



US007861774B2

(12) **United States Patent**  
**Fehr et al.**

(10) **Patent No.:** **US 7,861,774 B2**  
(45) **Date of Patent:** **Jan. 4, 2011**

(54) **METHOD AND APPARATUS FOR WELLBORE FLUID TREATMENT**

(56) **References Cited**

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(75) Inventors: **Jim Fehr**, Edmonton (CA); **Daniel Jon Themig**, Cochrane (CA)  
(73) Assignee: **Packers Plus Energy Services Inc.**, Calgary (CA)  
(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 32 days.

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(21) Appl. No.: **12/471,174**

(22) Filed: **May 22, 2009**

(65) **Prior Publication Data**

US 2010/0065276 A1 Mar. 18, 2010

**Related U.S. Application Data**

(60) Continuation of application No. 11/550,863, filed on Oct. 19, 2006, now Pat. No. 7,543,634, which is a continuation of application No. 11/104,467, filed on Apr. 13, 2005, now Pat. No. 7,134,505, which is a division of application No. 10/299,004, filed on Nov. 19, 2002, now Pat. No. 6,907,936.  
(60) Provisional application No. 60/331,491, filed on Nov. 19, 2001, provisional application No. 60/404,783, filed on Aug. 21, 2002.

(51) **Int. Cl.**

**E21B 43/14** (2006.01)  
**E21B 33/124** (2006.01)  
**E21B 34/14** (2006.01)

(52) **U.S. Cl.** ..... **166/191**; 166/308.1; 166/177.5; 166/318; 166/334.4; 166/147

(58) **Field of Classification Search** ..... 166/387, 166/386, 373, 374, 142, 146, 147, 184, 185, 166/194, 318, 269, 126, 127, 131, 191, 305.1, 166/306, 313, 308.1, 177.5, 50, 332.1, 332.4, 166/334.4

See application file for complete search history.

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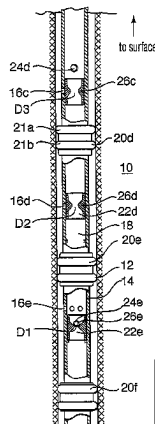
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(57) **ABSTRACT**

A tubing string assembly is disclosed for fluid treatment of a wellbore. The tubing string can be used for staged wellbore fluid treatment where a selected segment of the wellbore is treated, while other segments are sealed off. The tubing string can also be used where a ported tubing string is required to be run in in a pressure tight condition and later is needed to be in an open-port condition.

**16 Claims, 9 Drawing Sheets**



**BAKER HUGHES INCORPORATED**  
Exhibit 1001

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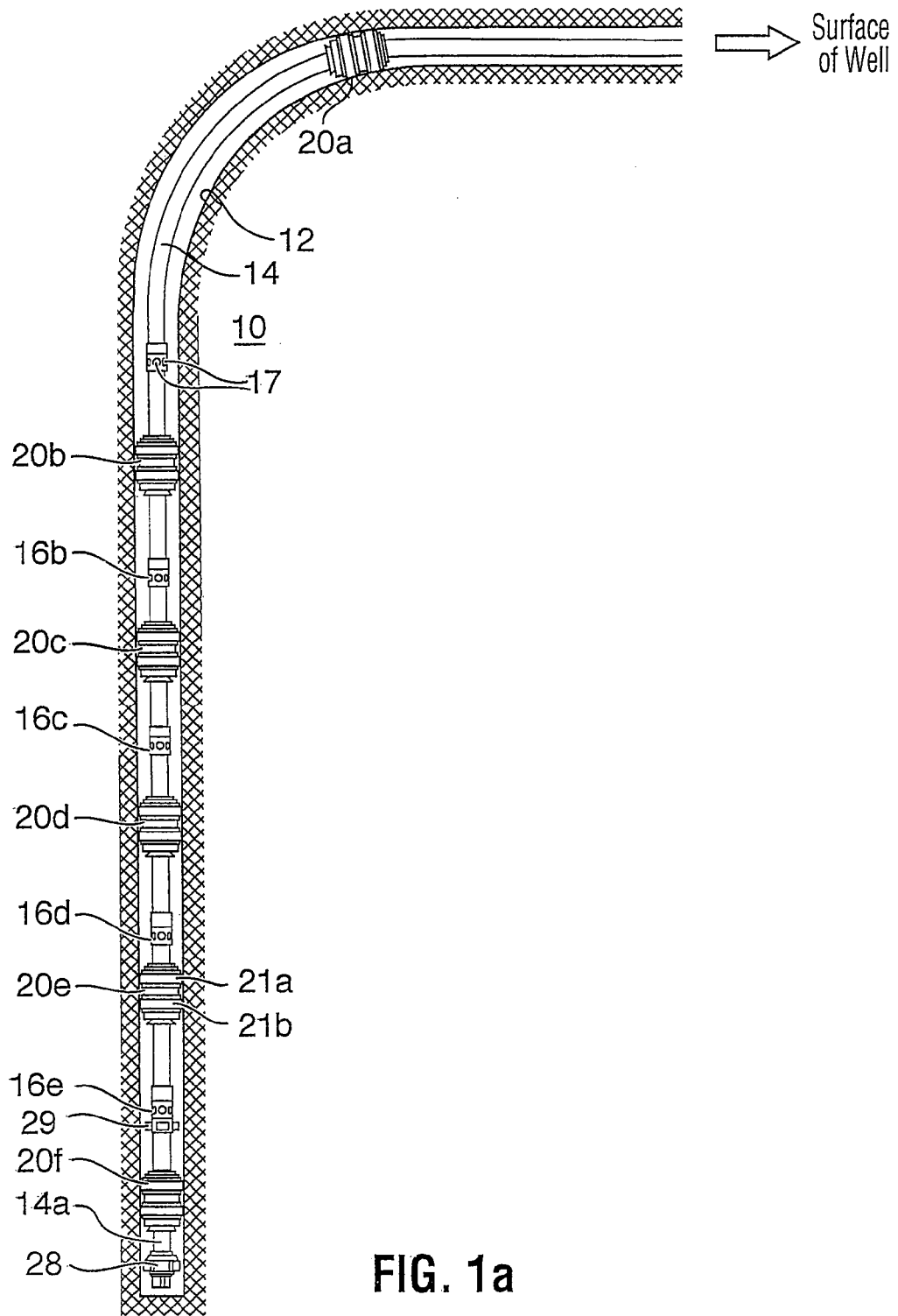


FIG. 1a

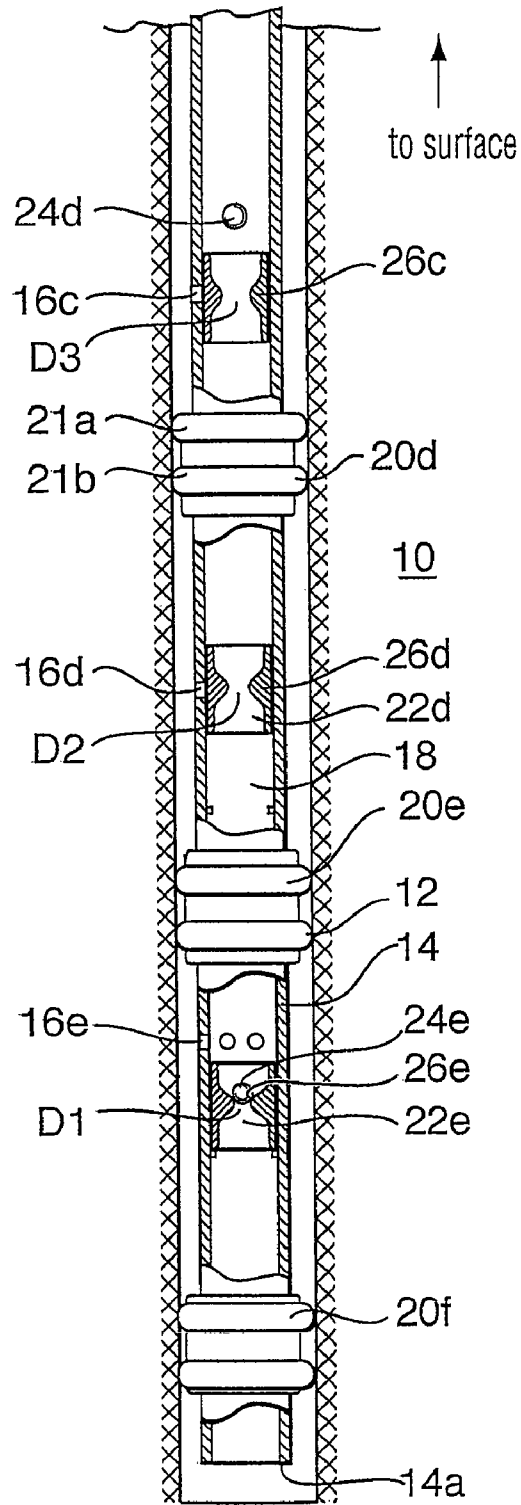


FIG 1h

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