US00D692395S

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

(10) **Patent No.: US D692,395 S**
(45) **Date of Patent: ** Oct. 29, 2013**

(54) **LIMIT SWITCH**

(75) Inventors: **Manabu Takahashi**, Kyoto (JP); **Kazuyuki Tsukimori**, Kyoto (JP); **Shigenobu Fukui**, Kyoto (JP)

(73) Assignee: **OMRON Corporation**, Kyoto (JP)

(**) Term: **14 Years**

(21) Appl. No.: **29/408,235**

(22) Filed: **Dec. 8, 2011**

(30) **Foreign Application Priority Data**

Jun. 10, 2011 (JP) 2011-013169
Jun. 10, 2011 (JP) 2011-013170
Jun. 10, 2011 (JP) 2011-013171
Jun. 10, 2011 (JP) 2011-013172
Jun. 10, 2011 (JP) 2011-013176
Jun. 10, 2011 (JP) 2011-013177

(51) **LOC (9) Cl.** **09-03**

(52) **U.S. Cl.**
USPC **D13/158**

(58) **Field of Classification Search**
USPC ..... D13/110, 133, 160, 158; 174/50, 66, 174/65 R, 67, 70 R, 77 R, 77 S, 92; 200/5 R, 200/43.11, 43.14, 50.01, 50.15, 293, 293.1, 200/303, 401; 335/68, 132, 202; 361/42, 361/44, 45, 50, 71, 115, 118, 119, 679; 439/578, 638, 675, 687, 696, 825, 842, 439/844, 620
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,539,738 A * 11/1970 Bowen et al. 200/47
(Continued)

OTHER PUBLICATIONS

Omron Catalog of limit switches (Oct. 2011).

(Continued)

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

(57) **CLAIM**

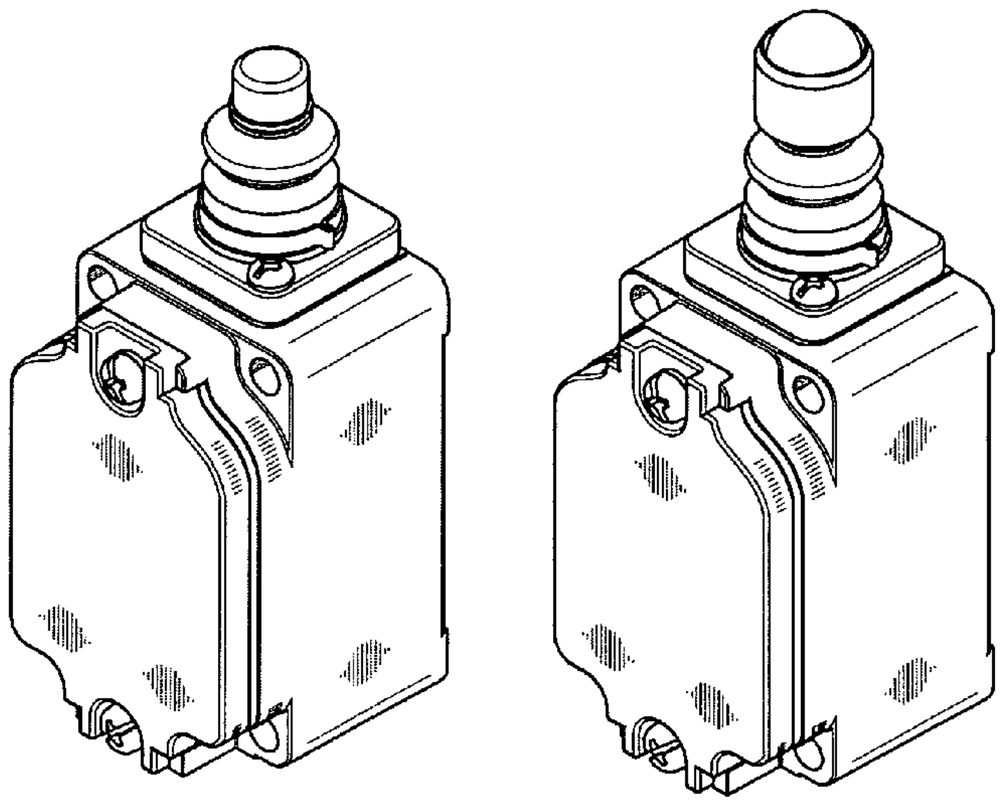
The ornamental design for a limit switch, as shown and described.

DESCRIPTION

FIG. **1** is a top, front and right side perspective view of a limit switch showing a first embodiment of our new design;
FIG. **2** is a bottom, rear and left side perspective view thereof;
FIG. **3** is a front elevation view thereof;
FIG. **4** is a rear elevation view thereof;
FIG. **5** is a left side view thereof;
FIG. **6** is a right side view thereof;
FIG. **7** is a top plan view thereof;
FIG. **8** is a bottom plan view thereof;
FIG. **9** is a top, front and right side perspective view of a limit switch showing a second embodiment of our new design;
FIG. **10** is a bottom, rear and left side perspective view thereof;
FIG. **11** is a front elevation view thereof;
FIG. **12** is a rear elevation view thereof;
FIG. **13** is a left side view thereof;
FIG. **14** is a right side view thereof;
FIG. **15** is a top plan view thereof; and,
FIG. **16** is a bottom plan view thereof.

The broken line portion of the figure drawings is included to show unclaimed subject matter only and forms no part of the claimed design.

1 Claim, 8 Drawing Sheets



(56) **References Cited**

U.S. PATENT DOCUMENTS

4,133,991	A *	1/1979	Takase	200/47
D580,879	S *	11/2008	Andersson	D13/158
D588,551	S *	3/2009	Andersson	D13/158
D596,138	S *	7/2009	Andersson	D13/158
2012/0235025	A1 *	9/2012	Tobita et al.	250/208.4

OTHER PUBLICATIONS

Azbil catalog of limit switches (published at least as early as Dec. 8, 2011).

Moujen product information of limit switches http://www.moujenswitch.com/products.php?cPath=596 (published at least as early as Dec. 8, 2011).

* cited by examiner

Fig. 1

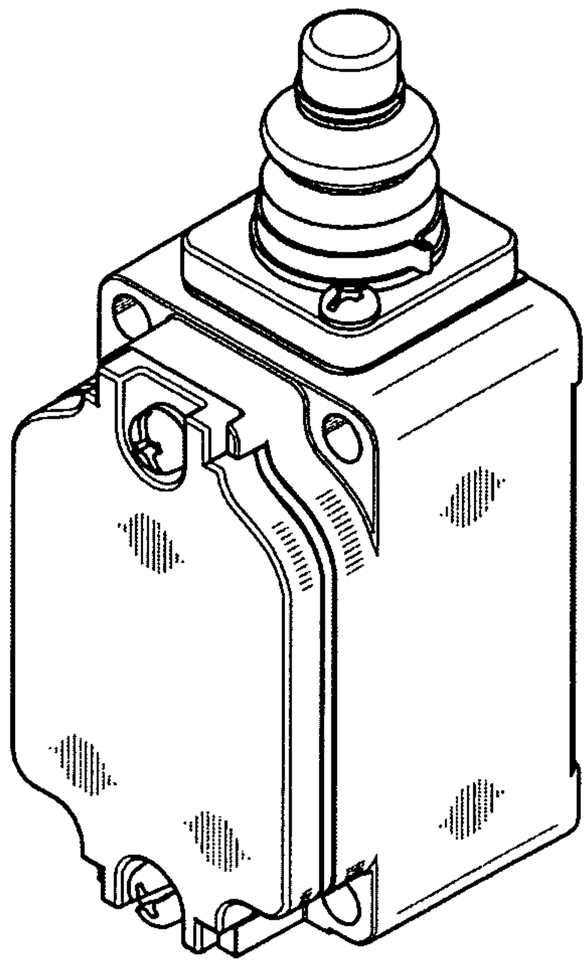


Fig. 2

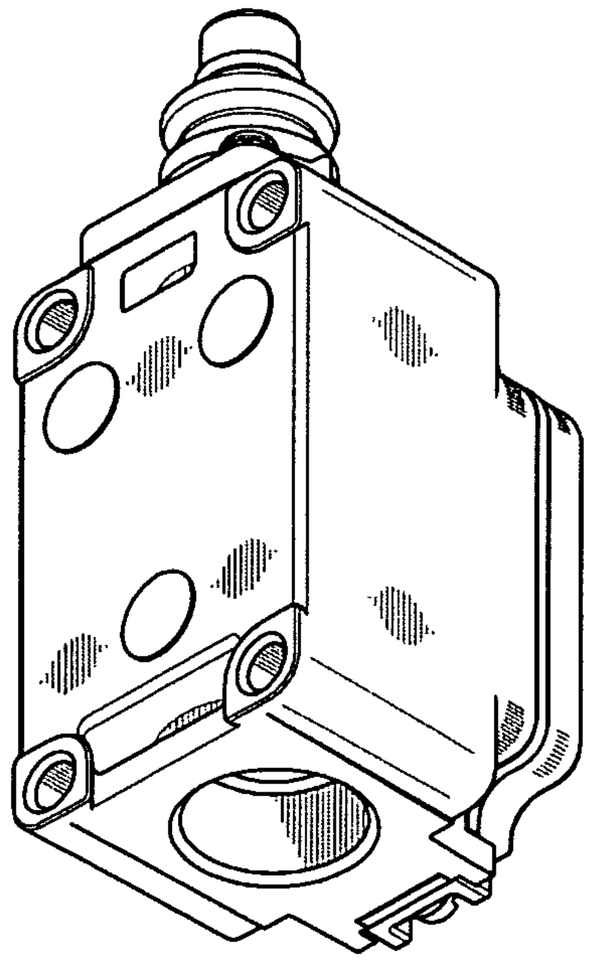


Fig. 3

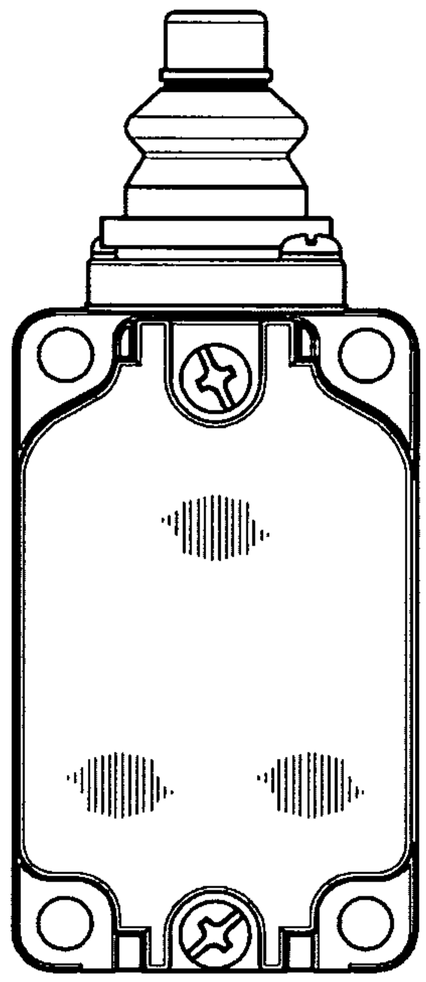


Fig. 4

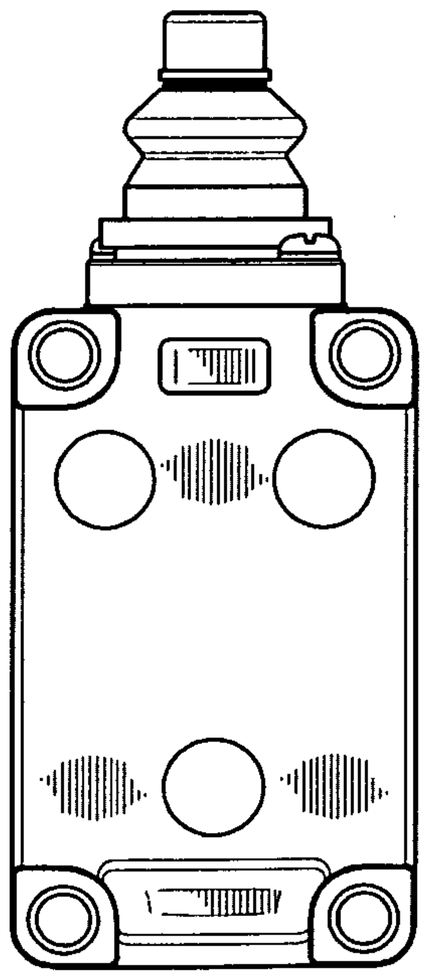


Fig. 5

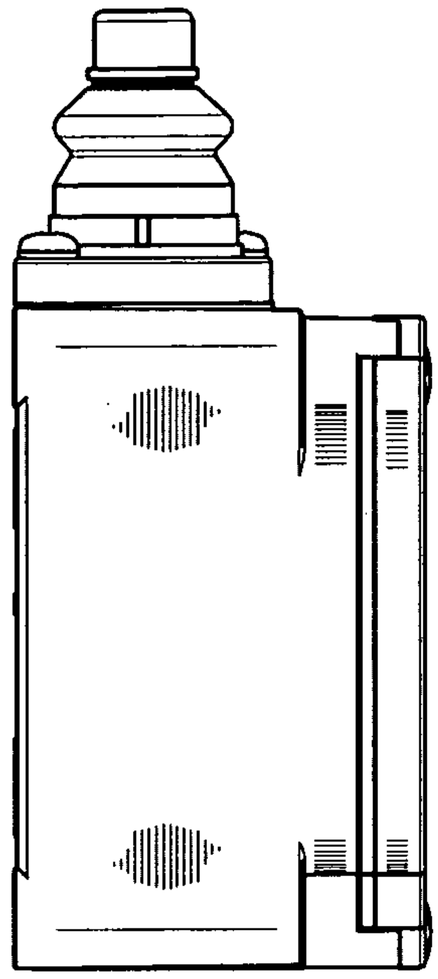


Fig. 6

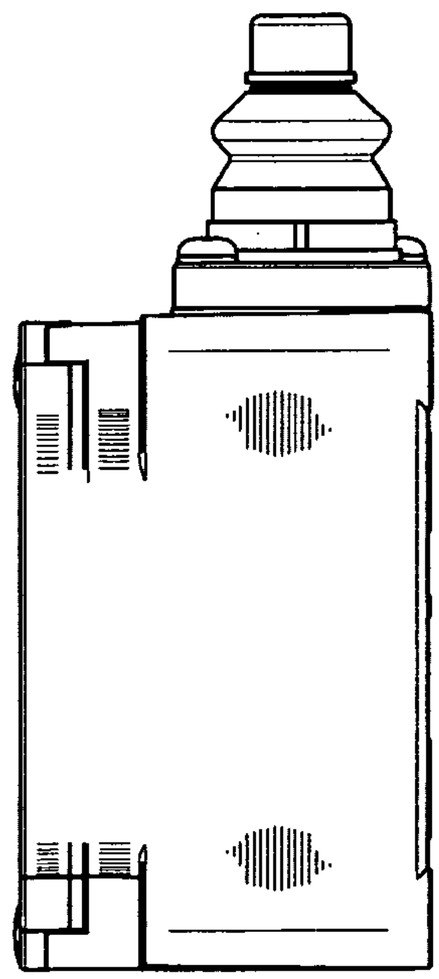


Fig. 7

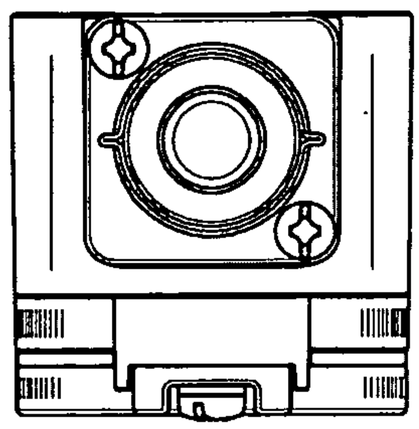


Fig. 8

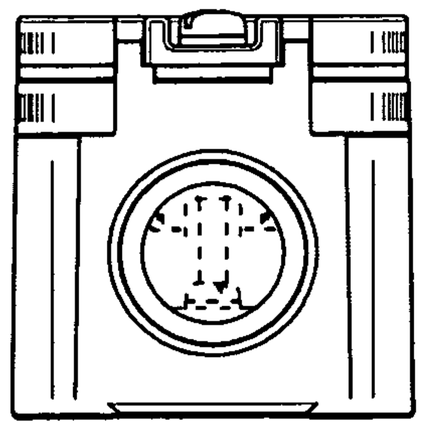


Fig. 9

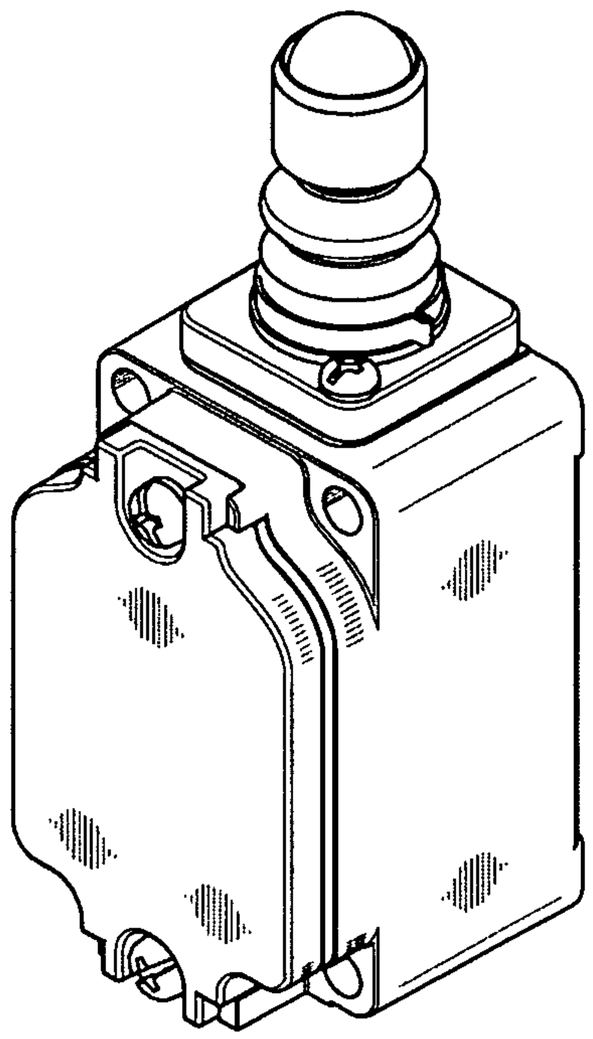


Fig. 10

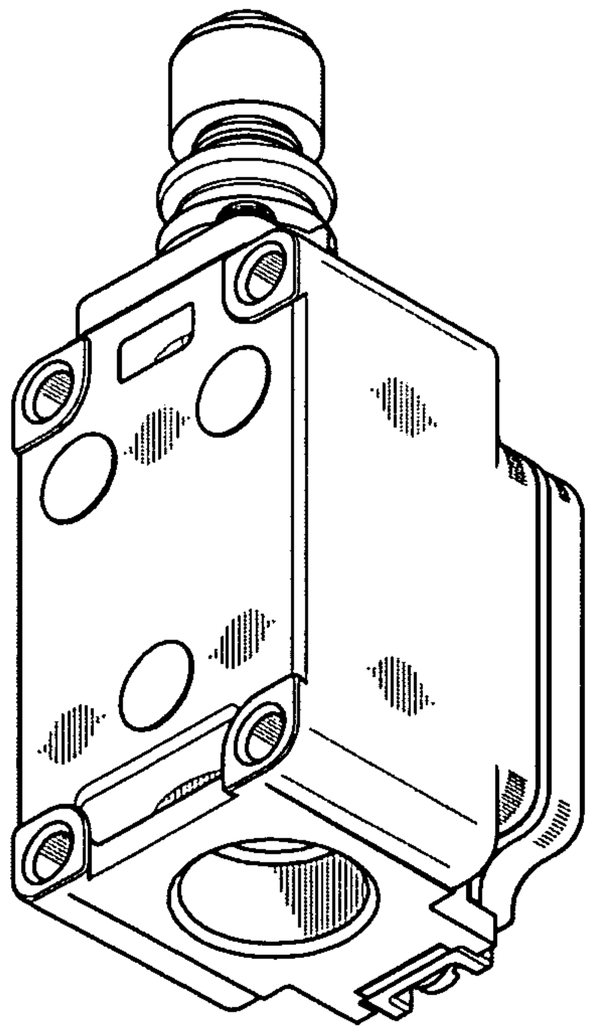


Fig. 11

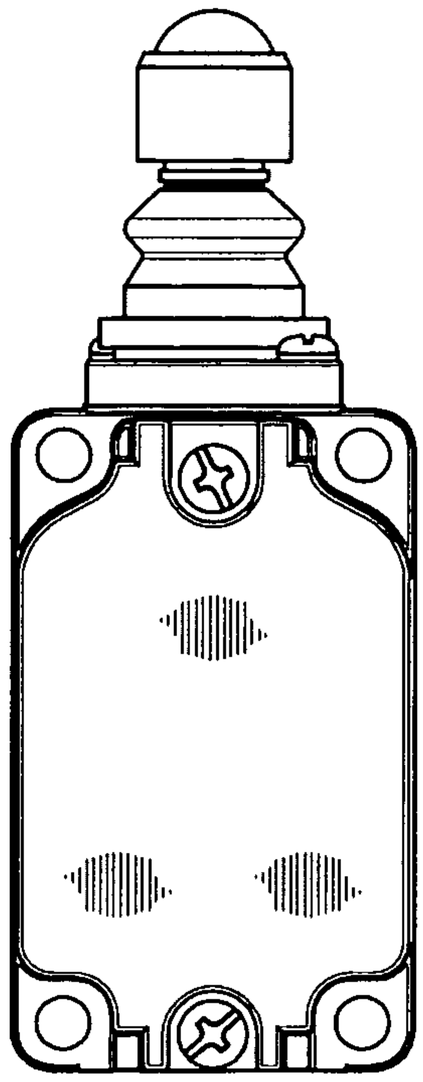


Fig. 12

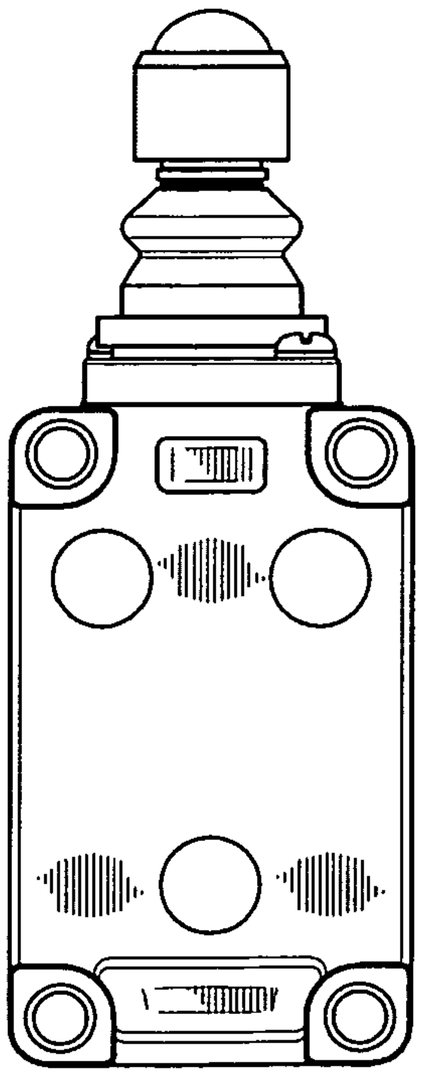


Fig. 13

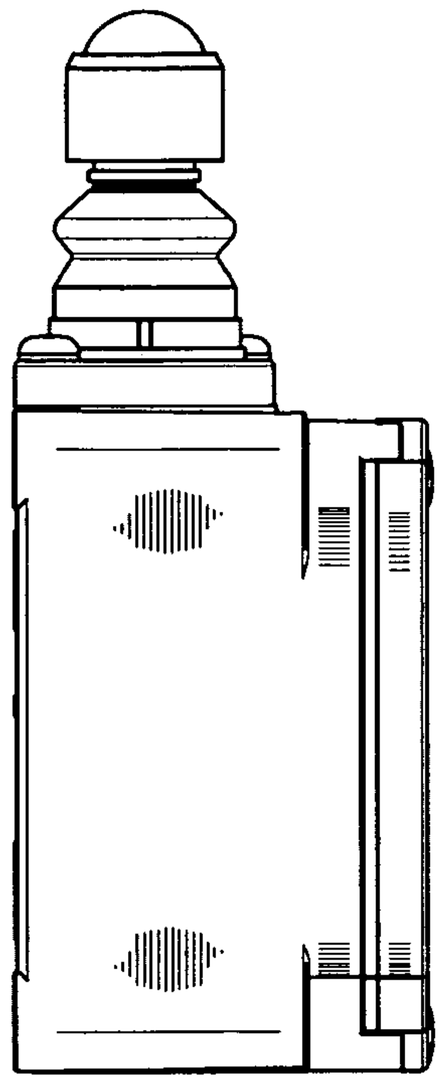


Fig. 14

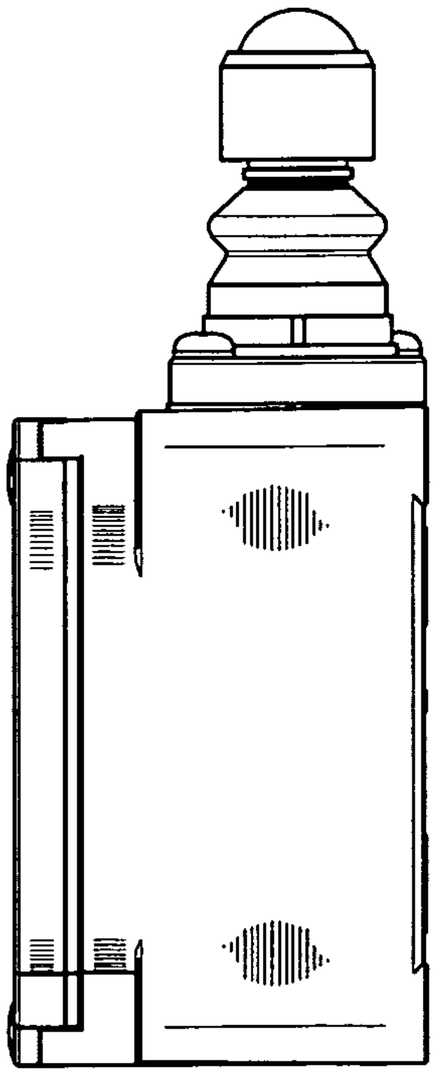


Fig. 15

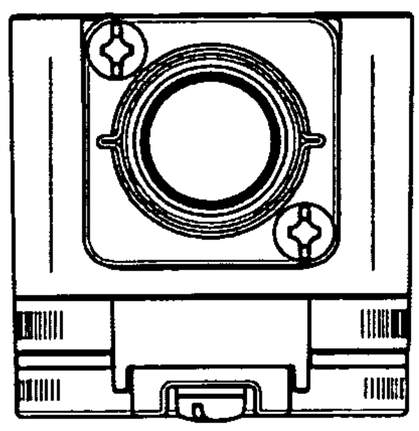


Fig. 16