

(12) United States Patent

Rutledge et al.

(54) SUCKER ROD APPARATUS AND METHOD

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(52) U.S. Cl.

CPC F04B 53/14 (2013.01); B29C 66/5261 (2013.01); B29C 65/542 (2013.01); E21B 17/1071 (2013.01); B29C 65/4835 (2013.01); B29C 66/53 (2013.01); B29L 2031/06 (2013.01); B29C 66/721 (2013.01); F04B 47/02 (2013.01); B29C 66/1246 (2013.01); B29C 66/12441 (2013.01)

(10) Patent No.:

US 8,851,162 B2 (45) **Date of Patent:** Oct. 7, 2014

USPC 166/68; 166/105; 403/265; 403/268

Field of Classification Search See application file for complete search history.

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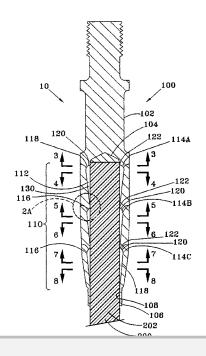
PCT search report for PCT/US12/00347 dated Nov. 29, 2012 (26 pages).

Primary Examiner — Giovanna Wright

ABSTRACT

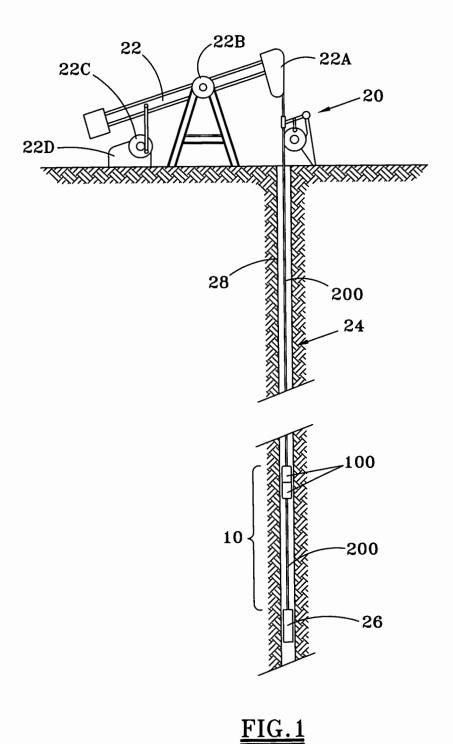
The present disclosure relates to a fiberglass rod with connectors on each end. Each connector has a rod-receiving receptacle having an open end, a closed end, and axially spaced annular wedge shaped surfaces such that the compressive forces between the rod and the respective connector are defined by the shape of the wedged surfaces.

40 Claims, 5 Drawing Sheets

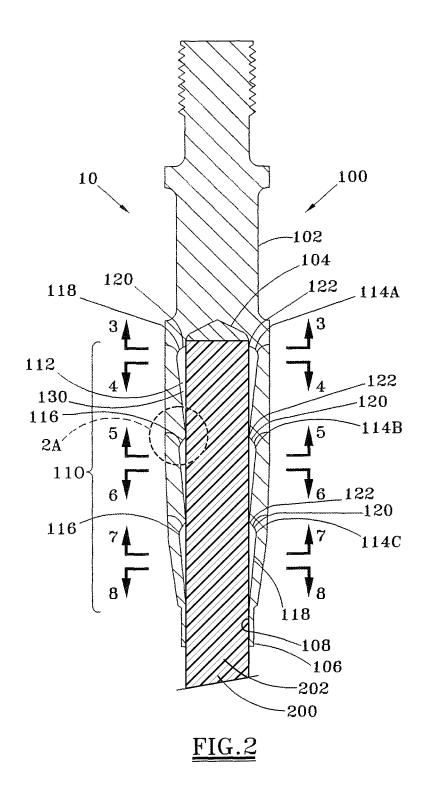


Petitioners' Exhibit 1023

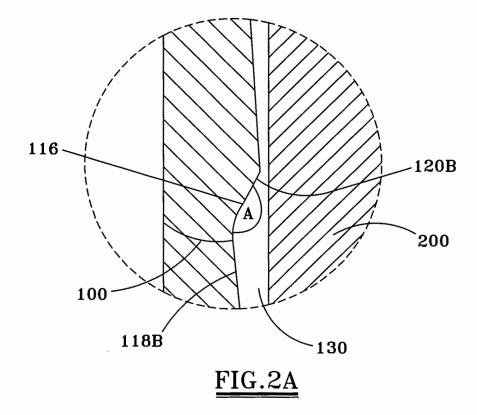












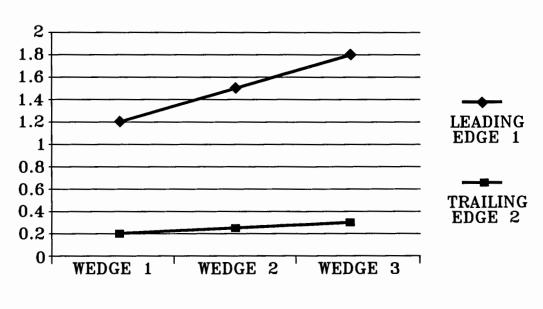
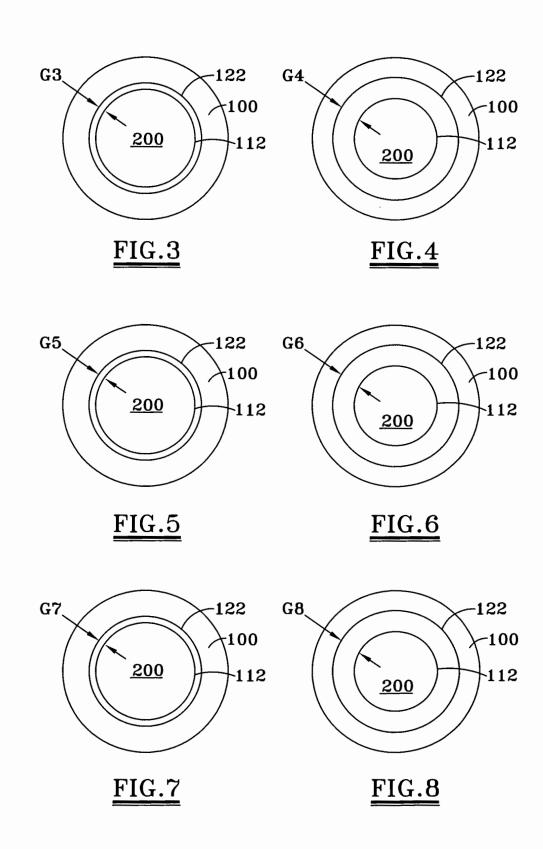


FIG.9

Oct. 7, 2014





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