



US008176995B1

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

(10) **Patent No.:** **US 8,176,995 B1**
(45) **Date of Patent:** **May 15, 2012**

(54) **REDUCED-IMPACT SLIDING PRESSURE CONTROL VALVE FOR PNEUMATIC HAMMER DRILL**

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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 275 days.

(21) Appl. No.: **12/424,583**

(22) Filed: **Apr. 16, 2009**

Related U.S. Application Data

(63) Continuation-in-part of application No. 12/364,600, filed on Feb. 3, 2009, now Pat. No. 8,006,776.

(51) **Int. Cl.**
B25D 9/18 (2006.01)
B25D 9/00 (2006.01)

(52) **U.S. Cl.** **173/114**; 173/13; 173/17; 173/78;
173/79; 173/80; 91/222; 91/327; 91/348;
251/343; 251/344; 251/345; 137/508

(58) **Field of Classification Search** 173/114,
173/13, 17, 78-80; 91/222, 327, 348; 251/343-345;
137/508

See application file for complete search history.

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(57) **ABSTRACT**

A method and means of minimizing the effect of elastic valve recoil in impact applications, such as percussive drilling, where sliding spool valves used inside the percussive device are subject to poor positioning control due to elastic recoil effects experienced when the valve impacts a stroke limiting surface. The improved valve design reduces the reflected velocity of the valve by using either an energy damping material, or a valve assembly with internal damping built-in, to dissipate the compression stress wave produced during impact.

18 Claims, 15 Drawing Sheets

