



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

(10) **Patent No.:** **US D892,091 S**  
(45) **Date of Patent:** **\*\* Aug. 4, 2020**

- (54) **STAGGERED HOLLOWED DISK ANTENNA SHEET**
- (71) Applicant: **Smart Stripe, LLC**, Austin, TX (US)
- (72) Inventors: **Michael Swisher**, Austin, TX (US);  
**Forrest Brown**, Carson City, NV (US); **Jack Claffin**, Kendalia, TX (US)

2008/0258980 A1\* 10/2008 Chen ..... H01Q 1/242  
343/700 MS  
2009/0073067 A1\* 3/2009 Soler Castany ..... H01Q 1/246  
343/770  
2011/0181478 A1 7/2011 Baliarda et al.  
2014/0049430 A1 4/2014 Koski, II  
2017/0084992 A1 3/2017 Choi et al.

- (73) Assignee: **SmartStripe, LLC**, Austin, TX (US)
- (\*\*) Term: **15 Years**

**FOREIGN PATENT DOCUMENTS**

EP 3346553 11/2018  
WO 2018148680 A1 8/2018

\* cited by examiner

- (21) Appl. No.: **29/664,159**
- (22) Filed: **Sep. 21, 2018**
- (51) **LOC (12) Cl.** ..... **08-08**
- (52) **U.S. Cl.**  
USPC ..... **D14/230**
- (58) **Field of Classification Search**  
USPC ..... D14/138, 230-238, 299, 358; D12/42,  
D12/43  
CPC ..... H01Q 7/00; H01Q 13/10; H01Q 9/285;  
H01Q 19/30; H01Q 19/12; H01Q 1/38;  
H01Q 1/36; H01Q 2/0027; H01Q 1/48;  
H01Q 9/045; H01Q 1/243; H04B 1/0475;  
H04B 1/034; H05K 11/00  
See application file for complete search history.

*Primary Examiner* — John Windmuller  
(74) *Attorney, Agent, or Firm* — Dickinson Wright PLLC;  
Ross Spencer Garsson

(57) **CLAIM**

The ornamental design for a staggered hollowed disk antenna sheet, as shown.

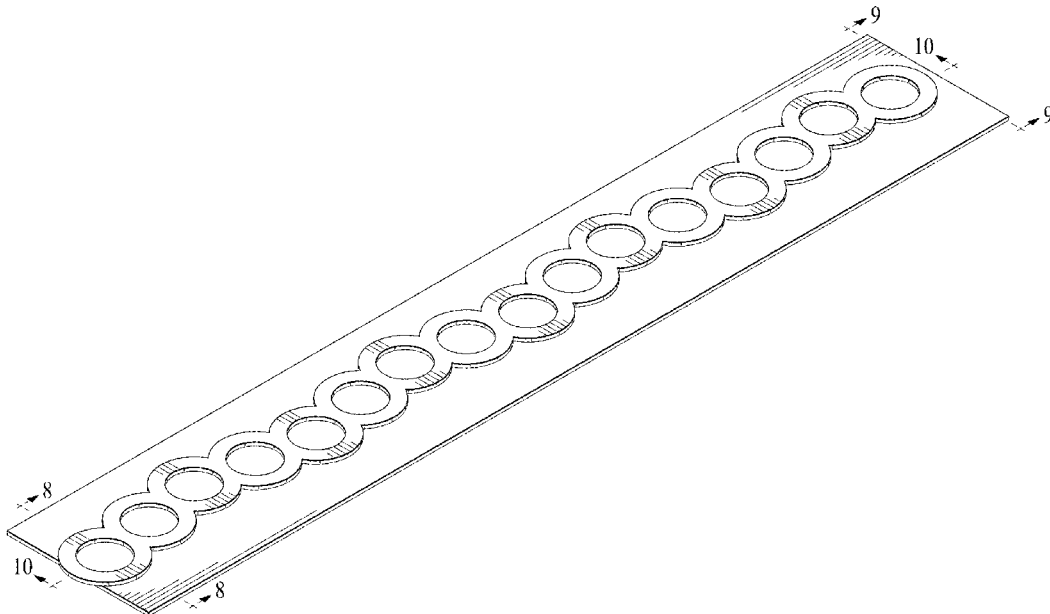
**DESCRIPTION**

FIG. 1 is a top right perspective view of a staggered hollow disk antenna sheet showing our new design;  
FIG. 2 is a top plan view thereof;  
FIG. 3 is a bottom view thereof;  
FIG. 4 is a left side elevation view thereof;  
FIG. 5 is a right side elevation view thereof;  
FIG. 6 is a front elevation view thereof;  
FIG. 7 is a rear elevation view thereof;  
FIG. 8 is a cross sectional view thereof along line 8-8 in FIG. 1;  
FIG. 9 is a cross sectional view thereof along line 9-9 in FIG. 1; and,  
FIG. 10 is a cross sectional view thereof along line 10-10 in FIG. 1.

(56) **References Cited**  
U.S. PATENT DOCUMENTS

3,765,024	A	10/1973	Chiron et al.	
3,918,064	A	11/1975	Gustincic	
D383,465	S *	9/1997	Chen	D14/230
6,104,349	A	8/2000	Cohen	
D697,900	S *	1/2014	Yang	D14/230
D776,643	S *	1/2017	He	D14/230
D810,056	S *	2/2018	Chang	D14/230

**1 Claim, 4 Drawing Sheets**



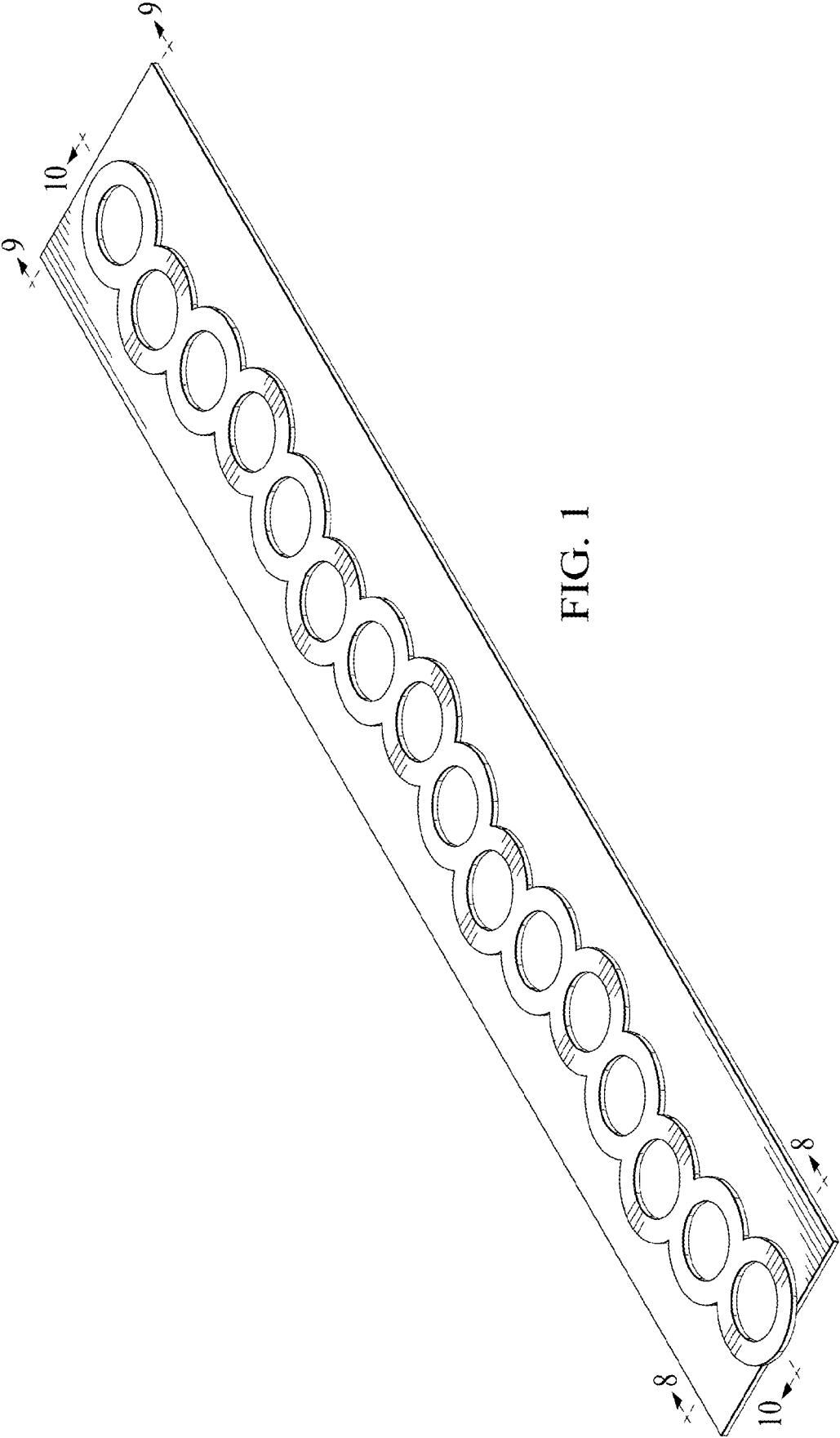


FIG. 1

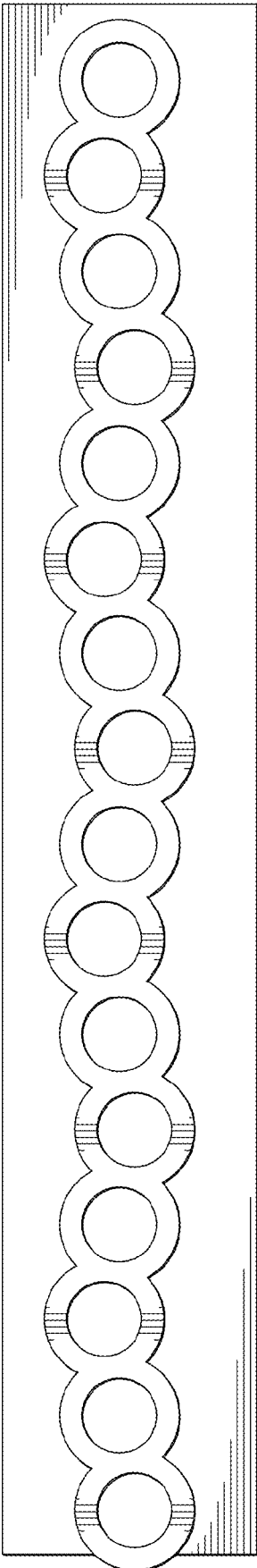


FIG. 2

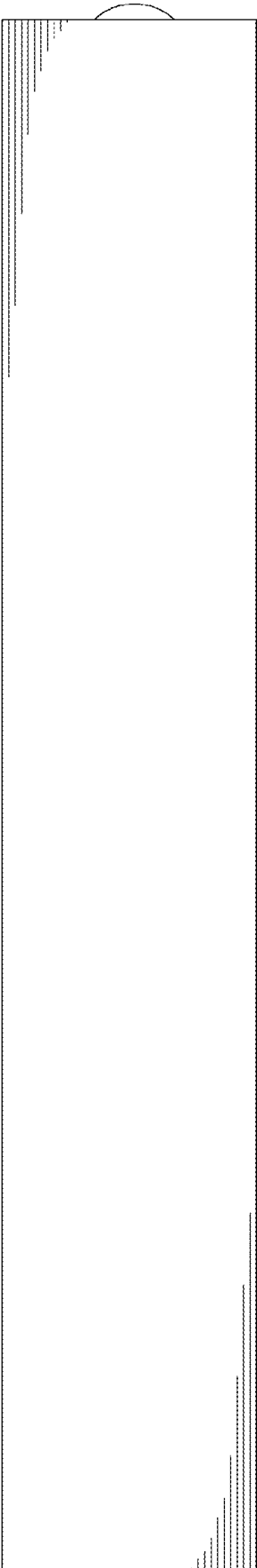


FIG. 3

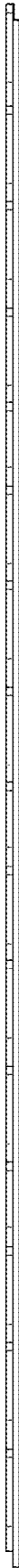


FIG. 4

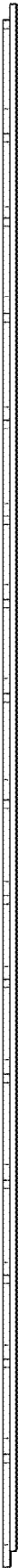


FIG. 5



FIG. 6



FIG. 7



FIG. 9



FIG. 8



FIG. 10