



US00D382786S

# United States Patent [19]

[11] Patent Number: Des. 382,786

Achterberg et al.

[45] Date of Patent: \*\*Aug. 26, 1997

[54] CIRCULAR SAW BLADE WITH HEAT VENTS

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[73] Assignee: Black & Decker Inc., Newark, Del.

[\*\*] Term: 14 Years

[21] Appl. No.: 35,566

[22] Filed: Mar. 2, 1995

[51] LOC (6) Cl. .... 08-03

[52] U.S. Cl. .... D8/70

[58] Field of Search ..... D8/20, 70; 30/347, 30/351, 355; 83/676, 835, 837, 838, 839, 840-850

### [56] References Cited

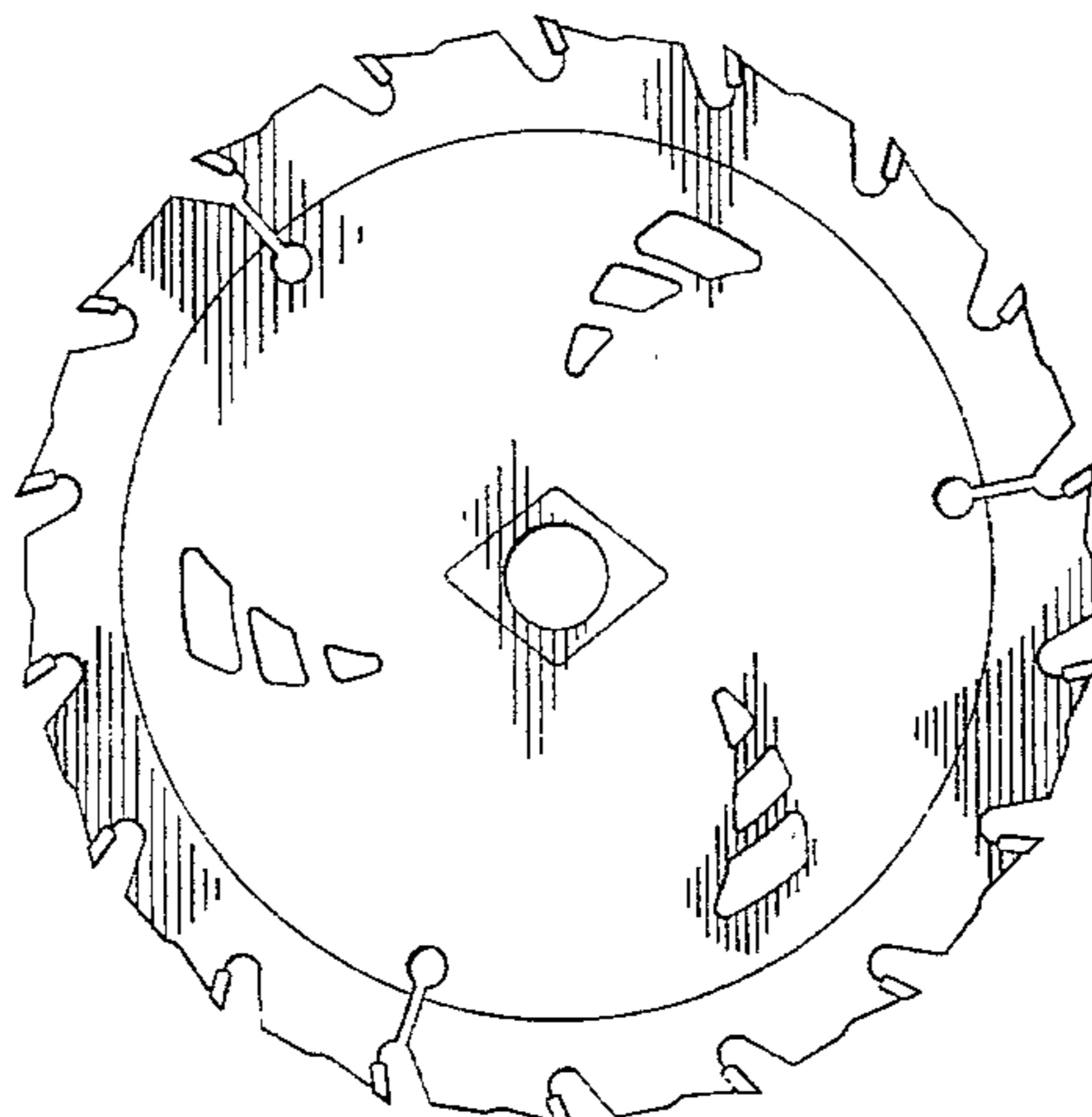
#### U.S. PATENT DOCUMENTS

- 13,300 10/1855 Williams et al. .
- D. 31,362 8/1899 McDonner ..... D8/20
- 88,949 4/1869 Emerson .
- 191,198 5/1877 Tilton .
- 199,852 1/1878 Milligan .
- 212,813 3/1879 Miller .
- 213,439 3/1879 Miller .
- D. 266,001 8/1982 Wertheimer .
- D. 337,713 7/1993 Johnston .
- D. 341,304 11/1993 Johnston ..... D8/70
- D. 345,683 4/1994 Johnston ..... D8/70
- 635,509 10/1899 Trunnel .
- 788,236 4/1905 Bartholomew .
- 1,083,645 1/1914 Wettstein ..... 83/835
- 1,711,102 4/1929 Sierra, Jr. .
- 1,723,843 8/1929 Chapin ..... 83/835
- 2,256,847 9/1941 Osenberg .
- 2,903,782 9/1959 Cowley .
- 3,176,455 4/1965 Buchanan .
- 3,363,617 1/1968 Hoerer ..... 83/835
- 3,513,821 5/1970 Bouvier ..... 83/835
- 3,700,016 10/1972 Strobel .
- 3,872,763 3/1975 Kayahara .
- 3,981,216 9/1976 Lemmon .
- 4,106,382 8/1978 Salje et al. .

- 4,232,580 11/1980 Stewart .
- 4,240,315 12/1980 Tuomaala ..... 83/835
- 4,333,371 6/1982 Matsuda .
- 4,417,833 11/1983 Wertheimer .
- 4,445,413 5/1984 Ohwada .
- 4,574,676 3/1986 Jansen-Herfeld .
- 4,776,251 10/1988 Carter, Jr. .
- 4,794,835 1/1989 Fujiyoshi .
- 4,821,617 4/1989 Fjellkner et al. .
- 4,848,205 7/1989 Suzuki et al. .
- 5,078,035 1/1992 Moller et al. .
- 5,182,976 2/1993 Wittkopp ..... 83/835
- 5,191,819 3/1993 Hoshi .
- 5,351,595 10/1994 Johnston .
- 5,365,986 11/1994 Hooser .

#### FOREIGN PATENT DOCUMENTS

- 0102626 9/1983 European Pat. Off. .
- 0243909 of 1987 European Pat. Off. .
- 0239676 5/1989 European Pat. Off. .
- 0376676 of 1990 European Pat. Off. .
- 0369120 of 1990 European Pat. Off. .
- 0303770 7/1991 European Pat. Off. .
- 0578625 1/1994 European Pat. Off. .
- 0598389 5/1994 European Pat. Off. .
- 0640422 3/1995 European Pat. Off. .
- 1050987 2/1959 Germany .
- 2654625 6/1978 Germany .
- 2703825 8/1978 Germany .
- 3234499 3/1984 Germany .
- 3310247 10/1984 Germany .
- 3346321 7/1985 Germany .
- 8324657 1/1986 Germany .
- 8703531 8/1987 Germany .
- 8711983 12/1987 Germany .
- 3804400 8/1989 Germany .
- 3605624 9/1989 Germany .
- 8224874 7/1993 Germany .
- 4243480 6/1994 Germany .
- 1264716 of 1989 Japan .
- 4-43001 of 1992 Japan .
- 4-53701 of 1992 Japan .
- 4-02410 of 1992 Japan .
- 484988 11/1975 U.S.S.R. .
- 0802020 2/1981 U.S.S.R. .
- 1146197 3/1985 U.S.S.R. .
- 2107641 5/1983 United Kingdom .
- WO8501242 3/1985 WIPO .
- WO8705556 9/1987 WIPO .
- 890967 10/1989 WIPO .
- WO9308969 5/1993 WIPO .



## OTHER PUBLICATIONS

Sears Craftsman Cut-off Blade, #2 on p. 24, Sears Craftsman Tool Catalog, Jul. 31, 1980.

"Euro-Rip" Ripping Saw blade, top illustration, Amana Tool Corp. Catalog, © 1993, p. 66.

CMT Tools' Premium Industrial Grade Carbide Blade, advertisement top right & left corners of p. 107, *Fine Woodworking Magazine*, Jan./Feb. 1993.

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[57]

## CLAIM

The ornamental design for a circular saw blade with heat vents, as shown and described.

## DESCRIPTION

FIG. 1 is a top plan view of a circular saw blade with heat vents in accordance with the invention disclosed and claimed herein, the bottom plan view being a mirror image thereof;

FIG. 2 is an edge elevational view of the circular saw blade with heat vents of FIG. 1;

FIG. 3 is a top plan view of a second embodiment of a circular saw blade with heat vents in accordance with the invention disclosed and claimed herein, the bottom plan view being a mirror image thereof;

FIG. 4 is an edge elevational view of the circular saw blade with heat vents of FIG. 3;

FIG. 5 is a top plan view of a third embodiment of a circular saw blade with heat vents in accordance with the invention disclosed and claimed herein, the bottom plan view being a mirror image thereof;

FIG. 6 is an edge elevational view of the circular saw blade with heat vents of FIG. 5;

FIG. 7 is a top plan view of a fourth embodiment of a circular saw blade with heat vents in accordance with the invention disclosed and claimed herein, the bottom plan view being a mirror image thereof;

FIG. 8 is an edge elevation view of the circular saw blade with heat vents of FIG. 7;

FIG. 9 is a top plan view of the fifth embodiment of a circular saw blade with heat vents in accordance with the invention disclosed and claimed herein, the bottom plan view being a mirror image thereof;

FIG. 10 is an edge elevation view of the circular saw blade with heat vents of FIG. 9;

FIG. 11 is a top plan view of a sixth embodiment of a circular saw blade with heat vents in accordance with the invention disclosed and claimed herein, the bottom plan view being a mirror image thereof;

FIG. 12 is an edge elevation view of the circular saw blade with heat vents of FIG. 11;

FIG. 13 is a top plan view of a seventh embodiment of a circular saw blade with heat vents in accordance with the invention disclosed and claimed herein, the edge view thereof being substantially the same as FIG. 10, and the bottom plan view being a mirror image thereof;

FIG. 14 is a top plan view of an eighth embodiment of a circular saw blade with heat vents in accordance with the invention disclosed and claimed herein, the edge view thereof being substantially the same as FIG. 10, and the bottom plan view being a mirror image thereof; and,

FIG. 15 is a top plan view of a ninth embodiment of a circular saw blade with heat vents in accordance with the invention disclosed and claimed herein, the edge view thereof being substantially the same as FIG. 10, and the bottom plan view being a mirror image thereof.

1 Claim, 9 Drawing Sheets

FIG. 1

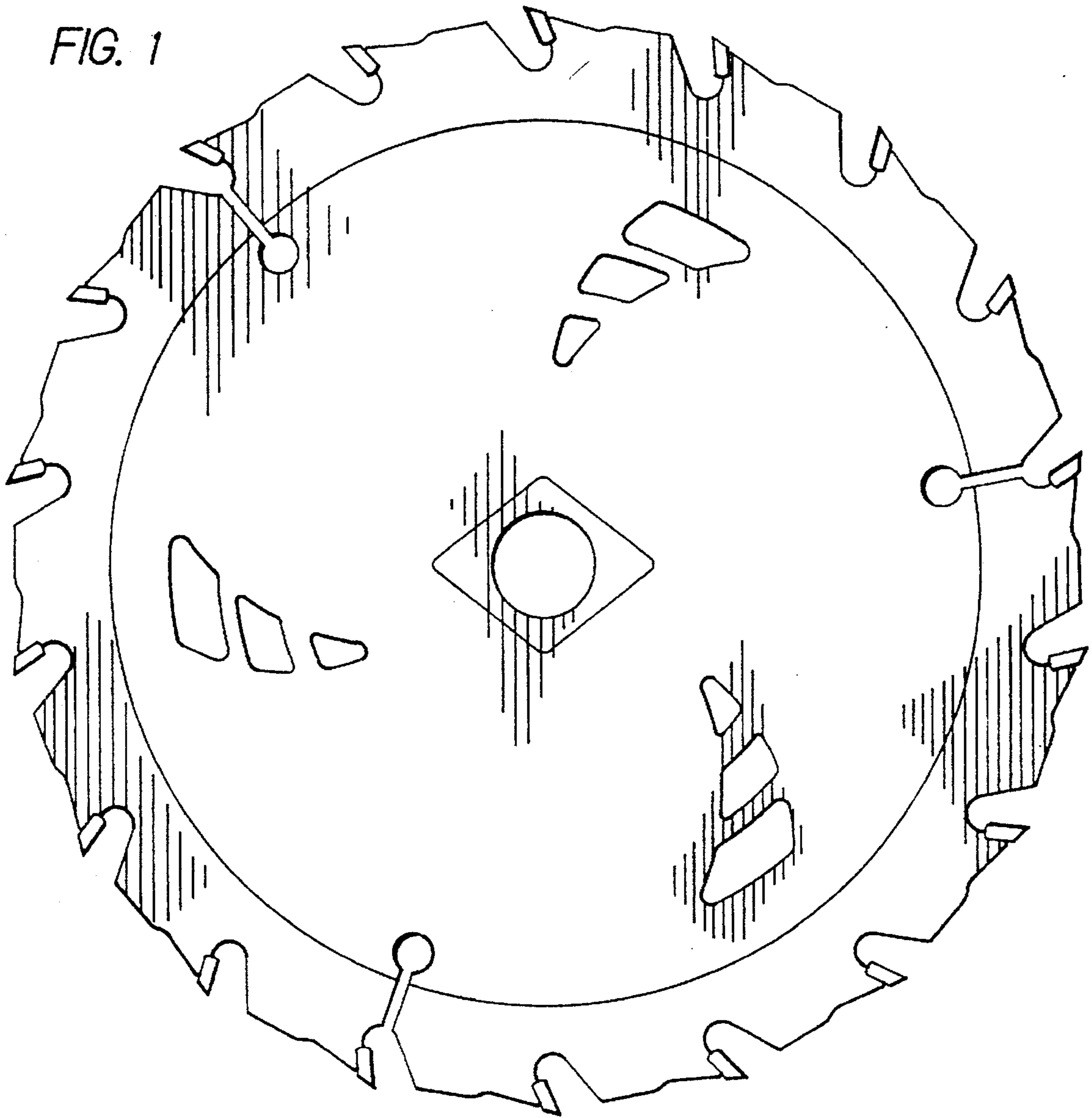


FIG. 2



FIG. 3

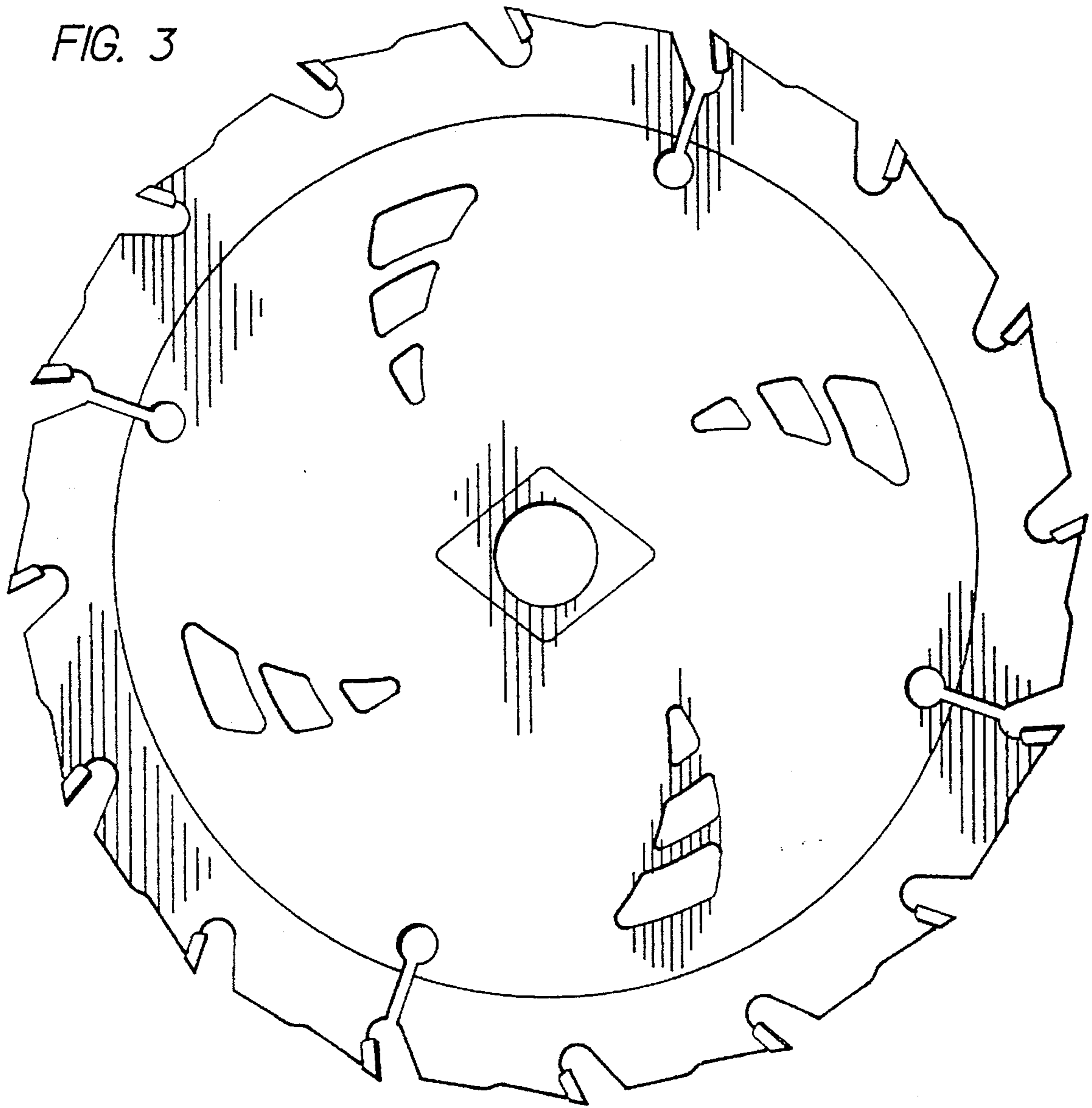


FIG. 4

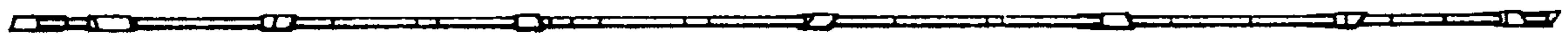


FIG. 5

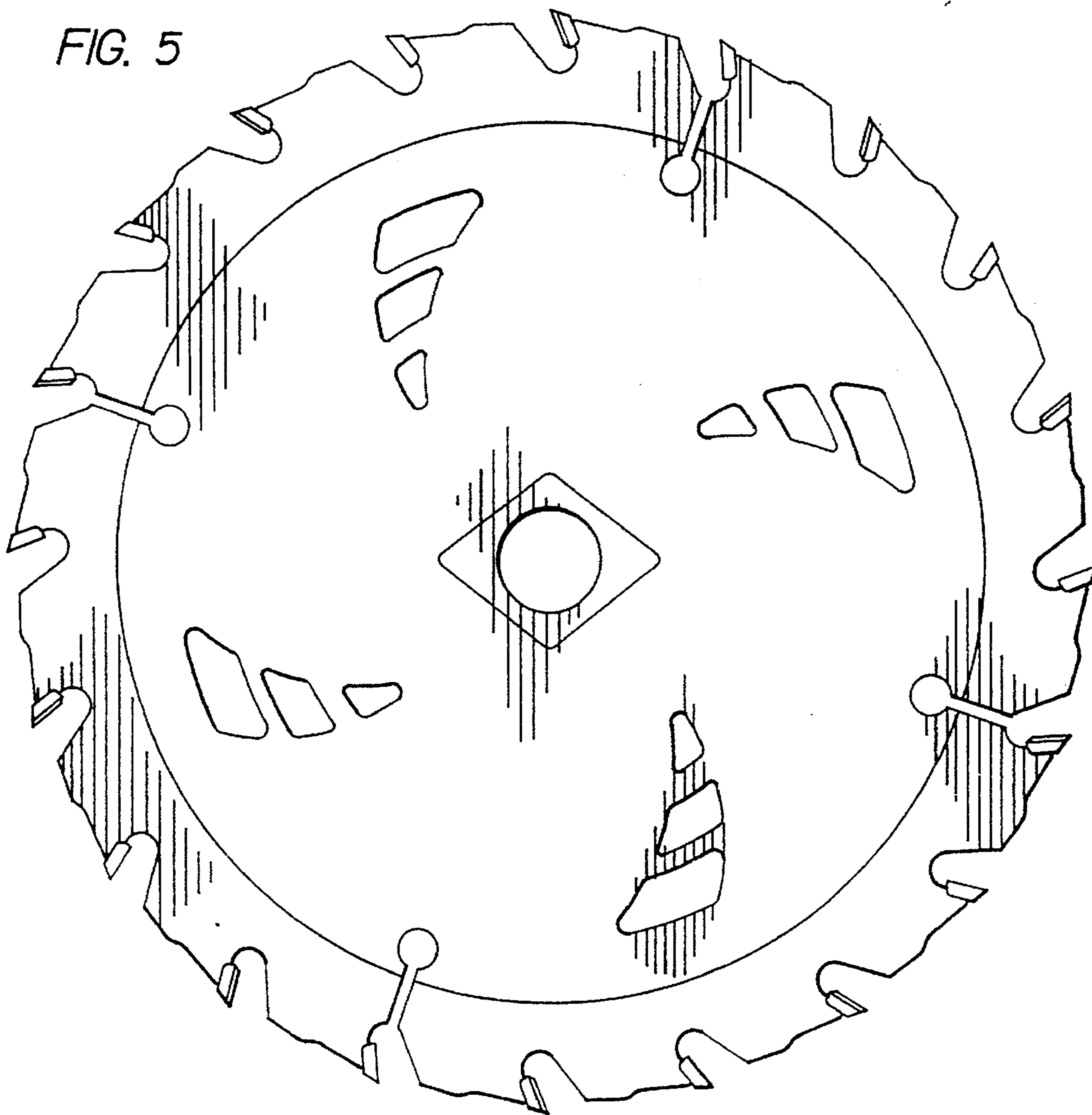


FIG. 6



FIG. 7

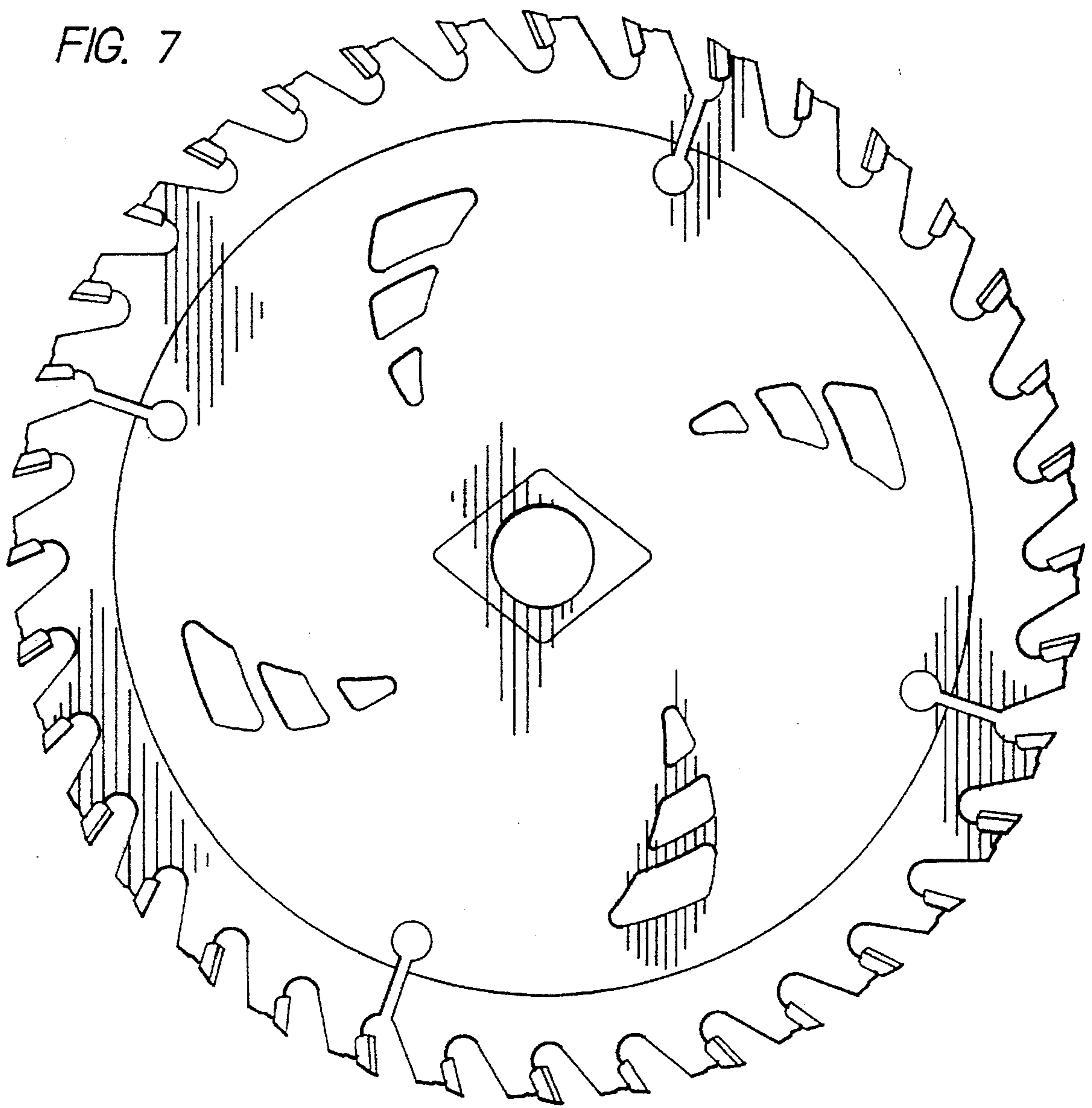


FIG. 8



FIG. 9

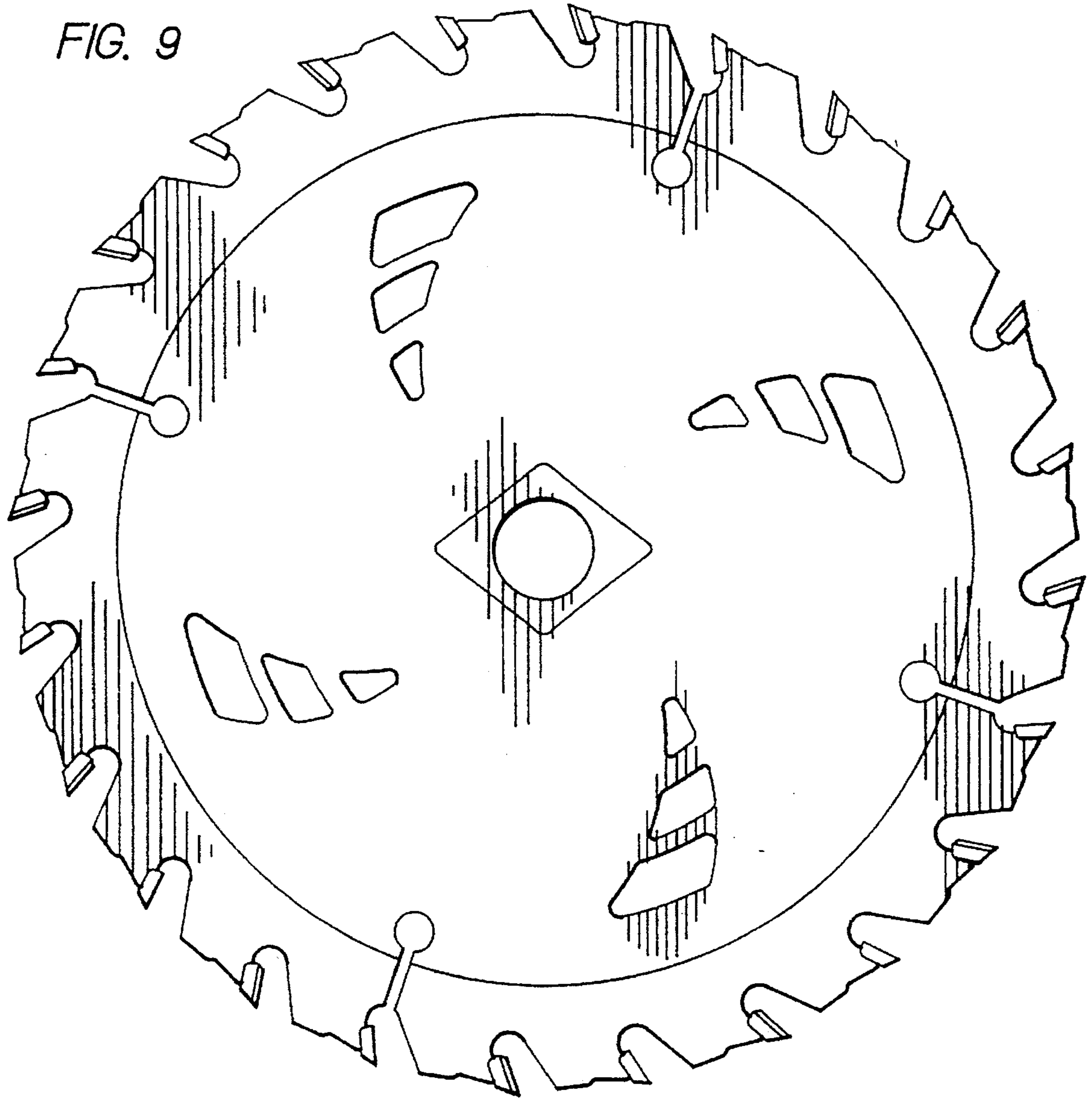


FIG. 10



FIG. 11

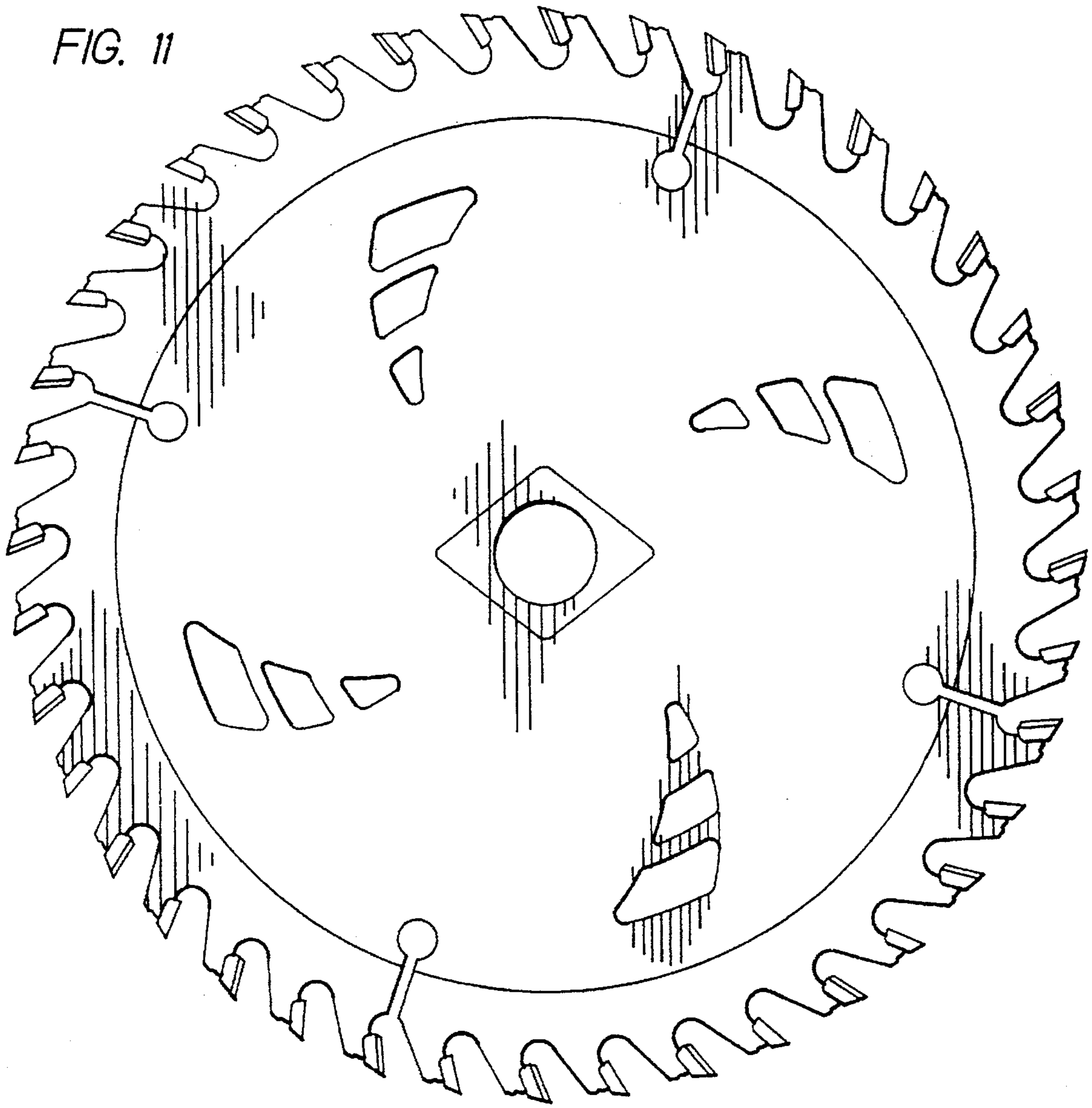


FIG. 12

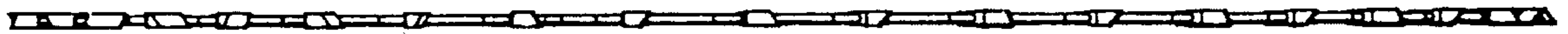




FIG. 13

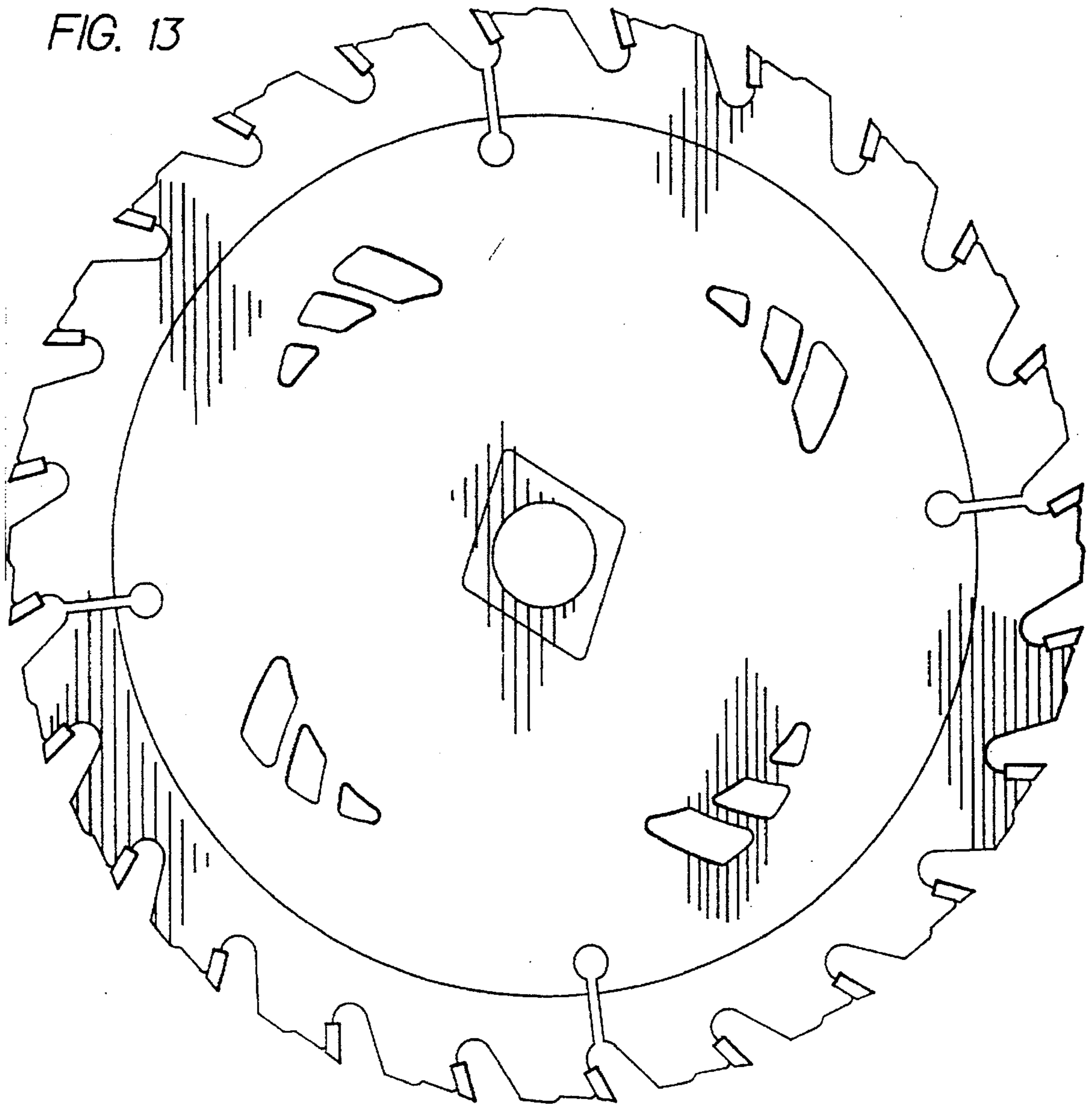


FIG. 14

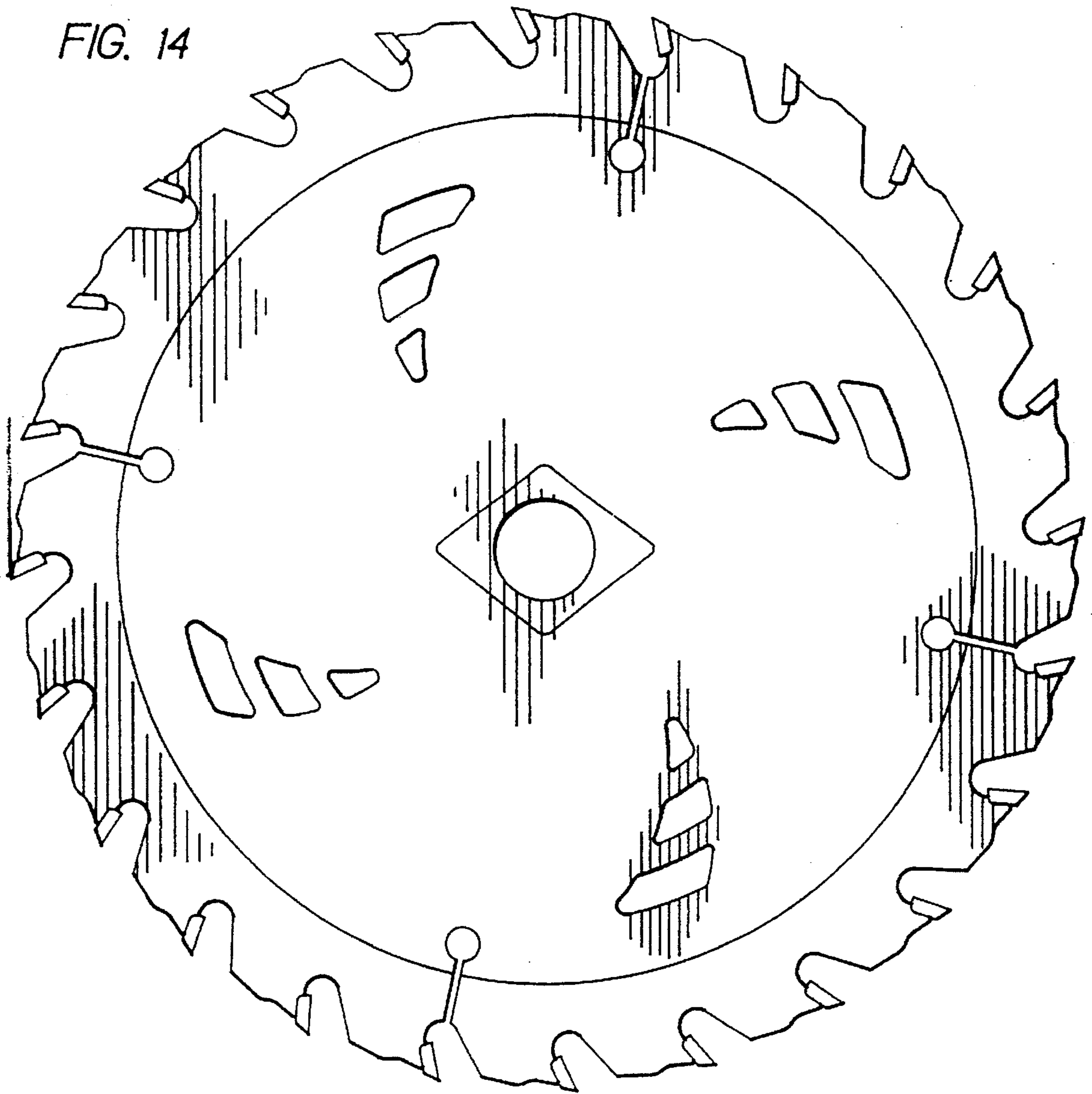


FIG. 15

