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## ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

### **Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)** (application filed on or after May 29, 2000)

The Patent Term Adjustment is 231 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

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

(10) **Patent No.:** **US 10,557,324 B2**  
(45) **Date of Patent:** **Feb. 11, 2020**

(54) **DIVERTER FOR DRILLING OPERATION**

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(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 231 days.

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(Continued)

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(51) **Int. Cl.**  
**E21B 21/08** (2006.01)

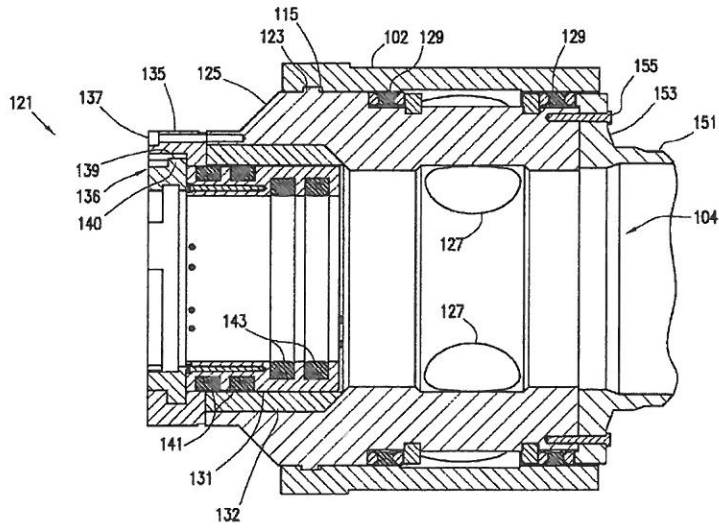
(52) **U.S. Cl.**  
CPC ..... **E21B 21/08** (2013.01)

(58) **Field of Classification Search**  
CPC ..... E21B 21/08; E21B 33/03; E21B 33/06; E21B 33/08; E21B 24/02  
See application file for complete search history.

(57) **ABSTRACT**

A diverter assembly may include a diverter body assembly. The diverter body assembly may also include a diverter body, the diverter body fluidly coupled to the annulus of a wellbore via a casing or riser, and the diverter body including one or more diverter outlet ports fluidly coupled to the annulus of the wellbore. The diverter body assembly may also include an upper packer assembly. The upper packer assembly may include a packer sleeve, the packer sleeve mechanically coupled to the diverter body. The packer sleeve may include one or more breach lock slots. The upper packer assembly may also include an upper packer body having one or more packer breach lock tabs engaged with the breach lock slots of the packer sleeve. The diverter assembly may also include a diverter support housing, the diverter support housing coupled to the diverter body assembly.

**4 Claims, 12 Drawing Sheets**



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