

US00D907577S

(12) **United States Design Patent** (10) **Patent No.:** **US D907,577 S**
Ganamukhi et al. (45) **Date of Patent:** **** Jan. 12, 2021**

(54) **CONNECTOR ASSEMBLY**

DESCRIPTION

(71) Applicant: **Molex, LLC**, Lisle, IL (US)
(72) Inventors: **Ishwarappa Ganamukhi**, Bangalore (IN); **Pierre Perez**, Aurora, IL (US)
(73) Assignee: **Molex, LLC**, Lisle, IL (US)
(**) Term: **15 Years**
(21) Appl. No.: **29/685,546**
(22) Filed: **Mar. 28, 2019**
(51) **LOC (13) Cl.** **13-03**
(52) **U.S. Cl.**
USPC **D13/133; D13/147**
(58) **Field of Classification Search**
USPC D13/133, 146, 147, 153, 154, 184
(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

D308,513 S * 6/1990 Endo D13/147
D367,466 S * 2/1996 Uchiyama D13/147
(Continued)

FOREIGN PATENT DOCUMENTS

WO D205298-016 * 3/2020

OTHER PUBLICATIONS

Connector System, Jun. 17, 2020, [online], [site visited Jul. 10, 2020], Available from Internet URL: https://www.molex.com/molex/products/part-detail/crimp_housings/0310671010 (Year: 2020).*

Primary Examiner — Karen E Kearney

Assistant Examiner — Michael Chong

(74) *Attorney, Agent, or Firm* — Banner & Witcoff, Ltd.

(57) **CLAIM**

The ornamental design for a connector assembly, as shown and described.

FIG. 1 is a front perspective view of a connector assembly showing our new design;
FIG. 2 is a rear perspective view thereof;
FIG. 3 is a front view thereof;
FIG. 4 is a rear view thereof;
FIG. 5 is a left side view thereof;
FIG. 6 is a right side view thereof;
FIG. 7 is a top view thereof;
FIG. 8 is a bottom view thereof;
FIG. 9 is a front perspective view of an alternate embodiment of the connector assembly showing our new design which is a mirror image of the connector assembly of FIGS. 1-8;
FIG. 10 is a rear perspective view thereof;
FIG. 11 is a front view thereof;
FIG. 12 is a rear view thereof;
FIG. 13 is a left side view thereof;
FIG. 14 is a right side view thereof;
FIG. 15 is a top view thereof;
FIG. 16 is a bottom view thereof;
FIG. 17 is a front perspective view of an alternate embodiment of the connector assembly showing our new design;
FIG. 18 is a rear perspective view thereof;
FIG. 19 is a front view thereof;
FIG. 20 is a rear view thereof;
FIG. 21 is a left side view thereof;
FIG. 22 is a right side view thereof;
FIG. 23 is a top view thereof;
FIG. 24 is a bottom view thereof;
FIG. 25 is a front perspective view of an alternate embodiment of the connector assembly showing our new design which is a mirror image of the connector assembly of FIGS. 17-24;
FIG. 26 is a rear perspective view thereof;
FIG. 27 is a front view thereof;
FIG. 28 is a rear view thereof;
FIG. 29 is a left side view thereof;
FIG. 30 is a right side view thereof;
FIG. 31 is a top view thereof;
FIG. 32 is a bottom view thereof;

(Continued)

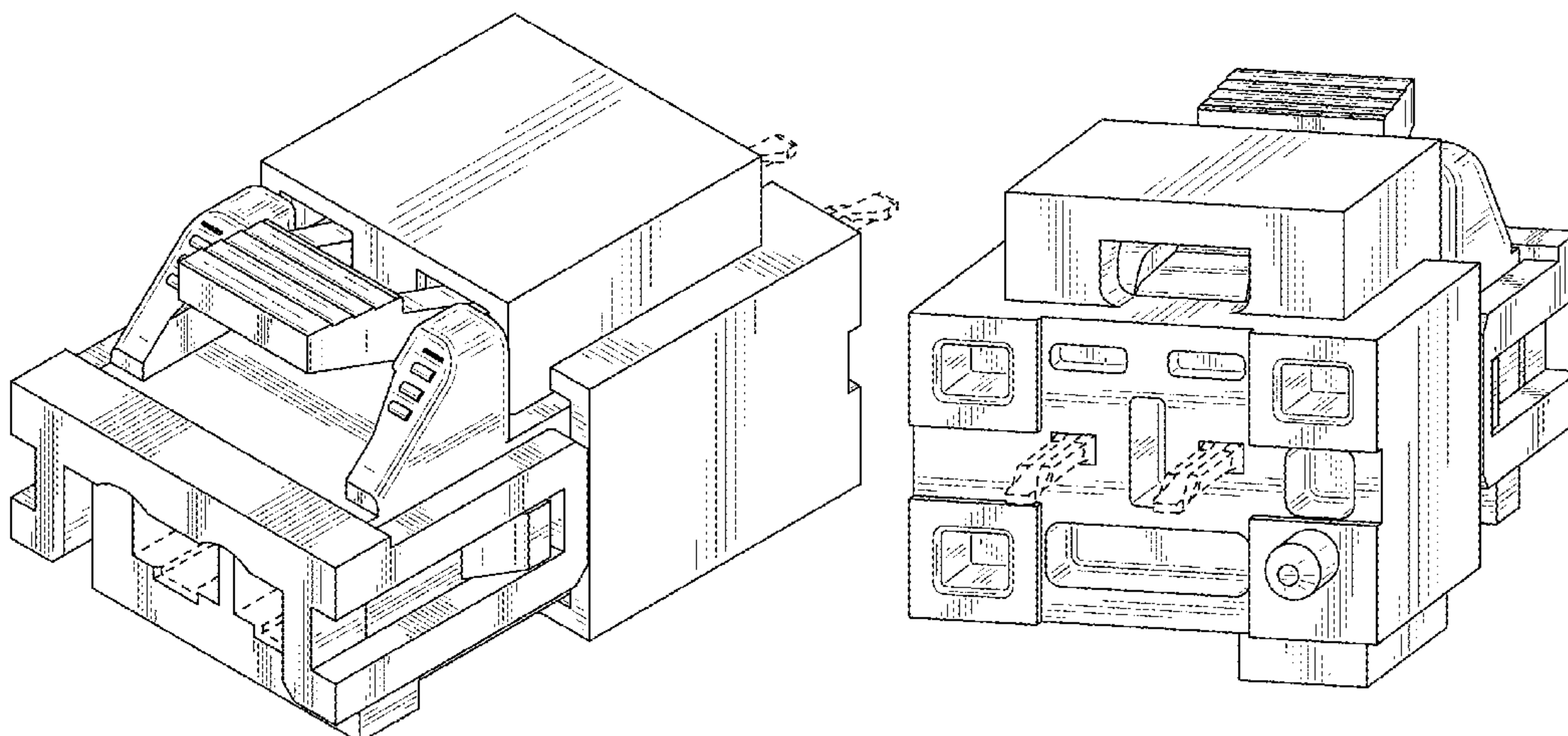


FIG. 33 is a front perspective view of an alternate embodiment of the connector assembly showing our new design;
FIG. 34 is a rear perspective view thereof;
FIG. 35 is a front view thereof;
FIG. 36 is a rear view thereof;
FIG. 37 is a left side view thereof;
FIG. 38 is a right side view thereof;
FIG. 39 is a top view thereof;
FIG. 40 is a bottom view thereof;
FIG. 41 is a front perspective view of an alternate embodiment of the connector assembly showing our new design which is a mirror image of the connector assembly of FIGS. 33-40;
FIG. 42 is a rear perspective view thereof;
FIG. 43 is a front view thereof;
FIG. 44 is a rear view thereof;
FIG. 45 is a left side view thereof;
FIG. 46 is a right side view thereof;
FIG. 47 is a top view thereof;
FIG. 48 is a bottom view thereof;
FIG. 49 is a front perspective view of an alternate embodiment of the connector assembly showing our new design;
FIG. 50 is a rear perspective view thereof;
FIG. 51 is a front view thereof;
FIG. 52 is a rear view thereof;
FIG. 53 is a left side view thereof;
FIG. 54 is a right side view thereof;
FIG. 55 is a top view thereof;
FIG. 56 is a bottom view thereof;
FIG. 57 is a front perspective view of an alternate embodiment of the connector assembly showing our new design which is a mirror image of the connector assembly of FIGS. 49-56;
FIG. 58 is a rear perspective view thereof;
FIG. 59 is a front view thereof;
FIG. 60 is a rear view thereof;
FIG. 61 is a left side view thereof;
FIG. 62 is a right side view thereof;
FIG. 63 is a top view thereof;
FIG. 64 is a bottom view thereof;
FIG. 65 is a front perspective view of an alternate embodiment of the connector assembly showing our new design;
FIG. 66 is a rear perspective view thereof;
FIG. 67 is a front view thereof;
FIG. 68 is a rear view thereof;
FIG. 69 is a left side view thereof;
FIG. 70 is a right side view thereof;
FIG. 71 is a top view thereof;
FIG. 72 is a bottom view thereof;
FIG. 73 is a front perspective view of an alternate embodiment of the connector assembly showing our new design which is a mirror image of the connector assembly of FIGS. 65-72;
FIG. 74 is a rear perspective view thereof;
FIG. 75 is a front view thereof;
FIG. 76 is a rear view thereof;
FIG. 77 is a left side view thereof;
FIG. 78 is a right side view thereof;
FIG. 79 is a top view thereof;
FIG. 80 is a bottom view thereof;
FIG. 81 is a front perspective view of an alternate embodiment of the connector assembly showing our new design;
FIG. 82 is a rear perspective view thereof;
FIG. 83 is a front view thereof;
FIG. 84 is a rear view thereof;

FIG. 85 is a left side view thereof;
FIG. 86 is a right side view thereof;
FIG. 87 is a top view thereof;
FIG. 88 is a bottom view thereof;
FIG. 89 is a front perspective view of an alternate embodiment of the connector assembly showing our new design which is a mirror image of the connector assembly of FIGS. 81-88;
FIG. 90 is a rear perspective view thereof;
FIG. 91 is a front view thereof;
FIG. 92 is a rear view thereof;
FIG. 93 is a left side view thereof;
FIG. 94 is a right side view thereof;
FIG. 95 is a top view thereof;
FIG. 96 is a bottom view thereof;
FIG. 97 is a front perspective view of an alternate embodiment of the connector assembly showing our new design;
FIG. 98 is a rear perspective view thereof;
FIG. 99 is a front view thereof;
FIG. 100 is a rear view thereof;
FIG. 101 is a left side view thereof;
FIG. 102 is a right side view thereof;
FIG. 103 is a top view thereof;
FIG. 104 is a bottom view thereof;
FIG. 105 is a front perspective view of an alternate embodiment of the connector assembly showing our new design which is a mirror image of the connector assembly of FIGS. 97-104;
FIG. 106 is a rear perspective view thereof;
FIG. 107 is a front view thereof;
FIG. 108 is a rear view thereof;
FIG. 109 is a left side view thereof;
FIG. 110 is a right side view thereof;
FIG. 111 is a top view thereof;
FIG. 112 is a bottom view thereof;
FIG. 113 is a front perspective view of an alternate embodiment of the connector assembly showing our new design;
FIG. 114 is a rear perspective view thereof;
FIG. 115 is a front view thereof;
FIG. 116 is a rear view thereof;
FIG. 117 is a left side view thereof;
FIG. 118 is a right side view thereof;
FIG. 119 is a top view thereof;
FIG. 120 is a bottom view thereof;
FIG. 121 is a front perspective view of an alternate embodiment of the connector assembly showing our new design which is a mirror image of the connector assembly of FIGS. 113-120;
FIG. 122 is a rear perspective view thereof;
FIG. 123 is a front view thereof;
FIG. 124 is a rear view thereof;
FIG. 125 is a left side view thereof;
FIG. 126 is a right side view thereof;
FIG. 127 is a top view thereof;
FIG. 128 is a bottom view thereof;
FIG. 129 is a front perspective view of an alternate embodiment of the connector assembly showing our new design;
FIG. 130 is a rear perspective view thereof;
FIG. 131 is a front view thereof;
FIG. 132 is a rear view thereof;
FIG. 133 is a left side view thereof;
FIG. 134 is a right side view thereof;
FIG. 135 is a top view thereof;
FIG. 136 is a bottom view thereof;

FIG. 137 is a front perspective view of an alternate embodiment of the connector assembly showing our new design which is a mirror image of the connector assembly of FIGS. 129-136;

FIG. 138 is a rear perspective view thereof;

FIG. 139 is a front view thereof;

FIG. 140 is a rear view thereof;

FIG. 141 is a left side view thereof;

FIG. 142 is a right side view thereof;

FIG. 143 is a top view thereof; and,

FIG. 144 is a bottom view thereof.

The broken lines depicting the remainder of the connector assembly show features that form no part of the claimed design.

1 Claim, 96 Drawing Sheets

(58) **Field of Classification Search**

CPC H01R 13/02; H01R 13/436; H01R 13/502;
H01R 13/504; H01R 13/506; H01R
13/64; H01R 13/4362

See application file for complete search history.

(56)

References Cited

U.S. PATENT DOCUMENTS

D388,767	S	*	1/1998	Akins	D13/133
D425,869	S	*	5/2000	Yokomizo	D13/147
D459,704	S	*	7/2002	Chen	D13/147
D463,370	S	*	9/2002	Chen	D13/147
D524,751	S	*	7/2006	Lee	D13/147
D676,386	S	*	2/2013	Gassauer	D13/133
D676,392	S	*	2/2013	Gassauer	D13/147
D726,662	S	*	4/2015	Honda	D13/154
D748,580	S	*	2/2016	Endo	D13/146
D748,588	S	*	2/2016	Endo	D13/147
D791,080	S	*	7/2017	Li	D13/133
D791,082	S	*	7/2017	Li et al.	
D791,083	S	*	7/2017	Li	D13/147
D791,705	S	*	7/2017	Li et al.	
D791,706	S	*	7/2017	Li	D13/147
D791,707	S	*	7/2017	Li	D13/147
D792,851	S	*	7/2017	Li	D13/147
D792,852	S	*	7/2017	Li	D13/147
D792,853	S	*	7/2017	Li	D13/147
D795,199	S	*	8/2017	Ikeda	D13/154
D802,538	S	*	11/2017	Li	D13/147
D803,162	S	*	11/2017	Li	D13/147
D840,938	S	*	2/2019	Hsu	D13/133

* cited by examiner

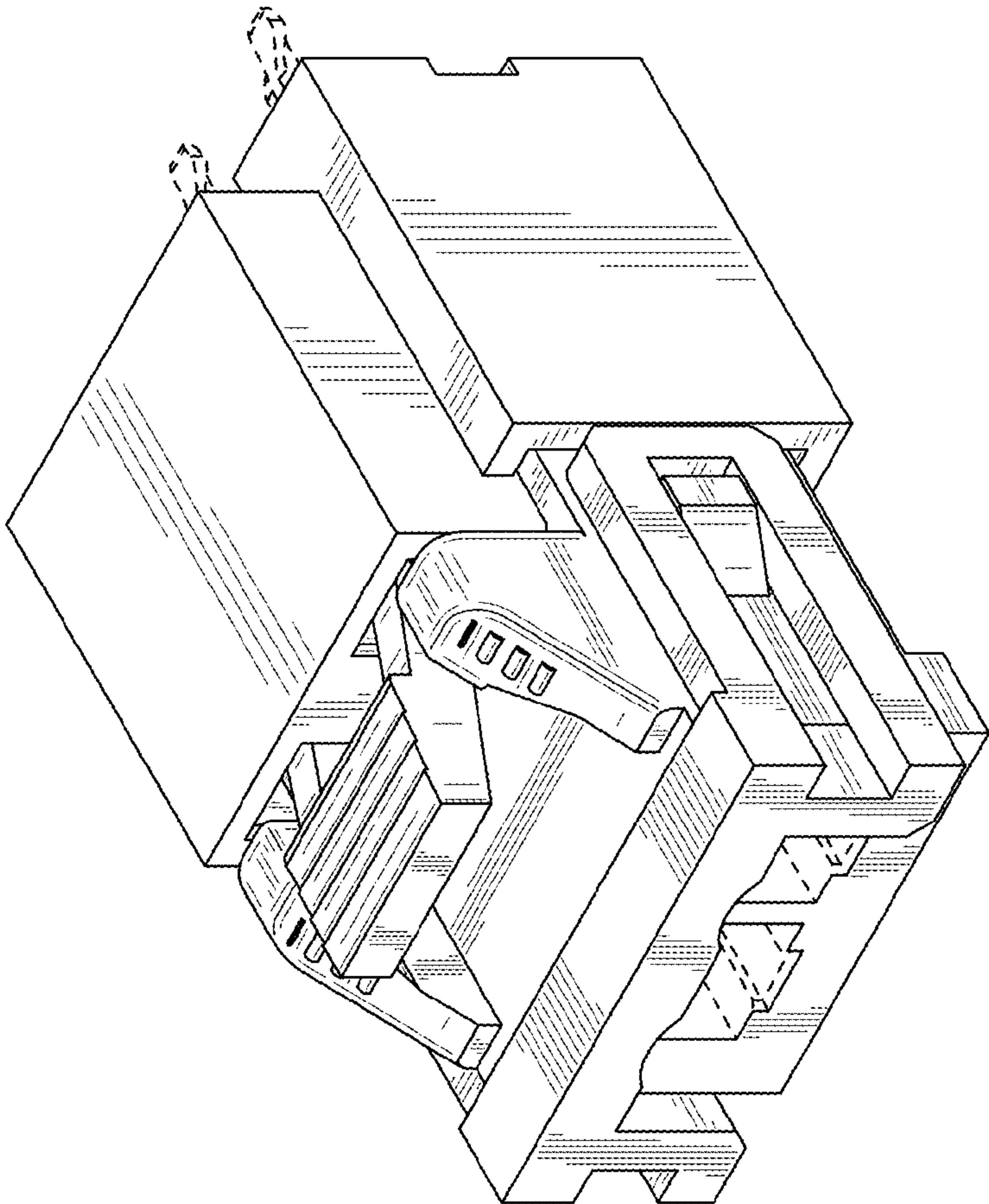


FIG. 1

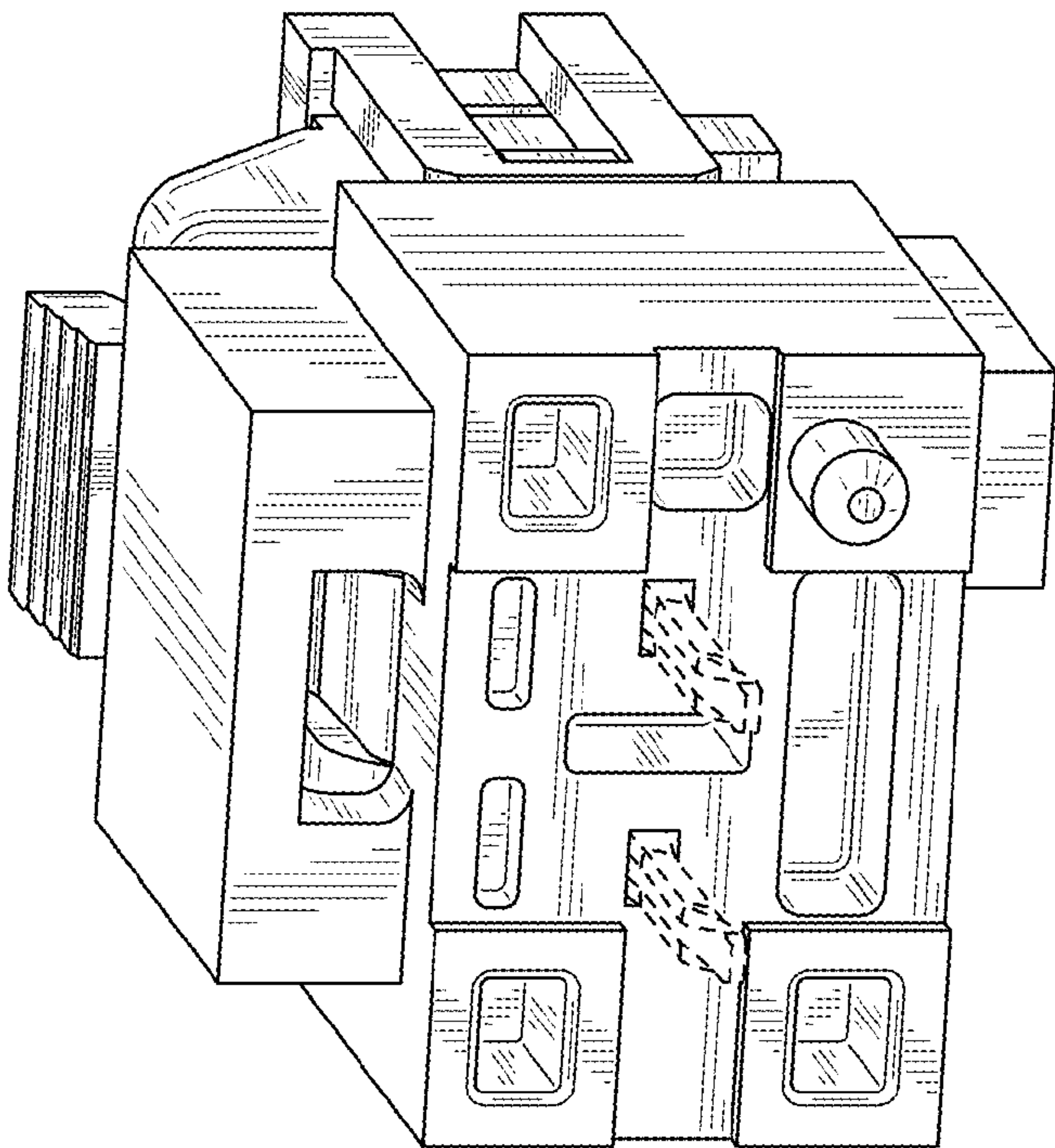


FIG. 2

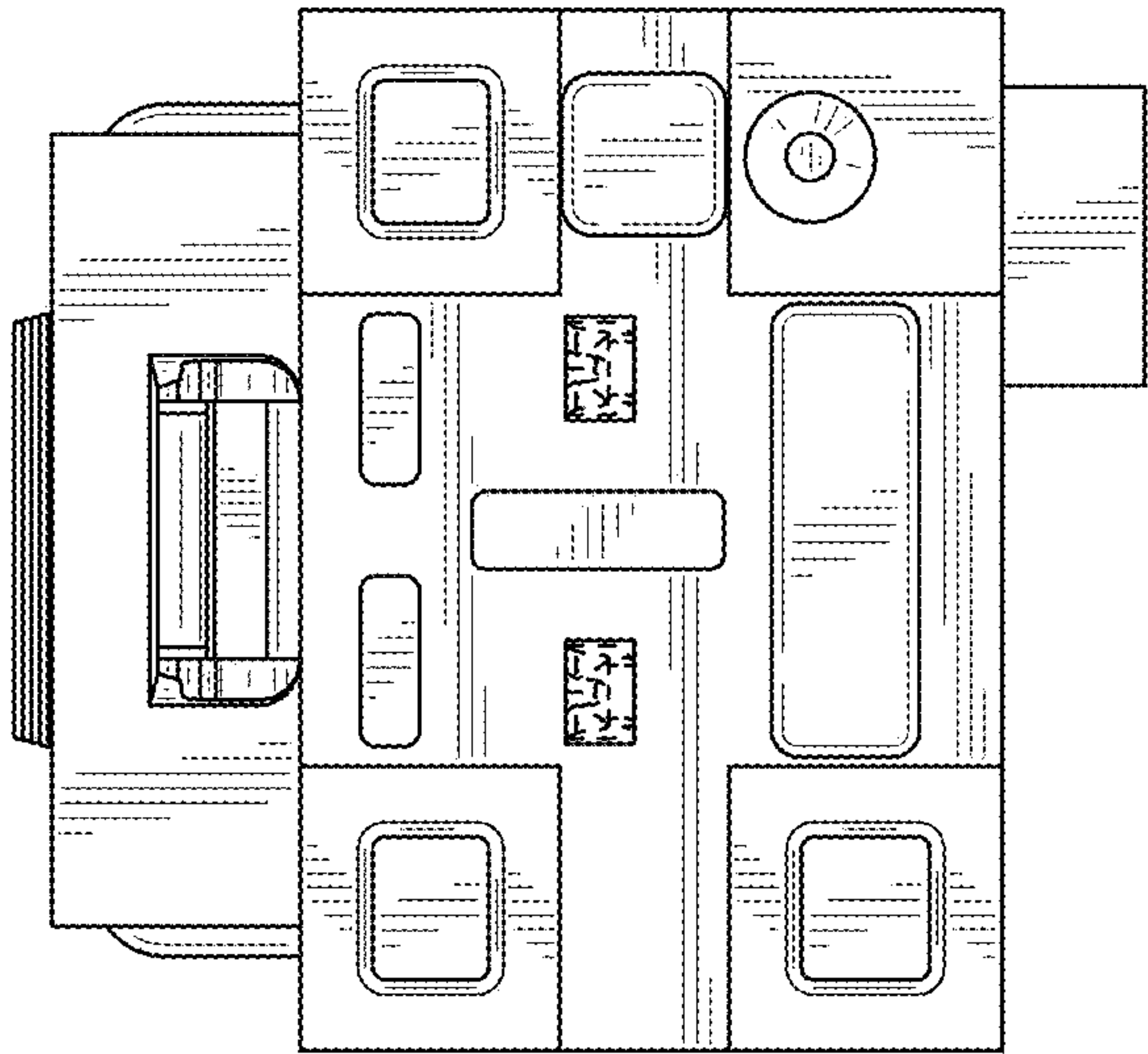


FIG. 4

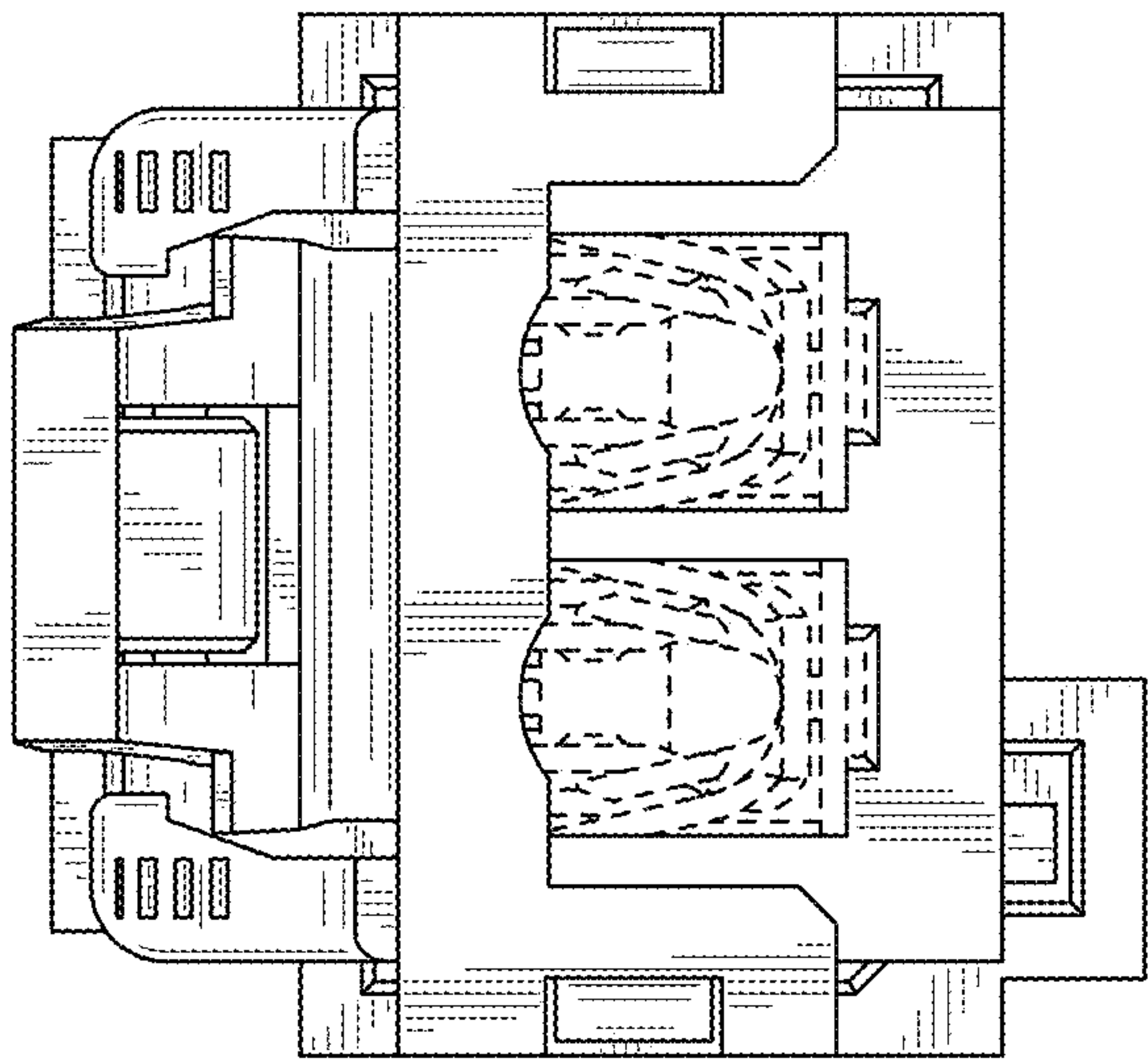


FIG. 3

FIG. 5

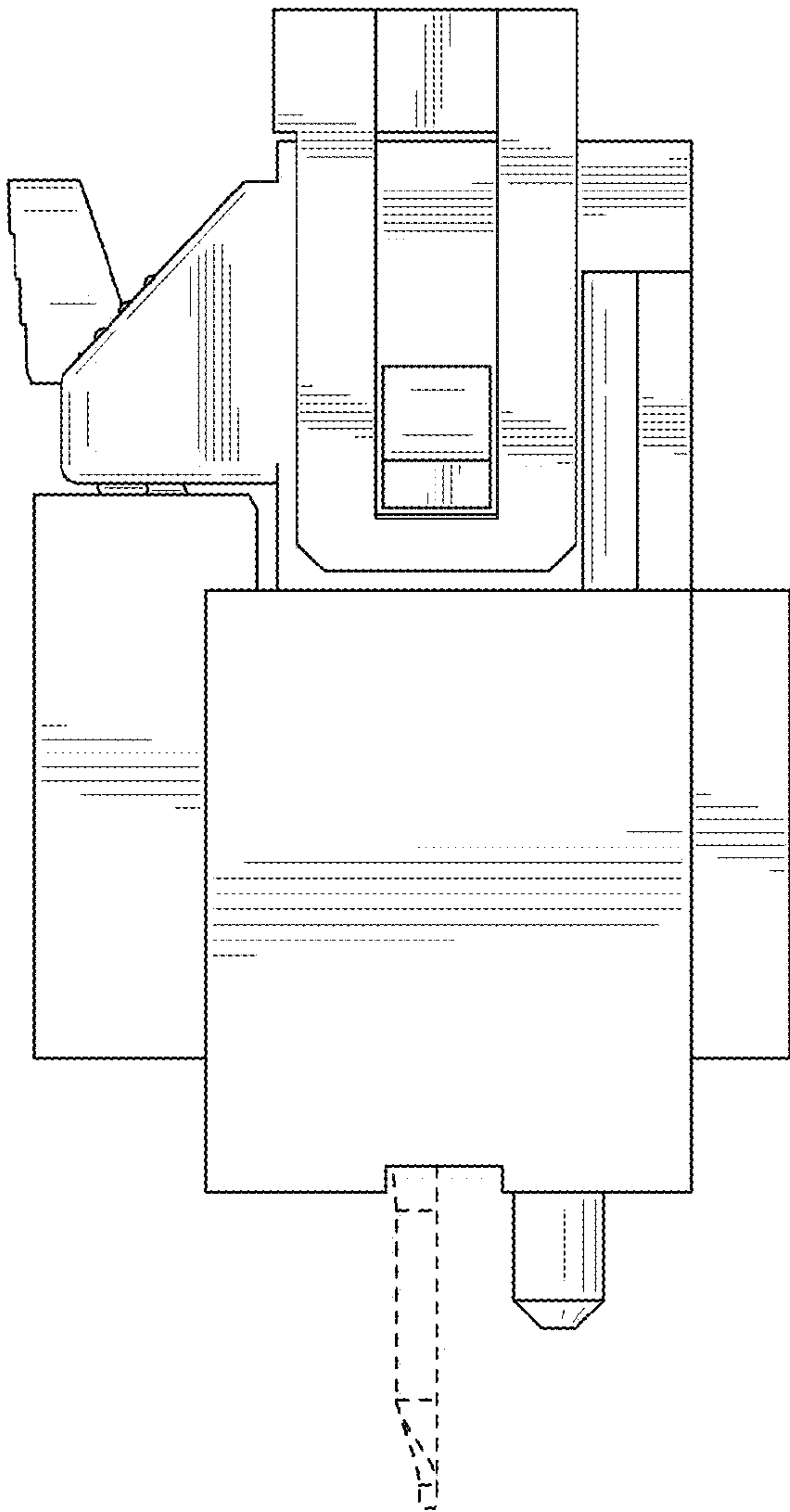
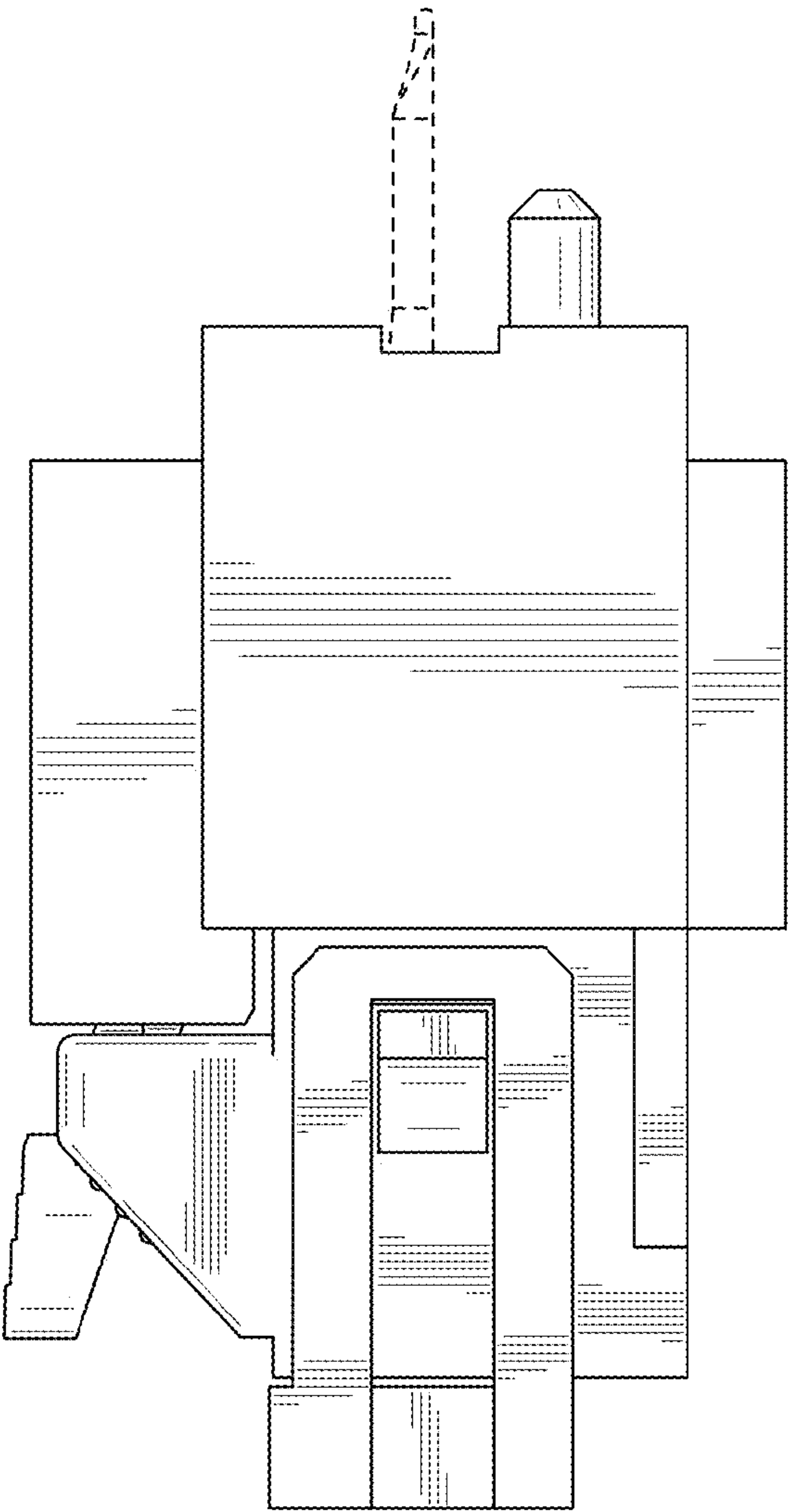


FIG. 6



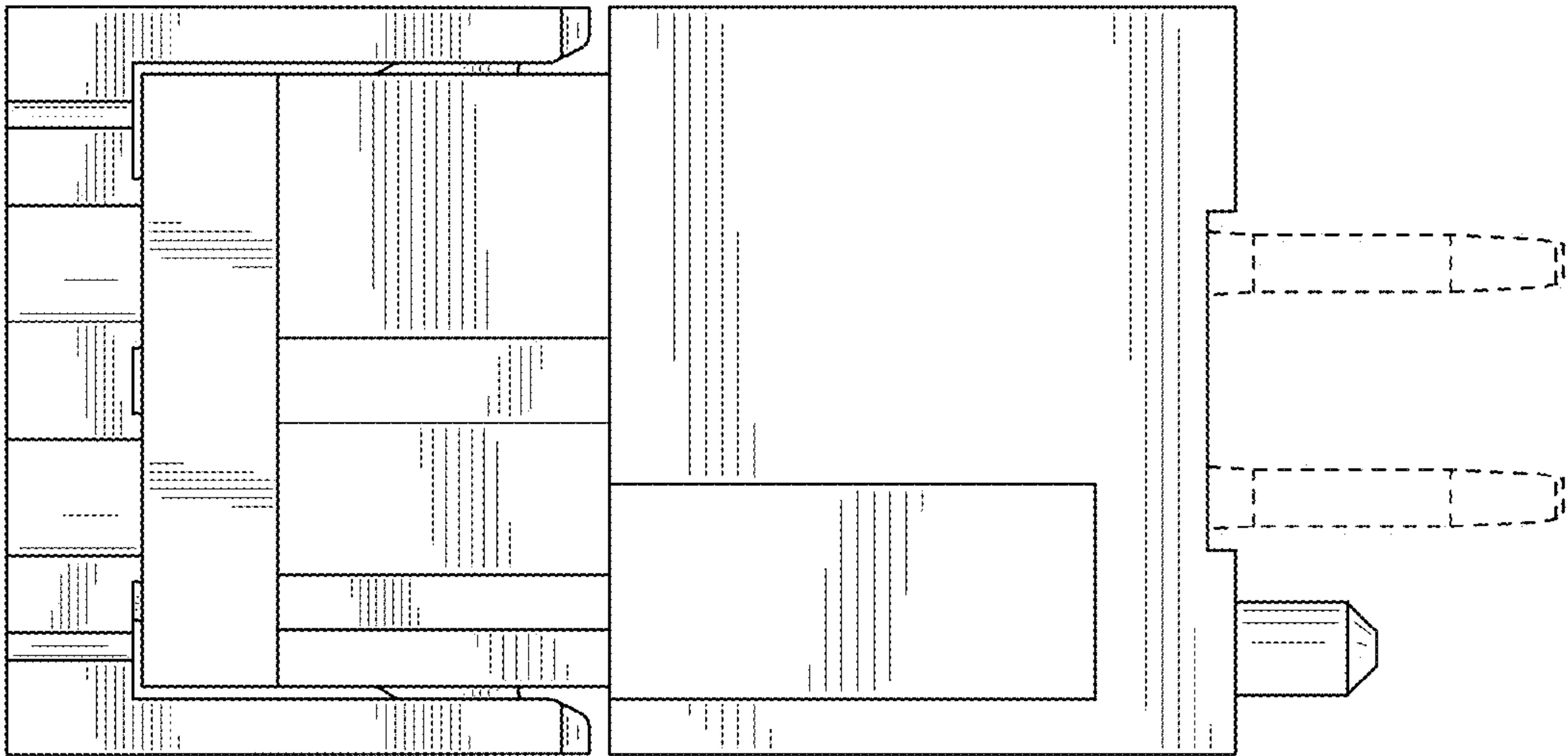


FIG. 8

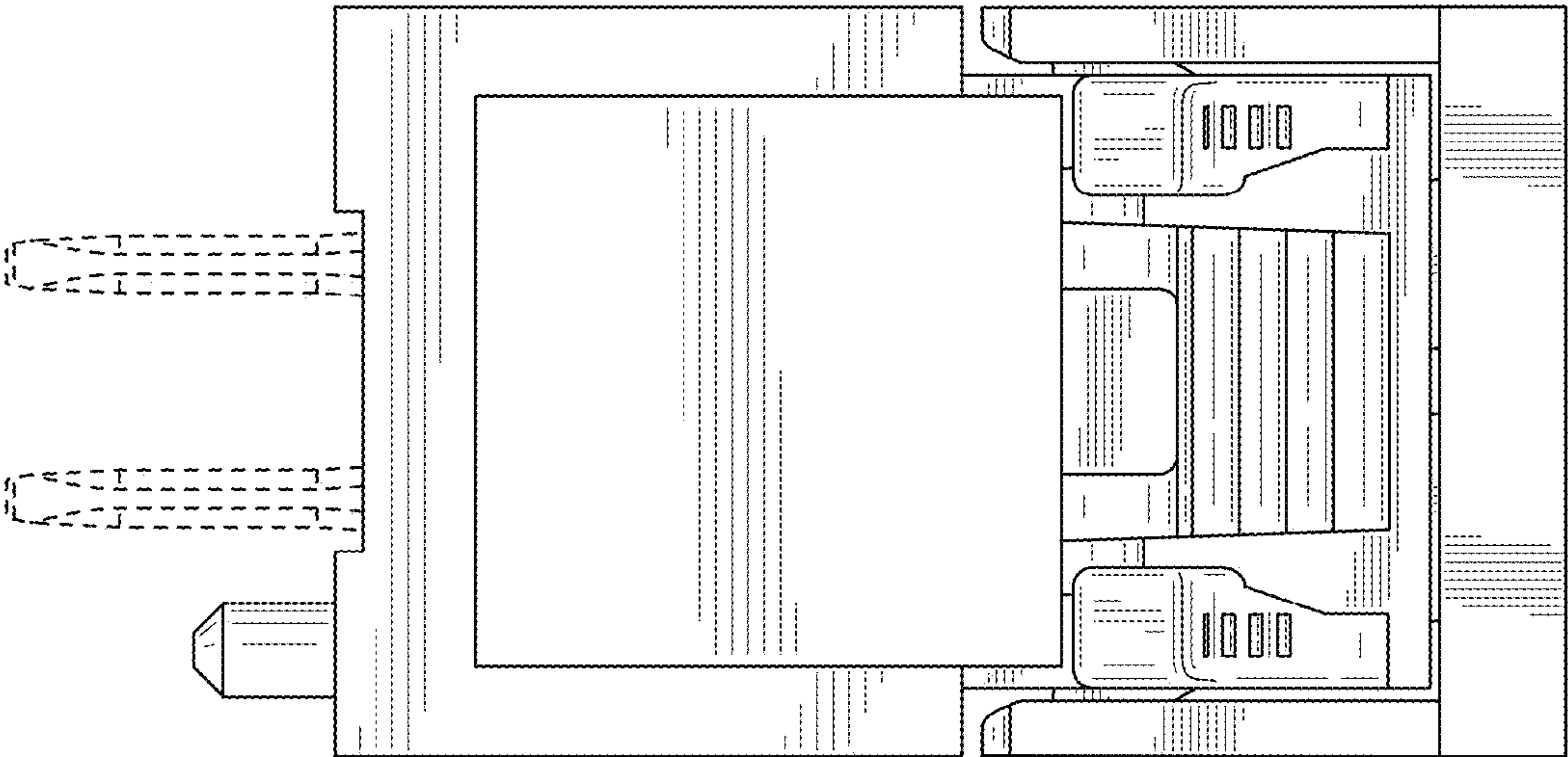


FIG. 7

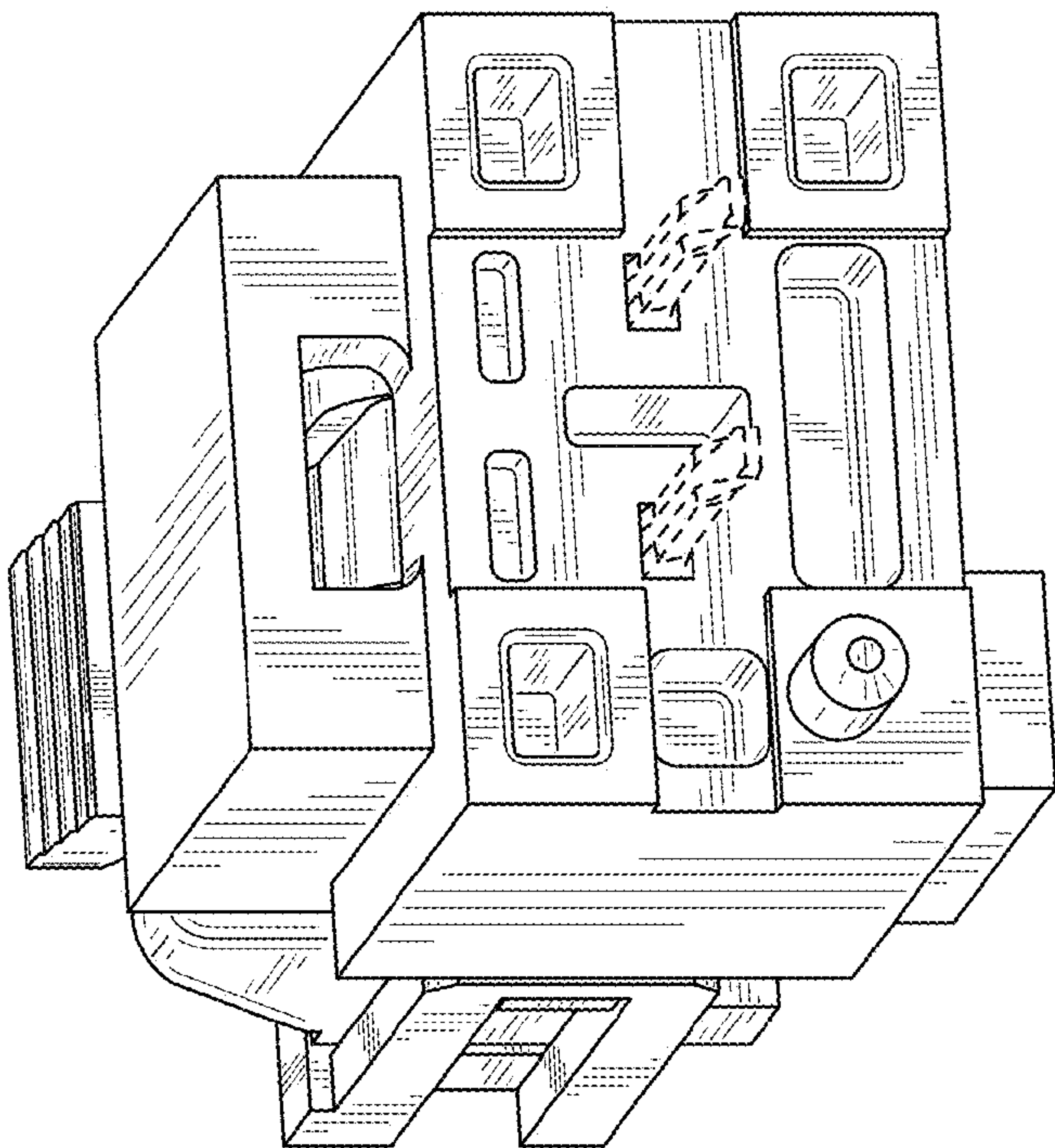


FIG. 10

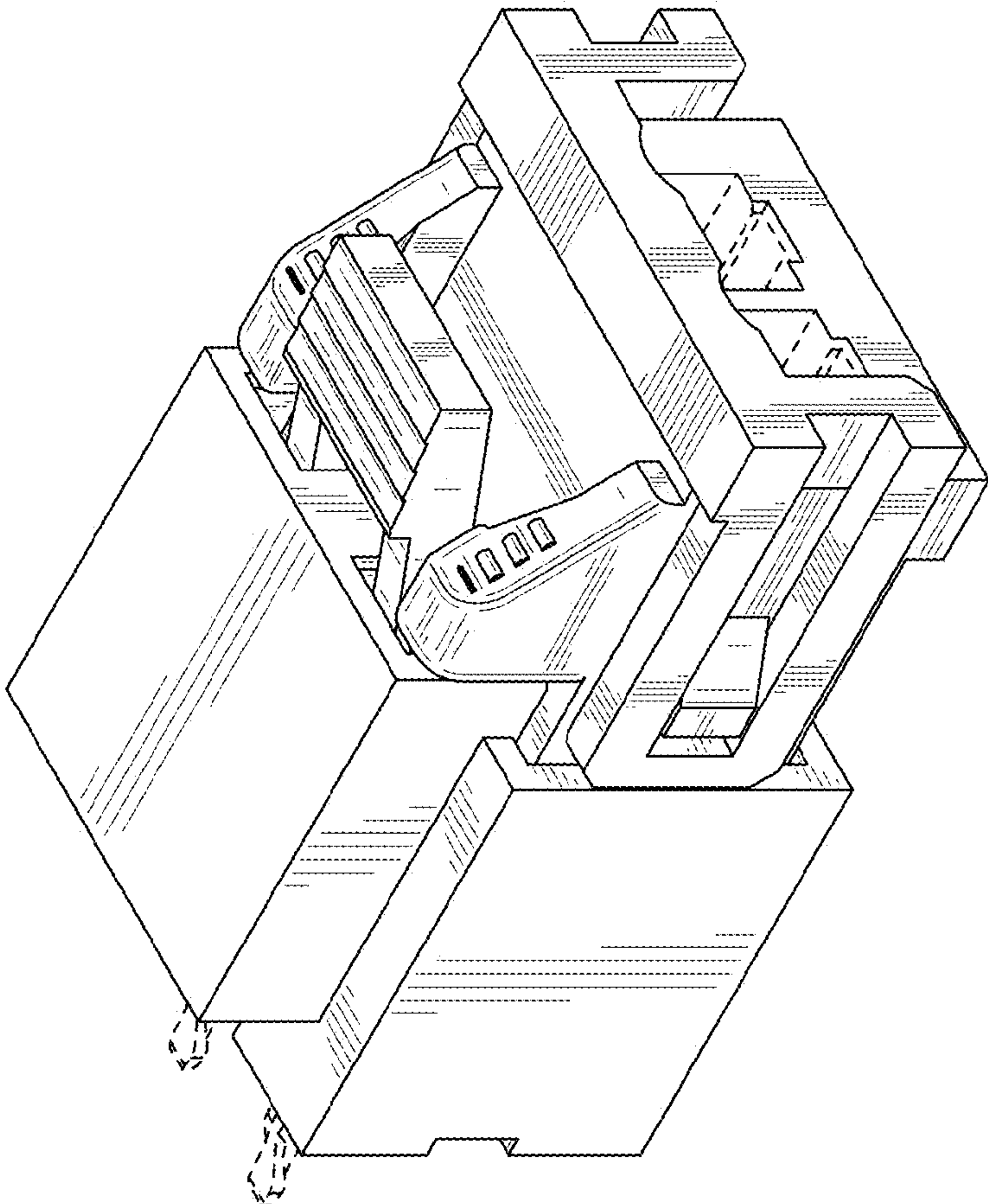


FIG. 9

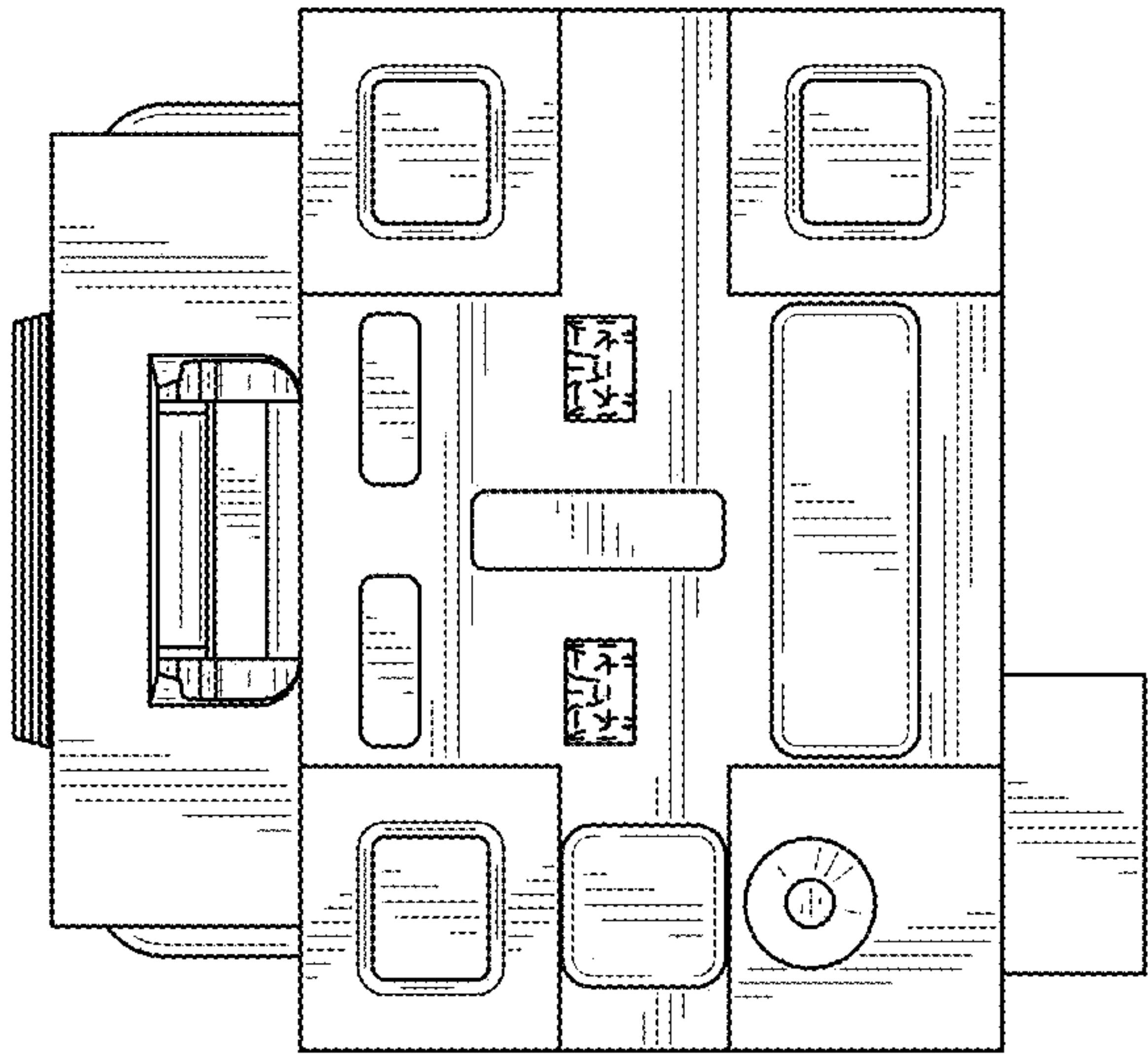


FIG. 12

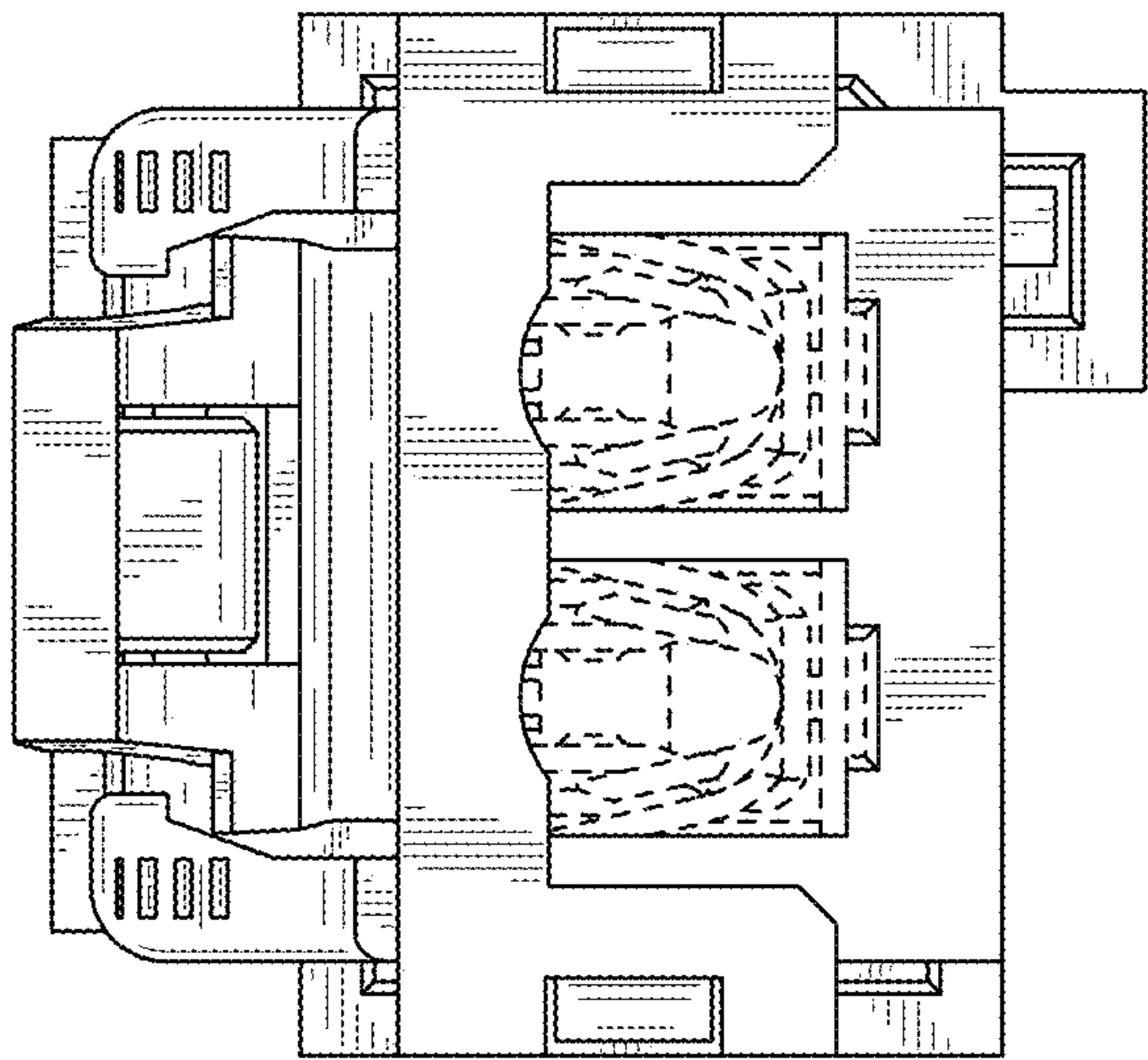


FIG. 11

FIG. 13

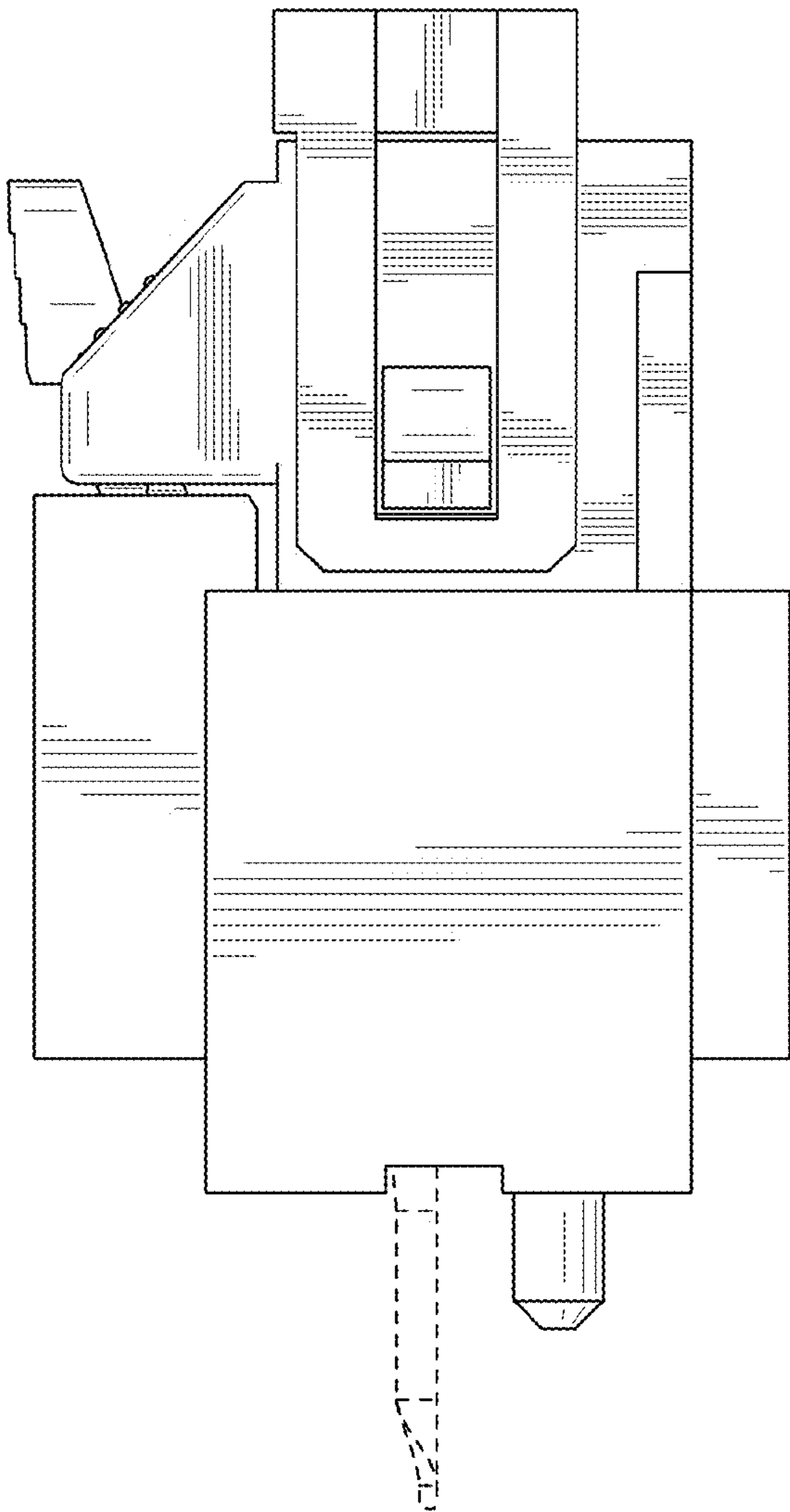
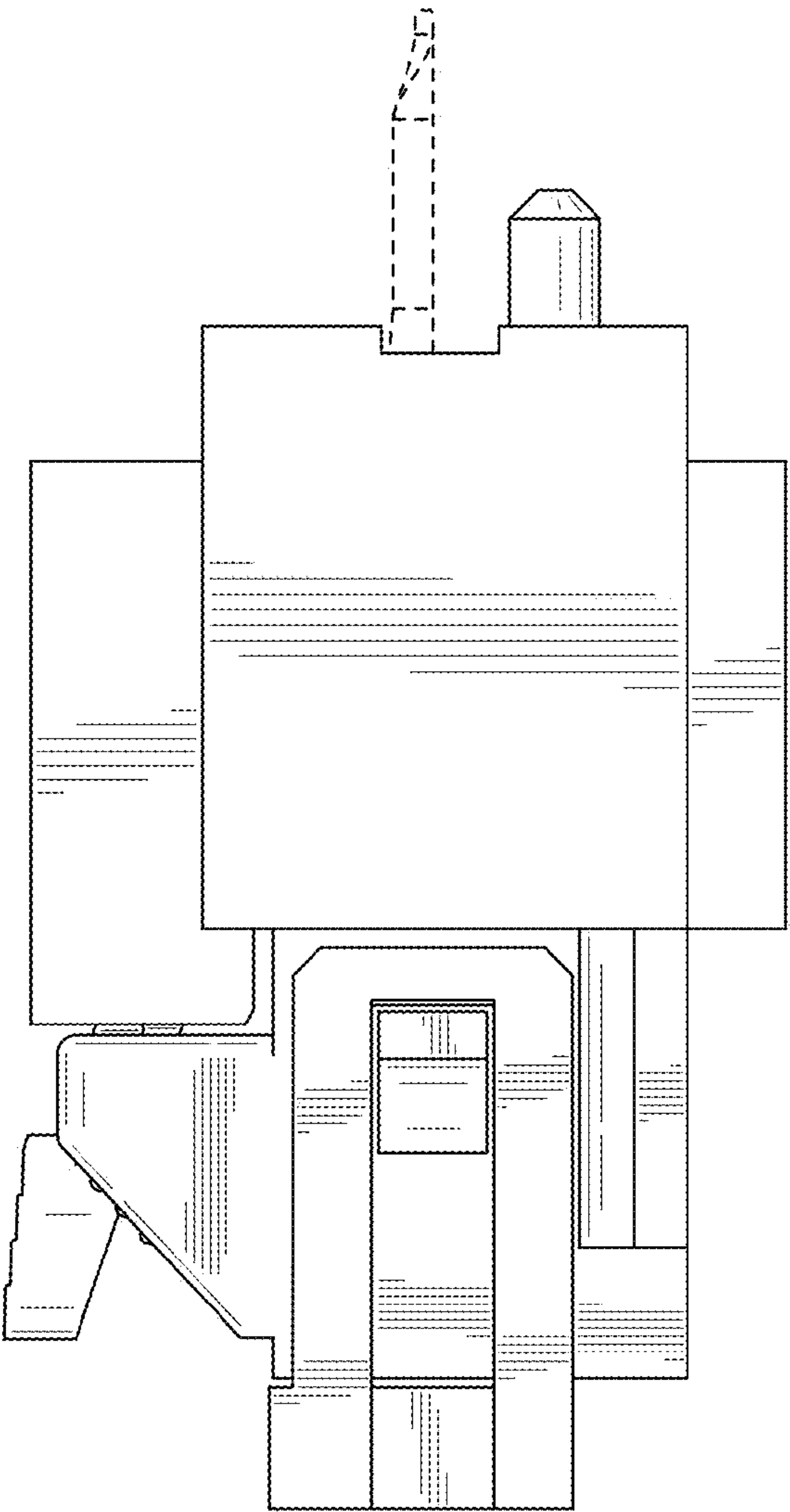


FIG. 14



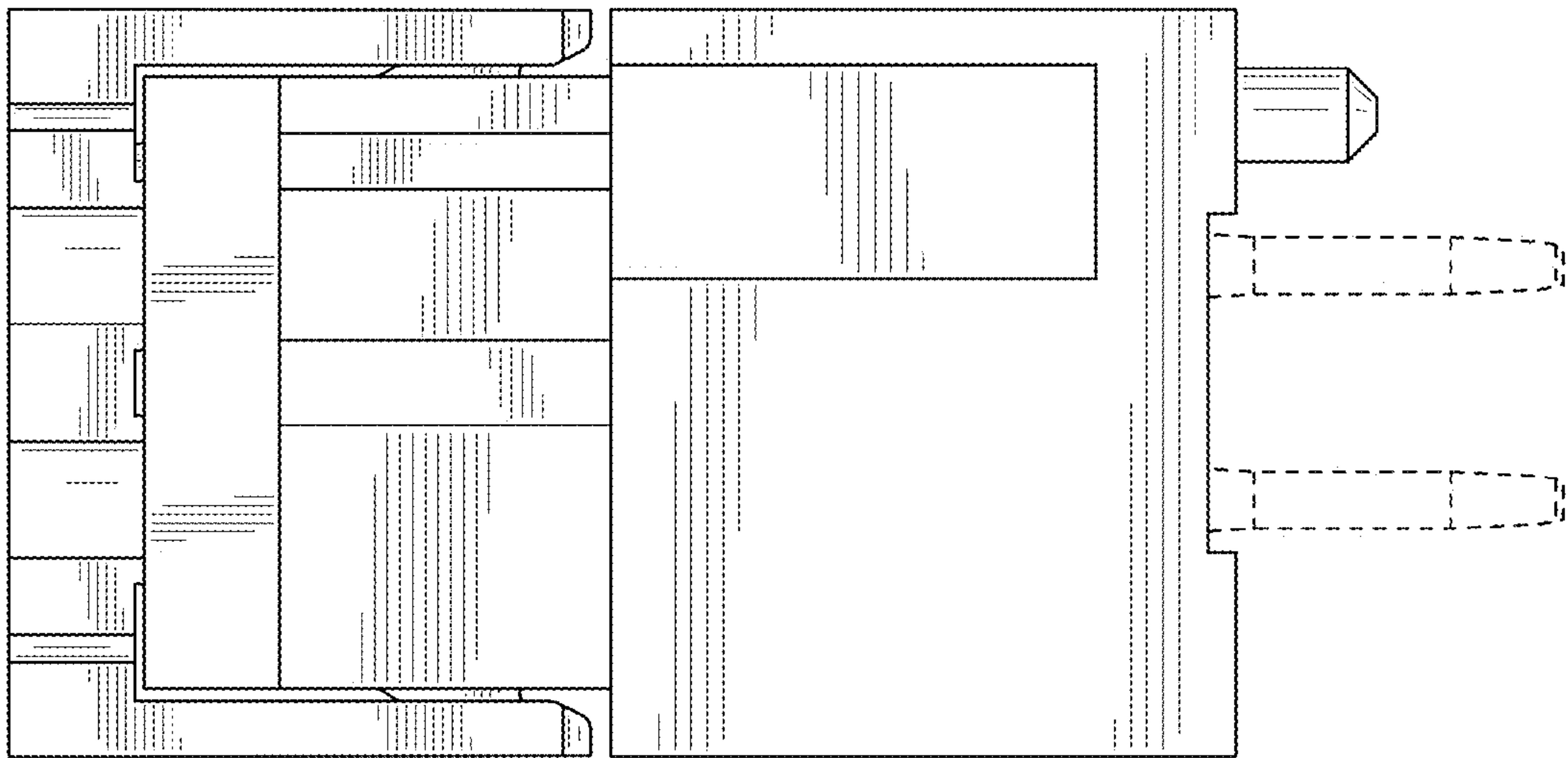


FIG. 15

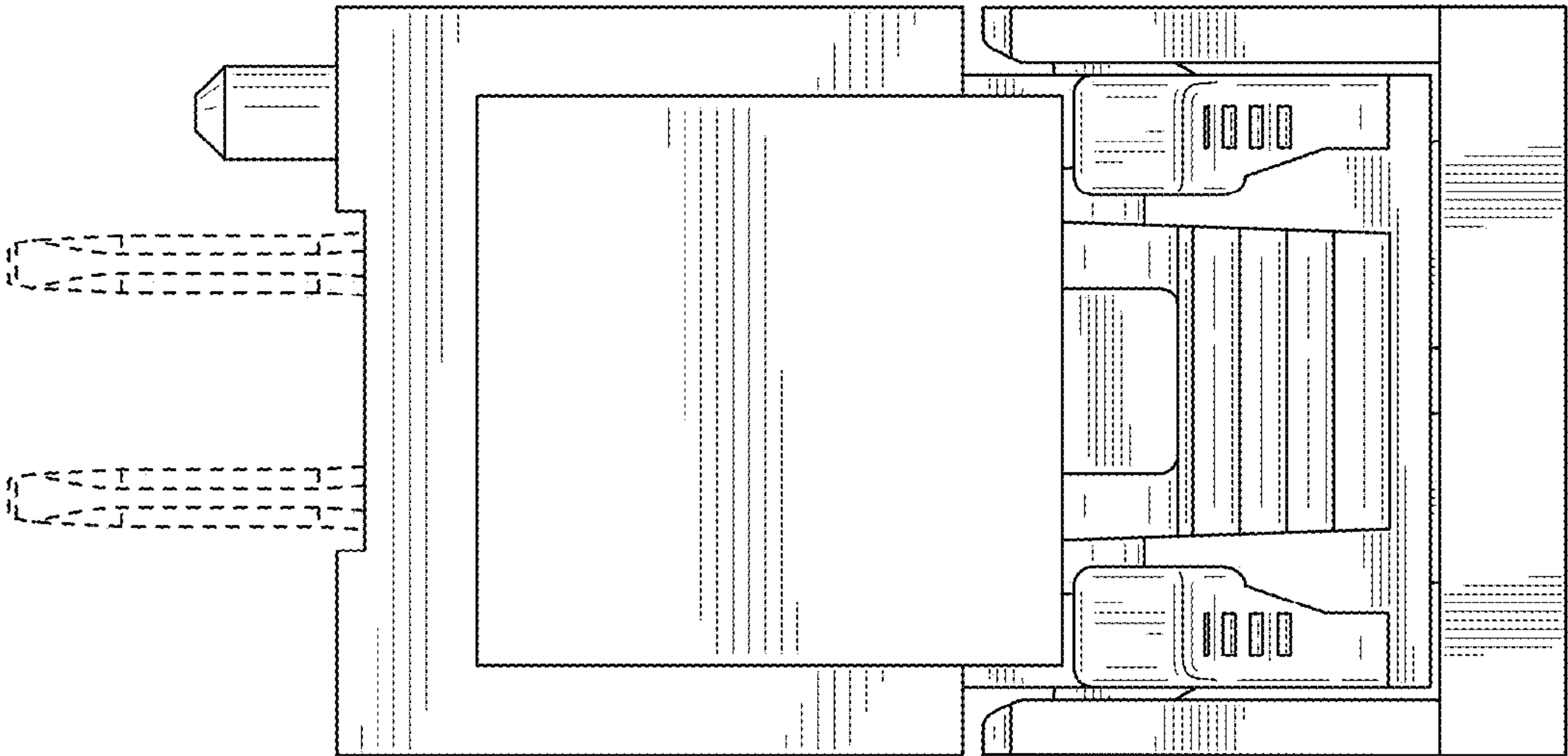


FIG. 16

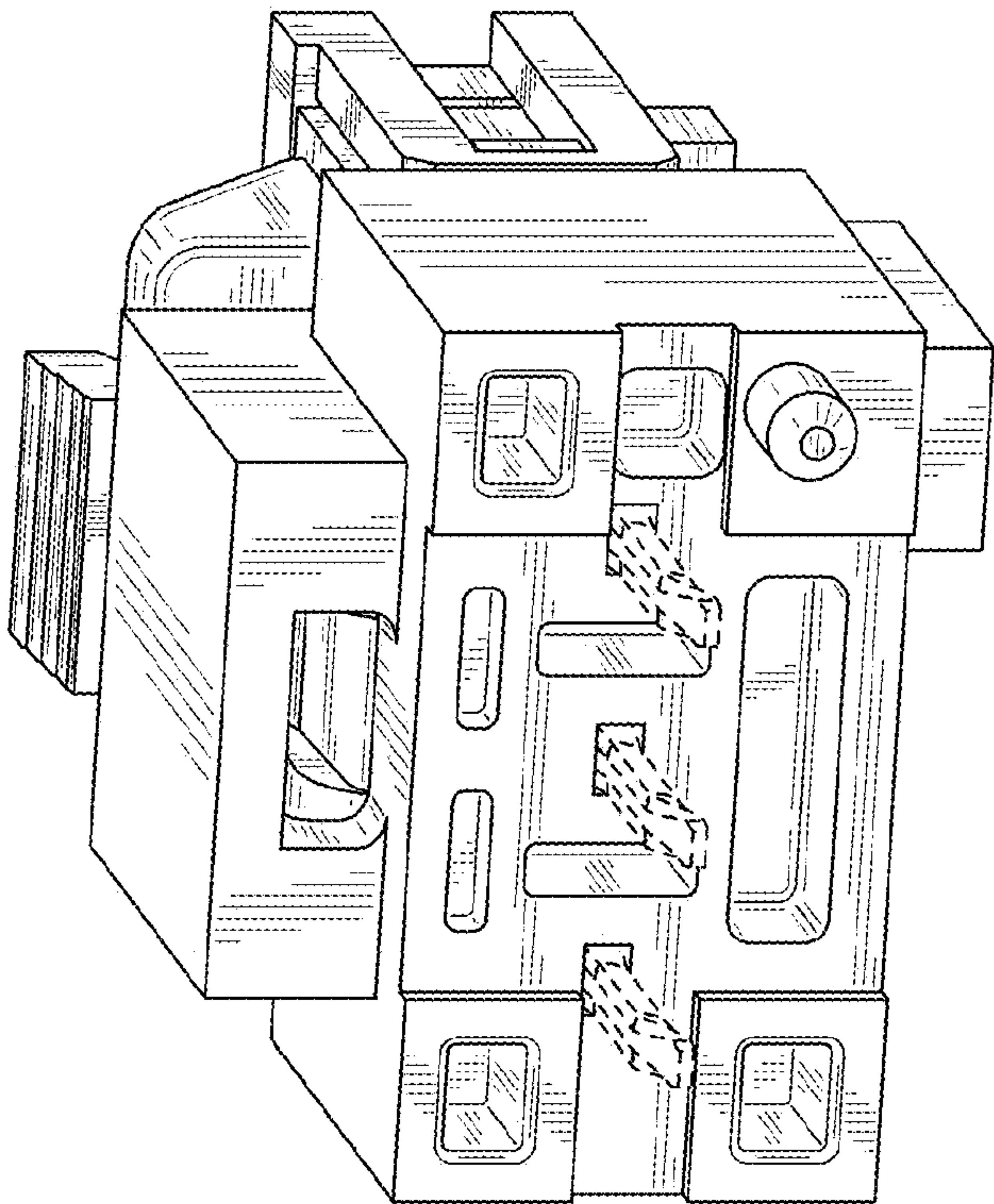


FIG. 18

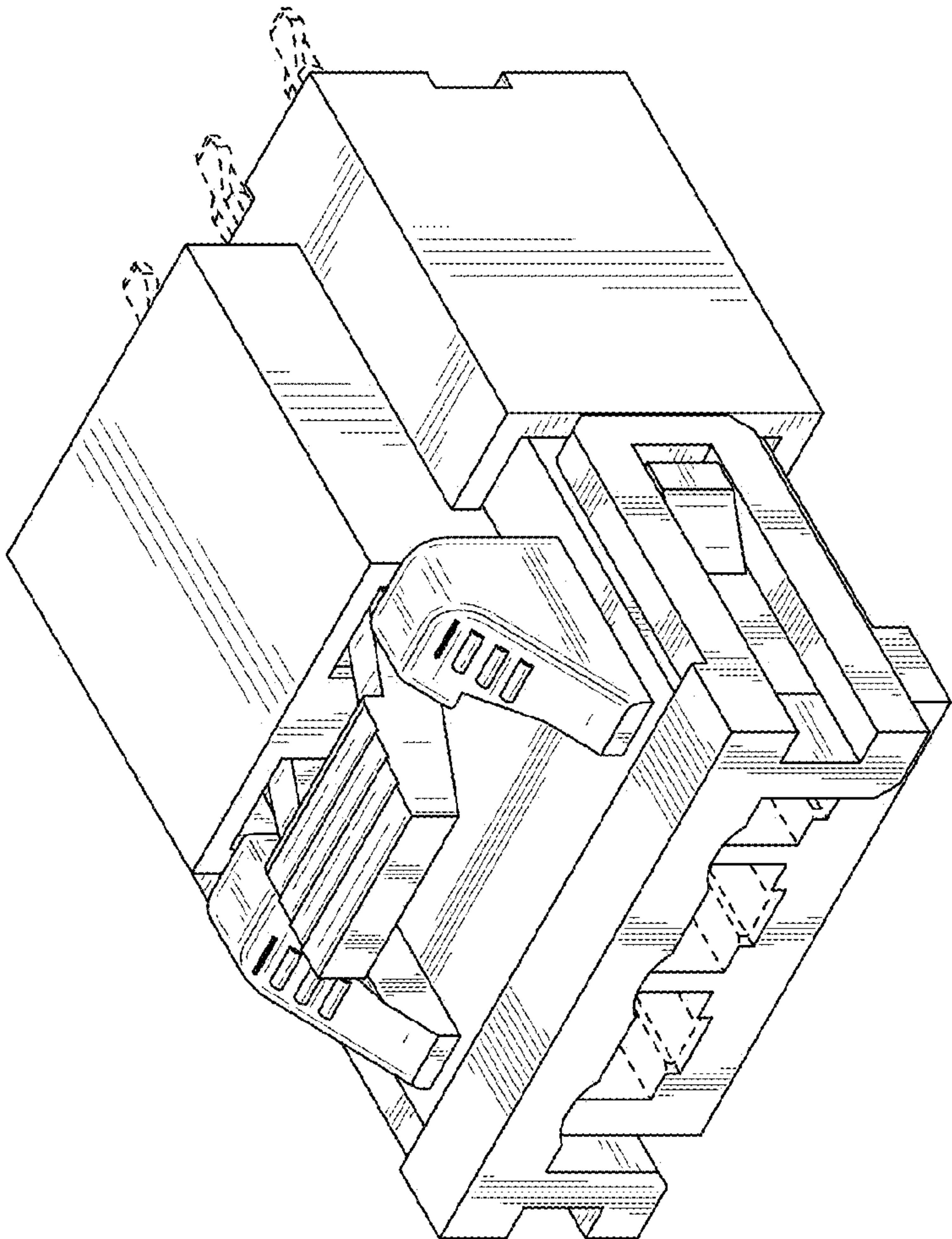


FIG. 17

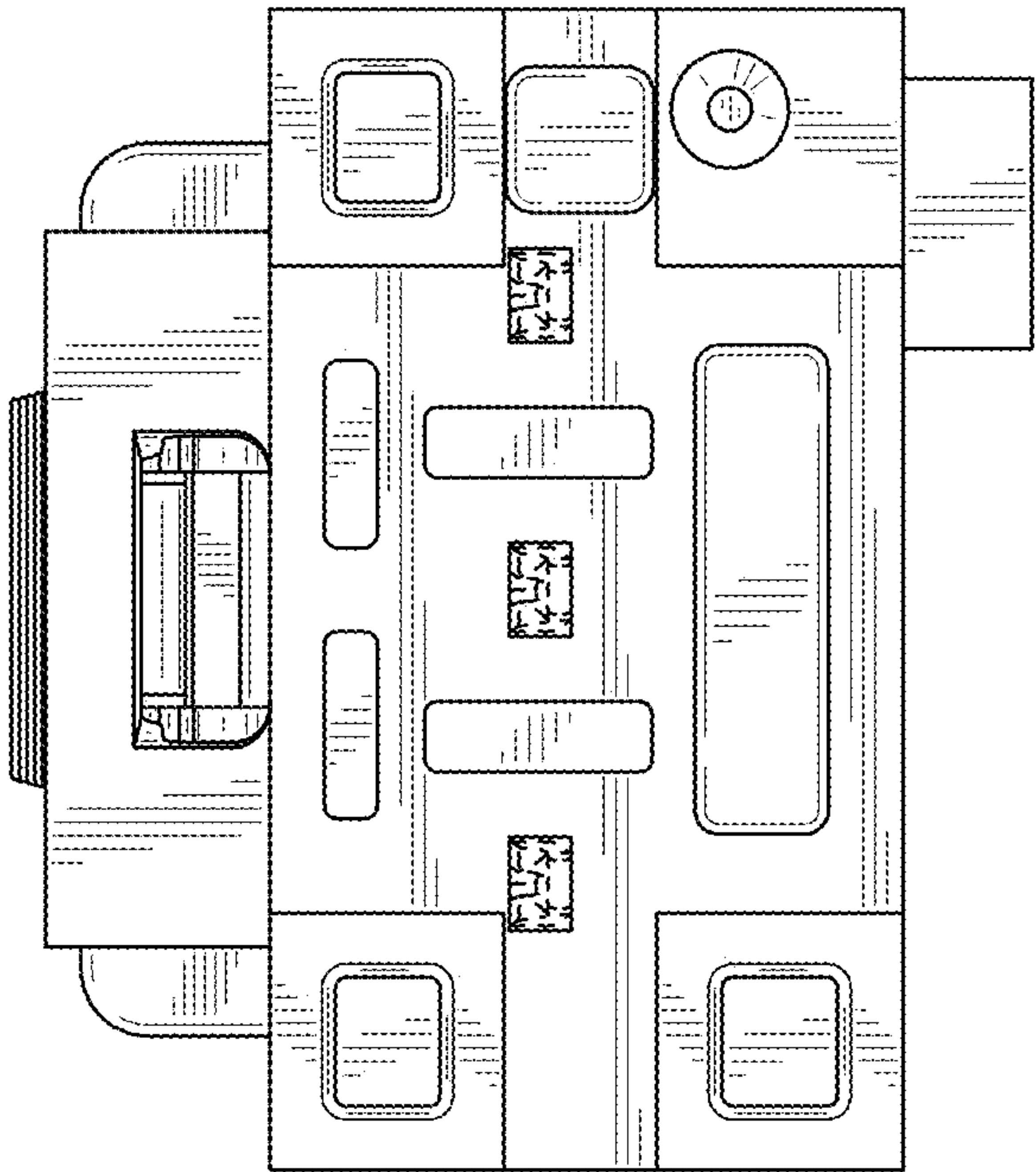


FIG. 20

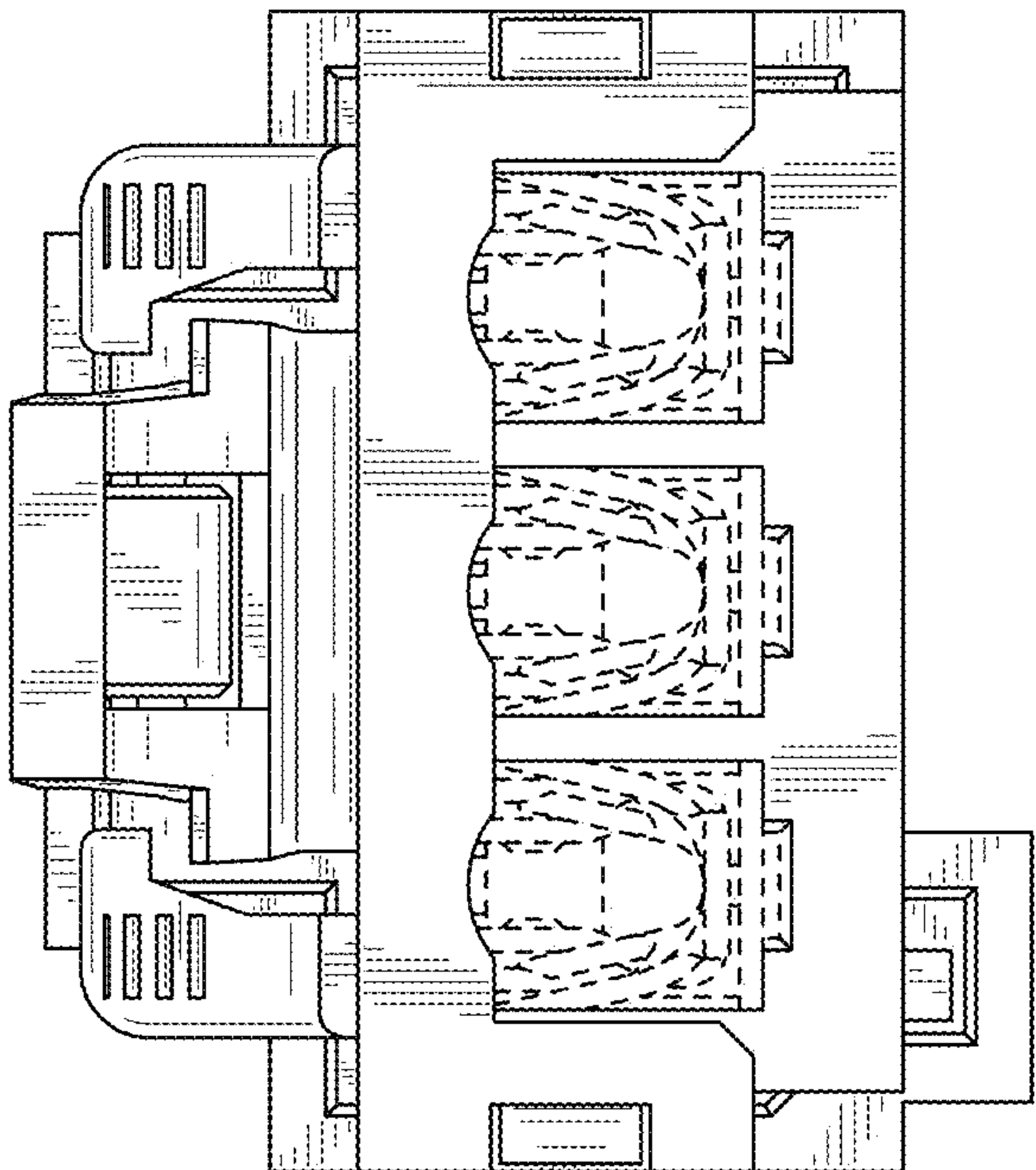


FIG. 19

FIG. 21

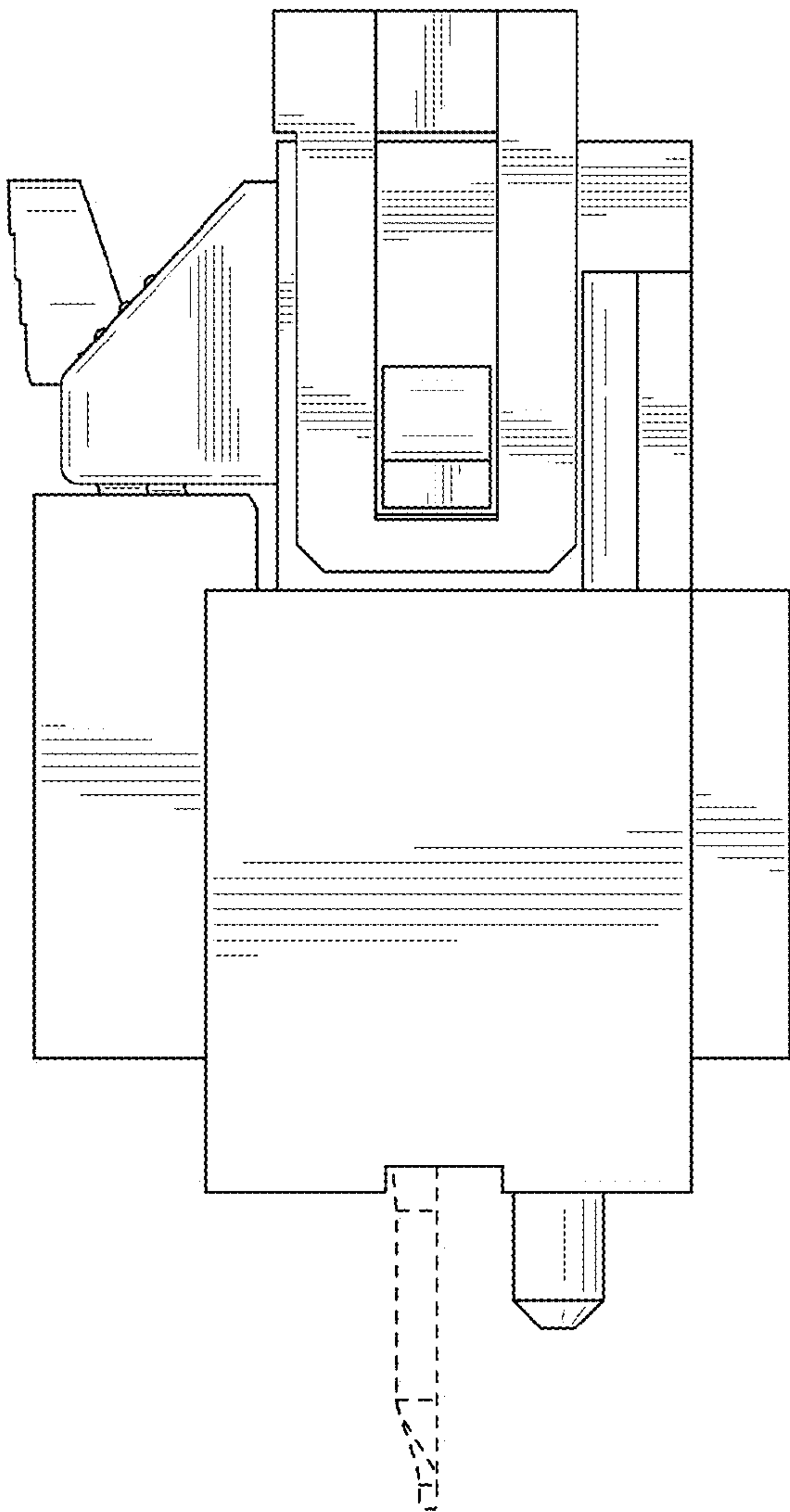
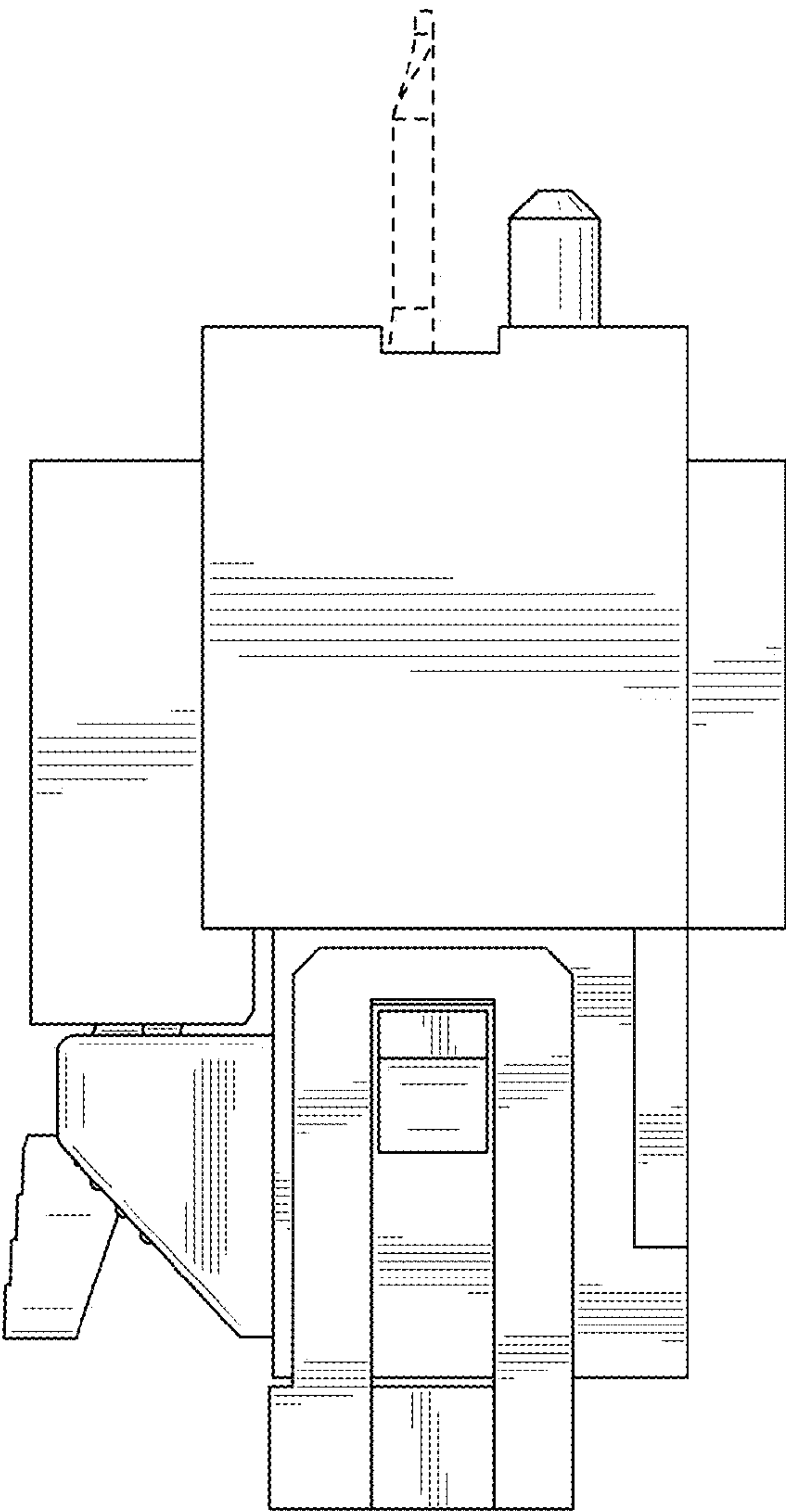


FIG. 22



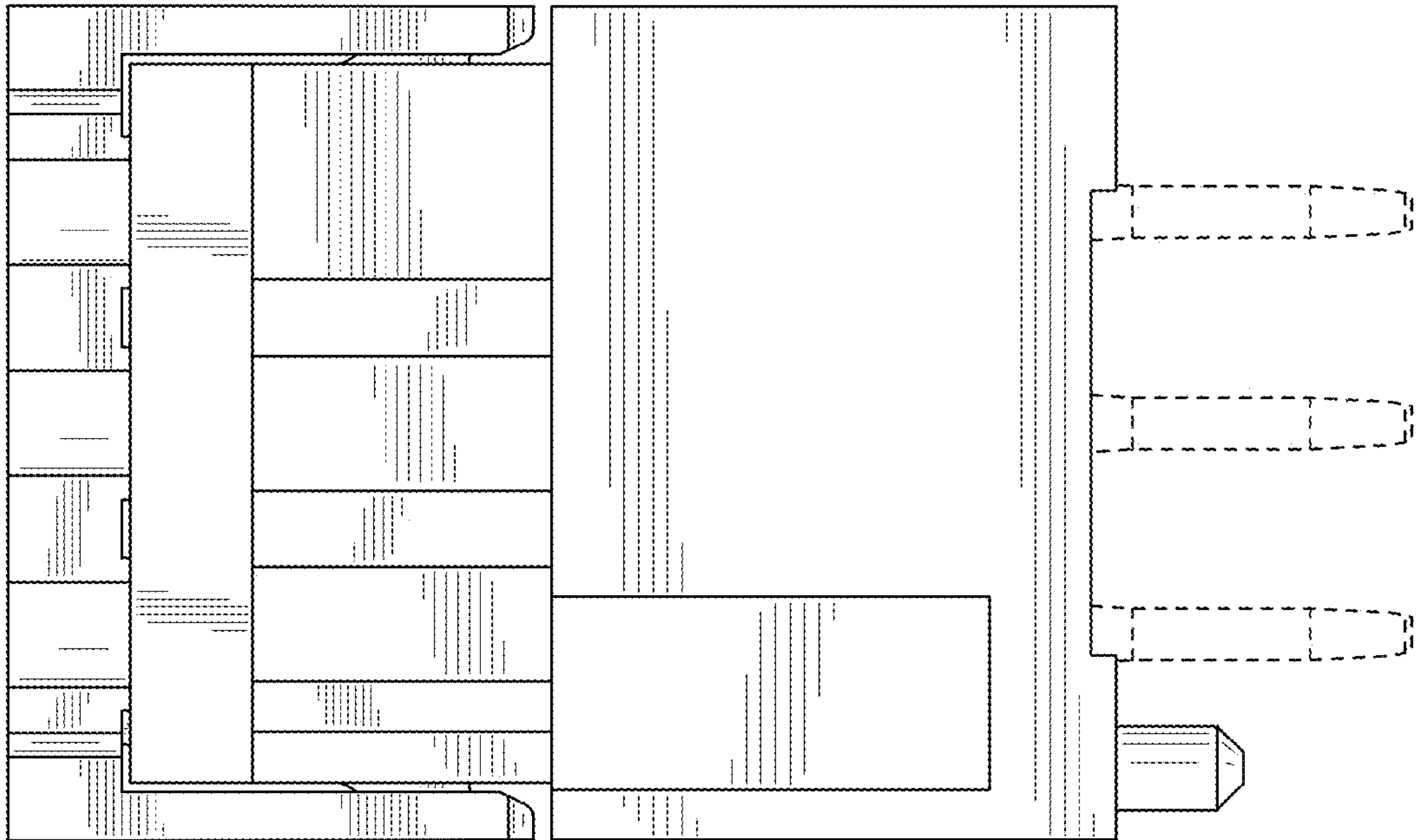


FIG. 24

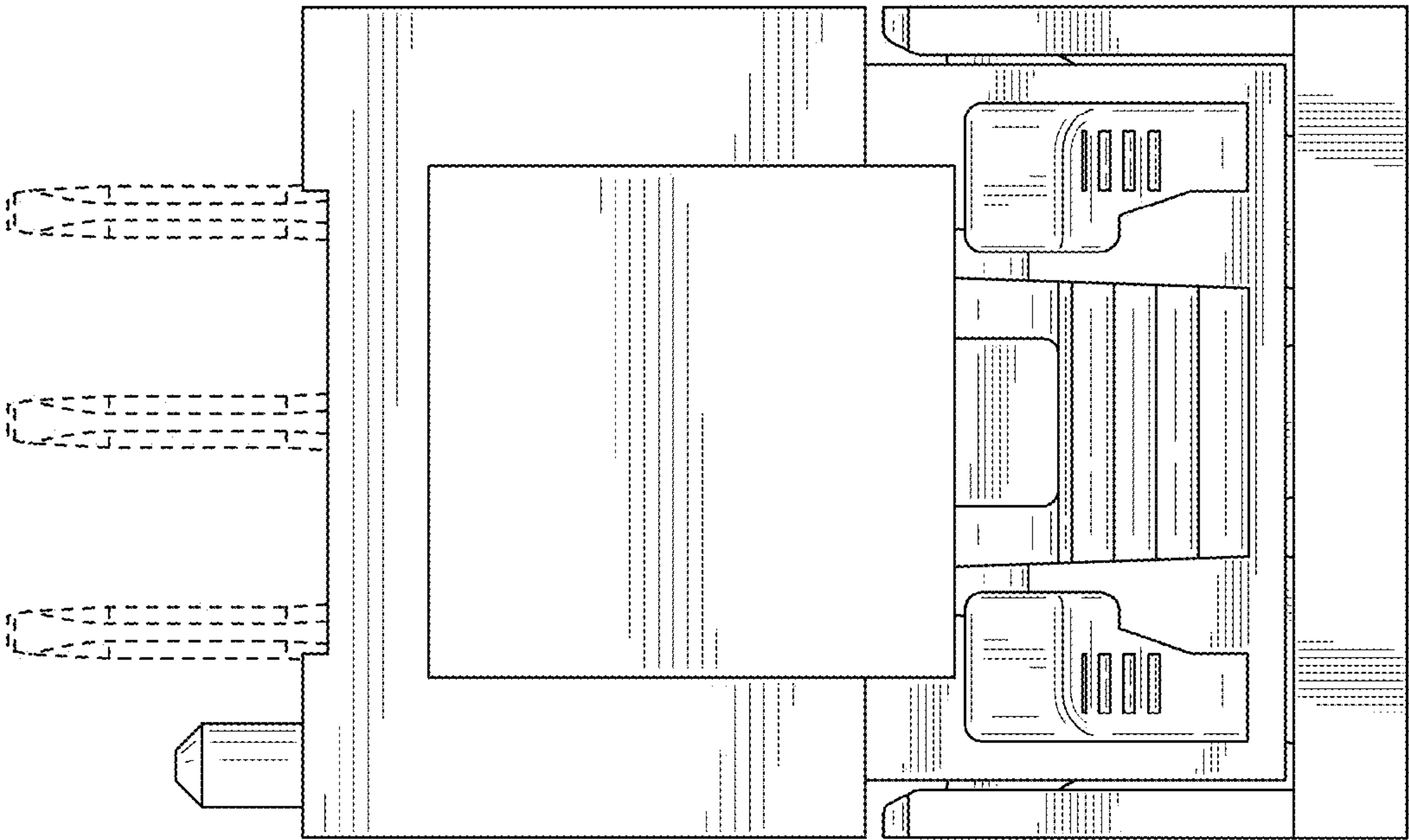


FIG. 23

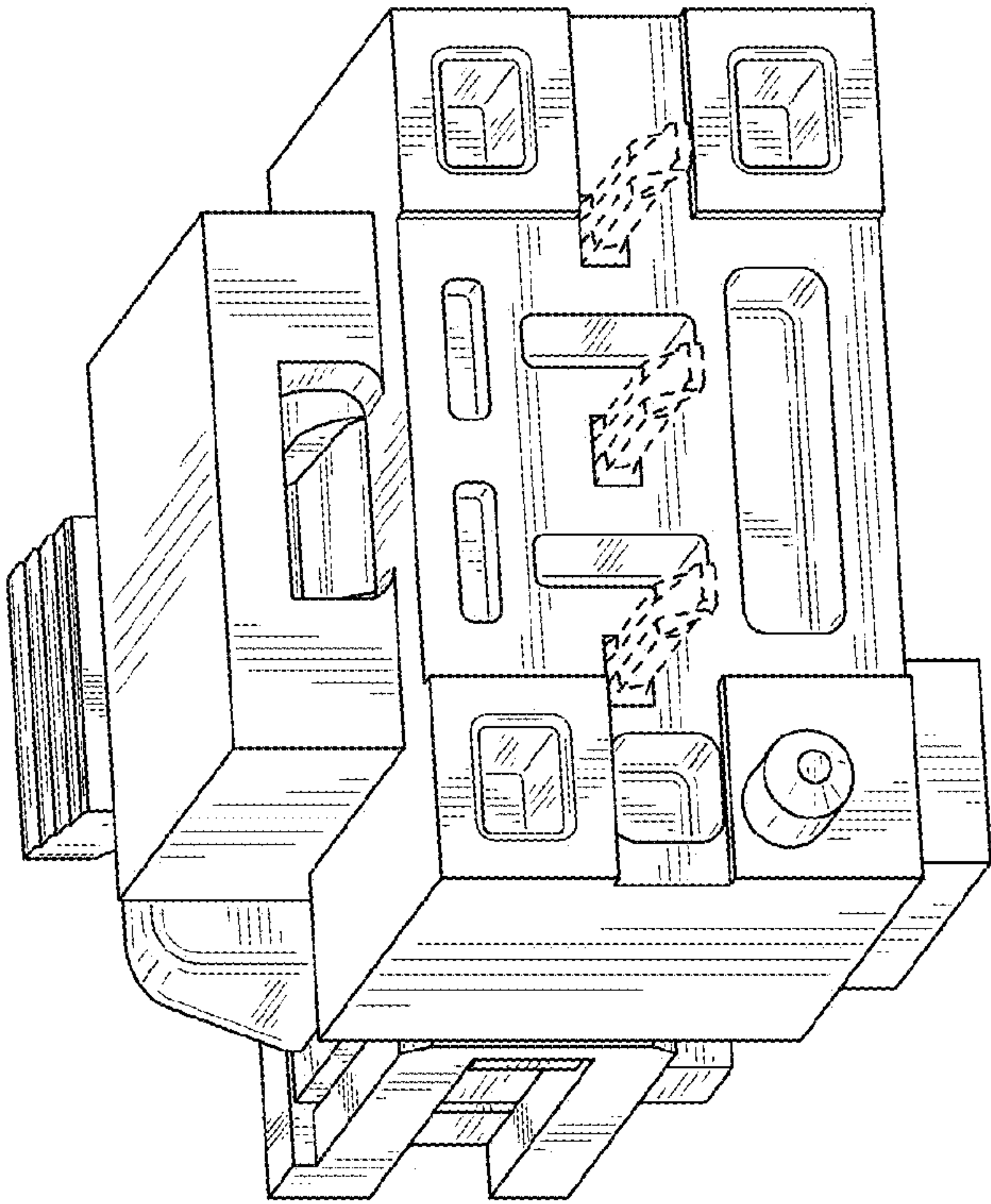


FIG. 26

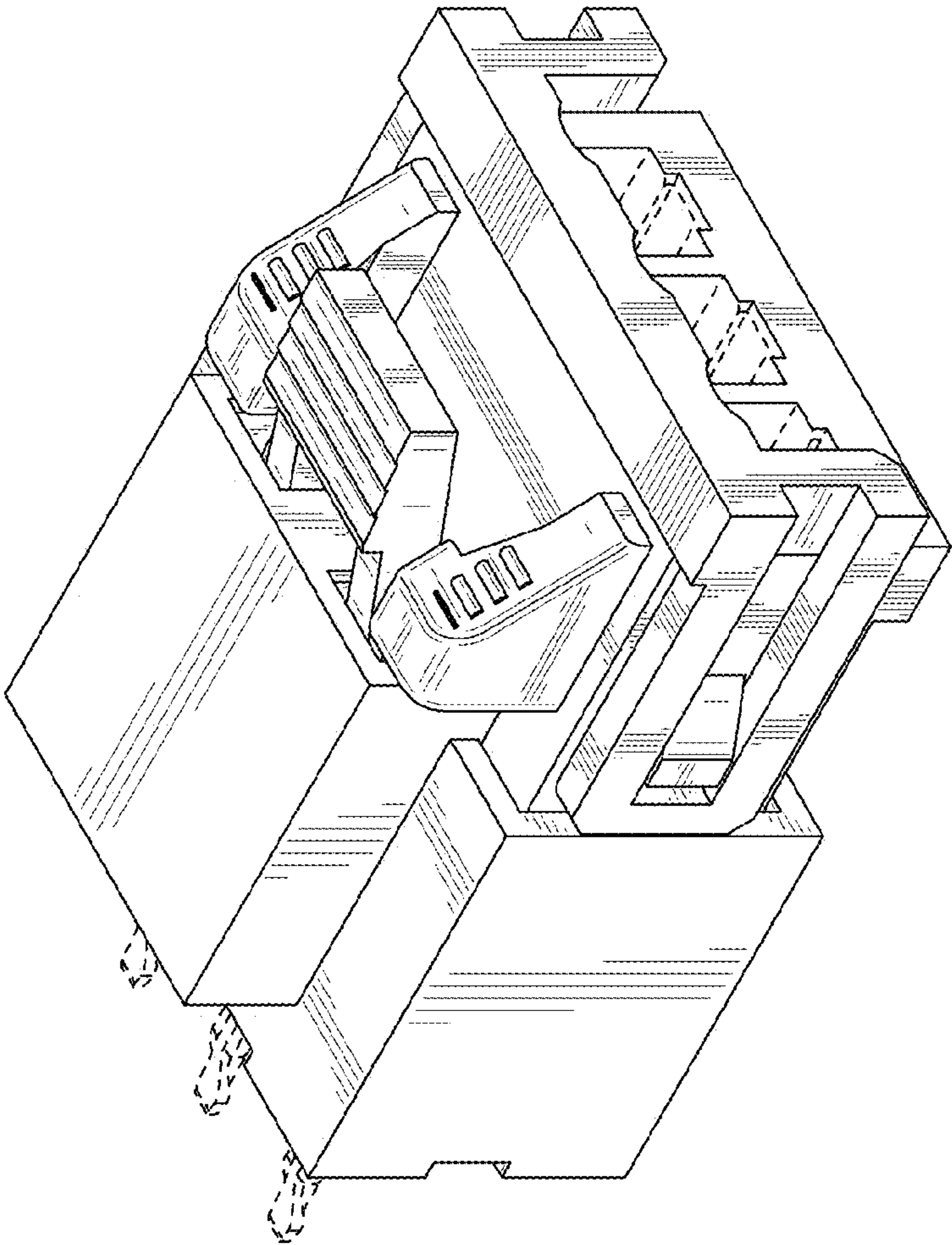


FIG. 25

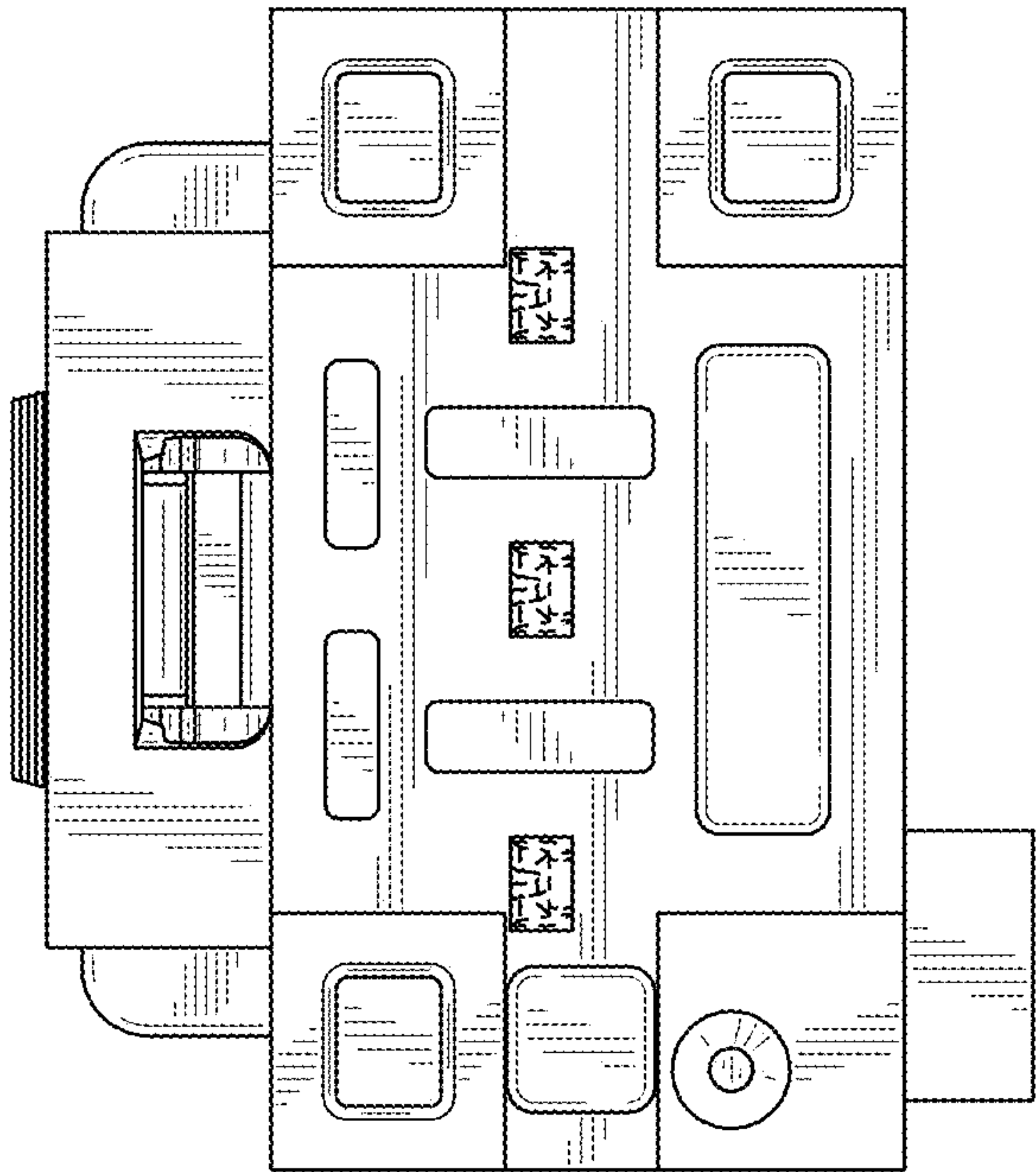


FIG. 27

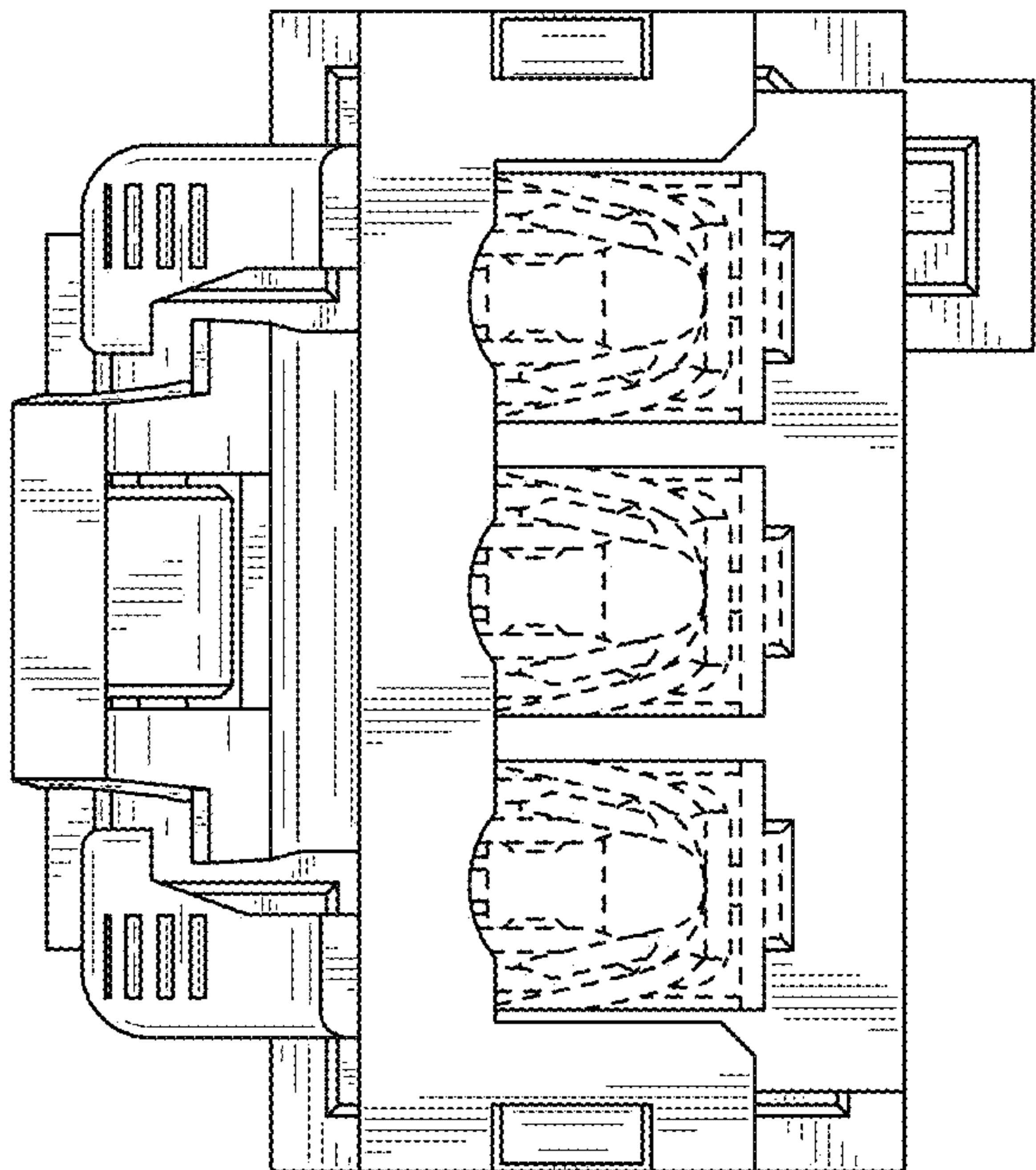


FIG. 28

FIG. 29

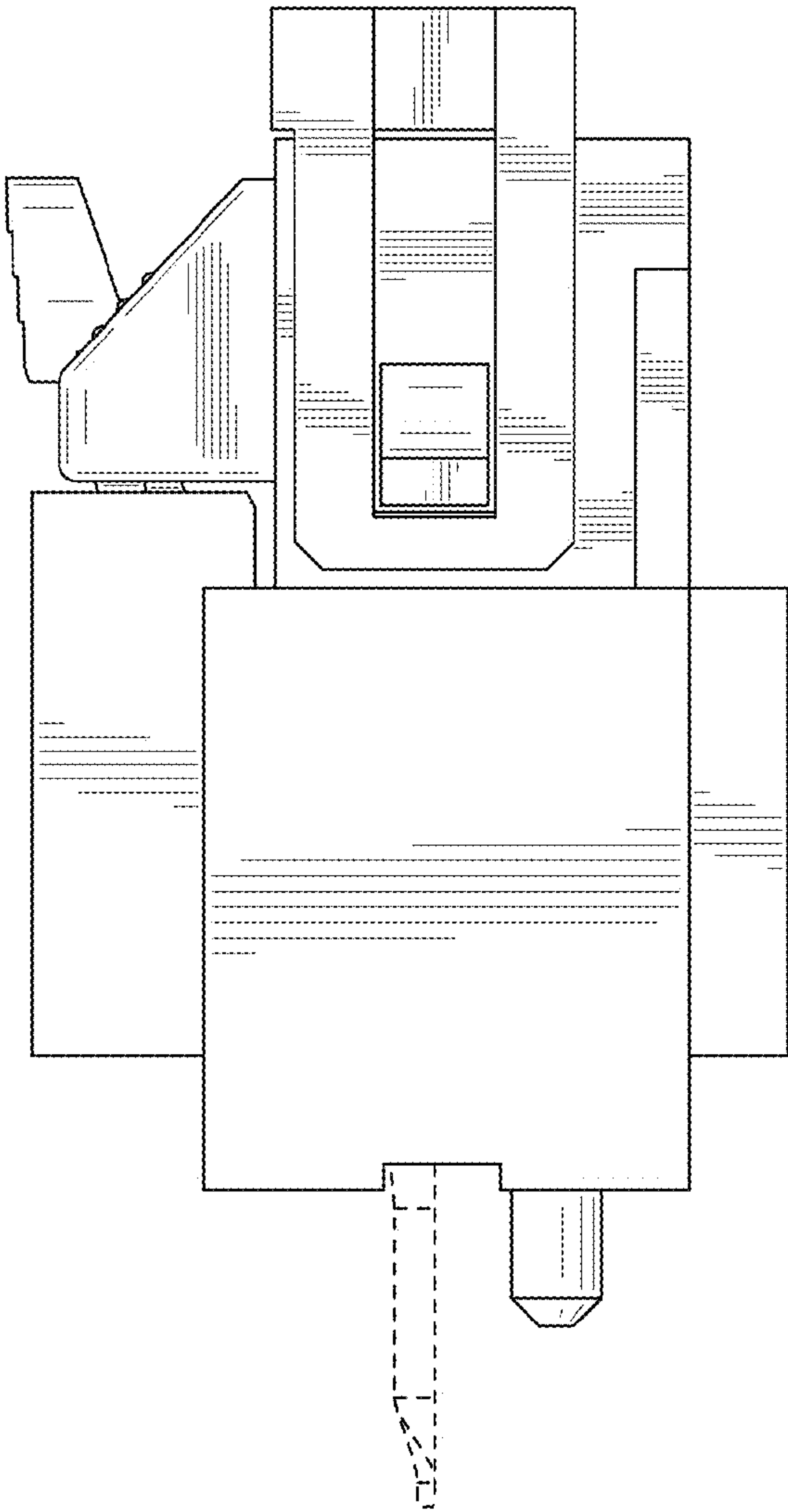
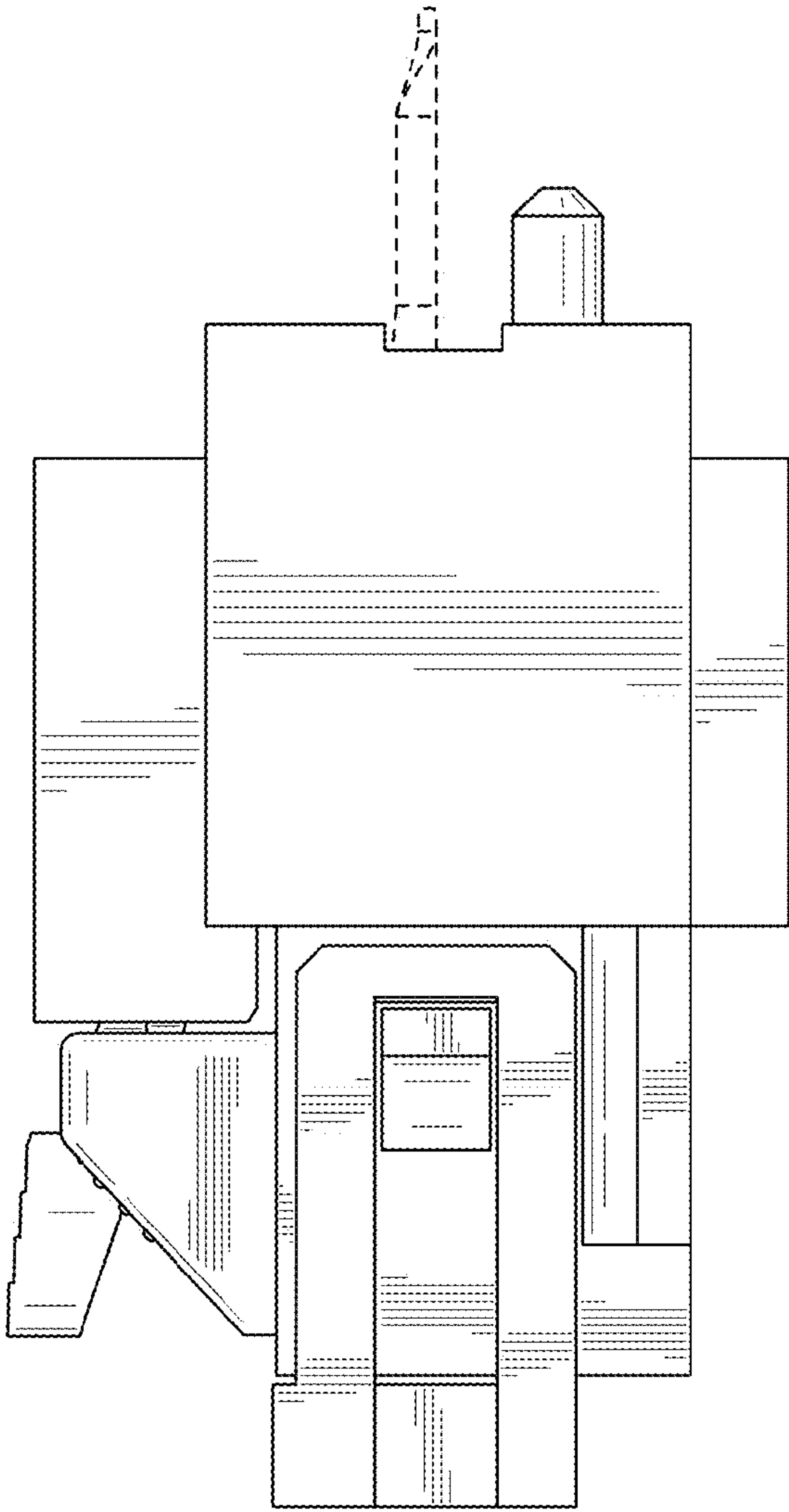


FIG. 30



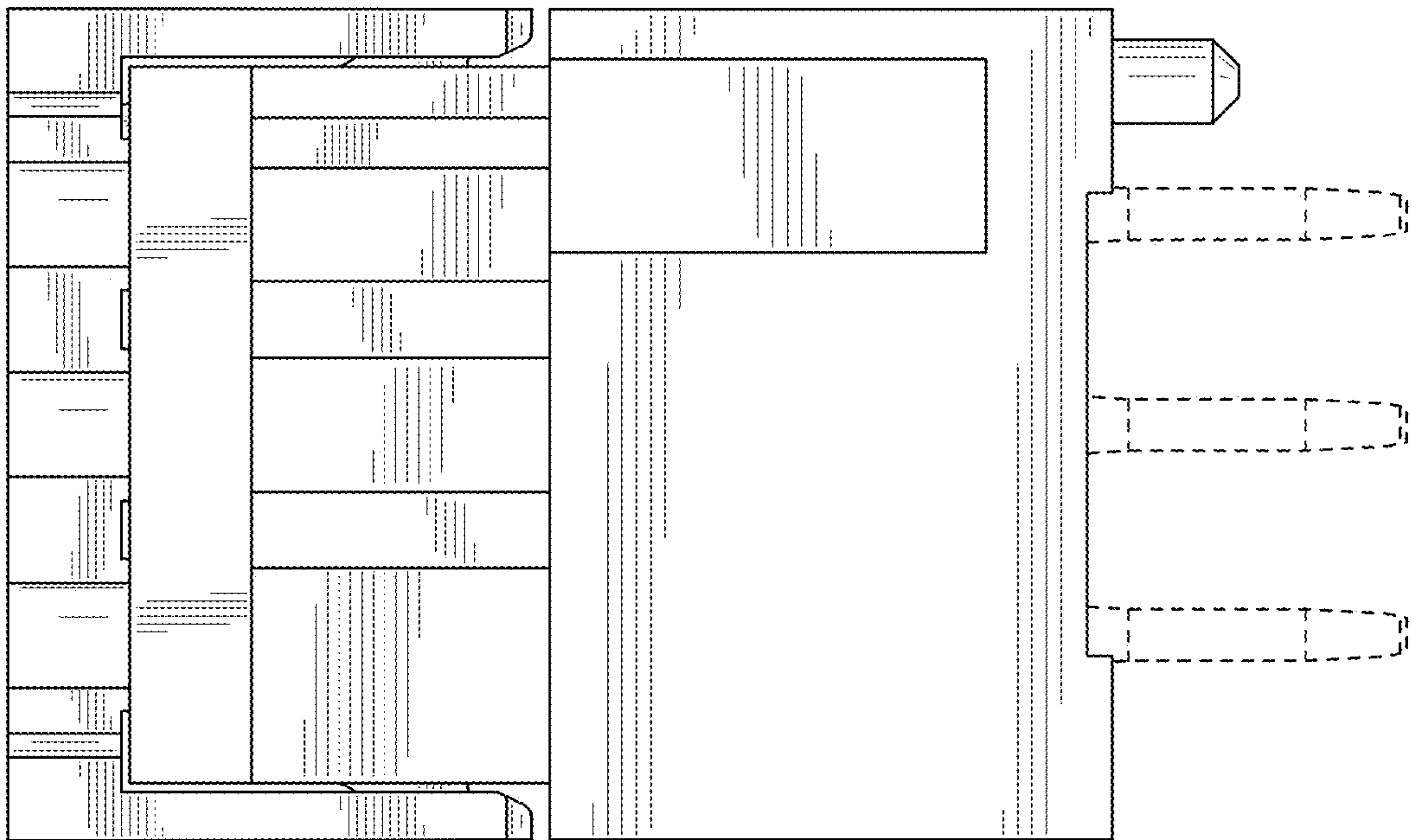


FIG. 32

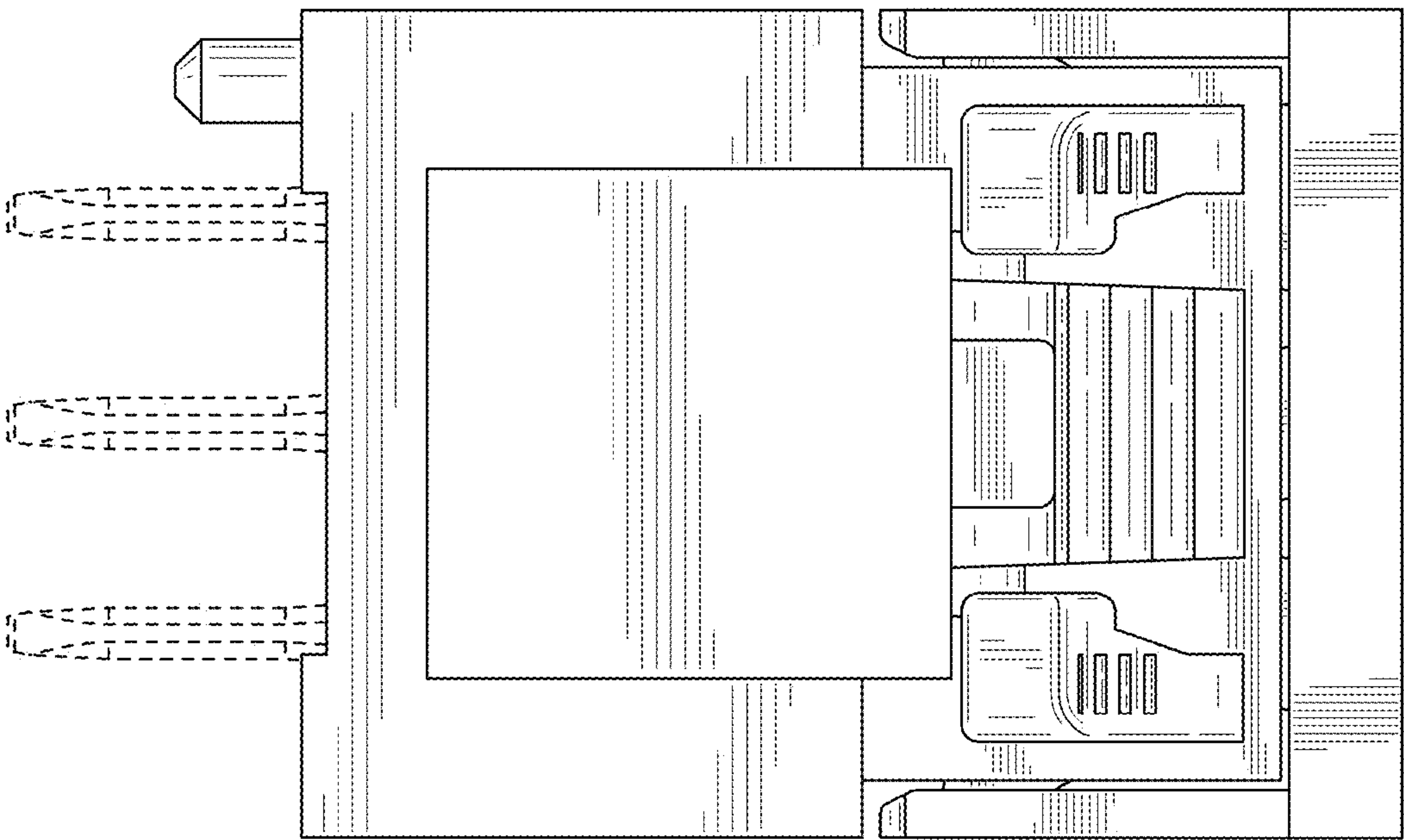


FIG. 31

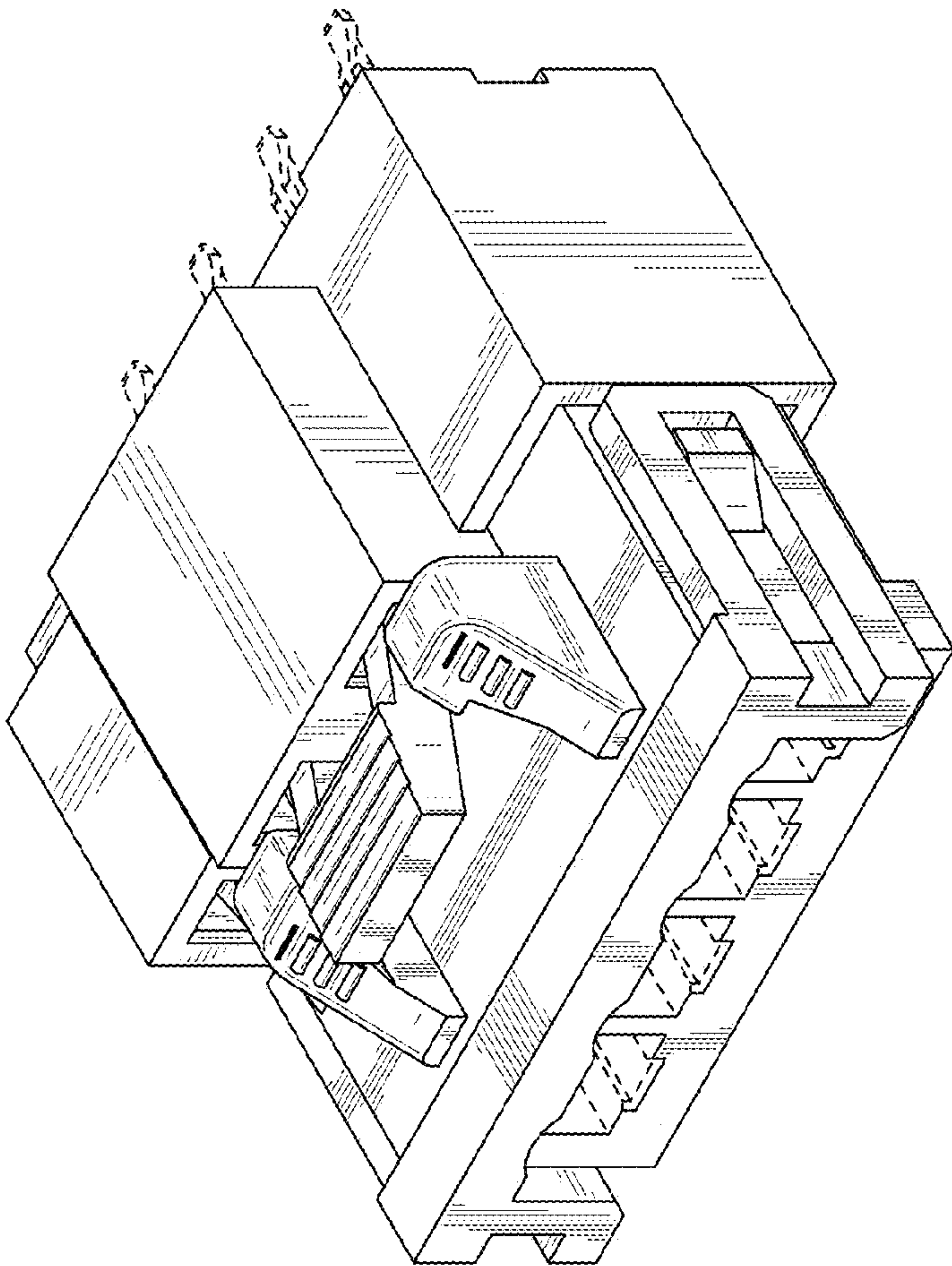


FIG. 33

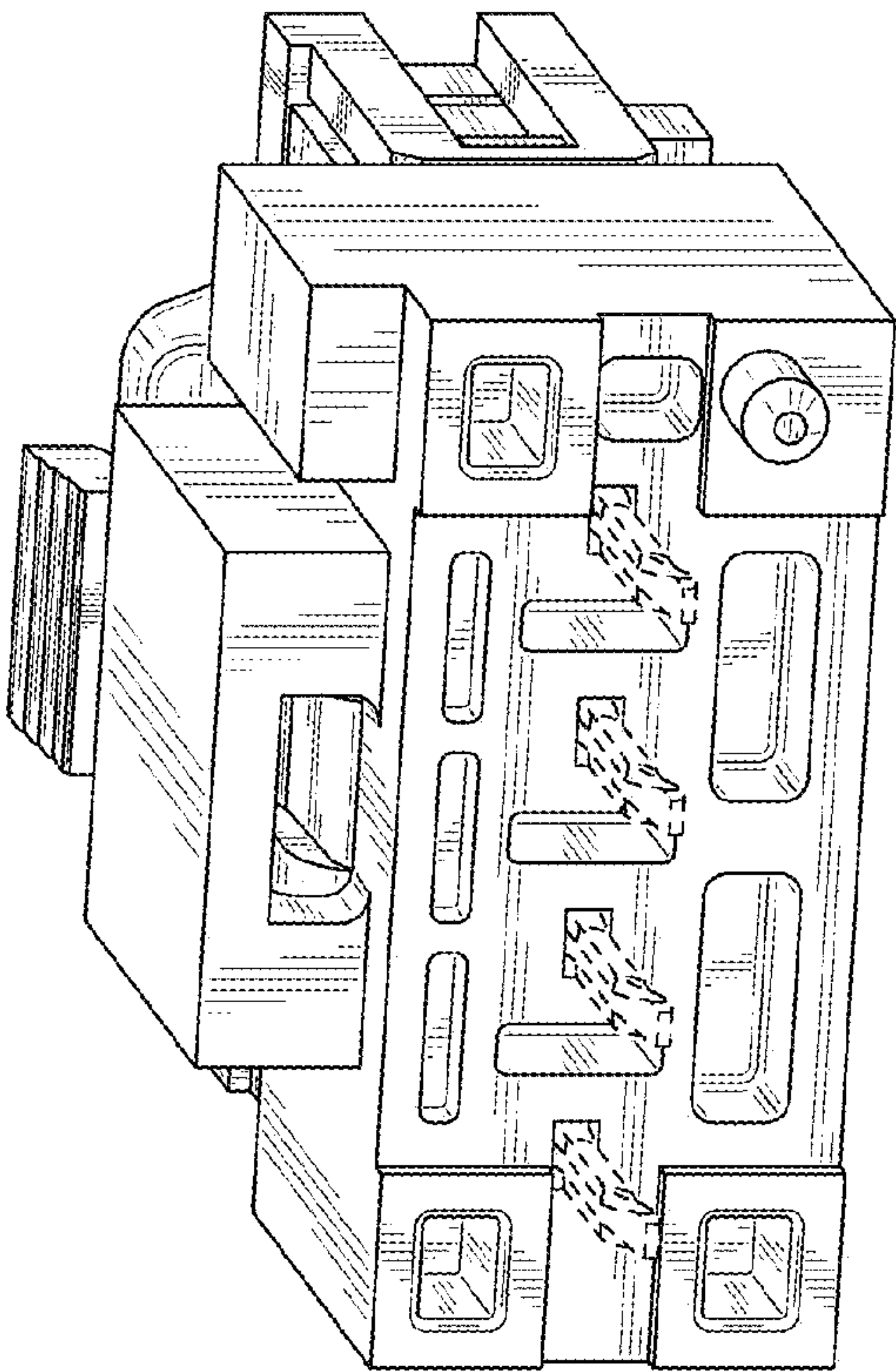


FIG. 34

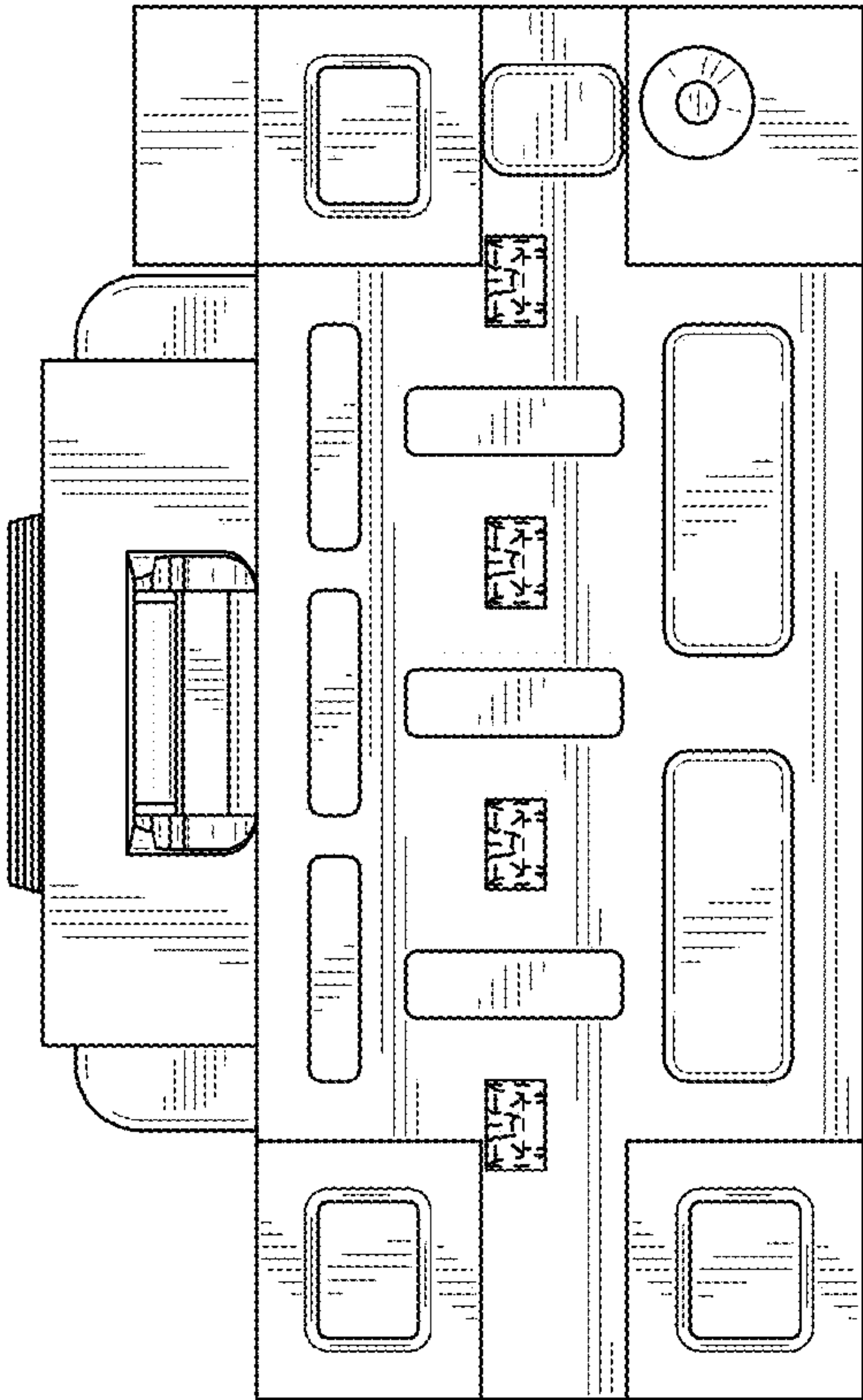


FIG. 36

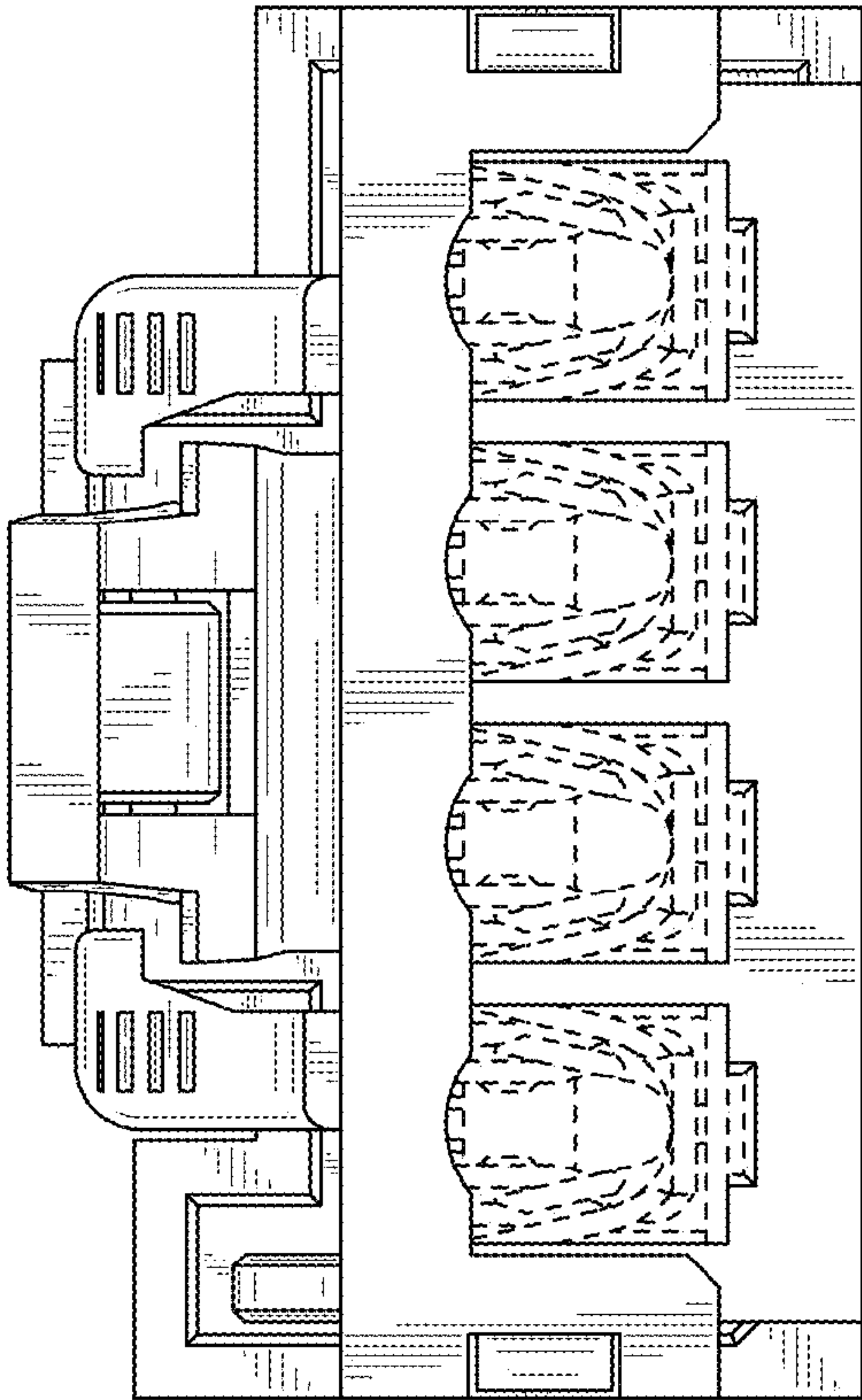


FIG. 35

FIG. 37

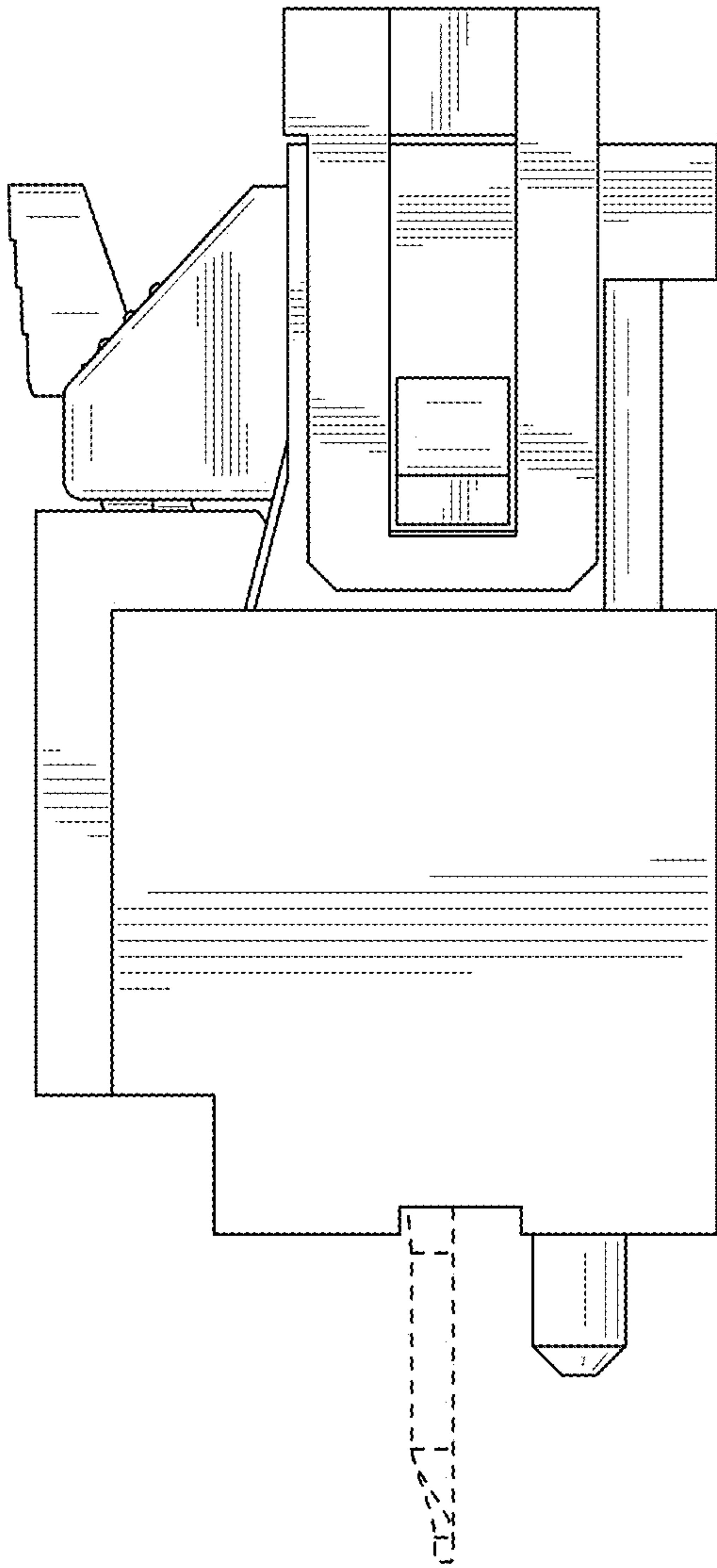
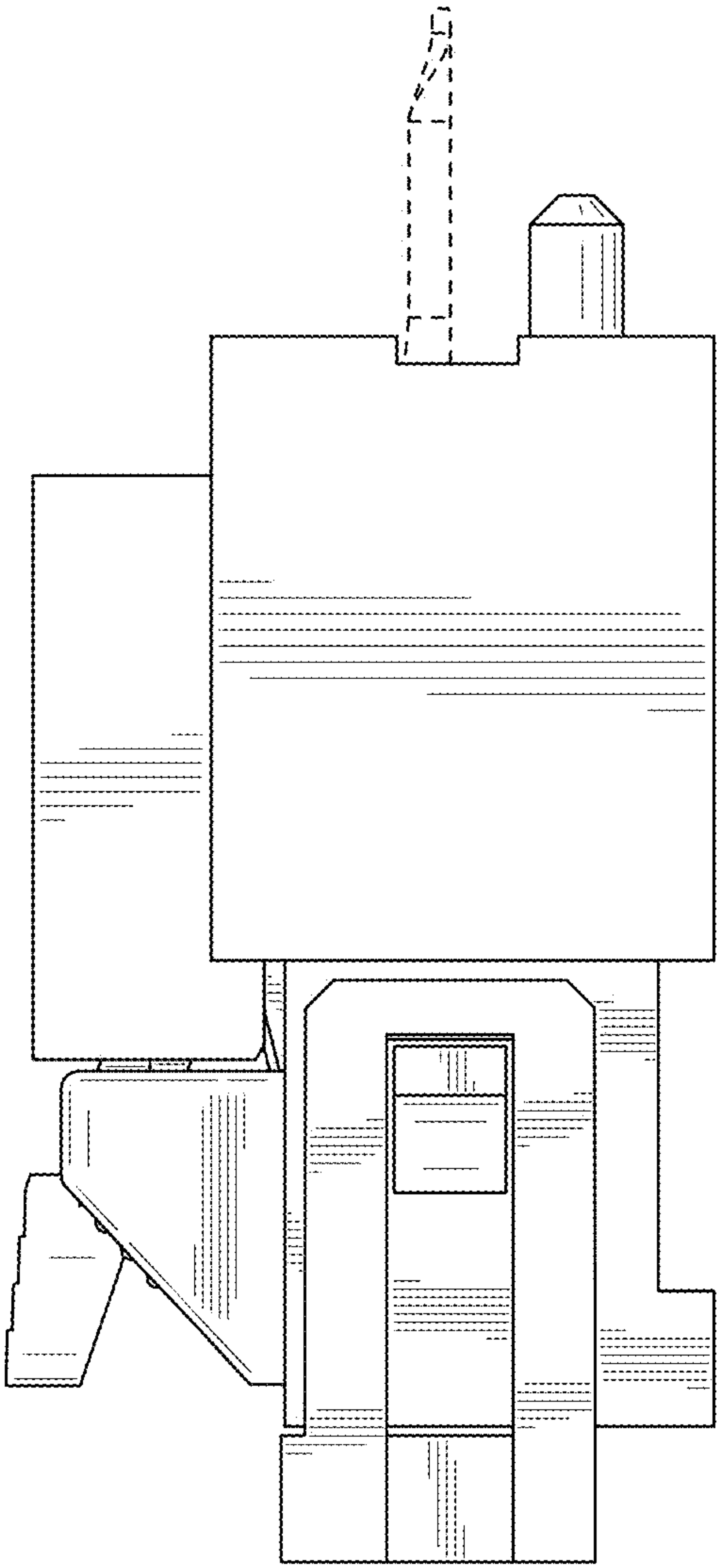


FIG. 38



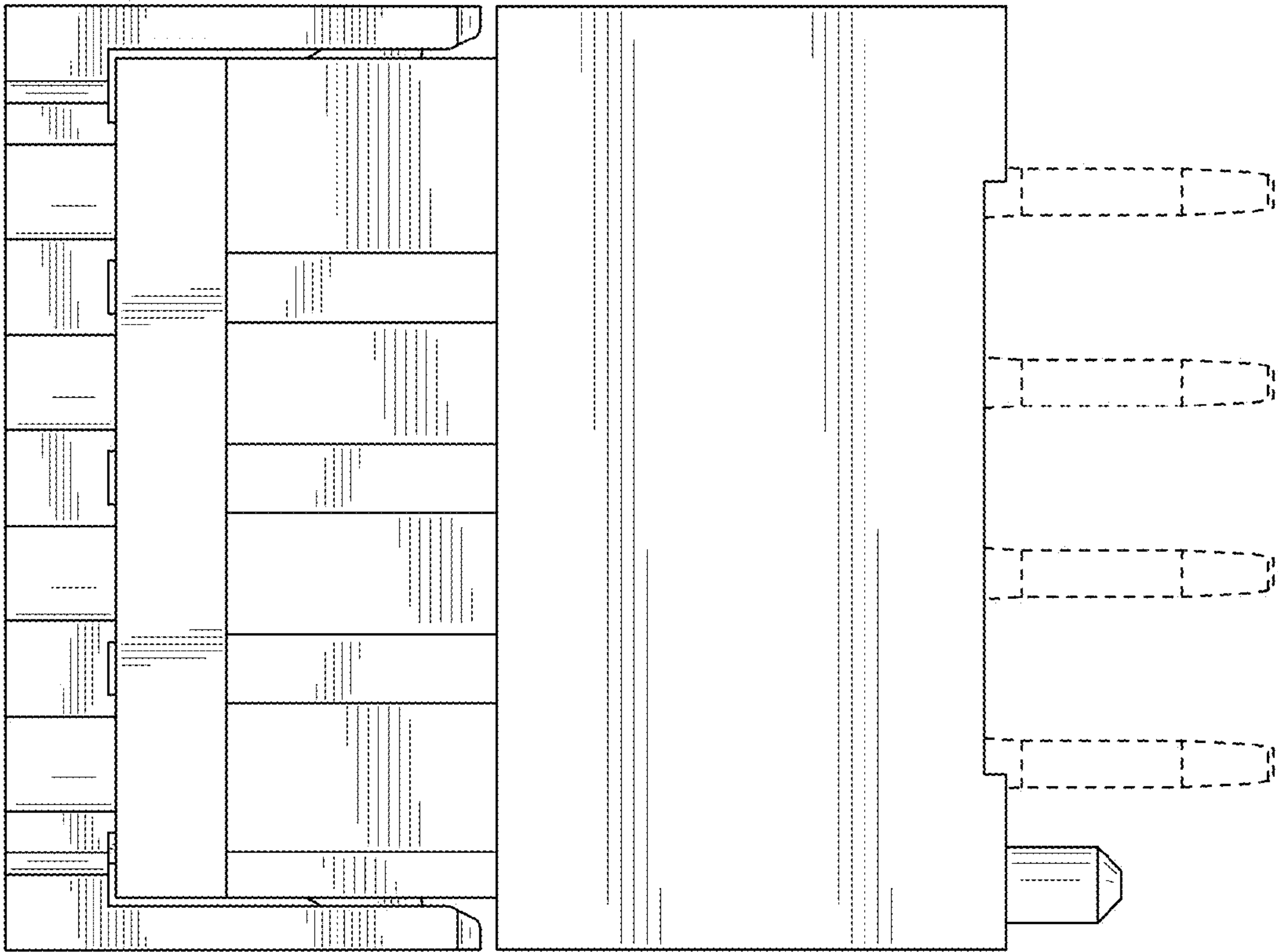


FIG. 40

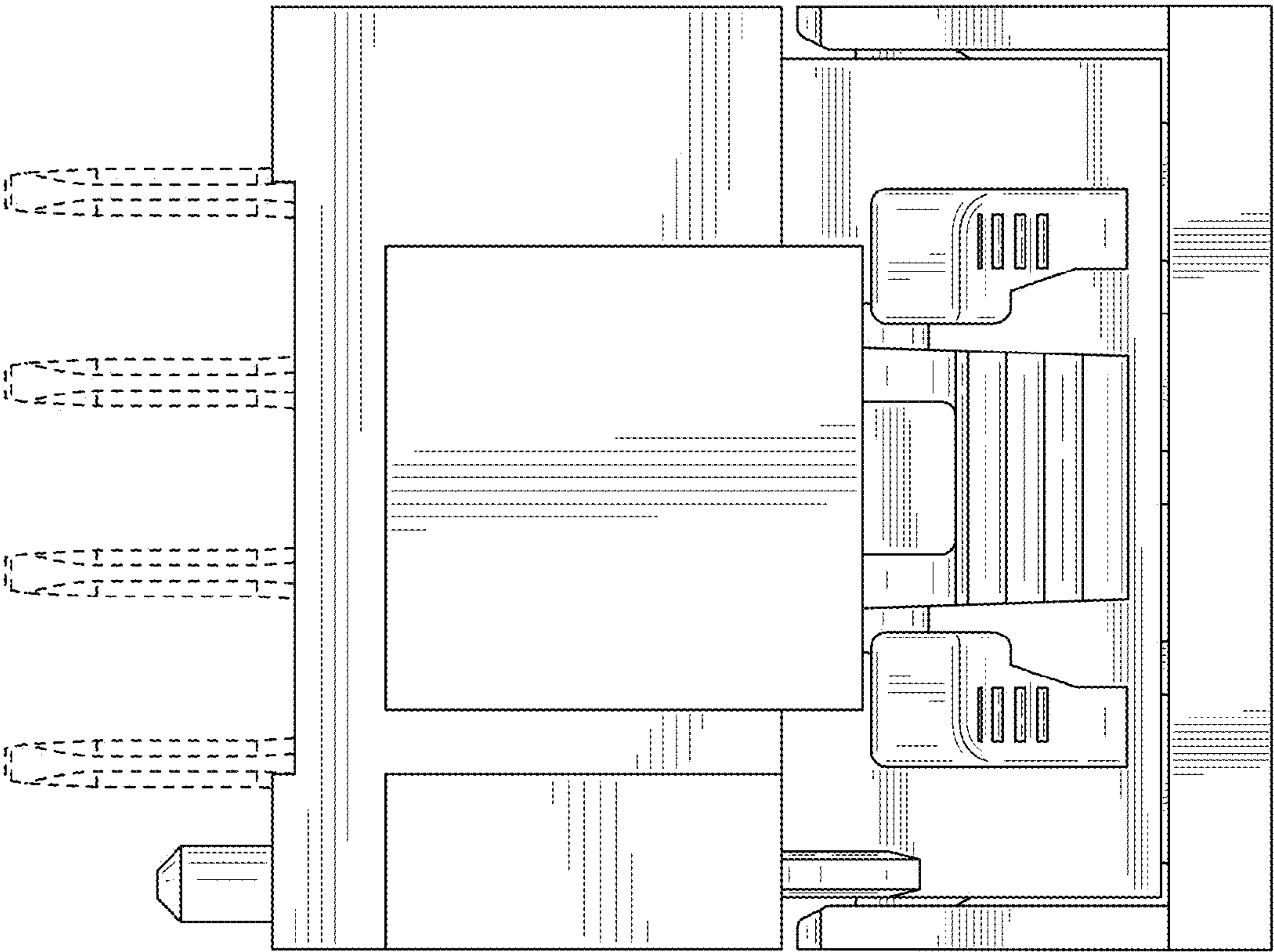


FIG. 39

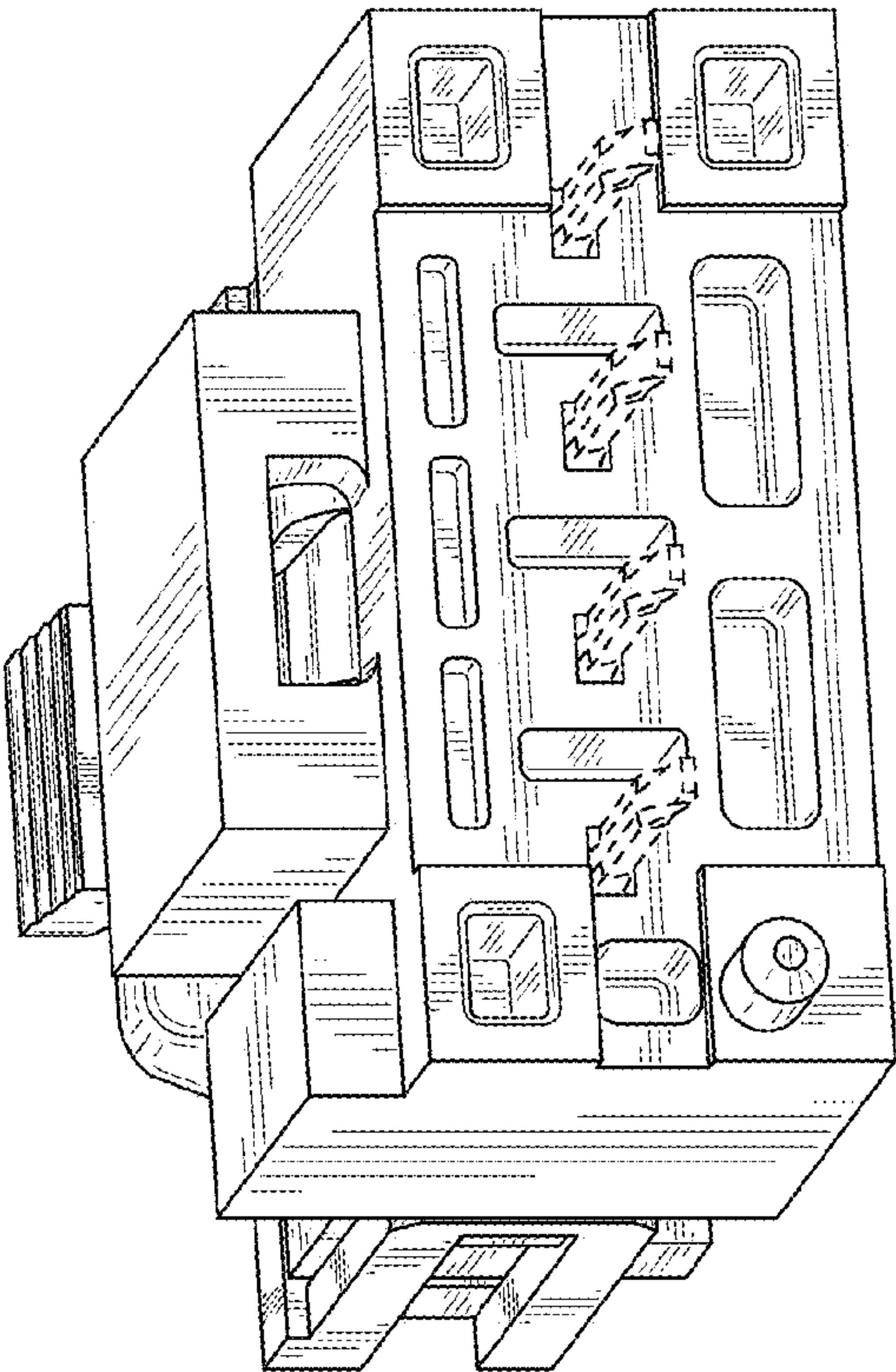


FIG. 42

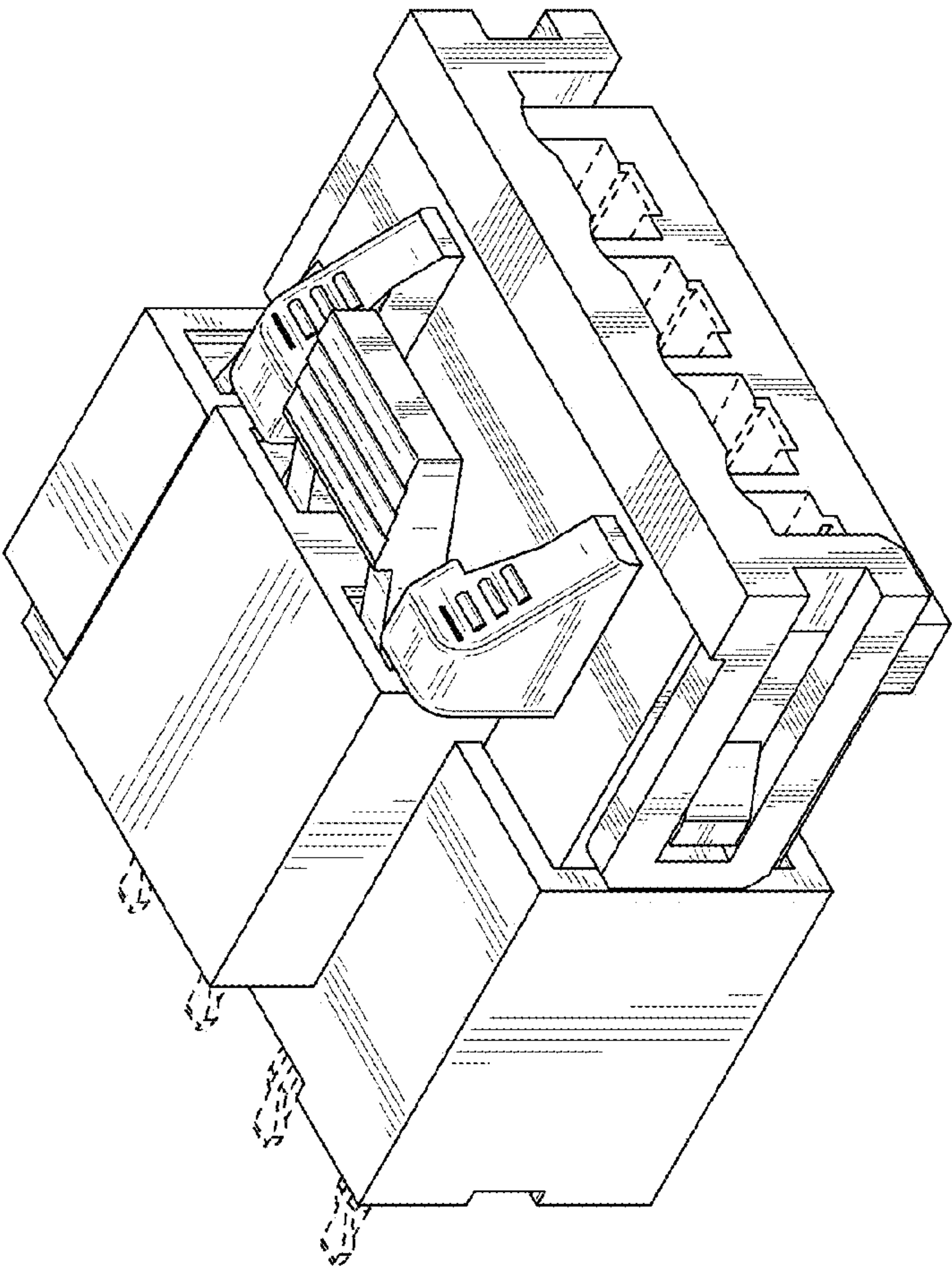


FIG. 41

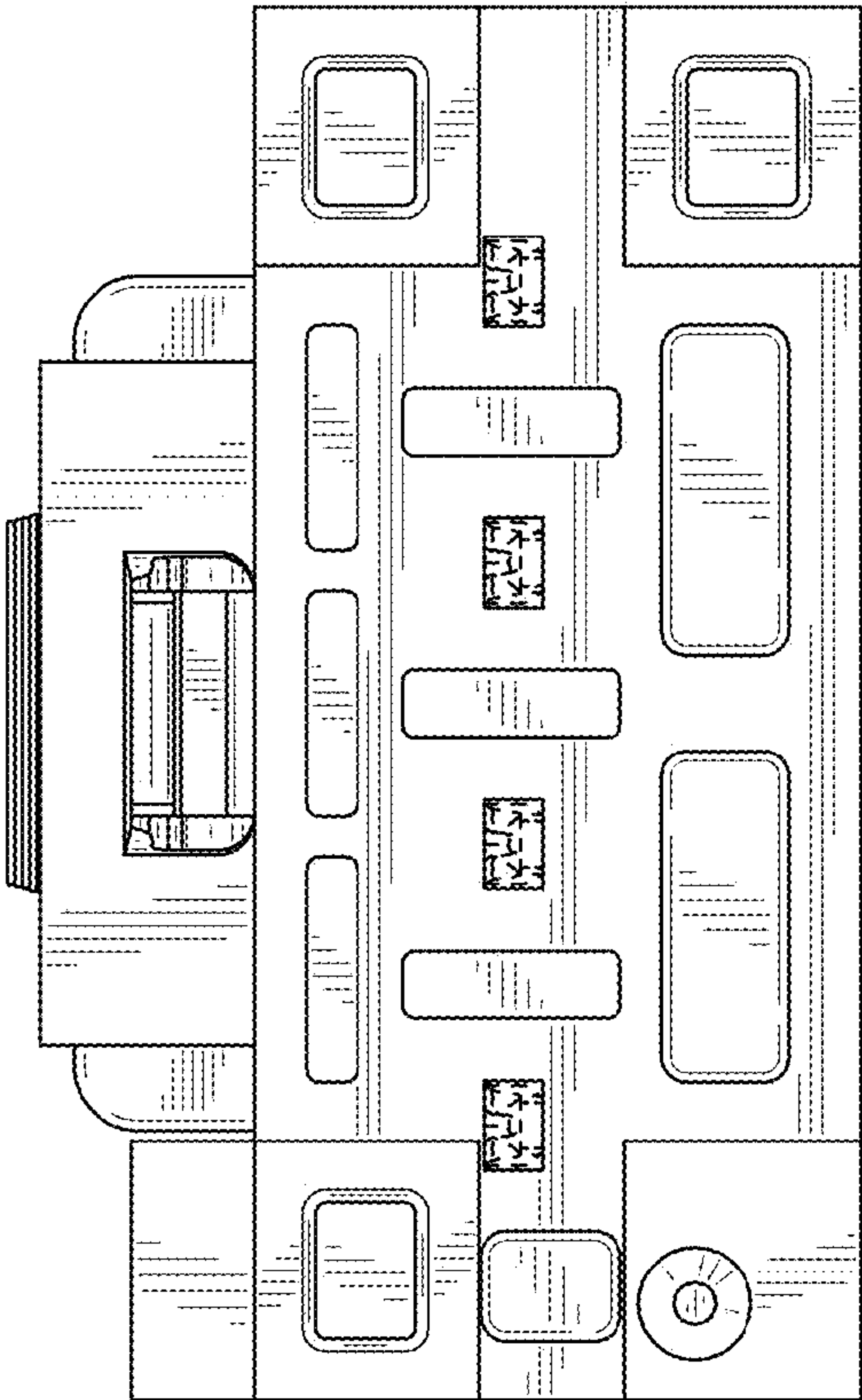


FIG. 43

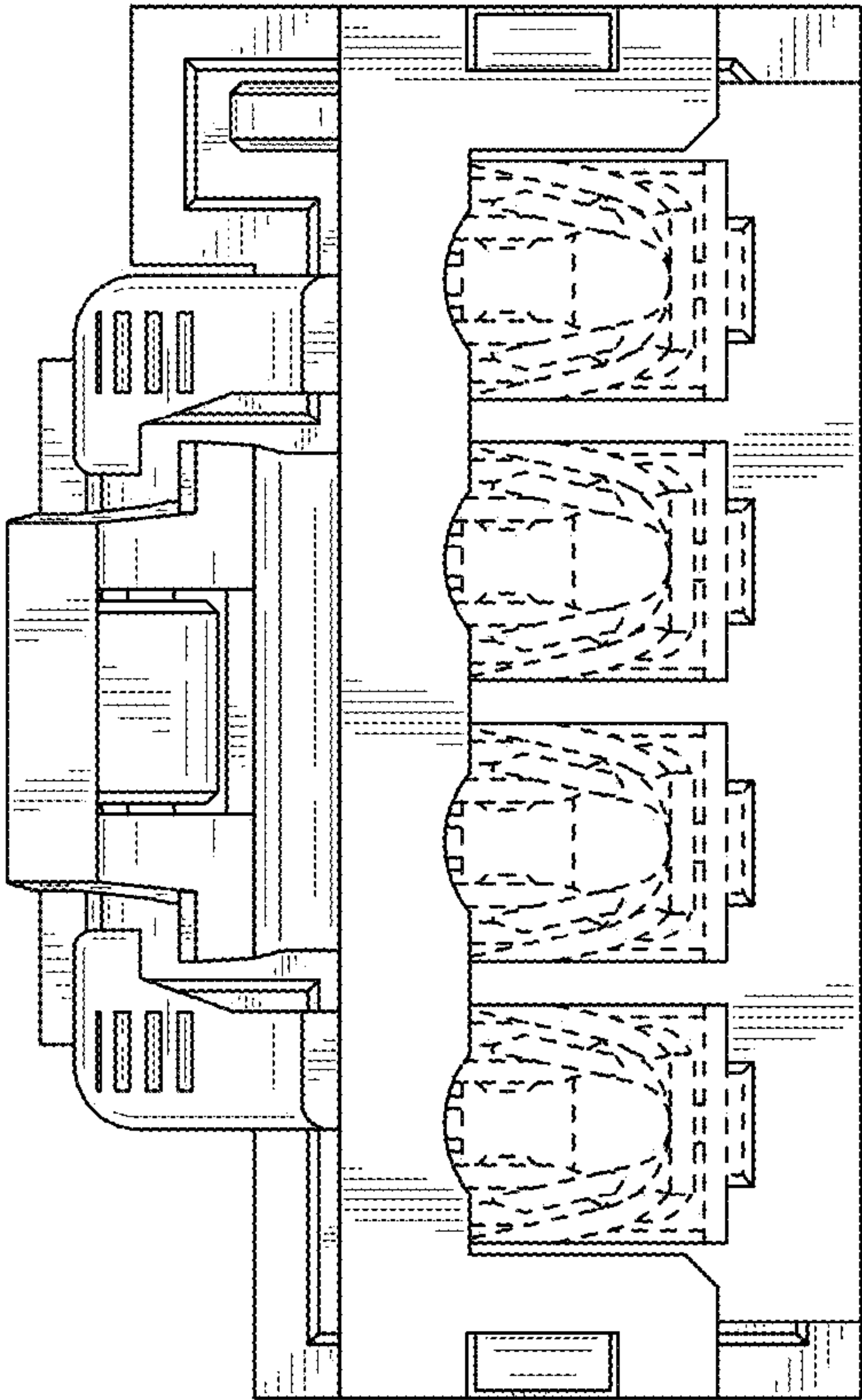


FIG. 44

FIG. 45

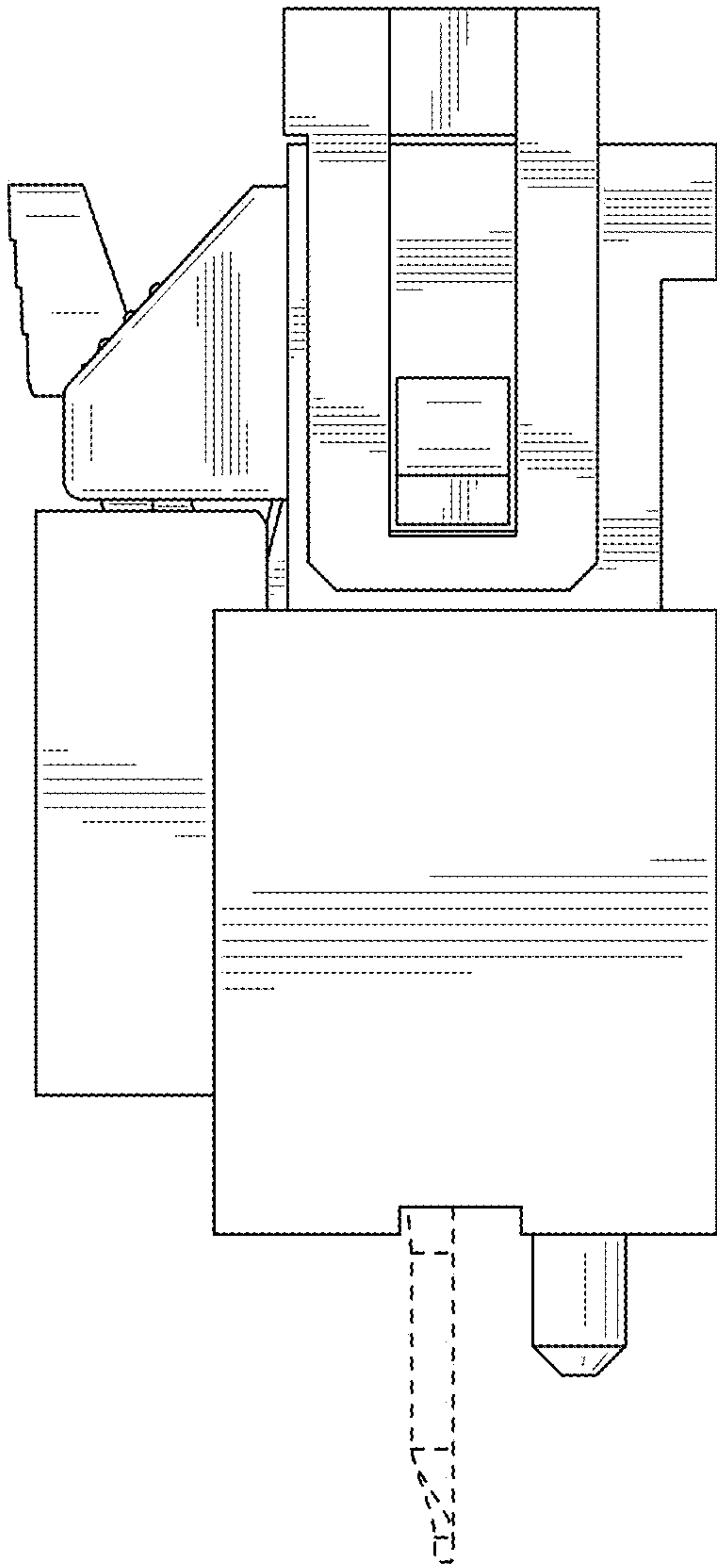
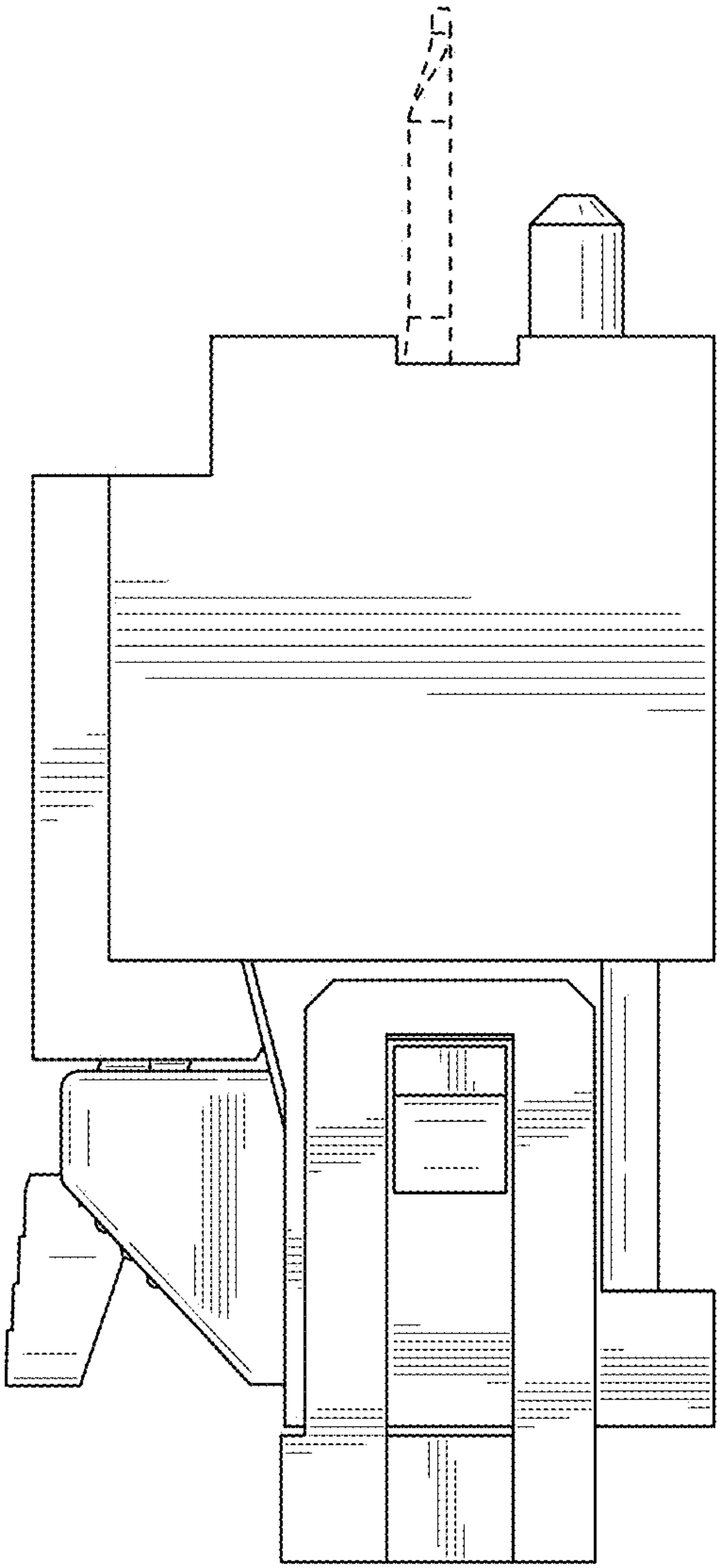


FIG. 46



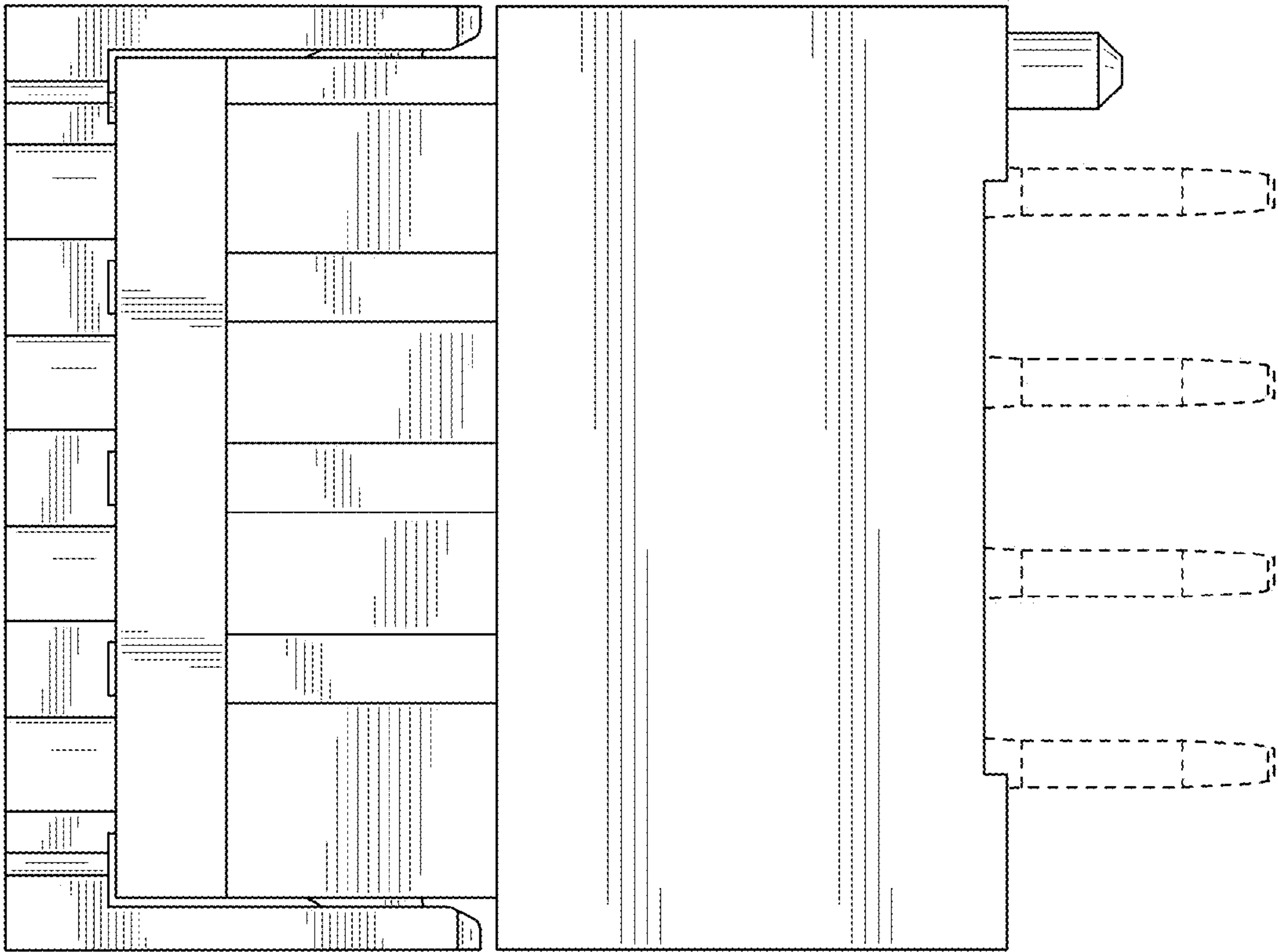


FIG. 48

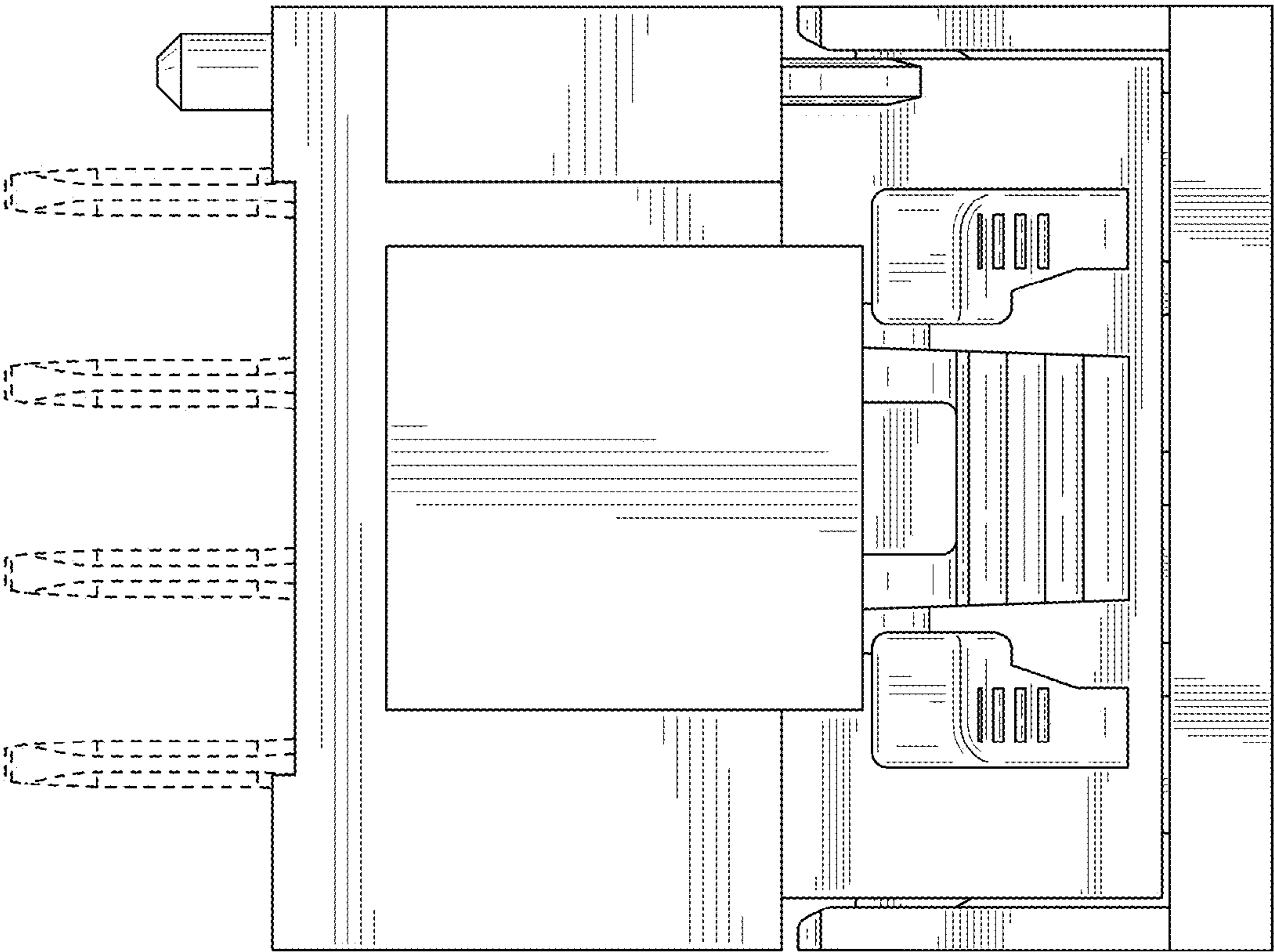


FIG. 47

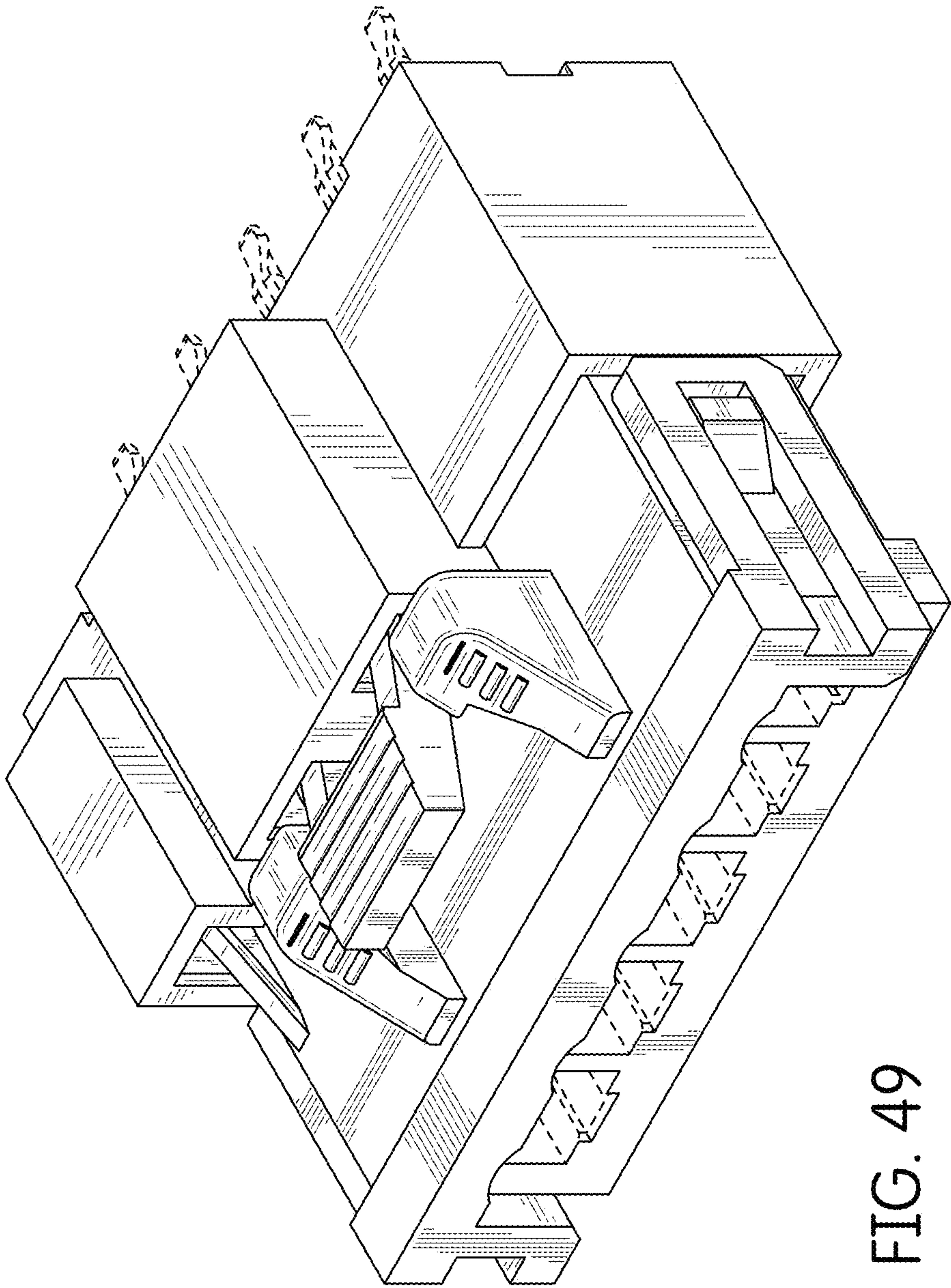


FIG. 49

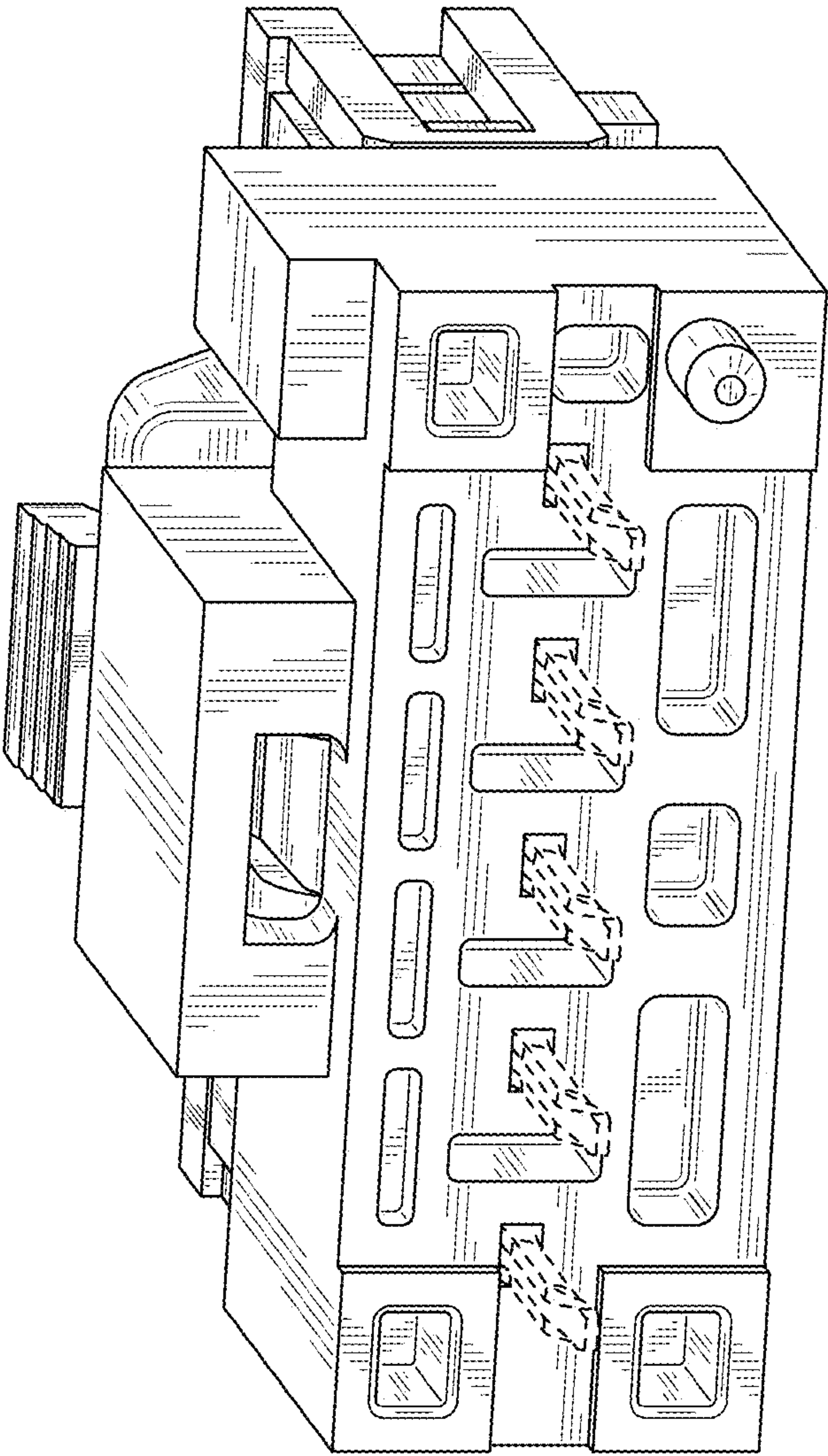


FIG. 50

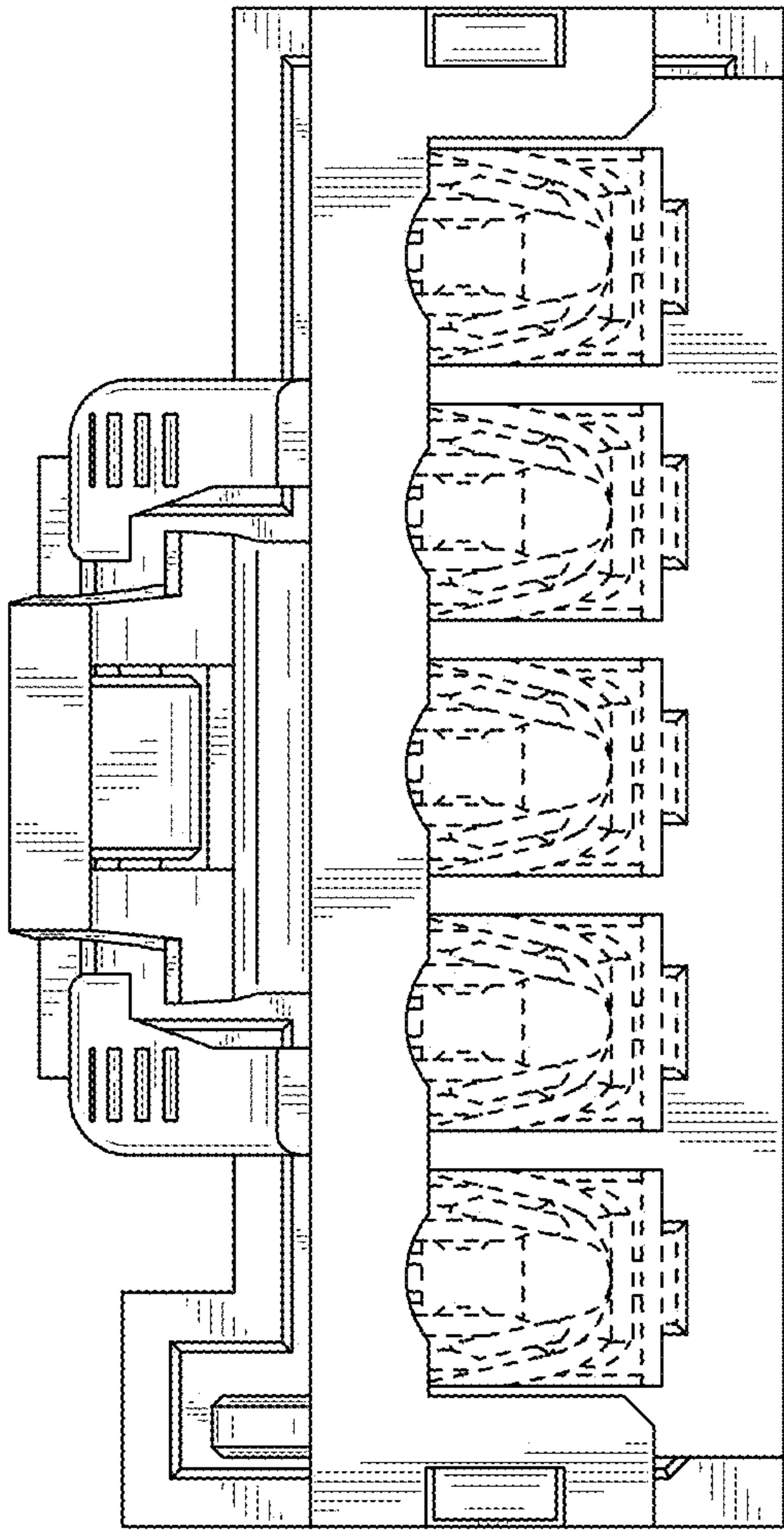


FIG. 51

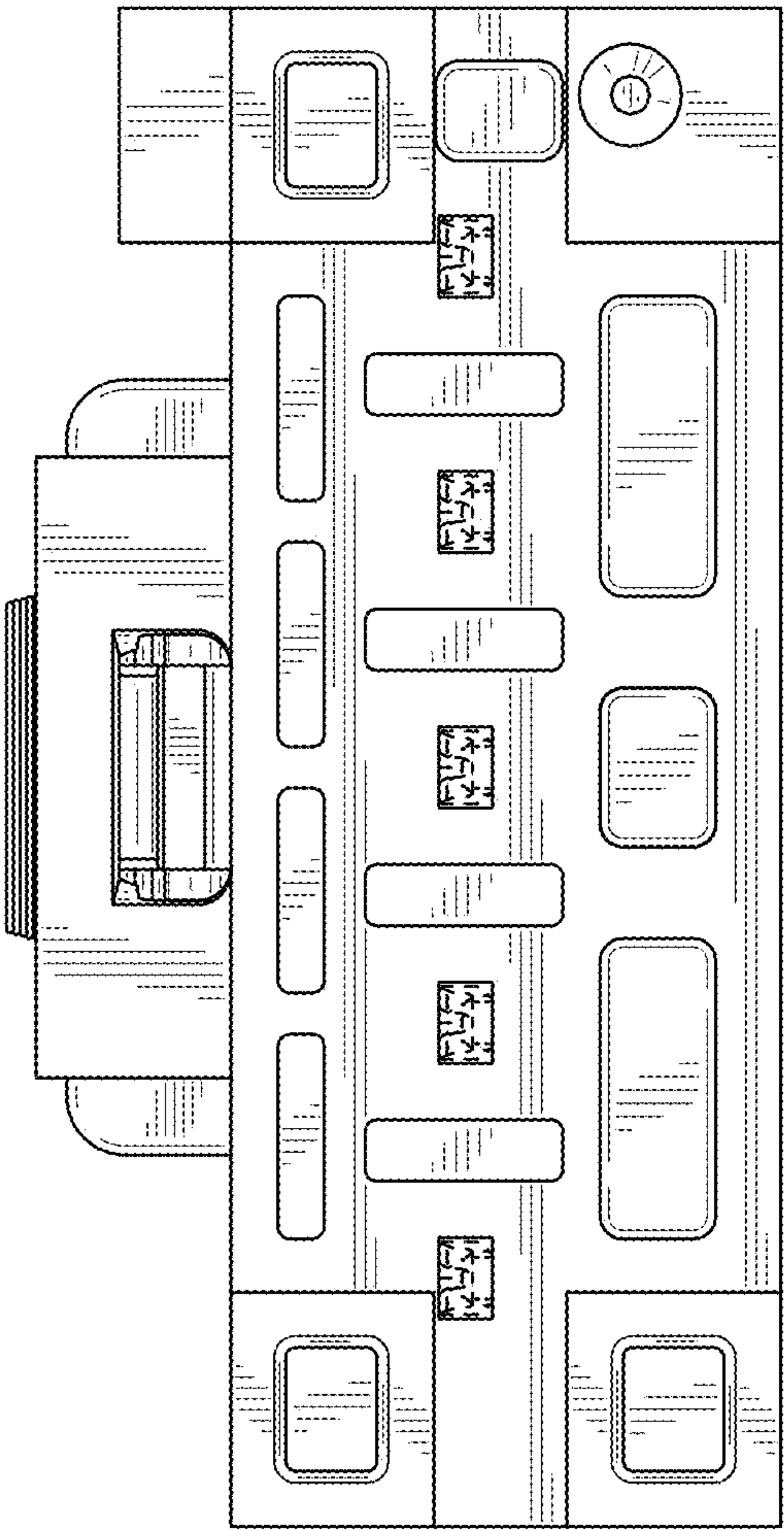


FIG. 52

FIG. 53

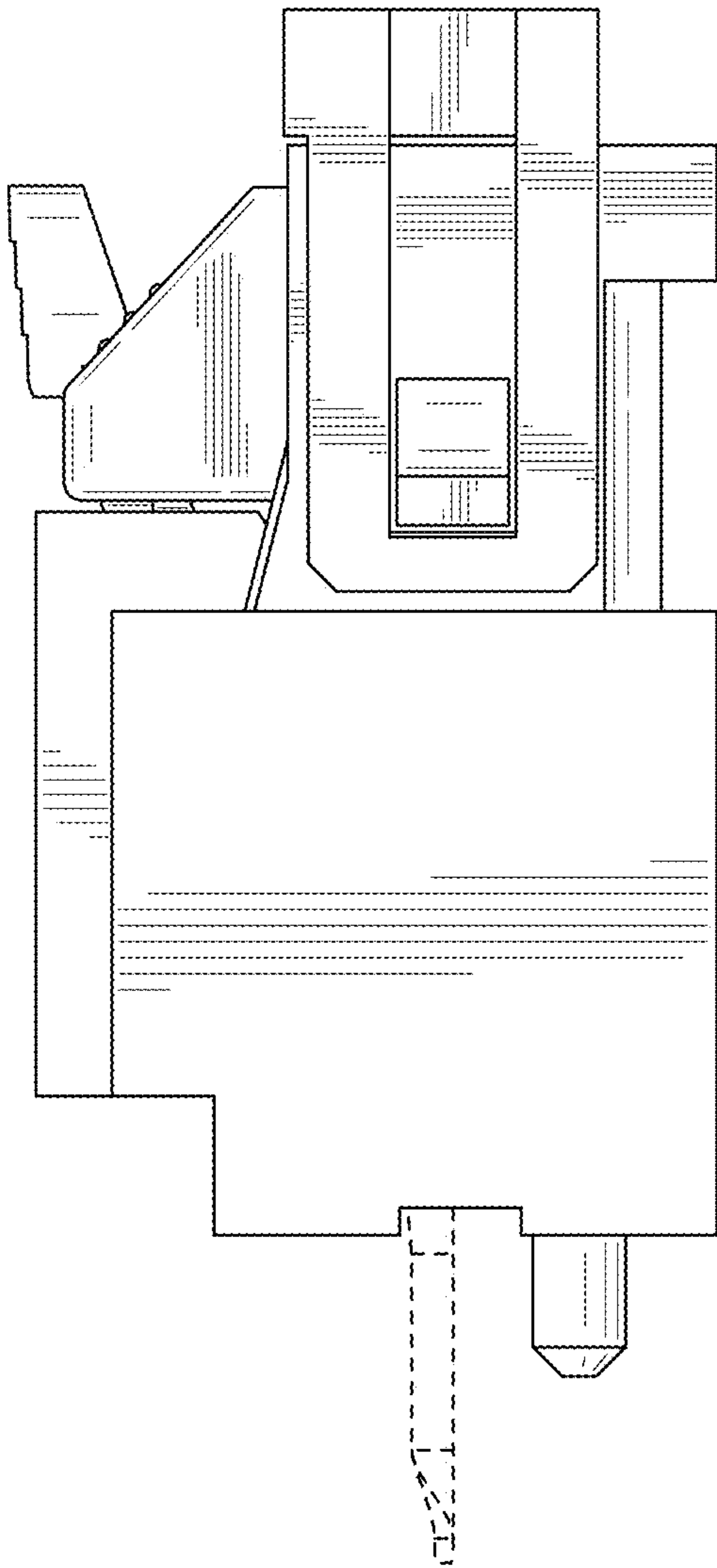
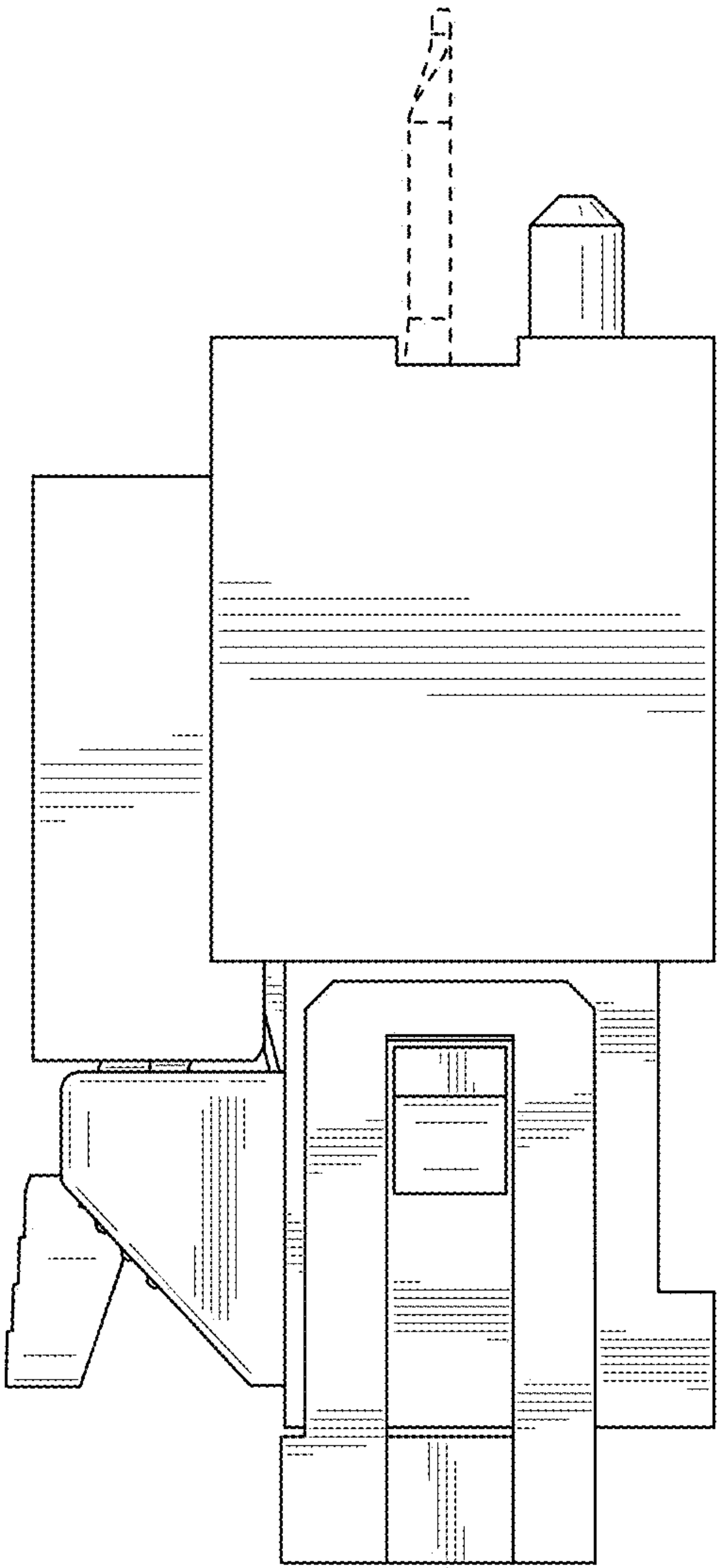


FIG. 54



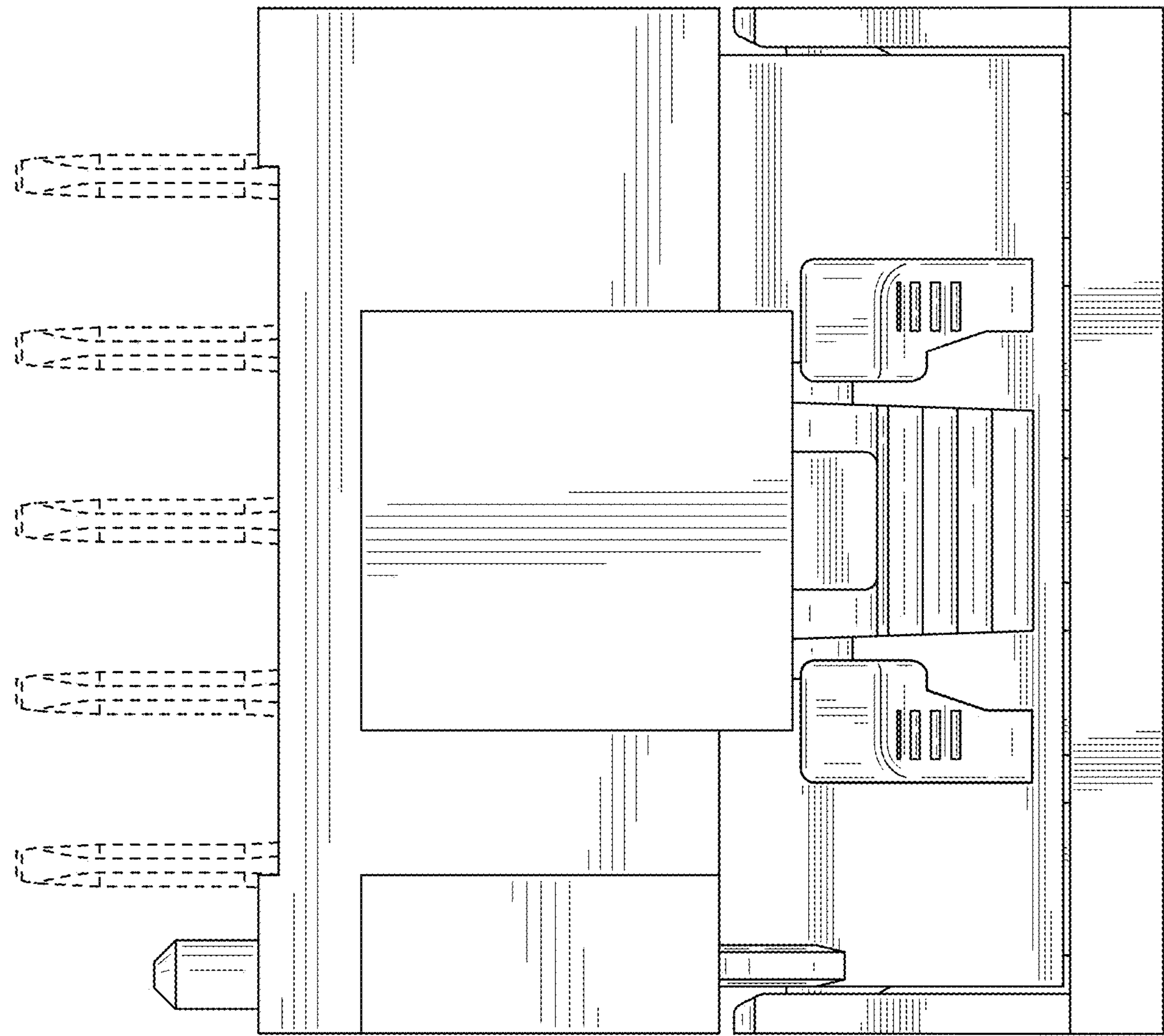


FIG. 55

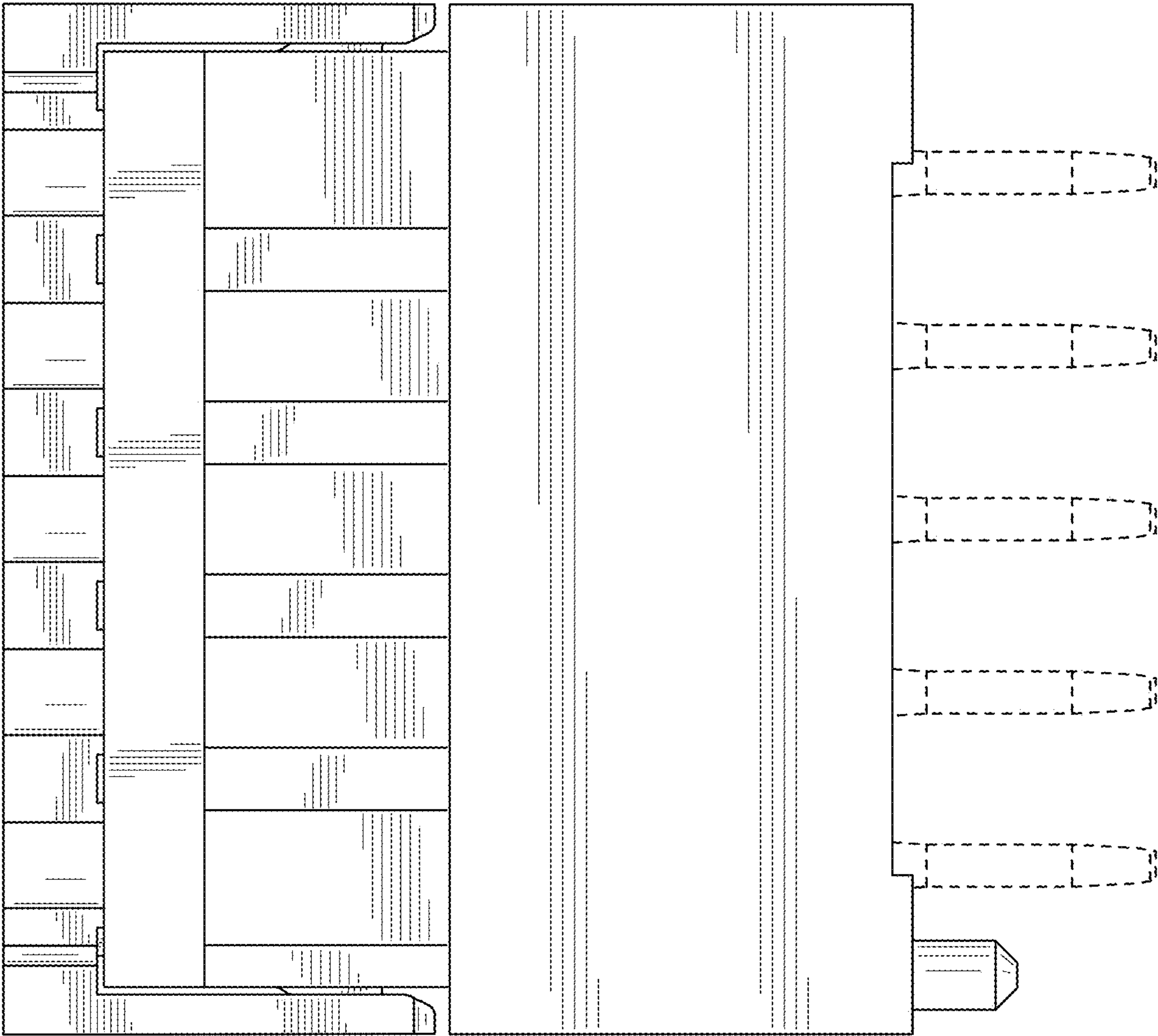


FIG. 56

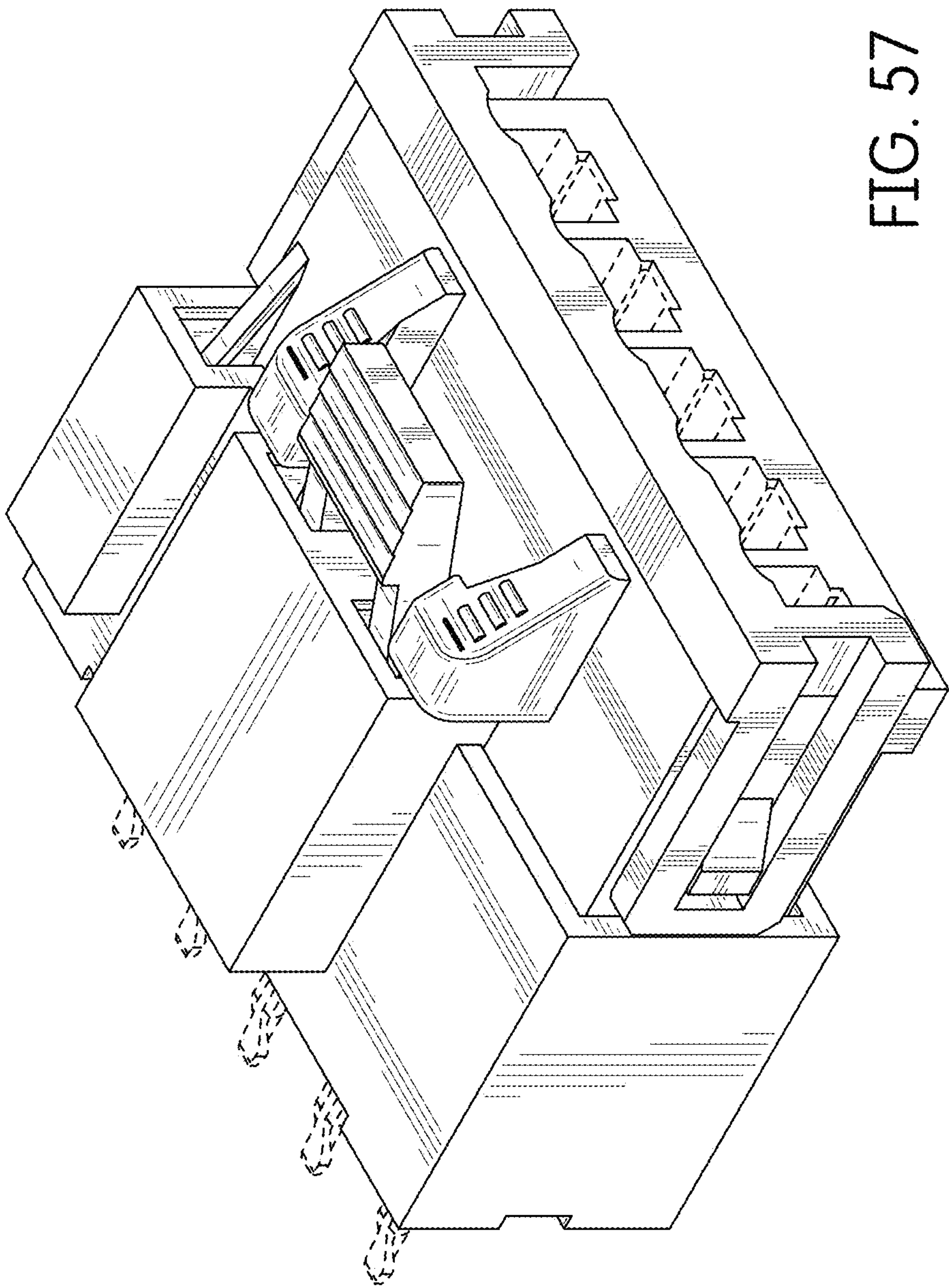


FIG. 57

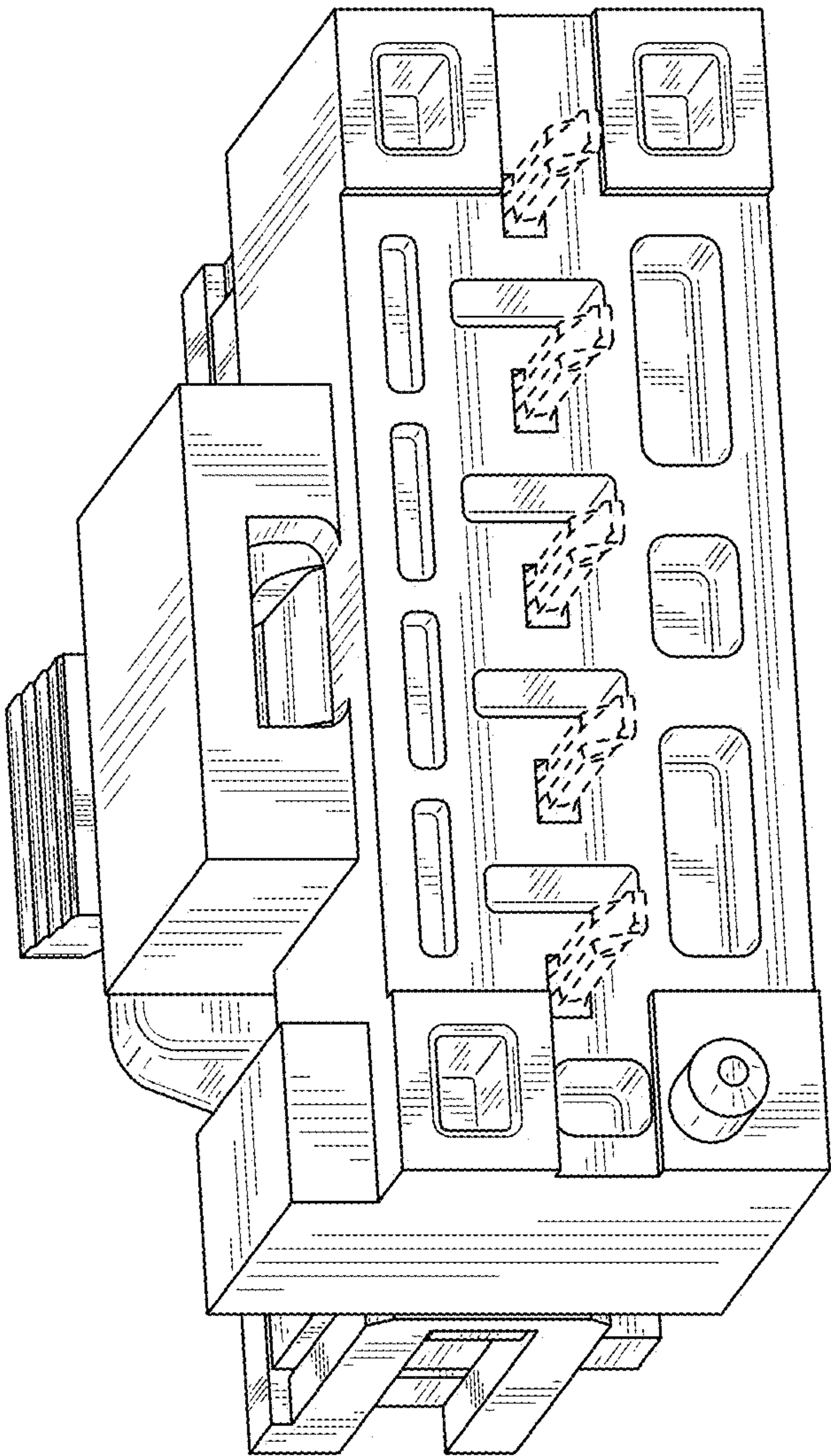


FIG. 58

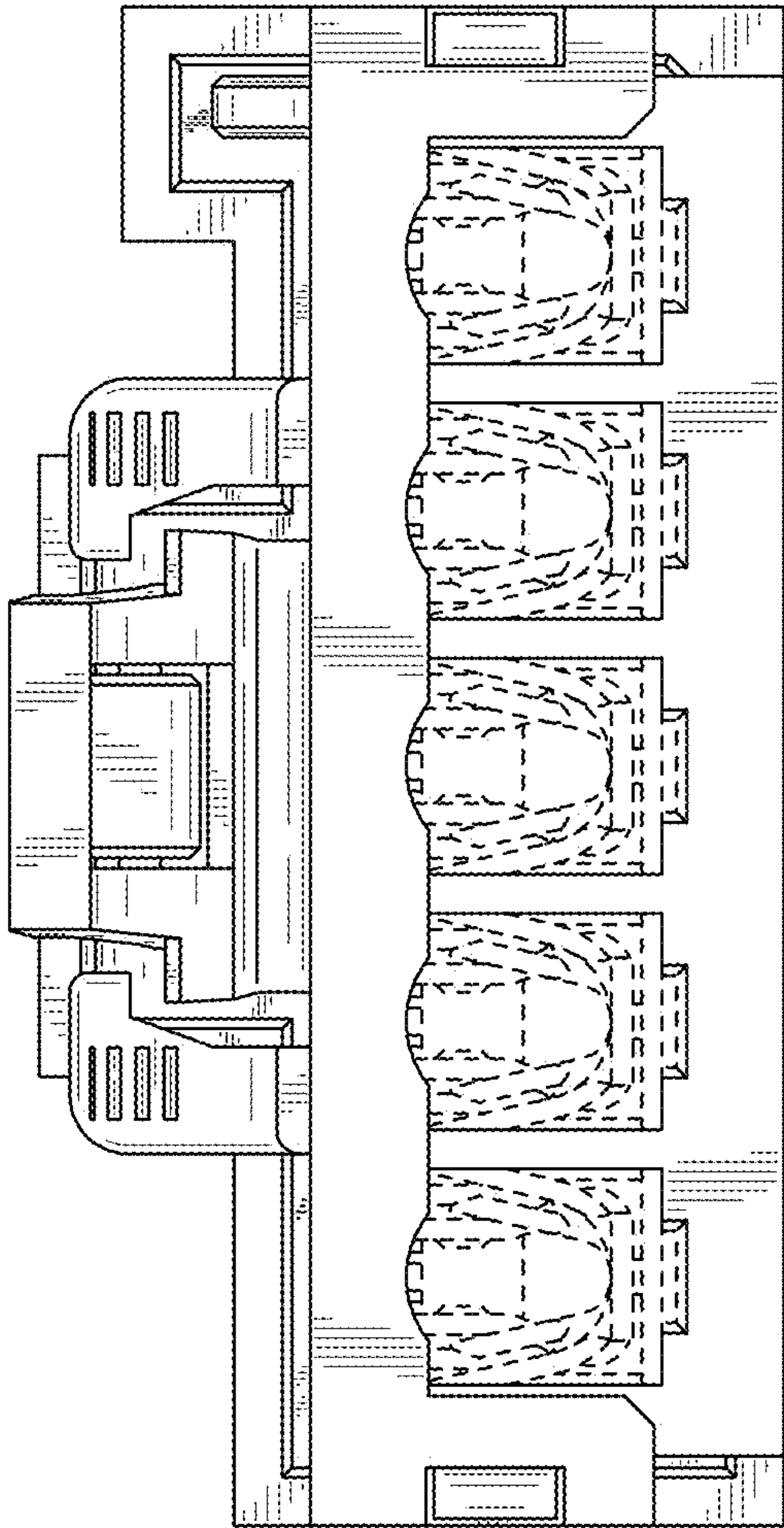


FIG. 59

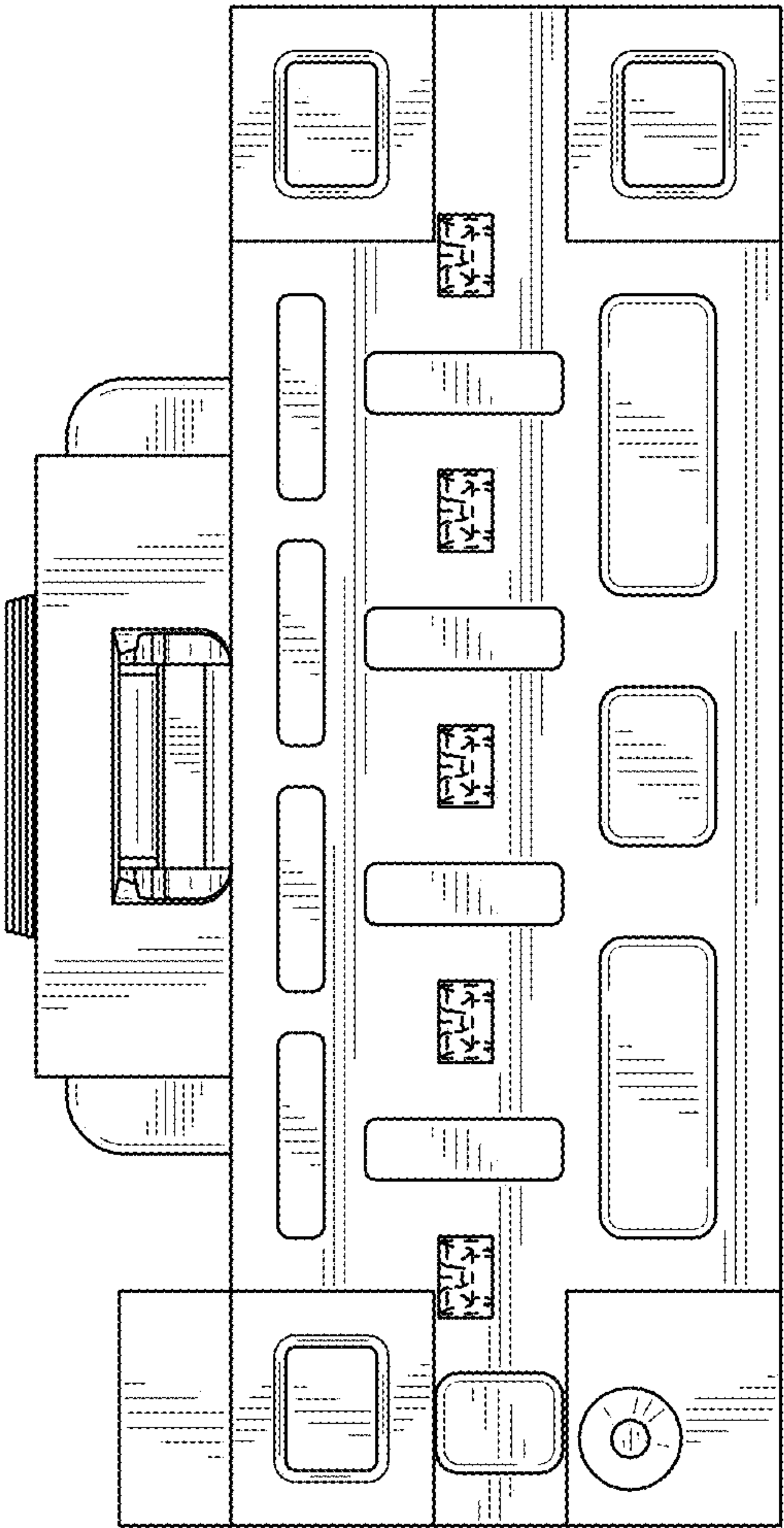


FIG. 60

FIG. 61

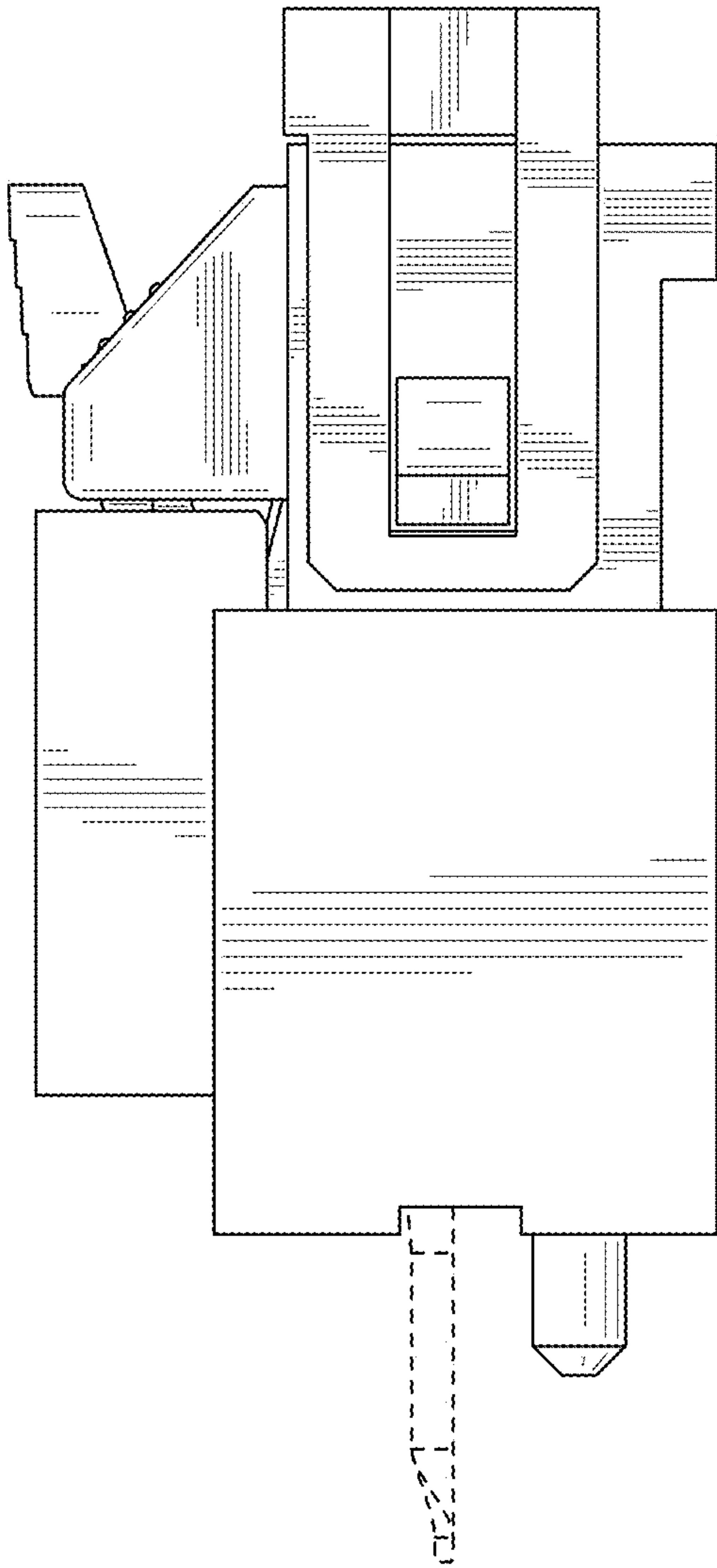
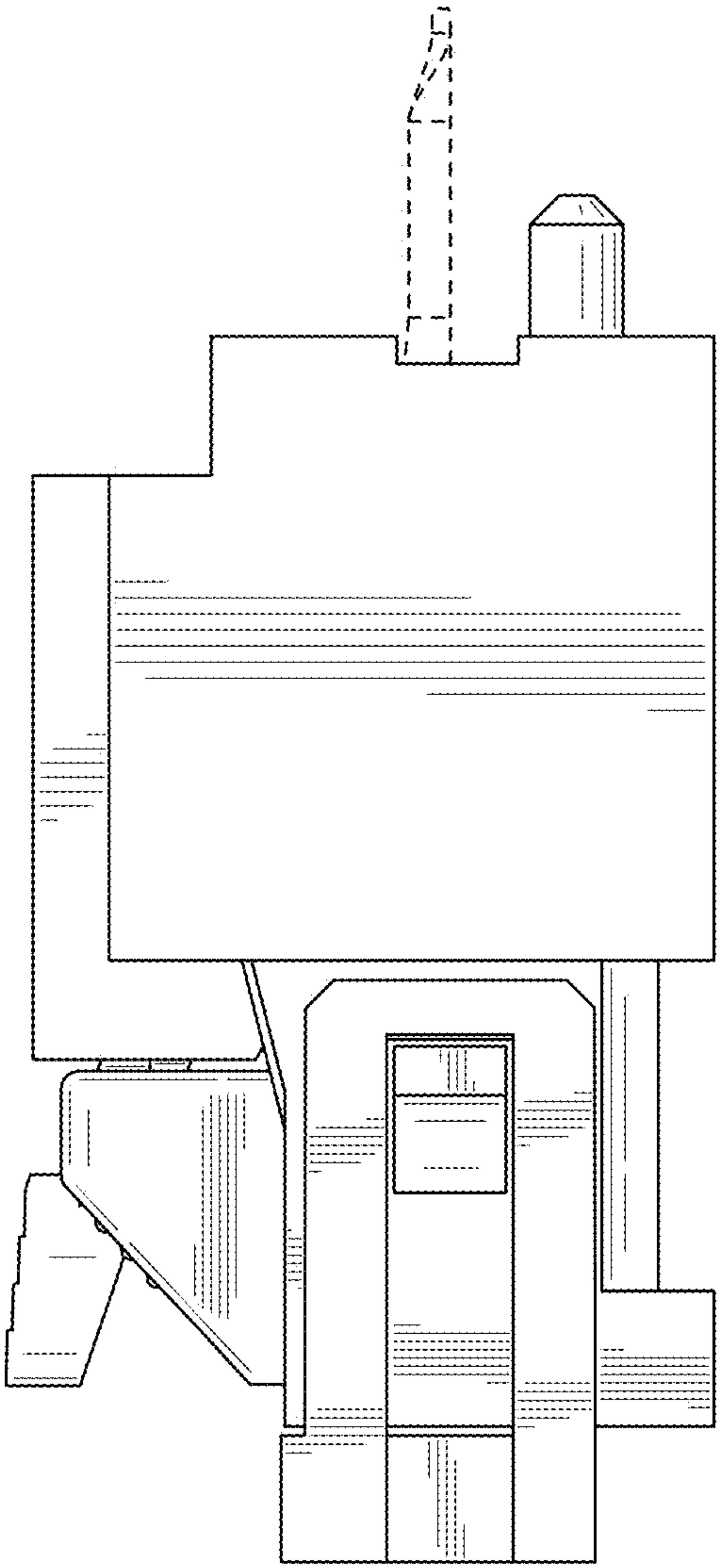


FIG. 62



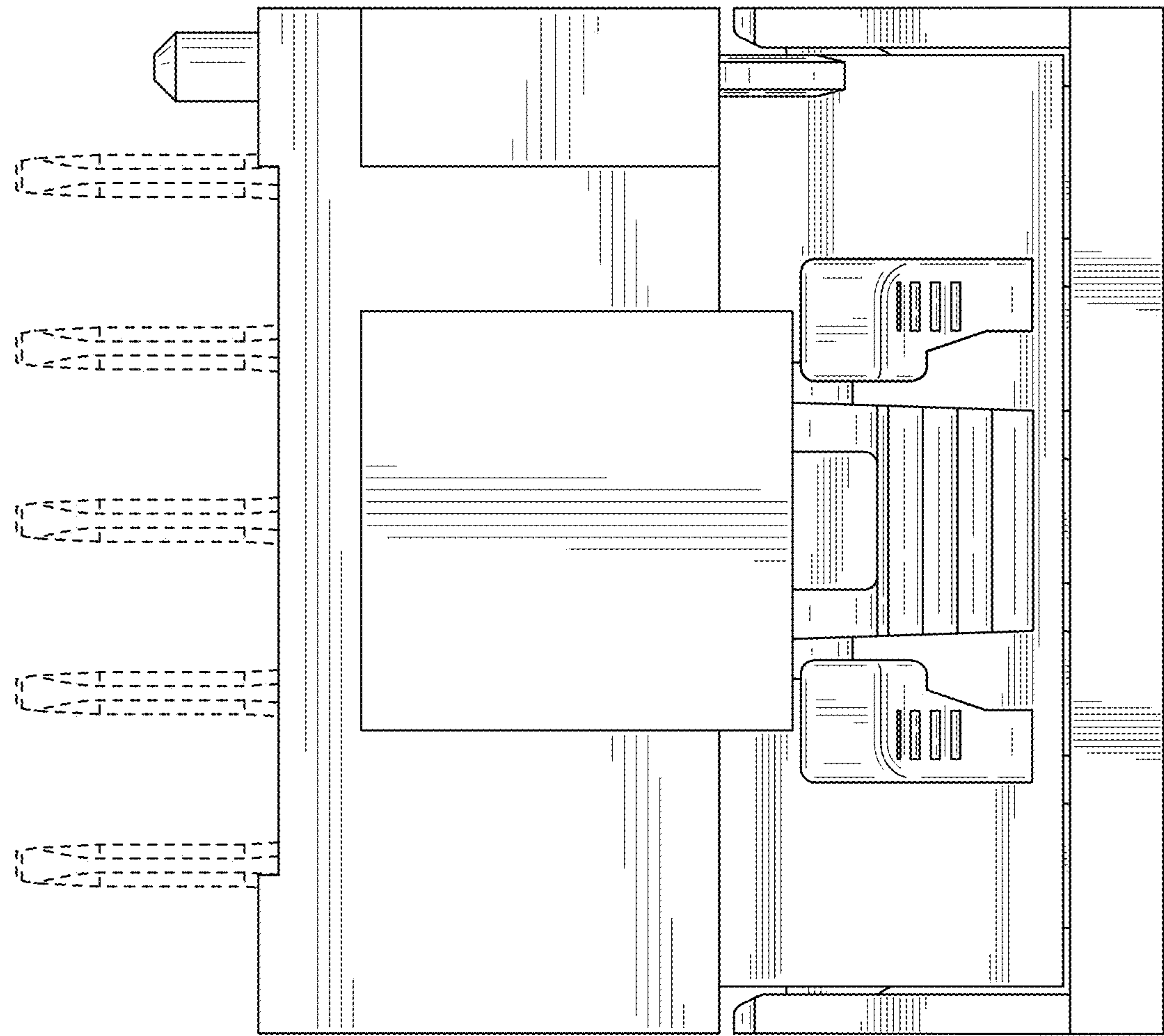


FIG. 63

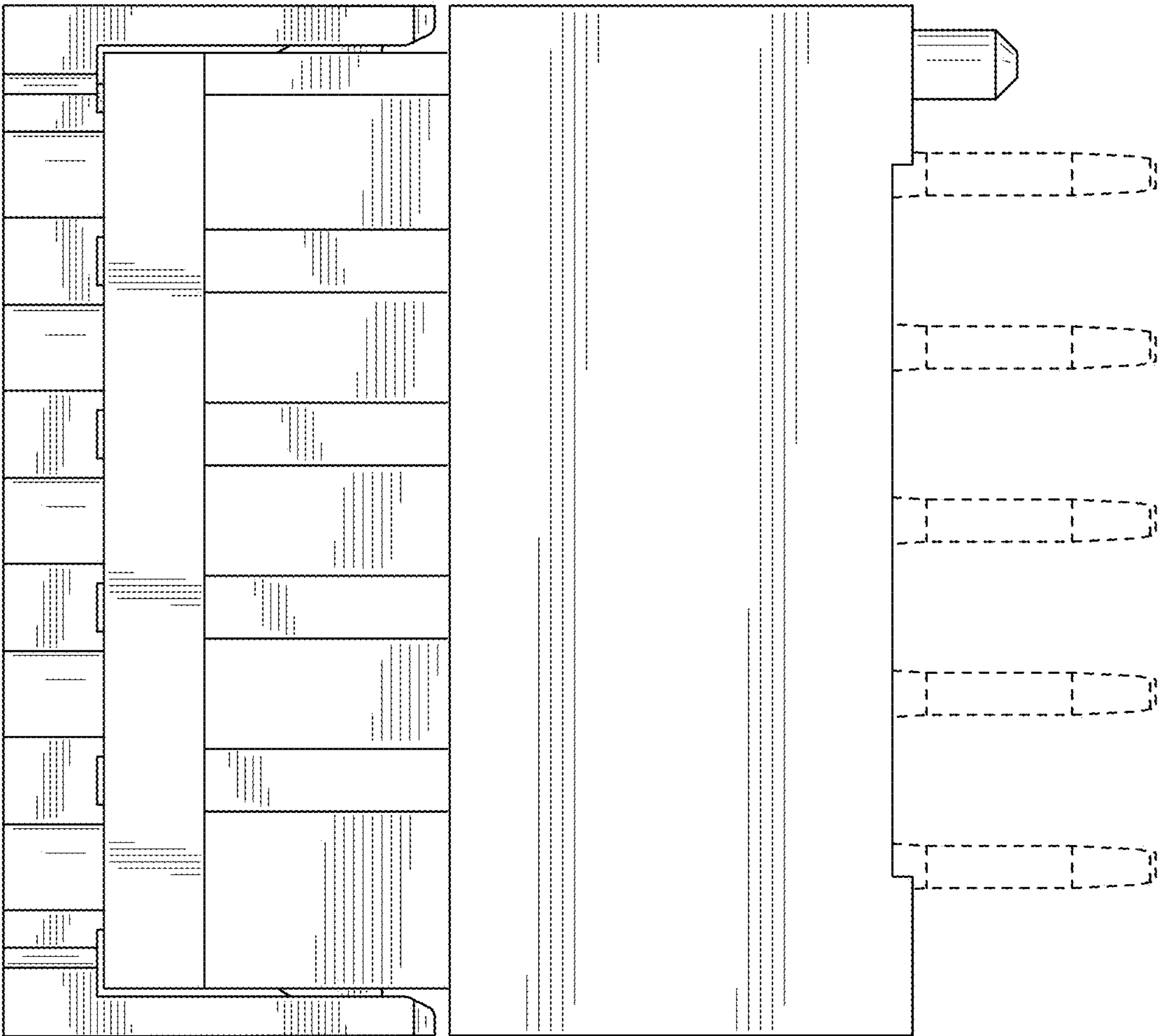


FIG. 64

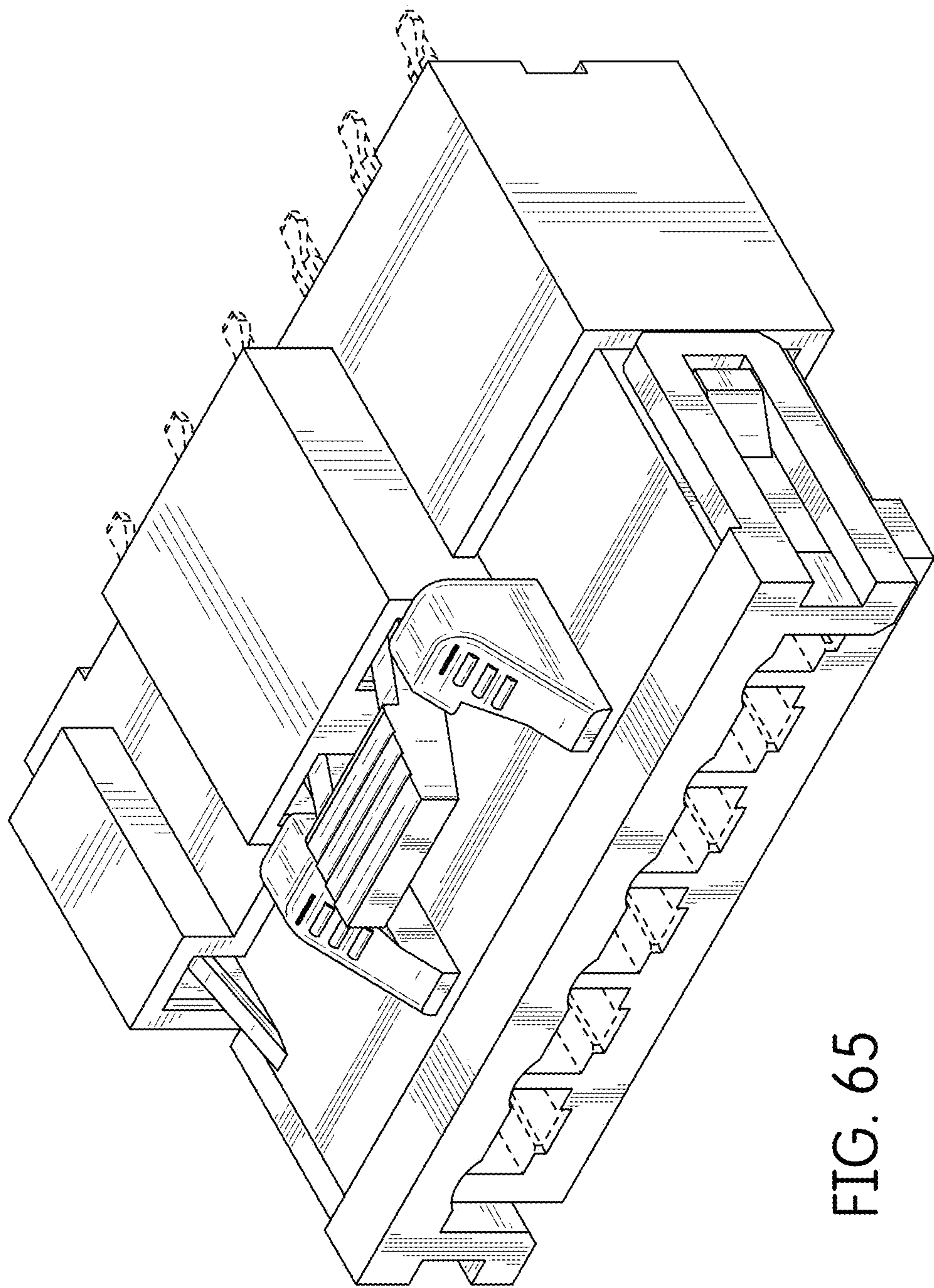


FIG. 65

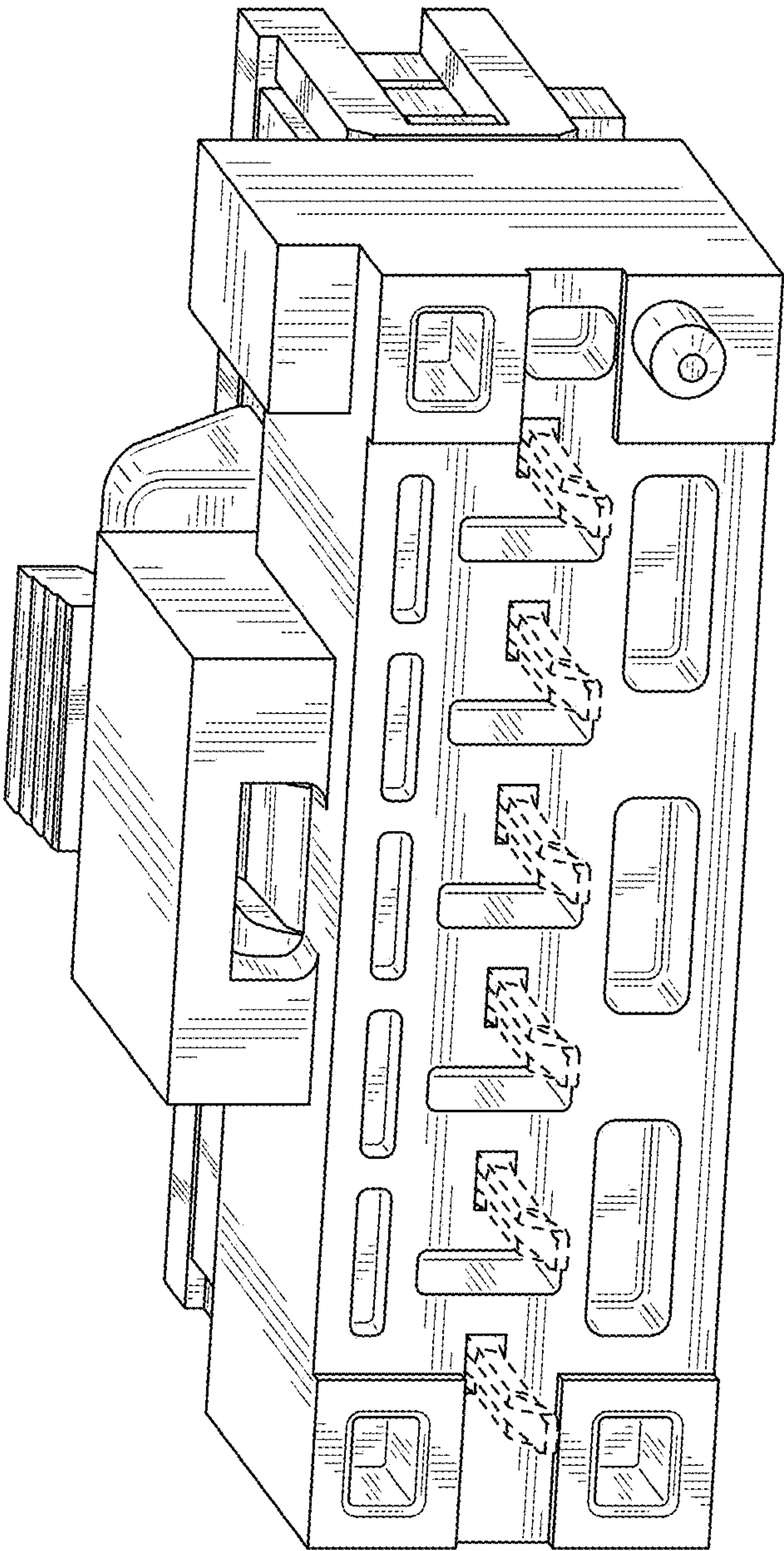


FIG. 66

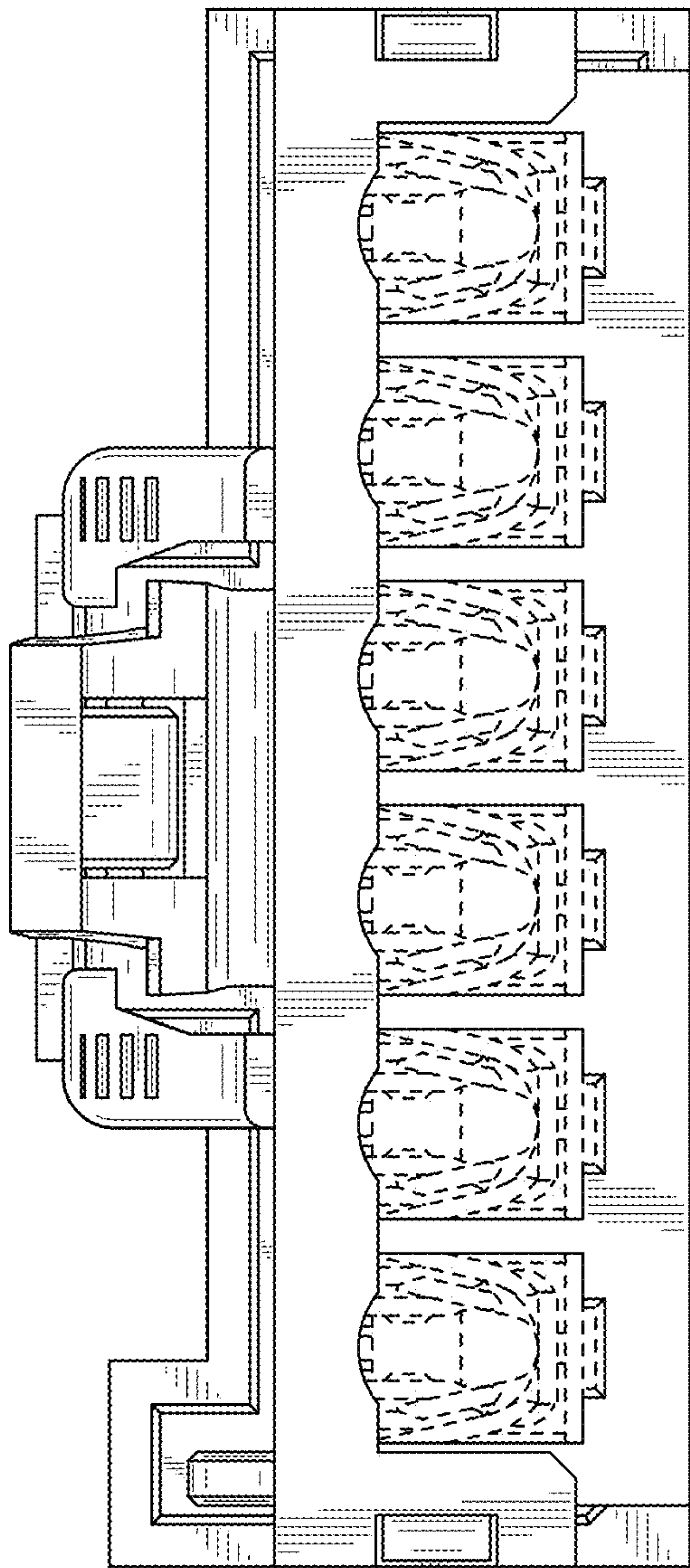


FIG. 67

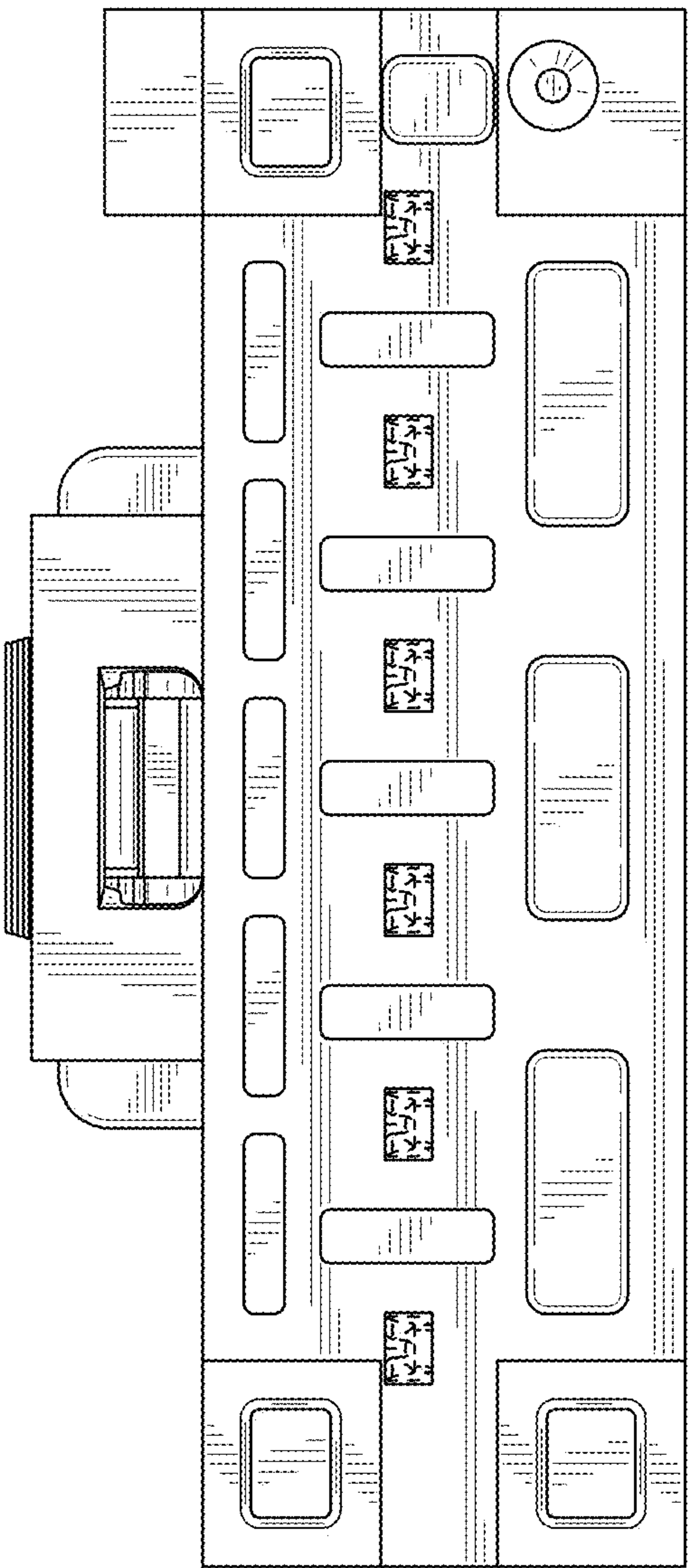


FIG. 68

FIG. 69

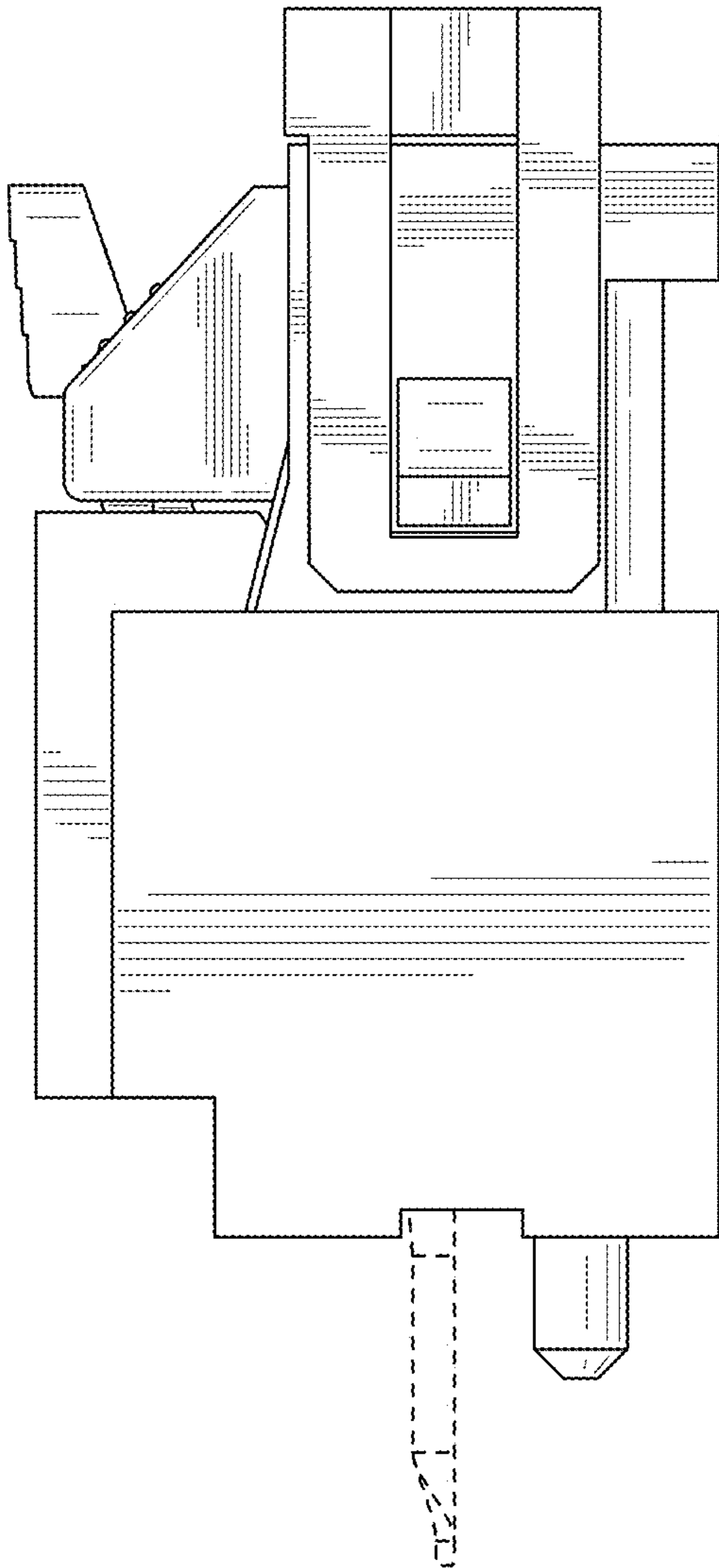
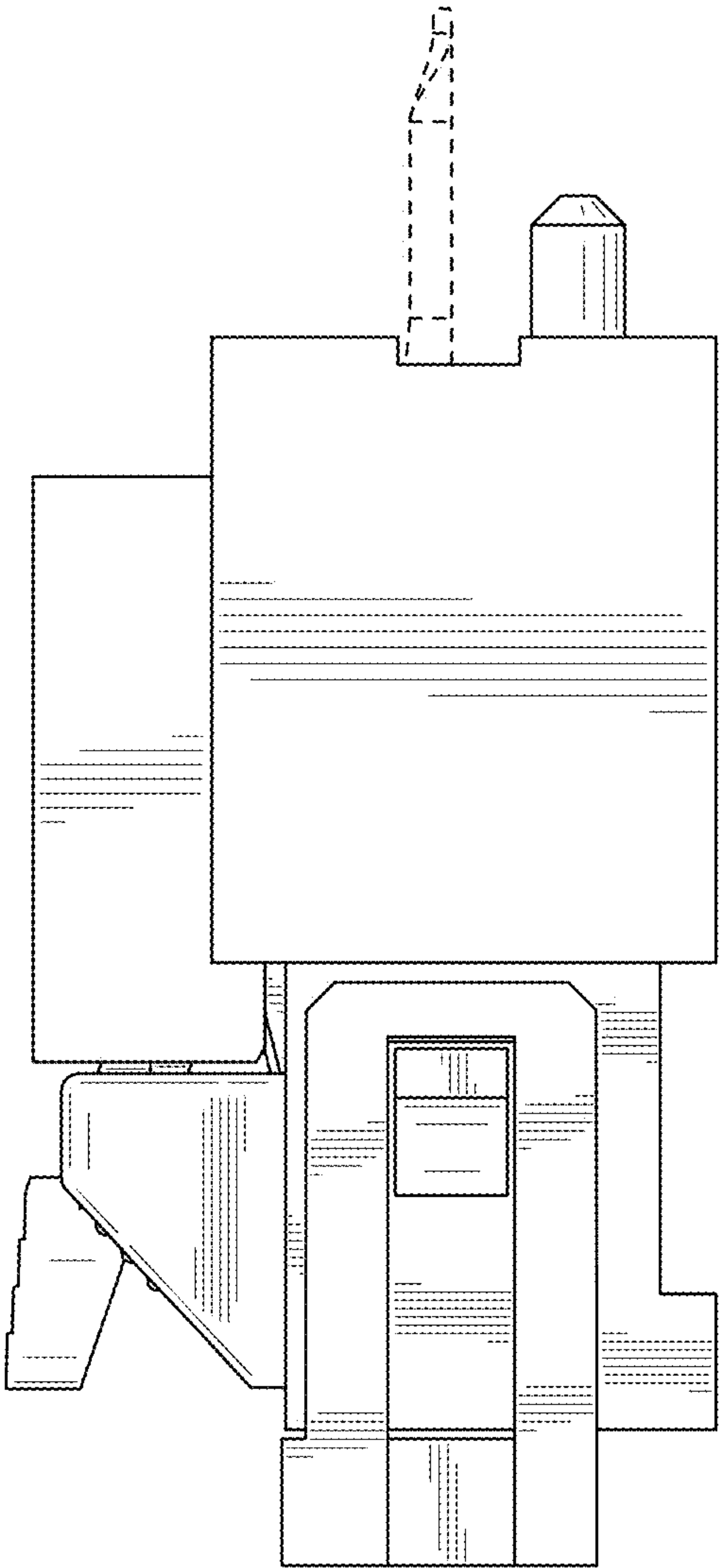


FIG. 70



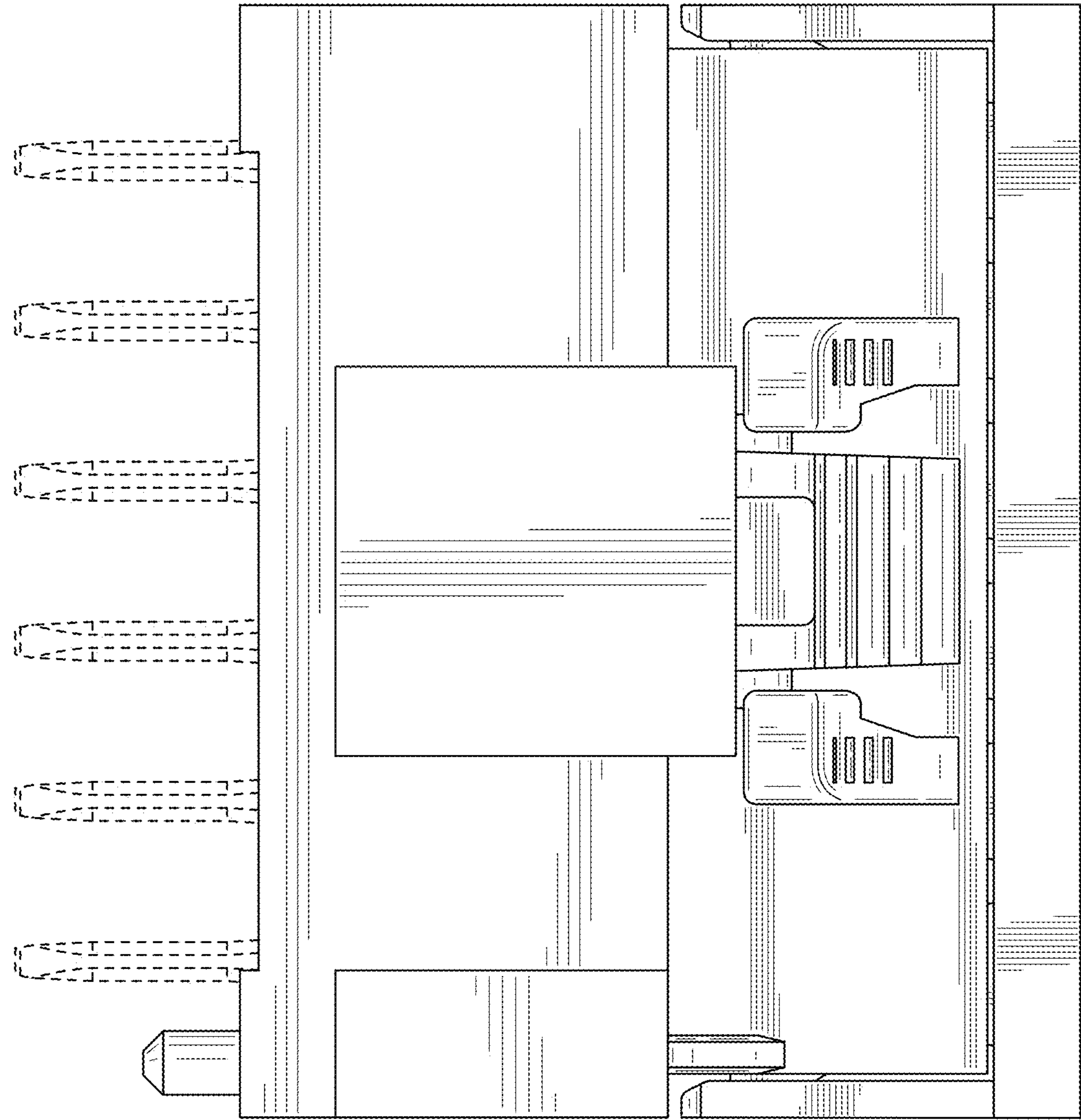


FIG. 71

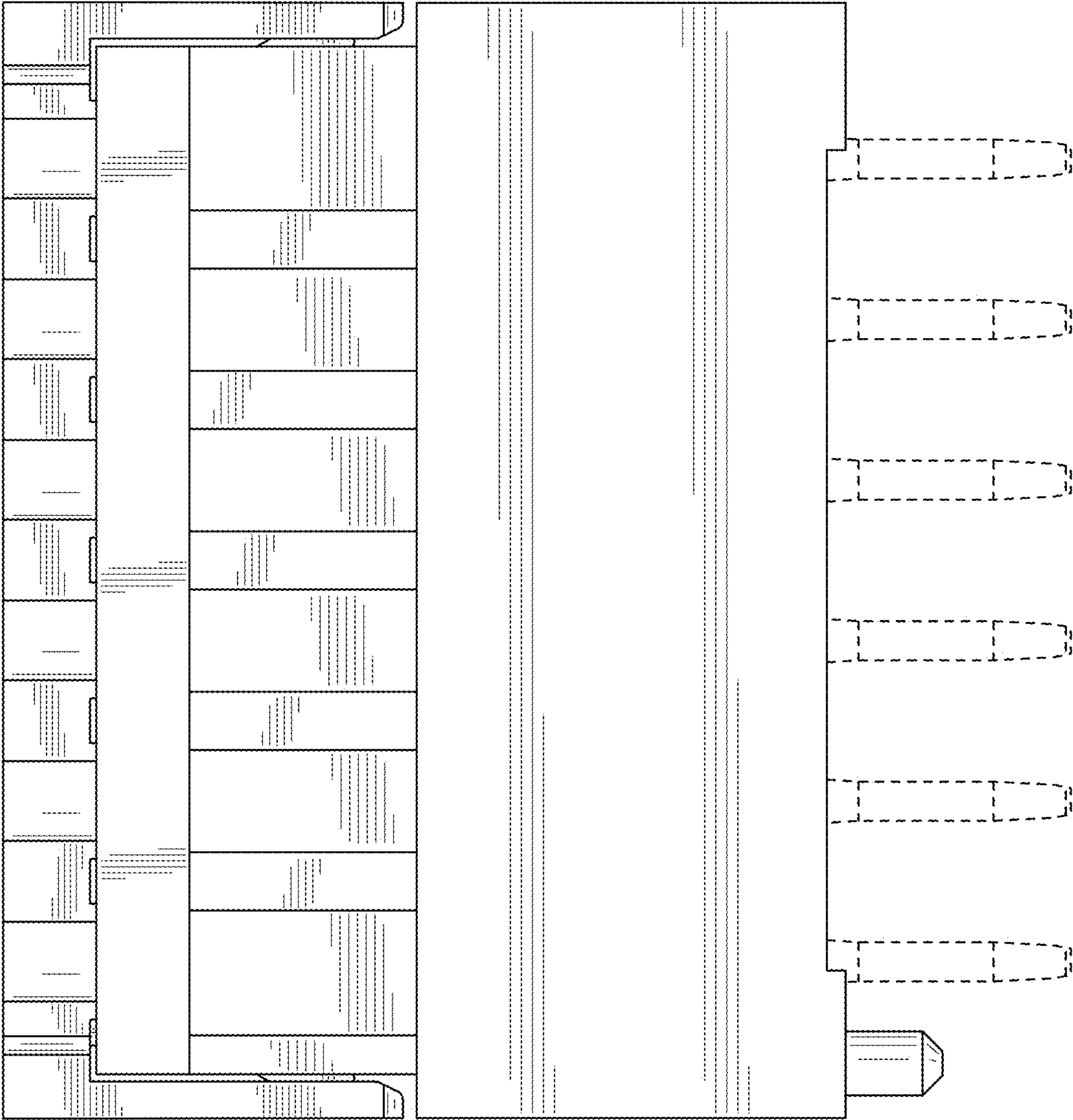


FIG. 72

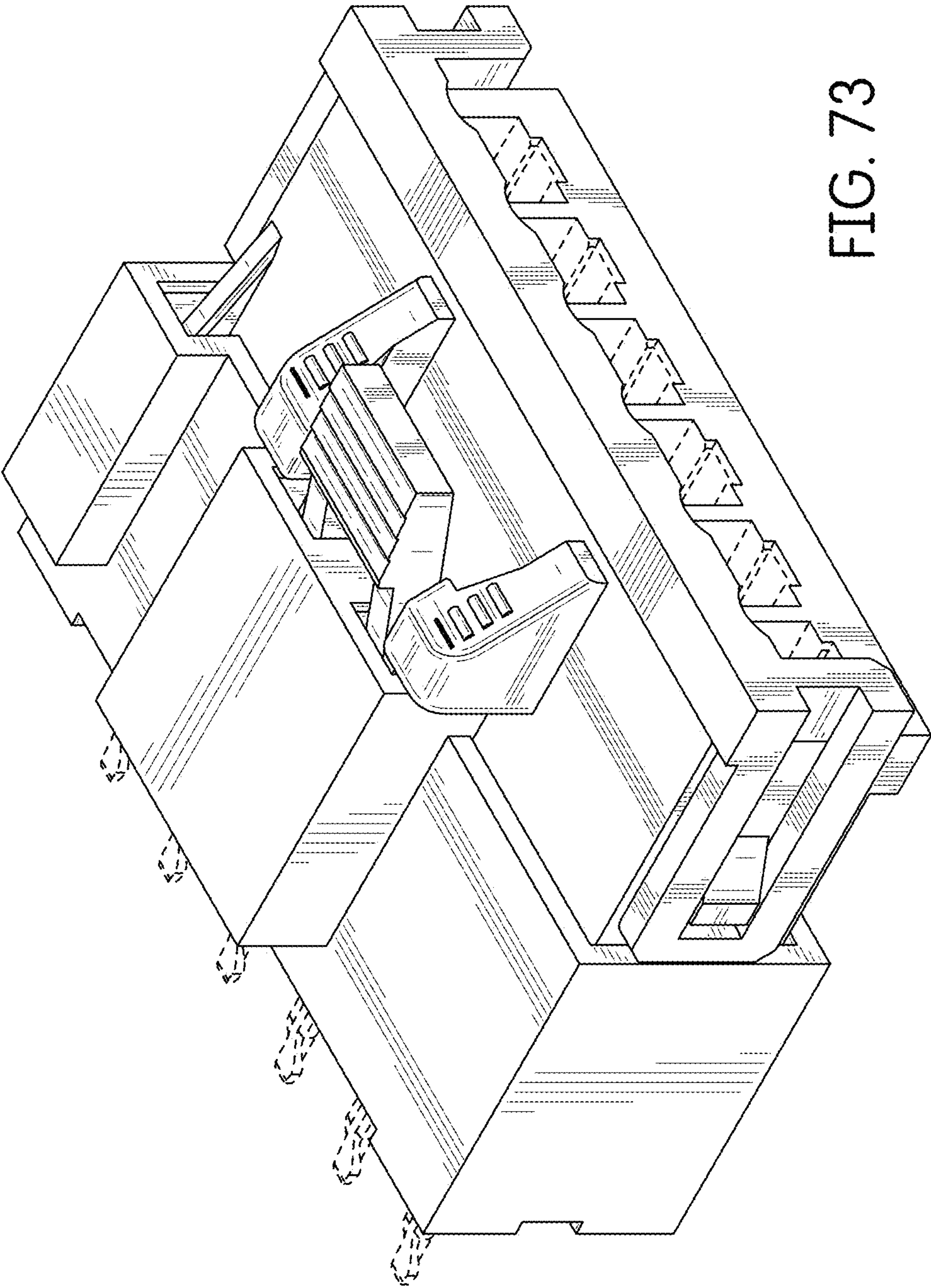


FIG. 73

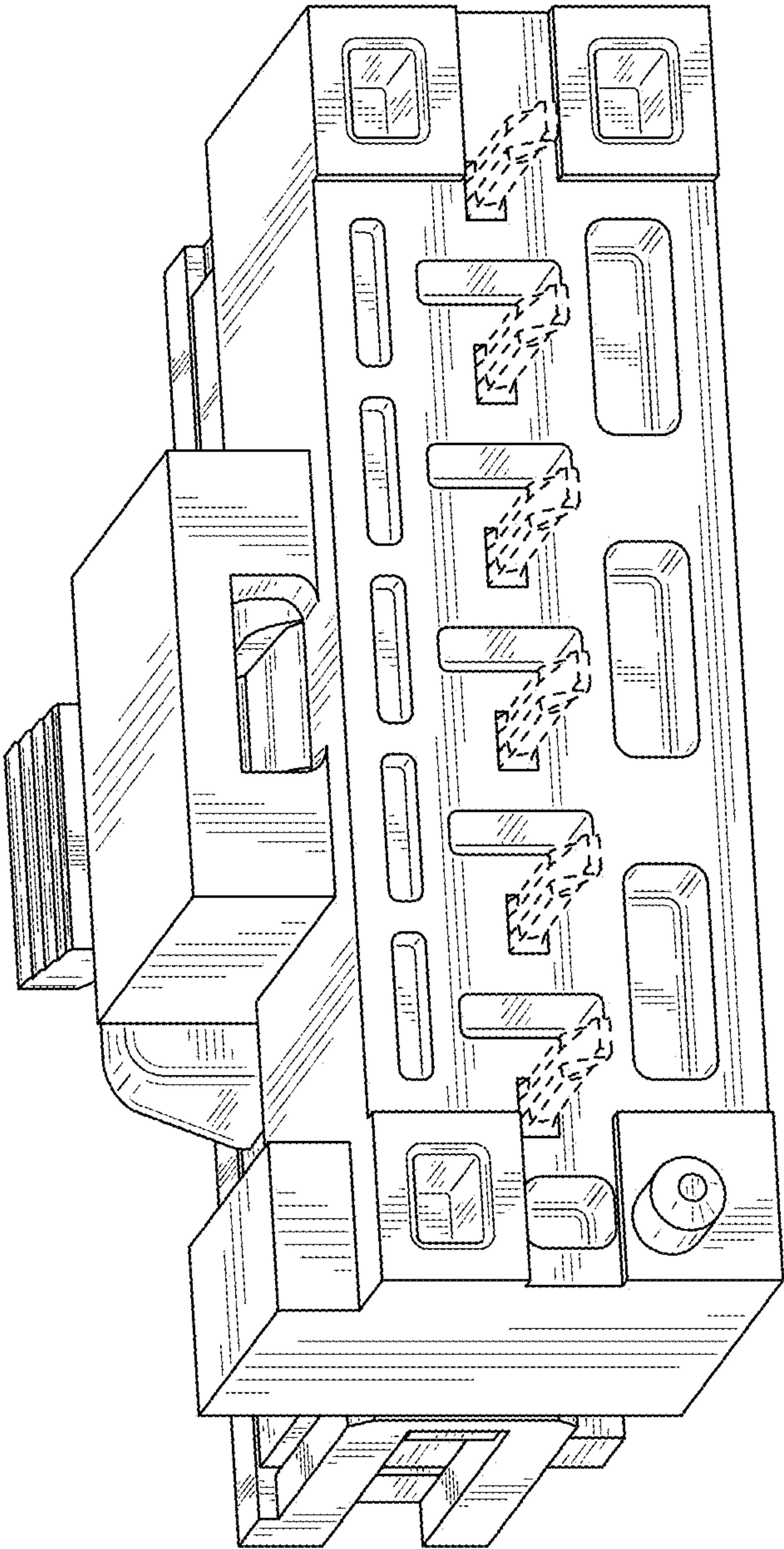


FIG. 74

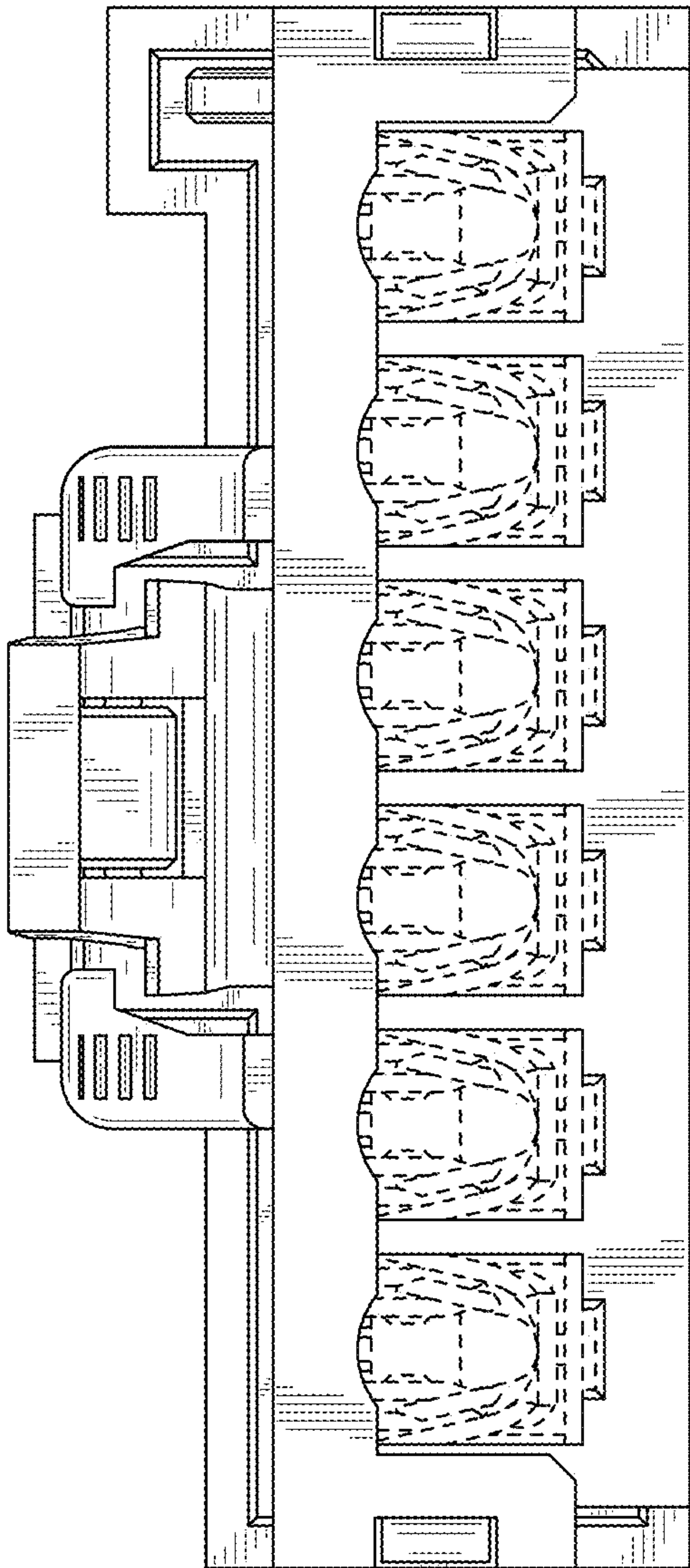


FIG. 75

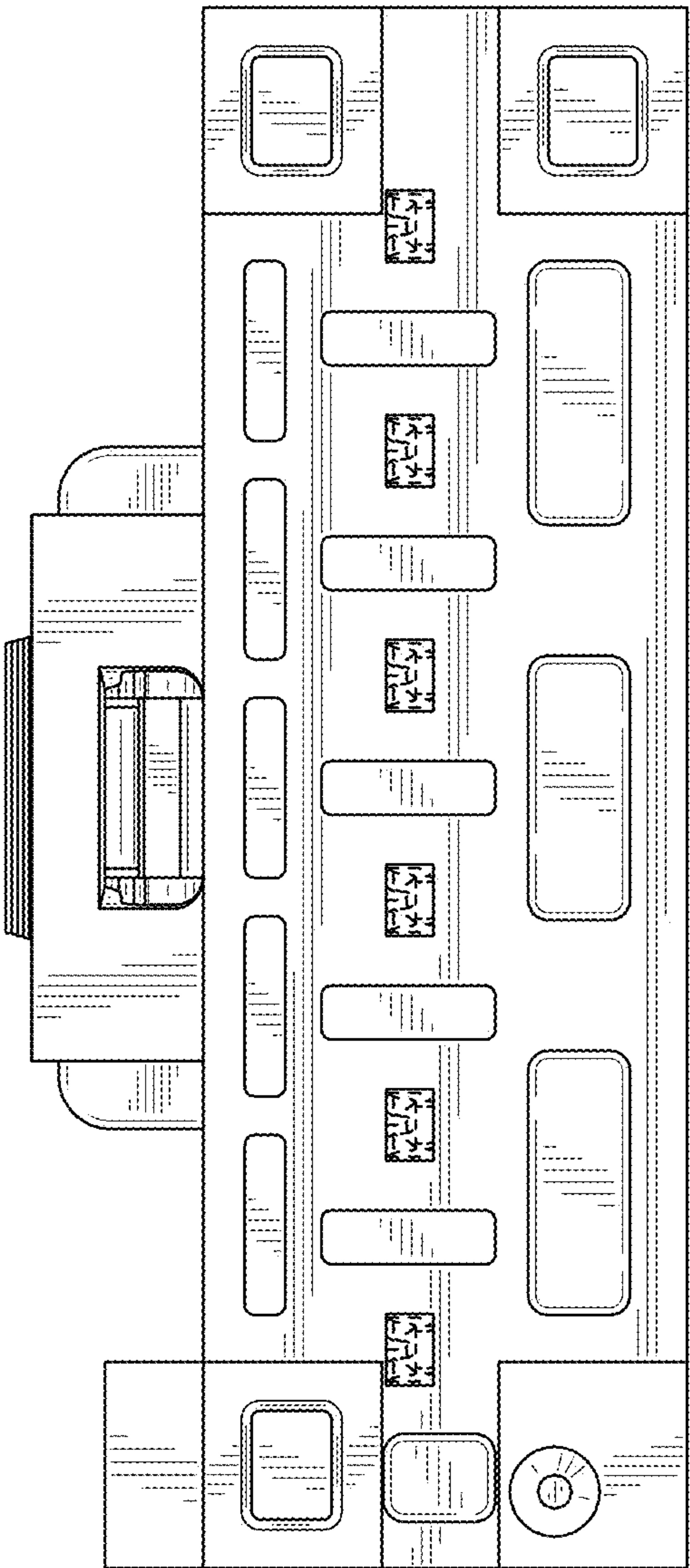


FIG. 76

FIG. 77

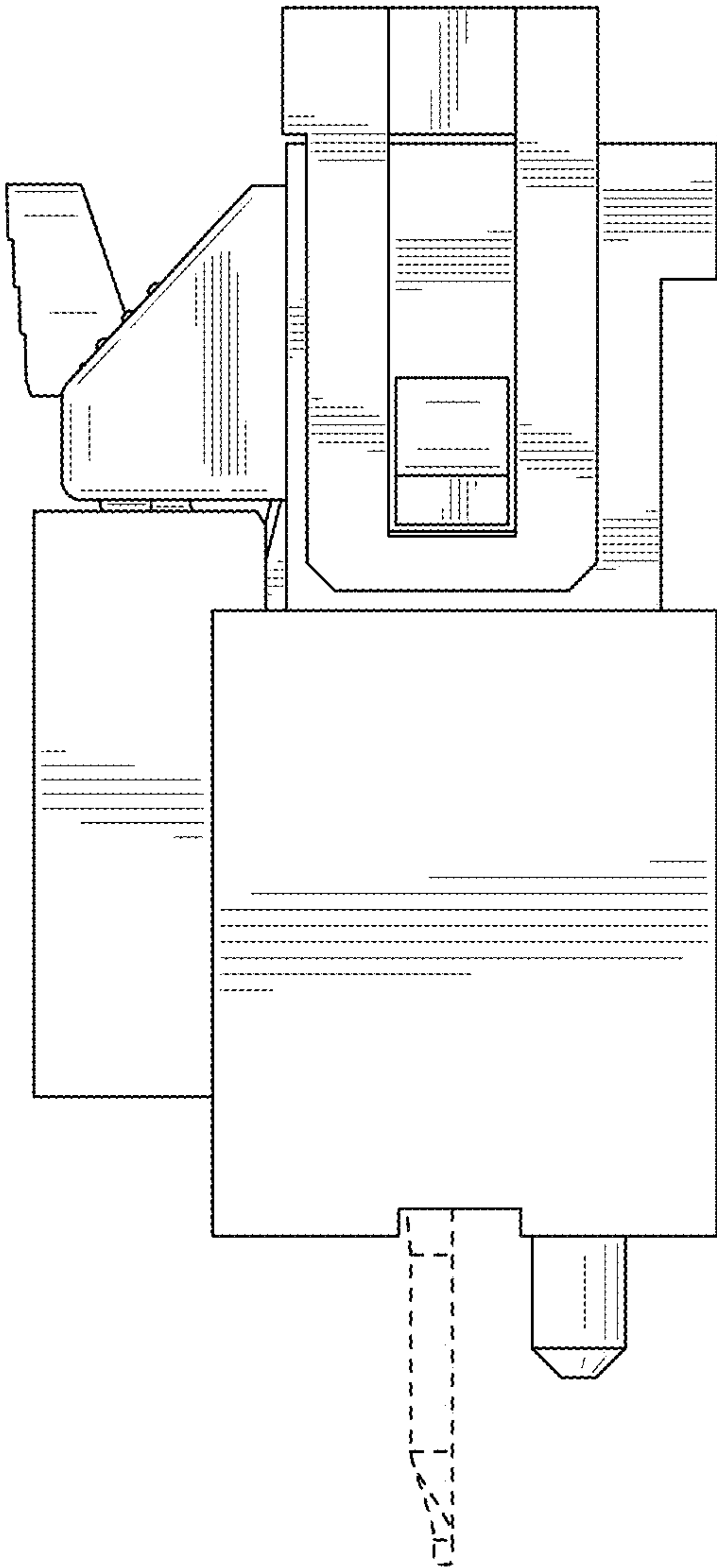
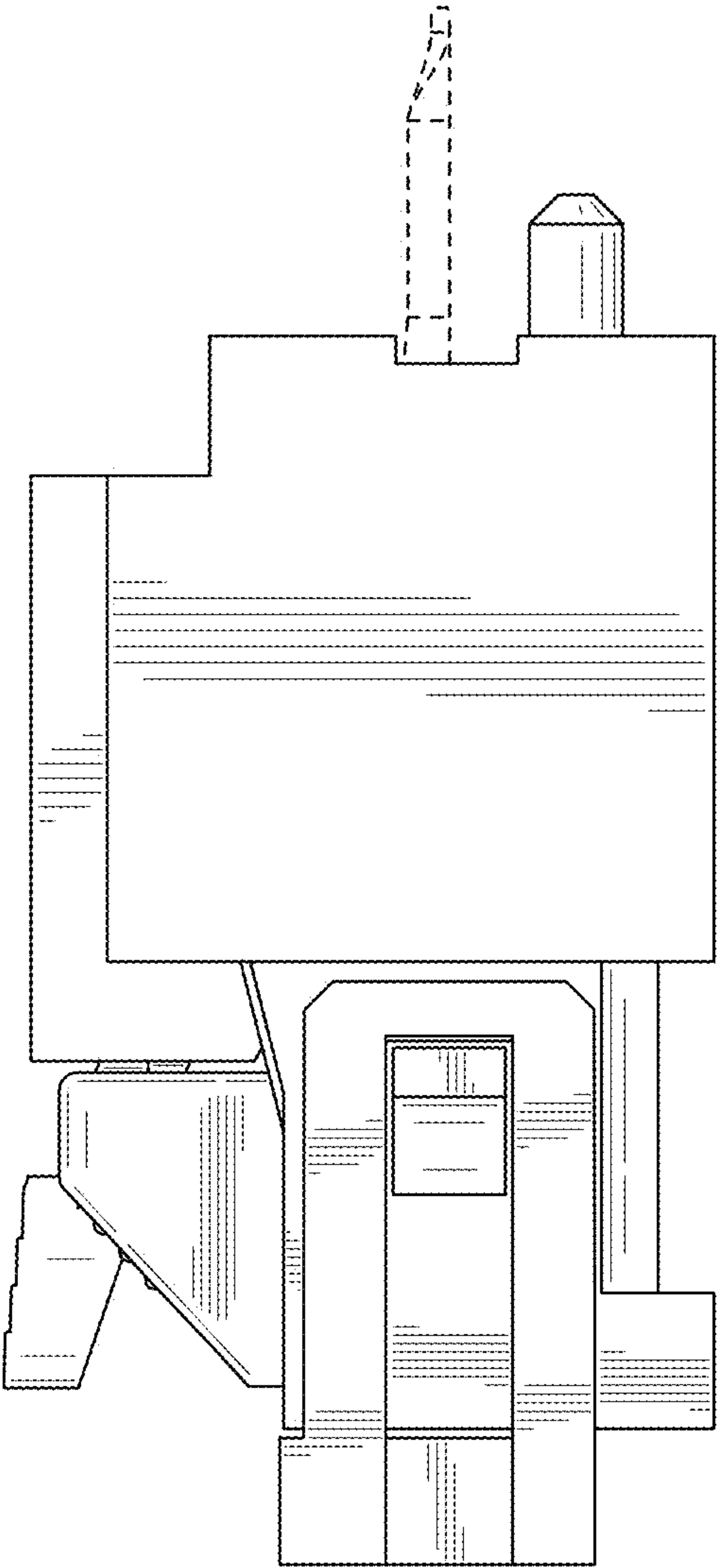


FIG. 78



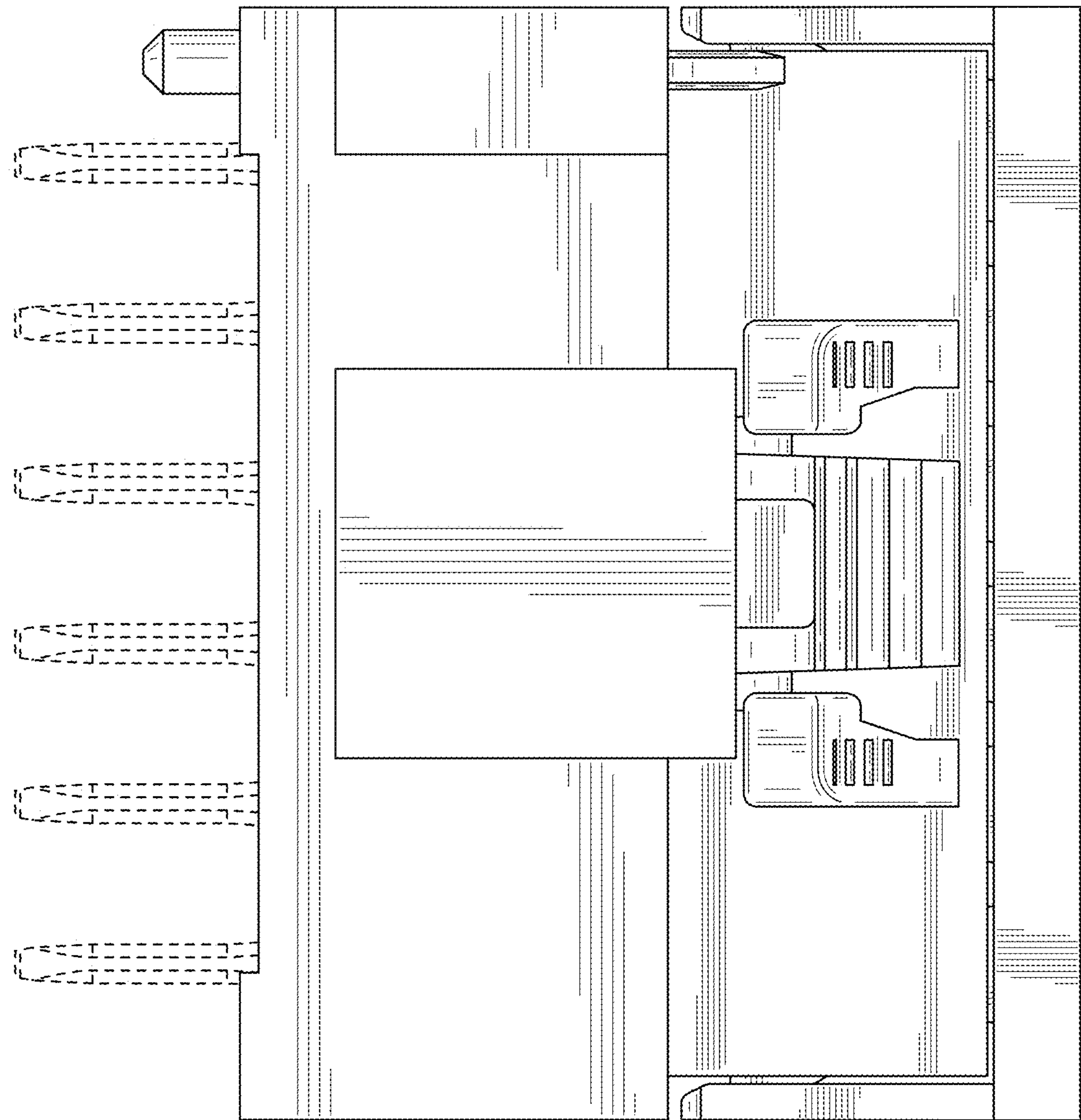


FIG. 79

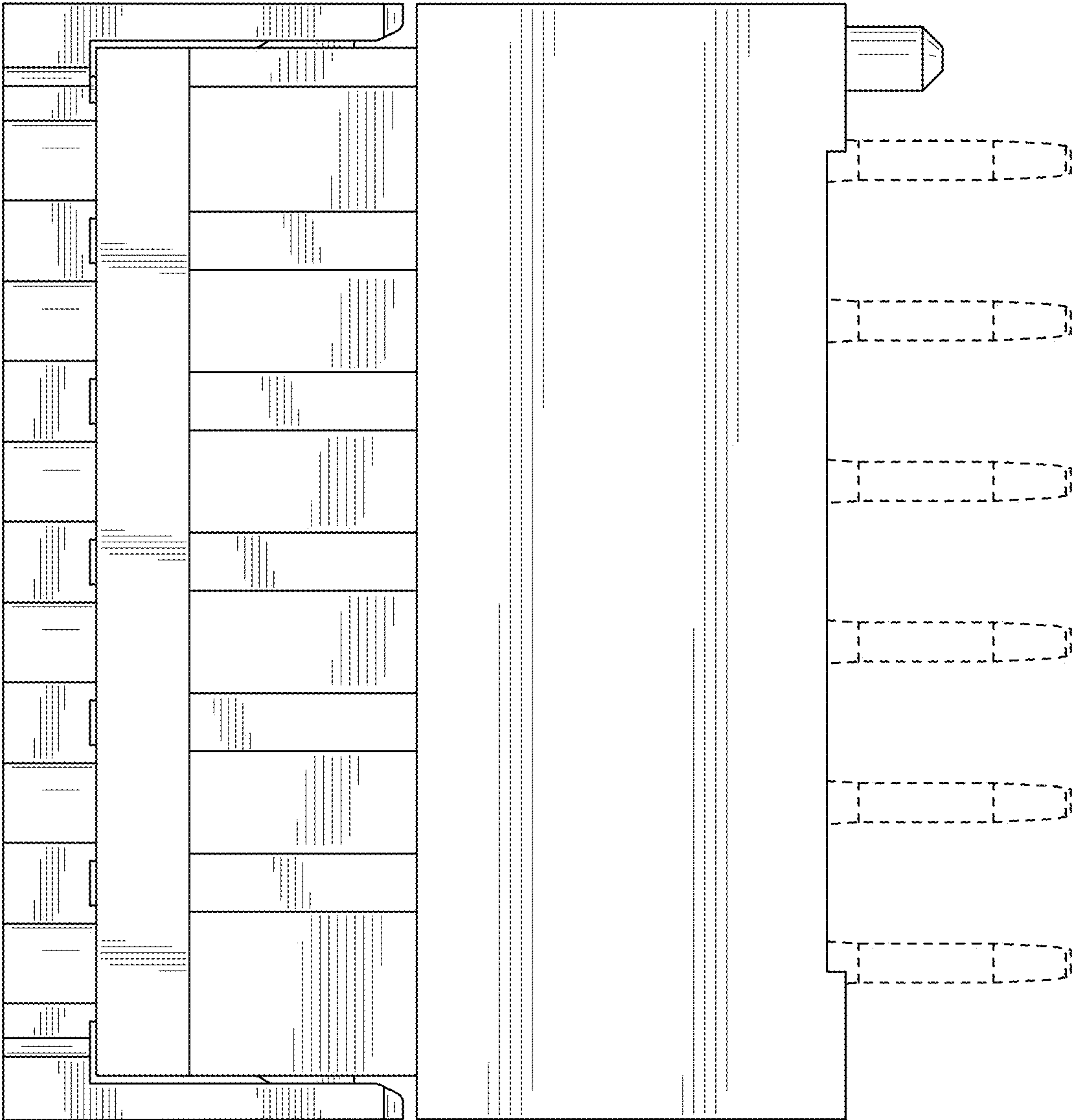


FIG. 80

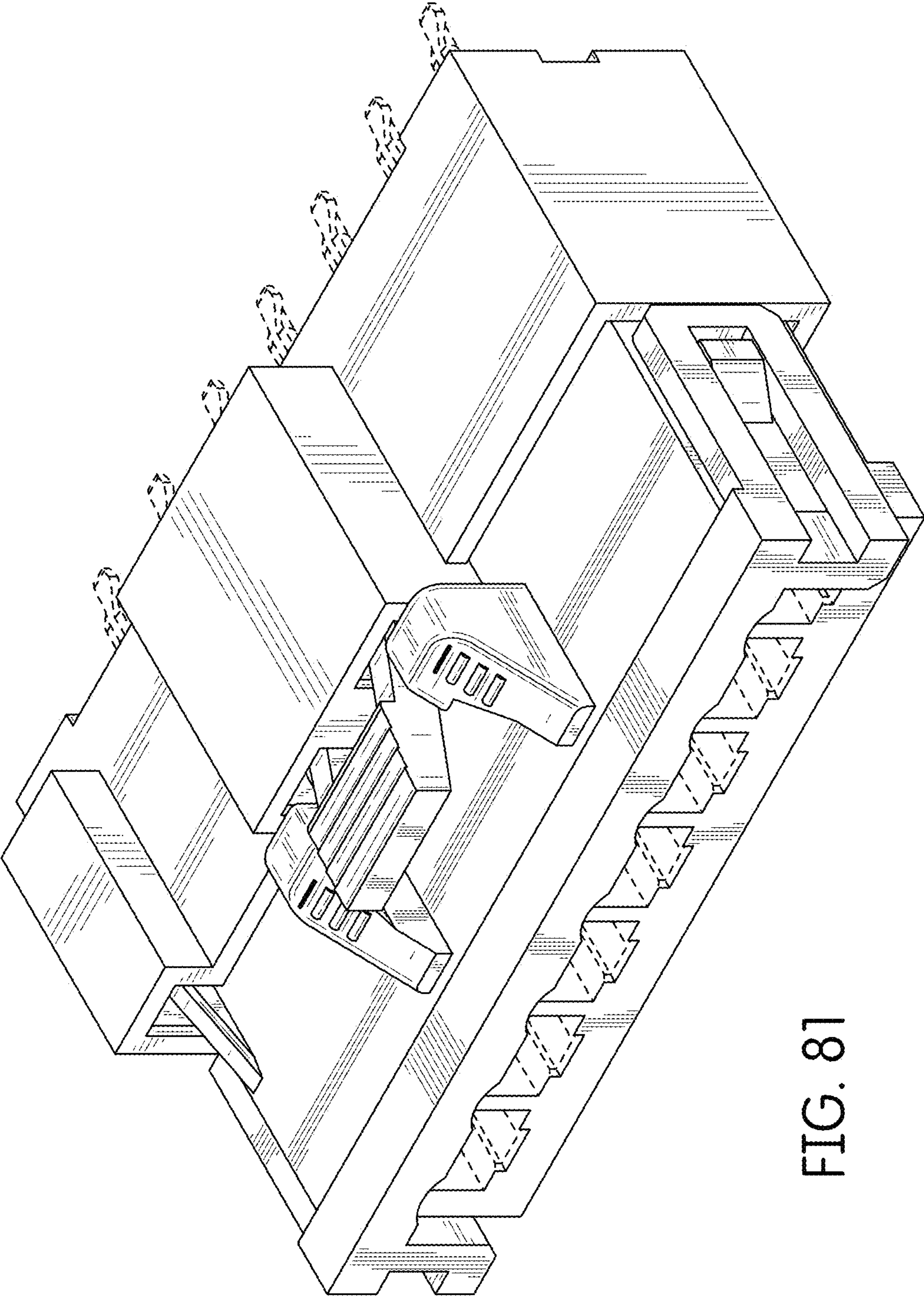


FIG. 81

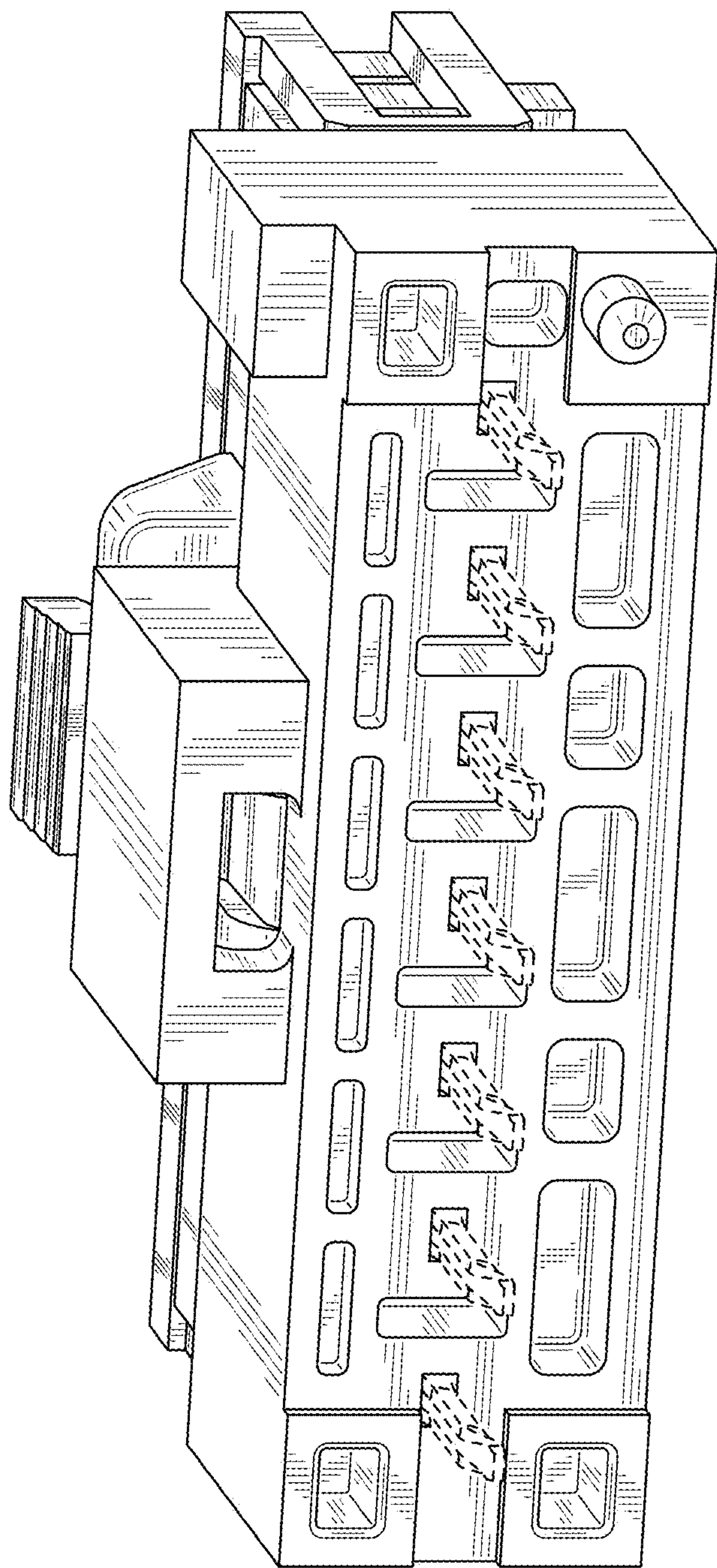


FIG. 82

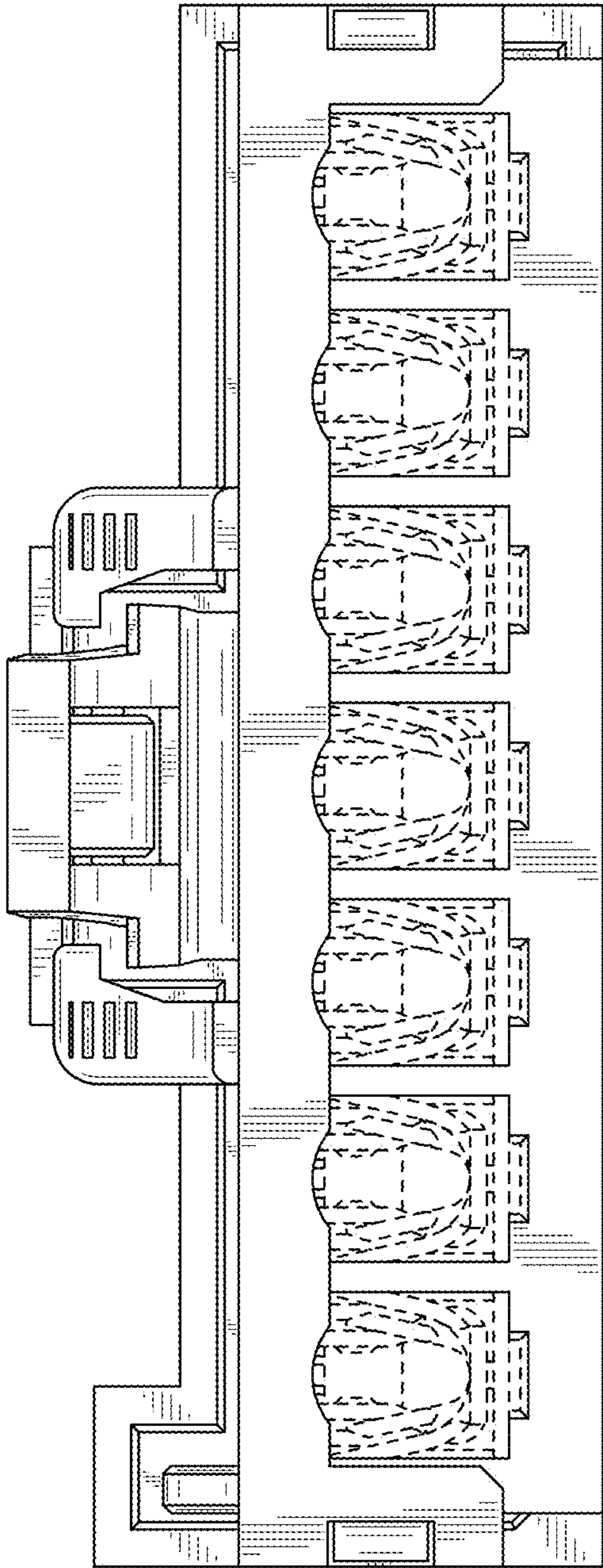


FIG. 83

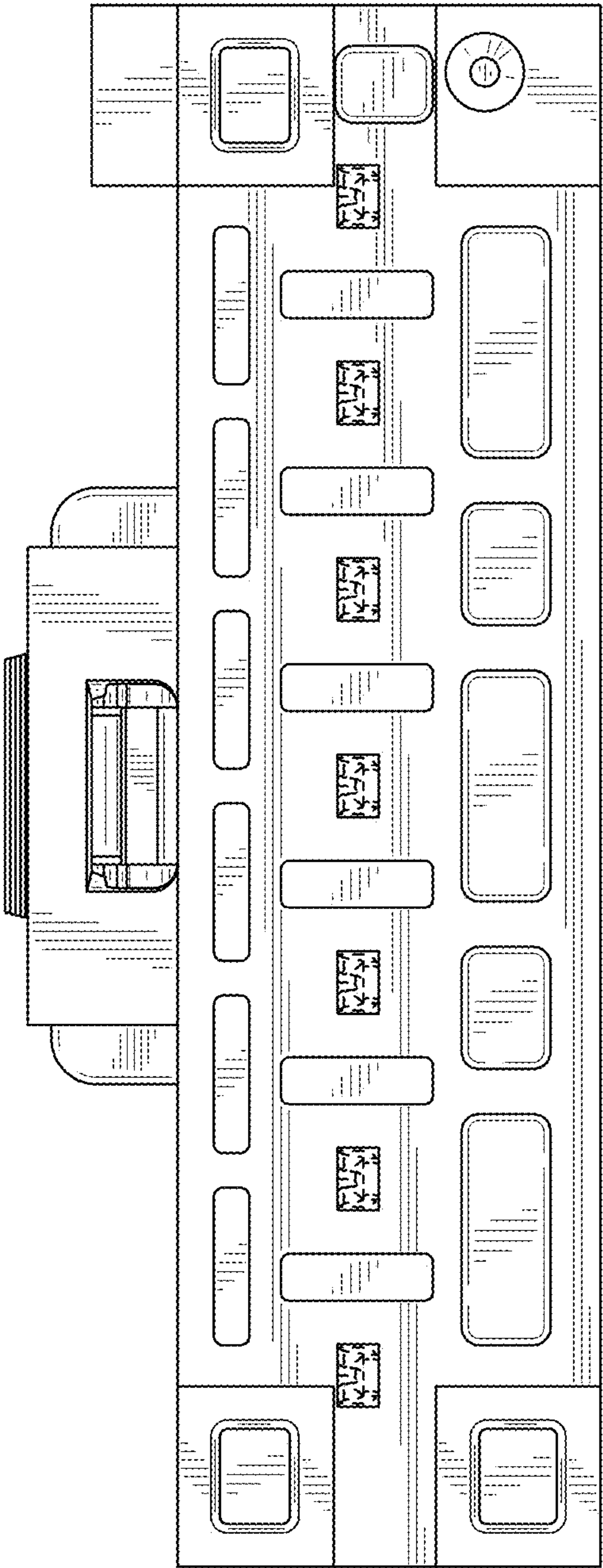


FIG. 84

FIG. 85

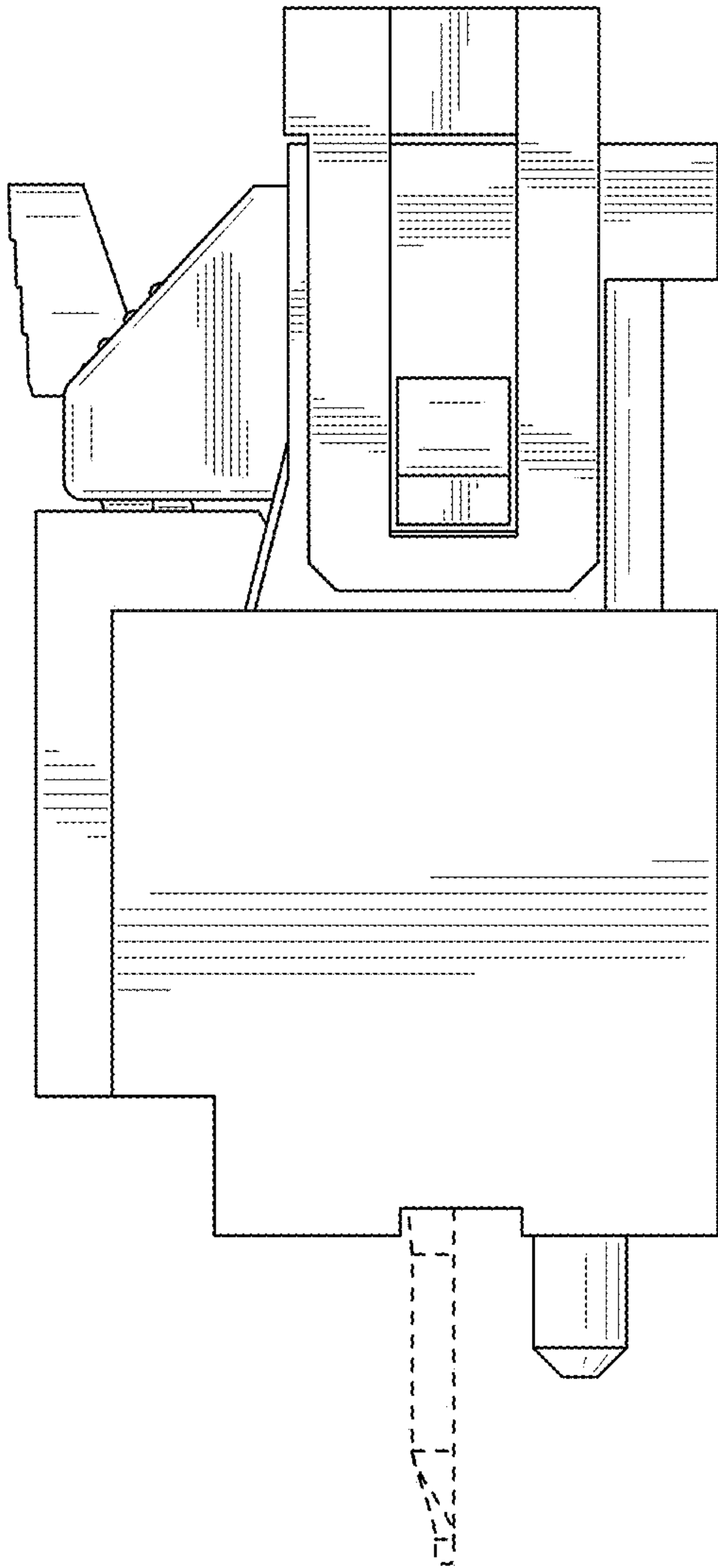
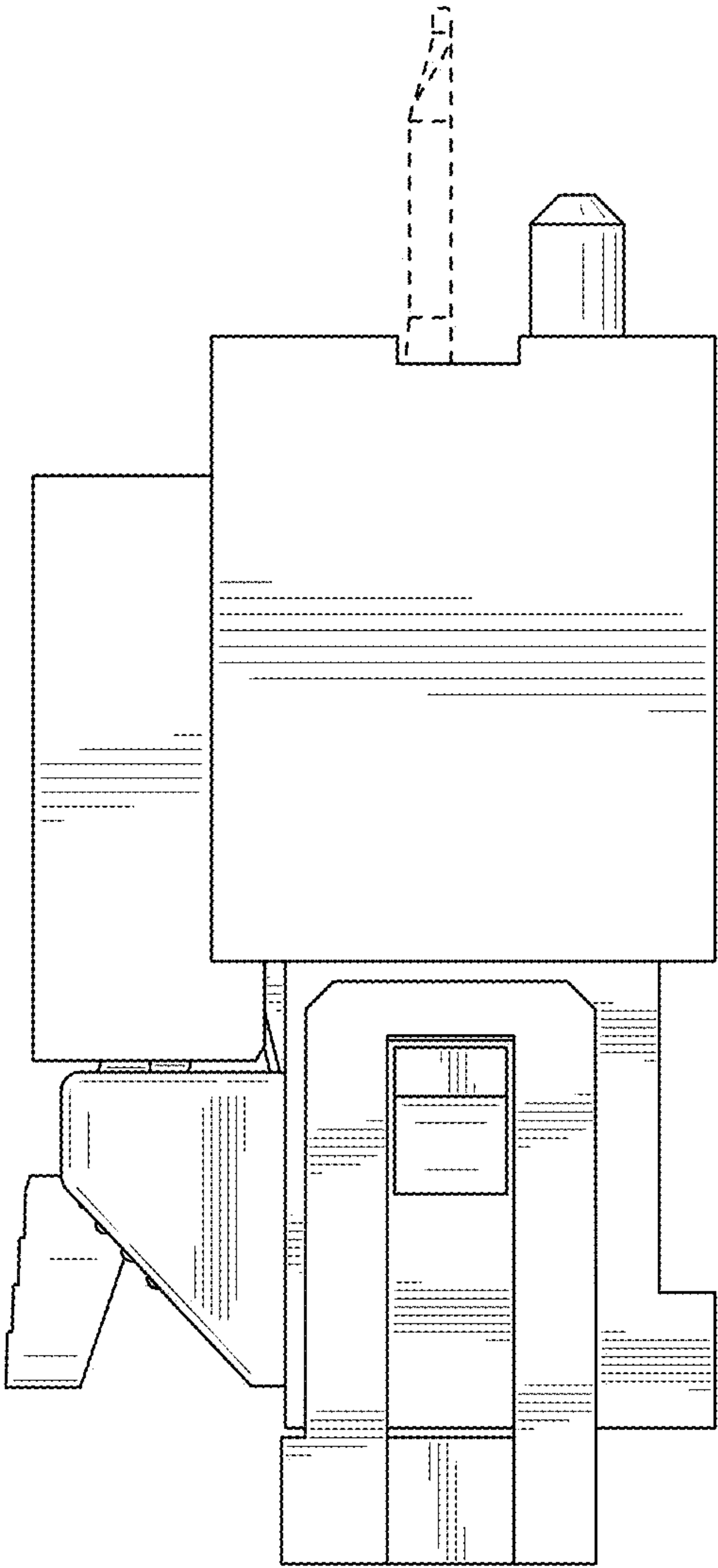


FIG. 86



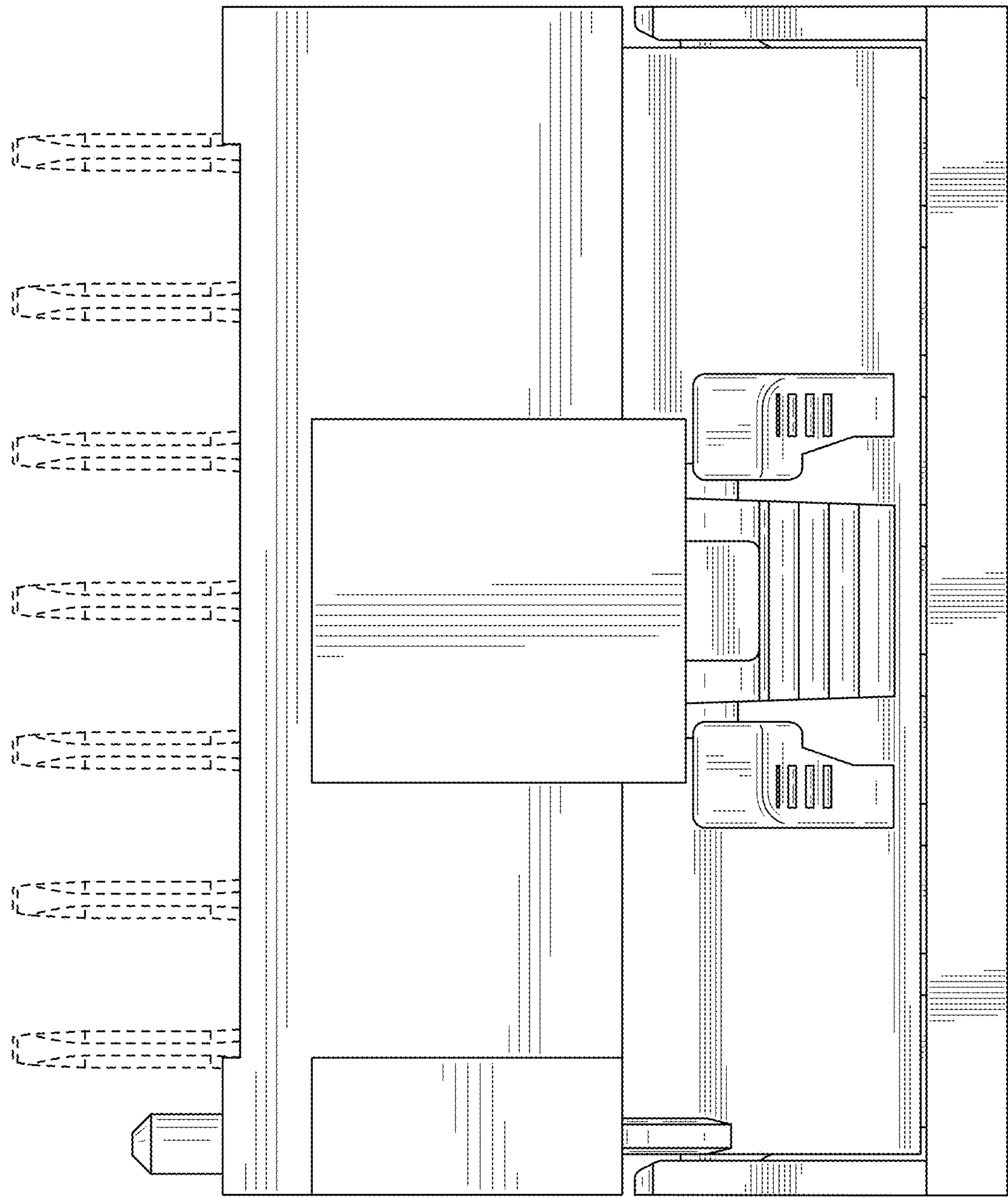


FIG. 87

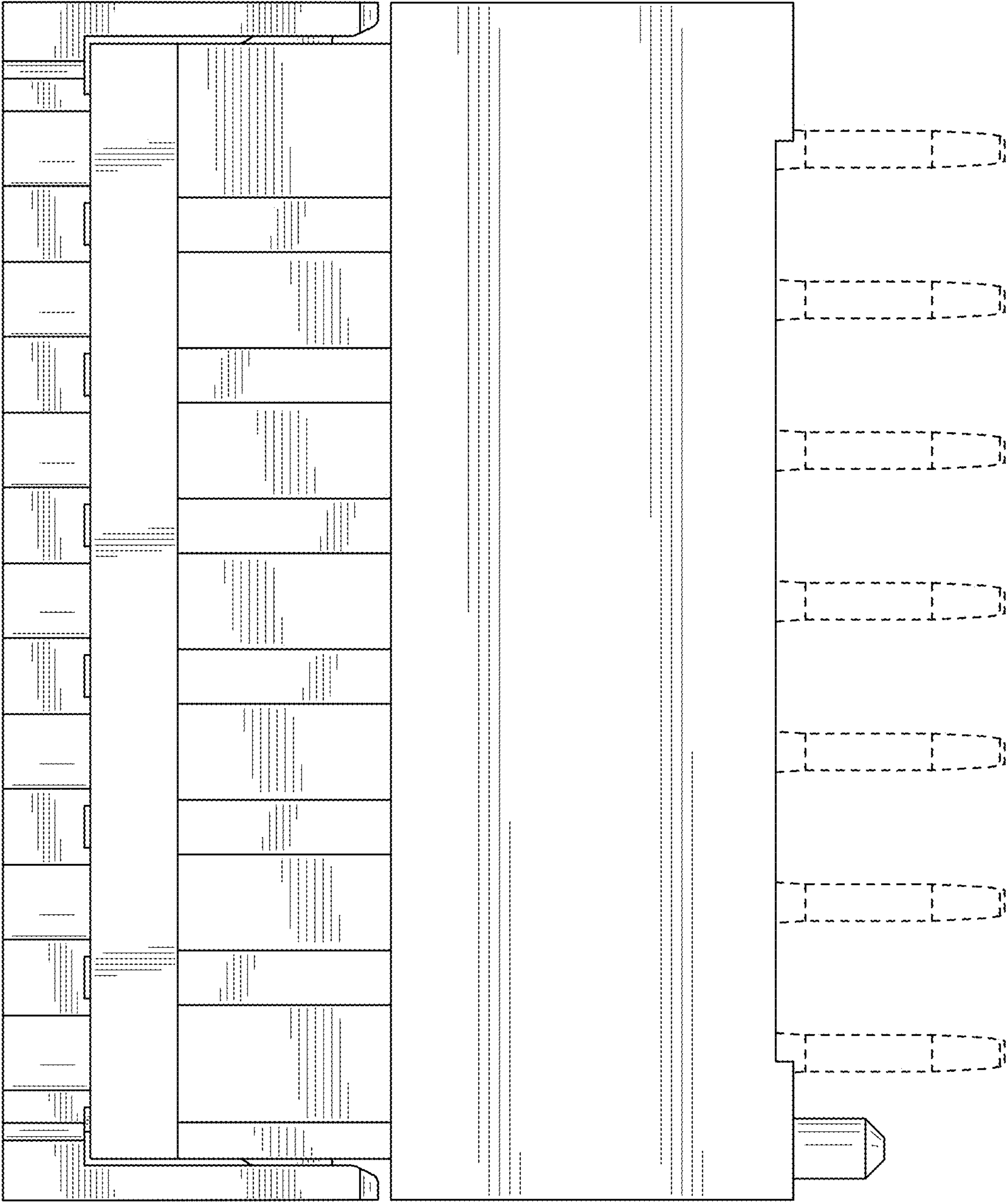


FIG. 88

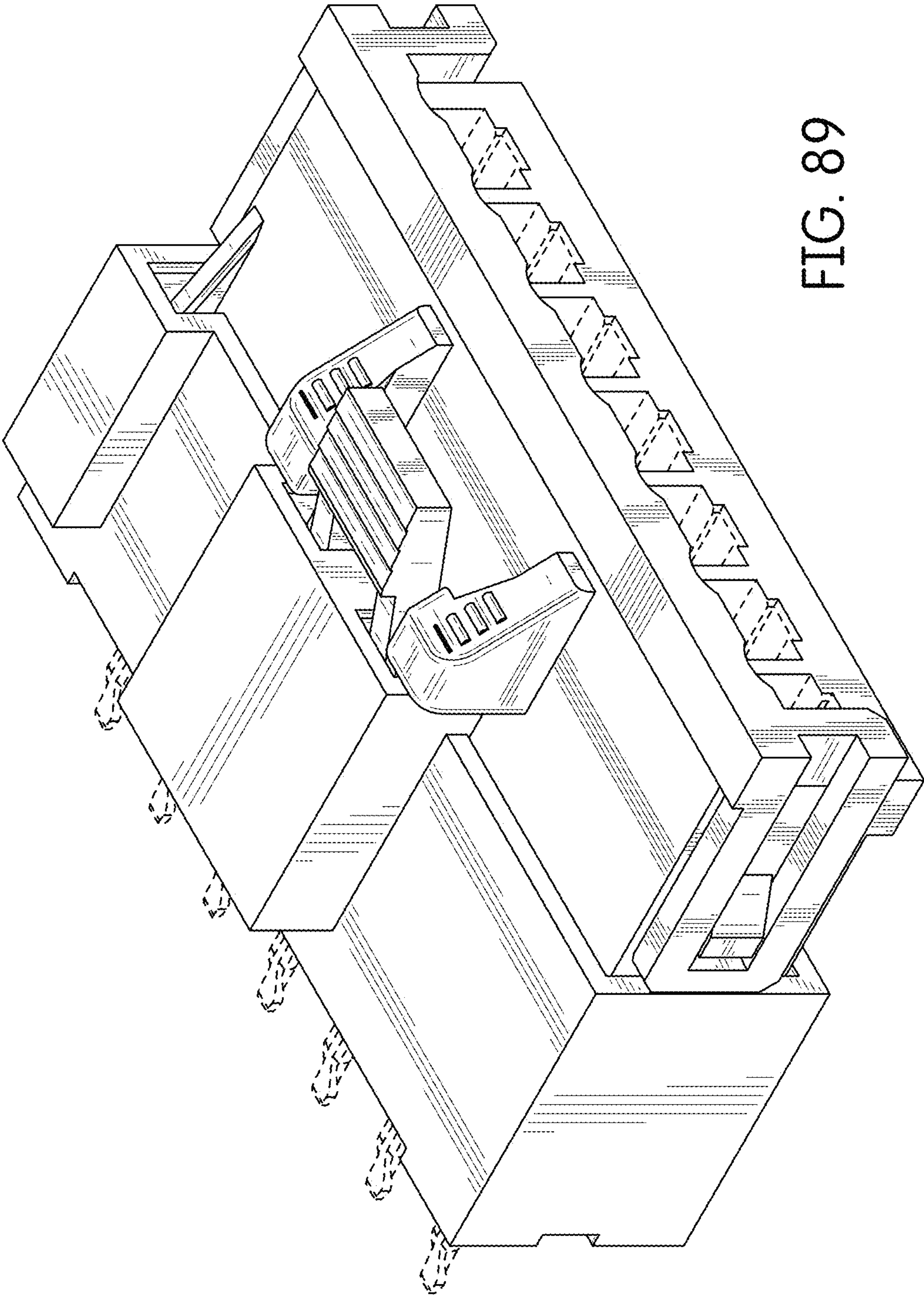


FIG. 89

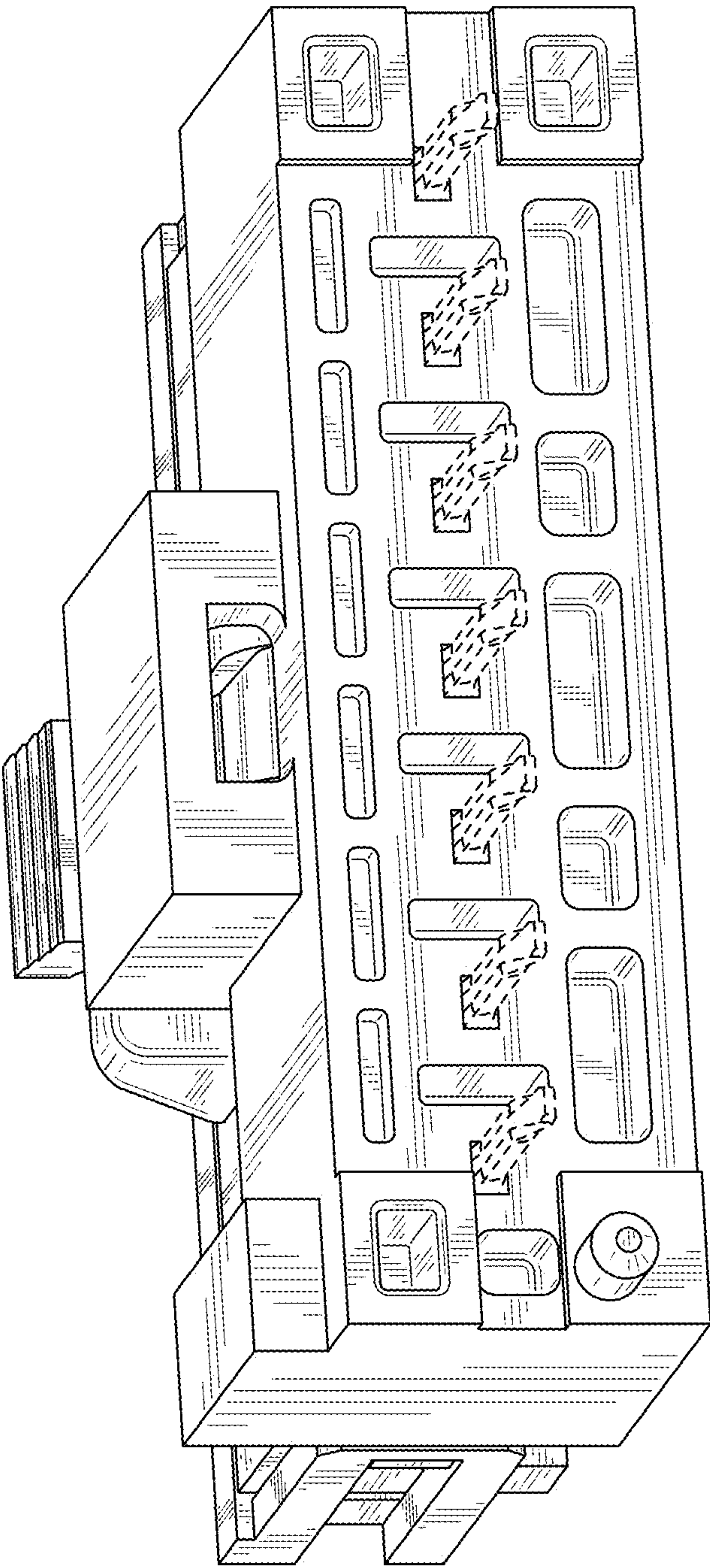


FIG. 90

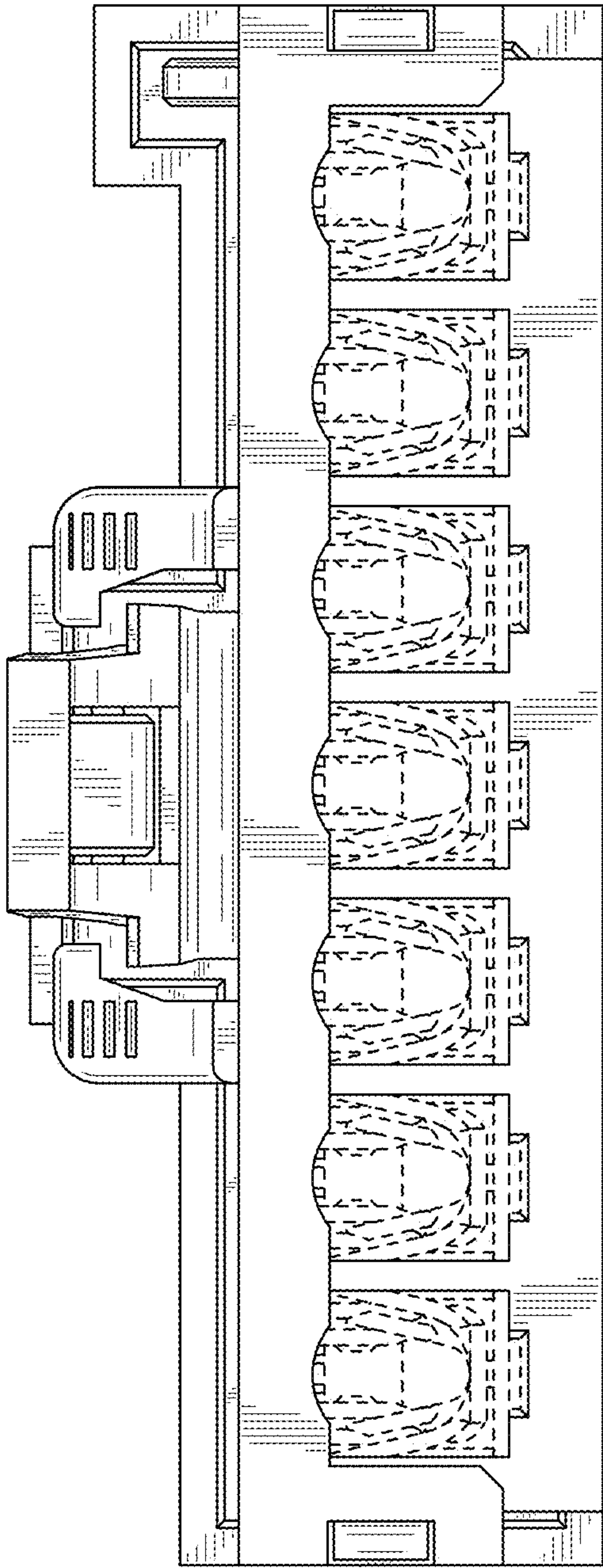


FIG. 91

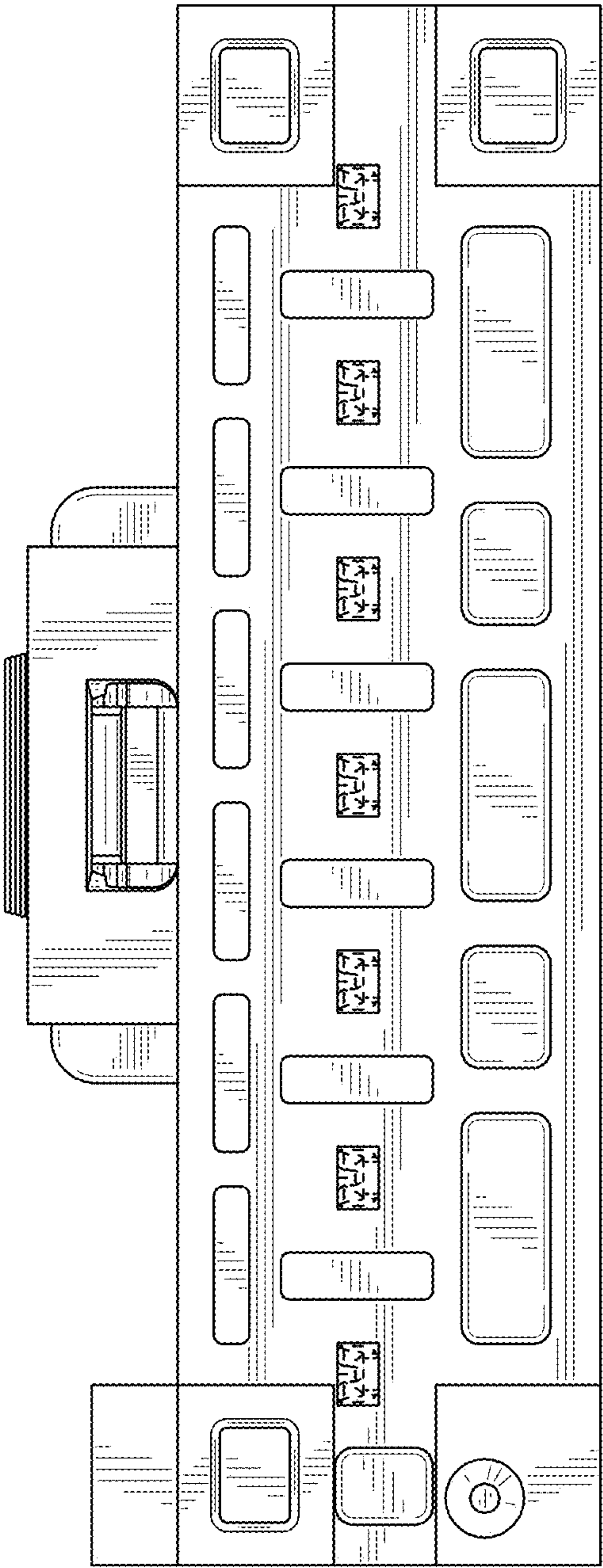


FIG. 92

FIG. 93

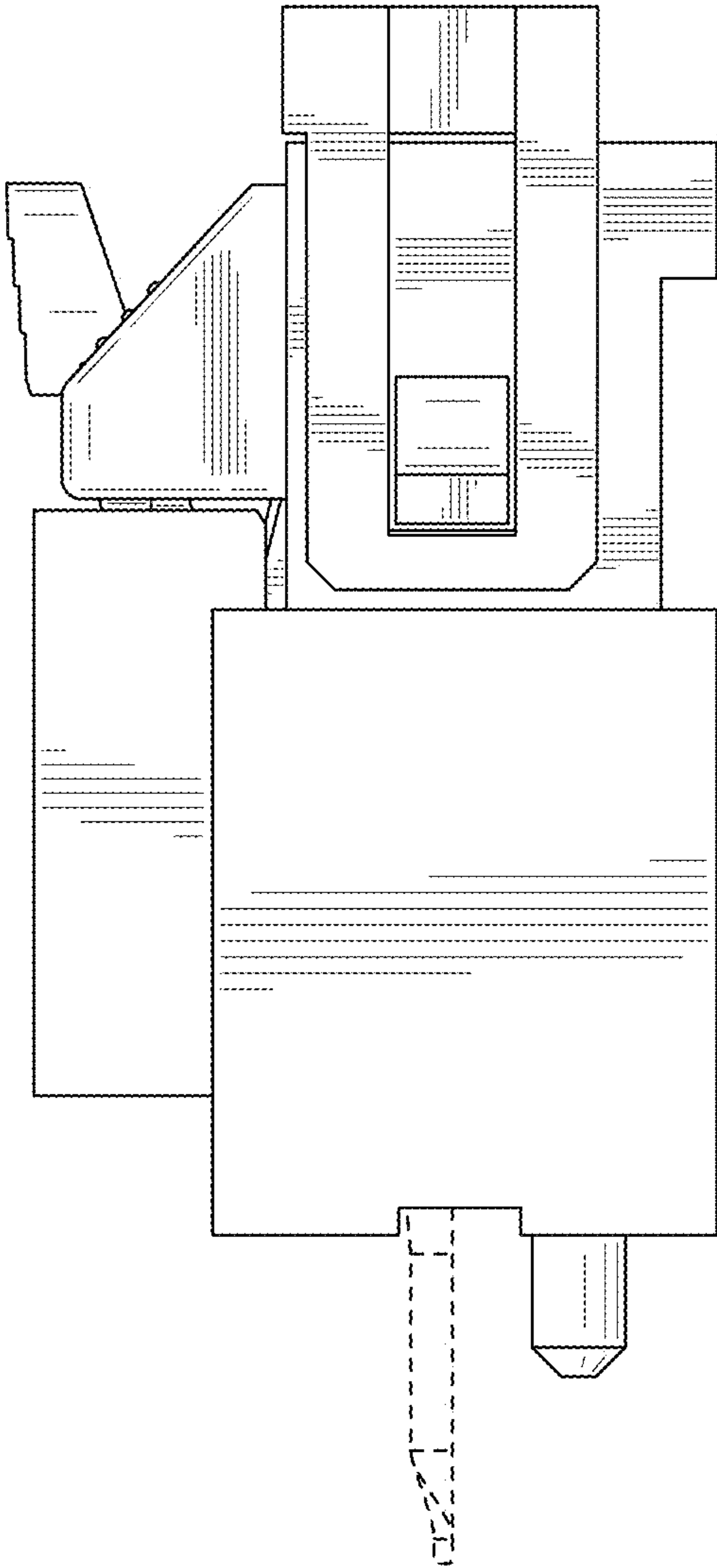
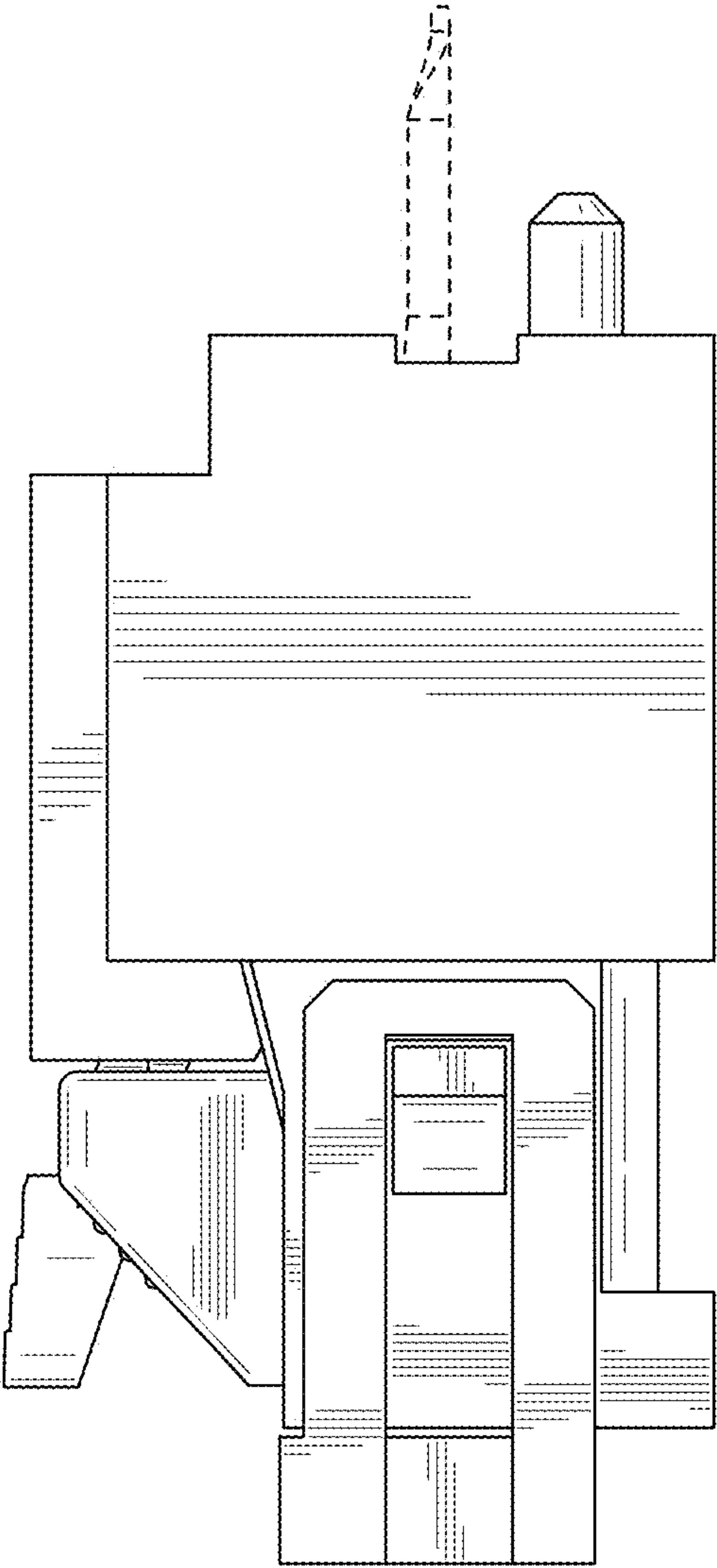


FIG. 94



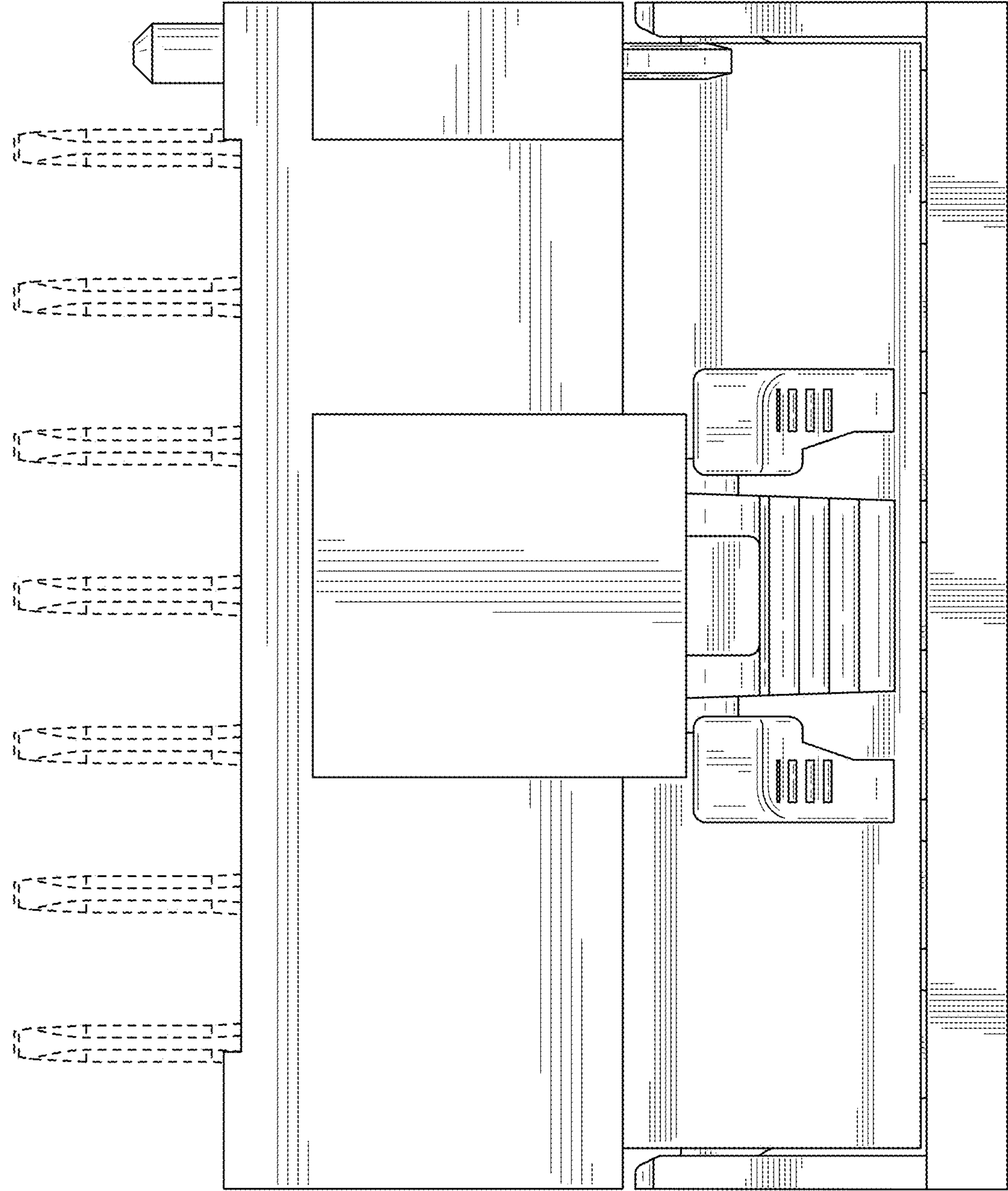


FIG. 95

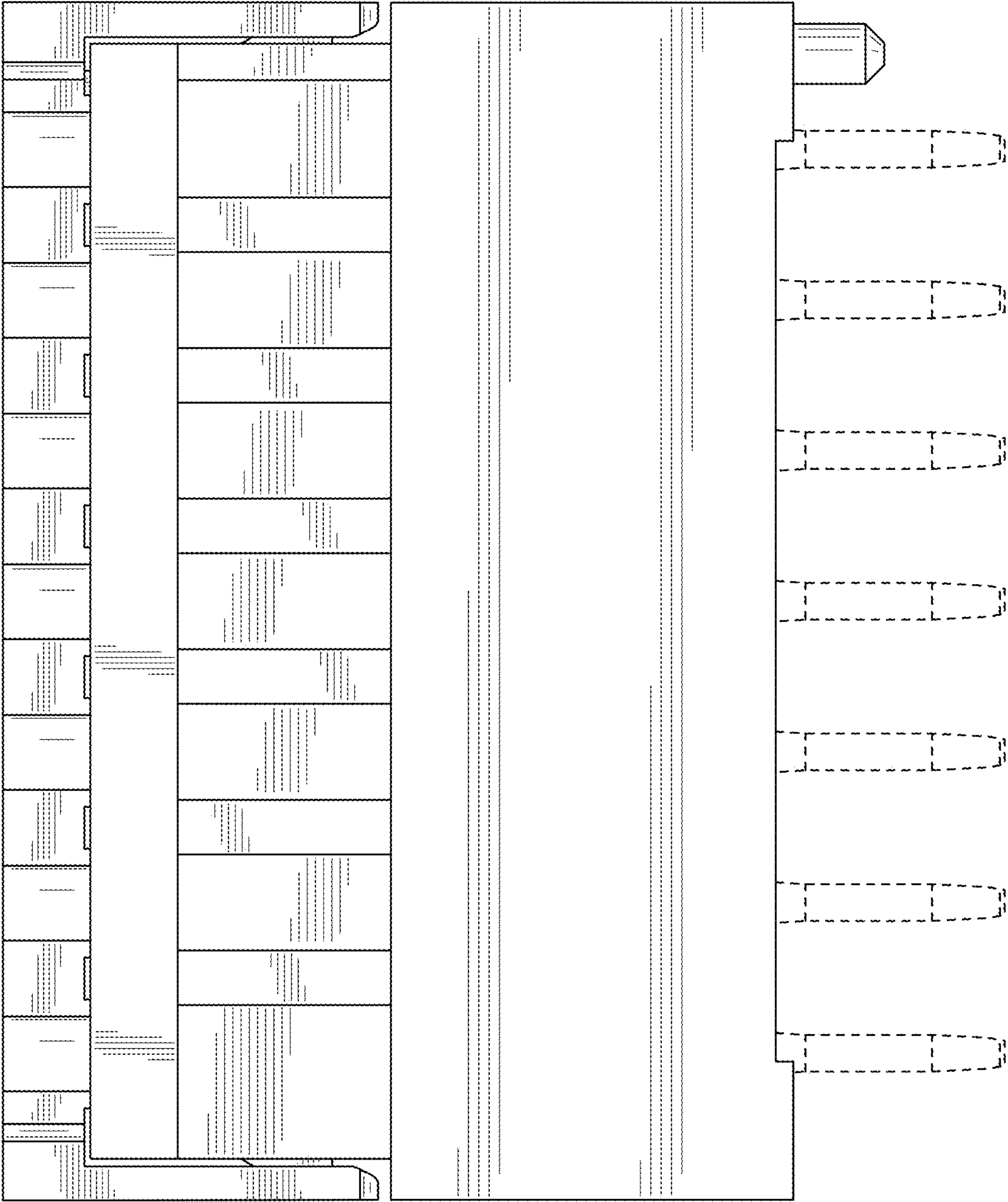


FIG. 96

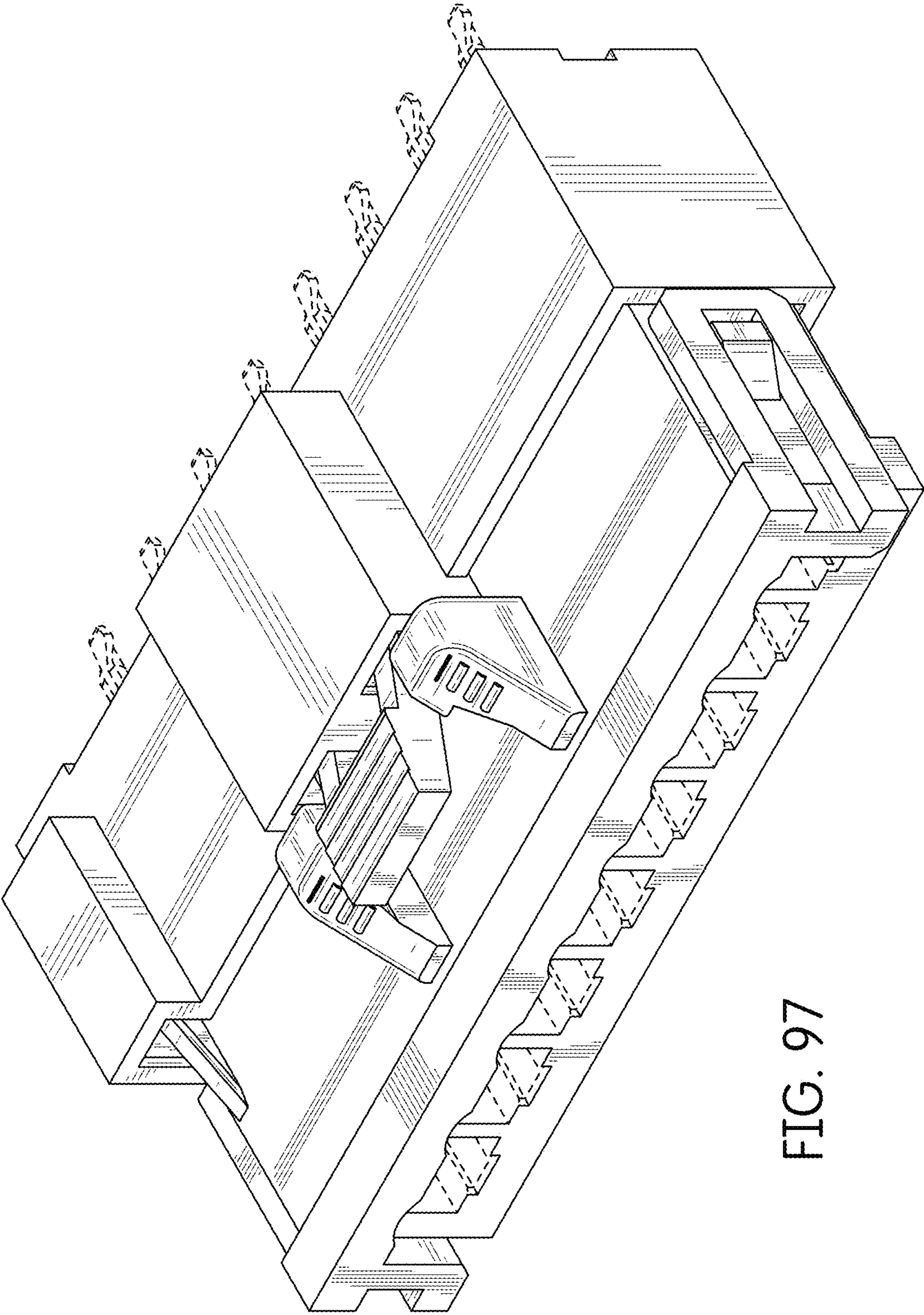


FIG. 97

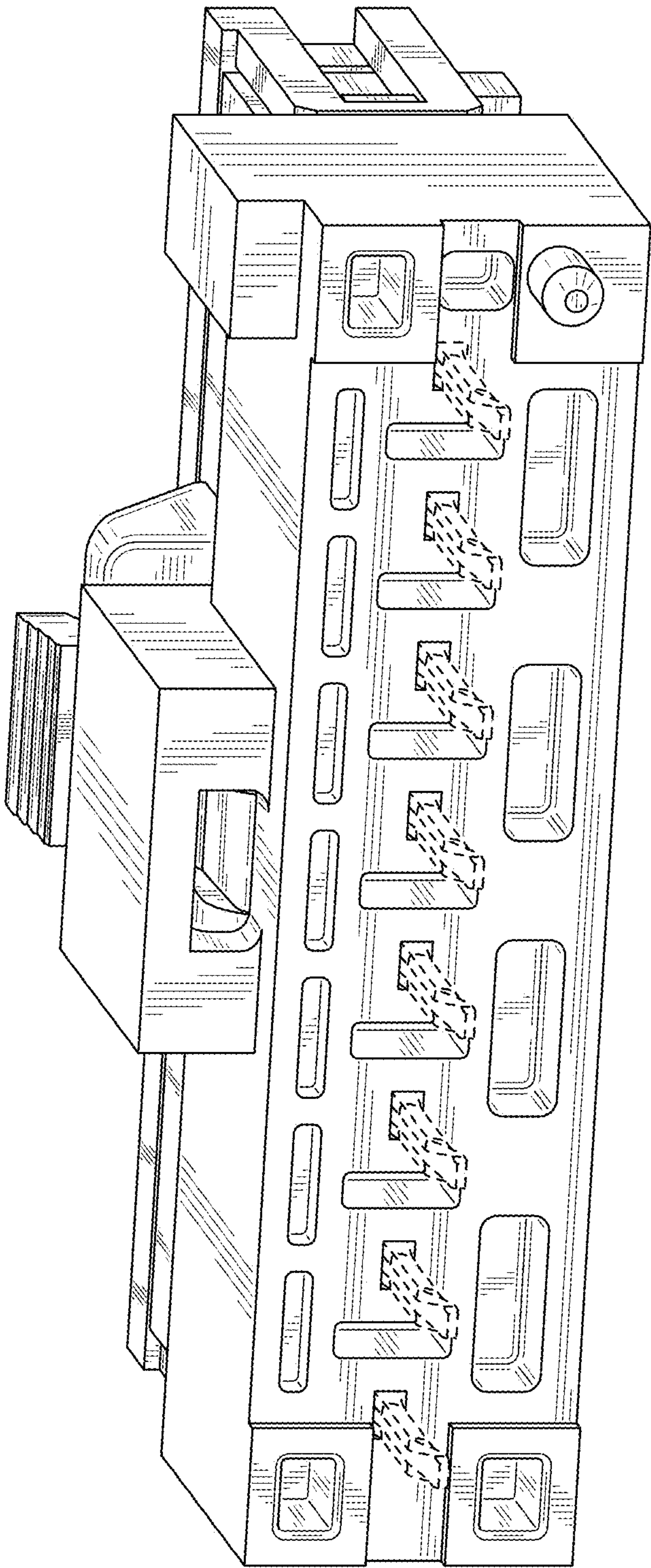


FIG. 98

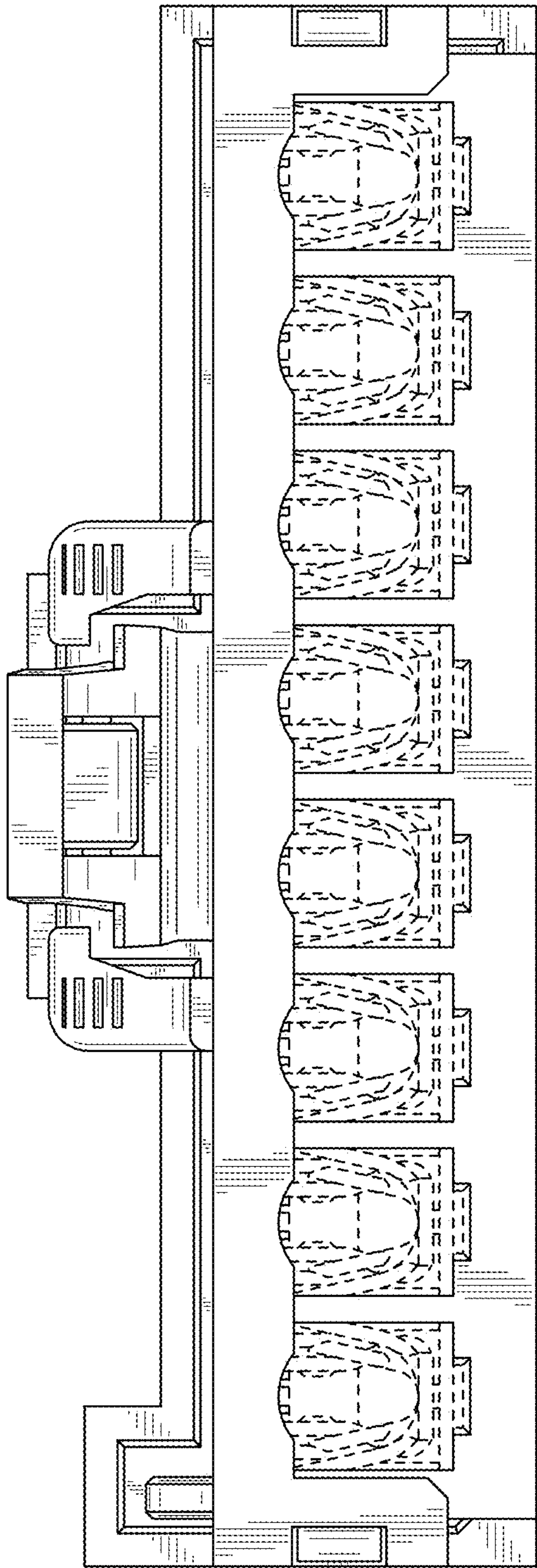


FIG. 99

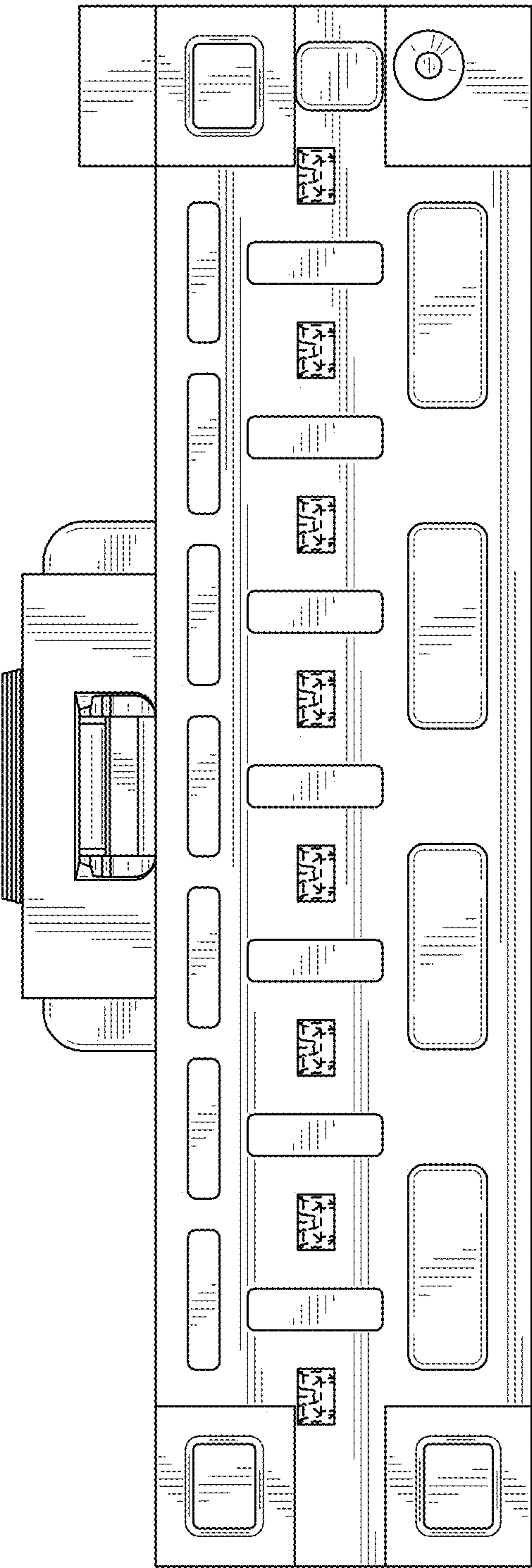


FIG. 100

FIG. 101

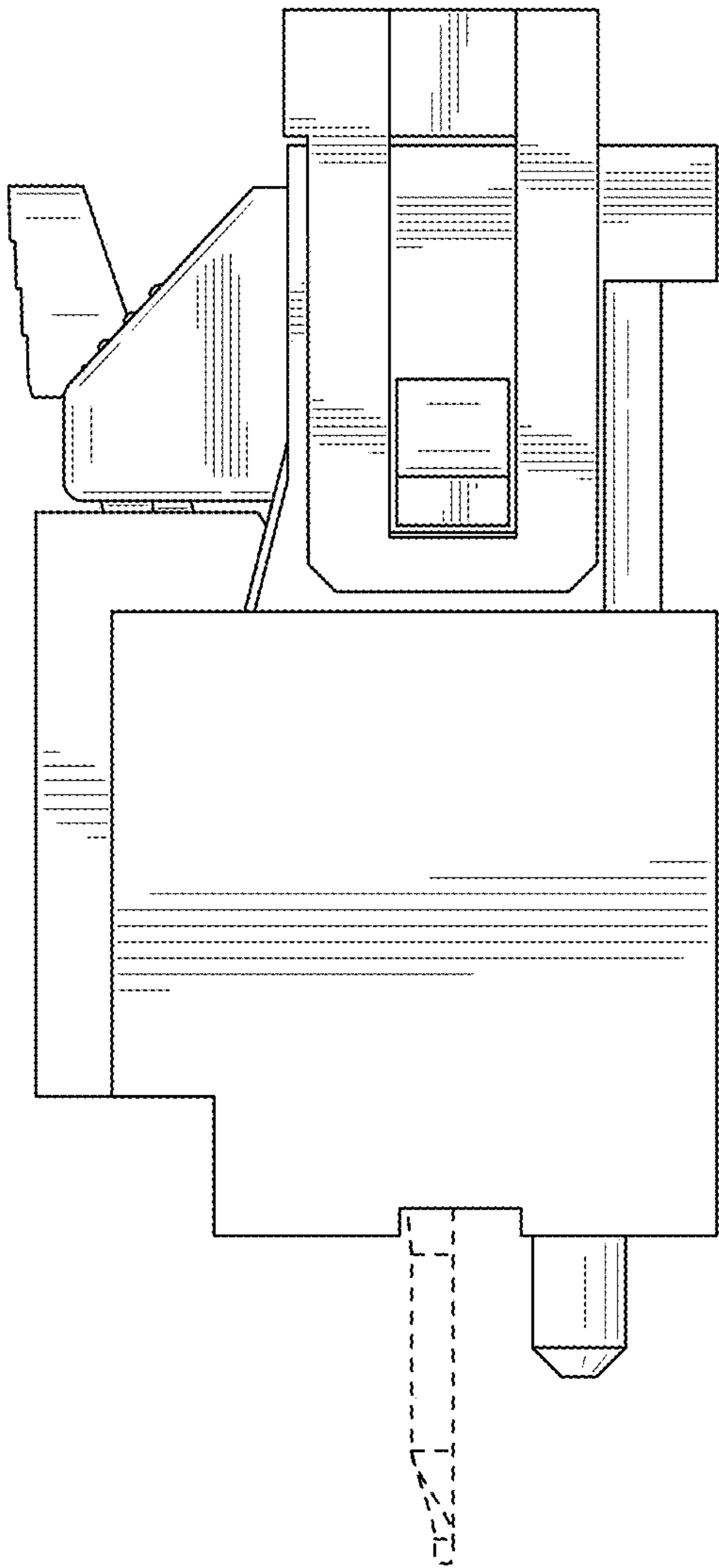
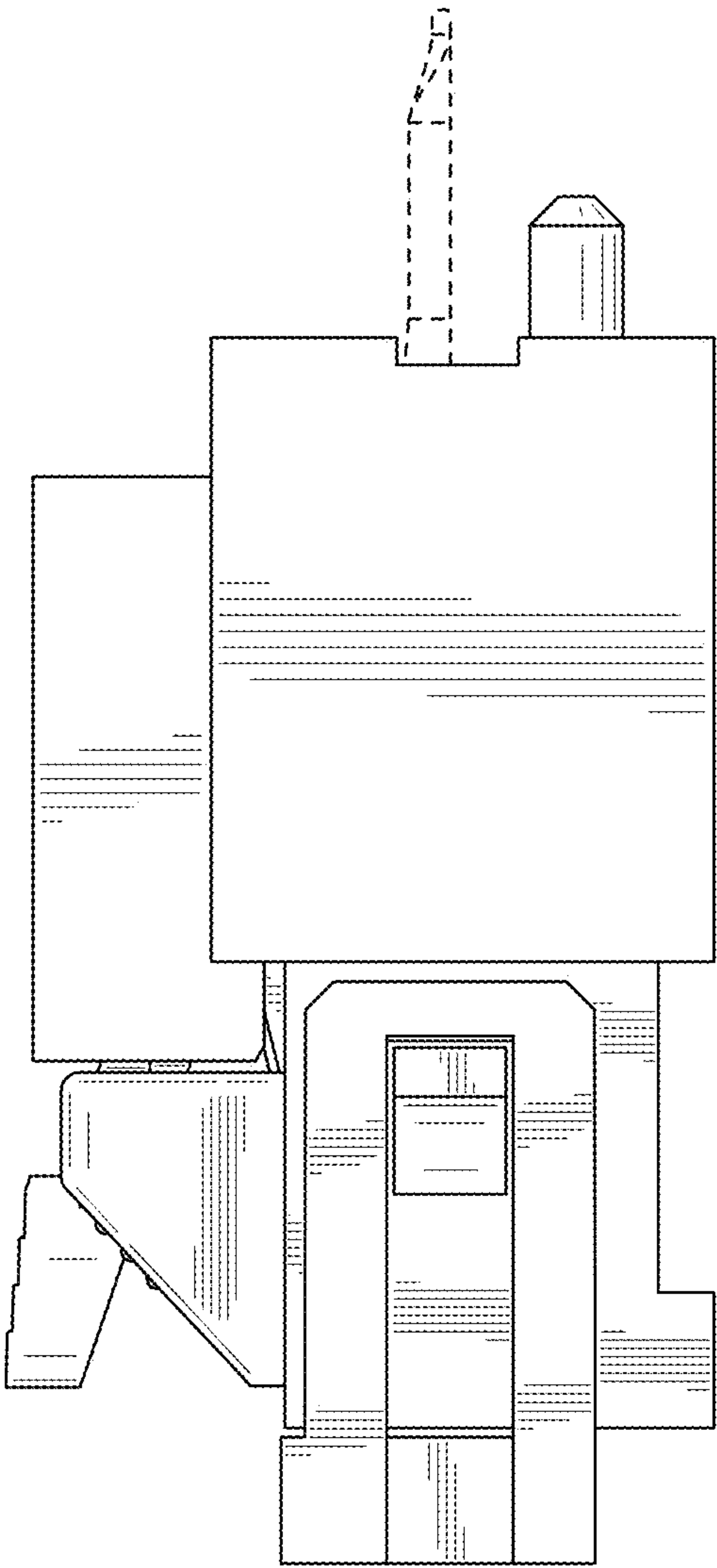


FIG. 102



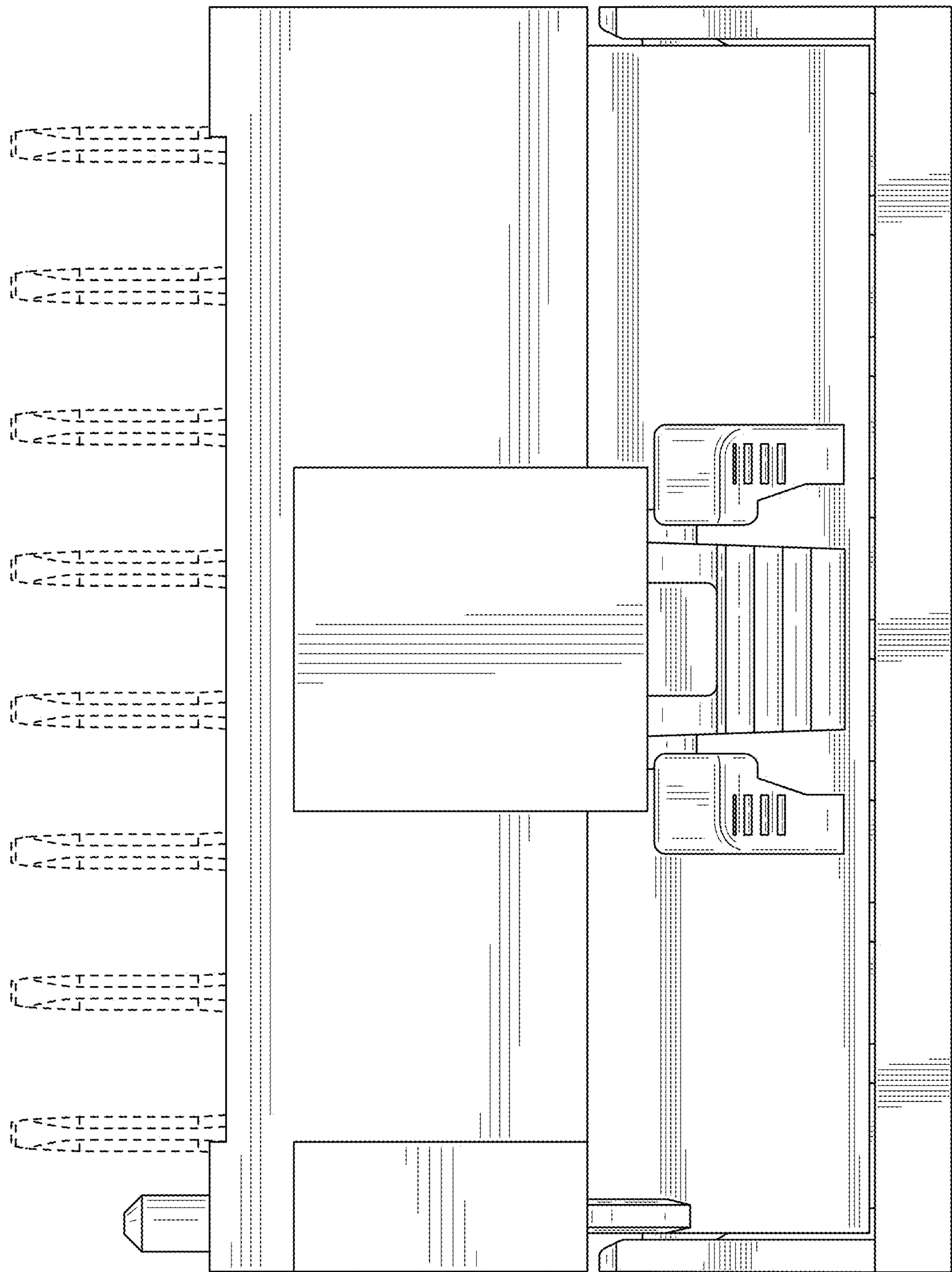


FIG. 103

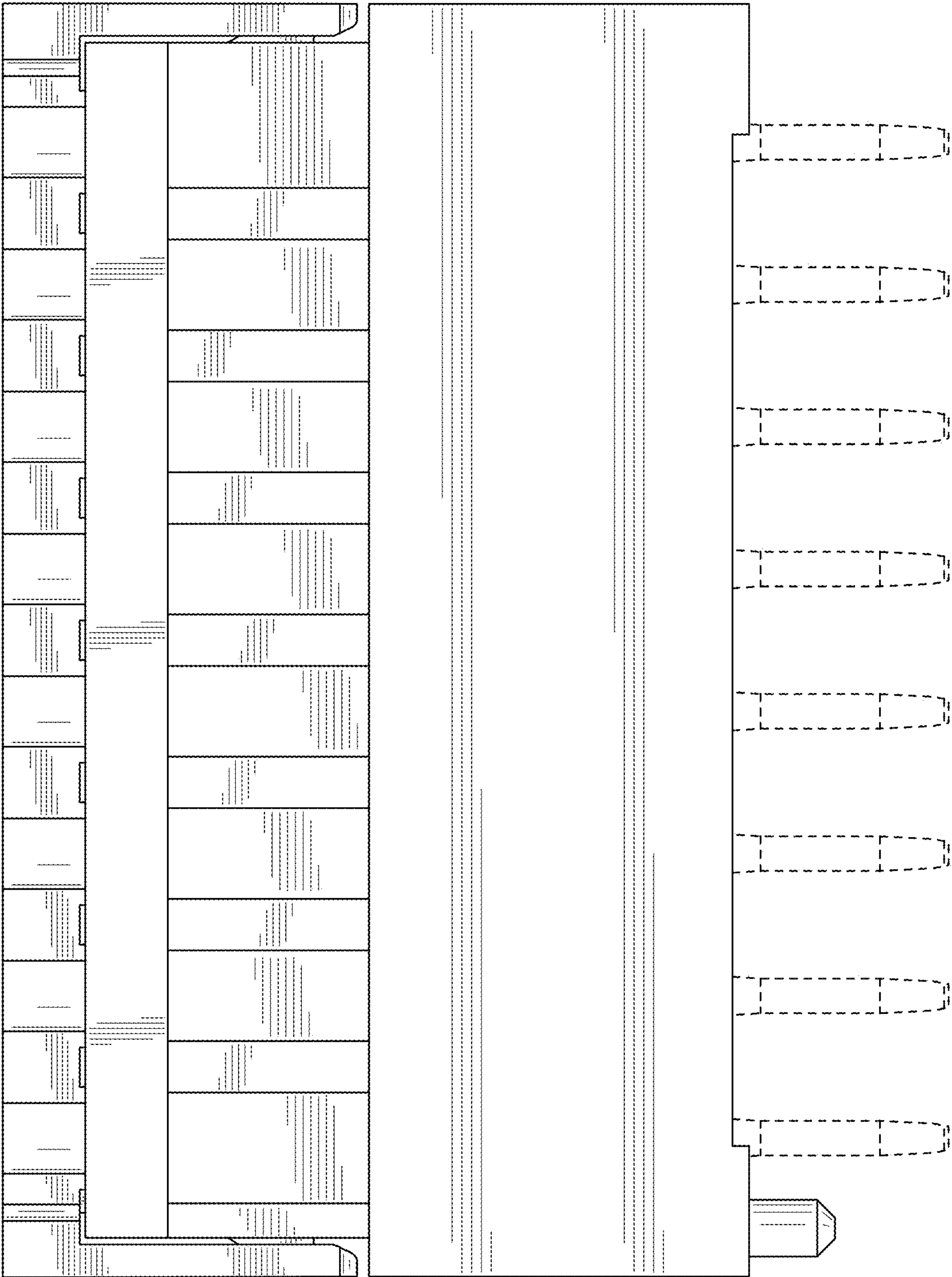


FIG. 104

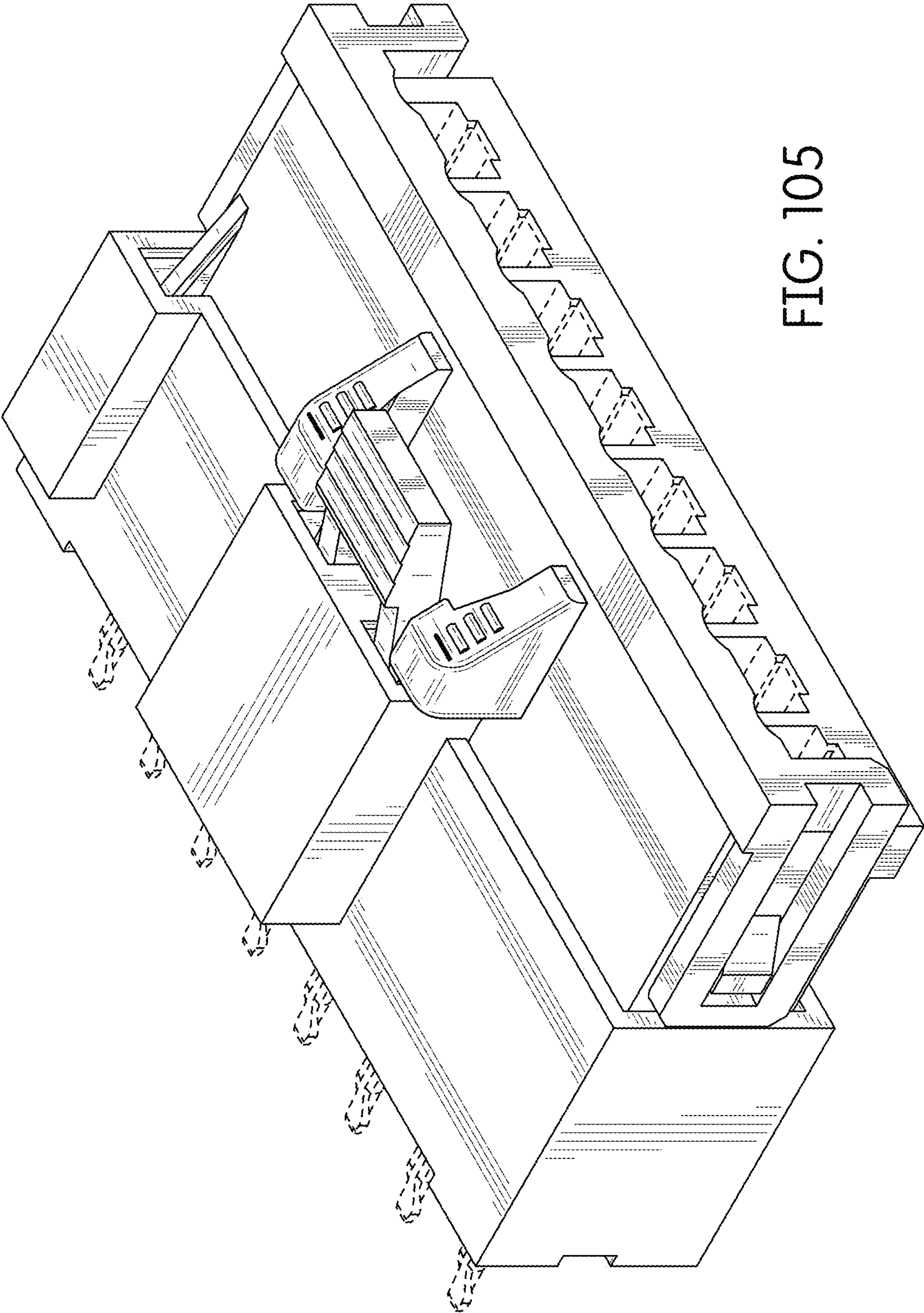


FIG. 105

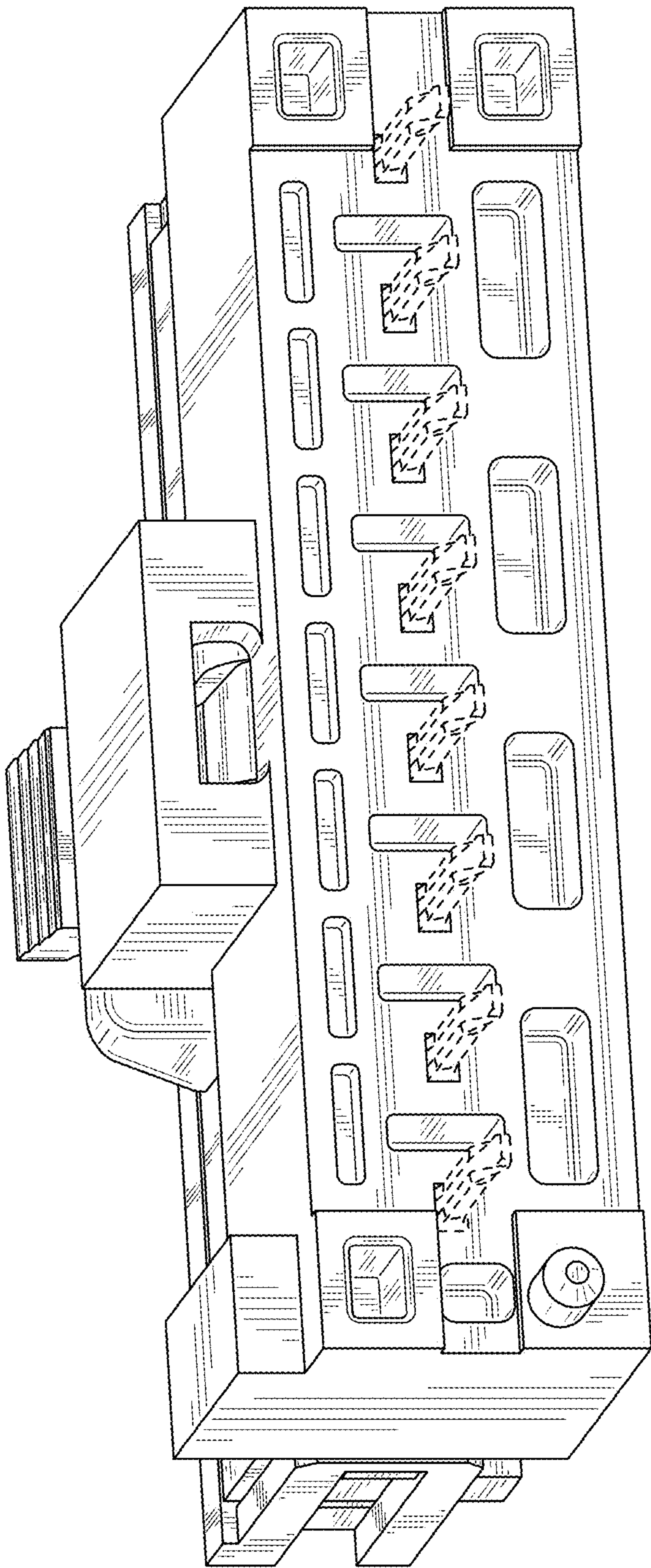


FIG. 106

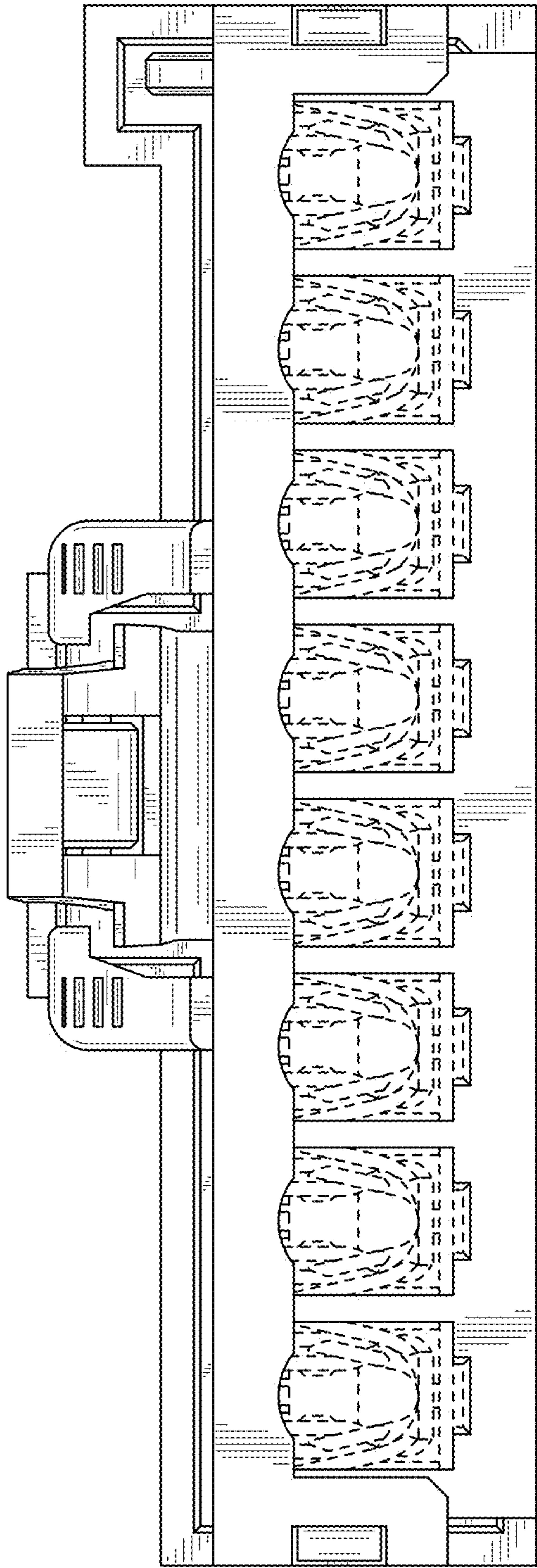


FIG. 107

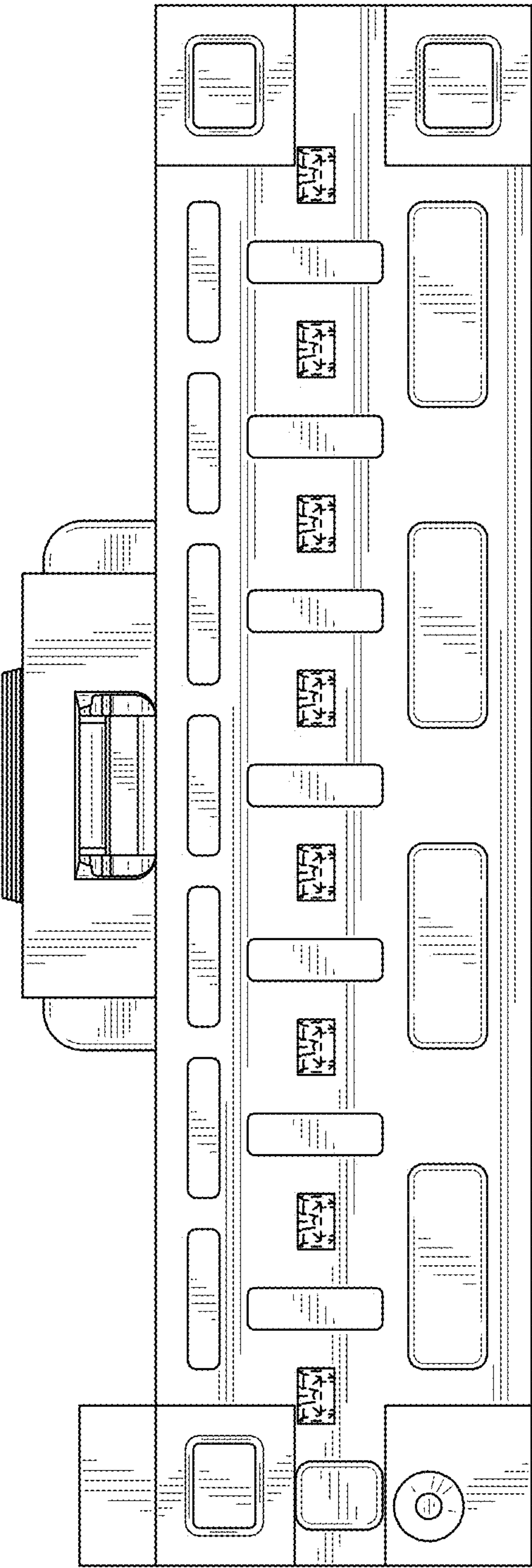


FIG. 108

FIG. 109

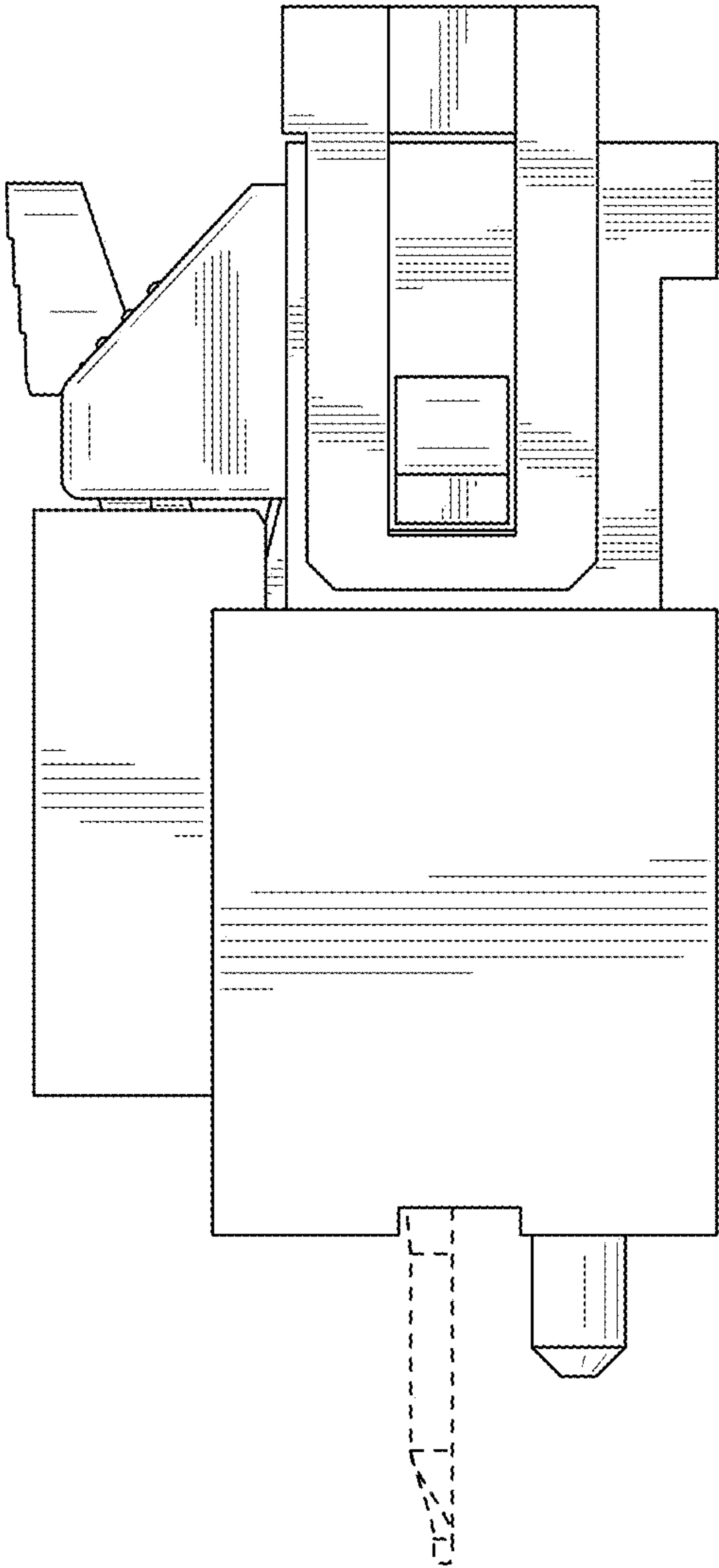
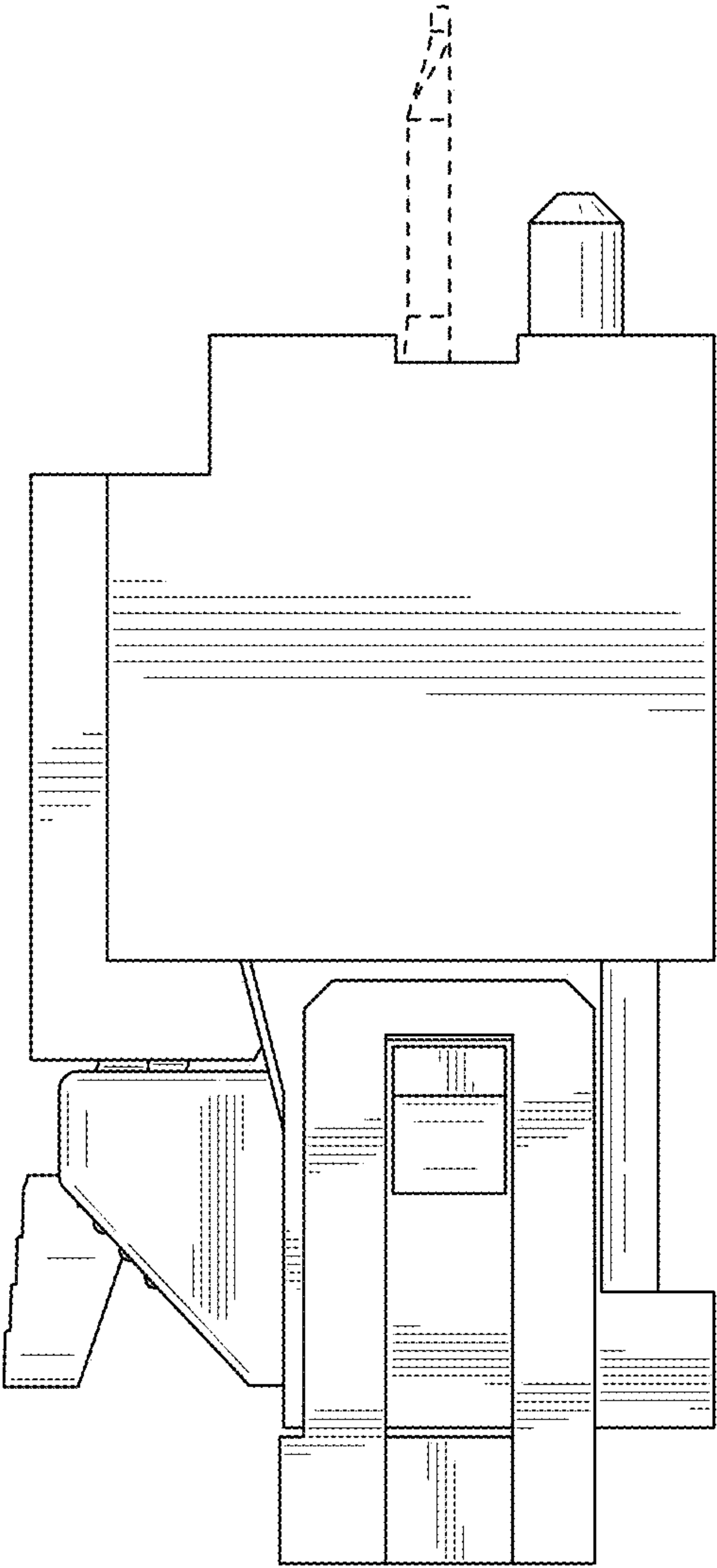


FIG. 110



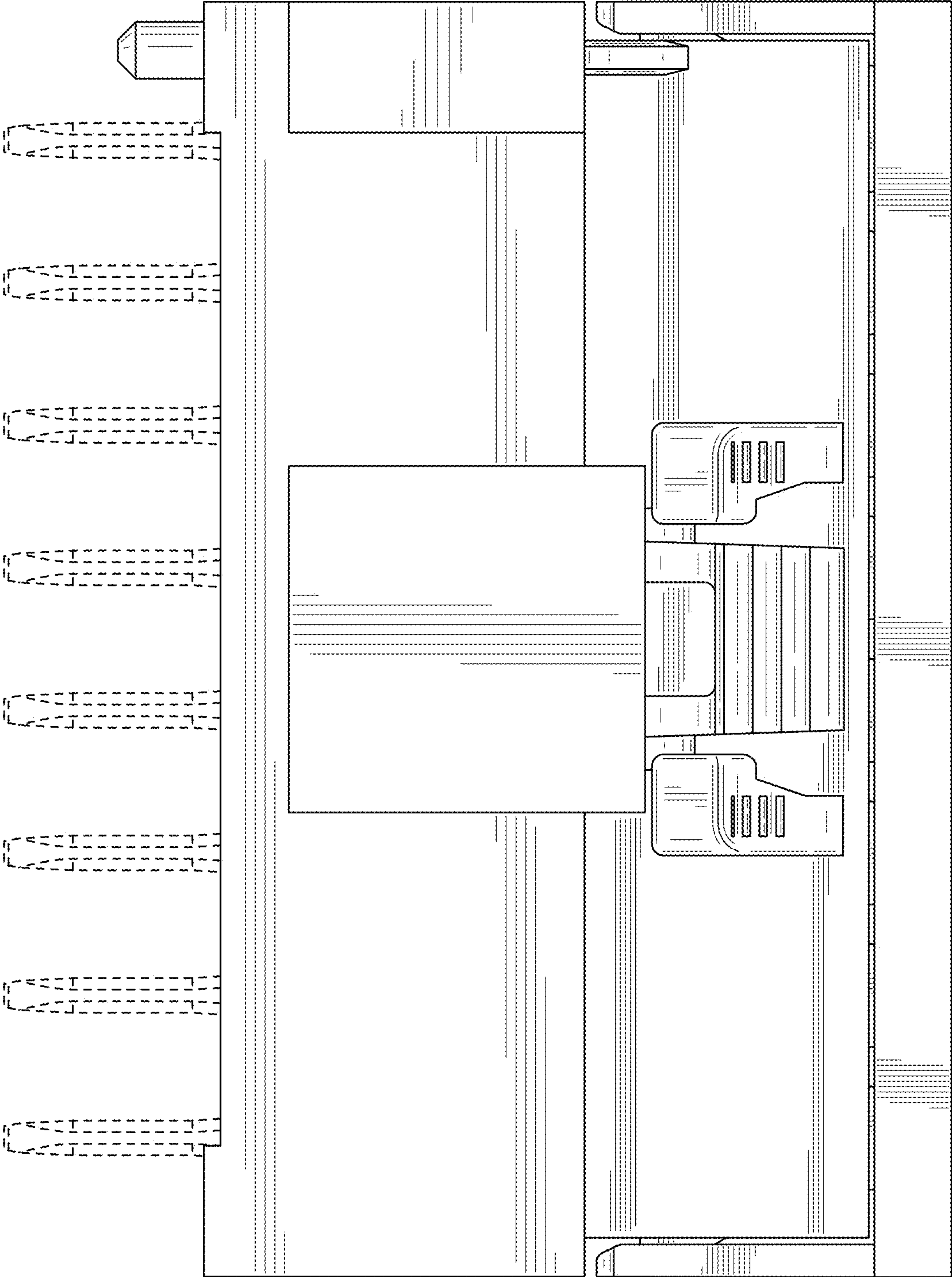


FIG. 111

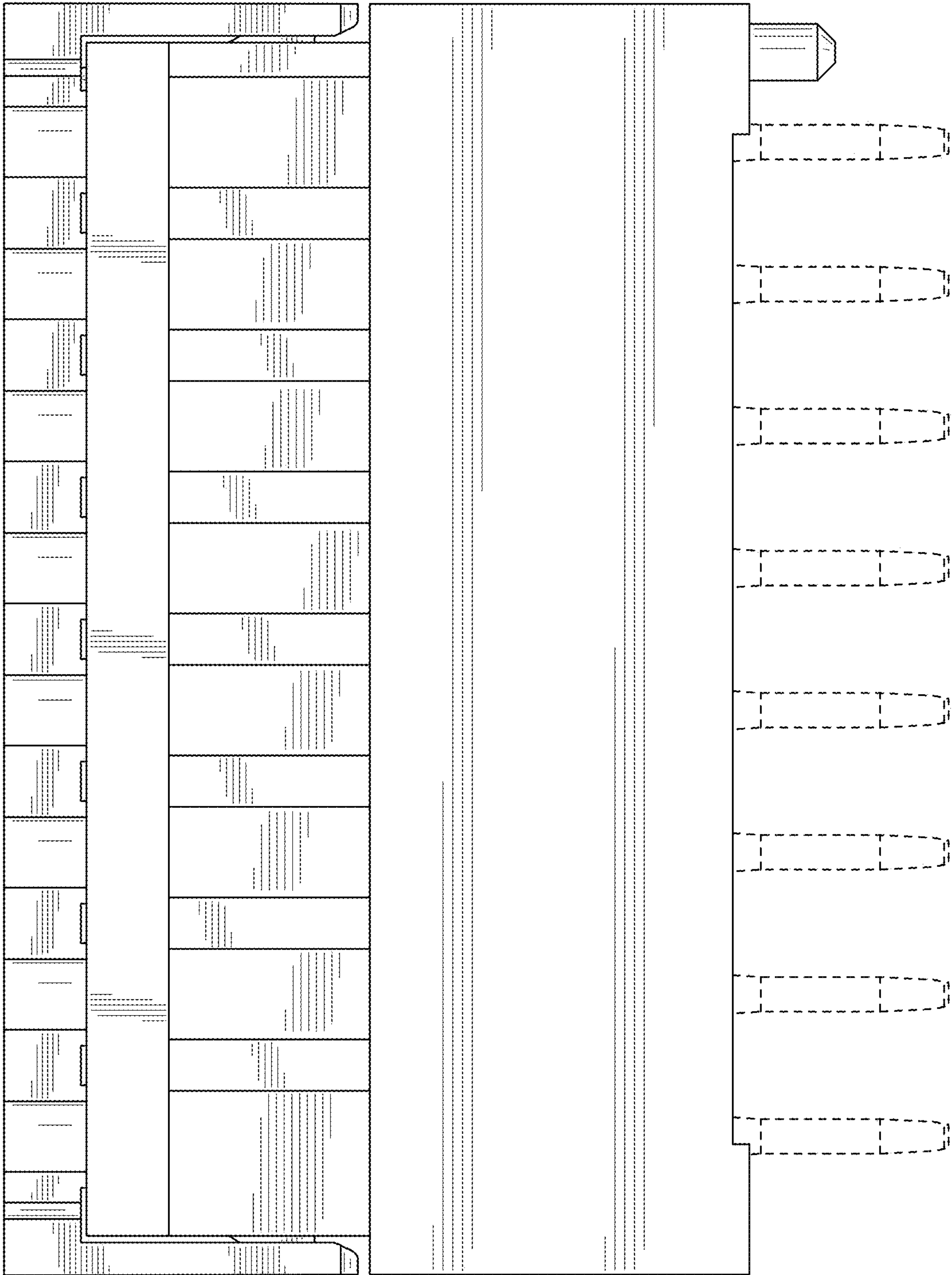


FIG. 112

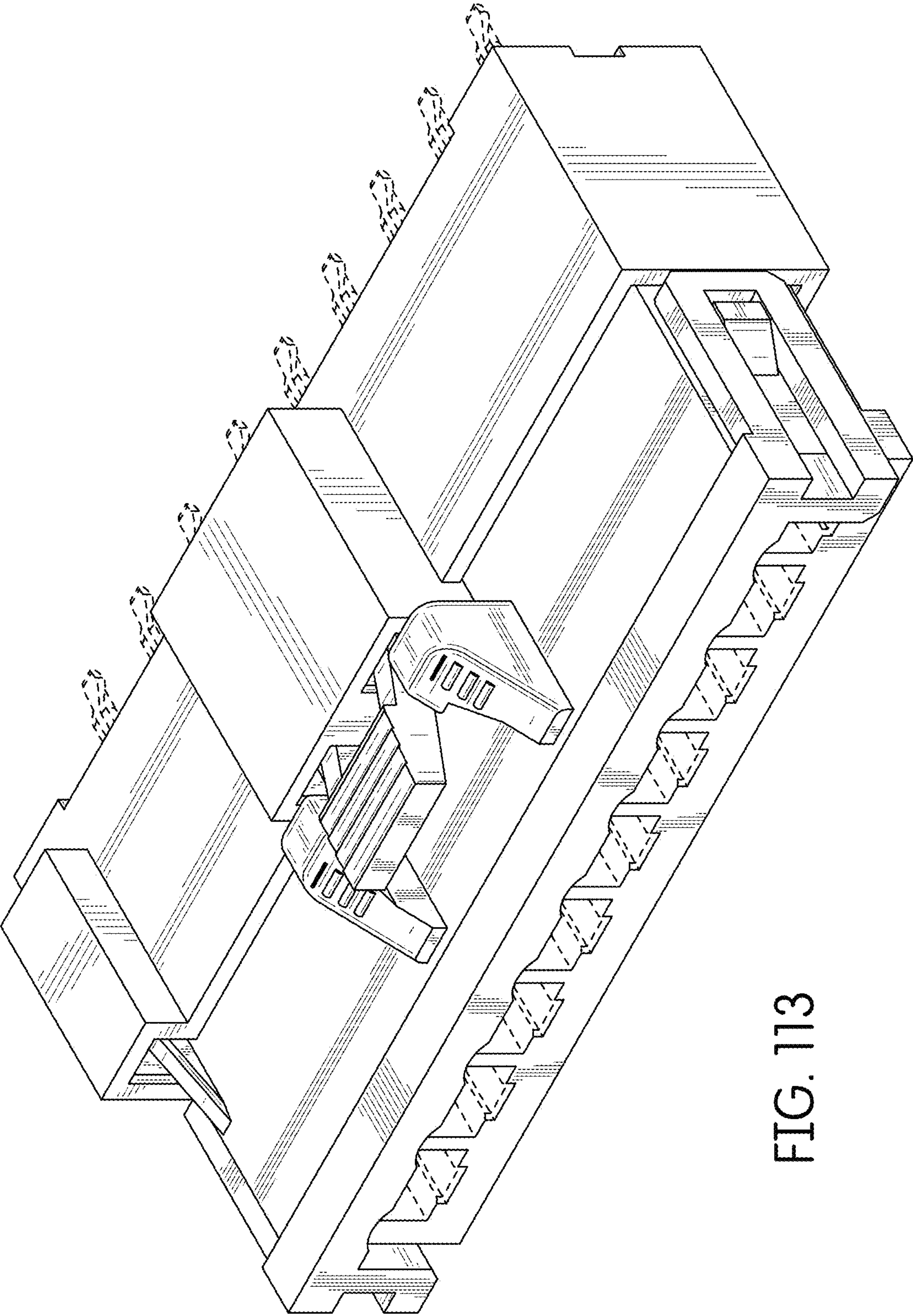


FIG. 113

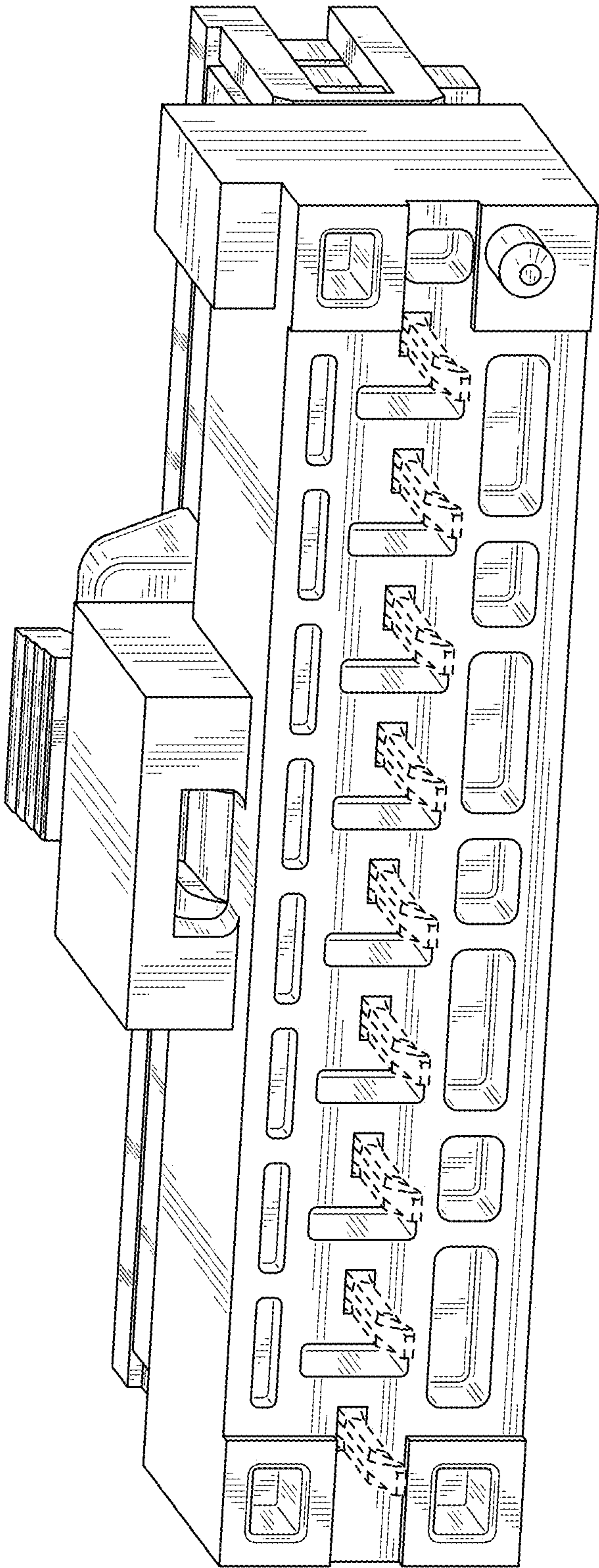


FIG. 114

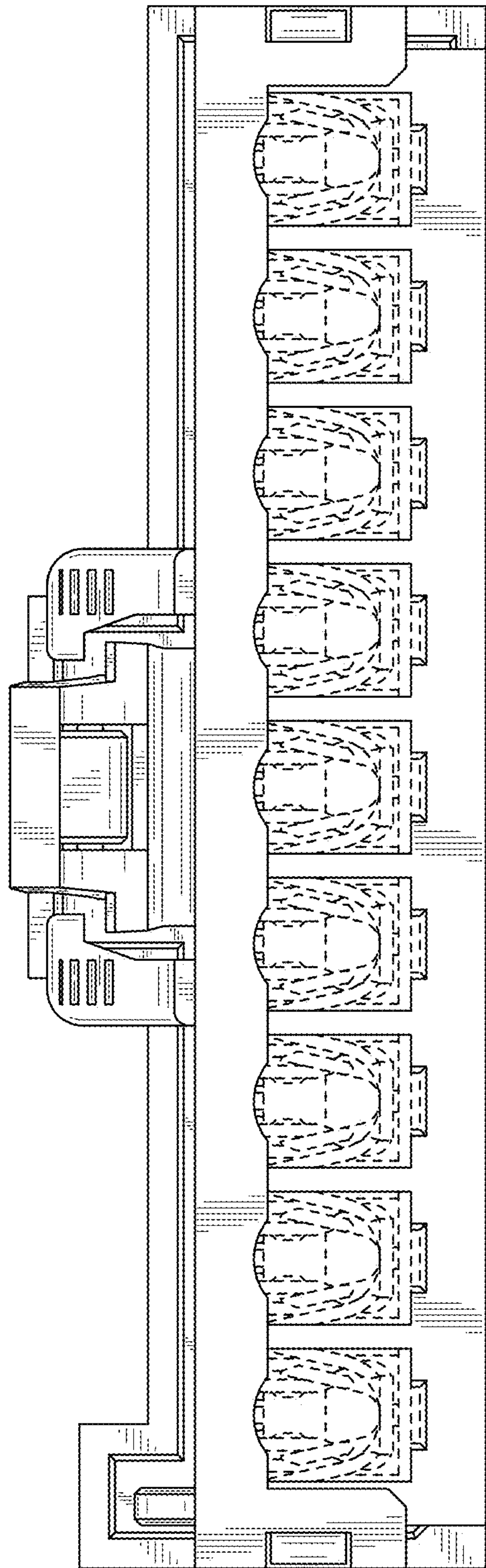


FIG. 115

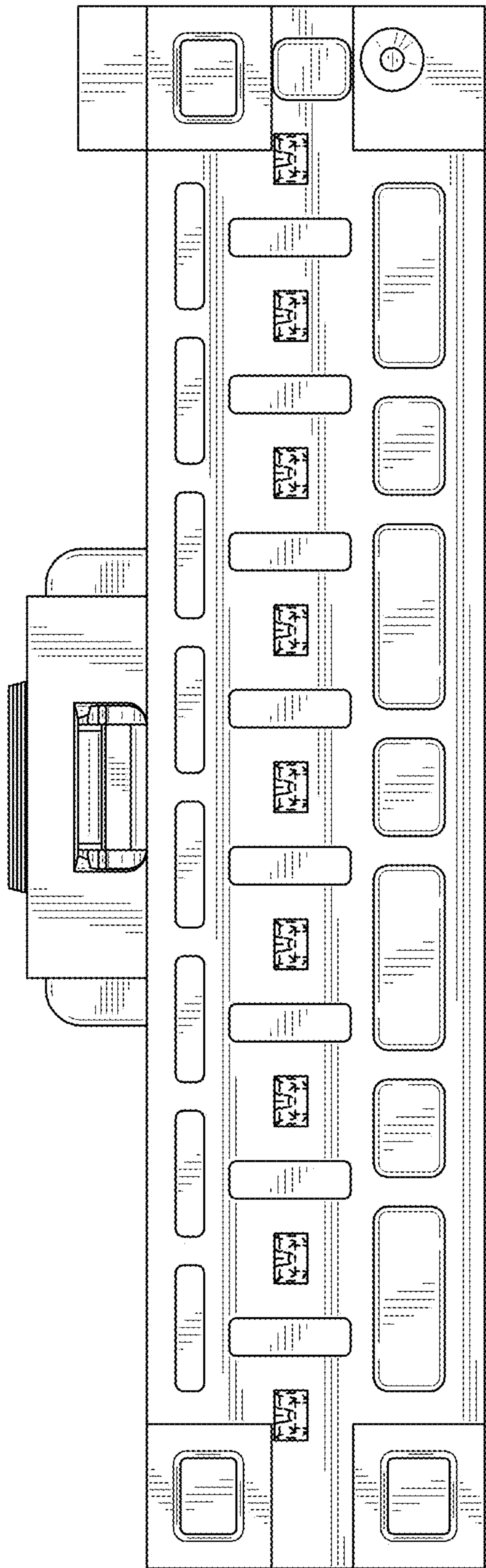


FIG. 116

FIG. 117

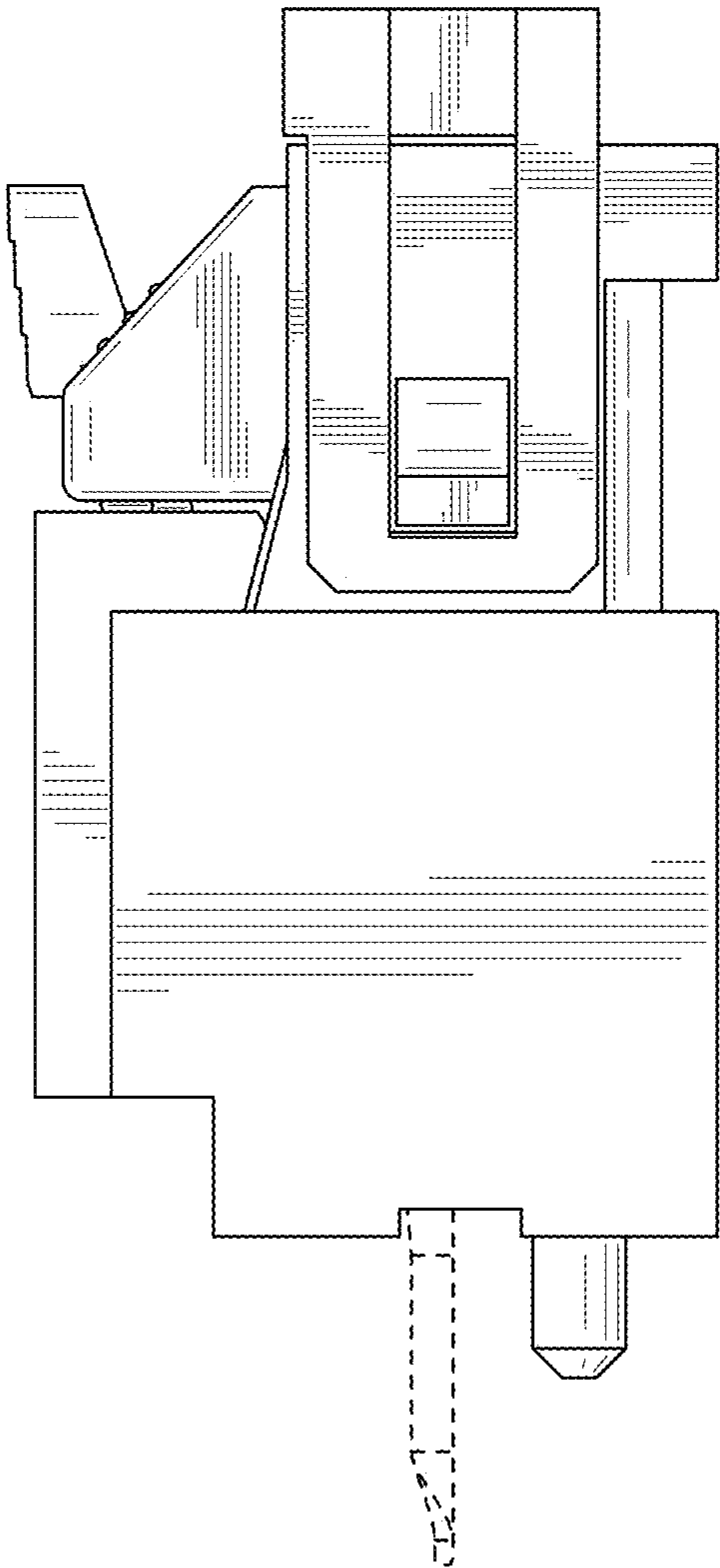
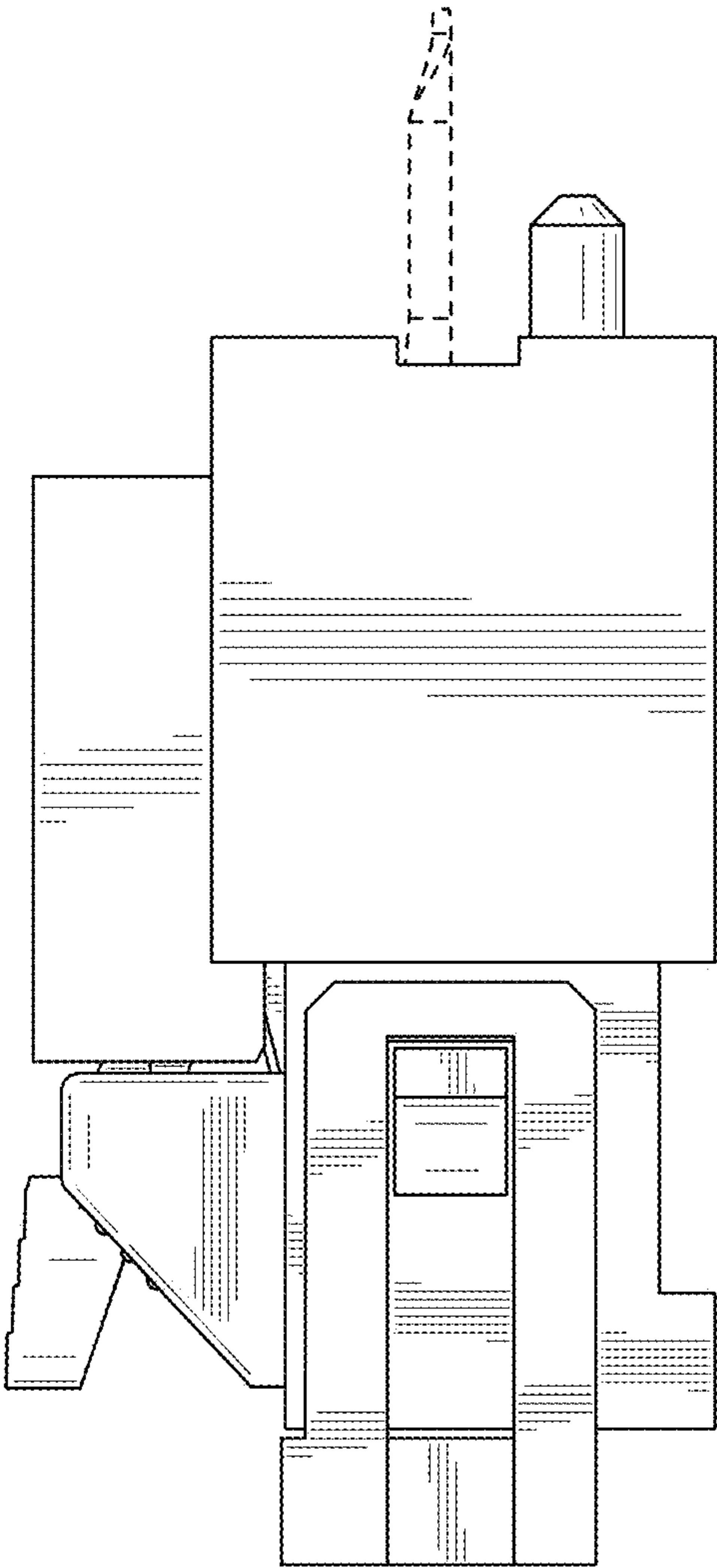


FIG. 118



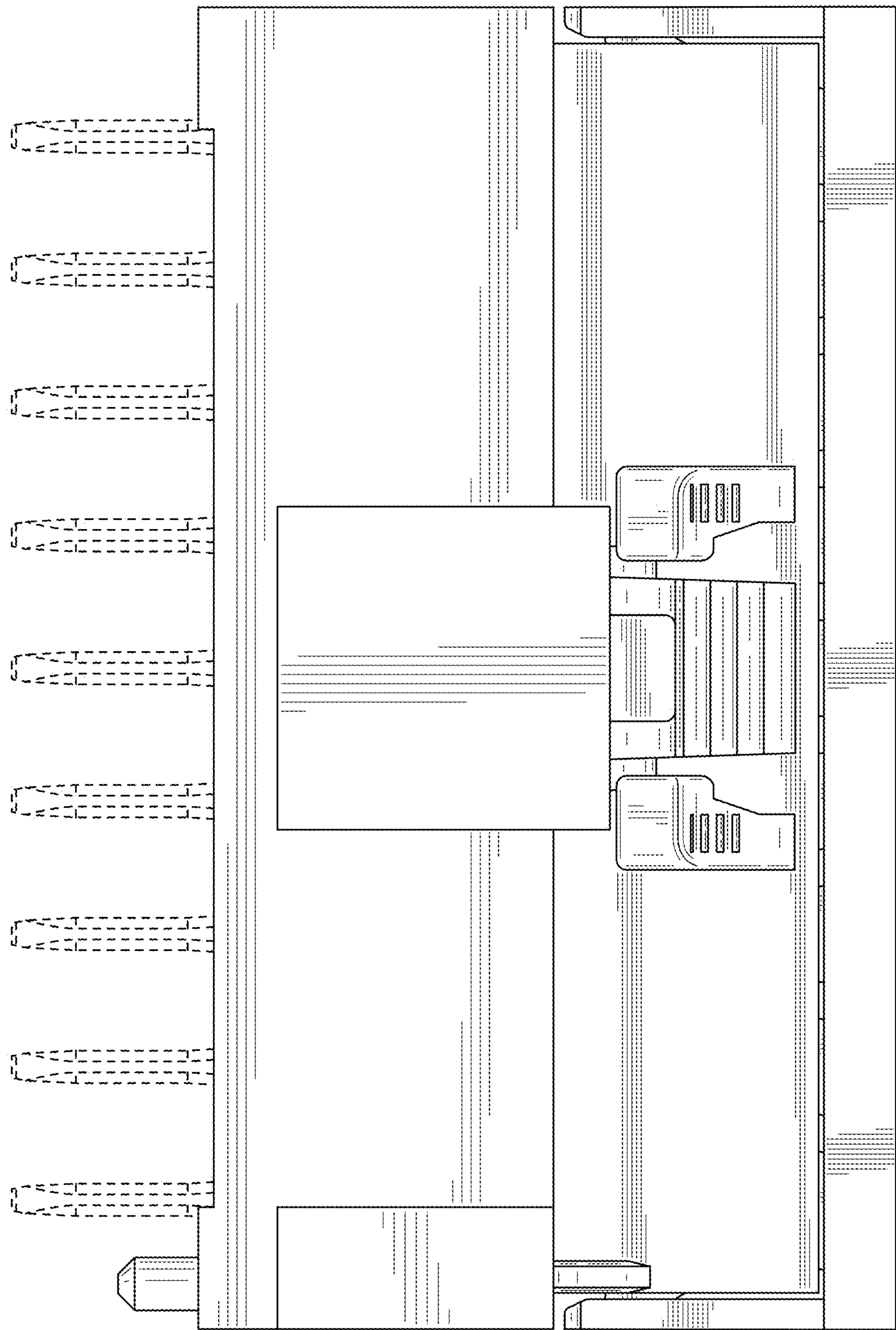


FIG. 119

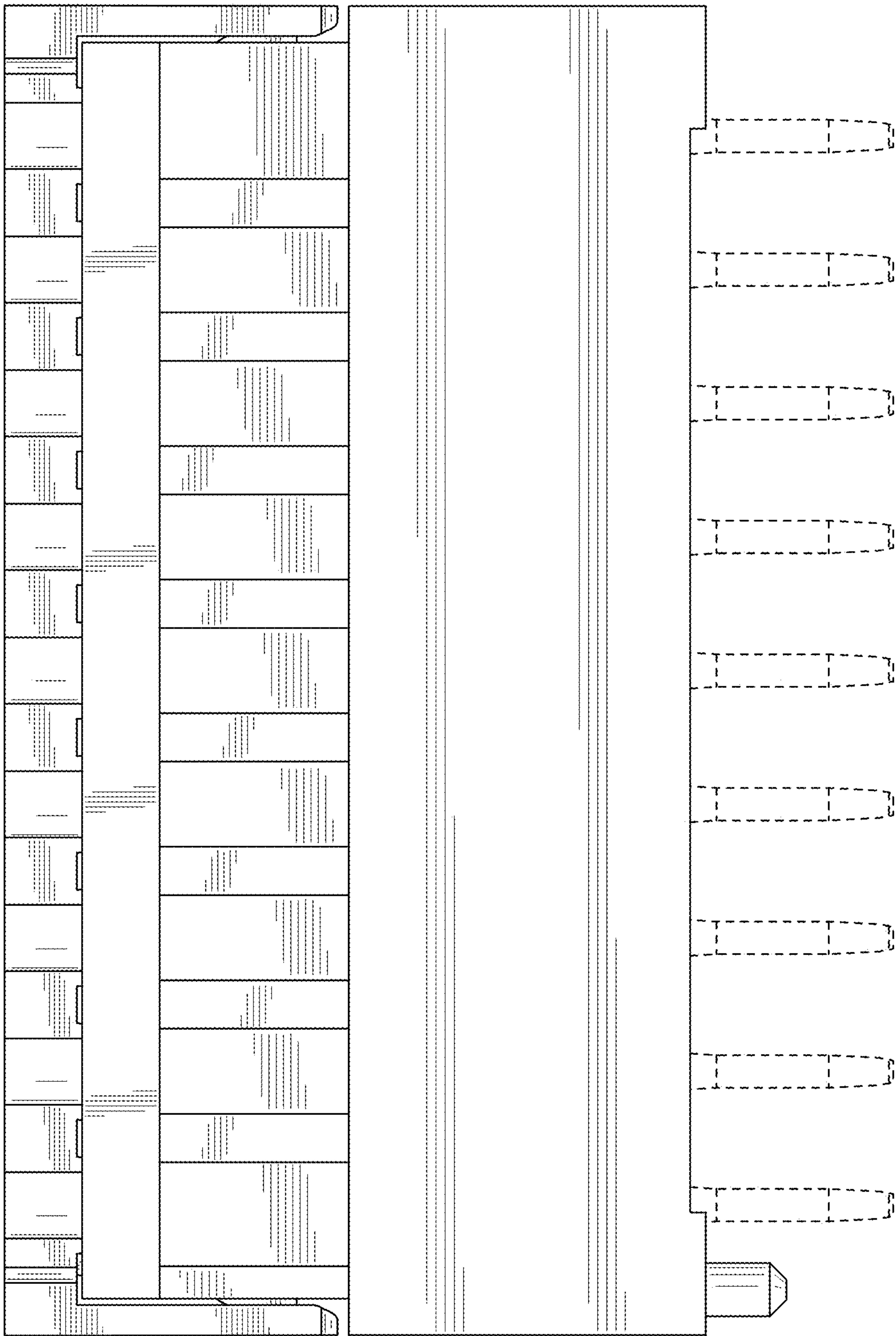


FIG. 120

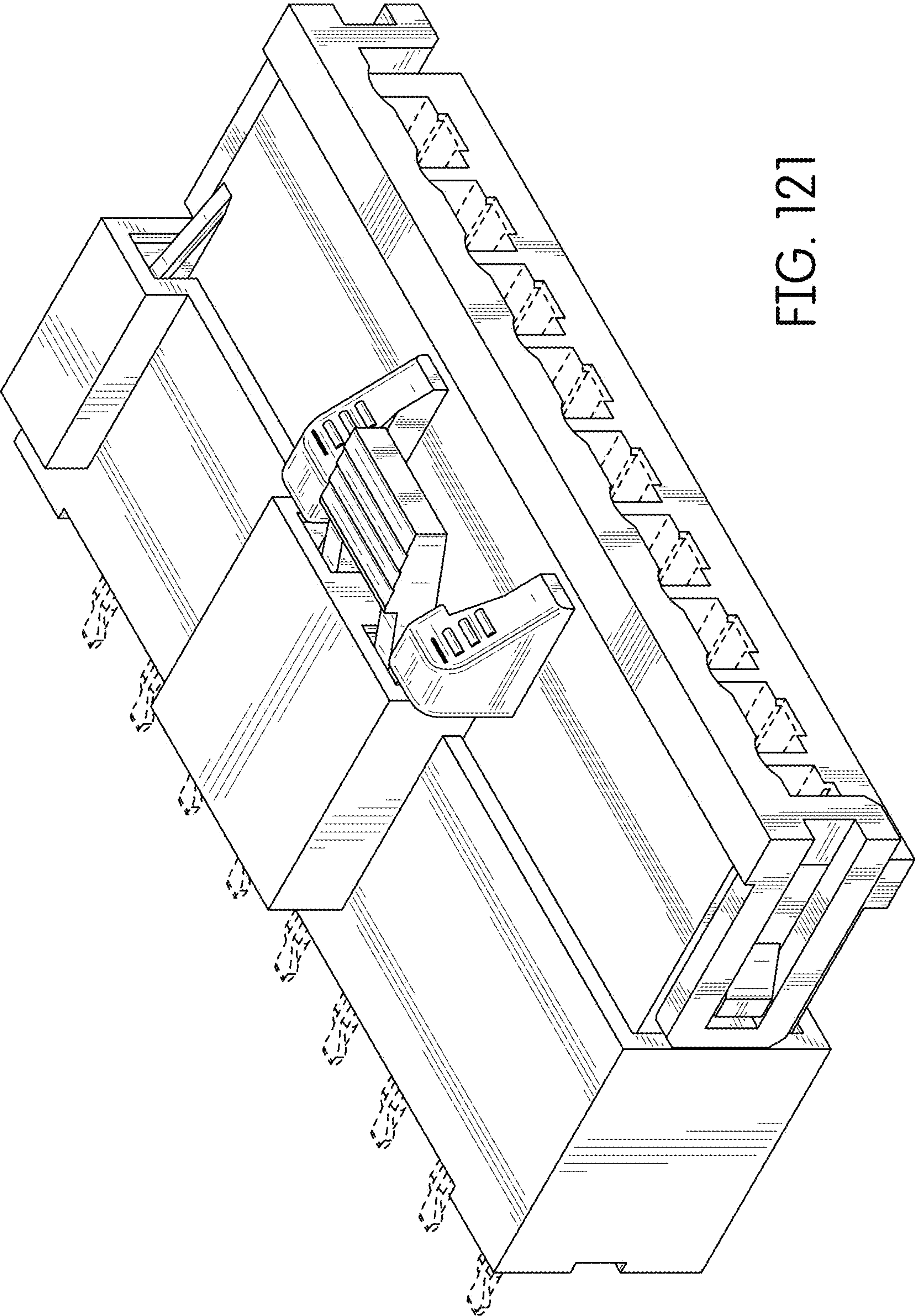


FIG. 121

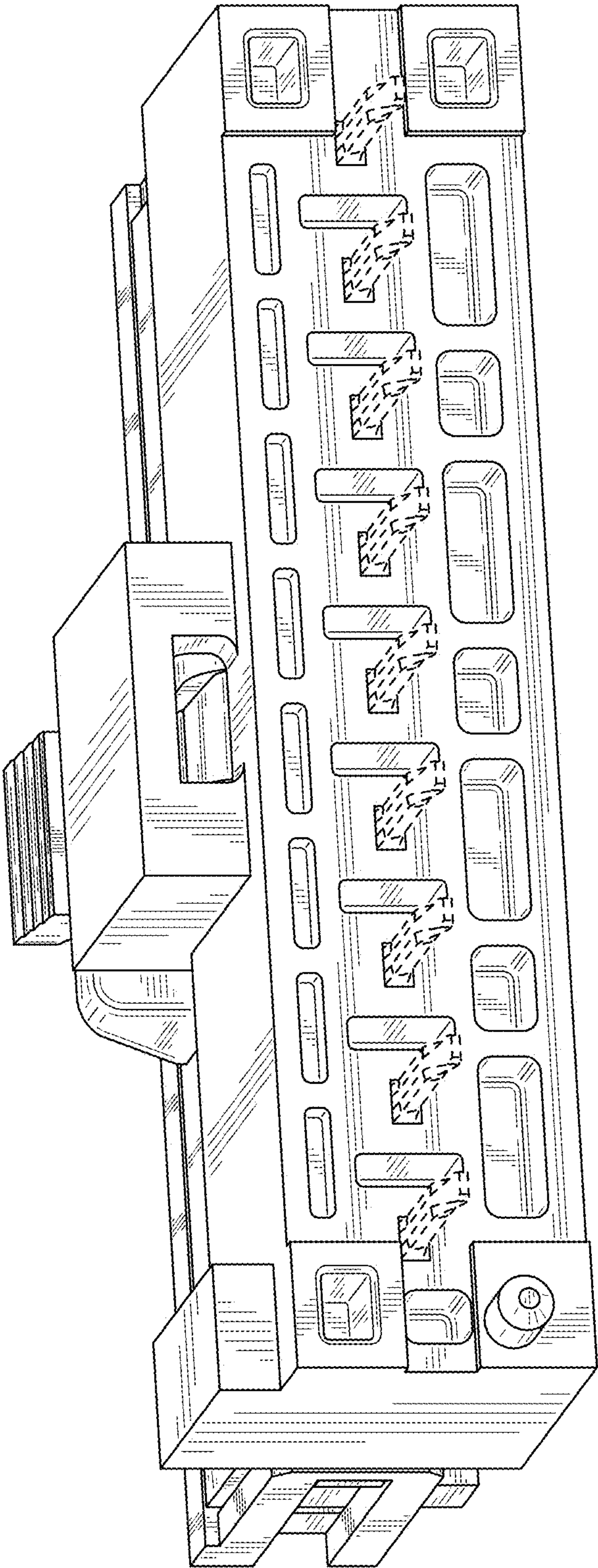


FIG. 122

FIG. 123

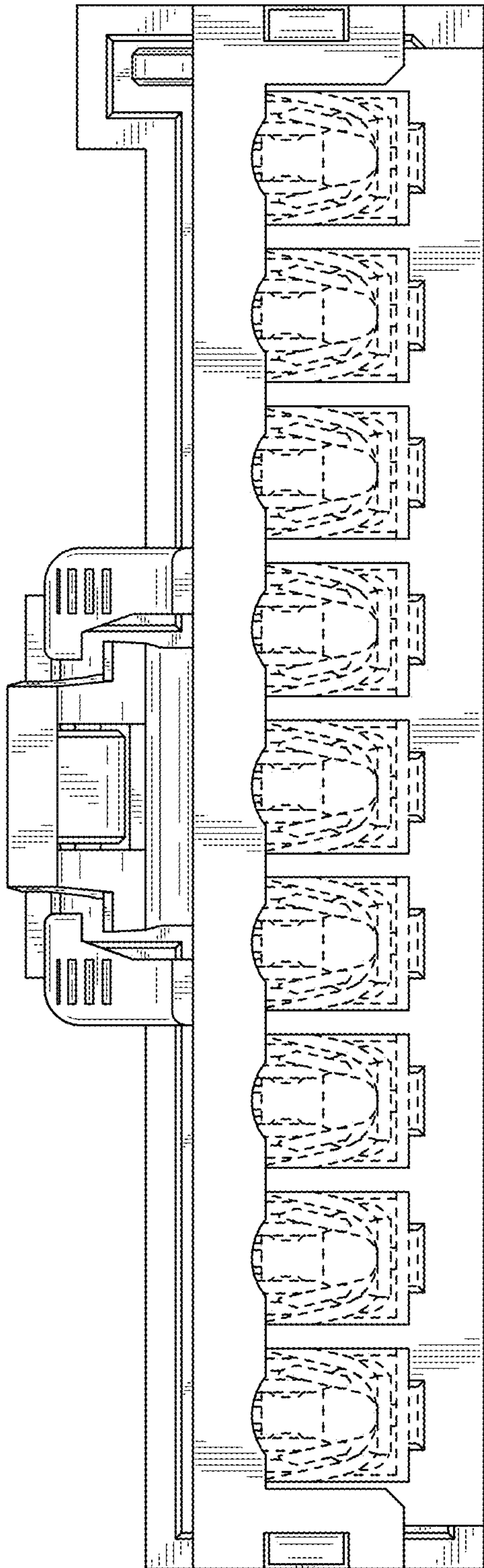
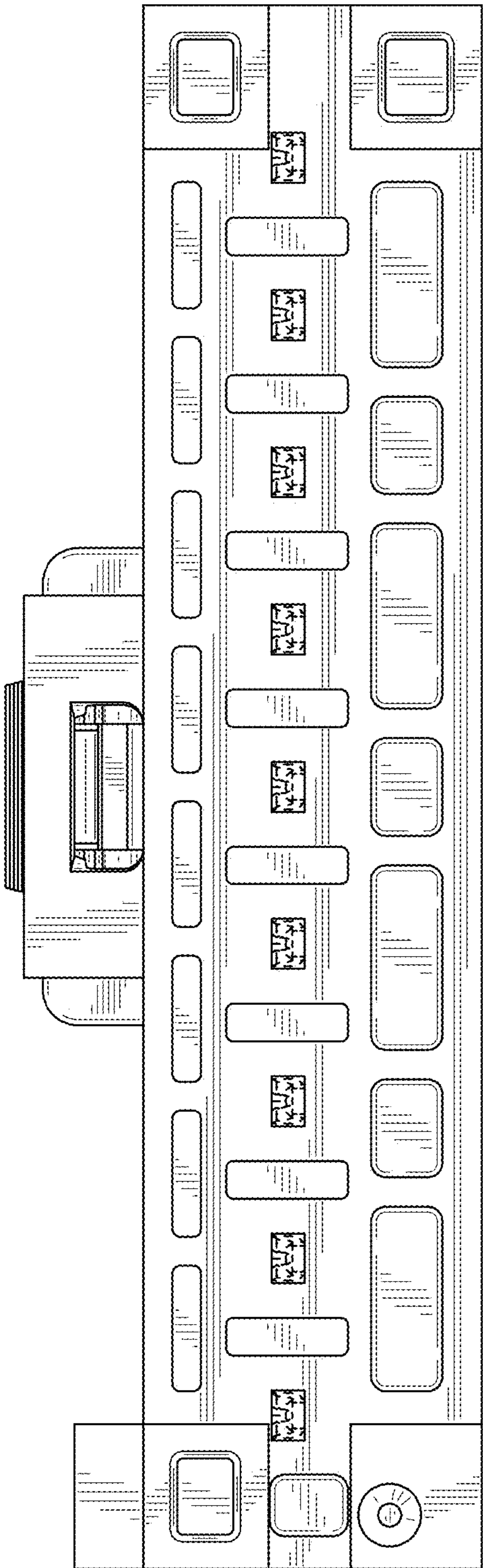
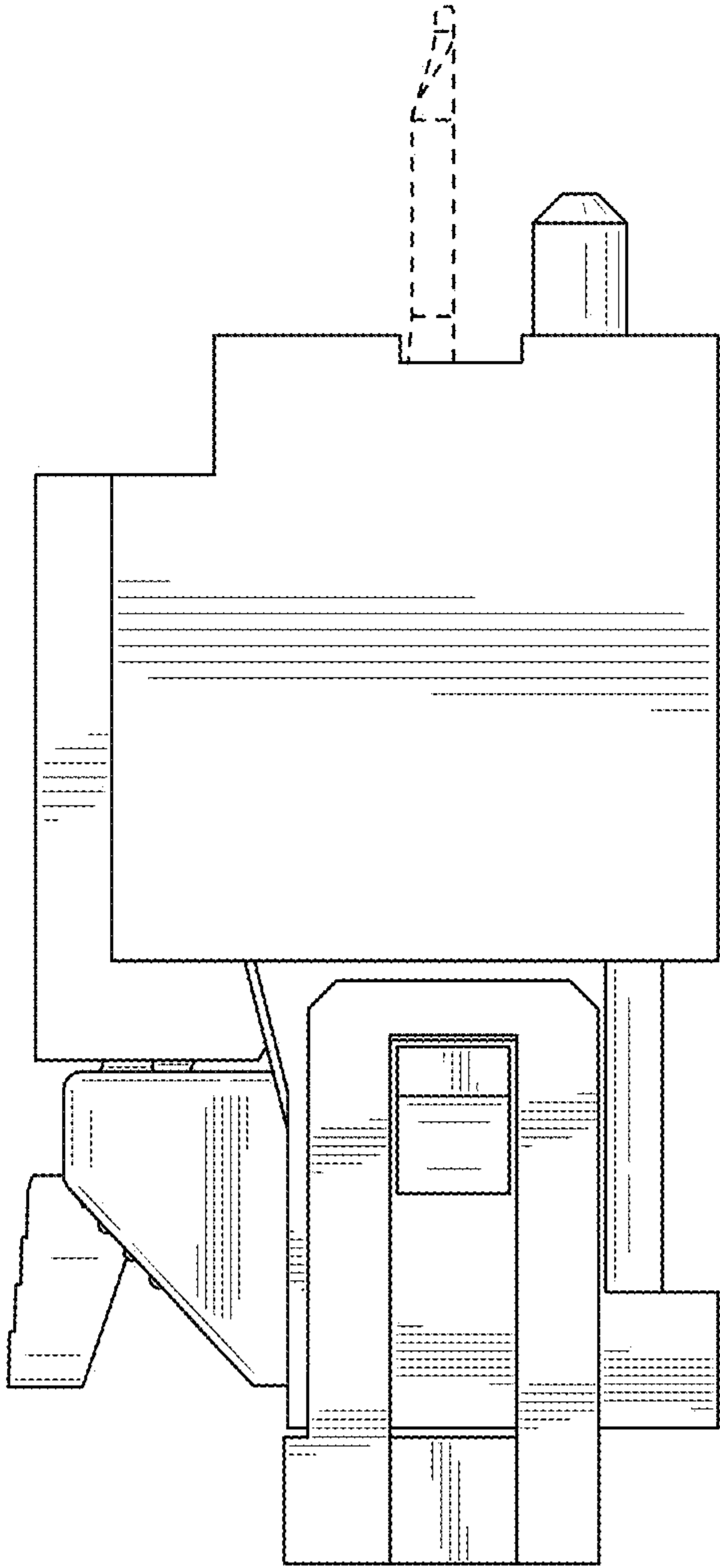
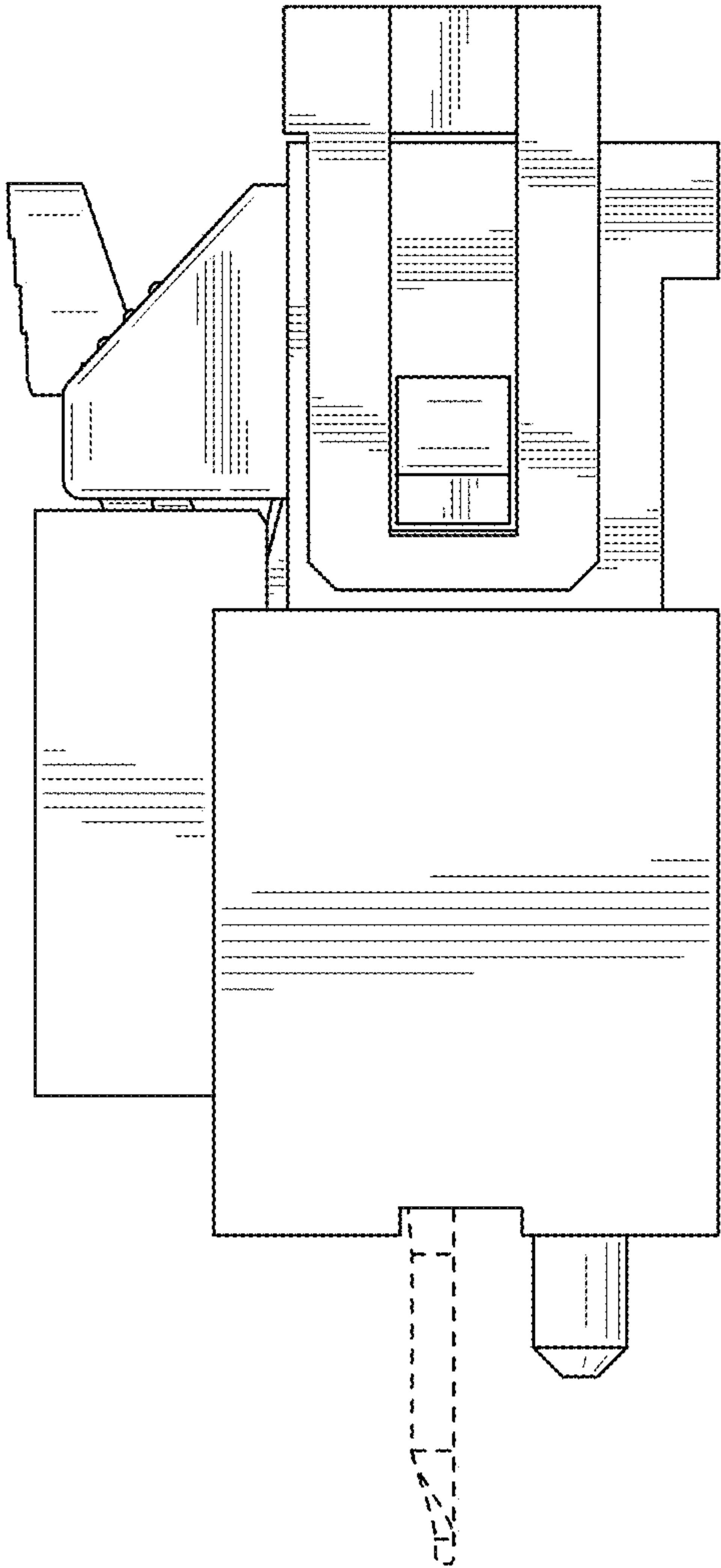


FIG. 124





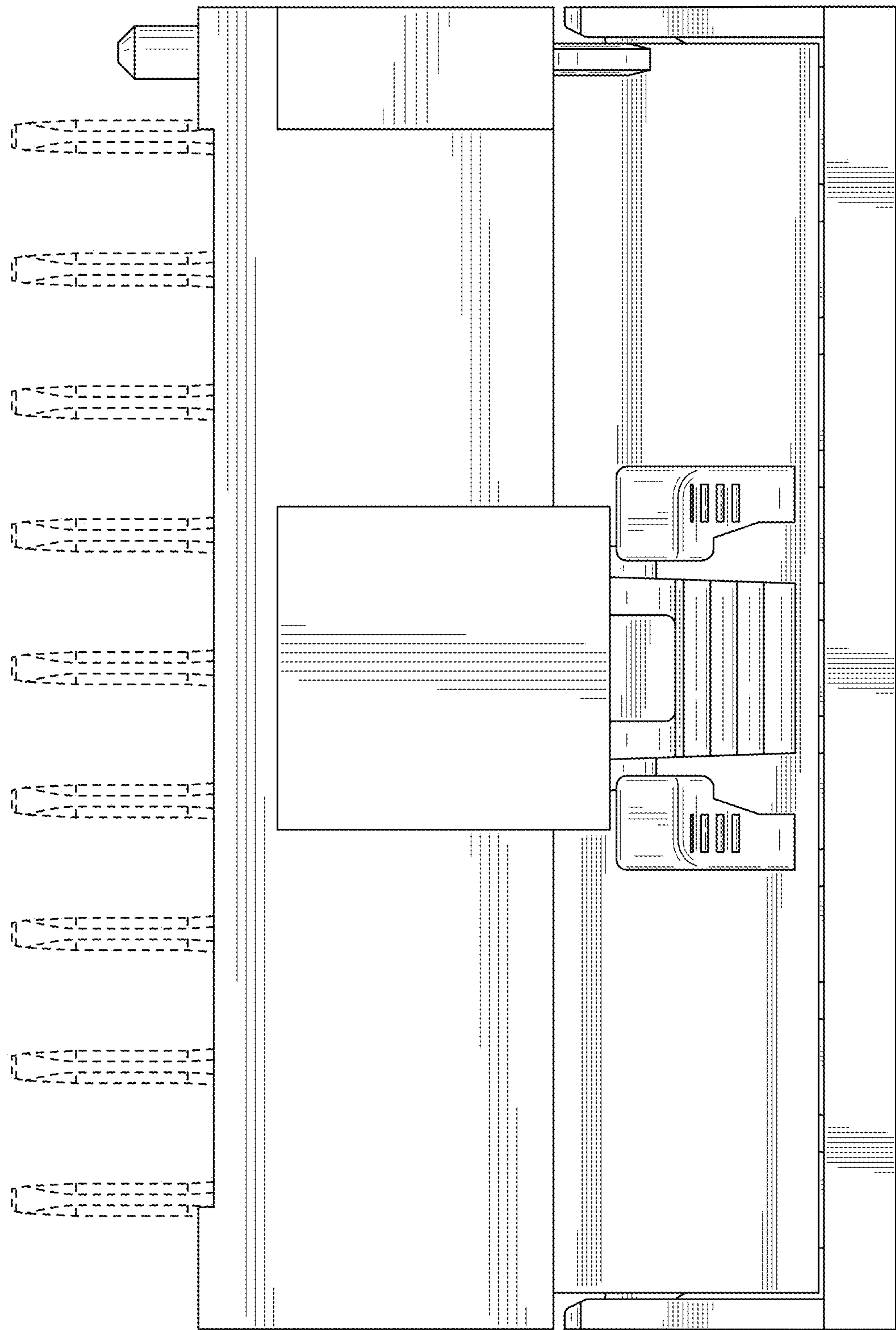


FIG. 127

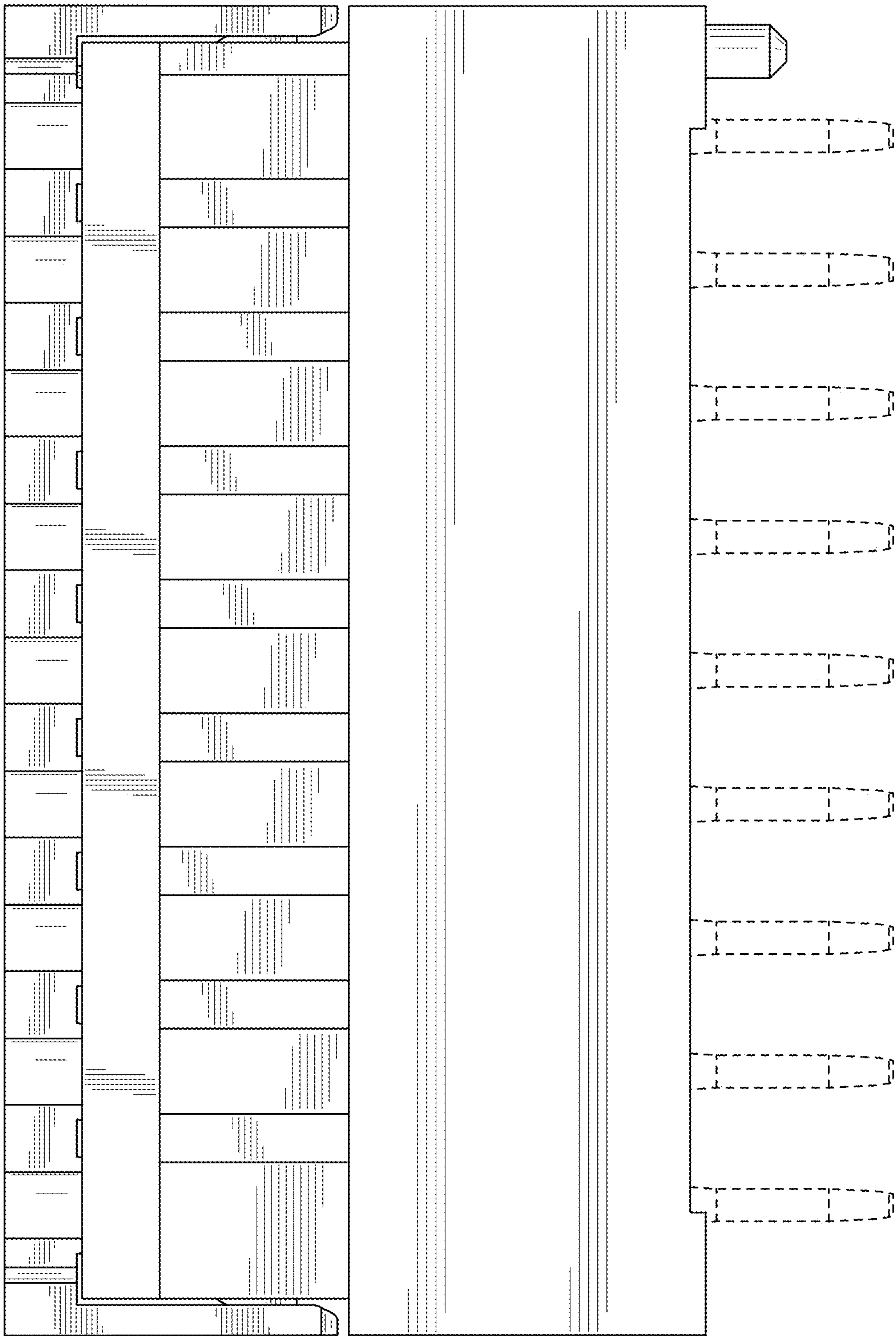


FIG. 128

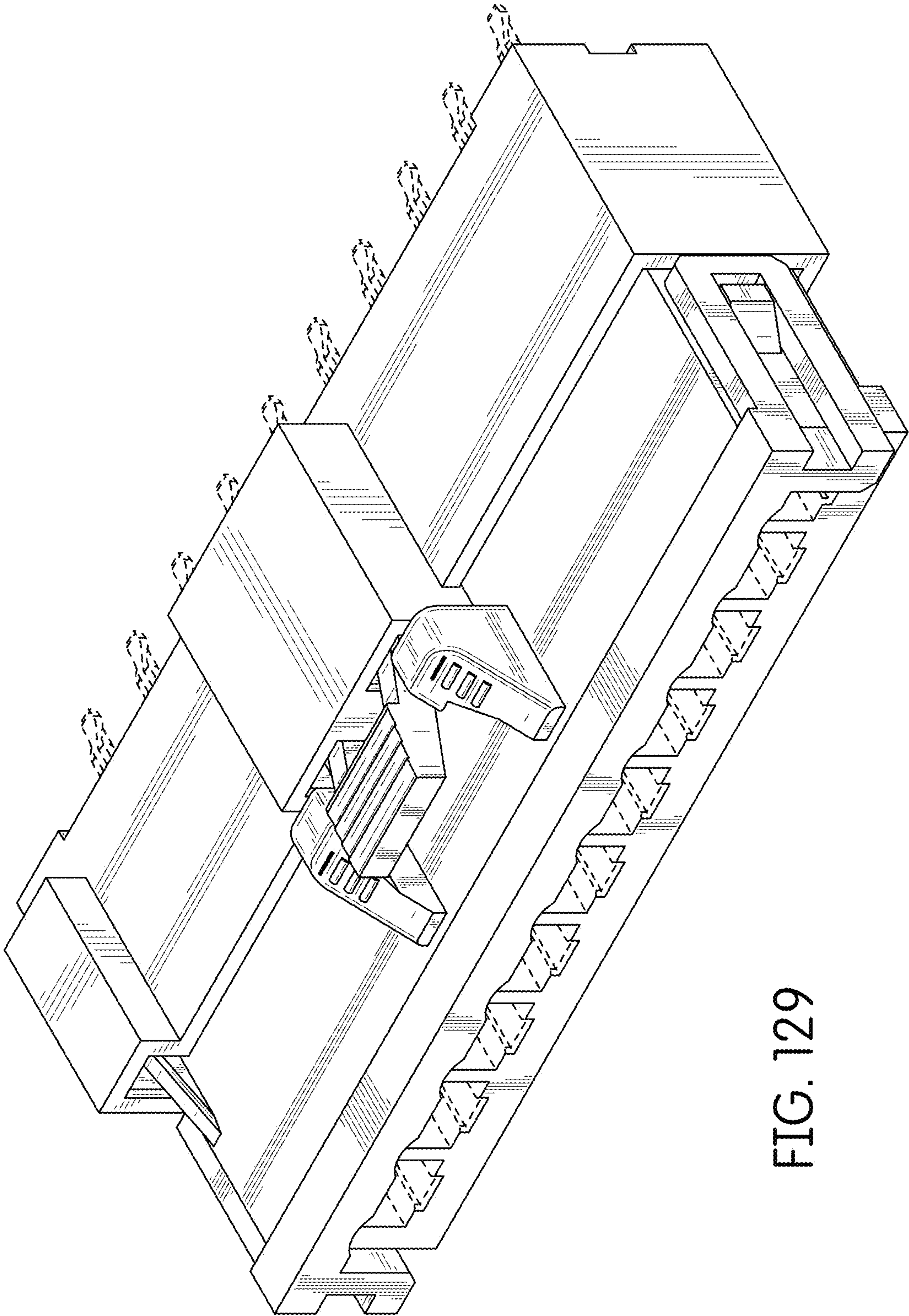


FIG. 129

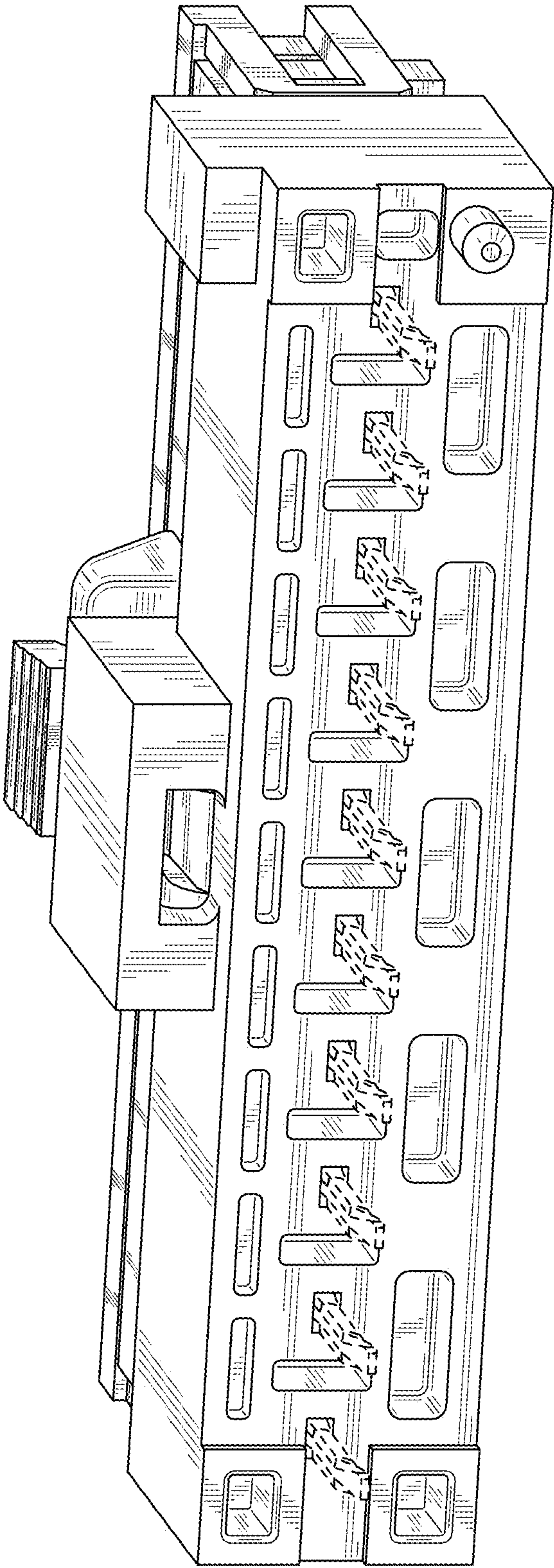


FIG. 130

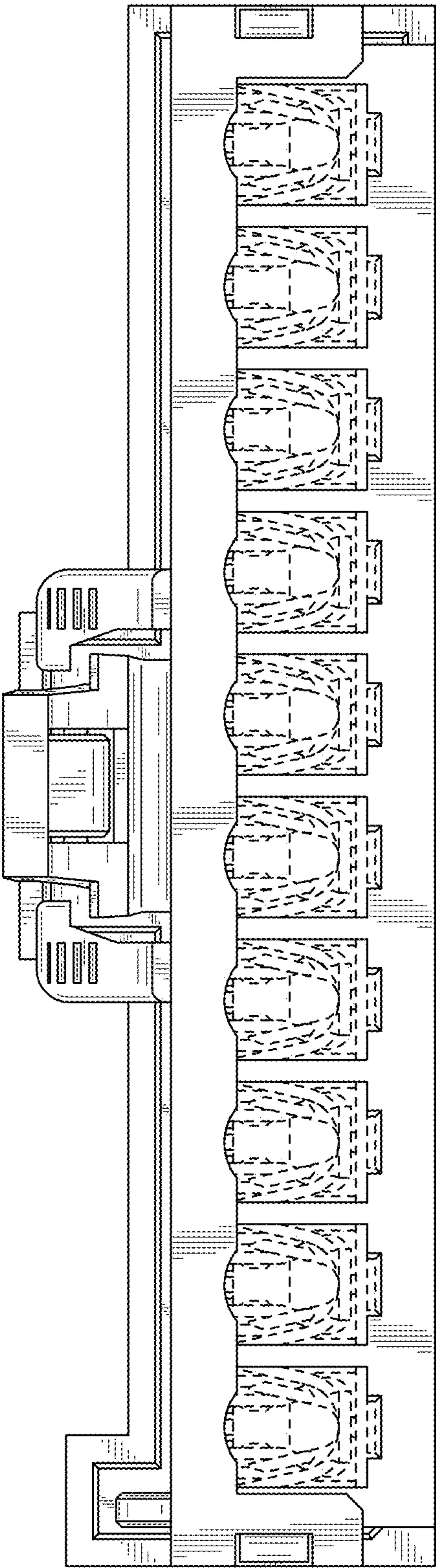


FIG. 131

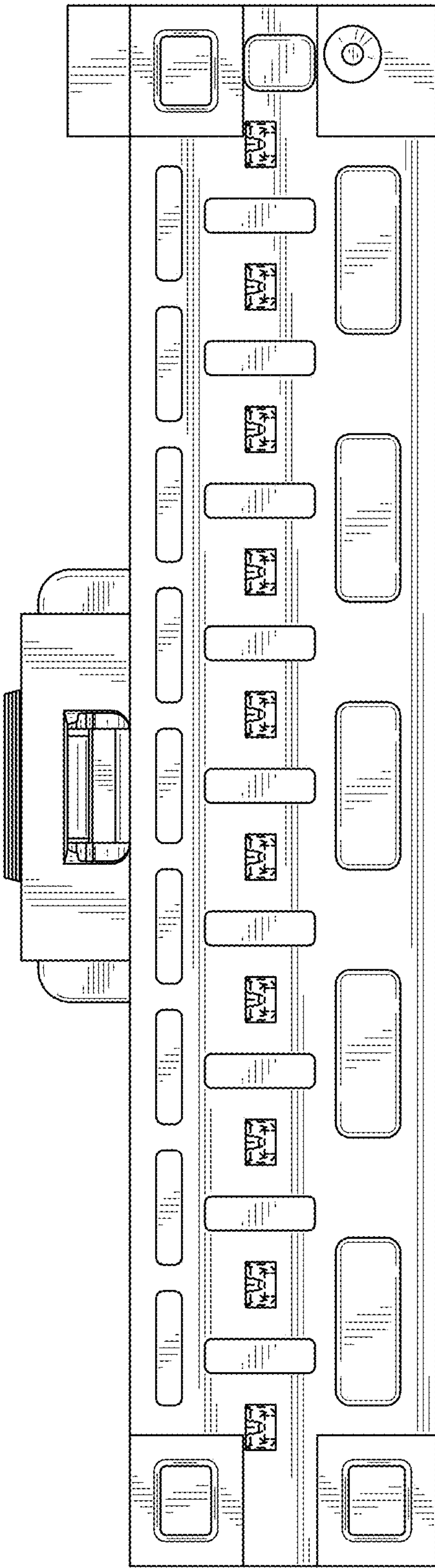
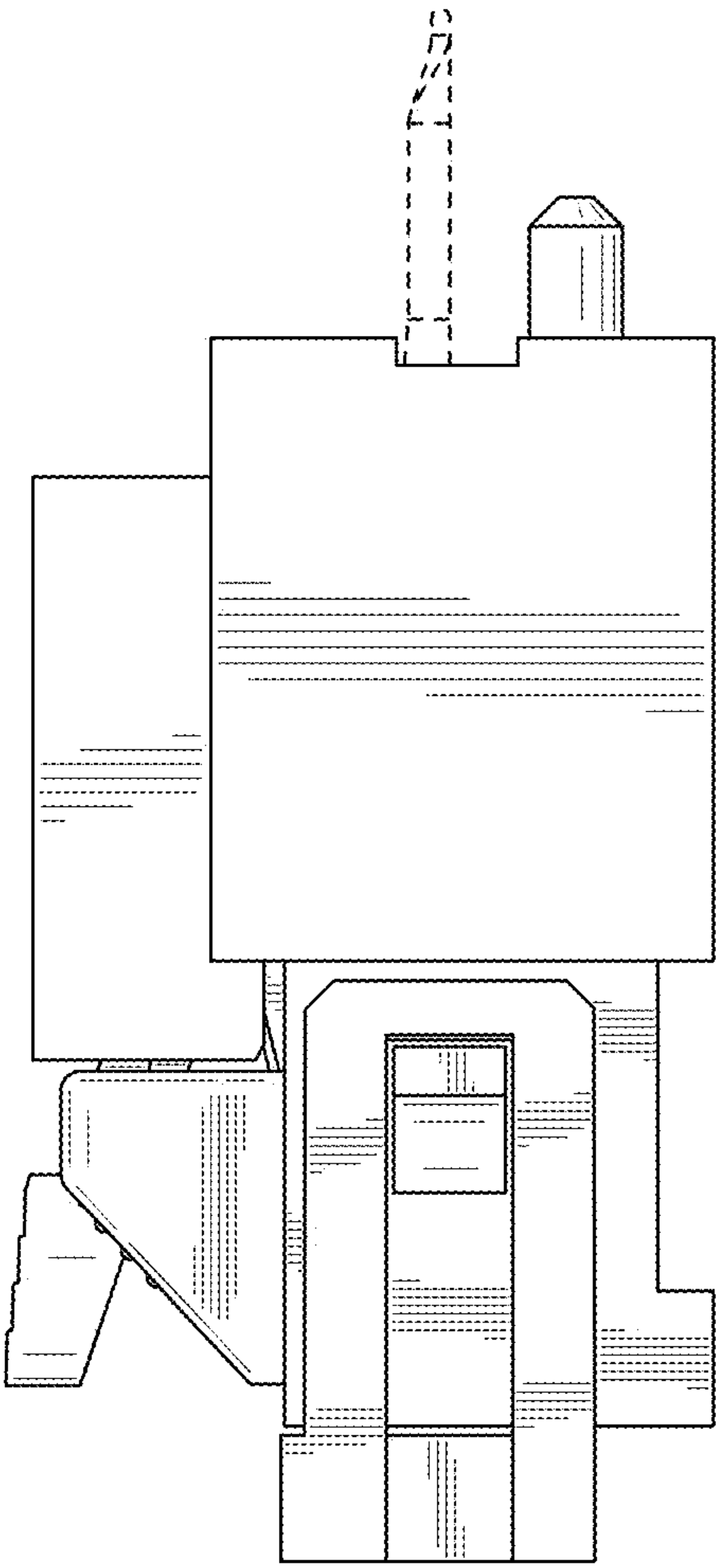
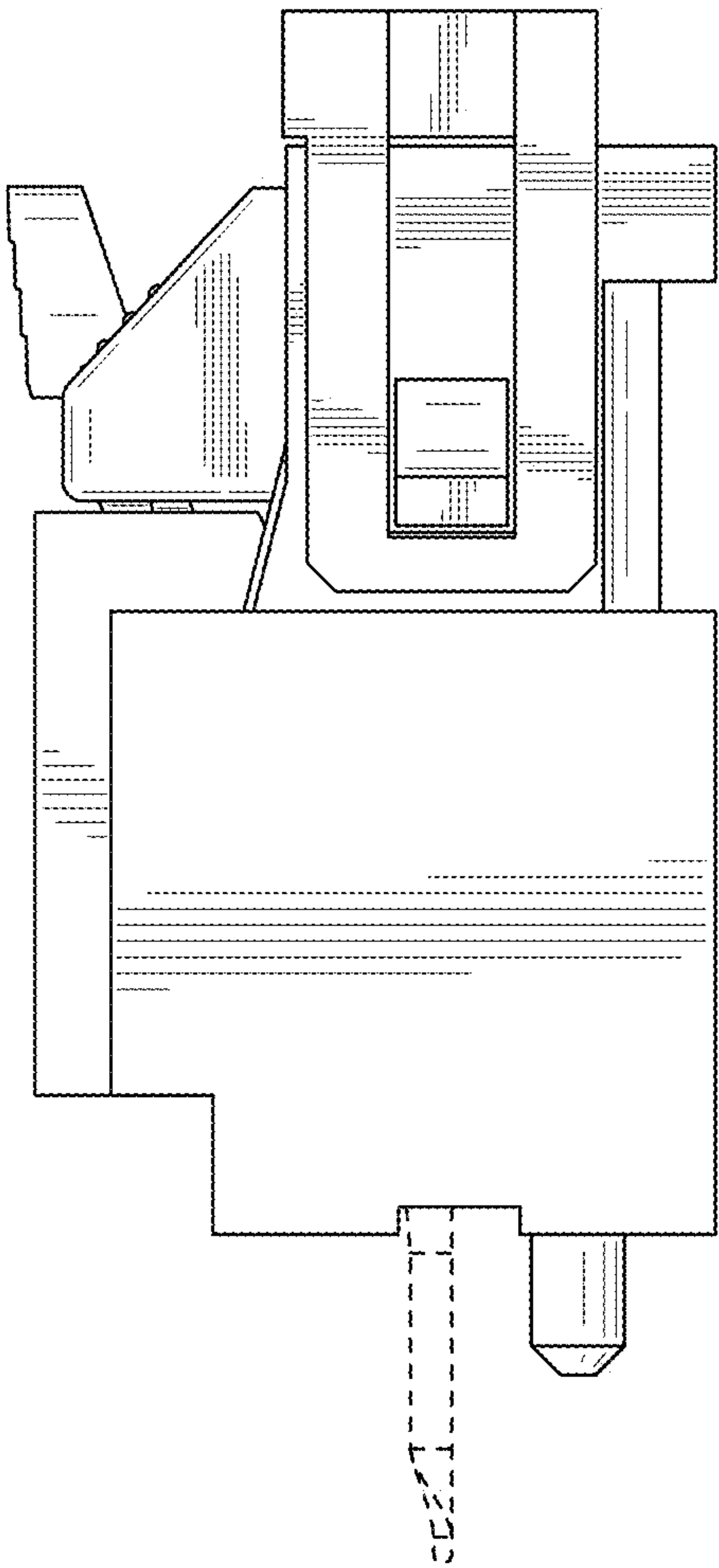


FIG. 132



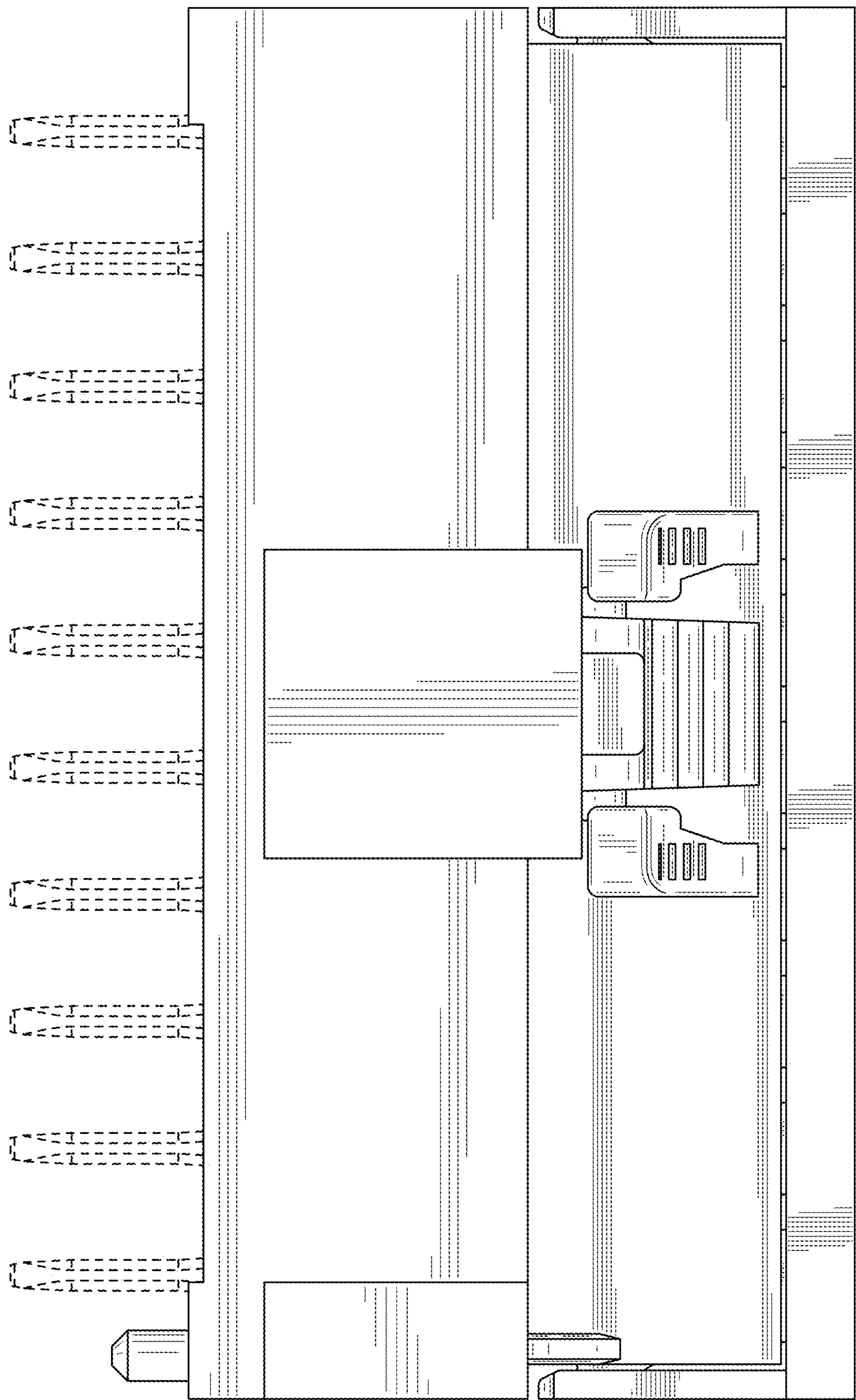


FIG. 135

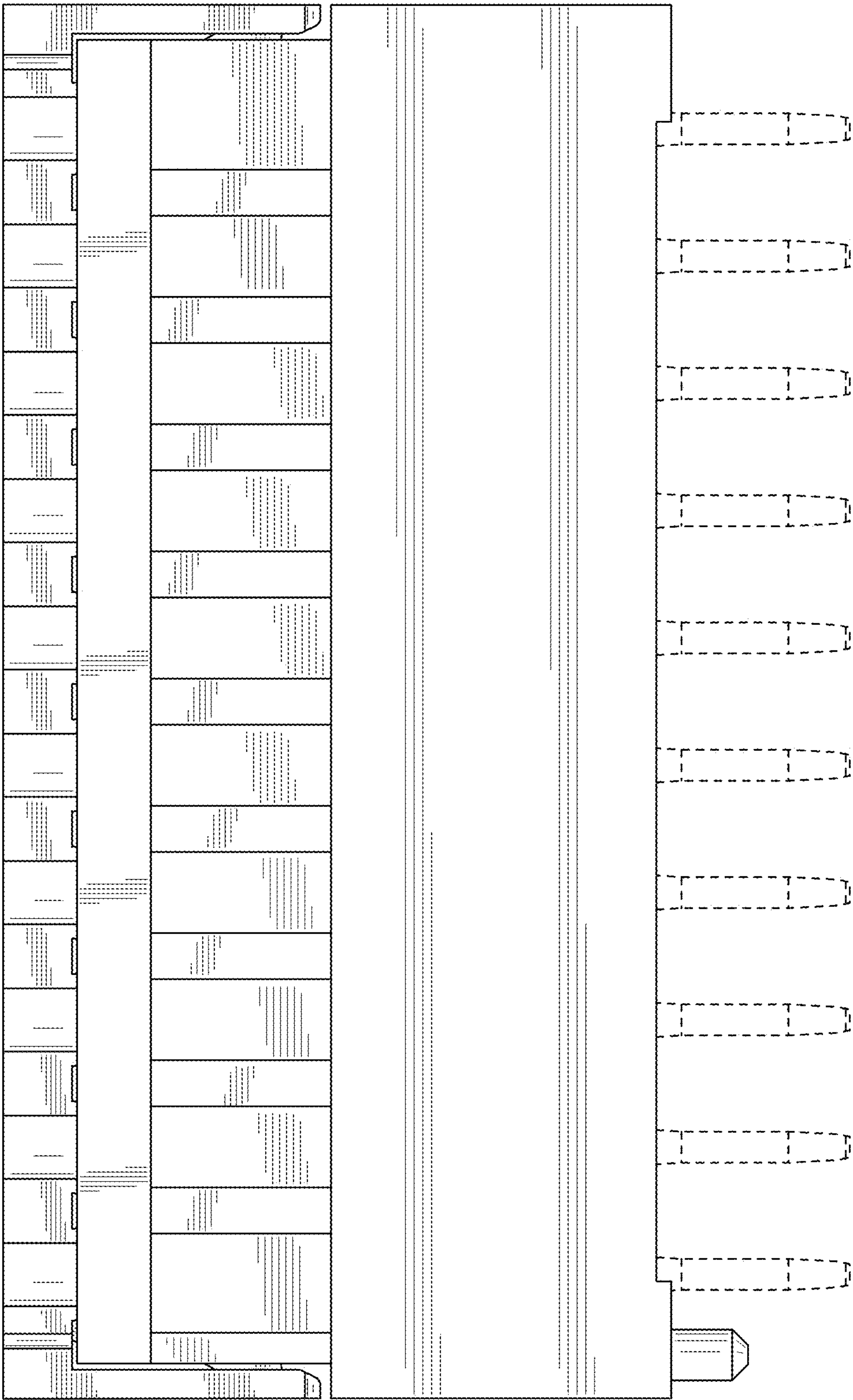


FIG. 136

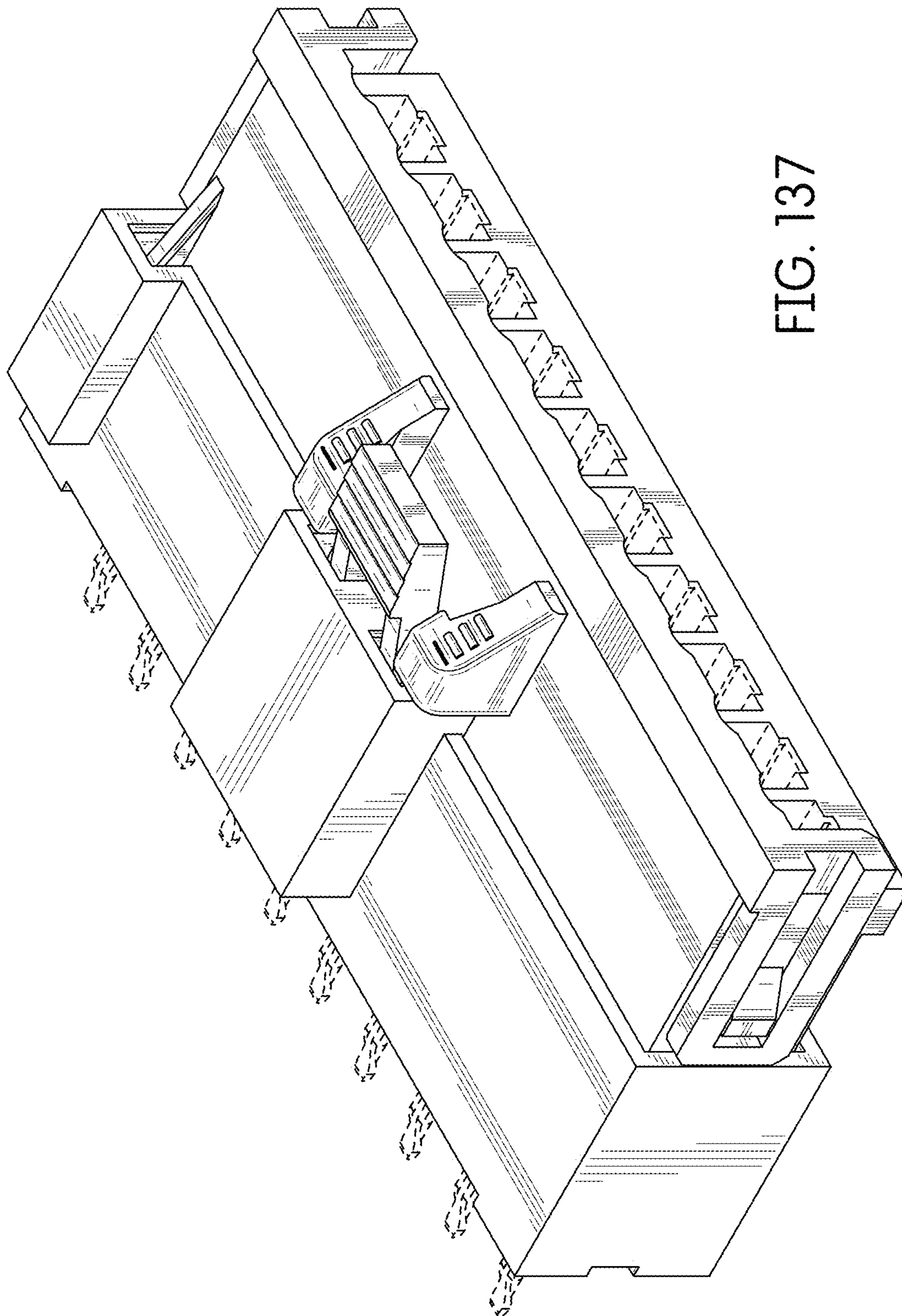


FIG. 137

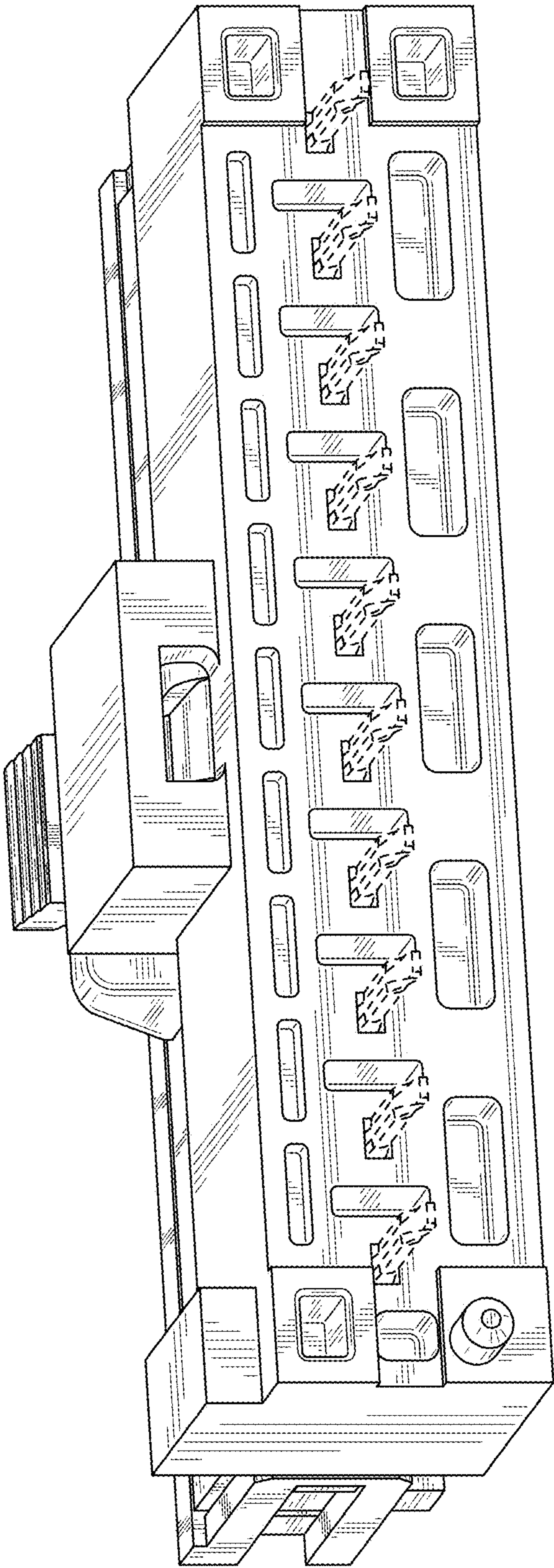


FIG. 138

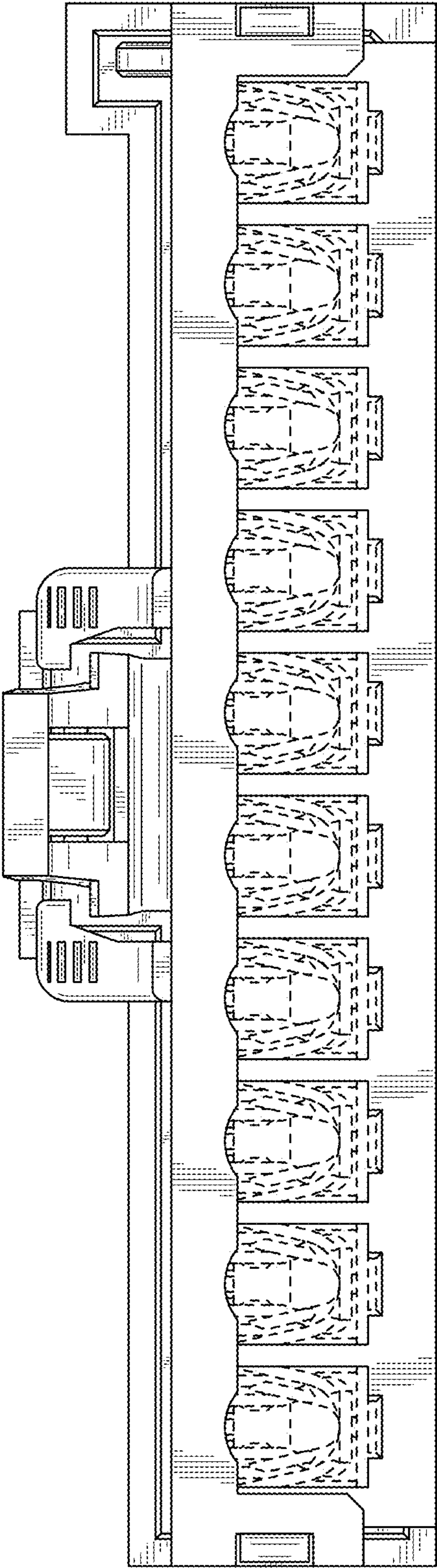


FIG. 139

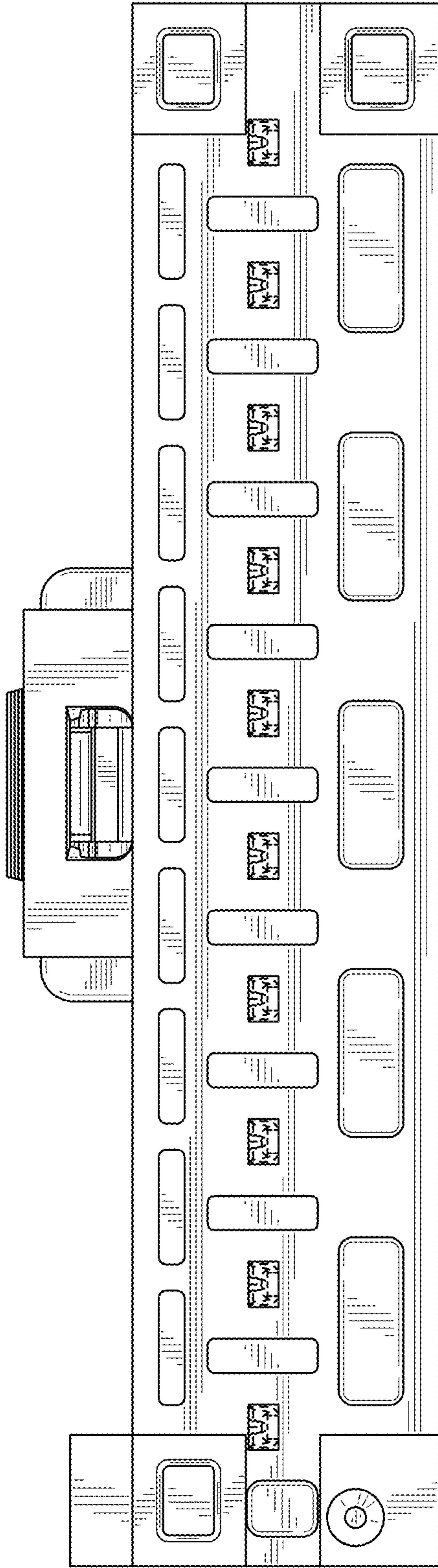


FIG. 140

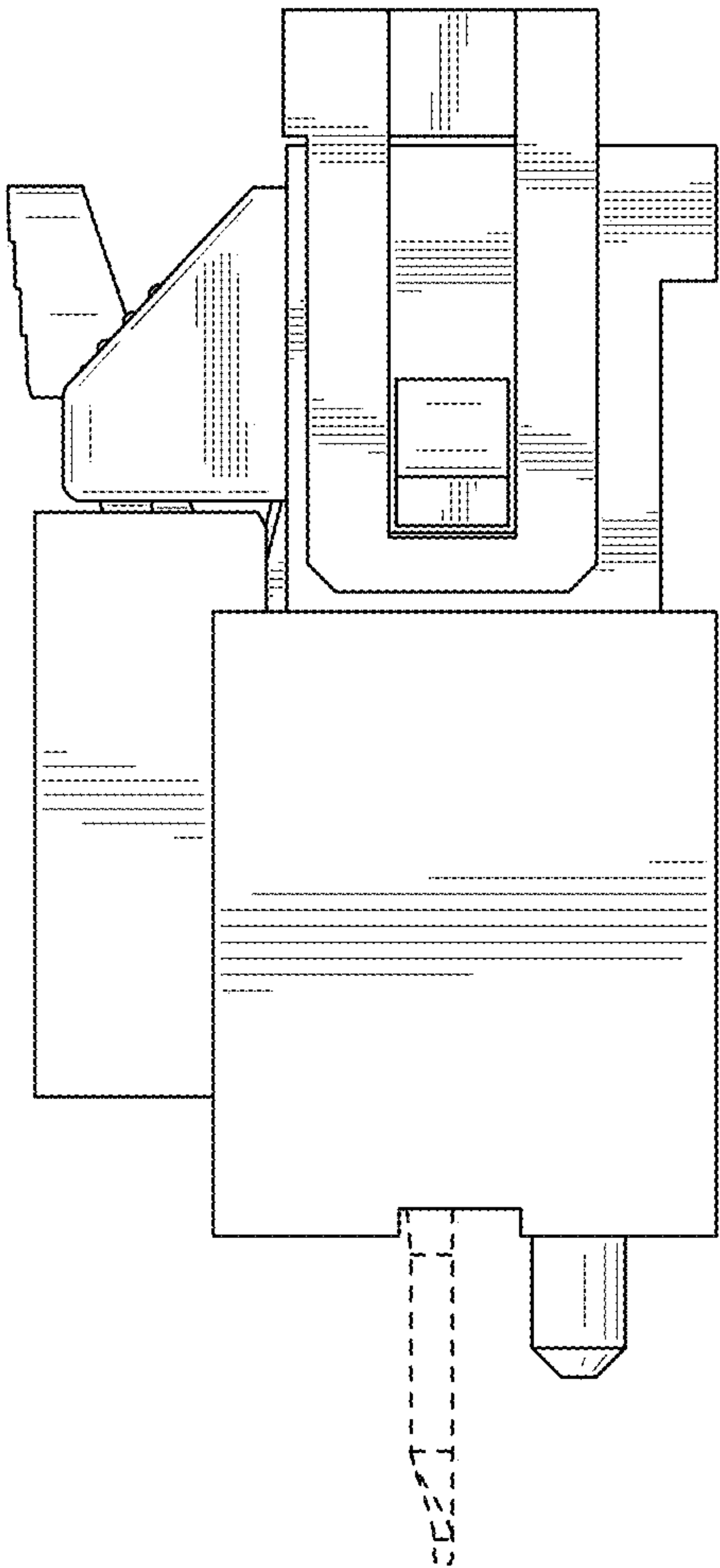


FIG. 141

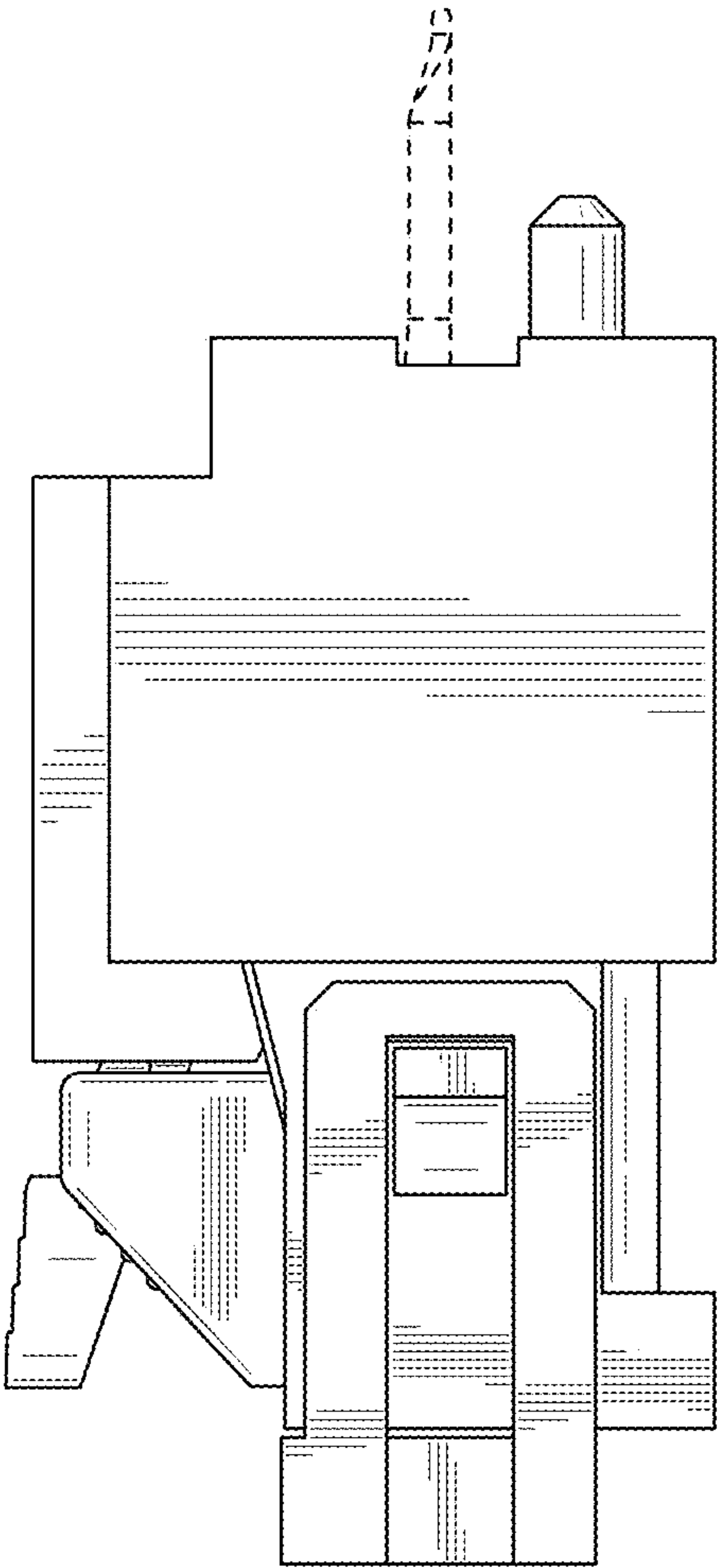


FIG. 142

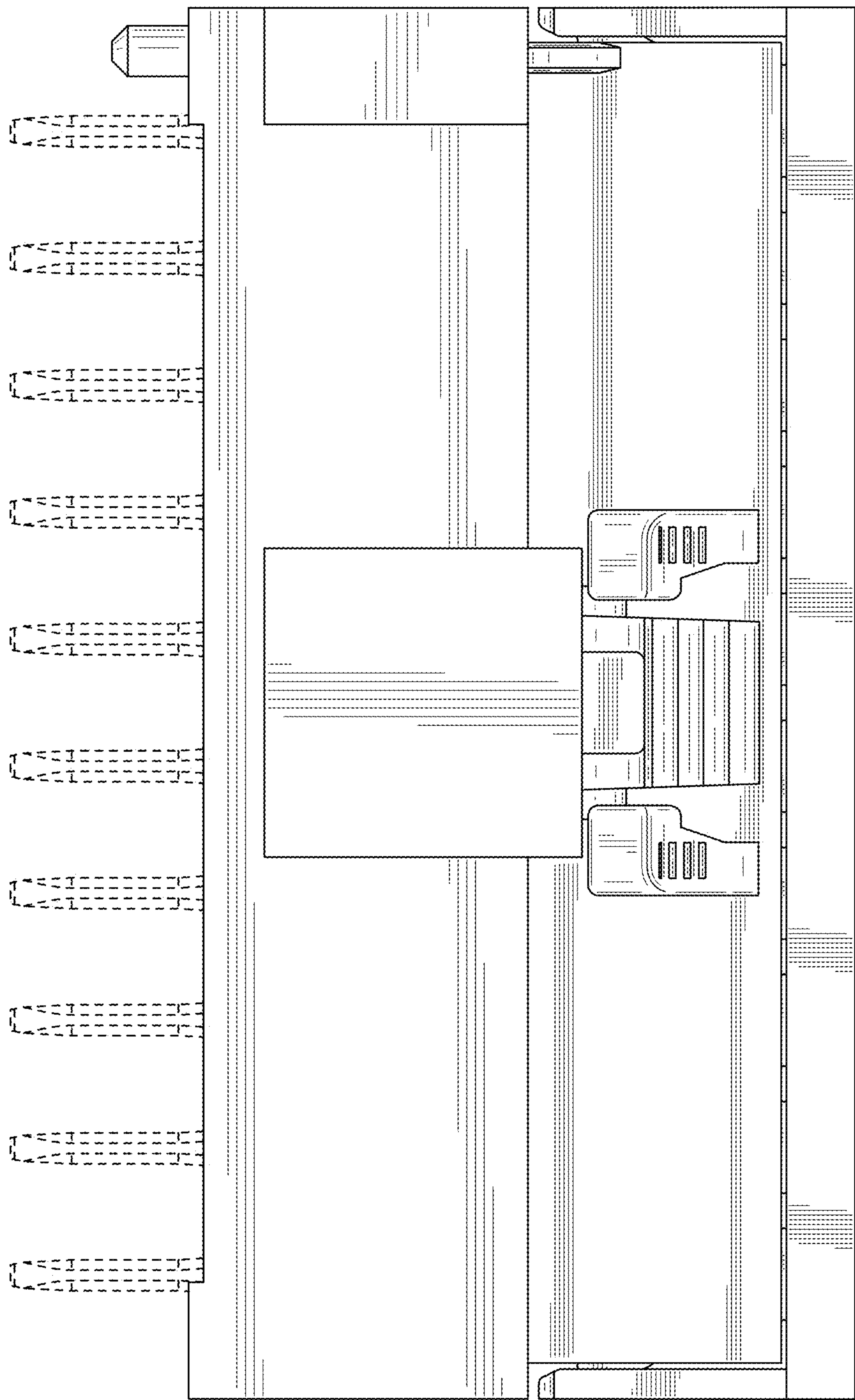


FIG. 143

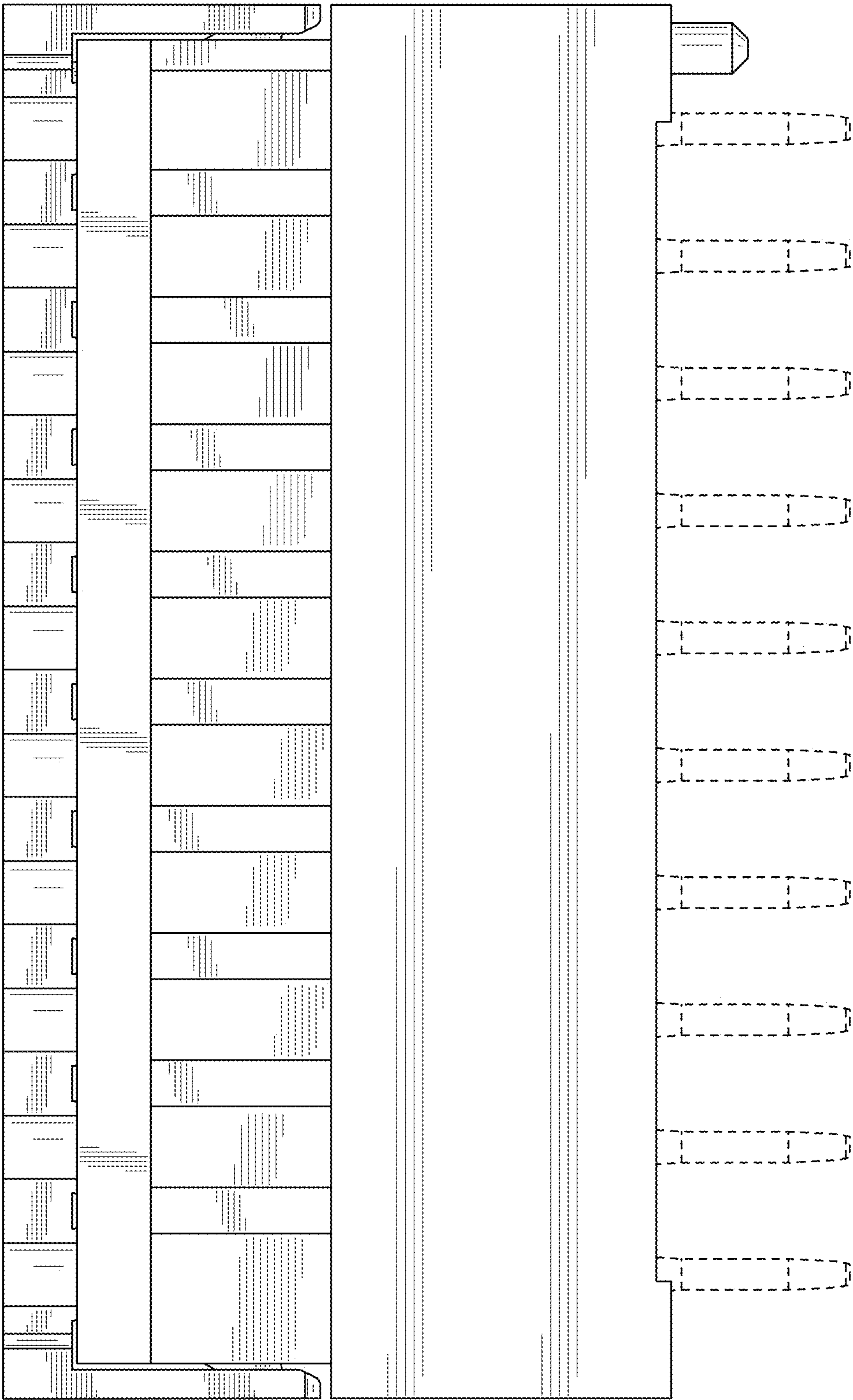


FIG. 144