US00D883517S

(12) United States Design Patent

Bulloch et al.

(10) Patent No.: US D883,517 S
(45) Date of Patent: ** May 5, 2020

(54) **ELECTROPHORESIS GEL CASSETTE**

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(**) Term: **15 Years**

(21) Appl. No.: **29/687,038**

(22) Filed: **Apr. 10, 2019**

Related U.S. Application Data

(62) Division of application No. 29/545,620, filed on Nov. 13, 2015, now Pat. No. Des. 849,963.

(51) **LOC (12) Cl.** **24-99**

(52) **U.S. Cl.**
USPC **D24/233**

(58) **Field of Classification Search**
USPC D24/107, 108, 113, 114, 121, 133, 184, D24/186, 216, 222–233
(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,888,759 A 6/1975 Elson et al.
4,035,377 A * 7/1977 Detroy G01N 27/44756 204/619
(Continued)

FOREIGN PATENT DOCUMENTS

CN 1162995 A 10/1997
CN 103460033 A 12/2013
(Continued)

OTHER PUBLICATIONS

Caprette, D. "Characterization of red cell membrane proteins by SDS-Page—Preparing SDS Gels,", http:www.ruf.rice.edu/-bioslabs/studies/sds-page/gellab2a.html, Updated May 24, 2005, downloaded Jan. 2, 2017, pp. 1-5.

Primary Examiner — Vy N Koenig

(57) **CLAIM**

The ornamental design for an electrophoresis gel cassette, as shown and described.

DESCRIPTION

This application is related to U.S. Design patent application Ser. No. 29/545,629 filed Nov. 13, 2015; and to U.S. Design patent application Ser. No. 29/545,637 filed Nov. 13, 2015 (now U.S. Design Pat. No. D792,603 issued Jul. 18, 2017), and U.S. Design patent application Ser. No. 29/596,358 filed Mar. 7, 2017, the entire contents of each of which are incorporated by reference herein.

FIG. **1** is a front perspective view of an electrophoresis gel cassette showing our new design.

FIG. **2** is a back perspective view thereof.

FIG. **3** is a front view thereof.

FIG. **4** is a back view thereof.

FIG. **5** is a right side view thereof

FIG. **6** is a left side view thereof.

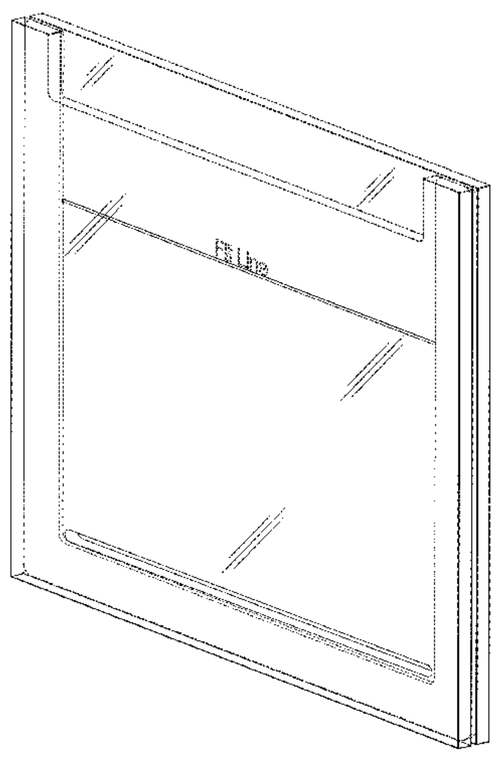
FIG. **7** is a top view thereof; and,

FIG. **8** is a bottom view thereof.

The broken lines in the figures show unclaimed portions of the electrophoresis gel cassette and form no part of the claimed design.

The short diagonal shade lines in the figures depict the contours and transparent qualities of the surface upon which they are applied and not surface ornamentation.

The elements on one side of the electrophoresis gel cassette may, therefore, be seen through the electrophoresis gel cassette from the opposite side of the electrophoresis gel cassette. Elements viewed directly on a surface of the
(Continued)



electrophoresis gel cassette are shown in heavier lines than elements seen through the electrophoresis gel cassette.

1 Claim, 5 Drawing Sheets

(58) **Field of Classification Search**
CPC B01F 13/0025; B01J 2219/00292; B01J 2220/64; B01L 3/14; B01L 3/508–50825; B01L 3/52–523
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,294,684	A		10/1981	Serwer	
4,374,723	A	*	2/1983	Vesterberg	B01D 57/02 204/617
D269,123	S		5/1983	Hoefer et al.	
4,560,459	A		12/1985	Hoefer	
4,574,040	A		3/1986	Delony et al.	
4,693,804	A		9/1987	Serwer	
4,715,942	A		12/1987	Tezuka et al.	
4,772,373	A		9/1988	Ebata et al.	
4,773,984	A		9/1988	Flesher et al.	
4,795,541	A		1/1989	Hurd et al.	
D303,007	S		8/1989	Flesher	
4,915,811	A	*	4/1990	Yamamoto	G01N 27/44756 204/619
4,957,613	A		9/1990	Schuette et al.	
4,975,174	A		12/1990	Bambeck et al.	
5,073,246	A		12/1991	Chu et al.	
5,116,483	A		5/1992	Lander	
5,192,408	A		3/1993	Scott	
5,228,971	A		7/1993	Brumley, Jr. et al.	
5,238,651	A		8/1993	Chuba	
5,284,565	A		2/1994	Chu et al.	
5,292,420	A		3/1994	Nakanura et al.	
5,407,552	A		4/1995	Lebacq et al.	
5,411,657	A	*	5/1995	Leka	G01N 27/44704 204/612
D367,713	S		3/1996	La Motte	
5,569,369	A	*	10/1996	Leffler	G01N 27/44704 204/616
5,618,399	A		4/1997	Gautsch et al.	
5,626,735	A		5/1997	Chu et al.	
5,632,877	A		5/1997	Van et al.	
5,685,967	A		11/1997	Manis et al.	
5,753,095	A		5/1998	Alpenfels et al.	
5,773,645	A		6/1998	Hochstrasser	
5,827,418	A		10/1998	Haven et al.	
5,843,295	A		12/1998	Steiner et al.	
5,882,495	A		3/1999	Garrels	
5,885,431	A		3/1999	Renfrew et al.	
5,888,369	A		3/1999	Tippins et al.	
5,972,188	A		10/1999	Rice et al.	
5,989,403	A		11/1999	Provonchee et al.	
6,001,233	A		12/1999	Levy et al.	
6,027,628	A		2/2000	Yamamura et al.	
6,093,301	A	*	7/2000	Van Atta	G01N 27/44704 204/616
6,110,340	A		8/2000	Lau et al.	
6,110,344	A		8/2000	Renfrew et al.	
6,139,709	A		10/2000	Scott et al.	
D443,068	S		5/2001	Manusu et al.	
6,231,741	B1		5/2001	Tuurenhout et al.	
6,379,519	B1		4/2002	Sevigny et al.	
6,436,262	B1		8/2002	Perez et al.	
6,521,111	B1		2/2003	Amshey et al.	
D505,729	S		5/2005	Lee et al.	
6,929,732	B2		8/2005	Chen	
6,932,895	B2		8/2005	Anderson et al.	
6,936,150	B2		8/2005	Rooney et al.	
6,942,775	B1		9/2005	Fox et al.	
D510,770	S		10/2005	Emerson	
D511,386	S		11/2005	Emerson	
6,969,455	B1		11/2005	Helfer et al.	
D524,449	S		7/2006	Emerson et al.	
7,074,312	B2	*	7/2006	Fox	G01N 27/44773 204/466
7,135,101	B2		11/2006	Atchison et al.	
7,250,100	B2	*	7/2007	Yonish	G01N 27/44773 204/606
7,276,143	B2		10/2007	Chen et al.	
7,544,279	B2		6/2009	Chen et al.	
7,601,251	B2		10/2009	Rooney et al.	
7,749,367	B2		7/2010	Zhou et al.	
D654,597	S		2/2012	Hiramura	
8,361,294	B2		1/2013	Wang et al.	
8,398,838	B2		3/2013	Chen et al.	
8,449,745	B2		5/2013	Wang et al.	
8,480,874	B2		7/2013	Henry et al.	
D719,277	S		12/2014	Miller et al.	
D733,922	S		7/2015	Sjolander	
9,234,874	B2		1/2016	Panattoni et al.	
D757,958	S		5/2016	Murray et al.	
9,383,335	B2		7/2016	Bjorkesten et al.	
9,400,260	B2		7/2016	Suh et al.	
D792,603	S		7/2017	Bulloch et al.	
9,714,918	B2		7/2017	Updyke et al.	
D794,823	S		8/2017	Nelson et al.	
D795,449	S		8/2017	Miller et al.	
D806,894	S		1/2018	Nelson et al.	
D831,847	S	*	10/2018	Miller	D24/233
10,101,296	B2		10/2018	Strong et al.	
D849,963	S	*	5/2019	Bulloch	D24/233
D851,278	S	*	6/2019	Bulloch	D24/233
D851,779	S	*	6/2019	Bulloch	D24/233
10,359,396	B2	*	7/2019	Bulloch	G01N 27/44747
D856,528	S	*	8/2019	Bulloch	D24/233
2002/0079222	A1		6/2002	Sevigny et al.	
2006/0163067	A1		7/2006	Sevigny et al.	
2006/0278533	A1		12/2006	Chen	
2007/0205108	A1		9/2007	Jean et al.	
2007/0284250	A1		12/2007	Magnant et al.	
2011/0042213	A1		2/2011	Updyke et al.	
2011/0042217	A1		2/2011	Updyke et al.	
2014/0045250	A1		2/2014	Kreifels et al.	
2016/0041123	A1		2/2016	Guadagno et al.	
2016/0084797	A1		3/2016	Goh et al.	
2016/0258903	A1		9/2016	Ran et al.	
2017/0153204	A1		6/2017	Bulloch et al.	

FOREIGN PATENT DOCUMENTS

CN	206920385	U	1/2018
WO	WO-9524640	A1	9/1995
WO	WO-9613717	A1	5/1996
WO	WO-9954721	A1	10/1999
WO	WO-2007032951	A2	3/2007

* cited by examiner

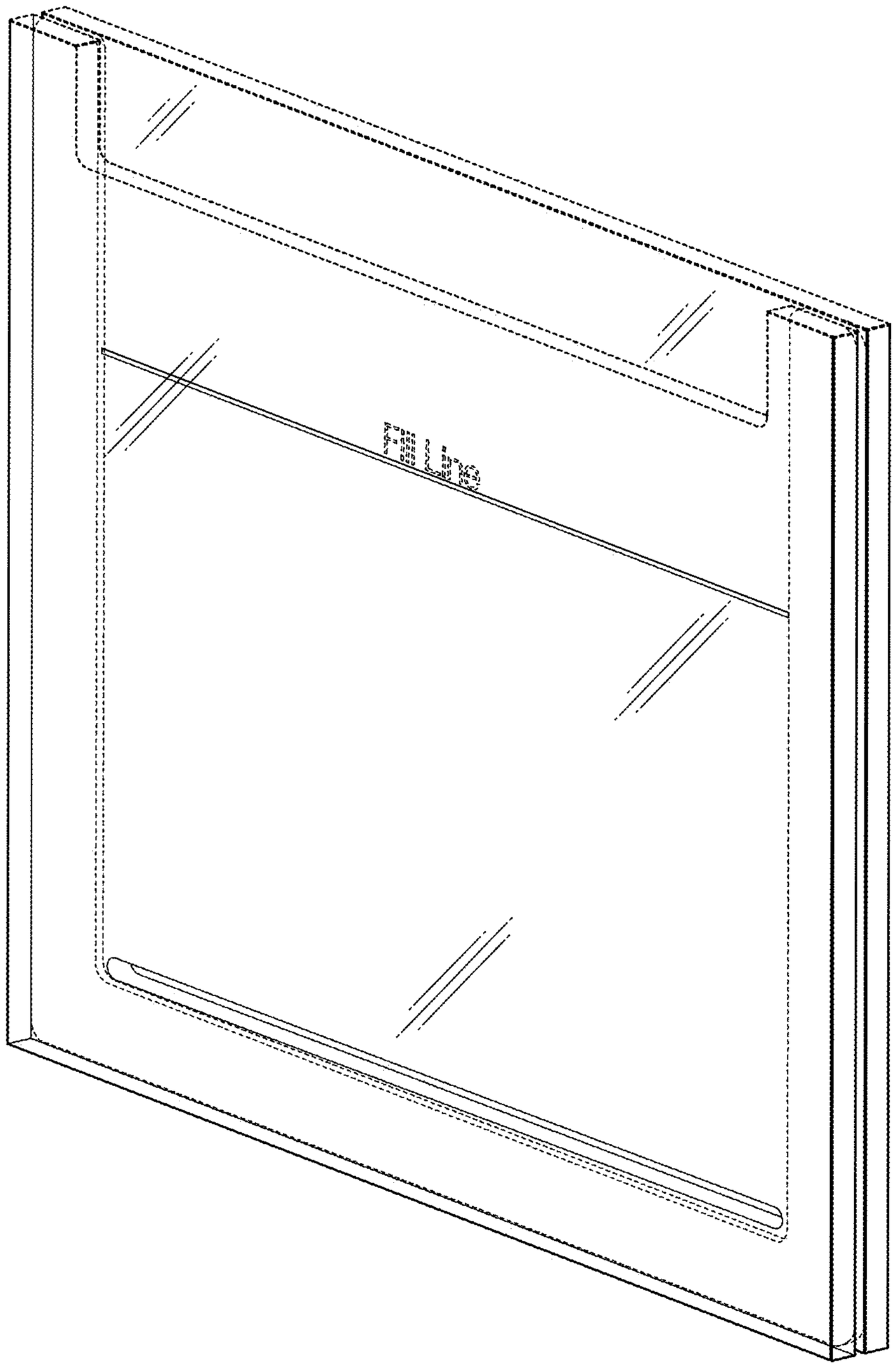


FIG. 1

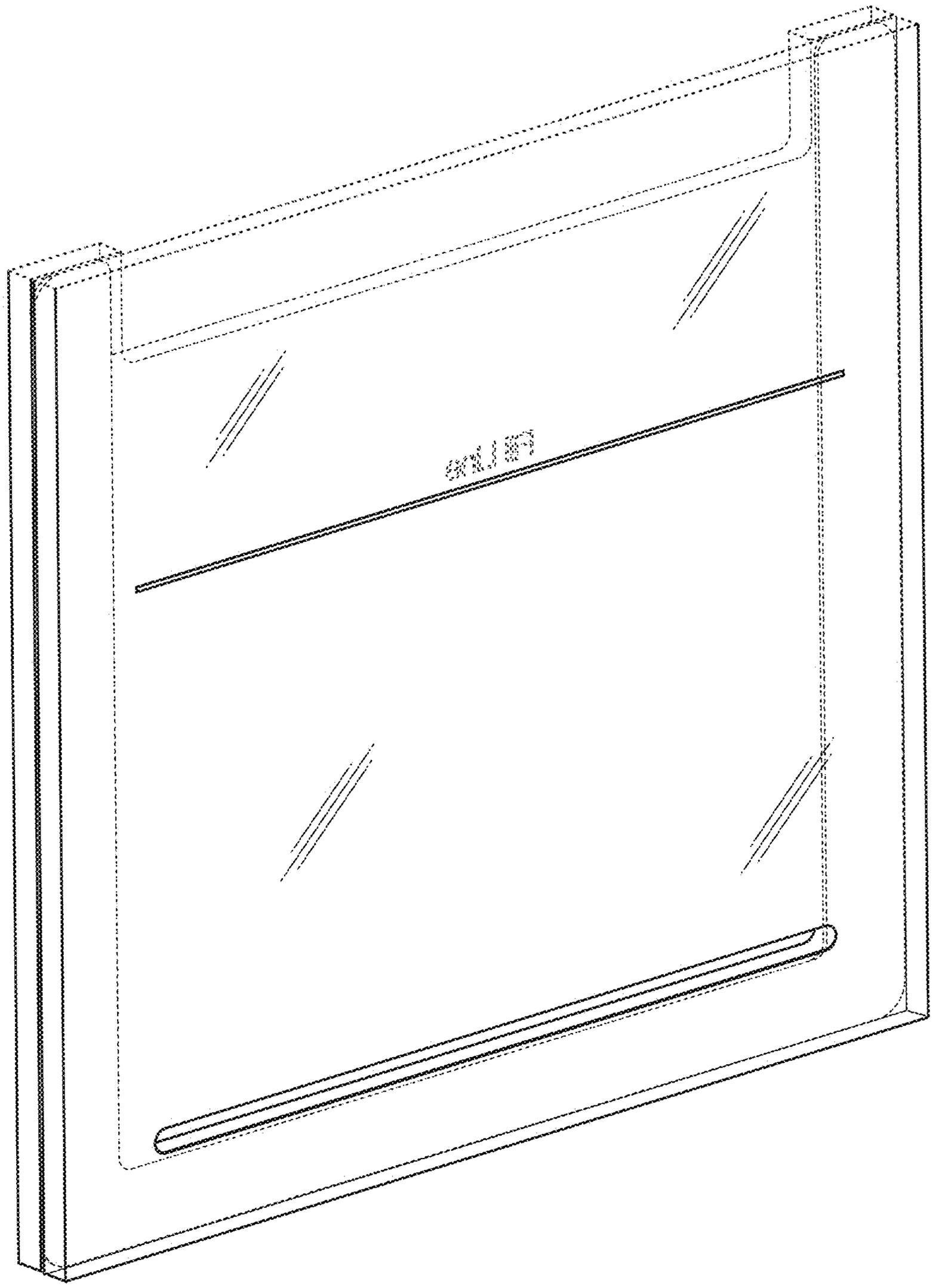


FIG. 2

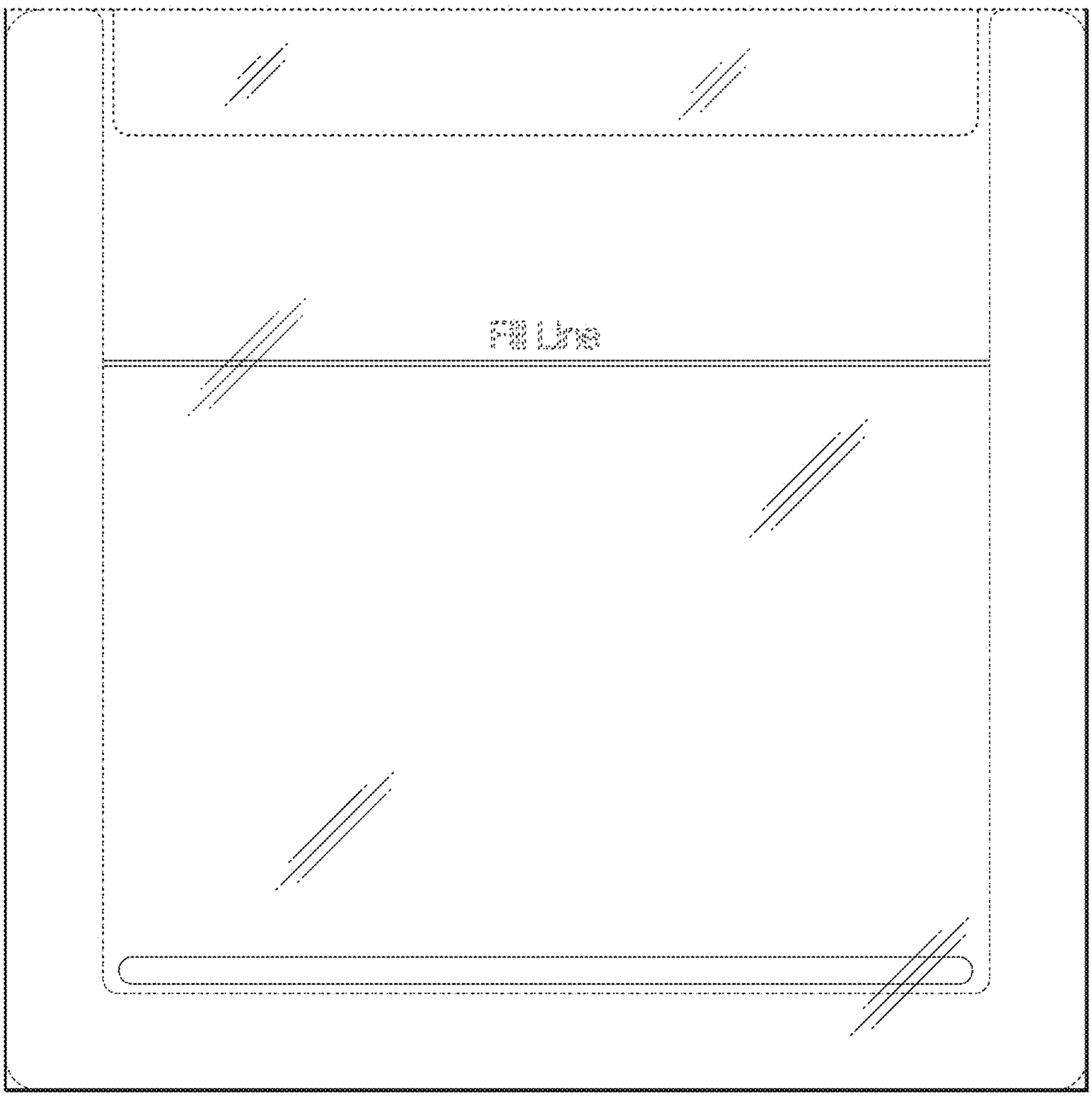


FIG. 3

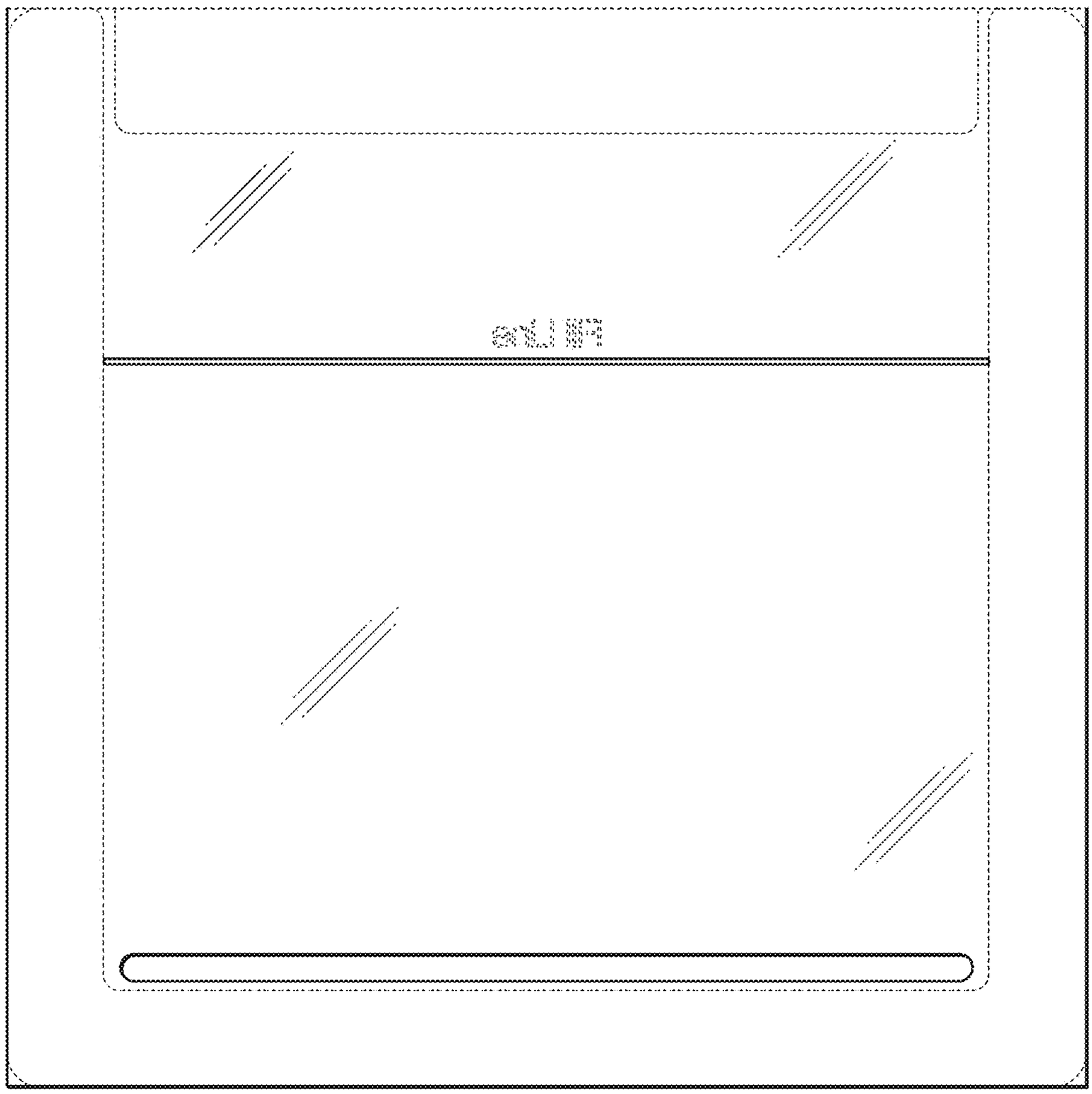


FIG. 4

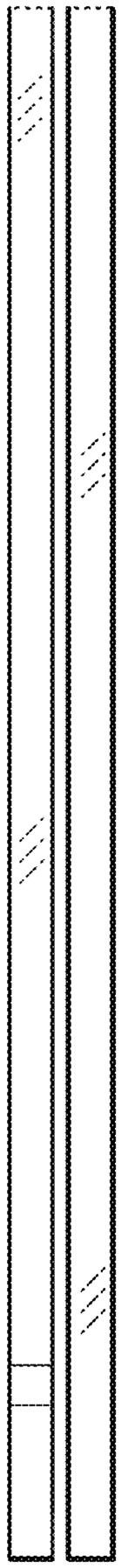


FIG. 5

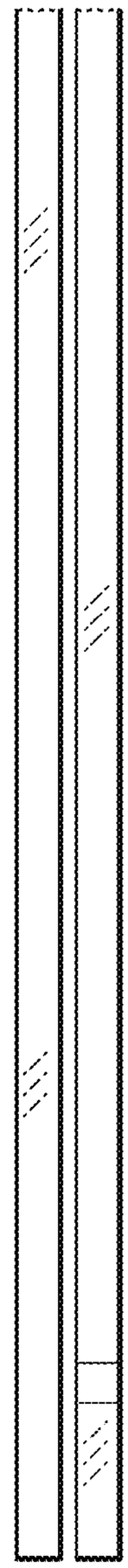


FIG. 6

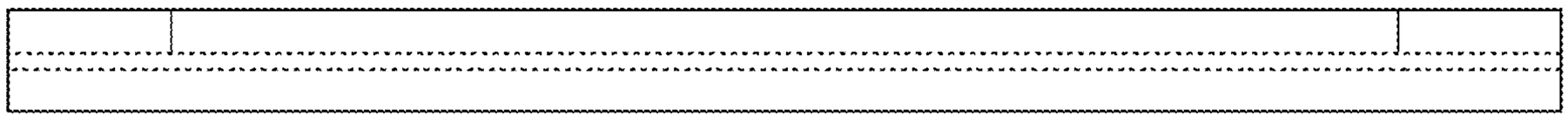


FIG. 7

FIG. 8