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

(10) **Patent No.:** **US D605,535 S**

(45) **Date of Patent:** **\*\* Dec. 8, 2009**

(54) **BIO-SENSOR**

(57) **CLAIM**

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**Hiroyuki Kukita**, Saitama (JP); **Takeru Mutoh**, Saitama (JP)

The ornamental design for a bio-sensor, as shown and described.

(73) Assignee: **Nihon Dempa Kogyo Co., Ltd.**, Tokyo (JP)

**DESCRIPTION**

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

FIG. 1 is a front view of a bio-sensor of a new design;

(21) Appl. No.: **29/310,759**

FIG. 2 is a back view thereof;

(22) Filed: **Sep. 9, 2008**

FIG. 3 is a left side view thereof;

(51) **LOC (9) Cl.** ..... **10-04**

FIG. 4 is a right side view thereof;

(52) **U.S. Cl.** ..... **D10/46**

FIG. 5 is a plan view thereof;

(58) **Field of Classification Search** ..... D10/46;  
73/24.06, 580, 778; 310/8.2, 8.9, 320, 344,  
310/553, 361, 370; 324/715-719; 333/72;  
204/403, 416, 418, 419; 435/288, 291, 817  
See application file for complete search history.

FIG. 6 is a bottom plan view thereof;

FIG. 7 is a front view of a crystal resonator, the bio-sensor being eliminated for ease of illustration;

FIG. 8 is a back view of a crystal resonator, the bio-sensor being eliminated for ease of illustration;

FIG. 9 is a left side view of a crystal resonator, the bio-sensor being eliminated for ease of illustration;

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

5,387,328 A \* 2/1995 Sohn ..... 257/253  
6,776,888 B2 \* 8/2004 Yamamoto et al. .... 204/403.09  
D575,169 S 8/2008 Wakamatsu et al.

FIG. 10 is a right side view of a crystal resonator, the bio-sensor being eliminated for ease of illustration;

FIG. 11 is a plan view of a crystal resonator, the bio-sensor being eliminated for ease of illustration;

FIG. 12 is a bottom plan view of a crystal resonator, the bio-sensor being eliminated for ease of illustration; and,

**OTHER PUBLICATIONS**

U.S. Appl. No. 29/294,262, filed Dec. 31, 2007, Shunichi Wakamatsu, et al.

FIG. 13 is a referential assembling drawing showing a condition wherein the bio-sensor is incorporated in a sensing apparatus.

\* cited by examiner

The broken line showing of structural features are included for the purpose of illustrating non-claimed subject matter and forms no part of the claimed design.

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**1 Claim, 6 Drawing Sheets**

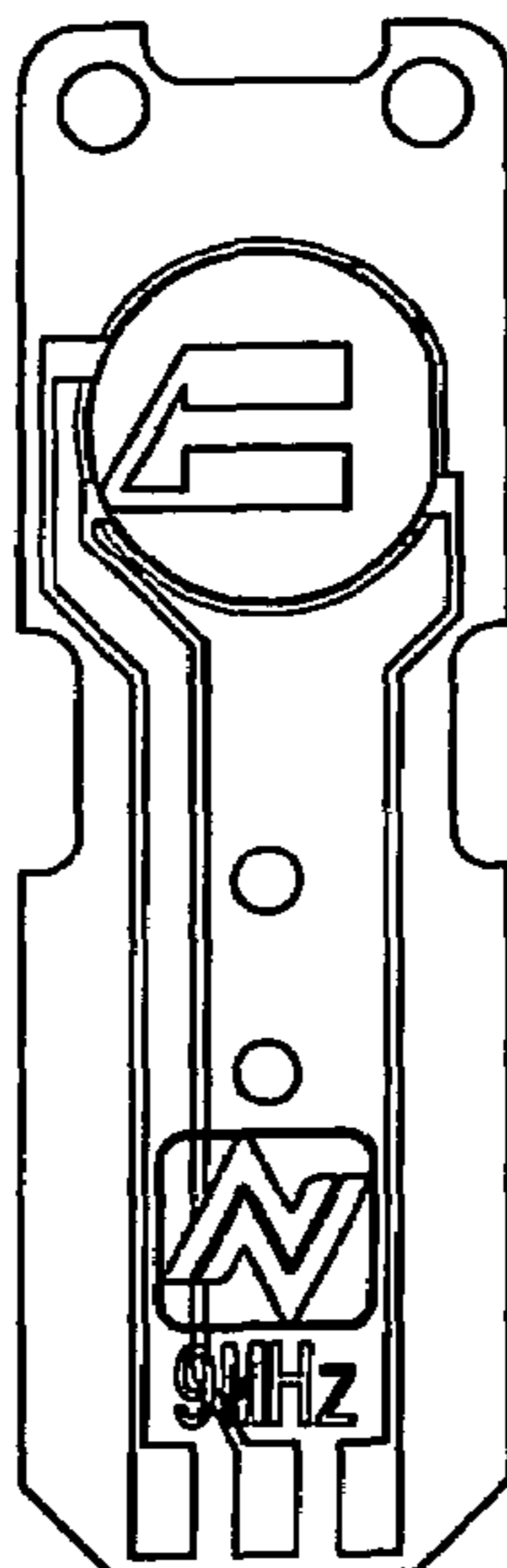


FIG. 1

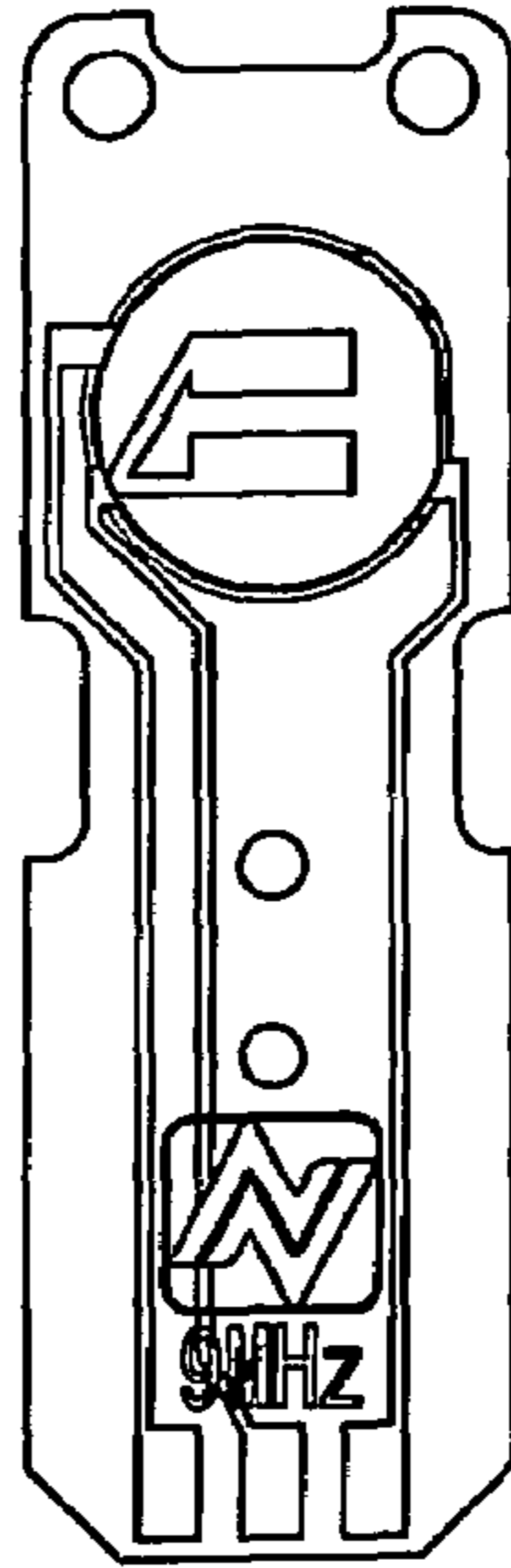


FIG. 2

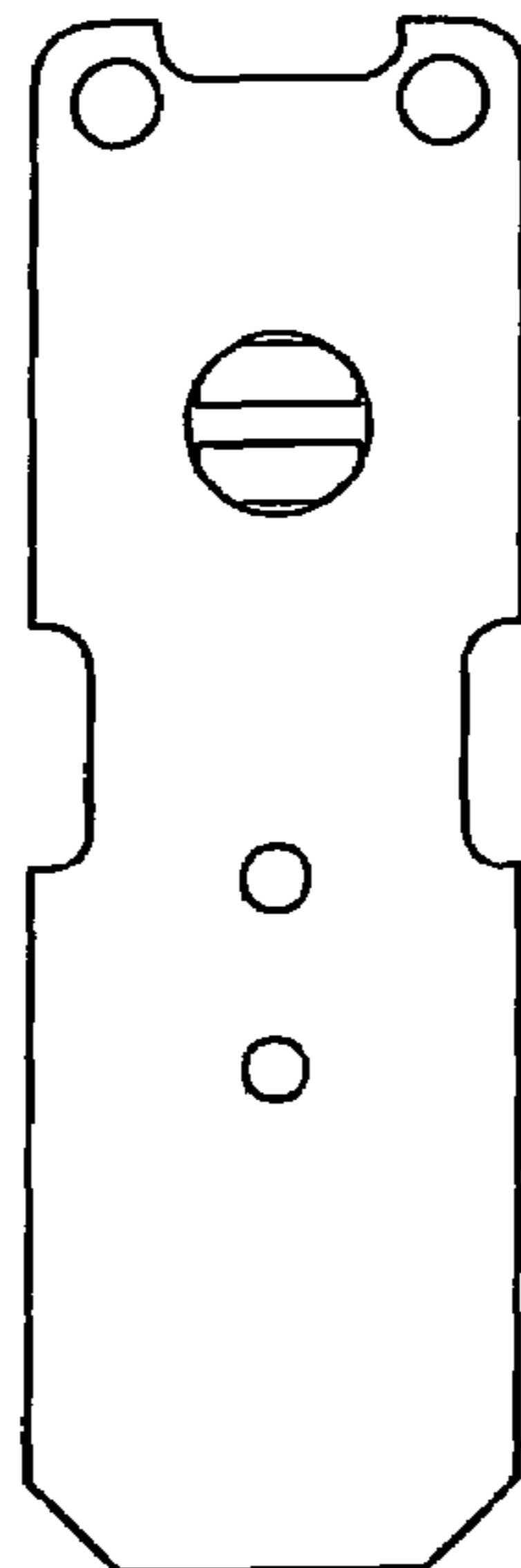


FIG. 3



FIG. 4



FIG. 5



FIG. 6

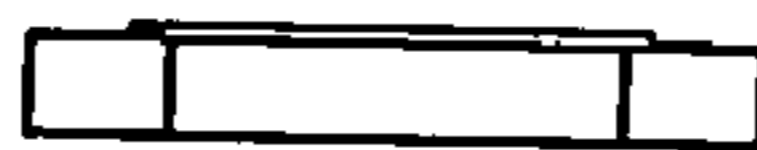


FIG. 7

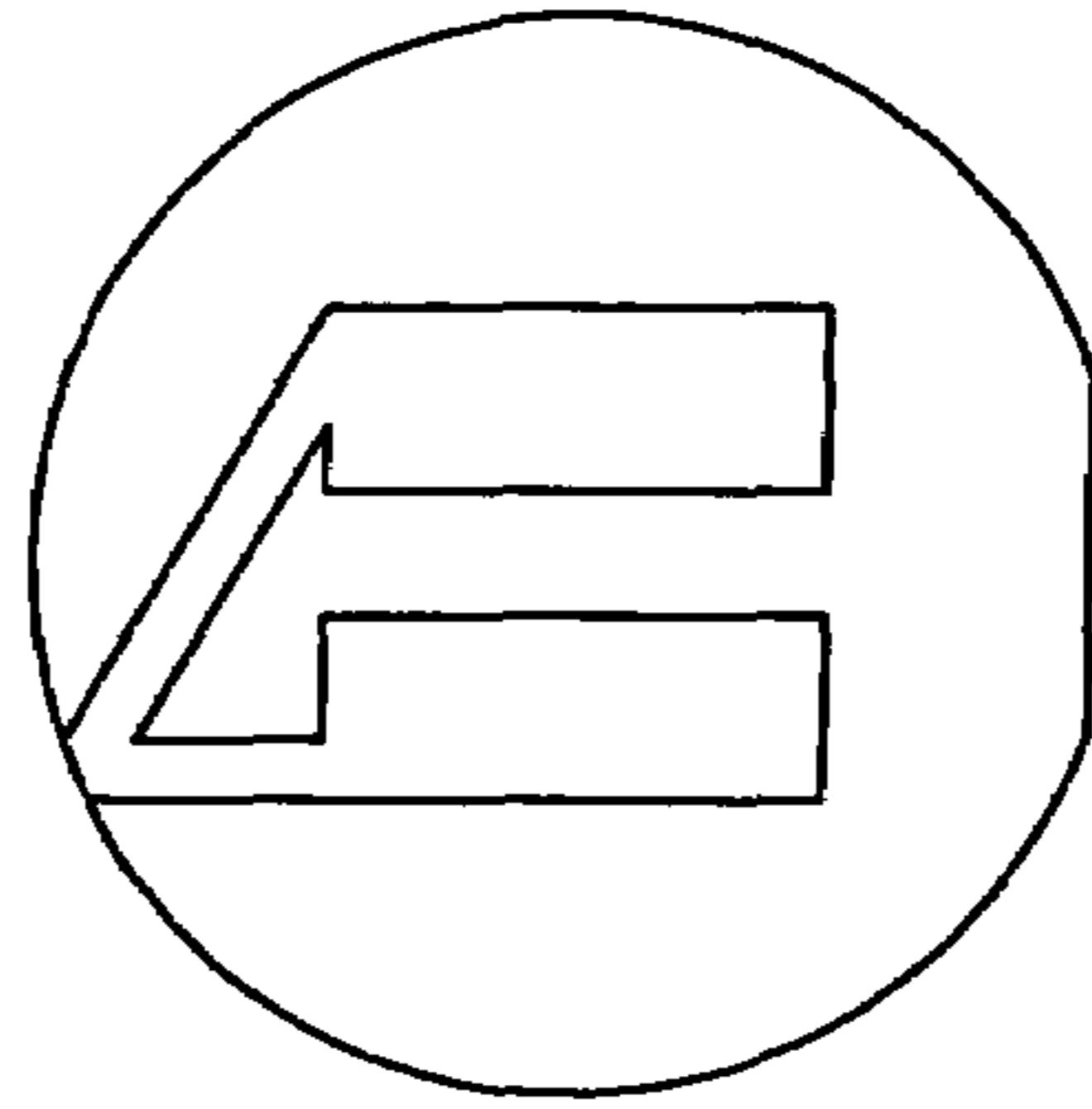


FIG. 8

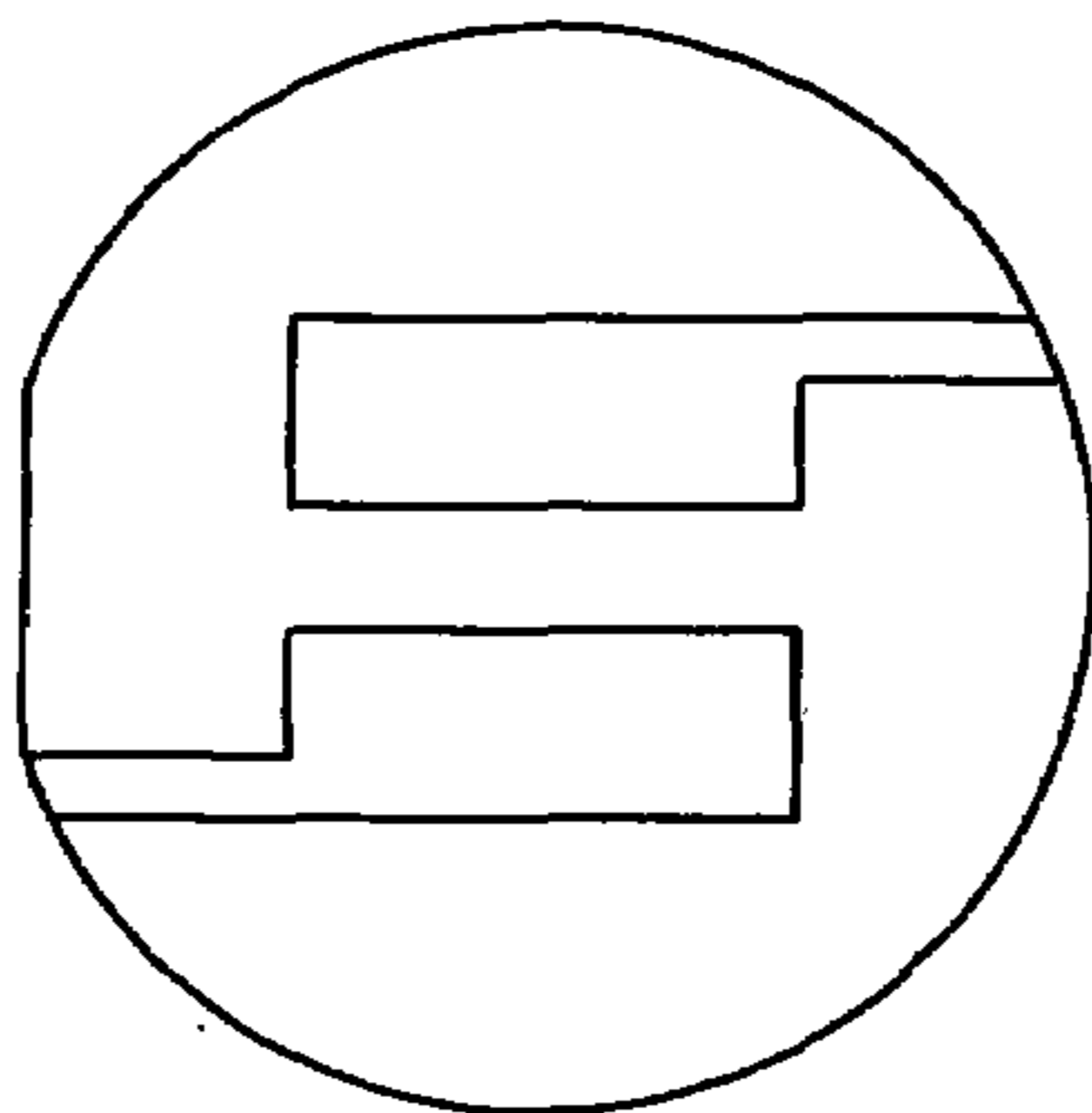


FIG. 9



FIG. 10

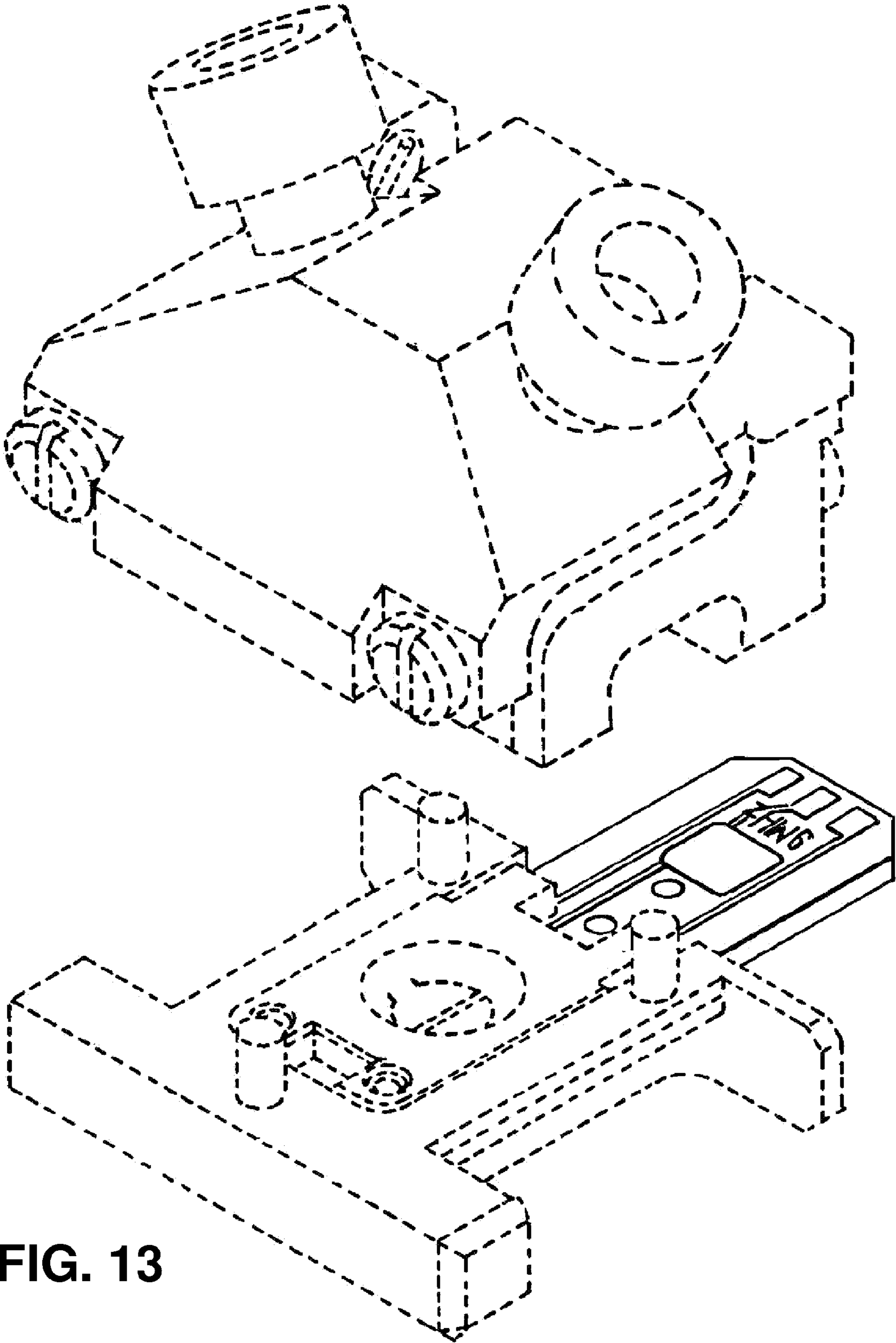


FIG. 11



FIG. 12





**FIG. 13**