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Paper 6
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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 IPR2016-01827
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 60–63 and 69 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 5 ("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 4, 2. The '951 patent is also the subject of PTAB proceeding IPR2016-01786. Pet. 1; Paper 4, 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 4, 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.

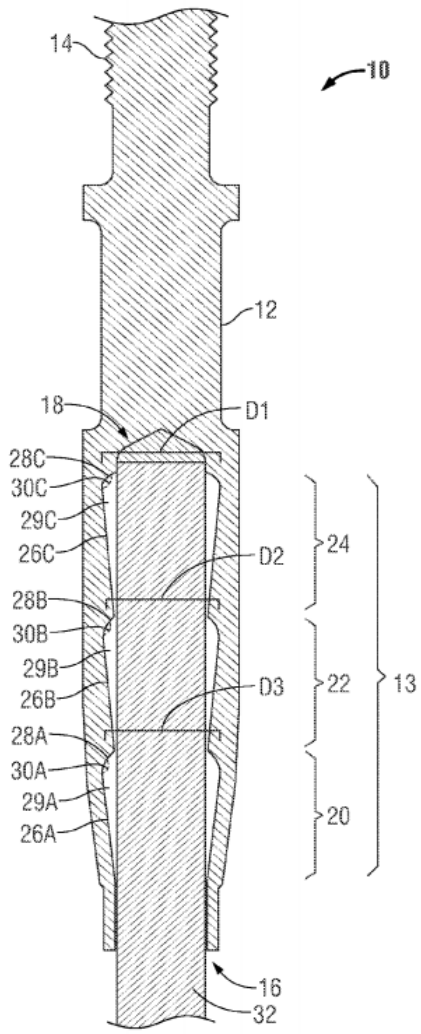

Figure 1

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 claim 60 is an independent claim. Ex. 1001, 32:22–33:3. Challenged claims 61–63 and 69 depend directly or indirectly from claim 60. *Id.* at 33:4–66, 34:55–65.

Claim 60, reproduced below, is illustrative:

60. An end fitting for a fiber composite 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;

the wedge system comprising an outer wedge portion formed in the interior proximate the open end, the outer wedge portion configured to distribute compressive force in the sucker rod proximate the open end, the outer wedge portion in cross-section having a respective outer wedge triangular configuration, the outer wedge triangular configuration comprising an outer leading edge extending between the open end and an outer trailing edge, the outer leading edge intersecting the outer trailing edge at a respective outer vertex characterized by a respective outer vertex angle, the outer wedge triangular configuration comprising an imaginary outer triangle base opposite the outer vertex, the outer wedge triangular configuration determining distribution by the outer wedge portion of compressive force in the sucker rod proximate the open end;

the wedge system comprising an inner wedge portion formed in the interior proximate the closed end, the inner wedge portion configured to distribute compressive force in the sucker rod proximate the closed end, the inner wedge portion in cross-section having a respective inner wedge triangular configuration, the inner wedge triangular configuration comprising an inner leading edge extending between the closed end and an inner trailing edge, the inner leading edge intersecting the inner trailing edge at a respective inner vertex characterized by a respective inner vertex angle, the inner wedge triangular configuration comprising an imaginary inner triangle base opposite the inner vertex, the inner wedge triangular configuration determining distribution by the inner wedge portion of compressive force in the sucker rod proximate the closed end; and

the inner wedge triangular configuration differing from the outer wedge triangular configuration to bias distribution of

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