

(12) **United States Patent**  
**Carpenter et al.**

(10) **Patent No.:** **US 6,543,159 B1**  
(45) **Date of Patent:** **Apr. 8, 2003**

(54) **SNOWBOARD BOOT AND BINDING STRAP**

(75) Inventors: **Jake Burton Carpenter**, Stowe, VT (US); **Paul T. Maravetz**, Grand Isle, VT (US); **Thomas McGann**, Jerico Center, VT (US); **David J. Dodge**, Williston, VT (US); **John Gerndt**, Burlington, VT (US); **Stefan Reuss**, Innsbruck (AT)

(73) Assignee: **The Burton Corporation**, Burlington, VT (US)

(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1120 days.

(21) Appl. No.: **08/619,358**

(22) Filed: **Mar. 21, 1996**

(51) **Int. Cl.<sup>7</sup>** ..... **A43B 5/00**

(52) **U.S. Cl.** ..... **36/115; 36/117.1; 36/50.5; 36/88**

(58) **Field of Search** ..... **36/50.1, 50.5, 36/88, 92, 115, 116, 117.1, 117.9**

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

3,241,153	A	3/1966	Brewer	
3,516,180	A	6/1970	Thurston	
3,545,103	A	12/1970	Bloomfield et al.	
3,657,827	A	4/1972	Rieker	
3,747,239	A	7/1973	Green	
3,751,832	A	8/1973	Baryluk	
4,030,215	A *	6/1977	Vogel	36/117.9
4,080,745	A *	3/1978	Torrance	36/50.1
4,282,657	A *	8/1981	Antonious	36/50.1

(List continued on next page.)

**FOREIGN PATENT DOCUMENTS**

CH	214531	3/1940
CH	244825	8/1945
CH	264893	6/1948
CH	502 828 A	2/1971
DE	916696	7/1954

DE	91 13 766 U	2/1997
DE	196 03 790 A	4/1997
DE	196 42887 A1	4/1997
EP	0 217 750	4/1987
EP	0646334 *	4/1995
EP	0 705 544 A1	4/1996
EP	0 705 625 A1	4/1996
EP	0 753 267 A1	1/1997
EP	0 770 413 A1	5/1997
EP	0 774 217 A2	5/1997
JP	3004426	11/1994
JP	7-171002	7/1995
JP	8-266307	10/1996
NO	60109	9/1937
WO	WO 94/21149	9/1994
WO	WO 95/09035	4/1995
WO	WO 96/01575	1/1996
WO	WO 97/17860	5/1997

**OTHER PUBLICATIONS**

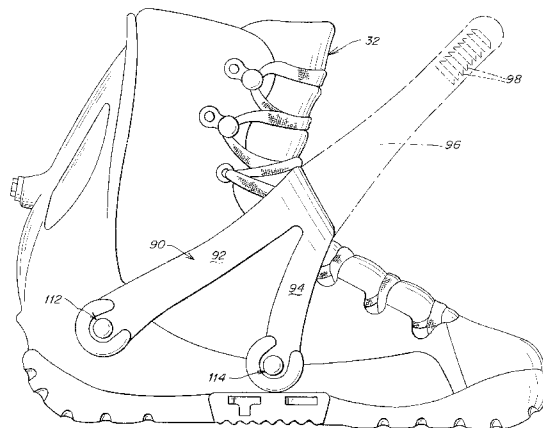
Pages from a DNR Sportsystem Ltd. Catalog.  
Pages from a Flow Catalog.  
International Search Report dated Oct. 24, 1997.  
Utility Model Technology Assessment Jan. 12, 1998.

*Primary Examiner*—M. D. Patterson  
(74) *Attorney, Agent, or Firm*—Wolf, Greenfield & Sacks, P.C.

(57) **ABSTRACT**

One aspect of the invention is a removable strap for a snowboard boot to preventing the rider's foot from lifting in the boot. The ankle strap enables a soft boot to be used with both a strap-less step-in binding system, and a strap binding system. Another aspect is a snowboard binding including a strap adapted to releasably secure the snowboard boot and constructed and arranged to avoid creation of a pressure point at an instep bone of the rider. A further aspect is an apparatus comprising a snowboard boot and a strap attached thereto. The strap is arranged to prevent the rider's heel from lifting in the snowboard boot, and is constructed and arranged to avoid creation of a pressure point at an instep bone of the rider.

**57 Claims, 11 Drawing Sheets**



U.S. PATENT DOCUMENTS

4,296,558 A	*	10/1981	Antonious	.....	36/50.1	5,381,612 A	*	1/1995	Paris	.....	36/117.9
4,387,517 A		6/1983	Annovi			5,409,244 A		4/1995	Young		
4,662,082 A		5/1987	Shabazz			5,416,952 A		5/1995	Dodge		
4,669,202 A		6/1987	Ottieri			5,435,080 A		7/1995	Meiselman		
4,741,550 A	*	5/1988	Dennis	.....	280/618	5,459,949 A		10/1995	MacPhail		
4,979,760 A		12/1990	Derrah			5,474,322 A		12/1995	Perkins et al.		
5,044,654 A	*	9/1991	Meyer	.....	280/613	5,480,176 A		1/1996	Sims		
5,172,924 A		12/1992	Barci			5,493,793 A		2/1996	Pozzobon et al.		
5,234,230 A		8/1993	Crane et al.			5,499,461 A	*	3/1996	Danezin et al.	.....	36/117.1
5,312,258 A		5/1994	Giorgio			5,505,477 A		4/1996	Turner et al.		
5,368,320 A		11/1994	Teeter et al.			5,570,522 A	*	11/1996	Olson et al.	.....	36/115

\* cited by examiner

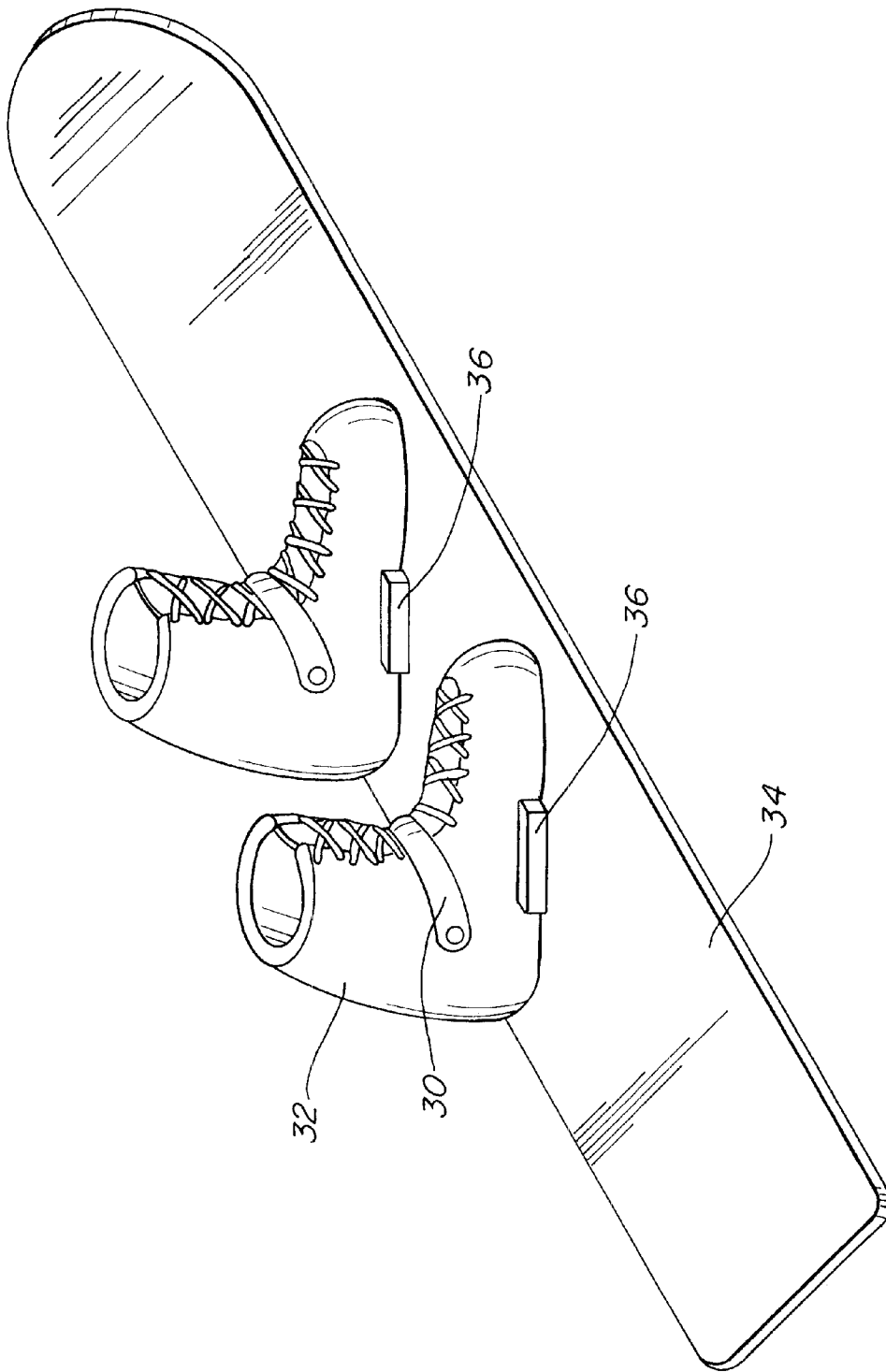


FIG. 1

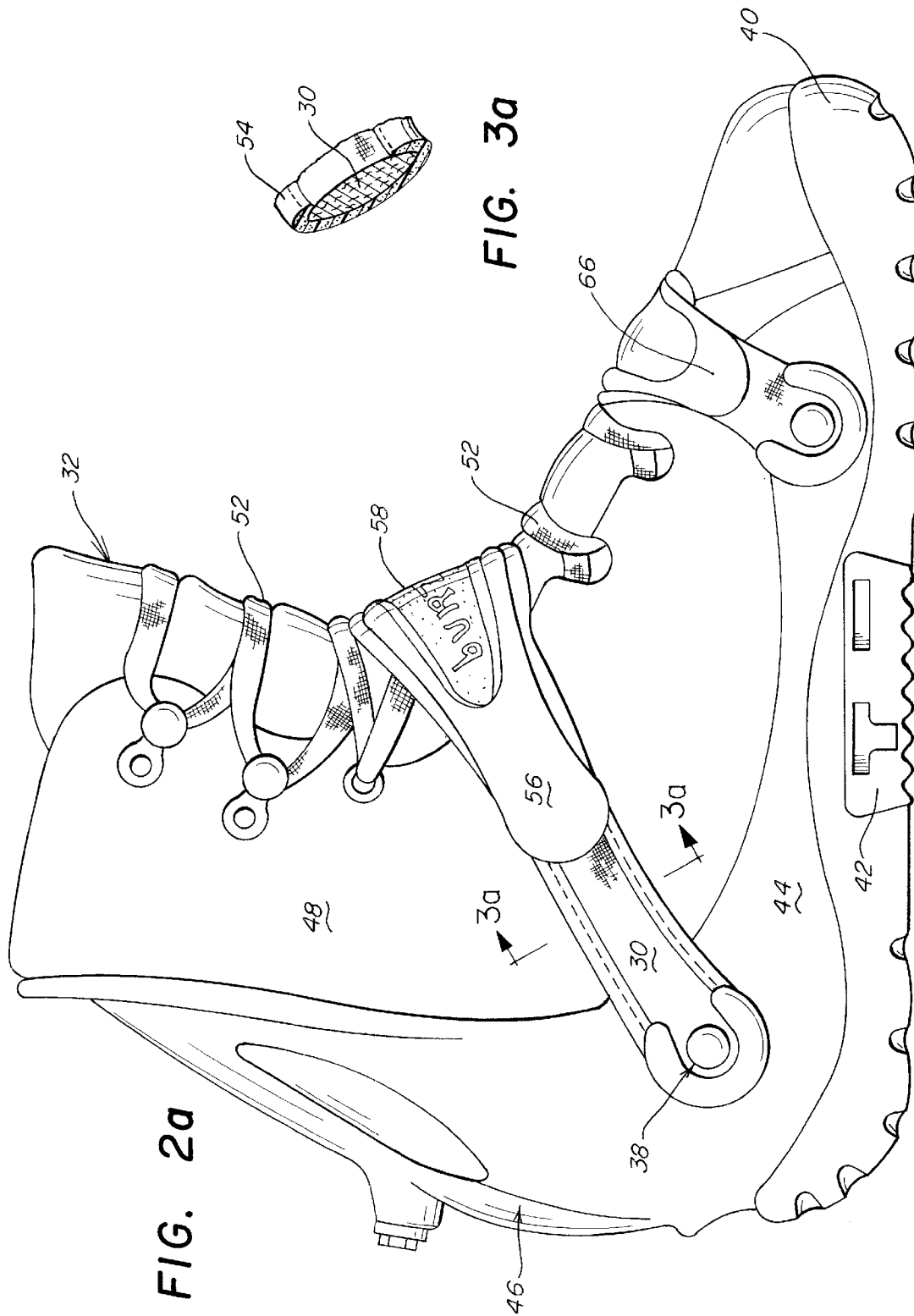
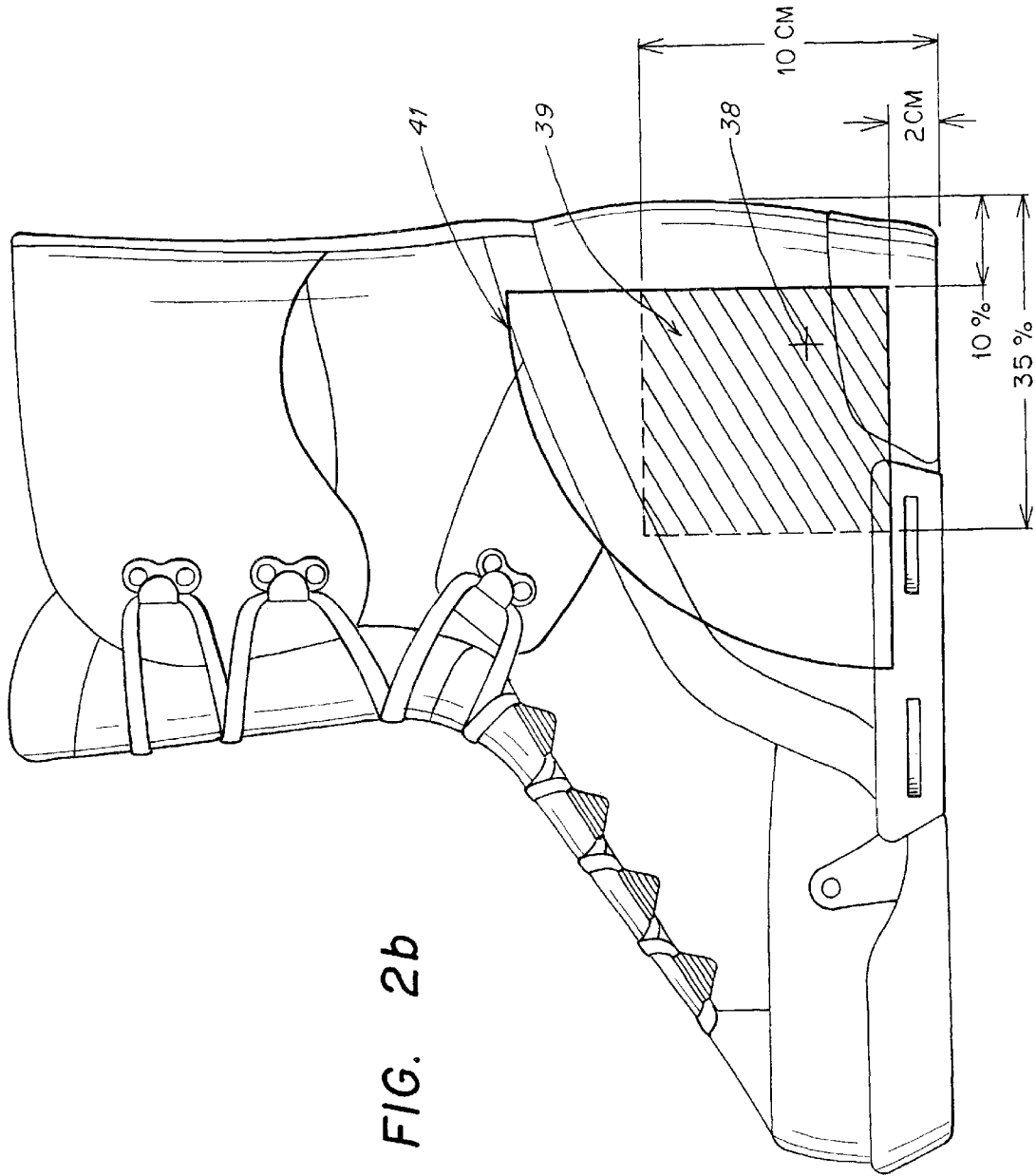


FIG. 2a

FIG. 3a



# Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

## Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

## Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

## Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

## API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

## LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

## FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

## E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.