



US00D843986S

(12) **United States Design Patent** (10) **Patent No.:** **US D843,986 S**  
**Takikawa et al.** (45) **Date of Patent:** **\*\* Mar. 26, 2019**

(54) **FREQUENCY SELECTIVE SURFACE**

(56) **References Cited**

(71) Applicant: **MITSUBISHI ELECTRIC CORPORATION**, Tokyo (JP)

U.S. PATENT DOCUMENTS

(72) Inventors: **Michio Takikawa**, Tokyo (JP); **Hiroto Ado**, Tokyo (JP); **Masashi Okuno**, Tokyo (JP); **Yoshio Inasawa**, Tokyo (JP)

7,414,593 B2 8/2008 Williams et al.  
D582,903 S \* 12/2008 Martinez ..... D14/230  
D582,904 S \* 12/2008 Martinez ..... D14/230  
D652,028 S \* 1/2012 Hernandez ..... D14/230  
D652,029 S \* 1/2012 Hernandez ..... D14/230

(Continued)

(73) Assignee: **Mitsubishi Electric Corporation**, Tokyo (JP)

OTHER PUBLICATIONS

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

Mitsubishi, "More About the Logo", Retrieved Oct. 15, 2018, [https://www.mitsubishielectric.com/en/about/history/logo/logo\\_more.html](https://www.mitsubishielectric.com/en/about/history/logo/logo_more.html), (Year: 2018).\*

(21) Appl. No.: **29/655,923**

*Primary Examiner* — Mark A Goodwin

(22) Filed: **Jul. 9, 2018**

*Assistant Examiner* — Benjamin M Weeks

(74) *Attorney, Agent, or Firm* — Studebaker & Brackett PC

**Related U.S. Application Data**

(62) Division of application No. 29/576,846, filed on Sep. 7, 2016.

(57) **CLAIM**

The ornamental design for the frequency selective surface, as shown and described.

**Foreign Application Priority Data**

(30) Apr. 8, 2016 (JP) ..... 2016-007829  
Apr. 8, 2016 (JP) ..... 2016-007830  
Apr. 8, 2016 (JP) ..... 2016-007831  
Apr. 8, 2016 (JP) ..... 2016-007832

**DESCRIPTION**

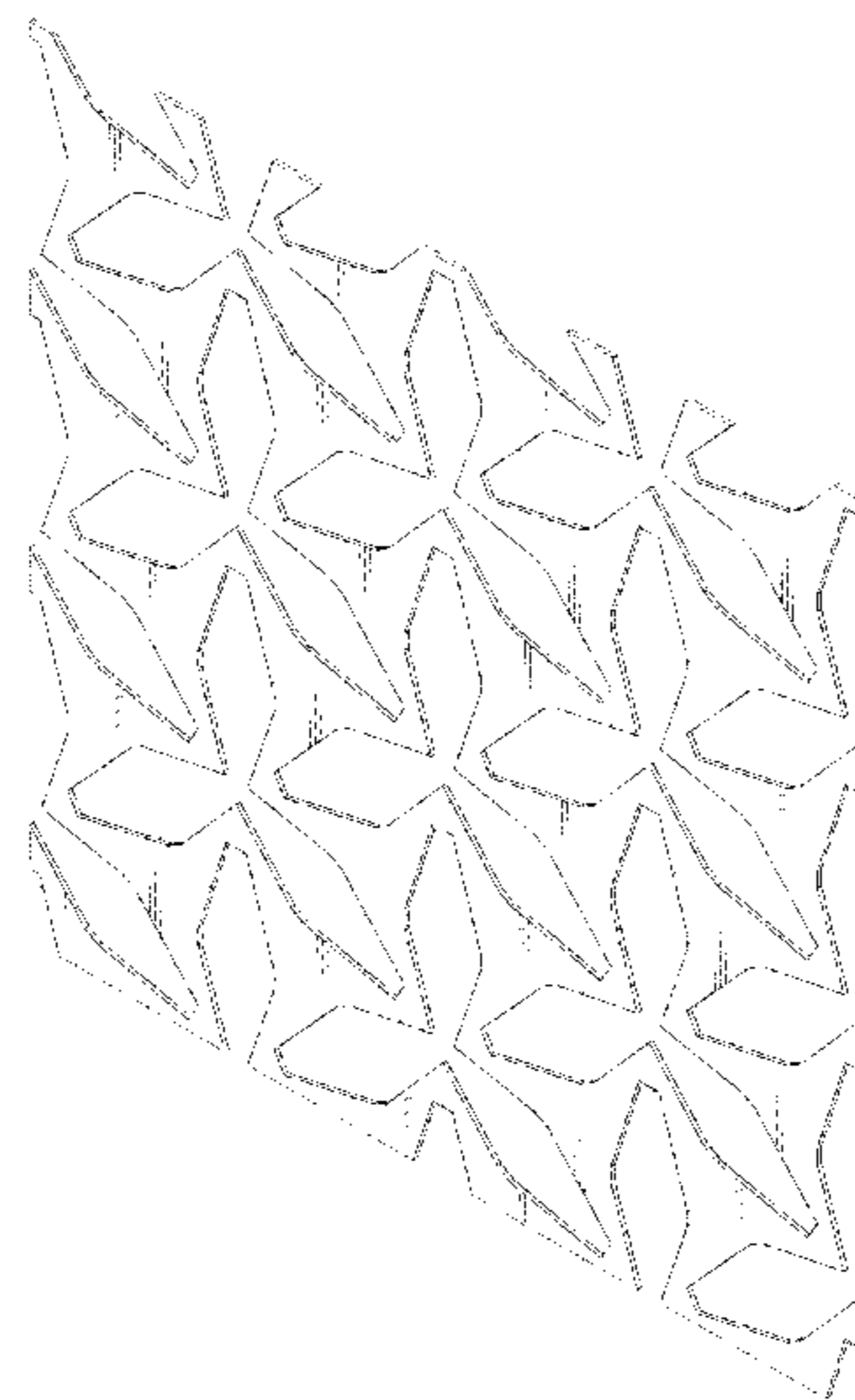
FIG. 1 is a perspective view of the front, right and top sides of a frequency selective surface of showing our new design; FIG. 2 is a front view thereof; FIG. 3 is a rear view thereof; FIG. 4 is a left side view thereof; FIG. 5 is a right side view thereof; FIG. 6 is a top view thereof; FIG. 7 is a bottom view thereof; FIG. 8 is a cross sectional view at line 8-8 in FIG. 2; and, FIG. 9 is a reference perspective view showing a usage state where the frequency selective surface is continuously extended in the left, right, top and bottom in the front view. The broken lines shown represent unclaimed subject matter of the frequency selective surface or environments and form no part of the claimed design.

(51) **LOC (11) Cl.** ..... **14-03**

(52) **U.S. Cl.**  
USPC ..... **D14/230**

(58) **Field of Classification Search**  
USPC ..... D5/1, 2, 15, 25, 29, 54; D12/42, 43; D14/138, 230-238.1, 299, 358  
CPC ..... H01Q 7/00; H01Q 13/10; H01L 33/486; H01L 23/02; H05K 5/00; F16L 3/2235; F16L 3/227; Y10T 403/7141  
See application file for complete search history.

**1 Claim, 7 Drawing Sheets**



(56)

**References Cited**

U.S. PATENT DOCUMENTS

D652,409 S *	1/2012	Hernandez .....	D14/230
8,773,776 B2	7/2014	Bowers et al.	
8,779,629 B2	7/2014	Kim et al.	
2003/0122729 A1	7/2003	Diaz et al.	
2009/0160718 A1	6/2009	Yen et al.	
2017/0093045 A1	3/2017	Savage et al.	
2018/0048247 A1	2/2018	Gerstenberger	

\* cited by examiner

Fig. 1

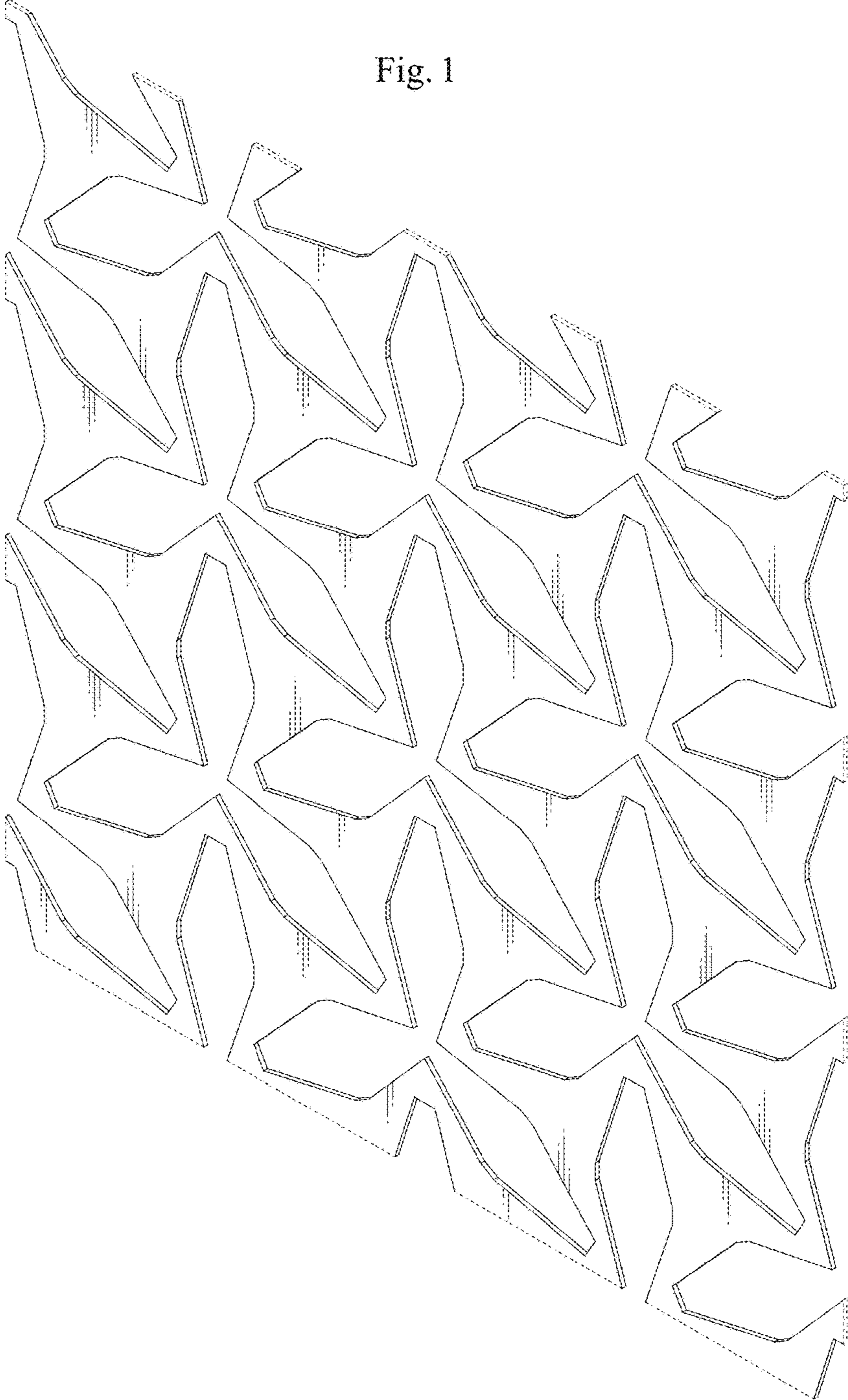


Fig. 2

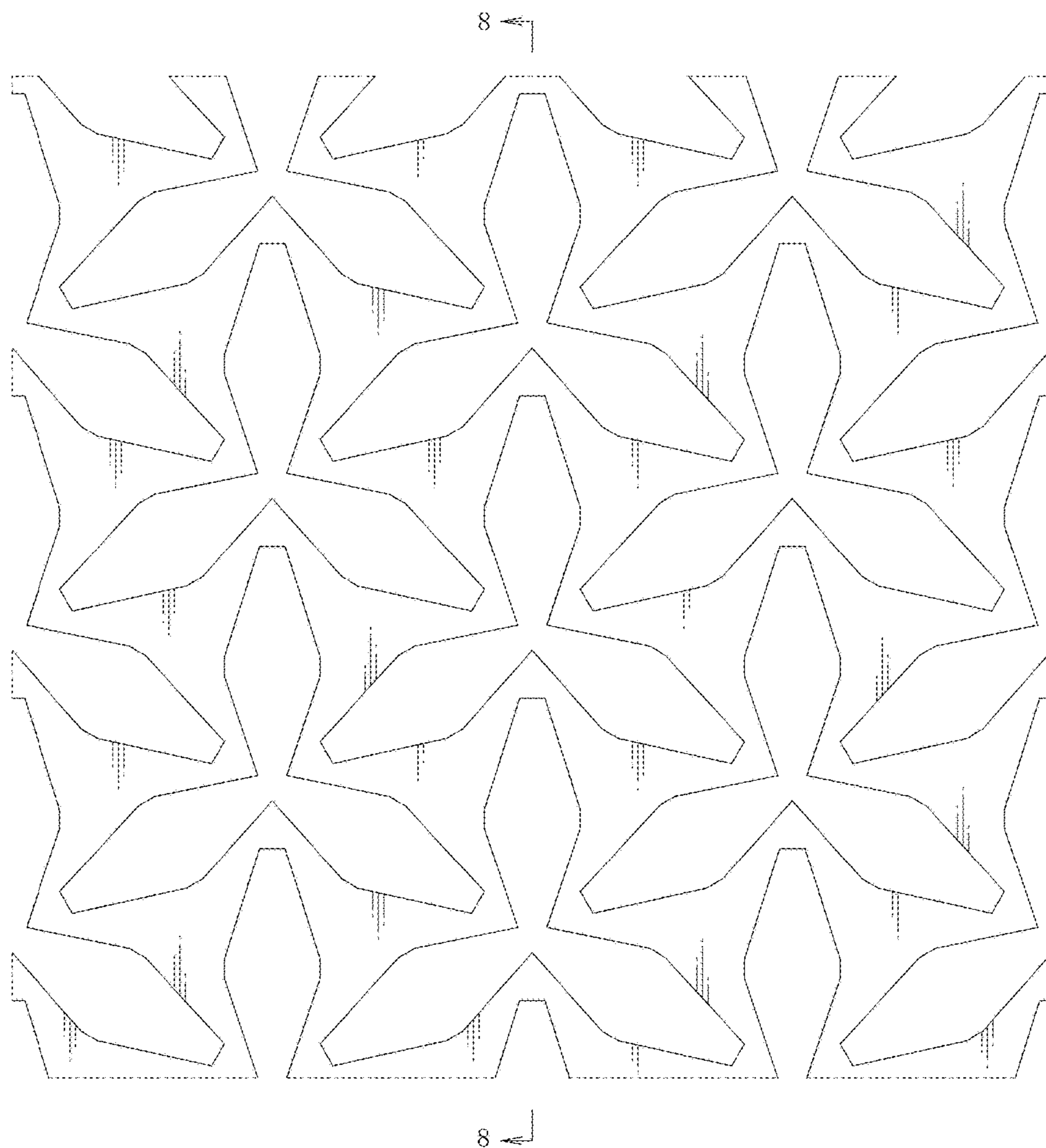


Fig. 3

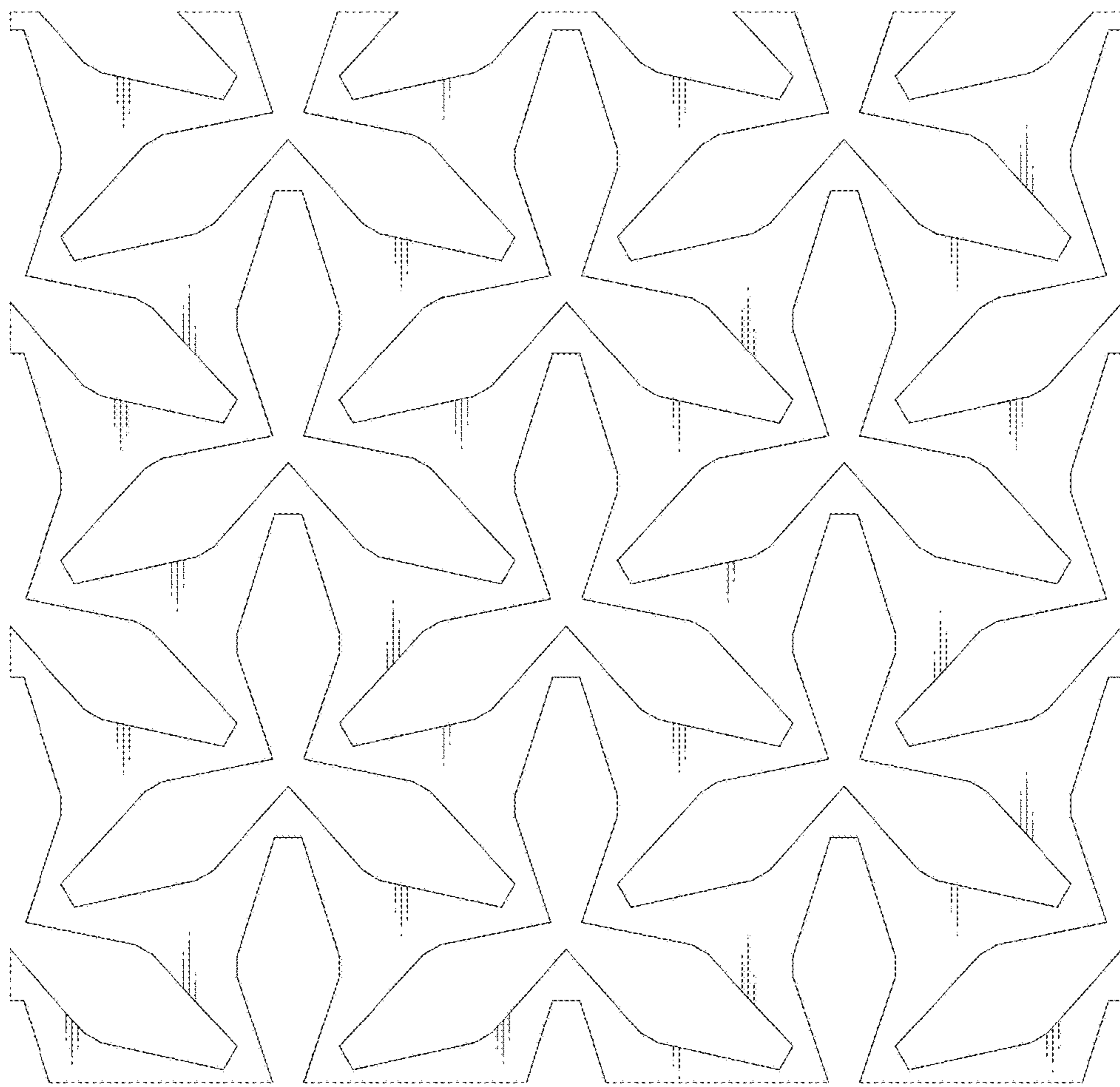


Fig. 4

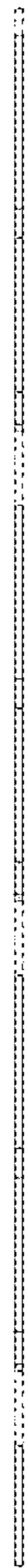


Fig. 5



Fig. 6

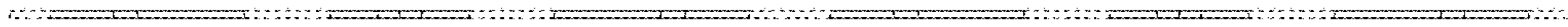


Fig. 7

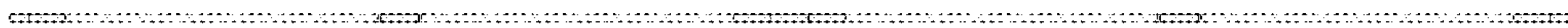


Fig. 8





Fig. 9

