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Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

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Leea Staret Lee

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US008585341B1

(12) **United States Patent**
Oren et al.

(10) **Patent No.:** **US 8,585,341 B1**
(45) **Date of Patent:** **Nov. 19, 2013**

(54) **PROPPANT DISCHARGE SYSTEM AND A CONTAINER FOR USE IN SUCH A PROPPANT DISCHARGE SYSTEM**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(22) Filed: **Oct. 25, 2012**

Related U.S. Application Data

(63) Continuation of application No. 13/628,702, filed on Sep. 27, 2012, which is a continuation-in-part of application No. 13/555,653, filed on Jul. 23, 2012.

(51) **Int. Cl.**
B65G 65/40 (2006.01)

(52) **U.S. Cl.**
USPC **414/411; 414/407; 414/528; 222/181.1**

(58) **Field of Classification Search**
USPC **414/502-505, 518, 528, 406, 407, 411; 166/79.1, 75.15; 222/163, 181.1; 221/174**

See application file for complete search history.

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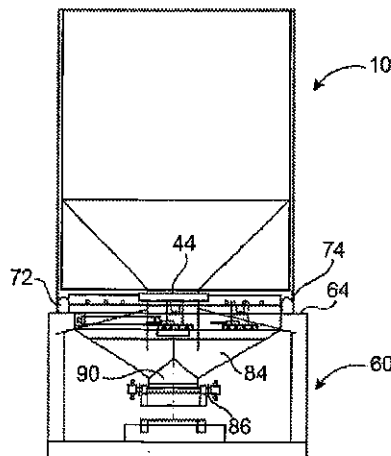
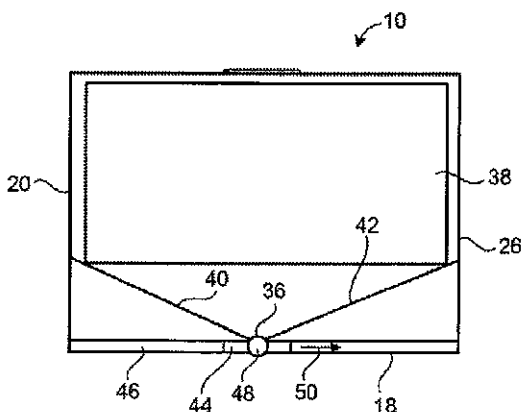
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(57) **ABSTRACT**

A proppant discharge system has a container with an outlet formed at a bottom thereof and a gate slidably affixed at the outlet so as to be movable between a first position covering the outlet to a second position opening the outlet, and a support structure having an actuator thereon. The container is removably positioned on the top surface of the support structure. The actuator is engageable with gate so as to move the gate from the first position to the second position. A conveyor underlies the container so as to receive proppant as discharged from the container through the outlet. The container is a ten foot ISO container.

9 Claims, 5 Drawing Sheets



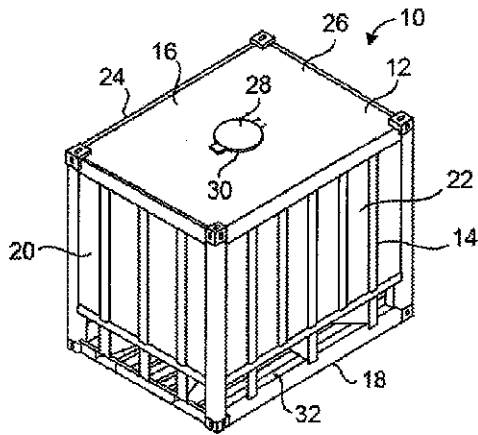


FIG. 1

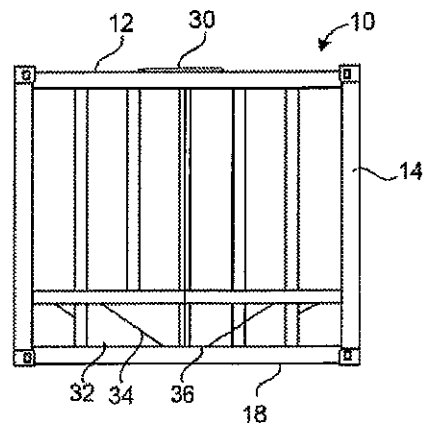


FIG. 2

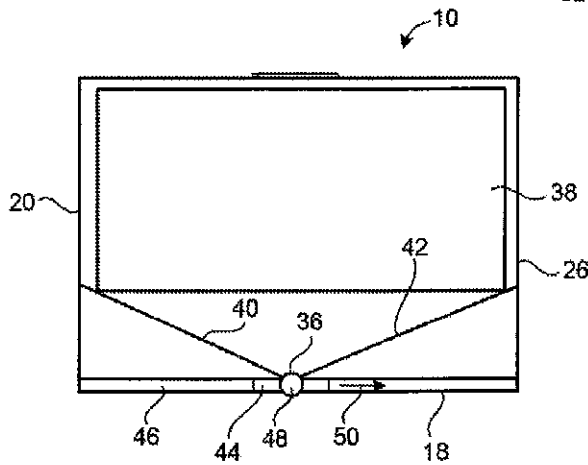


FIG. 3

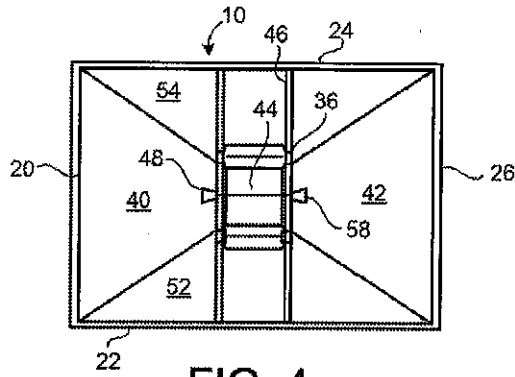


FIG. 4

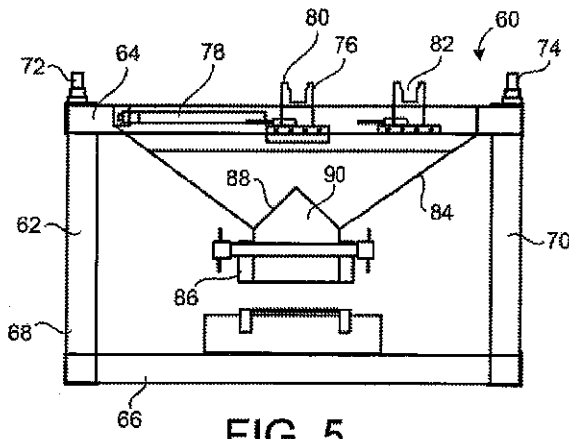


FIG. 5

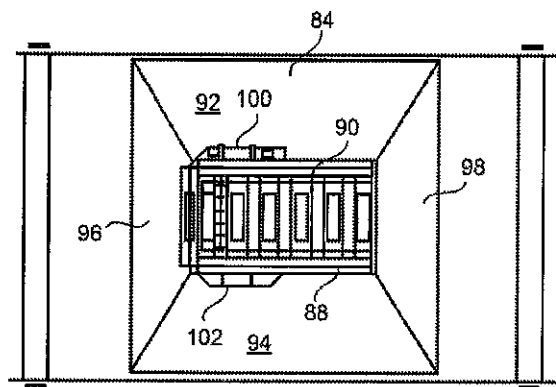


FIG. 6

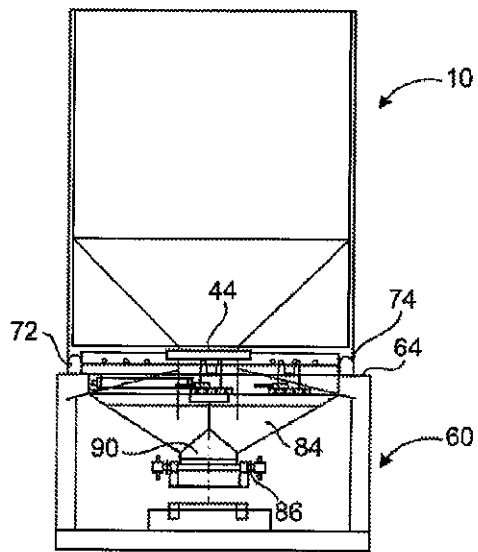


FIG. 7

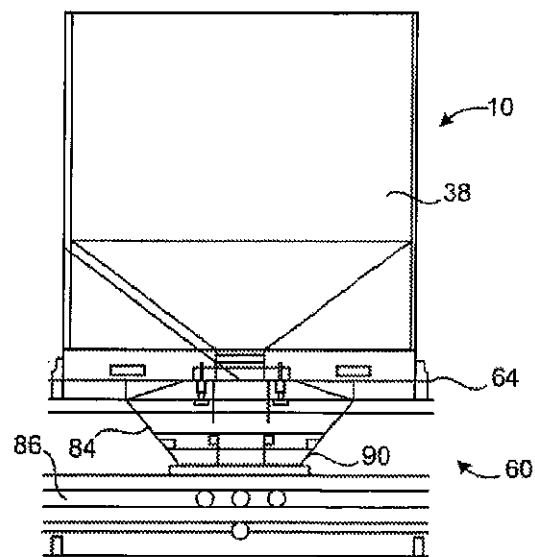


FIG. 8

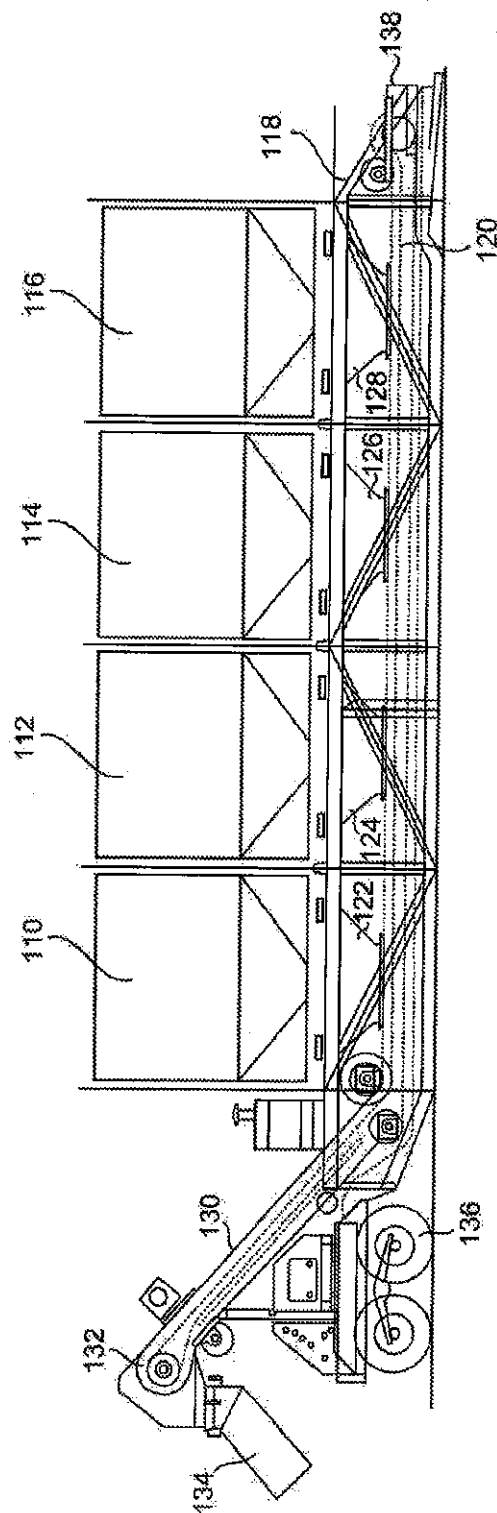


FIG. 9

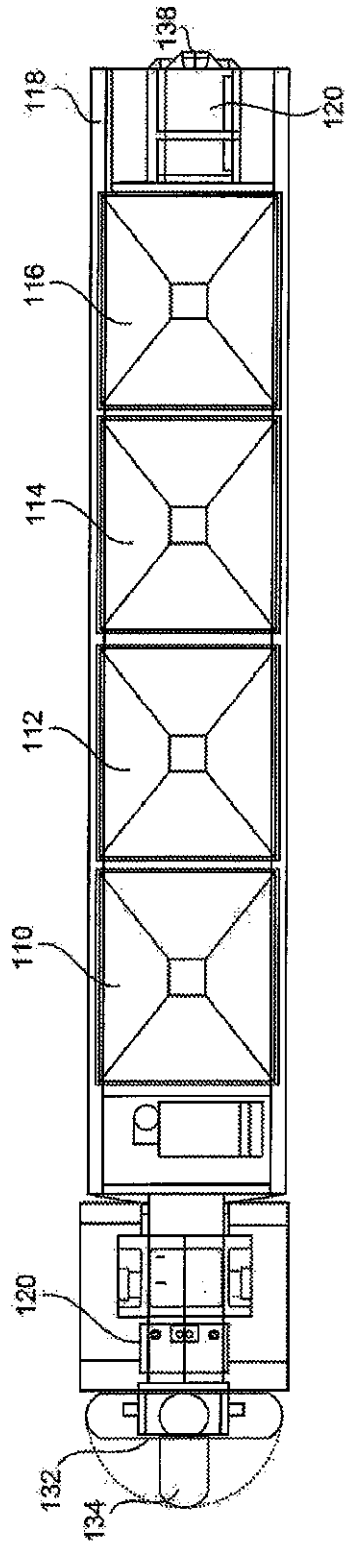


FIG. 10