

**PCT**WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : F16B 23/00	A1	(11) International Publication Number: WO 99/18361 (43) International Publication Date: 15 April 1999 (15.04.99)
(21) International Application Number: PCT/US98/20508 (22) International Filing Date: 1 October 1998 (01.10.98) (30) Priority Data: 08/943,341 3 October 1997 (03.10.97) US (71) Applicant: PHILLIPS SCREW COMPANY [US/US]; 508 Edgewater Drive, Wakefield, MA 01880 (US). (72) Inventors: HUGHES, Barry, J.; Unit 8, Mast Hill Condos, 612 Essex Avenue, Gloucester, MA 01930 (US). MOWINS, Michael, L.; 7 Castle Hill Road, Gloucester, MA 01930 (US). (74) Agent: BOOKSTEIN, Arthur, Z.; Kirkpatrick & Lockhart LLP, One International Place, Boston, MA 02110-2637 (US).	(81) Designated States: AU, BR, CA, CN, CZ, GE, HU, IL, JP, KR, MX, PL, SG, YU, Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i>	

(54) Title: **RECESSED HEAD FASTENER AND DRIVER SYSTEMS**

(57) Abstract

Recessed head fasteners (10) are provided with a configuration by which the force applied by the blades of the driver (12) to the recessed wings is applied at the radially outer regions of the wings (16). The wings (16) of the fastener recess may be provided with torque pads at the outer regions of the wings adapted to engage the outer portions of the driver blades. The torque pads (36) may be defined by relieved regions on the drive walls of the recess wings (16). The relieved regions are formed to avoid contact with the driver blades. Stabilizing ribs also may be defined at the radially inward regions of the drive walls. A recess engageable driver may include a plurality of radially extending ribs configured to promote engagement of the ribs with the most radially outward regions of the recess drive walls. The driver and the recess are compatible with each other as well as with otherwise corresponding conventional recesses and drivers that do not incorporate the invention. Also disclosed are punches and methods for making the disclosed fasteners.

