



US00D355253S

United States Patent [19]

[11] Patent Number: **Des. 355,253**

Jansen et al.

[45] Date of Patent: **** Feb. 7, 1995**

[54] **IMPELLER FOR REFRIGERANT COMPRESSORS**

[75] Inventors: **Willem Jansen, Weston; Steve H. Pancygrau, Malden, both of Mass.; Bradford R. Myrick, Contoocook, N.H.; John M. Griffith, Lexington, Mass.**

[73] Assignee: **Northern Research & Engineering Corporation, Mass.**

[**] Term: **14 Years**

[21] Appl. No.: **5,166**

[22] Filed: **Feb. 25, 1993**

[52] U.S. Cl. **D23/411; D15/5**

[58] Field of Search **D23/377, 381, 382, 411; D15/5; 362/96, 294; 416/186 R**

[56] **References Cited**

U.S. PATENT DOCUMENTS

1,873,974	8/1932	Meyer	416/186 R
4,236,871	12/1980	Hirst et al.	416/186 R
4,428,717	1/1984	Catterfeld	416/186 R
5,192,193	3/1993	Cooper et al.	416/186 R

FOREIGN PATENT DOCUMENTS

635926	3/1962	Italy	416/186 R
--------	--------	-------	-----------

Primary Examiner—Lisa P. Lichtenstein
Attorney, Agent, or Firm—Michael H. Minns

[57] **CLAIM**

The ornamental design for an impeller for refrigerant compressors, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of an impeller for refrigerant compressors according to the present invention, FIG. 1 is enlarged 1.125 relative to FIG. 2;

FIG. 2 is a front view of an impeller for refrigerant compressors according to the present invention, the left side, right side and rear views are the substantially the same as the front view;

FIG. 3 is a top view of an impeller for refrigerant compressors according to the present invention;

FIG. 4 is a bottom view of an impeller for refrigerant compressors according to the present invention;

FIG. 5 is a perspective view of an impeller for refrigerant compressors showing a second embodiment of our new design, the bottom view is substantially the same as FIG. 4, FIG. 5 is enlarged 1.125 relative to FIG. 6;

FIG. 6 is a front view of FIG. 5, the left side, right side and rear views are substantially the same as the front view;

FIG. 7 is a top view of FIG. 5;

FIG. 8 is a perspective view of one of the blades shown in FIGS. 1 through 4, shown separately for clarity of illustration, the blades of the second embodiment of the impeller for refrigerant compressors shown in FIGS. 5 through 7 being substantially the same;

FIG. 9 is a front end view of the blade shown in FIG. 8;

FIG. 10 is a left side view of the blade shown in FIG. 8;

FIG. 11 is a right side view of the blade shown in FIG. 8;

FIG. 12 is a rear end view of the blade shown in FIG. 8;

FIG. 13 is a top view of the blade shown in FIG. 8;

FIG. 14 is a bottom view of the blade shown in FIG. 8;

FIG. 15 is a perspective view of another one of the blades shown in FIGS. 1 through 4, shown separately for clarity of illustration, the blades of the second embodiment of the impeller for refrigerant compressors shown in FIGS. 5 through 7 being substantially the same;

FIG. 16 is a front end view of the blade shown in FIG. 15;

FIG. 17 is a left side view of the blade shown in FIG. 15;

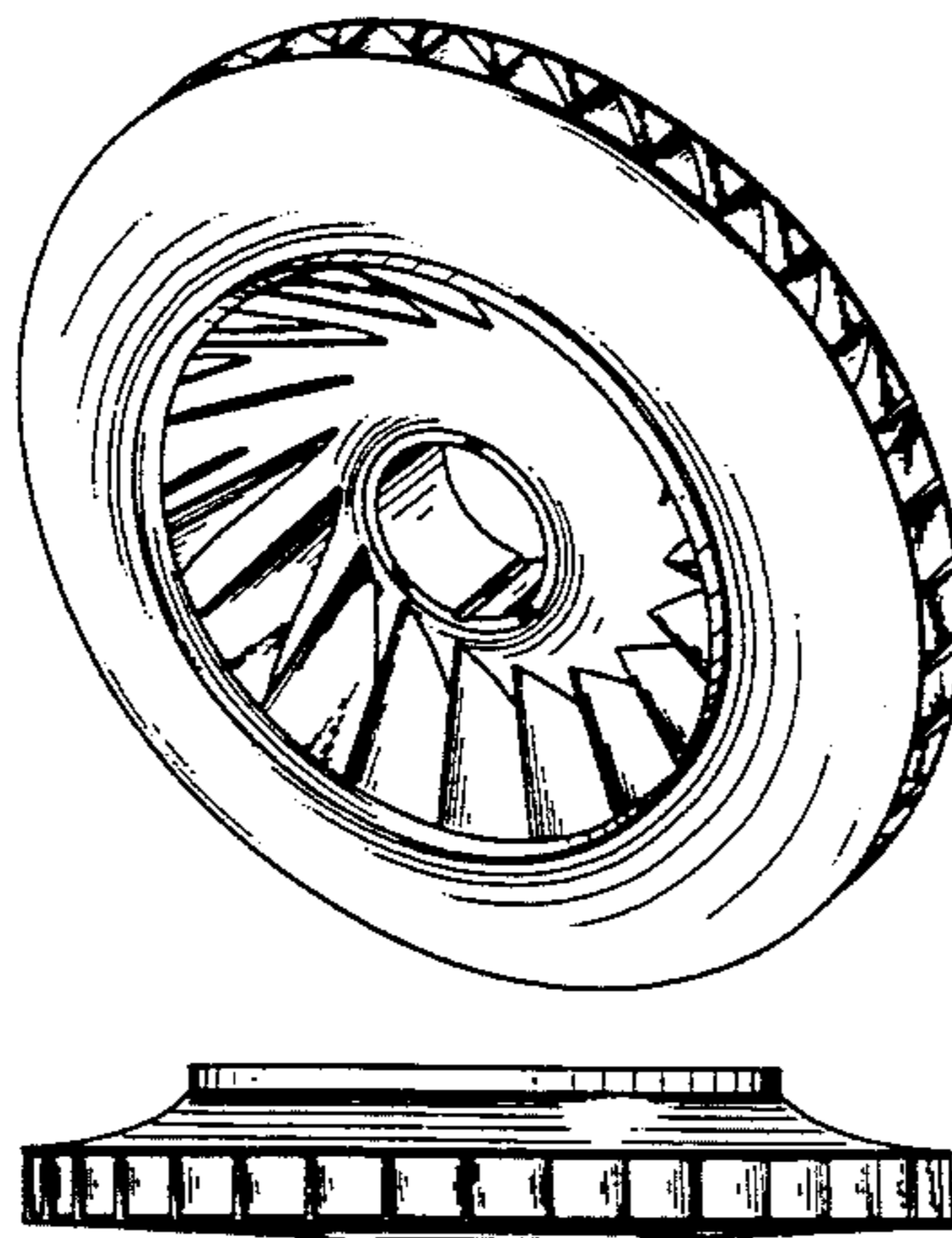
FIG. 18 is a right side view of the blade shown in FIG. 15;

FIG. 19 is a rear end view of the blade shown in FIG. 15;

FIG. 20 is a top view of the blade shown in FIG. 15; and,

FIG. 21 is a bottom view of the blade shown in FIG. 15. The blades of FIGS. 8 through 21 are shown twice the size of the blades in FIGS. 2 through 4.

The difference between the first and second embodiments resides in the appearance of the slots in the top surface.



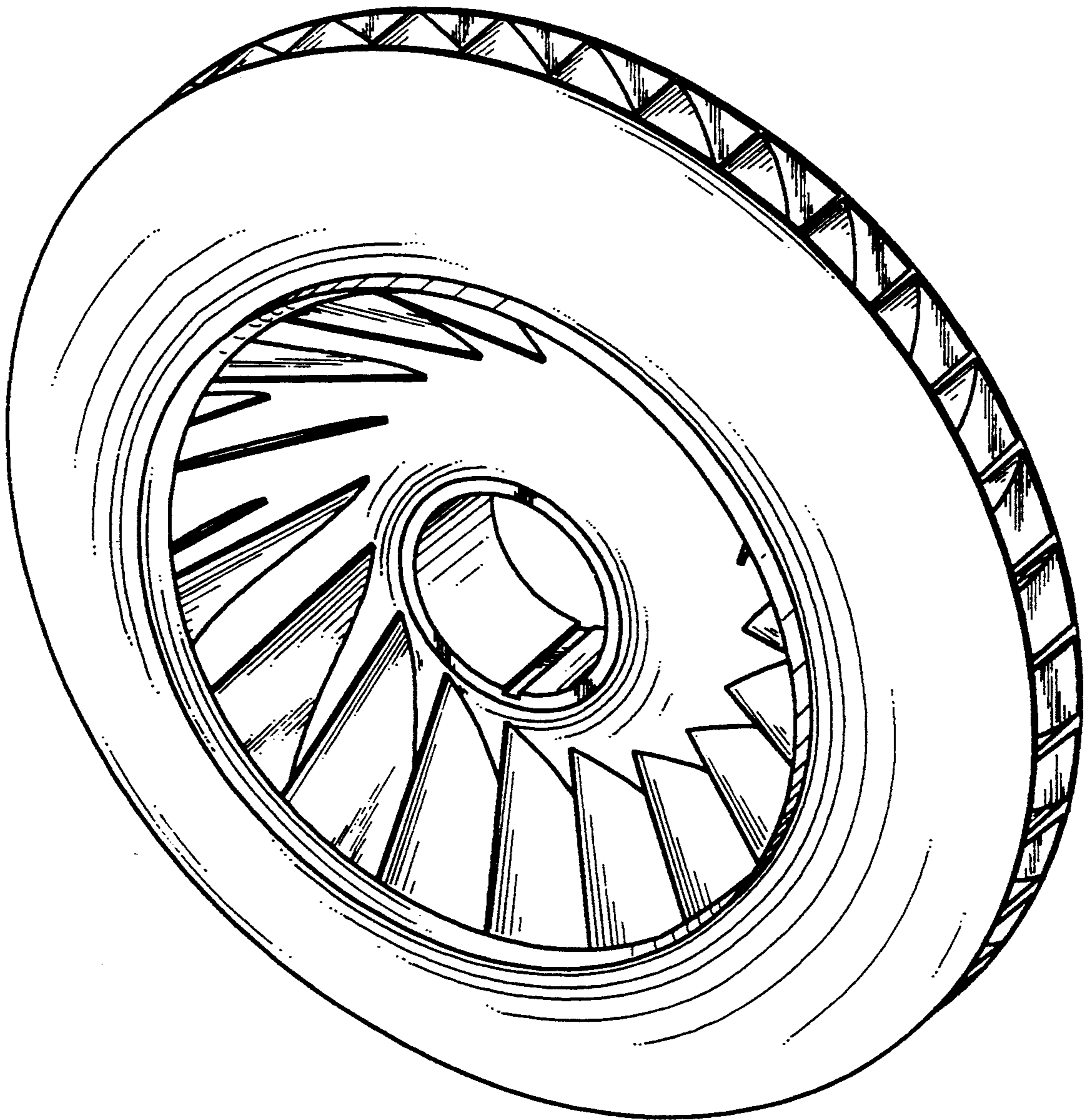


FIG. 1

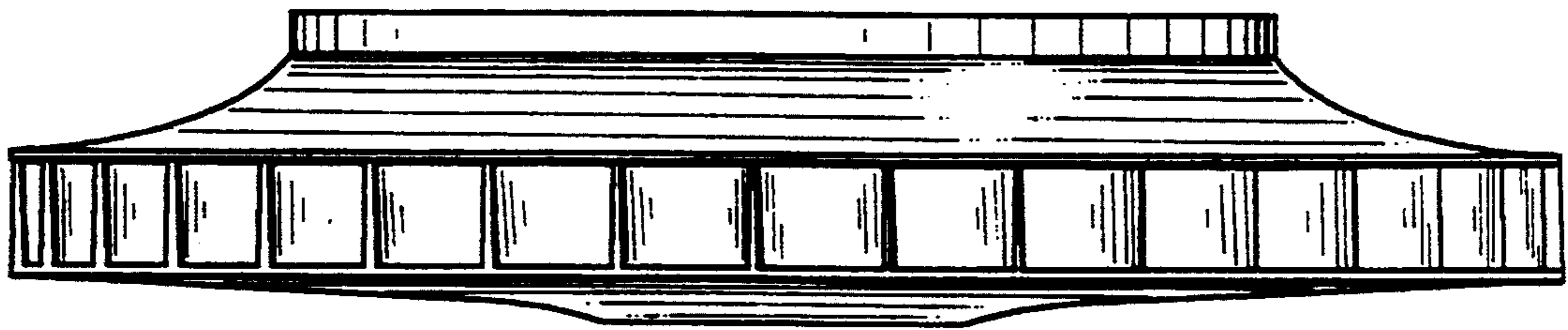


FIG. 2

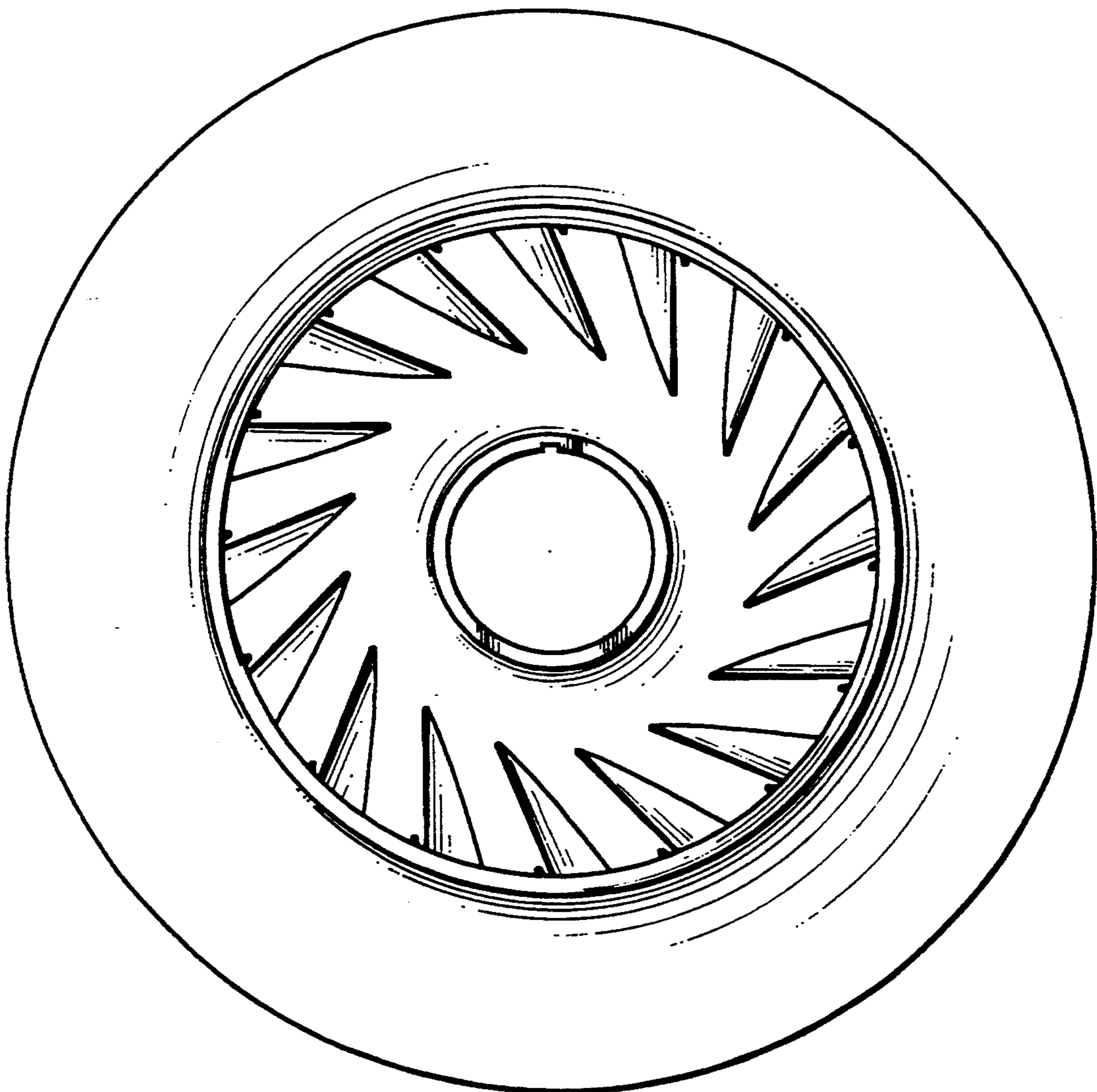


FIG. 3

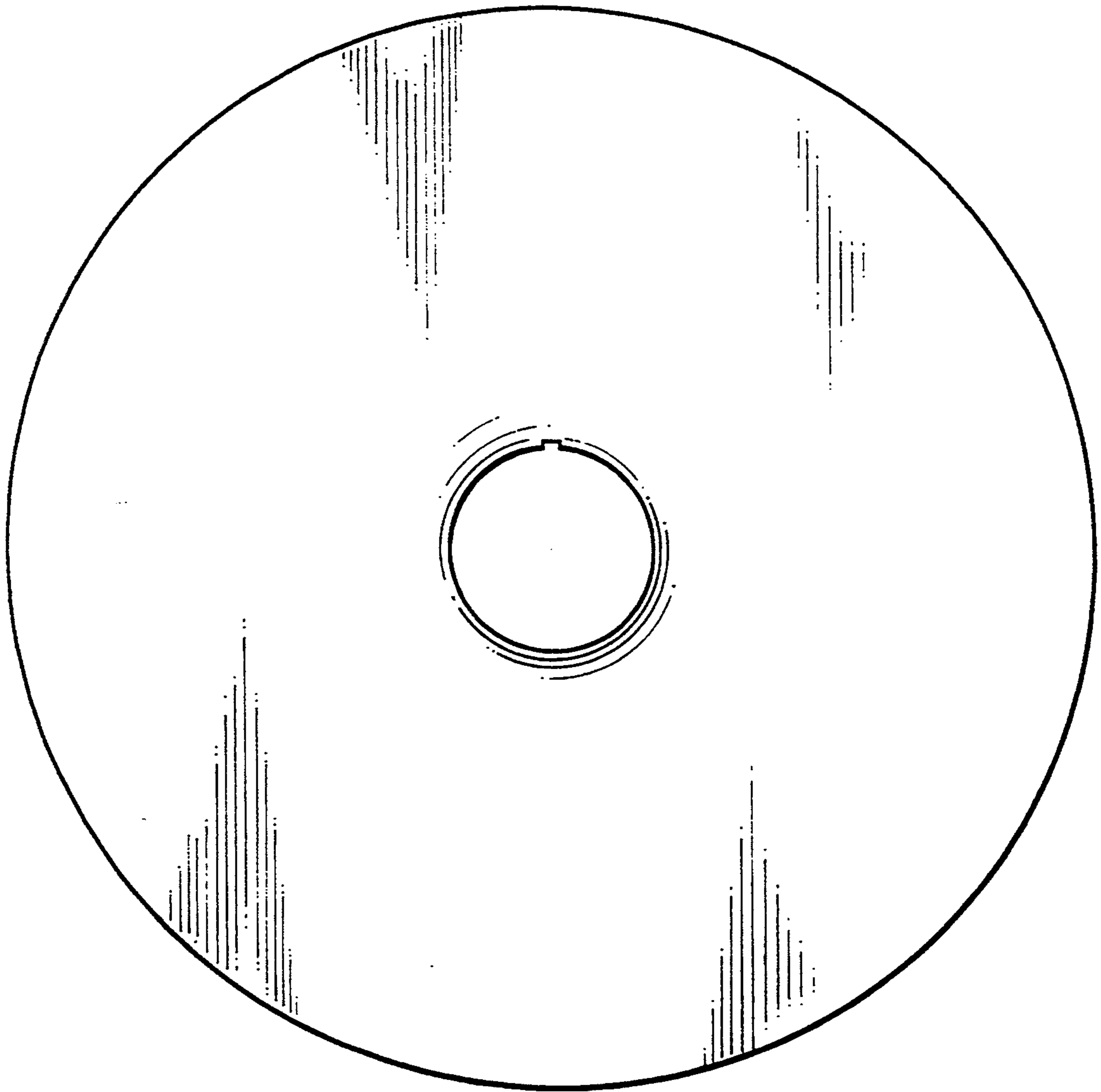


FIG. 4

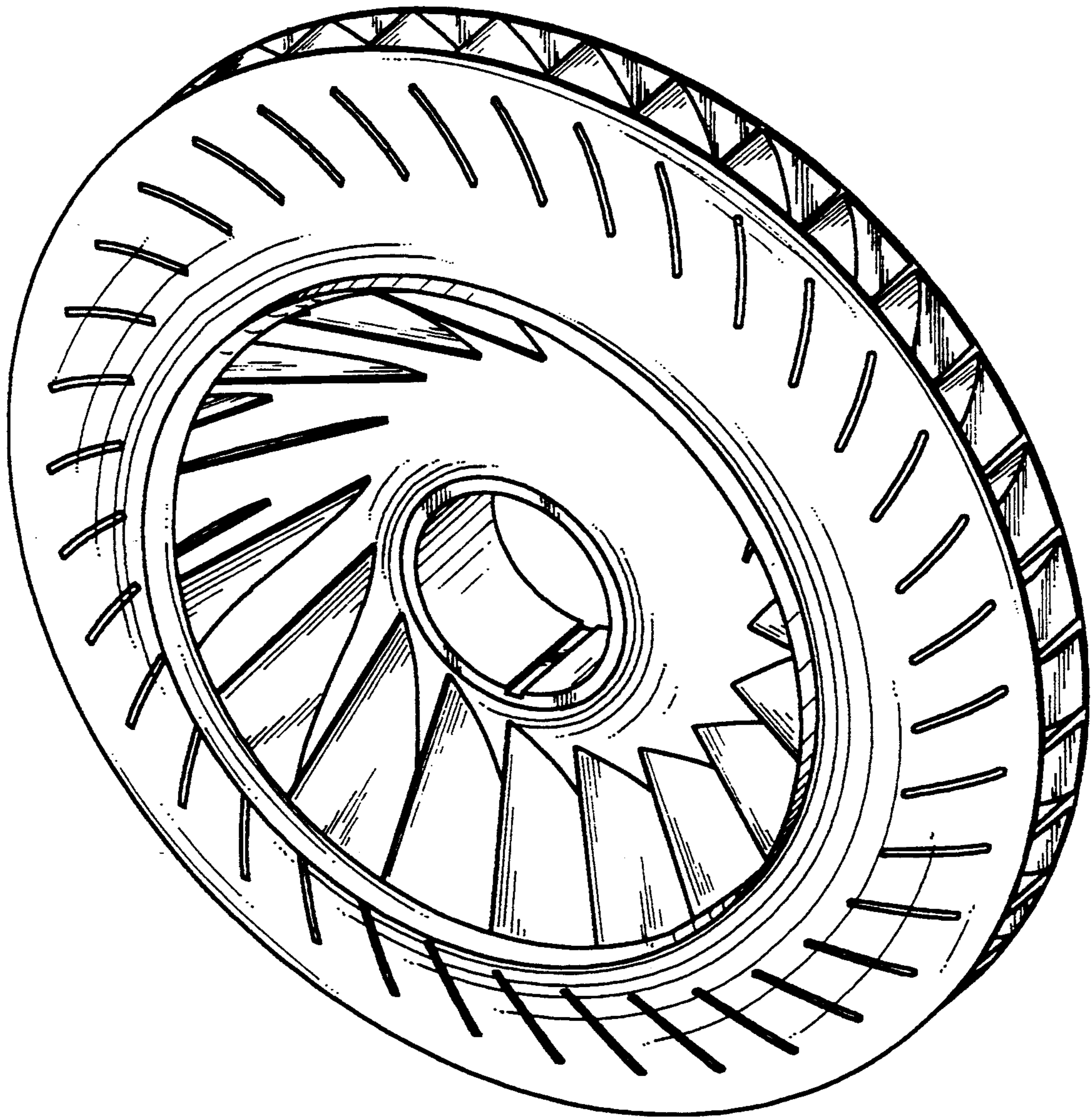


FIG. 5

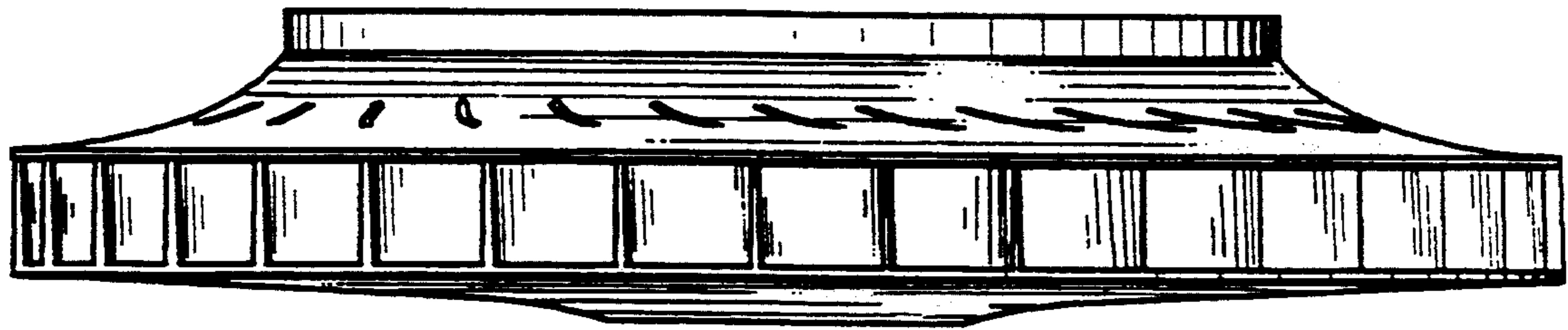


FIG. 6

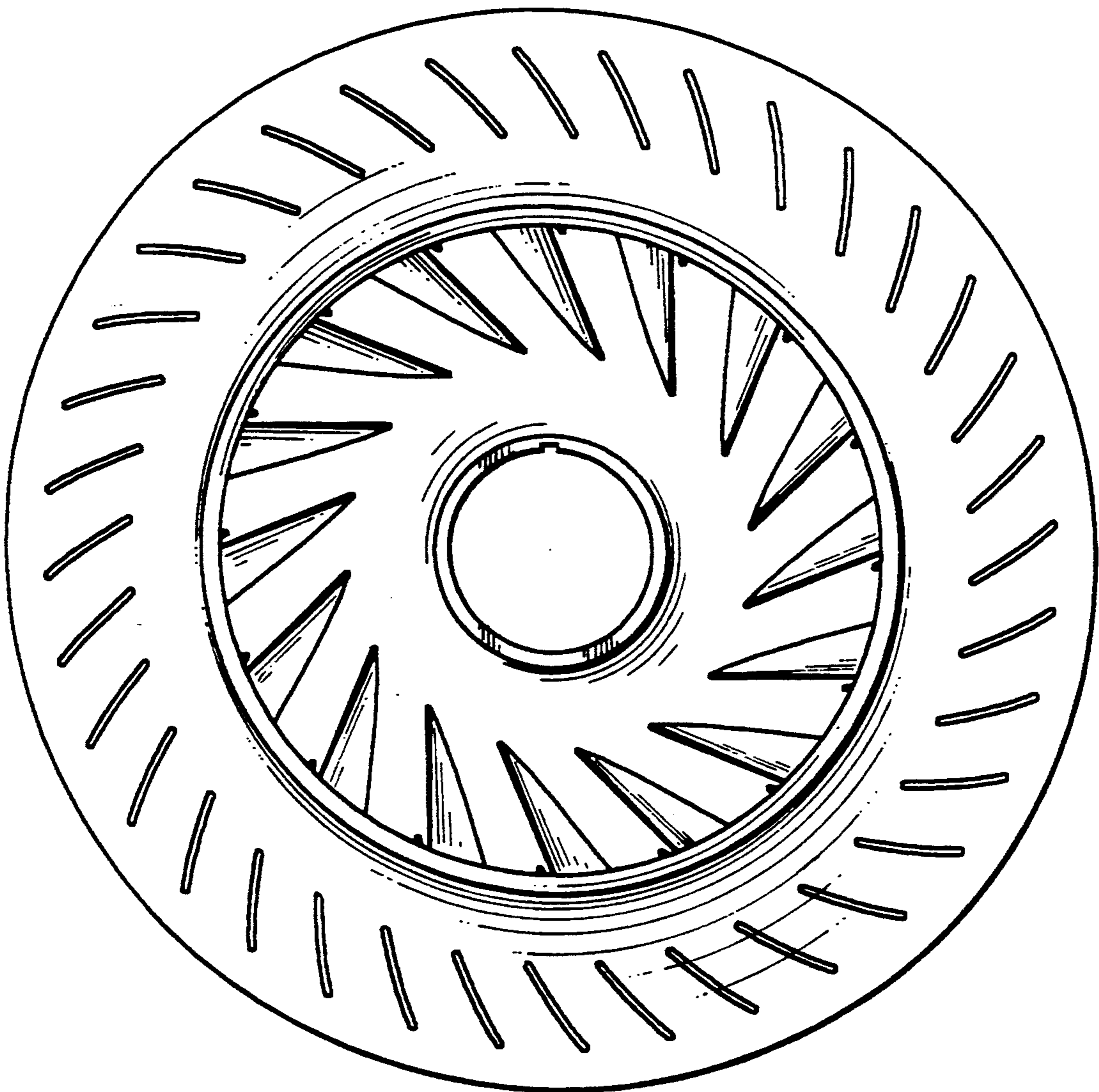


FIG. 7

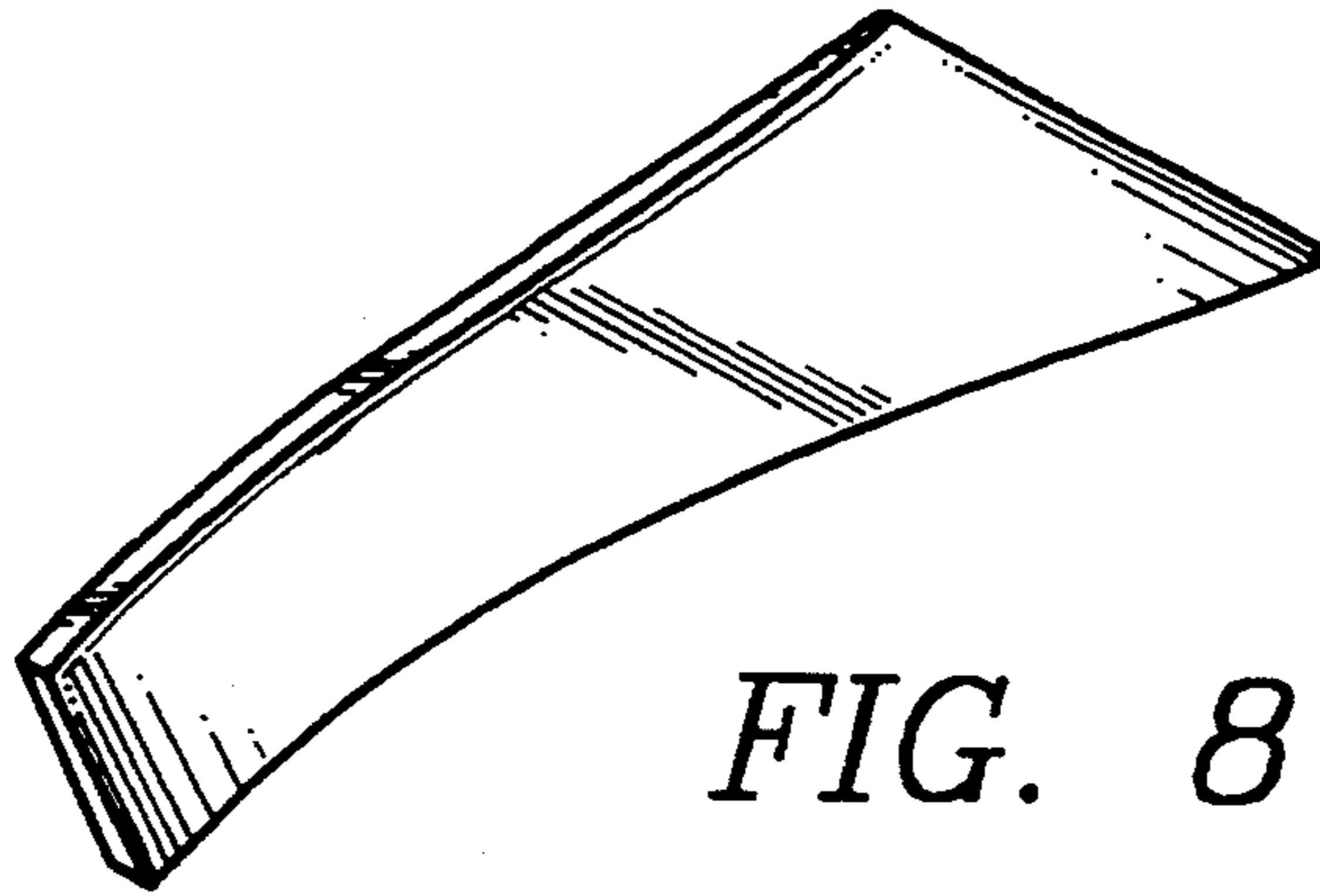


FIG. 8

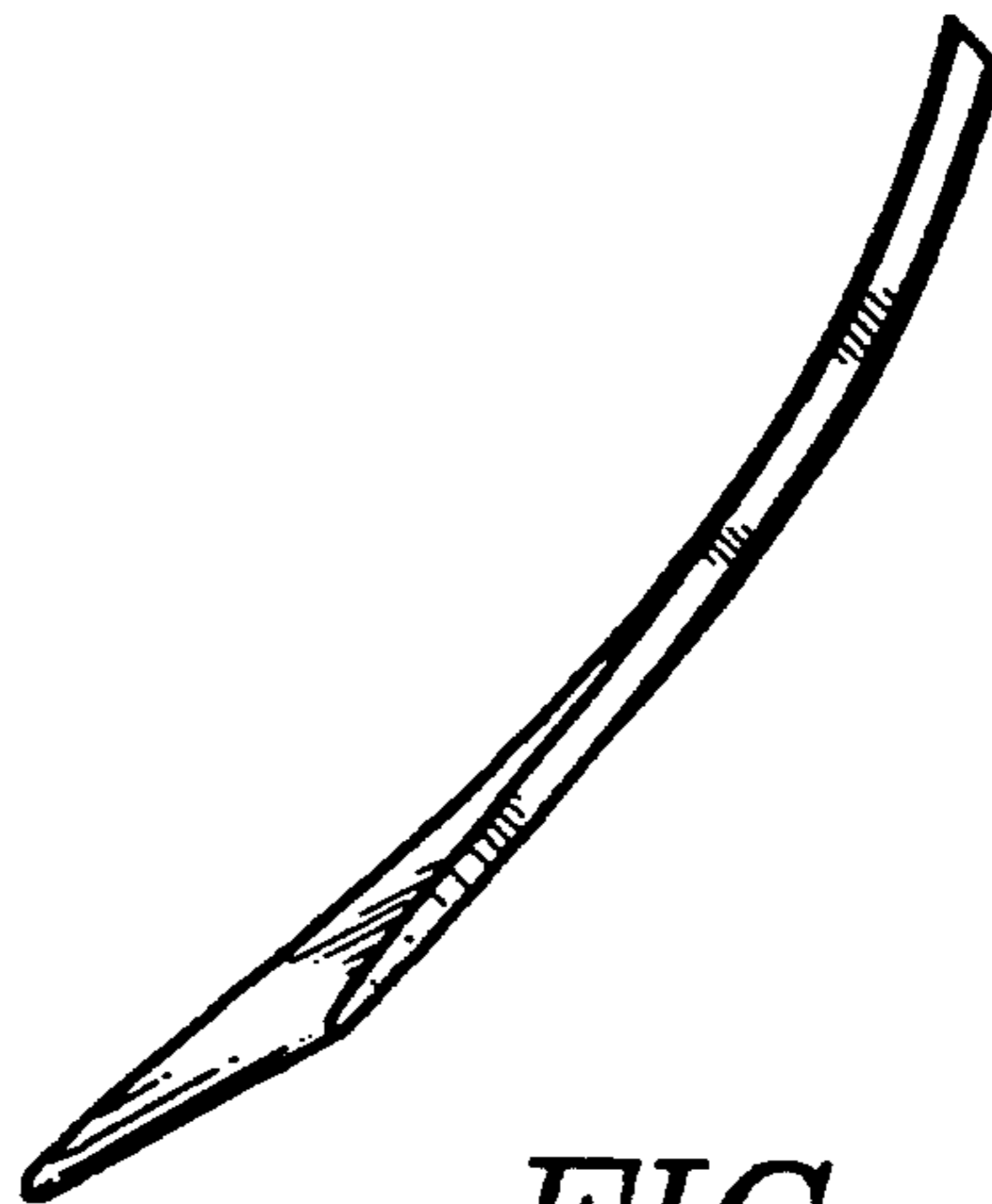


FIG. 13

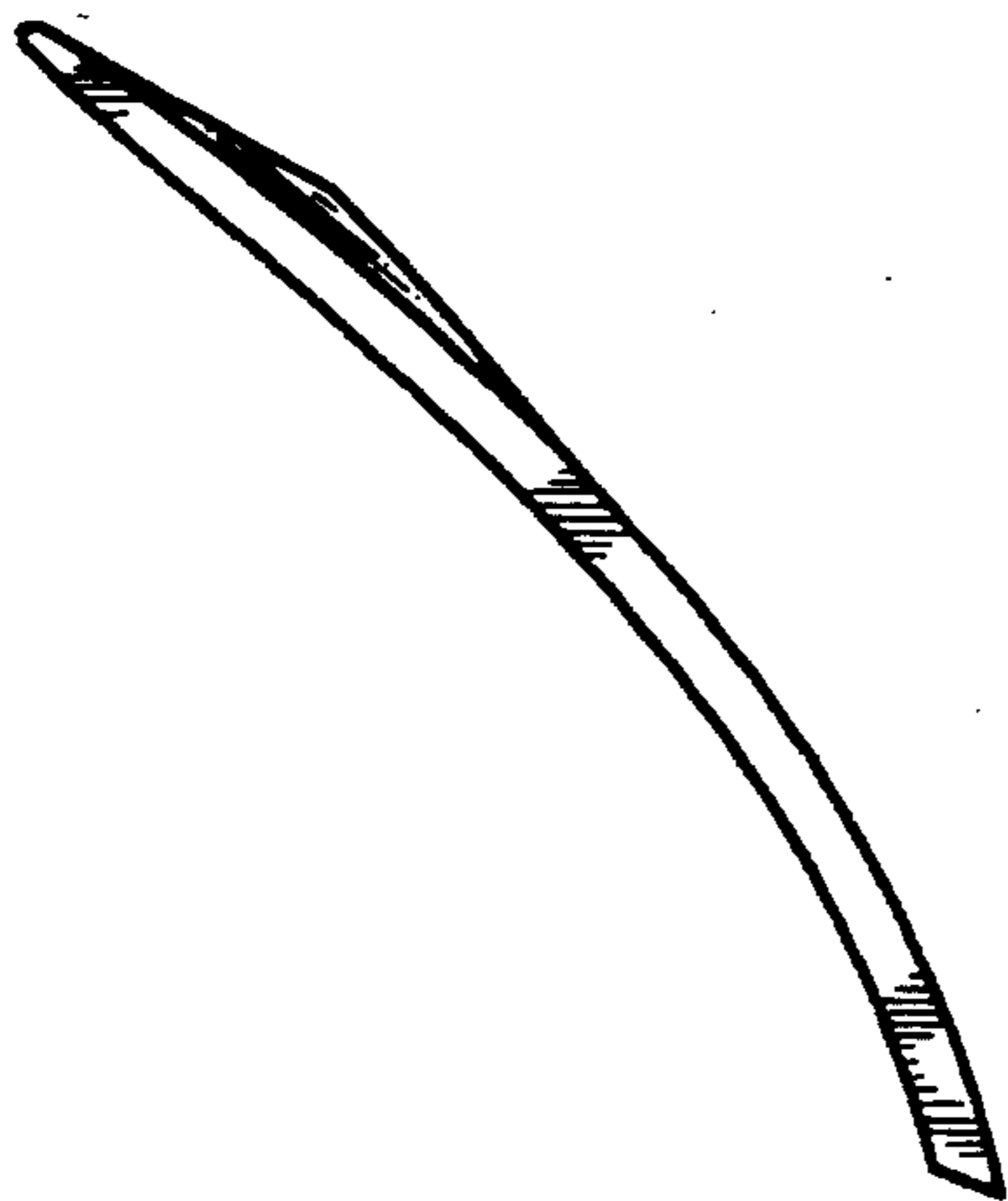


FIG. 14

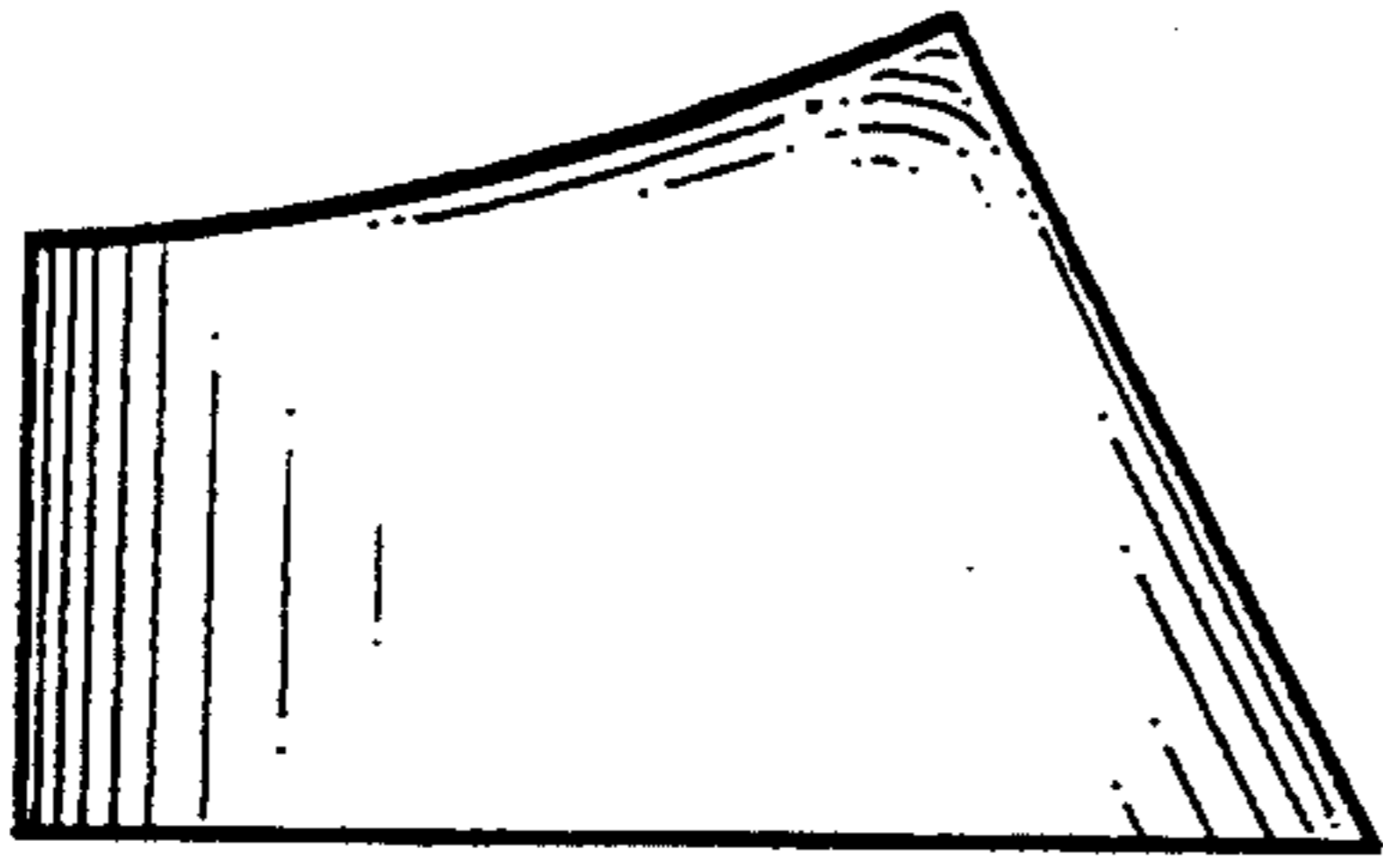


FIG. 9

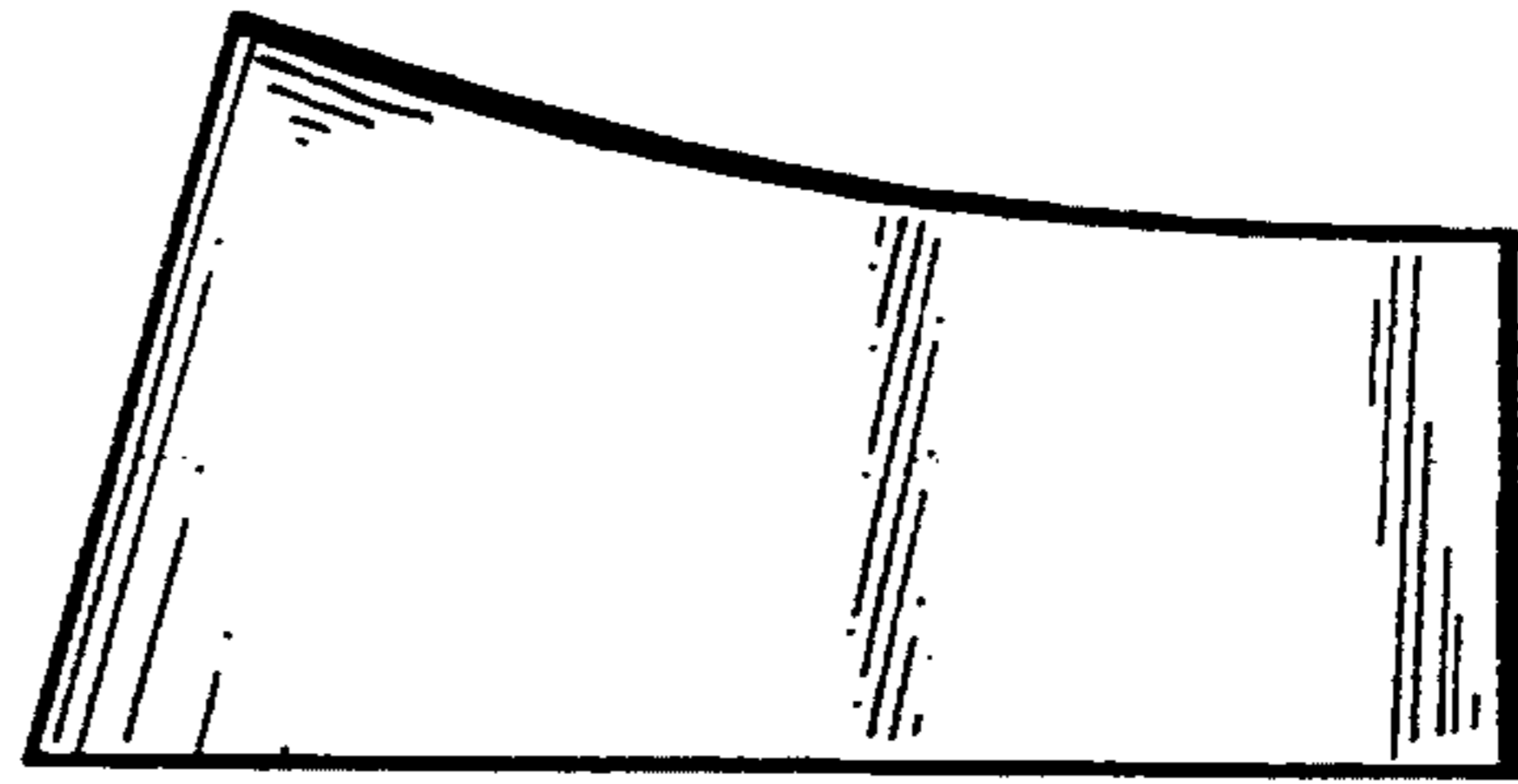


FIG. 10

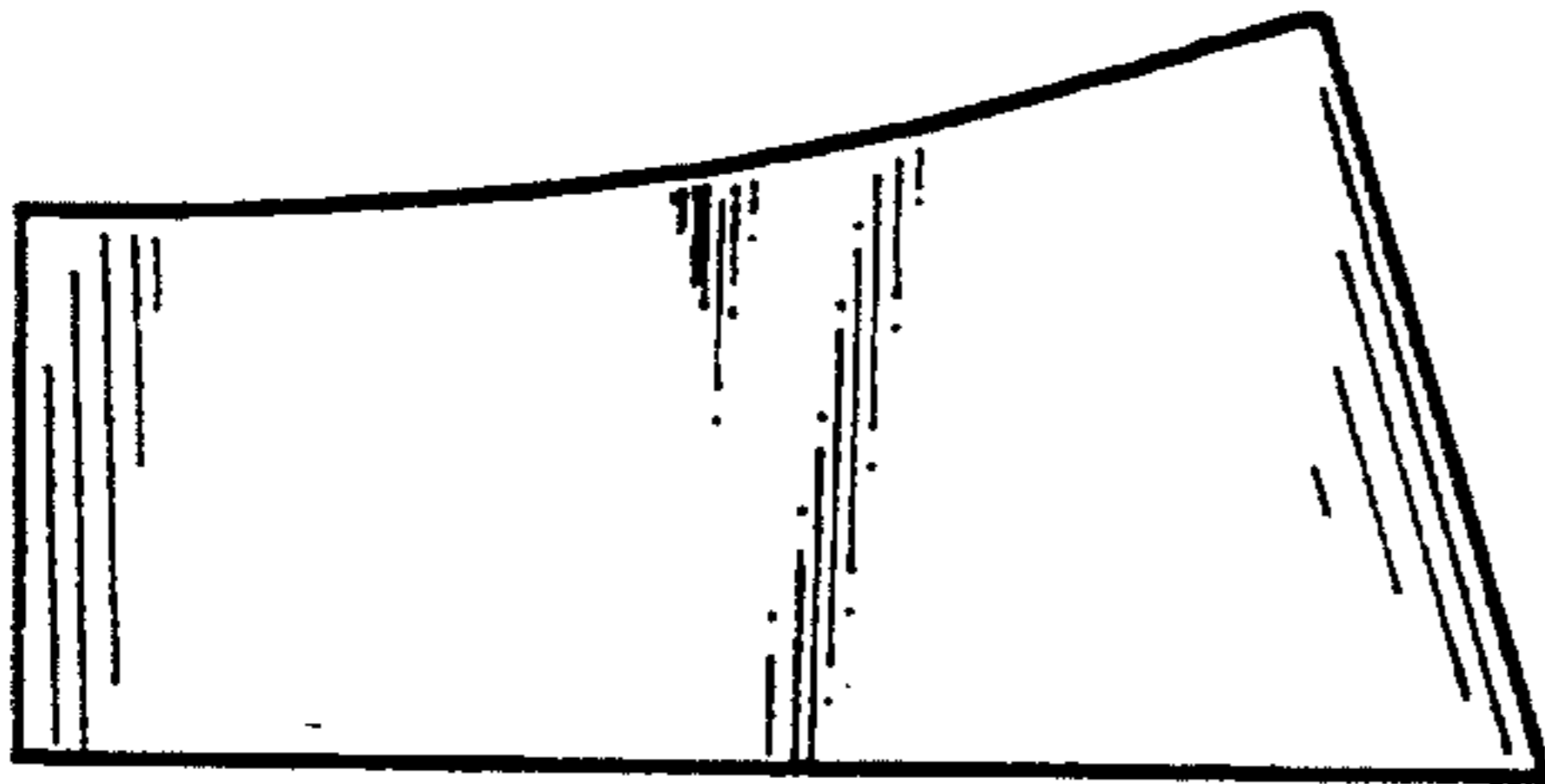


FIG. 11

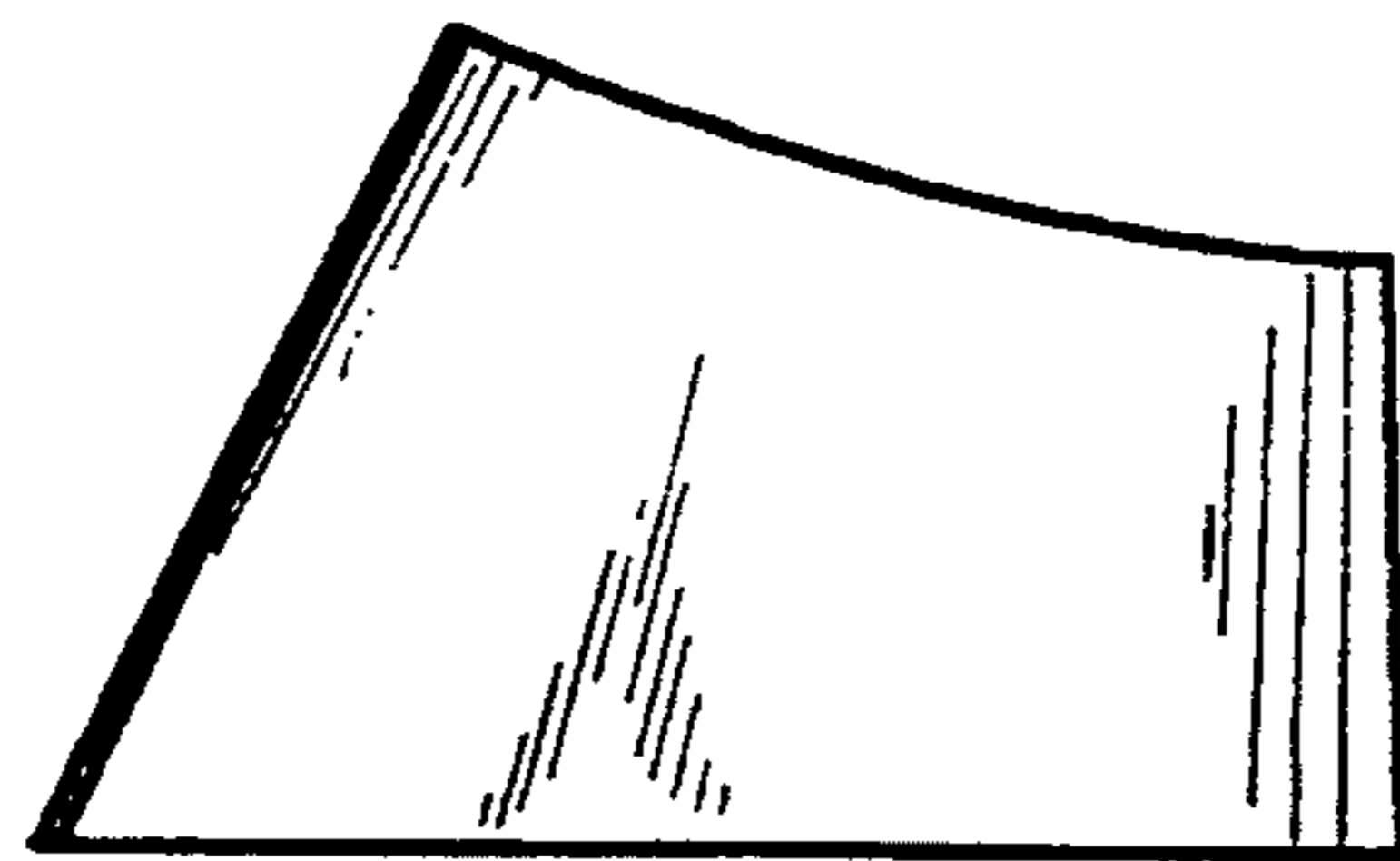


FIG. 12

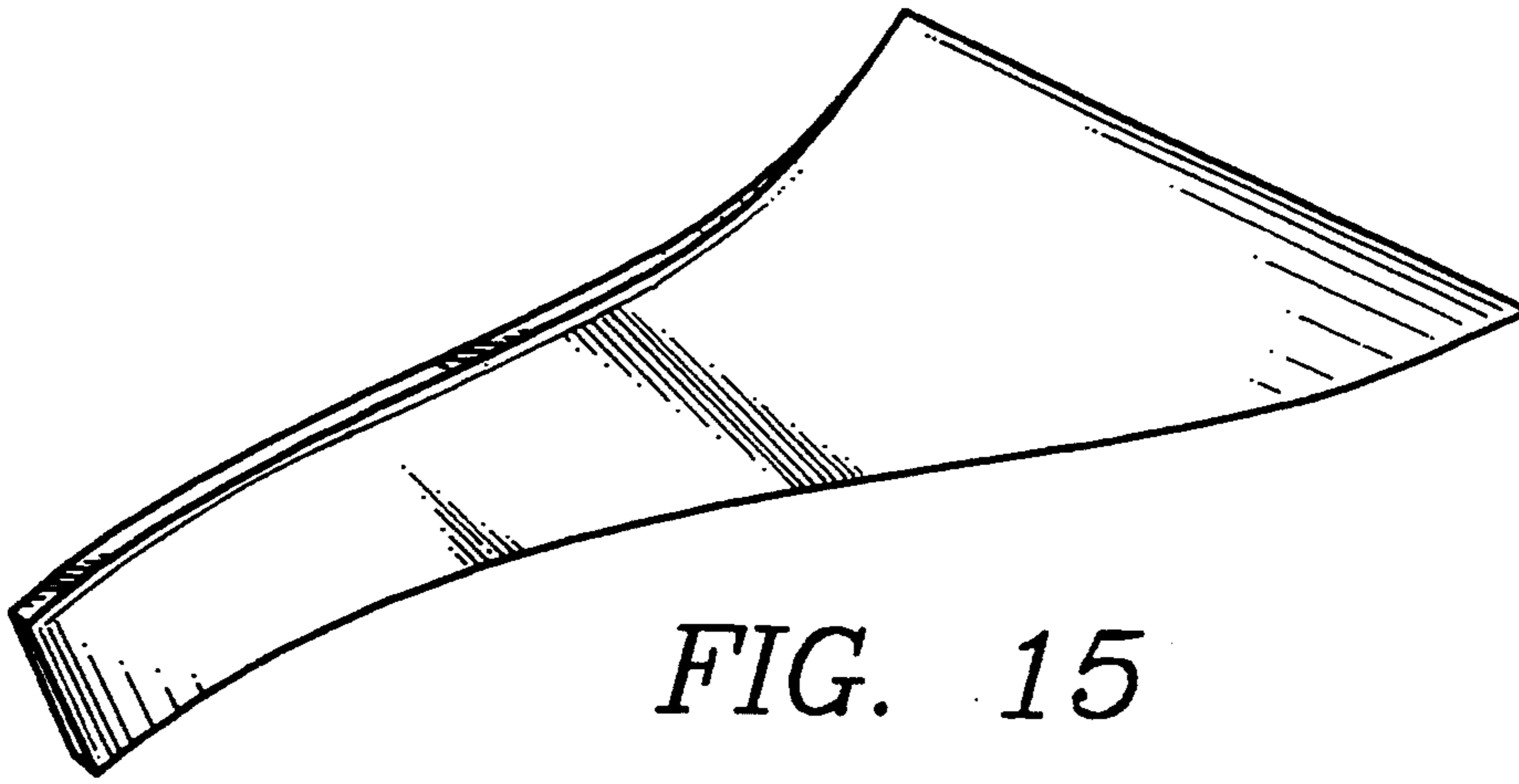


FIG. 15

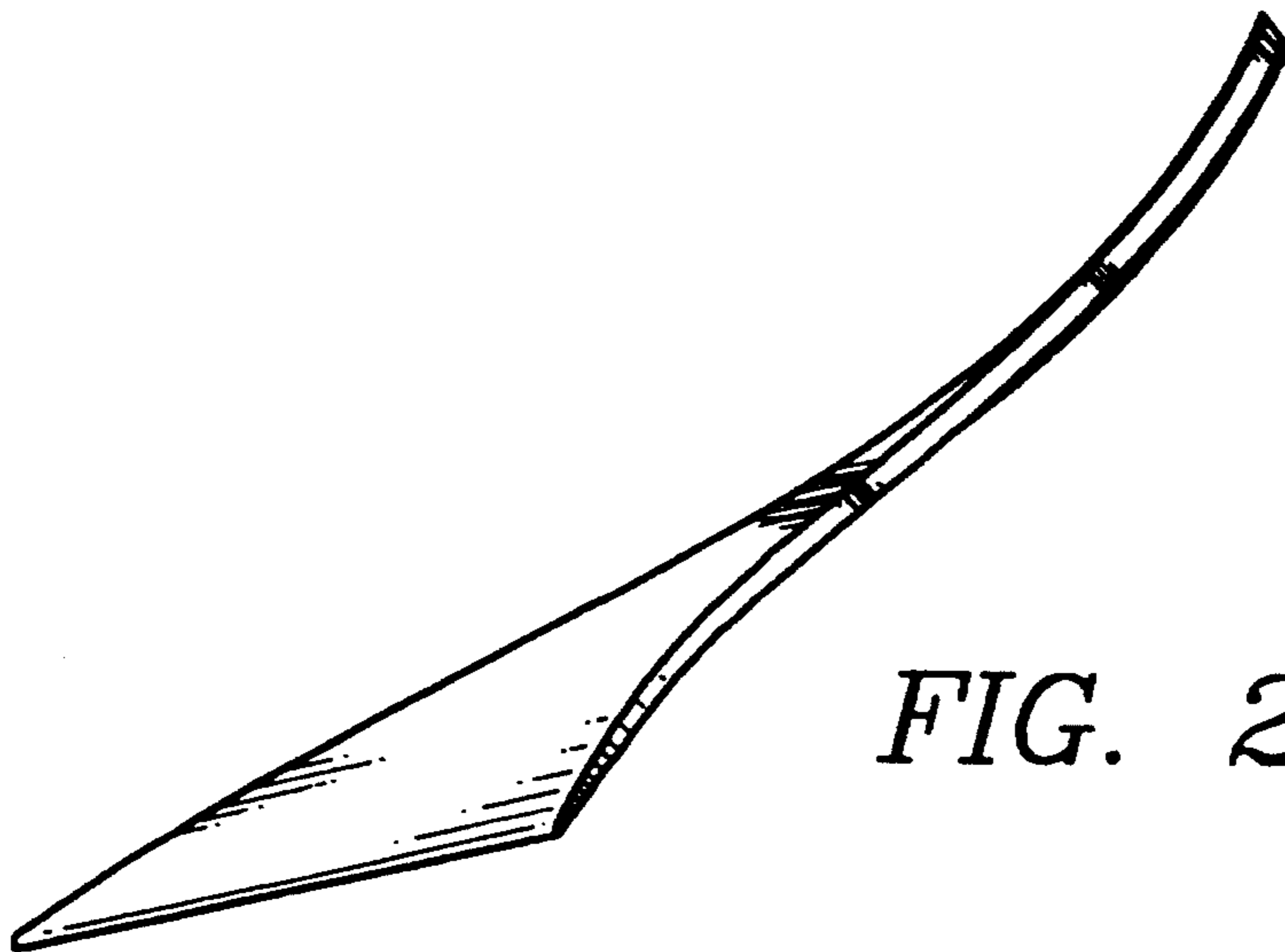


FIG. 20

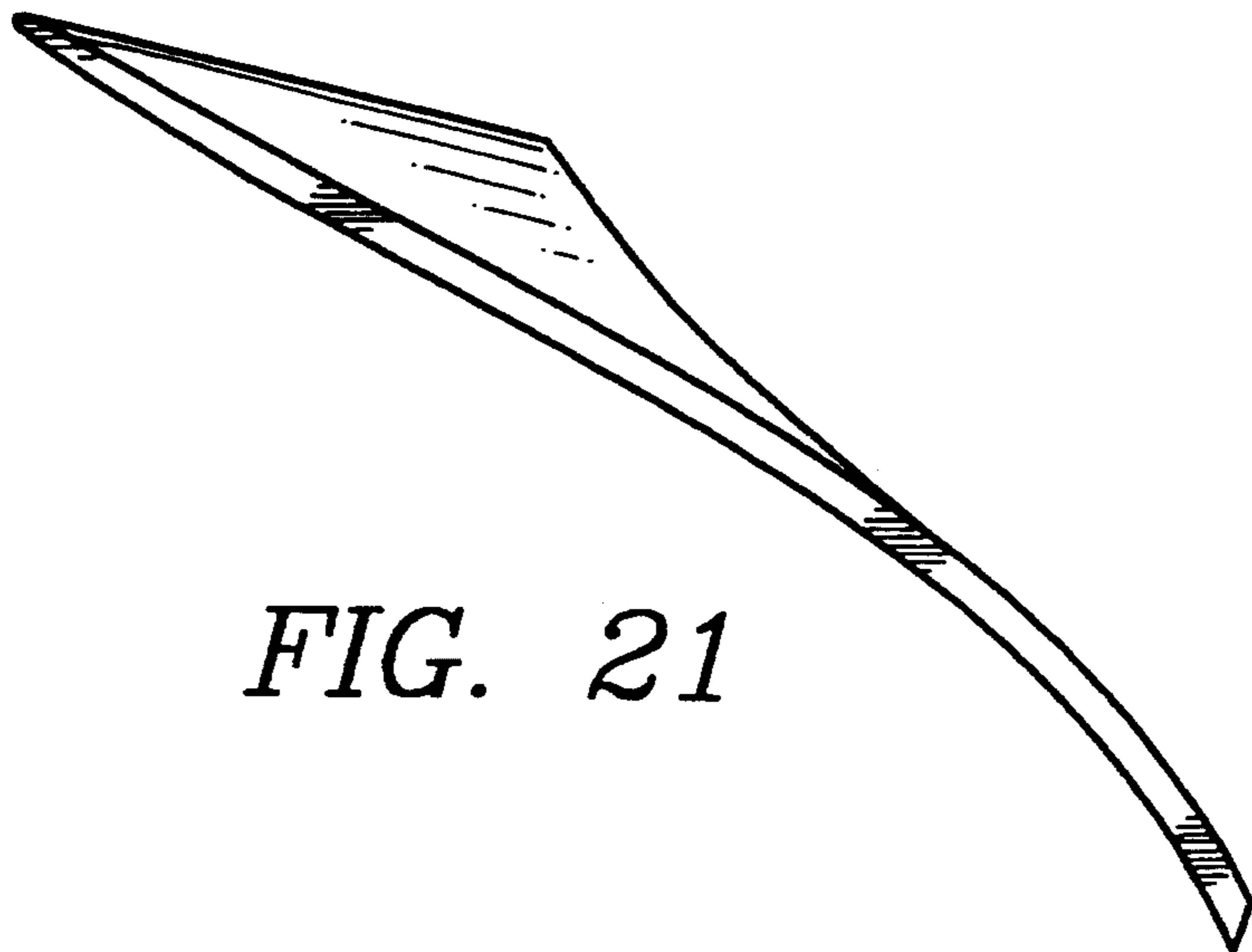


FIG. 21



FIG. 16

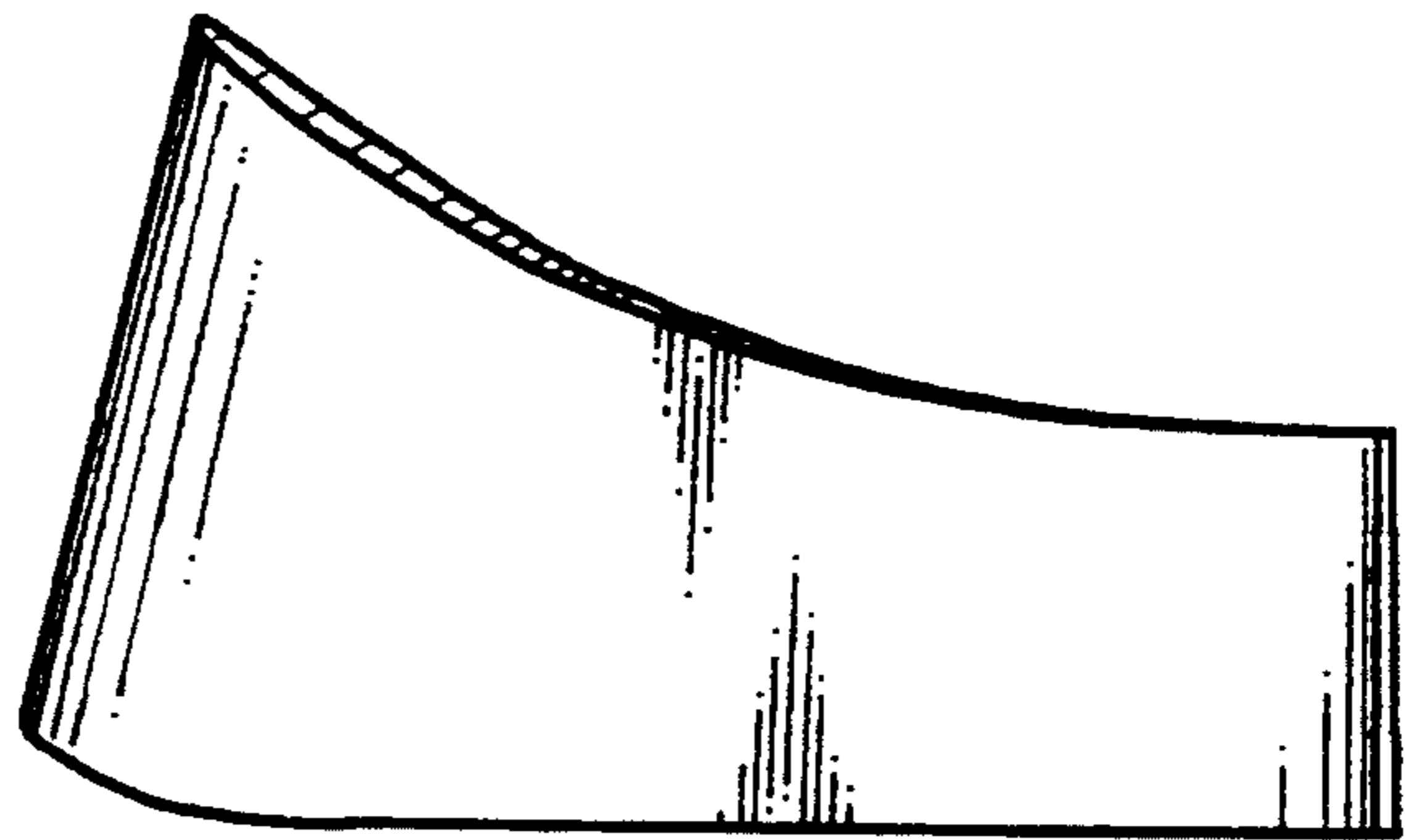


FIG. 17

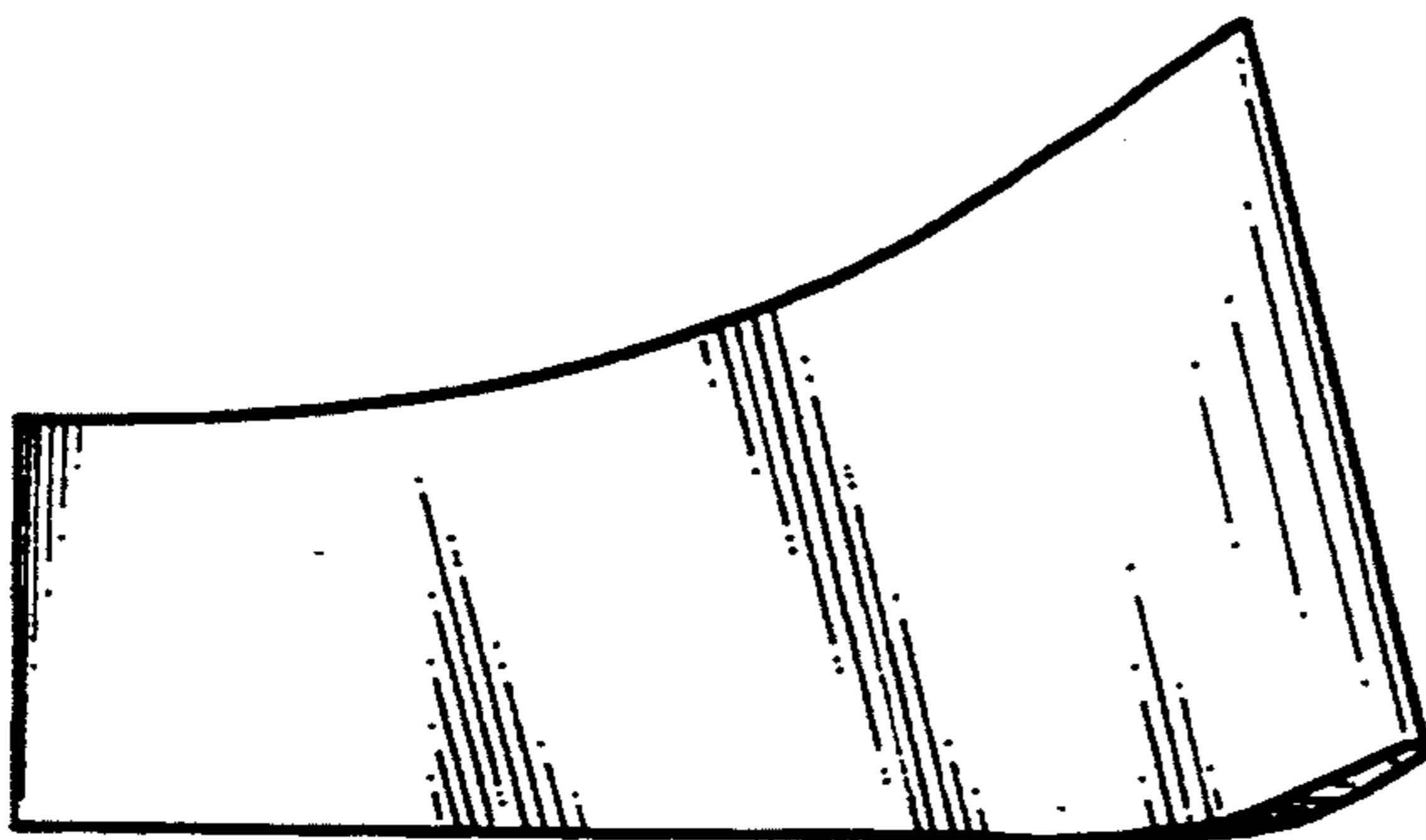


FIG. 18

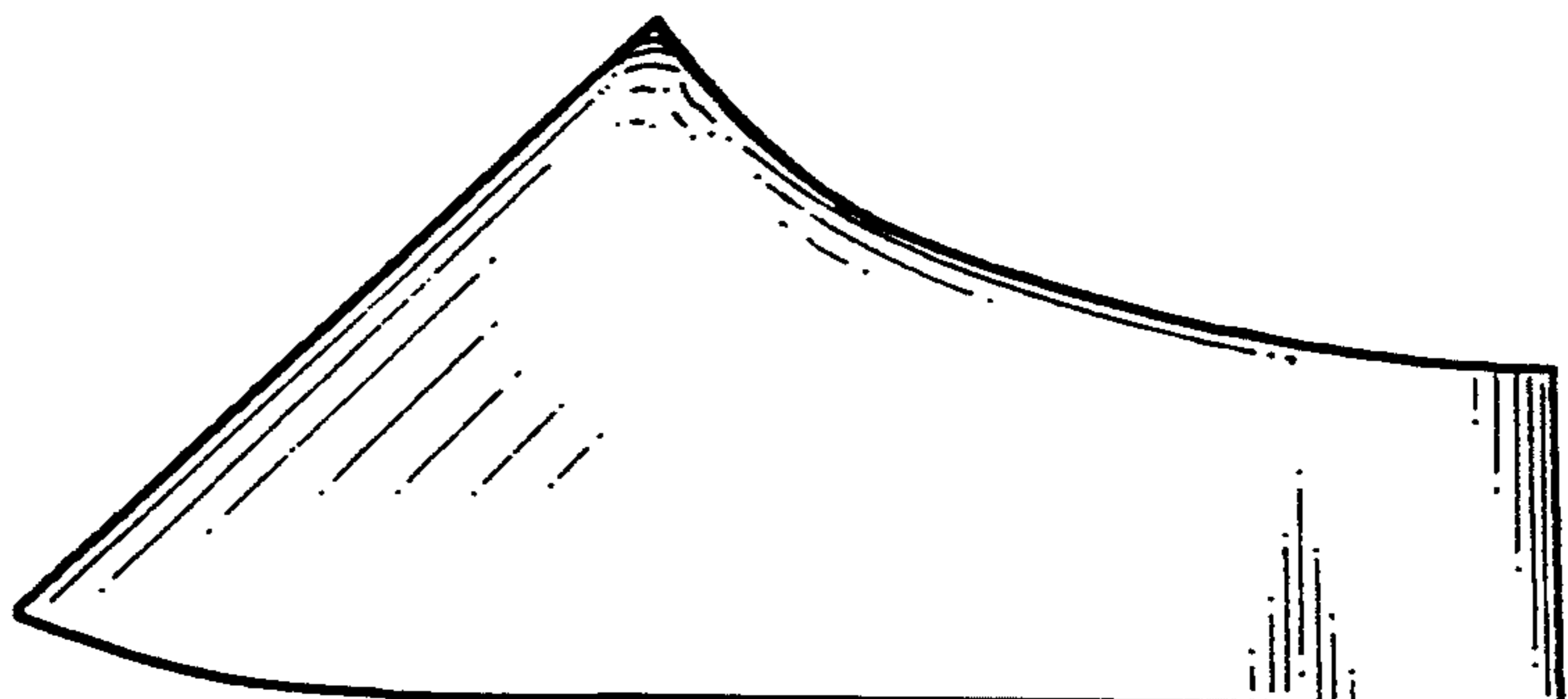


FIG. 19