



US00D825717S

(12) **United States Design Patent**
Karibe

(10) **Patent No.:** **US D825,717 S**

(45) **Date of Patent:** **** Aug. 14, 2018**

(54) **SOLENOID VALVE**

(71) Applicant: **SMC CORPORATION**, Tokyo (JP)

(72) Inventor: **Takeshi Karibe**, Joso (JP)

(73) Assignee: **SMC CORPORATION**, Tokyo (JP)

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

(21) Appl. No.: **29/599,887**

(22) Filed: **Apr. 7, 2017**

(30) **Foreign Application Priority Data**

Oct. 10, 2016 (EM) 003413343

(51) **LOC (11) CL.** **23-01**

(52) **U.S. CL.**

USPC **D23/233**

(58) **Field of Classification Search**

USPC D10/49; D23/233–237, 244–249

CPC .. F02M 51/0685; F02M 61/168; F16K 31/02;

F16K 31/048; F16K 31/0631; F16K

31/0675; F16K 31/082; F16K 27/029;

F16K 11/24

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,425,416 B1 * 7/2002 Narita F15B 13/0825
137/625.27
D609,307 S * 2/2010 Moriyama D23/233
D615,618 S 5/2010 Someya
D639,392 S * 6/2011 Yamada D23/233
D667,930 S * 9/2012 Yamada D23/233
D686,696 S * 7/2013 Lai D23/233
D695,380 S * 12/2013 Tamura D23/233
D724,697 S * 3/2015 Johnson D23/233
D738,463 S * 9/2015 Yoshida D23/233

D738,464 S 9/2015 Yoshida et al.
D738,465 S 9/2015 Yoshida et al.
D738,466 S 9/2015 Yoshida et al.
D753,268 S * 4/2016 Nishimura D23/233
D754,292 S * 4/2016 Mangold D23/233
D760,352 S * 6/2016 Mangold D23/233
2004/0227119 A1 * 11/2004 Mills F16K 31/0631
251/129.14
2006/0284131 A1 * 12/2006 Cripps F16K 31/06
251/129.15
2015/0108382 A1 * 4/2015 Svensson F16K 31/02
251/129.19
2017/0356395 A1 * 12/2017 Lee F02M 25/0836

FOREIGN PATENT DOCUMENTS

JP 52-23109 S 11/1980
JP 544411 S 11/1980
JP 52-23112 S 12/1980
JP 52-23115 S 12/1980

(Continued)

Primary Examiner — Selina Sikder

(74) *Attorney, Agent, or Firm* — Birch, Stewart, Kolasch
& Birch, LLP

(57)

CLAIM

The ornamental design for a solenoid valve, as shown.

DESCRIPTION

FIG. 1 is a front, top and left side perspective view of a solenoid valve showing my new design;

FIG. 2 is a rear, bottom and right side perspective view thereof;

FIG. 3 is a front view thereof;

FIG. 4 is a rear view thereof;

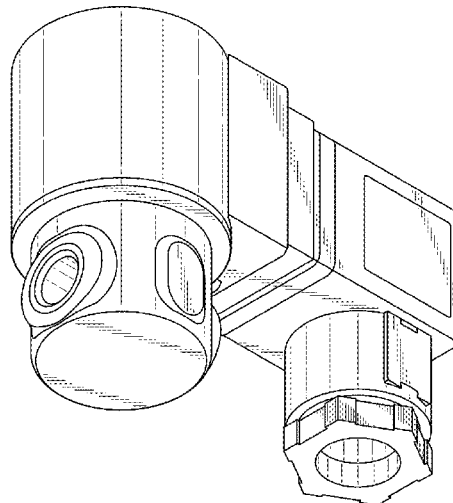
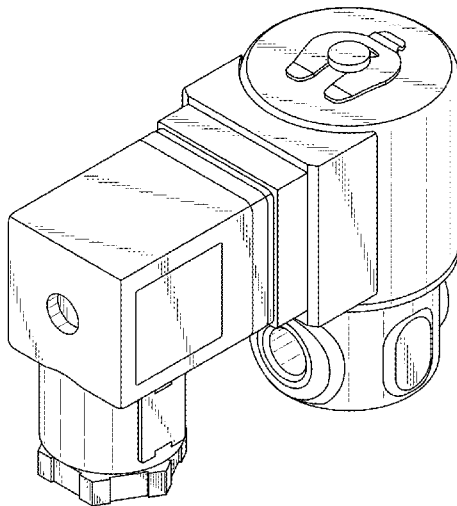
FIG. 5 is a top plan view thereof;

FIG. 6 is a bottom plan view thereof;

FIG. 7 is a left side view thereof; and,

FIG. 8 is a right side view thereof.

1 Claim, 8 Drawing Sheets



(56)

References Cited

FOREIGN PATENT DOCUMENTS

JP	544411-2 S	12/1980
JP	544411-3 S	12/1980
JP	57-38644 S	10/1984
JP	57-38645 S	10/1984
JP	635375-1 S	10/1984
JP	635375 S	10/1984

* cited by examiner

FIG. 1

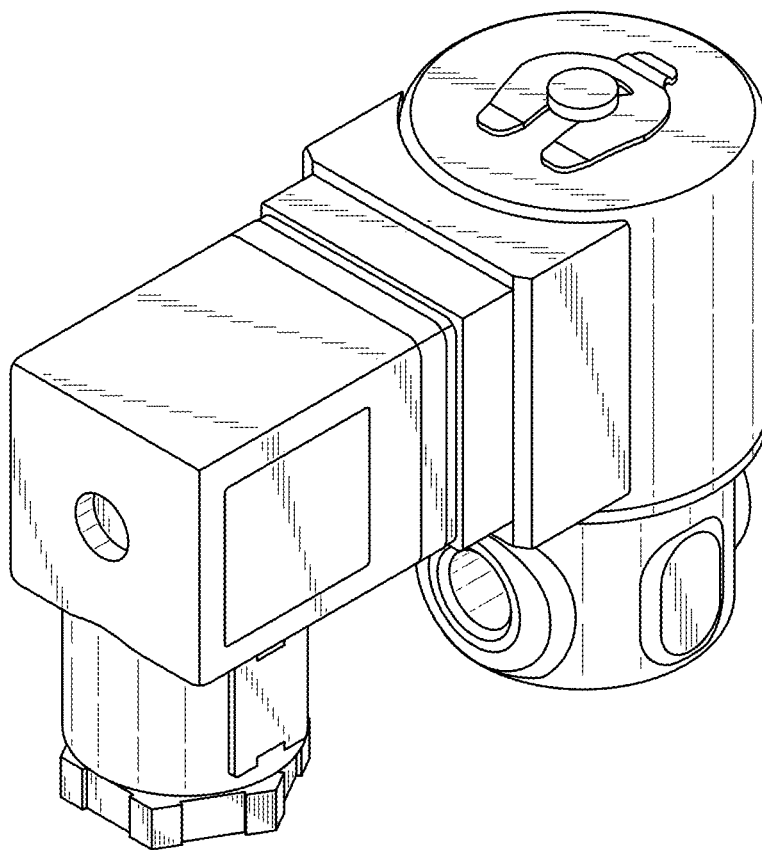


FIG. 2

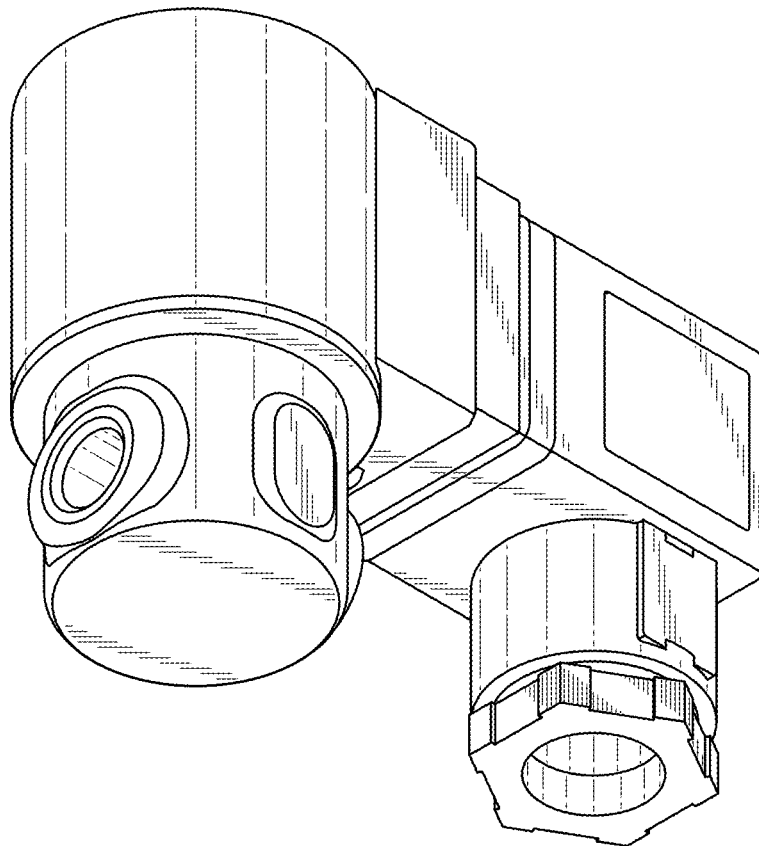


FIG. 3

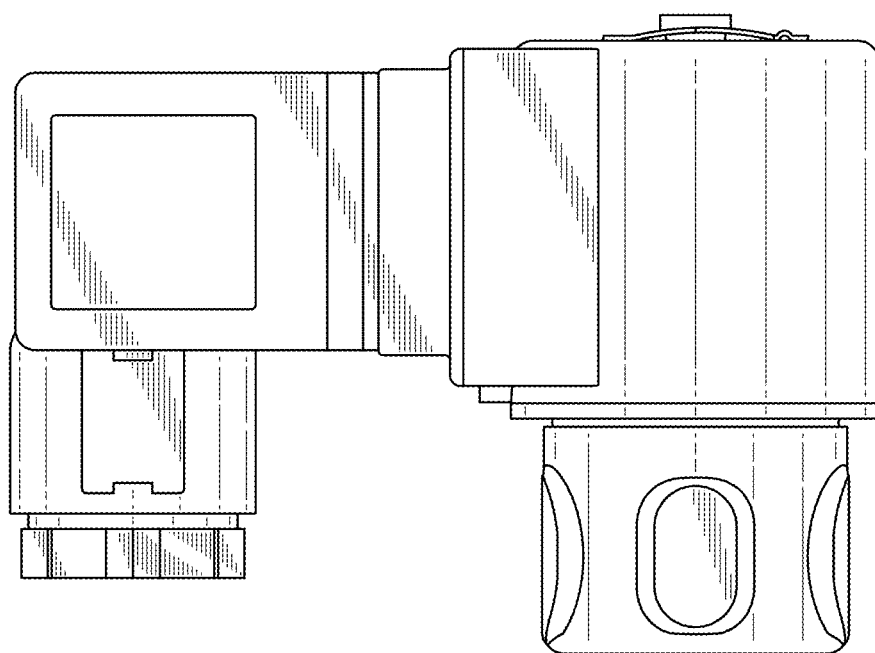


FIG. 4

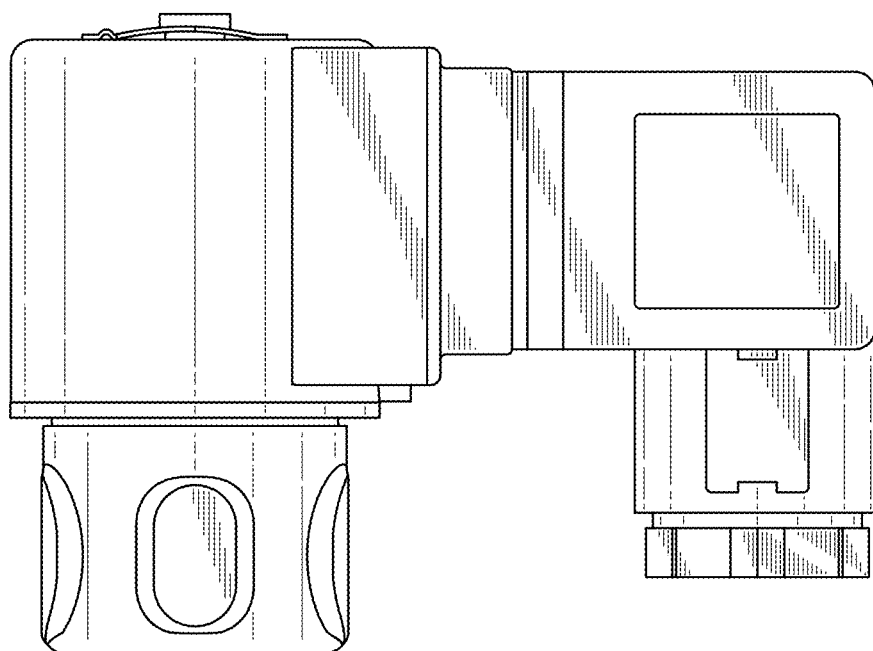


FIG. 5

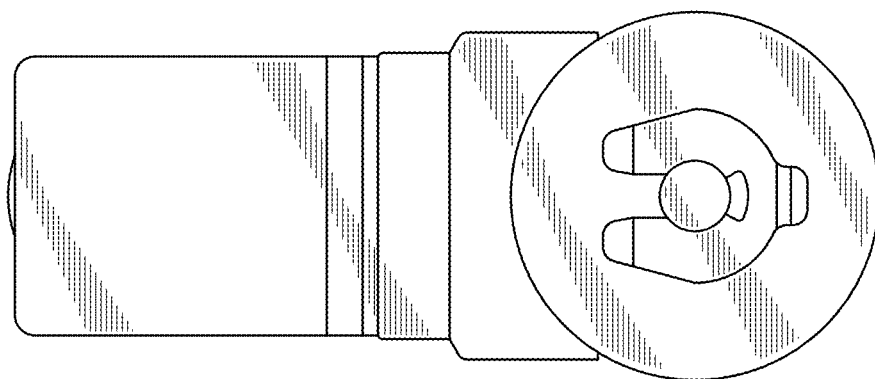


FIG. 6

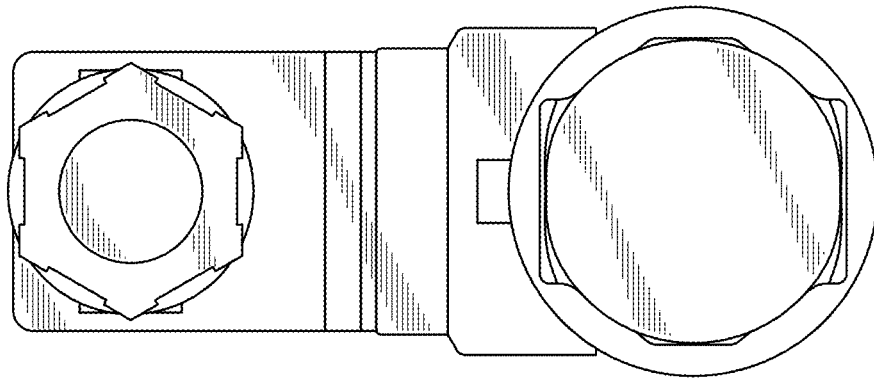


FIG. 7

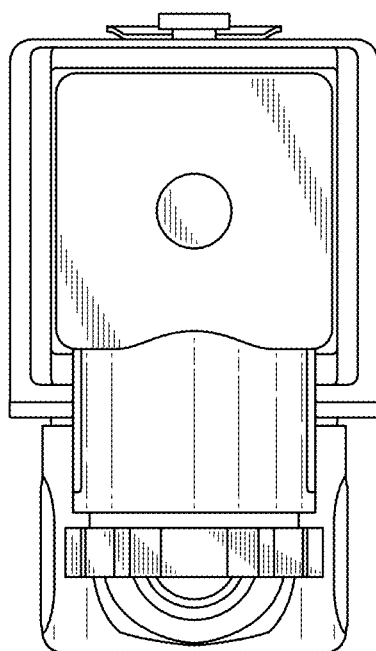


FIG. 8

