



US00D681063S

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

(10) **Patent No.:** **US D681,063 S**

(45) **Date of Patent:** **** Apr. 30, 2013**

(54) **OPTICAL GRAIN SORTER**

(75) Inventors: **Hiroaki Kanemoto**, Chiyoda-ku (JP);
Kohei Kishimoto, Chiyoda-ku (JP);
Nobuyoshi Ikeda, Chiyoda-ku (JP)

(73) Assignee: **Satake Corporation**, Chiyoda-ku,
Tokyo (JP)

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

(21) Appl. No.: **29/395,125**

(22) Filed: **Nov. 30, 2011**

(30) **Foreign Application Priority Data**

Jun. 3, 2011 (JP) 2011-012685

(51) **LOC (9) Cl.** **15-03**

(52) **U.S. Cl.**
USPC **D15/10**

(58) **Field of Classification Search** D15/10,
D15/122; 209/908, 932, 580, 576, 644, 577,
209/587, 509, 581, 582; 382/110

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,482,686	A *	12/1969	Wood	209/587
4,186,836	A *	2/1980	Wassmer et al.	209/565
4,271,966	A *	6/1981	Crowley	209/576
4,301,931	A *	11/1981	Satake	209/691
4,385,700	A *	5/1983	Hodges et al.	209/539
4,392,421	A *	7/1983	Yano et al.	99/524
4,441,412	A *	4/1984	Imamura et al.	99/601
4,454,029	A *	6/1984	Codding	209/581
D282,367	S *	1/1986	Satake	D15/10
4,624,368	A *	11/1986	Satake	209/581

4,697,709	A *	10/1987	Codding	209/549
4,718,558	A *	1/1988	Castaneda	209/546
4,799,596	A *	1/1989	Mallant	209/580
4,842,144	A *	6/1989	Yahashi	209/44.1
4,863,041	A *	9/1989	Bailey	209/580
4,878,582	A *	11/1989	Codding	209/580

(Continued)

FOREIGN PATENT DOCUMENTS

JP	1379945	S	2/2010
JP	1388204	S	5/2010
JP	1388207	S	5/2010

OTHER PUBLICATIONS

Satake Corporation, "Small-Sized Optical Sorter 'Pikasen' for Agriculture on Sale," News Release, Jul. 31, 2009 (w Eng Abstract).

Primary Examiner — Mark Goodwin

(74) *Attorney, Agent, or Firm* — Chapman and Cutler LLP

(57) **CLAIM**

The ornamental design for an optical grain sorter, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of an optical grain sorter showing our new design;

FIG. 2 is a front view of the optical grain sorter of FIG. 1;

FIG. 3 is a rear view of the optical grain sorter of FIG. 1;

FIG. 4 is a left side view of the optical grain sorter of FIG. 1;

FIG. 5 is a right side view of the optical grain sorter of FIG. 1;

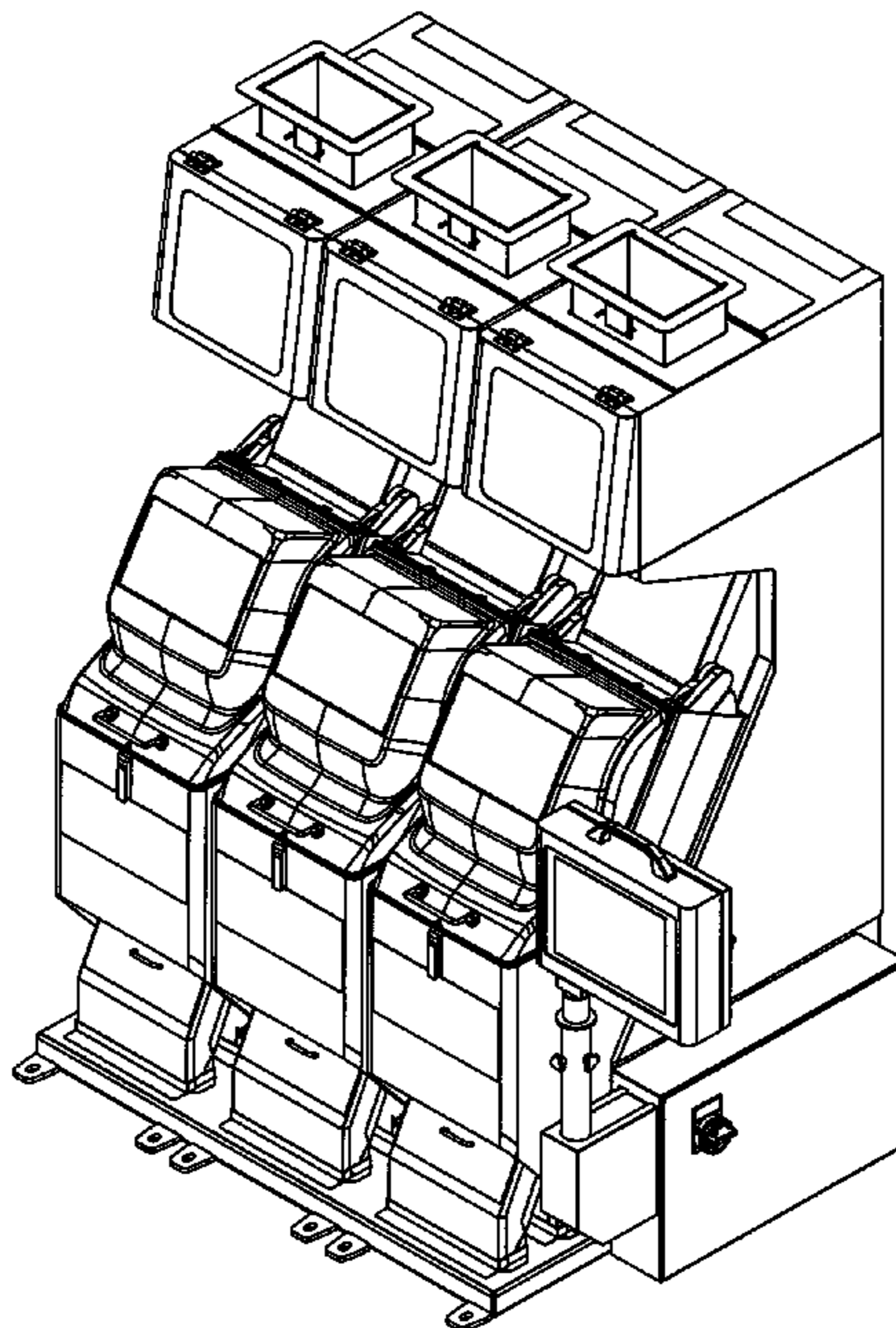
FIG. 6 is a top plan view of the optical grain sorter of FIG. 1;

and,

FIG. 7 is a bottom plan view of the optical grain sorter of FIG. 1.

The broken lines are for illustrative purposes only and form no part of the claimed design.

1 Claim, 6 Drawing Sheets



US D681,063 S

Page 2

U.S. PATENT DOCUMENTS

4,940,850	A *	7/1990	Satake	.....	209/580	D478,096	S *	8/2003	Kim	.....	D15/10
4,951,825	A *	8/1990	Hawkins et al.	.....	209/558	7,298,870	B2 *	11/2007	Ikeda et al.	.....	382/108
4,971,684	A *	11/1990	Mueller	.....	209/44	D556,795	S *	12/2007	Bee	.....	D15/122
D338,892	S *	8/1993	Crawford	.....	D15/10	D560,233	S *	1/2008	Bee	.....	D15/122
5,836,363	A *	11/1998	LaFleur	.....	141/314	7,968,814	B2 *	6/2011	Imai et al.	.....	209/580
5,960,098	A *	9/1999	Tao	.....	382/110	D651,222	S *	12/2011	Hodgkiss	.....	D15/122
6,100,488	A *	8/2000	Satake et al.	.....	209/580	2009/0050540	A1 *	2/2009	Imai et al.	.....	209/580
6,252,188	B1 *	6/2001	Zapata et al.	.....	209/577	2011/0192291	A1 *	8/2011	Sakamoto et al.	.....	99/617

* cited by examiner

FIG.1

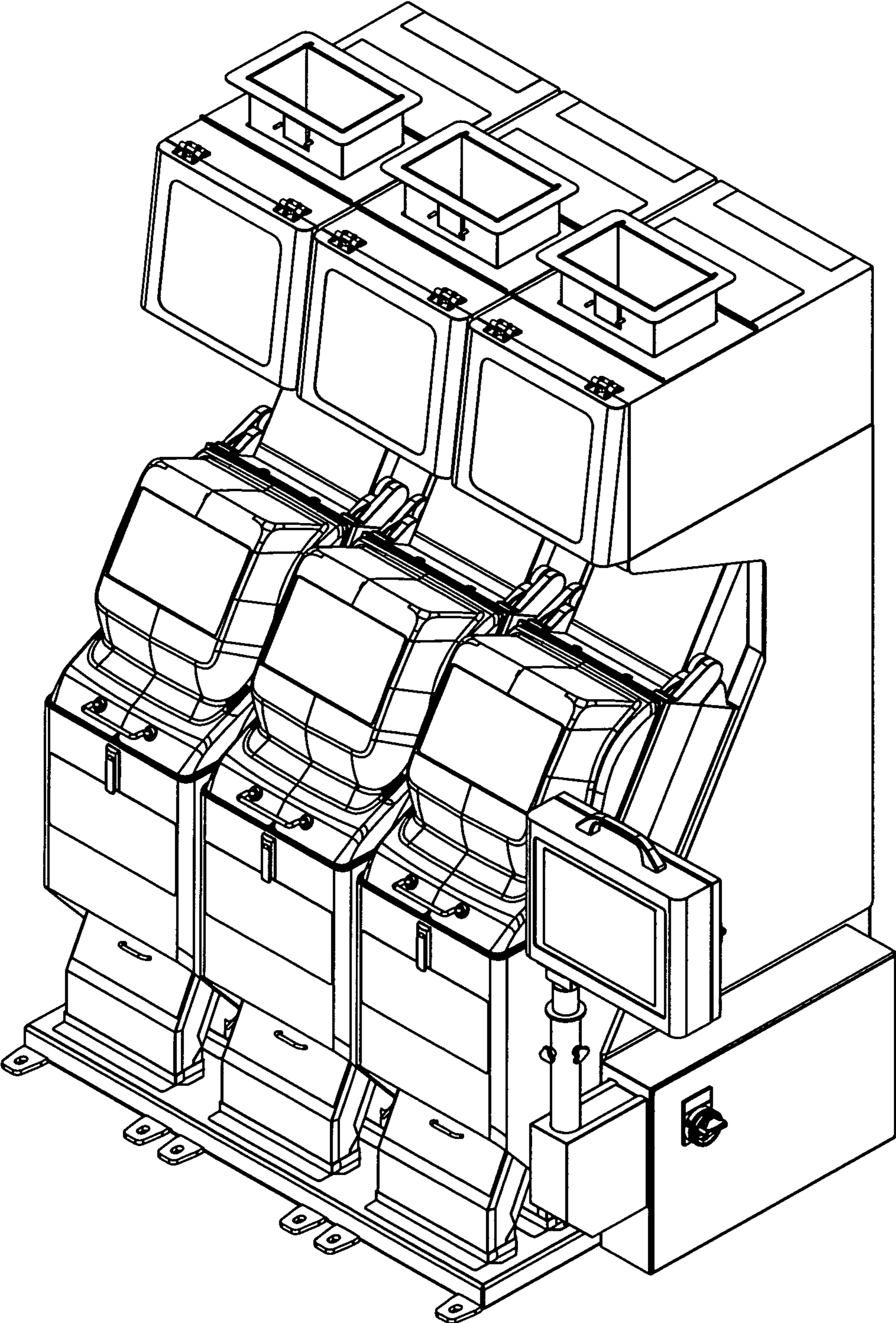


FIG.2

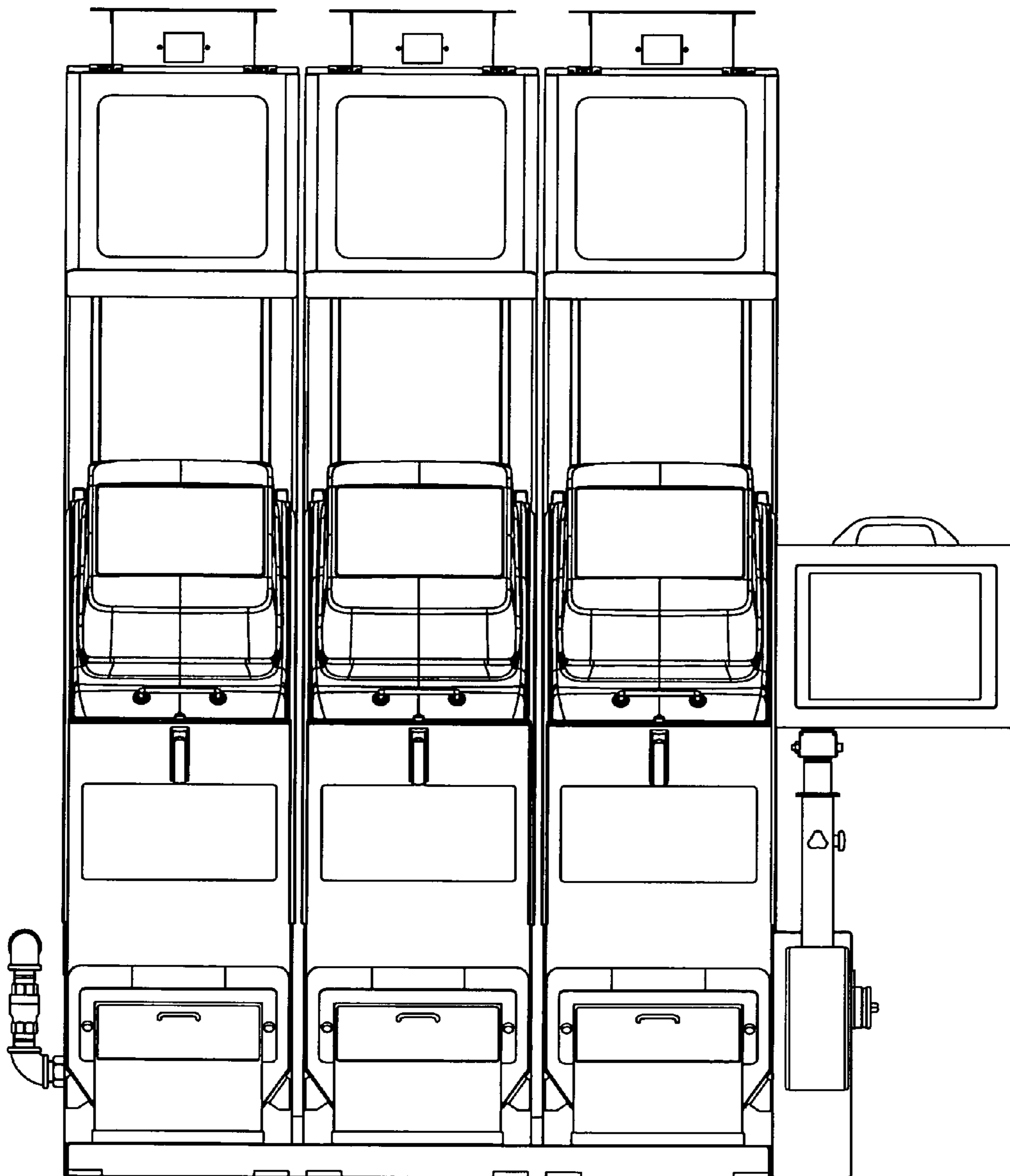


FIG.3

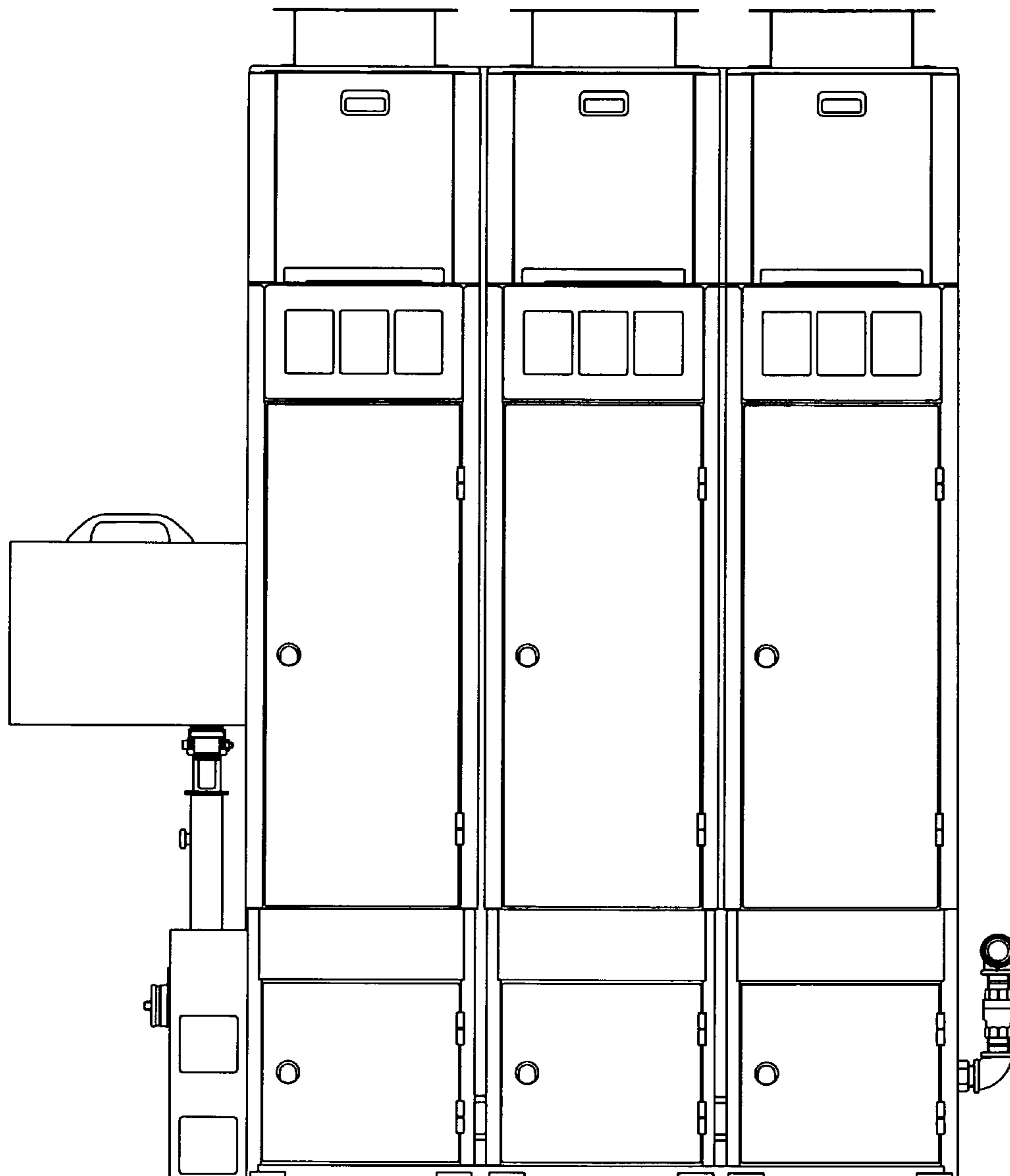


FIG.4

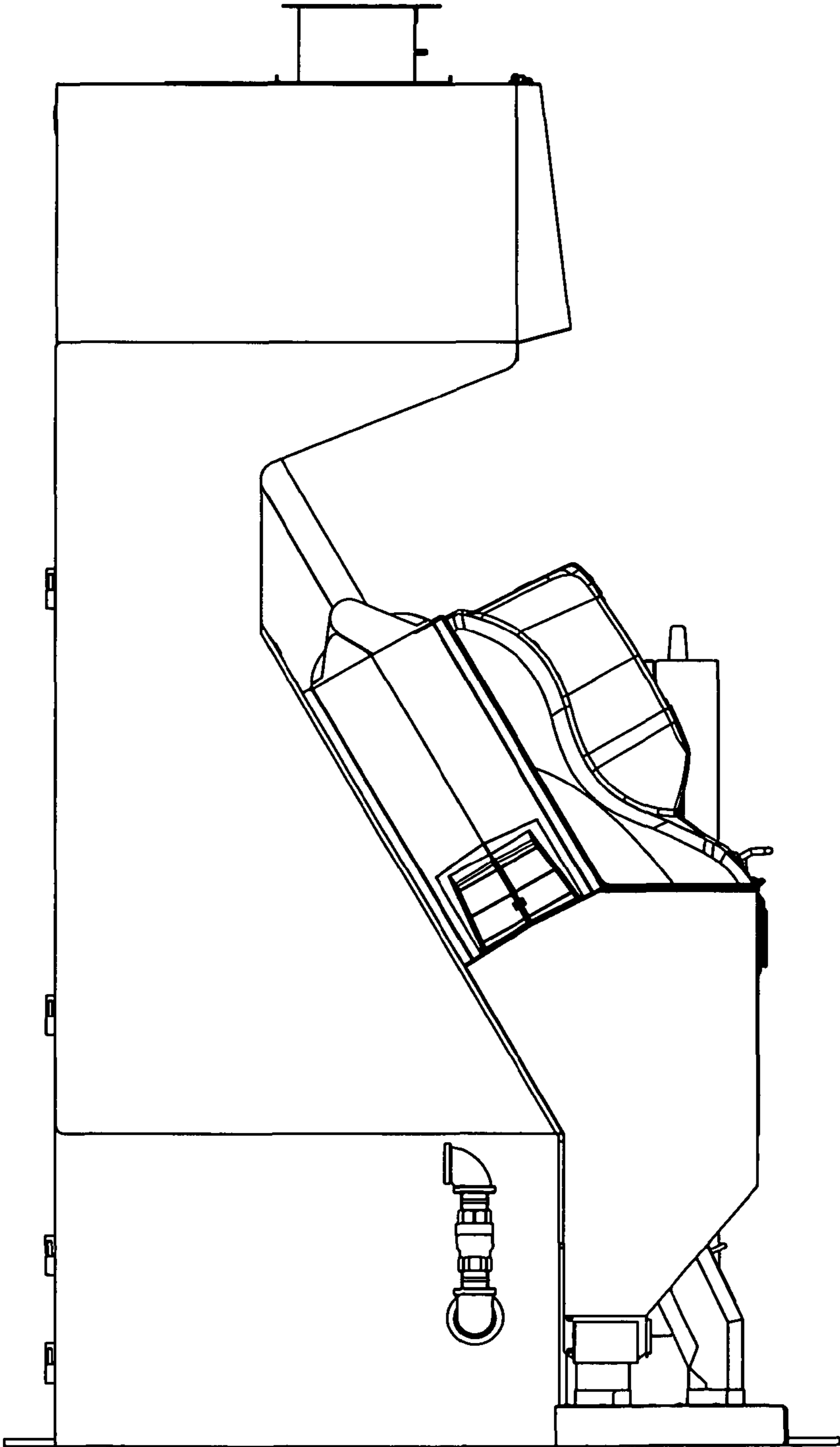


FIG.5

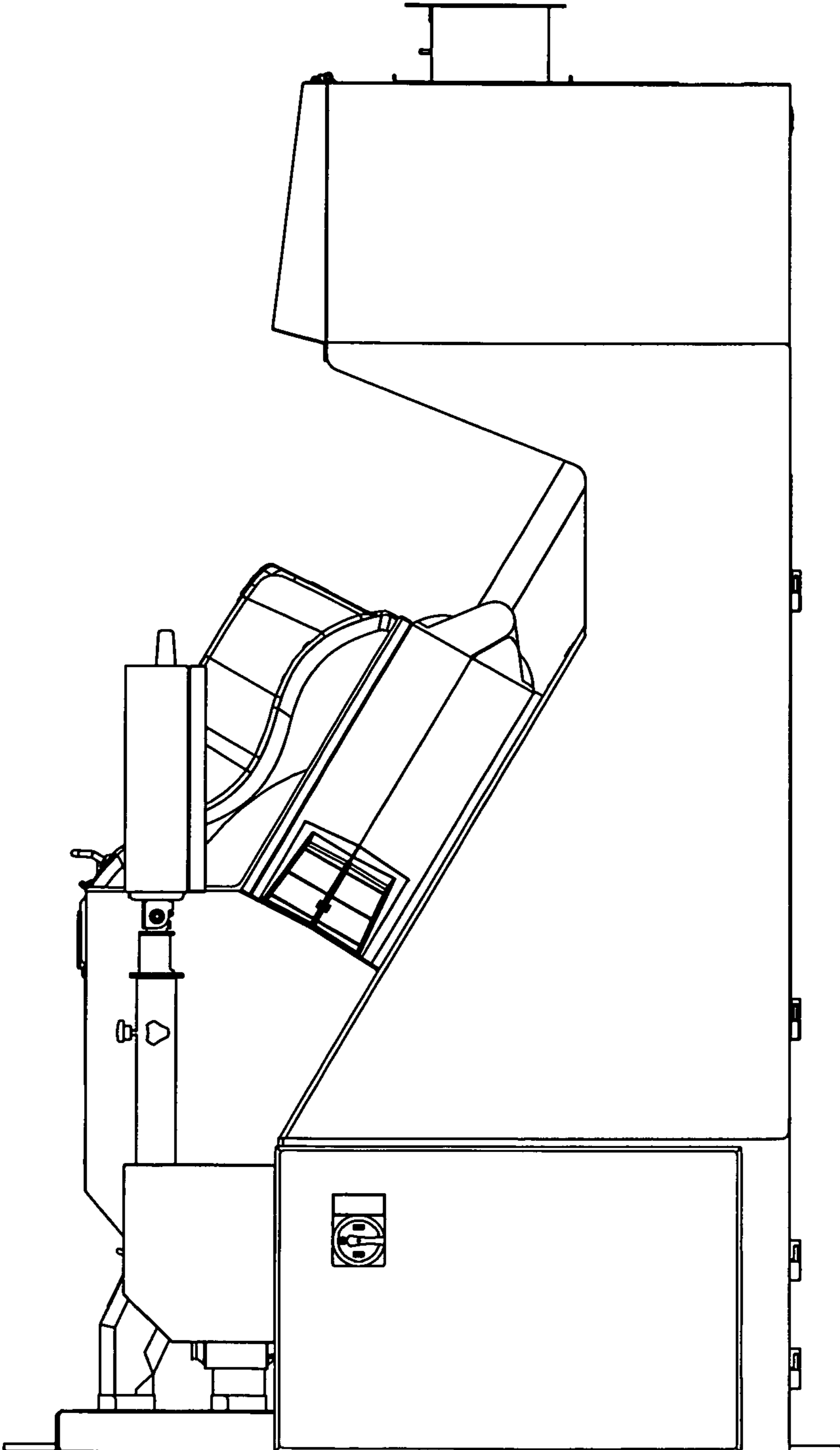


FIG.6

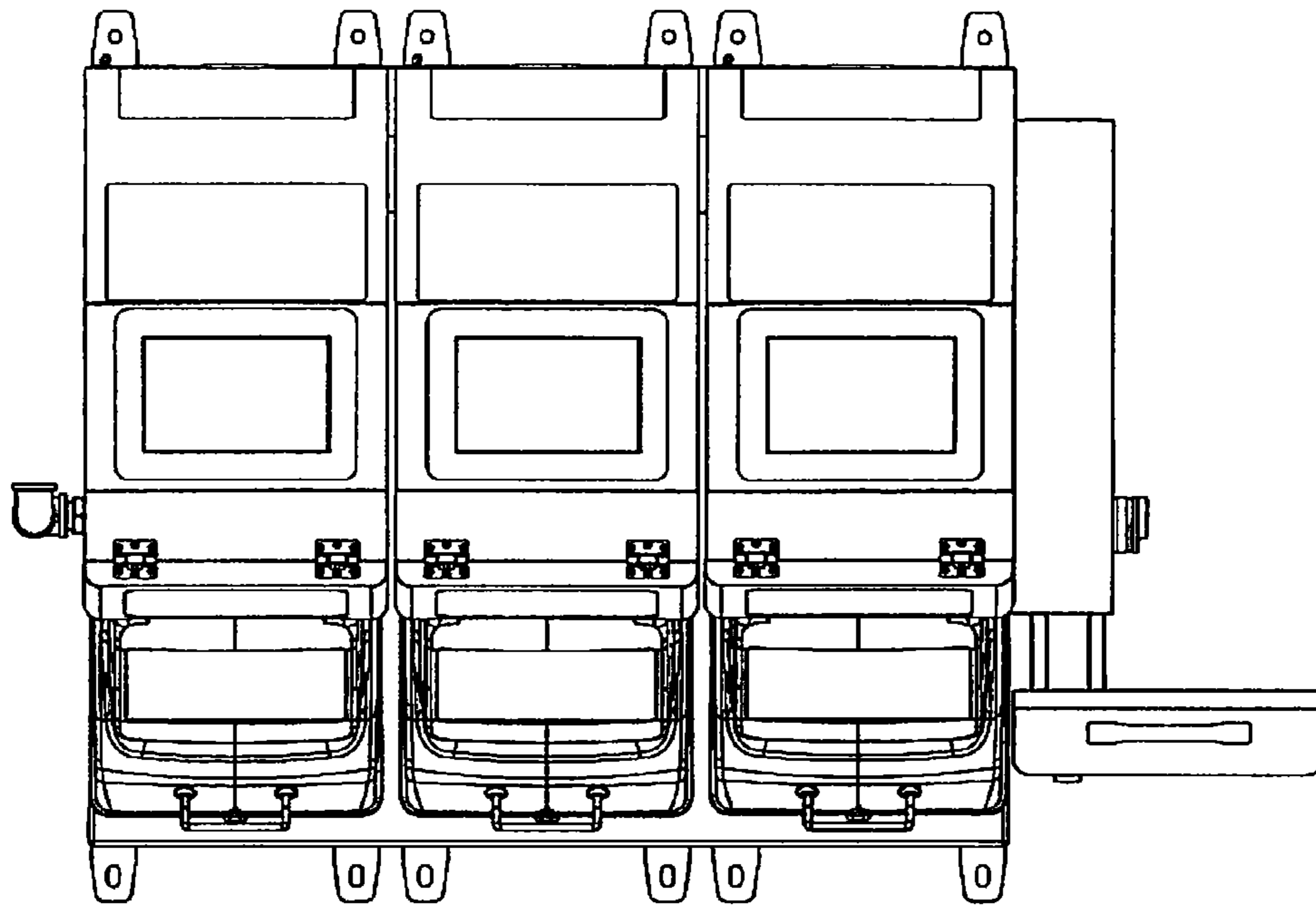


FIG.7

