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

(10) **Patent No.:** **US D908,737 S**

(45) **Date of Patent:** **\*\* Jan. 26, 2021**

(54) **FLUID PRESSURE CYLINDER**

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

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

(21) Appl. No.: **29/706,487**

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(30) **Foreign Application Priority Data**

Mar. 29, 2019 (CN) ..... 2019 3 0137122

(51) **LOC (13) Cl.** ..... **15-02**

(52) **U.S. Cl.**  
USPC ..... **D15/7**

(58) **Field of Classification Search**  
USPC ..... D15/7, 9, 143, 148, 149, 199; D10/85;  
D23/225, 233, 235

(Continued)

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

D295,753 S \* 5/1988 LaBair ..... D15/7  
4,825,746 A \* 5/1989 Herner ..... F15B 15/082  
188/271

(Continued)

**FOREIGN PATENT DOCUMENTS**

CN 304695093 S 6/2018  
JP 846878-1 S 9/1992

(Continued)

**OTHER PUBLICATIONS**

SMC, Compact Air Cylinder—Standard Type, 2 in Bore, (first available Jul. 19, 2019), Amazon.com, URL:<<https://www.amazon.com/Compact-Air-Cylinder-Standard-Type/dp/B07VJX3FJS>> (Year: 2019).\*

com/Compact-Air-Cylinder-Standard-Type/dp/B07VJX3FJS> (Year: 2019).\*

(Continued)

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(57) **CLAIM**

The ornamental design for a fluid pressure cylinder, as shown and described.

**DESCRIPTION**

FIG. 1 is a front, top and left side perspective view of a fluid pressure cylinder showing a first embodiment of our 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;

FIG. 8 is a right side view thereof;

FIG. 9 is a front, top and left side perspective view of a fluid pressure cylinder showing a second embodiment of our new design;

FIG. 10 is a rear, top and left side perspective view of FIG. 9;

FIG. 11 is a rear, bottom and right side perspective view of FIG. 9;

FIG. 12 is a front view of FIG. 9;

FIG. 13 is a rear view of FIG. 9;

FIG. 14 is a top plan view of FIG. 9;

FIG. 15 is a bottom plan view of FIG. 9;

FIG. 16 is a left side view of FIG. 9;

FIG. 17 is a right side view of FIG. 9;

(Continued)

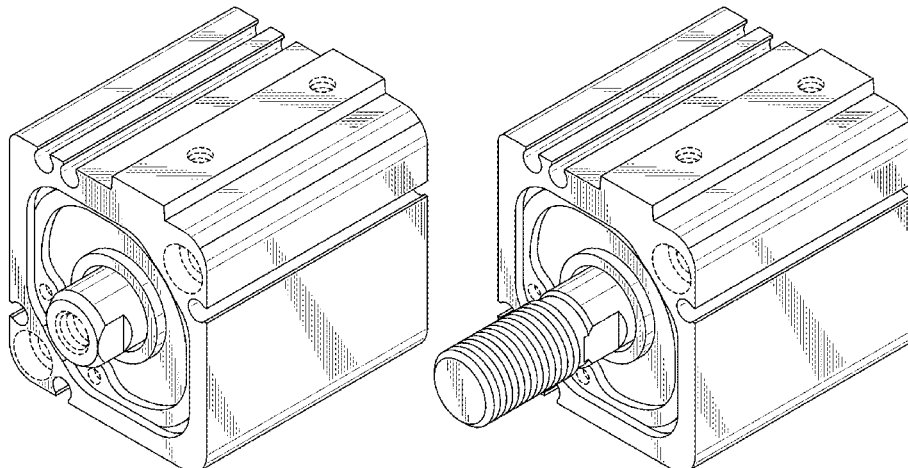


FIG. 18 is a front, top and left side perspective view of a fluid pressure cylinder showing a third embodiment of our new design;

FIG. 19 is a rear, bottom and right side perspective view of FIG. 18;

FIG. 20 is a front view of FIG. 18;

FIG. 21 is a rear view of FIG. 18;

FIG. 22 is a top plan view of FIG. 18;

FIG. 23 is a bottom plan view of FIG. 18;

FIG. 24 is a left side view of FIG. 18;

FIG. 25 is a right side view of FIG. 18;

FIG. 26 is a front, top and left side perspective view of a fluid pressure cylinder showing a fourth embodiment of our new design;

FIG. 27 is a rear, top and left side perspective view of FIG. 26;

FIG. 28 is a rear, bottom and right side perspective view of FIG. 26;

FIG. 29 is a front view of FIG. 26;

FIG. 30 is a rear view of FIG. 26;

FIG. 31 is a top plan view of FIG. 26;

FIG. 32 is a bottom plan view of FIG. 26;

FIG. 33 is a left side view of FIG. 26; and,

FIG. 34 is a right side view of FIG. 26.

The broken lines depict portions of the fluid pressure cylinder that form no part of the claimed design.

#### 1 Claim, 34 Drawing Sheets

#### (58) Field of Classification Search

CPC .... F02M 37/04; F02M 31/14; F04D 29/4286;  
F15B 15/14; F15B 15/16; F15B 15/26;  
F15B 15/1919; F15B 15/1414; F15B  
15/00; F15B 15/08

See application file for complete search history.

#### (56) References Cited

##### U.S. PATENT DOCUMENTS

D303,393 S \* 9/1989 Stoll ..... D15/7  
5,163,351 A \* 11/1992 Dominka ..... F15B 15/26  
251/31  
D333,474 S \* 2/1993 Aizawa ..... D15/5  
D370,683 S \* 6/1996 Stahlman ..... D15/7  
5,555,789 A \* 9/1996 Rosengren ..... F15B 15/082  
384/57  
D417,457 S \* 12/1999 Asahara ..... D15/7  
D420,683 S \* 2/2000 Suzuki ..... D15/7  
D428,617 S \* 7/2000 Hariwara ..... D15/7  
6,089,111 A \* 7/2000 Machijima ..... G01D 11/30  
73/866.5  
6,152,015 A \* 11/2000 Migliori ..... F15B 15/1419  
92/177  
D445,704 S \* 7/2001 Suzuki ..... D10/85  
D480,405 S \* 10/2003 Kleffmann ..... D15/143  
D499,348 S \* 12/2004 Matsumoto ..... D10/85

D500,258 S \* 12/2004 Kita ..... D10/85  
D500,259 S \* 12/2004 Kita ..... D10/85  
D572,282 S \* 7/2008 Yaegashi ..... D15/143  
D575,175 S \* 8/2008 Suzuki ..... D10/85  
D584,324 S \* 1/2009 Yaegashi ..... D15/143  
D600,534 S \* 9/2009 Tokumoto ..... D8/354  
D669,097 S \* 10/2012 Hariwara ..... D15/7  
D669,098 S \* 10/2012 Hariwara ..... D15/7  
D682,901 S \* 5/2013 Peschel ..... D15/143  
D685,014 S \* 6/2013 Mangold ..... D15/143  
D685,403 S \* 7/2013 Mangold ..... D15/143  
D687,516 S \* 8/2013 Asaba ..... D23/233  
D689,524 S \* 9/2013 Peschel ..... D15/7  
D689,525 S \* 9/2013 Peschel ..... D15/7  
D699,759 S \* 2/2014 Peschel ..... D15/7  
D699,760 S \* 2/2014 Peschel ..... D15/7  
D699,761 S \* 2/2014 Peschel ..... D15/7  
D757,120 S \* 5/2016 Kudo ..... D15/7  
D760,805 S \* 7/2016 Monden ..... D15/7  
D770,595 S \* 11/2016 Suzuki ..... D23/233  
D772,302 S \* 11/2016 Kudo ..... D15/7  
D780,228 S \* 2/2017 Kudo ..... D15/7  
D780,229 S \* 2/2017 Kudo ..... D15/7  
D794,164 S \* 8/2017 Suzuki ..... D23/233  
D805,559 S \* 12/2017 Kudo ..... D15/7  
D805,560 S \* 12/2017 Kudo ..... D15/7  
D819,700 S \* 6/2018 Kudo ..... D15/7  
D820,321 S \* 6/2018 Kudo ..... D15/7  
D825,616 S \* 8/2018 Monden ..... D15/9  
D826,285 S \* 8/2018 Yaegashi ..... D15/9  
D871,457 S \* 12/2019 Ikari ..... D15/7  
D888,769 S \* 6/2020 Mizutani ..... D15/7  
D888,770 S \* 6/2020 Mizutani ..... D15/7  
D888,771 S \* 6/2020 Mizutani ..... D15/7  
D888,772 S \* 6/2020 Sato ..... D15/7  
D888,773 S \* 6/2020 Sato ..... D15/7  
D888,774 S \* 6/2020 Asahara ..... D15/7  
D888,775 S \* 6/2020 Sato ..... D15/7  
D890,213 S \* 7/2020 Sato ..... D15/7  
D890,214 S \* 7/2020 Sato ..... D15/7  
D890,215 S \* 7/2020 Sato ..... D15/7  
D892,980 S \* 8/2020 Sato ..... D23/233  
D894,965 S \* 9/2020 Nagai ..... D15/7  
D899,466 S \* 10/2020 Nemoto ..... D15/7  
2011/0126703 A1 \* 6/2011 Terasaki ..... F15B 15/2892  
92/5 R  
2017/0298931 A1 \* 10/2017 Kudo ..... F15B 15/2861  
2020/0109782 A1 \* 4/2020 Odaka ..... F15B 15/14  
2020/0300276 A1 \* 9/2020 Tamura ..... F15B 15/14

##### FOREIGN PATENT DOCUMENTS

JP 846878 S 9/1992  
JP 1110350 S 6/2001  
JP 1615185 S 10/2018

##### OTHER PUBLICATIONS

SMC, C(D)QX, Compact Cylinder, Double Acting, Single Rod, Low Speed, (site visited Nov. 14, 2020), SCM USA website, URL:<[https://www.smcusa.com/products/C\(D\)QX-Compact-Cylinder-Double-Acting-Single-Rod-Low-Speed-53749](https://www.smcusa.com/products/C(D)QX-Compact-Cylinder-Double-Acting-Single-Rod-Low-Speed-53749)> (Year: 2020).\*

\* cited by examiner

FIG. 1

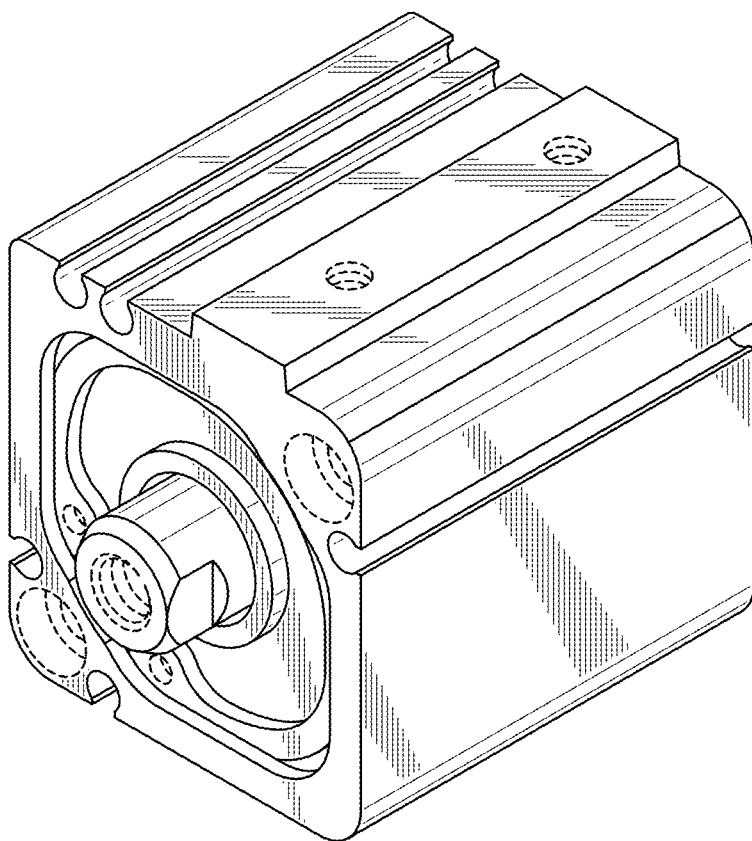


FIG. 2

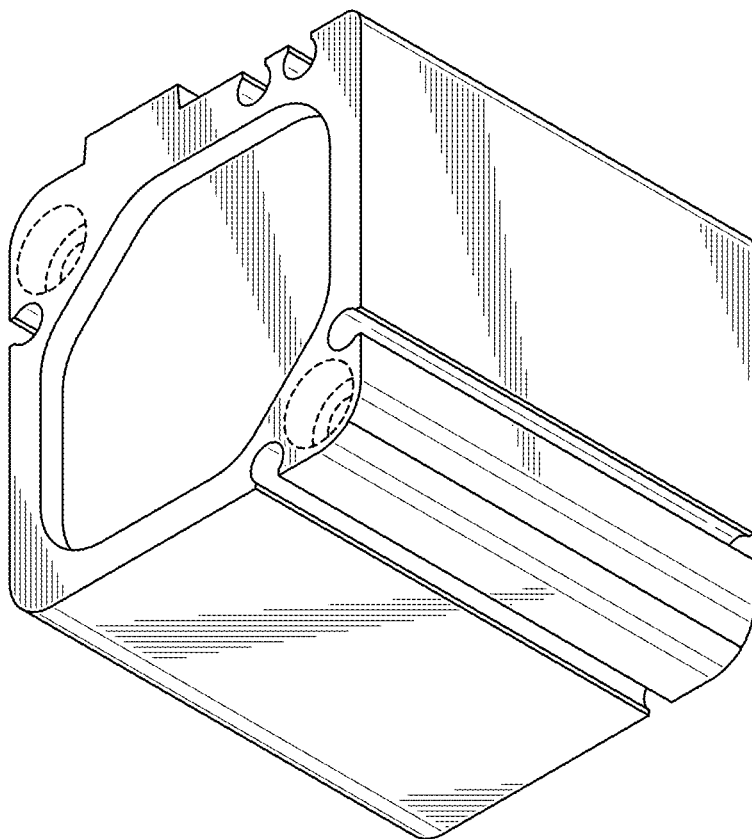


FIG. 3

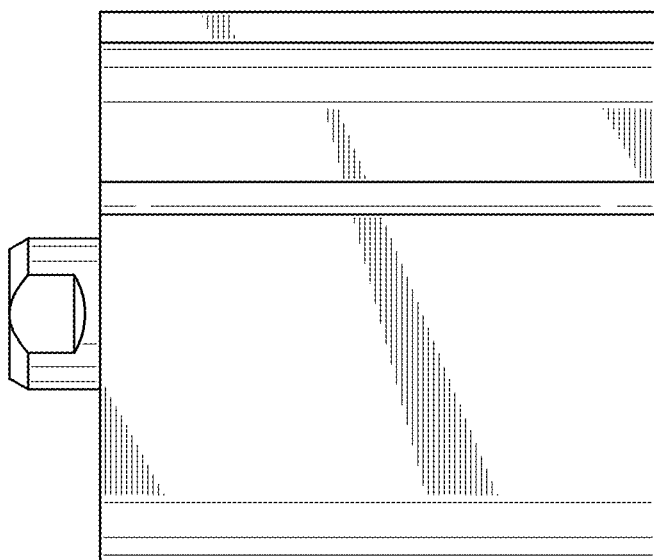


FIG. 4

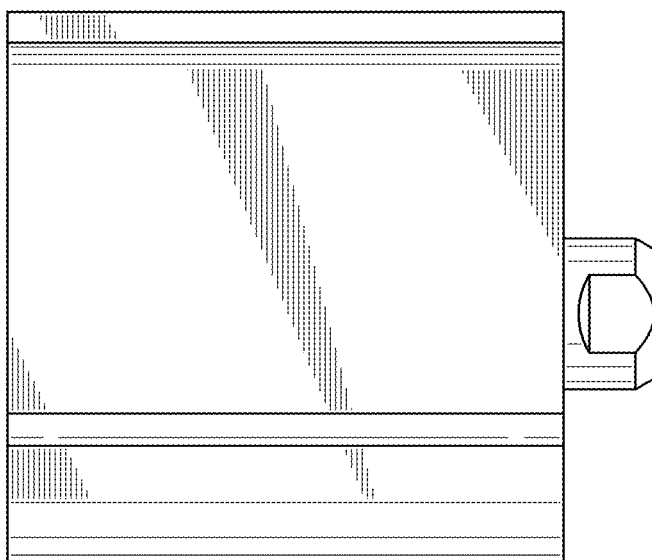


FIG. 5

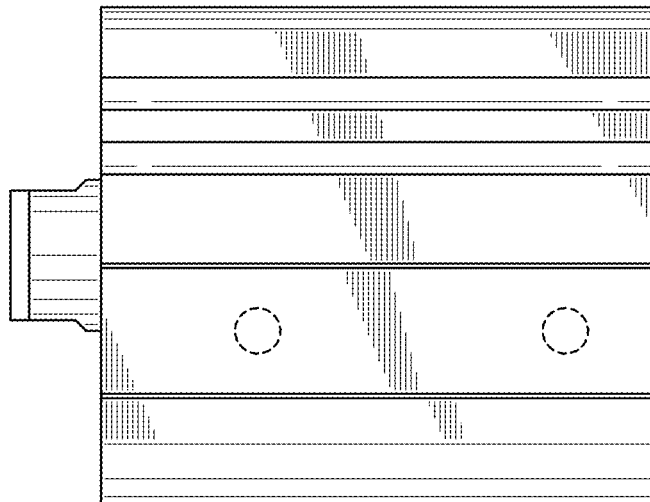


FIG. 6

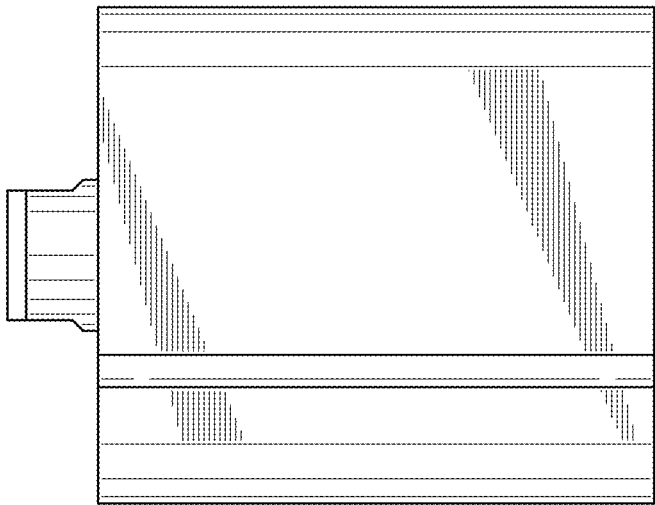


FIG. 7

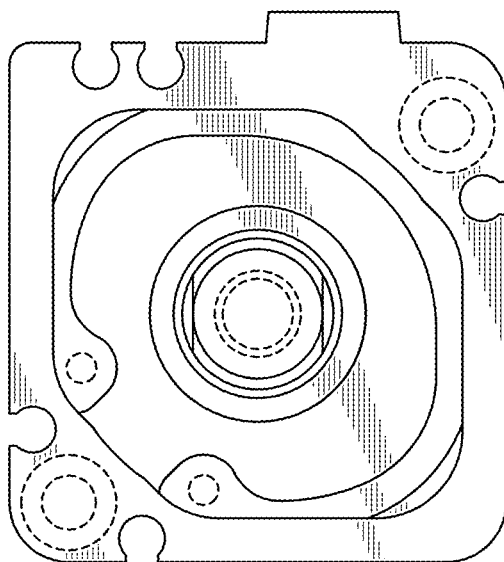


FIG. 8

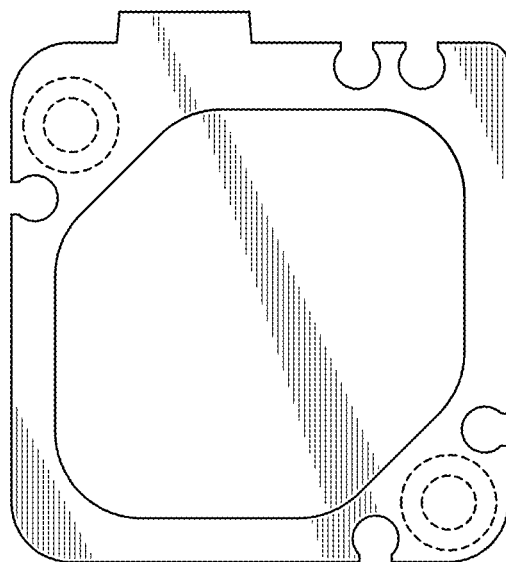


FIG. 9

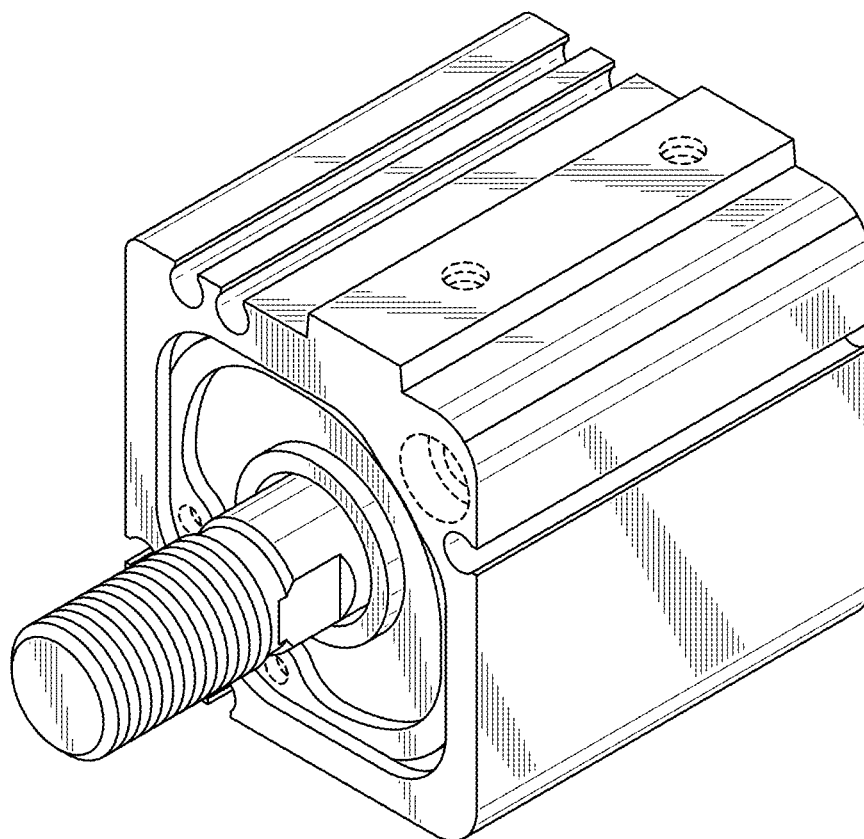


FIG. 10

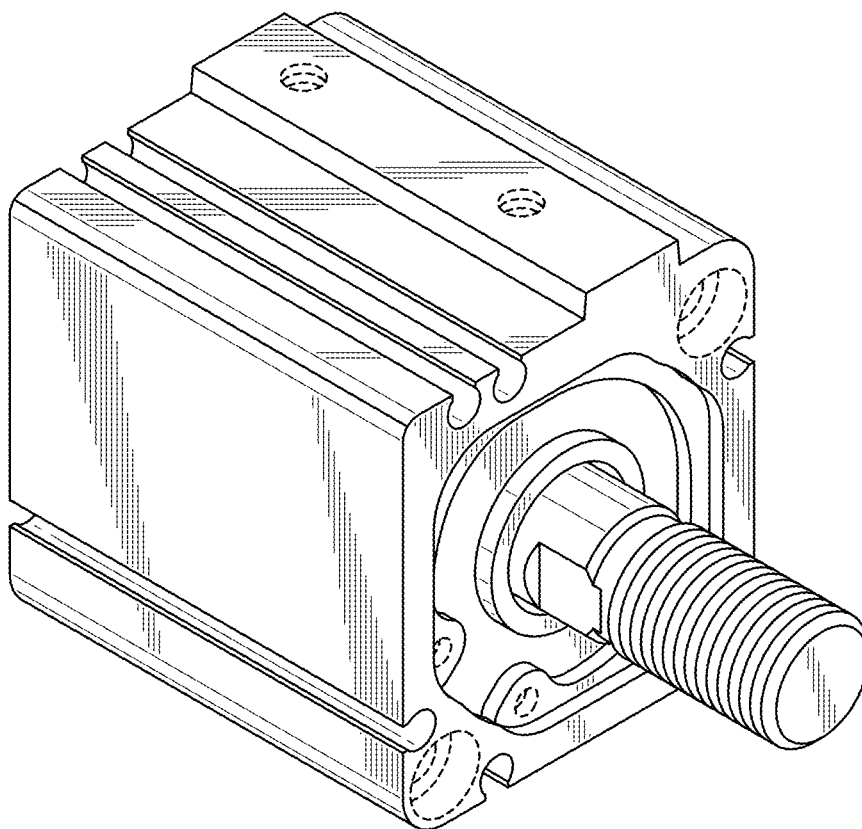


FIG. 11

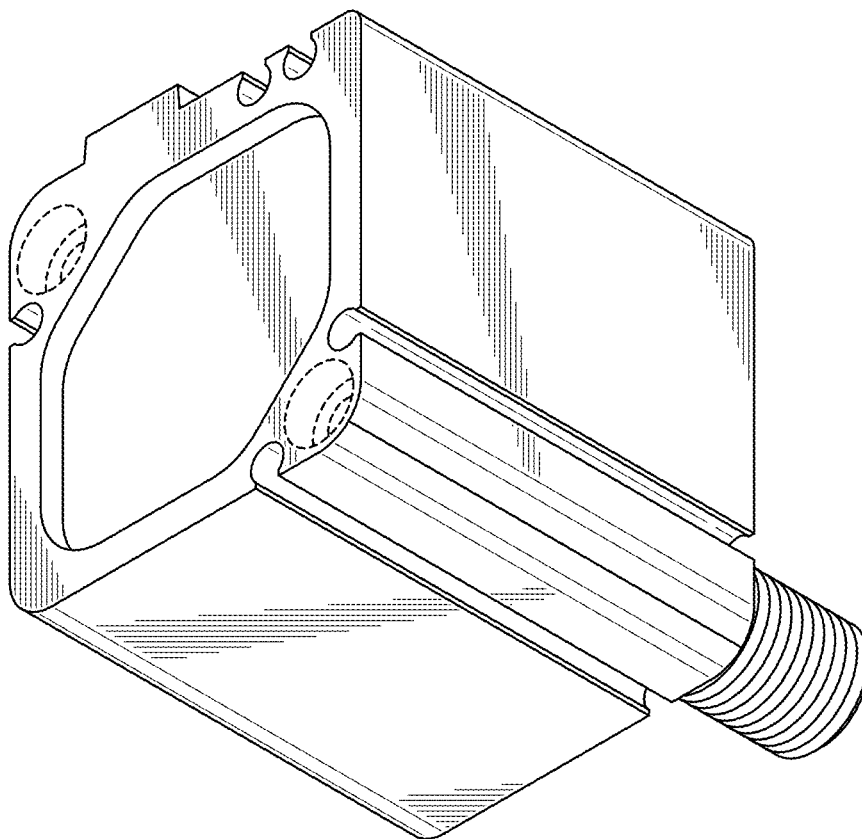


FIG. 12

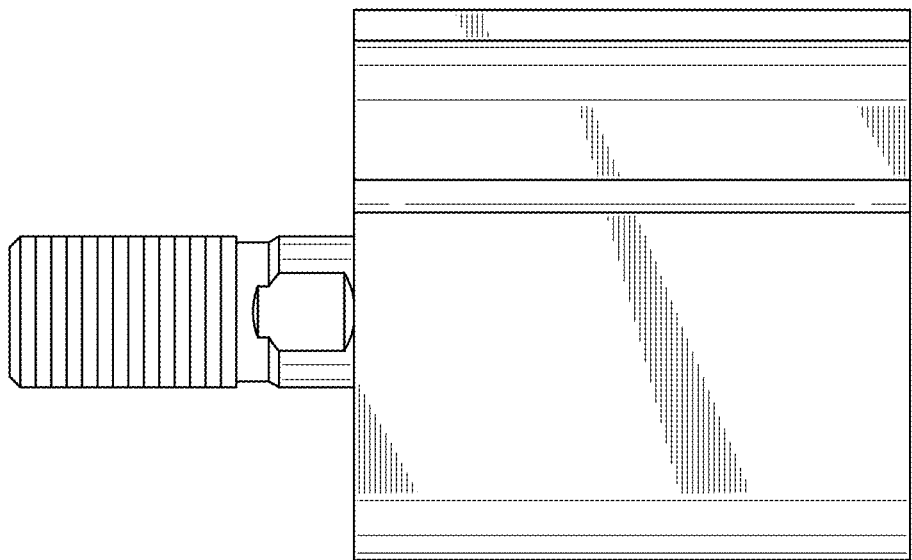


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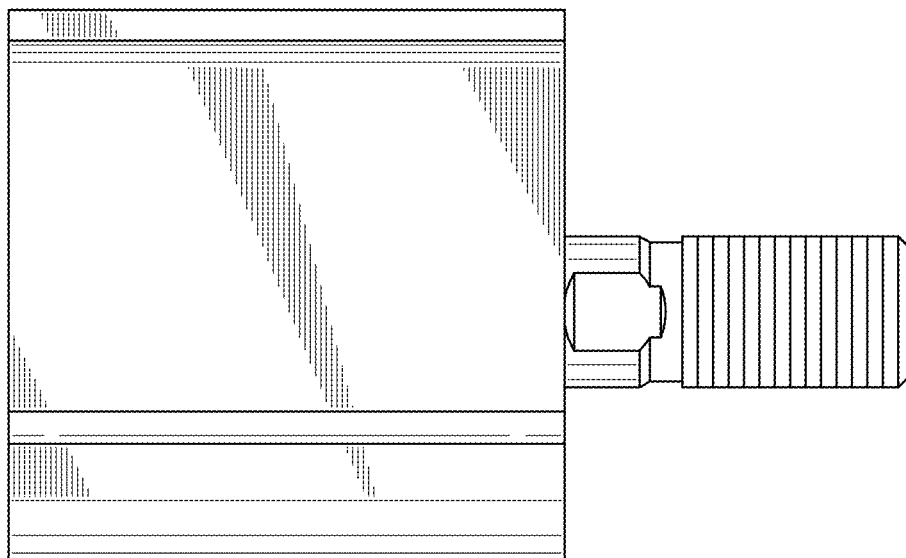


FIG. 14

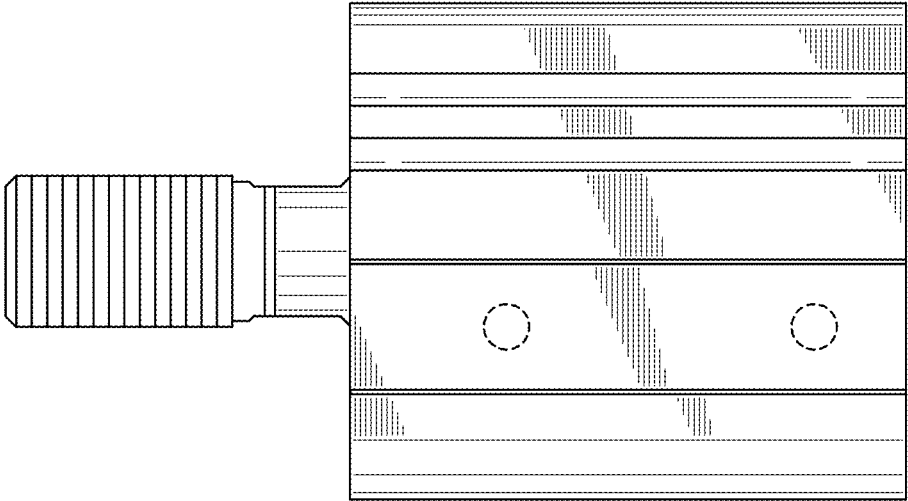


FIG. 15

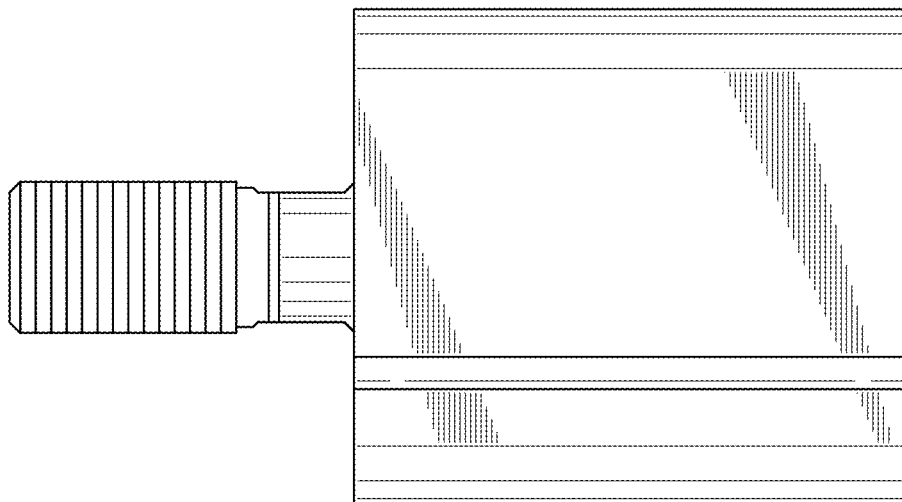


FIG. 16

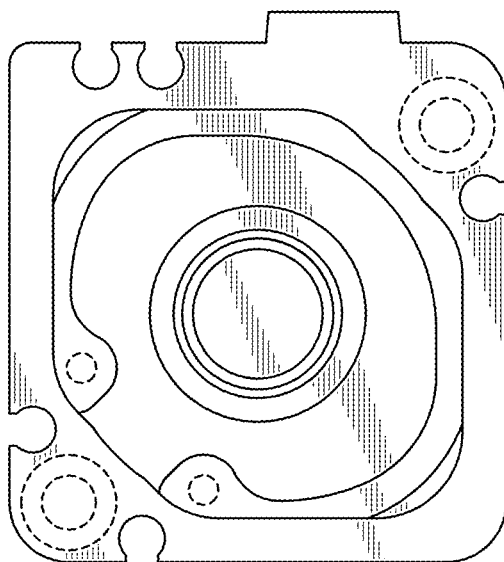


FIG. 17

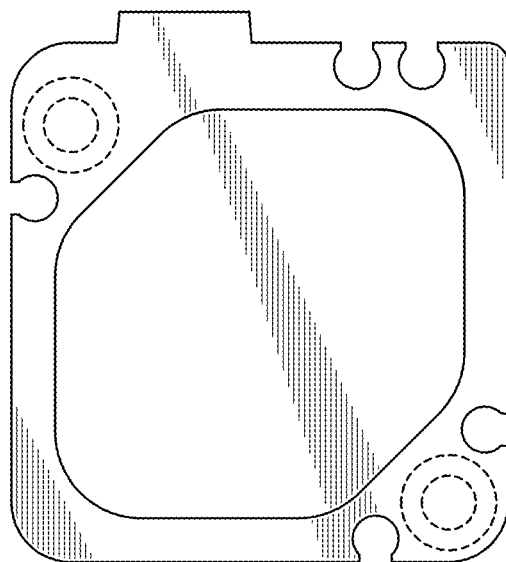


FIG. 18

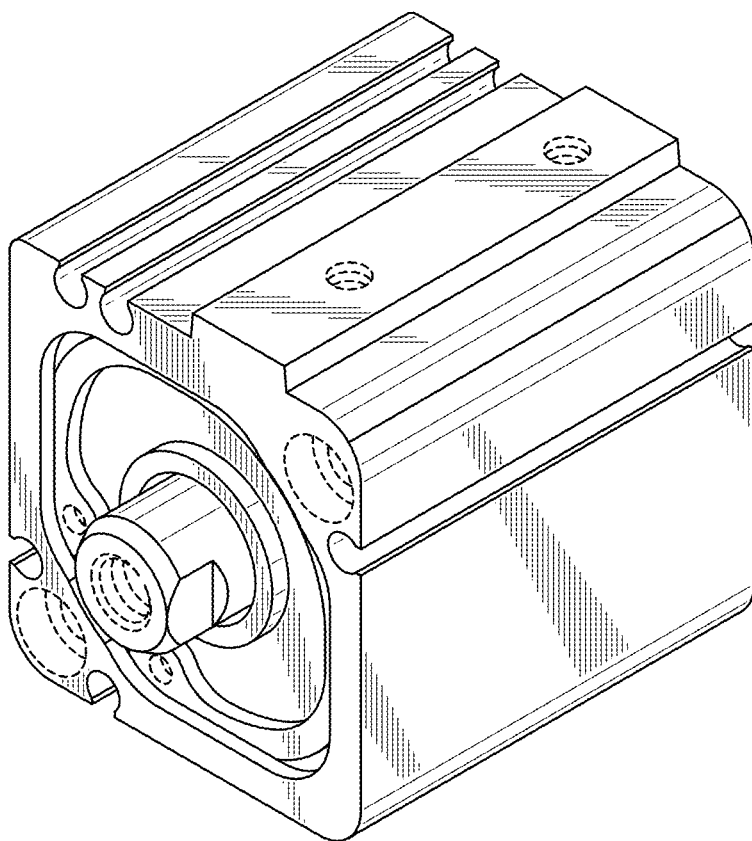


FIG. 19

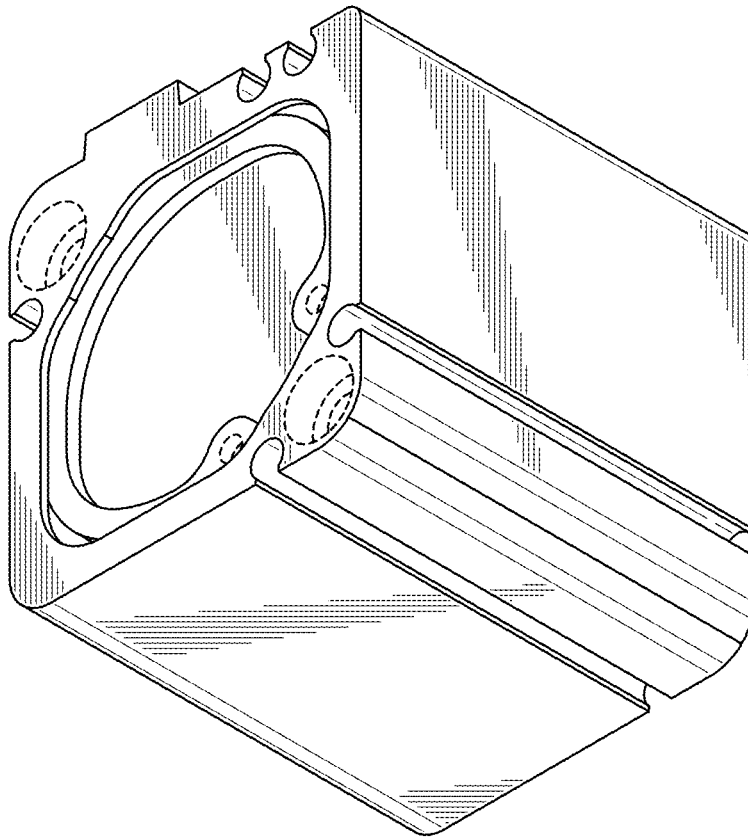


FIG. 20

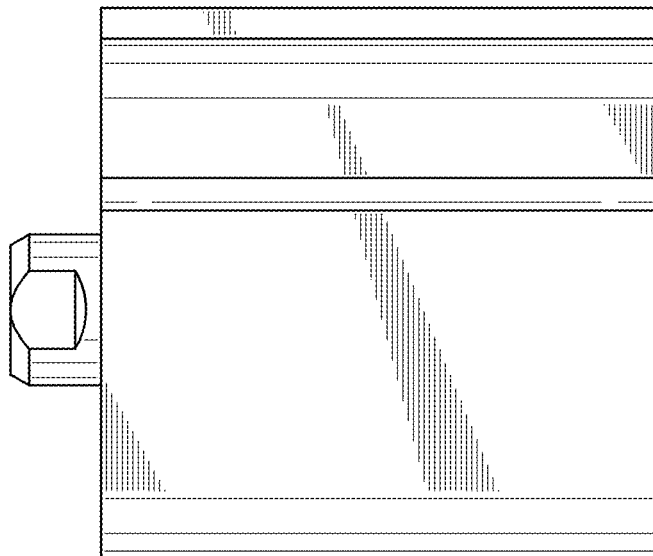


FIG. 21

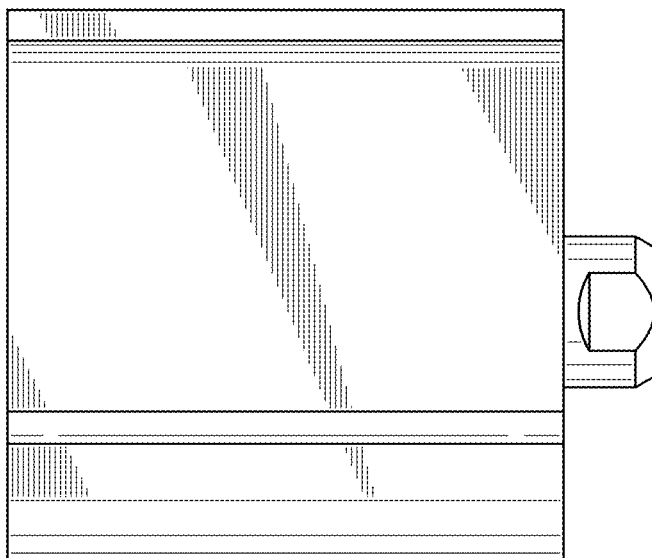


FIG. 22

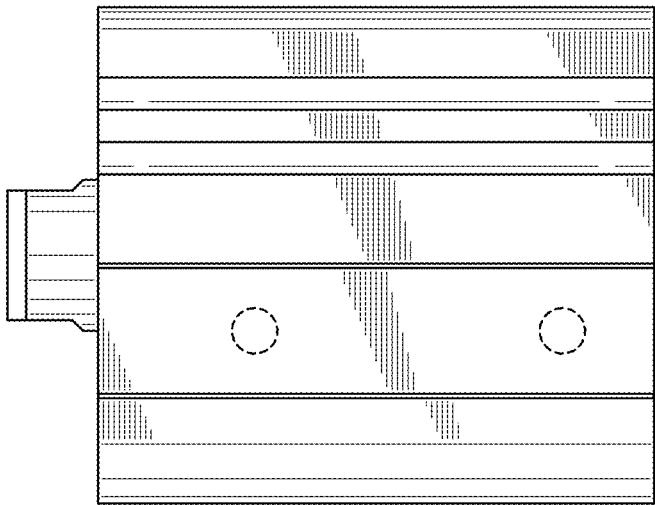


FIG. 23

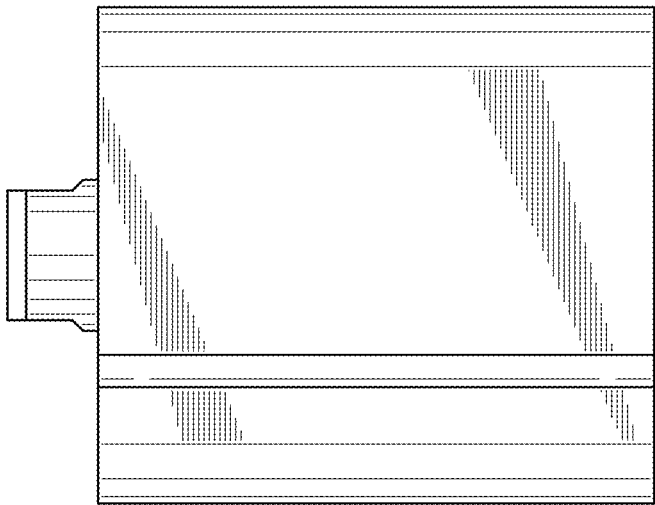


FIG. 24

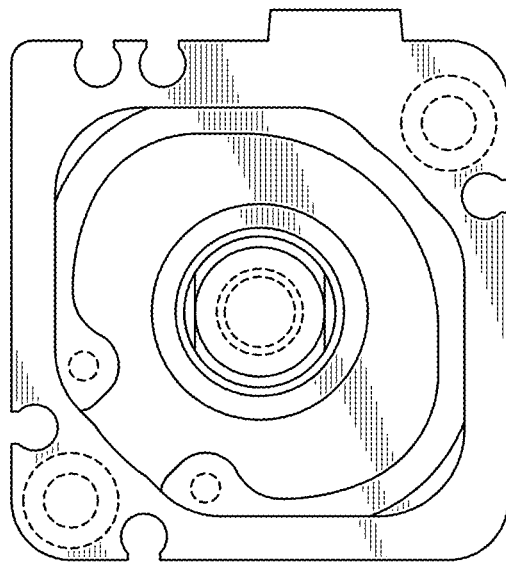


FIG. 25

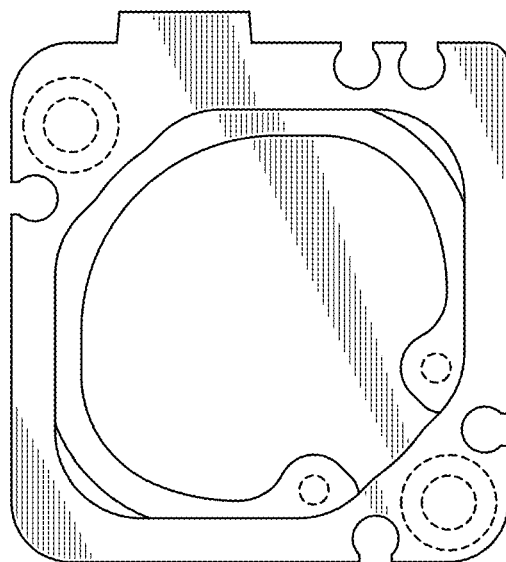


FIG. 26

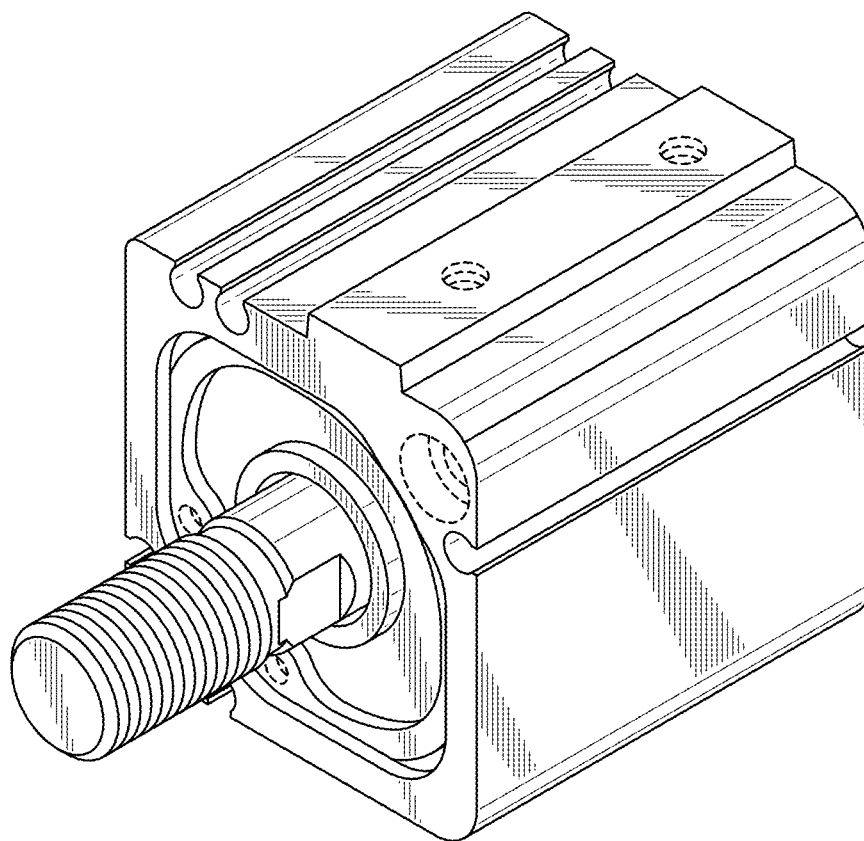


FIG. 27

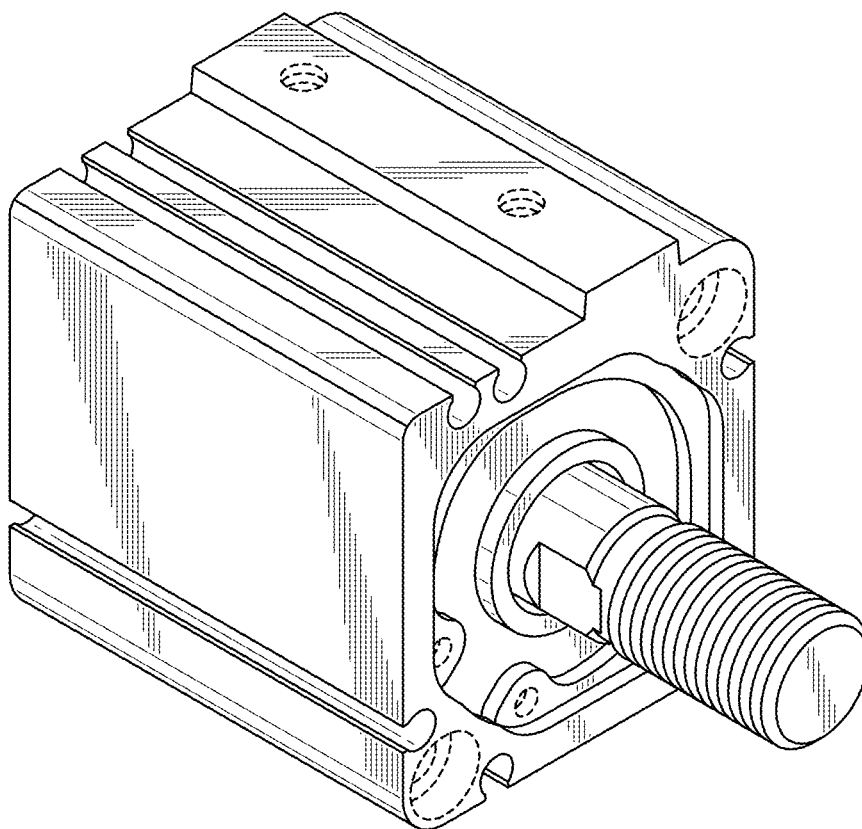


FIG. 28

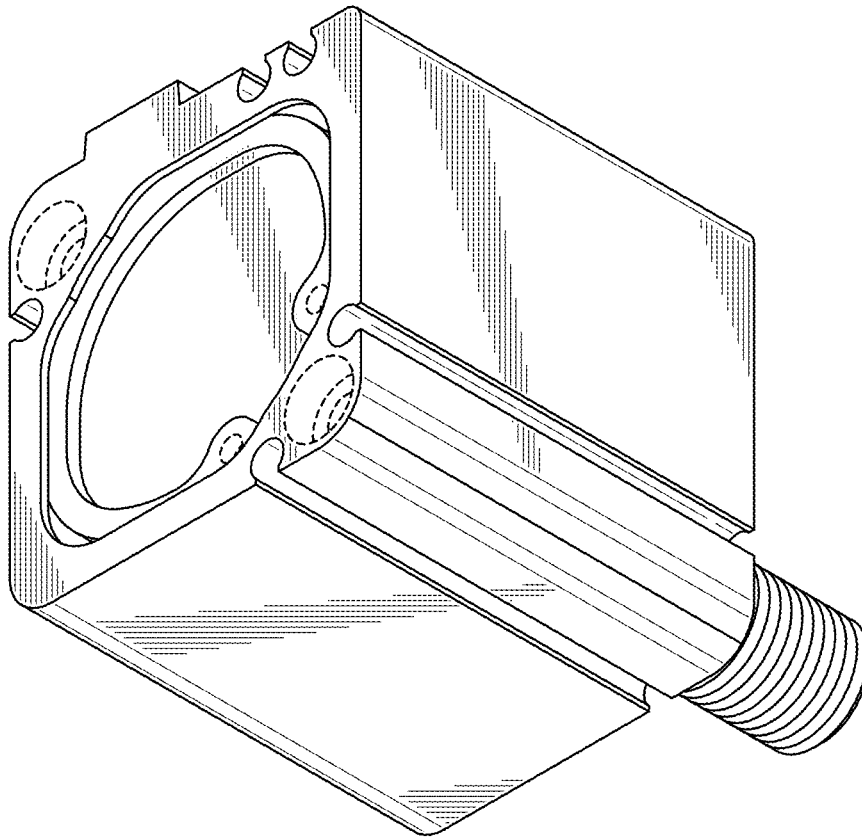


FIG. 29

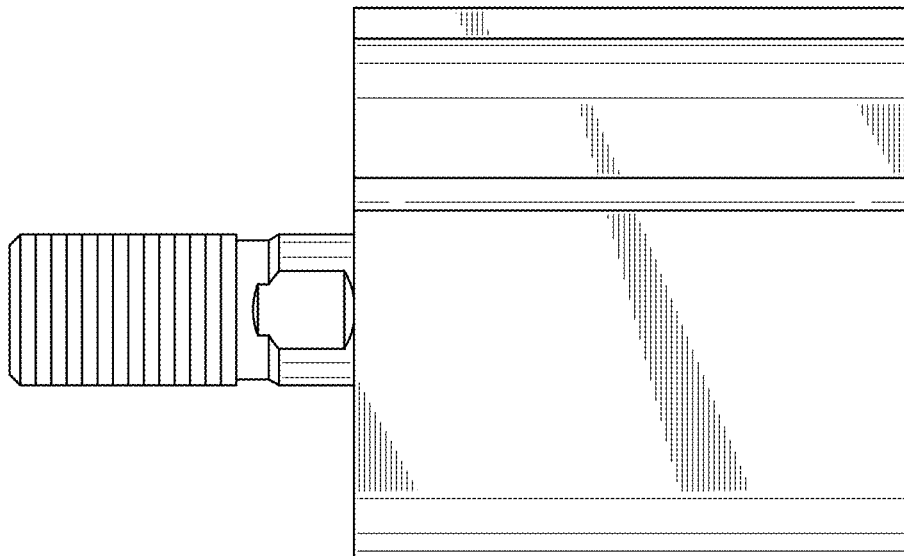


FIG. 30

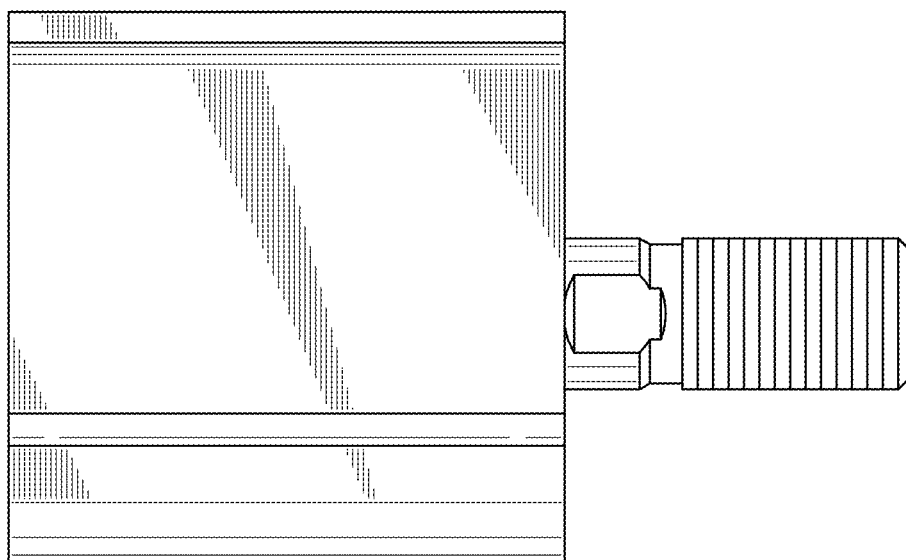


FIG. 31

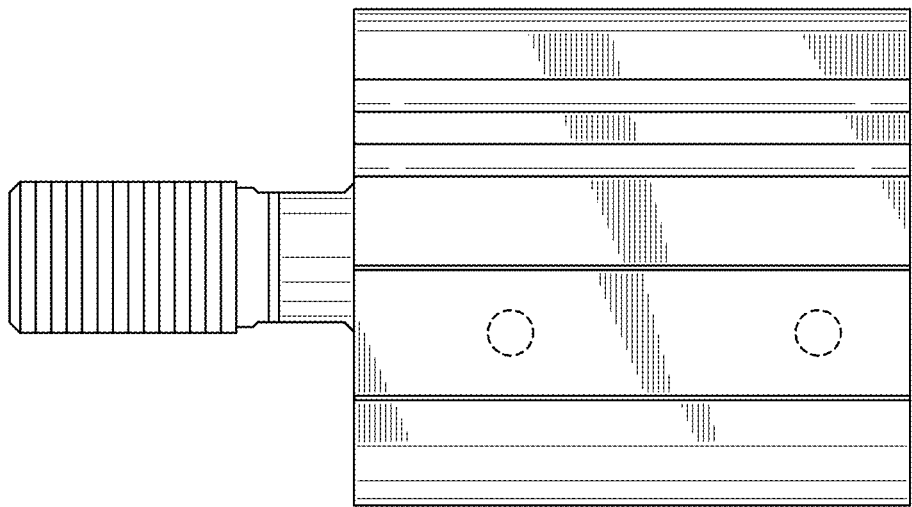


FIG. 32

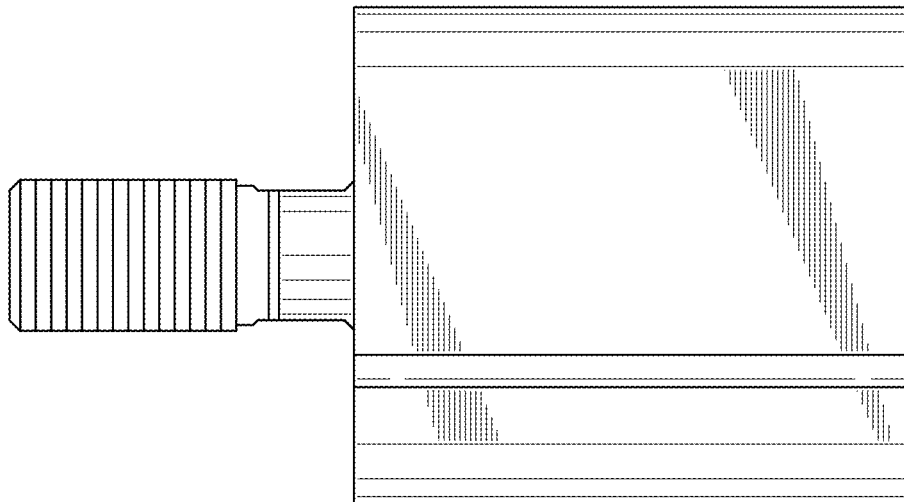


FIG. 33

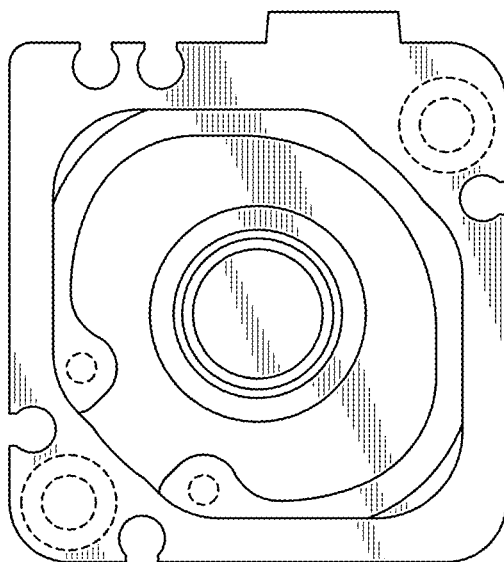


FIG. 34

