

## Title (en)

Liner hanger, running tool and method

## Title (de)

Liner Hängevorrichtung, Einbauwerkzeug und Verfahren

## Title (fr)

Suspension de colonne perdue, outil de pose et procédé associé

## Publication

**EP 1712731 A1 20061018 (EN)**

## Application

**EP 06012129 A 20020515**

## Priority

- EP 02736875 A 20020515
- US 29204901 P 20010518
- US 31645901 P 20010831
- US 94385401 A 20010831
- US 94370101 A 20010831
- US 31657201 P 20010831
- US 98148701 A 20011017
- US 8332001 A 20011019
- US 494501 A 20011204
- US 458801 A 20011204
- US 13696902 A 20020502
- US 13699202 A 20020502

## Abstract (en)

A liner hanger running tool (120) includes improvements to the running tool release mechanism, the packoff bushing, and the packer setting assembly. A method is provided for reliably releasing a running tool from a liner hanger (110), for allowing stabbing of the running tool packoff bushing (10) into the top of the liner hanger, and for reliably setting the radial set packer element. The port closure member (212) is movable with a tubular body from a port isolation position to an open port position. The tool includes an annular seal assembly and a substantially conical wedge ring having an outer surface configured to radially expand the annular seal assembly. A ball (240) is lowered into a diverter and thus guided into a pocket (286) in one side thereof to permit passage of a pump down plug (180) into a lower wiper plug (181). A slip assembly carried about a liner for lowering into a wellbore includes a C-ring (64), which expands to cause its teeth to engage with the wellbore. A plug holder (10) sub temporarily supports a liner wiper plug, so that a pump down plug may land in the liner wiper plug and be supported from a generally tubular body of the plug holder sub.

## IPC 8 full level

**E21B 23/06** (2006.01); **E21B 23/01** (2006.01); **E21B 23/04** (2006.01); **E21B 33/04** (2006.01); **E21B 33/12** (2006.01); **E21B 43/10** (2006.01); **E21B 33/00** (2006.01)

## CPC (source: EP US)

**E21B 23/01** (2013.01 - EP); **E21B 23/042** (2020.05 - EP US); **E21B 23/06** (2013.01 - EP); **E21B 33/04** (2013.01 - EP); **E21B 33/1212** (2013.01 - EP); **E21B 33/1216** (2013.01 - EP); **E21B 43/10** (2013.01 - EP); **E21B 2200/01** (2020.05 - EP)

## Citation (applicant)

- EP 0985797 A2 20000315 - HALLIBURTON ENERGY SERV INC [US]
- US 4281711 A 19810804 - BRADDICK BRITT O, et al

## Citation (search report)

- [A] EP 0985797 A2 20000315 - HALLIBURTON ENERGY SERV INC [US]
- [A] GB 2229753 A 19901003 - BAKER HUGHES INC [US]
- [A] US 6032734 A 20000307 - TELFER GEORGE [GB]

## Cited by

GB2437652A; GB2437652B

## Designated contracting state (EPC)

DK FR GB

## Designated extension state (EPC)

AL LT LV MK RO SI

## DOCDB simple family (publication)

**EP 1712729 A2 20061018**; **EP 1712729 A3 20061227**; **EP 1712729 B1 20110720**; BR 122013000180 B1 20160719; DK 1712729 T3 20111024; DK 1712730 T3 201110124; DK 2020482 T3 20121022; EP 1712730 A2 20061018; EP 1712730 A3 20061227; EP 1712730 B1 20101215; EP 1712731 A1 20061018; EP 1712731 B1 20090902; EP 1712732 A1 20061018; EP 1712732 B1 20090715; EP 2020482 A2 20090204; EP 2020482 A3 20110427; EP 2020482 B1 20120926

## DOCDB simple family (application)

**EP 06012127 A 20020515**; BR 122013000180 A 20020515; DK 06012127 T 20020515; DK 06012128 T 20020515; DK 08105836 T 20020515; EP 06012128 A 20020515; EP 06012129 A 20020515; EP 06012130 A 20020515; EP 08105836 A 20020515