



US00D652446S

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

(10) **Patent No.:** **US D652,446 S**
(45) **Date of Patent:** **** Jan. 17, 2012**

- (54) **PRINthead ASSEMBLY**
- (75) Inventors: **David A. Brady**, Plainfield, NH (US);
Frederick H. Amidon, Jr., Cornish, NH
(US); **Marc K. Torrey**, Windsor, VT
(US)
- (73) Assignee: **FUJIFILM Dimatix, Inc.**, Lebanon, NH
(US)

- 5,871,292 A 2/1999 Johnson
- 5,885,455 A 3/1999 Graus et al.
- 5,936,650 A 8/1999 Ouchida et al.
- 5,939,816 A 8/1999 Culp
- 6,000,792 A 12/1999 Koizumi et al.
- 6,068,367 A 5/2000 Fabbri et al.
- 6,084,618 A 7/2000 Baker et al.
- 6,152,559 A 11/2000 Kojima et al.
- 6,217,164 B1 4/2001 Hino
- 6,224,709 B1 5/2001 Takemoto et al.
- 6,227,645 B1* 5/2001 Takahashi et al. 347/20
- 6,350,013 B1 2/2002 Scheffelin et al.

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

(Continued)

(21) Appl. No.: **29/339,562**

FOREIGN PATENT DOCUMENTS

(22) Filed: **Jul. 2, 2009**

CN 1980795 A 6/2007

(51) **LOC (9) Cl.** **18-02**

(Continued)

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

OTHER PUBLICATIONS

(58) **Field of Classification Search** D18/56,
D18/40, 43; 347/86, 87, 20, 40, 49, 42
See application file for complete search history.

Office Action from co-pending Chinese App 200580017004.x dated
Dec. 26, 2008 (222CN1).

(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

- 4,179,620 A * 12/1979 Agulnek 347/40
- 4,433,341 A 2/1984 Thomas
- 4,527,175 A 7/1985 Kojima et al.
- 4,529,445 A 7/1985 Buschow
- 4,661,458 A 4/1987 Berry et al.
- 4,680,696 A 7/1987 Eminuma et al.
- 4,825,227 A 4/1989 Fischbeck et al.
- 4,929,963 A 5/1990 Balazar
- 4,937,598 A 6/1990 Hine
- 4,940,998 A 7/1990 Asakawa
- 5,265,315 A 11/1993 Hoisington et al.
- 5,365,843 A 11/1994 House et al.
- 5,461,405 A 10/1995 Lehmann et al.
- 5,489,930 A 2/1996 Anderson
- 5,546,109 A 8/1996 Nakano
- 5,610,645 A 3/1997 Moore et al.
- 5,646,658 A 7/1997 Thiel et al.
- 5,724,082 A 3/1998 Moynihan
- 5,751,300 A 5/1998 Cowger et al.
- 5,782,184 A 7/1998 Albertalli et al.
- 5,831,654 A 11/1998 Colombat et al.

Primary Examiner — David Muller

(74) *Attorney, Agent, or Firm* — Fish & Richardson P.C.

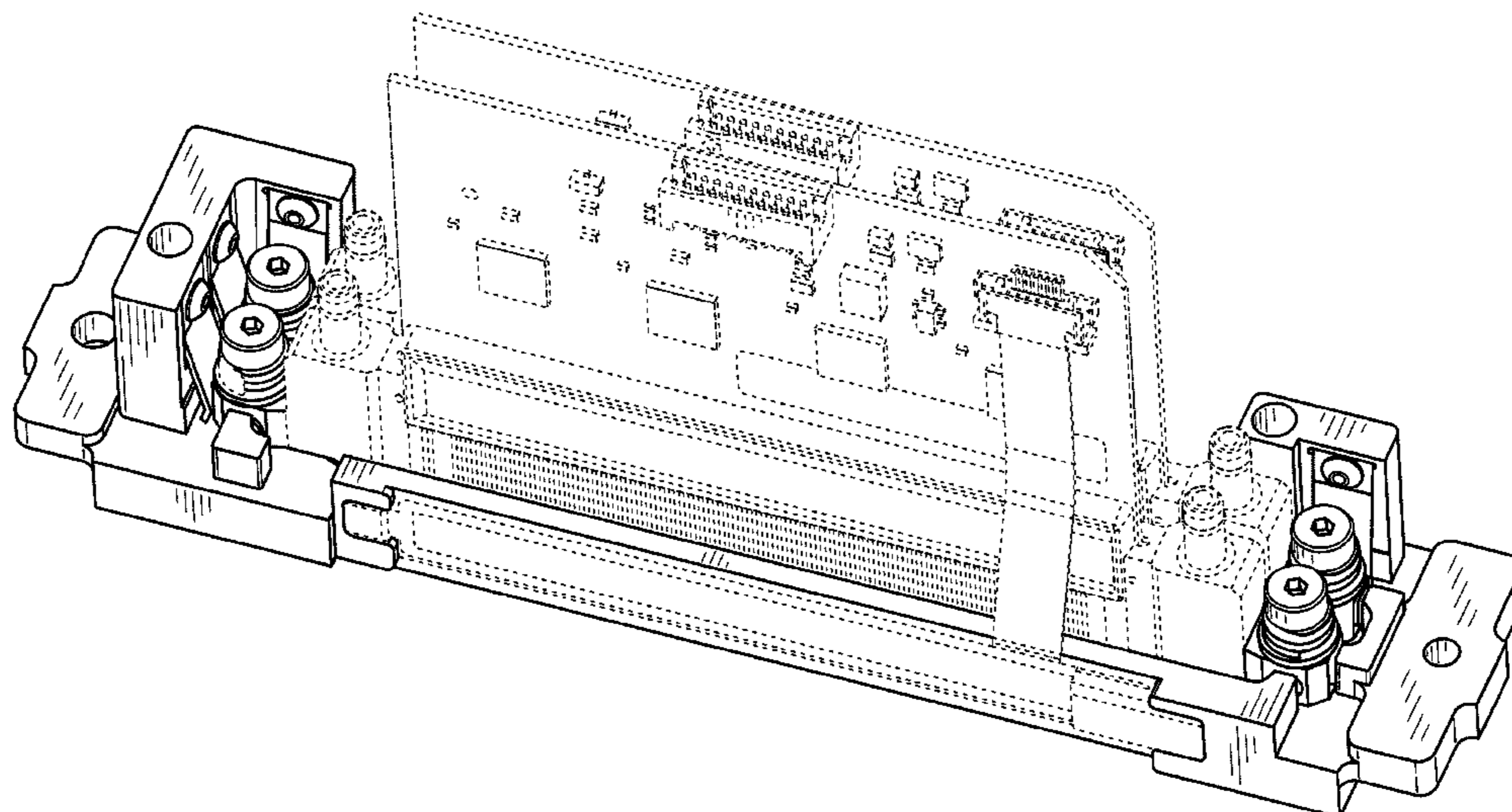
(57) **CLAIM**

The ornamental design for a printhead assembly, substan-
tially as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of the printhead assembly;
FIG. 2 is a front view;
FIG. 3 is a back view;
FIG. 4 is a right side view;
FIG. 5 is a left side view;
FIG. 6 is a top view; and,
FIG. 7 is a bottom view.
Broken lines are to disclose environment related to the
claimed design, but not forming part of the claimed design.

1 Claim, 3 Drawing Sheets



U.S. PATENT DOCUMENTS

6,382,778	B1 *	5/2002	Iijima et al.	347/86
6,391,193	B1	5/2002	Luka	
6,406,137	B1	6/2002	Okazaki et al.	
6,428,141	B1	8/2002	McElfresh et al.	
6,457,811	B1	10/2002	Pan et al.	
6,467,874	B1	10/2002	Williams et al.	
6,499,823	B2	12/2002	Okazaki et al.	
6,502,921	B2	1/2003	Kanda et al.	
6,554,398	B2	4/2003	Wyngaert et al.	
6,609,778	B2	8/2003	Ingham et al.	
6,631,978	B1	10/2003	Watanabe et al.	
6,634,742	B2	10/2003	Owaki et al.	
6,652,083	B2	11/2003	Ison et al.	
6,655,786	B1	12/2003	Footte et al.	
6,659,590	B2	12/2003	Silverbrook	
6,672,706	B2	1/2004	Silverbrook	
6,672,707	B2	1/2004	Silverbrook	
6,685,299	B2	2/2004	Hirota	
6,715,863	B2	4/2004	Shimizu	
6,752,493	B2	6/2004	Dowell et al.	
6,796,630	B2	9/2004	Ison et al.	
6,869,167	B2	3/2005	Silverbrook	
7,052,117	B2	5/2006	Bibl et al.	
7,246,888	B2 *	7/2007	Akahane et al.	347/20
7,322,675	B2 *	1/2008	Silverbrook	347/49
7,334,886	B2	2/2008	Papaiacovou et al.	
7,387,366	B2	6/2008	Ingham et al.	
7,413,284	B2	8/2008	Higginson et al.	
7,413,300	B2	8/2008	von Essen et al.	
7,416,126	B2 *	8/2008	Wittenberg et al.	347/40
7,427,332	B2	9/2008	Takemoto et al.	
7,448,741	B2	11/2008	von Essen	
D588,632	S	3/2009	Kamimura et al.	
7,527,347	B2 *	5/2009	Mukai	347/20
7,566,118	B2	7/2009	Bibl et al.	
D600,744	S *	9/2009	Kim	D18/43
7,658,460	B2	2/2010	Aoki	
7,748,830	B2 *	7/2010	Platt et al.	347/87
D621,871	S *	8/2010	Maeshima et al.	D18/43
D624,584	S *	9/2010	Park et al.	D18/43
7,810,902	B2	10/2010	Silverbrook	
D626,589	S *	11/2010	Domae	D18/56
7,824,021	B2 *	11/2010	Silverbrook	347/42
2002/0024554	A1	2/2002	Tominaga	
2002/0180835	A1	12/2002	Boyd et al.	
2003/0202040	A1	10/2003	Shade	
2003/0227516	A1	12/2003	Yamaguchi et al.	
2003/0234845	A1	12/2003	Tominaga et al.	
2004/0021735	A1	2/2004	Horii et al.	
2004/0224102	A1	11/2004	Ebihara	
2005/0157073	A1	7/2005	Silverbrook et al.	
2005/0270329	A1	12/2005	Hoisington et al.	
2005/0280678	A1	12/2005	Bibl et al.	
2006/0250493	A1	11/2006	Silverbrook et al.	
2008/0211872	A1	9/2008	Hoisington et al.	

FOREIGN PATENT DOCUMENTS

CN	1984780	A	6/2007
CN	1997521	A	7/2007
EP	0 383 558		8/1990
EP	0666177		8/1995
EP	1186416		3/2002
EP	1238813		9/2002
EP	1258354	A2	11/2002
EP	1 336 486		8/2003

JP	S61-205154	9/1986
JP	07017050	1/1995
JP	H07-186386	7/1995
JP	H11-277734	10/1999
JP	2001-260366	9/2001
JP	2002-067343	5/2002
JP	2003-502879	1/2003
JP	2003127385	5/2003
JP	2001511058	4/2007
JP	2007-535434	12/2007
JP	2007535431	12/2007
JP	2007535433	12/2007
KR	2007-0007379	1/2007
KR	20070007202	1/2007
KR	20070012846	1/2007
WO	2005/108095	11/2005
WO	2005108094	11/2005
WO	2005108097 A	11/2005

OTHER PUBLICATIONS

International Preliminary Report on Patentability from International Application No. PCTUS2005/015028 dated Nov. 9, 2006 (222WO1).

International Search Report for PCT/US2005/015028, Dec. 6, 2005 (09991-222WO1).

Office Action from co-pending Chinese Application No. 2005800201298 dated Apr. 24, 2009 (141CN1).

International Preliminary Report on Patentability from International Application No. PCT/US2005/14952 dated Nov. 9, 2006 (141WO1).

International Search Report for PCT/US2005/14952 dated Aug. 22, 2005 (141WO1).

International Preliminary Report on Patentability from International Application No. PCTUS2005/014999 dated Nov. 9, 2006 (117WO1).

International Search Report for PCT/US2005/014999, Oct. 6, 2005 (09991-117WO1).

Office Action from Chinese Application No. 200580019821.9 dated Sep. 12, 2008 (117CN1).

U.S. Appl. No. 12/496,874, filed Jul. 2, 2009.

U.S. Appl. No. 29/339,564, filed Jul. 2, 2009.

Office Action from Chinese Application No. 200580019821.9 dated Oct. 23, 2009, 8 pages (117CN1).

Office Action from European Application No. 05745034.8 dated Nov. 19, 2009, 3 pages (141EP1).

Office Action dated Jan. 22, 2010 from co-pending Chinese application No. 200580017004.x.

Office Action dated Jan. 8, 2010 from co-pending Chinese application No. 2005800201298.

Office Action dated Nov. 19, 2009 from co-pending European application No. 05745034.8.

Office Action dated Jun. 2, 2010 from co-pending Chinese application No. 2005800201298.

Office Action dated Feb. 26, 2010 from co-pending European application No. 05745124.7.

International Search Report from corresponding PCT application No. PCT/US2005/014999, mailed Oct. 5, 2006.

International Search Report from corresponding PCT application No. PCT/US2005/015028, mailed Dec. 6, 2005.

Office Action dated Aug. 3, 2010 from co-pending Japanese application No. 2007-511048.

* cited by examiner

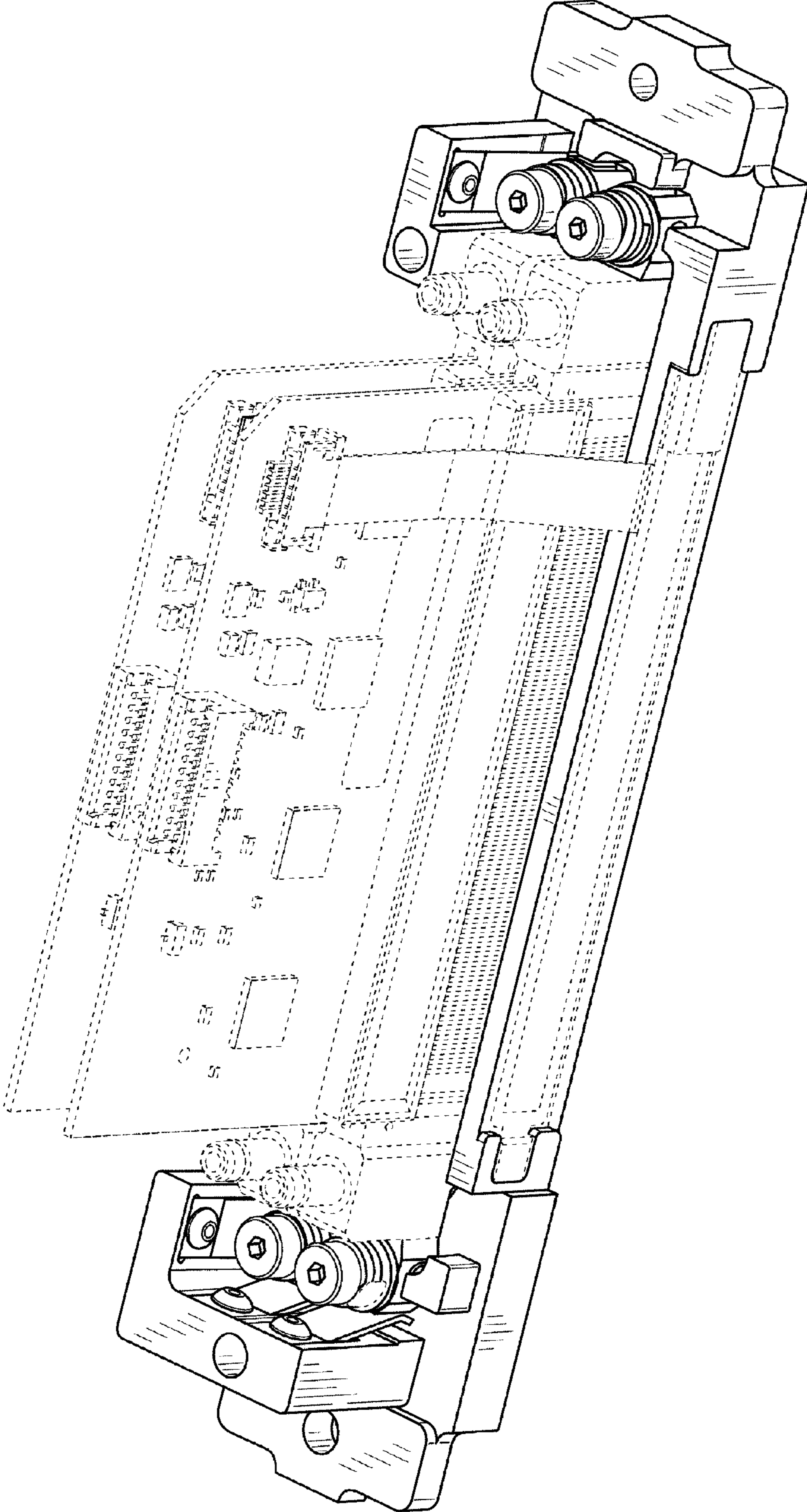


FIG. 1

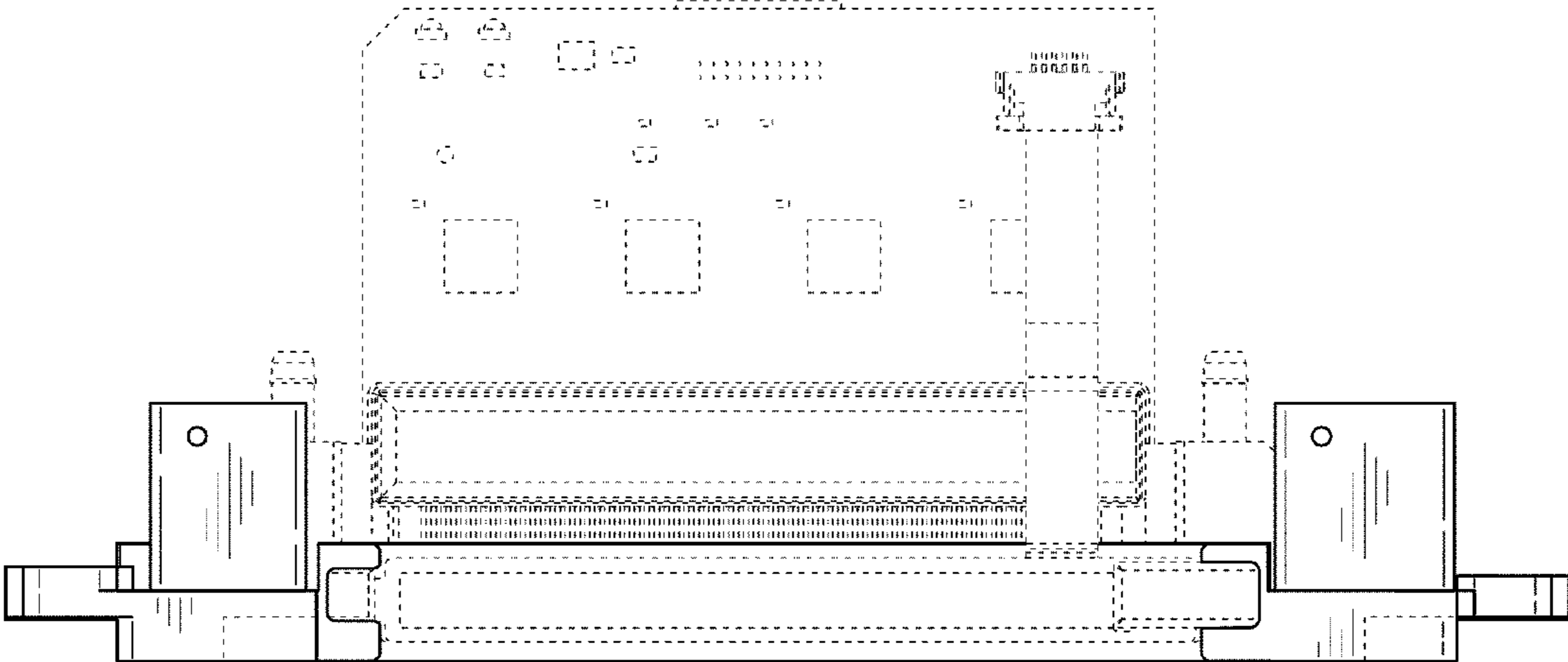


FIG. 2

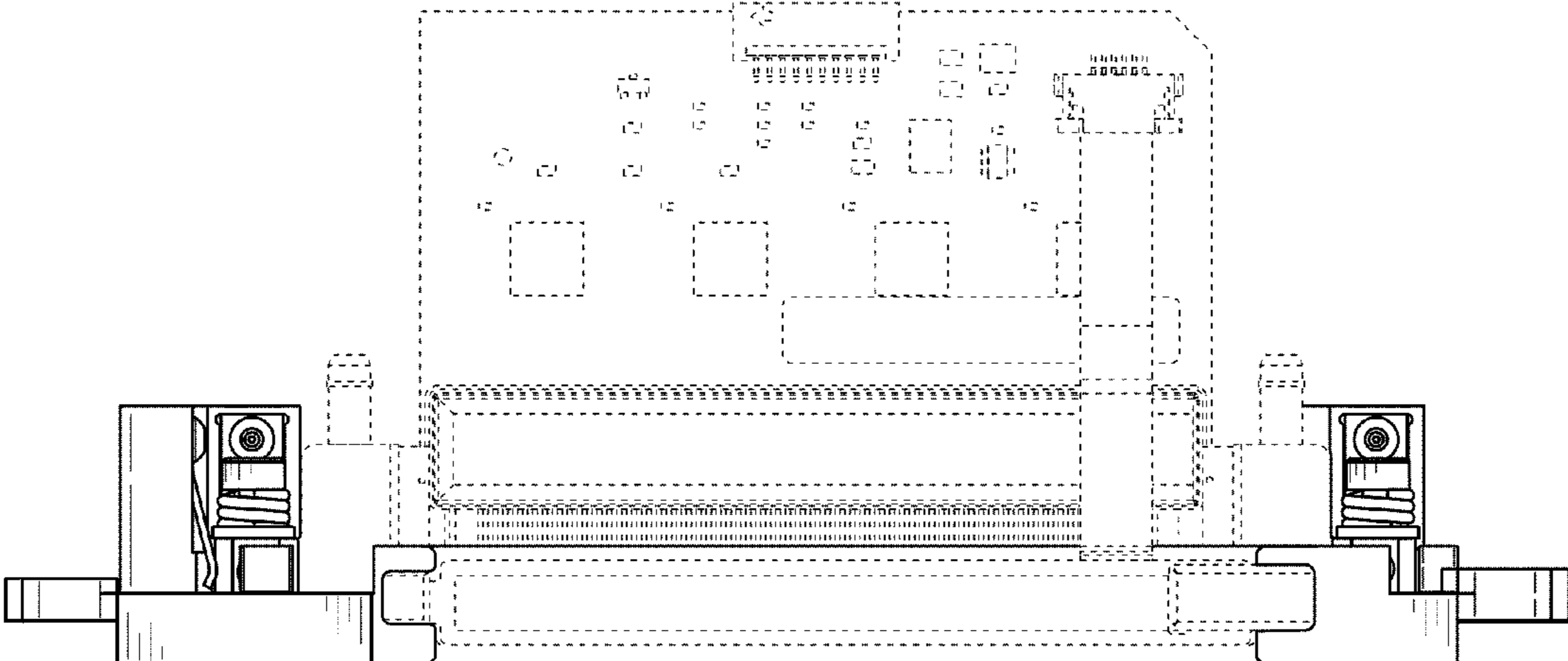


FIG. 3

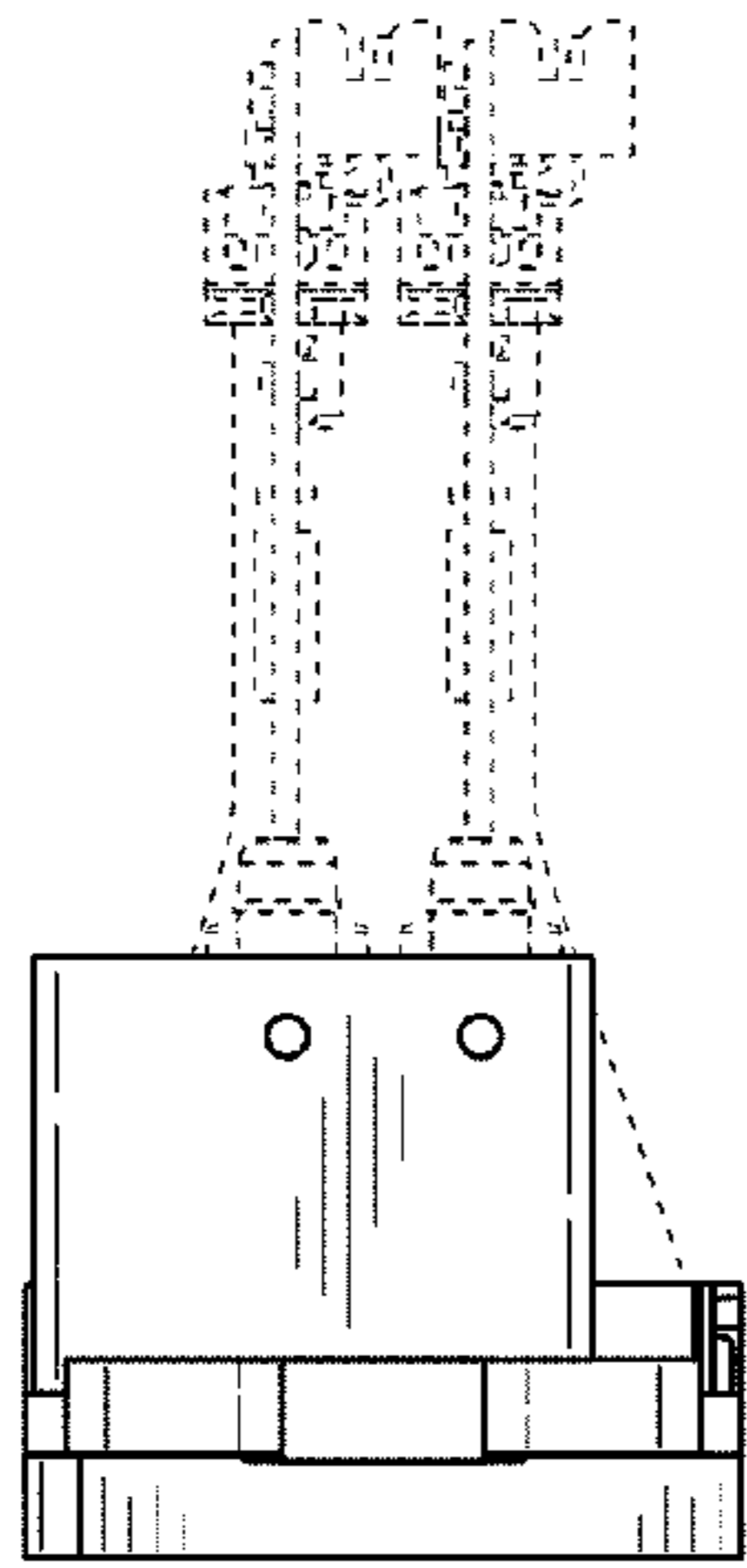


FIG. 4

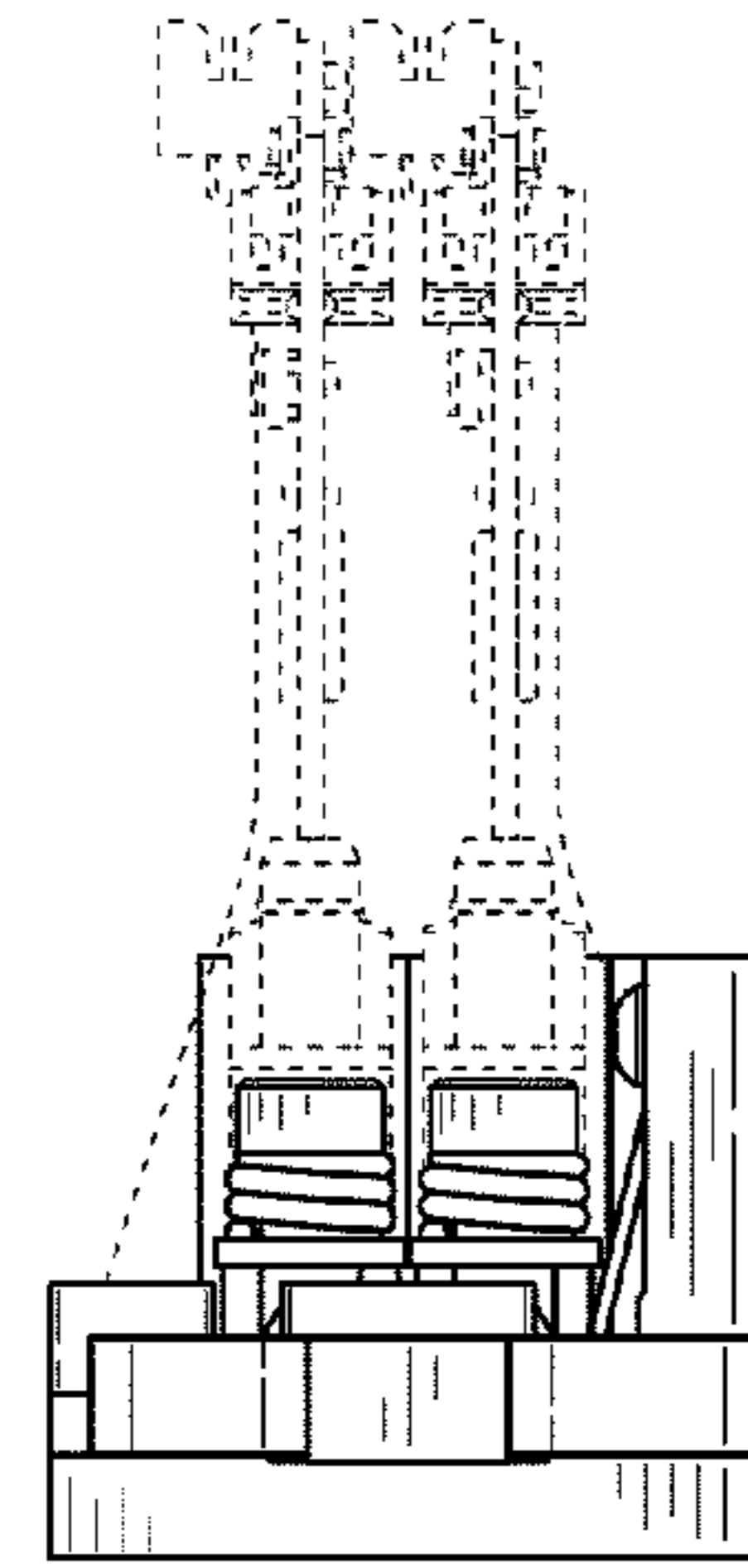


FIG. 5

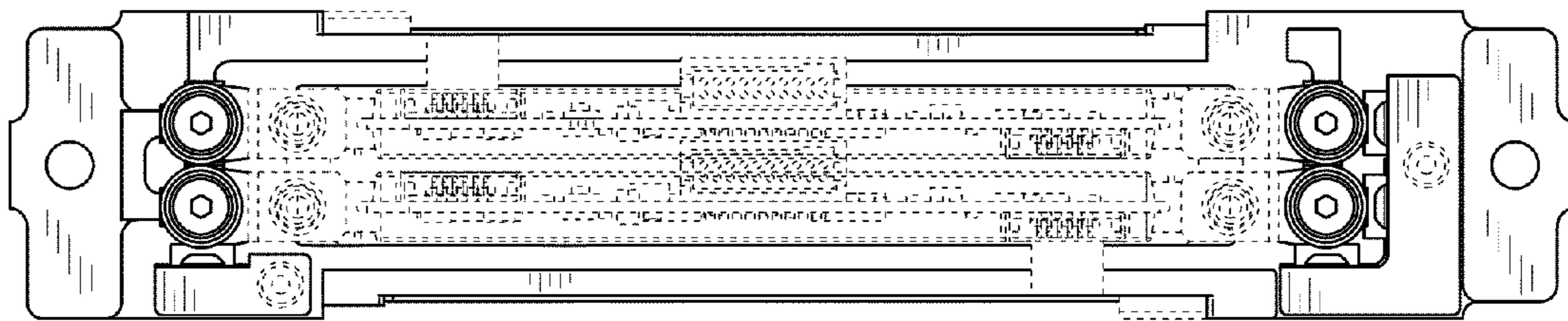


FIG. 6

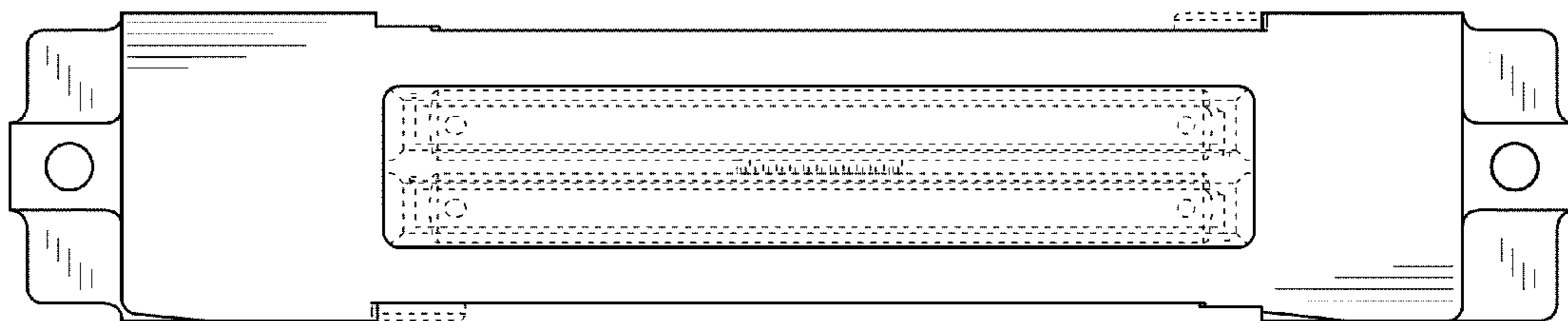


FIG. 7