

US0D1074800S

(12) **United States Design Patent** (10) **Patent No.: US D1,074,800 S**
Hoshi et al. (45) **Date of Patent: ** May 13, 2025**

(54) **THERMAL HEAD FOR A PRINTER**

FOREIGN PATENT DOCUMENTS

(71) Applicants: **SATO HOLDINGS KABUSHIKI KAISHA**, Tokyo (JP); **KYOCERA Corporation**, Kyoto (JP)

EP 0 765 761 A1 4/1997
EP 1 914 083 A1 4/2008

(Continued)

(72) Inventors: **Kazuyuki Hoshi**, Saitama (JP); **Kazuya Shindo**, Kirishima (JP)

OTHER PUBLICATIONS

(73) Assignees: **SATO HOLDINGS KABUSHIKI KAISHA**, Tokyo (JP); **KYOCERA Corporation**, Kyoto (JP)

How to install a PCI or PCI-Express expansion card, by lowendguru, dated Aug. 5, 2014, youtube.com [online]. Retrieved Aug. 2, 2020 from internet <URL:https://www.youtube.com/watch?time_continue=22&v=p9pTv1S5gsw&feature=emb_logo> (Year: 2014).

(Continued)

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

Primary Examiner — Andrew T Nemeth

(21) Appl. No.: **29/735,163**

(74) *Attorney, Agent, or Firm* — Foley & Lardner LLP

(22) Filed: **May 19, 2020**

(57) **CLAIM**

The ornamental design for a thermal head for a printer as shown and described.

DESCRIPTION

Related U.S. Application Data

(62) Division of application No. 29/638,654, filed on Feb. 28, 2018, now Pat. No. Des. 936,139.

(51) **LOC (15) Cl.** **14-02**

(52) **U.S. Cl.**
USPC **D18/56**

(58) **Field of Classification Search**
USPC D14/299, 301–303, 307, 332, 386,
D14/420–425, 432, 439, 441, 443, 447,
(Continued)

FIG. 1 is a top perspective view of the claimed design;
FIG. 2 is a rear perspective view of the claimed design of FIG. 1;

FIG. 3 is a bottom perspective view of the claimed design of FIG. 1;

FIG. 4 is a front view of the claimed design of FIG. 1;

FIG. 5 is a rear view of the claimed design of FIG. 1;

FIG. 6 is a left side view of the claimed design of FIG. 1;

FIG. 7 is a right side view of the claimed design of FIG. 1;

FIG. 8 is a top view of the claimed design of FIG. 1; and,

FIG. 9 is a bottom view of the claimed design of FIG. 1.

The ornamental design which is claimed is shown in solid lines in the drawings and surfaces shown with shading lines. Shading lines in the drawings show contour and not surface ornamentation. The broken lines in the drawings illustrate portions of the article that form no part of the claimed design.

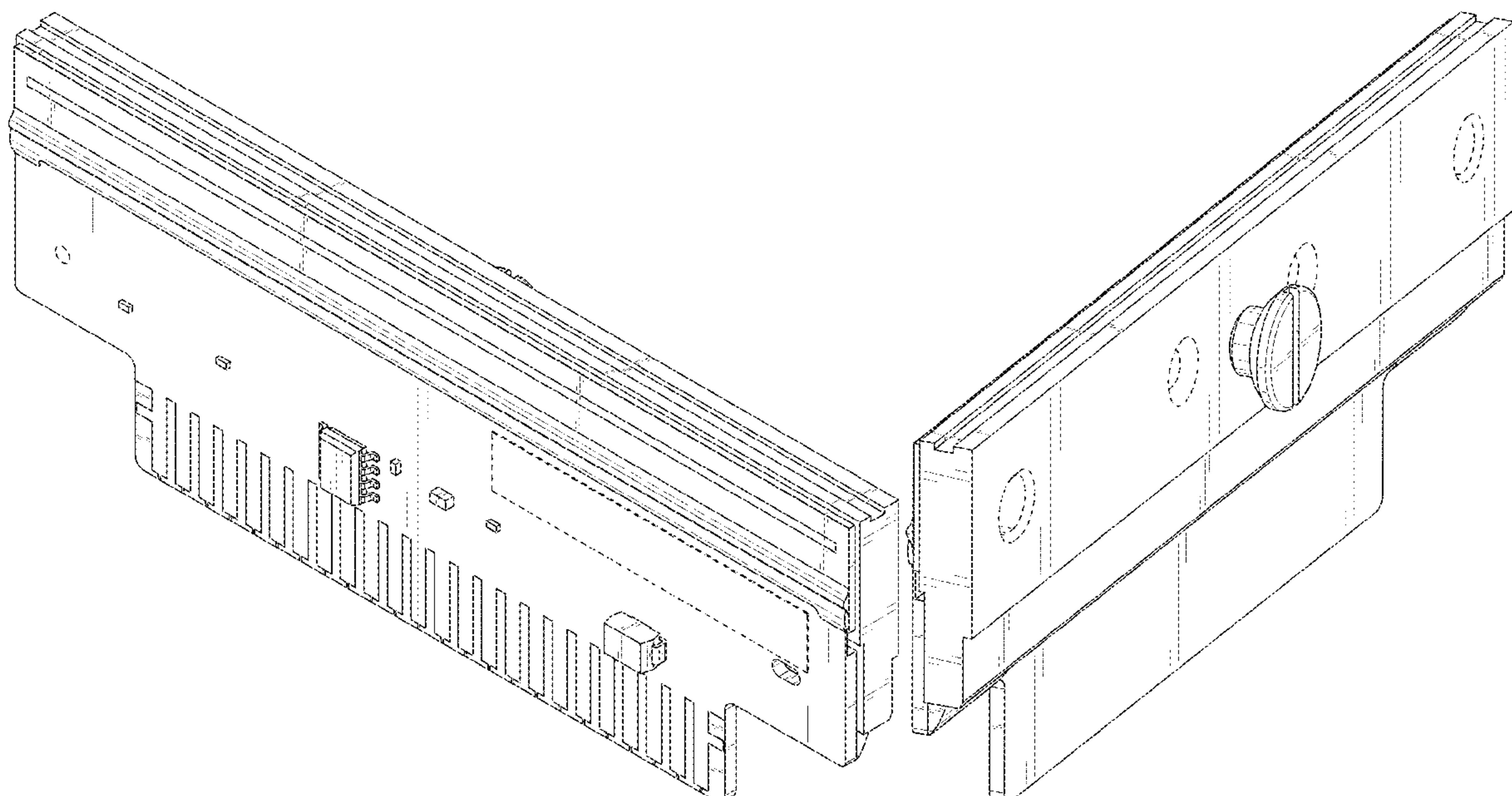
(56) **References Cited**

U.S. PATENT DOCUMENTS

D280,109 S 8/1985 Lewis
5,366,302 A 11/1994 Masumura et al.

(Continued)

1 Claim, 8 Drawing Sheets



(58) Field of Classification Search

USPC D14/462–471, 474, 480.5, 483–484;
D18/12, 14, 18–19, 36–41, 43–54, 54.1,
D18/55–59, 99; D24/216, 225, 229;
D13/147, 182
CPC .. G06K 15/12; G06K 15/14; B41J 3/00; B41J
3/28; B41J 11/00; B41J 11/58; B41J
15/12; B41J 15/042; G03G 15/00; G03G
15/0142; H04N 1/00129; H04N 1/00135;
H04N 1/00204; H04N 1/00278
See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

5,565,905 A 10/1996 Kajiya et al.
D375,975 S 11/1996 Koizumi et al.
5,694,159 A 12/1997 Kajiya et al.
5,779,371 A 7/1998 Aoyama et al.
D410,949 S 6/1999 Fowkes
D433,237 S 11/2000 Katz et al.
D434,909 S 12/2000 Seltzer
6,307,580 B1 10/2001 Yoshikawa
D465,772 S 11/2002 Poulter et al.
D542,344 S 5/2007 Duby et al.
7,399,130 B2 7/2008 Hirte et al.
D621,060 S 8/2010 Handique
8,068,127 B2 11/2011 Ochiai et al.
D652,446 S 1/2012 Brady et al.
D653,284 S 1/2012 Amidon et al.
D689,439 S 9/2013 Yu et al.
8,564,633 B2 10/2013 Matsushima et al.
8,610,752 B2 12/2013 Tsugaru
D733,056 S 6/2015 Yuan et al.
D753,073 S 4/2016 Sponring
D757,666 S 5/2016 Yokoo
9,662,900 B1 5/2017 Liu et al.
D798,822 S 10/2017 Jiang et al.
D843,334 S 3/2019 Takebayashi et al.
D846,955 S 4/2019 Ray et al.
D849,690 S 5/2019 Luo
D859,317 S 9/2019 Huang et al.
10,442,222 B2 10/2019 Hoshi
10,479,107 B2 11/2019 Hoshi
D873,341 S 1/2020 Horikawa et al.
D875,056 S 2/2020 Qi
10,668,755 B2 * 6/2020 Hoshi B41J 25/34
10,723,151 B2 * 7/2020 Hoshi B41J 25/34
D901,390 S 11/2020 Ma et al.
10,882,328 B2 * 1/2021 Hoshi B41J 2/33515
D910,746 S * 2/2021 Takeda D18/56
D919,700 S * 5/2021 Takeda D18/56
D936,139 S * 11/2021 Hoshi D18/56
12,097,715 B2 * 9/2024 Kato B41J 2/345
12,145,379 B2 * 11/2024 Yamashita B41J 2/33515
2001/0005216 A1 6/2001 Takahashi et al.
2002/0033874 A1 3/2002 Aubin et al.
2002/0048479 A1 4/2002 Bryant et al.
2002/0163204 A1 11/2002 Singleton et al.
2003/0146968 A1 8/2003 Milton
2008/0094463 A1 4/2008 Tsuchida et al.
2011/0193926 A1 8/2011 Matsushima et al.
2011/0193927 A1 8/2011 Matsushima et al.
2012/0212562 A1 8/2012 Tsugaru
2016/0347093 A1 12/2016 Ogasawara et al.
2018/0186155 A1 7/2018 Hoshi
2019/0039393 A1 2/2019 Hoshi
2019/0070874 A1 * 3/2019 Hoshi B41J 29/13
2019/0126636 A1 * 5/2019 Hoshi B41J 11/04
2019/0126645 A1 5/2019 Hoshi
2019/0299679 A1 10/2019 Ushiyama
2023/0150273 A1 * 5/2023 Yamashita B41J 2/3357
347/208
2023/0373226 A1 * 11/2023 Kyunai B41J 2/3355

FOREIGN PATENT DOCUMENTS

EP 2 641 745 A1 9/2013
GB 2047065 * 8/1995
JP 57-088131 U 5/1982
JP 07-081179 A 3/1995
JP H07-81179 A 3/1995
JP 07-256977 A 10/1995
JP 2989024 B2 12/1999
JP 2003-220722 A 8/2003
JP 2005-324374 A 11/2005
JP 2006-334952 A 12/2006
JP 2006-334953 A 12/2006
JP 2007-136931 A 6/2007
JP 2012-171114 A 9/2012
JP 2014-133364 A 7/2014
WO WO-2018/051767 A1 3/2018
WO WO-2018/051769 A1 3/2018
WO WO-2018/051770 A1 3/2018
WO WO-2018/051771 A1 3/2018

OTHER PUBLICATIONS

HP300312A-G02 16 pins SHEC C56 Thermal Head for Taico
Printer, dated Dec. 16, 2017, printhead-barcode.com [online]. Retrieved
Aug. 2, 2020 from the internet <URL:http://www.primthead-barcode.
com/index.php?main_page=product_info&products_id=
2965>(Year: 2017).
USPTO Notice of Allowance, U.S. Appl. No. 15/907,890, Aug. 11,
2020, 14 pages.
USPTO Office Action, U.S. Appl. No. 16/607,427, Aug. 7, 2020, 18
pages.
USPTO Office Action, U.S. Appl. No. 29/638,654, Aug. 6, 2020, 27
pages.
USPTO Notice of Allowance, U.S. Appl. No. 29/659,475, Oct. 20,
2020, 7 pages.
Japanese Office Action and English Translation, Application No.
2018-539603, Oct. 27, 2020, 10 pages.
Japanese Office Action and English Translation, Application No.
2018-539605, Nov. 4, 2020, 6 pages.
Japanese Office Action and English Translation, Application No.
2018-539606, Oct. 20, 2020, 6 pages.
Japanese Office Action and English Translation, Application No.
2018-539607, Nov. 4, 2020, 4 pages.
Extended European Search Report, Application No. 20213458.1,
Apr. 26, 2021, 18 pages.
USPTO Notice of Allowance, U.S. Appl. No. 29/638,654, Sep. 3,
2021, 11 pages.
USPTO Office Action, U.S. Appl. No. 17/092,620, Mar. 3, 2022, 16
pages.
U.S. Appl. No. 29/731,950, filed Apr. 20, 2020, Hoshi et al.
Notice of Allowance, U.S. Appl. No. 15/759,383, May 5, 2020, 9
pages.
Office Action issued in corresponding European Patent Application
No. 20213458.1 on Dec. 12, 2022.
Notice of Allowance, U.S. Appl. No. 16/607,427, Nov. 25, 2020, 11
pages.
IBM aCard IDE to LVD-SCSi Bridge Adapter, posted 2010, retrieved
Jun. 20, 2020 from https://www.amazon.com/aCard-LVD-SCSi-
Bridge-Adapter-AEC-7722/dp/B00BNHQ3BE/ref=V4ASHR022K3H
&dchild=1&keyword=.
USPTO Office Action, U.S. Appl. No. 29/659,475, Jun. 25, 2020, 10
pages.
Summons to Attend Oral Proceedings issued in connection with EP
Appl. Ser. No. 20213458.1 dated Mar. 31, 2023.
Kyocera Avery Monarch KPA-104-8TAW1-MM1 Thermal Label
Printer Print Head, posted NA [online], (retrieved Feb. 4, 2021).
Retrieved from the internet, https://www.ebay.com/c/1451731436?
iid=313285433051 (Year: NA), 4 pages.
USPTO Notice of Allowance, U.S. Appl. No. 29/731,950, Feb. 18,
2021, 33 pages.
USPTO Office Action, U.S. Appl. No. 29/638,654, Feb. 9, 2021, 11
pages.

(56)

References Cited

OTHER PUBLICATIONS

U.S. Appl. No. 15/759,061, filed Mar. 9, 2018, Kazuyuki Hoshi et al.
 U.S. Appl. No. 15/759,331, filed Mar. 12, 2018, Kazuyuki Hoshi et al.
 U.S. Appl. No. 15/759,337, filed Mar. 12, 2018, Kazuyuki Hoshi et al.
 U.S. Appl. No. 15/759,383, filed Mar. 12, 2018, Kazuyuki Hoshi et al.
 U.S. Appl. No. 15/907,890, filed Feb. 28, 2018, Kazuyuki Hoshi et al.
 U.S. Appl. No. 16/607,427, filed Oct. 23, 2019, Sato Holdings Kabushiki Kaisha.
 U.S. Appl. No. 29/659,475, filed Aug. 9, 2018, Yasuhide et al.
 Chinese Office Action and English translation, Application No. 201780055650.8, Mar. 3, 2020, 13 pages.
 Chinese Office Action, Application No. 201780045890.X, Jan. 2, 2020, 7 pages.
 Chinese Office Action, Application No. 201780045900.X, Jan. 2, 2020, 7 pages.
 Chinese Office Action, Application No. 201780045904.8, Dec. 26, 2019, 6 pages.
 European Office Action, Application No. 17 850 671.3, Mar. 18, 2020, 6 pages.
 European Office Action, Application No. 17 850 674.7, Mar. 18, 2020, 5 pages.
 European Search Report, Application No. 17850671.3, Jul. 30, 2019, 11 pages.
 European Search Report, Application No. 17850673.9, Jul. 9, 2019, 8 pages.
 European Search Report, Application No. 17850674.7, Jul. 30, 2019, 8 pages.
 European Search Report, Application No. 17850675.4, Jul. 16, 2019, 9 pages.
 Google translation of JP 2006-334953, published on Dec. 2006. (Year: 2006).

Google translation of JP 2007-136931, published on Jun. 2007, 5 pages.
 Human English Translation of JP 2006-334952, 39 pages.
 Machine-generated translation of JP 2006-334952, published on Dec. 2006, 17 pages.
 Notice of Allowance, U.S. Appl. No. 15/759,061, Jan. 15, 2020, 12 pages.
 USPTO Notice of Allowance, U.S. Appl. No. 15/759,061, Jan. 24, 2019, 15 pages.
 USPTO Notice of Allowance, U.S. Appl. No. 15/759,061, Nov. 13, 2019, 13 pages.
 USPTO Notice of Allowance, U.S. Appl. No. 15/759,331, Jan. 31, 2019, 13 pages.
 USPTO Notice of Allowance, U.S. Appl. No. 15/759,331, May 8, 2019, 21 pages.
 USPTO Notice of Allowance, U.S. Appl. No. 15/759,337, Jul. 15, 2019, 9 pages.
 USPTO Notice of Allowance, U.S. Appl. No. 15/759,383 Dec. 3, 2019, 9 pages.
 USPTO Office Action, U.S. Appl. No. 15/759,061, May 7, 2019, 14 pages.
 USPTO Office Action, U.S. Appl. No. 15/759,337, Apr. 10, 2019, 11 pages.
 USPTO Office Action, U.S. Appl. No. 15/759,383, Jan. 13, 2020, 6 pages.
 USPTO Office Action, U.S. Appl. No. 15/759,383, Jul. 23, 2019, 12 pages.
 USPTO Office Action, U.S. Appl. No. 15/759,383, Apr. 12, 2019, 12 pages.
 USPTO Office Action, U.S. Appl. No. 15/907,890, Aug. 7, 2019, 16 pages.
 USPTO Restriction Office Action, U.S. Appl. No. 29/659,475, Feb. 20, 2020, 14 pages.
 Extended European Search Report Issued in European Patent Application No. 18907605.2 on Feb. 25, 2021, 7 pages.

* cited by examiner

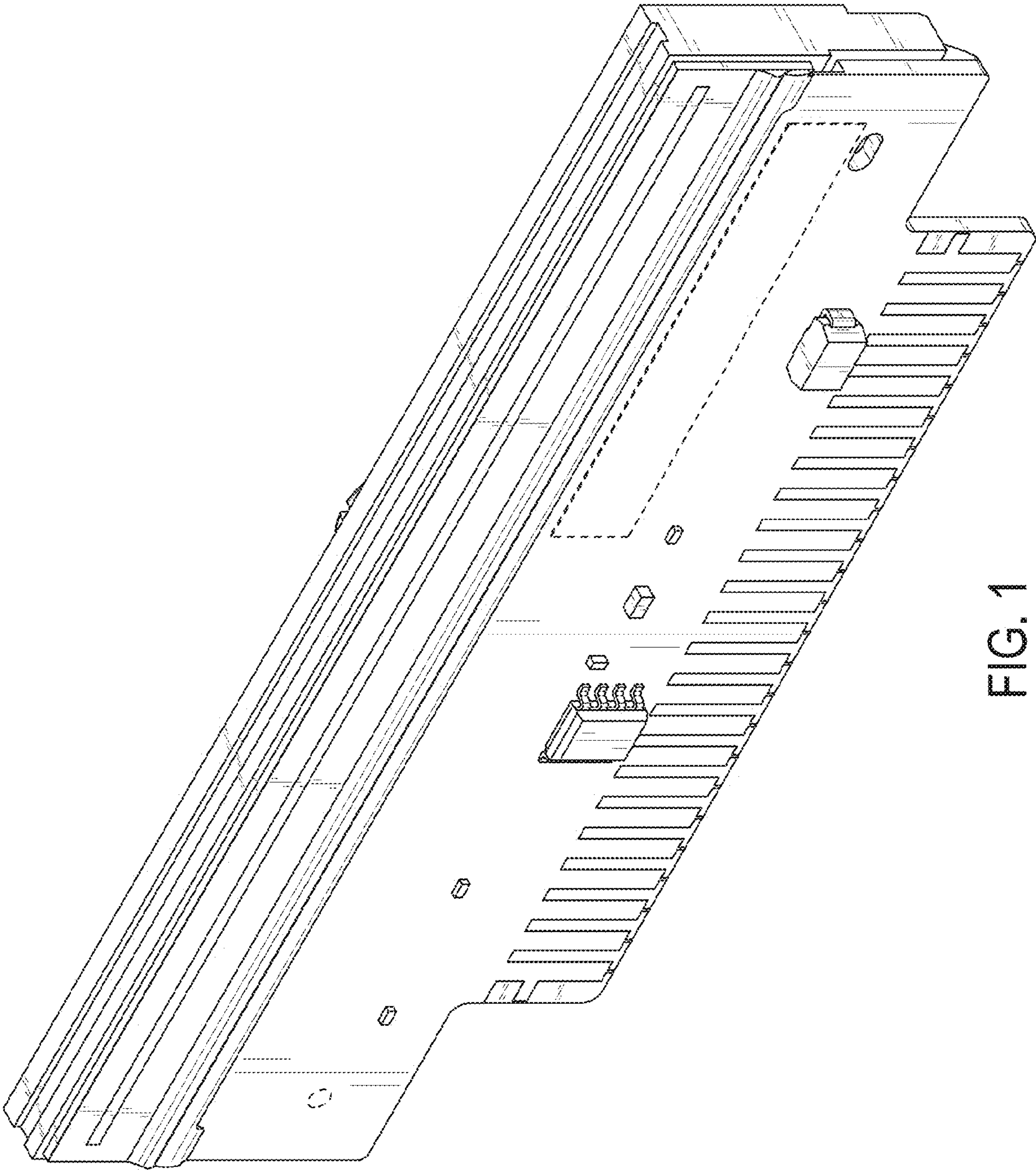


FIG. 1

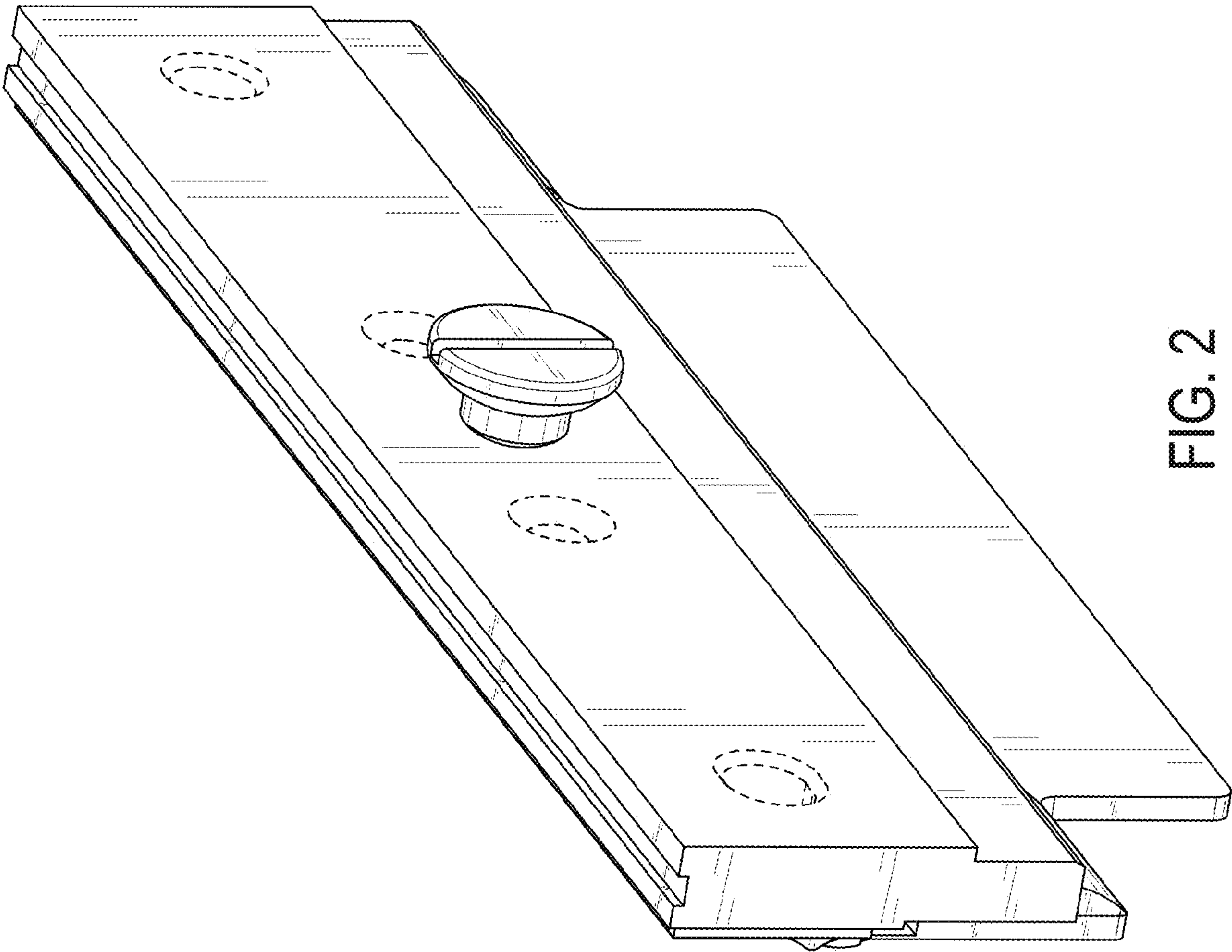


FIG. 2

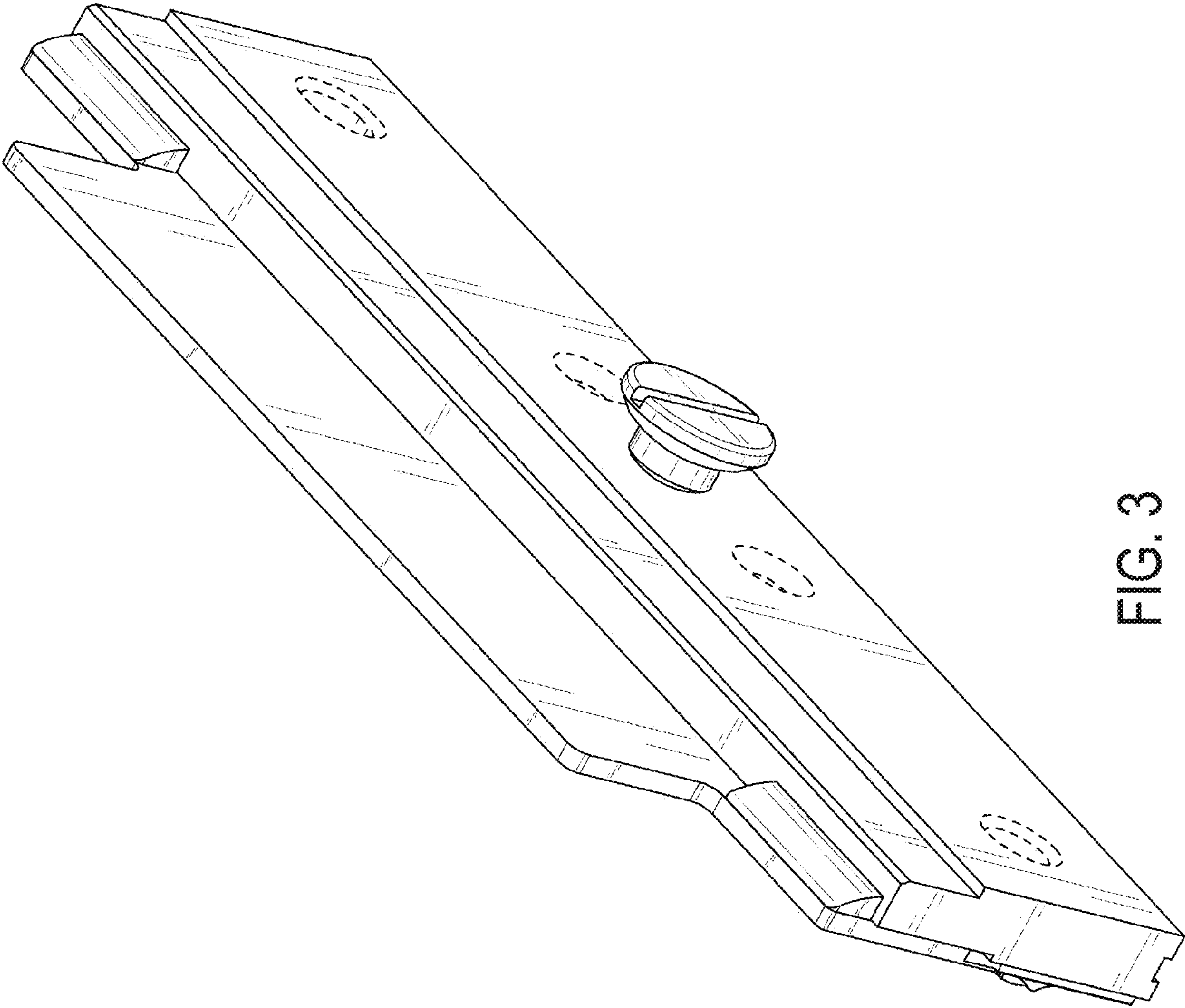


FIG. 3

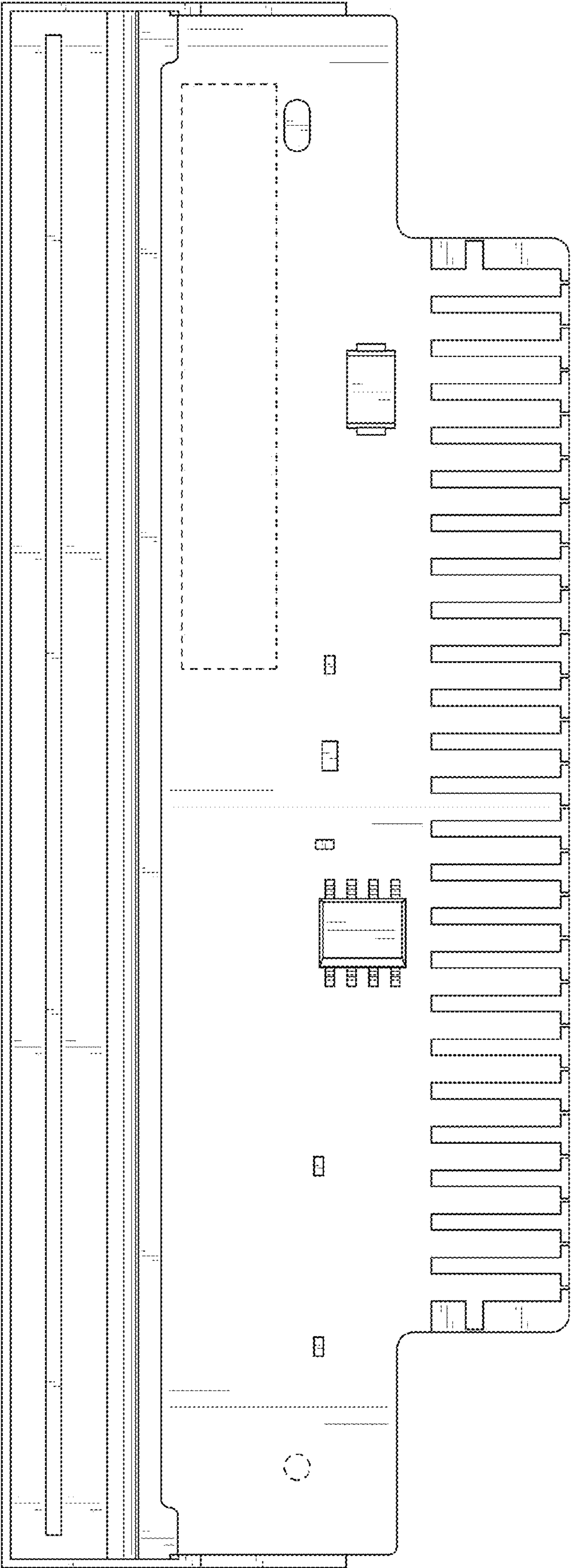


FIG. 4

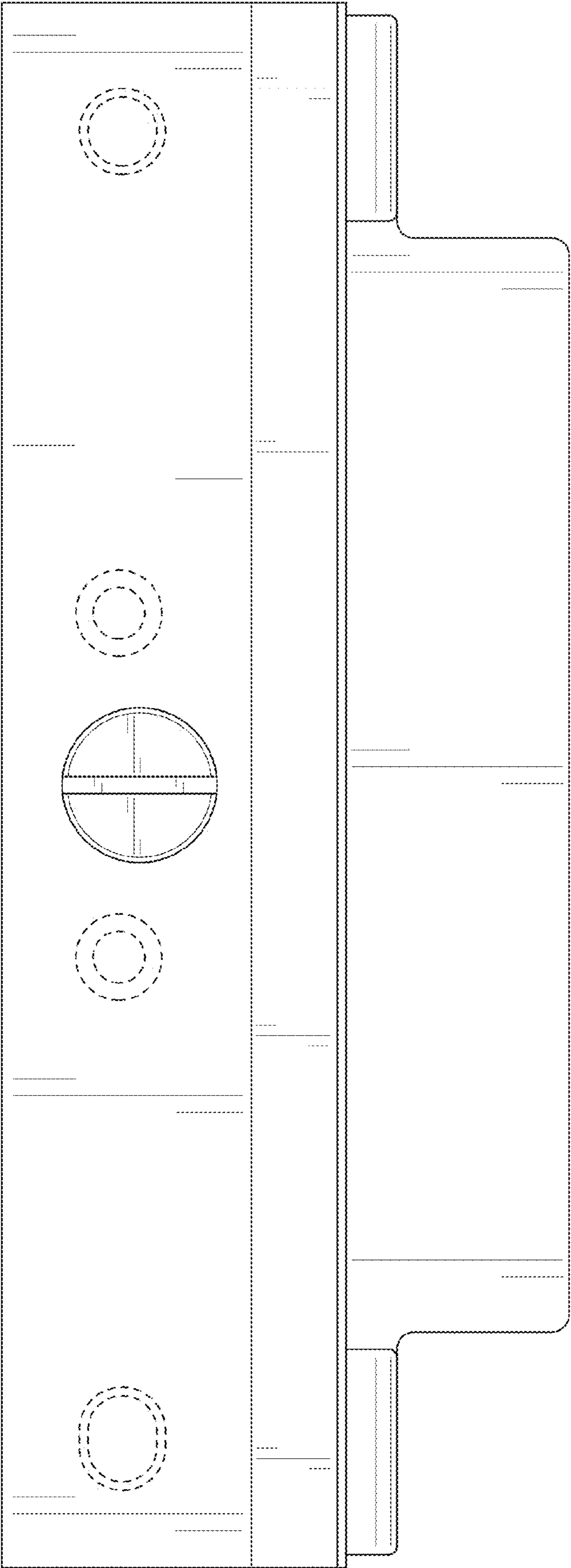


FIG. 5

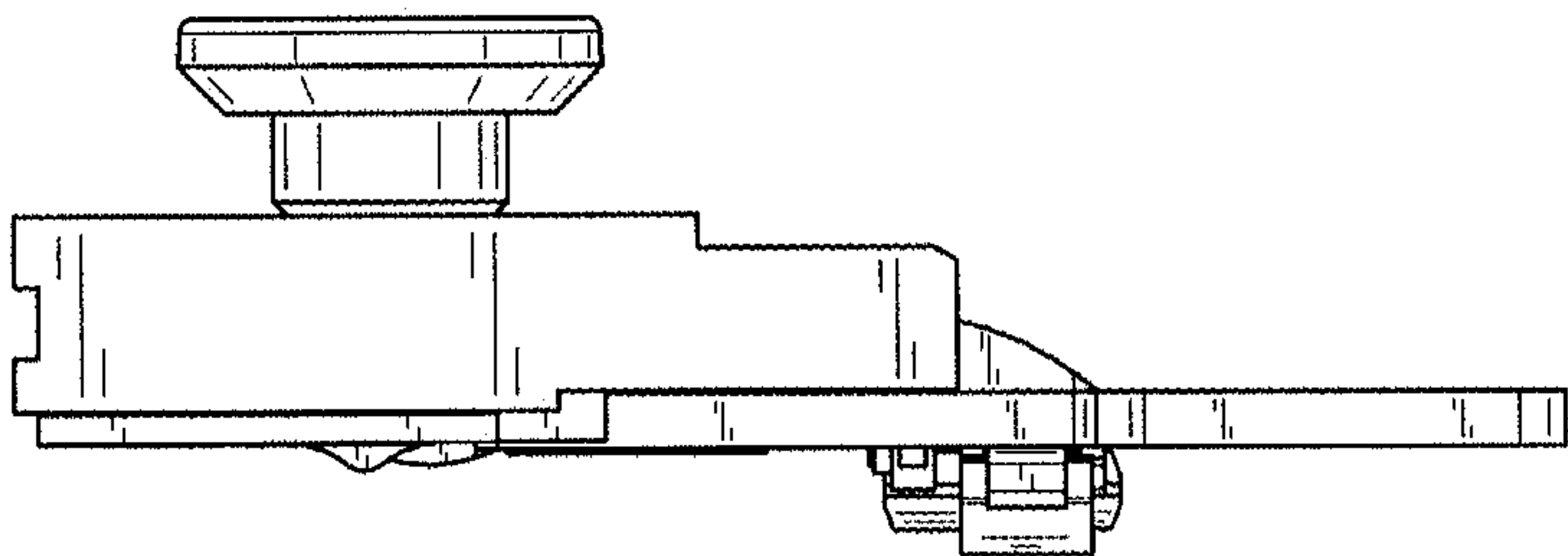


FIG. 7

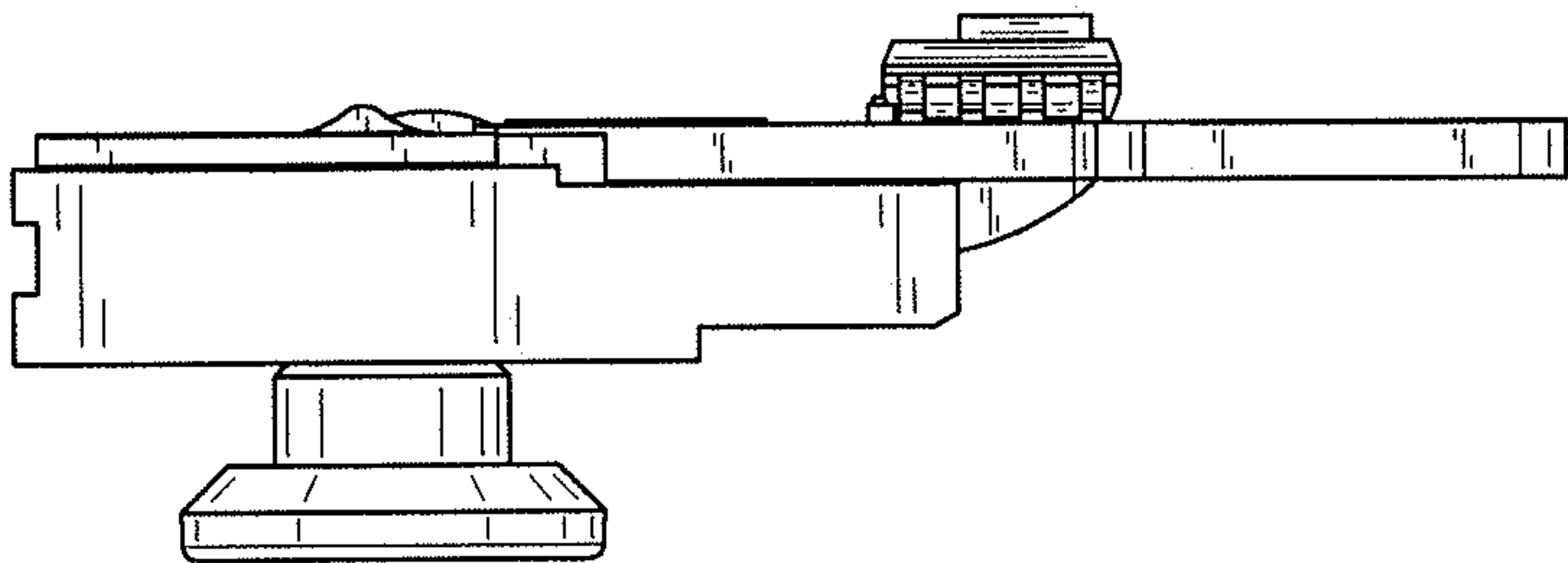


FIG. 6

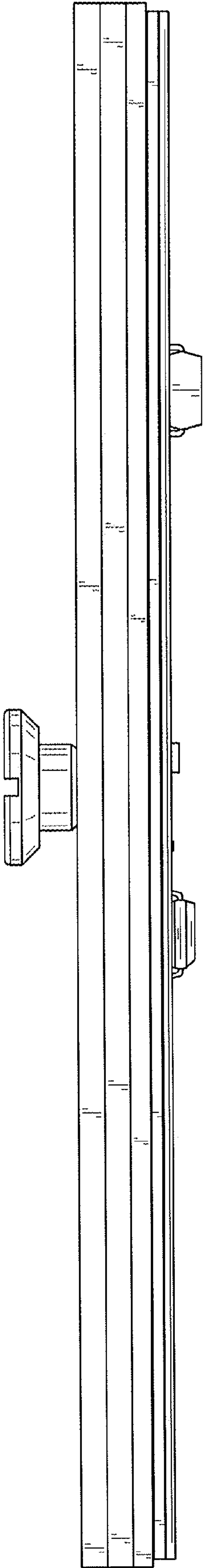


FIG. 8

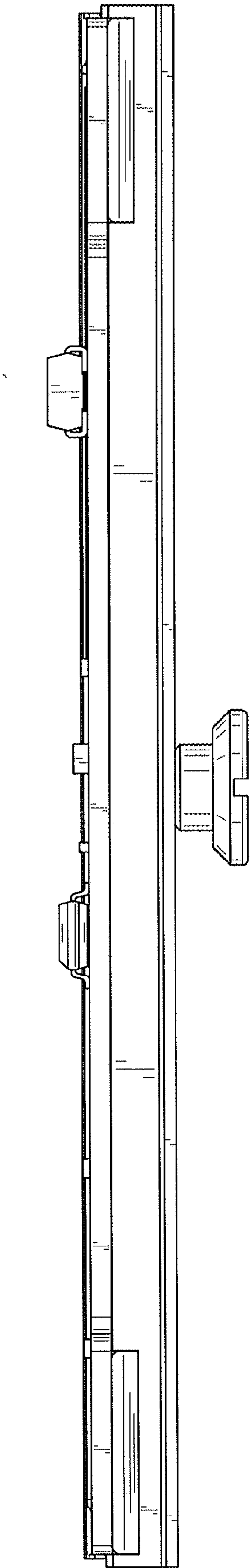


FIG. 9