



US00D890706S

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

(10) **Patent No.:** **US D890,706 S**

(45) **Date of Patent:** **\*\* Jul. 21, 2020**

(54) **ELECTRICAL CONNECTOR**

(71) Applicant: **HOSIDEN CORPORATION**, Yao-shi,  
Osaka (JP)

(72) Inventor: **Hideto Kobayashi**, Isesaki (JP)

(73) Assignee: **HOSIDEN CORPORATION**, Yao-shi  
(JP)

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

(21) Appl. No.: **29/654,129**

(22) Filed: **Jun. 21, 2018**

(30) **Foreign Application Priority Data**

Jan. 10, 2018 (HK) ..... 2018-000137

(51) **LOC (12) Cl.** ..... **13-03**

(52) **U.S. Cl.**  
USPC ..... **D13/146**

(58) **Field of Classification Search**  
USPC ..... D13/101, 118, 123, 133, 145–147, 149,  
D13/154, 184, 199  
CPC ..... H01R 9/05; H01R 12/00; H01R 12/17;  
H01R 12/70; H01R 13/436; H01R  
13/514; H01R 13/58; H01R 13/627;  
H01R 24/04; H01R 24/50  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

4,046,452 A \* 9/1977 Cassarly ..... H01R 13/514  
439/594

D331,911 S \* 12/1992 Sato ..... D13/133

D334,013 S \* 3/1993 Nagasaka ..... D13/133

(Continued)

*Primary Examiner* — Angela J Lee

*Assistant Examiner* — Shawn T Gingrich

(74) *Attorney, Agent, or Firm* — Kratz, Quintos &  
Hanson, LLP

(57) **CLAIM**

The ornamental design for electrical connector, as shown  
and described.

**DESCRIPTION**

FIG. 1 is a front elevational view of an electrical connector  
according to the claimed design;

FIG. 2 is a back elevational view of the electrical connector  
according to the claimed design;

FIG. 3 is a top plan view of the electrical connector  
according to the claimed design;

FIG. 4 is a bottom plan view of the electrical connector  
according to the claimed design;

FIG. 5 is a right side elevational view of the electrical  
connector according to the claimed design;

FIG. 6 is a left side elevational view of the electrical  
connector according to the claimed design;

FIG. 7 is a top, front, and right side perspective view of the  
electrical connector according to the claimed design;

FIG. 8 is a back, bottom, and left side perspective view of  
the electrical connector according to the claimed design;

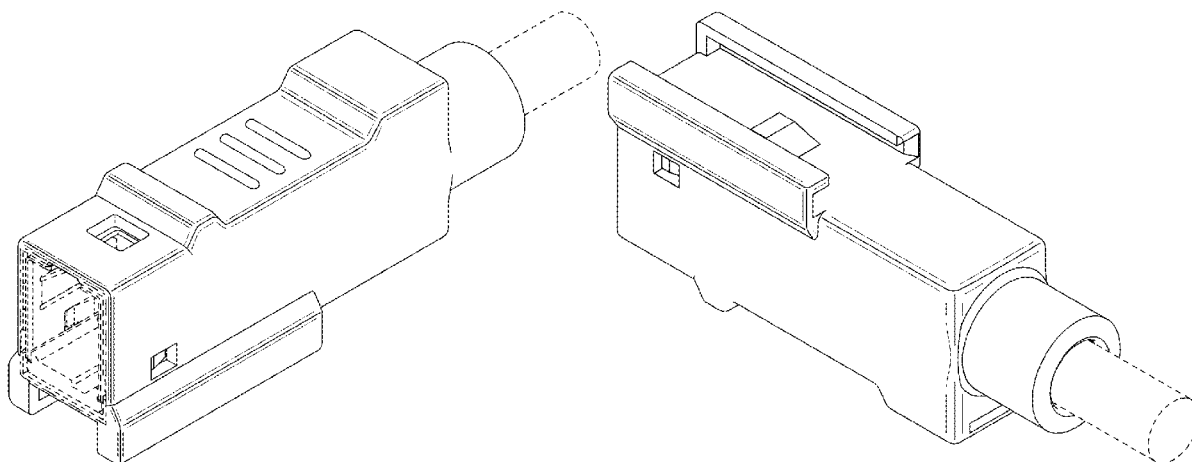
FIG. 9 is an enlarged partial cross-sectional view of the  
electrical connector according to the claimed design, taken  
along line 9-9 in FIG. 1;

FIG. 10 is an enlarged partial cross-sectional view of the  
electrical connector according to the claimed design, taken  
along line 10-10 in FIG. 1; and,

FIG. 11 is an enlarged partial cross-sectional view of the  
electrical connector according to the claimed design, taken  
along line 11-11 in FIG. 1.

The broken lines are included for the purpose of illustrating  
environmental structures and form no part of the claimed  
design. The dot-dash broken lines define the boundaries of  
the claimed design and form no part of the claimed design.  
The wavy solid line in FIGS. 9-11 is used to show the edge  
of the enlarged view and forms no part of the claimed  
design.

**1 Claim, 6 Drawing Sheets**



(56)

**References Cited**

## U.S. PATENT DOCUMENTS

5,993,238	A *	11/1999	Kudo .....	H01R 13/6272
				439/352
D454,333	S *	3/2002	Ikeda .....	D13/133
D464,318	S *	10/2002	Togashi .....	D13/133
7,811,126	B1 *	10/2010	Chen .....	H01R 13/42
				439/595
D810,689	S *	2/2018	Takano .....	D13/147
D843,940	S *	3/2019	Sasaki .....	D13/133
D854,500	S *	7/2019	Asano .....	D13/133
10,386,583	B2 *	8/2019	Jibiki .....	G02B 6/3838
2001/0026661	A1 *	10/2001	De Jong .....	G02B 6/3831
				385/56
2002/0114583	A1 *	8/2002	Asada .....	G02B 6/3849
				385/78
2011/0123156	A1 *	5/2011	Koreeda .....	G02B 6/3825
				385/53
2017/0324176	A1 *	11/2017	Ishikawa .....	H01R 12/716
2019/0140378	A1 *	5/2019	Sakai .....	H01R 12/7029
2019/0157809	A1 *	5/2019	Maesoba .....	H01R 13/6581
2019/0199036	A1 *	6/2019	Kanemura .....	H01R 13/639
2019/0288456	A1 *	9/2019	Maesoba .....	H01R 13/187
2019/0302383	A1 *	10/2019	Takano .....	G02B 6/4292
2019/0348792	A1 *	11/2019	Yamamoto .....	H01R 13/41
2019/0386435	A1 *	12/2019	Takahashi .....	H01R 13/6474

\* cited by examiner

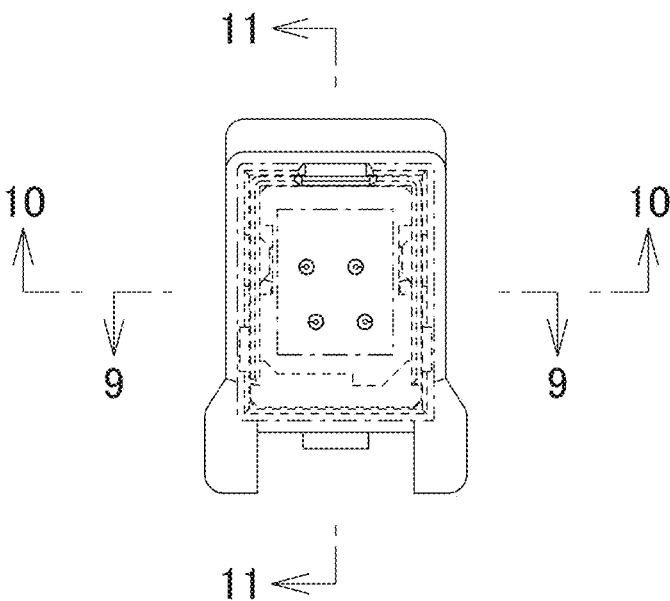


Fig.1

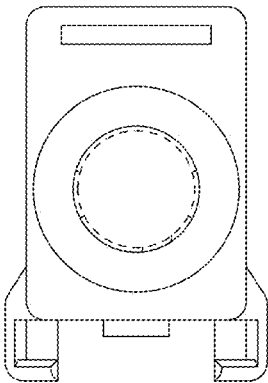


Fig.2

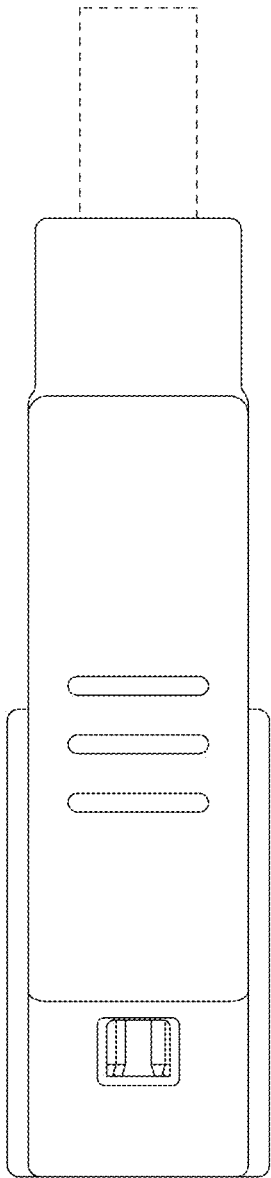


Fig.3

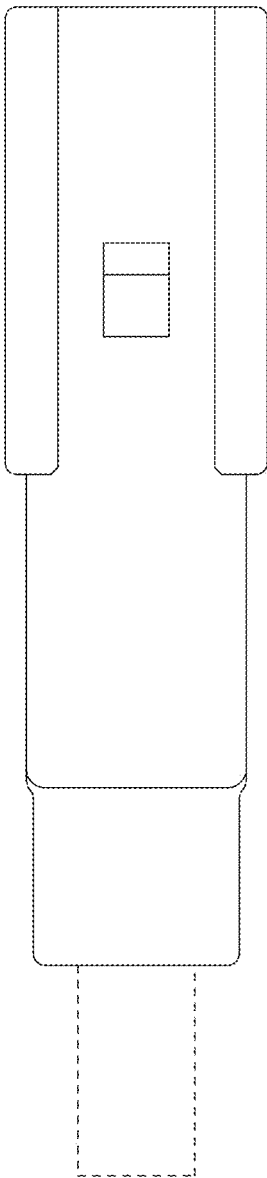


Fig.4

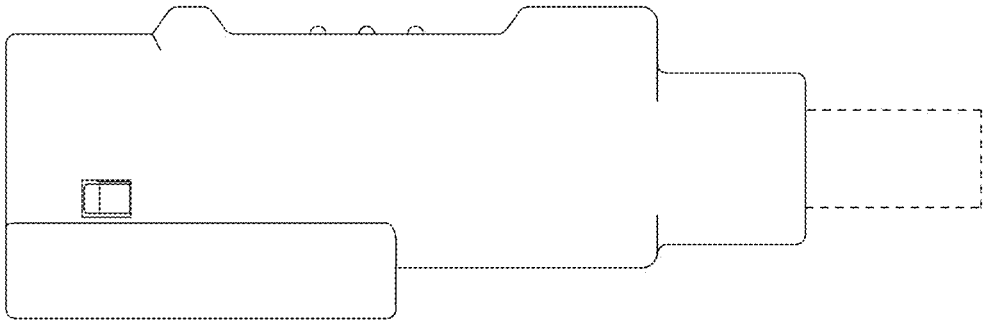


Fig.5

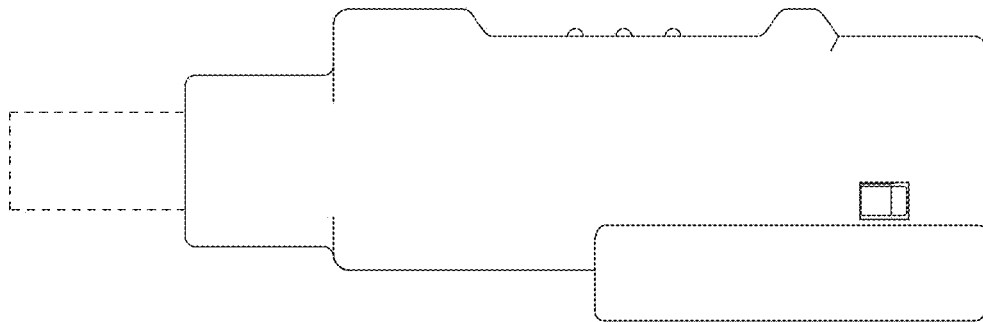


Fig.6

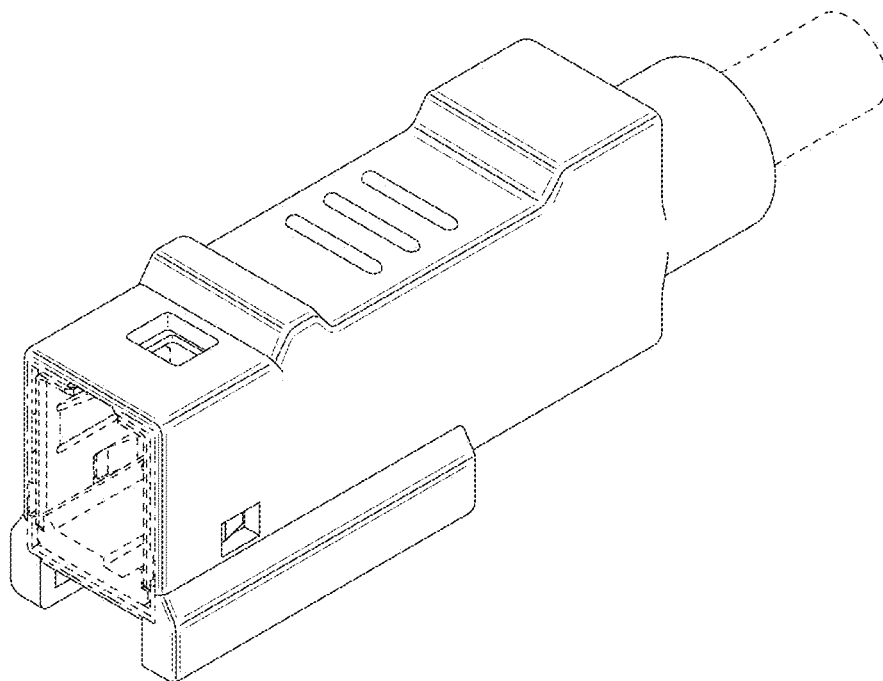


Fig.7

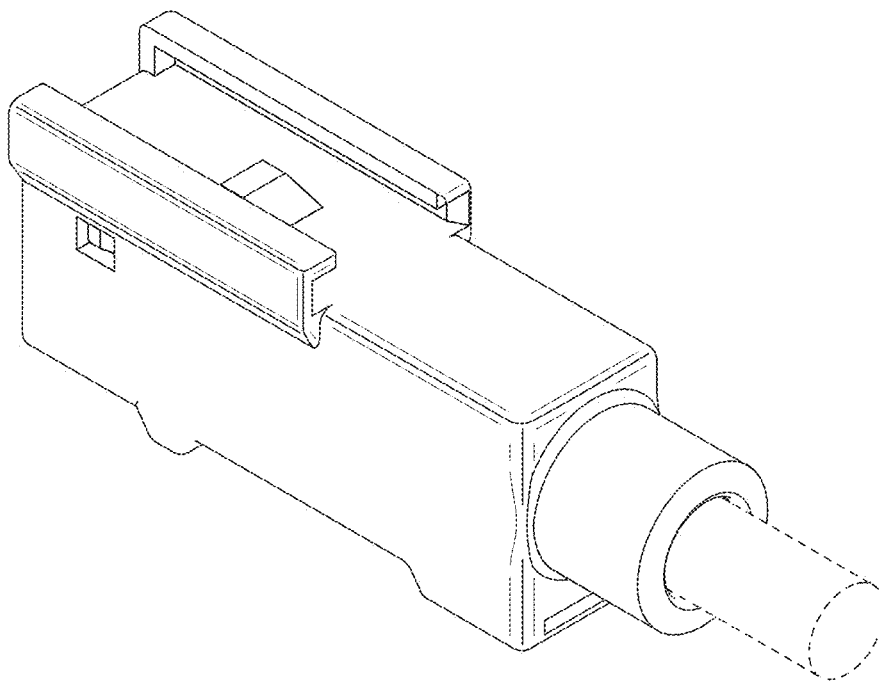


Fig.8

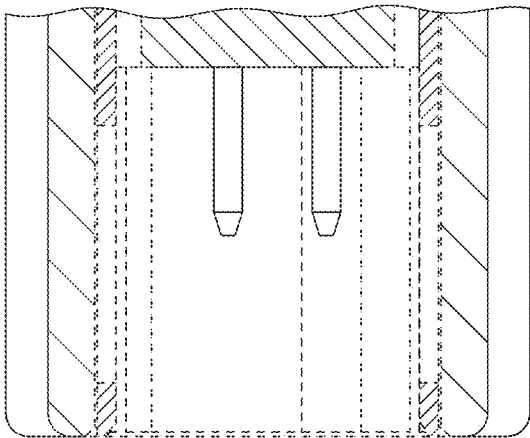


Fig.9

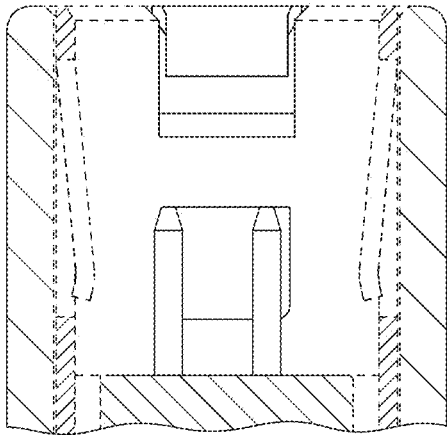


Fig.10

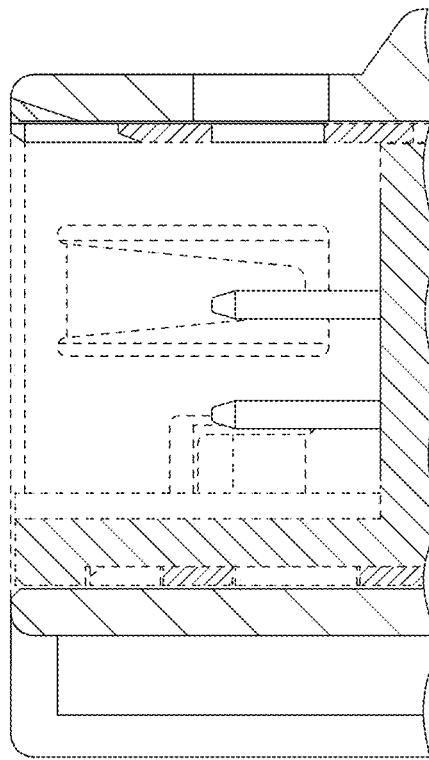


Fig.11