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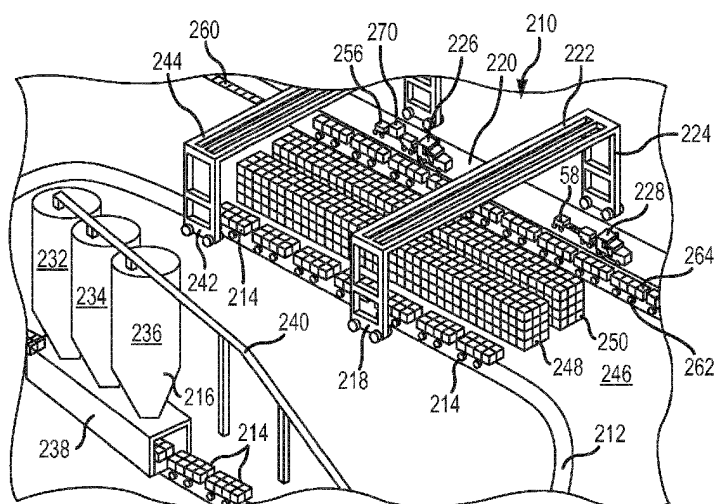
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(54) **PROPPANT DELIVERY SYSTEM AND RAILCAR**

(57) A proppant delivery system has a container-hauling trolley configured to move along a track, a proppant supply station, a proppant discharge station, a container transport pathway and a crane. The proppant supply station is positioned adjacent a first portion of the track. The container-hauling trolley is configured to move along the track to a location adjacent the proppant supply station. The proppant discharge station is positioned adjacent to a second portion of the track. The contain-

er-hauling trolley is further configured to move along the track to a location adjacent the proppant discharge station. The container transport pathway extends in spaced relation to the track. The crane has a first crane portion adjacent the proppant discharge station and a second crane portion adjacent the container transport pathway. The crane is configured to transfer a proppant container from the proppant discharge station toward the container transport pathway.



**FIG. 22**



## EUROPEAN SEARCH REPORT

Application Number  
EP 19 15 5269

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2014/083554 A1 (HARRIS ROBERT A [US]) 27 March 2014 (2014-03-27) * page 1, paragraph 4 * * page 3, paragraph 37 * * page 4, paragraph 46 - page 5, paragraph 46 * * page 5, paragraph 48-49 * * figures 1A, 4-7 *	1-5	INV. B65D88/30 B65D90/58 B61B1/00 B61D3/20
X	US 2013/206415 A1 (SHEESLEY JOHN M [US]) 15 August 2013 (2013-08-15) * page 4, paragraphs 78, 80, 82 * * figure 2 *	1-5	
A	US 2011/017693 A1 (THOMAS PATRICK [US] ET AL) 27 January 2011 (2011-01-27) * abstract; figure 1A *	1-3	
A	US 8 622 251 B2 (OREN JOHN [US]) 7 January 2014 (2014-01-07) * abstract; figure 3 *	1	
			TECHNICAL FIELDS SEARCHED (IPC)
			B65D B61D B61B
<p>3 <del>The present search report has been drawn up for all claims</del></p>			
Place of search <b>Munich</b>		Date of completion of the search <b>26 February 2019</b>	Examiner <b>Piolat, Olivier</b>
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons &amp; : member of the same patent family, corresponding document</p>			

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Application Number

EP 19 15 5269

**CLAIMS INCURRING FEES**

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

**LACK OF UNITY OF INVENTION**

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☒ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

1-5

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION  
SHEET B**

Application Number  
EP 19 15 5269

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-5

Proppant delivery system

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2. claim: 6

Railcar

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 19 15 5269

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on  
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2014083554 A1	27-03-2014	US D847489 S	07-05-2019
		US 2014083554 A1	27-03-2014
		US 2016332809 A1	17-11-2016
		US 2016332811 A1	17-11-2016
-----			
US 2013206415 A1	15-08-2013	CA 2805469 A1	10-08-2013
		US 2013206415 A1	15-08-2013
		US 2016083180 A1	24-03-2016
		US 2016083181 A1	24-03-2016
		US 2016159567 A1	09-06-2016
		US 2018208395 A1	26-07-2018
-----			
US 2011017693 A1	27-01-2011	NONE	
-----			
US 8622251 B2	07-01-2014	US 2013164112 A1	27-06-2013
		US 2014299225 A1	09-10-2014
		US 2014308109 A1	16-10-2014
		US 2015368037 A1	24-12-2015
		US 2016001989 A1	07-01-2016
		US 2016244278 A1	25-08-2016
		US 2016264352 A1	15-09-2016
		US 2016368704 A1	22-12-2016
		US 2017129696 A1	11-05-2017
		US 2017240363 A1	24-08-2017
		US 2018105374 A1	19-04-2018
		US 2018148278 A1	31-05-2018
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