



US009408738B2

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

(10) **Patent No.:** **US 9,408,738 B2**  
(45) **Date of Patent:** **Aug. 9, 2016**

(54) **ORTHOPEDIC BRACE FOR ANIMALS**

(56) **References Cited**

(71) Applicant: **EXOS LLC**, Vista, CA (US)

U.S. PATENT DOCUMENTS

(72) Inventors: **Chris Boraas**, Alexandria, MN (US);  
**Kristian Gamble**, Minneapolis, MN (US)

57,283 A 8/1866 Brown  
D19,360 S 10/1889 Sanders  
(Continued)

(73) Assignee: **Exos LLC**, Vista, CA (US)

FOREIGN PATENT DOCUMENTS

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 505 days.

CN 2902232 5/2007  
CN 101279110 10/2008  
(Continued)

(21) Appl. No.: **13/839,737**

OTHER PUBLICATIONS

(22) Filed: **Mar. 15, 2013**

Johnson & Johnson Orthoplast Splinting Materials, [http://www.medco-school.com/Supply/Product.asp?Leaf\\_Id-80365](http://www.medco-school.com/Supply/Product.asp?Leaf_Id-80365), archived 2007.

(65) **Prior Publication Data**

US 2014/0039367 A1 Feb. 6, 2014

(Continued)

**Related U.S. Application Data**

(60) Provisional application No. 61/678,426, filed on Aug. 1, 2012.

*Primary Examiner* — Victoria J Hicks

*Assistant Examiner* — Raymond E Harris

(74) *Attorney, Agent, or Firm* — Knobbe Martens Olson & Bear LLP

(51) **Int. Cl.**

**A61F 5/01** (2006.01)  
**A61D 9/00** (2006.01)

(57)

**ABSTRACT**

(52) **U.S. Cl.**

CPC ..... **A61F 5/0102** (2013.01); **A61D 9/00** (2013.01); **A61F 5/01** (2013.01)

Orthopedic braces and splints for use on a limb of an animal, that provide stability for unstable joints and limbs for short or long term support and function. These orthoses are designed to prevent the occurrence of, or reduce the severity of, a joint injury. These braces and splints can also be fitted immediately after corrective surgery, and can support and stabilize the joint while assisting or restricting the range of motion. Various embodiments of the orthoses are modular, thermoformable and may include an adjustable tensioning system, which in combination provide a custom fit for a wide variety of animals and injuries.

(58) **Field of Classification Search**

CPC ..... A61F 5/01; A61F 5/0102; A61F 5/0106; A61F 5/0123; A61F 5/0125; A61F 5/02; A61F 5/03; A61D 9/00; Y10T 24/37; Y10T 24/3703; Y10T 24/3705; Y10T 24/3708; Y10T 24/3711; Y10T 24/3713; Y10T 24/3716; Y10T 24/3718; Y10T 24/3721; Y10T 24/3724

USPC ..... 128/DIG. 15

See application file for complete search history.

**17 Claims, 17 Drawing Sheets**

