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(12) **United States Design Patent**
Oliver

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(54) **RADIO FREQUENCY IDENTIFICATION TAG ANTENNA ASSEMBLY**

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(**) Term: **14 Years**

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(52) **U.S. Cl.** **D14/230**
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See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,783,783	A	11/1988	Nagai et al.
4,935,702	A	6/1990	Mead et al.
5,430,441	A	7/1995	Bickley et al.
5,528,222	A	6/1996	Moskowitz et al.
5,572,226	A	11/1996	Tuttle
5,719,586	A	2/1998	Tuttle
5,805,632	A	9/1998	Leger
5,933,039	A	8/1999	Hui et al.
5,939,945	A	8/1999	Thewes et al.
5,995,048	A	11/1999	Smithgall et al.
6,043,746	A	3/2000	Sorrels
6,045,652	A	4/2000	Tuttle
6,069,564	A	5/2000	Hatano et al.
6,118,379	A	9/2000	Kodukula et al.
6,130,612	A	10/2000	Castellano et al.
6,130,632	A	10/2000	Opris
6,134,182	A	10/2000	Pilo
6,147,655	A	11/2000	Roesner
6,166,706	A	12/2000	Gallagher
6,184,841	B1	2/2001	Shober et al.
6,215,402	B1	4/2001	Rao Kodukula et al.
6,266,362	B1	7/2001	Tuttle et al.
6,268,796	B1	7/2001	Gnadinger et al.
6,271,793	B1	8/2001	Brady et al.
6,320,788	B1	11/2001	Sansbury et al.
6,340,932	B1	1/2002	Rodgers et al.
6,346,922	B1	2/2002	Proctor et al.
6,357,025	B1	3/2002	Tuttle
6,366,260	B1	4/2002	Carrender
6,396,438	B1	5/2002	Seal
6,445,297	B1	9/2002	Nicholson
6,517,000	B1	2/2003	McAllister et al.
6,571,617	B2	6/2003	Van Niekerk et al.
6,677,917	B2	1/2004	Van Heerden et al.
6,700,491	B2	3/2004	Shafer
6,701,605	B2	3/2004	Huffer et al.
6,720,930	B2	4/2004	Johnson et al.
D492,670	S	7/2004	Hung et al.
D493,446	S	7/2004	Hung et al.
6,830,193	B2 *	12/2004	Tanaka 235/492
2002/0075184	A1 *	6/2002	Tuttle ..... 343/700 MS
2002/0167405	A1	11/2002	Shanks et al.
2003/0184495	A1 *	10/2003	Tomon 343/866
2004/0001024	A1 *	1/2004	Killen et al. 343/792.5
2004/0075616	A1 *	4/2004	Endo et al. 343/895
2006/0262023	A1 *	11/2006	Engargiola et al. 343/792.5

FOREIGN PATENT DOCUMENTS

EP	0 298 618	11/1989
WO	01 73854	10/2001

OTHER PUBLICATIONS

Carley, L. Richard, "Trimming Analog Circuits Using Floating-Gate Analog MOS Memory", IEEE Journal of Solid-State Circuits, vol. 24, No. 6, Dec. 1989, pp. 1569-1575.

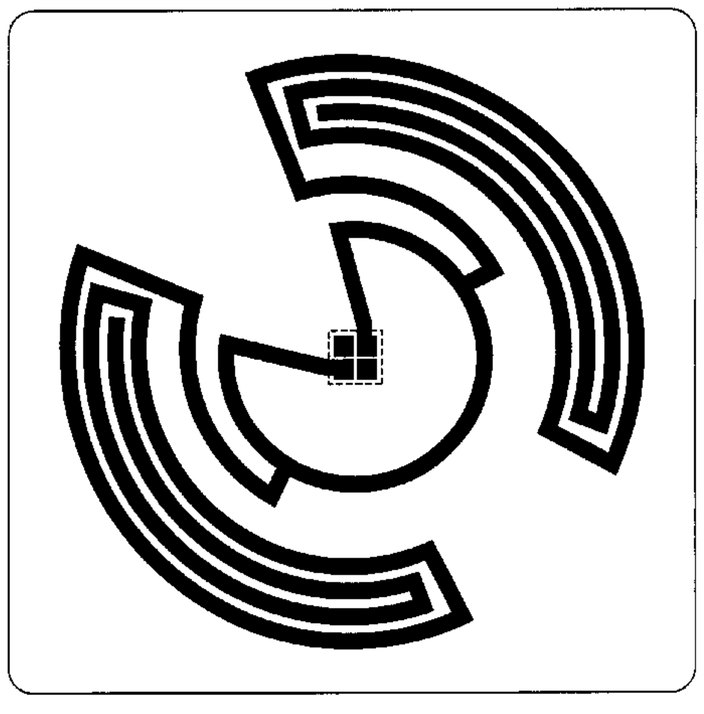
Raszka et al., "Embedded Flash Memory for Security Applications in a 0.13 μ m CMOS Logic Process", Digest of Technical Papers, IEEE International Solid-State Circuits Conference 2004, p. 46.

Weis, Stephen A., et al., Security and Privacy Aspects of Low-Cost Radio Frequency Identification Systems, Laboratory for Computer Science, Auto-ID Center, Massachusetts Institute of Technology, pp. 1-12.

Yoshida, Junko, EE Times, "RFID "kill" Feature Aims to Soothe Privacy Fears", Apr. 28, 2003.

Jonietz, Erika, Technology Review, "Tracking Privacy", Jul./Aug. 2004, pp. 74-75.

Partial International Search for International Application No. PCT/US03/31792, date mailed Apr. 2, 2004.



Nobel, Carmen, "Symbol Considers RFID Options", eWEEK, vol. 23, No. 7, p. 35, Feb. 13, 2006.

* cited by examiner

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(57) **CLAIM**

The ornamental design for a radio frequency identification tag antenna assembly, as shown and described.

DESCRIPTION

The present application may be considered to be related to co-pending U.S. Design patent application Ser. No. 29/220,504 filed Dec. 30, 2004, in the name of inventor Ronald A. Oliver, entitled "Radio Frequency Identification Tag Antenna Assembly", commonly owned herewith, which is a continuation-in-part U.S. Utility patent application Ser. No. 10/812,493 filed Mar. 29, 2004, in the name of inventors Ronald A. Oliver, Christopher J. Diorio and Todd E. Humes, entitled "Circuits for RFID Tags with Multiple Non-Independent Driven RF Ports", now abandoned, and a continuation-in-part of U.S. Utility patent application Ser. No. 10/815,474 filed Mar. 31, 2004, in the name of inventors John D. Hyde, Omer Onen and Ronald A. Oliver, entitled "RFID Tags Combining Signals Received from Mulitple Ports", now abandoned. The present application may also be considered to be related to co-pending U.S. Design patent application Ser. No. 29/220,493 filed Dec. 30, 2004, in the name of inventor Ronald A. Oliver, entitled "Radio Frequency Identification Tag Antenna Assembly", commonly owned herewith which is also a continuation-in-part U.S. Utility patent application Ser. No. 10/812,493. The present application may also be considered to be related to co-pending U.S. Design patent application Ser. No. 29/220,496 filed Dec. 30, 2004, in the name of inventor Ronald A. Oliver, entitled "Conductor for Radio Frequency Identification Tag Antenna Assembly", commonly owned herewith. The present application may also be considered to be related to co-pending U.S. Design patent application Ser. No. 29/254,156 filed Feb. 17, 2006, in the name of inventor Ronald A. Oliver, entitled "Radio Frequency Identification Tag Antenna Assembly", commonly owned herewith. The present application may also be considered to be related to co-pending U.S. Design patent application Ser. No. 29/254,144 filed Feb. 17, 2006, in the name of inventor Ronald A. Oliver, entitled "Radio Frequency Identification Tag Antenna Assembly", commonly owned herewith. The present application may also be considered to be related to co-pending U.S. Design patent application Ser. No. 29/254,158 filed Feb. 17, 2006, in the name of inventor Ronald A. Oliver, entitled "Radio Frequency Identification Tag Antenna Assembly", commonly owned herewith. The present application may also be considered to be related to co-pending U.S. Design patent application Ser. No. 29/254,157 filed Feb. 17, 2006, in the name of inventor Ronald A. Oliver, entitled "Radio Frequency Identification Tag Antenna Assembly", commonly owned herewith. The present application may also be considered to be related to co-pending U.S. Design patent application Ser. No. 29/254,143 filed Feb. 17, 2006, in the name of inventor Ronald A. Oliver, entitled "Radio Frequency Identification Tag Antenna Assembly", commonly owned herewith.

The FIGURE is a top plan view of a radio frequency identification tag antenna assembly showing my new design.

The broken line showing of a square integrated circuit chip is included for the purpose of illustrating environment and forms no part of the claimed design.

1 Claim, 1 Drawing Sheet