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(12) **United States Design Patent** (10) **Patent No.:** **US D816,820 S**
Satoh et al. (45) **Date of Patent:** **** May 1, 2018**

(54) **EXHAUST PIPE FOR WATER HEATER**

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

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(51) **LOC (11) Cl.** **23-03**

(52) **U.S. Cl.**
USPC **D23/322**

(58) **Field of Classification Search**
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D32/31
CPC ... F23J 13/02; F23J 11/00; F23J 13/025; F23J 13/04; F16L 11/111; F16L 11/15; B60H 1/00564; F23L 17/02
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,622,623	A *	12/1952	Michaudet	B29D 23/18 138/122
3,789,615	A *	2/1974	Maroschak	E02B 11/005 138/121
D235,100	S *	5/1975	Maroschak	D23/266
4,865,362	A *	9/1989	Holden	F16L 11/111 138/109

(Continued)

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(57) **CLAIM**

The ornamental design for an exhaust pipe for water a heater, as shown and described.

DESCRIPTION

FIG. 1 is a front view of a first embodiment and a second embodiment of an exhaust pipe for a water heater according to the present invention, in an unflexed and unbent state.

FIG. 2 is a top plan view applicable to both the first embodiment and the second embodiment of the exhaust pipe.

FIG. 3 is a right side view applicable to both the first embodiment and the second embodiment of the exhaust pipe, the left side view being the same.

FIG. 4 is a cross-sectional view taken along a cut line 4-4 of FIG. 1, showing the first embodiment of the exhaust pipe.

FIG. 5 is a partially enlarged view of a cross-sectional area taken along lines 5-5 in FIG. 4 according to the first embodiment of the exhaust pipe for a water heater.

FIG. 6 is a cross-sectional view taken along the cut line 6-6 of FIG. 1, and showing the second embodiment of the exhaust pipe for a water heater.

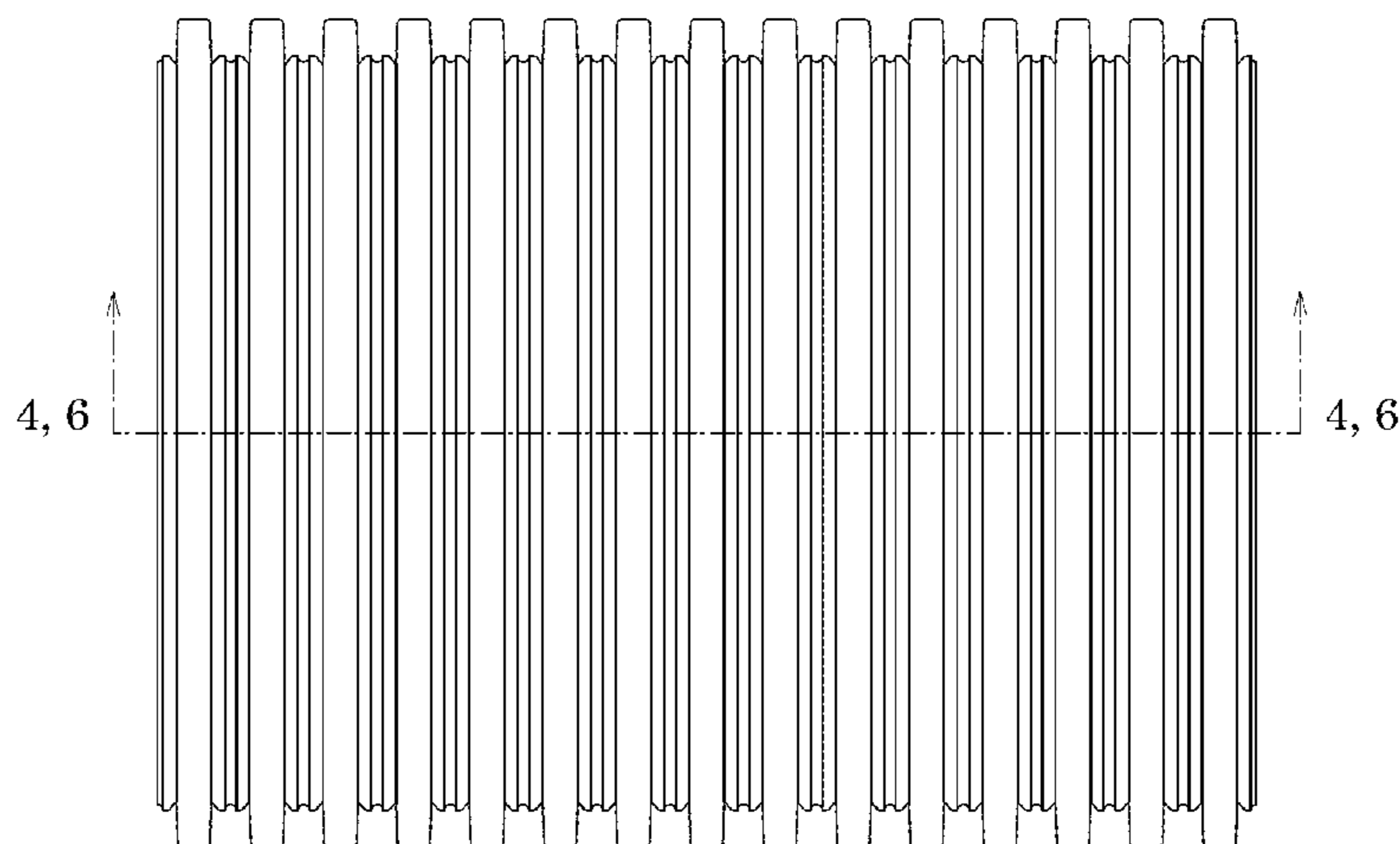
FIG. 7 is a partially enlarged view of a cross-sectional area taken along lines 7-7 in FIG. 6, according to the second embodiment of the exhaust pipe for a water heater.

FIG. 8 is a perspective view of the first embodiment of the exhaust pipe for a water heater, in a top and left elevational view.

FIG. 9 is a perspective view of the second embodiment of the exhaust pipe for a water heater, in a top and slight left elevational view; and,

FIG. 10 is a perspective view of the second embodiment of the exhaust pipe for a water heater, in a front and left elevational view.

1 Claim, 10 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D307,174 S * 4/1990 Bjorkman 138/121
5,792,532 A * 8/1998 Pflieger F16L 11/118
138/121
6,131,616 A * 10/2000 Tatsuta F16L 11/11
138/110
6,199,592 B1 * 3/2001 Siferd B29C 47/0023
138/109
6,394,143 B1 * 5/2002 Diels A47L 9/24
138/121
8,210,573 B2 * 7/2012 Delmer F16L 25/0063
285/39
8,997,793 B2 * 4/2015 Baxter F16L 11/111
138/121
2009/0072535 A1 * 3/2009 Baumann F16L 25/0045
285/311
2012/0255329 A1 * 10/2012 Wanweerakul D06F 39/083
68/208
2012/0318395 A1 * 12/2012 Baxter F16L 11/111
138/40
2013/0130606 A1 * 5/2013 Brunette F23J 13/02
454/47
2015/0240974 A1 * 8/2015 Gamble F16J 15/00
285/374
2016/0018027 A1 * 1/2016 Douglass, III B29C 47/0004
138/140
2017/0122556 A1 * 5/2017 Matsunaga F23J 13/02
2017/0167640 A1 * 6/2017 Inao F16L 11/15

* cited by examiner

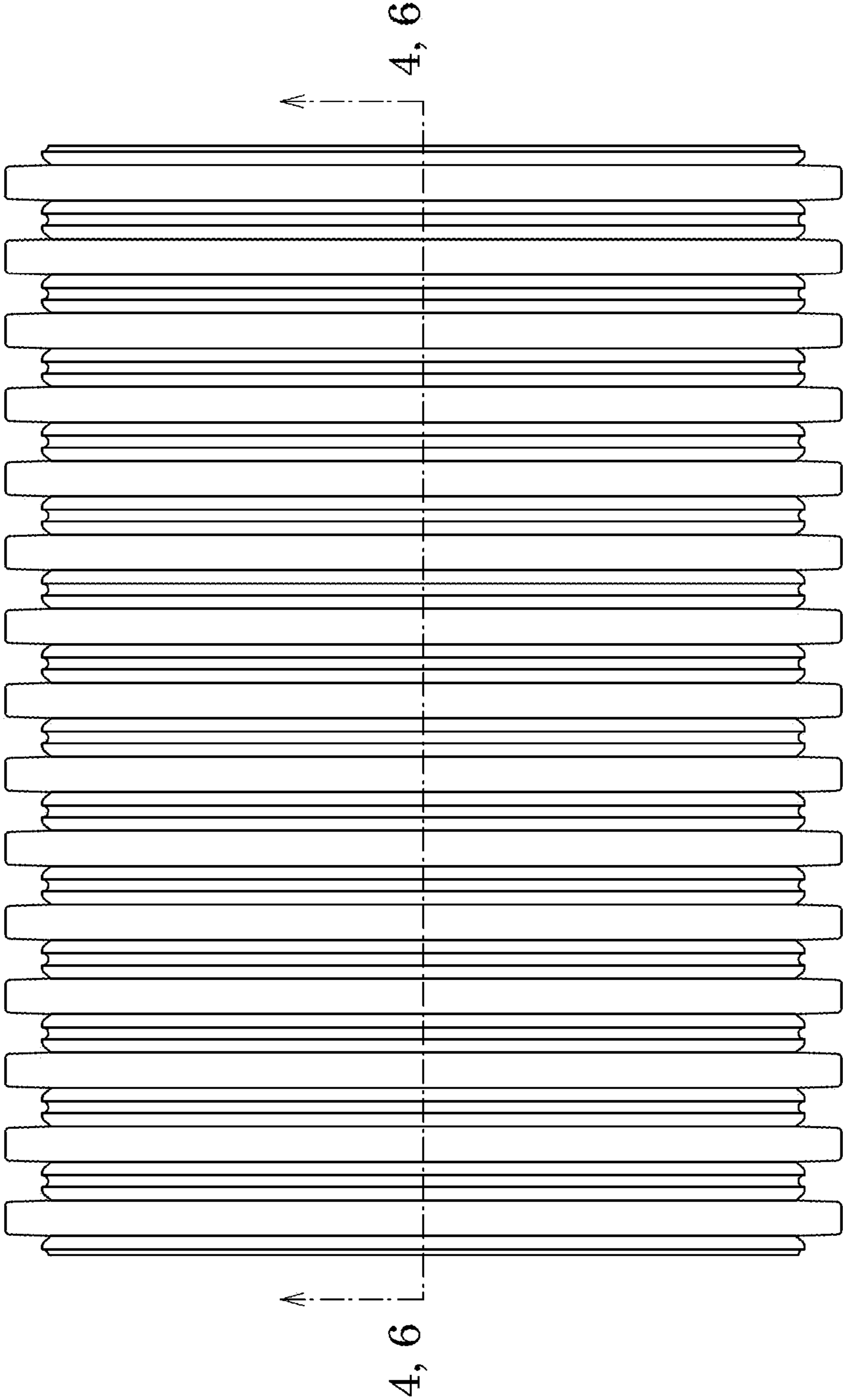


Fig. 1

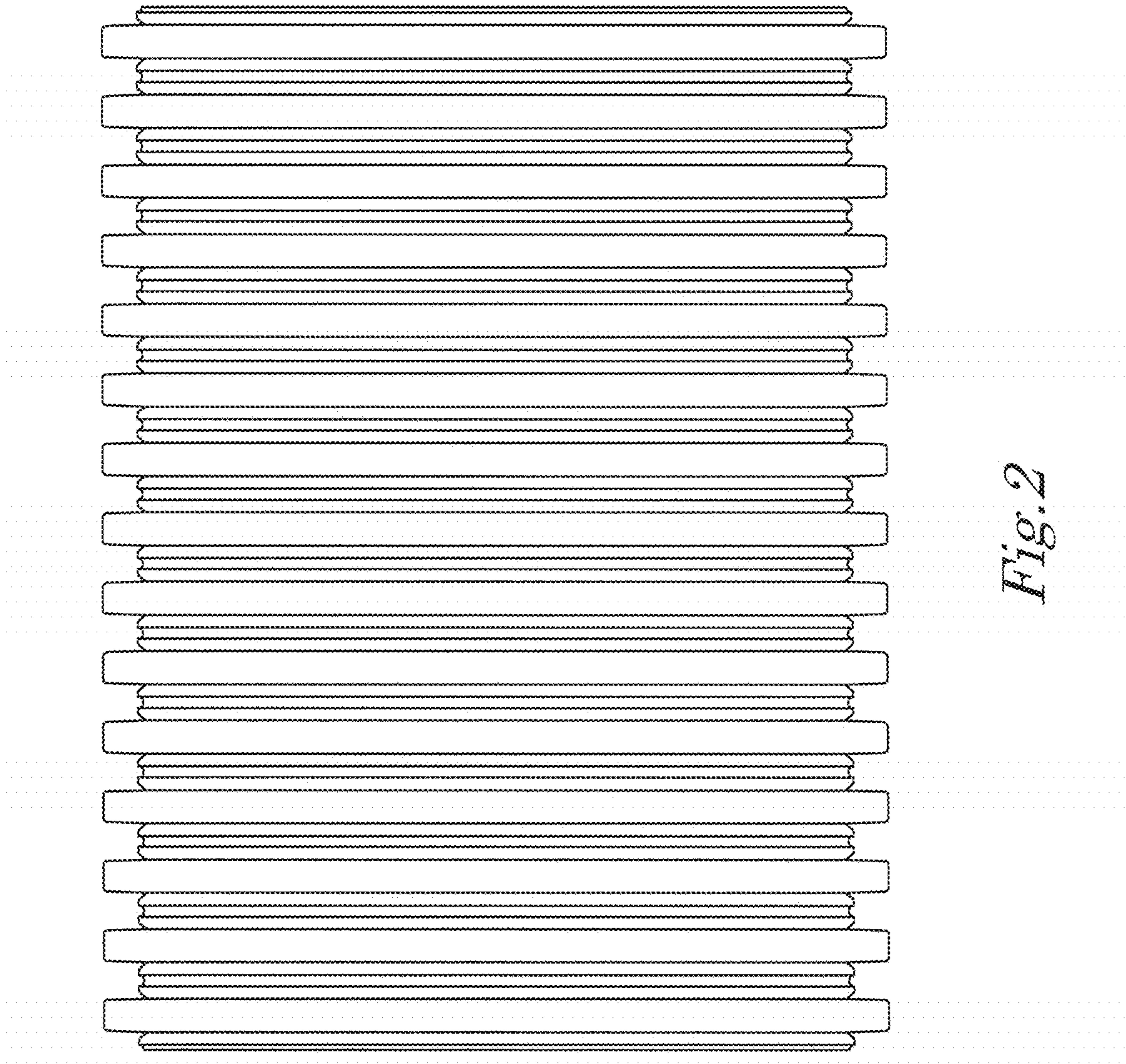


Fig. 2

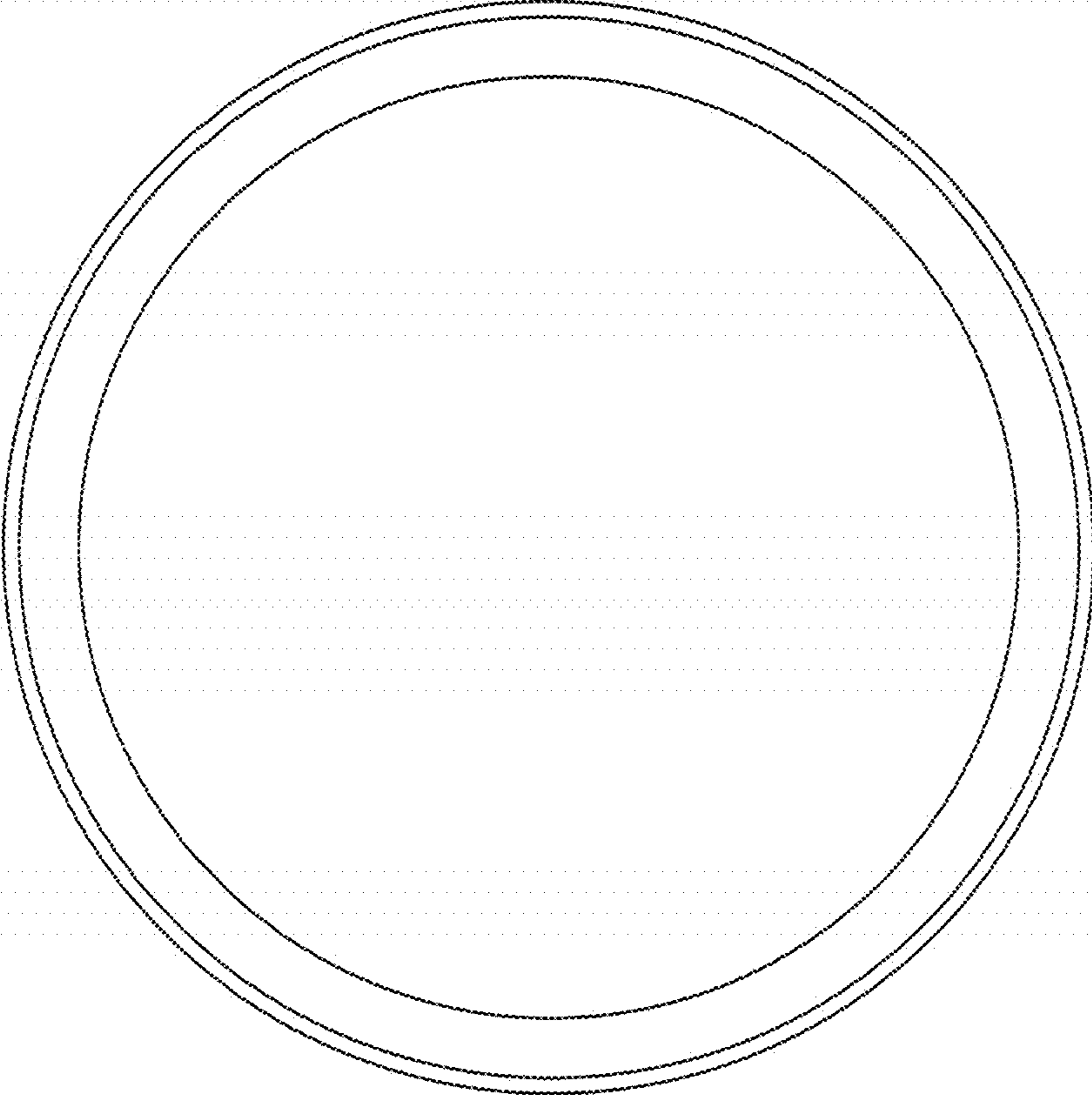


Fig. 3

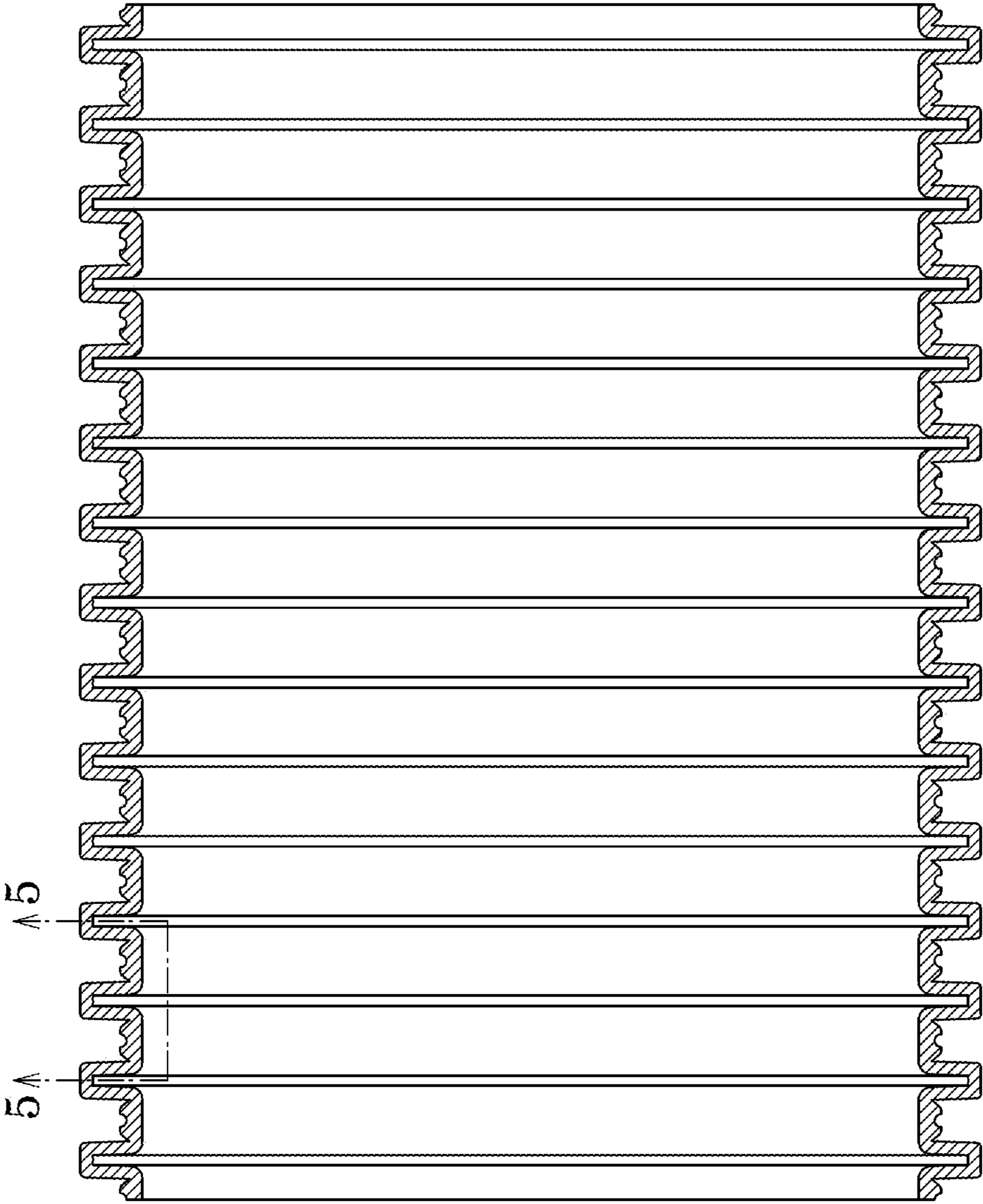


Fig. 4

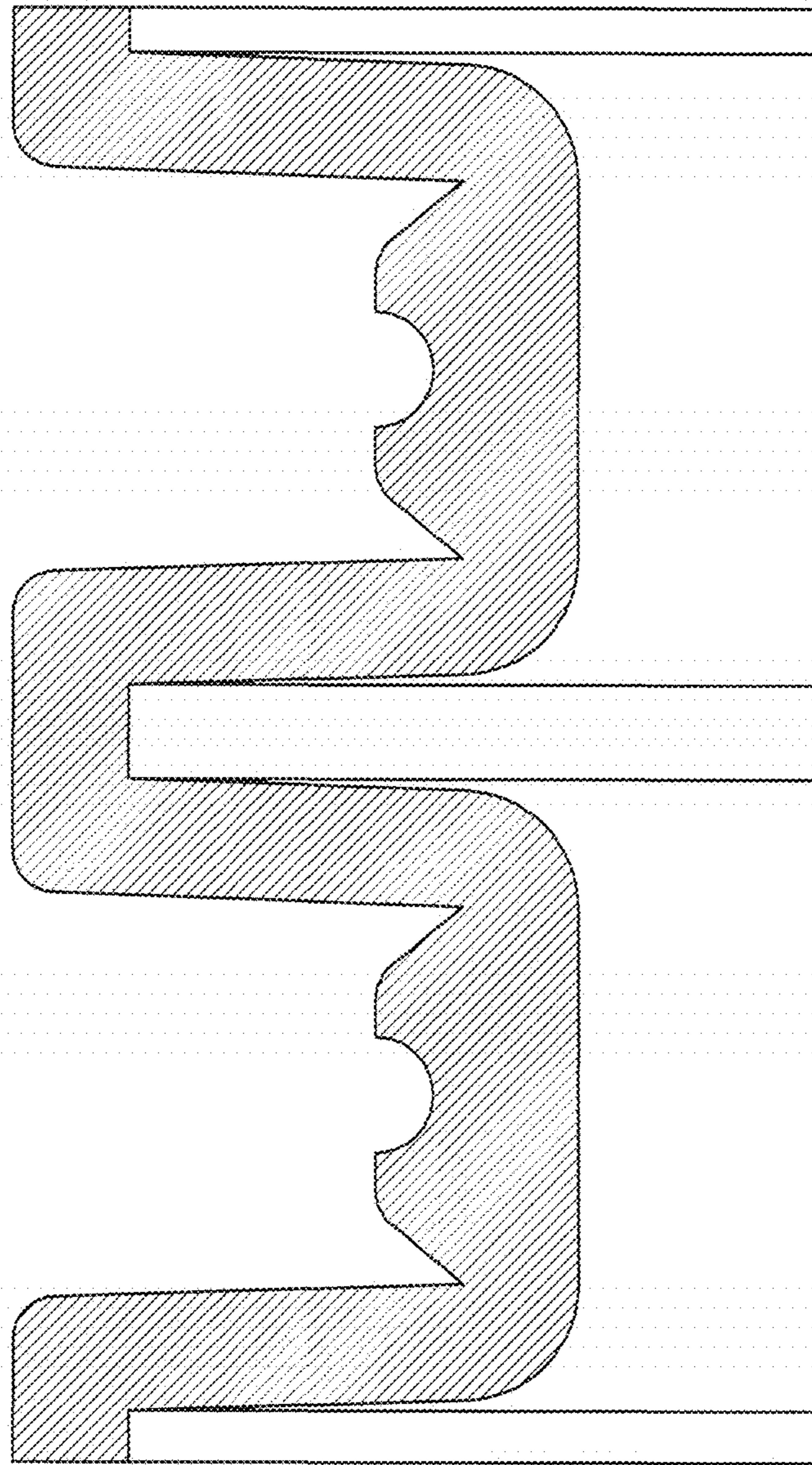


Fig. 5

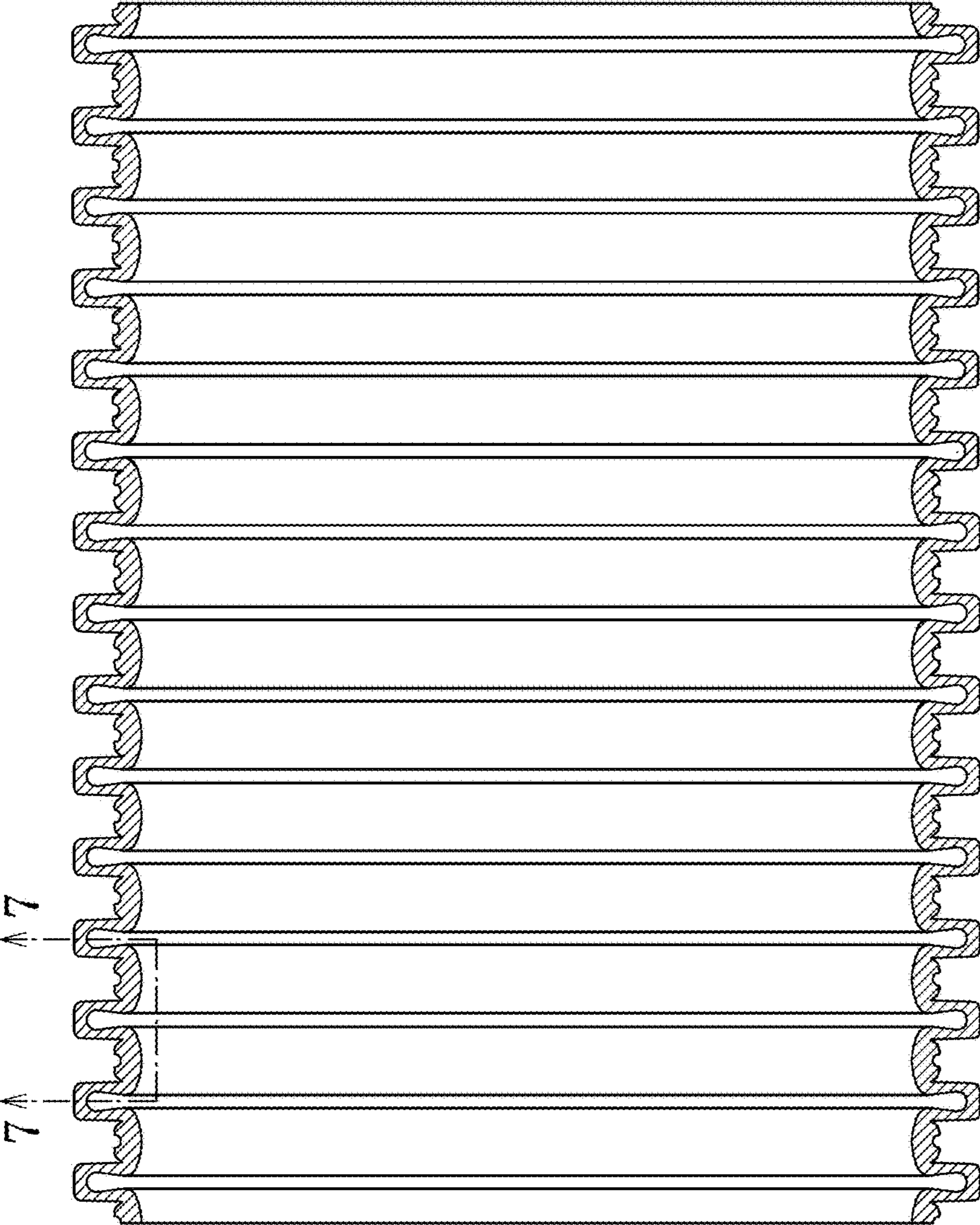


Fig. 6

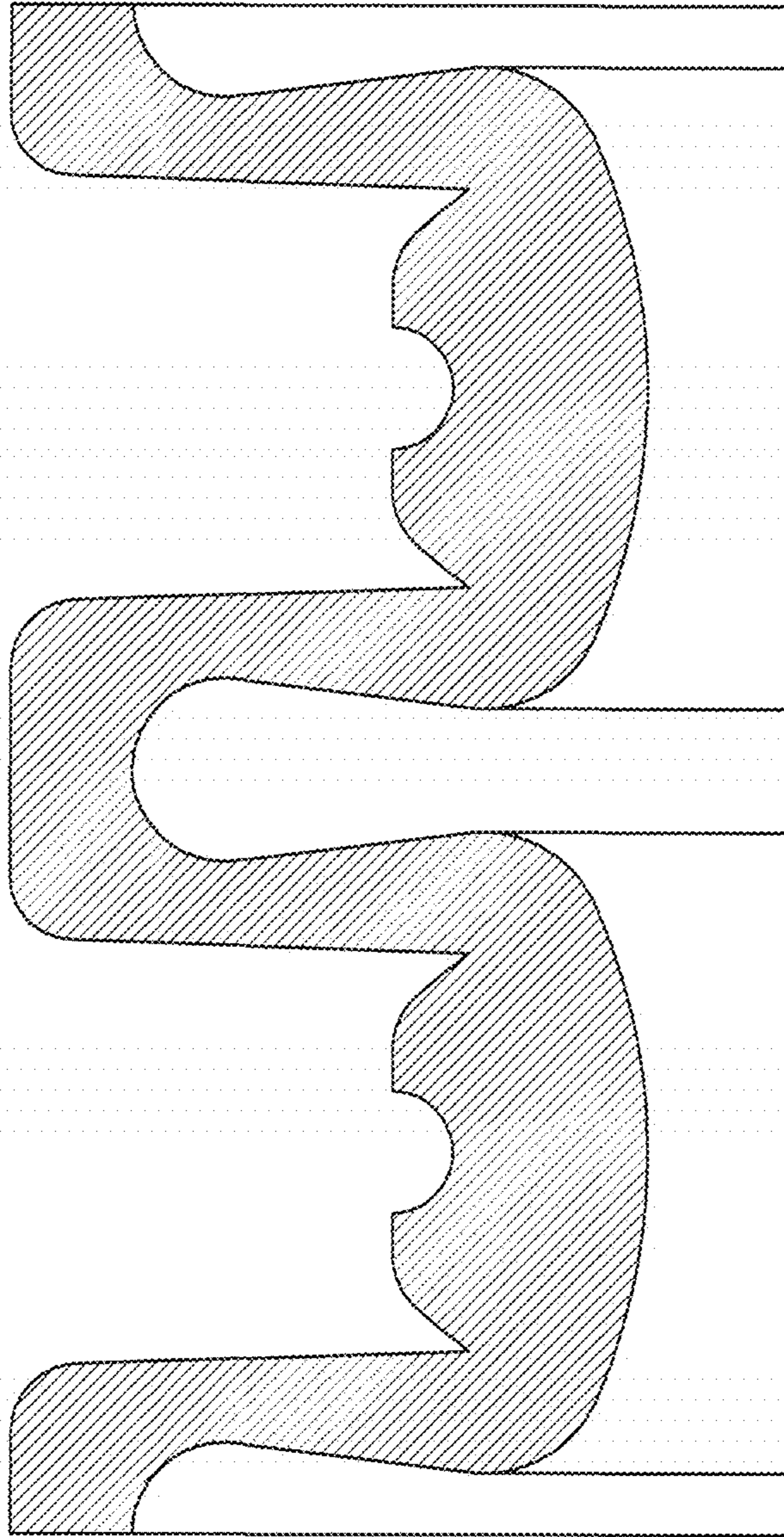


Fig. 7

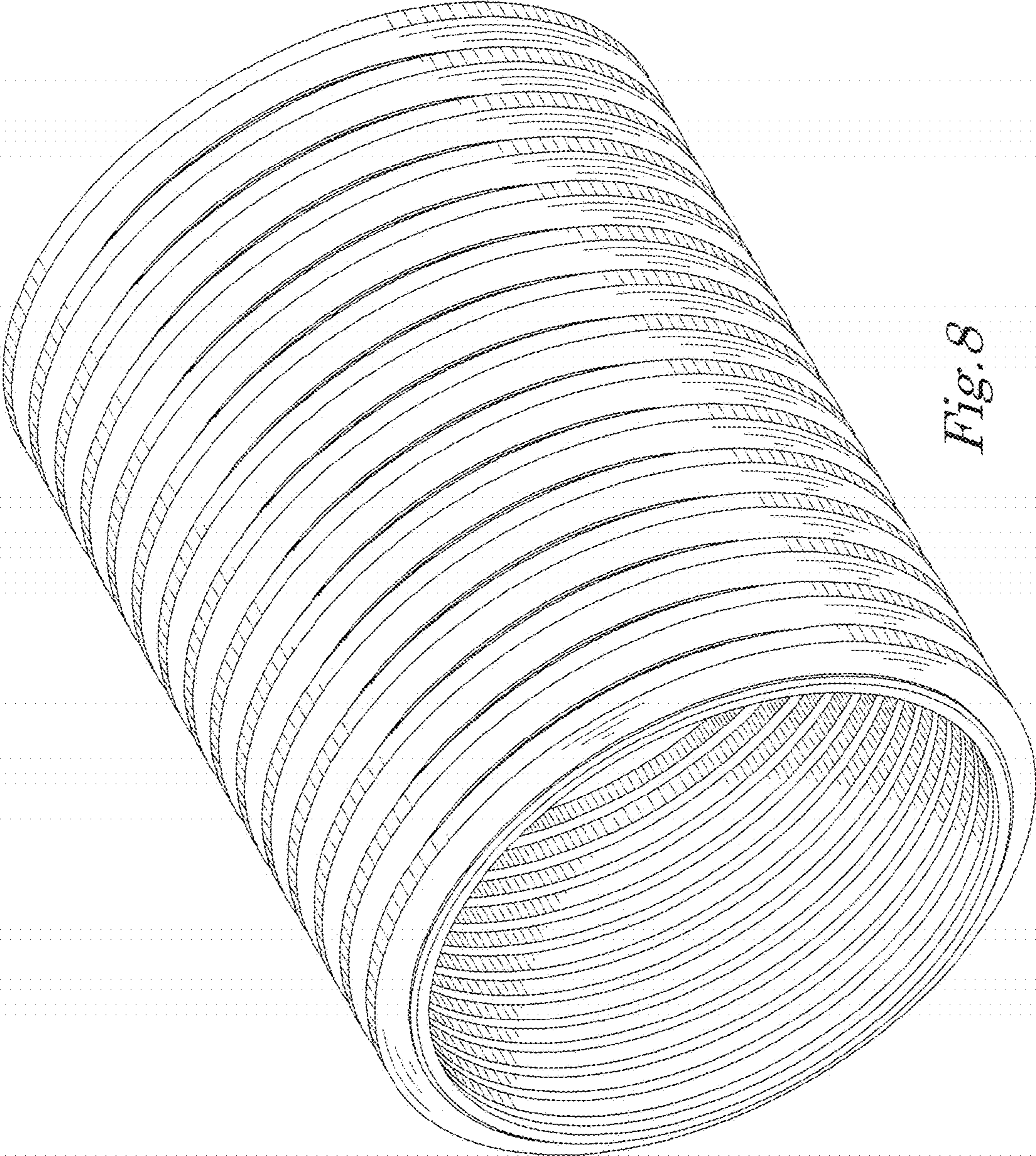


Fig. 8

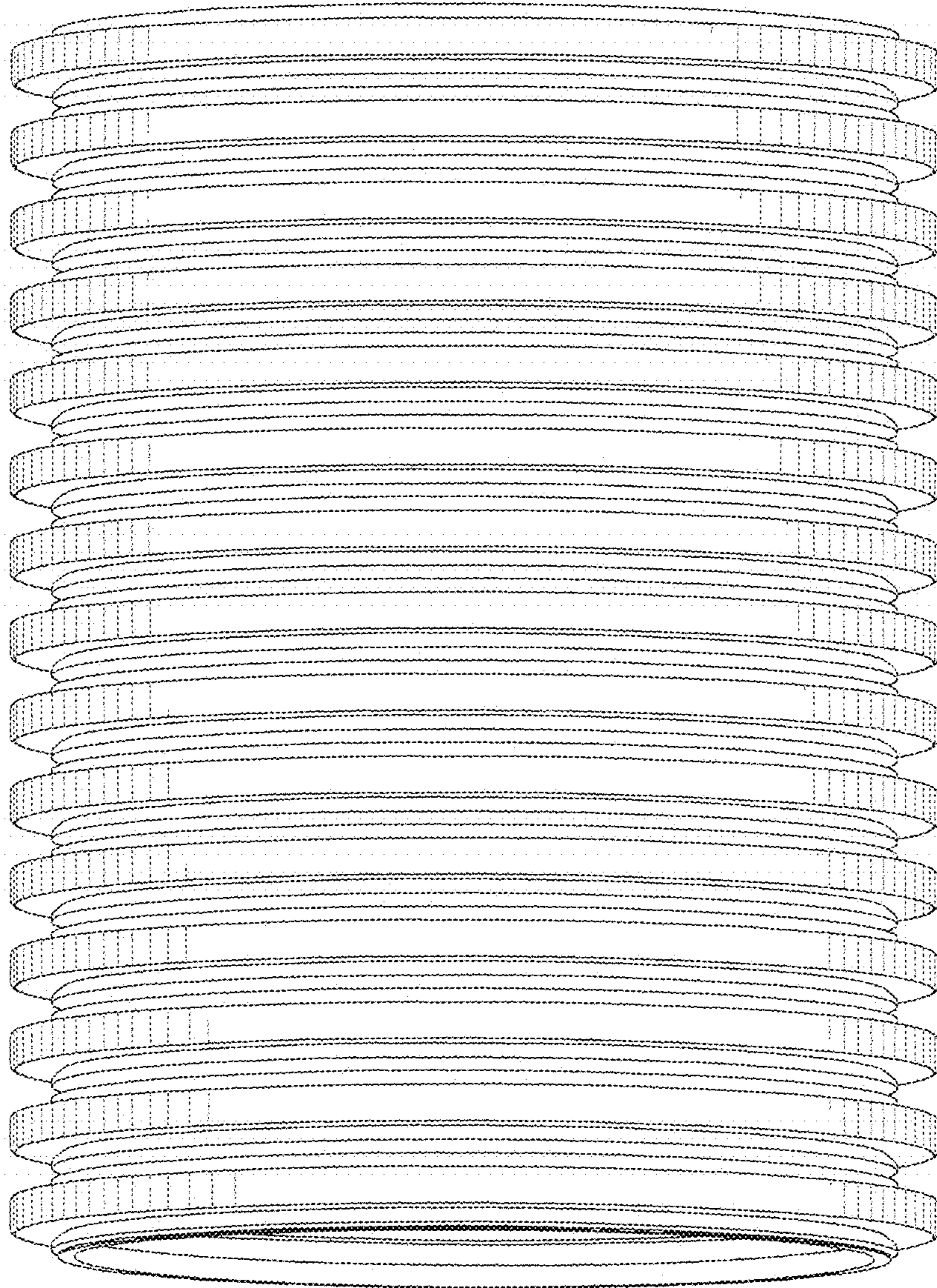


Fig. 9

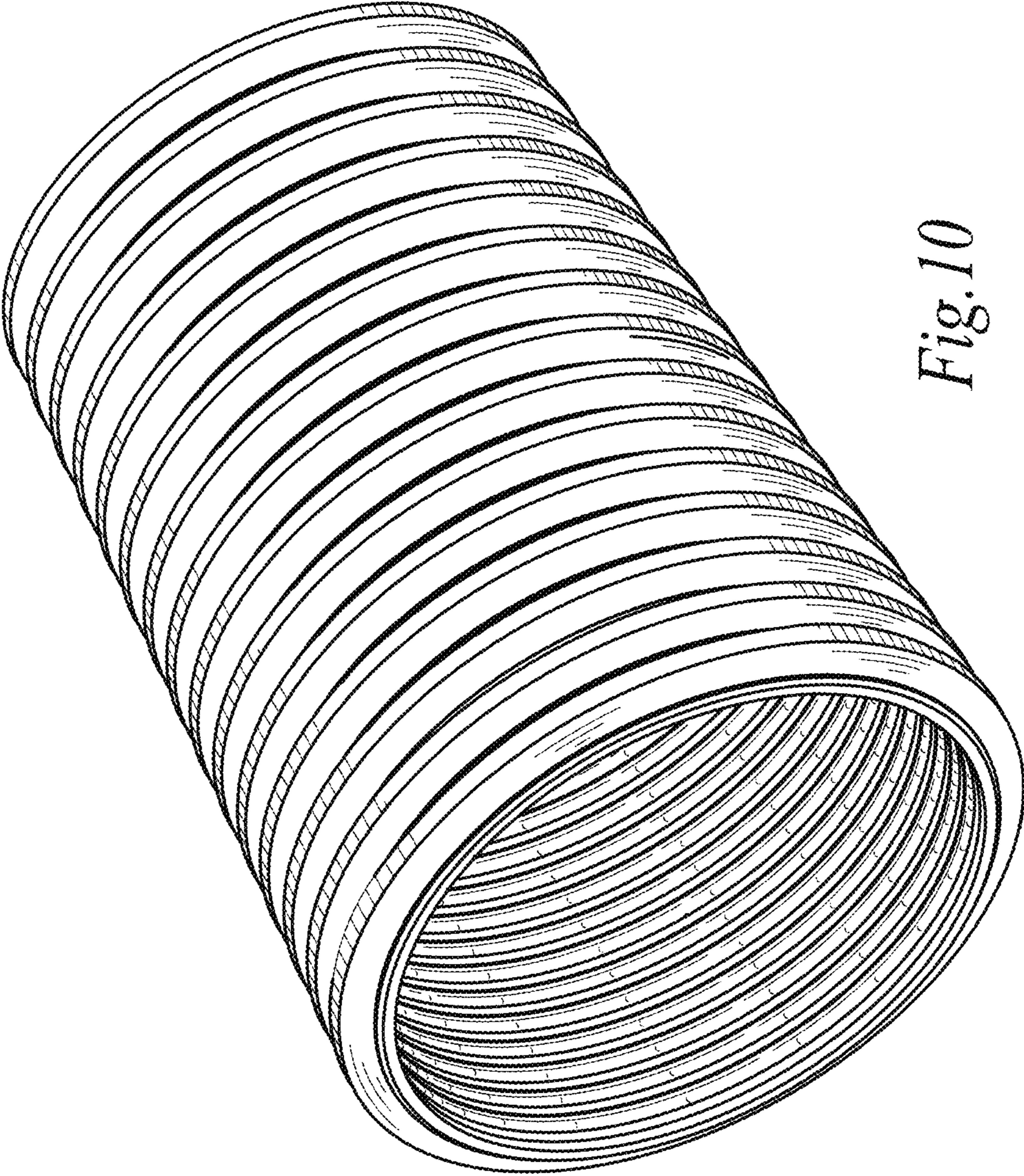


Fig. 10