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**Zhang et al.**

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(54) **SPINAL ROD LINK REDUCER**  
(75) Inventors: **Hong Zhang**, Plano, TX (US); **Dan Sucato**, Dallas, TX (US)  
(73) Assignee: **Globus Medical, Inc.**, Audubon, PA (US)  
(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 871 days.

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**Related U.S. Application Data**

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(52) **U.S. Cl.**  
CPC ..... **A61B 17/705** (2013.01); **A61B 17/7023** (2013.01); **A61B 17/7034** (2013.01); **A61B 17/7052** (2013.01); **A61B 17/7079** (2013.01); **A61B 17/7086** (2013.01); **A61B 17/7011** (2013.01)

(57) **ABSTRACT**

The present invention includes a rod link reducer of a spinal fixation system that includes a first and a second spinal rod manipulator; a first spinal rod manipulator joint connected to the first spinal rod manipulator and a second spinal rod manipulator joint connected to the second spinal rod manipulator; a first and a second translatable transverse shaft connected to the first and second joints, respectively; and a universal reducer connected to both the first and second translatable transverse shafts, wherein the universal reducer, the shafts and the linkers provide movement and temporary fixation of a spine that has been manipulated into a final position during spinal surgery.

(58) **Field of Classification Search**  
USPC ..... 606/250-253, 86 A, 90, 99, 279; 623/17.11  
See application file for complete search history.

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**13 Claims, 26 Drawing Sheets**

