EXHIBIT B4

(12) **United States Patent** (10) **Patent No.: US 6,443,796 B1**

Shackelford (45) **Date of Patent: Sep. 3, 2002**

(54) **SMART BLOCKS**

(76) Inventor: **Judith Ann Shackelford**, 615 N.
Camden Dr., Beverly Hills, CA (US)
90210

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/596,634**

(22) Filed: **Jun. 19, 2000**

(51) Int. Cl.^{7} **A63H 17/00**
(52) U.S. Cl. **446/91**; 446/118; 446/484;
446/485; 273/238; 273/237; 434/224
(58) Field of Search 446/91, 90, 118,
446/477, 487, 485; 273/238, 237; 434/224

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,484,984 A	*	12/1969	Fischer	446/91
3,696,548 A	*	10/1972	Teller	446/91
4,348,191 A	*	9/1982	Lipsitz et al.	434/308
4,552,541 A	*	11/1985	Bolli	446/91
4,556,393 A	*	12/1985	Bolli	446/91
4,743,202 A	*	5/1988	Bach	446/91
5,013,047 A	*	5/1991	Schwab	273/238
5,154,615 A	*	10/1992	Joubert	446/91
5,411,428 A	*	5/1995	Orii et al.	446/90
5,742,486 A	*	4/1998	Yangkuai	446/91
5,779,515 A	*	7/1998	Chung	446/91
5,788,553 A	*	8/1998	Shivers et al.	446/91
5,853,327 A	*	12/1998	Gilboa	273/237
5,906,369 A	*	5/1999	Brennan et al.	273/238
6,190,174 B1	*	2/2001	Lam	273/237
6,206,745 B1	*	3/2001	Gabai et al.	446/91
6,227,931 B1	*	5/2001	Shackelford et al.	446/477

FOREIGN PATENT DOCUMENTS

GB	2186731 A	*	8/1987	446/91
GB	2188956 A	*	10/1987	446/91

* cited by examiner

Primary Examiner—Derris H. Banks
Assistant Examiner—Urszula M. Cegielnik
(74) *Attorney, Agent, or Firm*—Ronald M. Goldman

(57) **ABSTRACT**

A child's construction set contains virtual intelligence, is interactive and smart, characteristics that may be exhibited to a player during player construction activity with the set and, thereafter, during continuing play and instills a sense of unpredictability to play. The set incorporates a programmed controller (17), a speaker (23), special ("smart") play pieces or blocks (1,3,5,7, et cet.) and a base (15) on which to position the play pieces or blocks. Sensors (A1–C3), referred to as "hot spots", are distributed at various positions about the base and are coupled to the controller, whereby the controller identifies special play pieces and the location of those play pieces when the respective play piece is installed at one of those positions. Some of the special play pieces may depict characters, some contain electrically operated devices, and some contain a player operated input device. The controller issues speech messages or other audible effects through the speaker to effect a virtual personality to the character play pieces; controls operation of electrically operated devices in special blocks, and detects and responds to player inputs from the player input blocks. Through wireless communication devices, the controller may acquire information from and supply speech messages to accessory blocks that are used off the base of the construction set.

36 Claims, 6 Drawing Sheets

Fig.1

Fig.3

CONTROLLER 17

- 23
- LCD DISPLAY 53
- 51
- CLOCK
- SPEECH RECOGNITION 49
- ADD-ON MEMORY 45
- PROCESSOR
- MEMORY
- ROM
- RAM
- 21
- 19
- INPUT OUTPUT I/O
- 25 BASE ROW SENSE INPUTS — A1:A3 B1:B3 C1:C3
- 27 BASE ROW CONTROL OUTPUTS — A1:A3 B1:B3 C1:C3
- 47
- PORTS
- 55 IR TRANSCEIVER
- 66 PC — INTERNET

Fig.2

Fig.4B

Fig.5B

Fig.8B

Fig.8A

Fig.4A

Fig.5A

Fig.6B

Fig.6A

Fig.7
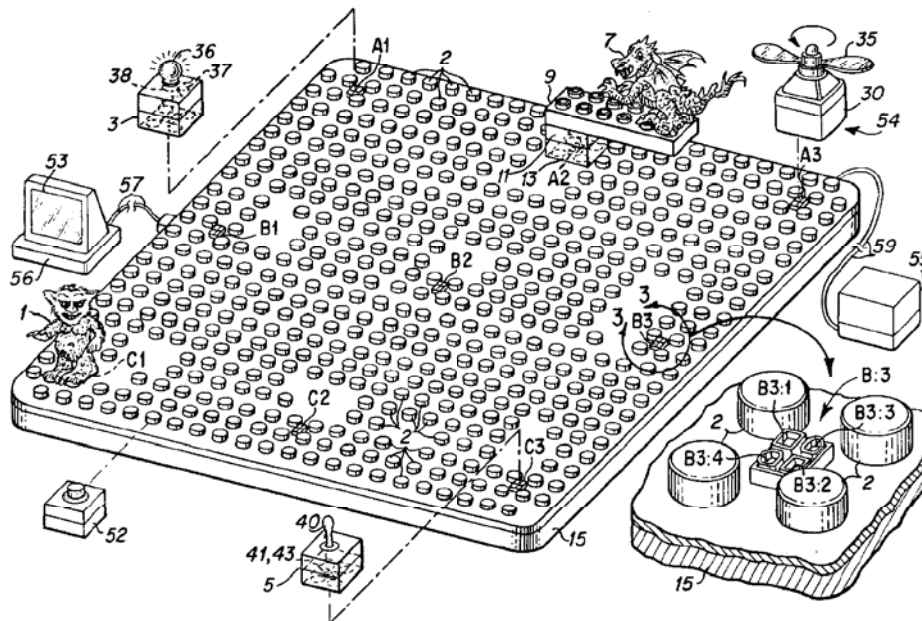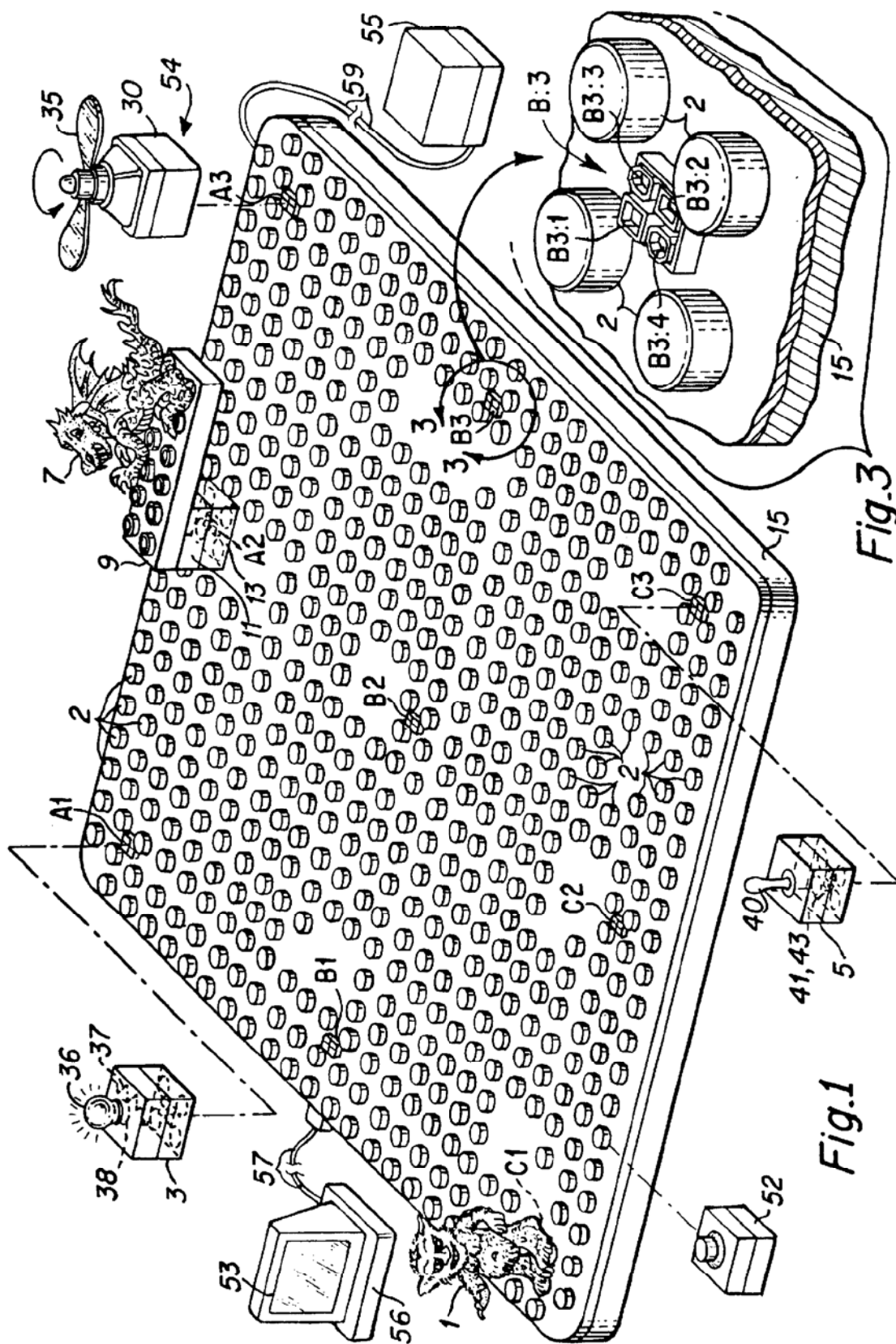
DOCKET ALARM
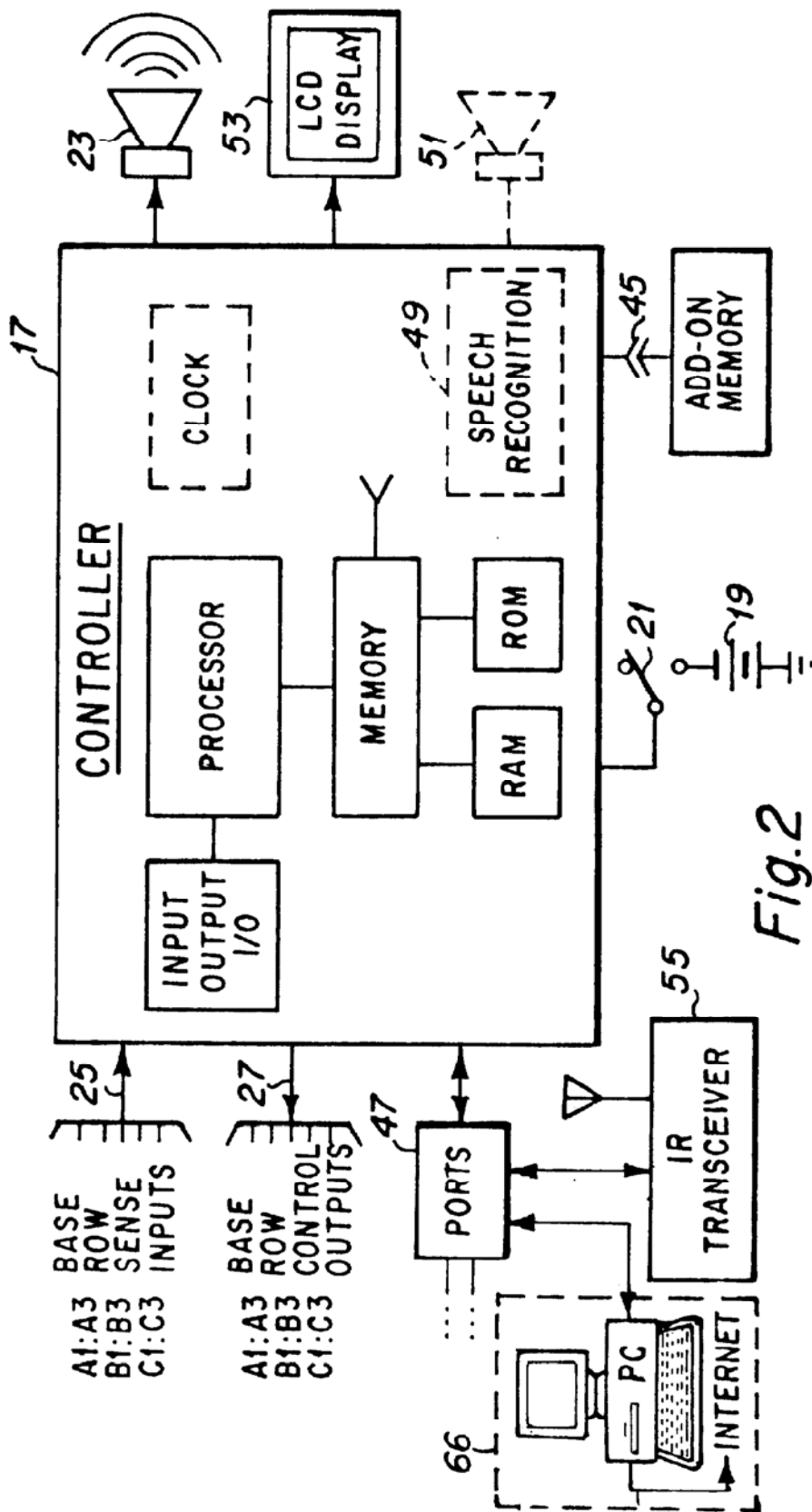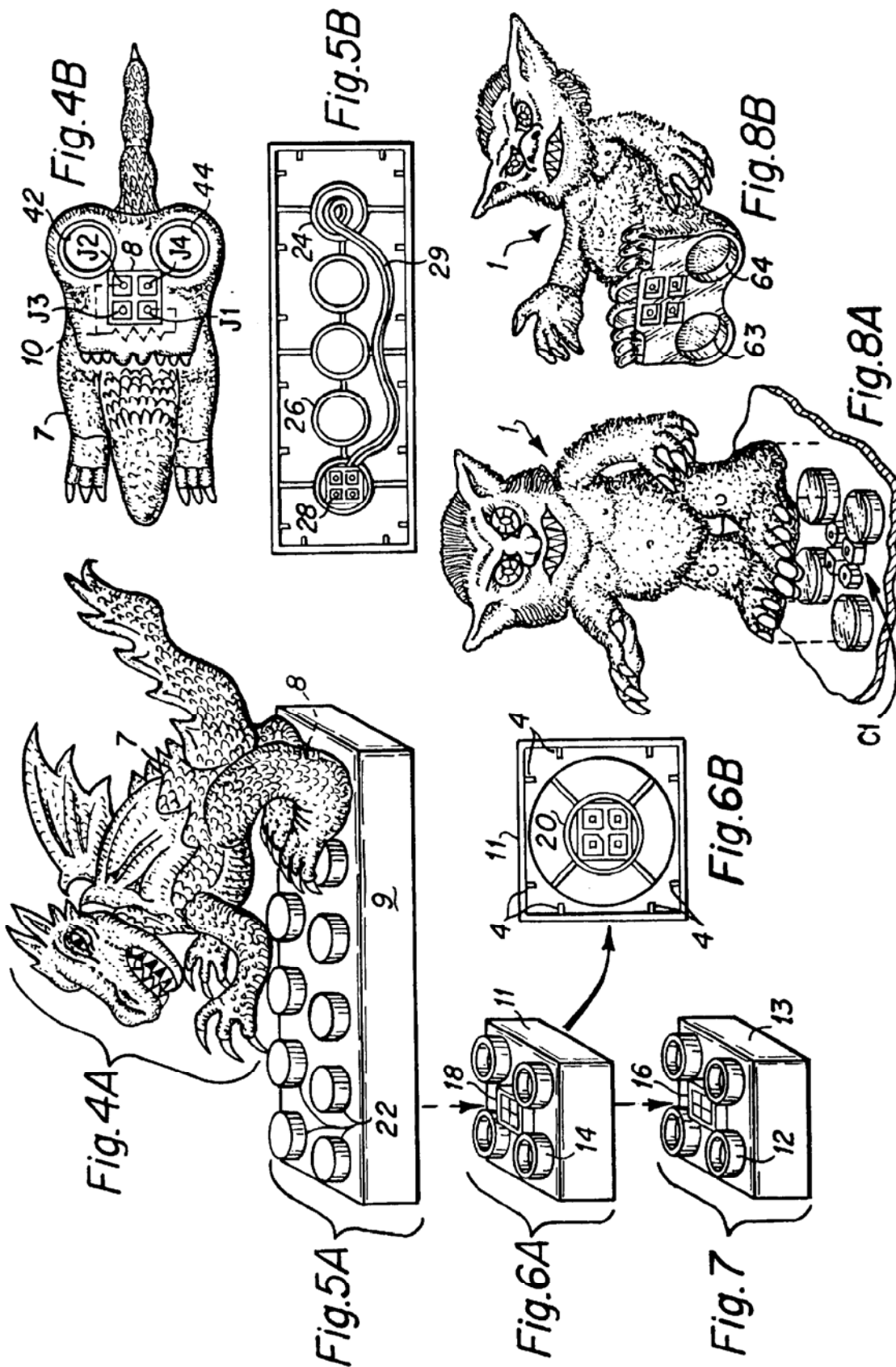
Explore Litigation Insights

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.

fastcase®
Smarter legal research.