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(12) **United States Design Patent**  
**Coy et al.**

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(45) **Date of Patent:** **\*\* Dec. 9, 2003**

(54) **PORTABLE COLLAPSIBLE  
TRIANGULARLY-SHAPED HEAT  
EXCHANGER HAVING UPWARDLY-  
DIRECTED EXHAUST**

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

(21) Appl. No.: **29/160,585**

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(52) **U.S. Cl.** ..... **D23/323**

(58) **Field of Search** ..... D23/314, 323,  
D23/330, 351; 165/144, 157, 135, 178,  
122; 312/236; 62/255.1, 259.4, 262, 263

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

- D210,725 S \* 4/1968 Lo Turco ..... D23/351
- 3,757,856 A 9/1973 Kun
- 4,125,151 A 11/1978 Hays et al.
- 4,240,257 A 12/1980 Rakowsky et al.
- D276,263 S \* 11/1984 Armbruster ..... D23/351 X
- 4,718,601 A 1/1988 Chike

- 4,835,882 A 6/1989 Dongelmans
- D303,285 S \* 9/1989 Mongeau ..... D23/314
- 4,896,411 A 1/1990 Dempsey
- 4,898,148 A 2/1990 Urso
- 5,024,267 A 6/1991 Yamaguchi et al.
- 5,147,200 A 9/1992 Knöpfel et al.
- 5,313,808 A 5/1994 Scuderi

\* cited by examiner

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(57) **CLAIM**

We claim the ornamental design for a portable collapsible triangularly-shaped heat exchanger having upwardly-directed exhaust, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of a portable collapsible triangularly-shaped heat exchanger having upwardly-directed exhaust, embodying the design of the present invention

FIG. 2 is a front elevational view thereof;

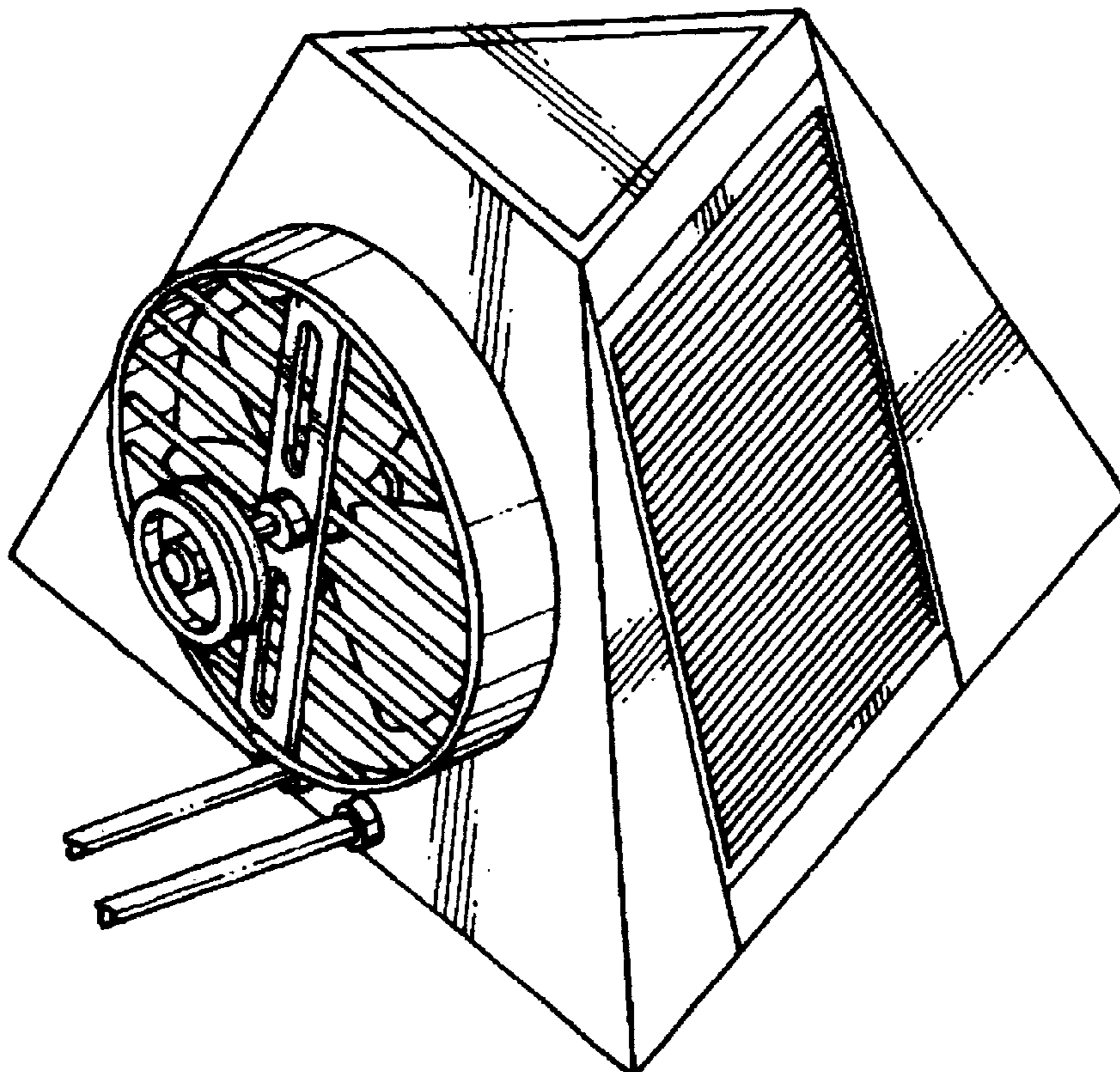
FIG. 3 is a rear elevational view thereof;

FIG. 4 is a left side elevational view thereof, the right side elevational view being a mirror image thereof;

FIG. 5 is a top plan view thereof; and,

FIG. 6 is a bottom plan view thereof.

**1 Claim, 4 Drawing Sheets**



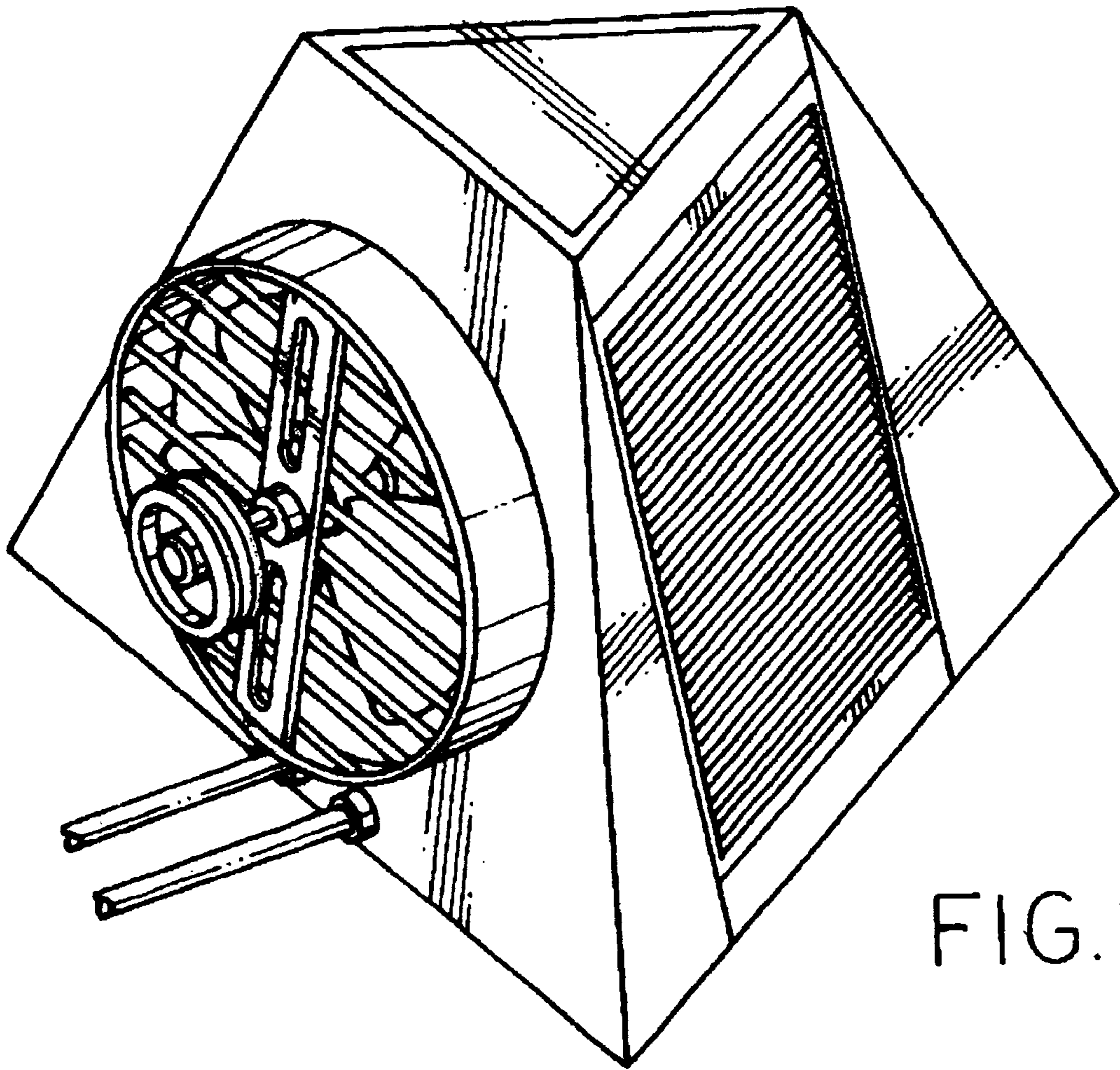


FIG. 1.

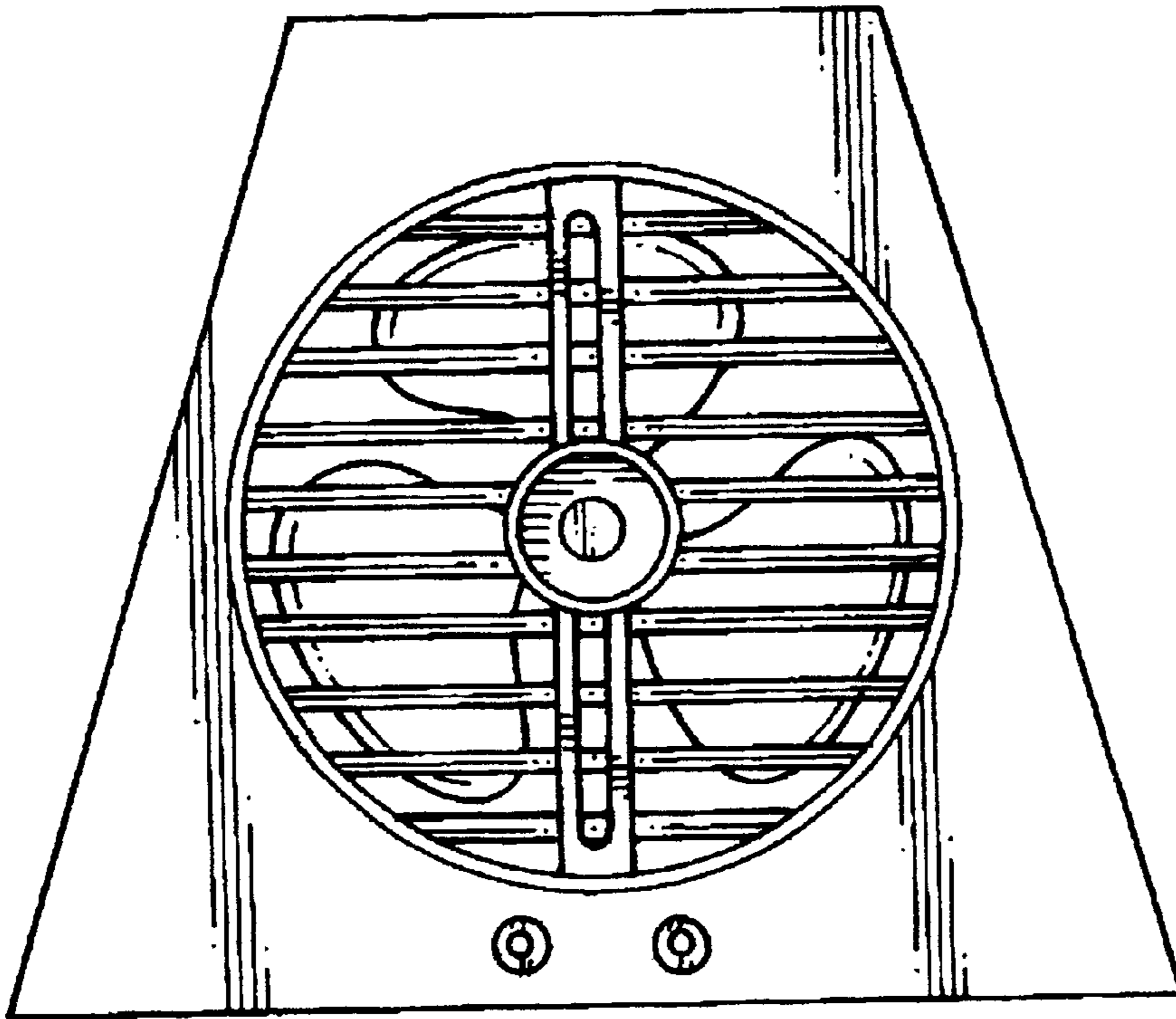


FIG. 2

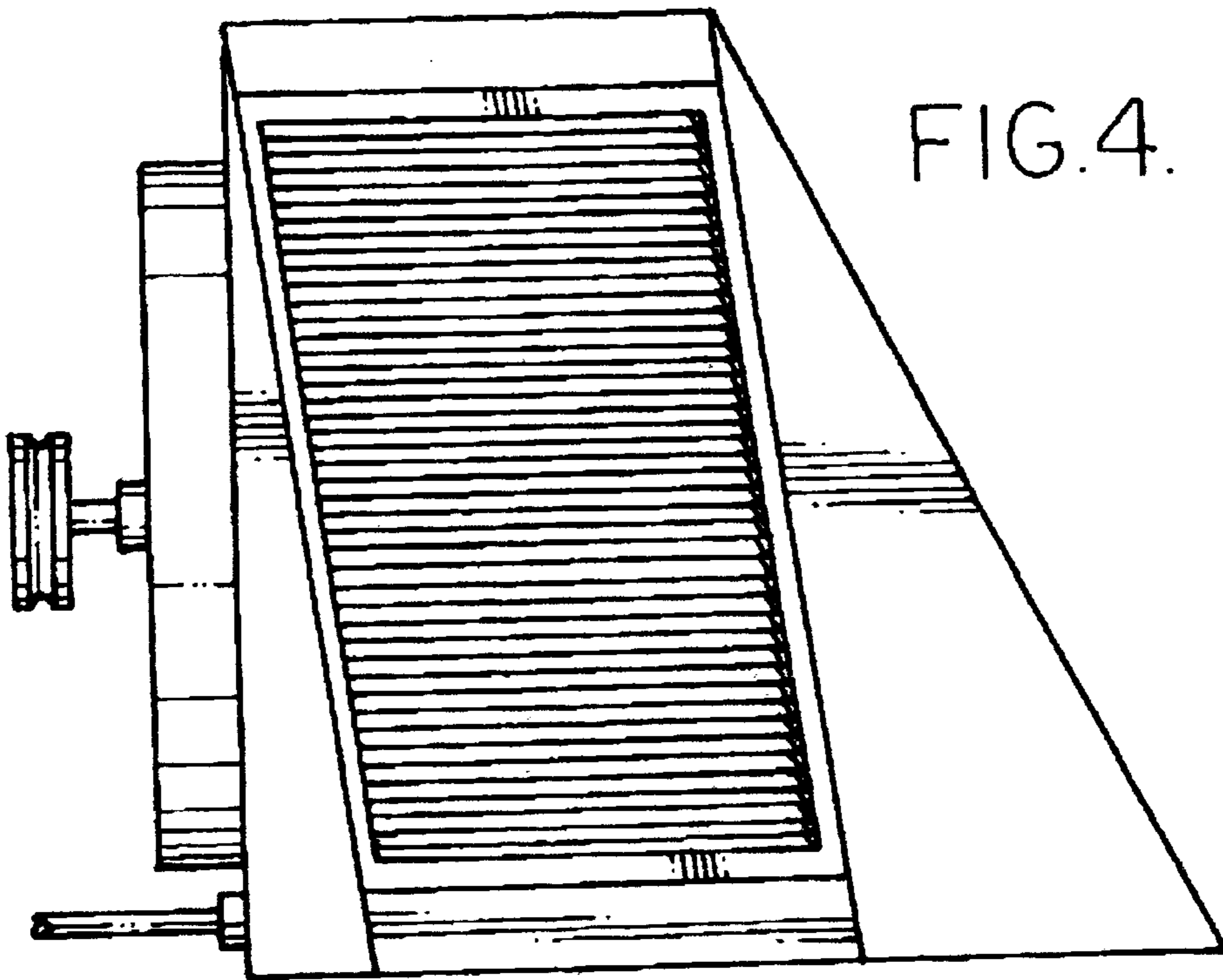


FIG. 4.

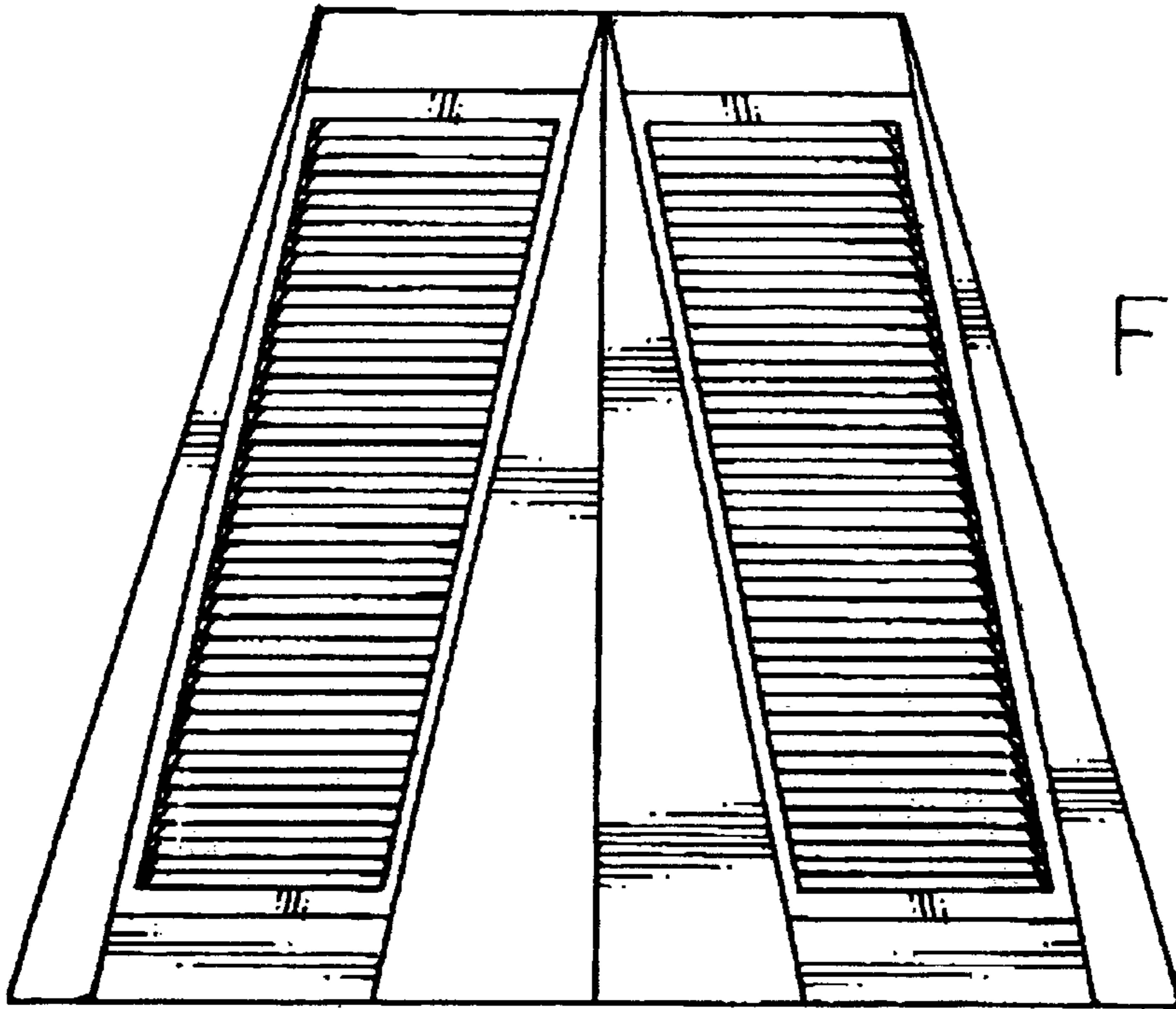


FIG. 3.

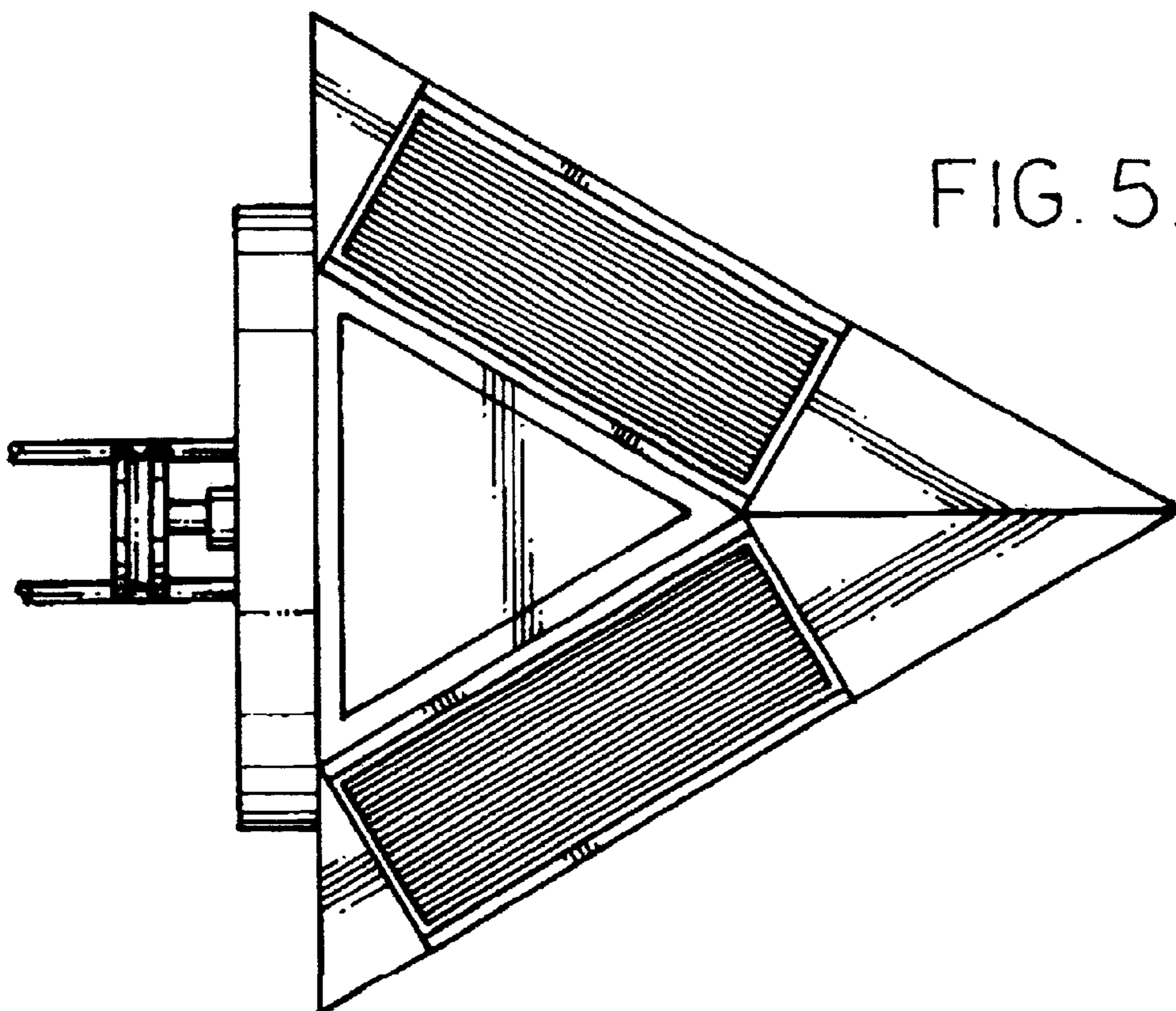


FIG. 5.

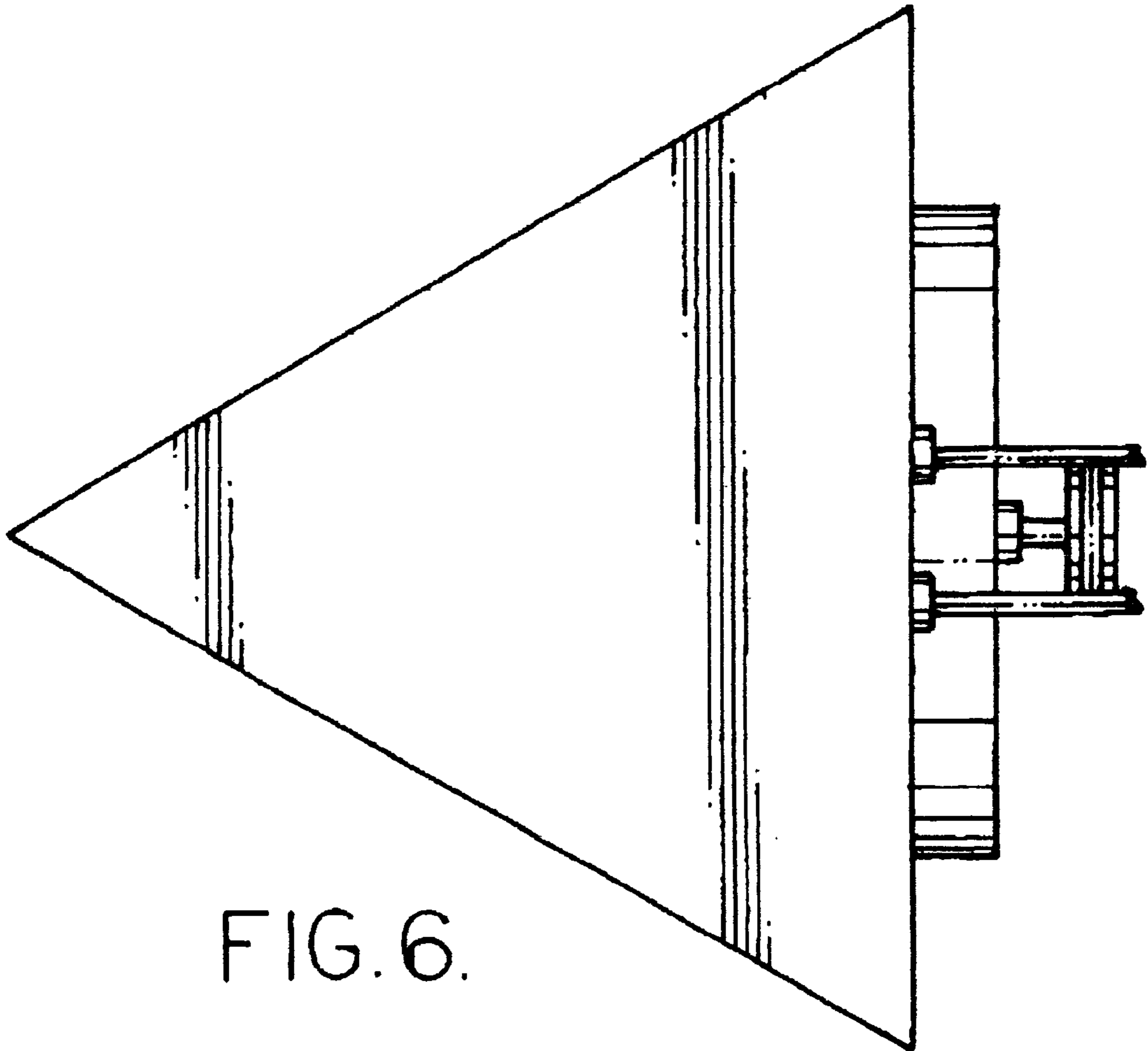


FIG. 6.