



US00D800258S

(12) **United States Design Patent** (10) **Patent No.:** **US D800,258 S**
Komatsuzaki et al. (45) **Date of Patent:** **** Oct. 17, 2017**

(54) **FLUID CONTROL VALVE**

(71) Applicants: **Hisashi Komatsuzaki**, Tsukubamirai (JP); **Hisataka Kato**, Tsukubamirai (JP); **Motohiro Soutome**, Tsukubamirai (JP)

(72) Inventors: **Hisashi Komatsuzaki**, Tsukubamirai (JP); **Hisataka Kato**, Tsukubamirai (JP); **Motohiro Soutome**, Tsukubamirai (JP)

(73) Assignee: **SMC Corporation**, Chiyoda-ku, Tokyo (JP)

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

(21) Appl. No.: **29/597,163**

(22) Filed: **Mar. 15, 2017**

(30) **Foreign Application Priority Data**

Nov. 22, 2016 (JP) 2016-025356

(51) **LOC (10) Cl.** **23-01**

(52) **U.S. Cl.**
USPC **D23/235**

(58) **Field of Classification Search**
USPC D23/233–249, 259–263; 137/486, 10, 137/487, 2, 413, 503, 602, 625.64, 312,
(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

D181,319 S * 10/1957 Schumaat D23/235
3,566,920 A * 3/1971 Stewart B60T 8/1812
137/625.64

(Continued)

Primary Examiner — Cynthia Ramirez

Assistant Examiner — Gino Colan

(74) *Attorney, Agent, or Firm* — Yokoi & Co., U.S.A.;
Toshiyuki Yokoi

(57) **CLAIM**

The ornamental design for a fluid control valve, as shown and described.

DESCRIPTION

FIG. 1 shows a front view of a fluid control valve showing our new design;

FIG. 2 shows a rear view thereof;

FIG. 3 shows a right side view thereof;

FIG. 4 shows a left side view thereof;

FIG. 5 shows a top view thereof;

FIG. 6 shows a bottom view thereof;

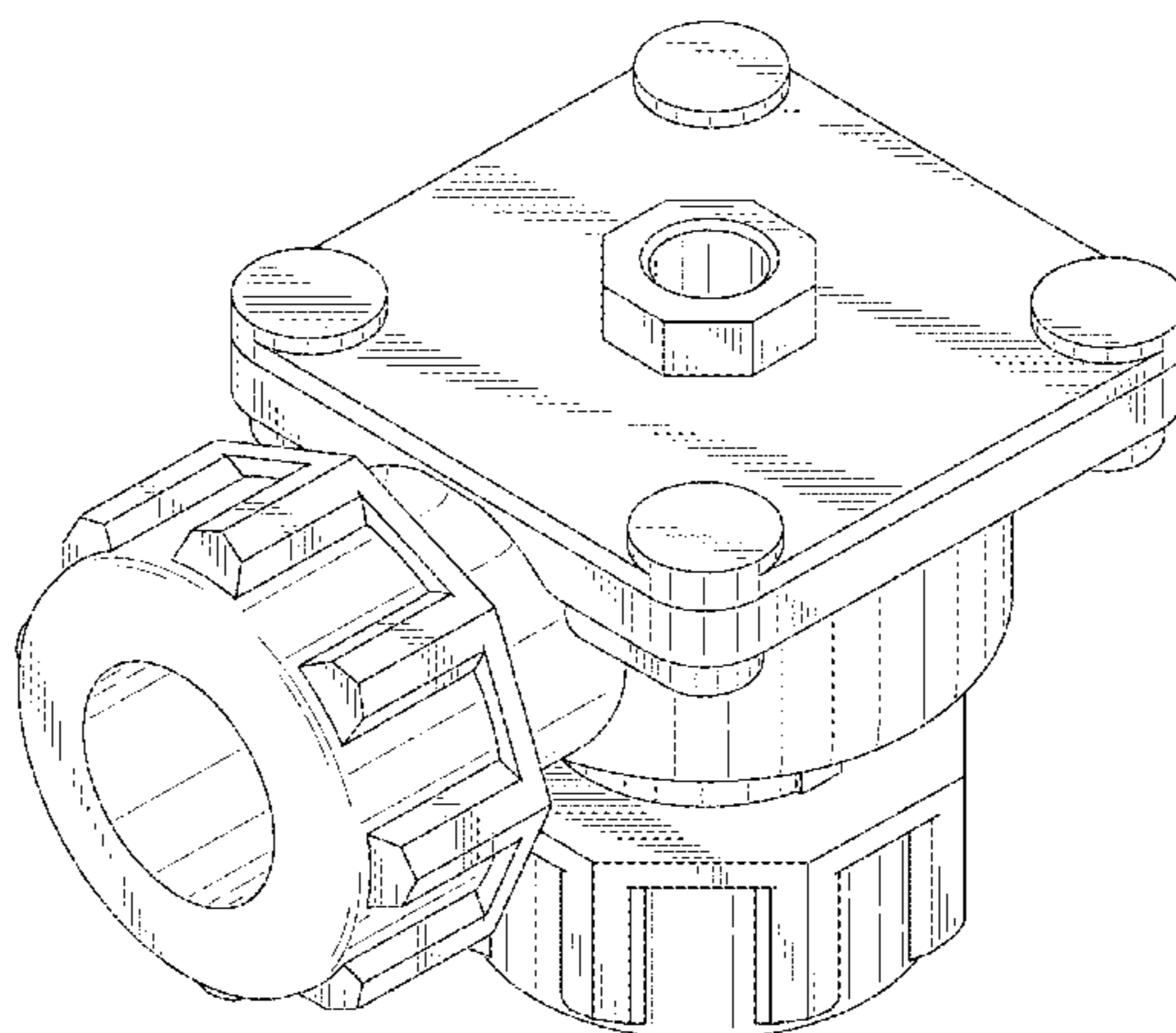
FIG. 7 shows a top, front and left side perspective view thereof; and,

FIG. 8 shows a bottom, rear and right side perspective view thereof.

The broken lines shown in the figures are included for the purpose of illustrating portions of the fluid control valve and form no part of the claimed design.

The present article is a fluid control valve used, for example, to immediately discharge a large amount of pressure fluid at high speed for wiping off dust attached to a bag filter of a dust collector. The fluid control valve includes: a body having two pressure fluid inlet/outlet ports; and a bonnet attached on an upper part of the body (See Reference drawings 1 and 2). The two pressure fluid inlet/outlet ports communicate with each other via a not illustrated passage formed inside the body. In the passage, a not illustrated valve body integrally formed with a diaphragm is provided. When using, for example, a not illustrated pressure fluid supply source such as an air tank is connected to one of the pressure fluid inlet/outlet ports, and a not illustrated injection pipe connected with an upper opening of the bag filter provided inside the dust collector is connected to the other of the pressure fluid inlet/outlet ports. In this state, when the pressure fluid is supplied to the present article, the valve body is opened according to the pressure of the pressure fluid, and the pressure fluid is injected inside the bag filter via the injection pipe. The injected pressure fluid causes impact on the bag filter to remove the dust attached to an outer periphery of the bag filter.

1 Claim, 8 Drawing Sheets



(58) **Field of Classification Search**

USPC 137/15.21, 613, 15.19; 251/129.11, 304,
251/208, 61.4, 149, 149.2, 145, 147, 148,
251/331, 335.2, 30.02

CPC F16K 3/085; F16K 7/17; F16K 31/402;
F16K 41/12; F16K 99/0015

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D351,216 S * 10/1994 Millett D23/233
5,924,441 A * 7/1999 Leys F16K 11/022
137/312
6,575,187 B2 * 6/2003 Leys F16K 11/048
137/15.21
D562,436 S * 2/2008 Kato D23/233
D676,110 S * 2/2013 Oike D23/233
8,839,808 B2 * 9/2014 Murata F16K 31/1221
137/15.19
D763,409 S * 8/2016 Cox D23/235
2008/0029170 A1 * 2/2008 O'Reilly F24D 19/0012
137/613
2013/0009086 A1 * 1/2013 Walker F16K 7/17
251/331

* cited by examiner

FIG. 1

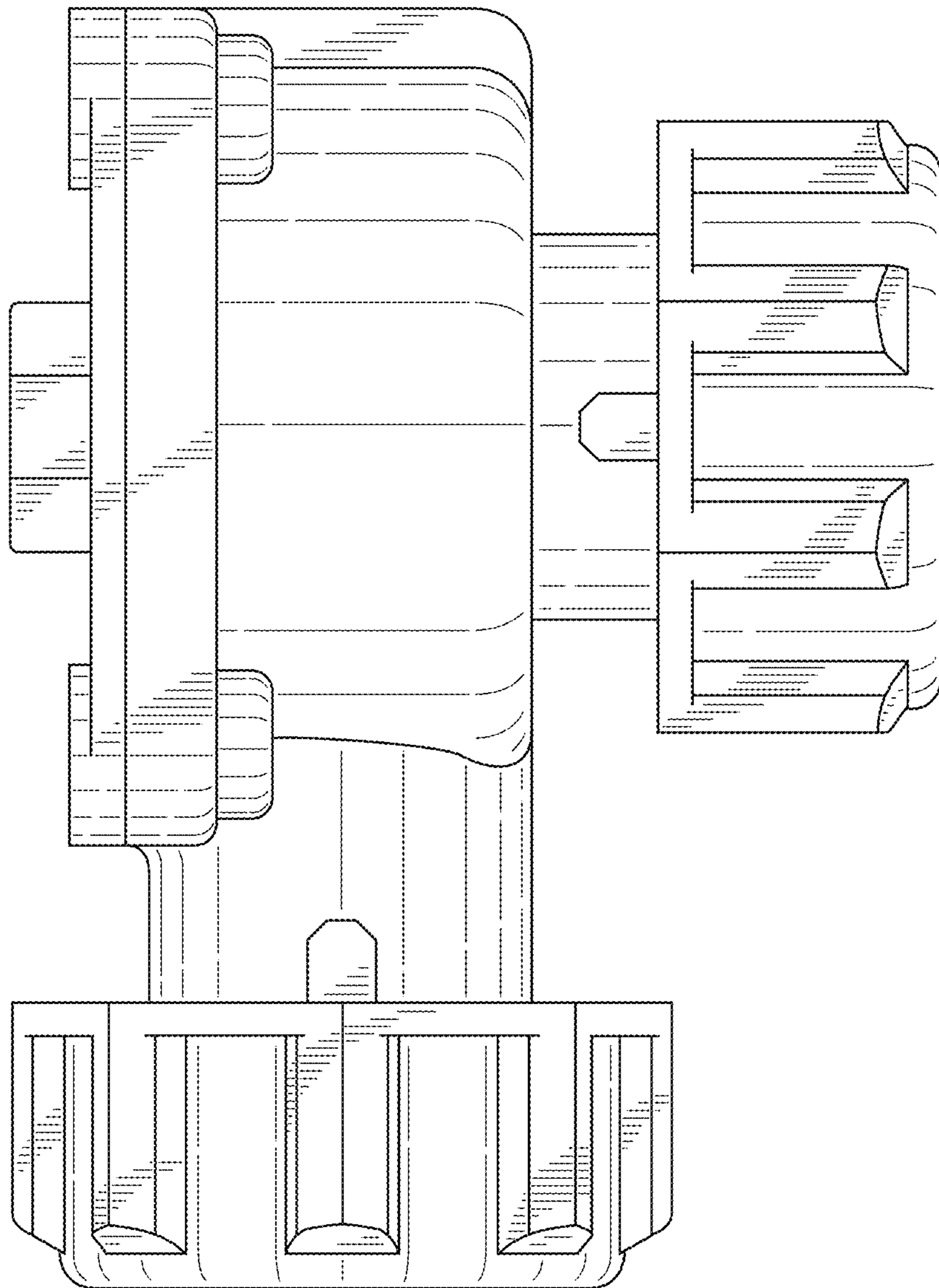


FIG. 2

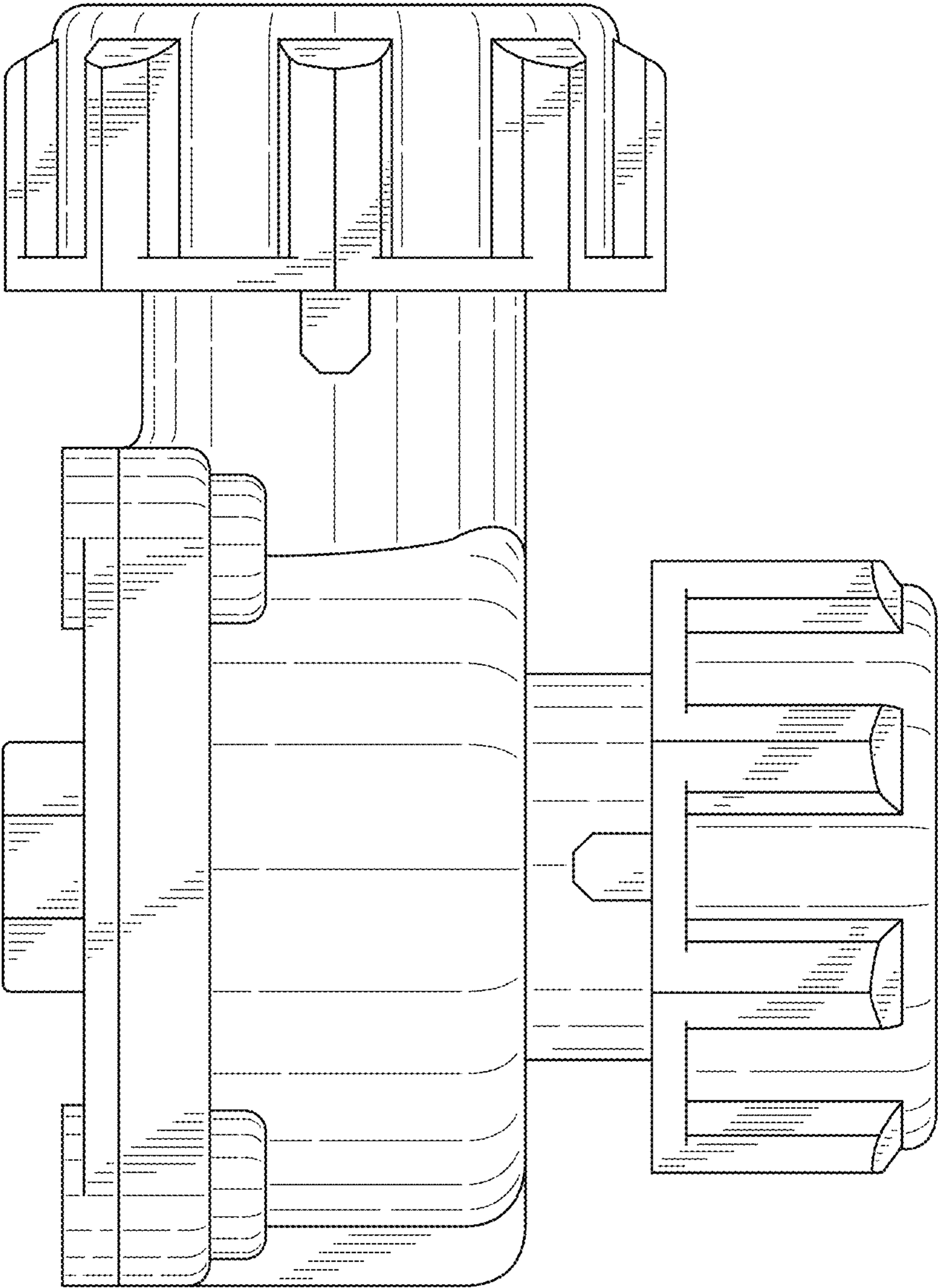


FIG. 3

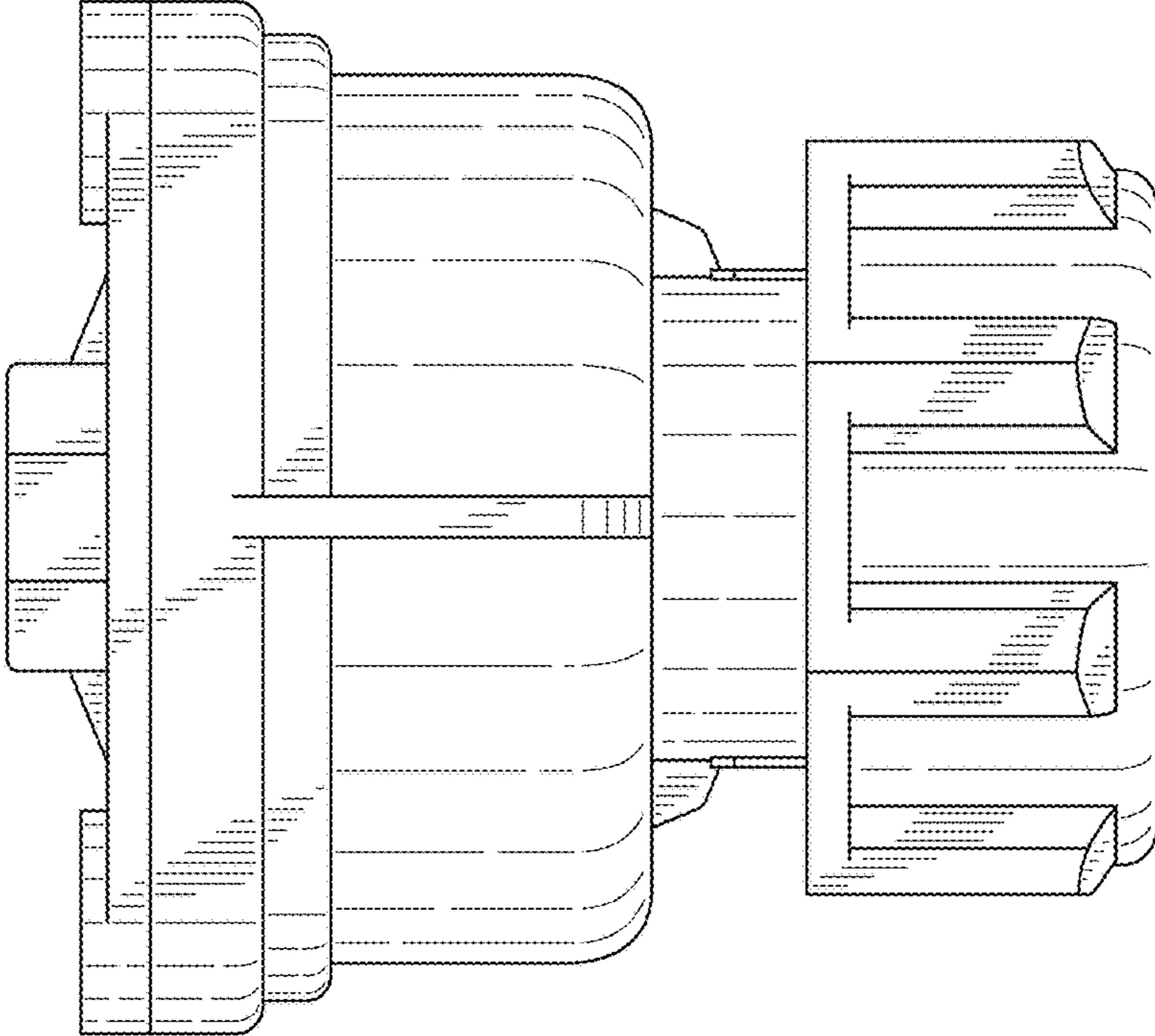


FIG. 4

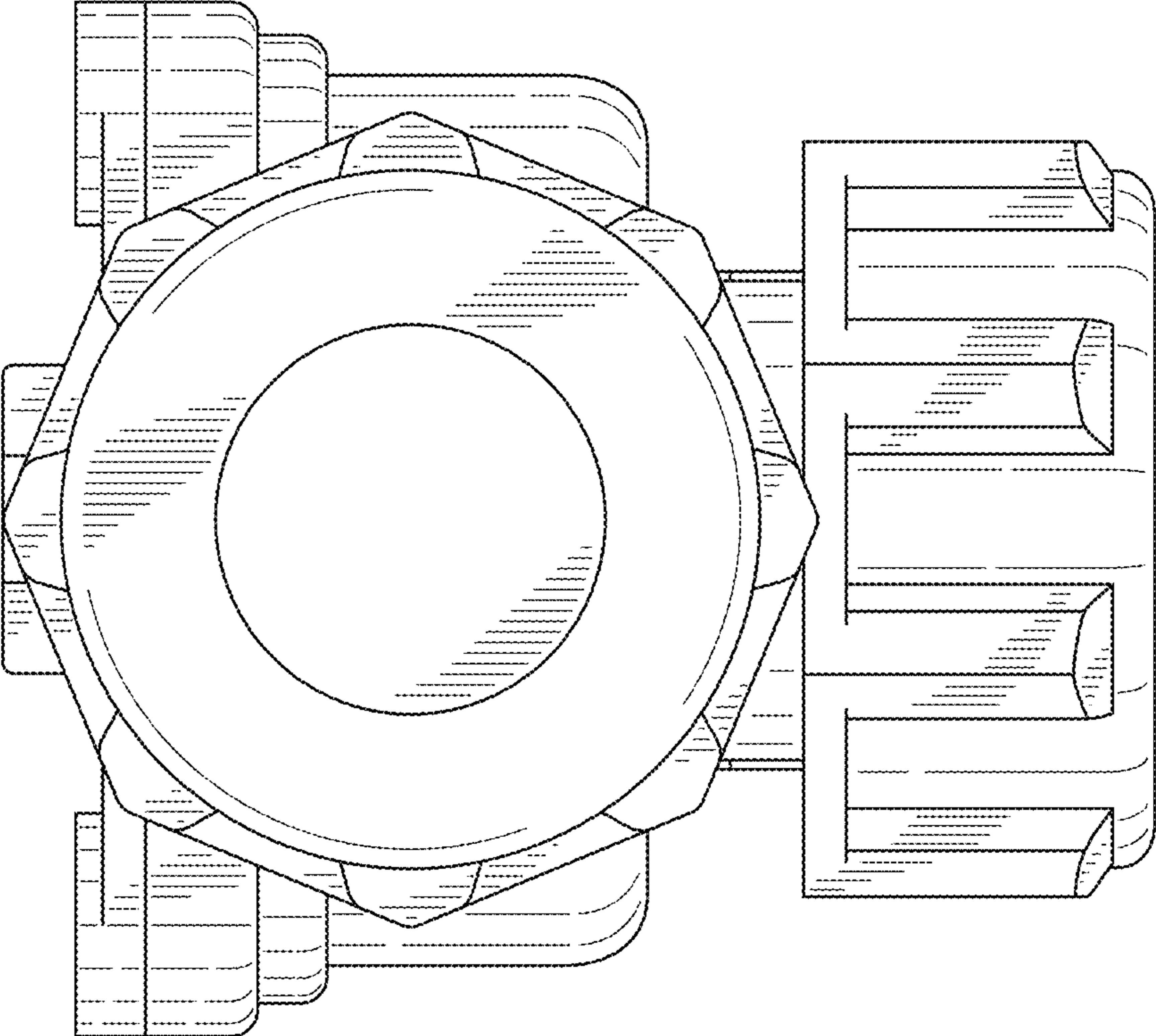


FIG. 5

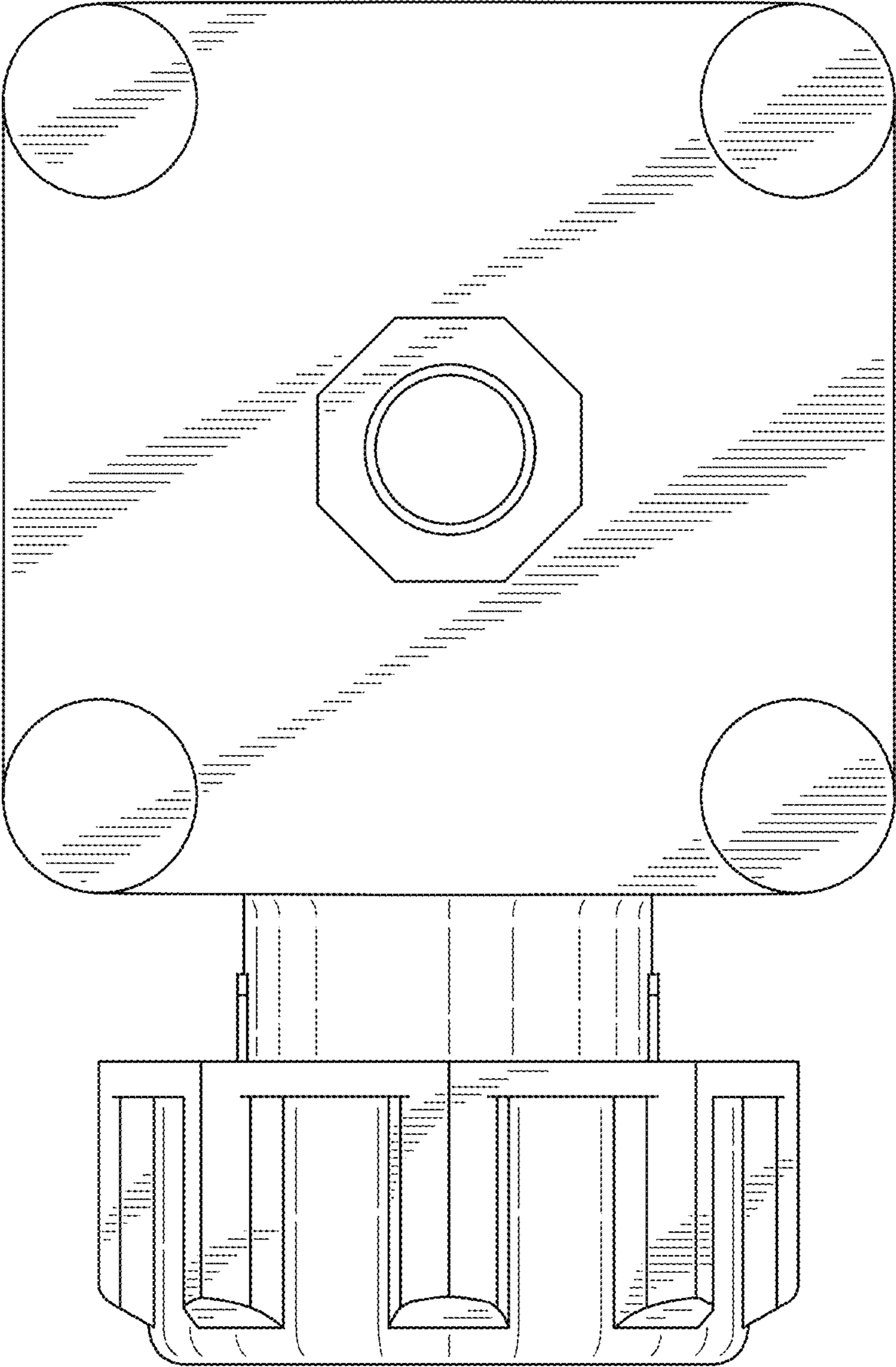


FIG. 6

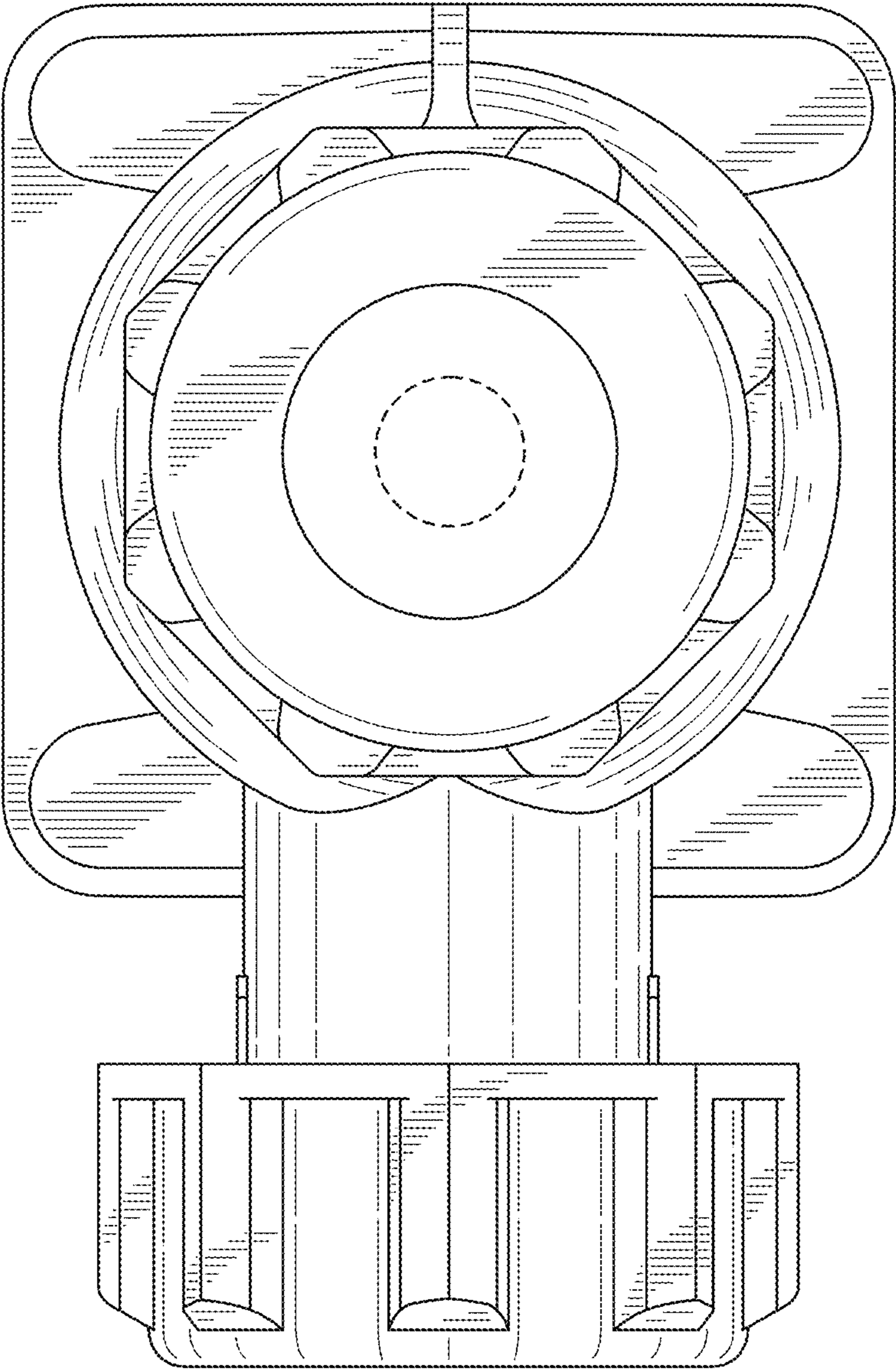


FIG. 7

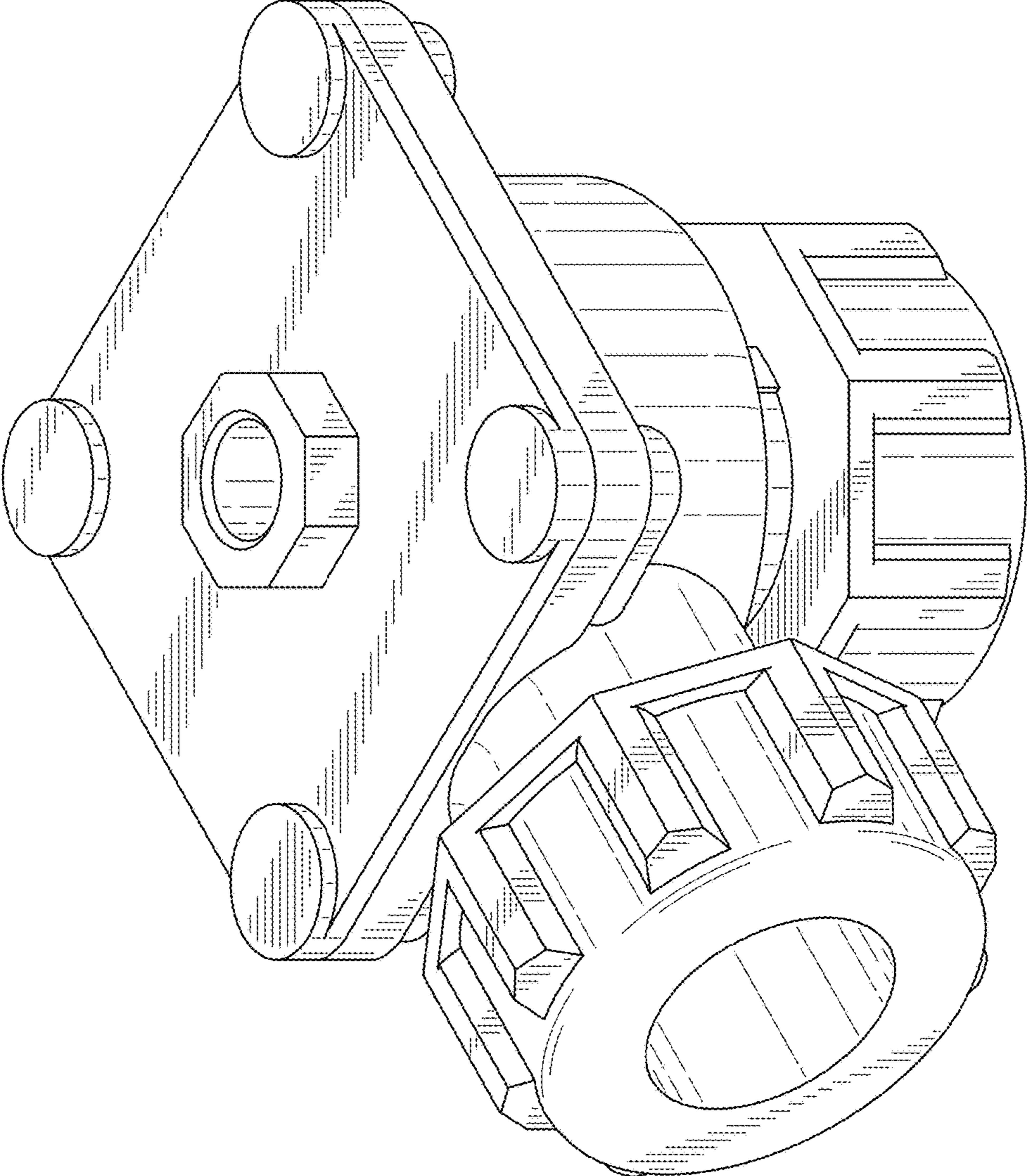


FIG. 8

