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(12) **United States Design Patent** (10) **Patent No.:** **US D803,909 S**  
**Sakaguchi et al.** (45) **Date of Patent:** **\*\* Nov. 28, 2017**

(54) **FLASK-LESS MOLDING MACHINE**

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(73) Assignee: **Sintokogio, Ltd.**, Nagoya-Shi, Aichi (JP)

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

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(30) **Foreign Application Priority Data**

May 17, 2016 (JP) ..... 2016-010431

(51) **LOC (10) Cl.** ..... **15-03**

(52) **U.S. Cl.**  
USPC ..... **D15/135**

(58) **Field of Classification Search**  
USPC ..... D15/122, 135-137, 138, 141, 142, 199  
(Continued)

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(57) **CLAIM**

The ornamental design for a flask-less molding machine, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of a flask-less molding machine including an upper molding sand tank part of the present invention.

FIG. 2 is a front view of the flask-less molding machine of FIG. 1.

FIG. 3 is a rear view of the flask-less molding machine of FIG. 1.

FIG. 4 is a top plan view of the flask-less molding machine of FIG. 1.

FIG. 5 is a bottom view of the flask-less molding machine of FIG. 1.

FIG. 6 is a right side view of the flask-less molding machine of FIG. 1.

FIG. 7 is a left side view of the flask-less molding machine of FIG. 1.

FIG. 8 is a sectional view taken along the line 8-8 of the flask-less molding machine of FIG. 3.

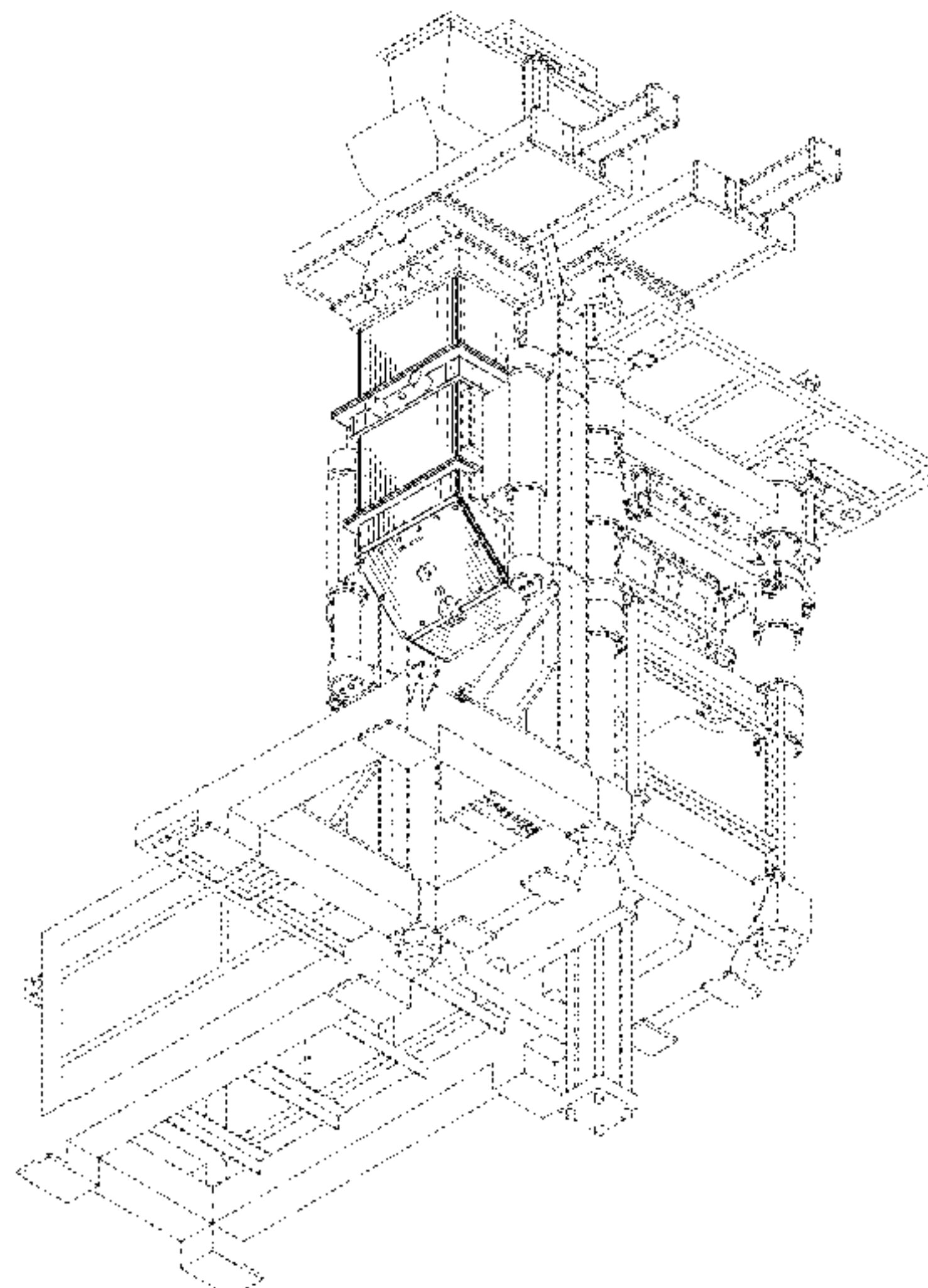
FIG. 9 is a rear view of the flask-less molding machine of FIG. 1, wherein the upper molding sand tank part moves down.

FIG. 10 is a left side view of the flask-less molding machine of FIG. 1, wherein the upper molding sand tank part moves down; and,

FIG. 11 is a perspective view of the flask-less molding machine of FIG. 1, wherein the upper molding sand tank part moves down.

The features shown in broken lines depict environmental subject matter only and form no part of the claimed design. The broken lines having alternating long and short segments define bounds of the claimed design and form no part thereof.

**1 Claim, 11 Drawing Sheets**



(58) **Field of Classification Search**

CPC ..... B29C 45/0001; B29C 2043/3427; B29C  
2043/3494; B29C 2045/0006; B29C  
2045/0043; B29C 2045/0049; B29C  
2045/14803; B29C 2945/76444; B29C  
43/24; B29C 45/0005; B29C 45/0025;  
B29C 45/006; B29C 45/14311; B29C  
45/14778; B29C 45/14811; B29C  
45/14819; B29C 45/1657; B29C 45/1671;  
B29C 45/1761; B29C 45/2708; B29C  
45/40; B29C 45/401; B29C 45/42; B29C  
45/84; B29C 47/0004; B29C 47/0021

See application file for complete search history.

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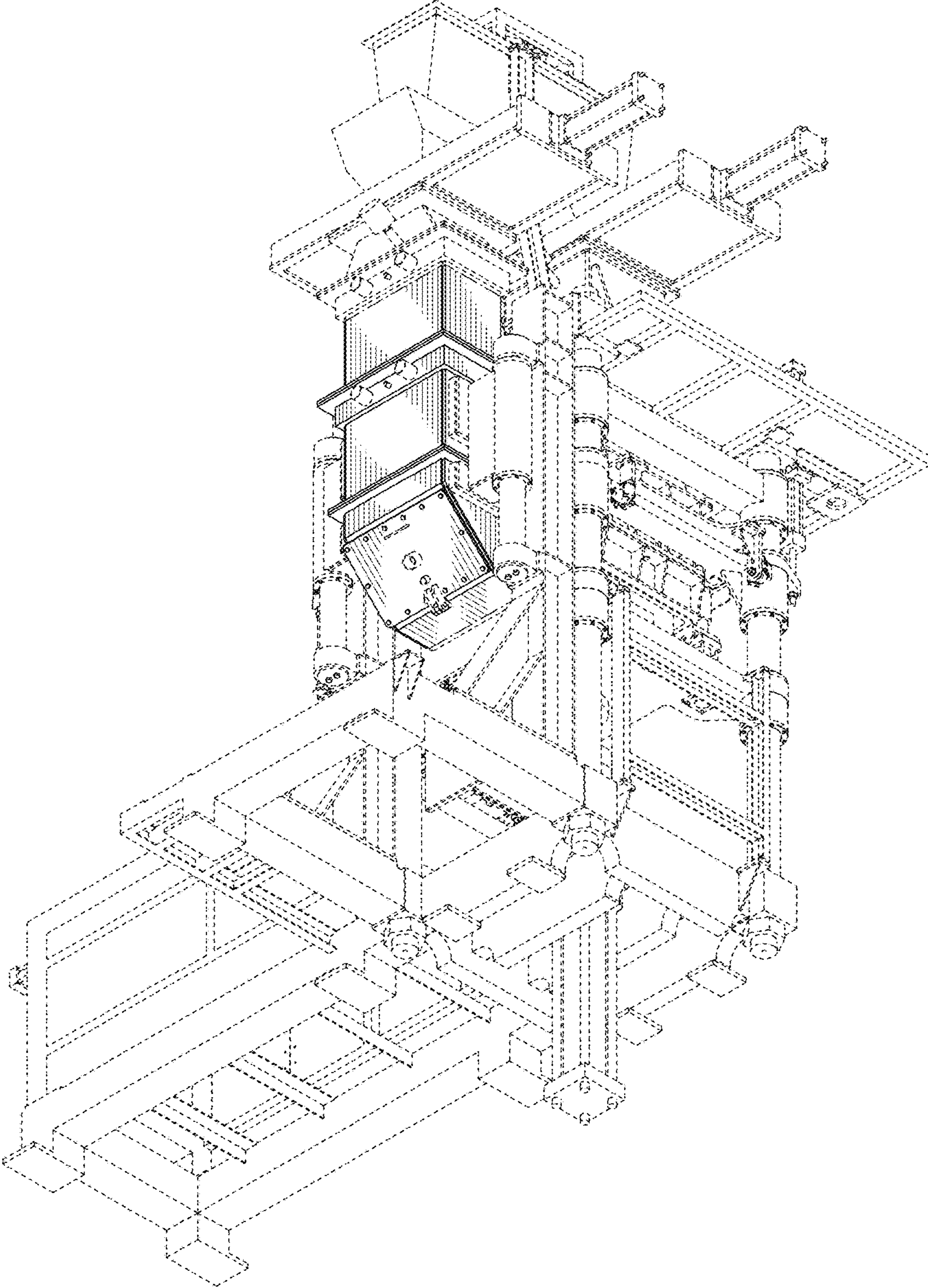


FIG. 1



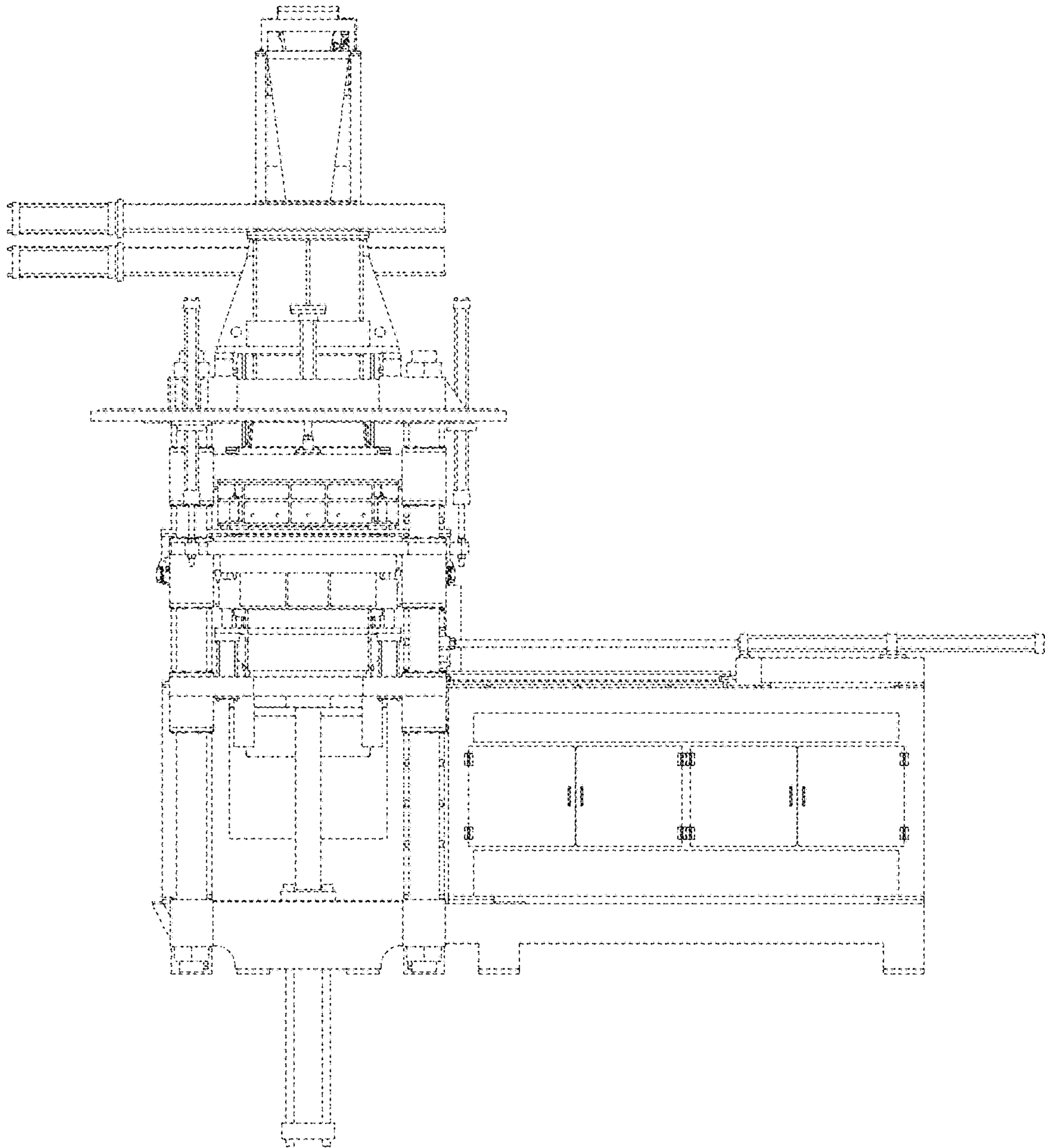


FIG. 2

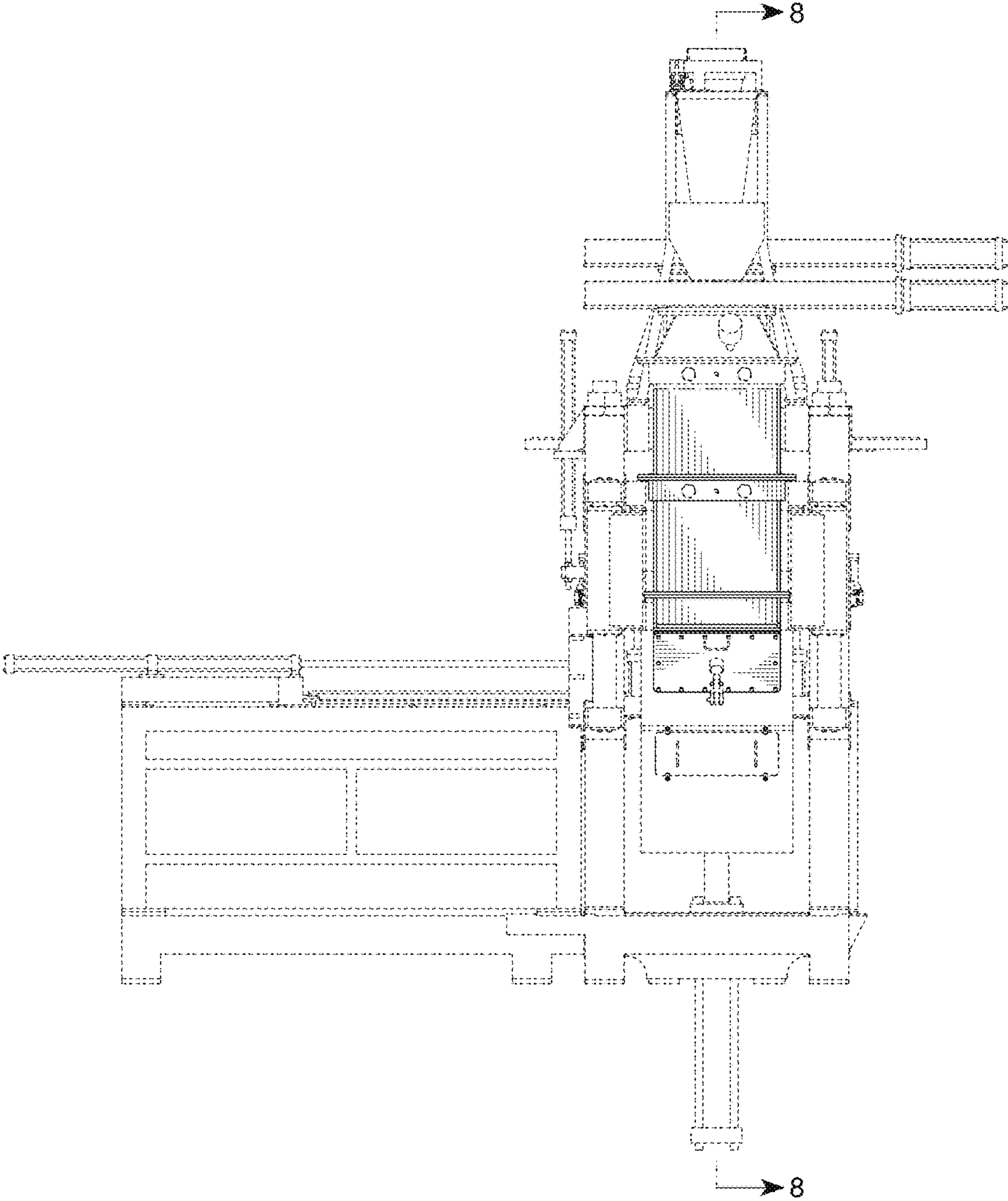


FIG. 3

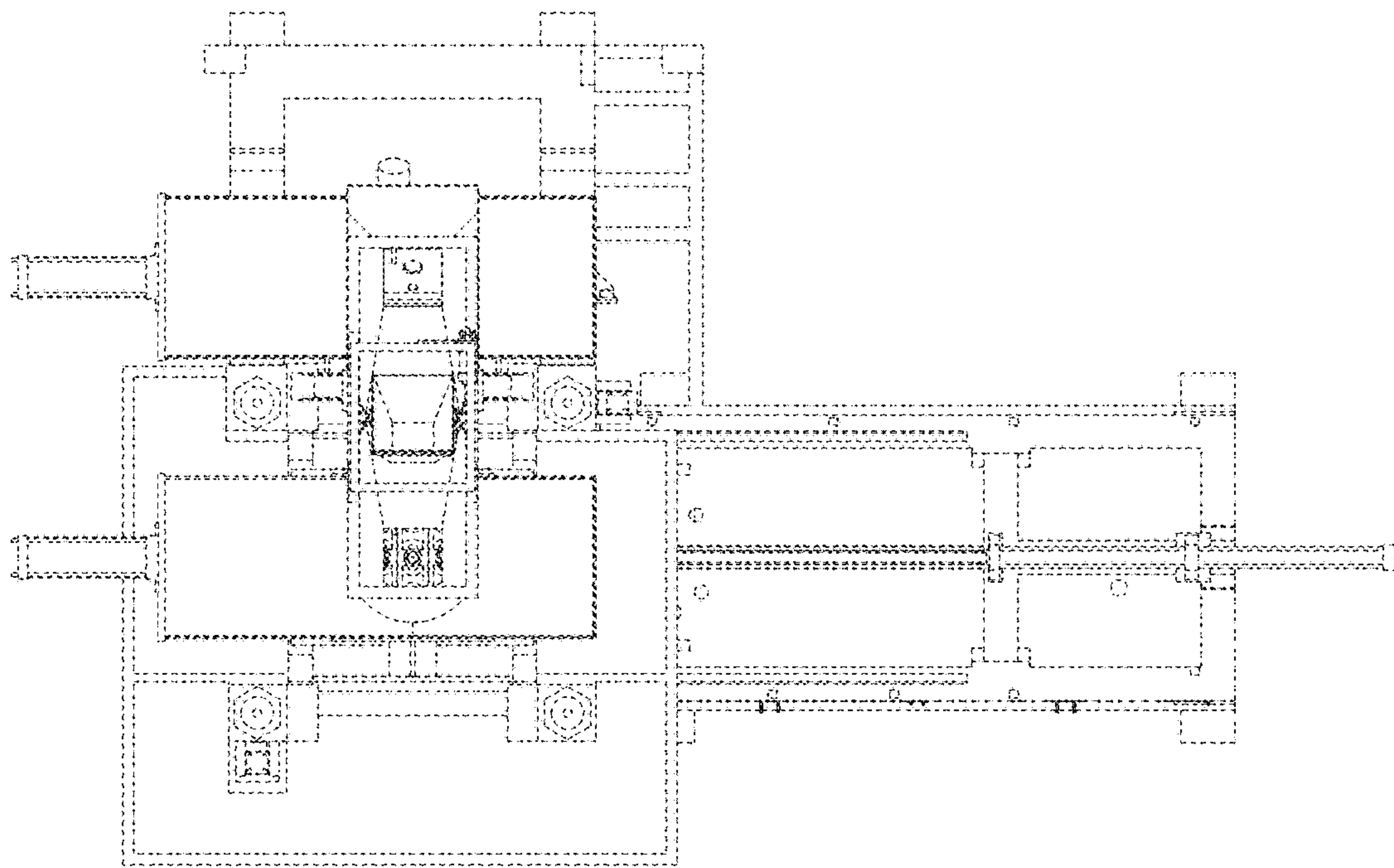


FIG. 4

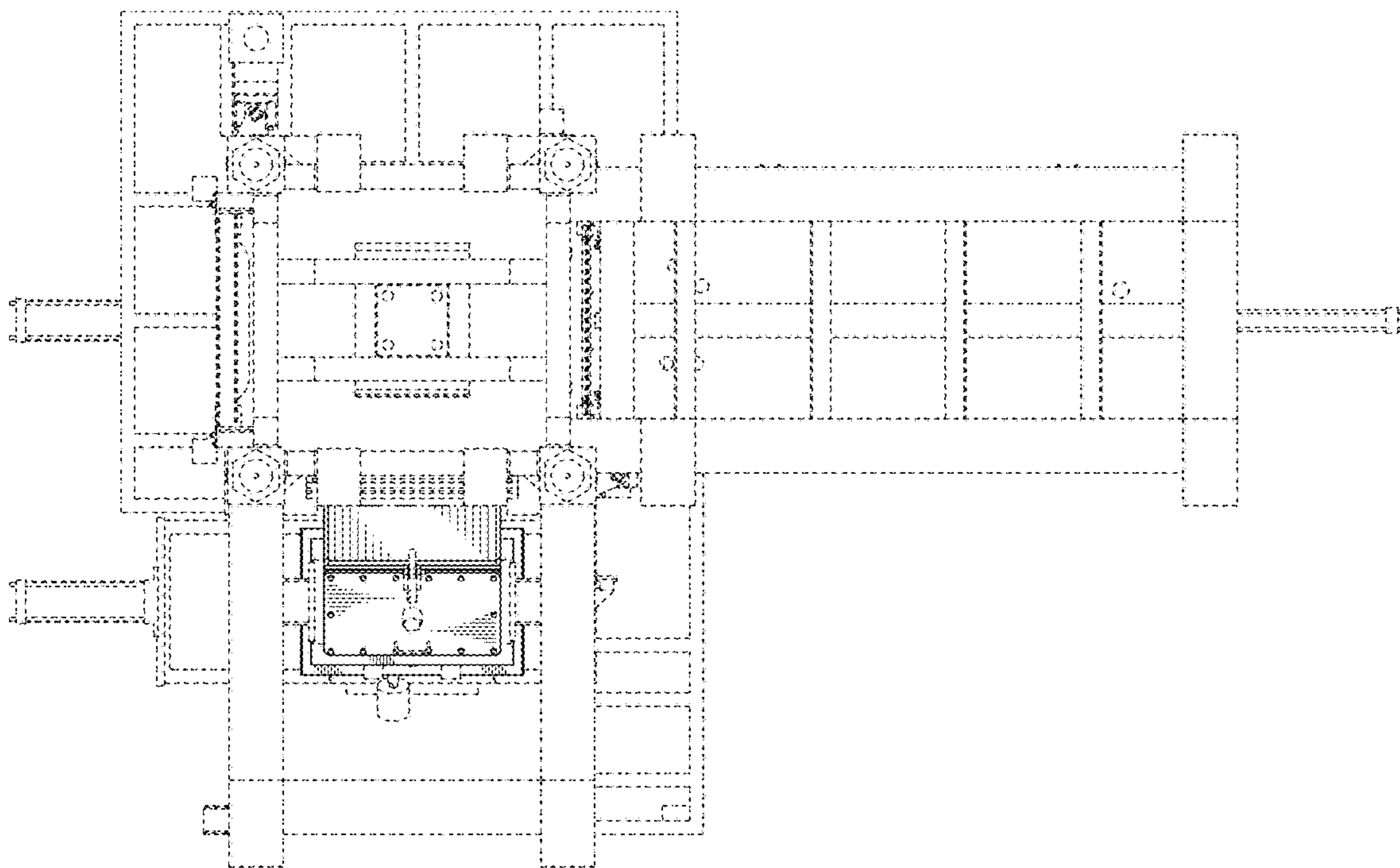


FIG. 5

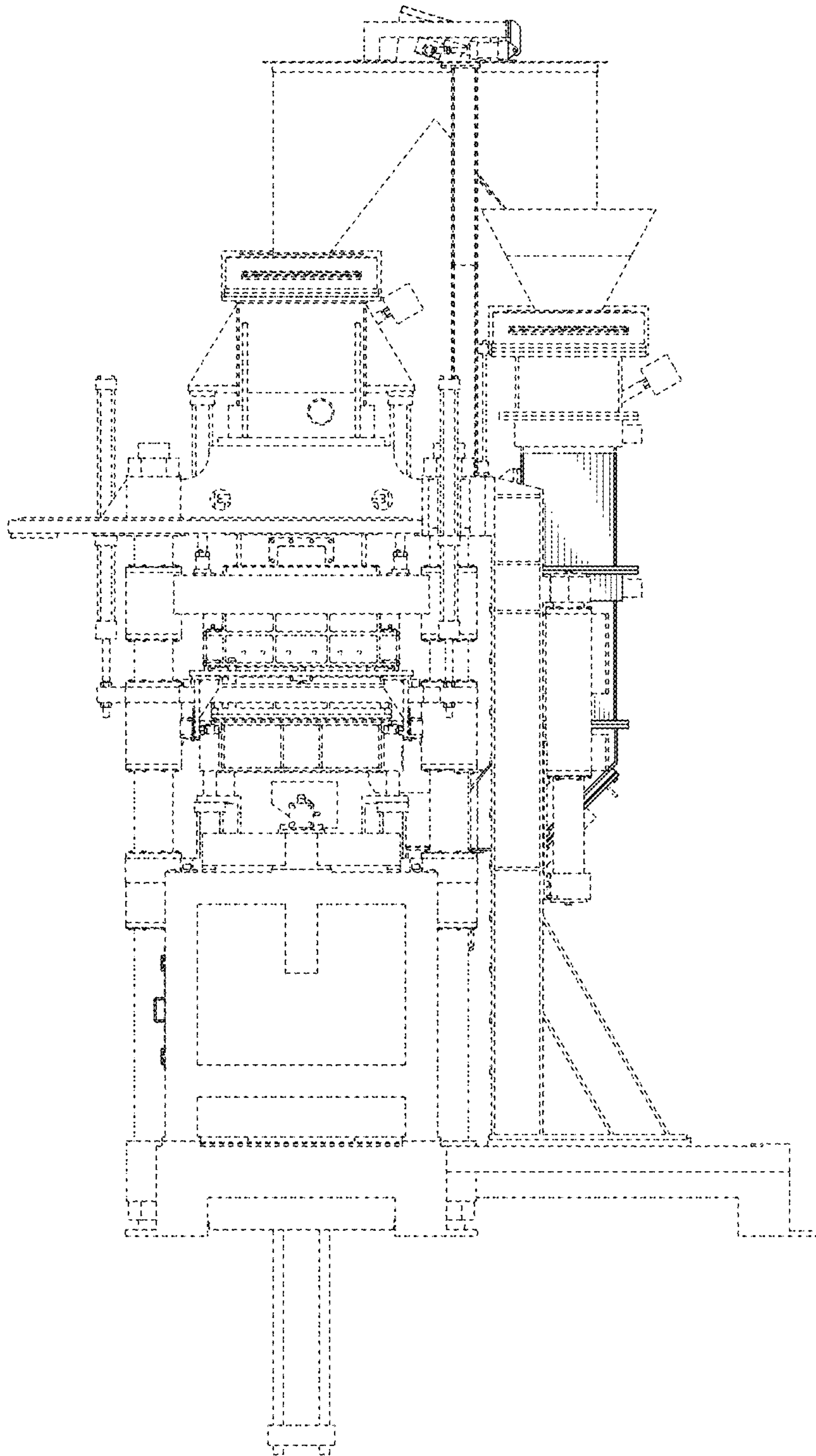


FIG. 6



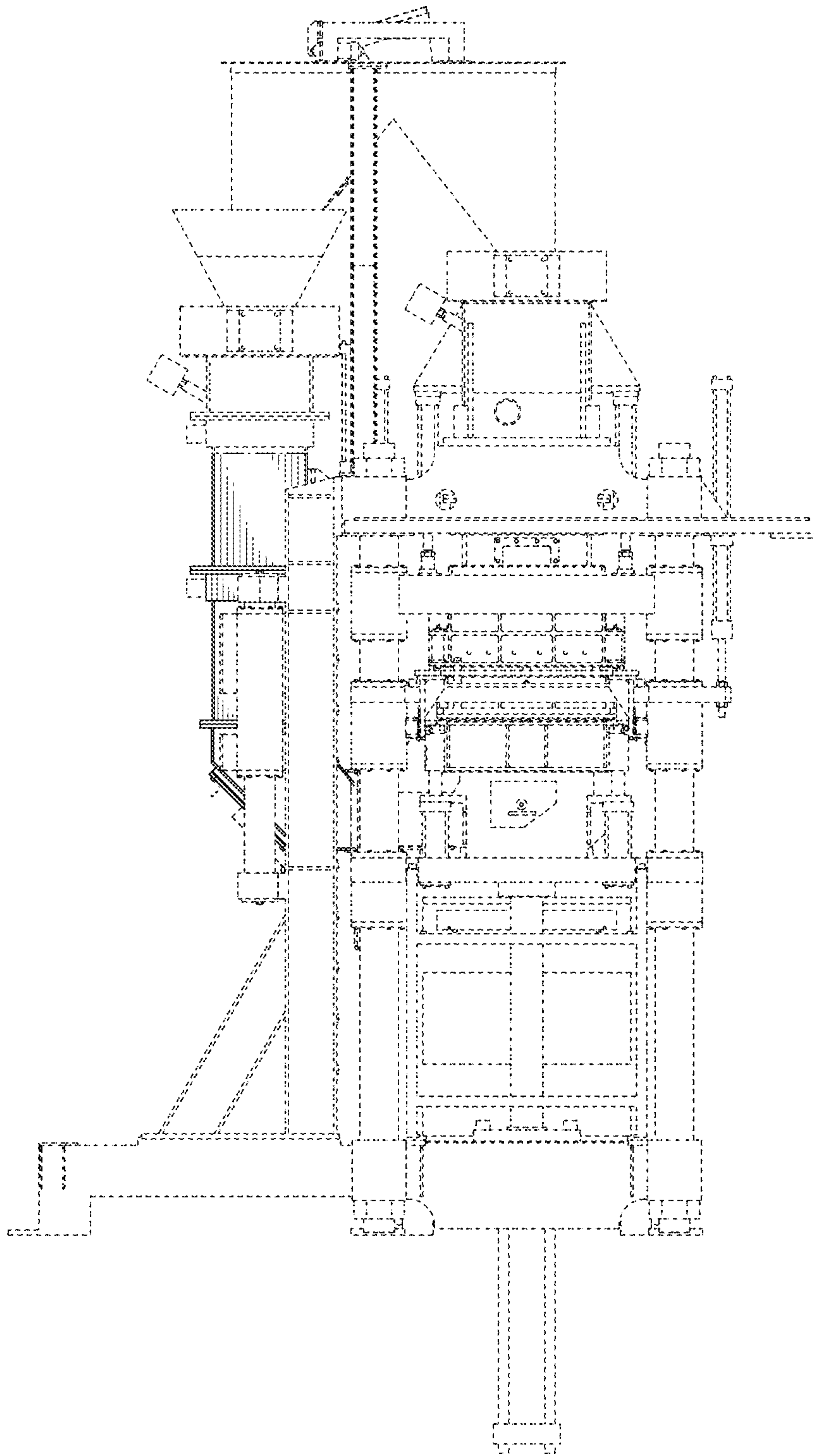


FIG. 7

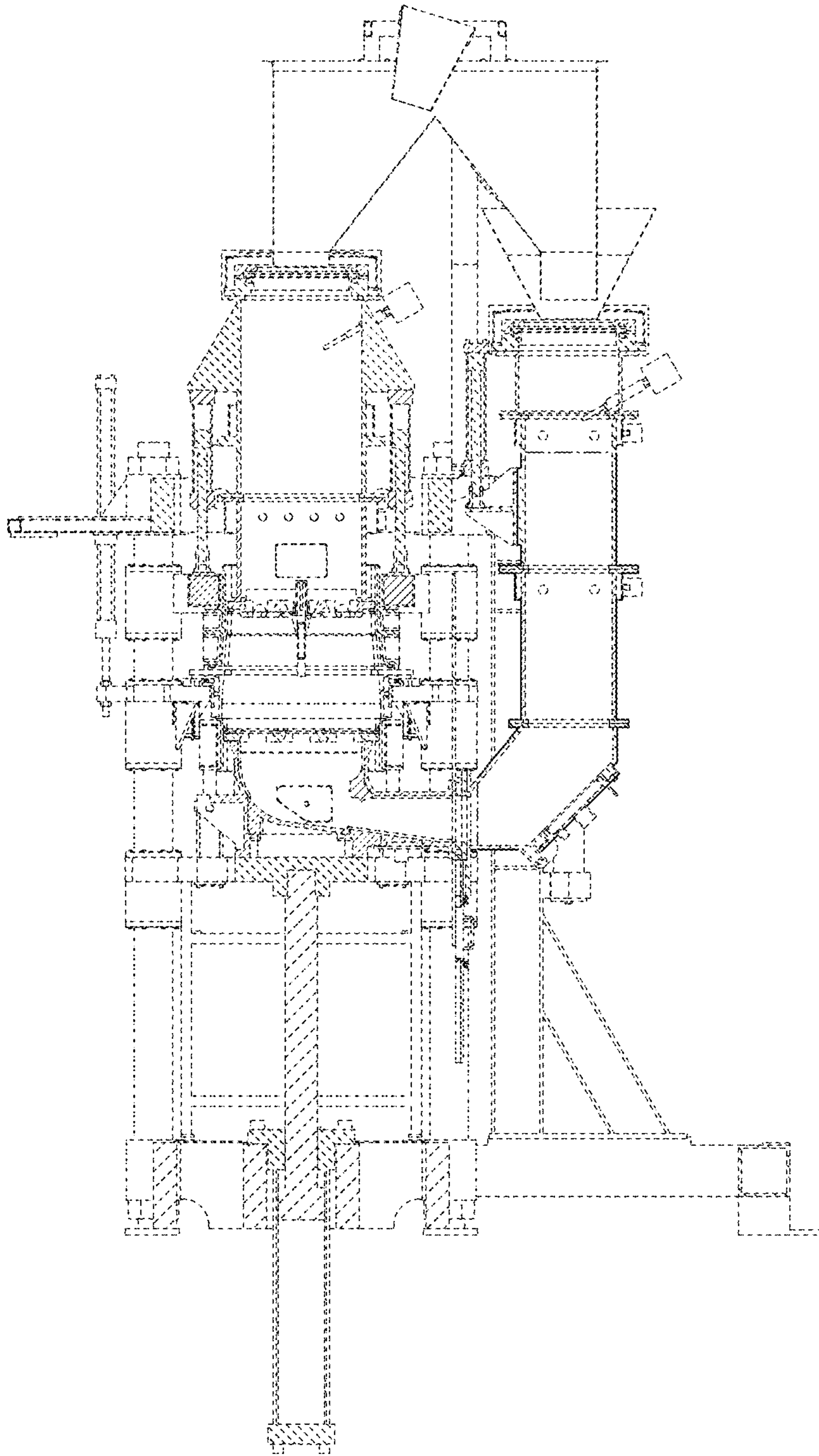


FIG. 8

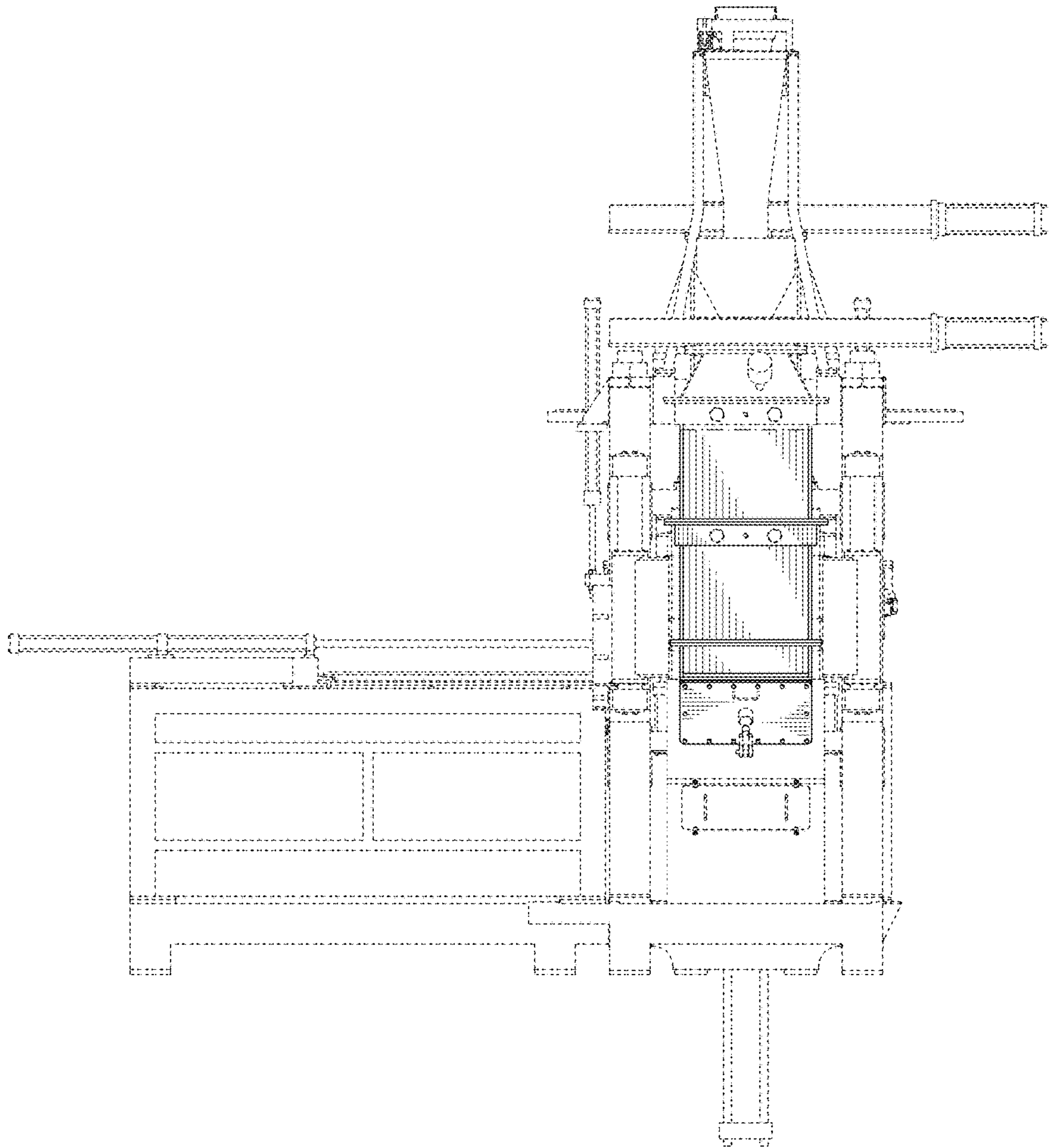


FIG. 9

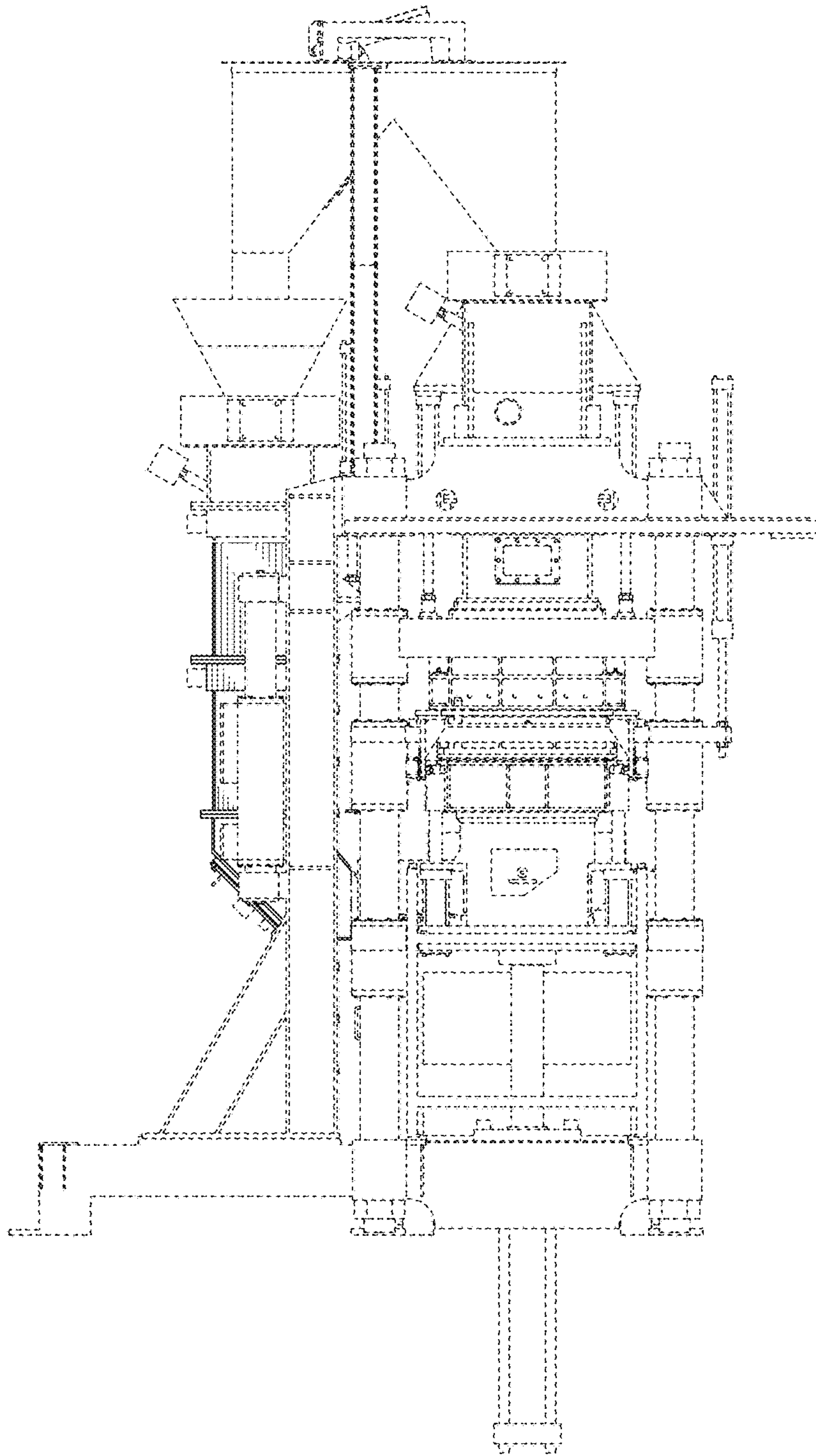


FIG. 10



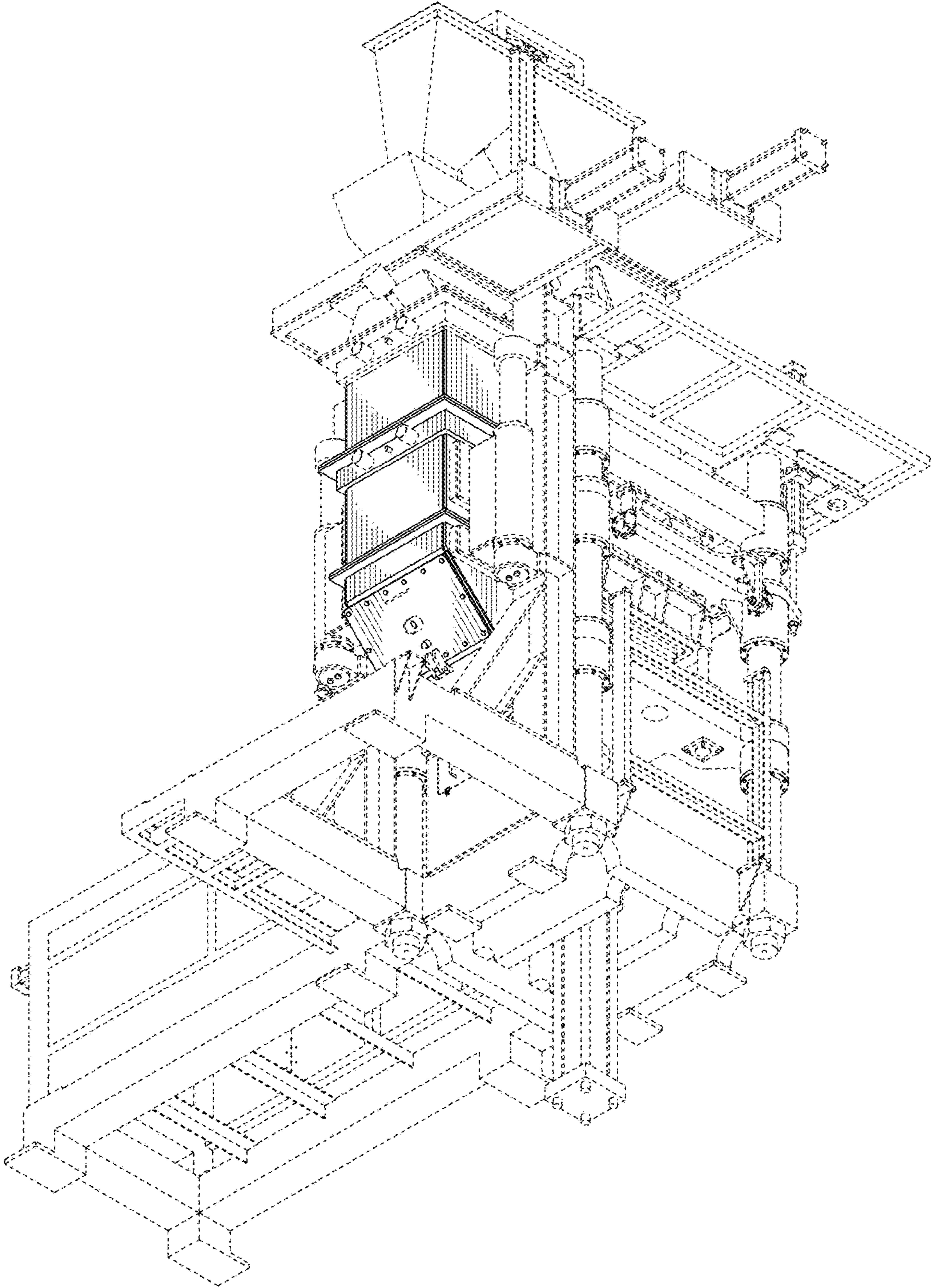


FIG. 11