USF Available Technologies

Technology Transfer Office

Apparatus for Osteotomy and Graft Preparation

Researchers at the University of South Florida have developed surgical tools that increase the surgical accuracy of orthopedic procedures.

An allograft is a tissue graft which is harvested from a human donor. Allografts are commonly used in orthopedic surgeries to fix bone or joint ailments. Orthopedic surgeons often utilize electric reciprocating saws for these procedures. Unfortunately, these saws are difficult to guide. When utilized for a total knee replacement, these saws are used in conjunction with metal jigs which guide the saw blade and ensure accurate cuts. Such guides, however, are not currently available for use in shaping allografts to replace bone deficits. This highlights the need for specially designed clamps and jigs to be developed for use in bone allograft procedures.

USF researchers have developed surgical tools which increase the surgical accuracy of orthopedic procedures involved in long bone osteotomies. These tools can be used with or without the supplementation of an allograft or autograft. The device utilizes two clamps on the operative side rigidly interconnected to one another with an adjustable rod that is locked into place. This system aims to minimize the difficulties that are faced with long bone osteotomy such as obtaining a desired final length, preventing malrotation of the osteotomized ends, ensuring an exact fit of the united bone ends, and maintaining all of these elements with stability when final fixation is attached. This device would allow for alignment of the graft, preservation of the desired mechanical and anatomical axes, rigid fixation of the graft for cutting, and adjustable jigs to ensure exact cuts.

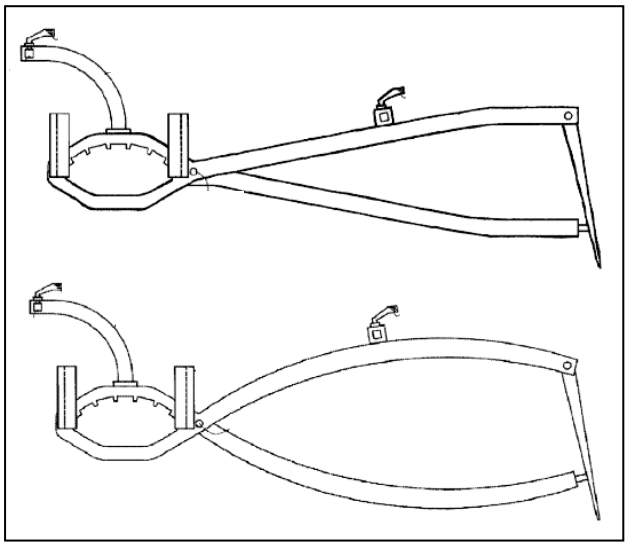
Tech ID # 09A051

Patent #s: 8,920,426/9,775,629

ADVANTAGES:

- **Prevents the malrotation of osteotomized ends**
- **Maintains mechanical and anatomic axes**
- **Allows for exact cuts for accurate alignment**

An Osteotomy and Graft Preparation System for Improved Surgical Accuracy



Side Views of The Novel Device with Straight or Curved Arms

University of South Florida | Technology Transfer Office
813.974.0994 (office) | 813.974.8490 (fax)
patents@research.usf.edu
http://www.usf.edu/research-innovation/pl/