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

(10) **Patent No.:** **US D785,578 S**

(45) **Date of Patent:** **** May 2, 2017**

(54) **SUBSTRATE SUPPORTING ARM FOR SEMICONDUCTOR MANUFACTURING APPARATUS**

(71) Applicant: **ASM IP Holding B.V.**, Almere (NL)

(72) Inventors: **Woo Chan Kim**, Daejeon (KR); **Jeong Ho Lee**, Seoul (KR); **Hyun Soo Jang**, Daejeon (KR); **Jong Su Kim**, Cheonan-si (KR)

(73) Assignee: **ASM IP Holding B.V.**, Almere (NL)

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

(21) Appl. No.: **29/558,827**

(22) Filed: **Mar. 22, 2016**

(51) **LOC (10) Cl.** **13-03**

(52) **U.S. Cl.**
USPC **D13/182**

(58) **Field of Classification Search**
USPC D13/182
CPC G03F 7/3021; G03F 7/3042; H01L 21/67155; H01L 21/67161; H01L 21/673; H01L 21/67303; H01L 21/67309; H01L 21/67313; H01L 21/6732; H01L 21/67326; H01L 21/6734; H01L 21/67346; H01L 21/67265; H01L 21/683; H01L 21/68714; H01L 21/68735; H01L 21/68764; H01L 21/68785; H01L 21/67766; H01L 2021/6006; H01L 2221/683; H01L 2224/11002; H01L 2224/27002; G01R 31/2808

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,132,160 A * 10/2000 Iwai H01L 21/67781
414/222.01
6,183,183 B1 * 2/2001 Goodwin H01L 21/6838
118/719

6,234,738 B1 * 5/2001 Kimata H01L 21/68707
414/416.03
6,293,749 B1 * 9/2001 Raaijmakers H01L 21/68707
294/32
6,614,201 B2 * 9/2003 Saino B25J 9/042
318/568.11
6,893,507 B2 * 5/2005 Goodman C23C 16/4581
118/715
6,991,419 B2 * 1/2006 Kim B25J 18/02
414/680
7,186,297 B2 * 3/2007 Asano H01L 21/67259
118/668

(Continued)

FOREIGN PATENT DOCUMENTS

KR 30-0554490 S 3/2010

OTHER PUBLICATIONS

Office Action dated Jul. 5, 2016 in Korean Design application No. 30-2016-0000963.

Primary Examiner — Elizabeth J Oswecki
(74) *Attorney, Agent, or Firm* — Knobbe, Martens, Olson & Bear, LLP

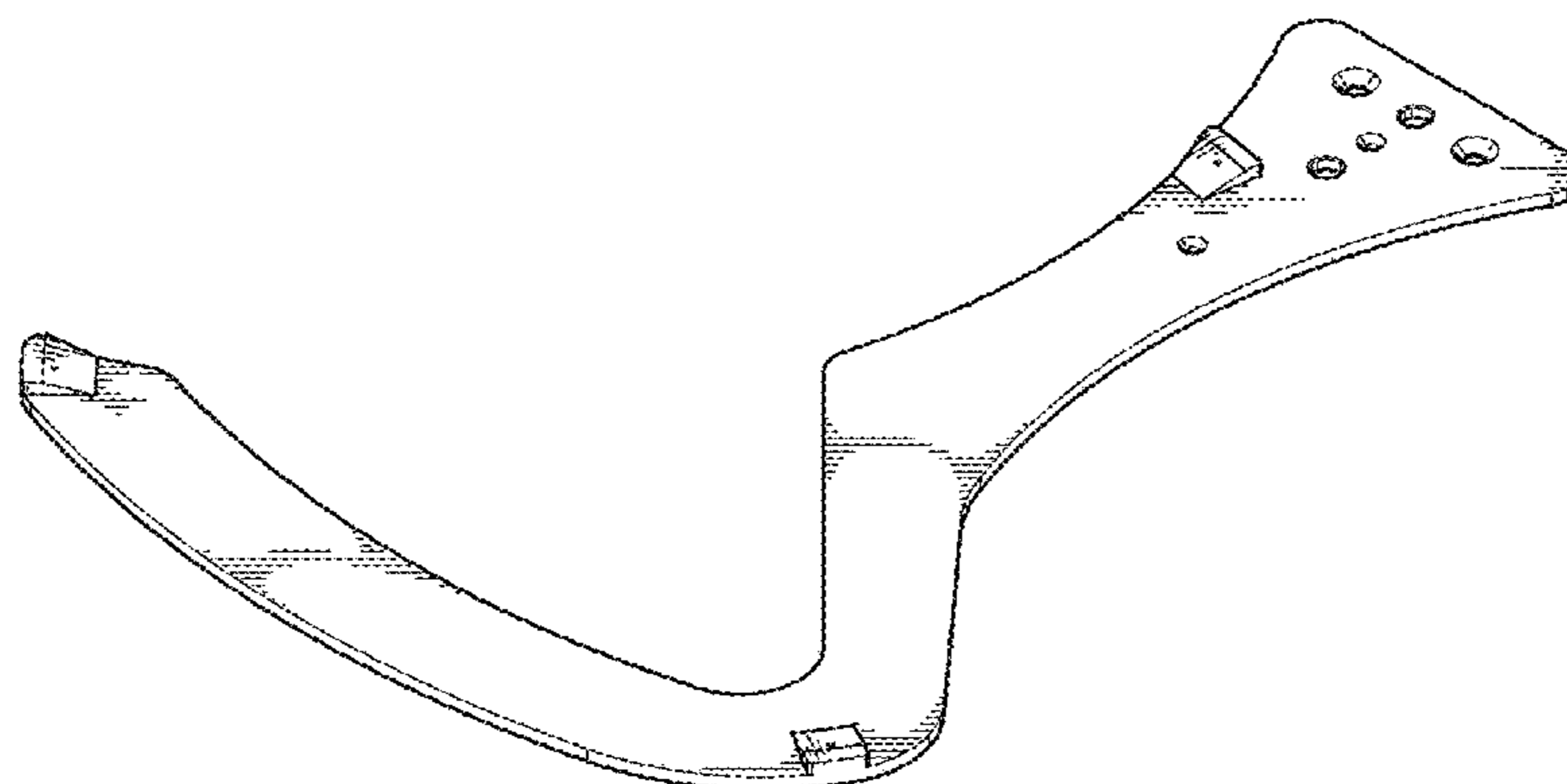
(57) **CLAIM**

The ornamental design for a substrate supporting arm for a semiconductor manufacturing apparatus, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a substrate supporting arm for a semiconductor manufacturing apparatus showing our new design;
FIG. 2 is a front elevational view thereof;
FIG. 3 is a rear elevational view thereof;
FIG. 4 is a left side elevational view thereof;
FIG. 5 is a right side elevational view thereof;
FIG. 6 is a top plan view thereof; and,
FIG. 7 is a bottom plan view thereof.

1 Claim, 5 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D559,805 S *	1/2008	Hosaka	D13/182
7,578,649 B2 *	8/2009	Caveney	B25J 9/042
			414/744.1
D614,152 S *	4/2010	Lee	D13/182
D665,759 S *	8/2012	Sato	D13/199
D666,979 S *	9/2012	Teramoto	D13/199
D695,240 S *	12/2013	Iida	D13/182
D701,498 S *	3/2014	Iida	D13/182

* cited by examiner

FIG. 1

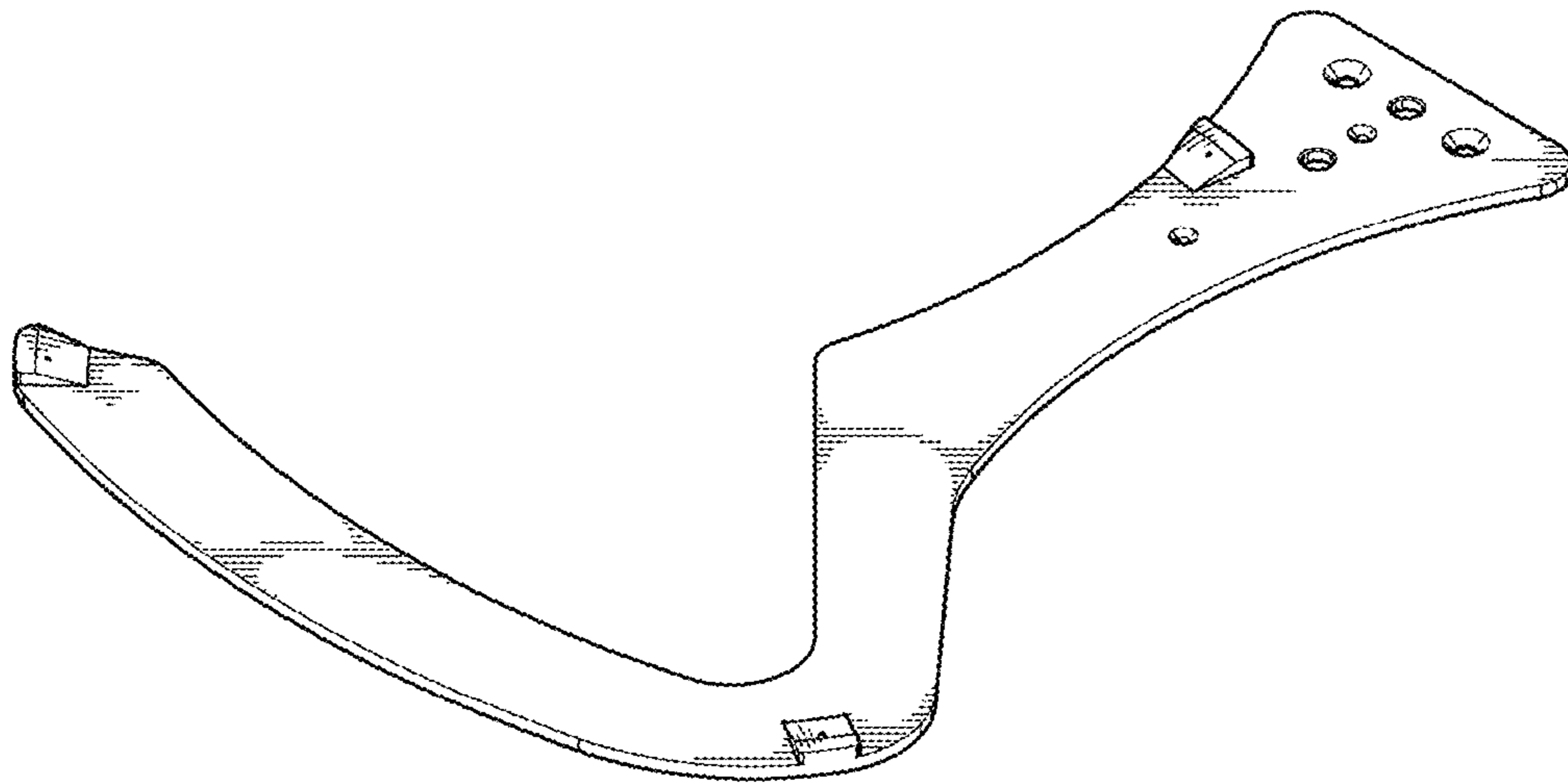


FIG. 2

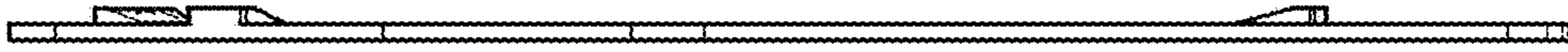


FIG. 3

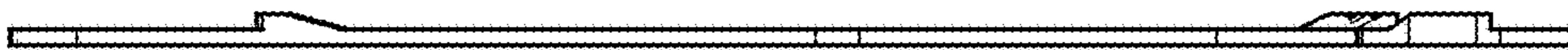


FIG. 4

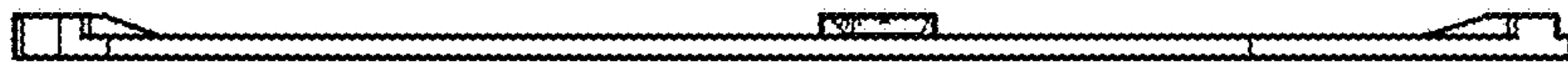


FIG. 5

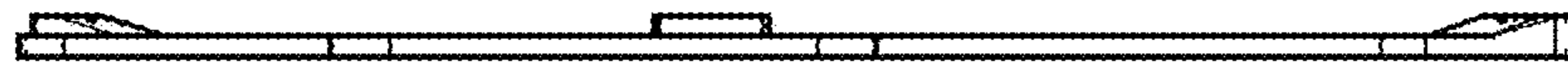


FIG. 6

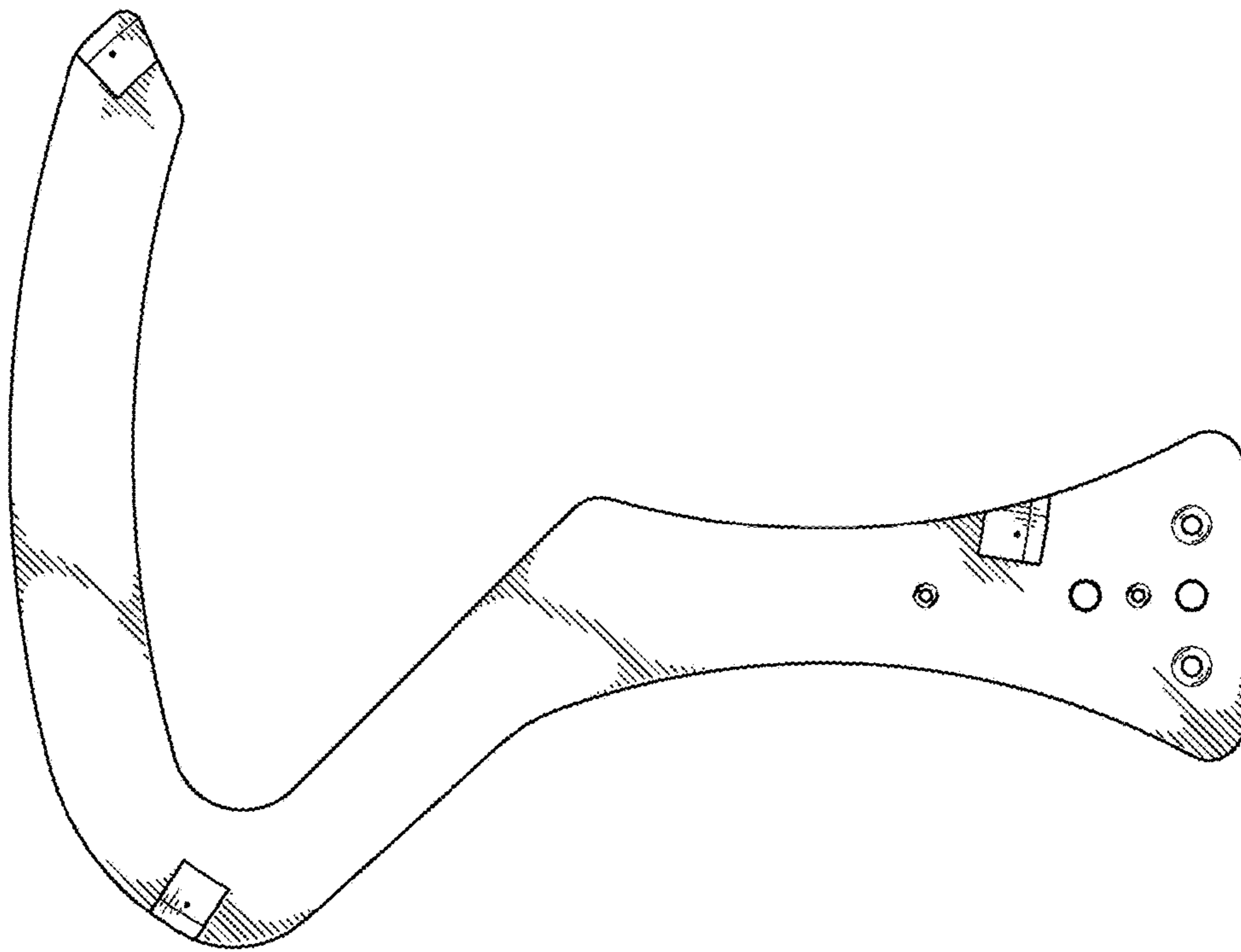
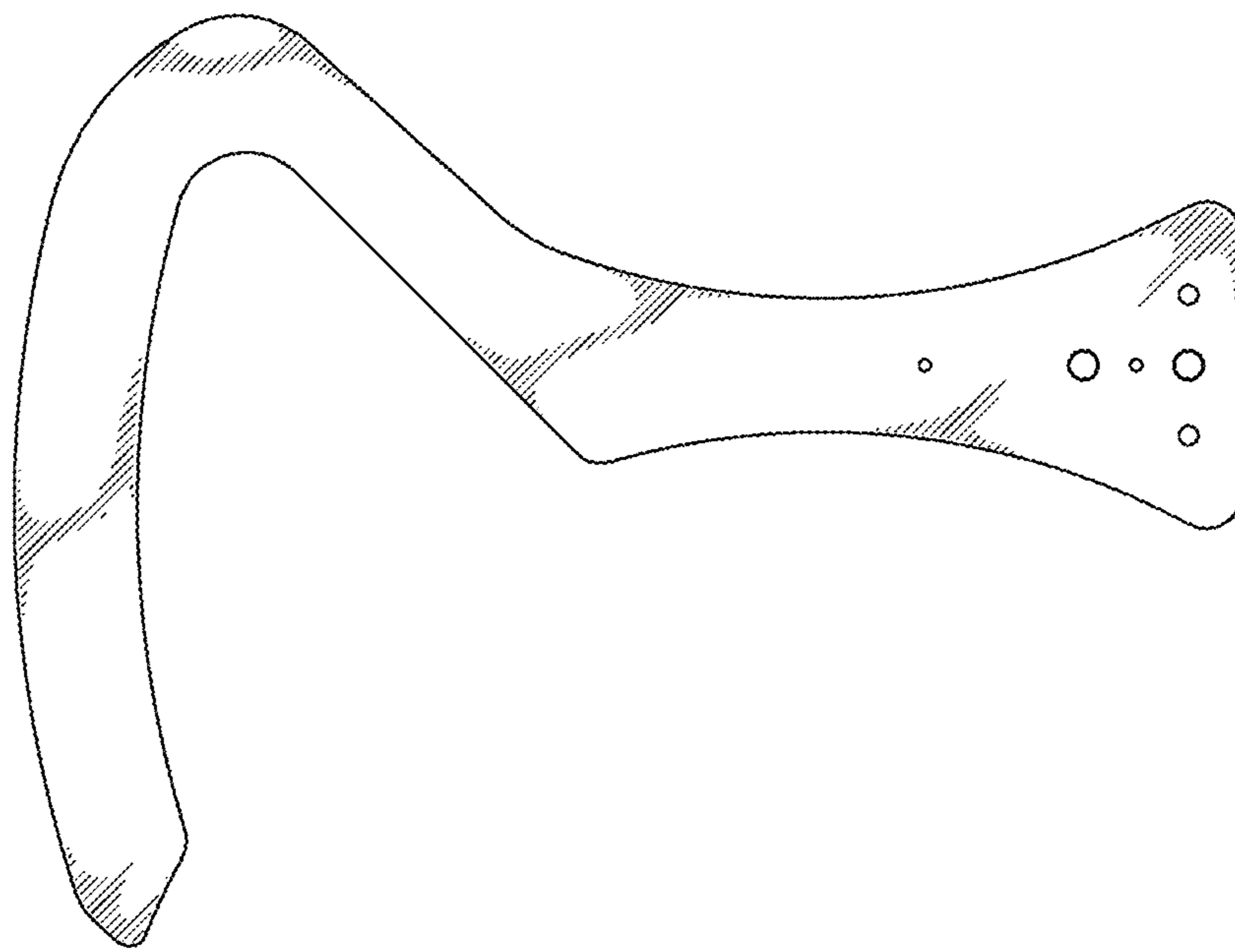


FIG. 7



UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : D785,578 S
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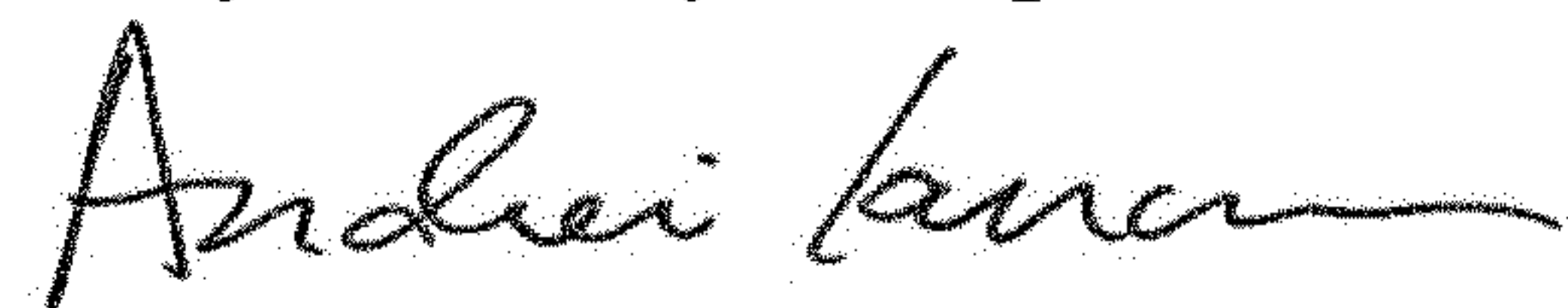
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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the Title Page

In Column 1, below "(22) Filed:" insert:
--(30) **Foreign Application Priority Data**
Jan. 8, 2016 (KR) 30-2016-0000963--.

Signed and Sealed this
Twenty-fifth Day of September, 2018



Andrei Iancu
Director of the United States Patent and Trademark Office