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United States Patent [19]

Kirimoto

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[54] BICYCLE CRANK ARM PORTION

[75] Inventor: Kanji Kirimoto, Osaka, Japan

[73] Assignee: Shimano Inc., Osaka, Japan

[**] Term: 14 Years

[21] Appl. No.: 29/101,155

[22] Filed: Feb. 25, 1999

[51] LOC (7) Cl. 12-12

[52] U.S. Cl. D12/123

[58] Field of Search D12/123; 188/24.15,
188/24.21; 74/594.1-594.7; 474/152, 160;
280/259, 260

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Assistant Examiner—Linda Brooks

Attorney, Agent, or Firm—Shinju Global IP Counselors, LLP

[57] CLAIM

The ornamental design for a bicycle crank arm portion, as shown and described.

DESCRIPTION

FIG. 1 is a bottom perspective view of a bicycle crank arm portion in accordance with a first embodiment of my new design;

FIG. 2 is a right side elevational view of the bicycle crank arm portion illustrated in FIG. 1;

FIG. 3 is a front elevational view of the bicycle crank arm portion illustrated in FIGS. 1 and 2;

FIG. 4 is a left side elevational view of the bicycle crank arm portion illustrated in FIGS. 1-3;

FIG. 5 is a rear side end elevational view of the bicycle crank arm portion illustrated in FIGS. 1-4;

FIG. 6 is a bottom plan view of the bicycle crank arm portion illustrated in FIGS. 1-5;

FIG. 7 is a cross-sectional view of the bicycle crank arm portion illustrated in FIGS. 1-6 as seen along section line 7-7 of FIG. 8;

FIG. 8 is a front elevational view of the bicycle crank arm portion illustrated in FIGS. 1-6 with a part broken away for illustration purposes;

FIG. 9 is a bottom perspective view of a bicycle crank arm portion in accordance with a second embodiment of my new design;

FIG. 10 is a right side elevational view of the bicycle crank arm portion illustrated in FIG. 9;

FIG. 11 is a front elevational view of the bicycle crank arm portion illustrated in FIGS. 9 and 10;

FIG. 12 is a left side elevational view of the bicycle crank arm portion illustrated in FIGS. 9-11;

FIG. 13 is a rear side end elevational view of the bicycle crank arm portion illustrated in FIGS. 9-12;

FIG. 14 is a bottom plan view of the bicycle crank arm portion illustrated in FIGS. 9-13;

FIG. 15 is a cross-sectional view of the bicycle crank arm portion illustrated in FIGS. 9-14 as seen along section line 15-15 of FIG. 16;

FIG. 16 is a front elevational view of the bicycle crank arm portion illustrated in FIGS. 9-14 with a part broken away for illustration purposes;

FIG. 17 is a bottom perspective view of a bicycle crank arm portion in accordance with a third embodiment of my new design;

FIG. 18 is a right side elevational view of the bicycle crank arm portion illustrated in FIG. 17;

FIG. 19 is a front elevational view of the bicycle crank arm portion illustrated in FIGS. 17 and 18;

FIG. 20 is a left side elevational view of the bicycle crank arm portion illustrated in FIGS. 17-19;

FIG. 21 is a rear side end elevational view of the bicycle crank arm portion illustrated in FIGS. 17-20;

FIG. 22 is a bottom plan view of the bicycle crank arm portion illustrated in FIGS. 17-21;

FIG. 23 is a cross-sectional view of the bicycle crank arm portion illustrated in FIGS. 17-22 as seen along section line 23-23 of FIG. 24;

FIG. 24 is a front elevational view of the bicycle crank arm portion illustrated in FIGS. 17-22 with a part broken away for illustration purposes;

FIG. 25 is a bottom perspective view of a bicycle crank arm portion in accordance with a fourth embodiment of my new design;

FIG. 26 is a right side elevational view of the bicycle crank arm portion illustrated in FIG. 25;

FIG. 27 is a front elevational view of the bicycle crank arm portion illustrated in FIGS. 25 and 26;

FIG. 28 is a left side elevational view of the bicycle crank arm portion illustrated in FIGS. 25-27;

FIG. 29 is a rear side end elevational view of the bicycle crank arm portion illustrated in FIGS. 25-28;

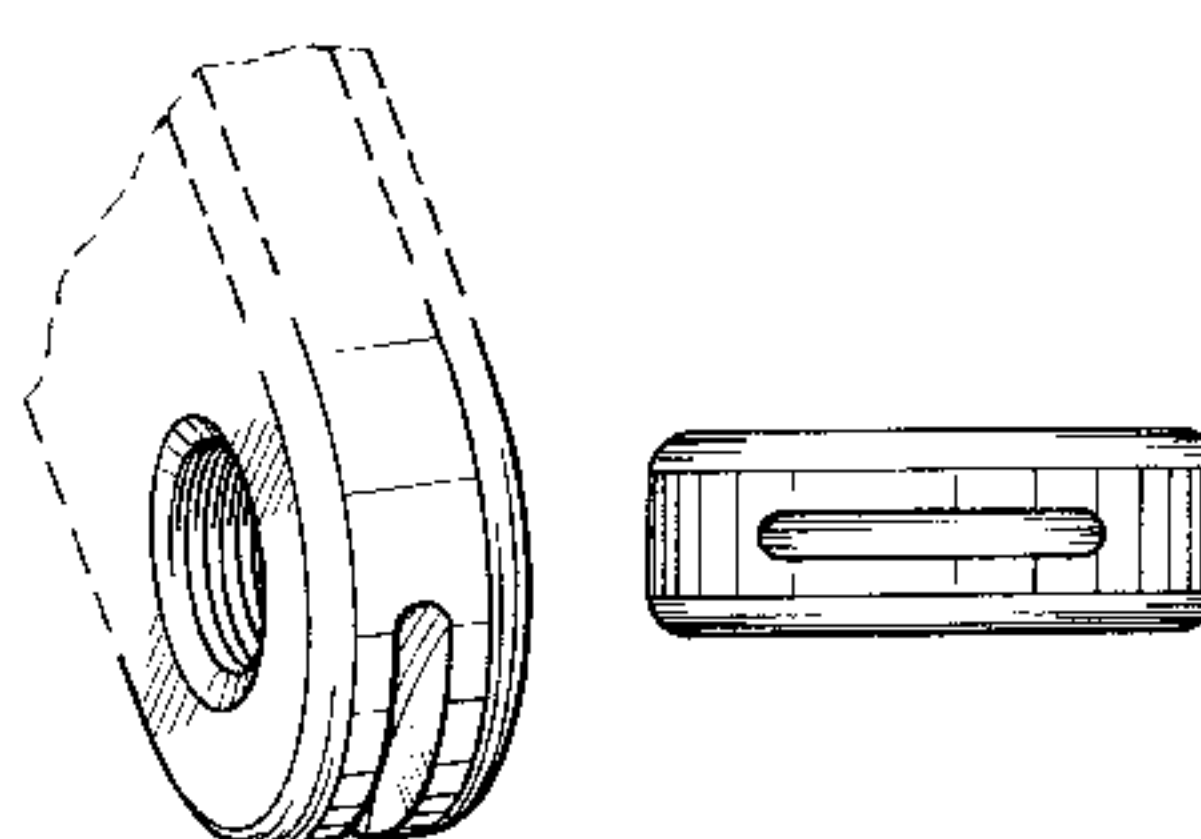
FIG. 30 is a bottom plan view of the bicycle crank arm portion illustrated in FIGS. 25-29;

FIG. 31 is a cross-sectional view of the bicycle crank arm portion illustrated in FIGS. 25-30 as seen along section line 31-31 of FIG. 32; and,

FIG. 32 is a front elevational view of the bicycle crank arm portion illustrated in FIGS. 25-30 with a part broken away for illustration purposes.

The broken line showing of environment (the remaining structure of the bicycle crank arm) in the Figures is for illustrative purposes only and forms no part of the claimed designs. Also, the cross-sectional views and the broken away portions are presented for better understanding the claimed designs.

1 Claim, 8 Drawing Sheets



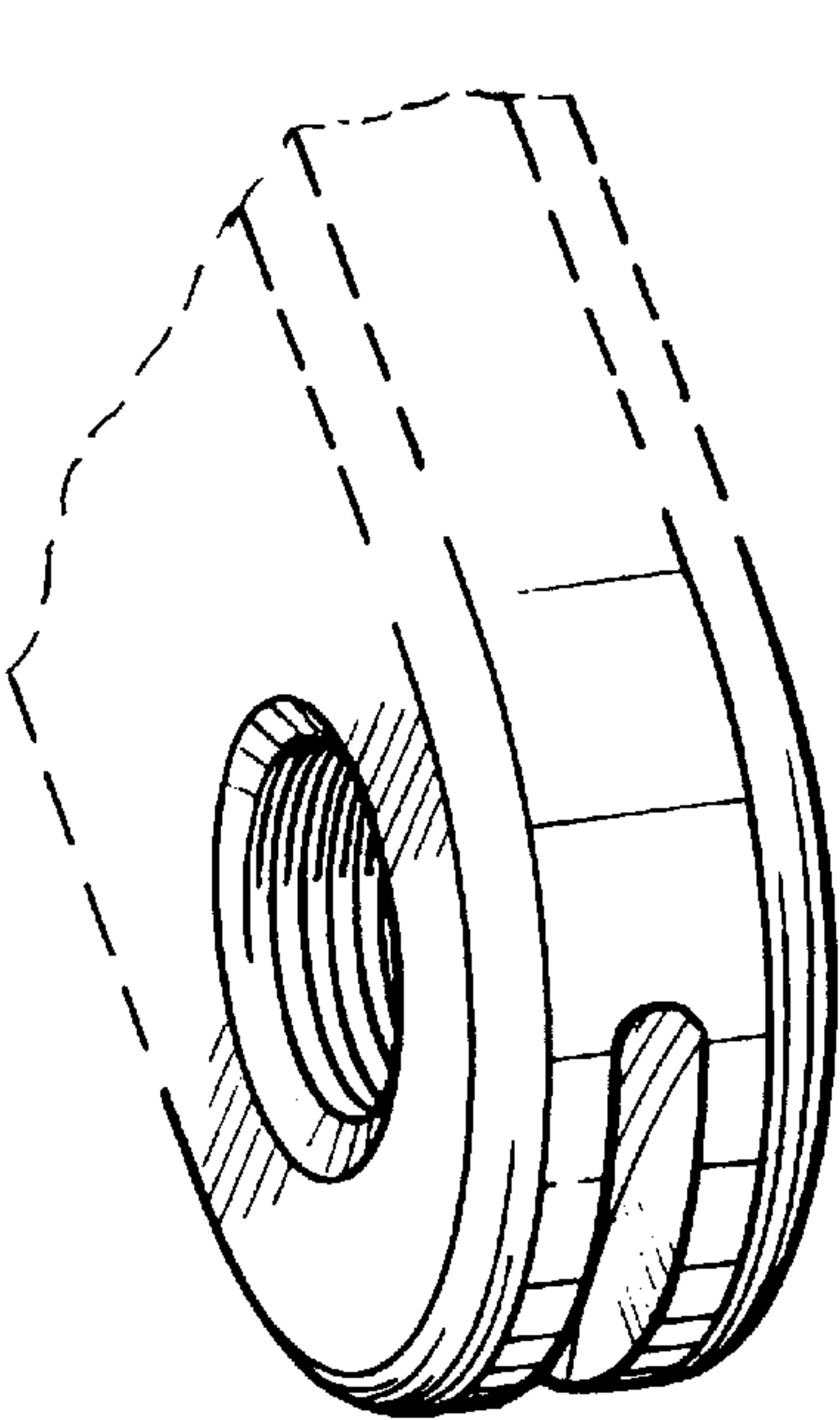


FIG. 1

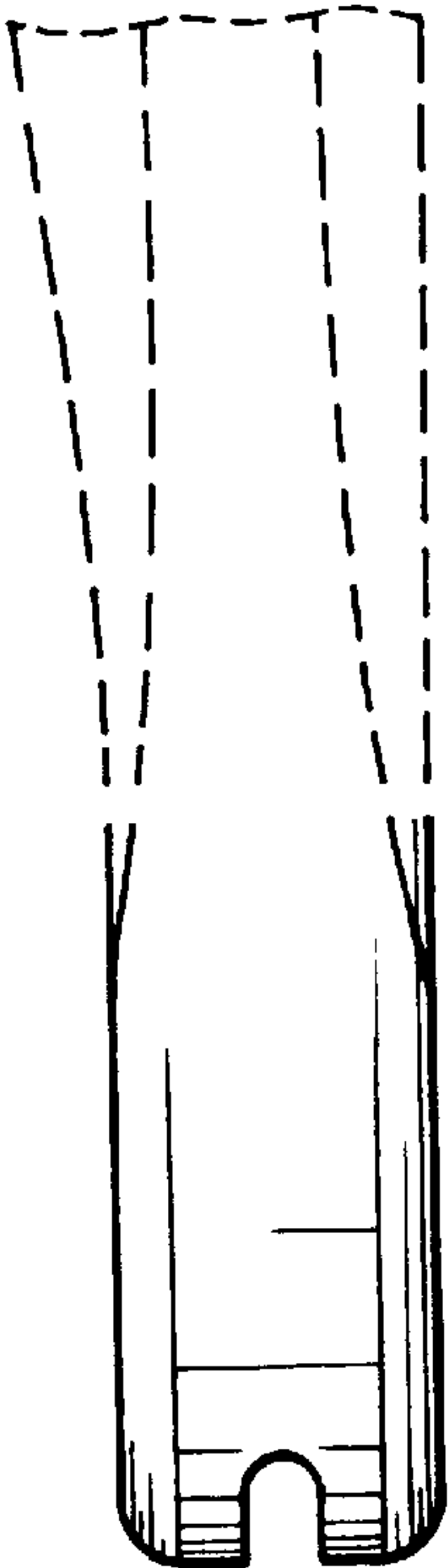


FIG. 2

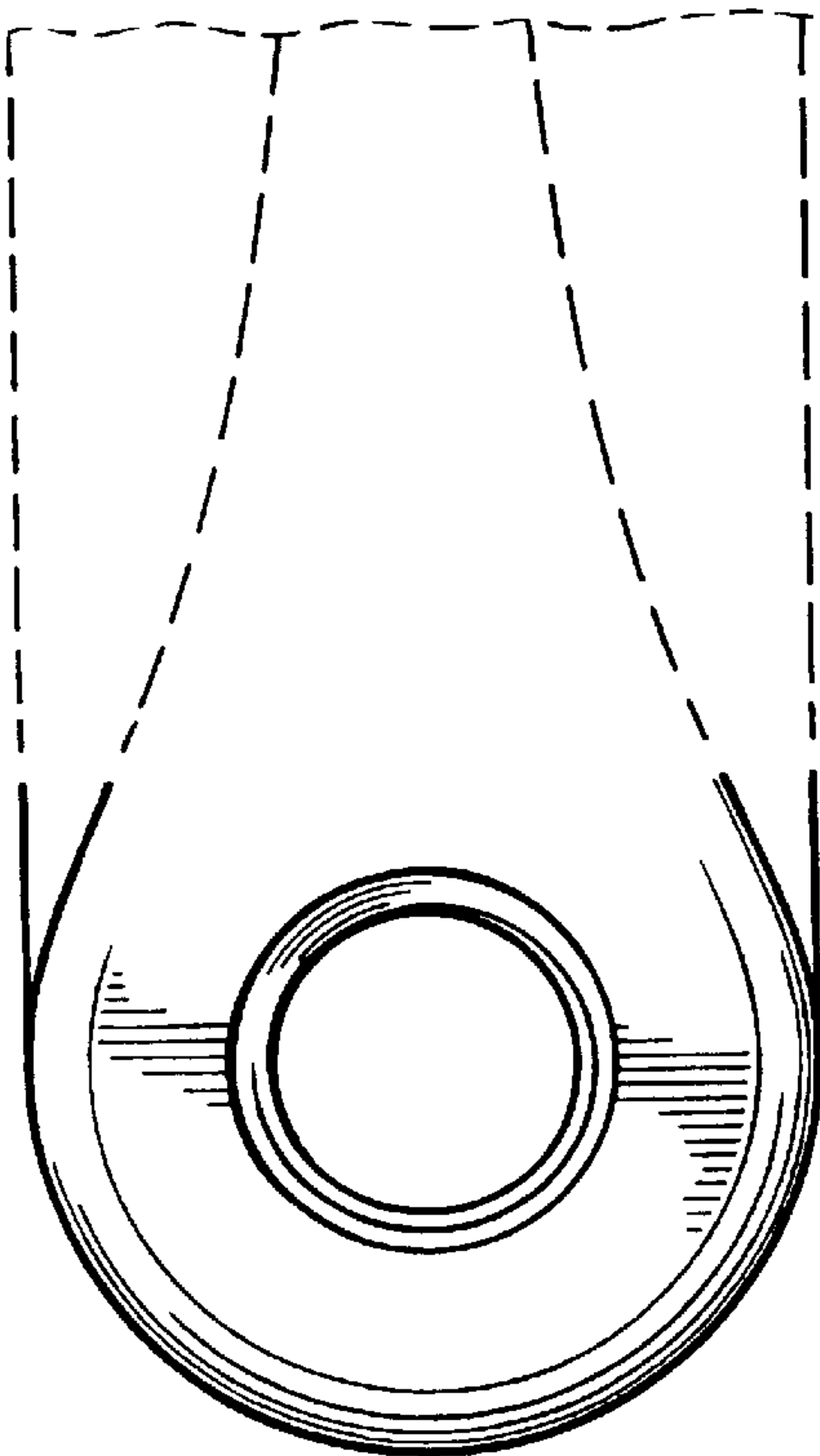


FIG. 3

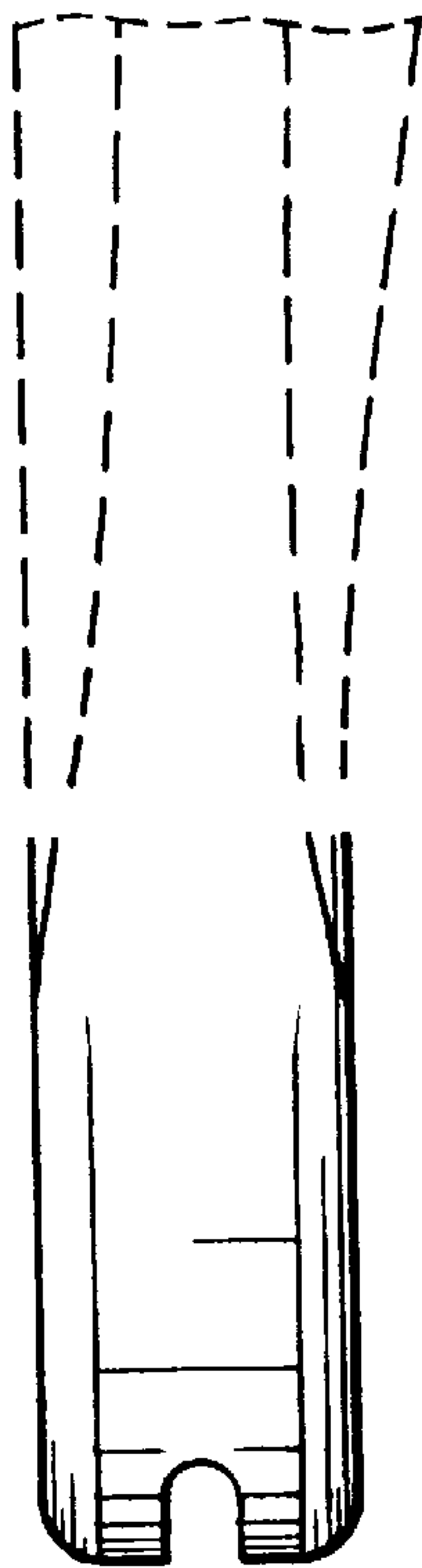


FIG. 4

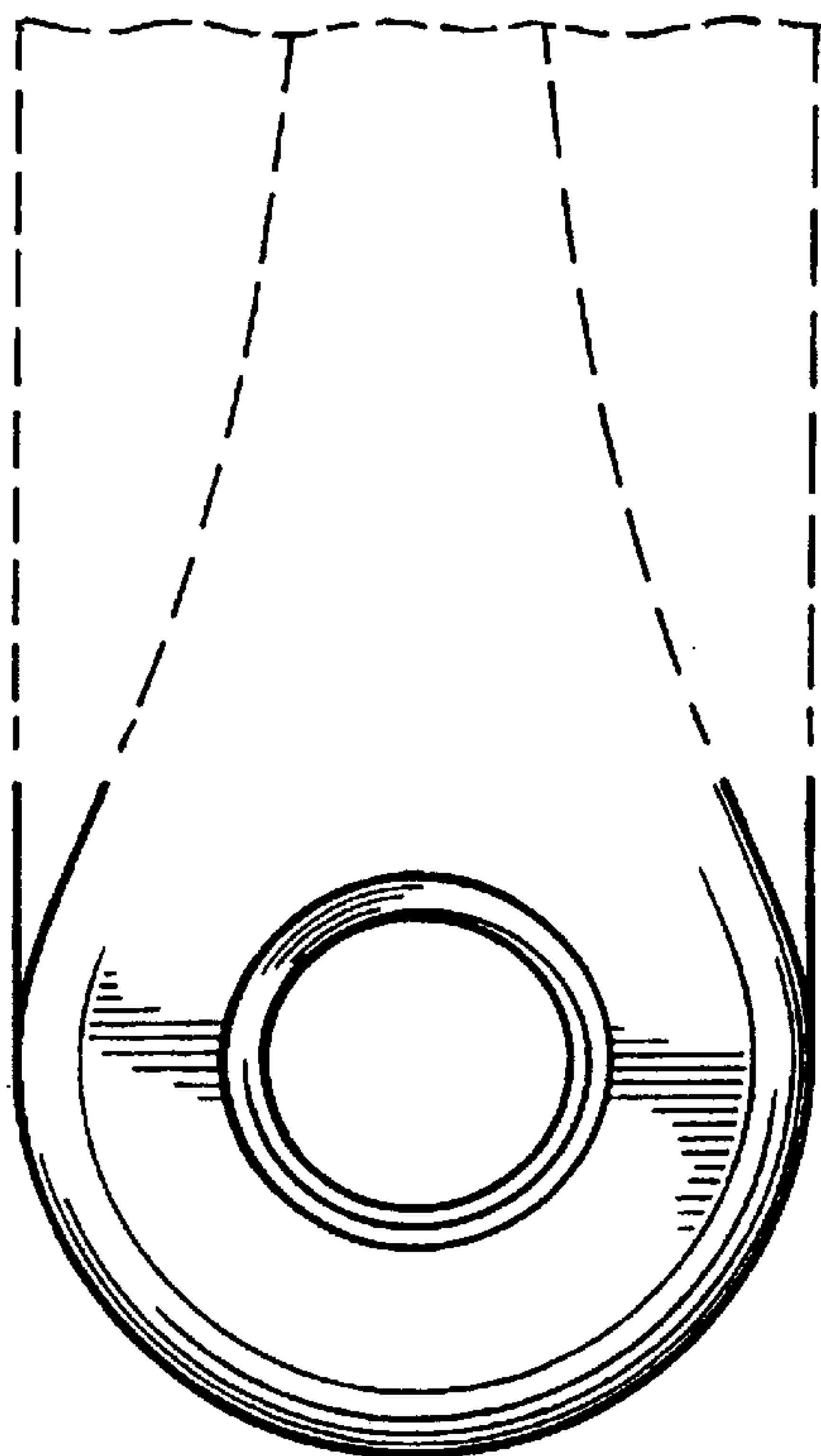


FIG. 5

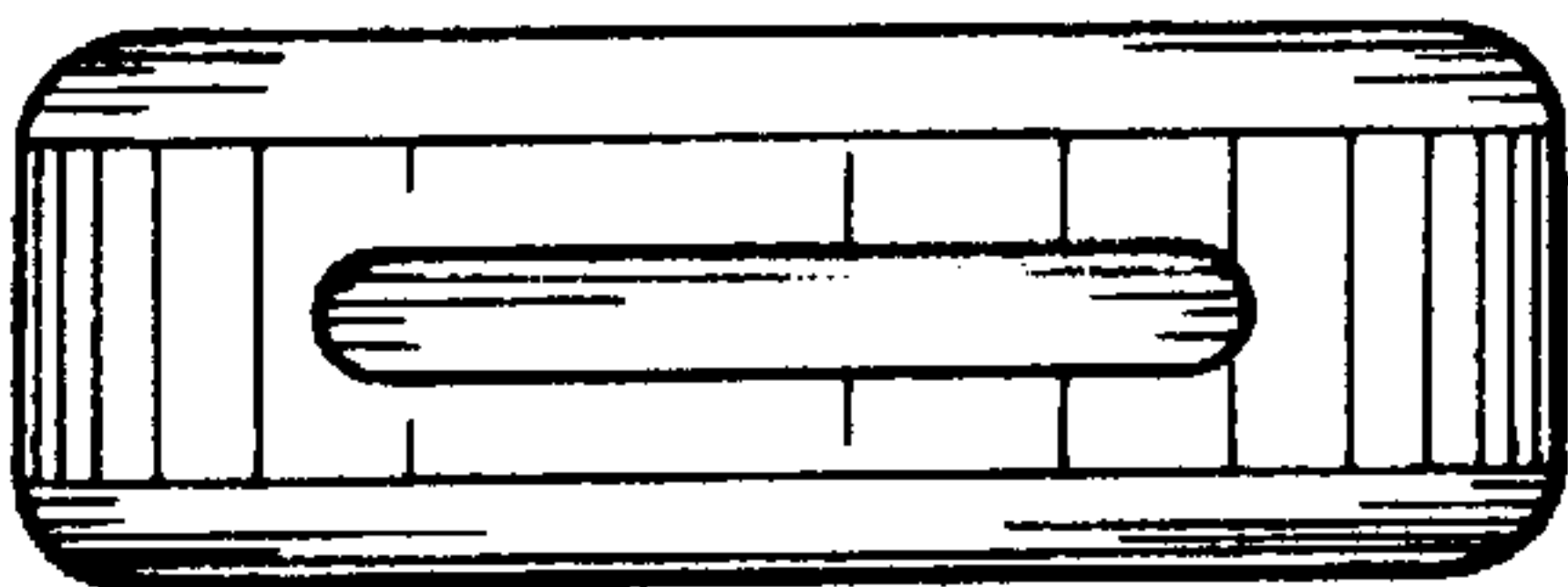


FIG. 6



FIG. 7

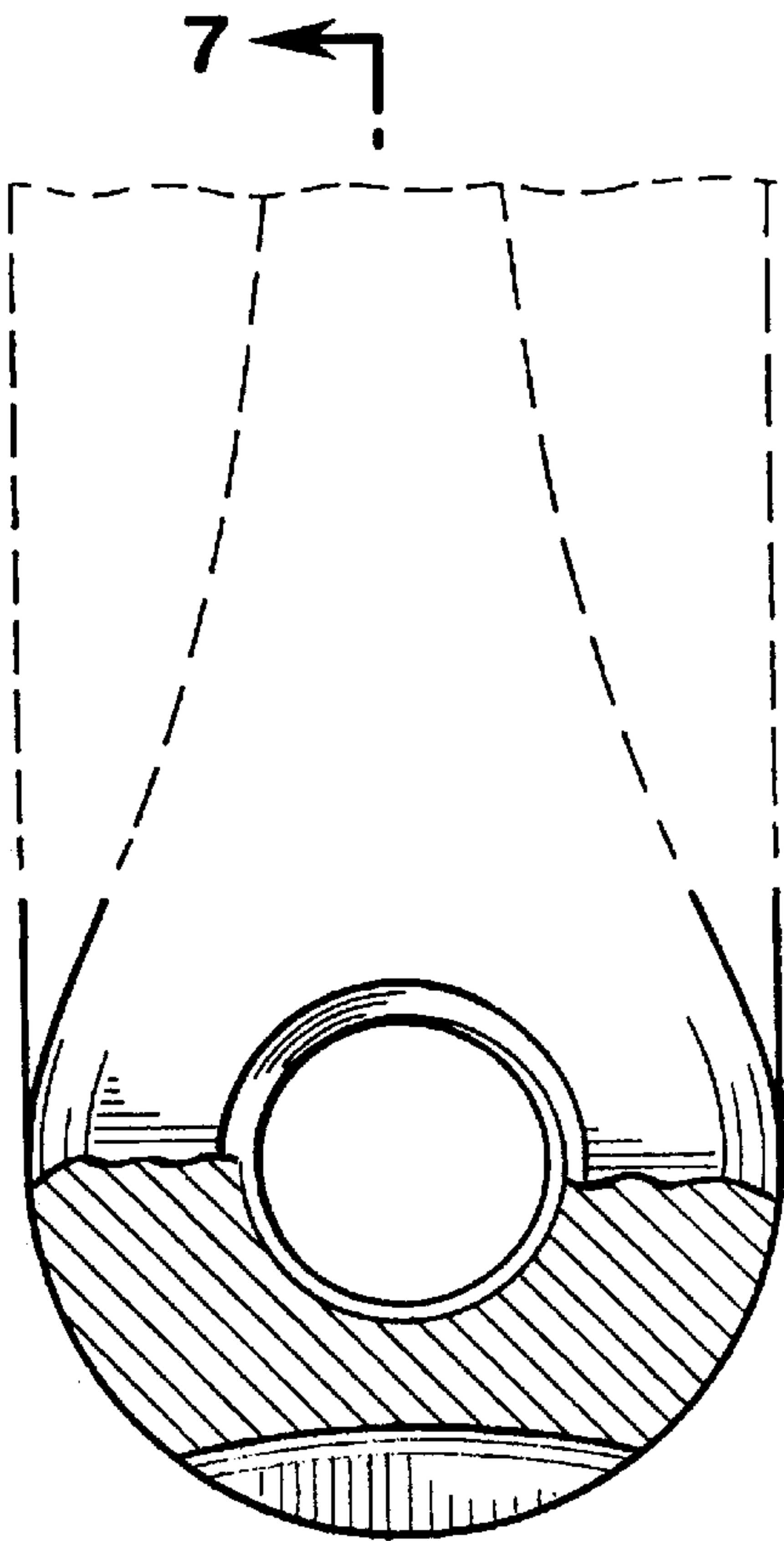


FIG. 8

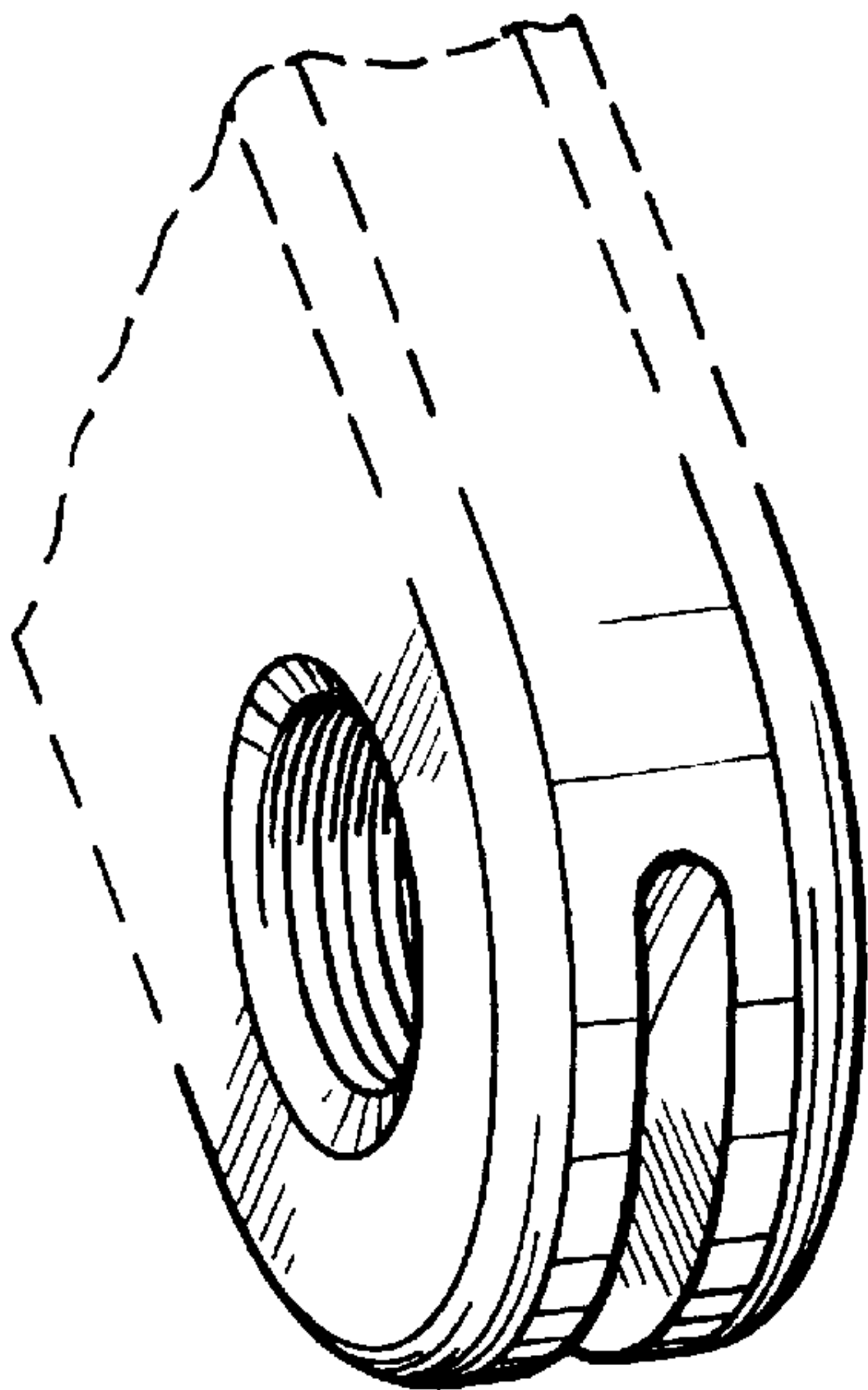


FIG. 9



FIG. 10

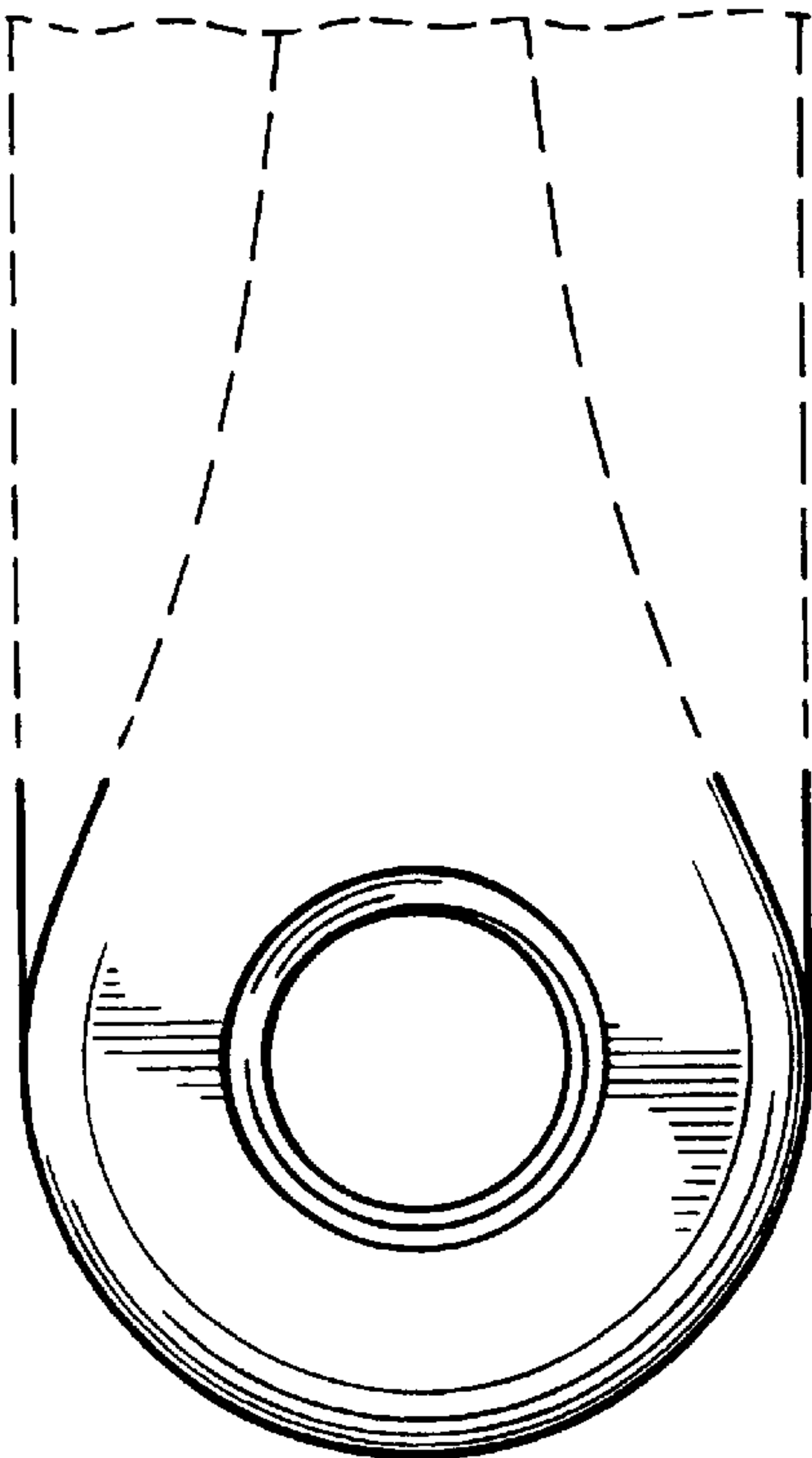


FIG. 11

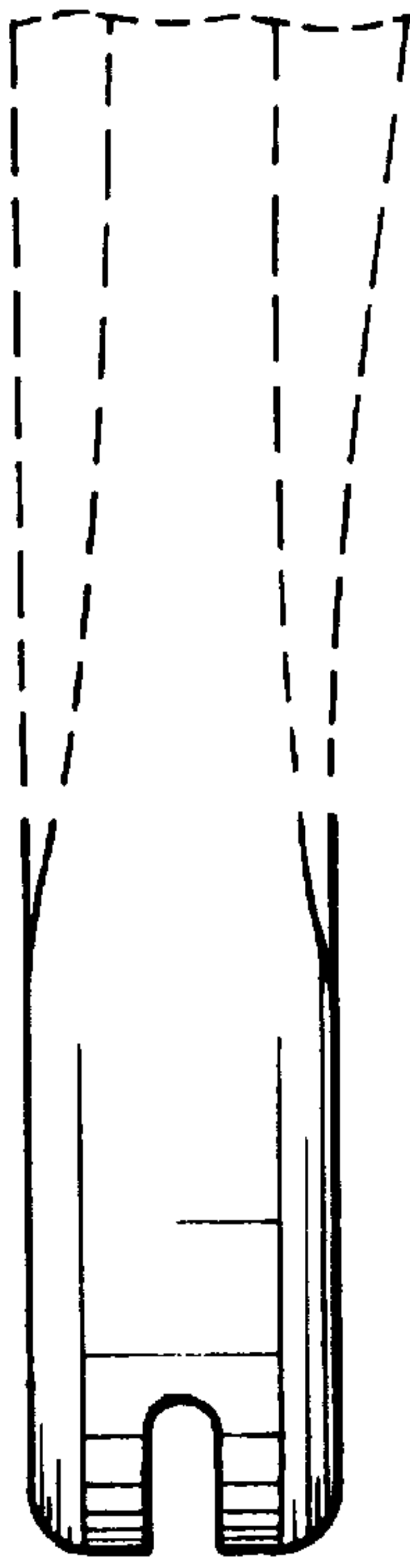


FIG. 12

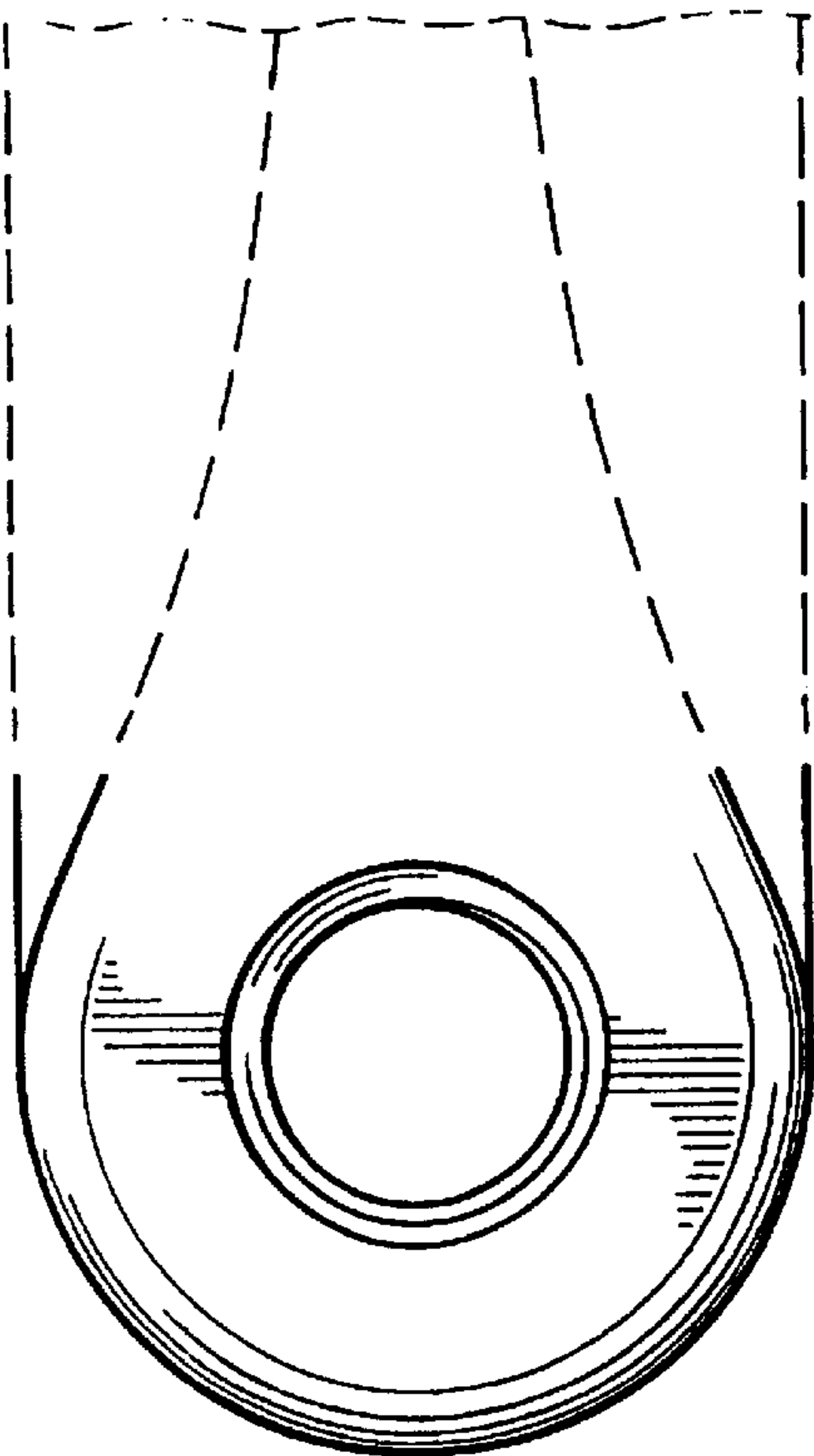


FIG. 13

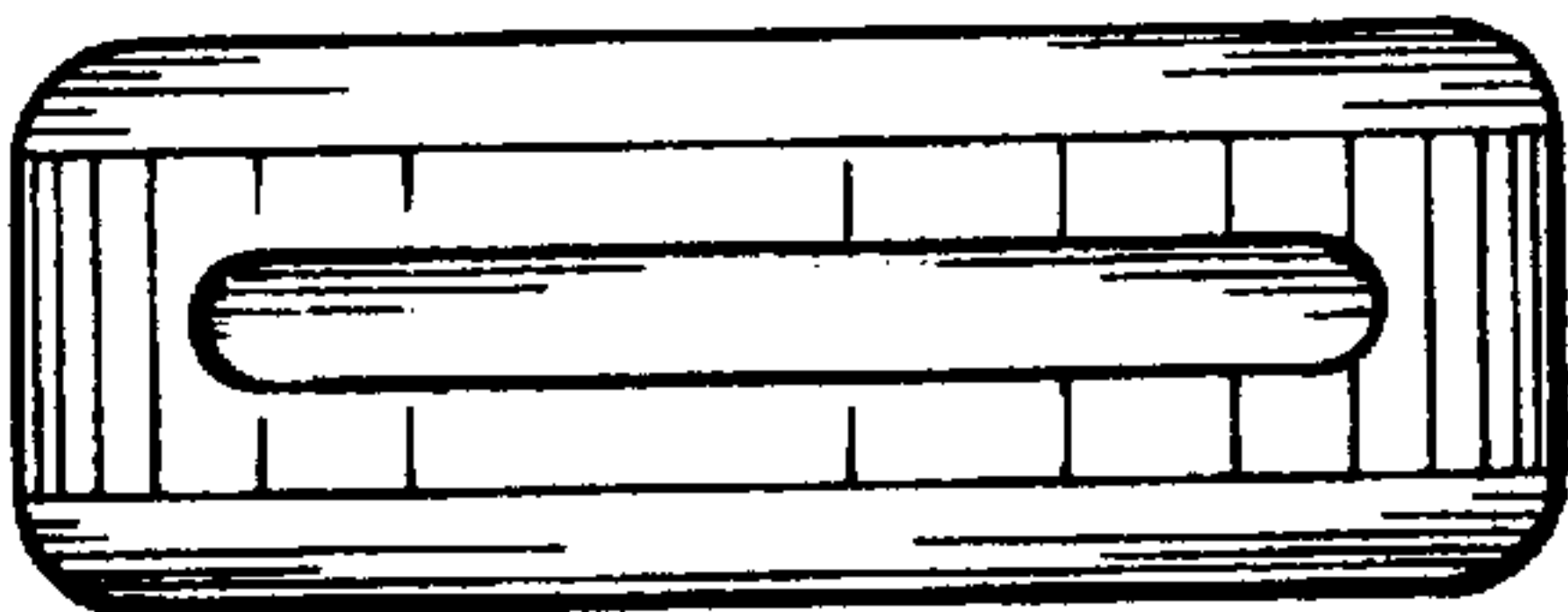


FIG. 14

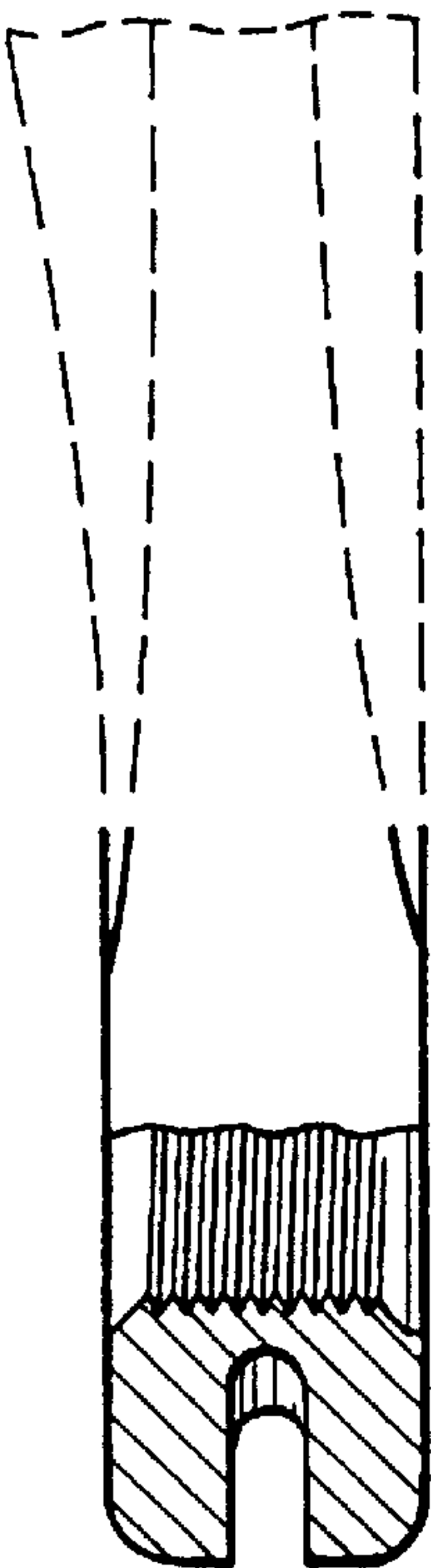
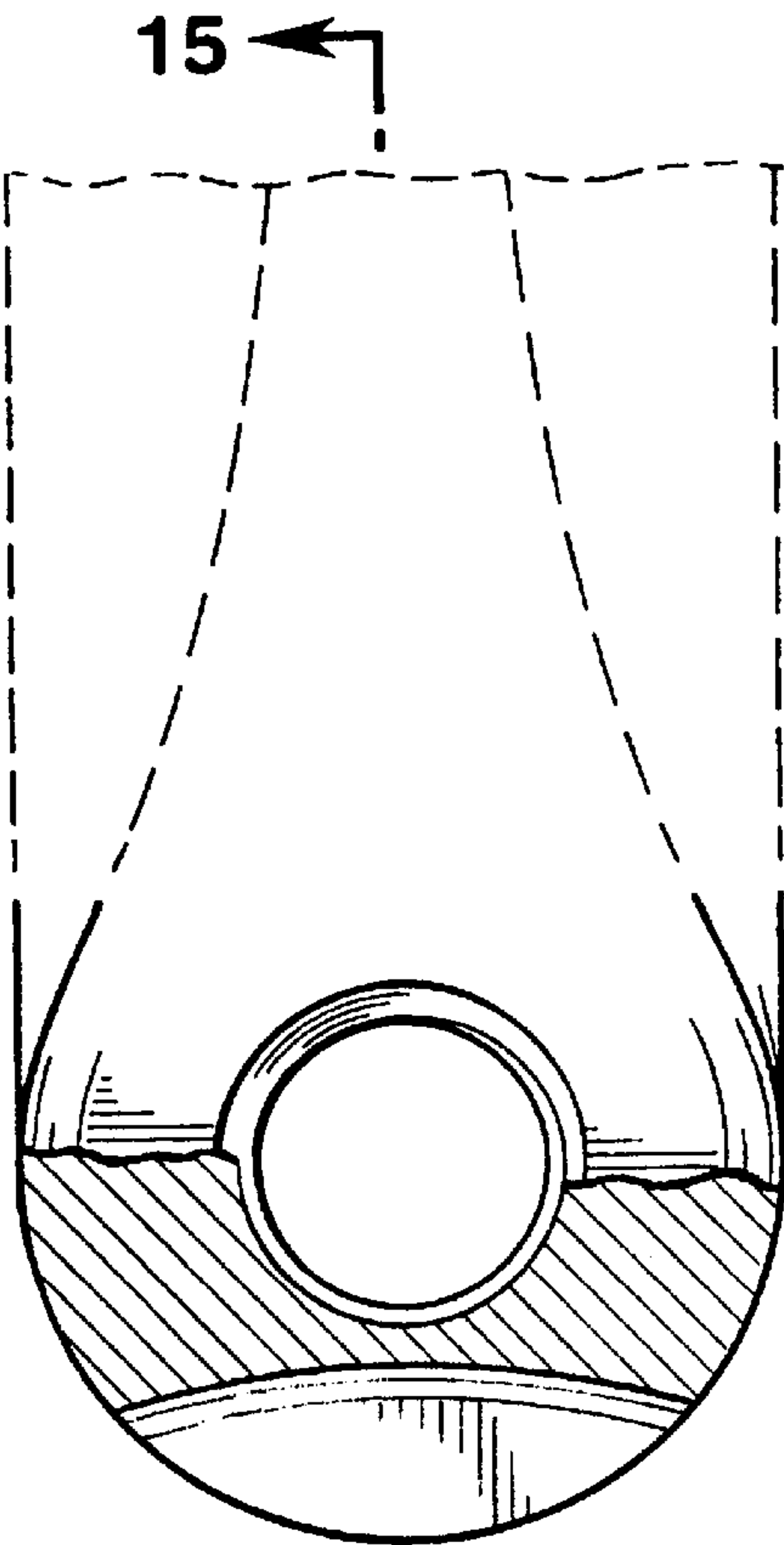


FIG. 15



15 ← FIG. 16

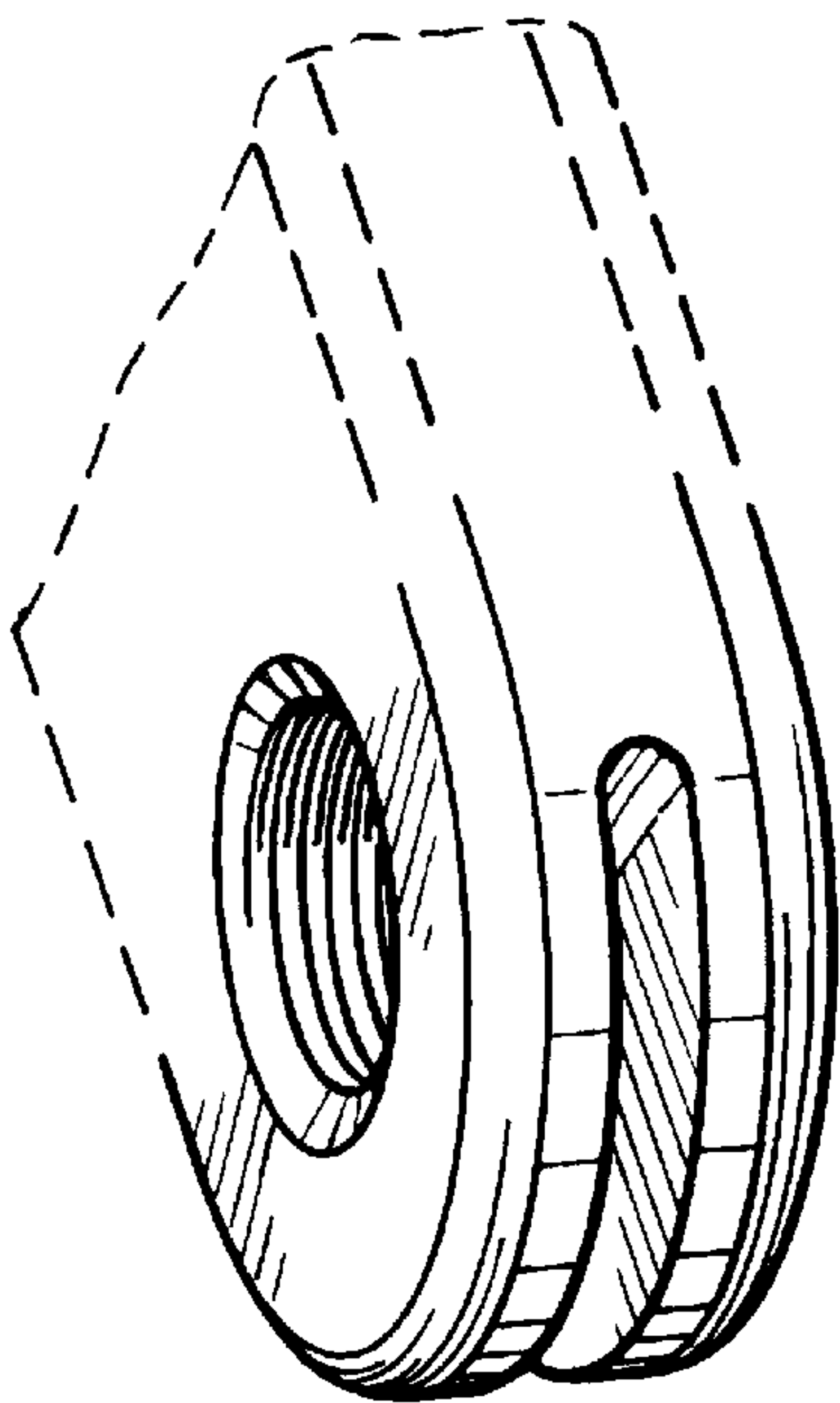


FIG. 17



FIG. 18

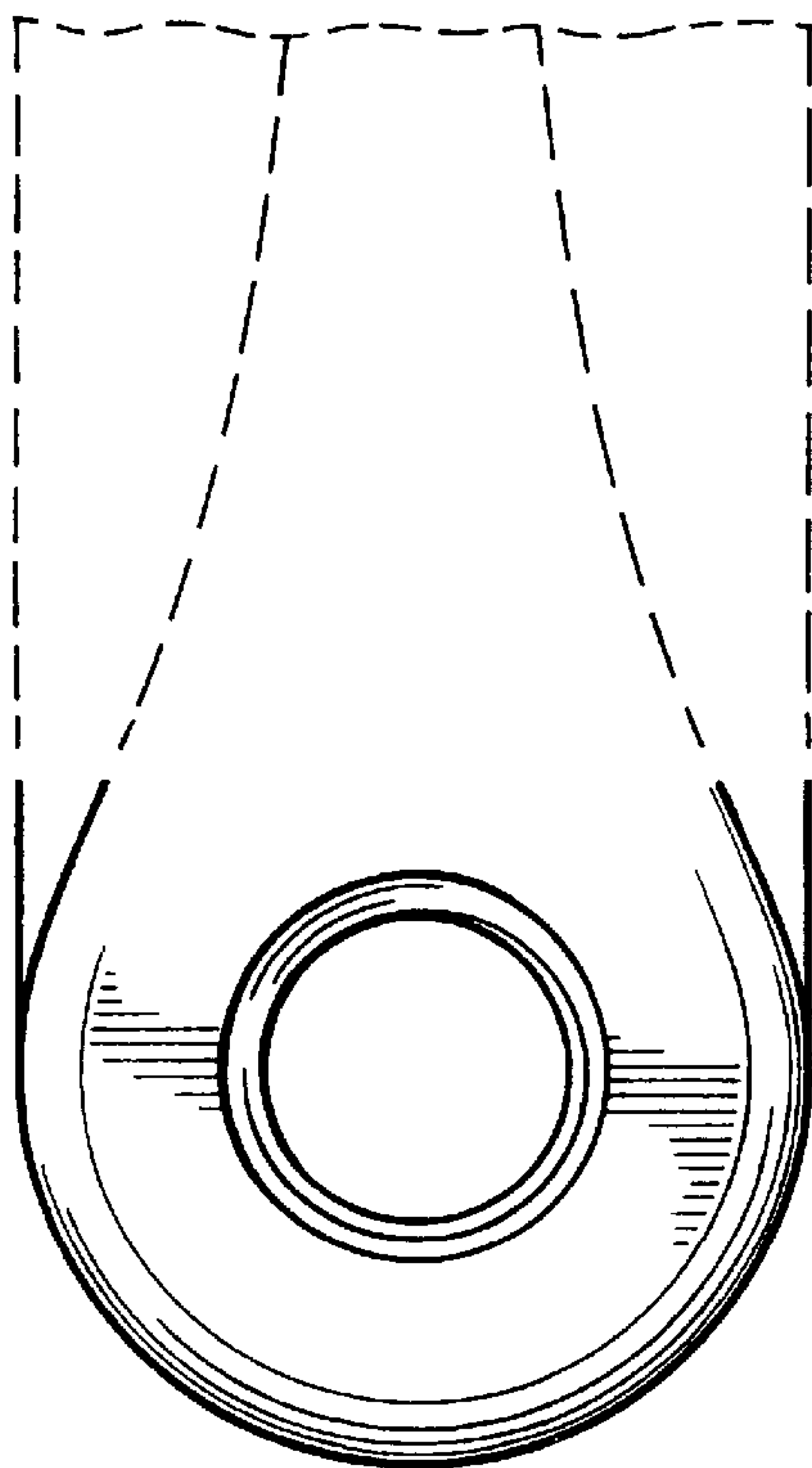


FIG. 19

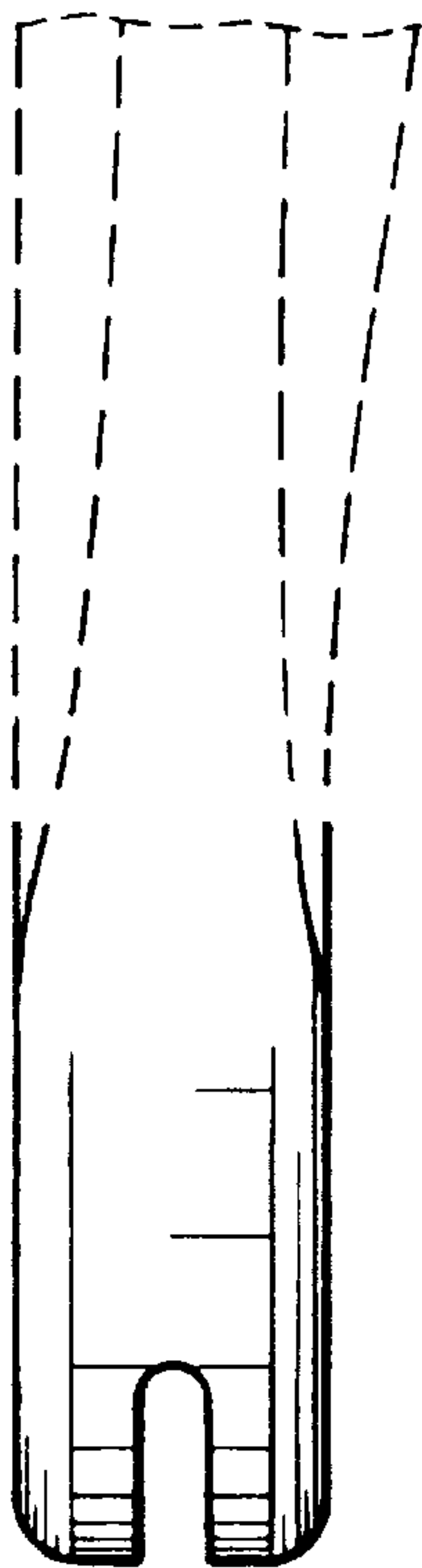


FIG. 20

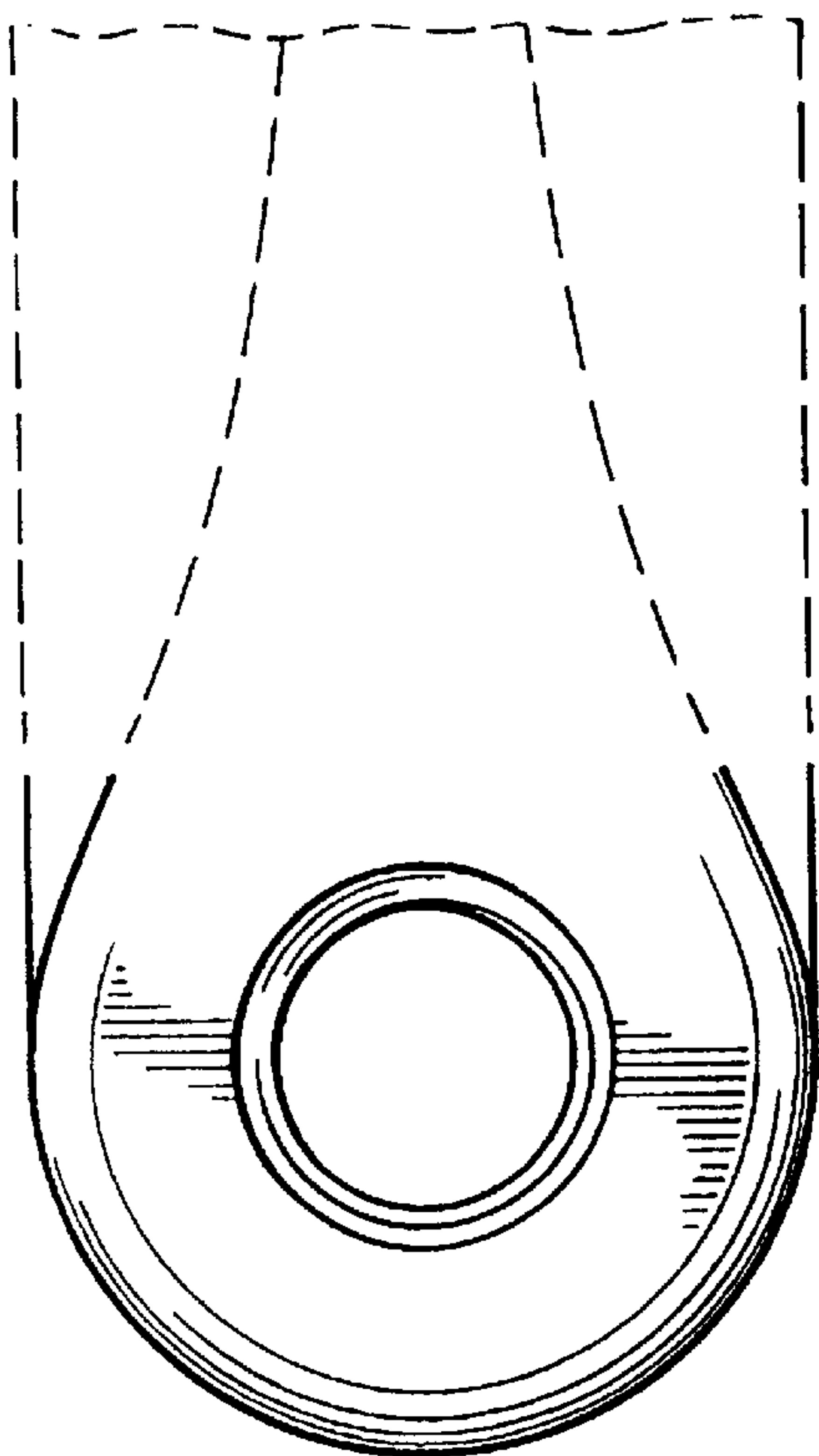


FIG. 21

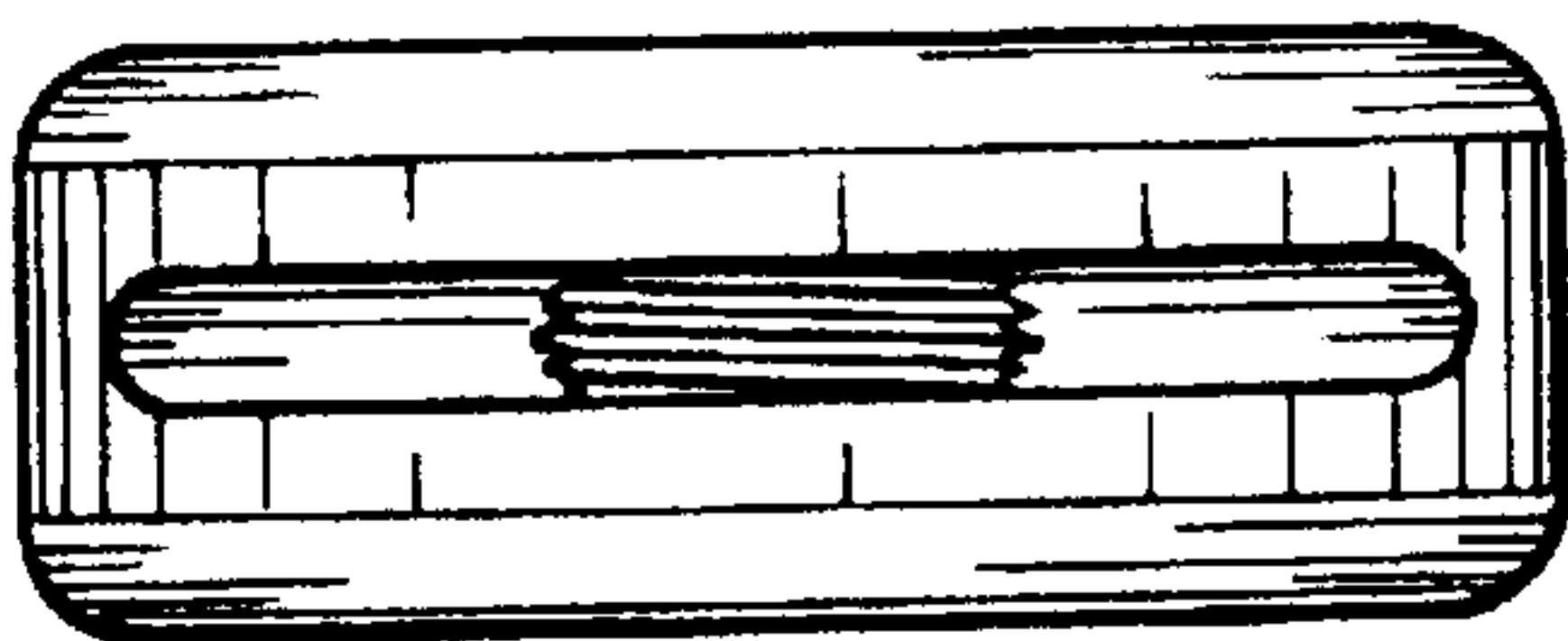
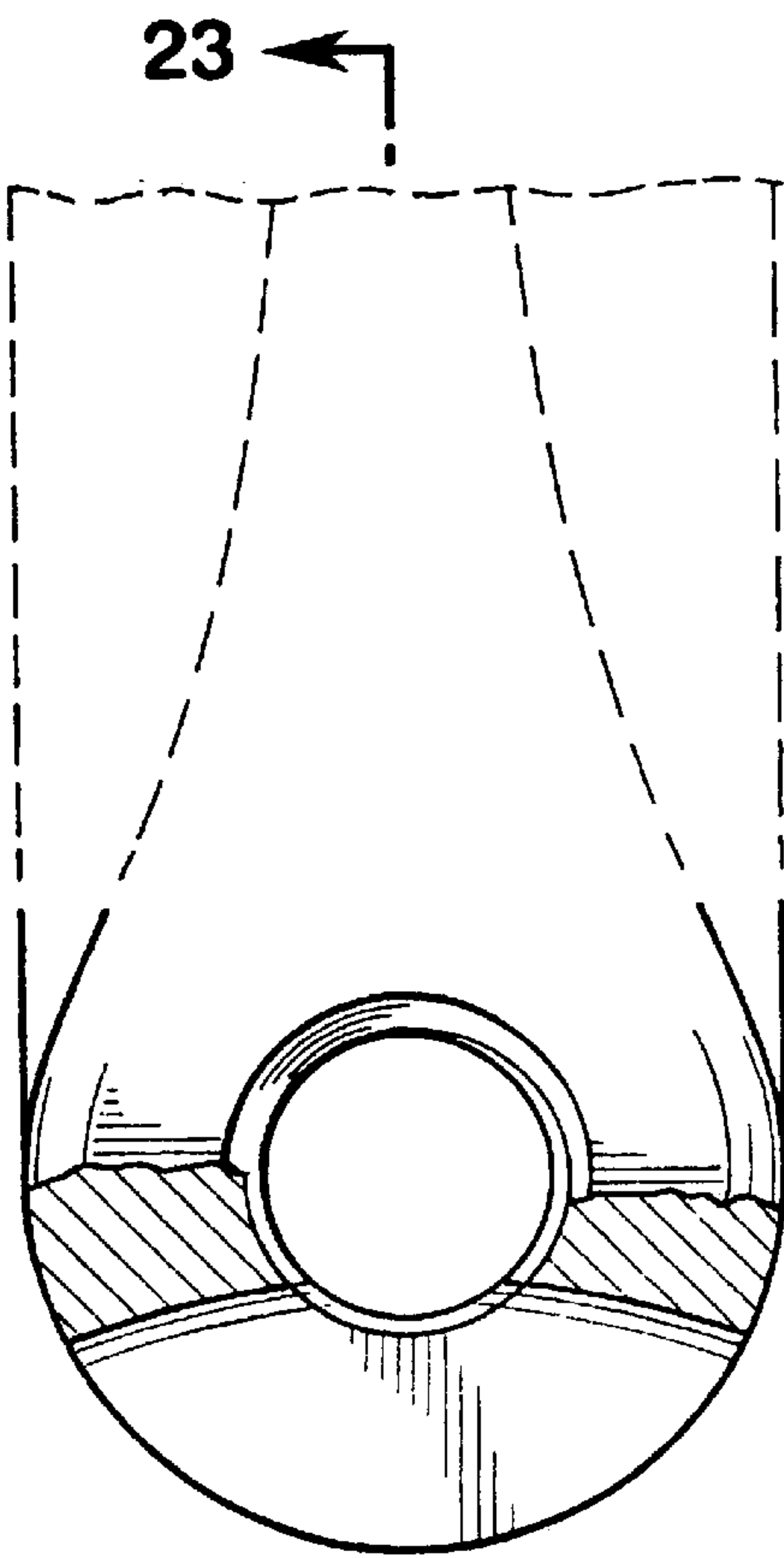


FIG. 22



FIG. 23



23 ← FIG. 24

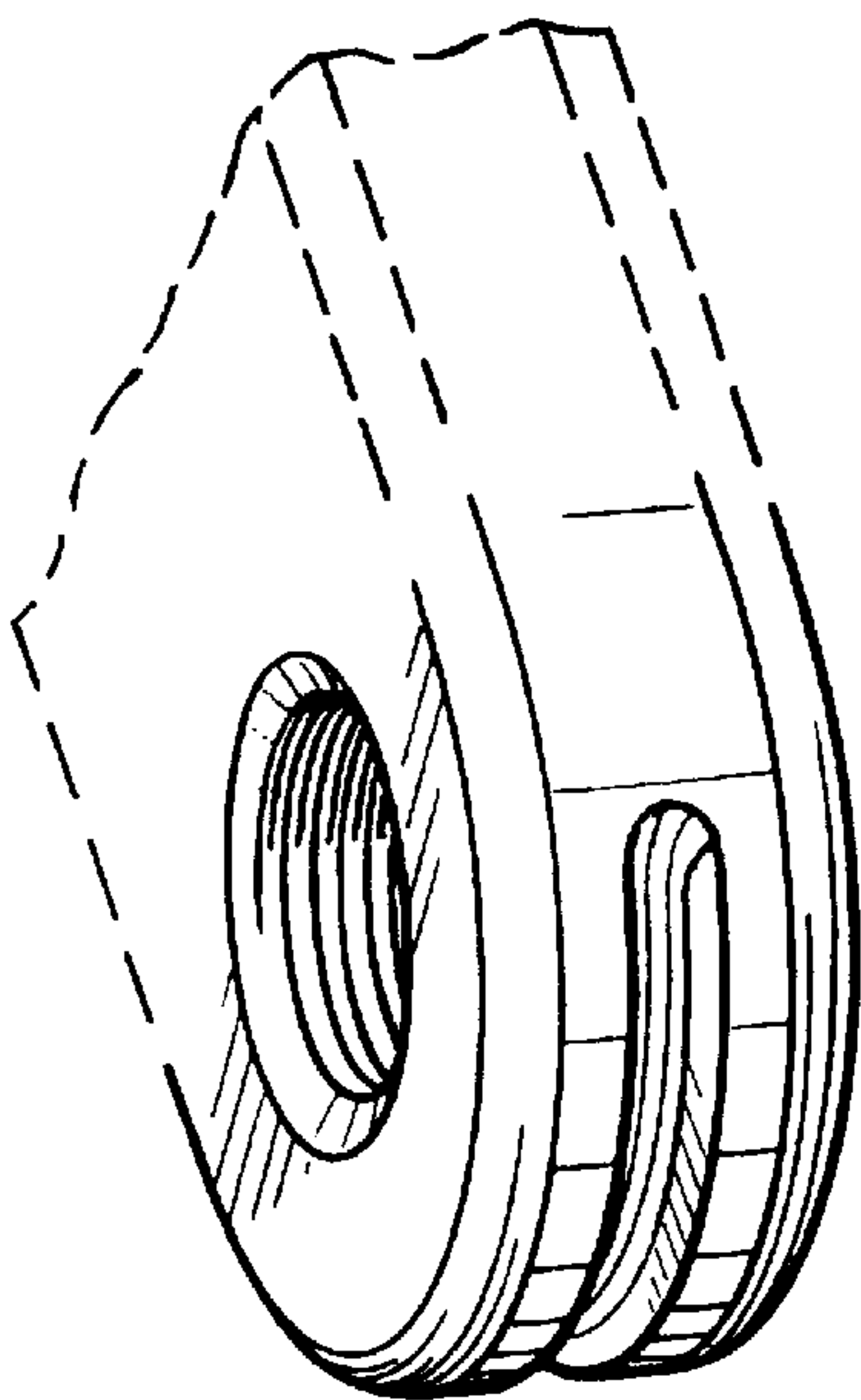


FIG. 25



FIG. 26

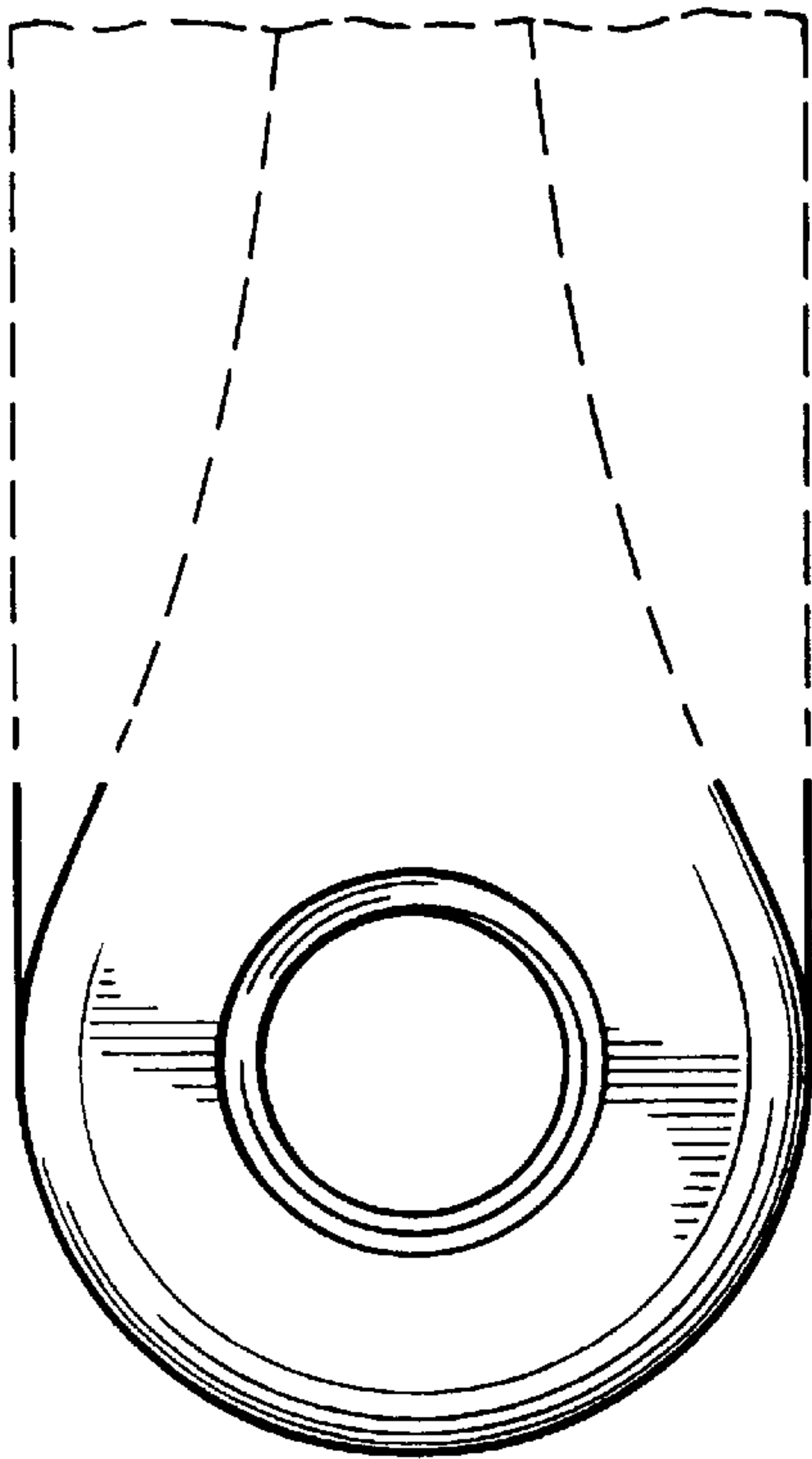


FIG. 27

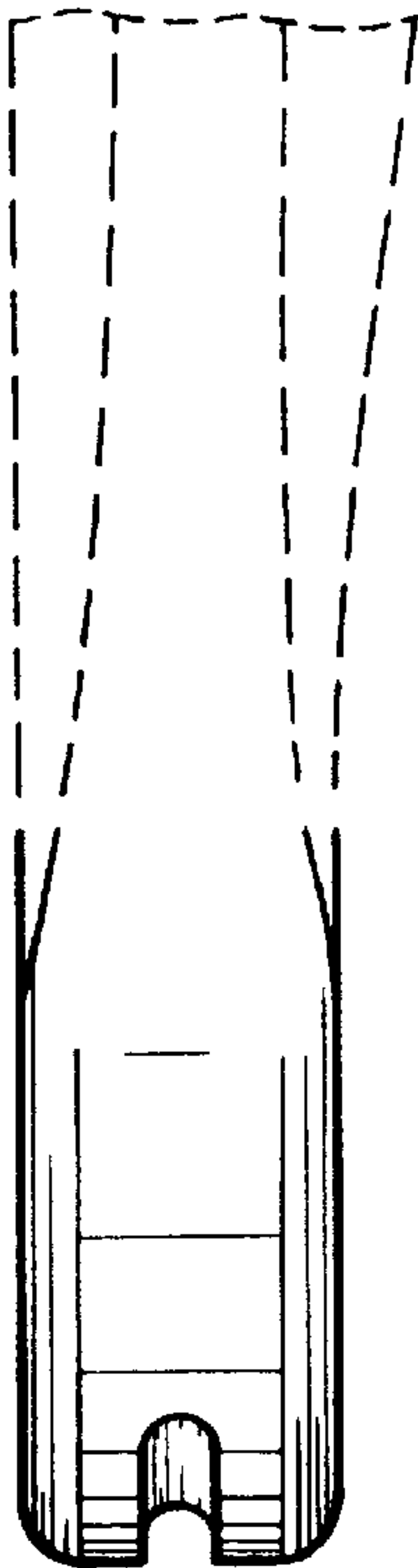


FIG. 28

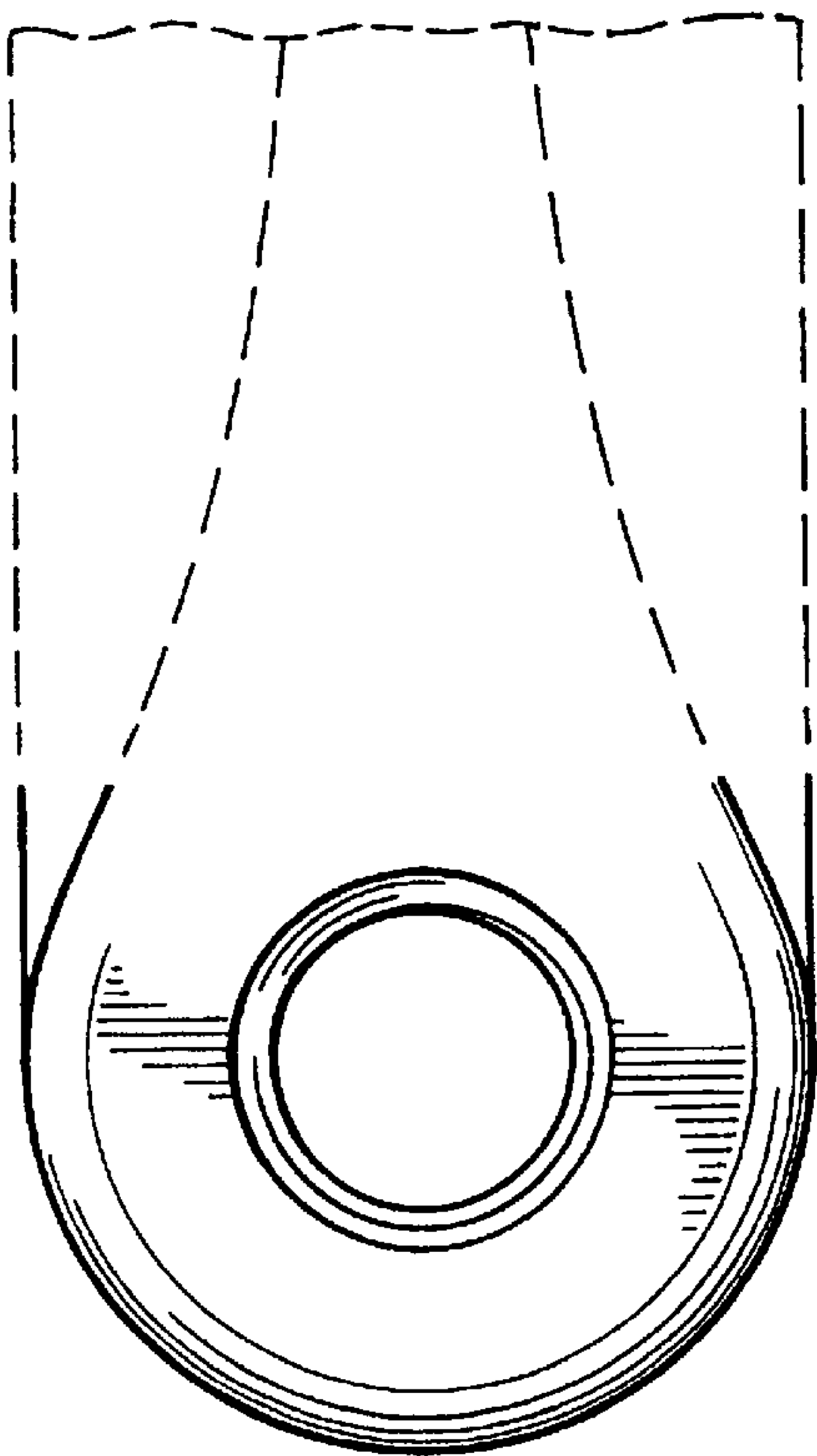


FIG. 29

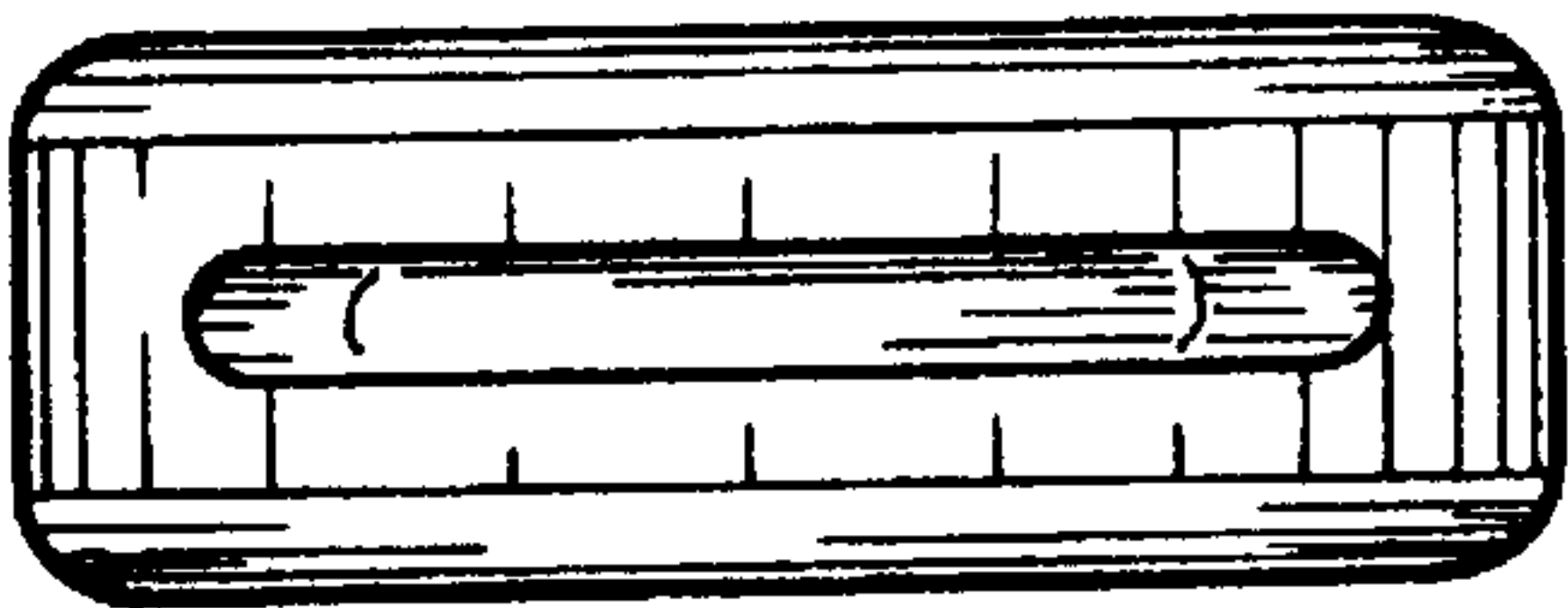
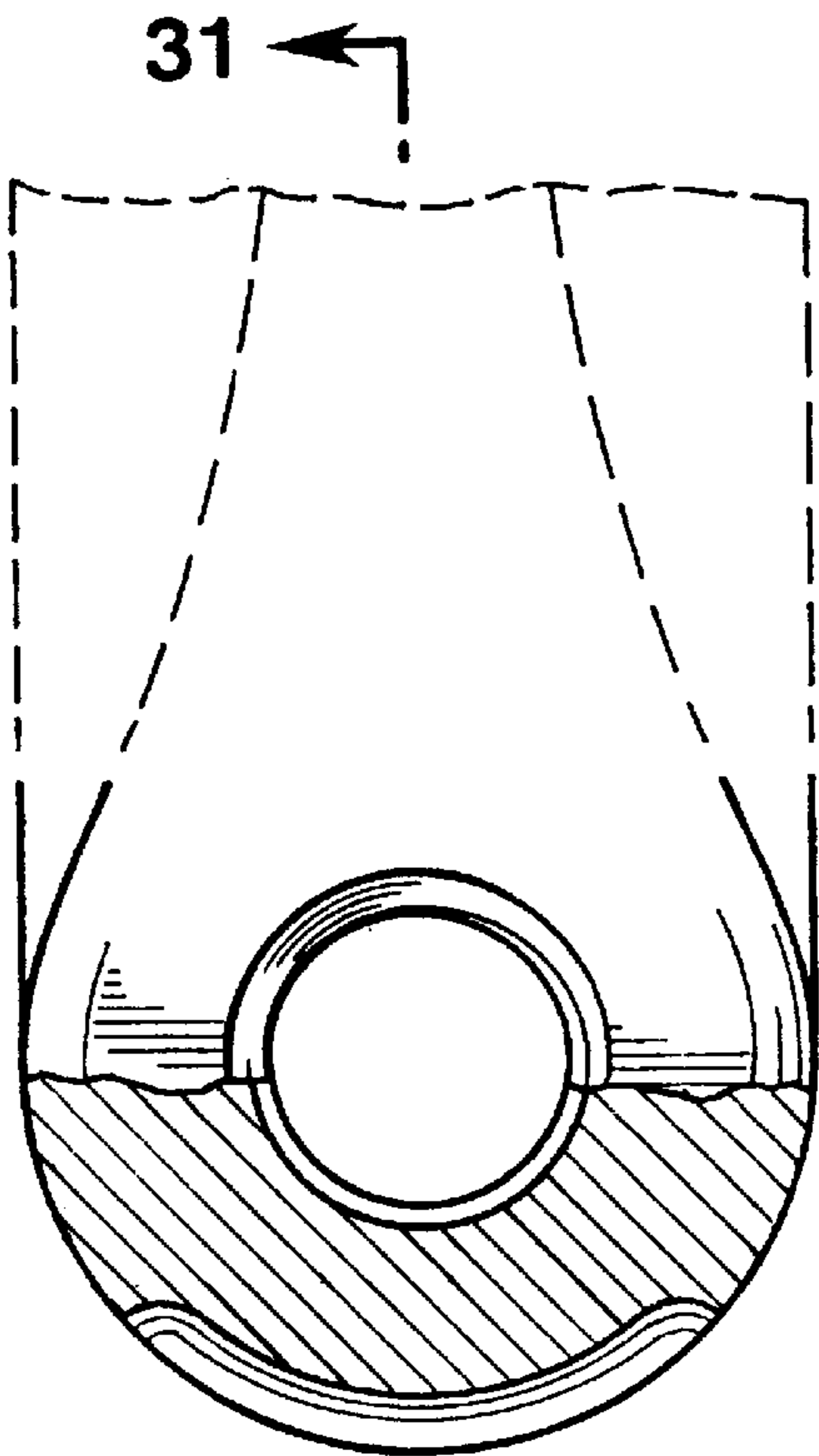


FIG. 30



FIG. 31



31 ← FIG. 32