

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

JOHN CRANE, INC.,
JOHN CRANE PRODUCTION SOLUTIONS, INC. &
JOHN CRANE GROUP CORP.,
Petitioner,

v.

FINALROD IP, LLC,
Patent Owner.

Case IPR2016-01786
Patent 9,045,951 B2

Before SALLY C. MEDLEY, LYNNE E. PETTIGREW, and
AMANDA F. WIEKER, *Administrative Patent Judges*.

WIEKER, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

John Crane, Inc., John Crane Production Solutions, Inc., and John Crane Group Corp. (collectively, “Petitioner”) filed a Petition requesting an *inter partes* review of claims 4, 6–8, 14, 15, 17, 21, 22, 35, 47, 50, 52, 57, 59, and 65–68 of U.S. Patent No. 9,045,951 B2 (Ex. 1001, “the ’951 patent”). Paper 2 (“Pet.”). In response, Patent Owner, Finalrod IP, LLC, filed a Preliminary Response. Paper 6 (“Prelim. Resp.”). We have jurisdiction under 35 U.S.C. § 314, which provides that an *inter partes* review may not be instituted “unless . . . the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

For the reasons set forth below, we deny institution of an *inter partes* review of the ’951 patent.

A. Related Matter

According to the parties, the ’951 patent is involved in the following lawsuit: *Finalrod IP, LLC v. John Crane, Inc., et al.*, Case No. 7-15-cv-00097 (W.D. Tex. 2015). Pet. 1; Paper 5, 2. The ’951 patent is also the subject of PTAB proceeding IPR2016-01827. Pet. 1; Paper 5, 3.

The ’951 patent claims benefit to issued U.S. Patent No. 8,851,162 B2, which was the subject of PTAB proceeding IPR2016-00521 (terminated). Pet. 1 (misstating proceeding number); Paper 5, 2–3.

B. The ’951 Patent

The ’951 patent relates to end fitting connectors for oil well sucker rods. Ex. 1001, 1:15–20. Specifically, the ’951 patent discloses that fiberglass sucker rods may be connected together with end fittings to form a

string that connects a down hole pump to an above-ground pump drive, which is used to extract oil from a well. *Id.* at 1:15–20, 25:7–35, Fig. 12.

Figure 1 of the '951 patent is reproduced below.

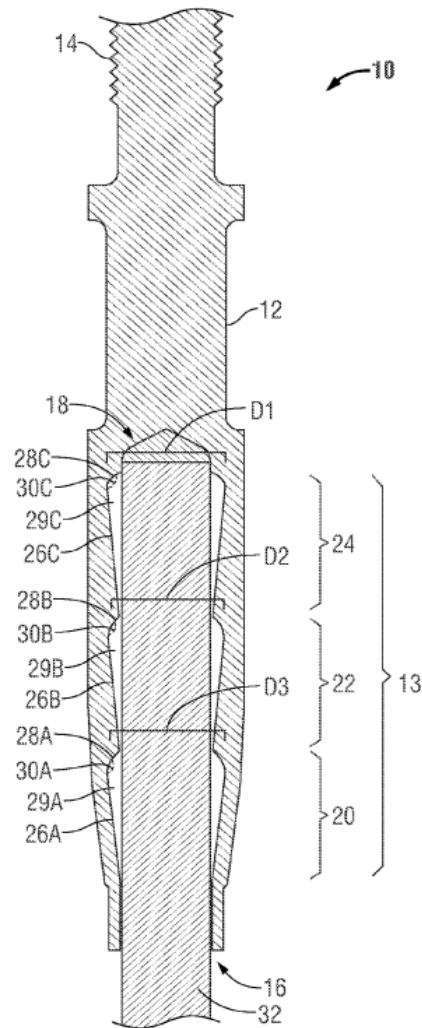


Figure 1

Figure 1 depicts a cross-sectional view of a rod and associated end fitting. *Id.* at 6:4–6. End fitting 10 includes open end 16, for receiving sucker rod 32, and closed end 18. *Id.* at 6:66–7:2. The interior surface of the end fitting includes wedge system 13, having outer 20, intermediate 22, and inner 24 wedges. *Id.* at 7:5–7. Each wedge includes a leading edge

(26A, 26B, 26C), a trailing edge (28A, 28B, 28C), and an angle between those edges (30A, 30B, 30C). *Id.* at 7:13–24.

A securing material such as resin is provided between rod 32 and fitting 10, wherein the resin cures and forms wedge sections 29A, 29B, 29C that protrude from the rod and fixedly secure the rod in the fitting. *Id.* at 7:7–12, 7:28–35. The '951 patent explains that contact between the protruding wedges of resin and the leading or trailing edges of the fitting distributes tensile and axial compressive forces at each of the wedge portions. *Id.* at 7:43–54. Further,

[t]he amount of each compressive force applied to each respective wedge portion can vary depending on the length of the leading edge, or trailing edge against which the protruding wedge of cured epoxy/resin material is urged by the axial force from reciprocation of the sucker rod string. The size of the angles influences the angle at which each of the edges extends relative to the corresponding protruding wedge of resin material and therefore also influences the force applied to each wedge portion.

Id. at 7:54–64 (reference numerals omitted). The '951 patent further explains that the lengths of the leading edges, trailing edges, and/or the size of the angles can be arranged to create a desired force distribution profile along the length of the end fitting, including to provide a profile in which compressive load at the outer wedge portion exceeds that at the inner wedge portion. *Id.* at 3:21–51.

C. Illustrative Claim

Challenged claims 4, 7, 14, and 21 are independent claims. Ex. 1001, 27:5–52, 27:57–28:39, 28:62–29:27, 29:44–30:28. Challenged claims 6 and 65 depend directly from claim 4. *Id.* at 27:55–56, 34:12–22. Challenged claims 8 and 66 depend directly from claim 7. *Id.* at 28:40–42, 34:23–33.

Challenged claims 15, 17, and 67 depend directly or indirectly from claim 14. *Id.* at 29:28–32, 29:35–36, 34:34–44. Challenged claims 22, 35, 50, 52, 57, 59, and 68 depend directly from claim 21. *Id.* at 30:29–31, 31:7–9, 31:59–61, 31:65–67, 32:12–14, 32:18–20, 34:45–55.

Claim 4, reproduced below, is illustrative:

4. An end fitting for a sucker rod, the end fitting comprising:

a body having an interior, a closed end, an open end, and a wedge system formed in the interior, wherein the wedge system comprises:

an outer wedge portion formed in the interior proximate to the open end, wherein the outer wedge portion comprises a first leading edge, a first trailing edge, and a first angle between the first leading edge and the first trailing edge, wherein the first leading edge faces the open end and the first trailing edge faces the closed end, and wherein the length of the first leading edge, the length of the first trailing edge, and the size of the first angle define a first distribution of force in the outer wedge portion;

an intermediate wedge portion formed in the interior between the outer wedge portion and the closed end, wherein the intermediate wedge portion comprises a second leading edge, a second trailing edge, and a second angle between the second leading edge and the second trailing edge, wherein the second leading edge faces the open end and the second trailing edge faces the closed end, and wherein the length of the second leading edge, the length of the second trailing edge, and the size of the second angle define a second distribution of force in the intermediate wedge portion; and

an inner wedge portion formed in the interior between the intermediate wedge portion and the closed end, proximate to the closed end, wherein the inner wedge portion comprises a third leading edge, a third

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