



US00D811188S

(12) **United States Design Patent** (10) **Patent No.:** **US D811,188 S**
Zimmerman et al. (45) **Date of Patent:** **** Feb. 27, 2018**

- (54) **GRIPPER BODY** 5,941,513 A 8/1999 Moilanen et al.
- (71) Applicant: **Delaware Capital Formation, Inc.**, 6,048,013 A 4/2000 Lavigne D8/74
Wilmington, DE (US)
- (72) Inventors: **Anthony B. Zimmerman**, Shelby 6,176,533 B1 1/2001 Moilanen et al.
Township, MI (US); **Joshua Moses**, 6,227,586 B1 5/2001 Moilanen et al.
Charlevoix, MI (US); **Robert W. 6,272,951 B1* 8/2001 Lambson E04B 1/2612**
McArthur, Charlevoix, MI (US) 269/3
- (73) Assignee: **Delaware Capital Formation, Inc.**, 6,273,408 B1 8/2001 Moilanen et al.
Wilmington, DE (US) 6,425,616 B2 7/2002 Moilanen et al.
6,530,615 B2 3/2003 Filipiak et al.
6,557,916 B2 5/2003 Moilanen et al.
6,575,512 B2 6/2003 Moilanen et al.
6,588,816 B1 7/2003 Moilanen et al.
7,032,944 B2 4/2006 Moilanen et al.

(Continued)

(**) Term: **15 Years**

(21) Appl. No.: **29/539,463**

(22) Filed: **Sep. 15, 2015**

(51) **LOC (11) Cl.** **08-05**

(52) **U.S. Cl.**
USPC **D8/72**

(58) **Field of Classification Search**
USPC D8/71-74, 394-399, 59; 294/198;
248/63, 72, 74.1, 689, 124.2; 81/487,
81/385, 386, 388-390; 269/3, 4, 6, 143,
269/165, 240, 243, 246-249, 254 R,
269/147-149; 29/256, 257, 276;
408/103, 104-109
CPC B25B 1/00; B25B 5/00
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

- 4,607,873 A 8/1986 Nusbaumer et al.
- D318,282 S * 7/1991 Kern D15/138
- 5,284,375 A 2/1994 Land, III
- 5,676,357 A * 10/1997 Horn B25B 5/16
269/201
- 5,853,211 A 12/1998 Sawdon et al.
- 5,871,250 A 2/1999 Sawdon
- 5,938,259 A 8/1999 Sawdon et al.

FOREIGN PATENT DOCUMENTS

- DE 202004017445 1/2005
- DE 10324272 3/2005

(Continued)

Primary Examiner — David G Muller

(74) *Attorney, Agent, or Firm* — Harness, Dickey & Pierce, P.L.C.

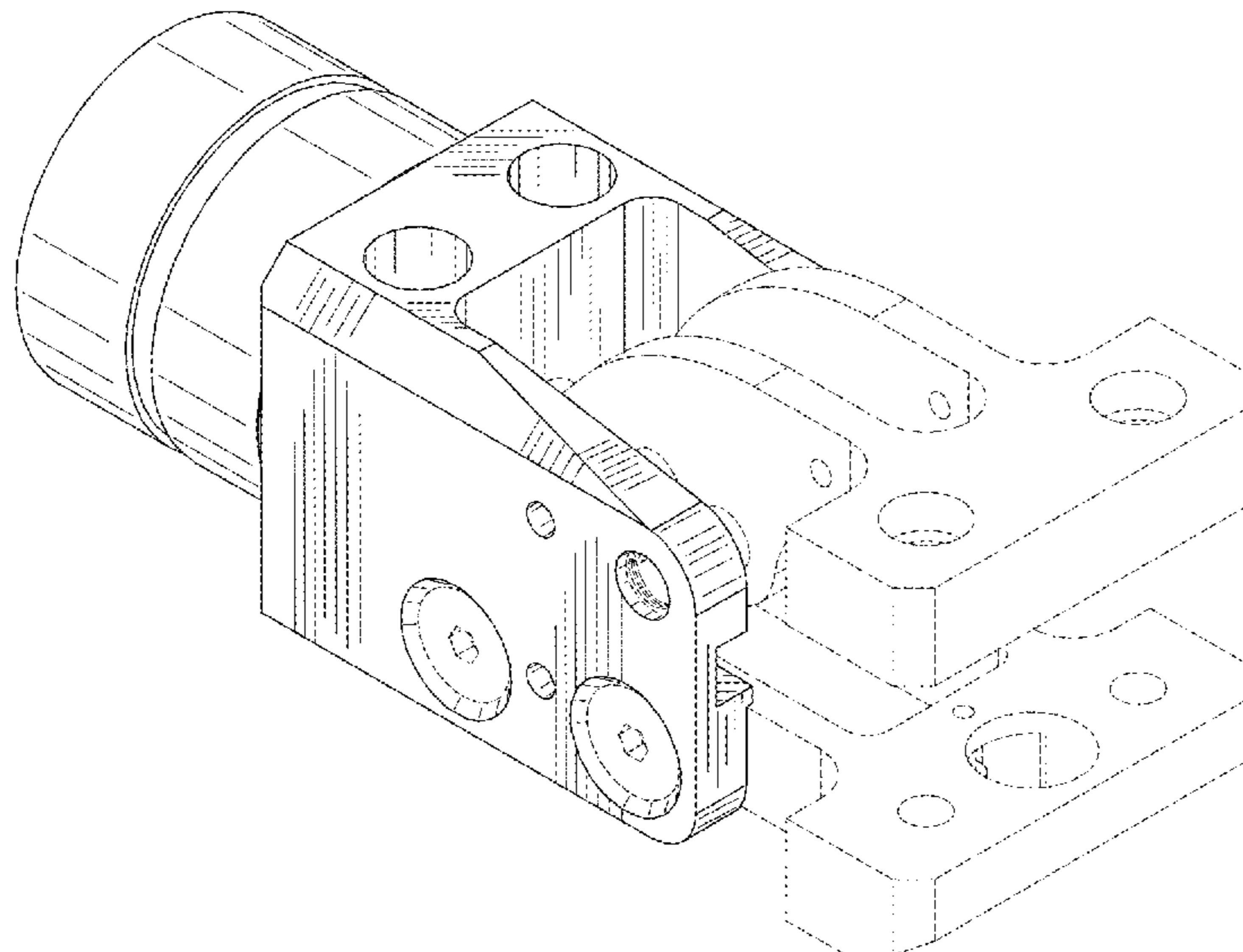
(57) **CLAIM**

The ornamental design for a gripper body, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of the gripper body with jaws in phantom.
 FIG. 2 is a perspective view of the gripper body without jaws.
 FIG. 3 is a left side elevation view of FIG. 2.
 FIG. 4 is a front elevation view of FIG. 2.
 FIG. 5 is a rear elevation view of FIG. 2.
 FIG. 6 is a top plan view of FIG. 2.
 FIG. 7 is a bottom plan view of FIG. 2; and,
 FIG. 8 is a right side elevation view of FIG. 2.

1 Claim, 4 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

7,172,230 B2 2/2007 Maffeis
 7,396,059 B2 7/2008 Maffeis
 D588,431 S * 3/2009 Fukano D8/72
 7,845,698 B2 12/2010 Jenkins et al.
 7,976,087 B2 7/2011 Maffeis
 8,104,810 B2 1/2012 Holcomb et al.
 8,167,346 B2 5/2012 Filipiak
 8,241,093 B2 * 8/2012 Piguet B24B 3/247
 269/243
 8,246,027 B2 * 8/2012 Li B25J 15/026
 269/225
 8,328,258 B2 * 12/2012 Kjol B66C 1/58
 294/106
 D682,653 S * 5/2013 Coope D8/74
 8,454,069 B2 6/2013 Jenkins et al.
 8,474,893 B2 * 7/2013 Kawanami B25J 15/0213
 294/106

8,672,379 B2 * 3/2014 Sato B25J 15/022
 294/106
 8,894,114 B2 * 11/2014 Fahldieck B65G 47/847
 198/407
 9,132,515 B2 * 9/2015 Spillane B23K 37/0408
 2001/0006295 A1 7/2001 Moilanen et al.
 2002/0093211 A1 7/2002 Filipiak et al.
 2003/0038492 A1 2/2003 Kruger
 2008/0073922 A1 3/2008 Holtz
 2008/0237957 A1 10/2008 Waldorf
 2009/0108513 A1 4/2009 Hara et al.

FOREIGN PATENT DOCUMENTS

DE 10338061 3/2005
 DE 102004025781 7/2005
 DE 102004058994 6/2006
 DE 102012003918 8/2013
 JP 2002-151889 5/2002
 WO WO2014-023286 2/2014

* cited by examiner

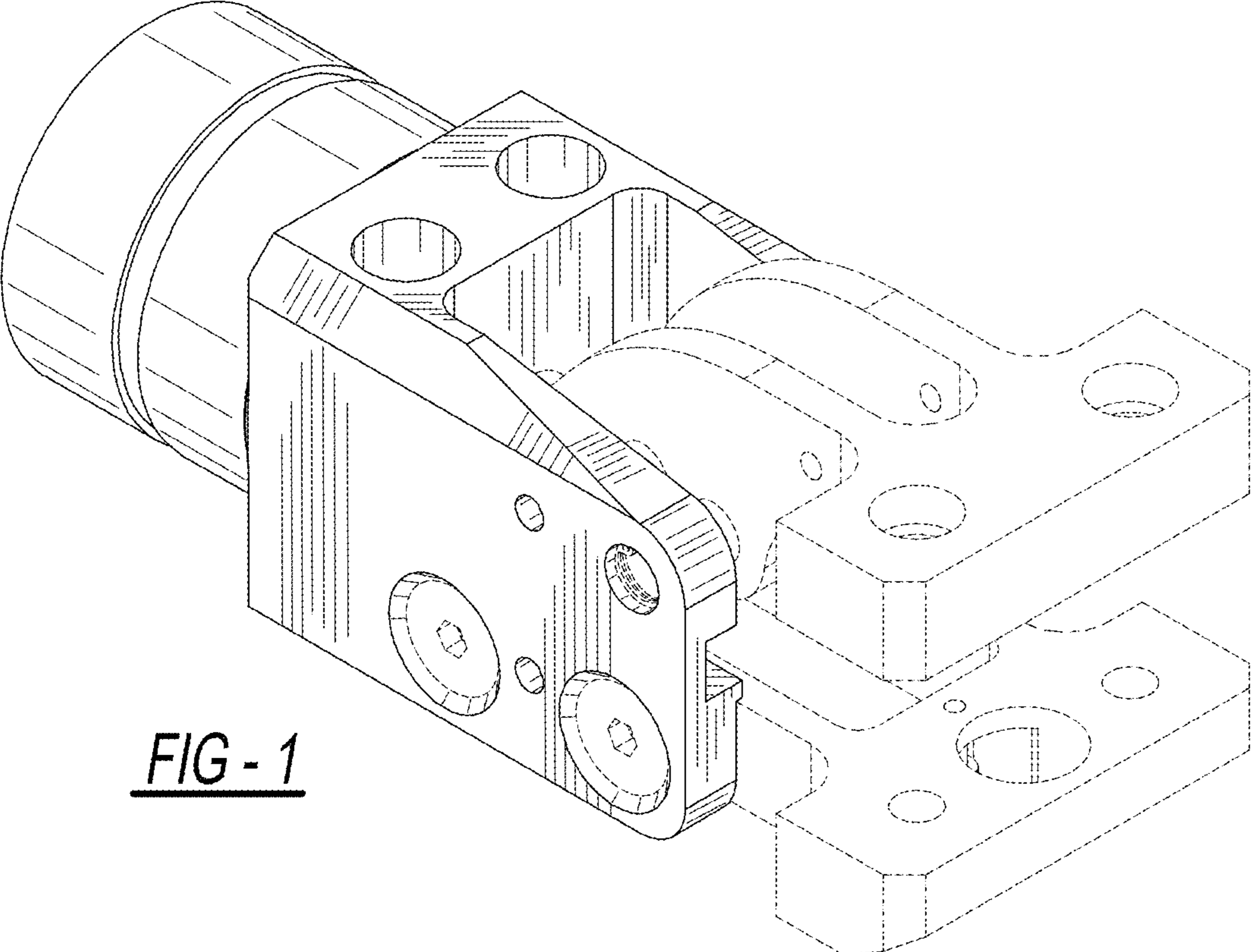


FIG - 1

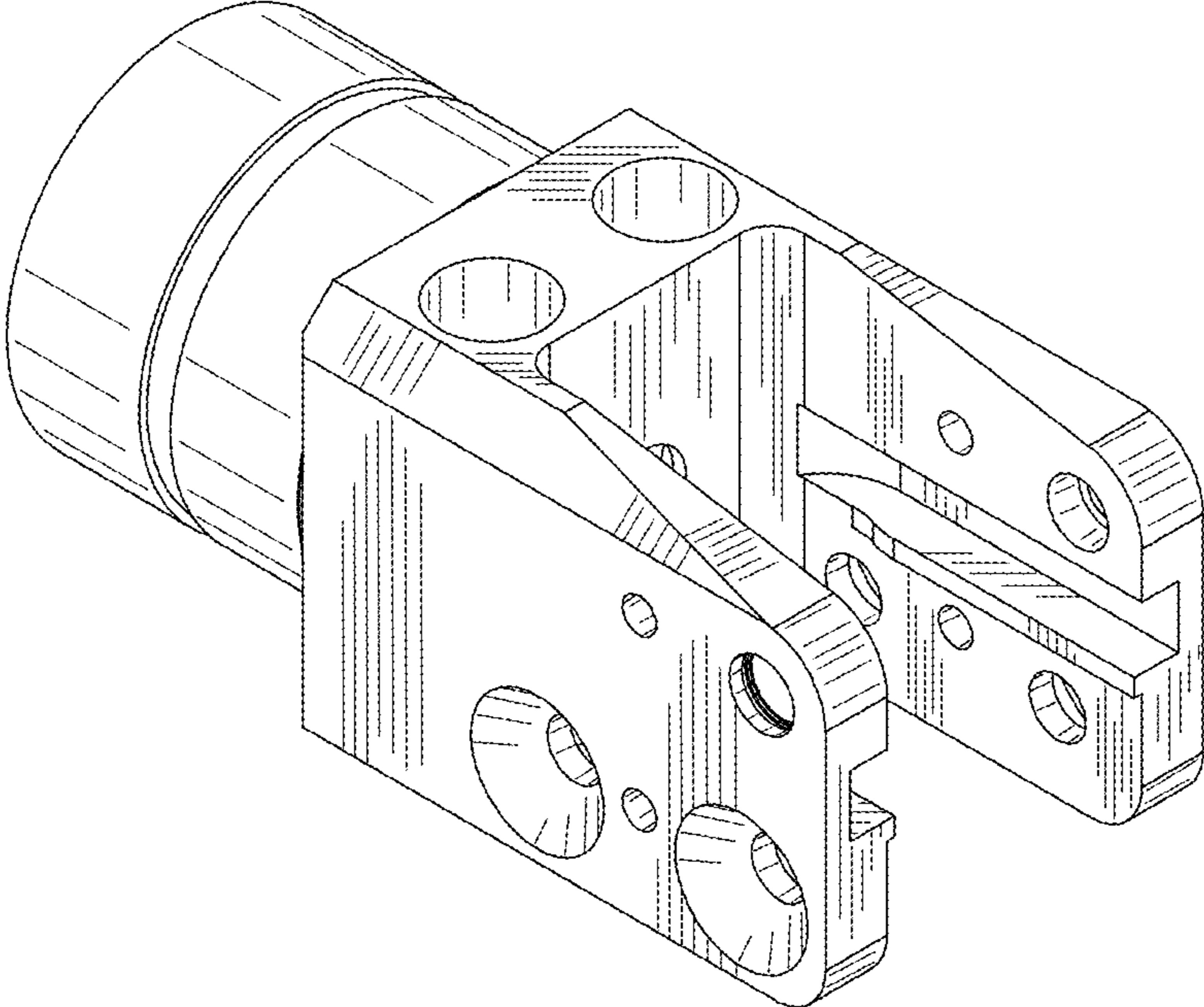


FIG - 2

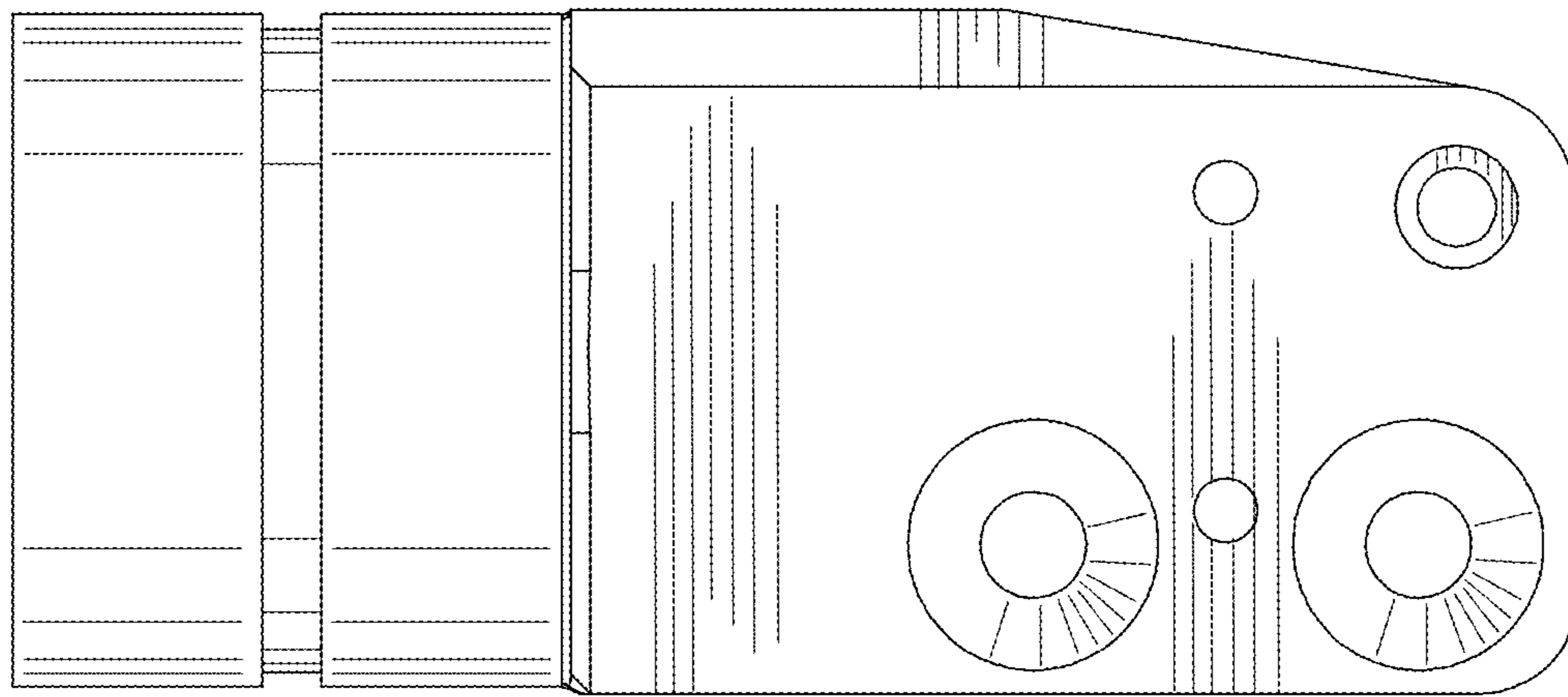


FIG - 3

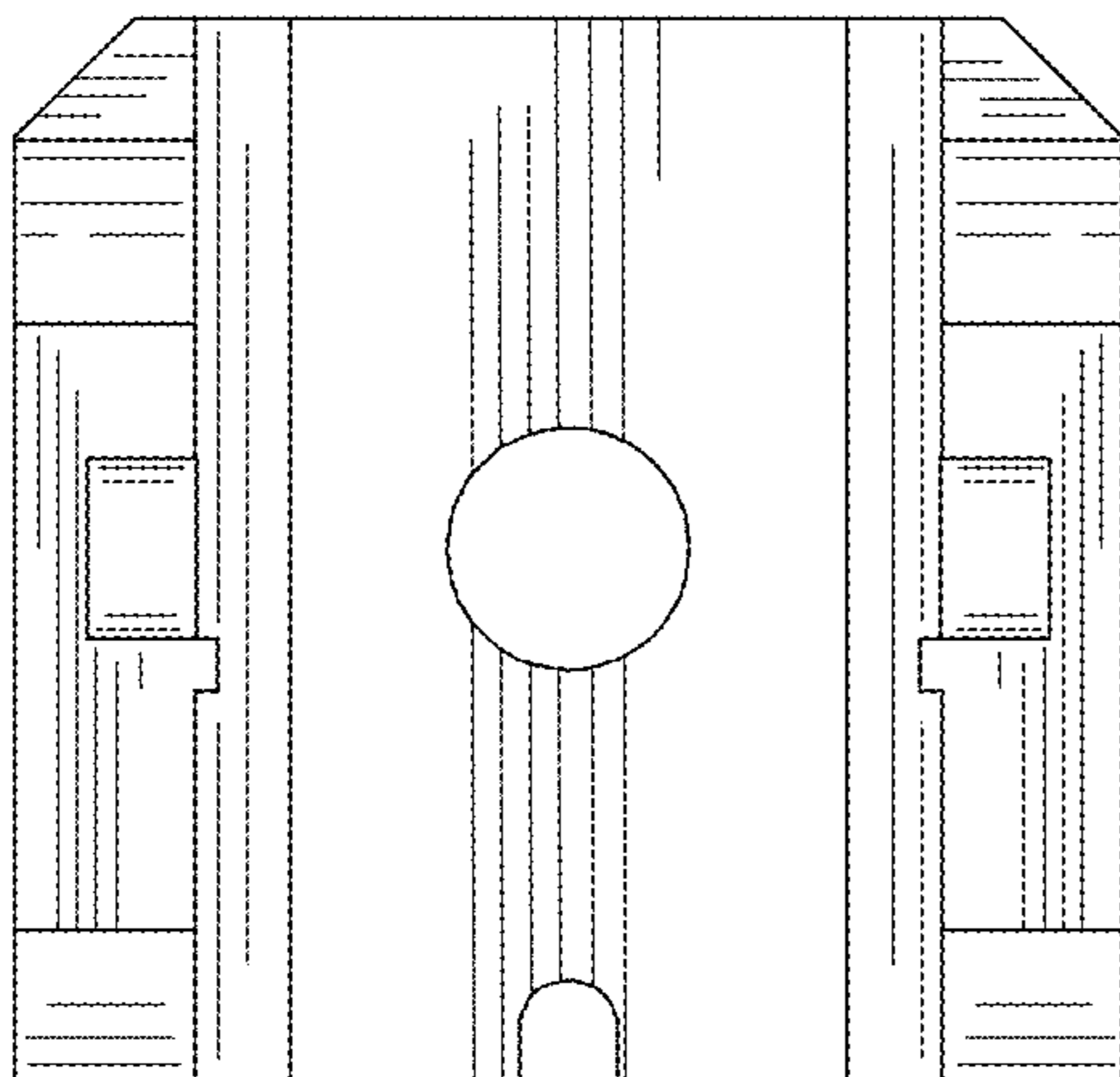
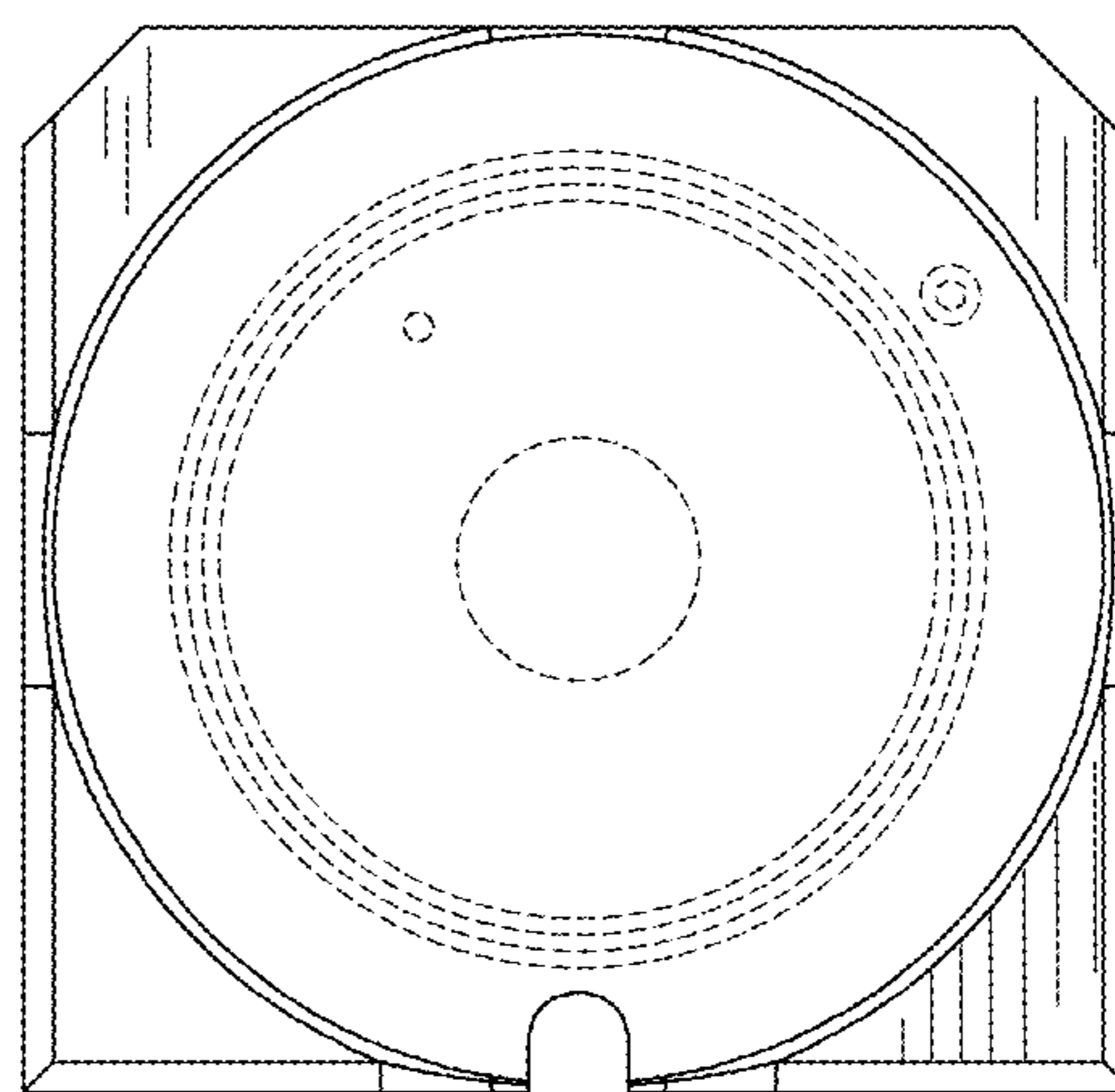


FIG - 4

FIG - 5



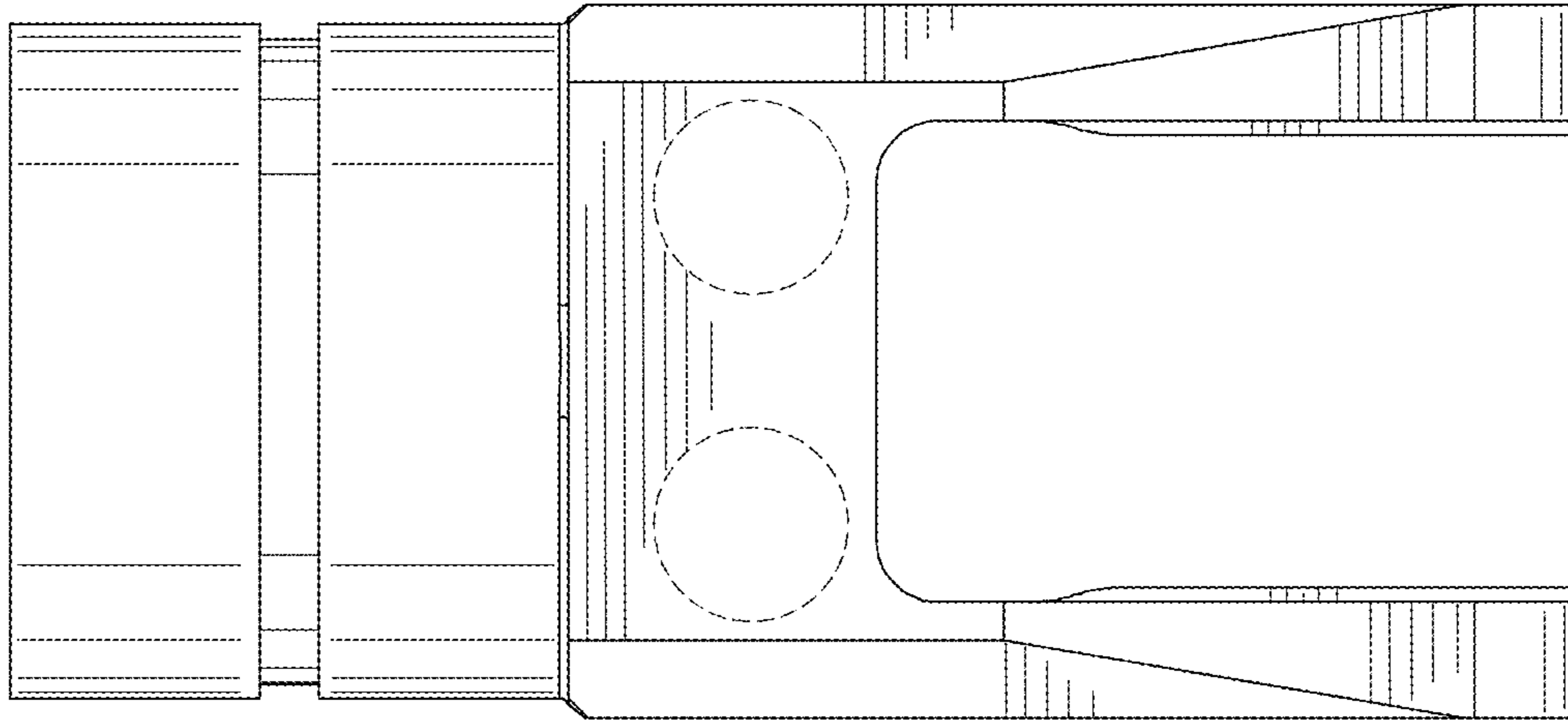


FIG - 6

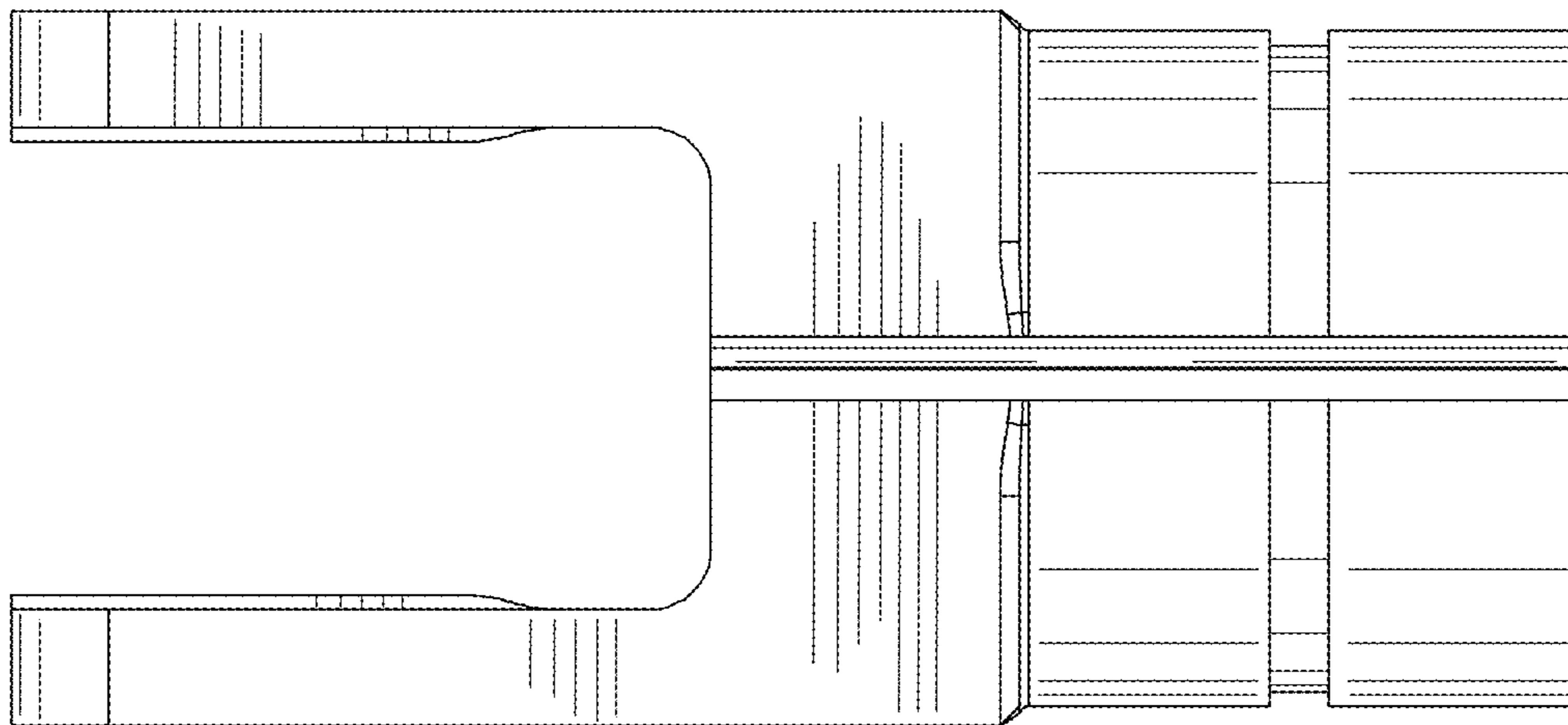


FIG - 7

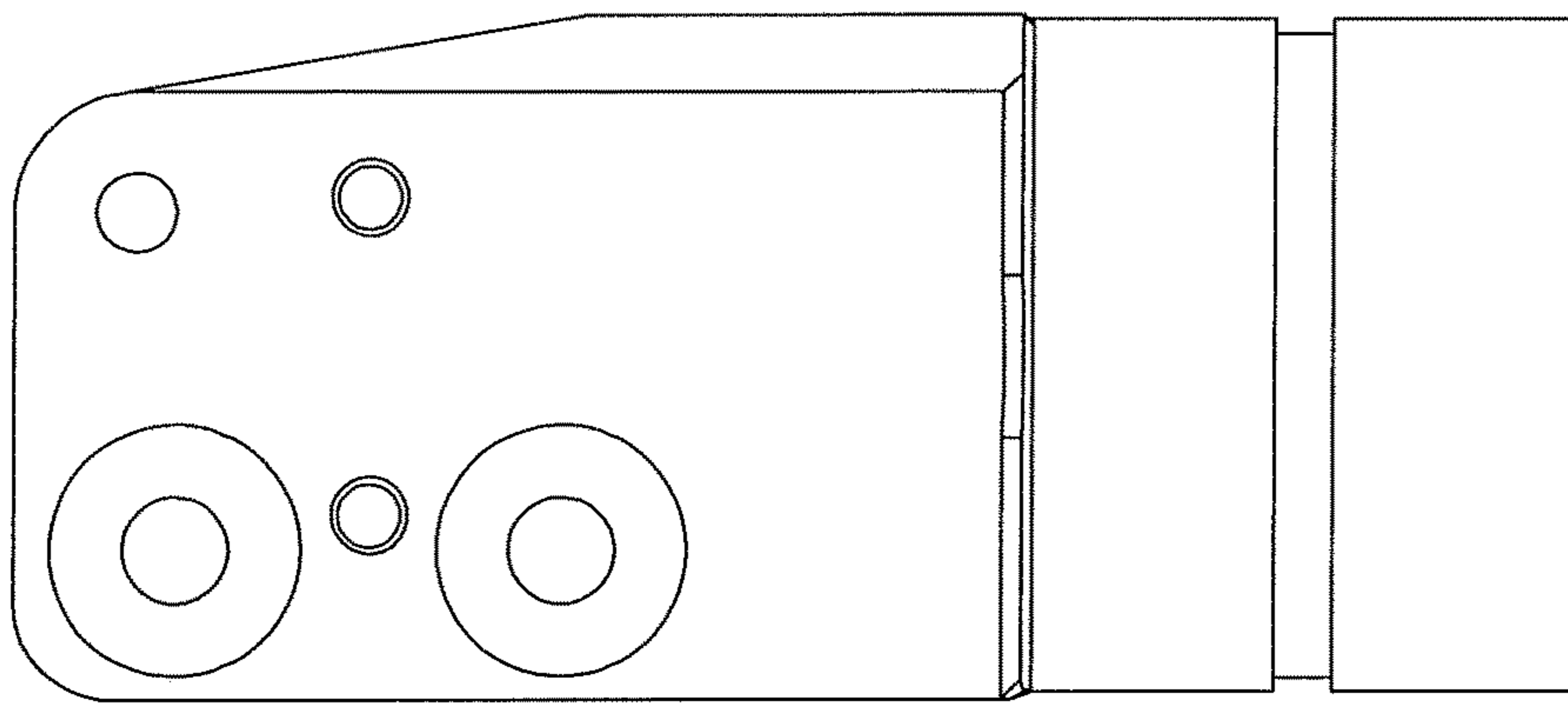


FIG - 8