



US00RE48837E

(19) **United States**
(12) **Reissued Patent**
Mercer et al.

(10) **Patent Number: US RE48,837 E**
(45) **Date of Reissued Patent: Dec. 7, 2021**

(54) **ELECTRIC VEHICLE CHARGING DEVICE**

H01M 10/425; B60L 11/182; B60L 11/1809; B60L 11/1861; B60R 16/03

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See application file for complete search history.

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(56) **References Cited**

U.S. PATENT DOCUMENTS

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(21) Appl. No.: **29/771,060**

(22) Filed: **Feb. 19, 2021**

Related U.S. Patent Documents

Reissue of:

(64) Patent No.: **Des. 844,559**
Issued: **Apr. 2, 2019**
Appl. No.: **29/441,028**
Filed: **Dec. 31, 2012**

U.S. Applications:

(62) Division of application No. 29/707,818, filed on Oct. 1, 2019, now Pat. No. Re. 48,500, which is an application for the reissue of Pat. No. Des. 844,559.

(51) **LOC (13) Cl.** **13-02**

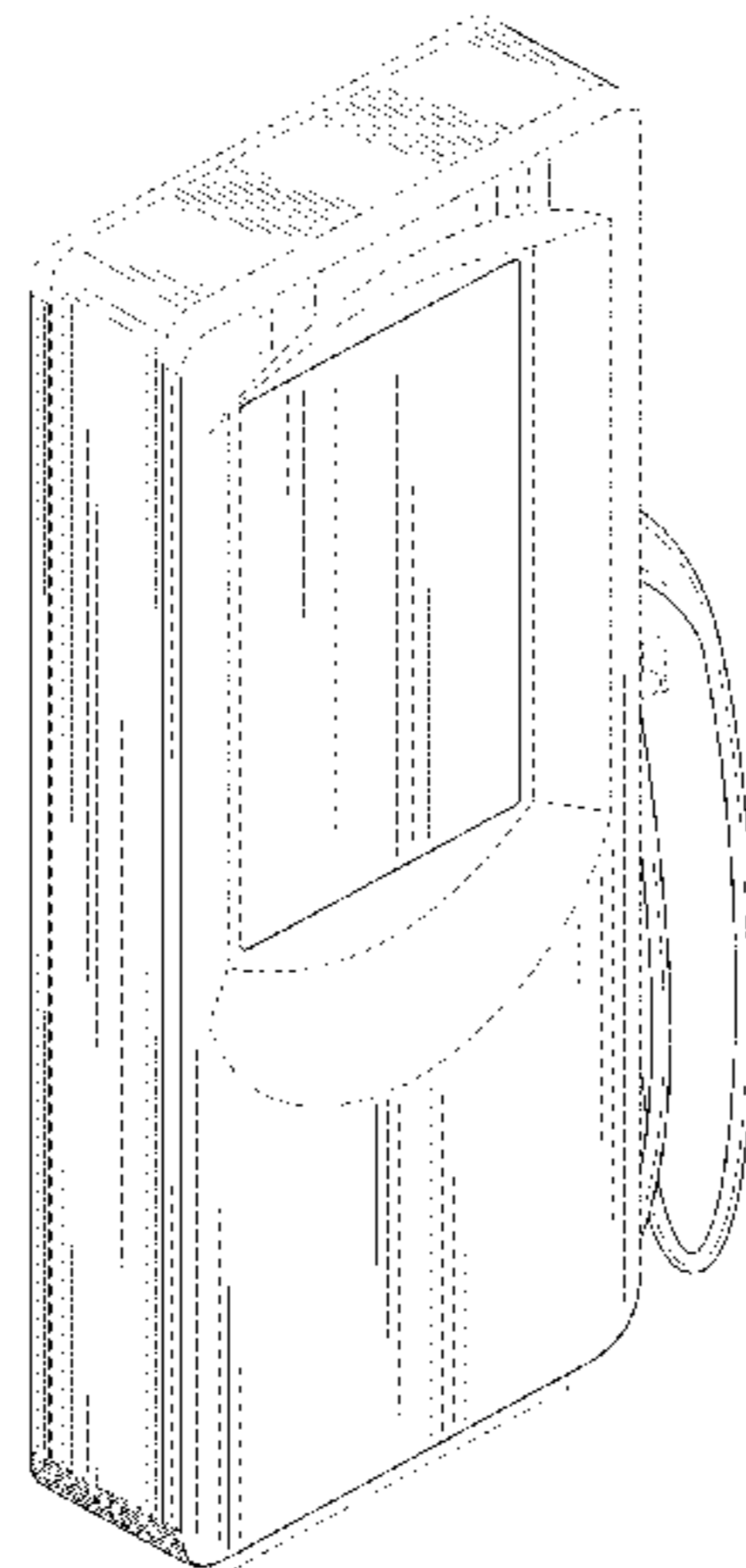
(52) **U.S. Cl.**
USPC **D13/107**

(58) **Field of Classification Search**

USPC D13/107-110, 118-119, 184; D14/251, D14/253, 432, 434

CPC Y02E 60/12; Y02T 90/14; Y02T 90/122; Y02T 90/128; Y02T 90/163; H02J 7/025; H02J 7/0042; H02J 7/0044; H02J 7/0045; H02J 7/0003; H02J 7/0027; H02J 7/0013; H02J 7/0054; H02J 7/00; H02J 2001/008; H02J 3/32; H02J 3/008; H01F 38/14; H01R 13/6675; H01M 2/1022; H01M 2/1055; H01M 10/44; H01M 10/46;

D273,580	S	*	4/1984	Riumbau	.....	D13/107
D459,234	S		10/2002	Kajiura		
6,459,234	B2		10/2002	Kajiura		
D507,813	S	*	7/2005	Gillard	.....	D20/19
D542,849	S	*	5/2007	Hill et al.	.....	D20/10
D608,733	S		1/2010	Smith		
D608,734	S		1/2010	Smith		
D613,683	S		4/2010	Baxter et al.		
D618,168	S		6/2010	Baxter et al.		
D618,204	S		6/2010	Andre et al.		
D626,063	S		10/2010	Cutter et al.		
D626,064	S		10/2010	Cutter et al.		
D626,065	S		10/2010	Cutter et al.		
D633,908	S		3/2011	Akana et al.		
D637,553	S		5/2011	Shin		
D644,218	S		8/2011	Akana et al.		
D646,269	S	*	10/2011	Crick et al.	.....	D14/307
D647,053	S		10/2011	Gotou et al.		
D654,430	S		2/2012	Demers et al.		
D654,857	S		2/2012	Salazar et al.		
D654,858	S		2/2012	Salazar et al.		
D654,860	S		2/2012	Holthusen		
D654,861	S		2/2012	Holthusen		
D659,635	S		5/2012	Hou et al.		
D664,086	S		7/2012	Chin-Ho Kim et al.		
D664,087	S		7/2012	Chin-Ho Kim et al.		
D664,089	S		7/2012	Chin-Ho Kim et al.		
D669,071	S		10/2012	Akana et al.		
D674,334	S	*	1/2013	Cutter et al.	.....	D13/107
D691,208	S	*	10/2013	Gorelick	.....	D20/10
D696,658	S	*	12/2013	Winston et al.	.....	D14/307
D708,573	S	*	7/2014	Gieniec et al.	.....	D13/107
D712,349	S	*	9/2014	Ahlgren	.....	D13/107
D720,285	S	*	12/2014	Gilomen	.....	D13/107
D729,157	S	*	5/2015	Gilomen	.....	D13/107
D730,822	S	*	6/2015	Chin-Ho Kim	.....	D13/107
D733,647	S	*	7/2015	Farrell	.....	D13/107
D749,503	S	*	2/2016	Ferguson	.....	D13/107
9,325,182	B2	*	4/2016	Venkataraman	.....	B60L 53/30
D771,562	S	*	11/2016	Dolle	.....	D13/107
D777,101	S	*	1/2017	Shimada	.....	D13/107
D778,818	S	*	2/2017	Bruining	.....	D13/107
9,705,346	B2	*	7/2017	Bonwit	.....	B60L 53/305
D816,077	S	*	4/2018	Benic	.....	D14/307
D833,387	S	*	11/2018	Baxter	.....	D13/107



(New)

D838,668	S	*	1/2019	Westfall	.....	D13/107
D842,242	S	*	3/2019	Zhang	.....	D13/107
D844,559	S		4/2019	Mercer et al.		
D858,435	S	*	9/2019	Helnerus	.....	D13/107
D868,687	S	*	12/2019	da Silva	.....	D13/107
D872,687	S	*	1/2020	Mortun	.....	D13/107
D876,342	S	*	2/2020	Mercer	.....	D13/107
D876,345	S	*	2/2020	Mercer	.....	D13/107
D876,346	S	*	2/2020	Mercer	.....	D13/107
D883,199	S	*	5/2020	Santander	.....	D13/107
D884,613	S	*	5/2020	Minkyo	.....	D13/107
2010/0296234	A1	*	11/2010	Crick, Jr.	.....	361/679.21
2011/0145141	A1	*	6/2011	Blain	.....	320/109
2012/0262112	A1		10/2012	Ross		
2013/0069588	A1	*	3/2013	Oda et al.	.....	320/109
2013/0207606	A1	*	8/2013	Ranga et al.	.....	B60L 53/31 320/109

OTHER PUBLICATIONS

Parsons, Sarah. "France Announces \$2.2 Billion Electric car Charging Network." [retrieved on Dec. 28, 2012]. Retrieved from the Internet: <www.google.com/imgres?q=electric+vehicle-Fcharging+stations&num=10&um=1&hl=en&tbo=d&biw=1440&bih=783&tbm=isch&tbnid=QP2cslOfm0K2MAimgrefurl=http://inhabitat.com/massachusetts-set-to-install-100-ev-charging-stations/&docid=NKQtedu9SWSKBM&imgurl=http://assets.inhabitat.com/wp-content/uploads/>.

Smartlet Coulomb Charging Station. [retrieved Nov. 7, 2012]. Retrieved from the Internet: <www.google.com/imgres?q=electnc+vehicle+charging+stations&num=10&um=1&hl=en&tbo=d&biw=1440&bih=783&tbm=isch&tbnid=RKicGBKiRP2P7M:&imgrefurl=http://news.cnet.com/8301-11128_3-10167445-54.html&docid=CWP1h-N1014k3M&imgurl=http://news.cnet.com/i/oto/20090219/smartlet_Coulomb_charging_station-cityhall_270x407>.

Bloomfield, Nikki Gordon. "Need An Electric Car Charging Station At Work? Here's One For Free." [retrieved Nov. 7, 2012]. Retrieved from the Internet: <www.google.com/imgres?q=electric+vehicle-Fcharging+stations&start=22&num=10&um=1&hl=en&tbo=d&biw=1440&bih=783&tbm=isch&tbnid=njkABlvYoMe0IM:&imgrefurl=http://www.greencarreports.com/news/1079118_need-an-electric-car-charging-station-at-work-heres-one-for-free&docid=7ywn-IMbSk0AgM&imgurl=http://images.thecarconnection.com/smUchargepoint_100182292_s_n>.

"Smart Grids, Fast Charging—Infrastructure for Electric Car." [retrieved on Nov. 7, 2012]. Retrieved from the Internet: <www.google.com/imgres?q=electric+vehicle+charging+stations&start=20&num=10&um=1&hl=en&tbo=d&biw=1440&bih=783&tbm=isch&tbnid=f4piNYxLOy80M:&imgrefurl=http://www.impactlab.net/2008/07/28/smart-grids-fast-charging-infrastructure-for-electric-cars/&docid=3pBfeFHp7Jg9mM&imgurl=http://www.impactlab.com/wp-content/uploads/2008/07/charging-station-london>.

"EV News: first hotel to install electric car charging station for guests." [retrieved on Nov. 7, 2012]. Retrieved from the Internet: <www.google.com/imgres?q=electric+vehicle+charging+stations&start=307&num=10&um=1&hl=en&tbo=d&biw=1440&bih=783&tbm=isch&tbnid=78HBWHajq0_ydM:&imgrefurl=http://www.examiner.com/article/ev-news-first-hotel-to-install-electric-car-charging-station-for-guests&docid=Hv6RWgv08bpOOM&imgurl=http://www.examiner.com/images/blog/wysiwyg/image/>.

"EV Charging Station, Volta—Honolulu, Hawaii." [retrieved on Dec. 30, 2012]. Retrieved from the Internet: <www.google.com/imgres?q=electric+vehicle-Fcharging+stations&start=307&num=10&um=1&hl=en&tbo=d&biw=1440&bih=783&tbm=isch&tbnid=78HBWHajq0_ydM:&imgrefurl=http://www.examiner.com/article/ev-news-first-hotel-to-install-electric-car-charging-station-for-guests&docid=Hv6RWgv08bpOOM&imgurl=http://www.examiner.com/images/blog/wysiwyg/image/>.

Buffalo Niagara Medical Campus. "Electric Vehicle Charging Stations Installed Across Campus." [retrieved on Dec. 30, 2012]. Retrieved from the Internet: <www.google.com/imgres?q=electric+vehicle-Fcharging+stations&start=554&um=1&hl=en&tbo=d&biw=1440&bih=783&tbm=isch&tbnid=5QoChyg4wMwOeM:&imgrefurl=http://www.bnmc.org/electric-vehide-charging-stations-installed-across-campus/&docid=VINctdKztXxtKM&imgurl=http://www.bnmc.org/wp-content/uploads/charging-stations>.

"Electric-Vehicle Charging Stations Available at ACC Campuses." [retrieved Dec. 30, 2012]. Retrieved from the Internet: <www.google.com/imgres?q=electnc+vehicle+charging+stations&start=738&um=1&hl=en&tbo=d&biw=1440&bih=783&tbm=isch&tbnid=BCVZxvxp_xJfmM:&imgrefurl=http://Minsideacc.austfincc.edu/index.php/2012/01/13/electric-vehicle-charging-stations-available-at-acc-campuses/&docid=WIRnei31J_vhM&imgurl=http://insideacc.austfincc.edu/wp-content/uploads/HBC-Charging-Station>.

Stewart, Douglas. "On the Same Day . . . Doe Ramps up Electric Vehicle Information; Costco removes EV chargers "No one uses "them." [retrieved on Nov. 7, 2012]. Retrieved from the Internet: <www.google.com/imgres?q=electric+vehicle+charging+stations&num=10&um=1&hl=en&tbo=d&biw=1440&bih=783&tbm=isch&tbnid=fy1RBJOdzLlwDM:&imgrefurl=http://ameristroika.wordpress.com/2011/08/30/on-the-same-day-doe-ramps-up-electric-vehicle-information-costco-removes-ev-chargers-no-one-uses-them/&docid=z4L5TL-rLf6l2M&imgurl=http://ameristroika.files.wordpress.com/2011/08/ev-recharging-station1>.

"Top 20 electric vehicle charging station companies." [retrieved Nov. 7, 2012]. Retrieved from the Internet: <www.google.com/imgres?q=electnc+vehicle+charging+stations&start=22&num=10&um=1&hl=en&tbo=d&biw=1440&bih=783&tbm=isch&tbnid=Xkyb5eDD_qzaxM:&imgrefurl=http://www.evcarco.com/evcarco/2012/01/27/ev-industry-charing-station-trends-united-states/&docid=kQyau38F05amJM&imgurl=http://www.evcarco.com/evcarco/wp-content/uploads/2012/01/EV-Charging-Station-fast>.

"Singapore: Robert Bosch appointed to set up EV charging station infrastructure." [retrieved on Dec. 30, 2012]. Retrieved from the Internet: <www.google.com/imgres?q=electric+vehicle-Fcharging+stations&start=59&num=10&um=1&hl=en&tbo=d&biw=1440&bih=783&tbm=isch&tbnid=zbLiKh-Op70WnM:&imgrefurl=http://theenergycollective.com/sklowem/44983/singapore-robert-bosch-appointed-set-ev-charging-station-infrastructure&docid=LNEAMWierfHiDM&imgurl=http://lh5.ggpht.com/LBgmD4flGMVcTK_7eL5IPWI/AAAAAAAAAEeb>.

Campus Life Services. "Charge your vehicle with us." [retrieved on Dec. 30, 2012]. Retrieved from the Internet: <www.google.com/imgres?q=electric+vehicle-Fcharging+stations&start=713&um=1&hl=en&tbo=d&biw=1440&bih=783&tbm=isch&tbnid=9ks7R5ujBHDtOM:&imgrefurl=http://campusliveservices.ucst.edu/16.784&docid=YUOFyHbLzoddMimgurl=http://campusliveservices.ucsf.edu/upload/cls/body_images/EV_2_car_charge_unite300jpg&w300&h=400&ei=GmqZULy1LysSx0AG-4CoDA&zoom=1&iact=hc&vpx=595&vpy=11&dur=8286&hovh=259&hu>.

University of Maryland: The Department of Transportation Services. "About Electric Vehicle Charging Stations." [retrieved on Nov. 7, 2012]. Retrieved from the Internet: <http://www.google.com/imgres?q=electric+vehicle+charging+kiosk&um=1&hl=en&tbo=d&biw=813&bih=453&tbm=isch&tbnid=s6QZ_c2vv4M1g-MAimgrefurl=http://www.transportation.umd.edu/chargingstation.html&docid=DuDNDCLikGewXM&imgurl=http://www.transportation.umd.edu/images/charging-station.png&w=230&h=320&ei=dGuZUK3sL9060AGz9oHIDw&zoom=1&iact=hc&vpx=498&vpy=59&dur=3576&hovh=256Ma>.

Moon, Jade. "Getting An EV Charge for Free." [retrieved on Dec. 30, 2012]. Retrieved from the Internet: <www.google.com/imgres?q=electric+vehicle+charging+kiosk&um=1&hl=en&tbo=d&biw=813&bih=453&tbm=isch&tbnid=spbpBxbTvGDwIMimgrefurl=http://www.midweek.com/getting-an-ev-charge-for-free/&docid=Wh1DDUhKhM7U1M&imgurl=http://www.midweek.com/wp-content/uploads/2012/04/moon.jpg&w=300&h=199&ei=dGuZUK3sL9060AGz9oHIDw&zoom=1&iact=hc&vpx=4&vpy=185&dur=3366&hovh=159&hou>.

Electric Vehicle Kiosk, [retrieved on Dec. 7, 2012]. Retrieved from the Internet: <www.google.com/imgres?q=electric+vehicle+charging+kiosk&um=1&hl=en&tbo=d&biw=813&bih=453&tbm=isch&tbnid=19Qs24hR5V2XAM:&imgrefurl=http://article.wn.com/view/2012/04/04/OpConnect_Leads_the_Way_With_Social_MediaEnabled_Electric_Ve/&docid=GswMhlig_P_2aVM&imgurl=http://M.yimg.com/vi/Sd_F4WoQqkYY/0.jpg&w=480&h=360&ei=dGuZUK3sL9060AGz9oHIDw&zoom=1&iact=hc&vpx=530&vpy=17&dur=10132&hovh=19441>.

* cited by examiner

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 (74) Attorney, Agent, or Firm — Morgan, Lewis &
 Bockius LLP

(57) **CLAIM**

The ornamental design for an electric vehicle charging system, as shown and described.

DESCRIPTION

Notice: More than one reissue application has been filed for the reissue of U.S. Design Pat. No. D. 844,559, issued on Apr. 2, 2019. The reissue applications are the present application and Ser. No. 29/707,818, filed on Oct. 1, 2019, all of which are reissues of U.S. Pat. No. D. 844,559.

This application is a Divisional of U.S. patent application Ser. No. 29/707,818 filed Oct. 1, 2019, which is an application for reissue of U.S. Design Pat. No. D. 844,559, which issued on Apr. 2, 2019 from U.S. Design application Ser. No. 29/441,028 filed on Dec. 31, 2012, each of which is incorporated herein by reference in its entirety.

[FIG. 1 is an upper left front perspective view of an electric vehicle charging system showing our new design;]

[FIG. 2 is an upper right rear perspective view thereof;]

[FIG. 3 is a front elevational view thereof;]

[FIG. 4 is a right side elevational view thereof;]

[FIG. 5 is a rear elevational view thereof;]

[FIG. 6 is a left side elevational view thereof;]

[FIG. 7 is a top plan view thereof;]

[FIG. 8 is a bottom plan view thereof;]

[FIG. 9 is a top left from perspective cutaway view showing illumination elements;]

[FIG. 10 is a side and enlarged elevational cutaway view of the electric vehicle charging system of FIGS. 4 and 6; and,]

[FIG. 11 is an enlarged bottom plan view showing details of air vents of the electric vehicle charging system of FIG. 8.]

FIG. 12 is an upper left front perspective view of a second embodiment of an electric vehicle charging device showing our new design;

FIG. 13 is an upper right rear perspective view thereof;

FIG. 14 is a front elevational view thereof;

FIG. 15 is a right side elevational view thereof;

FIG. 16 is a rear elevational view thereof;

FIG. 17 is a left side elevational view thereof;

FIG. 18 is a top plan view thereof;

FIG. 19 is a bottom plan view thereof;

FIG. 20 is a top left from perspective cutaway view;

FIG. 21 is a side and enlarged elevational cutaway view of the electric vehicle charging device of FIG. 17; and,

FIG. 22 is an enlarged bottom plan view showing details of the electric vehicle charging device of FIG. 19.

[The shade lines in the Figures show contour and not surface ornamentation.]

The broken lines in the Figures show portions of the electric vehicle charging [system] device which [forms] form no part of the claimed design.

1 Claim, 10 Drawing Sheets

Matter enclosed in heavy brackets [] appears in the original patent but forms no part of this reissue; matter printed in italics indicates the additions made by reissue.

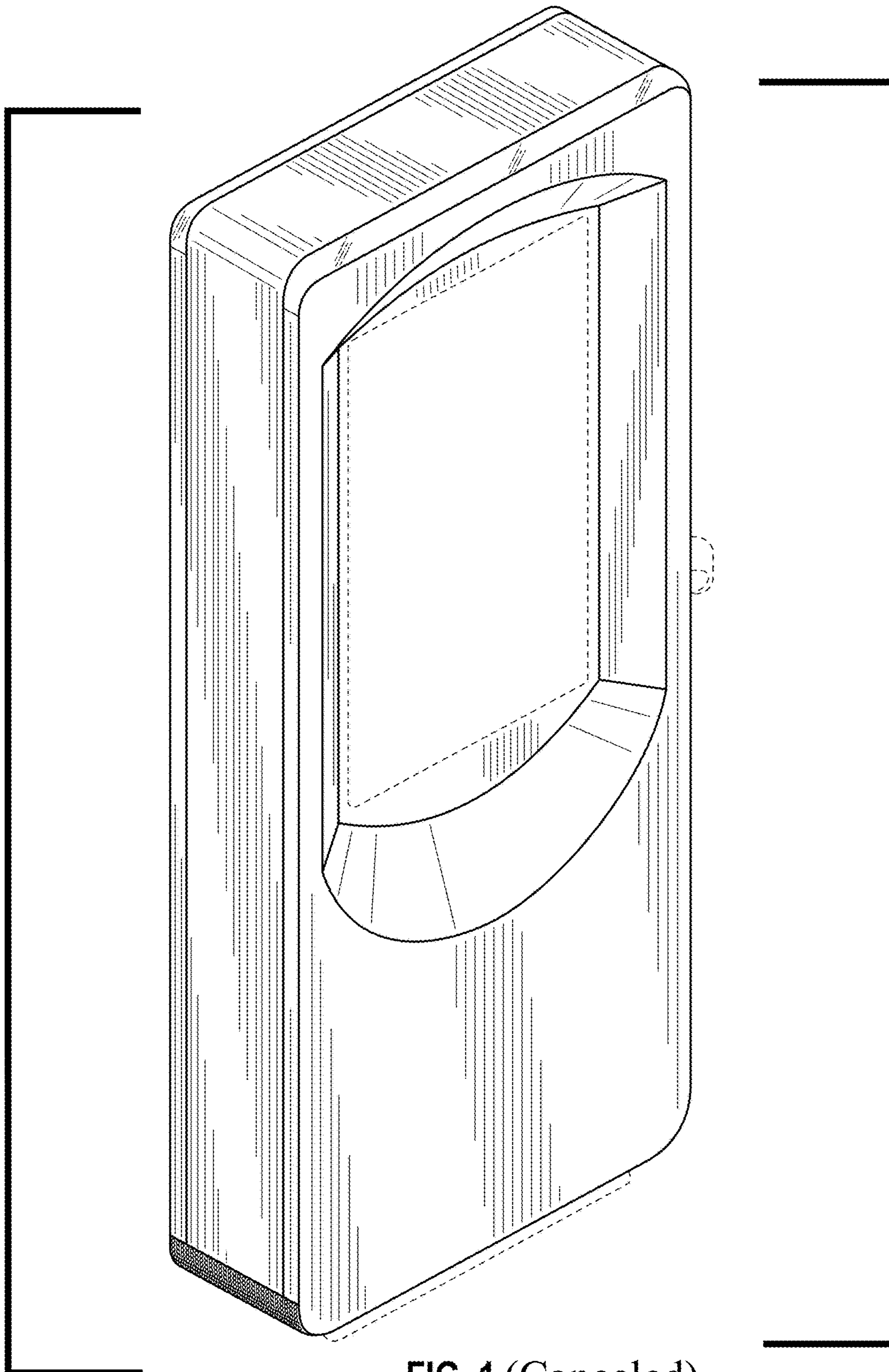


FIG. 1 (Canceled)

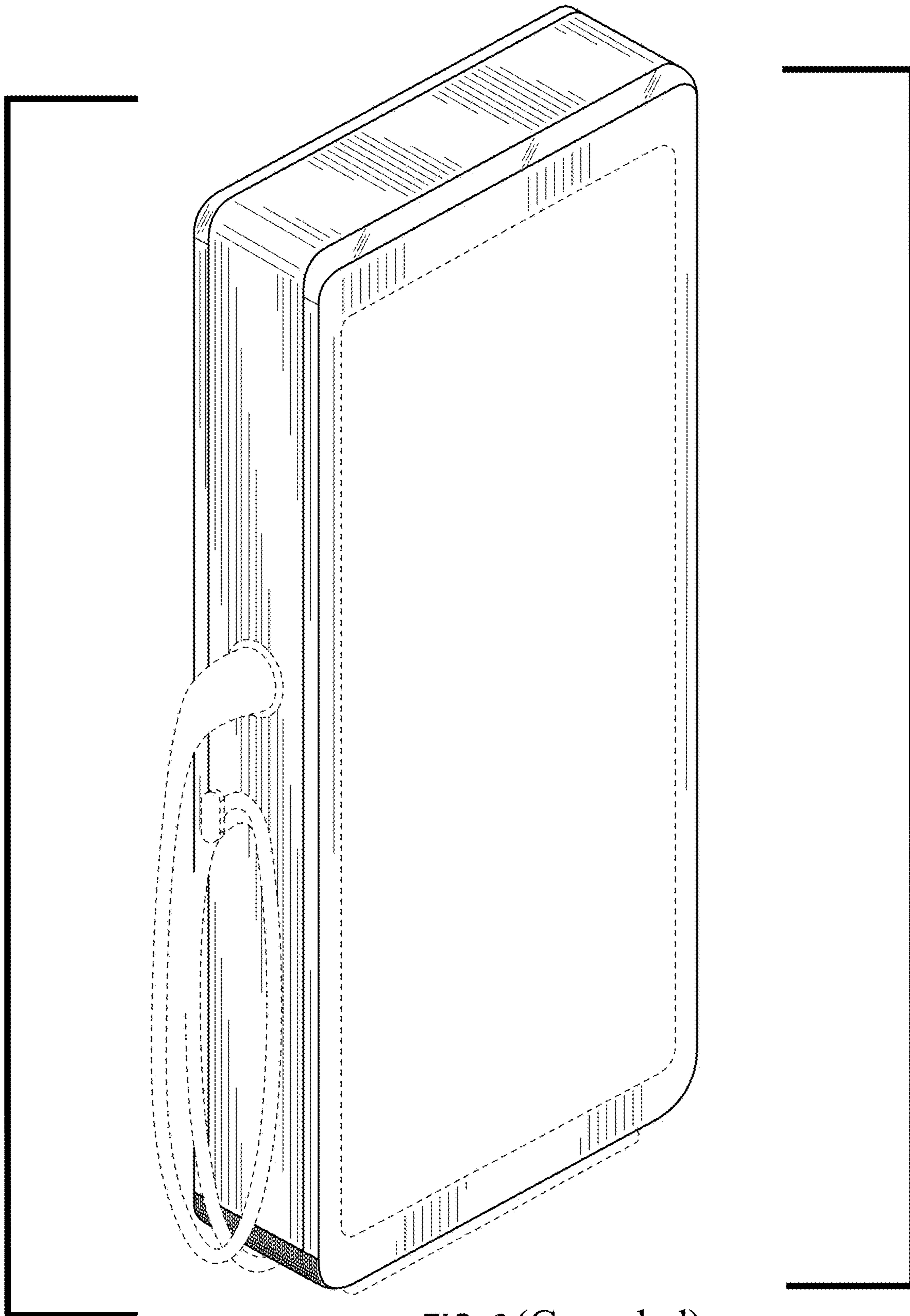


FIG. 2 (Canceled)

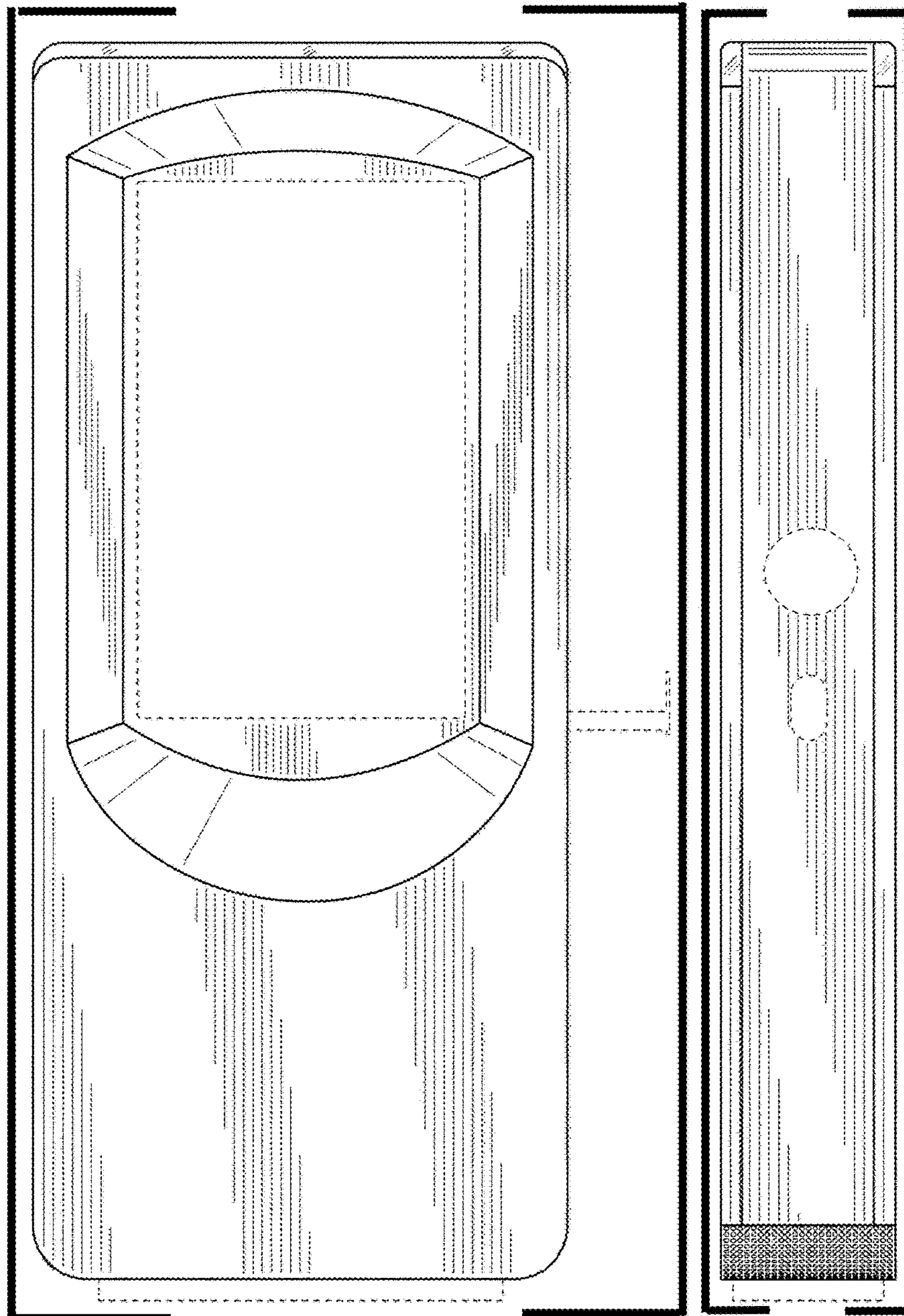


FIG. 3
(Canceled)

FIG. 4
(Canceled)

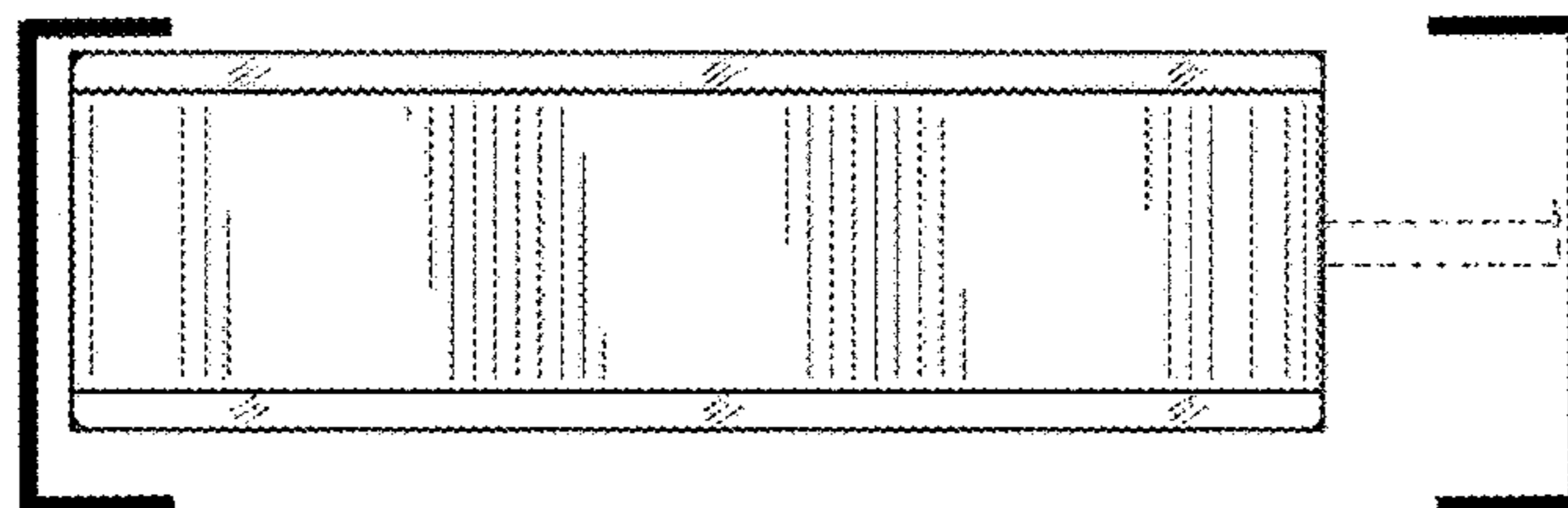
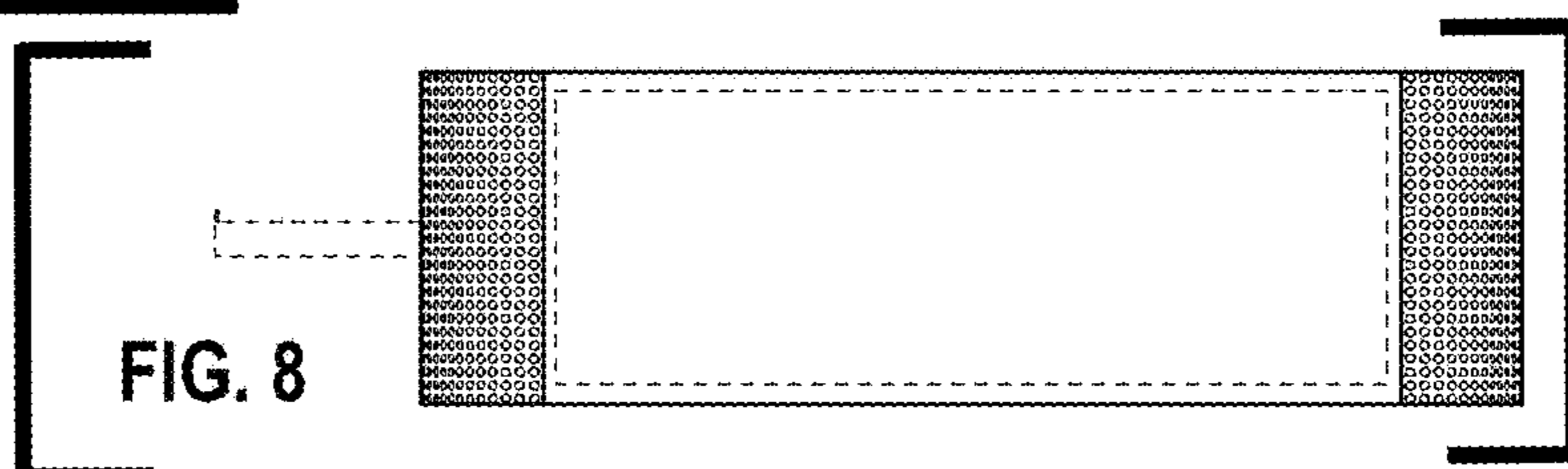
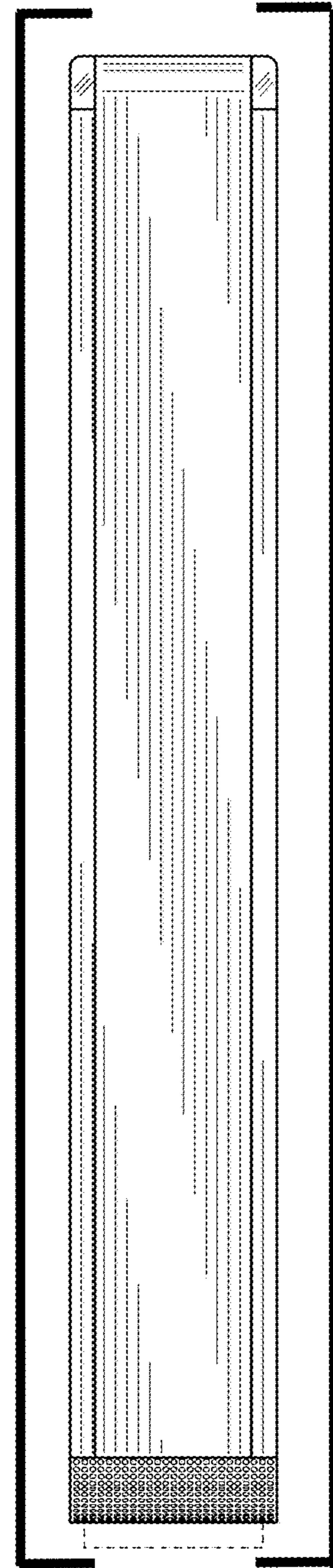
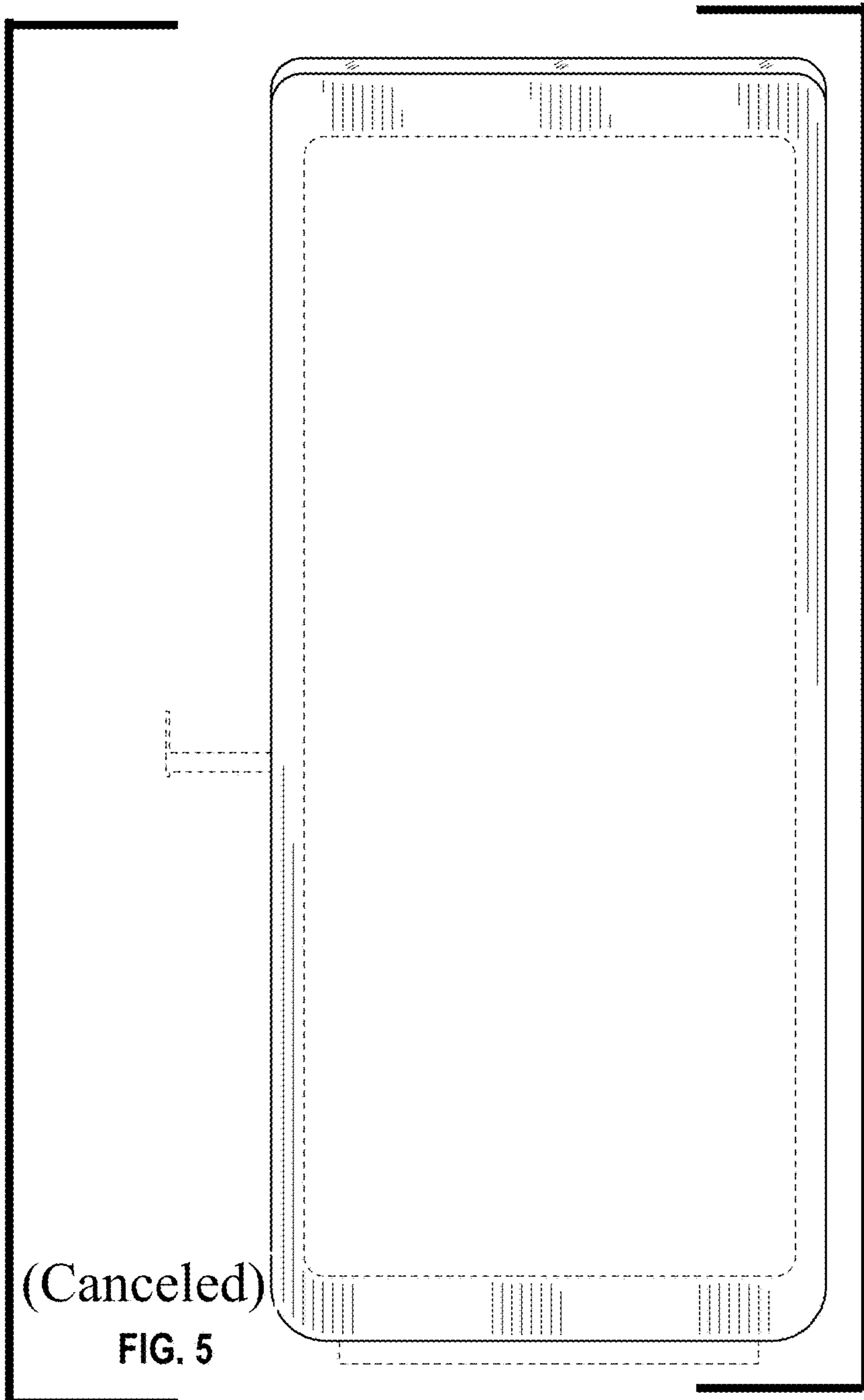


FIG. 7
(Canceled)



(Canceled)

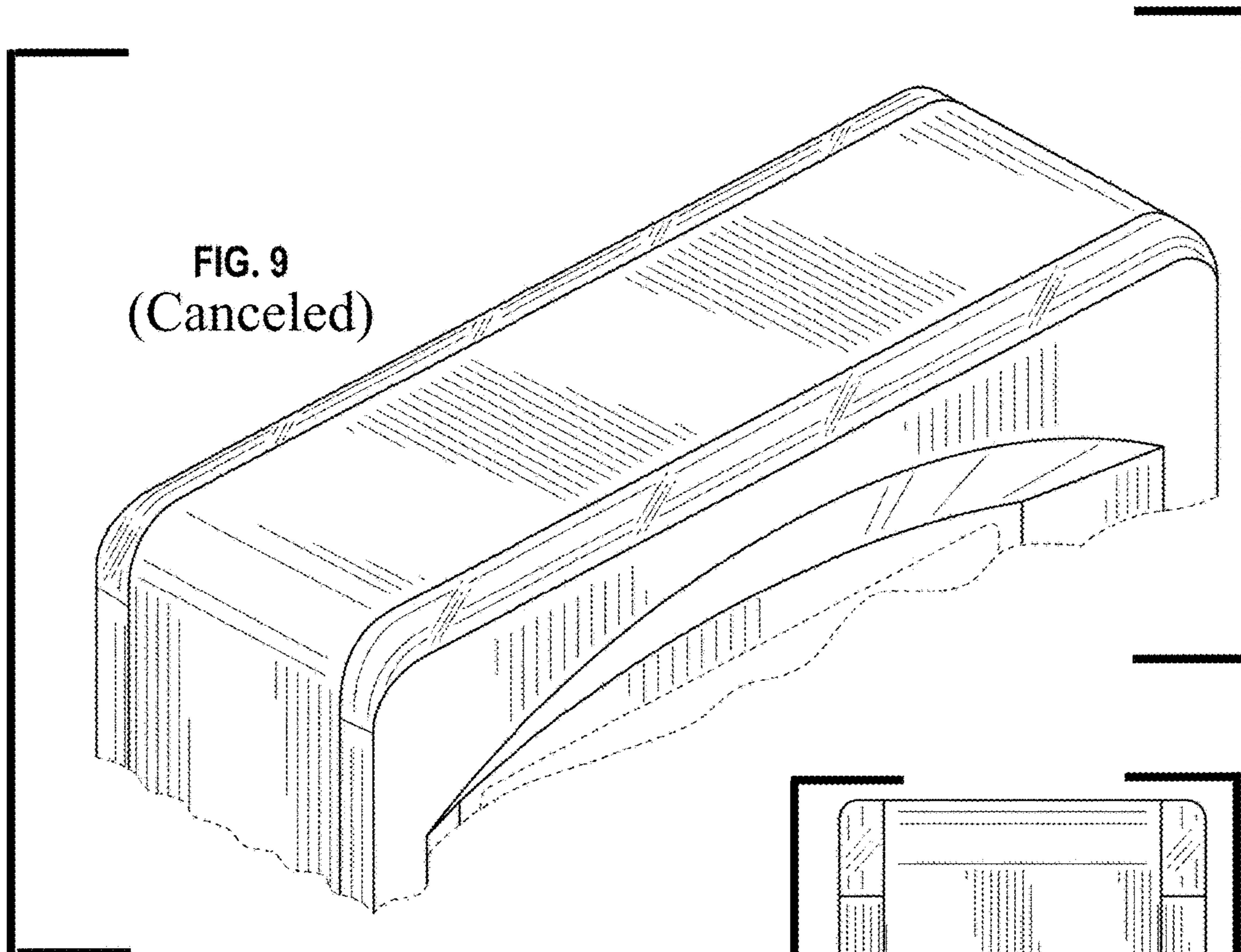


FIG. 9
(Canceled)

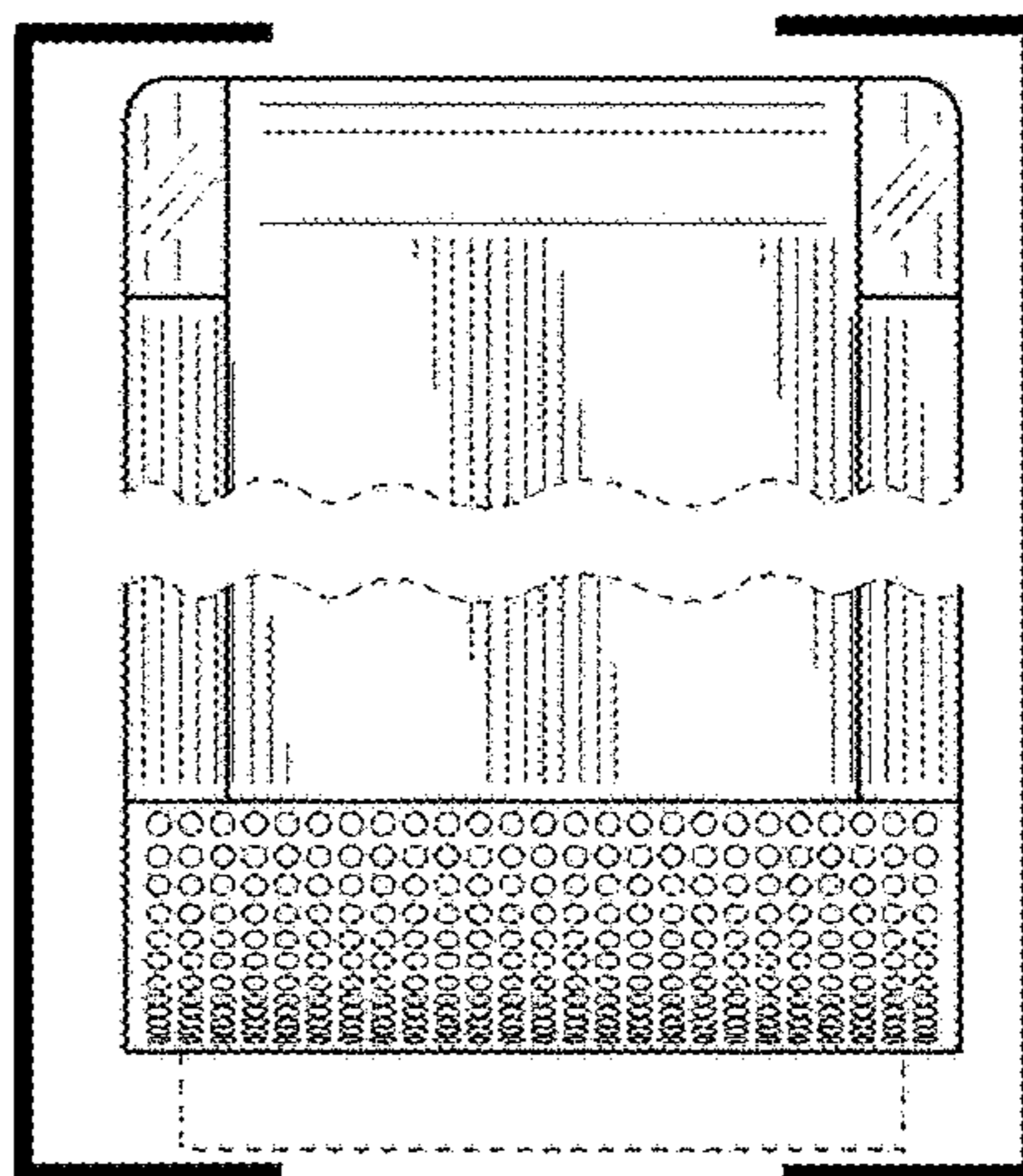
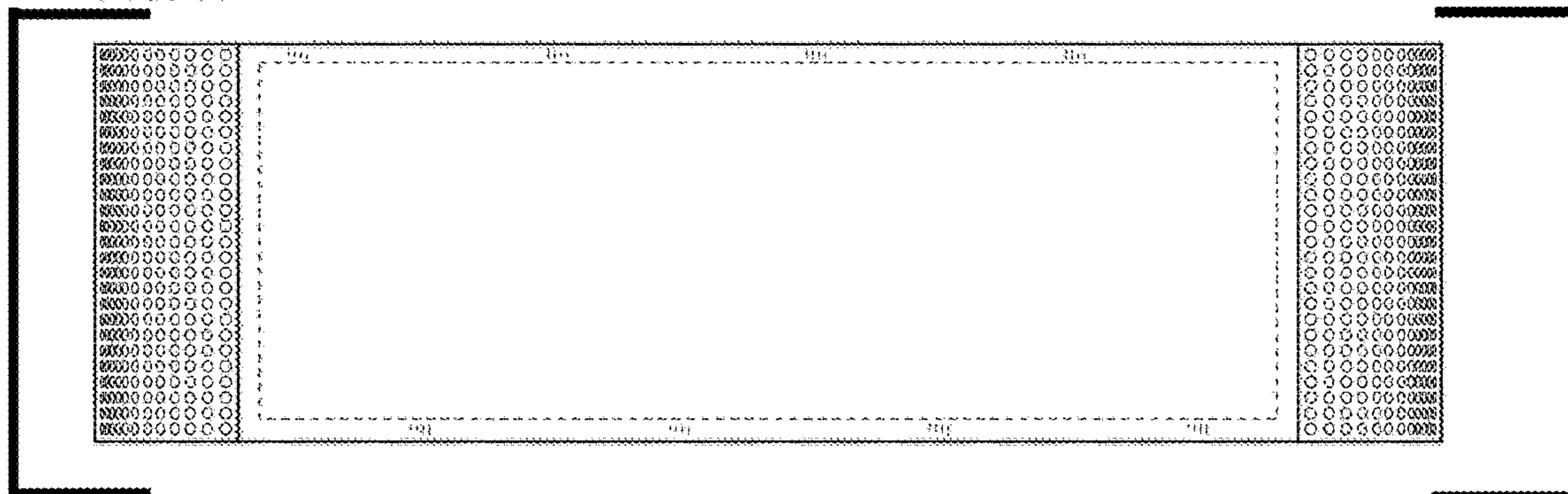


FIG. 10
(Canceled)

(Canceled)

FIG. 11



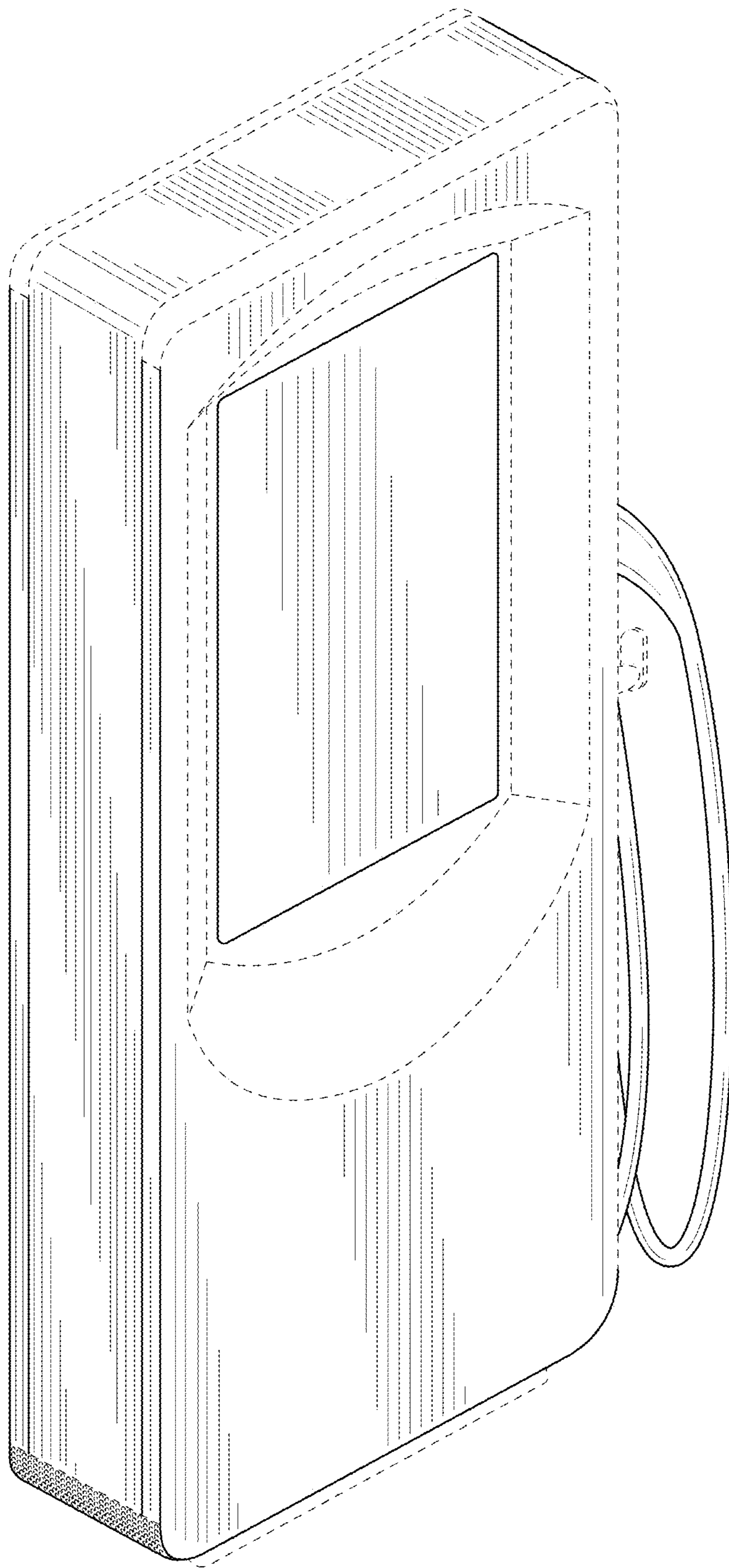


FIG. 12 (New)

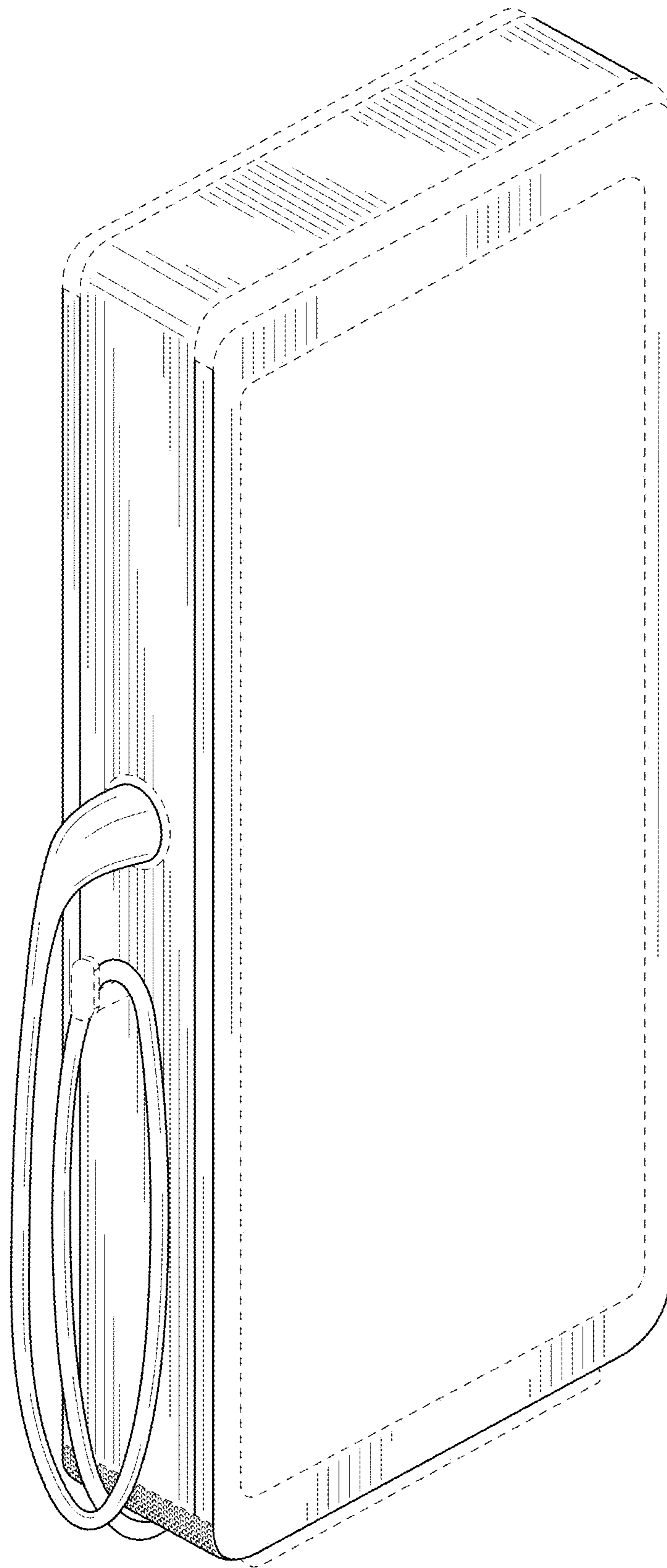


FIG. 13 (New)

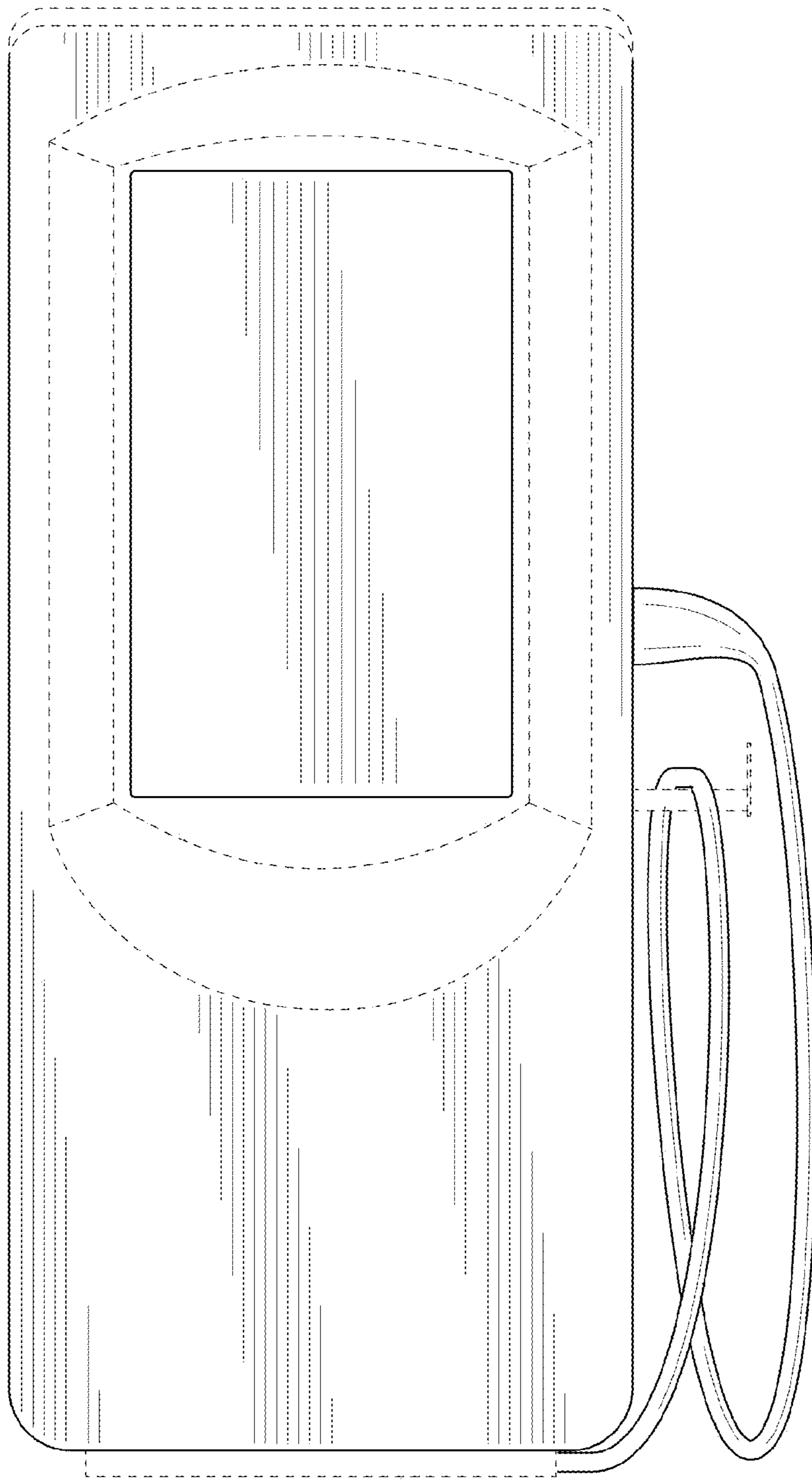


FIG. 14 (New)

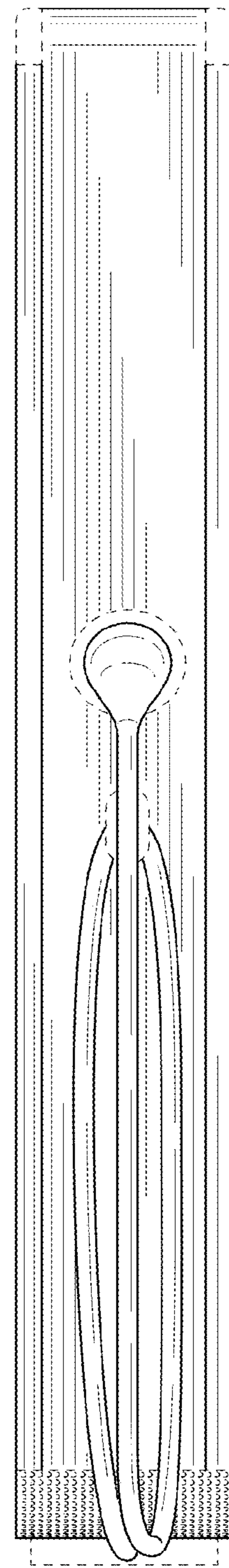


FIG. 15 (New)

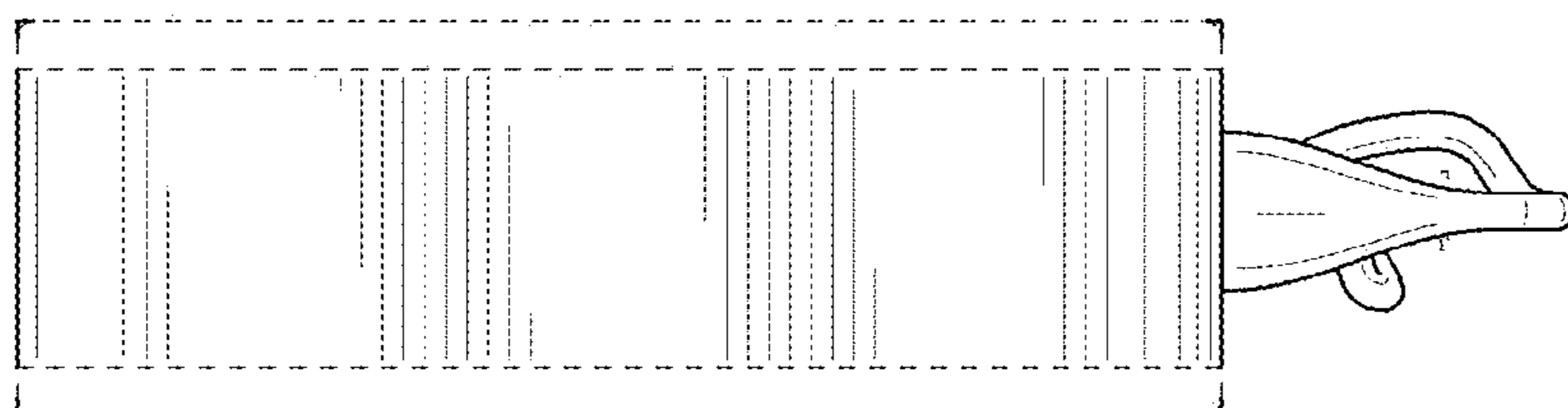


FIG. 18 (New)

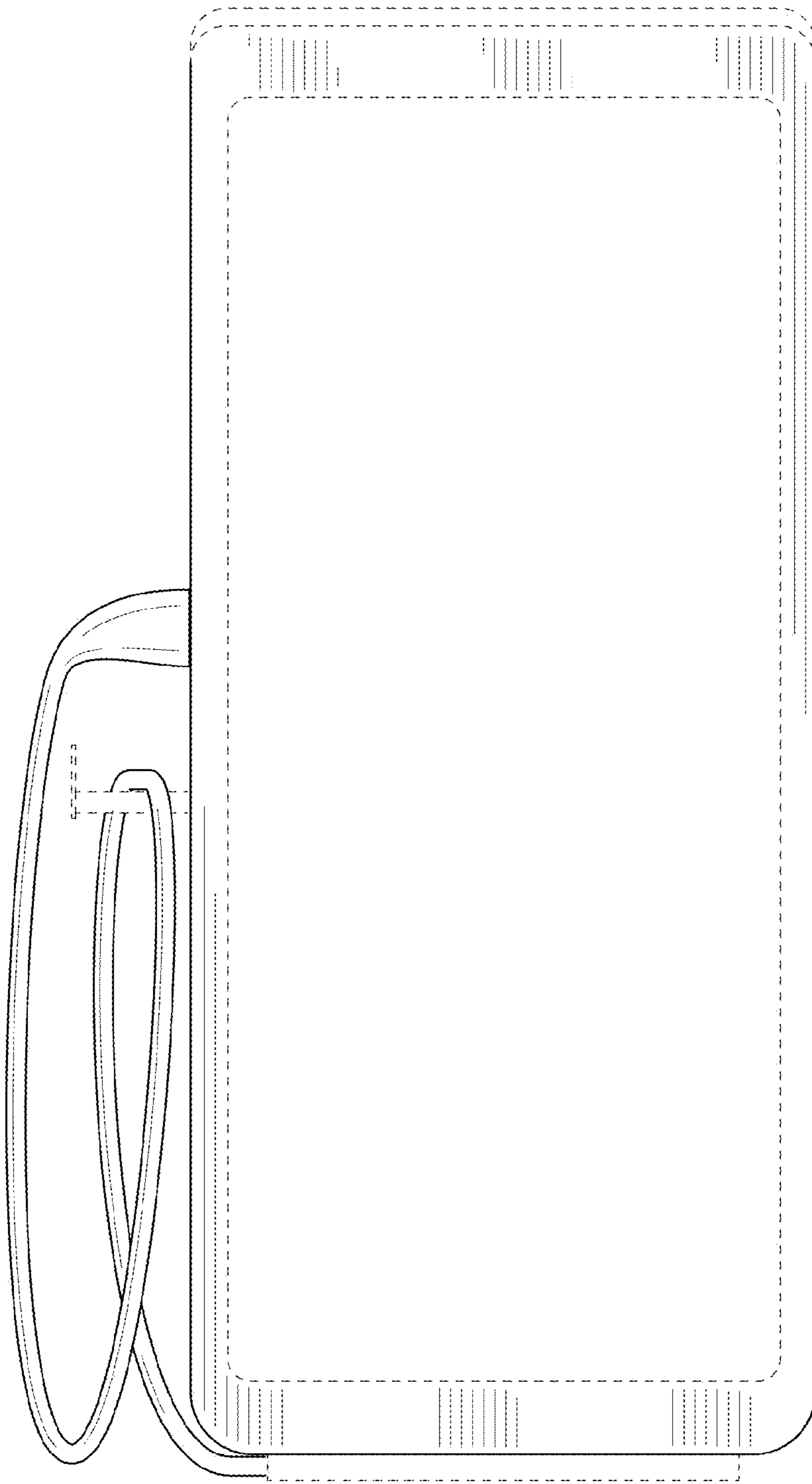


FIG. 16 (New)

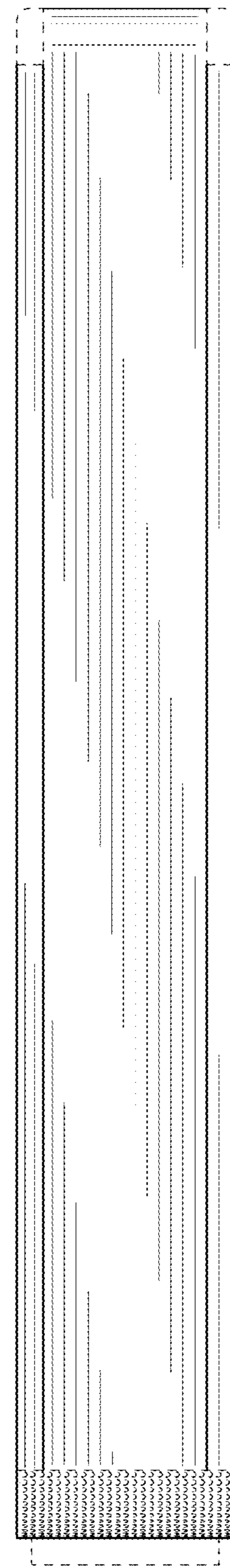


FIG. 17 (New)

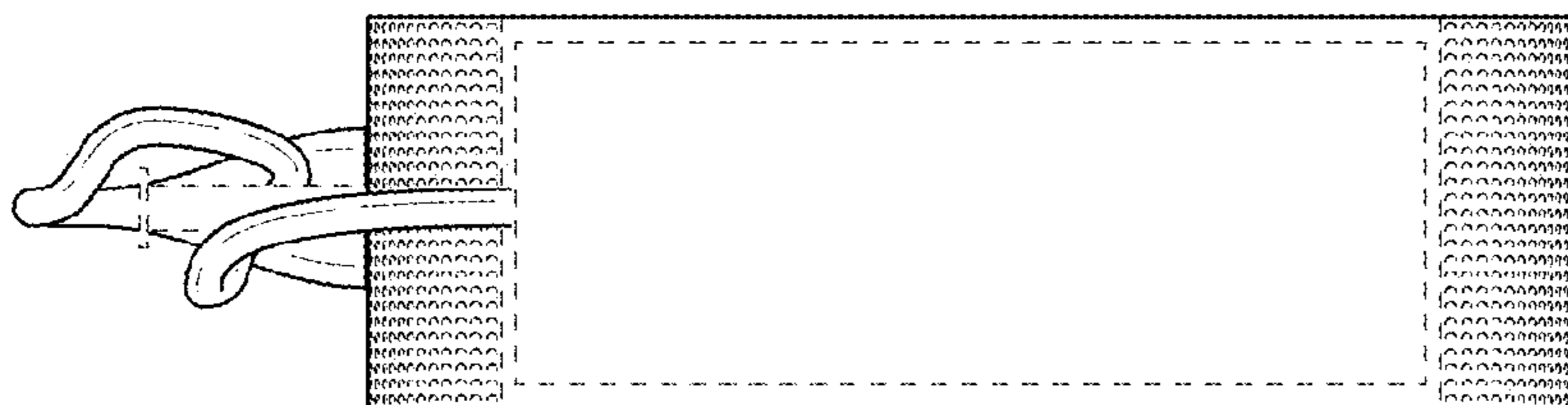


FIG. 19 (New)

FIG. 20 (New)

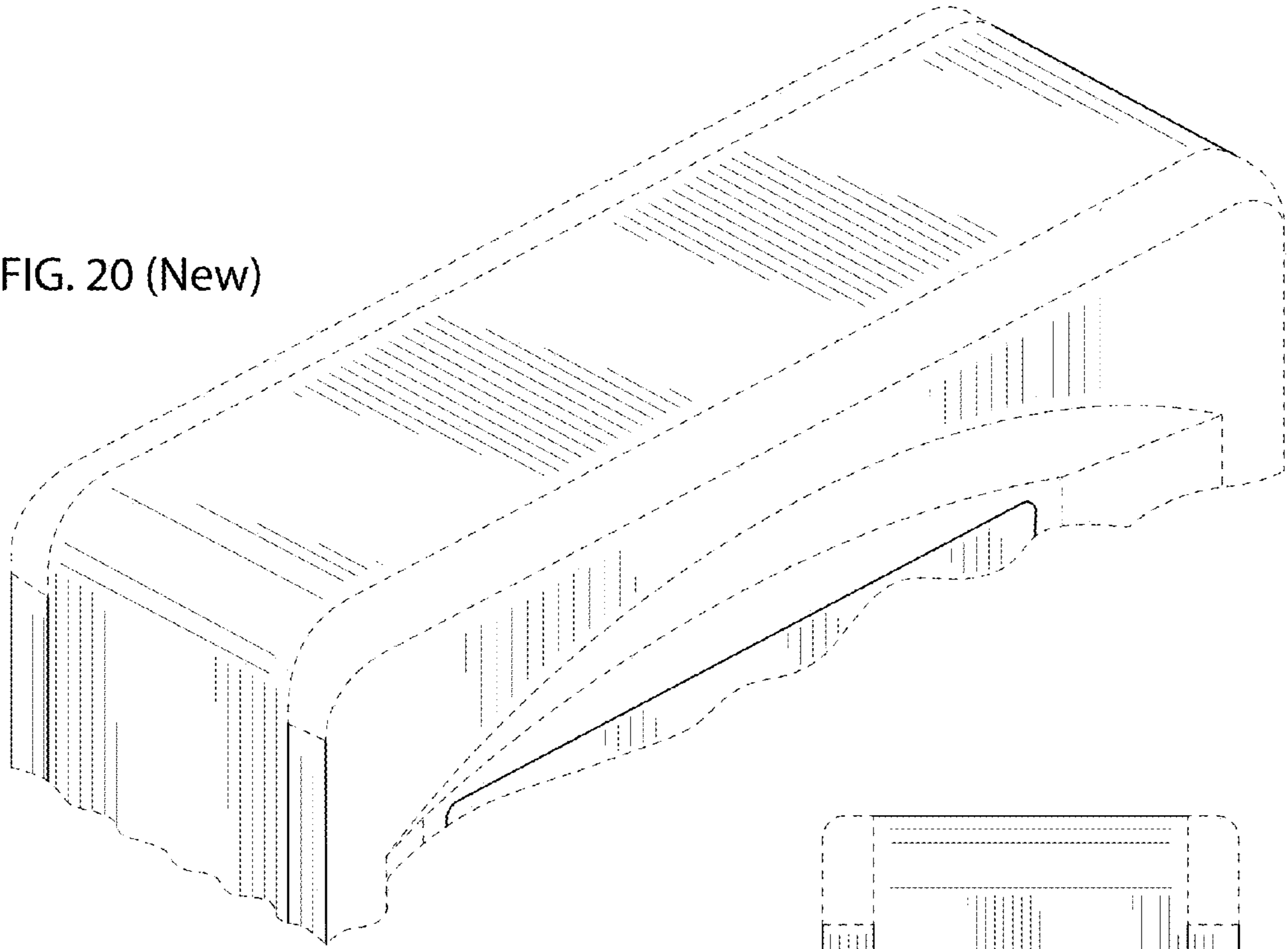


FIG. 21 (New)

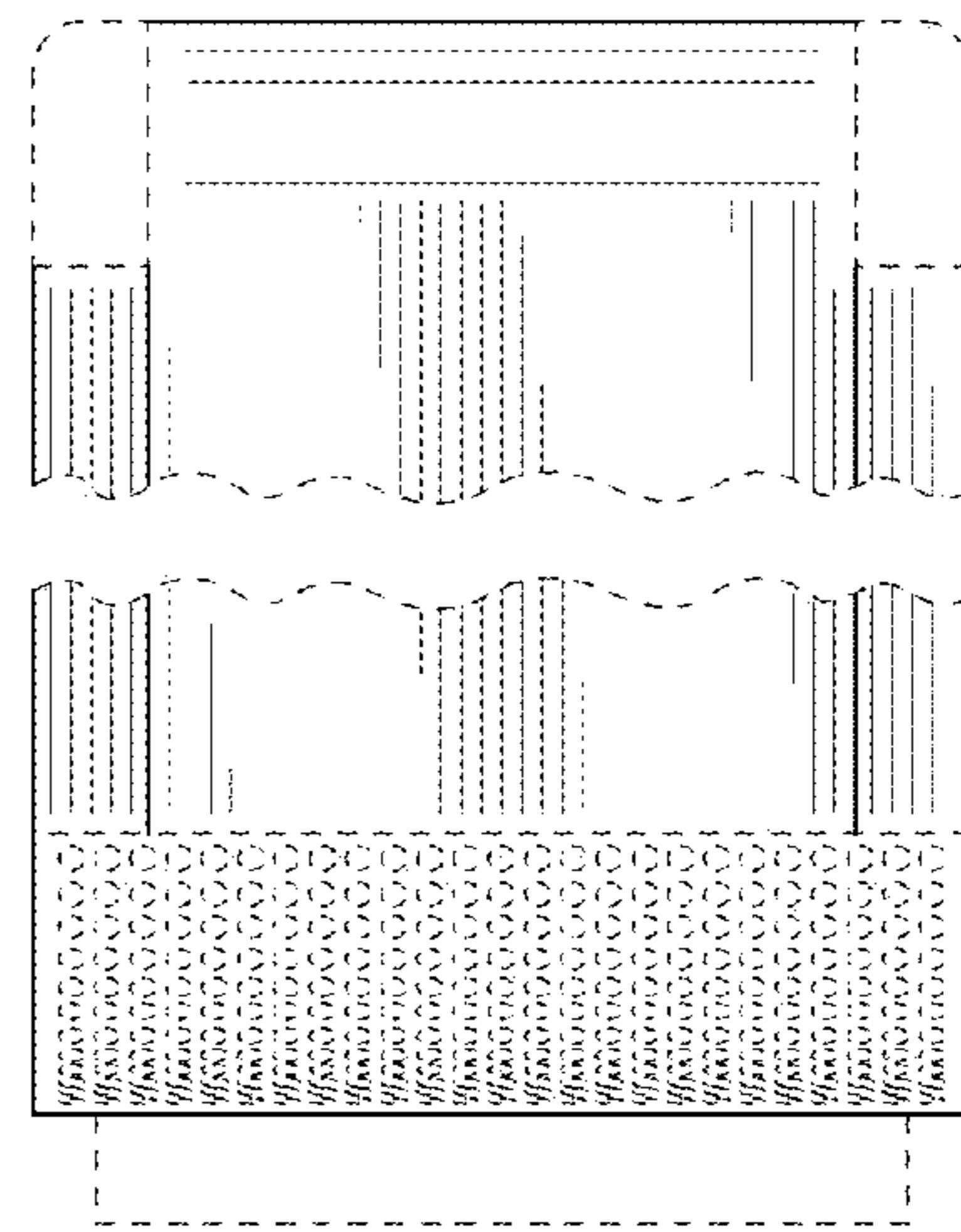


FIG. 22 (New)

