

US00D692394S

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

(10) **Patent No.:** **US D692,394 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); **Yuichi**  
**Ishikawa**, Kyoto (JP); **Kokichi Tobita**,  
Kyoto (JP); **Hiroyuki Moriyama**, Kyoto  
(JP); **Shinya Katsube**, Kyoto (JP)

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

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

(21) Appl. No.: **29/408,203**

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

(30) **Foreign Application Priority Data**

Jun. 10, 2011	(JP)	.....	D 2011-013163
Jun. 10, 2011	(JP)	.....	D 2011-013164
Jun. 10, 2011	(JP)	.....	D 2011-013165
Jun. 10, 2011	(JP)	.....	D 2011-013166
Jun. 10, 2011	(JP)	.....	D 2011-013167
Jun. 10, 2011	(JP)	.....	D 2011-013168
Jun. 10, 2011	(JP)	.....	D 2011-013173
Jun. 10, 2011	(JP)	.....	D 2011-013174
Jun. 10, 2011	(JP)	.....	D 2011-013175

(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  
4,133,991 A \* 1/1979 Takase ..... 200/47

(Continued)

**OTHER PUBLICATIONS**

OMRON Catalog of limit switches (Oct. 2011).  
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).

*Primary Examiner* — Thomas Johannes

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

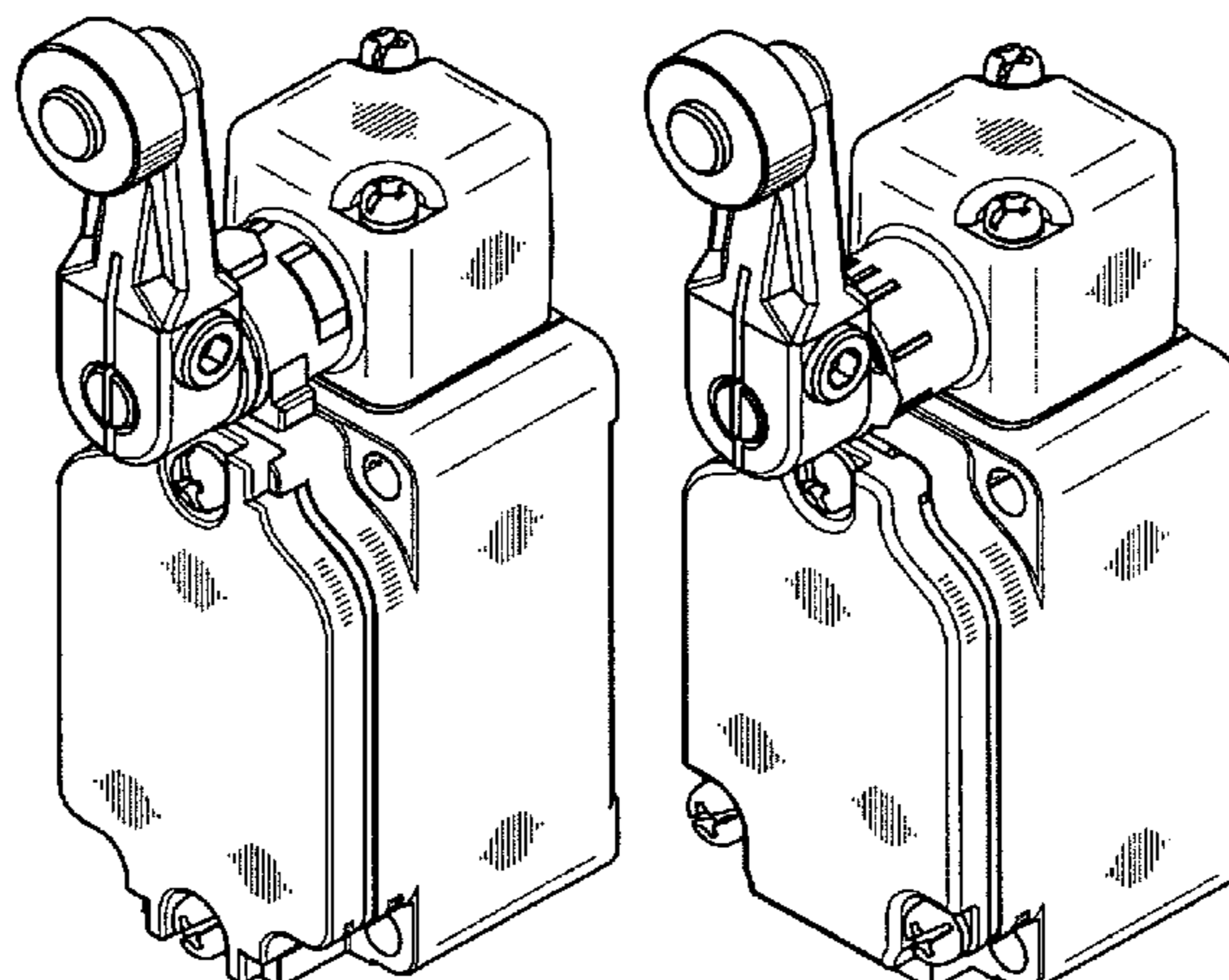
(57) **CLAIM**

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 left side view thereof, shown in an alternate  
position of use;  
FIG. 10 is a top, front and right side perspective view of a limit  
switch showing a second embodiment of our new design;  
FIG. 11 is a bottom, rear and left side perspective view  
thereof;  
FIG. 12 is a front elevation view thereof;  
FIG. 13 is a rear elevation view thereof;  
FIG. 14 is a left side view thereof;  
FIG. 15 is a right side view thereof;  
FIG. 16 is a top plan view thereof;  
FIG. 17 is a bottom plan view thereof; and,  
FIG. 18 is a left side view thereof, shown in an alternate  
position of use.  
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, 10 Drawing Sheets**



# US D692,394 S

Page 2

---

(56)

## References Cited

### U.S. PATENT DOCUMENTS

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
D580,879 S *	11/2008	Andersson .....	D13/158

\* cited by examiner

Fig. 1

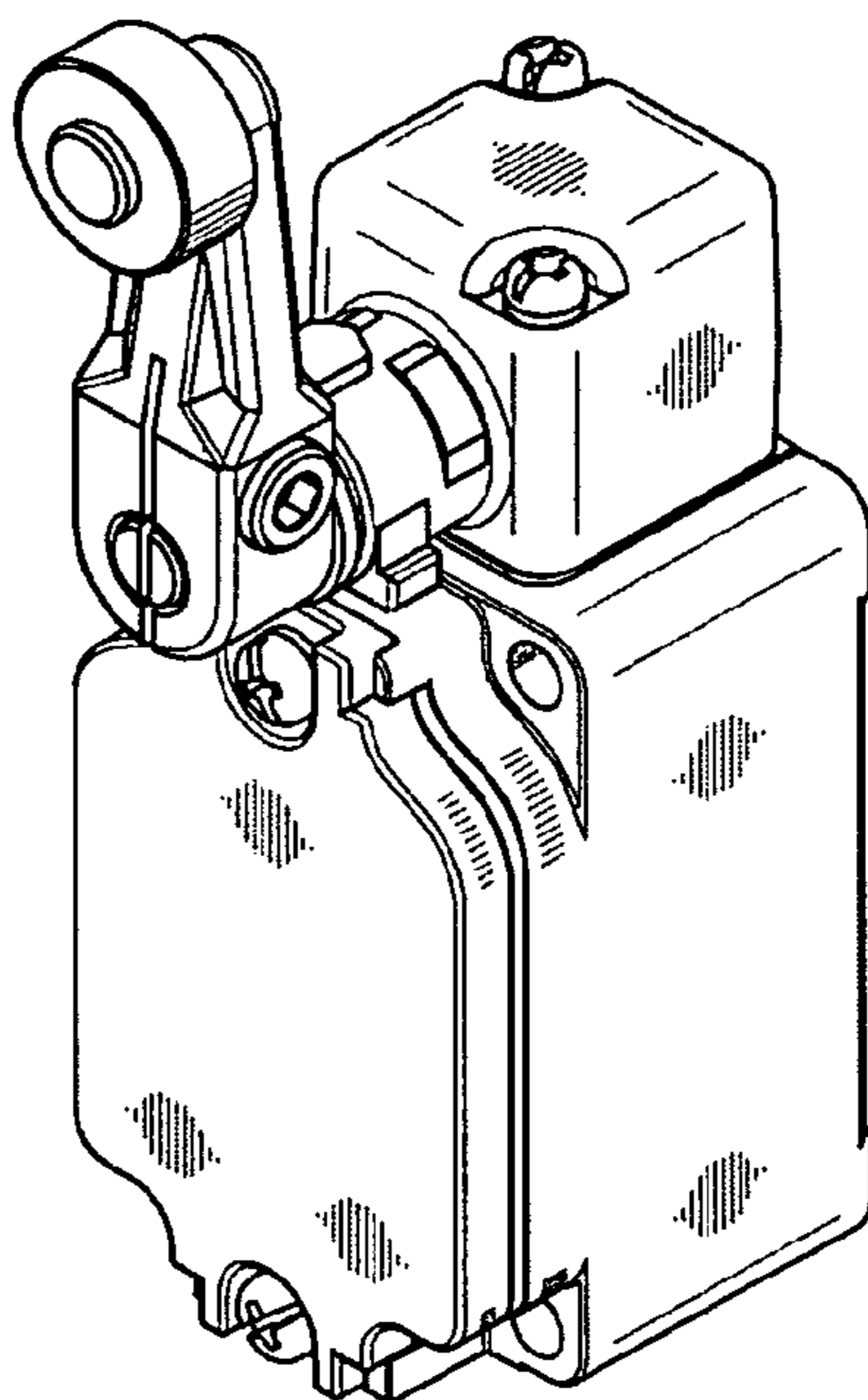


Fig. 2

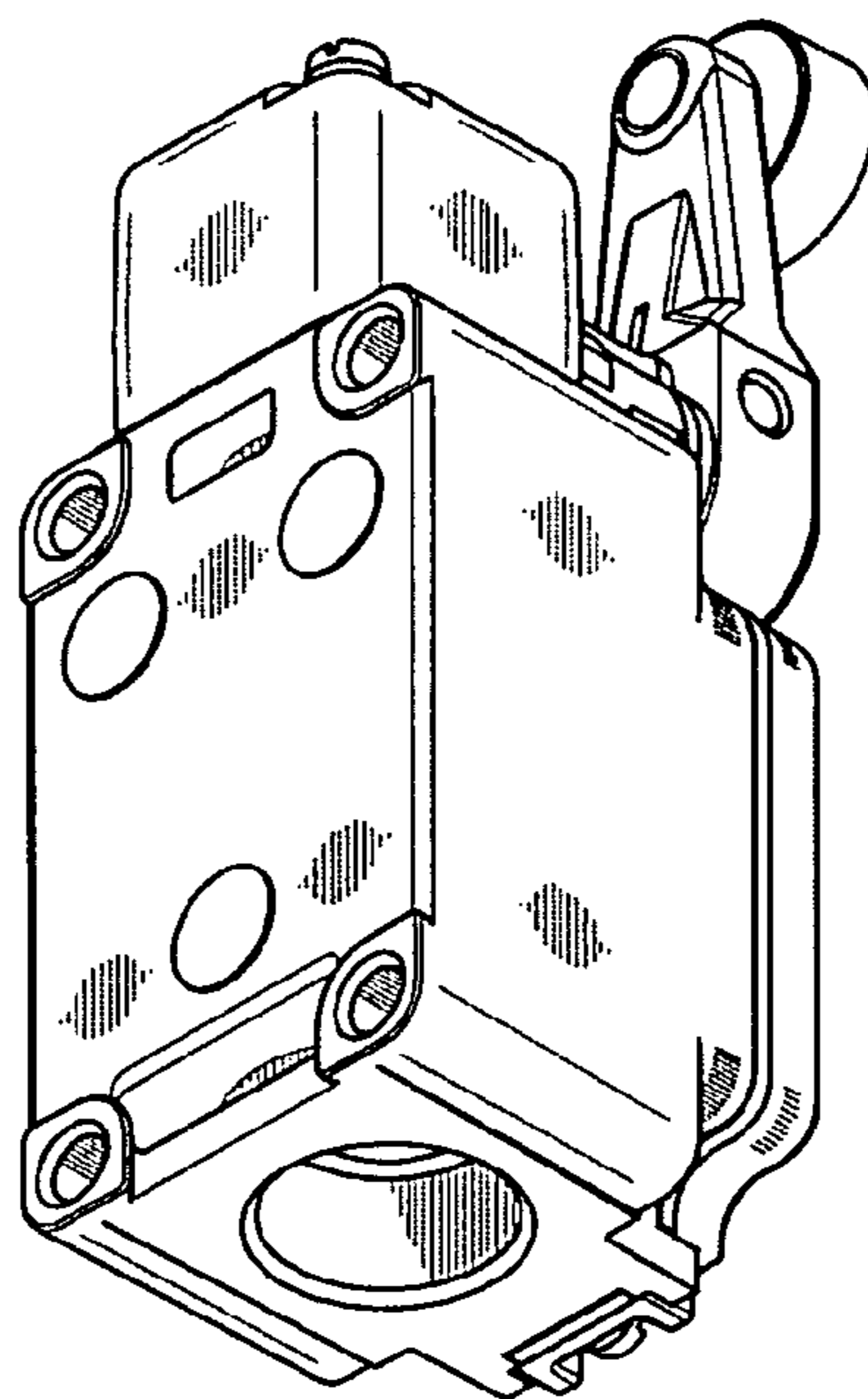


Fig. 3

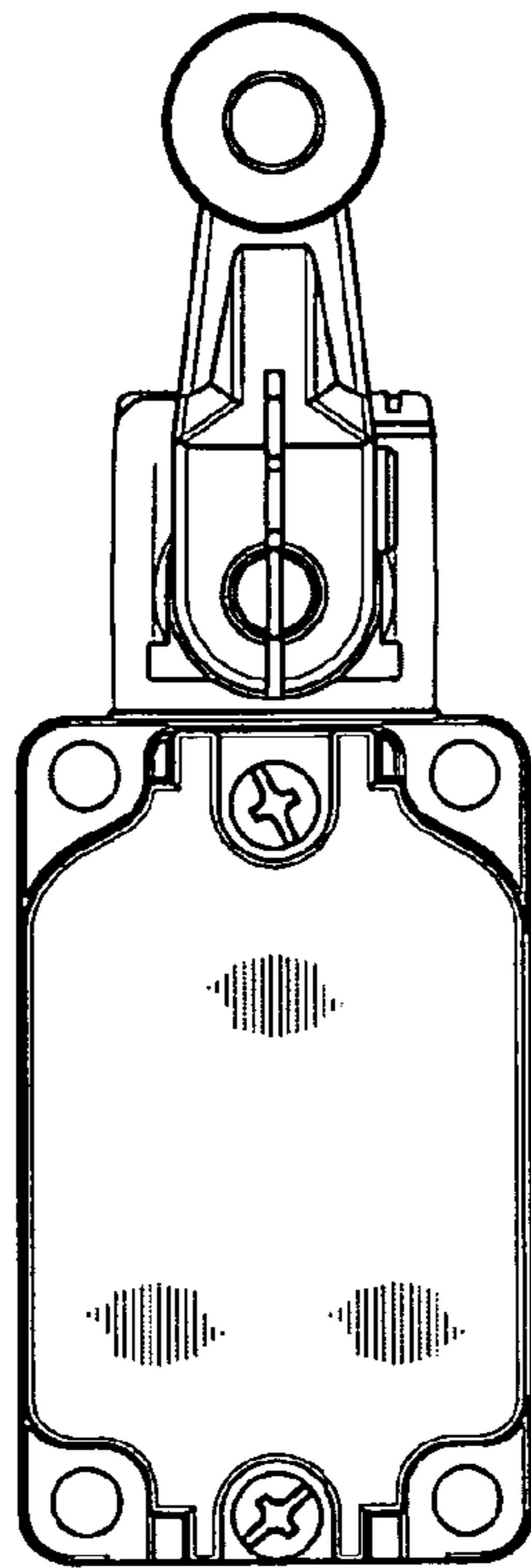


Fig. 4

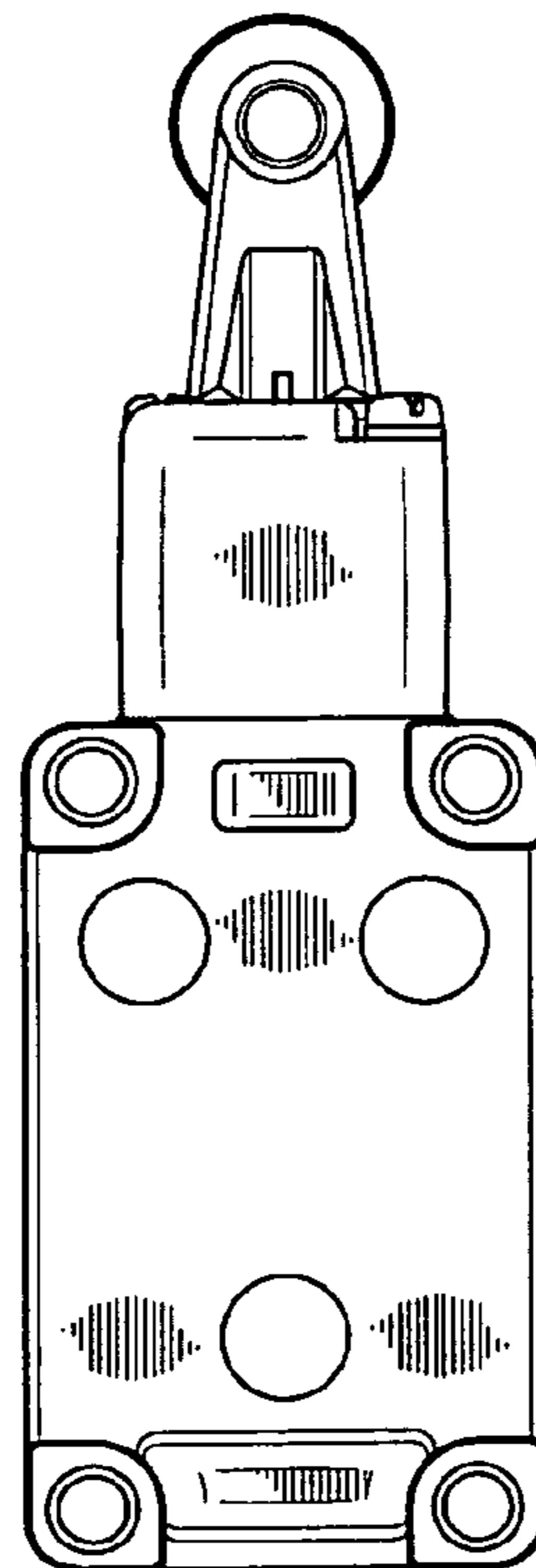


Fig. 5

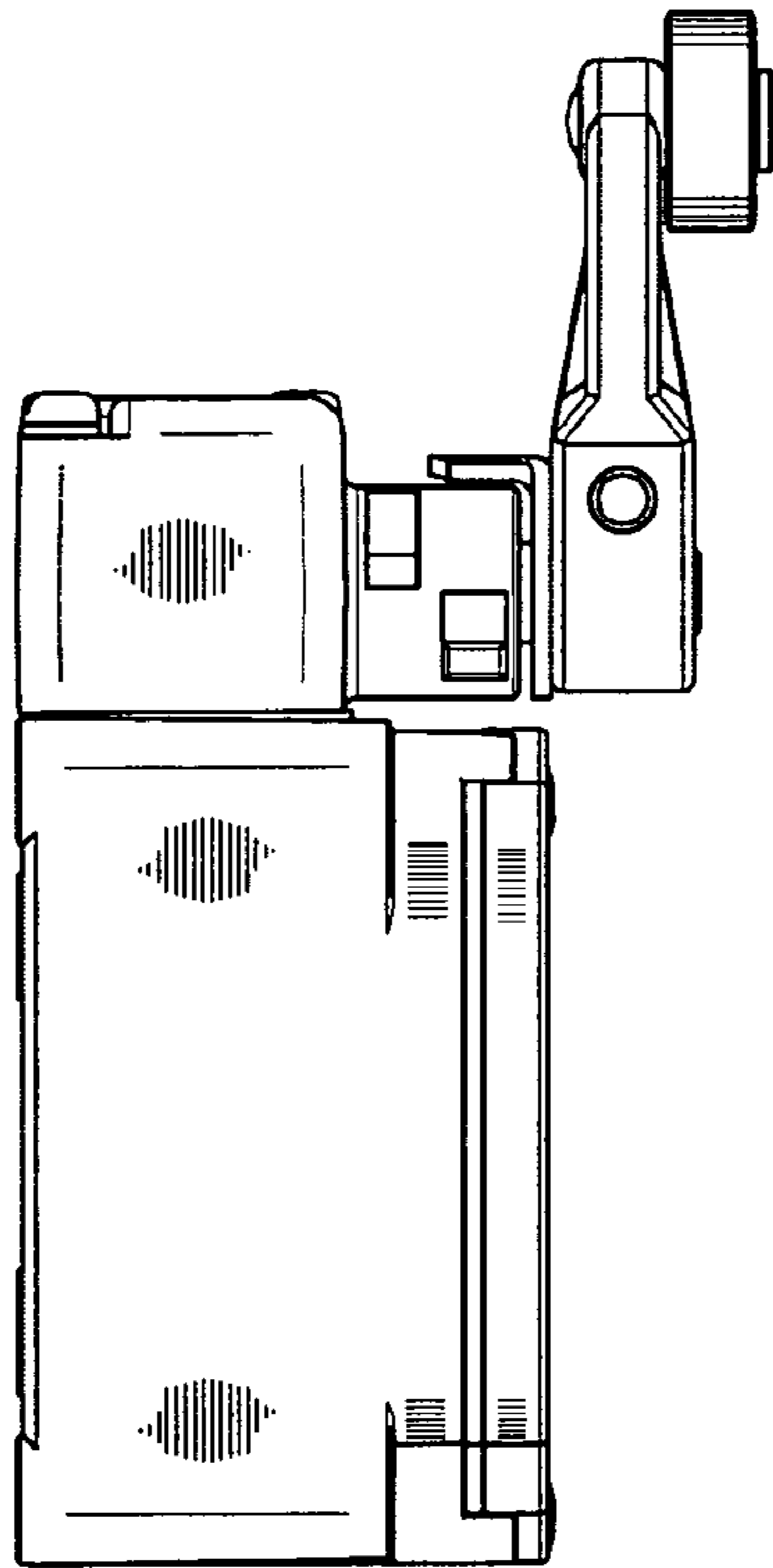


Fig. 6

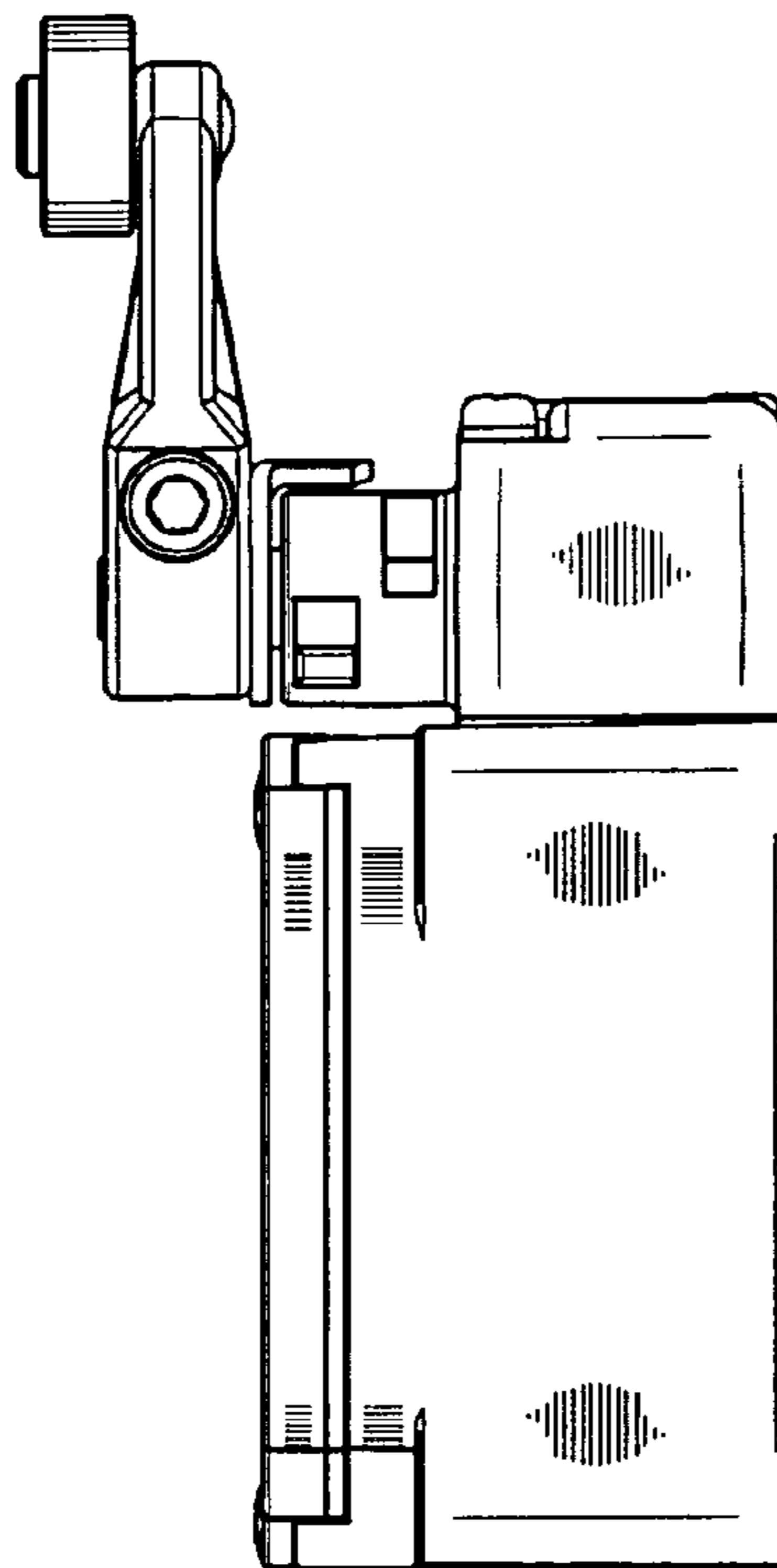


Fig. 7

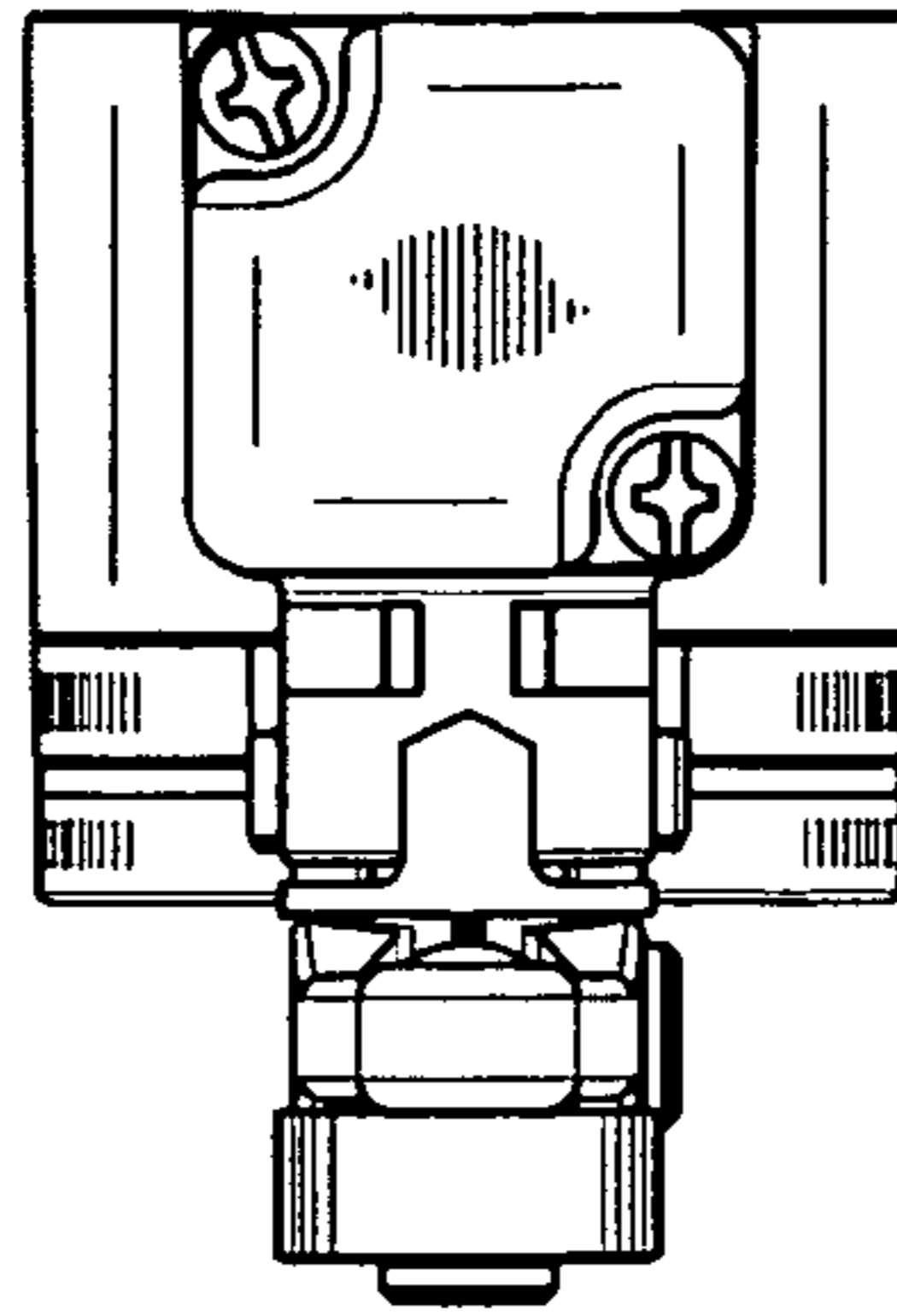


Fig. 8

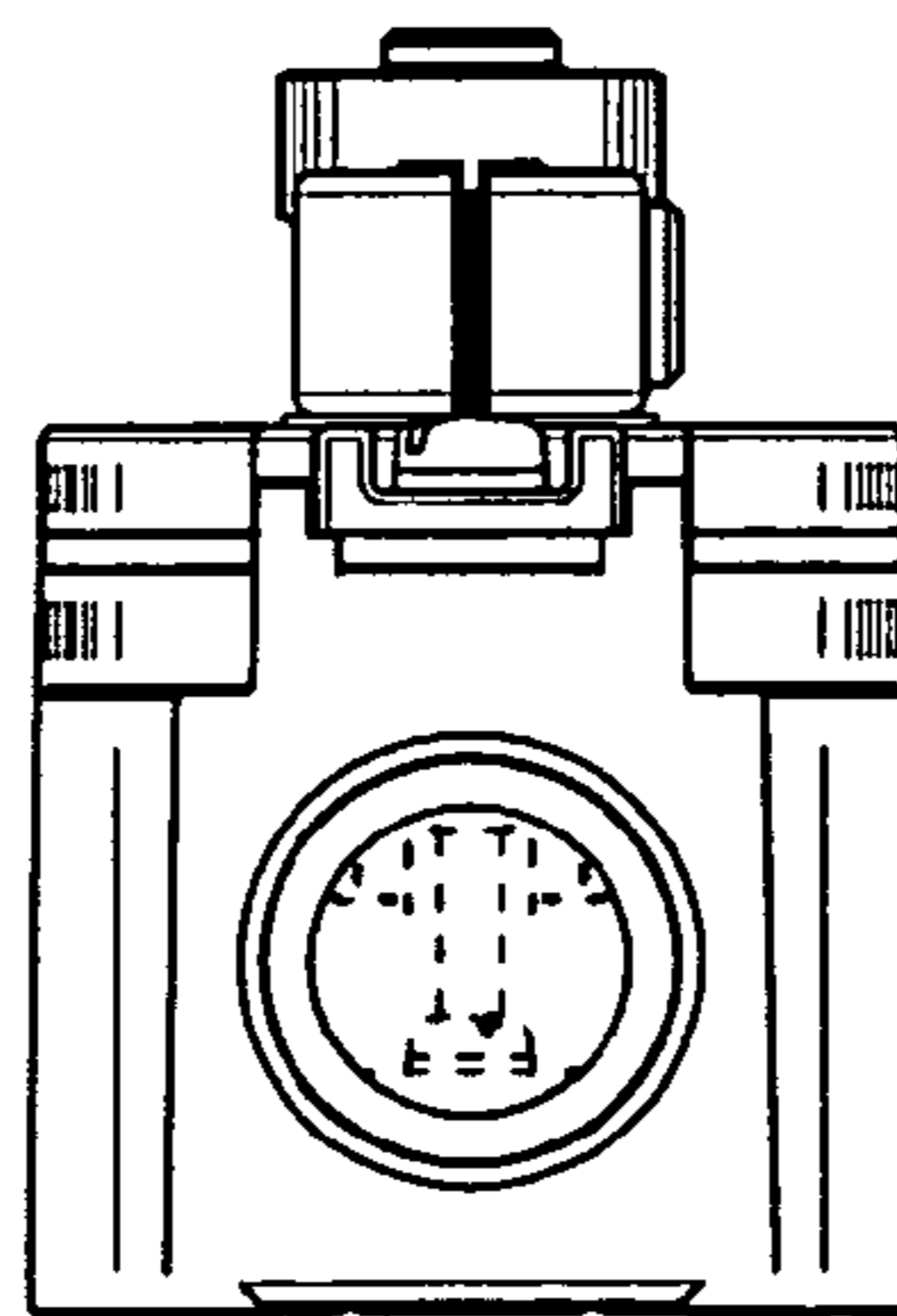


Fig. 9

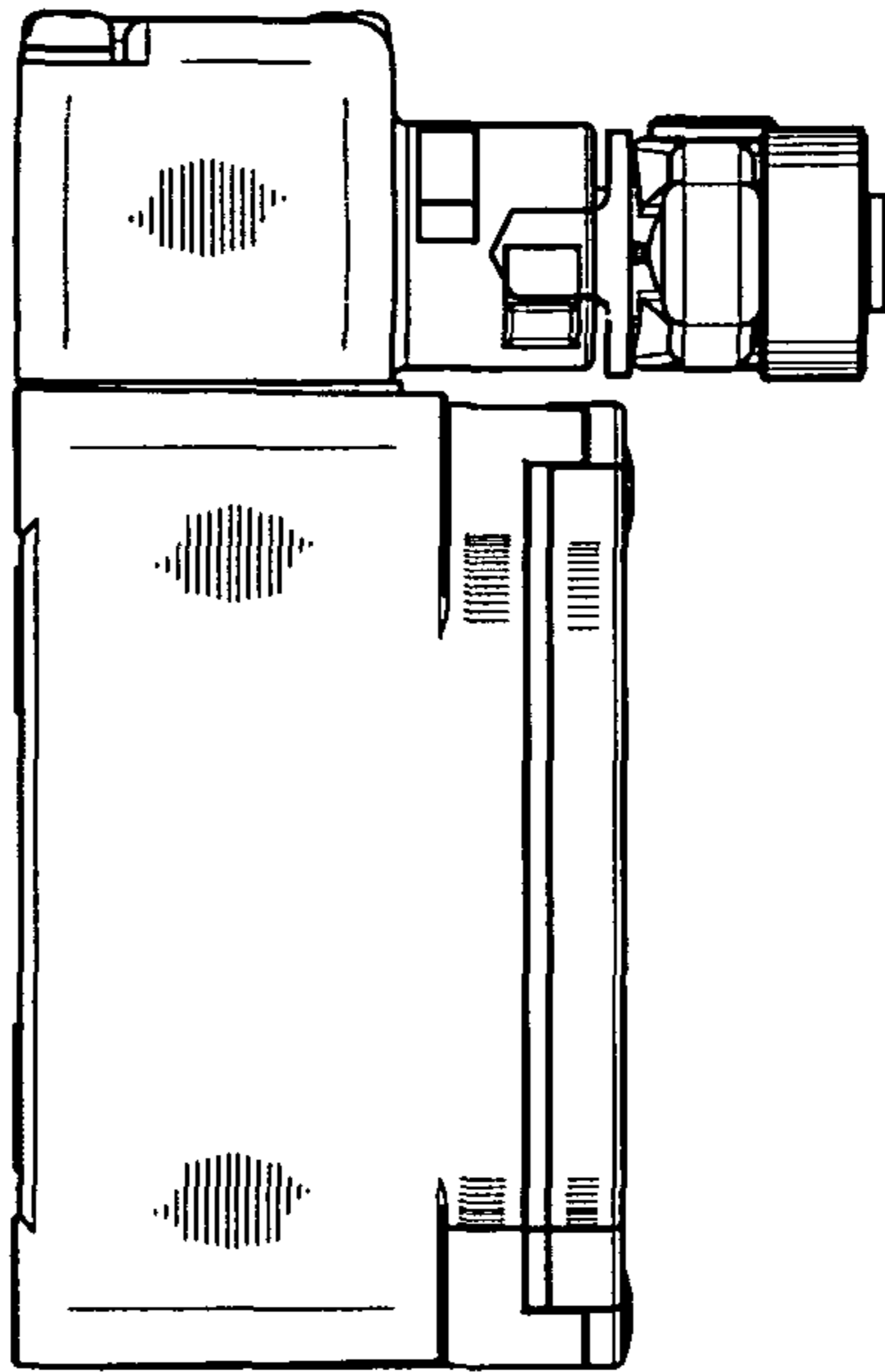




Fig. 10

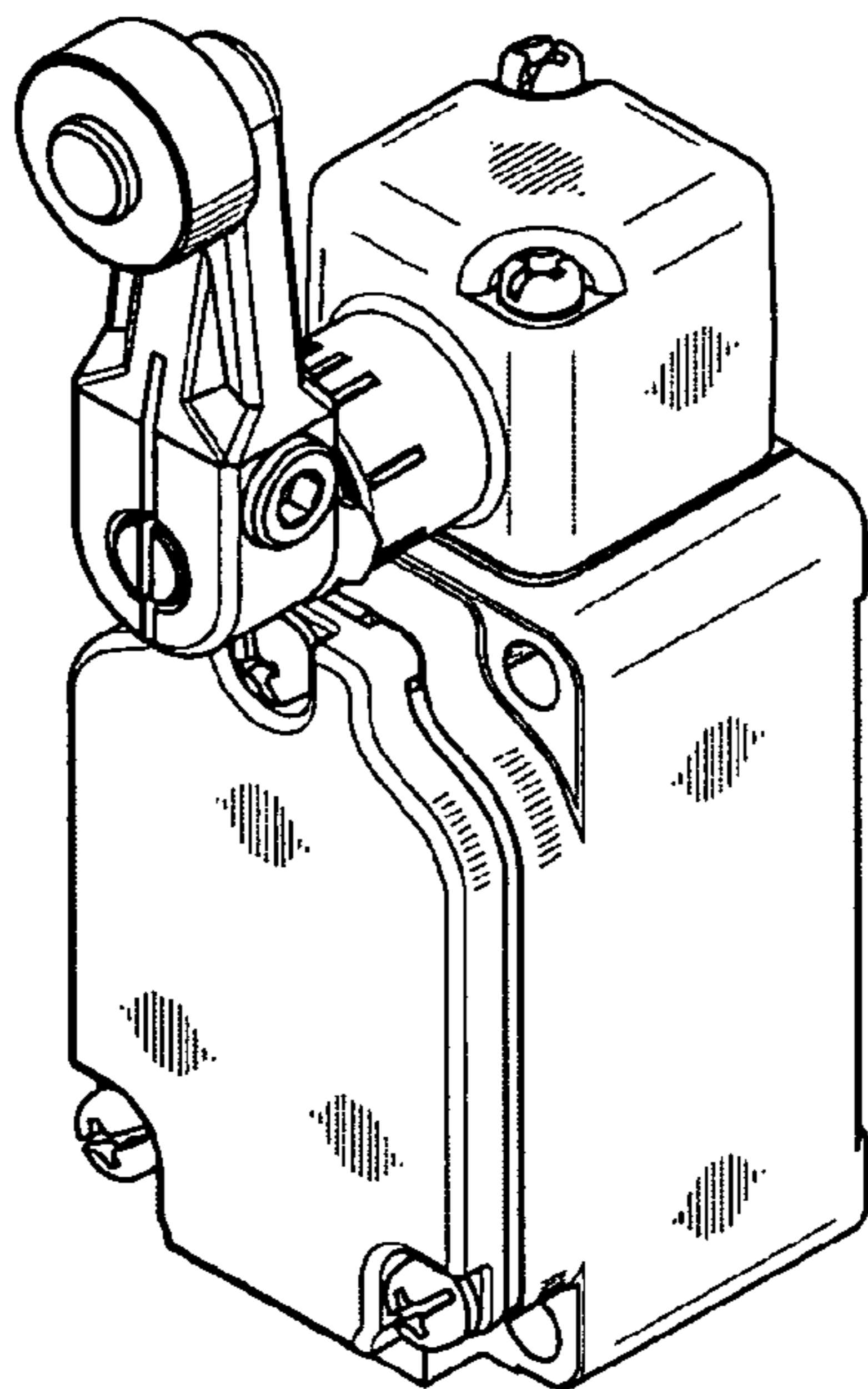


Fig. 11

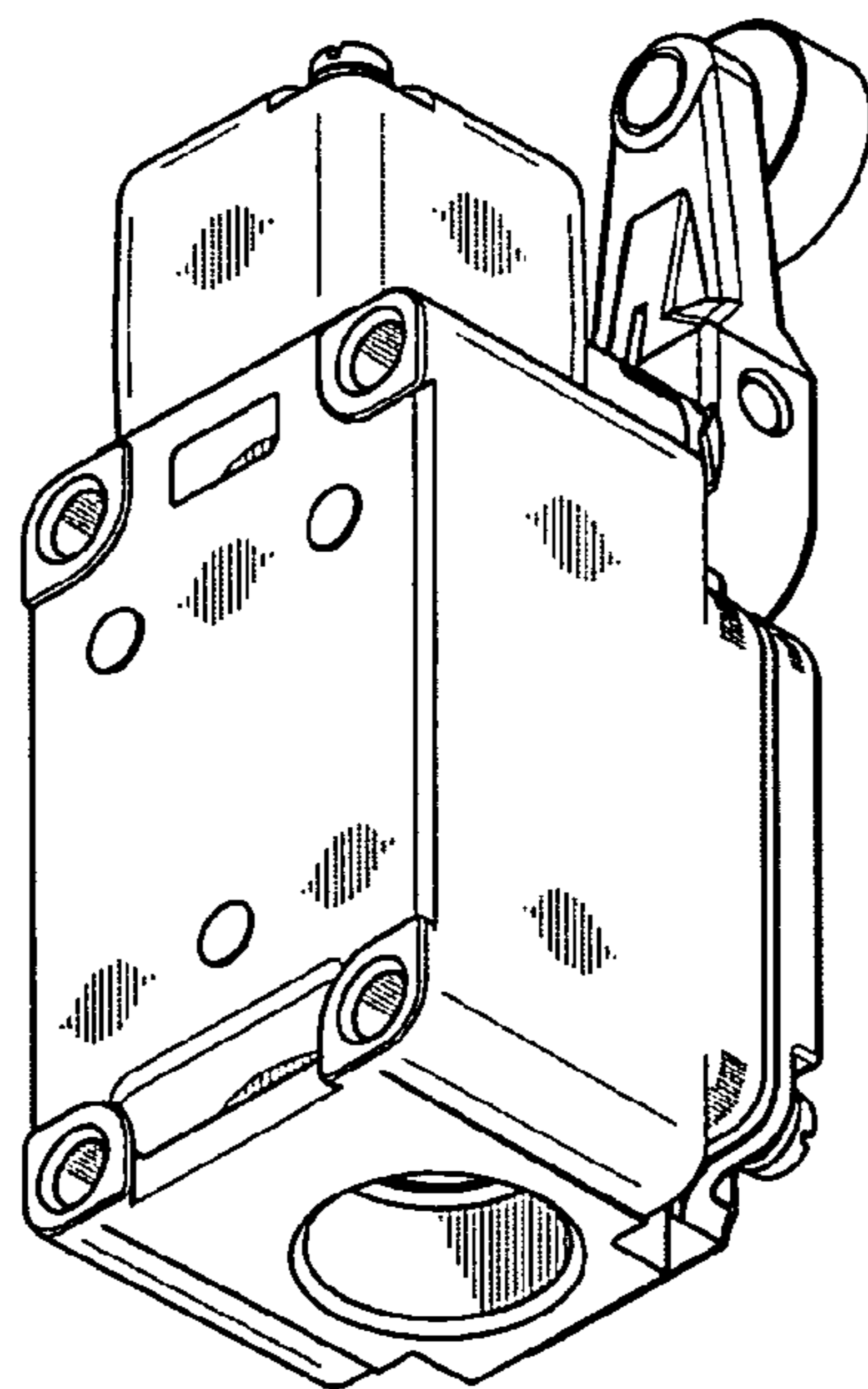




Fig. 12

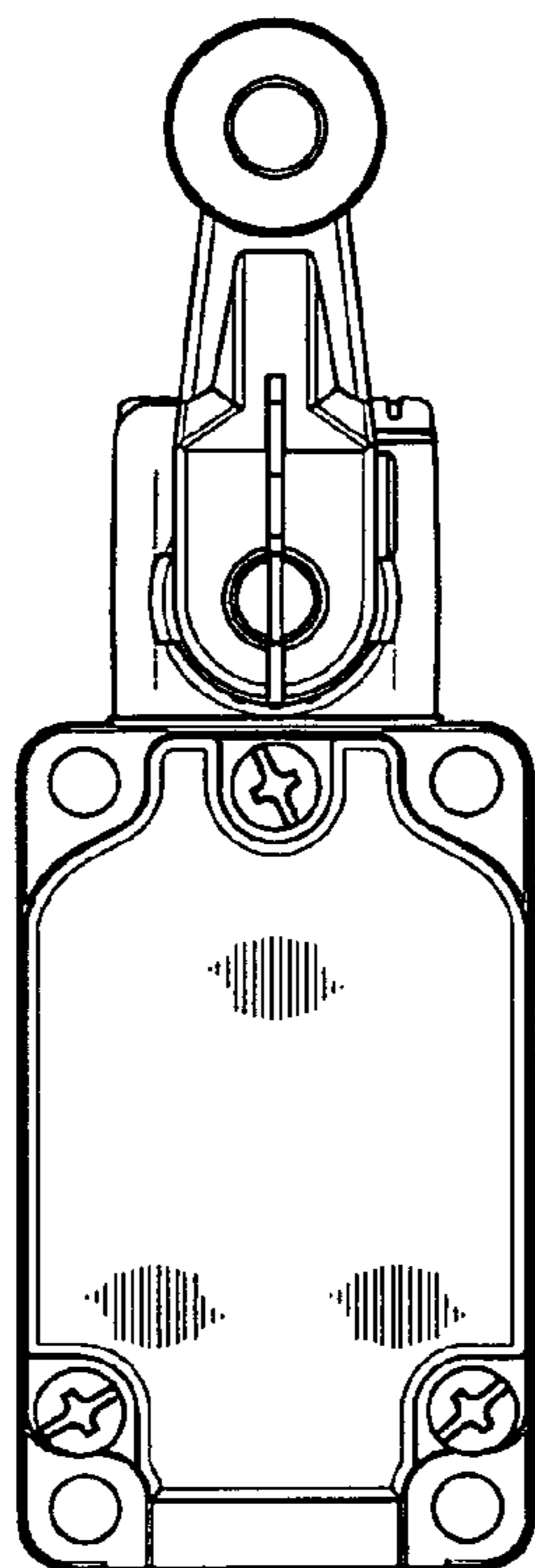


Fig. 13

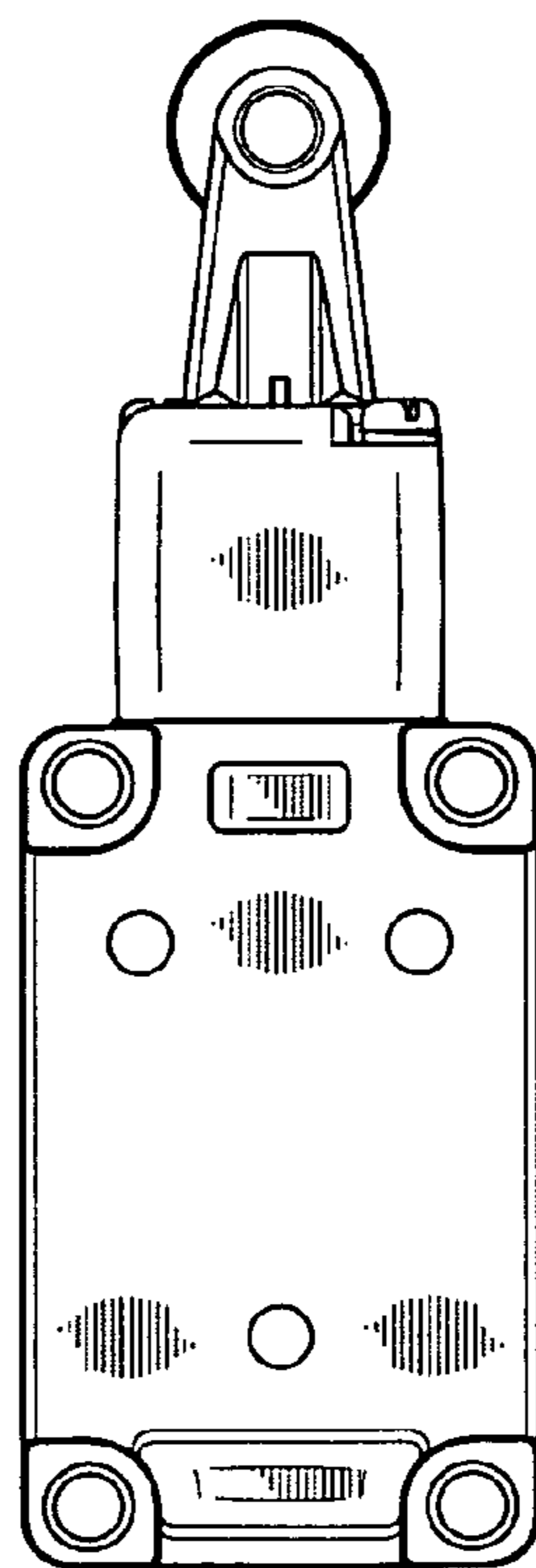


Fig. 14

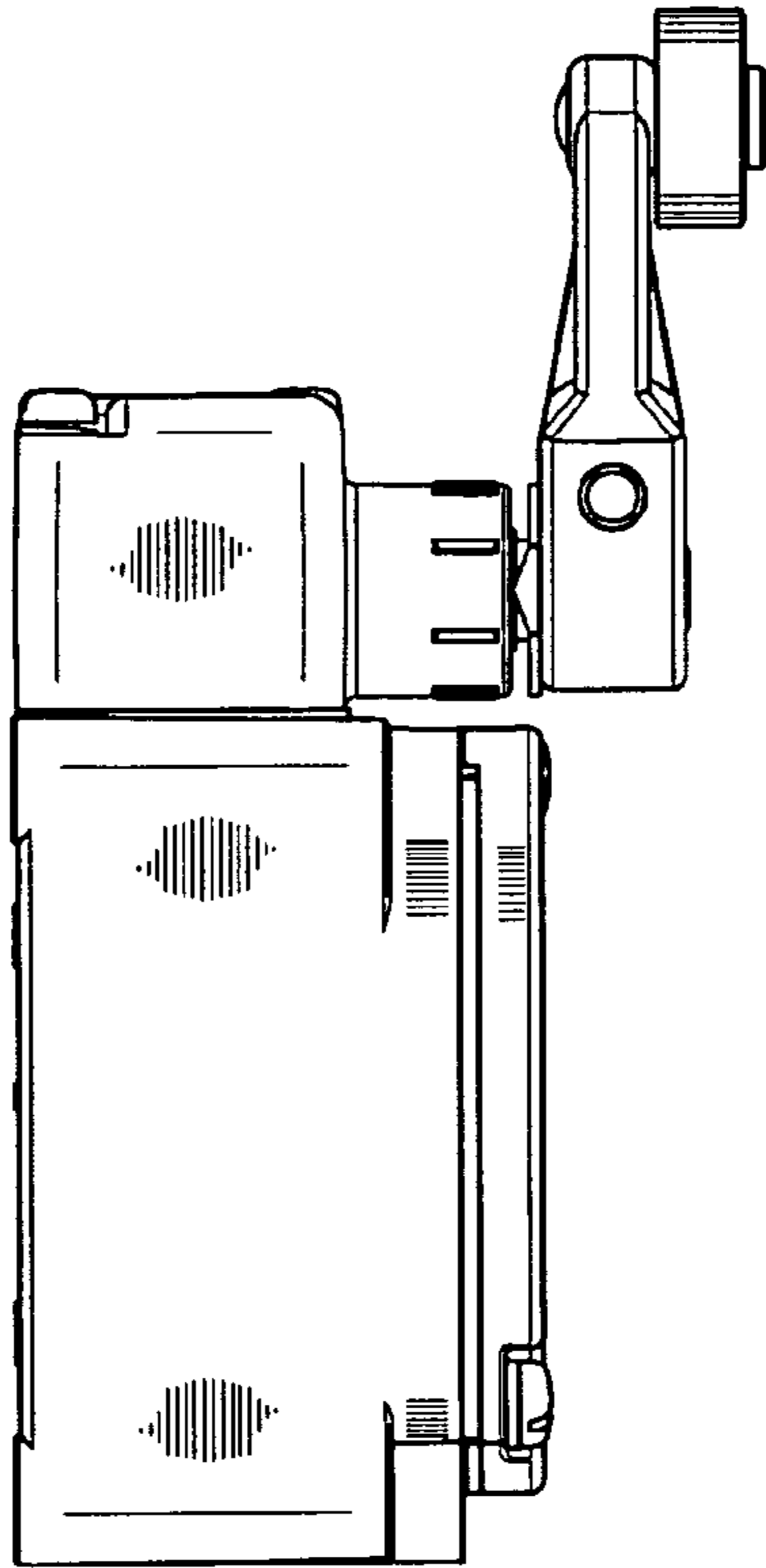


Fig. 15

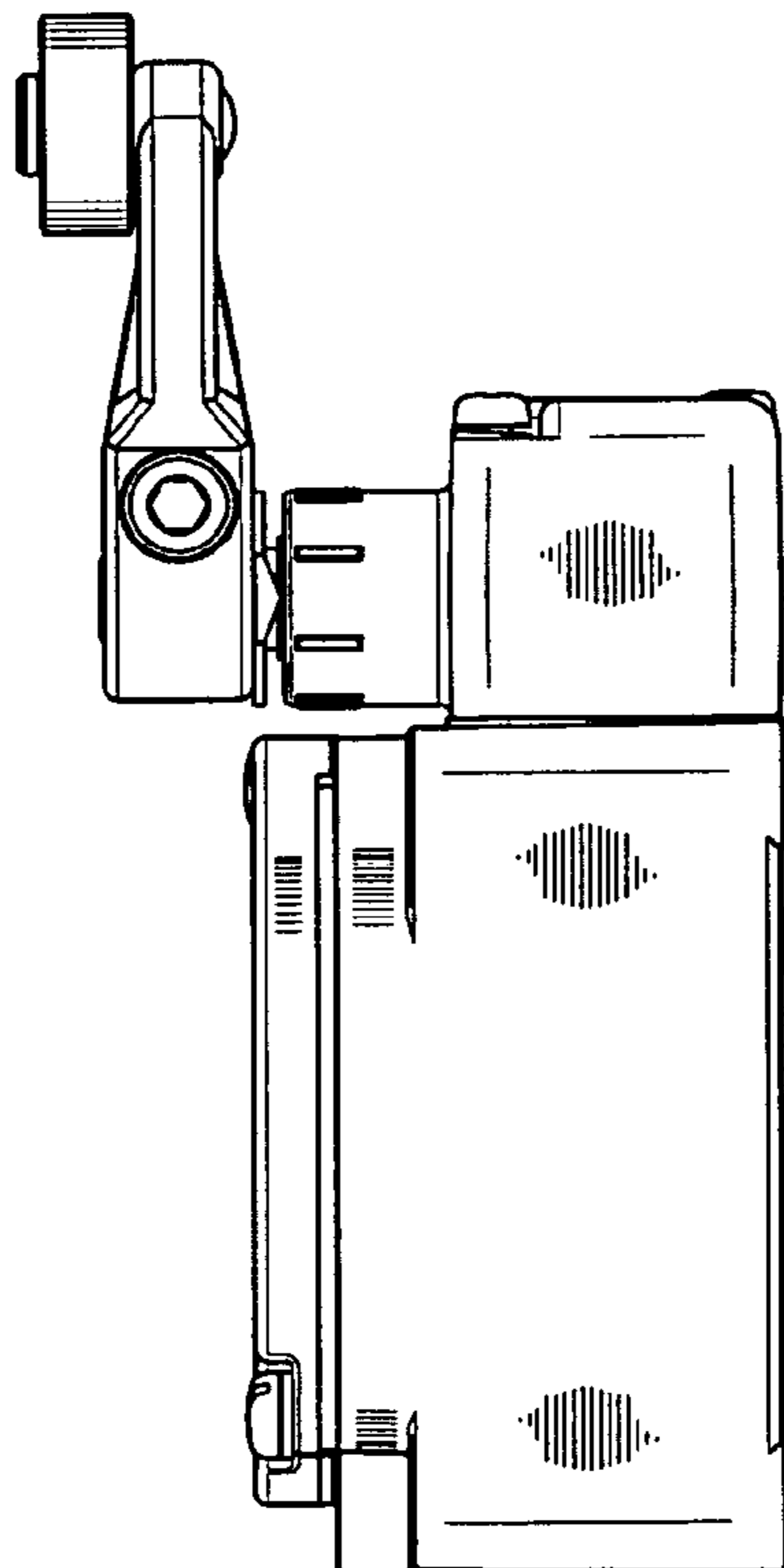


Fig. 16

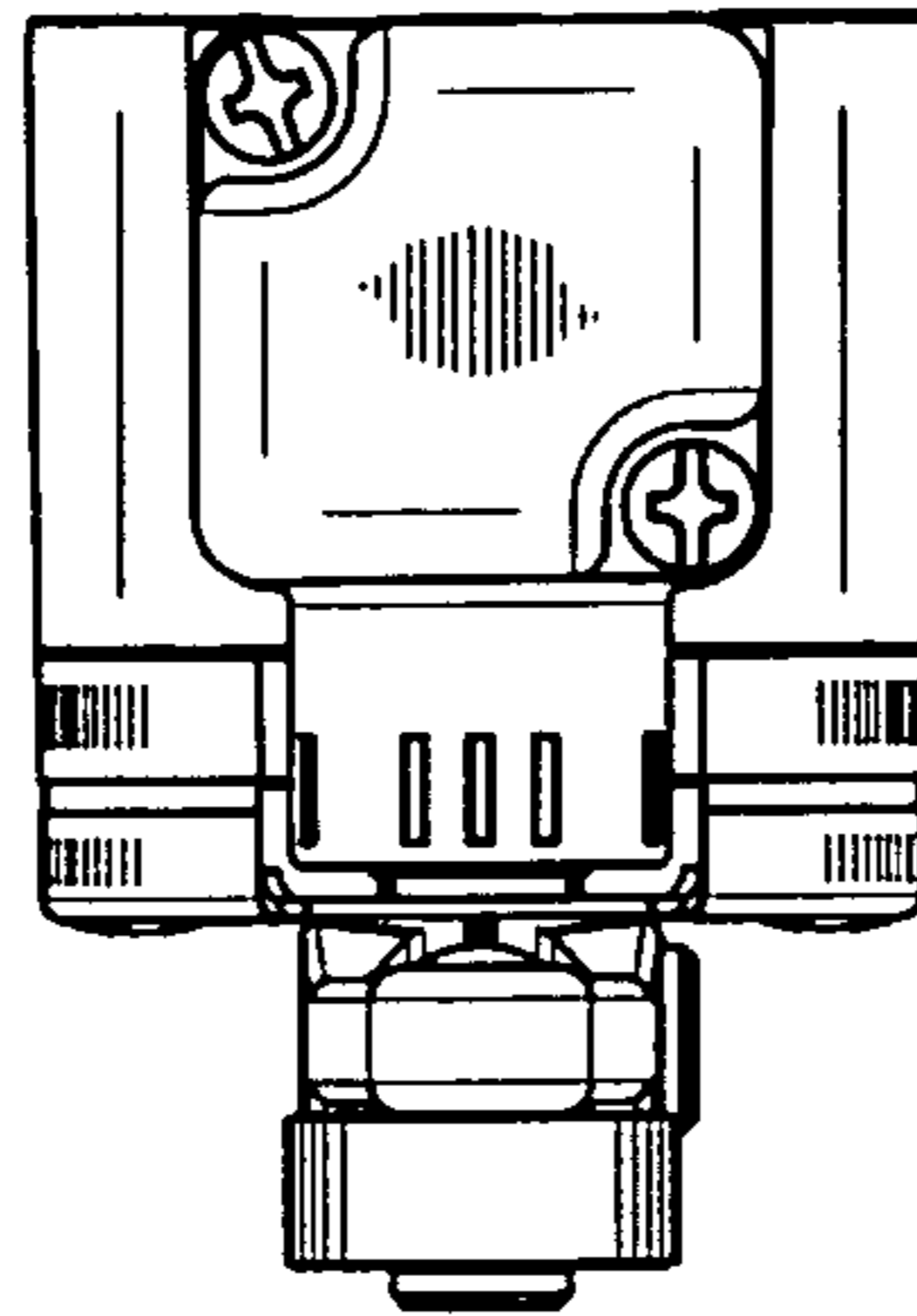


Fig. 17

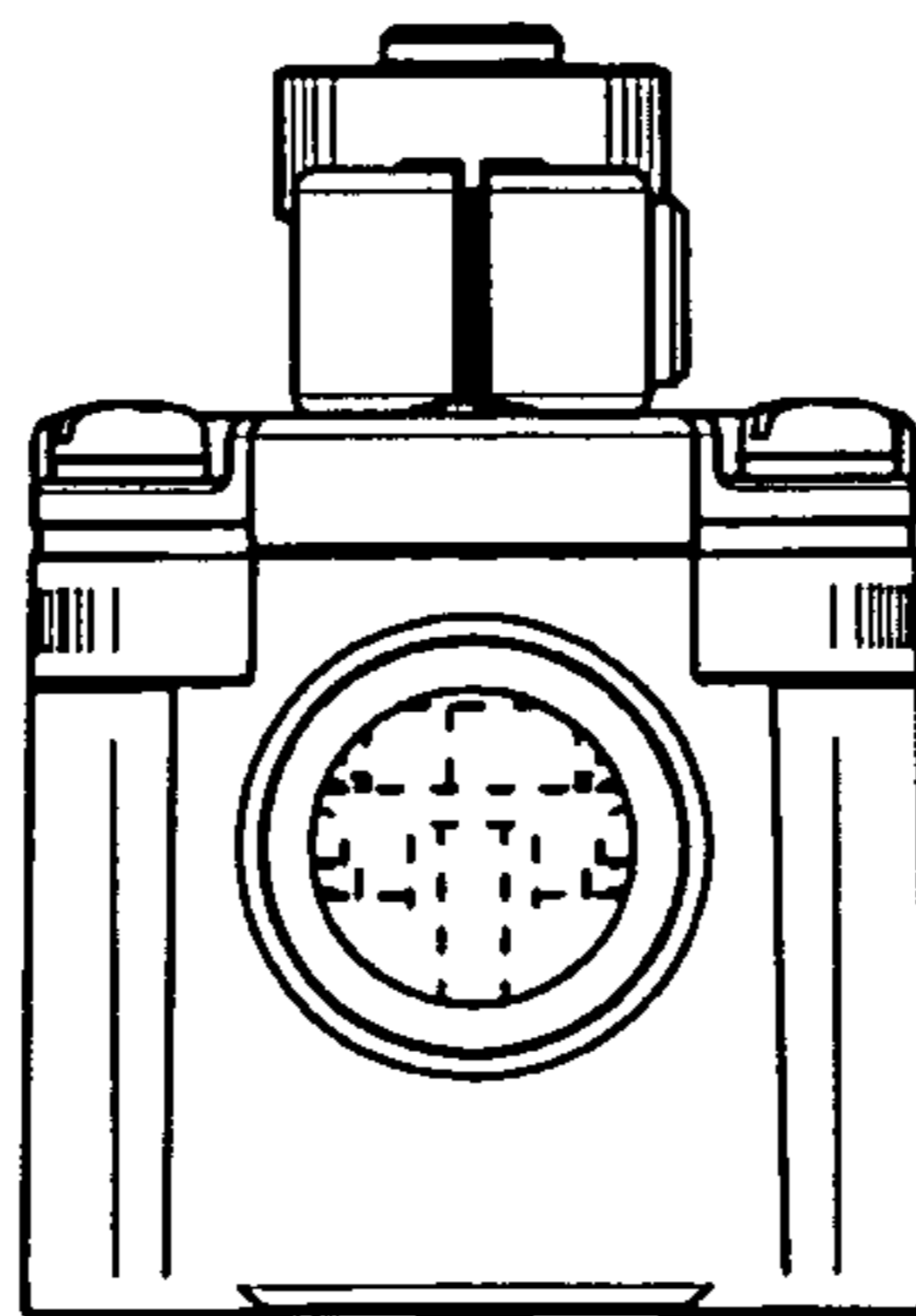


Fig. 18

