

Title (en)

HOLE OPENER WITH HYBRID REAMING SECTION

Title (de)

AUFWEITKOPF MIT HYBRIDEM ERWEITERUNGSBOHRBEREICH

Title (fr)

ÉLARGISSEUR À SECTION D'ALÉSAGE HYBRIDE

Publication

**EP 2486216 A2 20120815 (EN)**

Application

**EP 10765889 A 20100930**

Priority

- US 57454909 A 20091006
- US 2010051019 W 20100930

Abstract (en)

[origin: CA2776642A1] A hole opener having (100) a hybrid reaming section for downhole earth boring operations may include a reamer body (103) having an axis of rotation, an outer periphery, and upper and lower ends, a plurality of rolling cutters (110) coupled to the outer periphery and depending downwardly, the rolling cutters defining a rolling cutter cutting profile having a cutting diameter, a plurality of fixed blade (106) cutters coupled to the outer periphery and defining a fixed blade cutter cutting profile having a cutting diameter, each fixed blade cutter being coupled between adjacent rolling cutters. At least one of the fixed blade cutters may be asymmetrically coupled about the axis. The cutting diameter of the fixed blade cutter cutting profile may be larger than the cutting diameter of the rolling cutter cutting profile. At least a portion of the fixed blade cutter cutting profile may be deeper than the rolling cutter cutting profile.

IPC 8 full level

**E21B 10/14** (2006.01)

CPC (source: EP US)

**E21B 10/14** (2013.01 - EP); **E21B 10/28** (2013.01 - EP US)

Citation (search report)

See references of WO 2011043987A2

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)

CA 2776642 A1 20110414; EP 2486216 A2 20120815

DOCDB simple family (application)

CA 2776642 A 20100930; EP 10765889 A 20100930