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- (54) **SELECTIVE COMPRESSION AND DISTRACTION INSTRUMENT**
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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 0 days.

4,271,836 A	6/1981	Bacal	
4,502,475 A	3/1985	Weigle	
4,898,161 A	2/1990	Grundeil	
5,245,755 A	9/1993	Krivec	
5,297,538 A	3/1994	Daniel	
5,529,571 A	6/1996	Daniel	
5,885,210 A	3/1999	Cox	
5,899,901 A	5/1999	Middelton	
6,017,342 A	1/2000	Rinner	
6,102,909 A *	8/2000	Chen et al.	606/170
6,336,387 B1 *	1/2002	Lee	30/192
6,386,076 B1 *	5/2002	Swanstrom, Jr.	29/527.1

* cited by examiner

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(57) **ABSTRACT**

A selective compression and distraction instrument useful in manipulating bone, such as a person's spine during surgery. There are two handle sections and one jaw section. One handle section produces a compression action and the other produces a distraction action. The user determines which action to apply, and then selects the appropriate handle section which is releasably attached to the one jaw section. The jaw section is arranged to have two tips, and the jaw section moves the tips in a parallel relationship toward and away relative to each other. The tips are releasably and interchangeably attachable to the jaw section, and they provide selective spacing of tip blades from each other.

(56) **References Cited**

U.S. PATENT DOCUMENTS

188,262 A *	3/1877	Russell	81/353
427,220 A *	5/1890	Bernard	81/353
707,418 A *	8/1902	Howland	81/338
2,002,021 A	5/1935	Rouse	
3,960,147 A	6/1976	Murray	
4,102,339 A	7/1978	Weber	

27 Claims, 3 Drawing Sheets

