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

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- (54) **FIN TUBE ASSEMBLY FOR HEAT EXCHANGER**
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- (\*\*) Term: **14 Years**
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- (51) **LOC (10) Cl.** ..... **23-03**
- (52) **U.S. Cl.**  
USPC ..... **D23/323**
- (58) **Field of Classification Search**  
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F28D 1/0471; F25B 39/04; F24F 1/16;  
F24F 1/36; F24F 1/38; F24F 1/46; F24F  
1/50; F25D 23/006; F28F 9/0132; F28F  
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See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

- D139,313 S \* 10/1944 Landerman ..... D23/323
- 4,967,830 A \* 11/1990 Eubank ..... F24F 13/30  
165/125
- 5,038,854 A \* 8/1991 Peterson, III ..... F28D 1/047  
165/125
- 5,538,075 A \* 7/1996 Eubank ..... F24F 13/30  
165/125
- 5,954,125 A \* 9/1999 Mantegazza ..... B21D 53/085  
165/149
- 6,345,666 B1 \* 2/2002 Conrad ..... F02G 1/0435  
165/141
- D532,499 S \* 11/2006 Nakagawa ..... D23/323

- 8,474,515 B2 \* 7/2013 Burgers ..... F28D 7/103  
165/109.1
- 8,944,155 B2 \* 2/2015 Martin ..... F02G 1/055  
165/168
- 2003/0209345 A1 \* 11/2003 Zweig ..... B23P 6/00  
165/154
- 2006/0108107 A1 \* 5/2006 Naukkarinen ..... F28D 1/0472  
165/163
- 2006/0275151 A1 \* 12/2006 Heins ..... F04D 29/588  
417/313
- 2008/0141525 A1 \* 6/2008 Breiding ..... B23K 1/0012  
29/726.5
- 2009/0084131 A1 \* 4/2009 Reifel ..... F24F 1/18  
62/515
- 2011/0041781 A1 \* 2/2011 Deivasigamani ..... F24H 1/186  
122/18.1
- 2011/0174013 A1 \* 7/2011 Moraes ..... F24F 1/16  
62/498
- 2011/0209857 A1 \* 9/2011 Naukkarinen ..... F28D 7/02  
165/164

(Continued)

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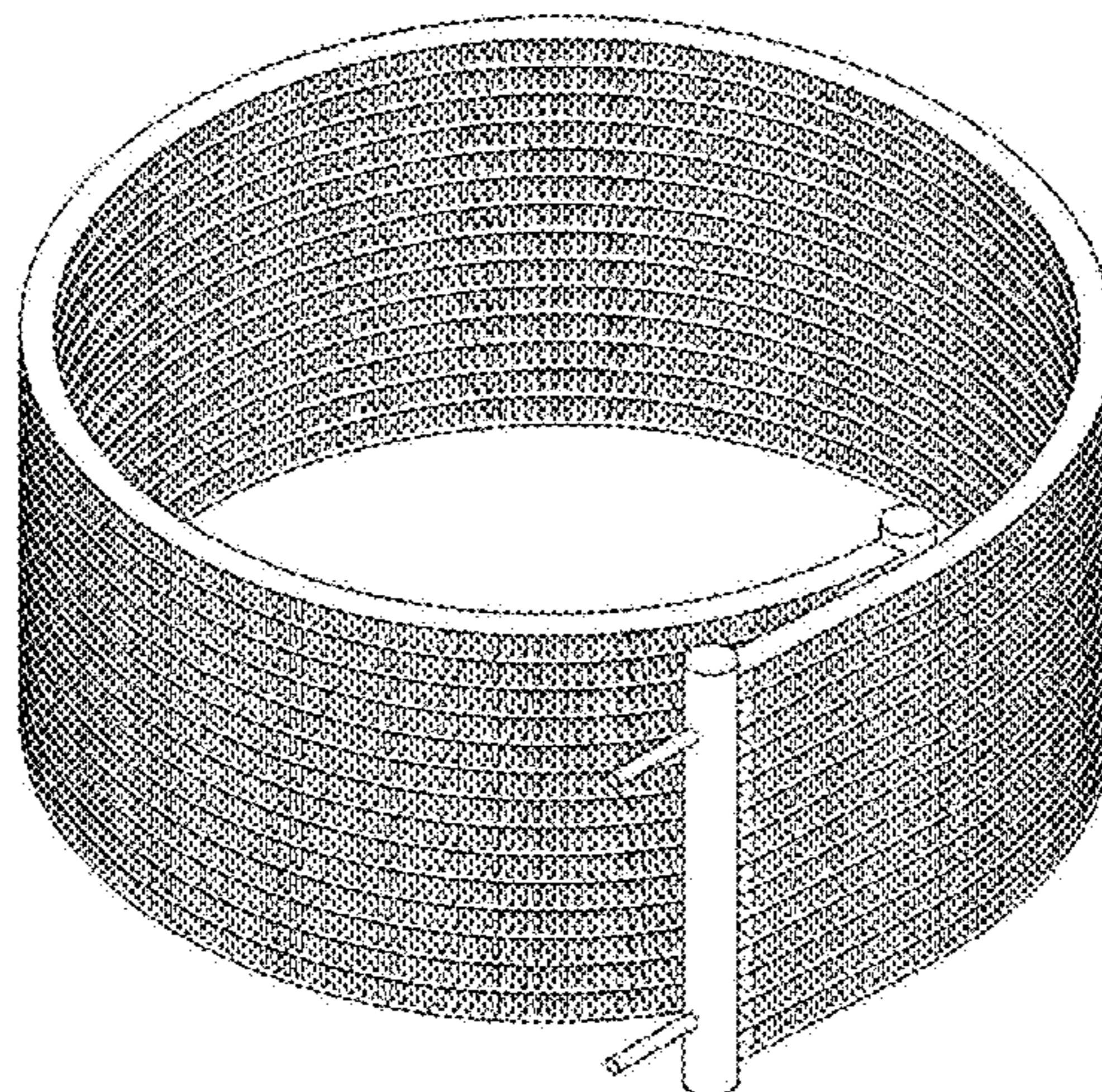
(57) **CLAIM**

The ornamental design for a fin tube assembly for heat exchanger, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of my design; FIG. 2 is a front elevational view thereof; FIG. 3 is a rear elevational view thereof; FIG. 4 is a left side elevational view thereof; FIG. 5 is a right side elevational view thereof; FIG. 6 is a top plan view thereof; and, FIG. 7 is a bottom plan view thereof.

**1 Claim, 3 Drawing Sheets**



(56)

**References Cited**

U.S. PATENT DOCUMENTS

2013/0008635 A1\* 1/2013 Alessandrini ..... F24H 1/43  
165/163  
2014/0151007 A1\* 6/2014 Quesada Saborio ... F28F 1/006  
165/181  
2015/0276263 A1\* 10/2015 Hayakawa ..... F24H 3/022  
392/360  
2015/0323229 A1\* 11/2015 Kim ..... F28D 1/0535  
165/104.21  
2016/0069595 A1\* 3/2016 Kim ..... F25B 13/00  
62/498  
2016/0084579 A1\* 3/2016 Showole ..... F28D 1/0477  
165/151  
2016/0216047 A1\* 7/2016 He ..... B21D 53/085  
2017/0059252 A1\* 3/2017 Zhou ..... F28D 1/053

\* cited by examiner



FIG. 1

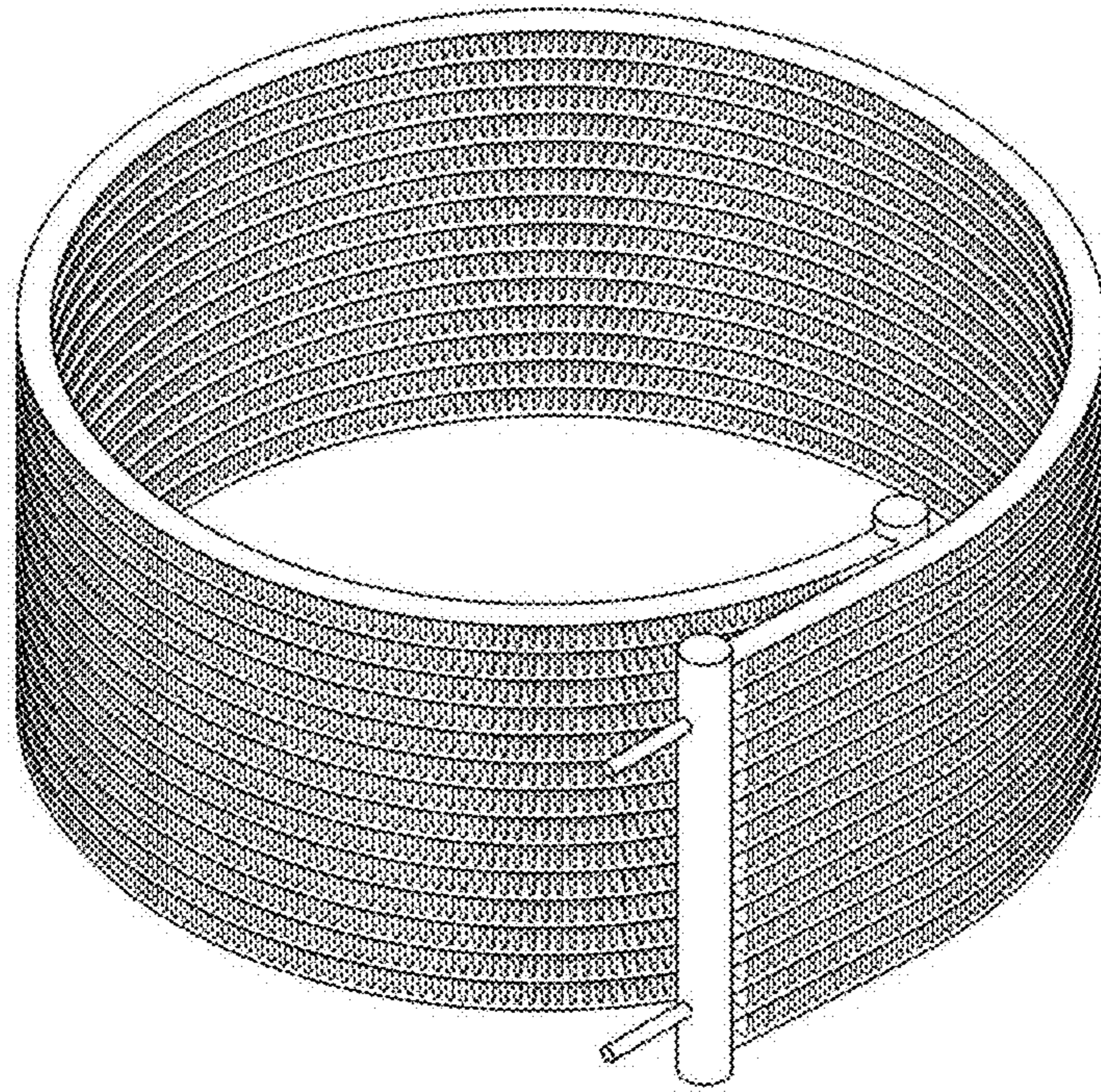


FIG. 2

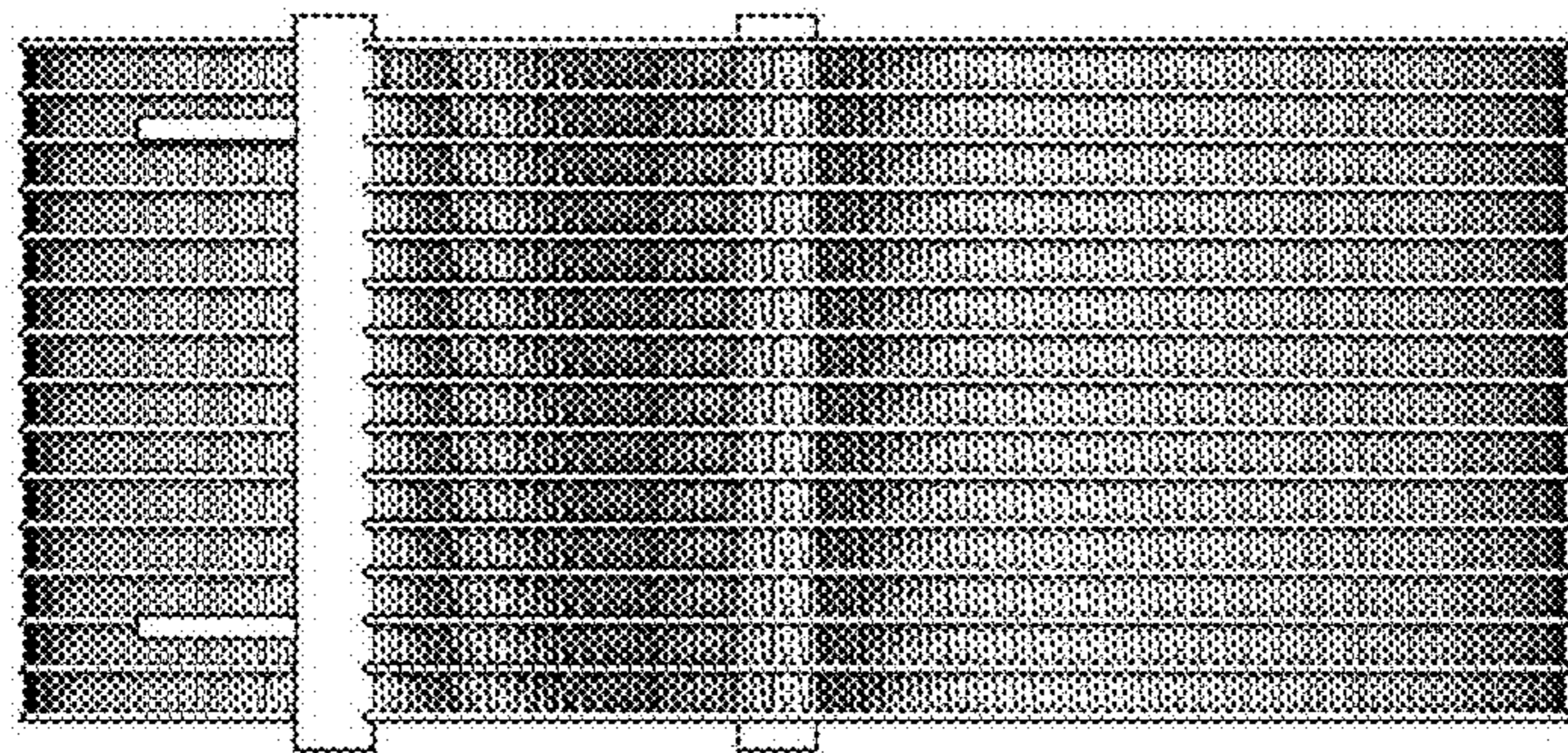




FIG. 3

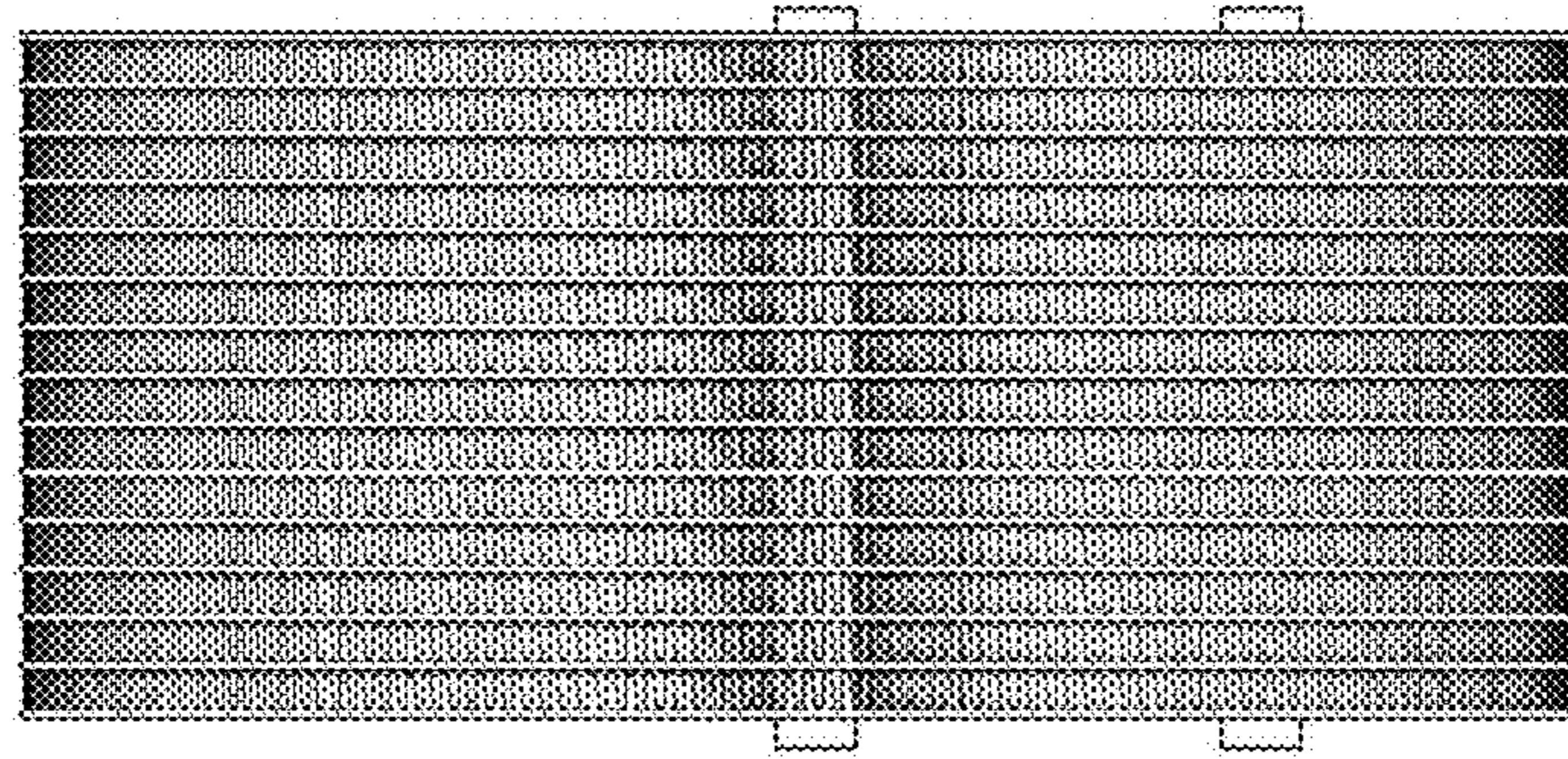


FIG. 4

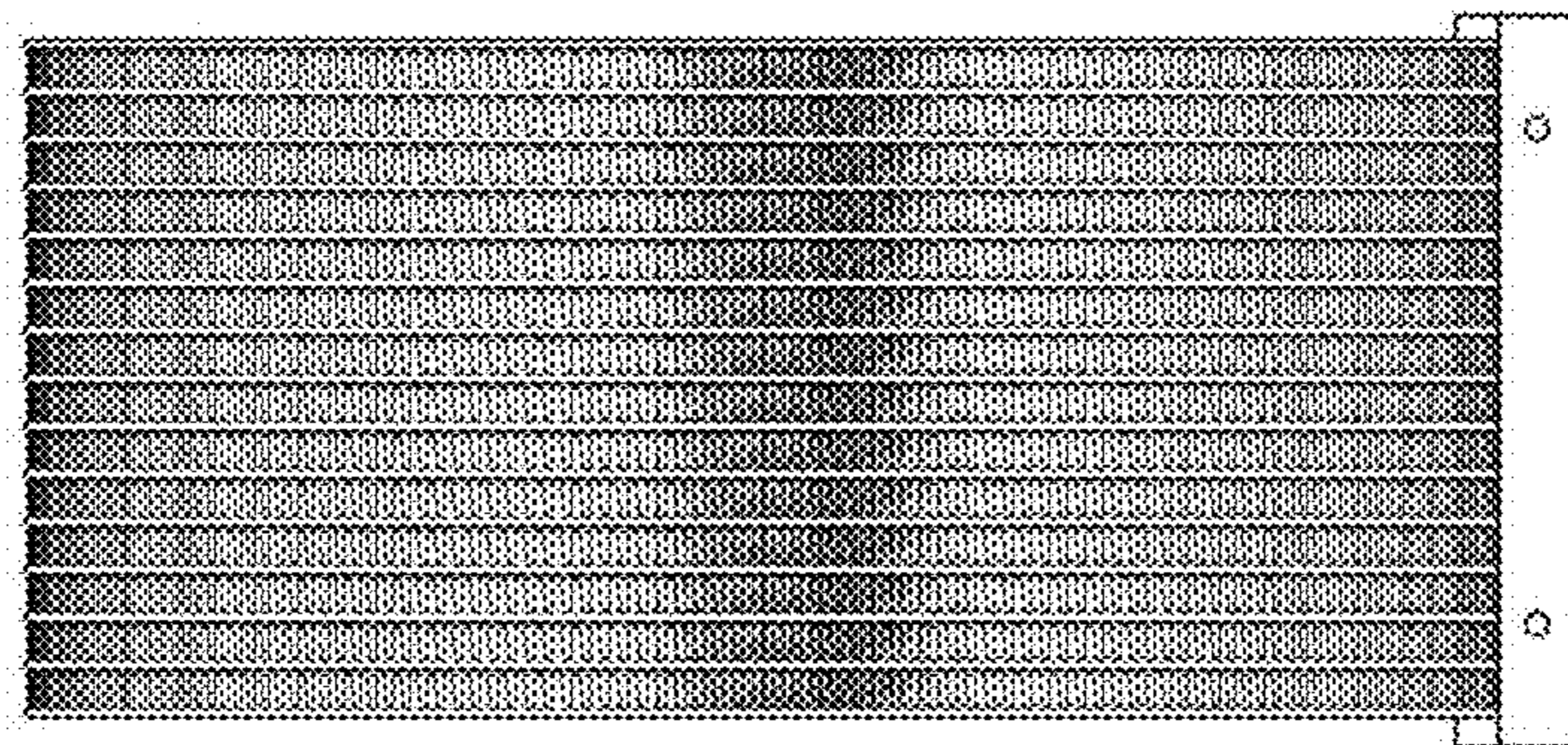


FIG. 5

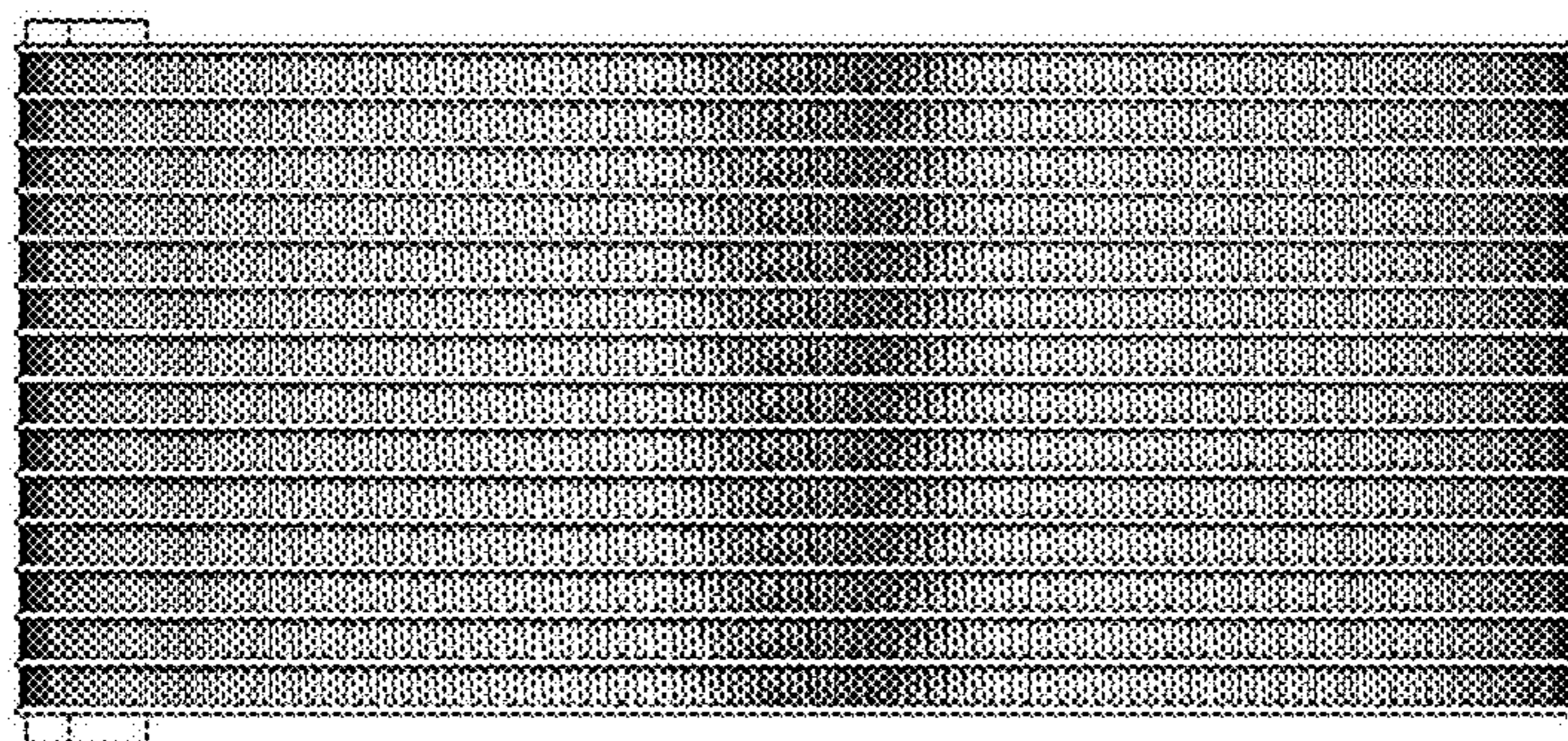




FIG. 6

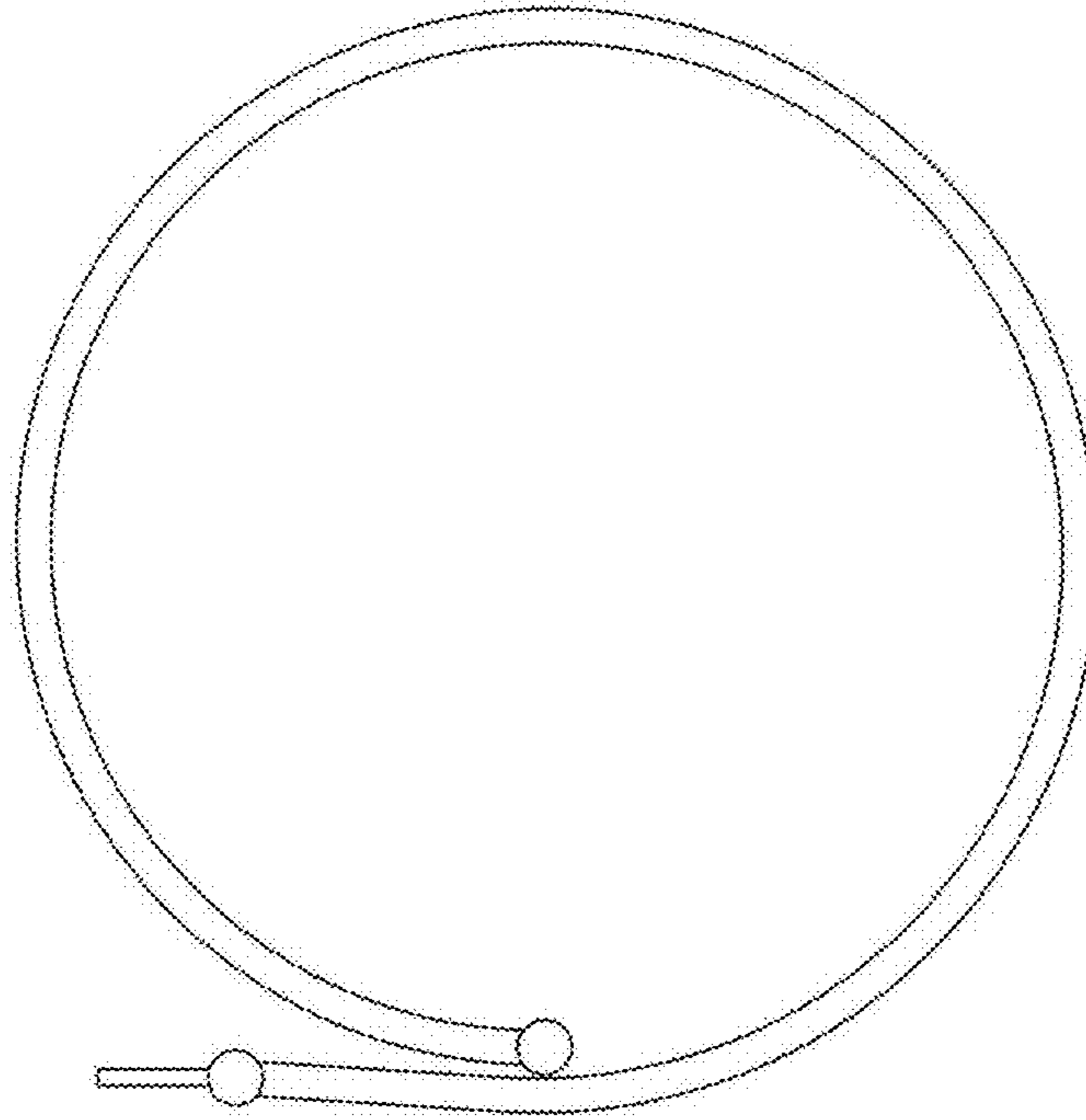


FIG. 7

