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

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(54) **OPERATING UNIT OF TREATMENT TOOL FOR ENDOSCOPE**

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(30) **Foreign Application Priority Data**

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(51) **LOC (11) Cl.** **24-02**

(52) **U.S. Cl.**
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(58) **Field of Classification Search**
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606/440, 142, 206; 600/104
CPC A61B 17/00; A61B 17/42; A61B 17/2812;
A61B 17/282; A61B 17/29; A61B
17/4225

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,903,892 A * 9/1975 Komiya A61B 1/00098
606/110
4,043,323 A * 8/1977 Komiya A61B 1/018
600/104
4,467,802 A * 8/1984 Maslanka A61B 17/221
294/100

5,766,184 A * 6/1998 Matsuno A61B 17/00234
604/15
5,993,474 A * 11/1999 Ouchi A61B 17/221
606/113
6,090,129 A * 7/2000 Ouchi A61B 17/221
606/113
6,210,398 B1 * 4/2001 Ouchi A61B 17/2909
600/184
6,814,745 B2 * 11/2004 Prestel A61B 10/06
606/205

(Continued)

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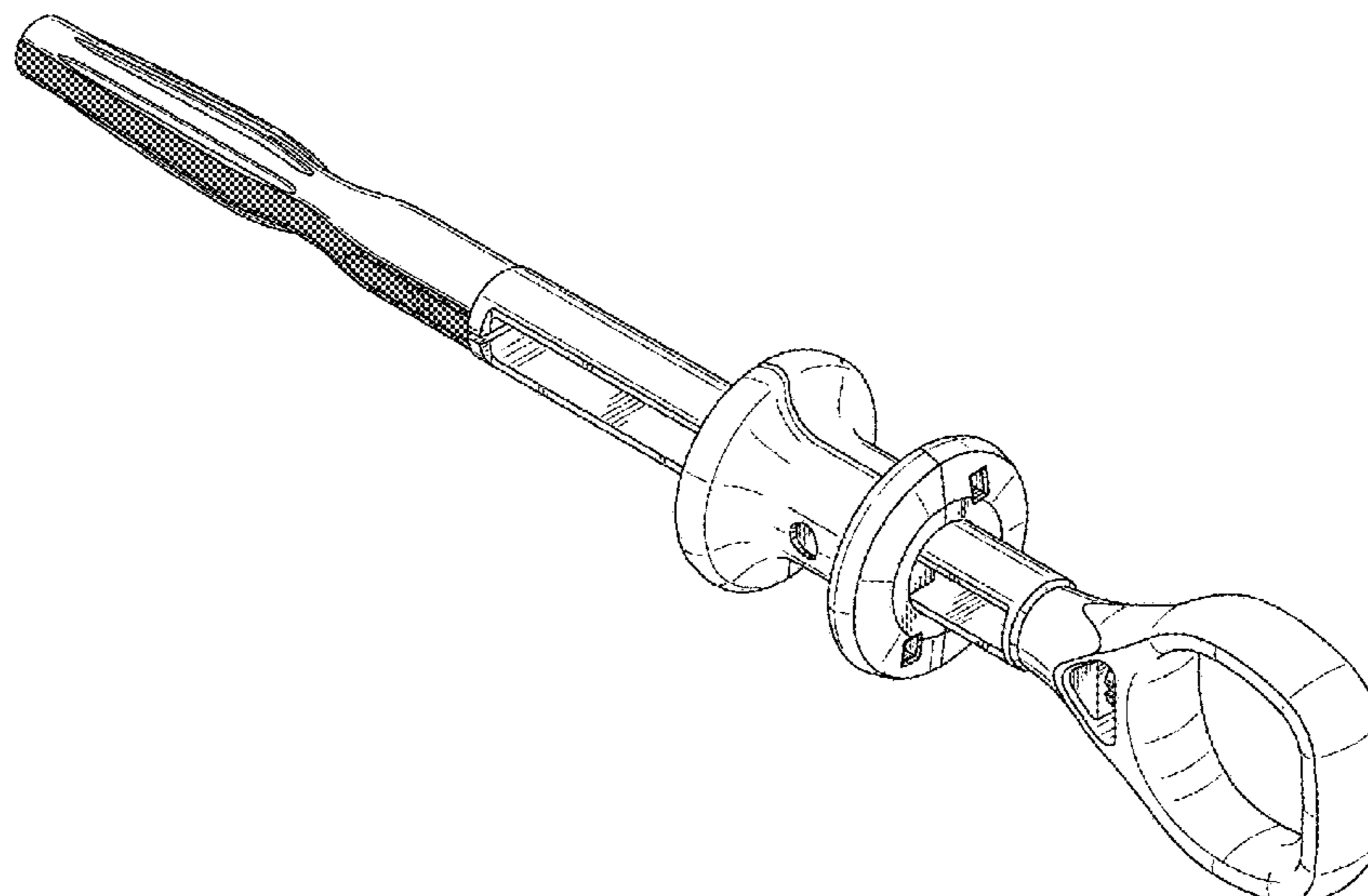
(57) **CLAIM**

The ornamental design for an operating unit of treatment tool for endoscope, as shown and described.

DESCRIPTION

FIG. 1 is a front, top and right side perspective view of an operating unit of treatment tool for endoscope, showing our new design;
FIG. 2 is a rear, bottom and left side perspective view thereof;
FIG. 3 is a front view thereof;
FIG. 4 is a rear view thereof;
FIG. 5 is a top view thereof;
FIG. 6 is a bottom view thereof;
FIG. 7 is a left side view thereof;
FIG. 8 is a right side view thereof;
FIG. 9 is a front view showing a state in which the finger hook ring is rotated and the slider is moved;
FIG. 10 is a cross sectional view thereof, taken along the line 10-10 in FIG. 3; and,
FIG. 11 is a cross sectional view thereof, taken along the line 11-11 in FIG. 3.
The broken lines shown represent unclaimed subject matter and form no part of the claimed design.

1 Claim, 6 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

8,052,681 B2 * 11/2011 Sugita A61B 18/1492
606/167
D728,802 S * 5/2015 Matsumura D24/187
D748,808 S * 2/2016 Matsumura D24/187
9,277,959 B2 * 3/2016 Okada A61B 18/1492
9,662,167 B2 * 5/2017 Motai A61B 17/42
D791,310 S * 7/2017 Maurice D24/129
9,717,516 B2 * 8/2017 Shoji A61B 17/29
2006/0157071 A1 * 7/2006 Sheffield A24F 13/22
131/257
2008/0091196 A1 * 4/2008 Deal A61B 18/1477
606/45
2008/0306334 A1 * 12/2008 Okada A61B 18/1492
600/104
2011/0152887 A1 * 6/2011 Surti A61B 17/08
606/142
2013/0289617 A1 * 10/2013 Suzuki A61B 17/2909
606/205
2015/0282826 A1 * 10/2015 Shoji A61B 10/06
606/209
2015/0305741 A1 * 10/2015 Satake A61B 17/10
606/142
2016/0192919 A1 * 7/2016 Horii A61B 17/221
600/104
2016/0338771 A1 * 11/2016 Kobayashi A61B 18/1492
2017/0020518 A1 * 1/2017 Voss A61B 17/0057
2017/0020629 A1 * 1/2017 Mikkaichi A61B 1/00
2017/0112569 A1 * 4/2017 Motosugi A61B 18/1492
2017/0303954 A1 * 10/2017 Ishii A61B 17/320016

* cited by examiner

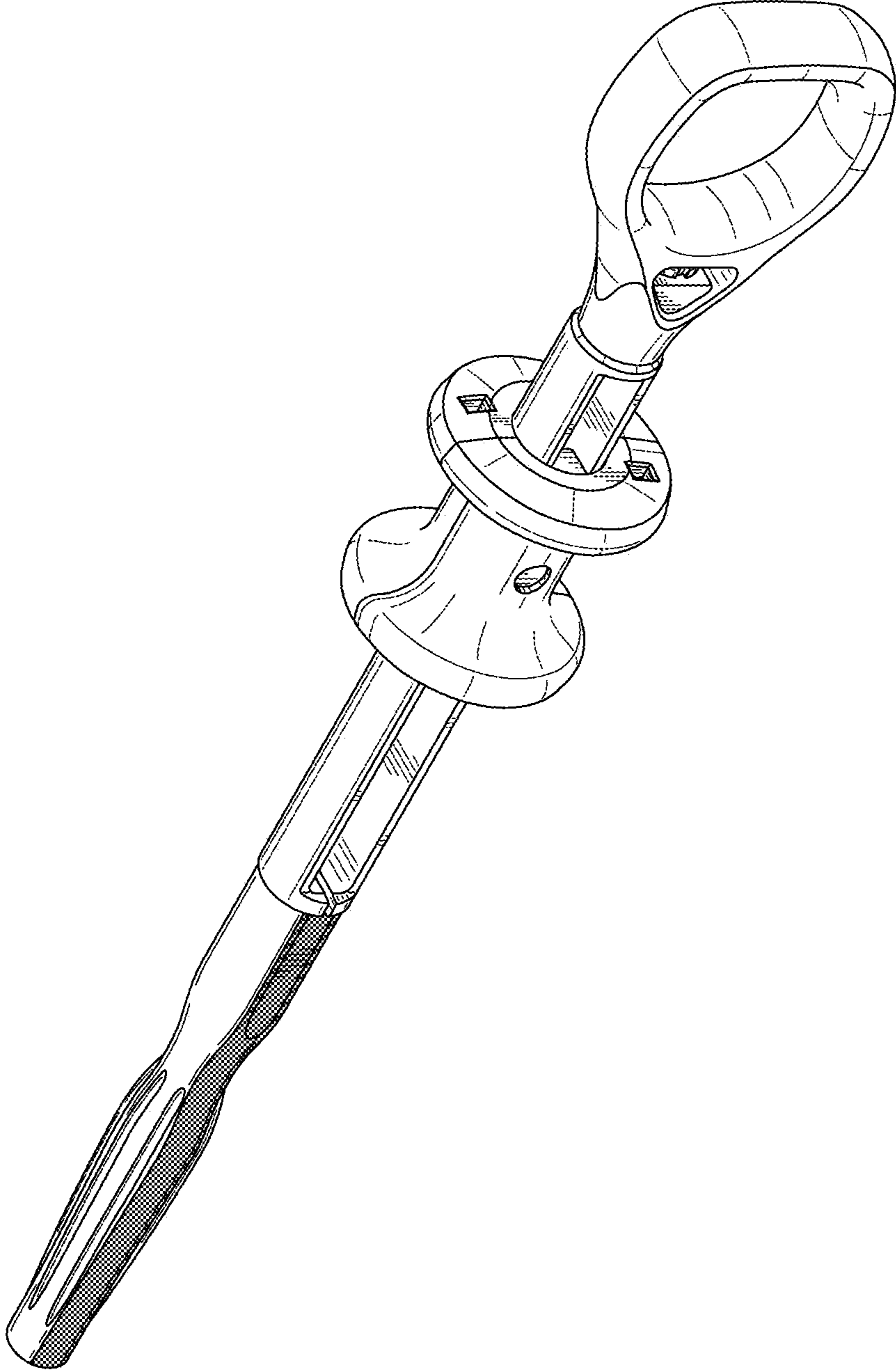


Fig. 1

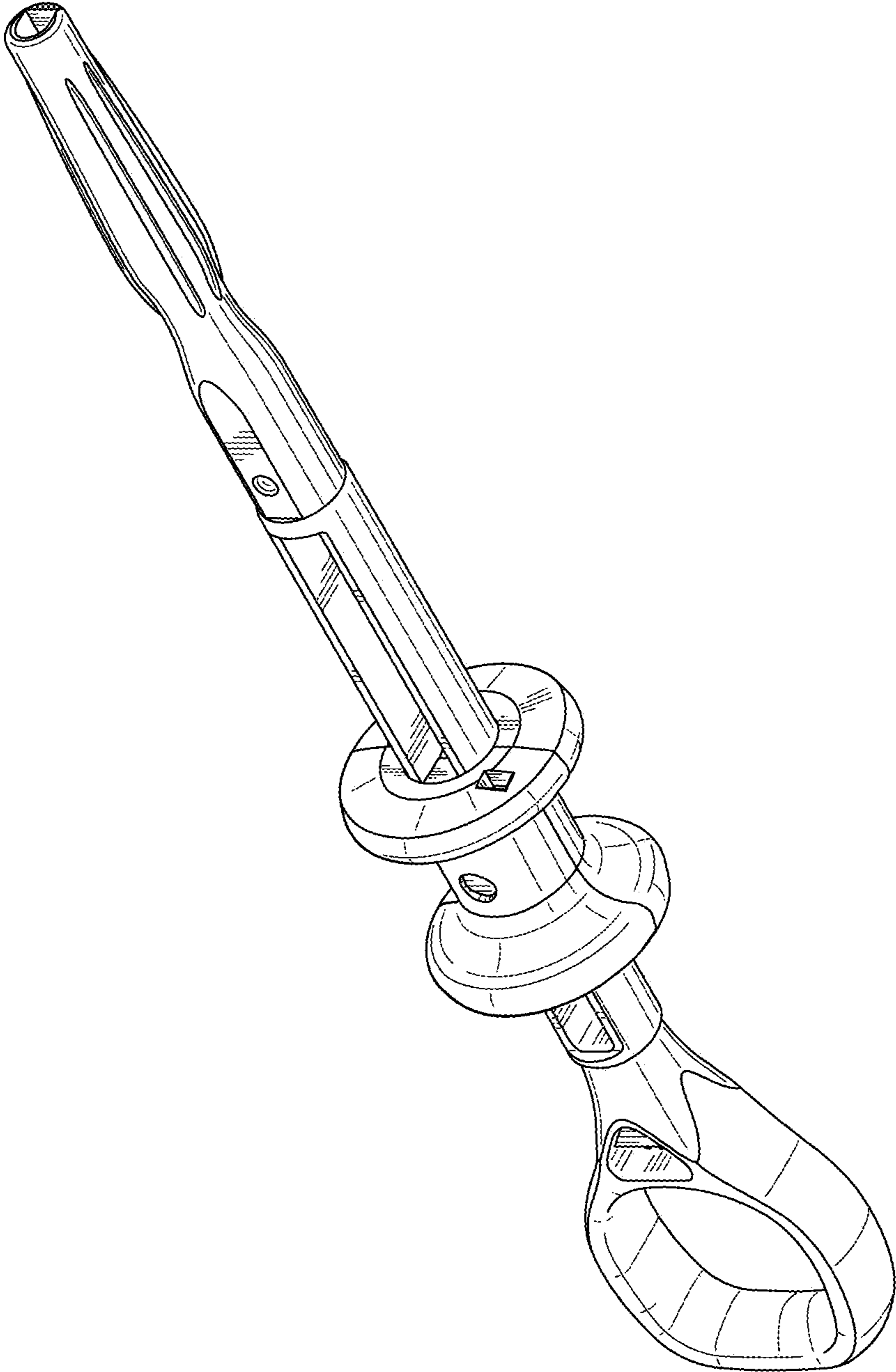


Fig. 2

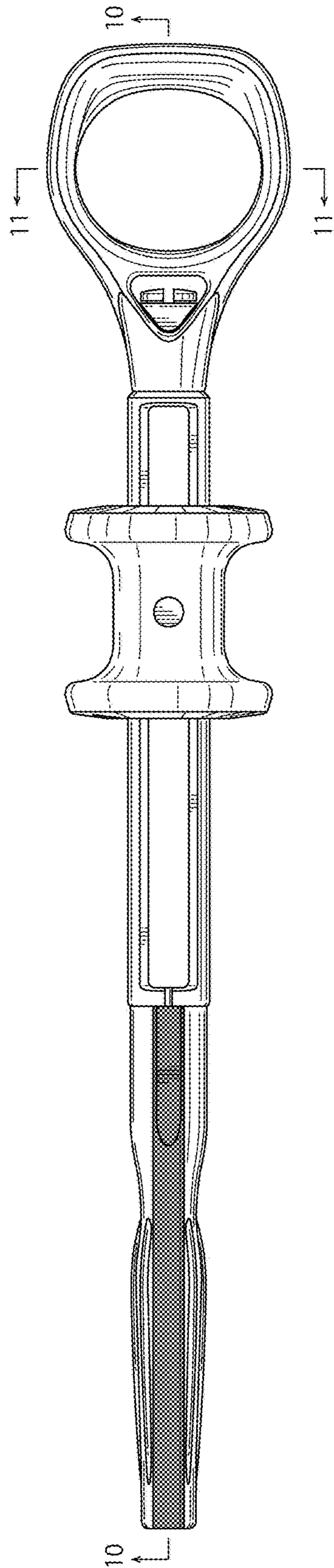


Fig. 3

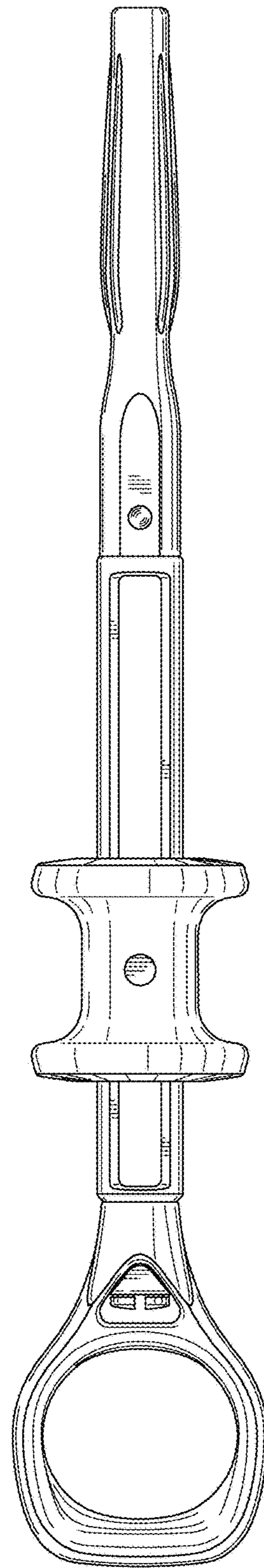


Fig. 4

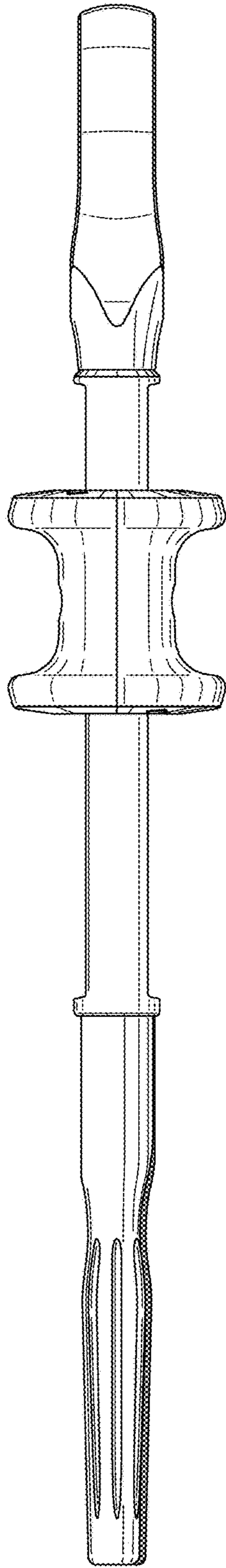


Fig. 5

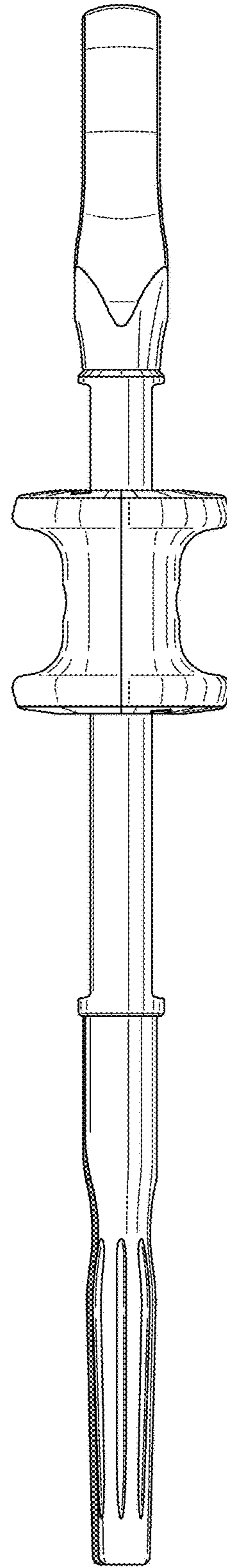


Fig. 6

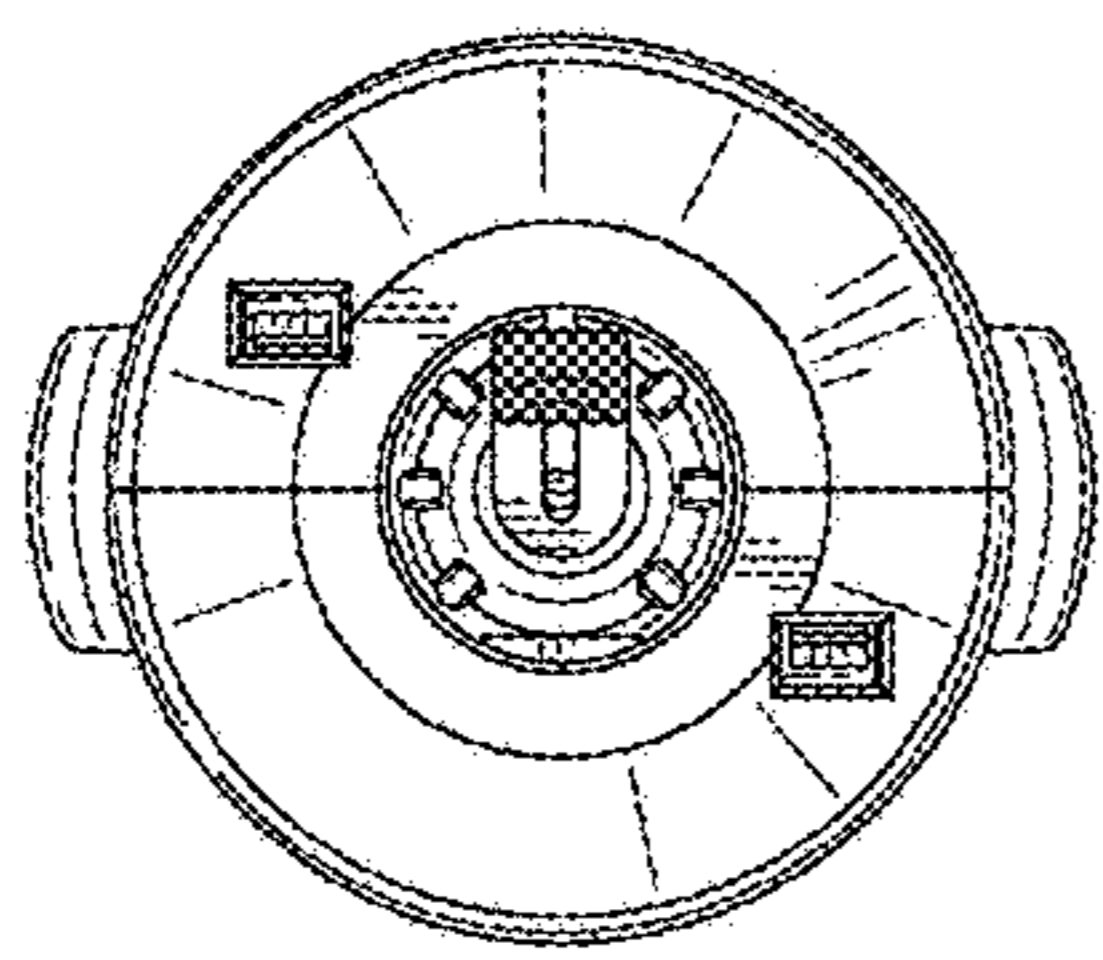


Fig. 7

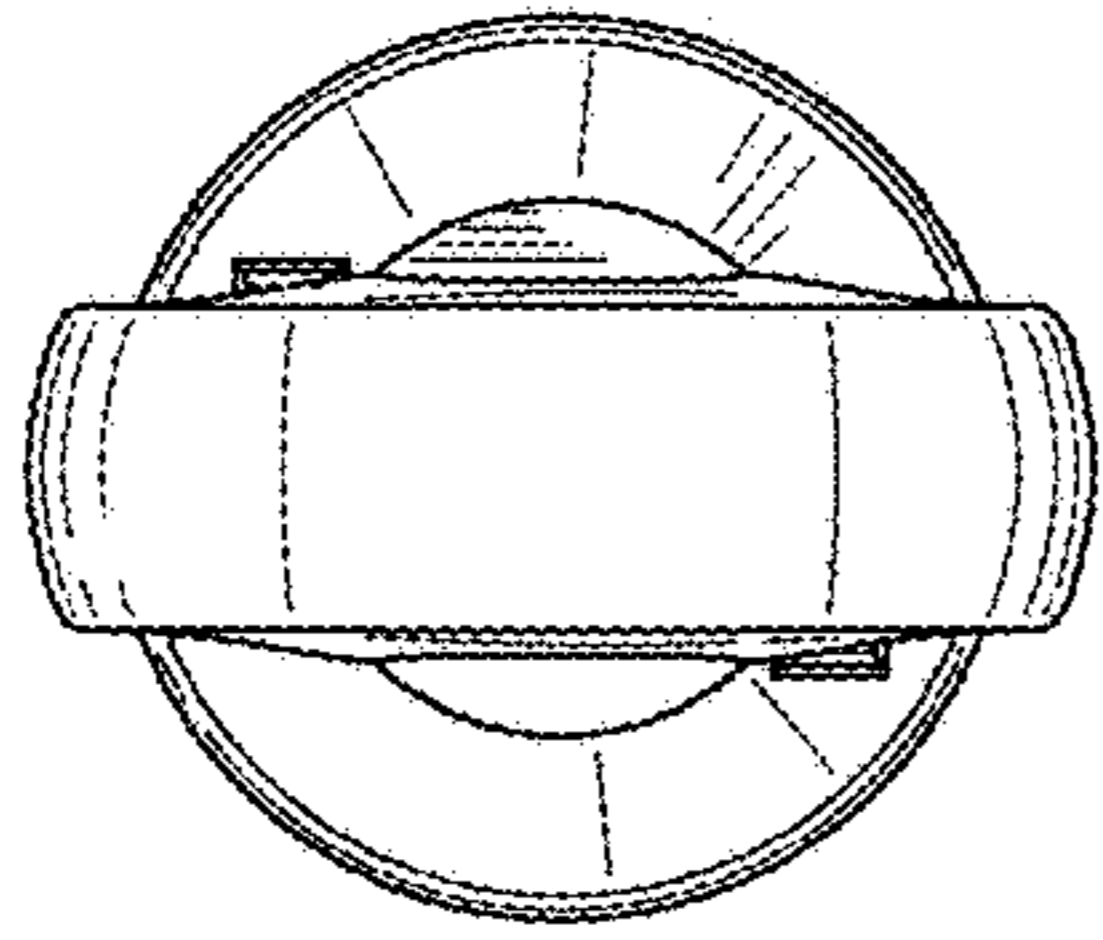


Fig. 8

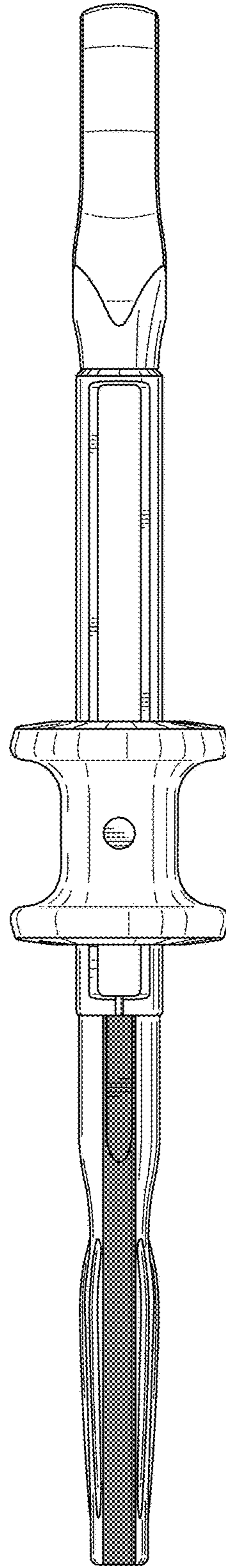


Fig. 9

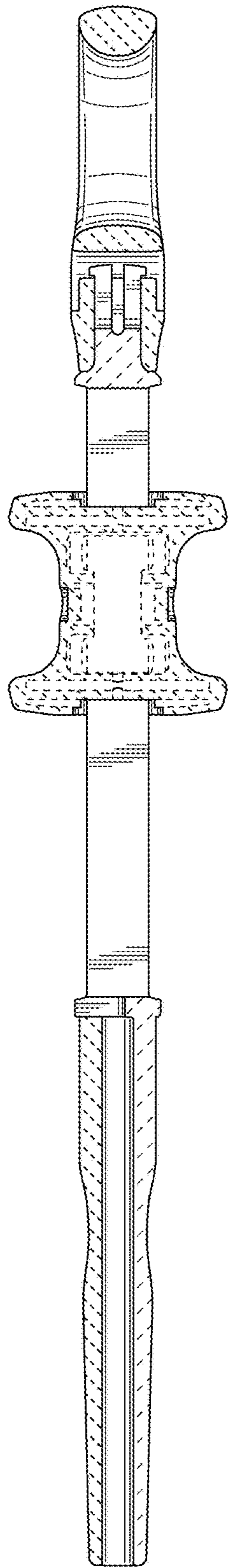


Fig. 10

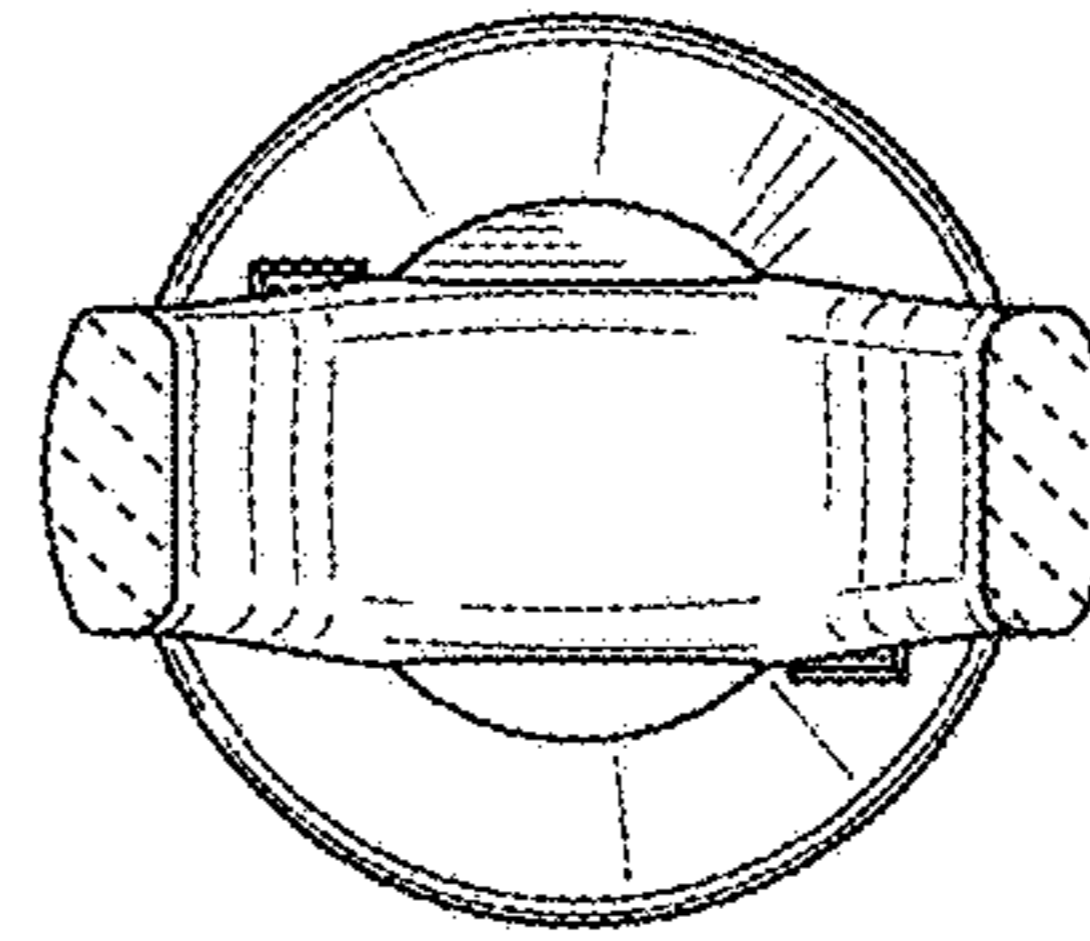


Fig. 11