

[54] HEAT EXCHANGER

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[\*\*] Term: 14 Years

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[52] U.S. Cl. .... D23/136

[58] Field of Search ..... D23/136; 165/162, 163, 165/157

FOREIGN PATENT DOCUMENTS

2100485	7/1971	Fed. Rep. of Germany	.....	165/163
2734060	2/1979	Fed. Rep. of Germany	.....	165/163
3016781	11/1981	Fed. Rep. of Germany	.....	165/163
122457	9/1979	Japan	.....	165/162
2075172	11/1981	United Kingdom	.....	165/163

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[57] CLAIM

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

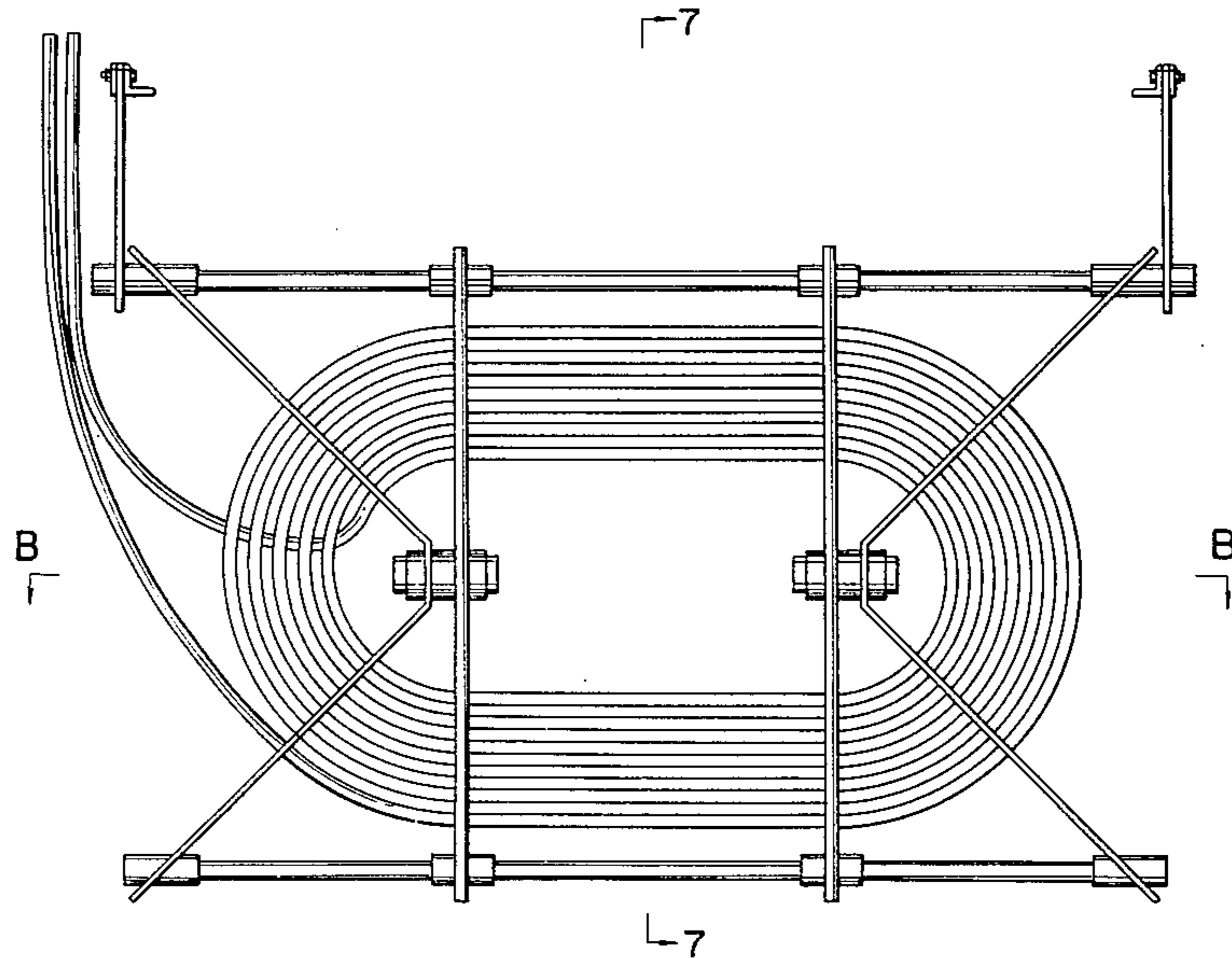
DESCRIPTION

FIG. 1 is a front elevational view of a heat exchanger, showing my new design;  
 FIG. 2 is a rear elevational view thereof;  
 FIG. 3 is a left side elevational view thereof;  
 FIG. 4 is a right side elevational view thereof;  
 FIG. 5 is a top plan view thereof;  
 FIG. 6 is a bottom plan view thereof;  
 FIG. 7 is a sectional view taken along line 7—7 of FIG. 1;  
 FIG. 8 is a sectional view taken along line 8—8 of FIG. 1.

[56] References Cited

U.S. PATENT DOCUMENTS

3,117,623	1/1964	Griebsch	.....	165/163
3,496,997	2/1970	Weber	.....	165/163
3,742,567	7/1973	Kaelin	.....	165/162 X
4,030,540	6/1977	Roma	.....	165/162 X
4,167,211	9/1979	Haller	.....	165/162 X
4,190,104	2/1980	Frei	.....	165/162
4,271,900	6/1981	Reitz	.....	165/162
4,343,626	8/1982	Reise et al.	.....	165/162



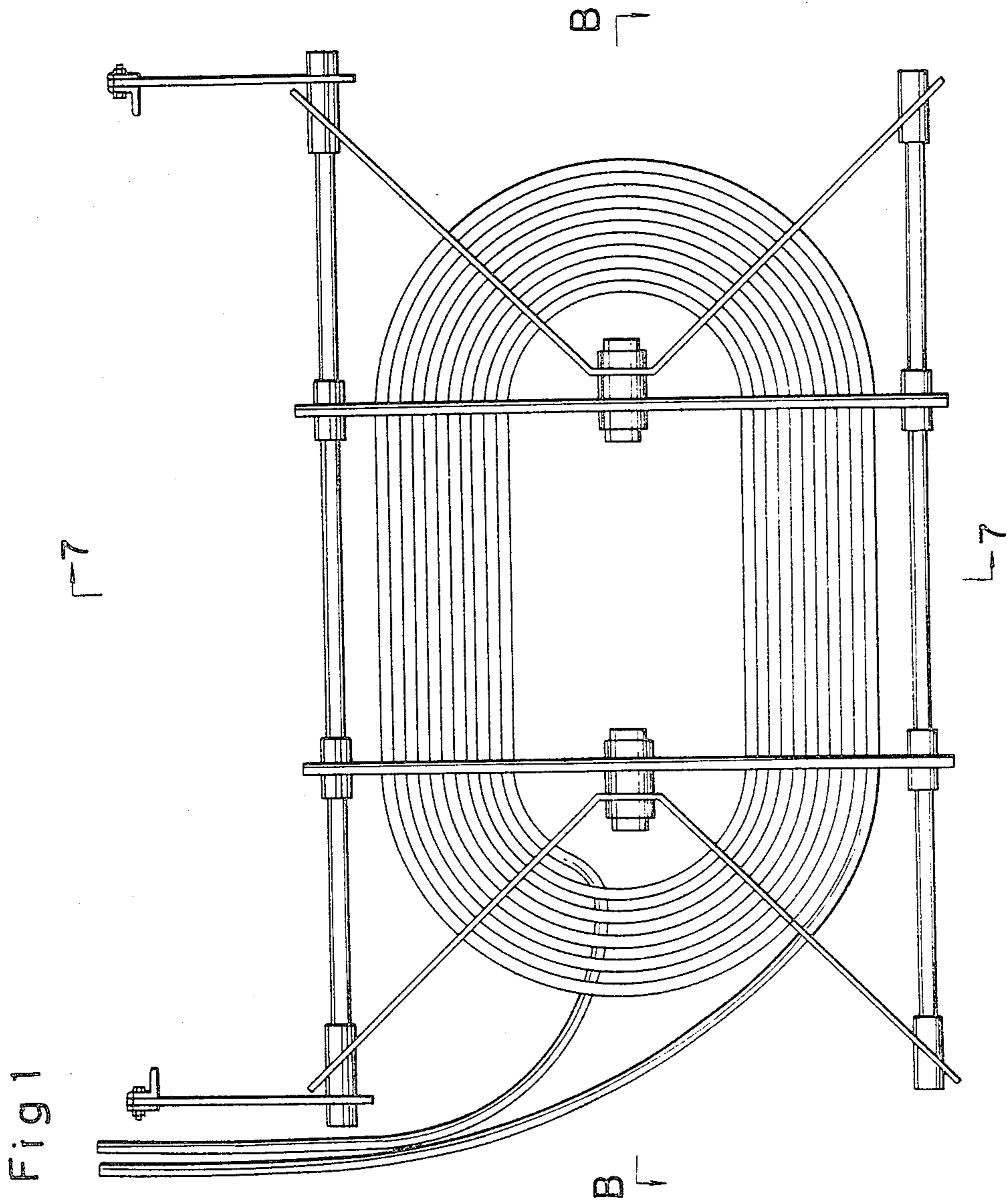


Fig 2

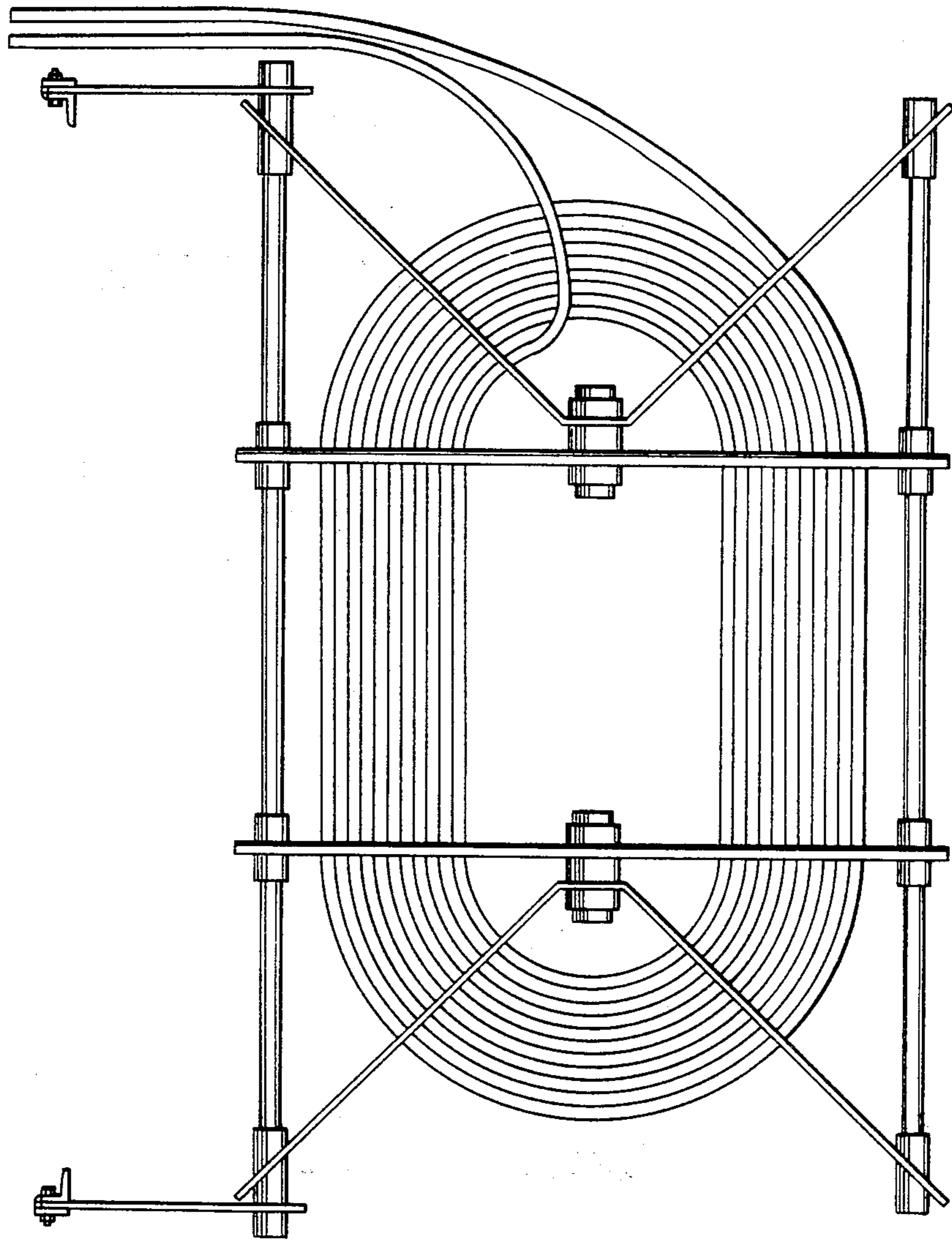


Fig 3

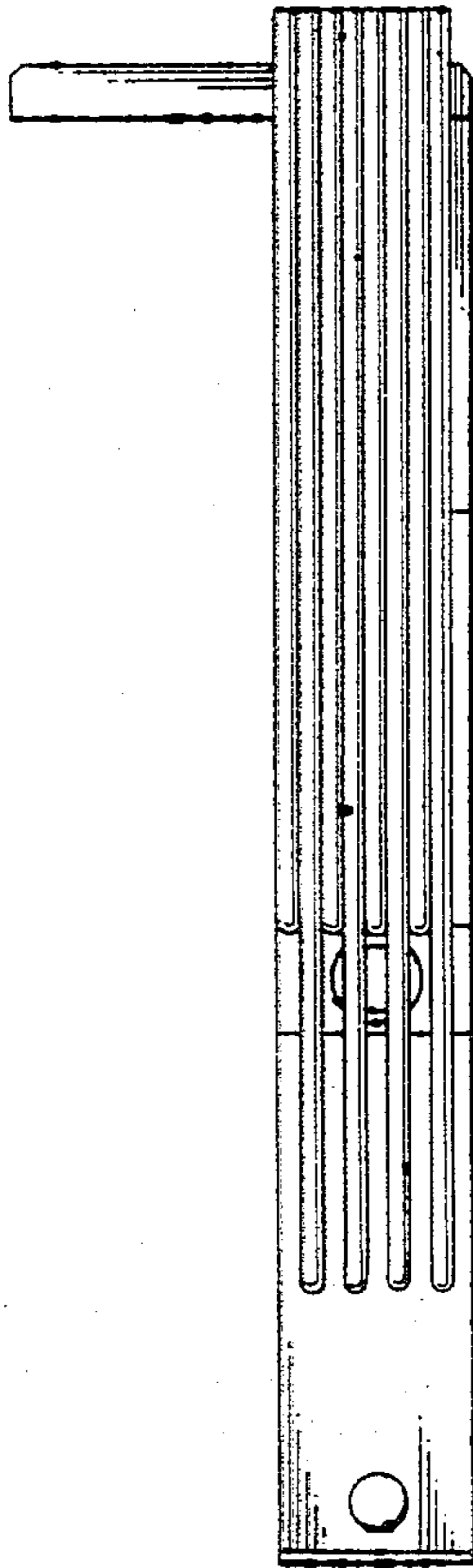


Fig 4

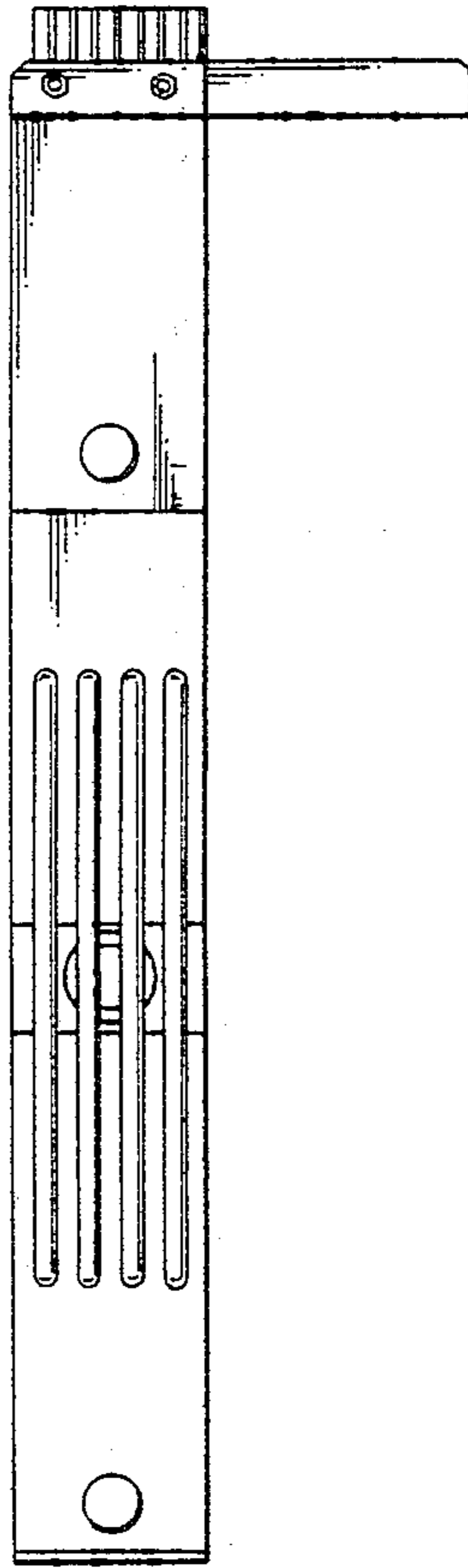


Fig 5

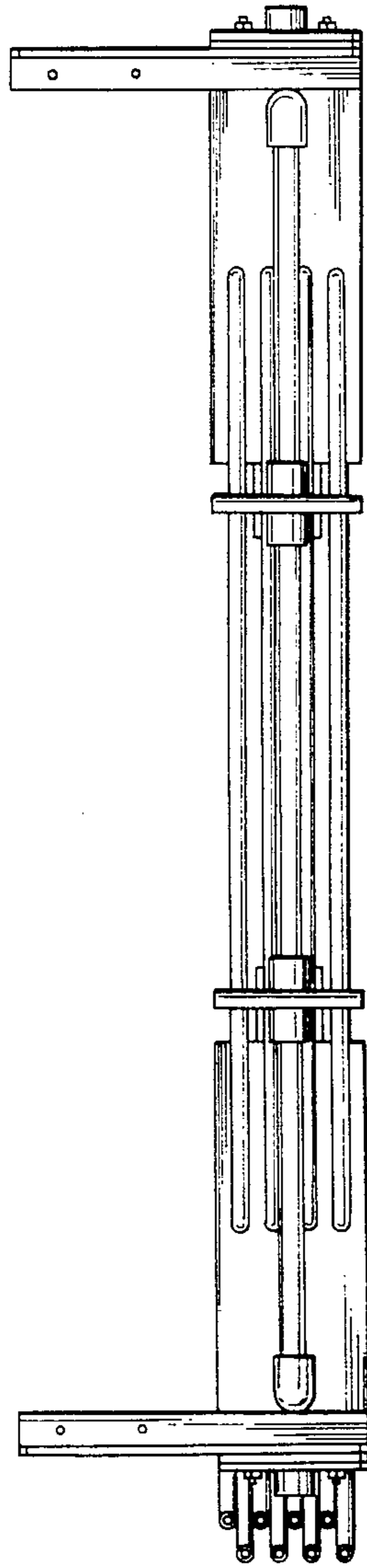


Fig 6

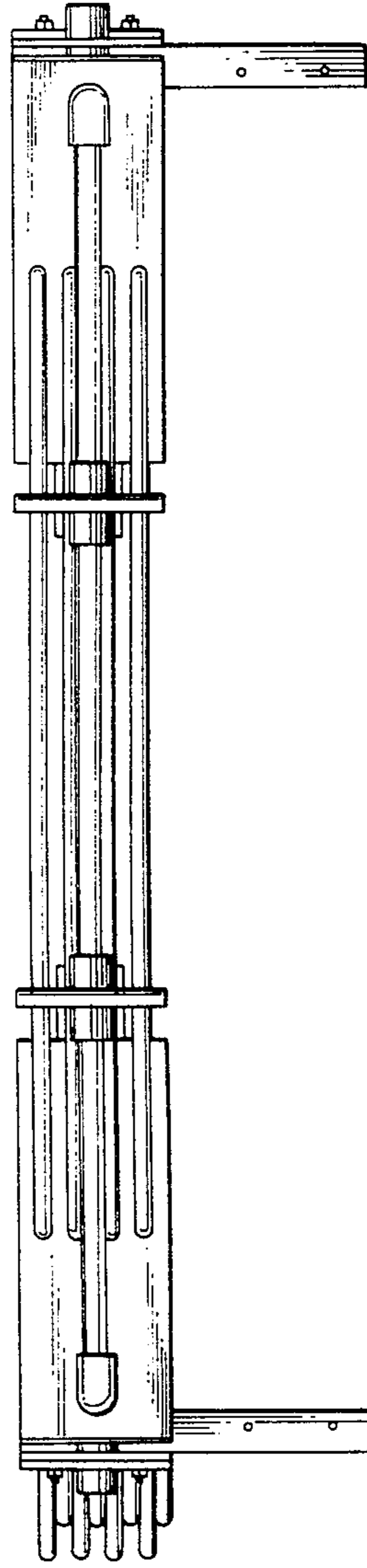


Fig 7

