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

(10) **Patent No.:** **US D799,768 S**

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- (54) **ROLLER FOR SUBSTRATE CLEANING**
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- (**) Term: **15 Years**
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- (22) Filed: **Mar. 23, 2016**
- (30) **Foreign Application Priority Data**

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(51) **LOC (10) Cl.** **15-05**

(52) **U.S. Cl.**
USPC **D32/25**

(58) **Field of Classification Search**
USPC D7/387, 393; D32/25, 40, 35
CPC B08B 1/04; B08B 3/08; B08B 3/02; B05C
17/0207; D04H 18/04; H01L 21/67046
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

- 4,566,911 A * 1/1986 Tomita B08B 1/04
134/6
- 5,401,231 A * 3/1995 Hebert B05C 17/0207
492/13
- 5,414,914 A * 5/1995 Suzuki
- 5,675,856 A * 10/1997 Itzkowitz B08B 1/04
15/102
- 5,745,945 A * 5/1998 Manfredi B08B 1/04
15/21.1
- 5,966,765 A * 10/1999 Hamada H01L 21/67046
15/102
- 6,004,402 A * 12/1999 Cercone B08B 3/08
134/2

- 6,027,573 A * 2/2000 Cercone B08B 3/08
134/22.19
- 6,041,465 A * 3/2000 Yashiki B08B 1/04
15/102
- 6,080,092 A * 6/2000 Cercone B08B 3/08
492/30
- 6,182,323 B1 * 2/2001 Bahten B08B 3/08
134/22.1
- 6,202,658 B1 * 3/2001 Fishkin H01L 21/67046
134/147
- 6,247,197 B1 * 6/2001 Vail B08B 1/04
118/259
- 6,299,698 B1 * 10/2001 Emami B08B 1/04
134/6
- 6,308,369 B1 * 10/2001 Garcia H01L 21/67046
15/102
- D456,667 S * 5/2002 Veltri D7/387

(Continued)

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(57) **CLAIM**

The ornamental design for a roller for substrate cleaning, as shown and described.

DESCRIPTION

FIG. 1 is a first perspective view observed from rear, right and top sides of a roller for substrate cleaning showing my new design;

FIG. 2 is a second perspective view observed from front, left and top sides thereof;

FIG. 3 is a front view thereof, a rear view being a mirror image thereof;

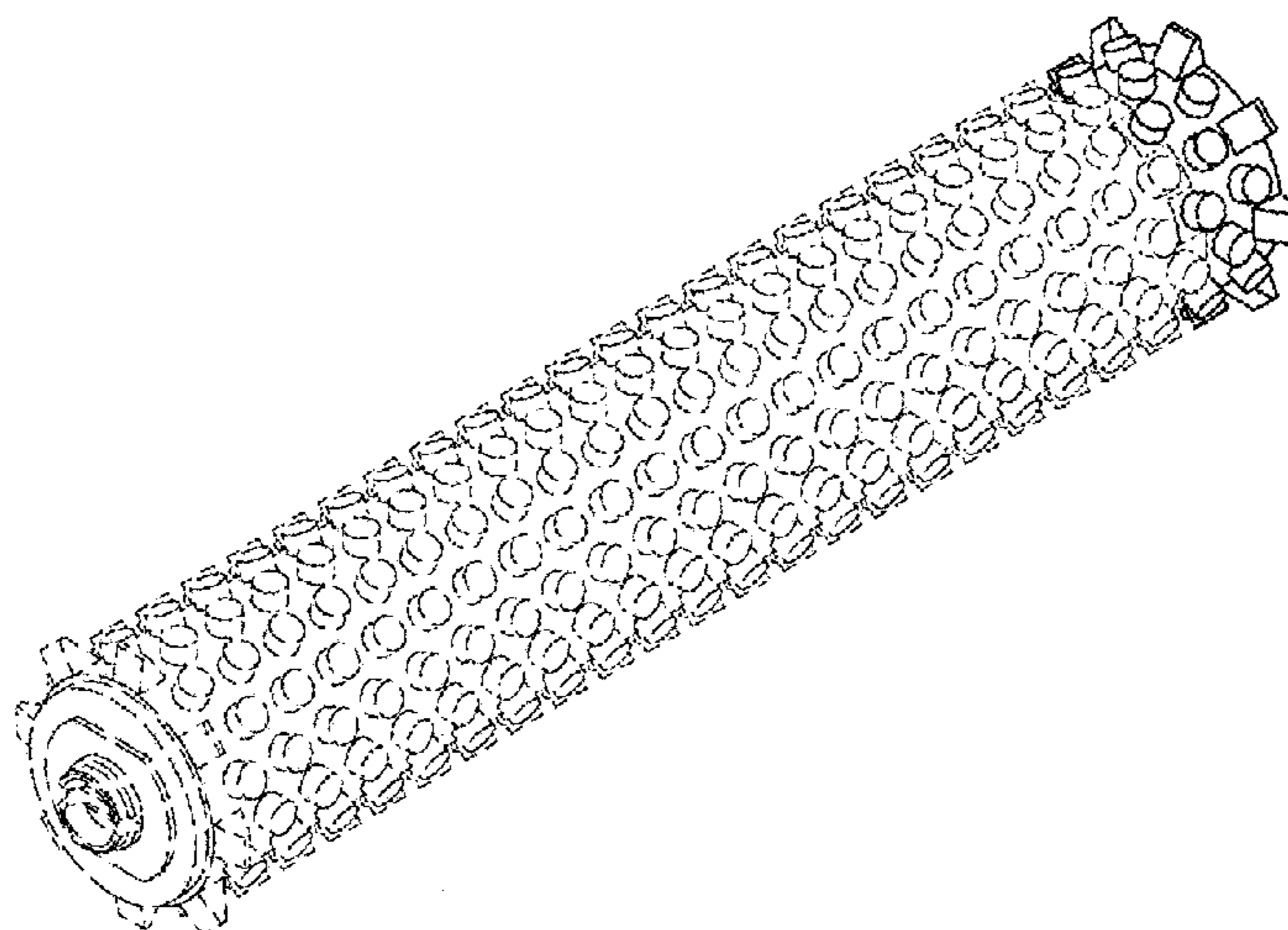
FIG. 4 is a top view thereof, a bottom view being identical thereto;

FIG. 5 is a right side view thereof; and,

FIG. 6 is a left side view thereof.

The broken lines depict environmental subject matter only and form no part of the claimed design.

1 Claim, 5 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

6,405,399	B1 *	6/2002	Farber	H01L 21/67046 134/122 R
6,502,273	B1 *	1/2003	Mihara	B08B 1/04 15/102
6,543,084	B2 *	4/2003	Dickey	H01L 21/67046 15/179
6,557,202	B1 *	5/2003	Bliven	H01L 21/67046 15/102
6,616,516	B1 *	9/2003	Ravkin	B08B 1/04 451/194
D482,566	S *	11/2003	Zemel	D7/395
6,904,637	B2 *	6/2005	Sugarman	B08B 1/04 134/199
7,735,177	B1 *	6/2010	Farber	H01L 21/67046 15/102
D622,920	S *	8/2010	Bejtlich, III	D32/40
7,955,693	B2 *	6/2011	Drury	B29C 44/385 15/103.5
D682,497	S *	5/2013	Wargo	D15/138
8,496,758	B2 *	7/2013	Idani	B08B 1/00 134/2
D707,408	S *	6/2014	Ishibashi	D32/25
2002/0100132	A1 *	8/2002	McMullen	B08B 1/04 15/102
2002/0121289	A1 *	9/2002	Brown	B08B 3/02 134/6
2005/0109371	A1 *	5/2005	Sin	B08B 1/04 134/6

* cited by examiner

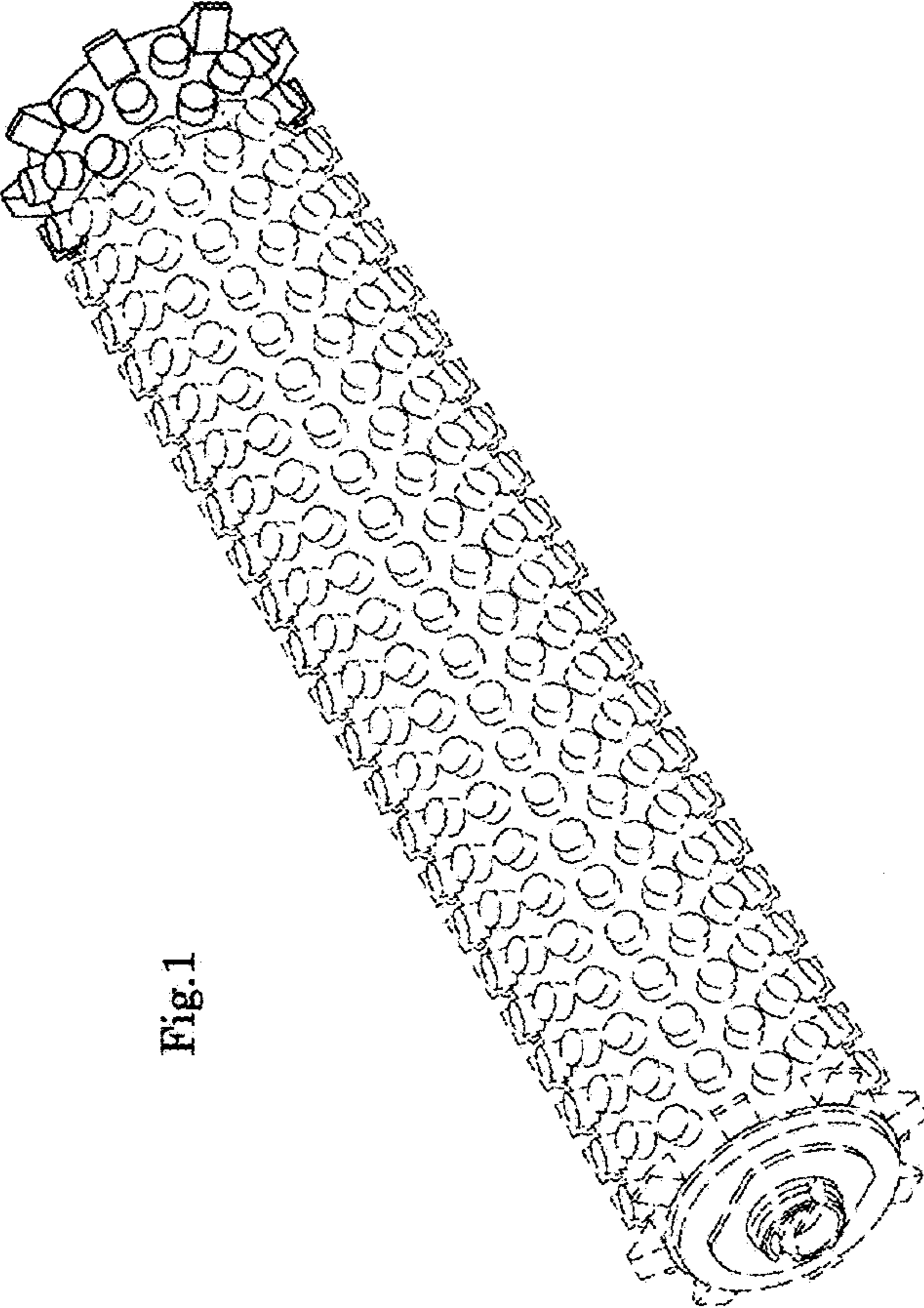


Fig.1

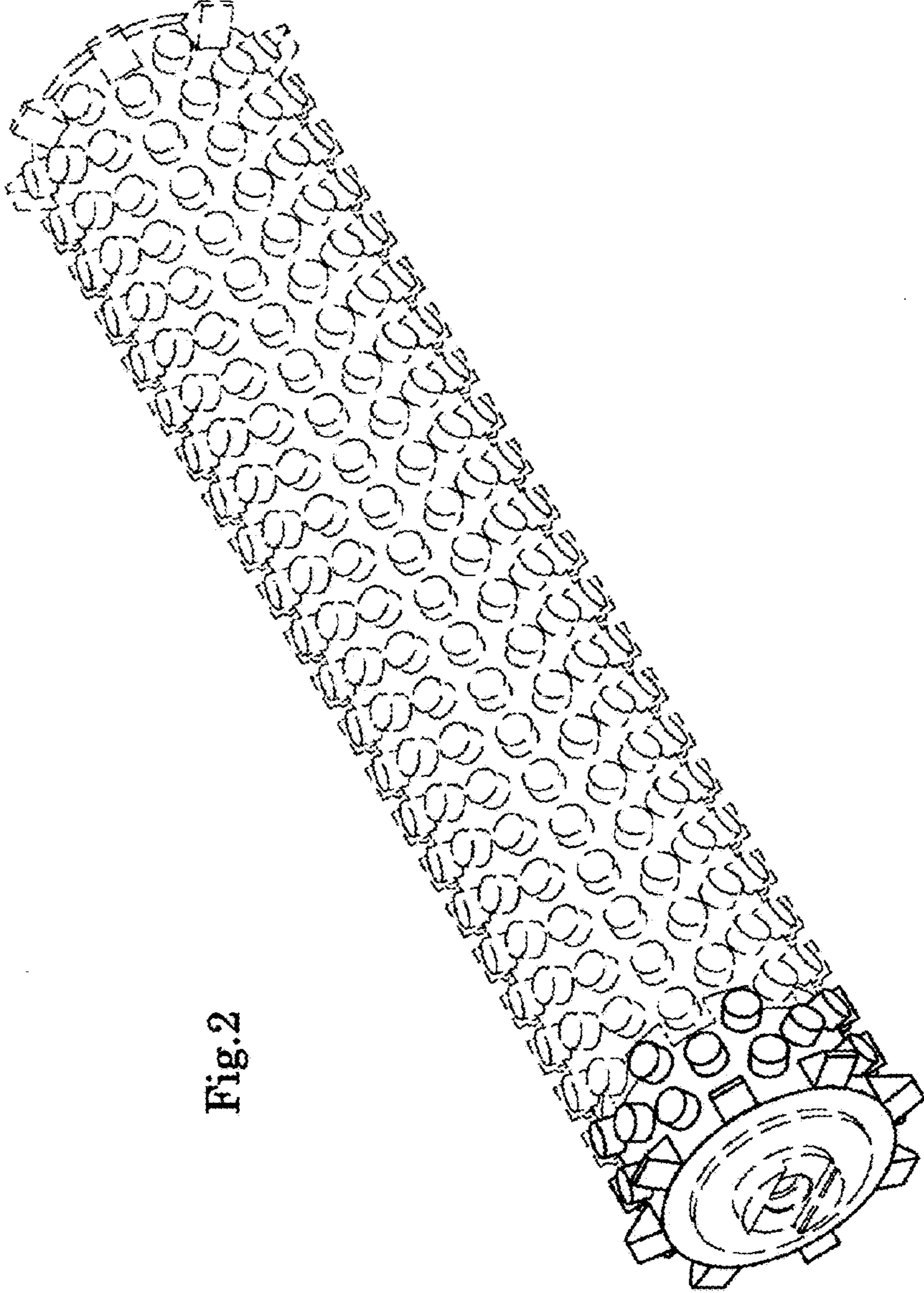
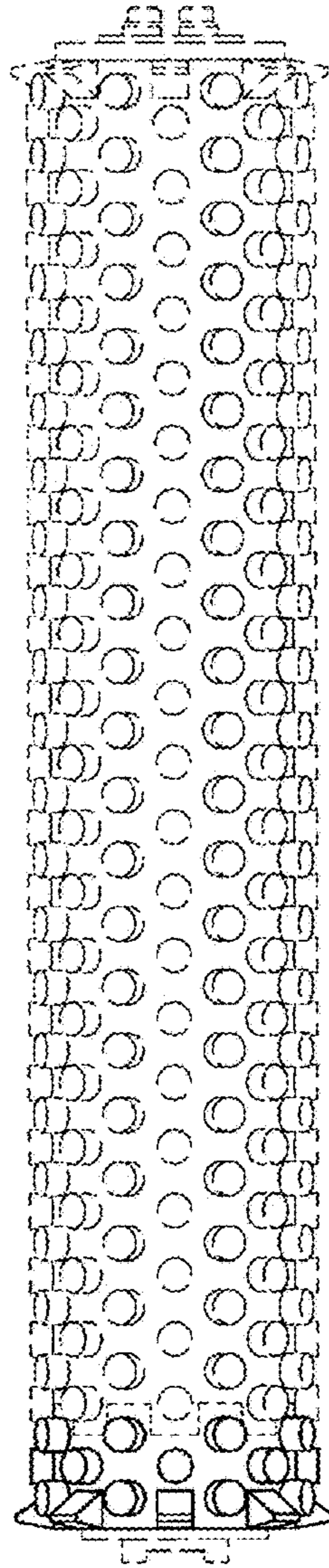


Fig.2

Fig.3



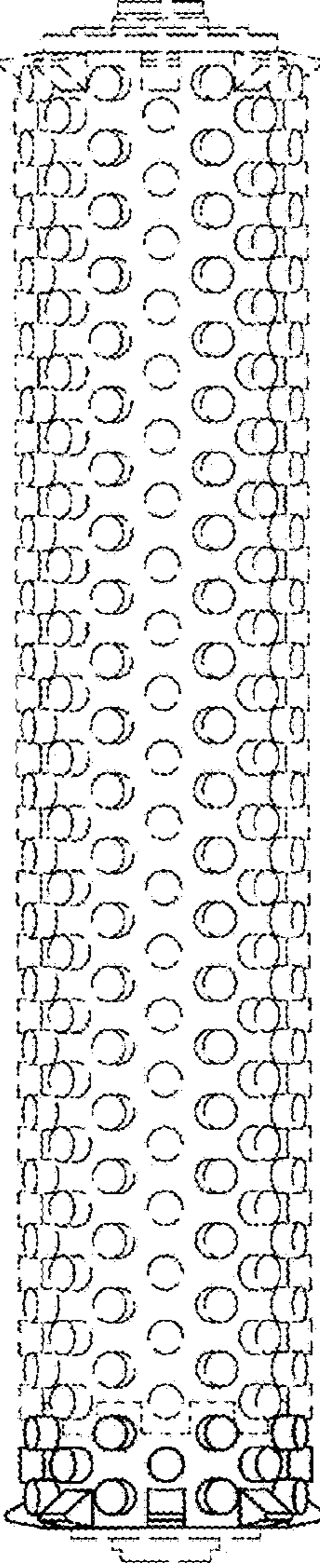


Fig.4

Fig.5

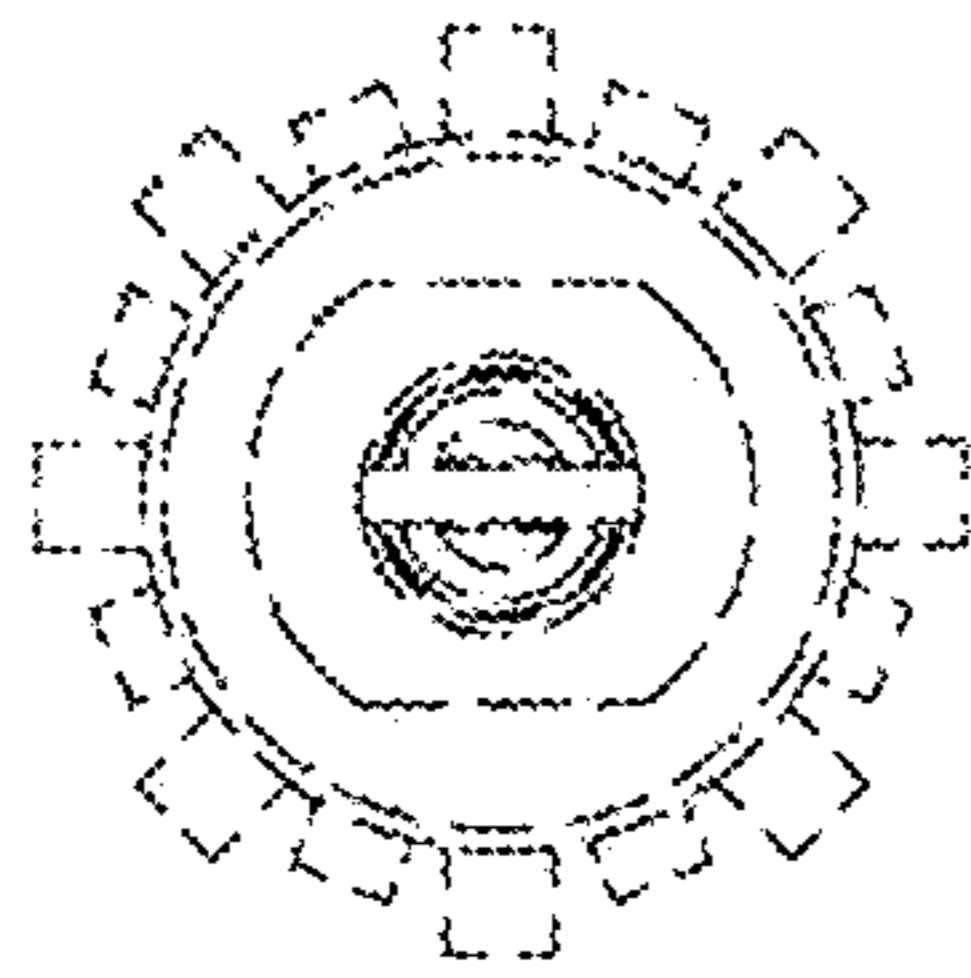


Fig.6

