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

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(45) **Date of Patent:** **\*\* \*Dec. 25, 2012**

(54) **MULTILAYER CELL CULTURE FLASK**

6,818,438 B2 \* 11/2004 Muser ..... 435/304.3  
7,745,210 B2 \* 6/2010 Martin ..... 435/304.1  
7,820,431 B2 \* 10/2010 Kenney et al. .... 435/294.1

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(Continued)

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FOREIGN PATENT DOCUMENTS

WO 88/00235 A1 1/1988

(Continued)

(\*) Notice: This patent is subject to a terminal disclaimer.

OTHER PUBLICATIONS

Office Action dated Jul. 27, 2011 in corresponding U.S. Appl. No. 29/364,106.

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

(Continued)

(21) Appl. No.: **29/364,108**

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(74) *Attorney, Agent, or Firm* — Nields, Lemack & Frame, LLC

(51) **LOC (9) Cl.** ..... **24-01**

(52) **U.S. Cl.** ..... **D24/224**

(58) **Field of Classification Search** ..... D24/216,  
D24/224, 227, 231, 232, 186, 121-123; D10/81;  
422/500, 547; 435/294.1, 297.1, 297.2, 288.2,  
435/304.1, 304.3, 307.1; D9/423, 424, 432,  
D9/516, 523

See application file for complete search history.

(57) **CLAIM**

The ornamental design for multilayer cell culture flask, as shown and described.

**DESCRIPTION**

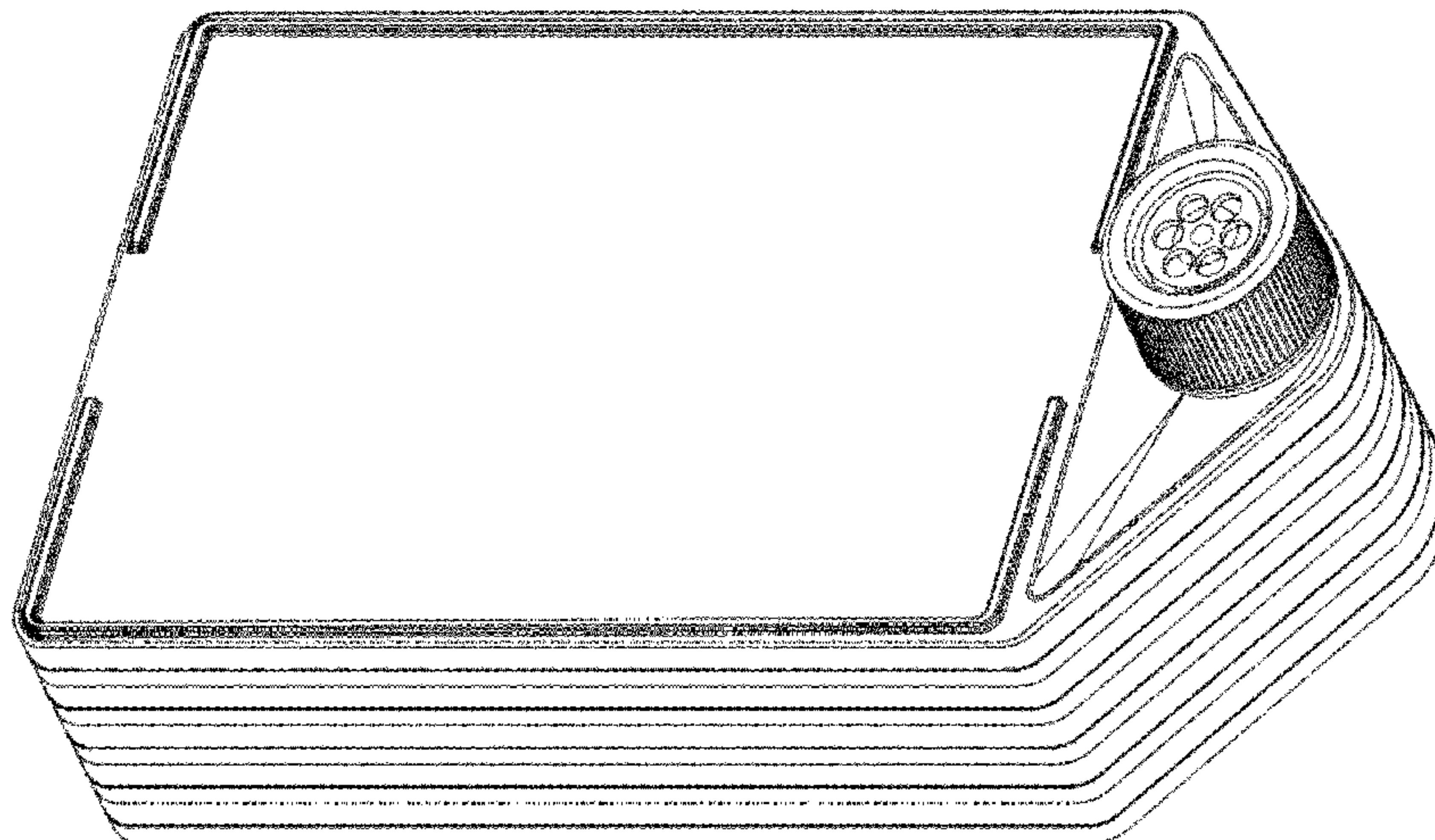
(56) **References Cited**

U.S. PATENT DOCUMENTS

4,334,028 A \* 6/1982 Carver ..... 435/304.3  
D287,638 S \* 1/1987 Moore et al. .... D24/224  
D291,730 S \* 9/1987 Kelln et al. .... D24/224  
4,770,854 A \* 9/1988 Lyman ..... 422/556  
D303,428 S \* 9/1989 Wada et al. .... D24/224  
D303,568 S \* 9/1989 Gabridge ..... D24/224  
5,139,952 A \* 8/1992 Honda et al. .... 422/547  
5,310,676 A 5/1994 Johansson et al.  
D355,964 S \* 2/1995 Nelvig ..... D24/158  
5,462,874 A \* 10/1995 Wolf et al. .... 435/297.5  
D375,565 S \* 11/1996 Autrey et al. .... D24/224  
D379,521 S \* 5/1997 Stevens et al. .... D24/224  
5,695,987 A \* 12/1997 Kayal et al. .... 435/304.1  
6,107,085 A 8/2000 Coughlin et al.  
6,569,675 B2 \* 5/2003 Wall et al. .... 435/304.2

FIG. 1 is a first end view of a multilayer cell culture flask;  
FIG. 2 is a second view thereof;  
FIG. 3 is a front view thereof;  
FIG. 4 is a perspective view thereof with the access port cap on;  
FIG. 5 is a perspective view thereof with the access port cap off;  
FIG. 6 is a bottom view thereof;  
FIG. 7 is a top view thereof;  
FIG. 8 is an enlarged perspective view of a portion of the multilayer cell culture flask with the access port cap on; and, FIG. 9 is an enlarged perspective view of a portion of the multilayer cell culture flask with the access port cap off.  
The broken lines in all drawing views are included for the purpose of illustrating portions of the multilayer cell culture flask that form no part of the claimed design.

**1 Claim, 9 Drawing Sheets**



U.S. PATENT DOCUMENTS

2001/0055803 A1 12/2001 Wall et al.  
2002/0045252 A1 4/2002 Yamashita et al.  
2004/0209755 A1\* 10/2004 Moore et al. .... 422/102  
2005/0074873 A1\* 4/2005 Shanler et al. .... 435/304.3  
2006/0205065 A1\* 9/2006 Bossi et al. .... 435/304.3  
2010/0129900 A1 5/2010 Clark et al.

FOREIGN PATENT DOCUMENTS

WO 92/05243 A1 2/1992  
WO 98/10055 A1 3/1998  
WO 2008/069902 A2 6/2008  
WO 2010/008566 A2 1/2010  
WO 2010/0085666 A2 1/2010

OTHER PUBLICATIONS

Japanese communication, with English translation, dispatched May 31, 2011 in corresponding foreign patent application No. JP 2010-030406.

Japanese communication, with English translation, dispatched May 31, 2011 in corresponding foreign patent application No. JP 2010-030395.

International Search Report and Written Opinion received for co-pending PCT Patent Application No. PCT/US2009/004118, mailed Apr. 9, 2010, 8 pages.

International Preliminary Report on Patentability received for co-pending PCT Patent Application No. PCT/US2009/004118, issued on Jan. 18, 2011, 5 pages.

Final Rejection mailed Jan. 4, 2012 in corresponding U.S. Appl. No. 29/364,106.

Office Action-Retraction-mailed Feb. 13, 2012 in co-pending U.S. Appl. No. 12/460,265.

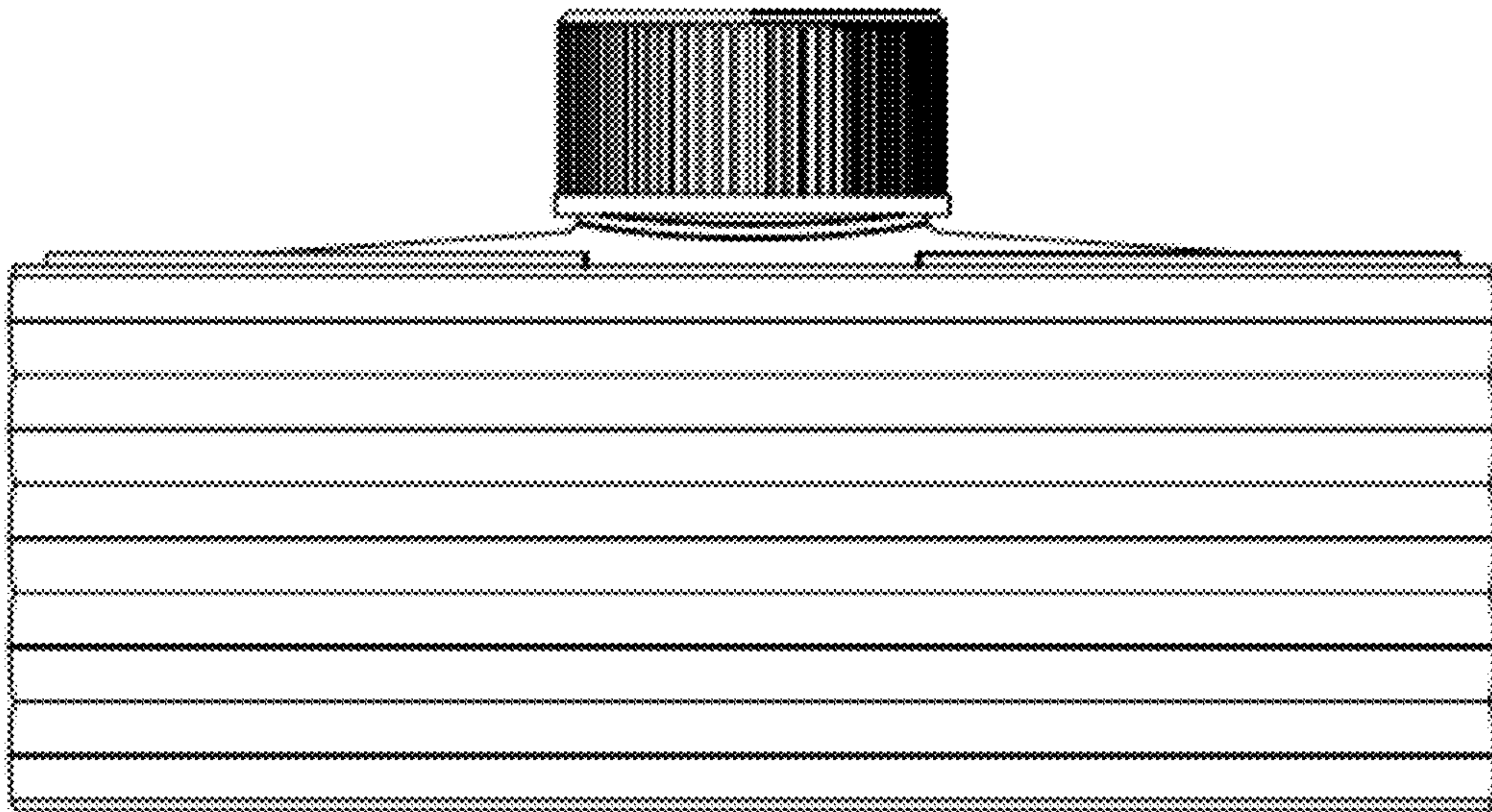
Office Action mailed Apr. 18, 2012 in corresponding U.S. Appl. No. 29/364,106.

Notice of Allowance mailed Jun. 13, 2012 in corresponding U.S. Appl. No. 29/364,106.

Japanese Communication dispatched Mar. 27, 2012 in co-pending Japanese Patent Application No. 2011-518730.

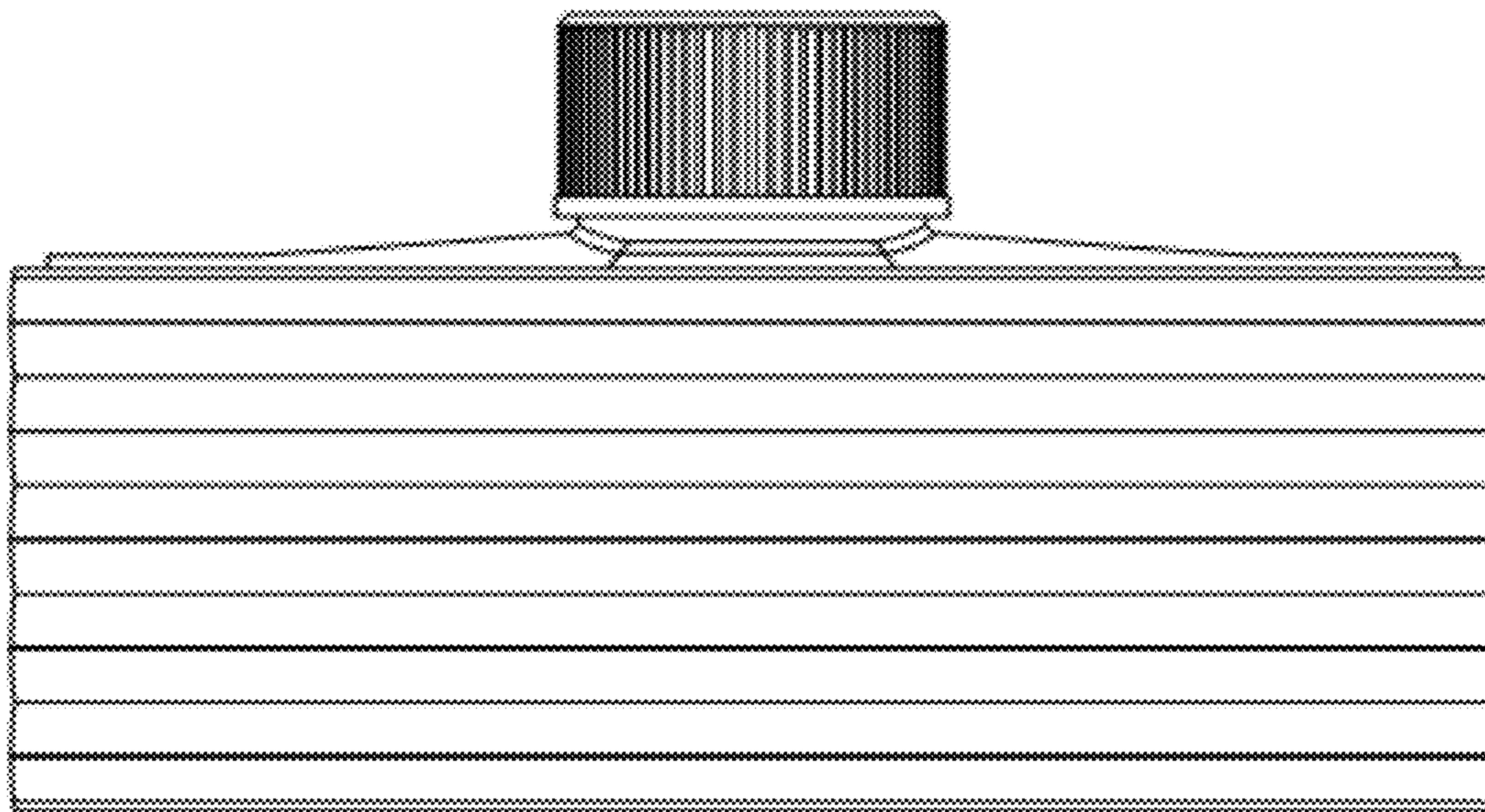
Office Action mailed Jun. 25, 2012 in co-pending U.S. Appl. No. 12/460,265.

\* cited by examiner

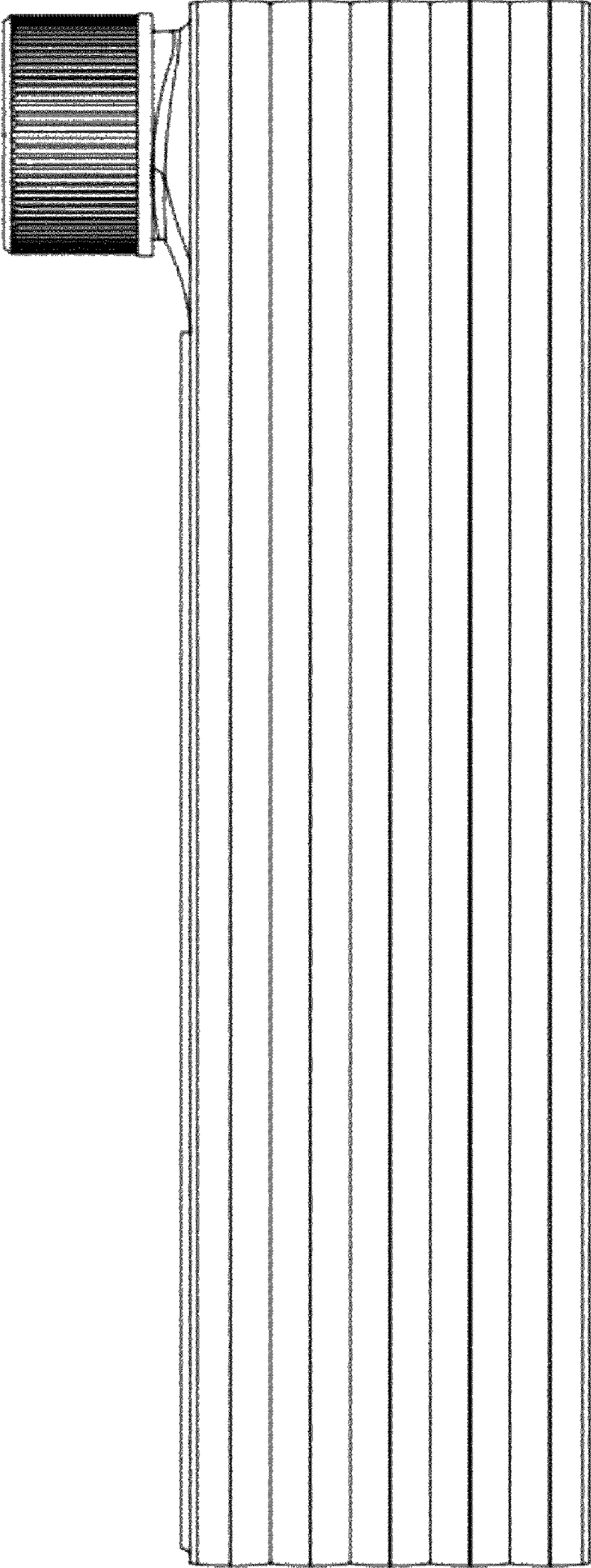


**FIG. 1**





**FIG. 2**



**FIG. 3**



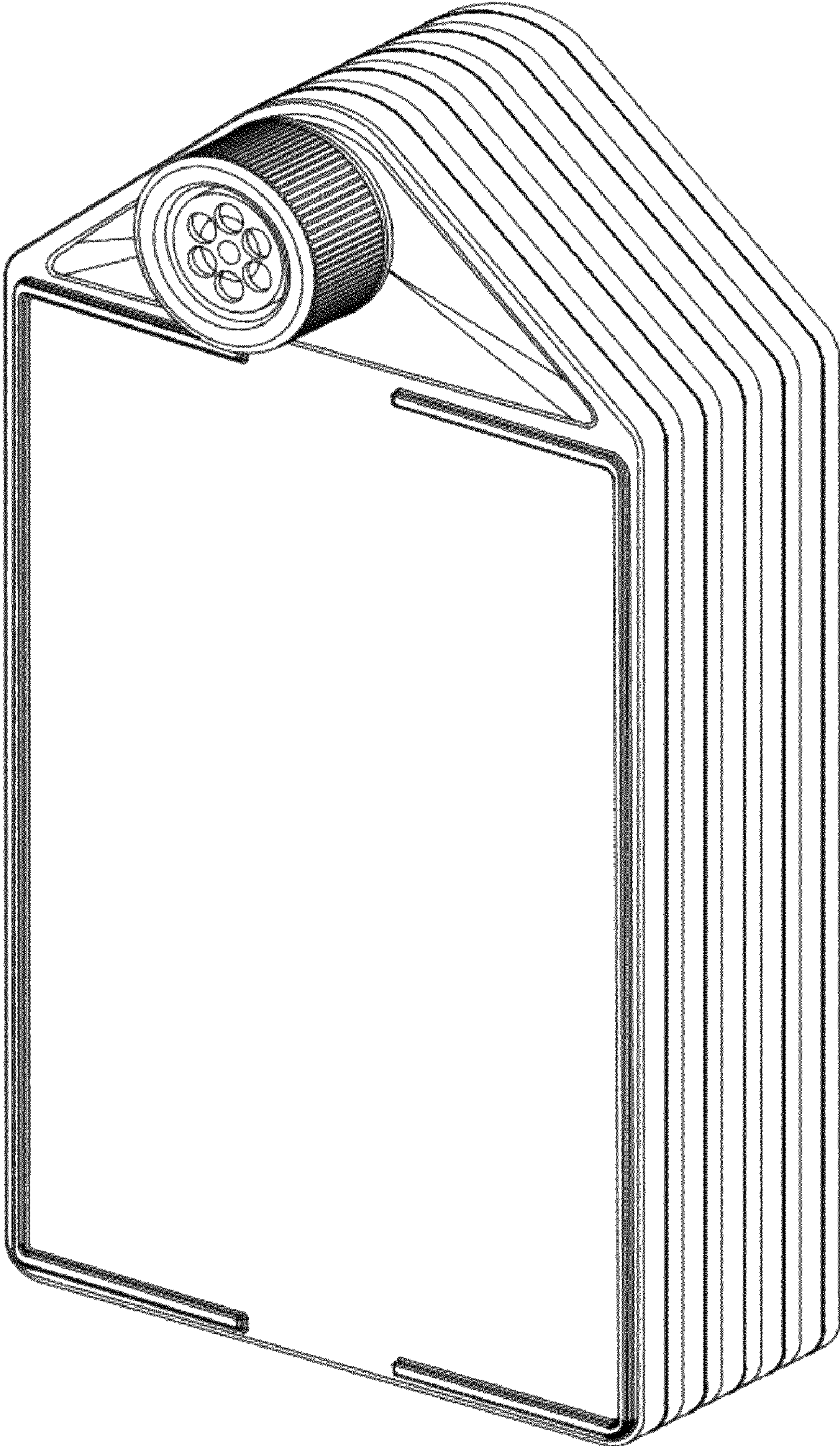


FIG. 4



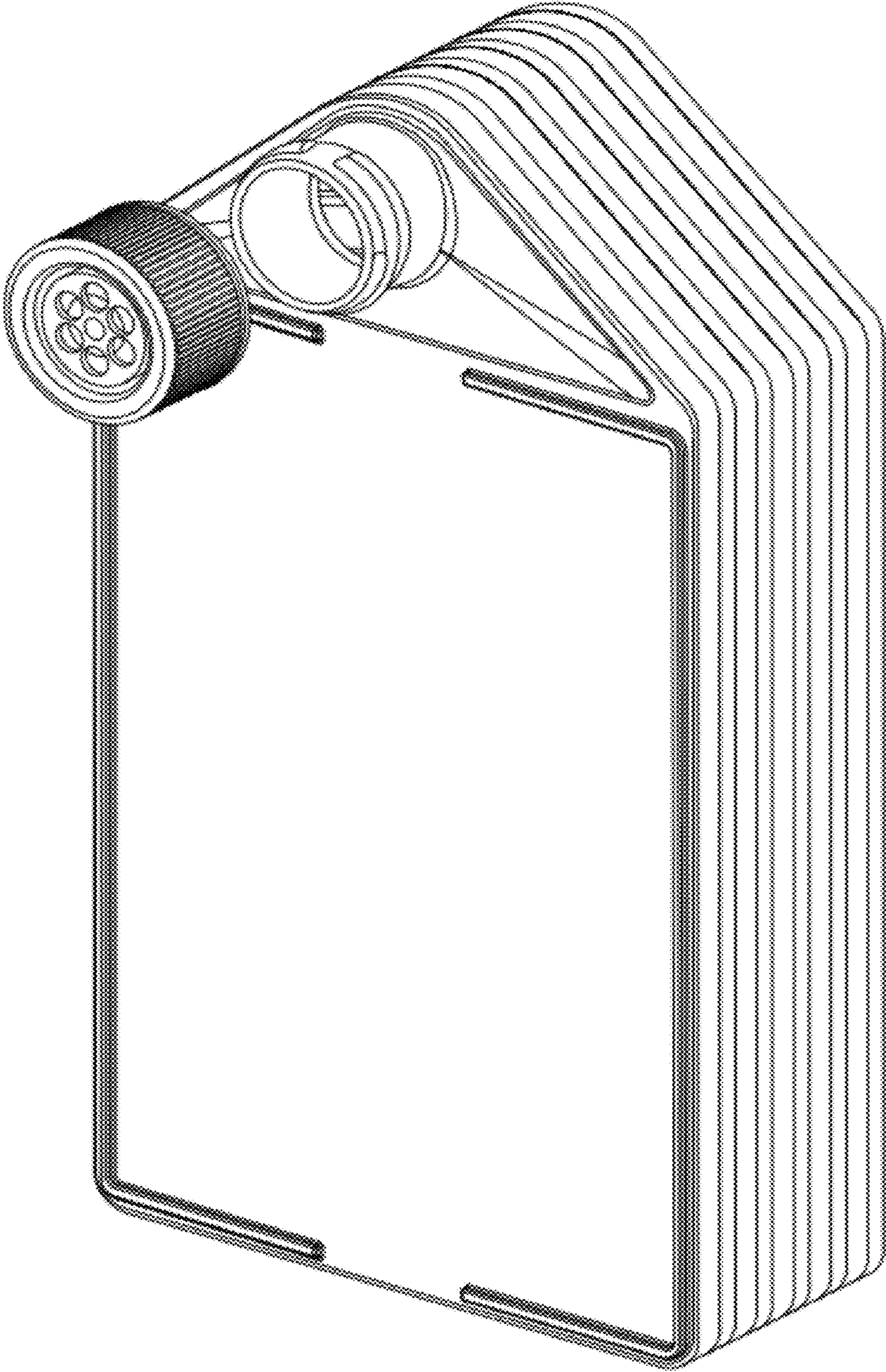


FIG. 5

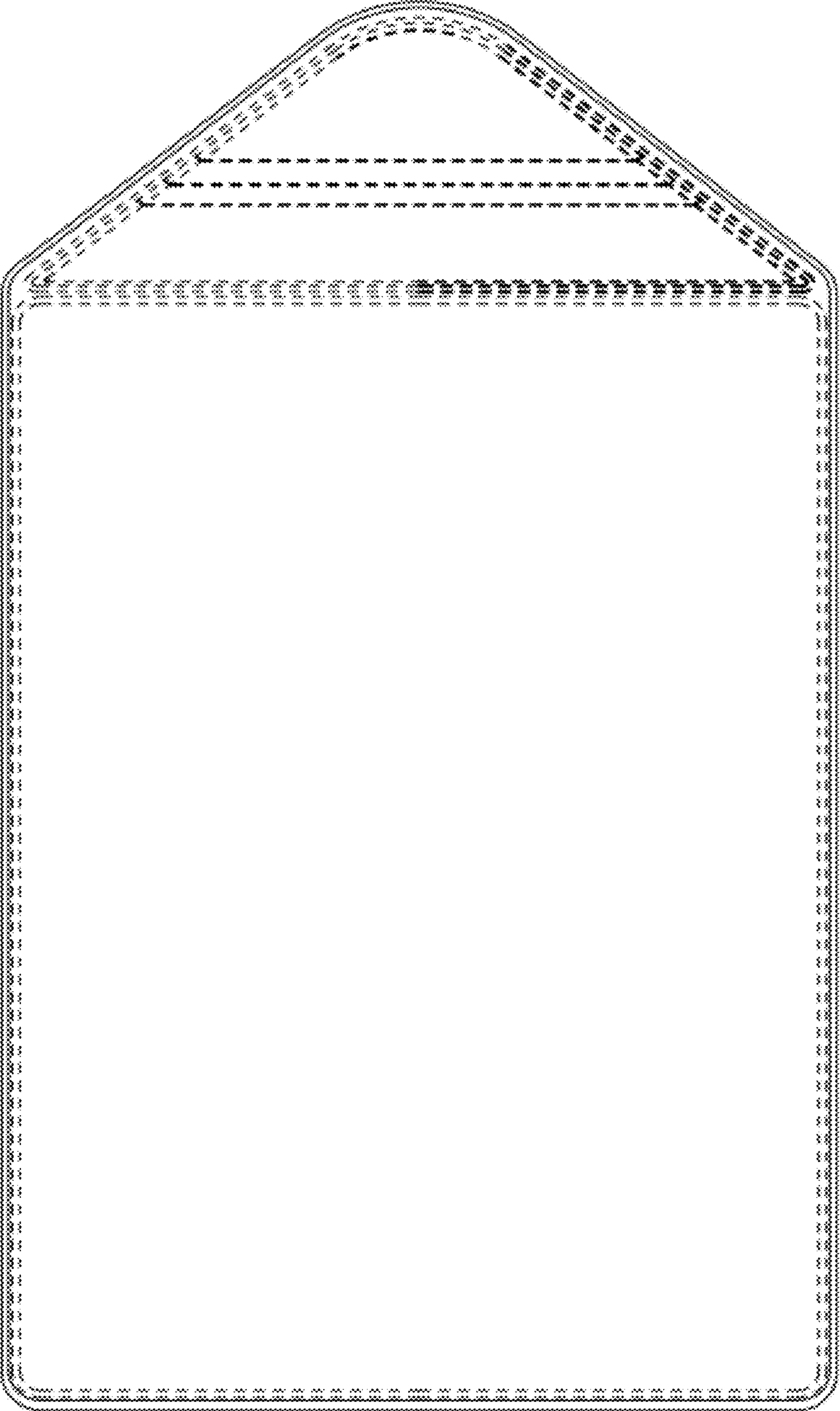


FIG. 6



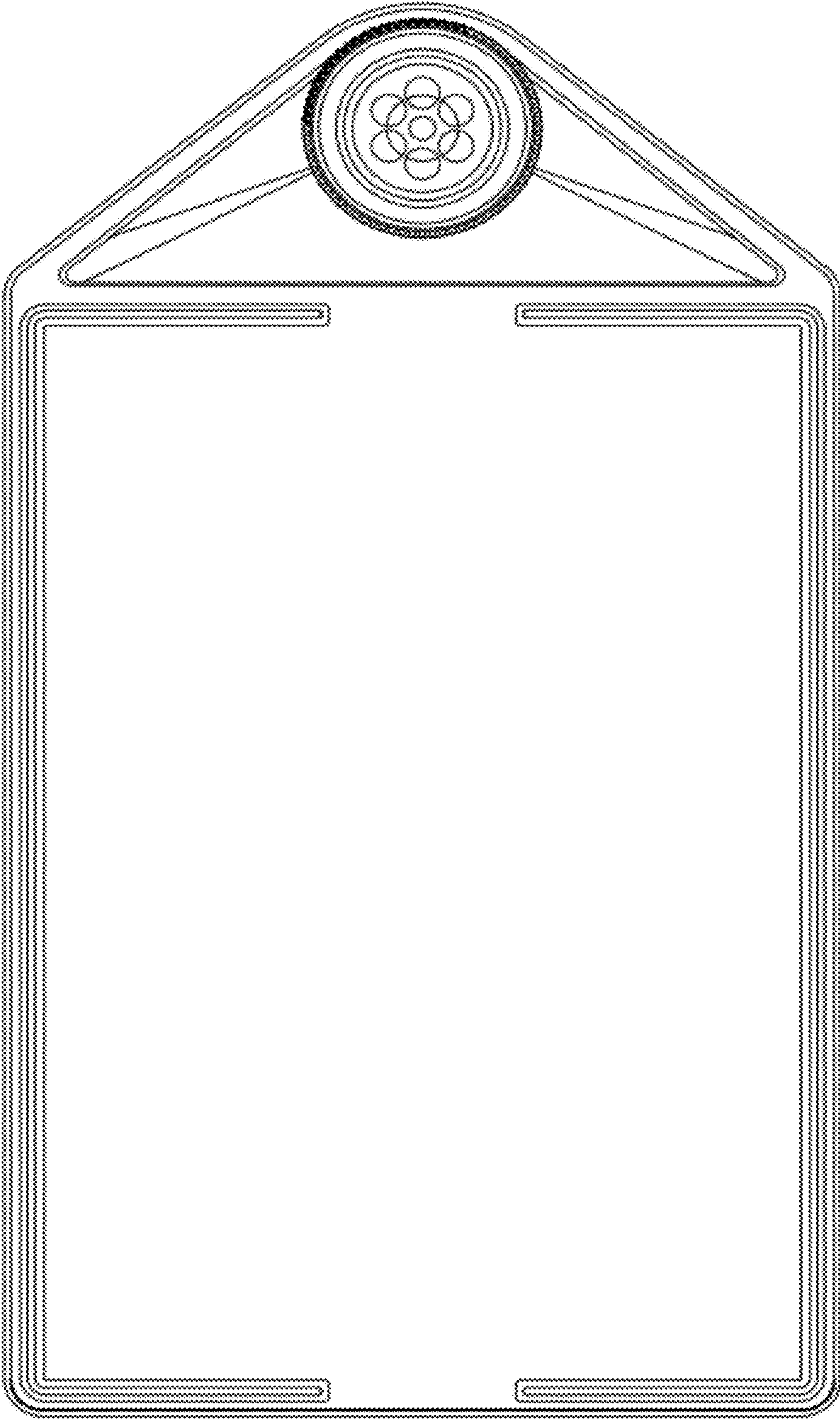
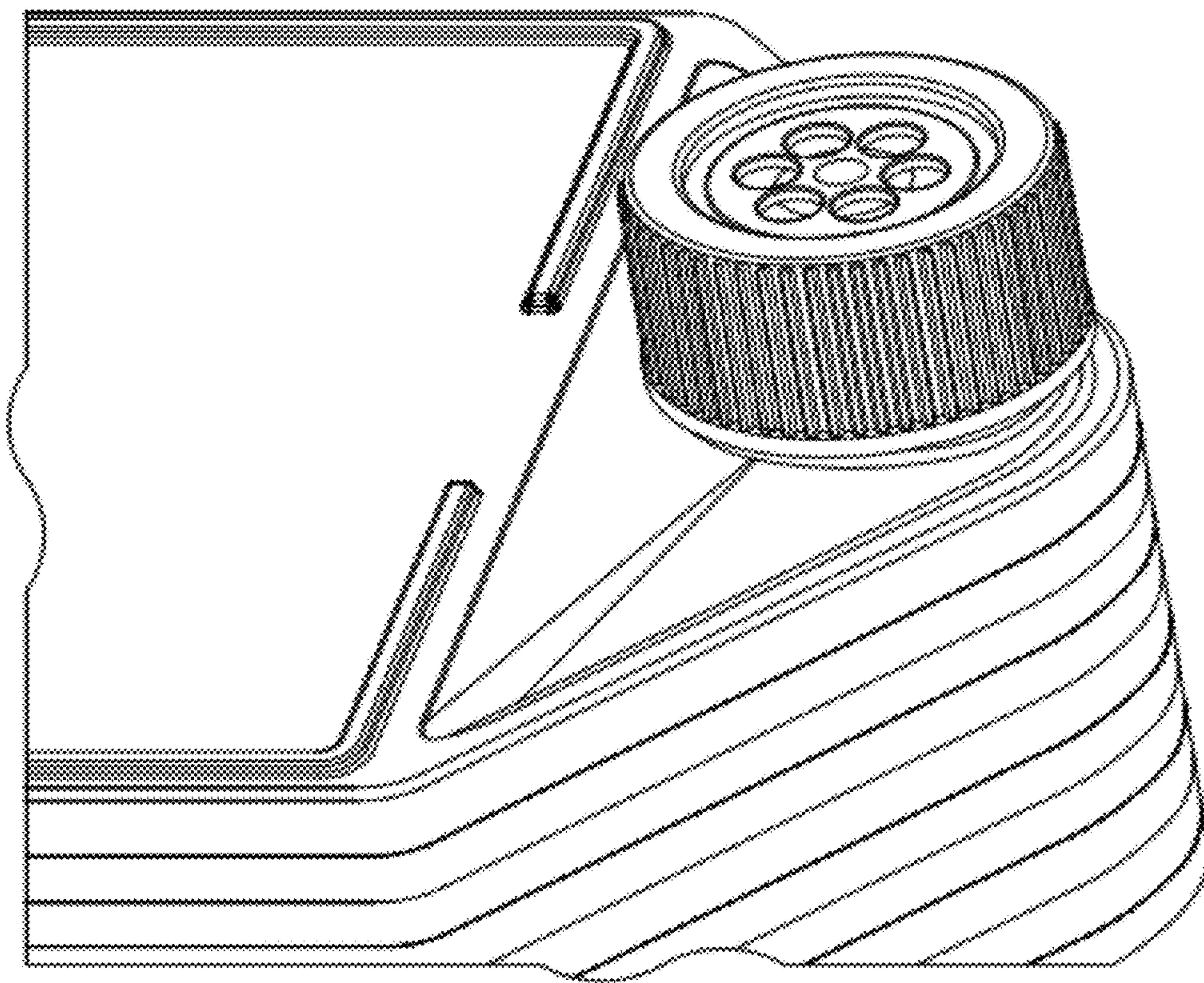
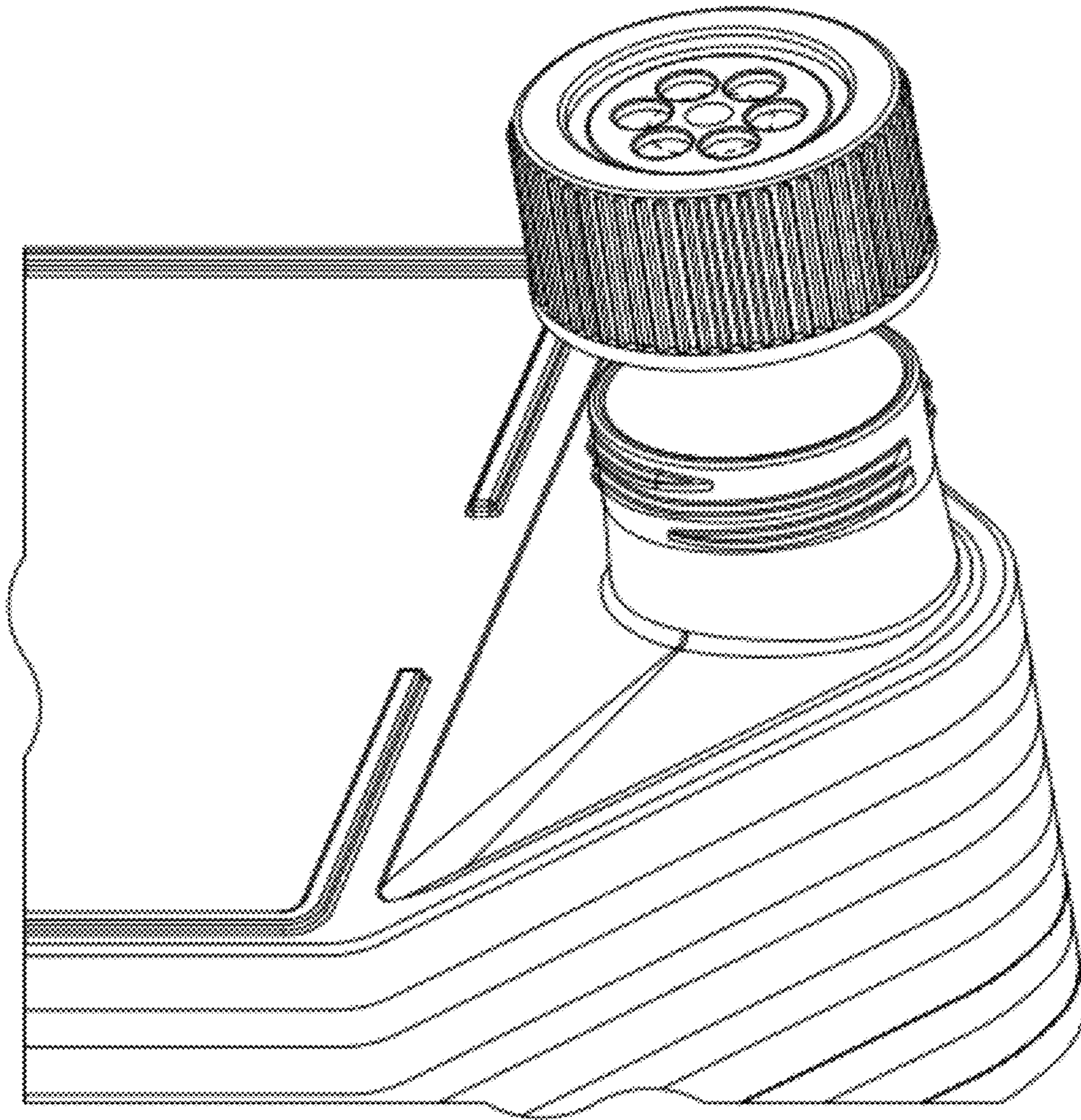


FIG. 7



**FIG. 8**





**FIG. 9**