



US006783004B1

(12) **United States Patent**
Rinner

(10) **Patent No.:** **US 6,783,004 B1**

(45) **Date of Patent:** **Aug. 31, 2004**

(54) **KIT OF MEDICAL TOOLS FOR REMOVING SCREWS**

(75) **Inventor:** **James A. Rinner, Racine, WI (US)**

(73) **Assignee:** **Pilling Weck Incorporated, Horsham, PA (US)**

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

(21) **Appl. No.:** **10/281,926**

(22) **Filed:** **Oct. 29, 2002**

Related U.S. Application Data

(60) Provisional application No. 60/411,290, filed on Sep. 17, 2002.

(51) **Int. Cl.⁷** **B65D 85/00**

(52) **U.S. Cl.** **206/368; 206/370; 206/63.5**

(58) **Field of Search** **206/363, 368, 206/369, 370, 63.5, 438**

References Cited

U.S. PATENT DOCUMENTS

2,472,028 A	5/1949	Son	
4,090,606 A	5/1978	Dawson	206/223
4,501,363 A	2/1985	Isbey	206/570

4,595,102 A	6/1986	Cianci	206/572
4,596,329 A	6/1986	Eldridge	206/370
4,828,113 A	5/1989	Friedland	206/570
5,172,810 A *	12/1992	Brewer	206/369
5,174,453 A	12/1992	Stoeffler	206/570
5,251,751 A	10/1993	Prussen	206/338
5,289,919 A	3/1994	Fischer	206/571
5,379,887 A	1/1995	Conley	206/459.5
5,417,585 A	5/1995	Morin	439/488
5,762,202 A	6/1998	Atad	206/756
5,868,250 A	2/1999	Brackett	206/363
6,158,437 A	12/2000	Vagley	128/898
D442,697 S	5/2001	Hajianpour	D24/229
6,368,565 B1 *	4/2002	Michaelson et al.	422/300

* cited by examiner

Primary Examiner—Jacob K. Ackun, Jr.

(74) Attorney, Agent, or Firm—Arthur J. Hansmann

(57) **ABSTRACT**

A kit of medical tools for removing screws from a patient in surgical procedures, including both the kit and the method of arranging the kit and its bits and tools. There are two removable trays in a container, one for the bits and one for the tools, and the trays stack upon the other in the container. Corresponding indicia are on both the bits and the supporting trays so the bits can be organized and readily selected by the surgeon, and an abutment aligns the bits in resilient grippers on the bit tray.

13 Claims, 7 Drawing Sheets

