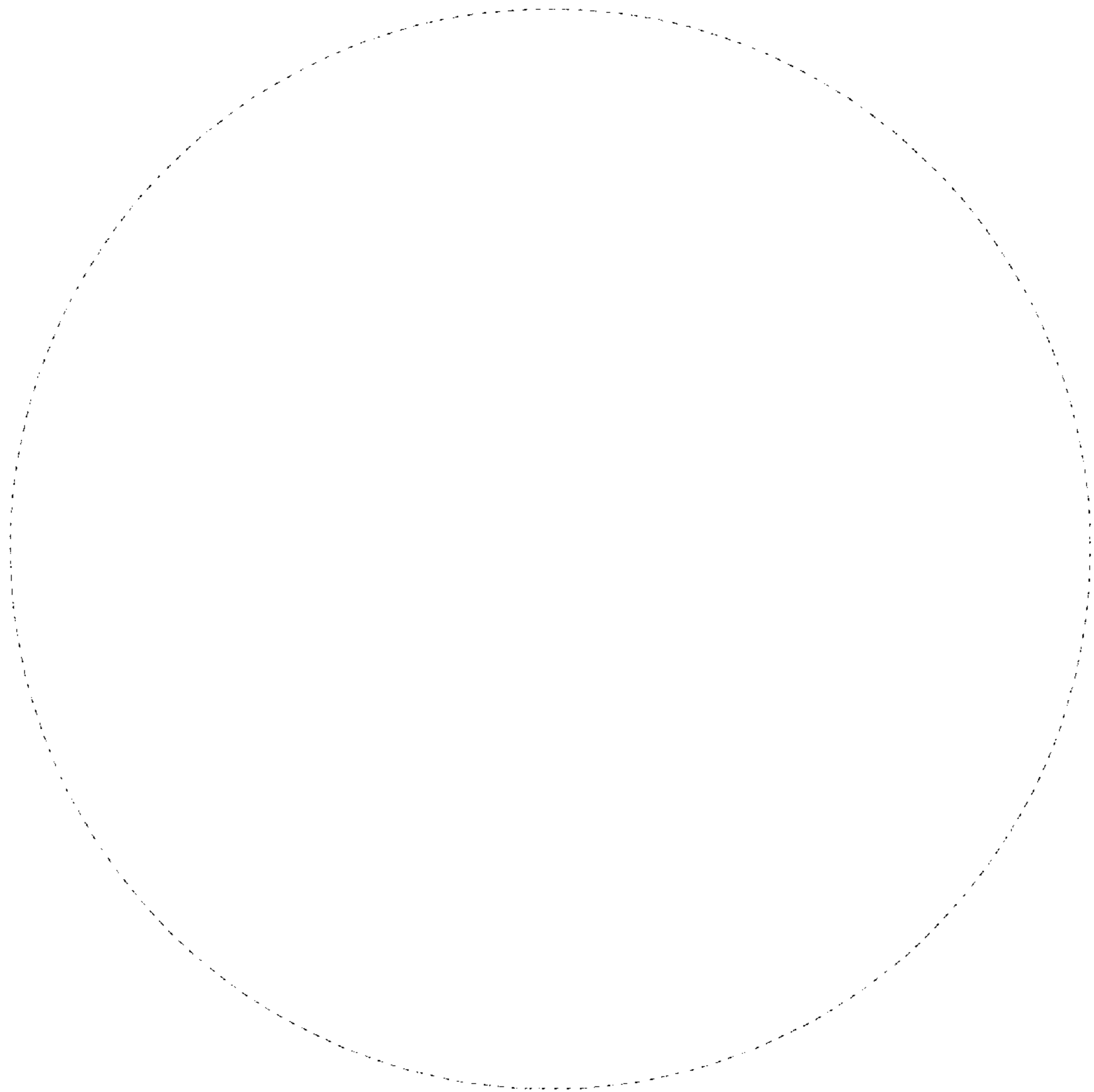


Fig. 8

