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(12) **United States Design Patent**
Swanson et al.

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(54) **HANDHELD WIRELESS COMMUNICATION
DEVICE KEYPAD**

EP 1 427 228 A2 6/2004
GB 2 375 014 A 10/2002
WO WO 2004/031488 A1 4/2004

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OTHER PUBLICATIONS

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Rapids, WI (US)

Cortez et al., "Teaching Science with Mobile Computer
Supported Collaborative Learning (MCSCCL)," *Wireless and
Mobile Technologies in Education, 2004, Proceedings, The
2nd IEEE International Workshop on Jungli, Taiwan, Mar.
23–25, 2004, Los Alamitos, CA, USA, IEEE Comput. Soc.,
US, pp. 67–74 (Mar. 23, 2004).*

(**) Term: **14 Years**

Digiano et al., "Collaboration Design Patterns: Conceptual
Tools for Planning for The Wireless Classroom," *Wireless
and Mobile Technologies in Education, 2002, Proceedings,
IEEE International Workshop on Aug. 29–23, 2002, Piscat-
away, NJ, USA, IEEE, pp. 39–47 (Aug. 29, 2002).*

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Wang, "Context Awareness and Adaptation in Mobile Learn-
ing," *Wireless and Mobile Technologies in Education, 2004,
Proceedings, The 2nd IEEE International Workshop on
Jungli, Taiwan, Mar. 23–25, 2004, Los Alamitos, CA, USA,
IEEE Comput. Soc., US, pp. 154–158 (Mar. 23, 2004).*

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(51) **LOC (8) Cl.** **14-02**

(52) **U.S. Cl.** **D14/455**

(58) **Field of Classification Search** D14/137–8,
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341/22; 345/160, 168–9; 200/5 A; 382/187;
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455/556.2, 575.1, 575.3, 575.4

Yatani et al., "Musex: A System for Supporting Children's
Collaborative Learning in a Museum with PDAs," *Wireless
and Mobile Technologies in Education, 2004, Proceedings,
The 2nd IEEE International Workshop on Jungli, Taiwan,
Mar. 23–25, 2004, Los Alamitos, CA, USA, IEEE Comput.
Soc., US, pp. 109–112 (Mar. 23, 2004).*

* cited by examiner

See application file for complete search history.

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(56) **References Cited**

U.S. PATENT DOCUMENTS

3,245,157 A 4/1966 Laviana
4,764,120 A 8/1988 Griffin et al.
5,002,491 A 3/1991 Abrahamson et al.
5,273,437 A 12/1993 Caldwell et al.
5,379,221 A 1/1995 Schullter et al.

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LLP

(57) **CLAIM**

We claim the ornamental design for a handheld wireless
communication device keypad, as shown and described.

(Continued)

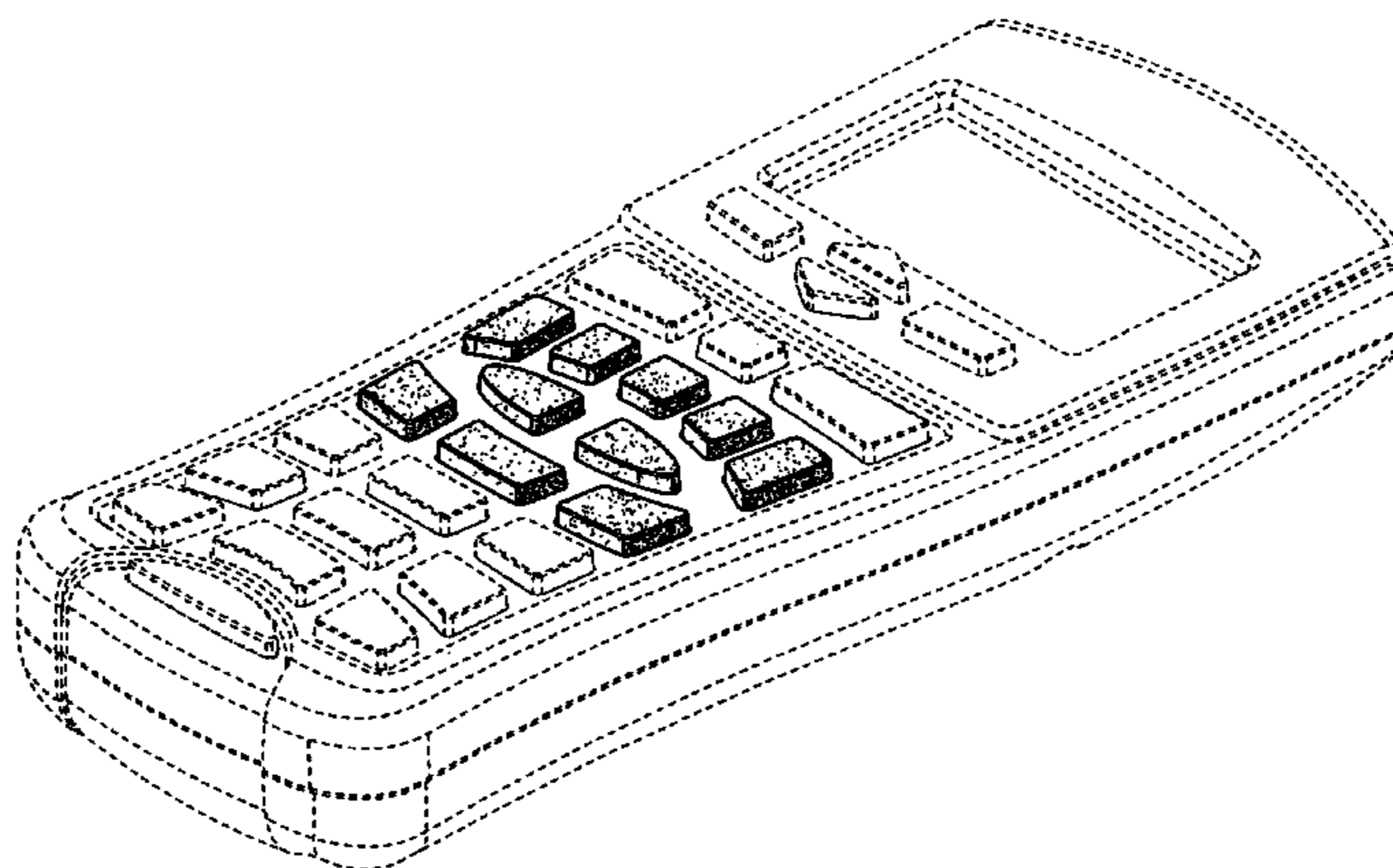
FOREIGN PATENT DOCUMENTS

EP 0 843 432 A2 5/1998
EP 0 697 773 B1 9/2002
EP 1 337 127 A1 8/2003

DESCRIPTION

FIG. 1 is a perspective view of the design for a handheld
wireless communication device keypad;
FIG. 2 is a front view of the design of FIG. 1;
FIG. 3 is a side view of the design of FIG. 1; and,
FIG. 4 is a top view of the design of FIG. 1.

1 Claim, 3 Drawing Sheets



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| U.S. PATENT DOCUMENTS | | | | | | | | | | | | | |
|-----------------------|----|---|---------|-----------------|-------|---------|--------------|----|---|---------|------------------|-------|-----------|
| D356,562 | S | * | 3/1995 | Nuovo | | D14/138 | 2002/0090970 | A1 | * | 7/2002 | Ko | | 455/550 |
| RE35,449 | E | | 2/1997 | Derks | | | 2003/0153263 | A1 | | 8/2003 | Glass et al. | | |
| 5,724,357 | A | | 3/1998 | Derks | | | 2003/0153321 | A1 | | 8/2003 | Glass et al. | | |
| D398,002 | S | * | 9/1998 | Chacon et al. | | D14/456 | 2003/0153347 | A1 | | 8/2003 | Glass et al. | | |
| 5,823,788 | A | | 10/1998 | Lemelson et al. | | | 2003/0236891 | A1 | | 12/2003 | Glass et al. | | |
| D408,397 | S | * | 4/1999 | Renard | | D14/138 | 2004/0009790 | A1 | * | 1/2004 | Im | | 455/556.1 |
| 6,021,119 | A | | 2/2000 | Derks et al. | | | 2004/0033478 | A1 | | 2/2004 | Knowles et al. | | |
| D429,228 | S | * | 8/2000 | Nagele et al. | | D14/138 | 2004/0072136 | A1 | | 4/2004 | Roschelle et al. | | |
| D464,948 | S | * | 10/2002 | Vasquez et al. | | D14/218 | 2004/0077389 | A1 | * | 4/2004 | Jang | | 455/575.5 |
| D482,681 | S | * | 11/2003 | Dalby et al. | | D14/247 | 2004/0127208 | A1 | | 7/2004 | Nair et al. | | |
| 6,665,000 | B1 | | 12/2003 | Buehler et al. | | | 2004/0209641 | A1 | * | 10/2004 | Hong | | 455/550.1 |
| 6,895,213 | B1 | | 5/2005 | Ward | | | 2004/0229642 | A1 | | 11/2004 | Derks et al. | | |
| D526,296 | S | * | 8/2006 | Wen | | D14/138 | 2005/0070294 | A1 | | 3/2005 | Lyle et al. | | |

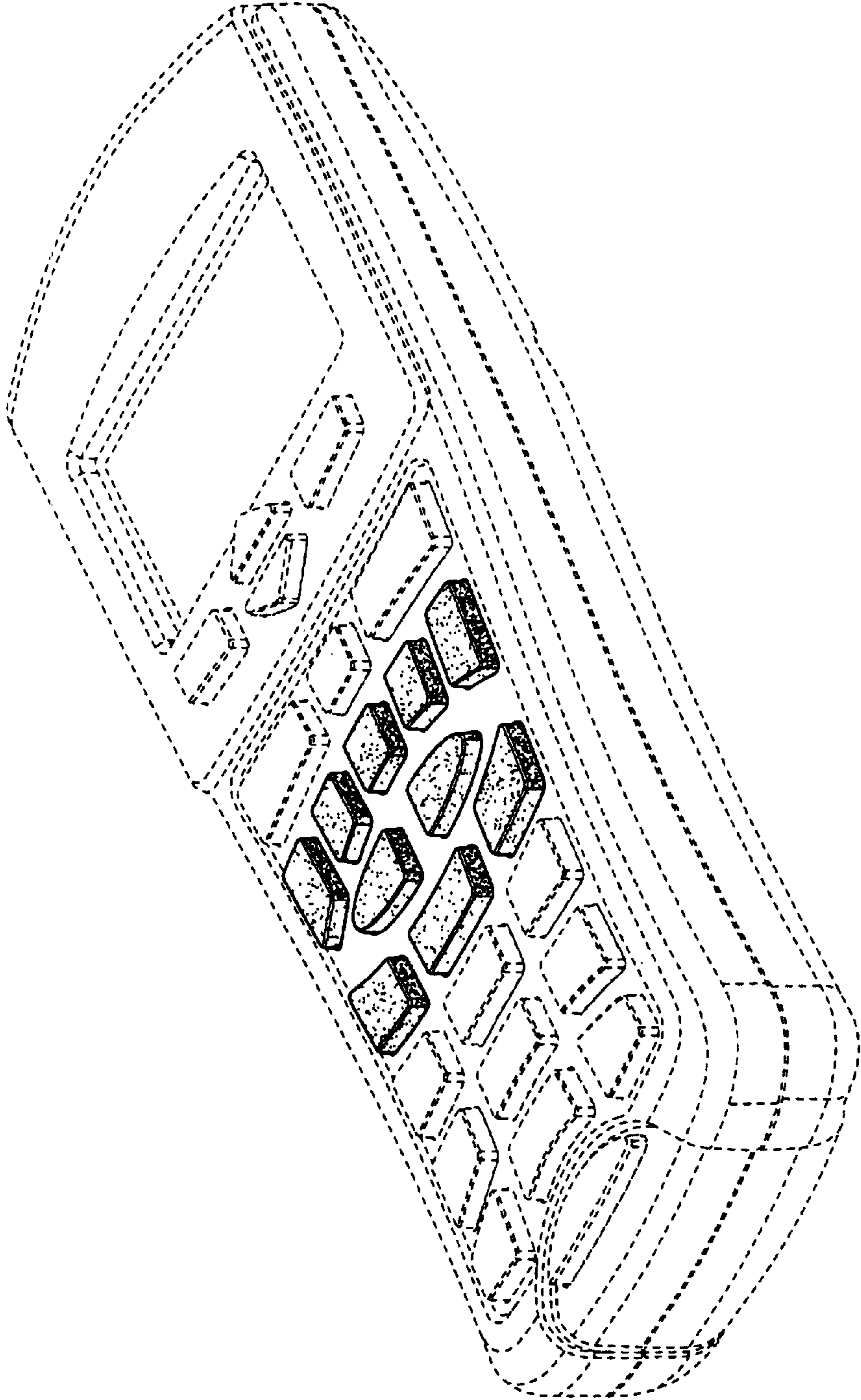


FIG. 1

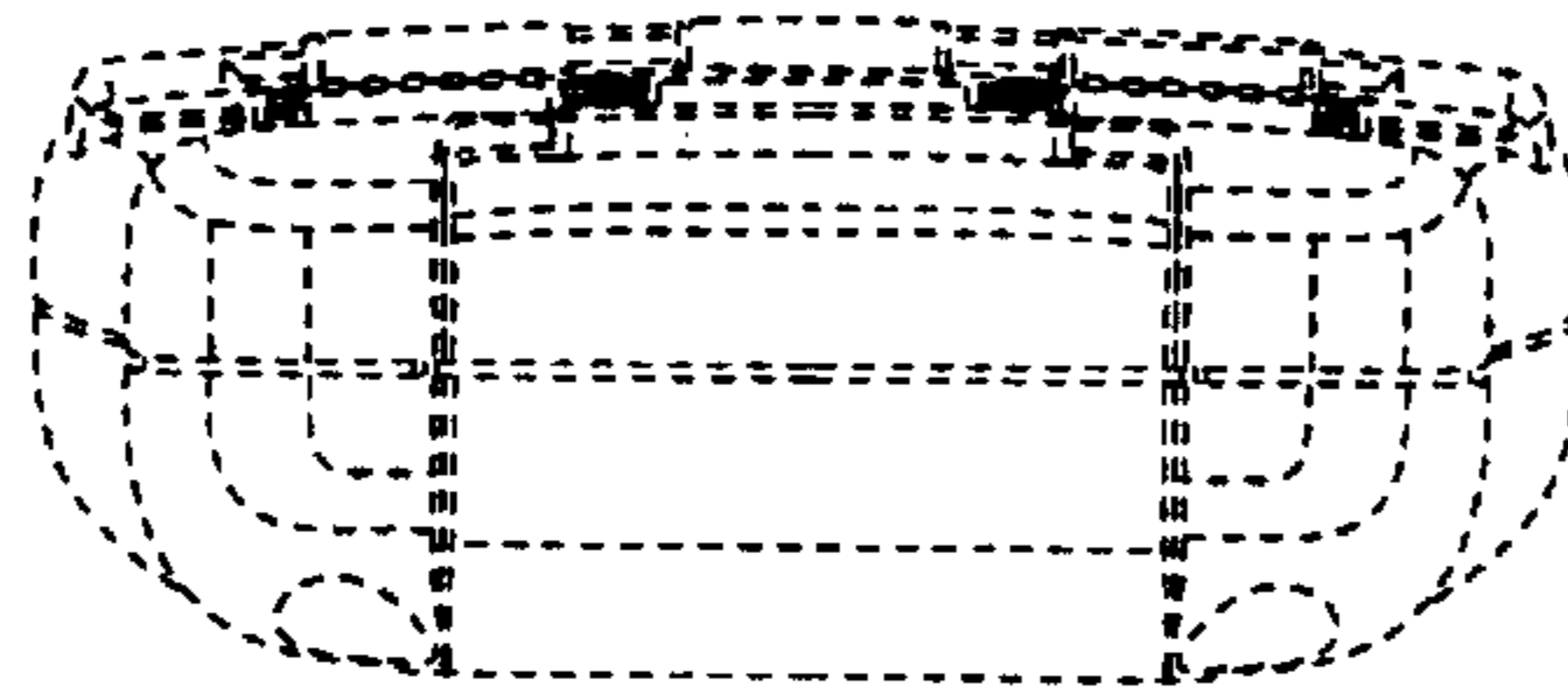


FIG. 2

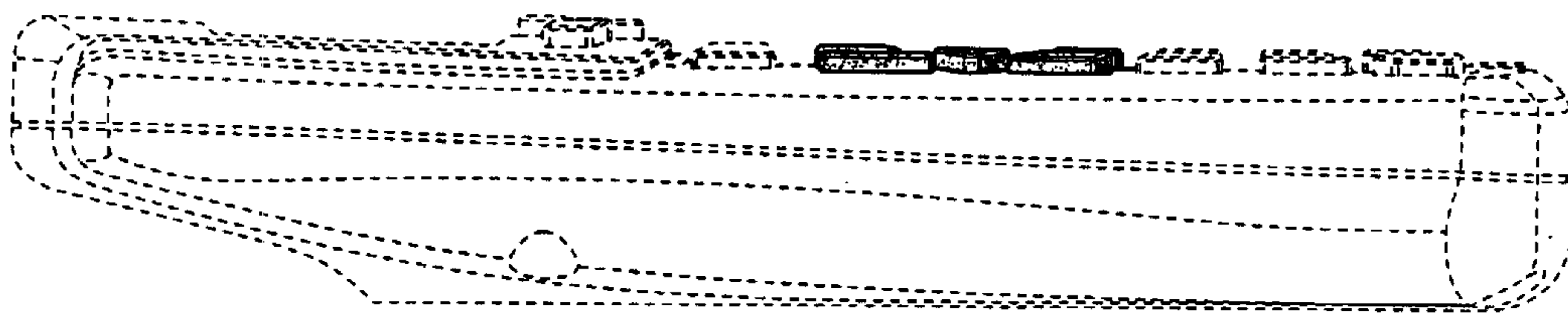


FIG. 3

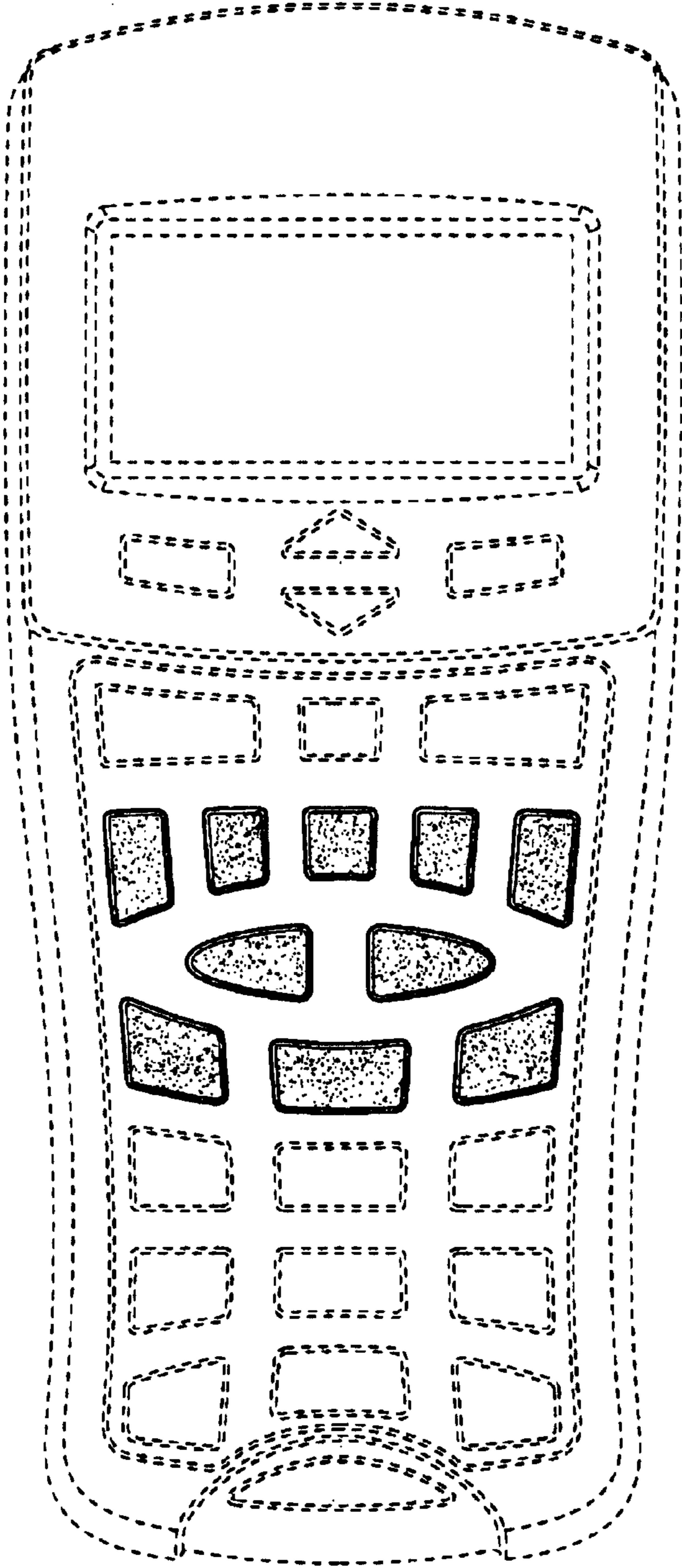


FIG. 4