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Yamaguchi et al.

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(54) **NOZZLE FOR PLASMA CUTTING MACHINE**

(75) Inventors: **Yoshihiro Yamaguchi**, Nomi (JP);
Kazuhiro Kuraoka, Nomi (JP)

(73) Assignee: **Komatsu Industries Corporation**,
Komatsu-Shi, Ishikawa (JP)

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D8/71; D15/144, 144.1, 144.2; 219/76,
219/121.4–121.5, 121.51, 121.52, 121.57
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,060,983 A * 10/1991 Lee 285/39
D362,860 S * 10/1995 Carkhuff D15/144
D365,345 S * 12/1995 Carkhuff D15/144
D366,051 S * 1/1996 Lewis et al. D15/138
D369,648 S * 5/1996 Fowler D23/213
D379,577 S * 6/1997 Carkhuff D8/30
D391,824 S * 3/1998 Larson D8/303
5,726,415 A * 3/1998 Luo et al. 219/121.48
5,747,767 A * 5/1998 Severance et al. 219/121.5
D405,342 S * 2/1999 Thompson D8/303
D428,652 S * 7/2000 Frezel et al. D24/152
D446,231 S * 8/2001 Kuraoka et al. D15/144
D451,113 S * 11/2001 Shintani et al. D15/144
6,318,410 B1 * 11/2001 Miyajima et al. 138/109
D478,141 S * 8/2003 Huang D21/756
D497,373 S * 10/2004 Hewett et al. D15/144
D499,124 S * 11/2004 Kuraoka et al. D15/144
D500,064 S * 12/2004 Kuraoka et al. D15/144
D506,764 S * 6/2005 Kuraoka et al. D15/144

D517,577 S * 3/2006 Conway et al. D15/144
D520,037 S * 5/2006 Furujo et al. D15/144
D527,401 S * 8/2006 Mizuno et al. D15/144
D533,489 S * 12/2006 Tokumoto D12/179
D555,972 S * 11/2007 Rae D7/395
D570,614 S * 6/2008 Yau D6/328
D574,026 S * 7/2008 Haga D16/134
2002/0125220 A1 * 9/2002 Augeraud et al. 219/121.5
2004/0079735 A1 * 4/2004 Kinerson et al. 219/121.48
2004/0169018 A1 * 9/2004 Brasseur et al. 219/121.5

FOREIGN PATENT DOCUMENTS

JP 873846 7/1993
JP 1098824 1/2001
JP 1209868 6/2004
JP 1214897 8/2004
JP 1240428 5/2005

* cited by examiner

Primary Examiner—Sandra Snapp

Assistant Examiner—Patricia Palasik

(74) *Attorney, Agent, or Firm*—Manabu Kanesaka

(57) **CLAIM**

The ornamental design for a nozzle for plasma cutting machine, as shown and described.

DESCRIPTION

FIG. 1 is a front view of a nozzle for plasma cutting machine showing our new design; a rear view being symmetrical to the front view;

FIG. 2 is a left side view thereof; a right side view being the same as the left side view;

FIG. 3 is a top plan view thereof;

FIG. 4 is a bottom plan view thereof;

FIG. 5 is a perspective view thereof;

FIG. 6 is a sectional view thereof taken along line 6—6 in FIG. 3; and,

FIG. 7 is another sectional view thereof taken along line 7—7 in FIG. 1.

1 Claim, 4 Drawing Sheets

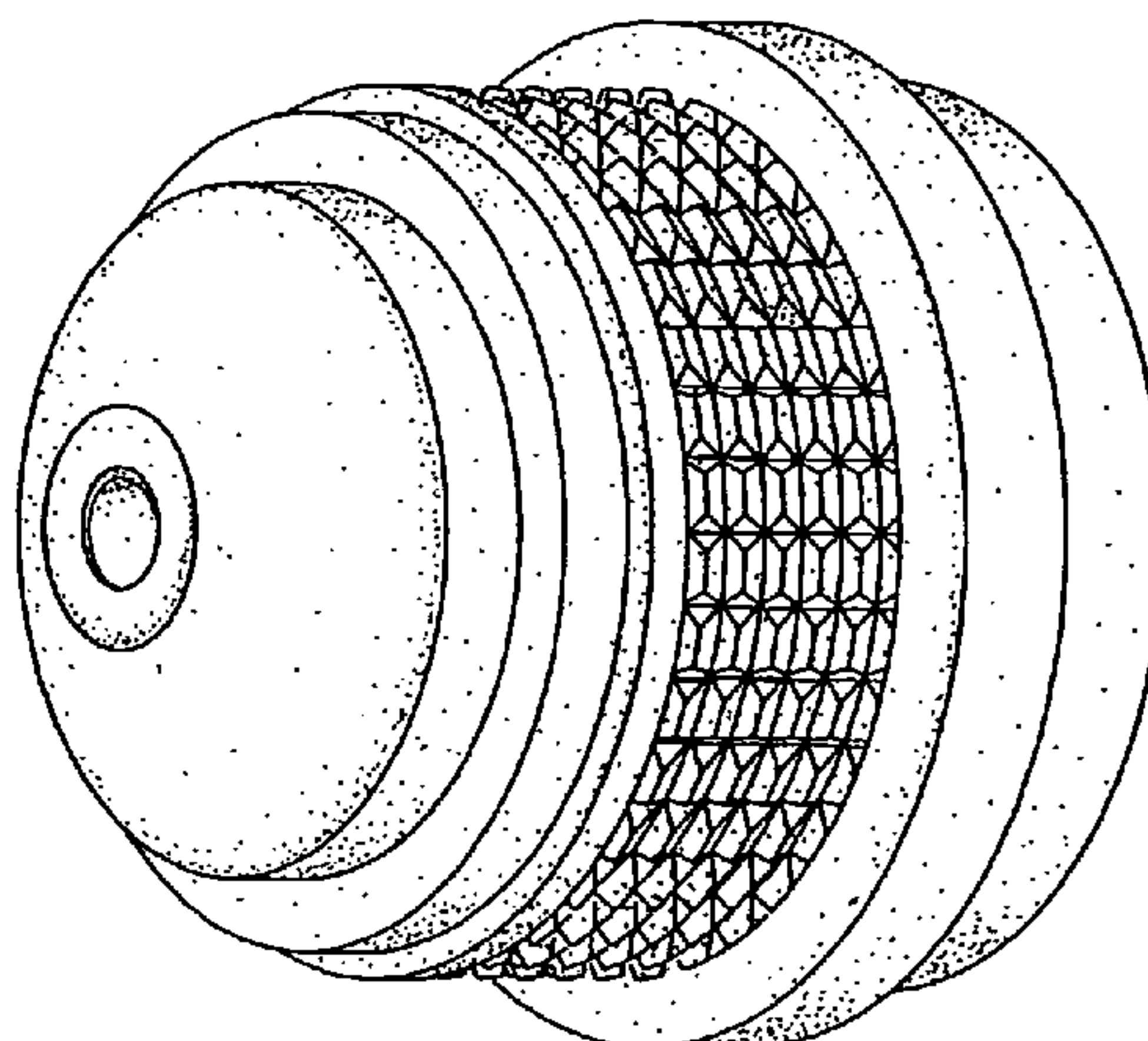


Fig. 1

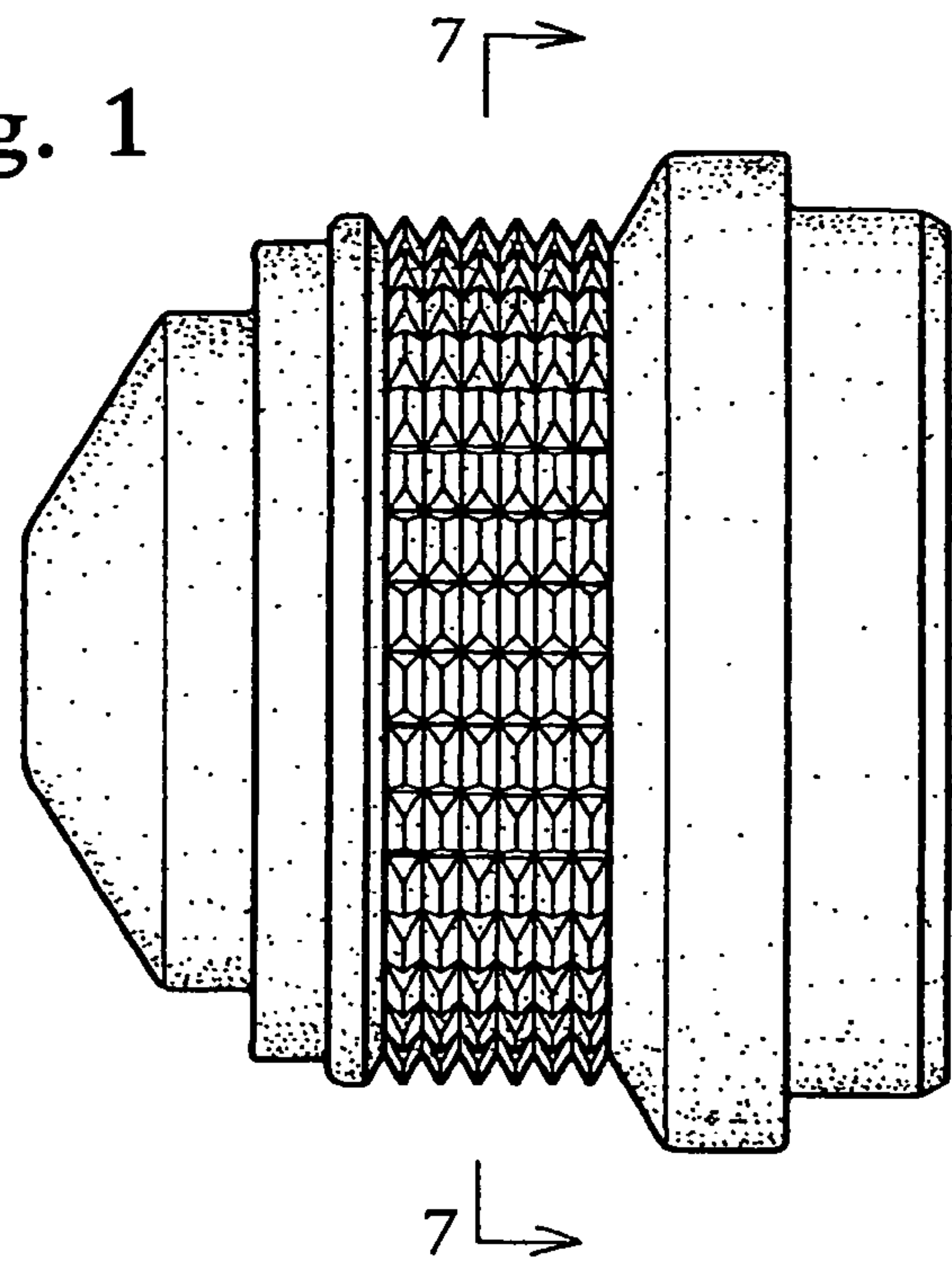


Fig. 2

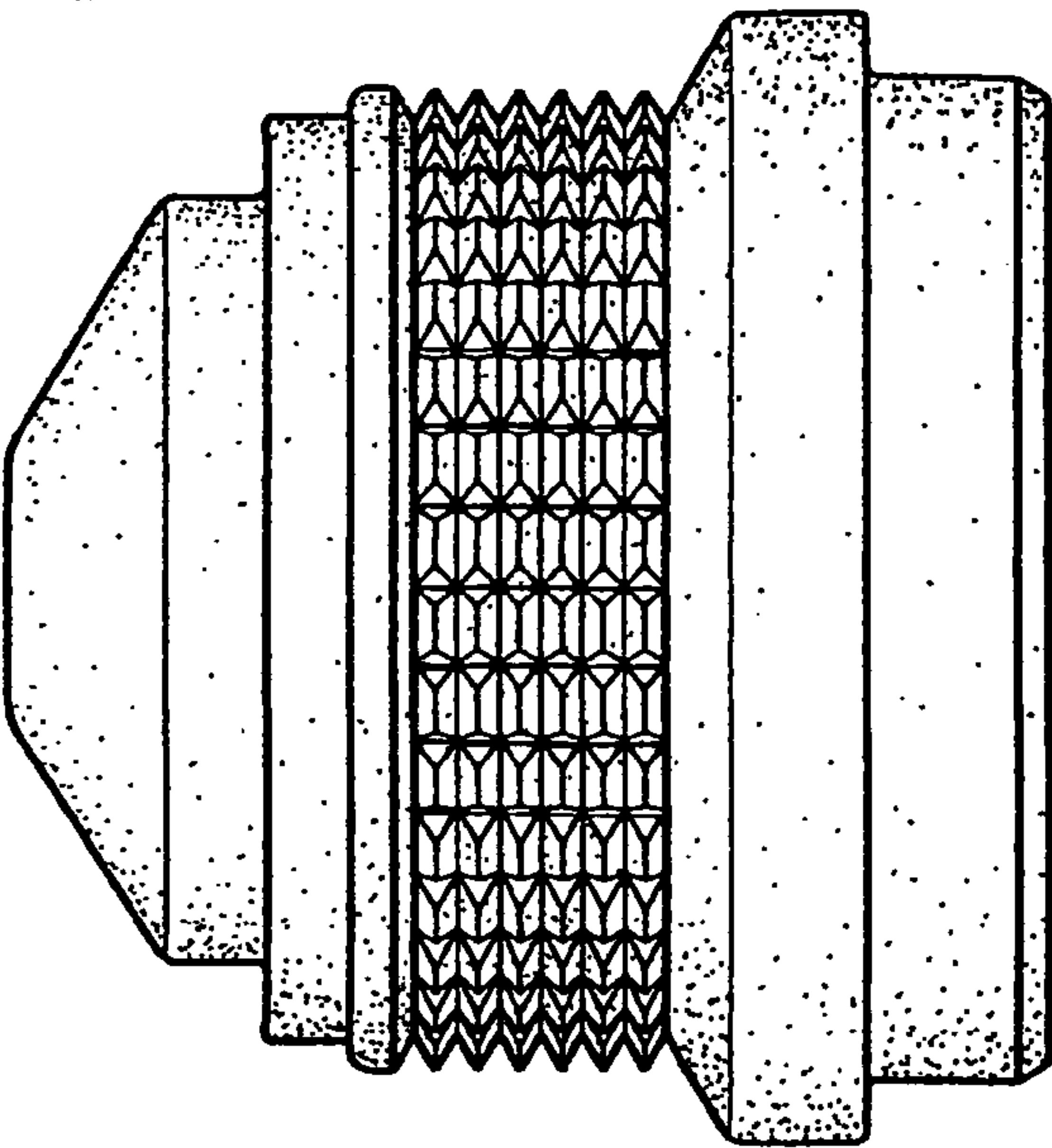


Fig. 3

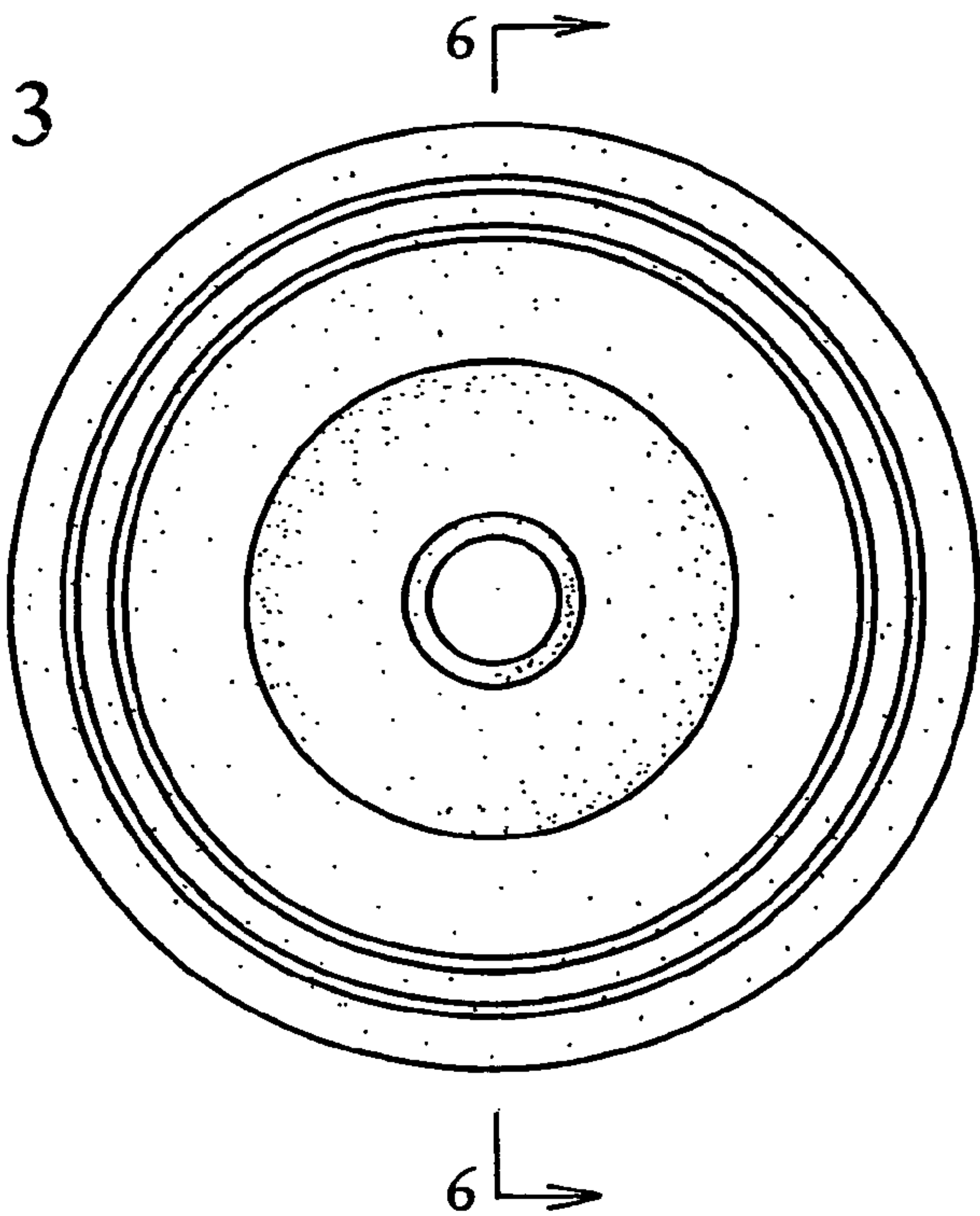


Fig. 4

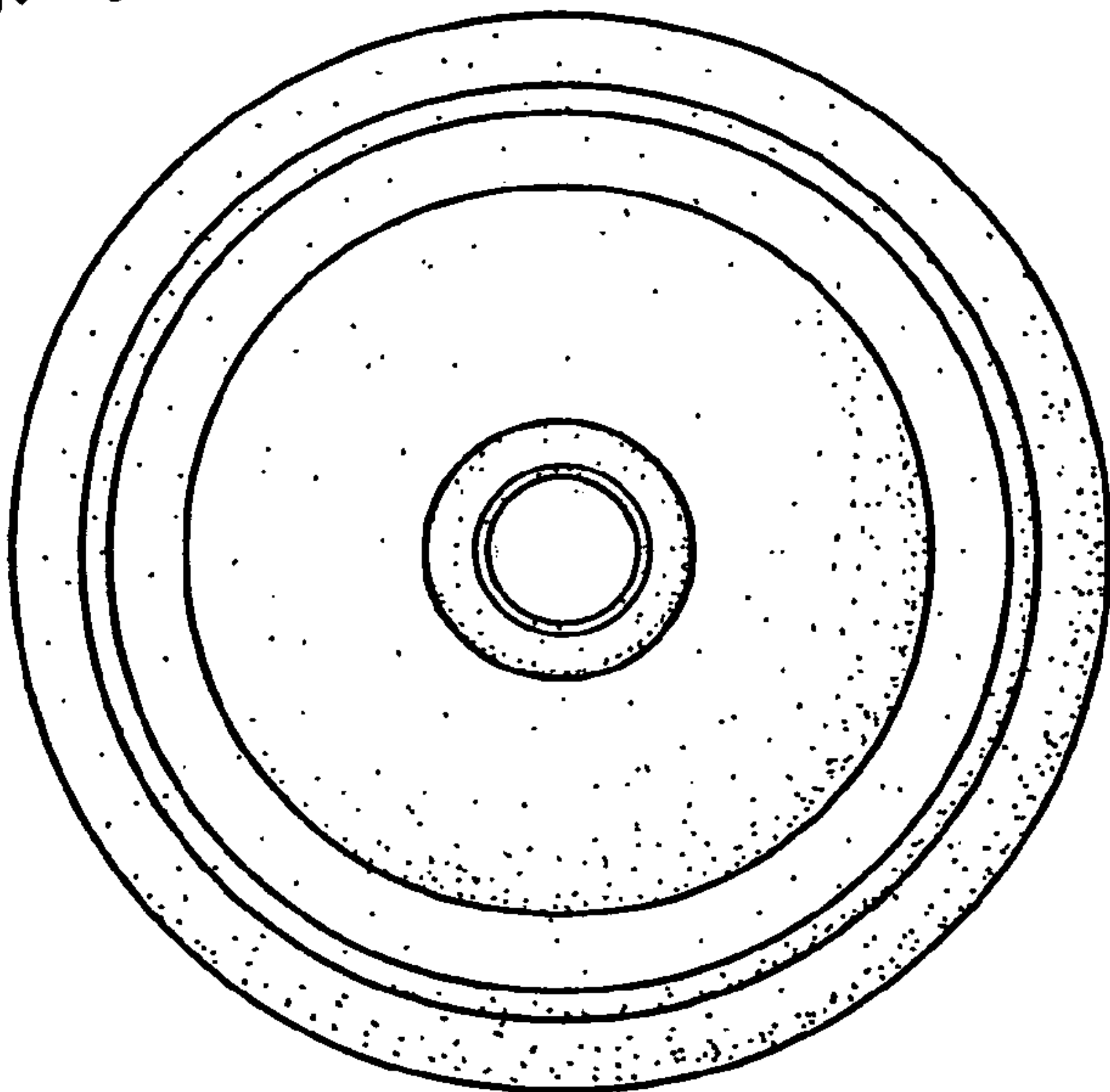


Fig. 5

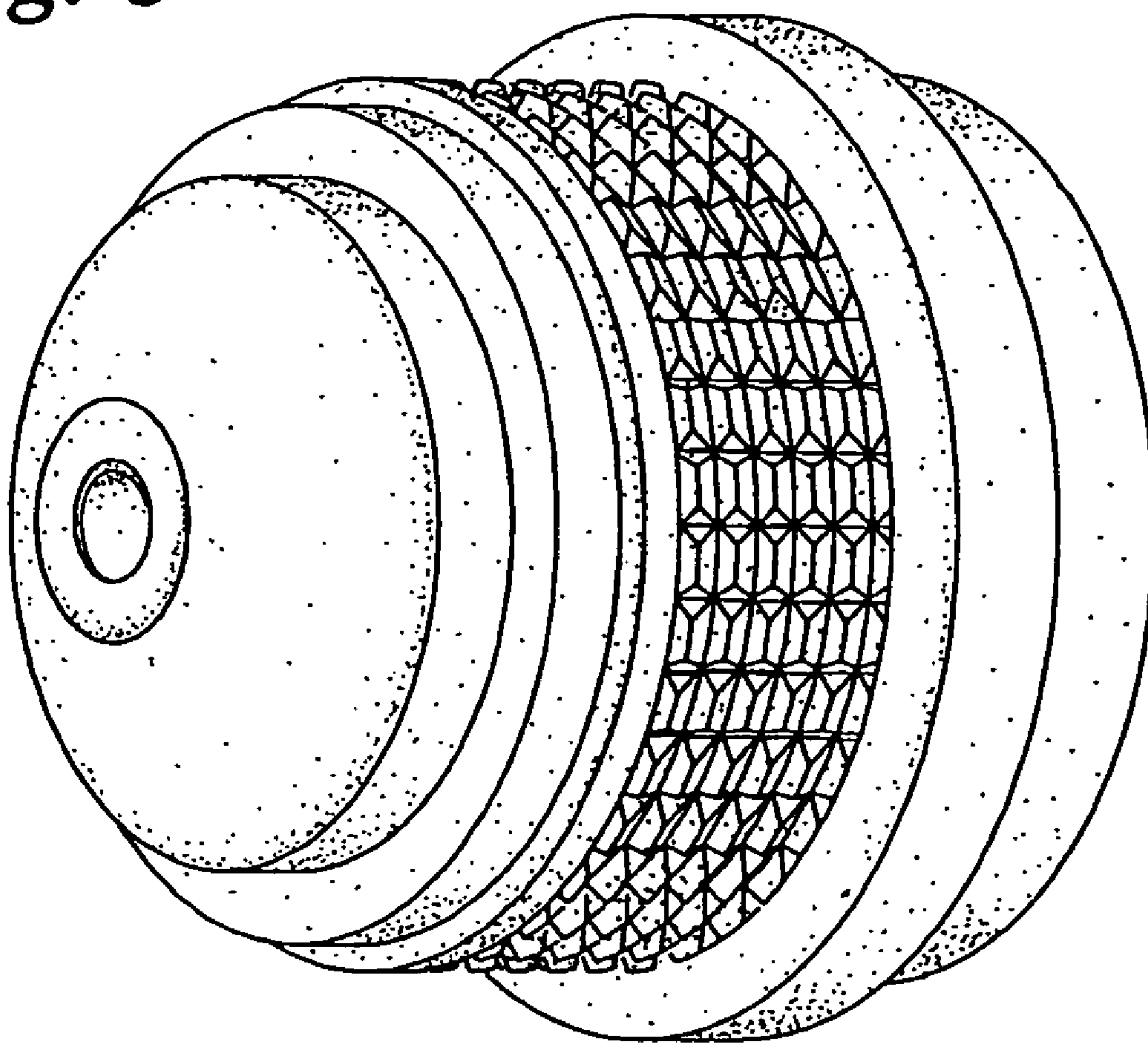


Fig. 6

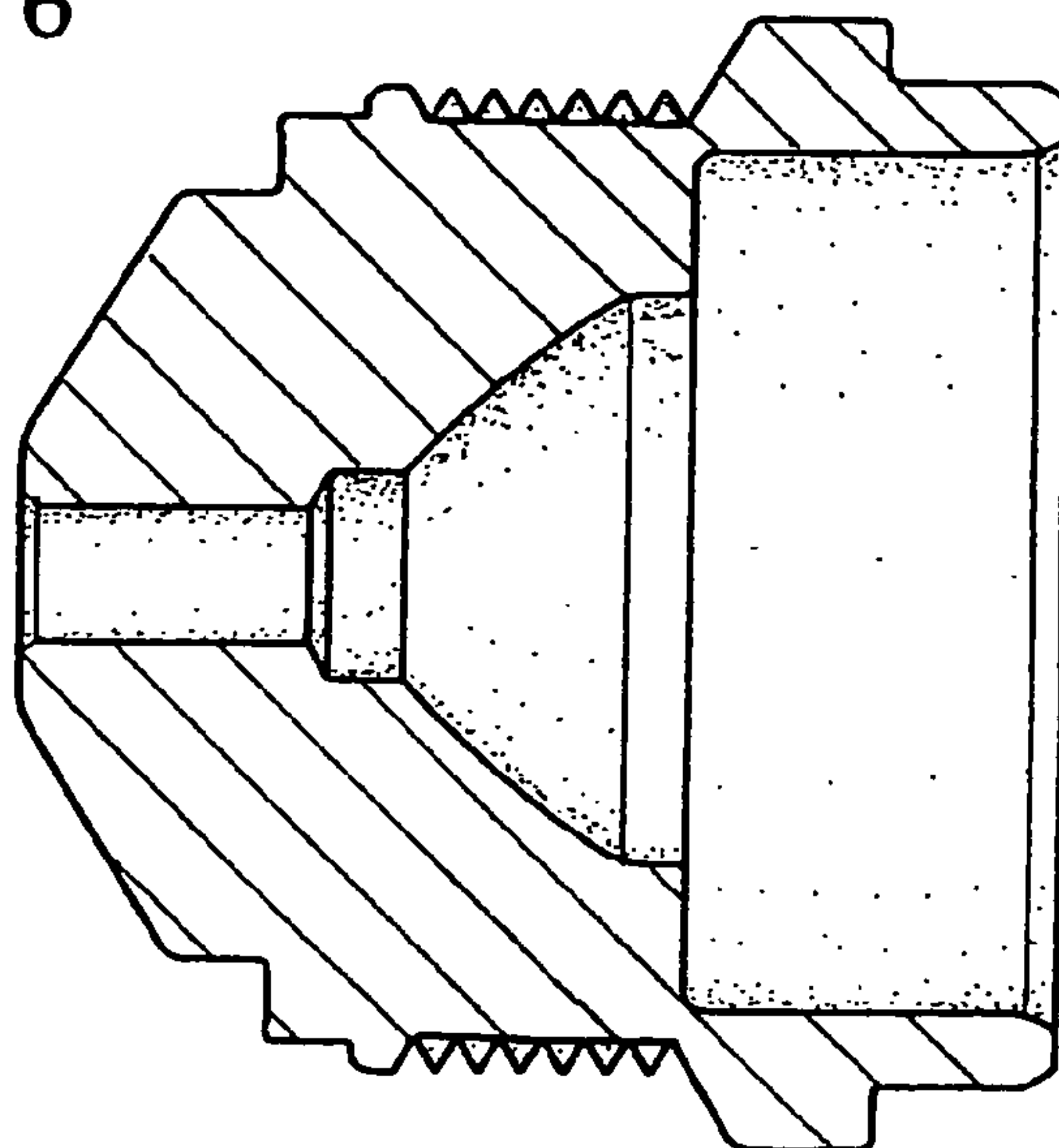


Fig. 7

