



US00D917703S

(12) **United States Design Patent** (10) **Patent No.:** **US D917,703 S**
Seki (45) **Date of Patent:** **** Apr. 27, 2021**

(54) **BIOSIGNAL DETECTOR**

(71) Applicant: **MELTIN MMI CO., LTD.**, Tokyo (JP)

(72) Inventor: **Tatsuya Seki**, Tokyo (JP)

(73) Assignee: **MELTIN MMI CO., LTD.**, Tokyo (JP)

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

(21) Appl. No.: **29/677,942**

(22) Filed: **Jan. 24, 2019**

Related U.S. Application Data

(62) Division of application No. 35/504,324, filed on Jul. 14, 2017 (U.S. filing date under 35 U.S.C. 384), and (Continued)

(30) **Foreign Application Priority Data**

Jan. 16, 2017 (JP) 2017-000575
Jan. 16, 2017 (JP) 2017-000576
(Continued)

(51) **LOC (13) Cl.** **24-02**

(52) **U.S. Cl.**
USPC **D24/186**

(58) **Field of Classification Search**
USPC D24/186, 187, 200
(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

D578,221 S 10/2008 Sakurai
D578,222 S 10/2008 Sakurai
(Continued)

Primary Examiner — Eliza Z Bennett-Hattan

(74) *Attorney, Agent, or Firm* — Renner, Otto, Boisselle & Sklar, LLP

(57) **CLAIM**

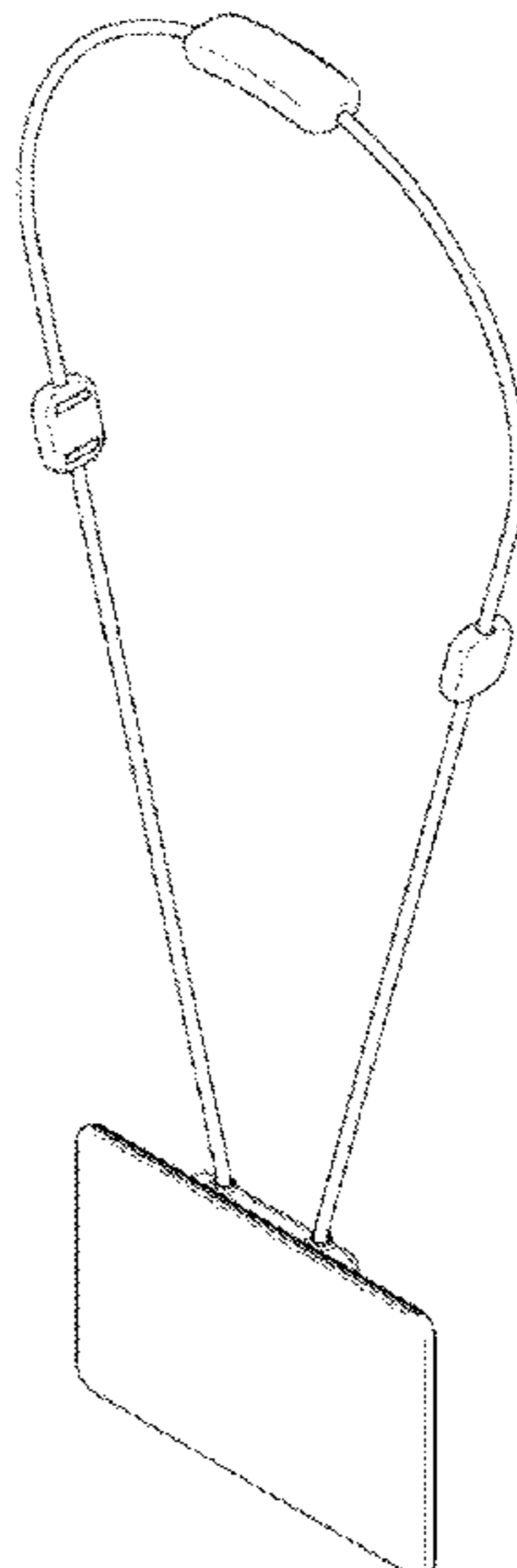
The ornamental design for a biosignal detector, as shown and described.

DESCRIPTION

- FIG. 1: Perspective
- FIG. 2: Perspective
- FIG. 3: Front
- FIG. 4: Back
- FIG. 5: Right
- FIG. 6: Left
- FIG. 7: Top
- FIG. 8: Bottom
- FIG. 9: Partial enlarged view of FIG. 1
- FIG. 10: Partial enlarged view of FIG. 2
- FIG. 11: Reference view—electrodes
- FIG. 12: Reference view—electrodes
- FIG. 13: Reference view—housing
- FIG. 14: Reference view of state in use
- FIG. 15: Perspective
- FIG. 16: Perspective
- FIG. 17: Front
- FIG. 18: Back
- FIG. 19: Right
- FIG. 20: Left
- FIG. 21: Top
- FIG. 22: Bottom
- FIG. 23: Partial enlarged view of FIG. 15
- FIG. 24: Partial enlarged view of FIG. 16
- FIG. 25: Reference view—electrodes
- FIG. 26: Reference view—electrodes
- FIG. 27: Reference view—housing; and,
- FIG. 28: Reference view of state in use.

The solid lines form part of the claimed designs; the broken lines are for illustrative purposes only and form no part of the claimed designs; the biosignal detector of designs 1 and 2 can detect biosignals (e.g., electrocardio signals, mastication signals) using the electrodes.

1 Claim, 28 Drawing Sheets



Related U.S. Application Data

having an international filing date of Jul. 14, 2017,
now Pat. No. Des. 853,569.

(30) **Foreign Application Priority Data**

Jan. 16, 2017 (JP) 2017-000577
 Jan. 16, 2017 (JP) 2017-000578
 Jan. 16, 2017 (JP) 2017-000579
 Jan. 16, 2017 (JP) 2017-000580
 Jan. 16, 2017 (JP) 2017-000581
 Jan. 16, 2017 (JP) 2017-000582
 Jan. 16, 2017 (JP) 2017-000583
 Jan. 16, 2017 (JP) 2017-000584
 Jan. 16, 2017 (JP) 2017-000585
 Jan. 16, 2017 (JP) 2017-000586
 Jan. 16, 2017 (JP) 2017-000587

(58) **Field of Classification Search**

CPC A61B 5/0478
 See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D585,557 S 1/2009 Sakurai
 D721,673 S 1/2015 Park
 D743,933 S 11/2015 Park
 9,232,366 B1 1/2016 Charlier
 D750,264 S * 2/2016 Guarraia D24/200
 D750,794 S 3/2016 Guarraia
 D751,214 S 3/2016 Guarraia

D751,722 S 3/2016 Guarraia
 D752,236 S 3/2016 Guarraia
 D752,766 S 3/2016 Guarraia
 D753,316 S 4/2016 Guarraia
 D756,959 S 5/2016 Lee
 D768,024 S 10/2016 Dayal
 D795,110 S 8/2017 Takizawa
 D796,051 S 8/2017 Ruffini
 D796,683 S 9/2017 Smeros
 D797,296 S 9/2017 Dehollander
 D800,089 S 10/2017 Park
 9,981,127 B2 5/2018 Guarraia
 D827,143 S 8/2018 Dayal
 D832,812 S 11/2018 Fyrlund
 10,317,939 B2 * 6/2019 Fukuda H04N 7/185
 D853,569 S * 7/2019 Seki D24/186
 D853,987 S * 7/2019 Kelley D14/205
 D878,326 S * 3/2020 Kiong D14/205
 D879,743 S * 3/2020 Lee D14/205
 D881,848 S * 4/2020 Kolton D14/223
 2012/0314351 A1 * 12/2012 Kroupa H02G 11/02
 361/679.01
 2013/0096641 A1 * 4/2013 Strother A61N 1/36021
 607/46
 2013/0115579 A1 * 5/2013 Taghavi A63F 13/98
 434/113
 2013/0156248 A1 * 6/2013 Nakajima H04R 5/033
 381/374
 2013/0190678 A1 * 7/2013 Andreas A61F 11/12
 604/20
 2013/0256345 A1 * 10/2013 Larkin H04R 1/105
 224/201
 2013/0274583 A1 10/2013 Heck
 2015/0196101 A1 7/2015 Sayal
 2016/0098138 A1 4/2016 Park

* cited by examiner

FIG. 1

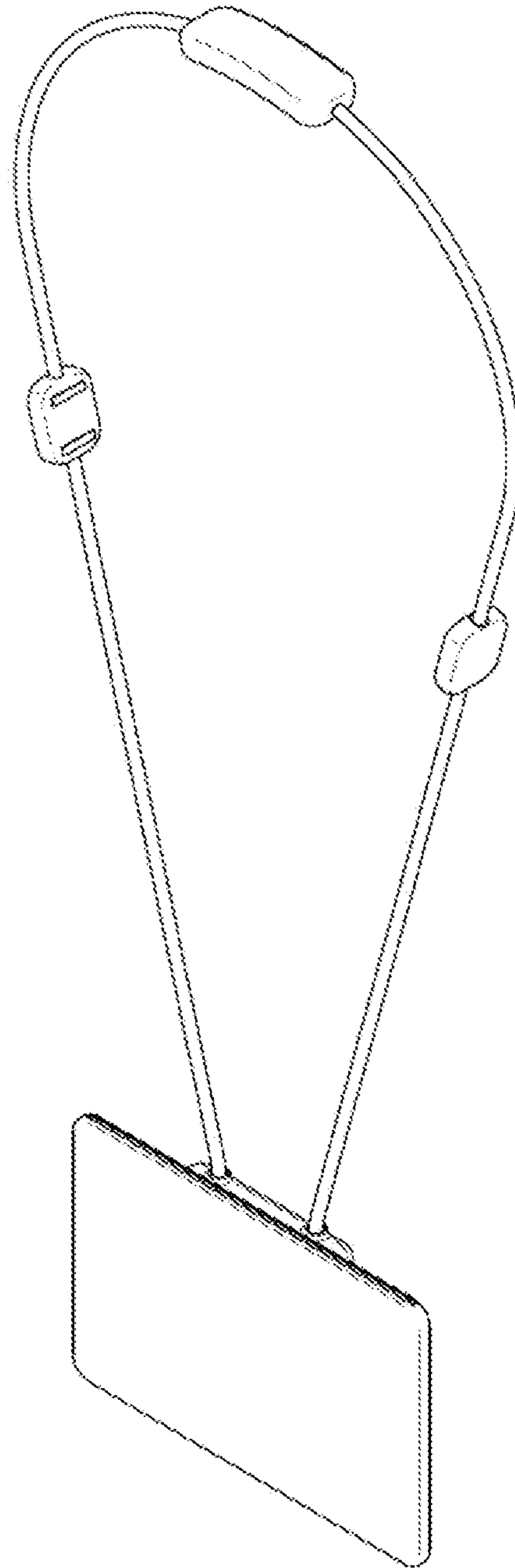


FIG. 2

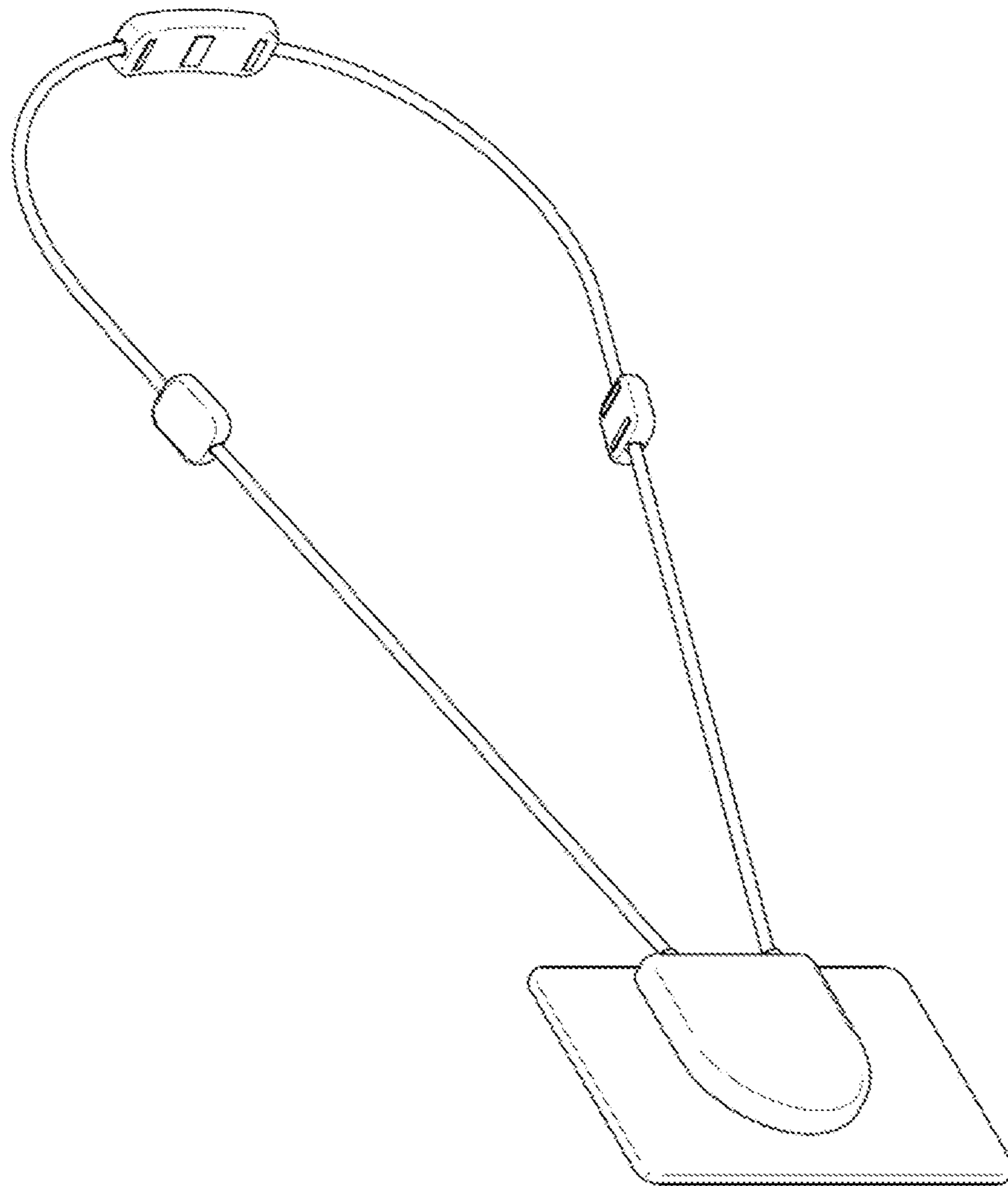


FIG. 3

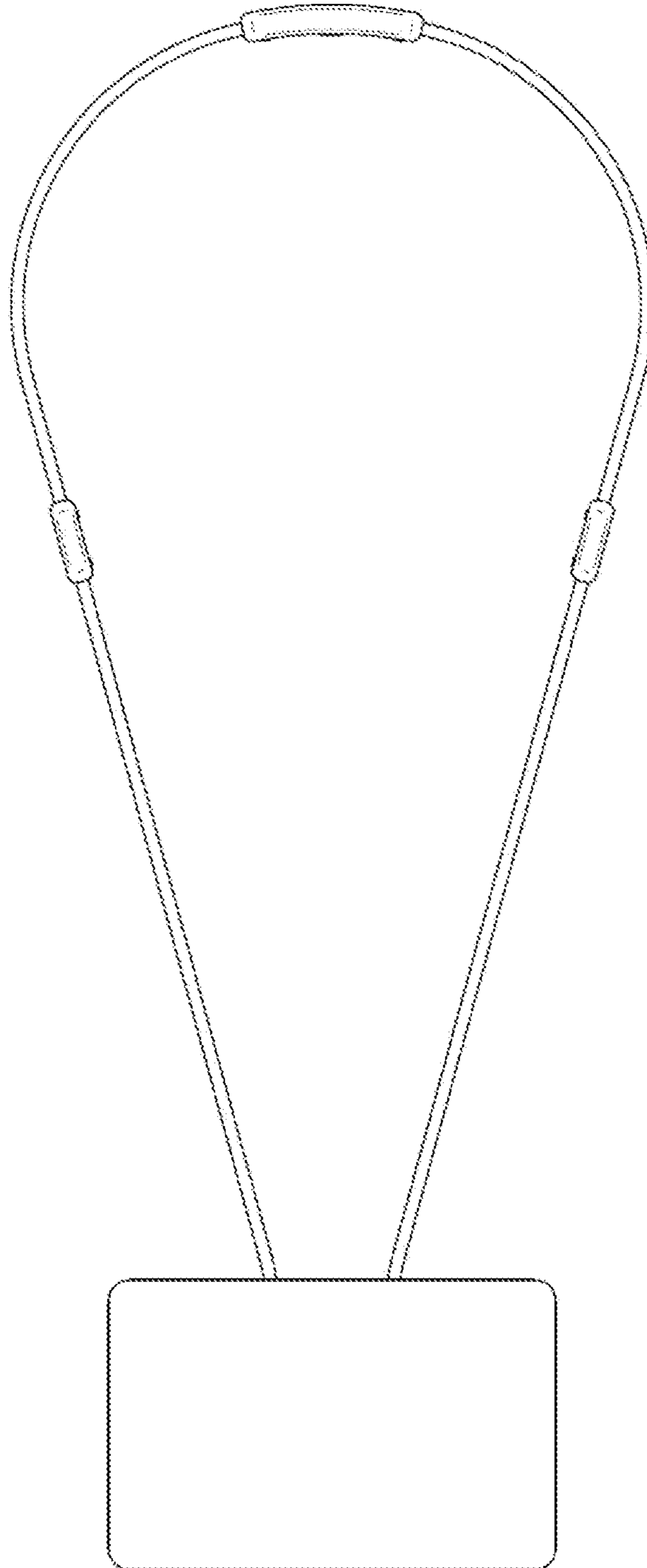


FIG. 4

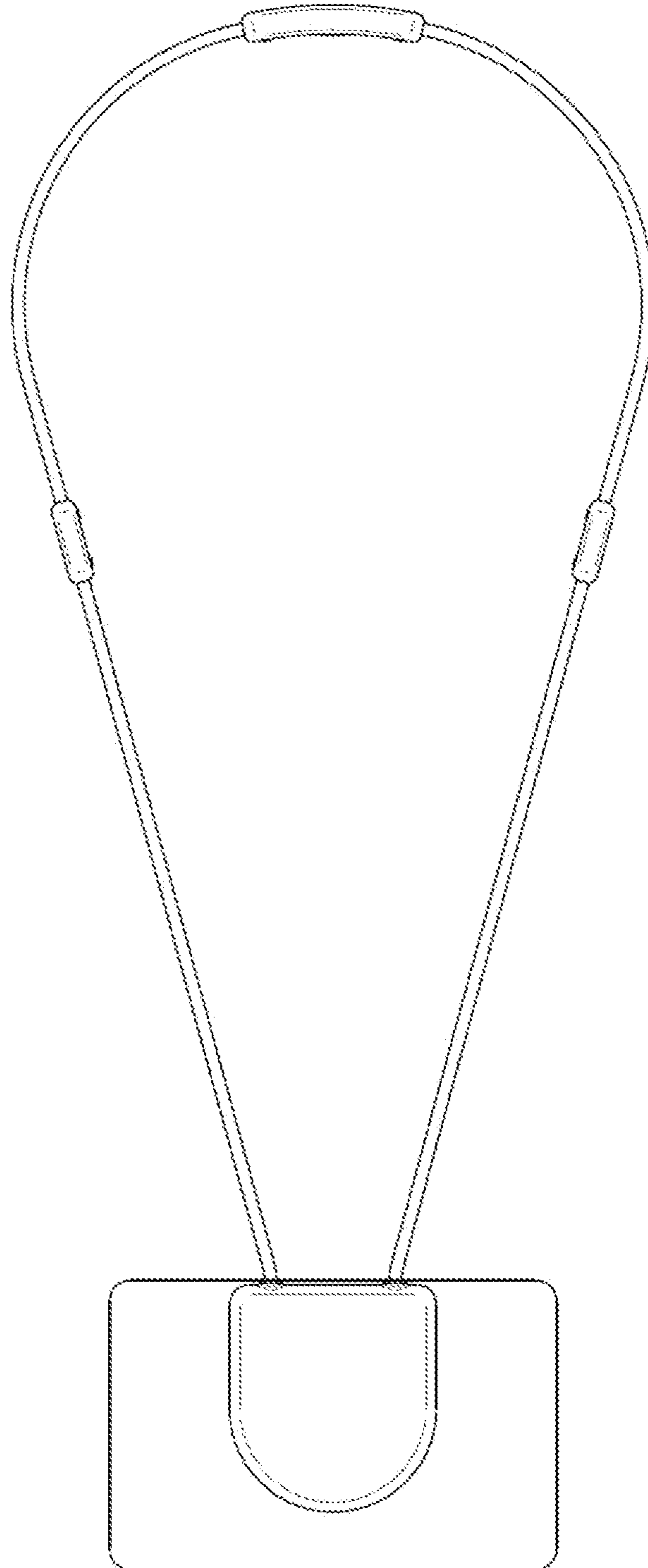


FIG. 5

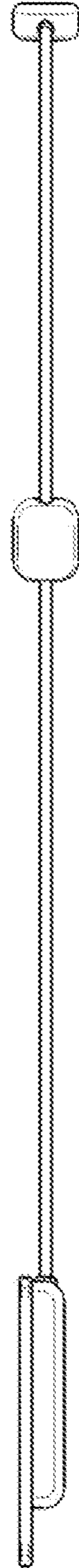


FIG. 6

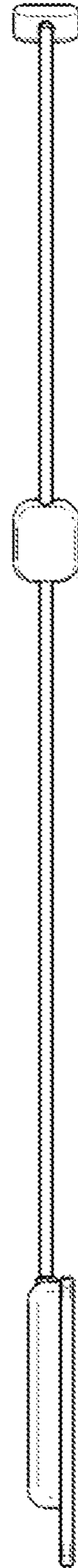


FIG. 7



FIG. 8

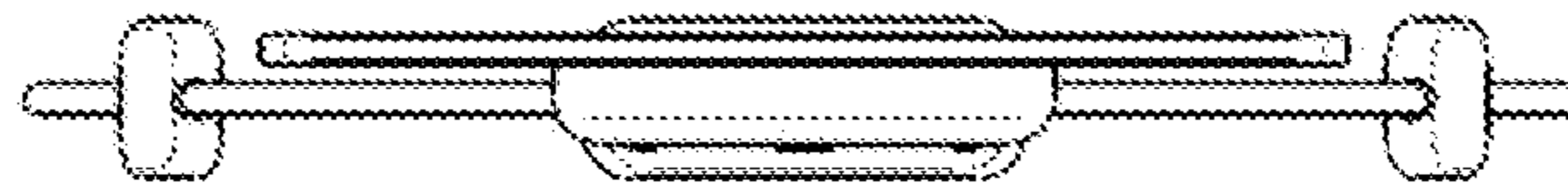


FIG. 9

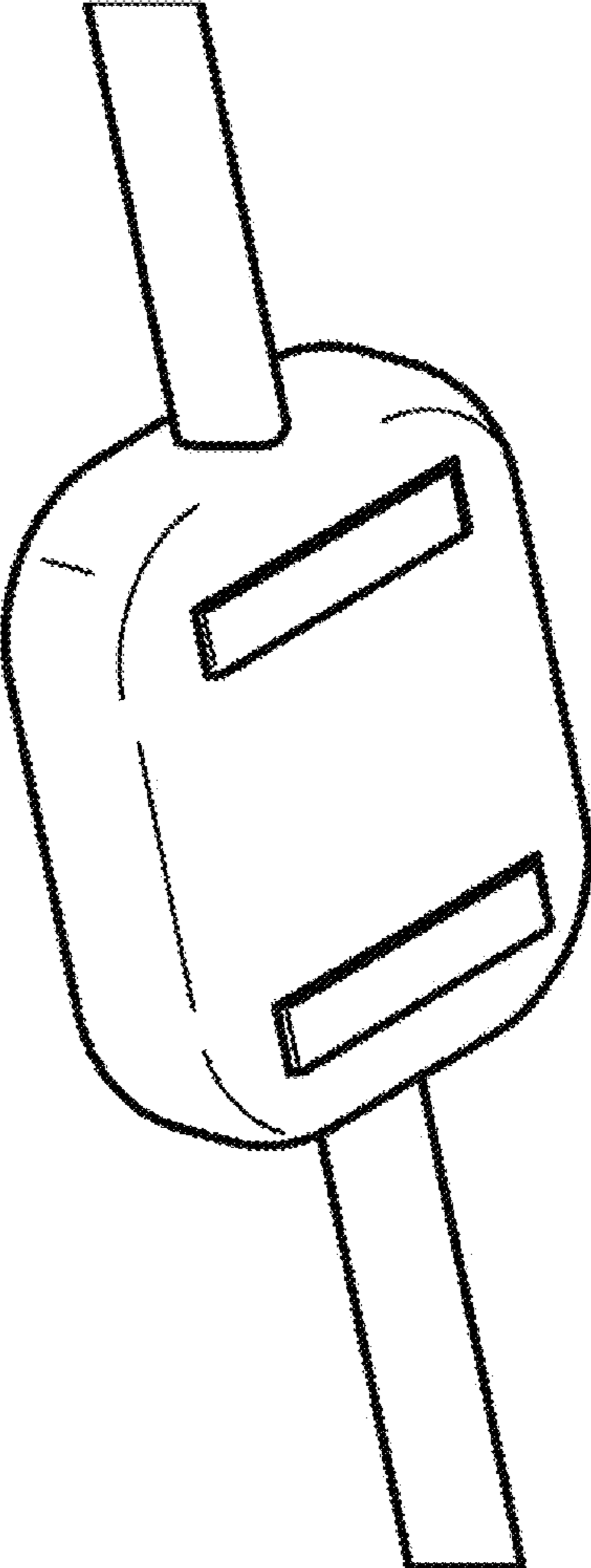


FIG. 10

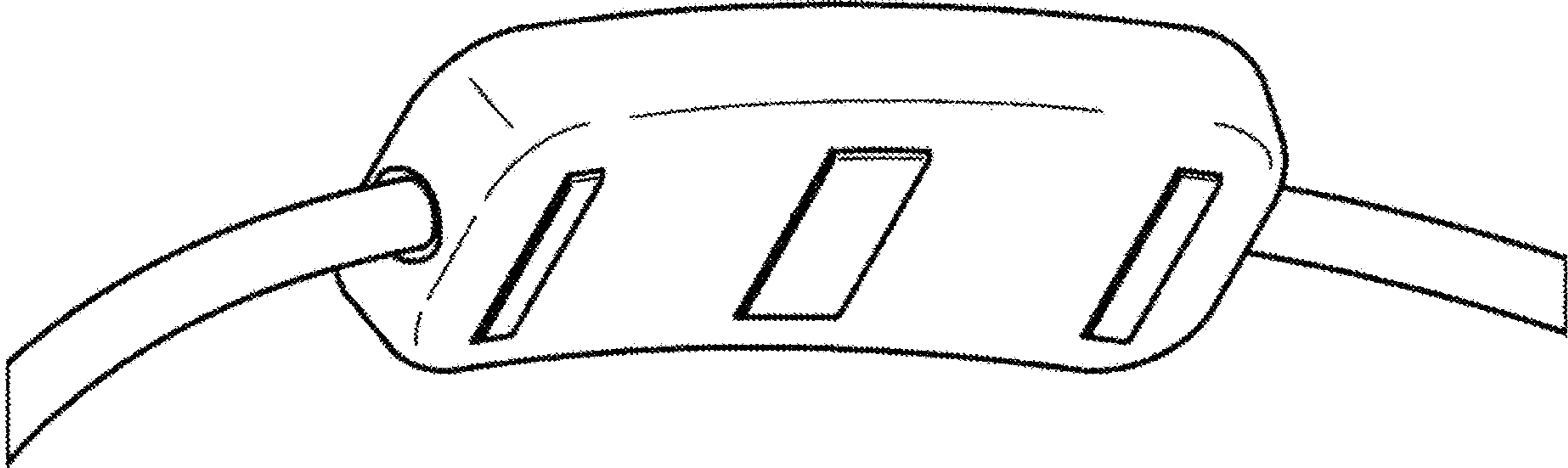


FIG. 11

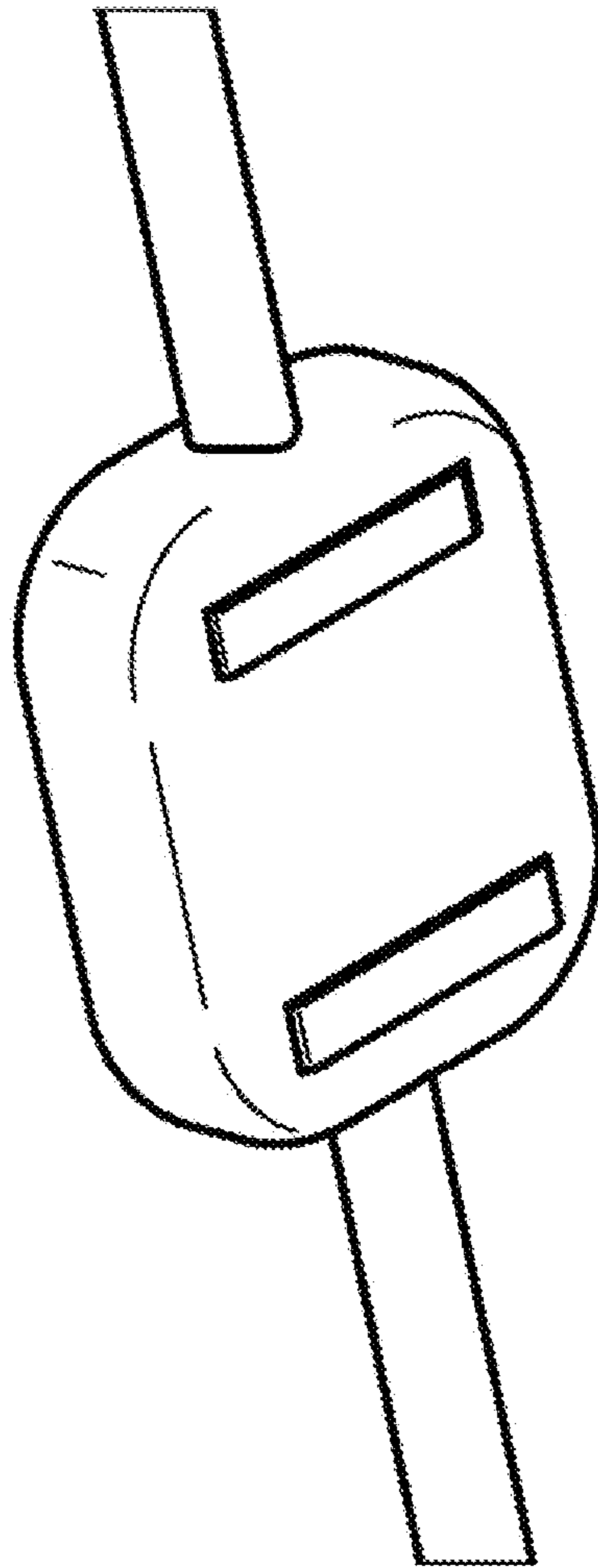


FIG. 12

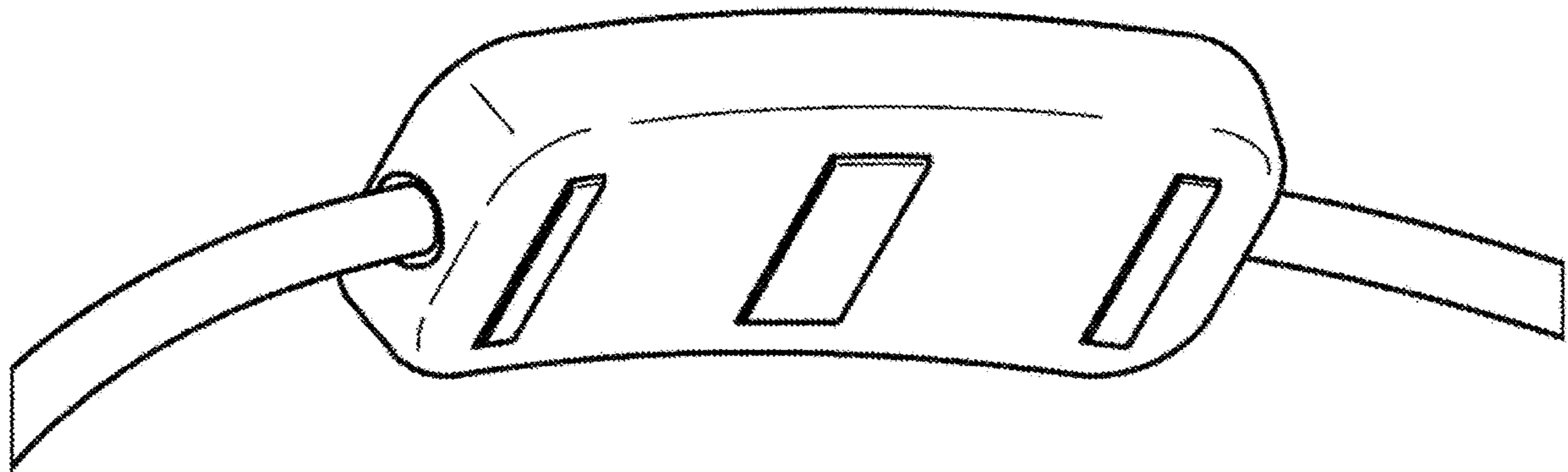


FIG. 13

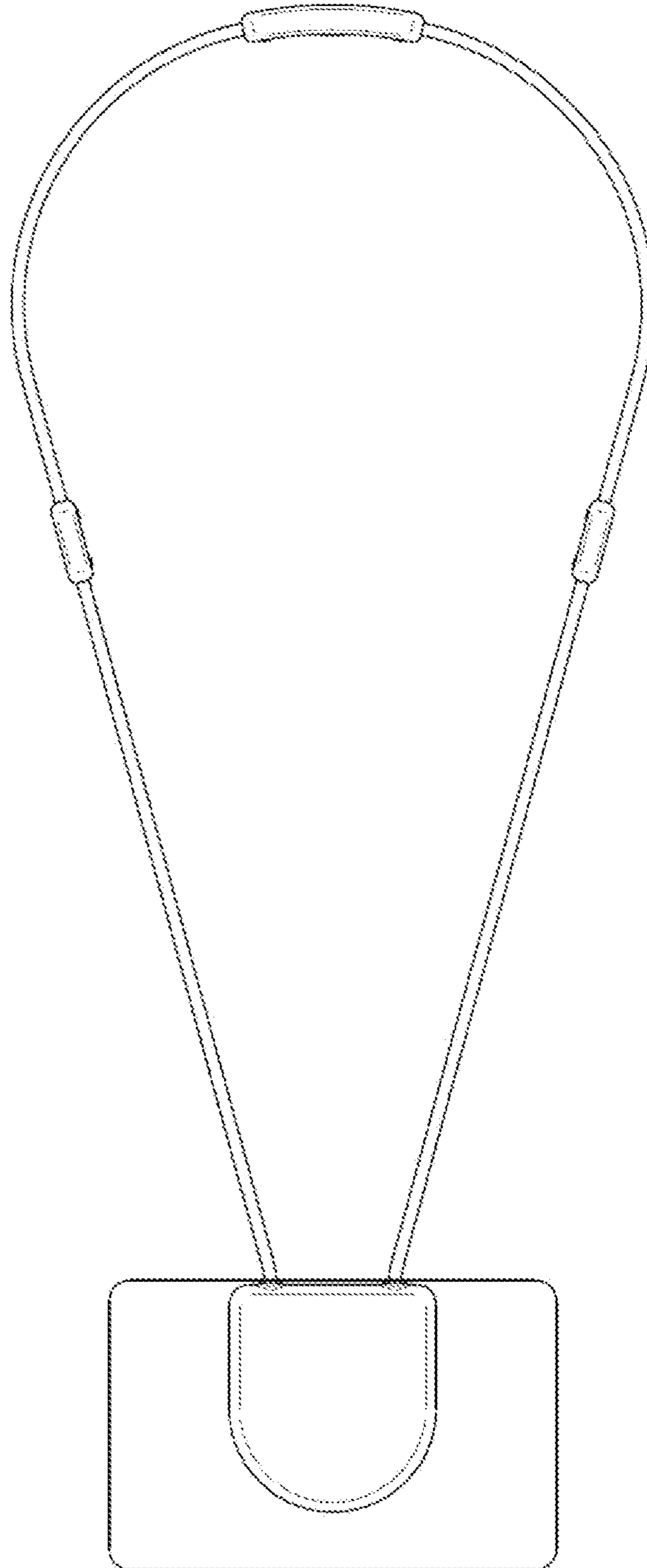


FIG. 14

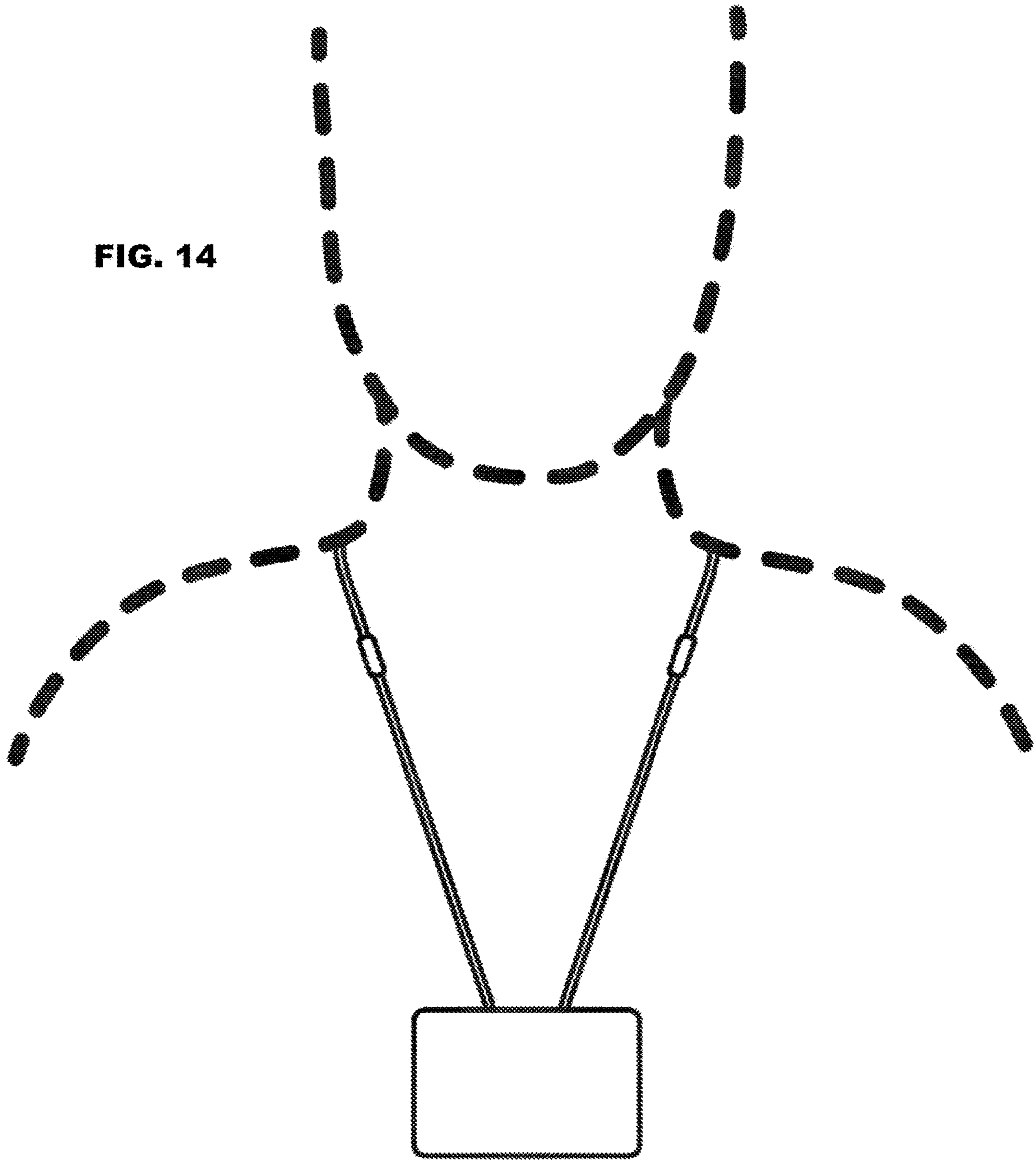


FIG. 15

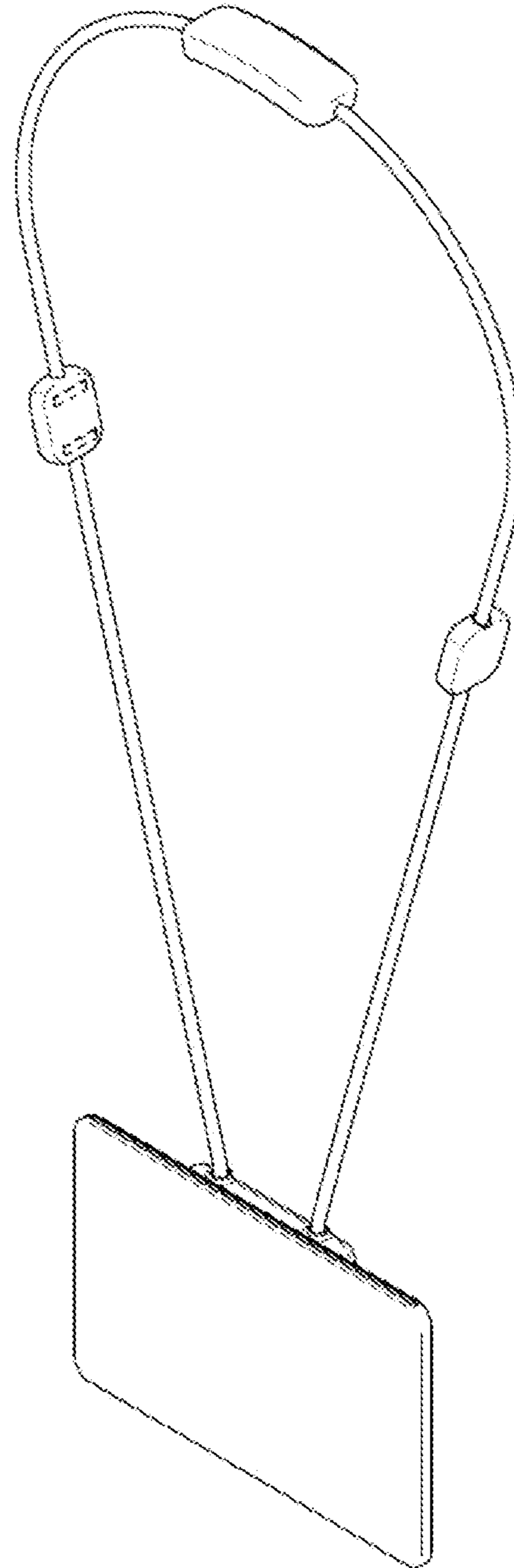


FIG. 16

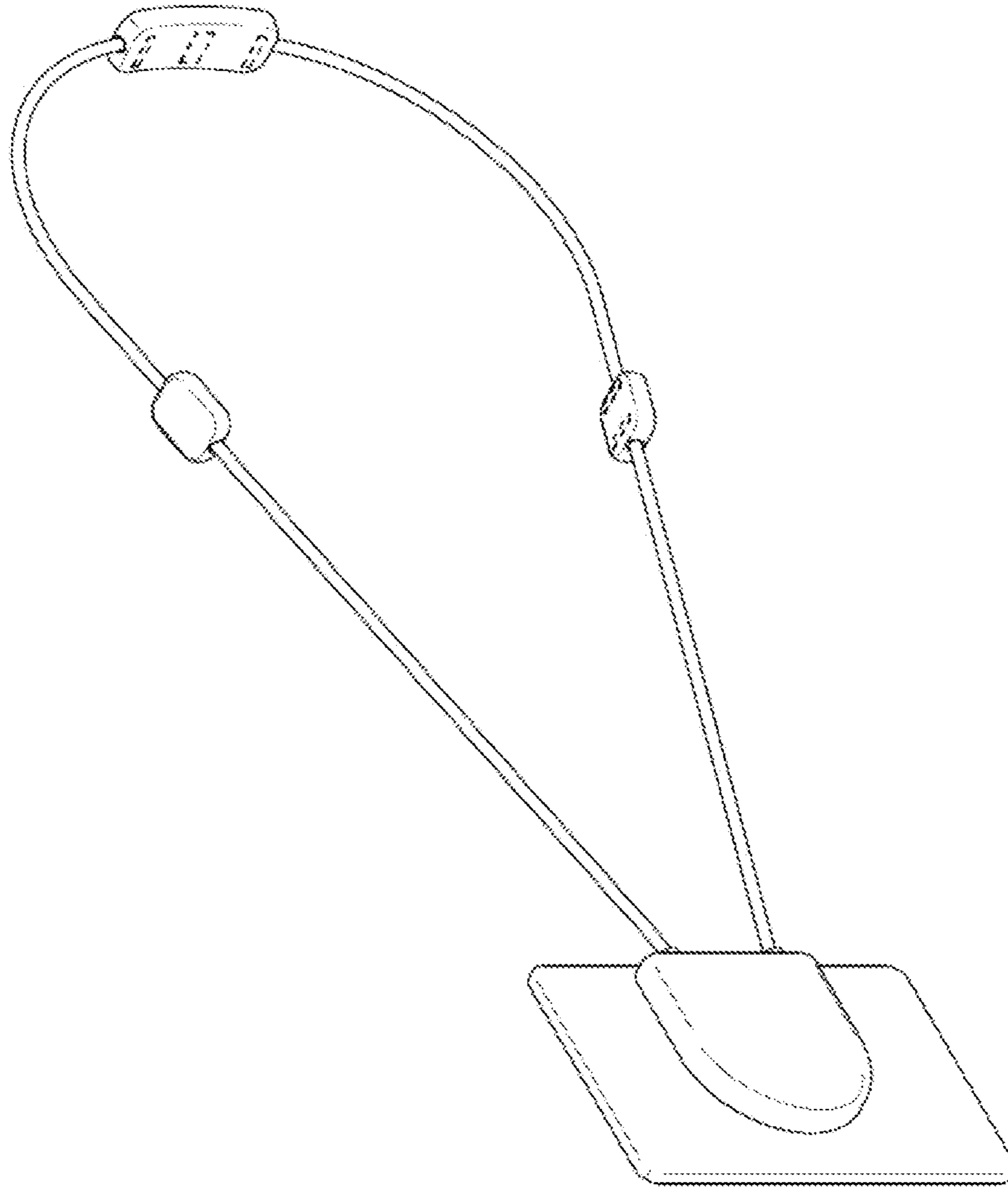


FIG. 17

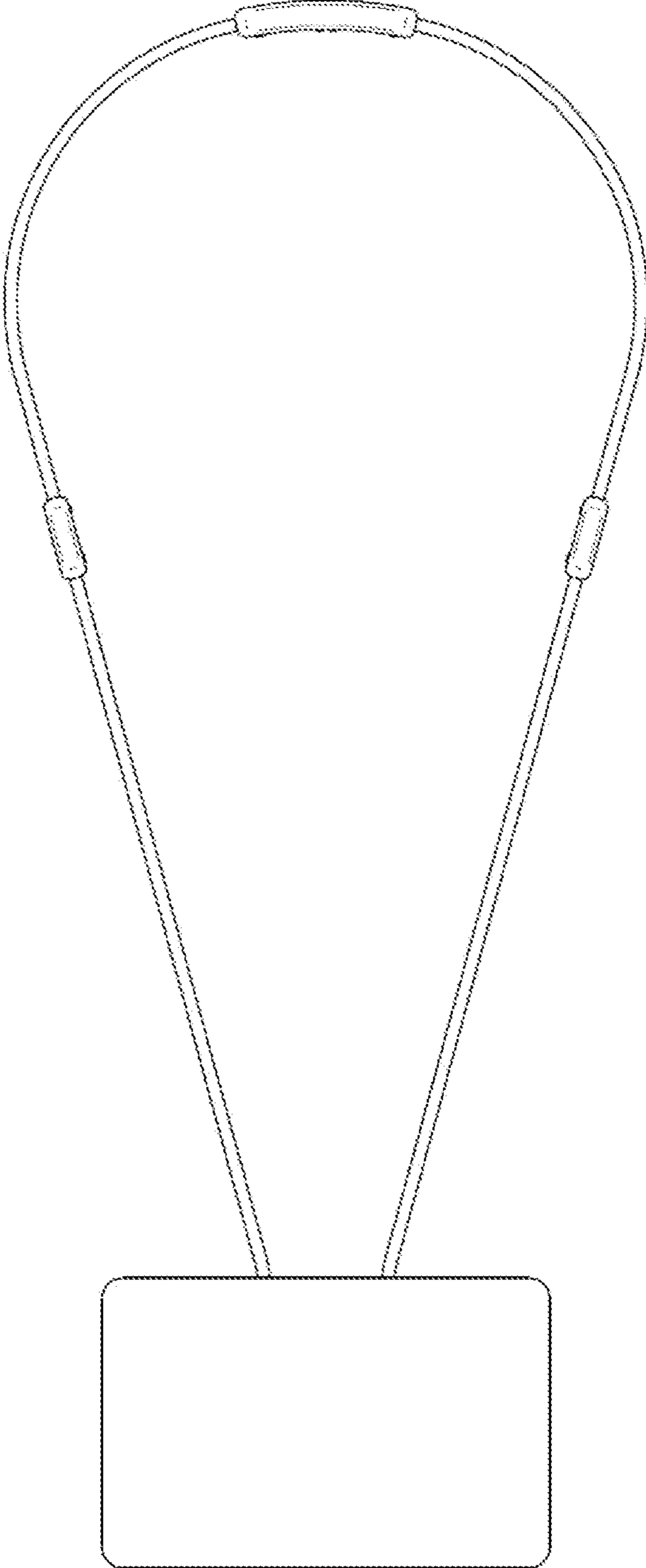


FIG. 18

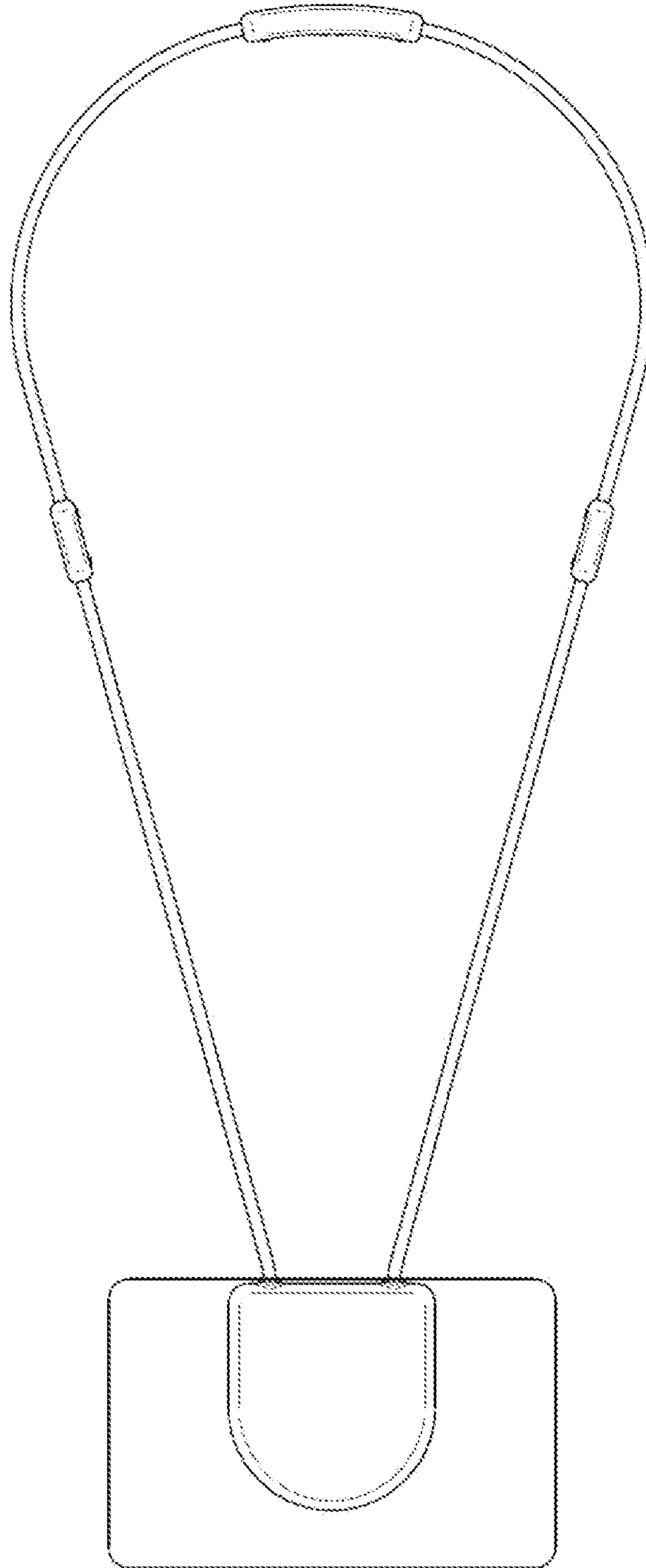


FIG. 19

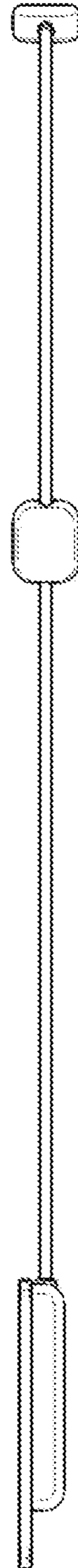


FIG. 20

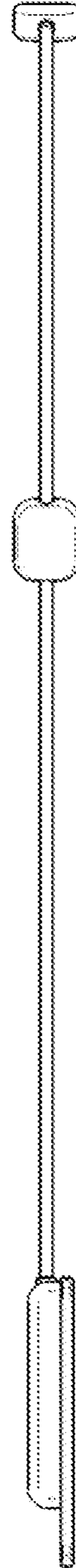


FIG. 21



FIG. 22

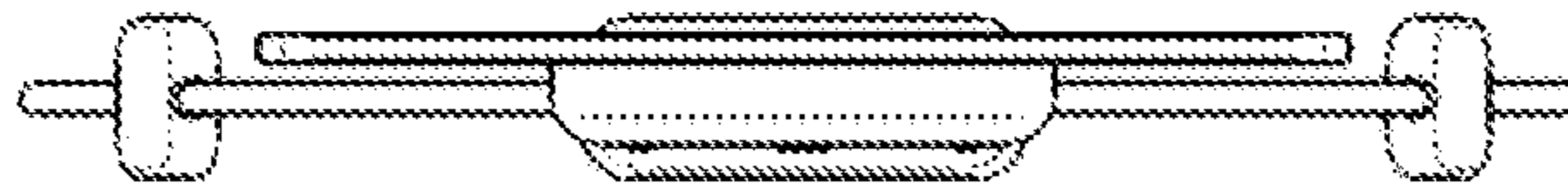


FIG. 23

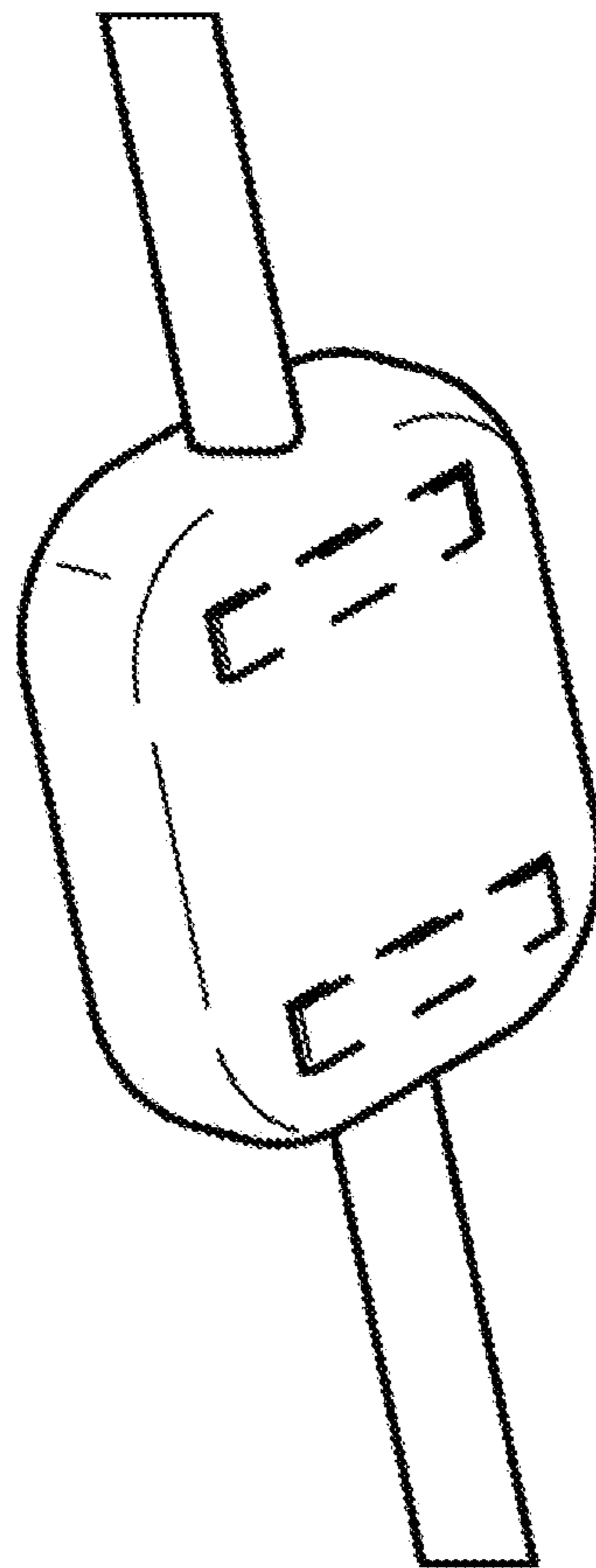


FIG. 24

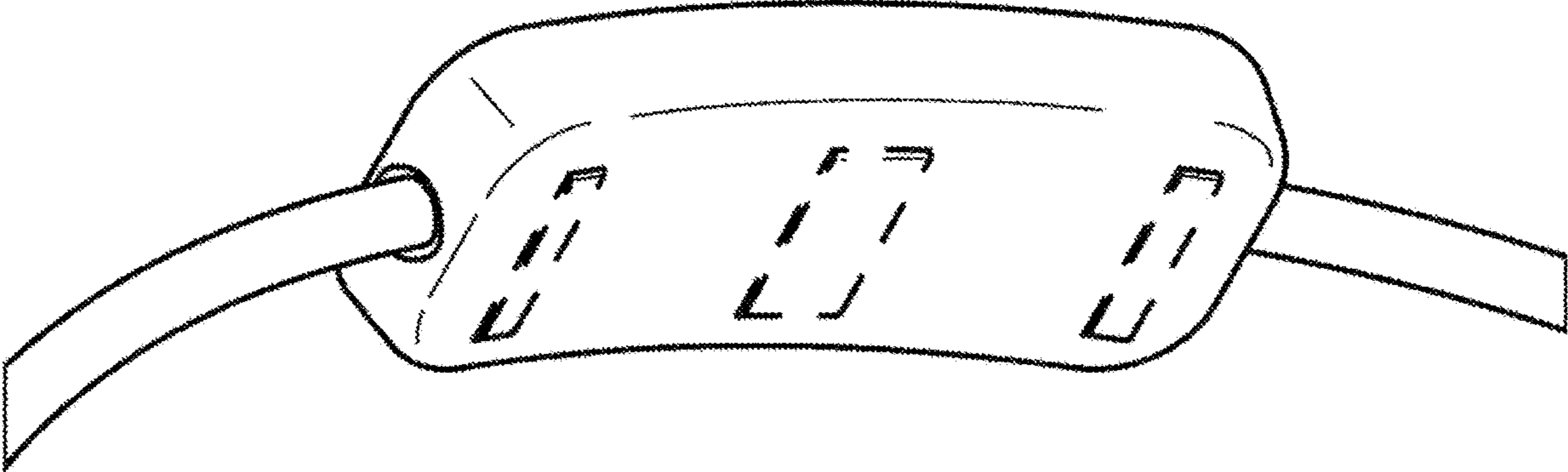


FIG. 25

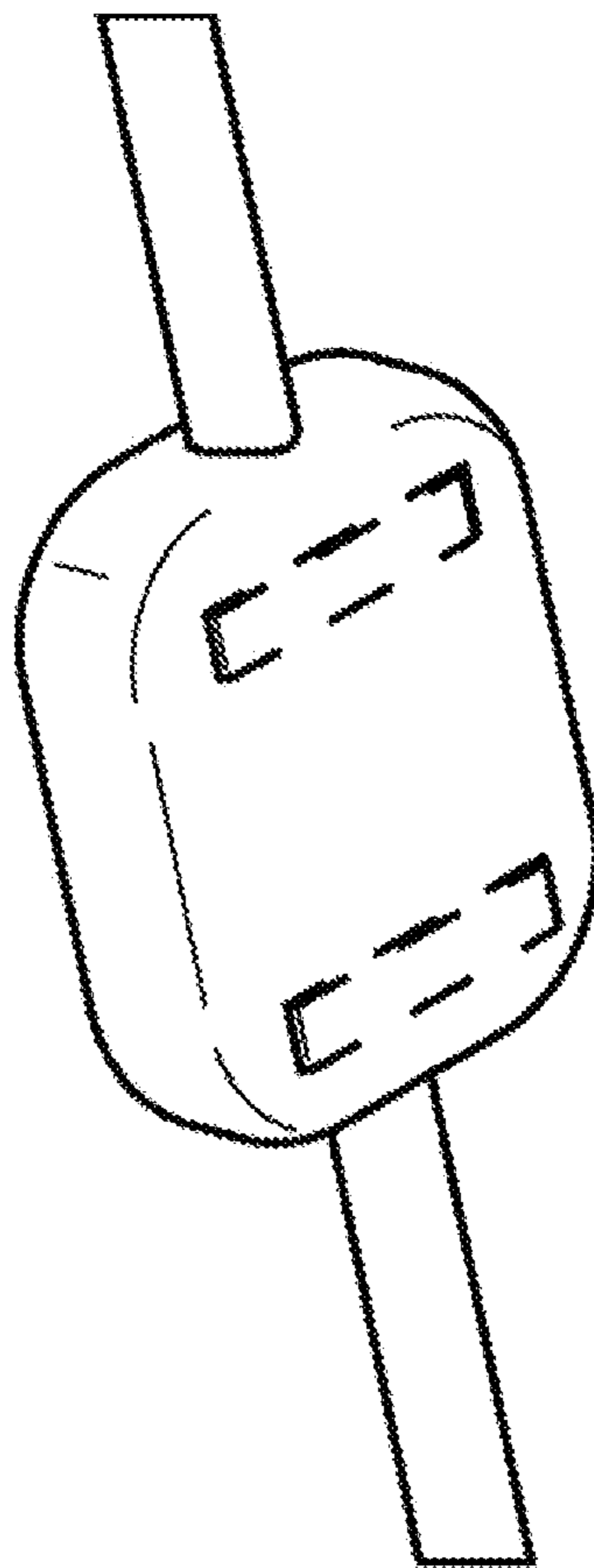


FIG. 26

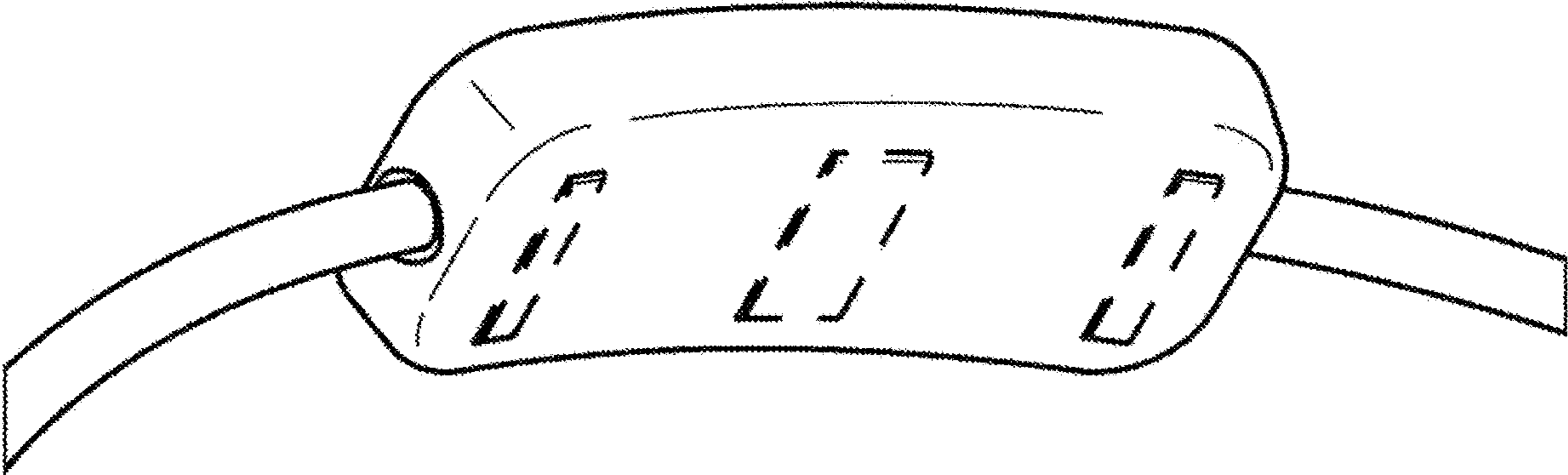


FIG. 27

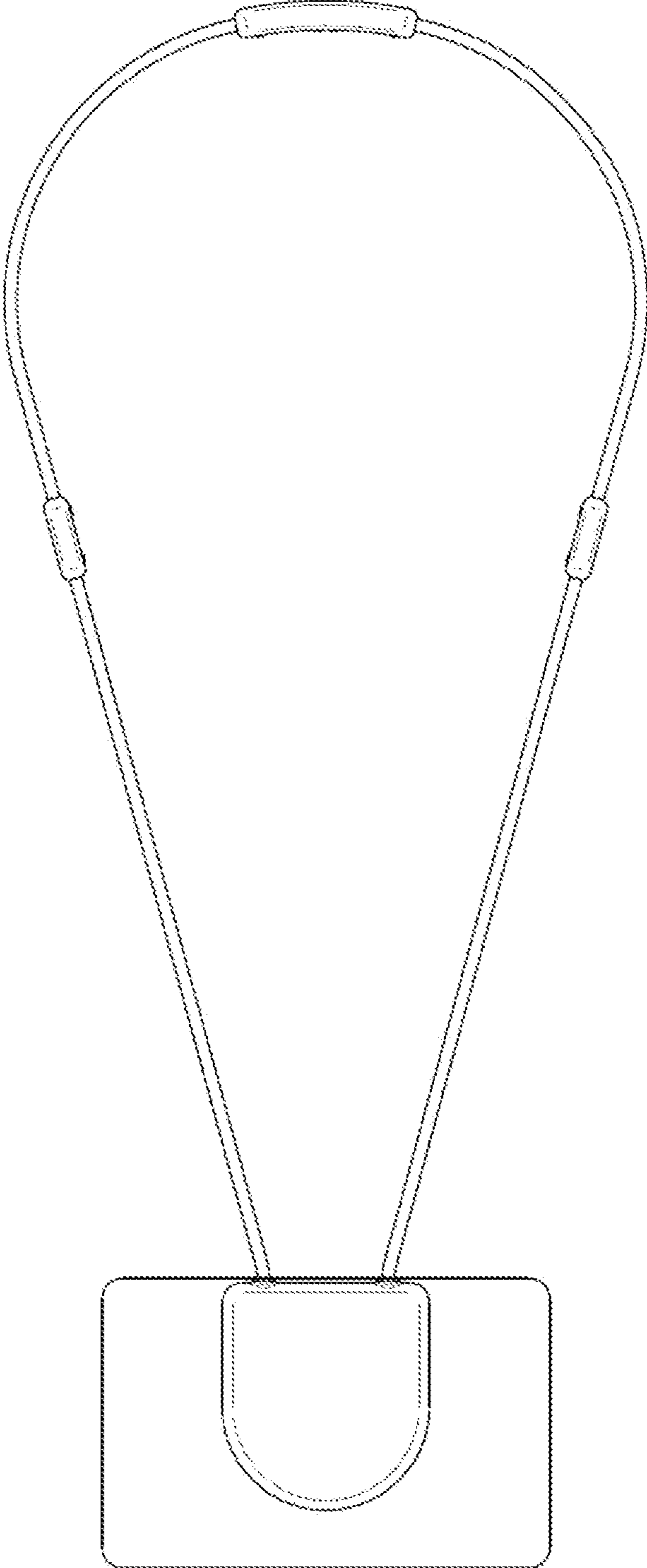


FIG. 28

