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20558	7590	01/23/2020	EXAMINER	
SMITH IP SERVICES, P.C. P.O. Box 997 Rockwall, TX 75087			GAY, JENNIFER HAWKINS	
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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* BROCK W. WATSON, ANDREW M. FERGUSON,  
ROGER L. SCHULTZ, GARY P. FUNKHOUSER, and  
JENNA N. ROBERTSON

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Appeal 2019-004601  
Application 15/432,041  
Technology Center 3600

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Before NINA L. MEDLOCK, PHILIP J. HOFFMANN, and  
BRUCE T. WIEDER, *Administrative Patent Judges*.

HOFFMANN, *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 1–30. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM IN PART.

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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 Thru Tubing Solutions, Inc. Appeal Br. 3.

According to Appellant, the “disclosure relates generally to equipment utilized and operations performed in conjunction with a subterranean well[,] and . . . more particularly provides for plugging devices and their deployment in wells.” Spec. 1, ll. 20–23. Claims 1, 11, and 21 are the independent claims on appeal. Below, we reproduce claim 1 as illustrative of the appealed claims:

1. A system for use with a subterranean well, the system comprising:
  - a perforating assembly including at least one perforator, the perforating assembly conveyed through a wellbore with fluid flow through the wellbore into an earth formation; and
  - plugging devices spaced apart from the perforating assembly in the wellbore, the plugging devices conveyed through the wellbore with the fluid flow.

#### REJECTIONS AND PRIOR ART

The Examiner rejects the claims as follows:<sup>2,3</sup>

- I. Claims 21, 23, 29, and 30 under 35 U.S.C. § 102(a)(1) as anticipated by Trummer et al. (US 2010/0122813 A1, pub. May 20, 2010) (“Trummer”);
- II. Claims 21, 23, 29, and 30 under 35 U.S.C. § 103 as unpatentable over Trummer and Perf Sealers, *The History of Perforation Ball Sealers in the Oil and Gas Industry*, (2014-

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<sup>2</sup> We reorder the rejections relative to the order the Examiner sets forth in the Final Office Action.

<sup>3</sup> Based on Appellant’s filing of a Terminal Disclaimer on November 13, 2018, the Examiner withdraws a double-patenting rejection of claims 1–6, 11, and 14–16. Answer 31–32.

2019), <https://www.perfsealers.com/history-of-performation-ball-sealers/> (“History of Perforation Ball Sealers”);

- III. Claim 22 under 35 U.S.C. § 103 as unpatentable over Trummer and Dotson et al. (US 2015/0075793 A1, pub. Mar. 19, 2015) (“Dotson”);
- IV. Claim 22 under 35 U.S.C. § 103 as unpatentable over Trummer, Dotson, and History of Perforation Ball Sealers;
- V. Claims 24 and 26 under 35 U.S.C. § 103 as unpatentable over Trummer and Davies (US 3,437,147, iss. Apr. 8, 1969);
- VI. Claims 24 and 26 under 35 U.S.C. § 103 as unpatentable over Trummer, Davies, and History of Perforation Ball Sealers;
- VII. Claim 25 under 35 U.S.C. § 103 as unpatentable over Trummer, Davies, Lafferty et al. (US 2012/0285695 A1, pub. Nov. 15, 2012) (“Lafferty”), and Ghassemzadeh (US 2010/0152070 A1, pub. June 17, 2010);
- VIII. Claim 25 under 35 U.S.C. § 103 as unpatentable over Trummer, Davies, Lafferty, Ghassemzadeh, and History of Perforation Ball Sealers;
- IX. Claims 27 and 28 under 35 U.S.C. § 103 as unpatentable over Trummer and Lafferty;
- X. Claims 27 and 28 under 35 U.S.C. § 103 as unpatentable over Trummer, Lafferty, and History of Perforation Ball Sealers;
- XI. Claims 1–3, 9–13, 19, and 20 under 35 U.S.C. § 103 as unpatentable over Trummer and Dotson;
- XII. Claims 4, 6, 14, and 16 under 35 U.S.C. § 103 as unpatentable over Trummer, Dotson, and Davies;

XIII. Claims 5 and 15 under 35 U.S.C. § 103 as unpatentable over Trummer, Dotson, Lafferty, and Ghassemzadeh;

XIV. Claims 7, 8, 17, and 18 under 35 U.S.C. § 103 as unpatentable over Trummer, Dotson, and Lafferty; and

## ANALYSIS

### Rejection I—Anticipation rejection of independent claim 21, and dependent claims 23, 29, and 30

#### Independent claim 21, and its dependent claims 23 and 29

For the reasons discussed in detail below, Appellant does not persuade us that the Examiner's anticipation rejection of claims 21, 23, and 29 is in error. Thus, we sustain the rejection.

Independent claim 21 recites the following:

21. A method of deploying plugging devices in a wellbore, the method comprising:

conveying the plugging devices through the wellbore with fluid flow through the wellbore; and

conveying a perforating assembly through the wellbore while the plugging devices are being conveyed through the wellbore outside of the perforating assembly.

Appeal Br., Claims App. Appellant argues that the Examiner errs in rejecting the claims as anticipated by Trummer, because Trummer does not disclose conveying a perforating assembly through a wellbore while conveying plugging devices through the wellbore outside of the perforating assembly. *See, e.g.*, Reply Br. 13–15. Based on our review of the record, we disagree with Appellant.

We note Appellant's citation of Trummer's paragraph 43. *Id.* at 13–14. Nonetheless, the Examiner's reliance on Trummer's Figure 2 adequately supports a finding that Trummer discloses conveying (or having conveyed)

perforating gun assembly 50 (on which the Examiner relies to disclose the claimed “perforating assembly”) through wellbore 20, while ball sealers 24 (on which the Examiner relies to disclose the claimed “plugging devices”) are outside of assembly 50 and being conveyed through the wellbore.

Answer 9–11. Specifically, the Examiner states that

[a]s can be seen in . . . [Trummer’s] Figure 2, . . . perforating gun 34A, which is used to create perforations 22 in zone 14A, [(see Trummer ¶ 32)], has created . . . perforations 22 in zone 14A[,] and has also been moved away from zone 14A but is not yet adjacent the next zone[, zone] 14B. In order for the perforating gun assembly to have moved away from its position adjacent zone 14A it must have been conveyed in an upward direction. As can also be seen in Figure 2, ball sealers 24 are located in the wellbore but have as of yet [not] sealed the perforations. Thus, the ball sealers are still being conveyed, pumped into the wellbore [(see *id.* ¶ 33)], while the perforating gun assembly is being moved or conveyed in the wellbore.

Answer 10–11 (bold omitted).

Dependent claim 30

For the following reasons, we sustain the Examiner’s anticipation rejection of dependent claim 30.

Claim 30 recites the following:

30. The method of claim 21, further comprising cutting the plugging devices, after the plugging devices have sealingly engaged openings.

Appeal. Br., Claims App. The Examiner’s reliance on Trummer’s paragraph 22 adequately supports the rejection (Answer 13), and Appellant does not persuade us that the Examiner errs (Reply Br. 15). Specifically, Trummer’s paragraph 22 discloses, in relevant part, that the plugging devices “may implode or explode” (Trummer ¶ 22), and the Examiner

determines that implosion or explosion of the plugging devices discloses cutting the plugging devices, as claimed (Answer 13). Appellant does not address the Examiner's findings, and, thus, does not persuade us of Examiner error.

*Rejection II—Obviousness rejection of independent claim 21, and dependent claims 23, 29, and 30*

As discussed above, we sustain the Examiner's anticipation rejection of claims 21, 23, 29, and 30 based on Trummer. In this case, Trummer anticipates each of these claims, and therefore a combination of Trummer and History of Ball Perforation Sealers discloses all of the claims' recitations. *See In re McDaniel*, 293 F.3d 1379, 1385 (Fed. Cir. 2002) ("It is well settled that 'anticipation is the epitome of obviousness.'").

*Rejections III and IV—Obviousness rejections of dependent claim 22*

Appellant argues that we should reverse claim 22's obviousness rejections for the same reasons that we should reverse claim 21's anticipation and obviousness rejections. Reply Br. 13–15, 41. Inasmuch as we sustain claim 21's rejections, we also sustain claim 22's rejections.

*Rejections V and VI—Obviousness rejections of dependent claims 24 and 26*

Appellant argues that we should reverse the obviousness rejections of claims 24 and 26 for the same reasons that we should reverse claim 21's anticipation and obviousness rejections. Reply Br. 32, 42. Inasmuch as we sustain claim 21's rejections, we also sustain the rejections of these dependent claims.

Rejections VII and VIII—Obviousness rejections of dependent claim 25

Appellant argues that we should reverse claim 25's obviousness rejections for the same reasons that we should reverse claim 21's anticipation and obviousness rejections. Reply Br. 33, 43. Inasmuch as we sustain claim 21's rejections, we also sustain claim 25's obviousness rejections.

Rejections IX and X—Obviousness rejections of dependent claims 27 and 28

Appellant argues that we should reverse the obviousness rejections of claims 27 and 28 for the same reasons that we should reverse claim 21's anticipation and obviousness rejections. Reply Br. 34, 44. Inasmuch as we sustain claim 21's rejections, we also sustain the rejections of dependent claims 27 and 28.

Rejections XI—Obviousness rejection of independent claims 1 and 11, and dependent claims 2, 3, 9, 10, 12, 13, 19, and 20

Independent claim 1, and its dependent claims 2, 3, 9, and 10

As set forth above, independent claim 1 recites, in relevant part, “a perforating assembly including at least one perforator, *the perforating assembly conveyed through a wellbore with fluid flow through the wellbore into an earth formation.*” Appeal Br., Claims App. (emphases added).

Based on our review, the Examiner does not support adequately that it would have been obvious to combine Trummer and Dotson to provide a perforating assembly that is conveyed as claimed.

The Examiner does not rely on Trummer to disclose conveying a perforator assembly through a wellbore with fluid flow through the wellbore into an earth formation. Instead, the Examiner relies on Dotson to disclose conveying a perforator assembly as claimed, and determines that it would have been obvious to so-convey Trummer's perforator assembly. *See, e.g.,* Answer 13–21.

We agree with Appellant, however, that each of the portions of Dotson on which the Examiner relies discloses conveying perforating tool 10 with fluid flow only into production string 15—no portion discloses anything beyond flowing fluid through something other than production string 15, and no portion discloses otherwise conveying perforating tool 10 with fluid flow. Reply Br. 16–22, *n.b.* at 16 (“Dotson does not disclose or suggest pumping a perforating assembly through a wellbore with fluid flow through the wellbore *into an earth formation*, as required by claim 1. Dotson instead describes that . . . jet perforating tool 10 may be pumped down . . . tubing string 15 until it comes to rest on . . . seat nipple 17 (see at least paragraphs 0010, 0014 and 0041, and F[igure]1). The fluid can flow down the bore of . . . tubing string 15 and back up the annulus between . . . tubing string 15 and . . . casing 13.”).

Thus, in view of foregoing, the Examiner does not support adequately that it would have been obvious to modify Trummer, based on Dotson, to convey a perforating assembly through a wellbore with fluid flow through the wellbore into an earth formation, as claimed. Accordingly, we do not sustain the Examiner's obviousness rejection of independent claim 1, and of claims 2, 3, 9, and 10 that depend from claim 1.

Independent claim 11, and its dependent claims 12, 13, 19,  
and 20

Independent claim 11 includes a recitation similar to that discussed above for claim 1. *See* Appeal Br., Claims App. (Claim 11) (“conveying a perforating assembly including a dispensing tool through the wellbore with fluid flow through the wellbore into an earth formation.”). Therefore, for reasons similar to those discussed above with respect to claim 1, we also do not sustain the Examiner’s obviousness rejection of independent claim 11, and its dependent claims 12, 13, 19, and 20.

Rejections XI–XIV—Obviousness rejections of dependent claims 4–8  
and 14–18

Each of claims 4–8 and 14–18 depends from one of independent claims 1 and 11. Because we do not sustain the independent claims’ obviousness rejection, and the Examiner does not rely on any of Davies, Lafferty, and Ghassemzadeh to disclose anything that would remedy the above-discussed deficiency in the independent claims’ rejection, we also do not sustain any of the Examiner’s obviousness rejections of claims 4–8 and 14–18.

## CONCLUSION

We AFFIRM the Examiner’s anticipation and obviousness rejections of claims 21–30.

We REVERSE the Examiner’s obviousness rejections of claims 1–20.

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Basis/Reference(s)</b>	<b>Affirmed</b>	<b>Reversed</b>
21, 23, 29, 30	102(a)(1)	Trummer	21, 23, 29, 30	
21, 23, 29, 30	103	Trummer, History of Perforation Ball Sealers	21, 23, 29, 30	
22	103	Trummer, Dotson	22	
22	103	Trummer, History of Perforation Ball Sealers, Dotson	22	
24, 26	103	Trummer, Davies	24, 26	
24, 26	103	Trummer, History of Perforation Ball Sealers, Davies	24, 26	
25	103	Trummer, Davies, Lafferty, Ghassemzadeh	25	
25	103	Trummer, History of Perforation Ball Sealers, Davies, Lafferty, Ghassemzadeh	25	
27, 28	103	Trummer, Lafferty	27, 28	
27, 28	103	Trummer, History of Perforation Ball Sealers, Lafferty	27, 28	
1-3, 9-13, 19, 20	103	Trummer, Dotson		1-3, 9-13, 19, 20
4, 6, 14, 16	103	Trummer, Dotson, Davies		4, 6, 14, 16
5, 15	103	Trummer, Dotson, Lafferty, Ghassemzadeh		5, 15
7, 8, 17, 18	103	Trummer, Dotson, Lafferty		7, 8, 17, 18
<b>Overall Outcome:</b>			21-30	1-20

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED IN PART