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One LLP 4000 MacArthur Blvd. East Tower, Suite 500 Newport Beach, CA 92660			KING, BRIAN M	
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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* IAN MORRIS, BRUCE HALL, TOLU OKIKIOLU, CP  
WOODRUFF, and THOMAS RIGOLO

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Appeal 2018-005884  
Application 12/486,627  
Technology Center 3700

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Before JILL D. HILL, LEE L. STEPINA, and ARTHUR M. PESLAK,  
*Administrative Patent Judges.*

HILL, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the Examiner's decision to reject claims 1–27. *See* Final Act. 1. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

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<sup>1</sup> We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as SeaOne Holdings, LLC. Br. 1.

### CLAIMED SUBJECT MATTER

Appellant's invention relates to a comprehensive system for the storage and transportation of natural gas in a light hydrocarbon liquid medium. Claims 1, 2, 11, 14, 15, and 24 are independent. Claim 1, reproduced below with certain limitations italicized, is illustrative of the claimed subject matter:

1. A system for processing, storing and transporting natural gas from supply source to market, comprising

a production barge comprising processing equipment modules configured to produce a compressed gas liquid (CGL) product comprising a liquid phase mixture of natural gas and a hydrocarbon liquid solvent, wherein the hydrocarbon liquid solvent includes one or more of ethane, propane and butane, *wherein the production barge is moveable between gas supply locations,*

a marine transport vessel comprising a containment system configured to store the CGL product at storage pressures and temperatures at selected points in the ranges of -40F to -80F, and 900 psig to 2150 psig and associated with storage densities for the natural gas that exceeds the storage densities of compressed natural gas (CNG) for the same storage pressures and temperatures, wherein the marine transport vessel is configured to receive CGL product from the production barge and load into the containment system, wherein the containment system comprises tubular containment piping configured in a looped pipeline containment system with recirculation facilities to maintain temperatures and pressures at selected points in the ranges of - 40F to -80F, and 900 psig to 2150 psig, and

an offloading barge comprising separation, fractionation and offloading equipment modules for separating the CGL product into its natural gas and solvent constituents and offloading natural gas to storage or pipeline facilities, wherein the offloading barge is configured to receive CGL product from the marine transport vessel and *wherein the offloading barge is moveable between gas market offloading locations,*

*wherein the offloading barge is moveable between a gas market offloading location and the marine transport vessel, and wherein the production barge is moveable between a gas supply location and the marine transport vessel.*

## REFERENCES

The prior art relied upon by the Examiner is:

Name	Reference	Date
Bishop	US 2003/0061820 A1	Apr. 3, 2003
Hubbard	US 2006/0010911 A1	Jan. 19, 2006
Hall	US 2007/0017575 A1	Jan. 25, 2007

## REJECTIONS

I. Claims 1–5, 7, 9, 11–18, 20, 22, and 24–27 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Hall and Hubbard. Final Act. 2.

II. Claim 6, 8, 10, 19, 21, and 23 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Hall, Hubbard, and Bishop. Final Act. 15.

## OPINION

### *Rejection I – Hall and Hubbard*

The Examiner finds that Hall discloses a compressed gas liquid (CGL) transport system having loading/processing, off-loading/separating, and transport capabilities, including a transport vessel, but does not disclose a production barge that processes CGL and an offloading barge that separates CGL, which are movable relative to the transport vessel. Final Act. 3–4. The Examiner notes that, although the preferred embodiment of Hall performs the three operations in the same vessel, Hall discloses that “the process trains can be installed separate from the transport vessel.” *Id.* at 4 (citing Hall ¶ 10). The Examiner finds that Hubbard discloses a movable

producing barge and a movable offloading barge with a transport movable between the barges. *Id.* at 3–4. The Examiner considers that it would have been obvious to have CGL production and offloading on movable barges by combining prior art elements according to known methods to yield predictable results. *Id.*

Appellant argues, *inter alia*, that the combination of references does not teach or suggest separate, movable barges, because Hall has an integral system and Hubbard does not use movable barges. Br. 12. Specifically, Appellant argues that processing, storage and offloading in Hall are all on the same vessel, and that Hubbard’s vessels operate as a stationary offshore floating vessel. Br. 11 (citing Hall ¶ 9; Hubbard ¶¶ 47, 63).

The Examiner responds that Hall prefers one ship, but teaches separating the processing trains from the transport system. Ans. 19 (citing Hall ¶ 10). Regarding Hubbard, the Examiner states that Hubbard’s “FSRU (the offloading facility) includes a lightering barge and[,] as such[,] the system would include offloading means that include an offloading barge [being] . . . moveable between gas market offloading locations.” Ans. 20 (citing Hubbard ¶ 67). The Examiner thus concludes that, because “Hubbard teaches a system for processing natural gas that includes moveable barges as part of the processing equipment,” the combination of Hall and Hubbard teach movable barges for processing CGL. Ans. 21

Appellant has the better position. The portion of Hall upon which the Examiner relies for “separate systems” states only that Hall’s method of storing and transporting natural gas “is not limited to ship installation and is suited to other forms of transportation with or without the process train installed on the transport medium.” Hall ¶ 10. Paragraph 2 of Hall discloses

that “the present invention is particularly applicable to ship or barge installation for marine transportation and [] on board gas processing, but is equally applicable to ground modes of transportation such as rail, trucking and land storage systems for natural gas.” Thus, while Hall discloses transporting using different types of transportation modes and discloses that transportation does not need to include processing, Appellant is correct that Hall does not explicitly suggest a processing vessel separate from the transport vessel. *See* Br. 13.

Regarding Hubbard, although Hubbard discloses a floating facility rather than an on-shore facility, the Examiner has not sufficiently established that Hubbard’s floating facility is “movable” as claimed. In the Final Action, the Examiner states that Hubbard discloses a barge, and “[a]s it is a barge it is moveable between locations.” Final Act. 3. In the Answer, the Examiner states that Hubbard’s “FSRU (the offloading facility) includes a lightering barge and as such the system would include offloading means that include an offloading barge which as a barge would be moveable between gas market offloading locations.” Ans. 20. However, Hubbard’s disclosure of a “barge” is with respect to vessels that interact with Floating, Production, Storage and Offloading vessel (FPSO 30), or Floating, Storage and Regassification Unit (FSRU 50). Specifically, Hubbard discloses that “FSRU **50** may comprise equipment for side by side and/or tandem mooring and berthing of LNG transport ships and lightering barges.” Hubbard ¶ 48. Hubbard also discloses that “FSRU **50** may comprise lightering barge handling facilities for handling approximately 20,000 m<sup>3</sup> capacity, generally utilizing side by side berthing for loading.” *Id.* ¶ 56. Hubbard does not disclose that the lightering barge processes the natural gas. That is, claim 1

recites “a production barge comprising processing equipment modules configured to produce a compressed gas liquid (CGL) product . . . is moveable.”

In contrast to disclosing a movable facility, Hubbard discloses that “FSRU **50** will comprise marine systems and utilities as . . . necessary to operate as a stationary offshore floating vessel.” Hubbard ¶ 47; *see also* Br. 11. The only disclosed movement in Hubbard is “weather vaning” or pivoting. Hubbard ¶ 54 (“FSRU **50** will utilize single point mooring to allow the FSRU to essentially weather vane around the risers.”). This movement, however, does not qualify as movement “wherein the production barge is moveable between a gas supply location and the marine transport vessel,” as required by claim 1. The Examiner’s finding that Hubbard discloses movable barges for processing and offloading is, therefore, not supported by a preponderance of the evidence.

Thus, the record as a whole does not support “the legal conclusion that the invention would have been obvious.” *In re Oetiker*, 977 F.2d 1443, 1449 (Fed. Cir. 1992). For these reasons, we do not sustain the rejection of claim 1. The Examiner relies on the same finding for independent claims 2, 11, 14, 15, and 24. *See* Final Act. 4–5 and 7–14. For the same reasons, we do not sustain the rejection of claims 2, 11, 14, 15, and 24, and claims 3–5, 7, and 9, which depend from claim 2, claims 12 and 13, which depend from claim 11, claims 16–18, 20, 22, and 23, which depend from claim 15, and claims 25–27, which depend from claim 24.

### *Rejection II – Hall, Hubbard, and Bishop*

Rejection II relies on the same proposed combination of Hall and Hubbard, with additional disclosure of Bishop. The Examiner does not rely

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on the additional disclosure of Bishop in any manner that would remedy the conclusion set forth in the rejection based on Hall and Hubbard. We do not sustain Rejection II for the same reasons set forth above.

DECISION SUMMARY

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1-5, 7, 9, 11-18, 20, 22, 24-27	103	Hall and Hubbard		1-5, 7, 9, 11-18, 20, 22, 24-27
6, 8, 10, 19, 21, 23	103	Hall, Hubbard, Bishop		6, 8, 10, 19, 21, 23
<b>Overall Outcome:</b>				1-27

REVERSED