WANG, HARTMANN & GIBBS, P.C.
A Professional Law Corporation
Richard F. Cauley (SBN: 109194)
Franklin E. Gibbs (SBN: 189015)
Erick P. Wolf (SBN: 224906)
1301 Dove Street, Suite 1050
Newport Beach, CA 92660
Telephone: (949) 833-8483
Facsimile: (949) 833-2281

Attorneys for Plaintiff

UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA

AURORA CORP. OF AMERICA, a Delaware corporation, Plaintiff, vs. FELLOWES, INC., an Illinois corporation, Defendant.	Case No. CV07-8306 GHK (AJWx) COMPLAINT FOR: 1. DECLARATORY JUDGMENT OF NON-INFRINGEMENT; AND 2. DECLARATORY JUDGMENT OF INVALIDITY; DEMAND FOR JURY TRIAL

Plaintiff Aurora Corp. of America ("Aurora"), for its complaint against Defendants Fellowes, Inc. ("Fellowes"), states as follows:

NATURE OF THE ACTION

1. This is an action for declaratory relief regarding invalidity and non-infringement of U.S. Patent No. 7,311,276 ("the '276 Patent"), a true and correct copy of which is attached as Exhibit 1, to this Complaint.

PARTIES

2. Plaintiff Aurora is a Delaware corporation with a principal place of business at 3500 Challenger Street, Torrance, CA 90503.

3. Defendant Fellowes is an Illinois corporation with a principal place of business at 1789 Norwood Ave., Itasca, IL 60143.

JURISDICTION AND VENUE

4. This action seeks declaratory judgment under the Declaratory Judgment Act, 28 U.S.C. § 2201 et seq. and under the Patent Laws of the United States, including 35 U.S.C. § 1 et seq. It presents an actual case or controversy under Article III of the United States Constitution and serves a useful purpose in clarifying and settling the legal rights at issue.

5. This Court has subject matter jurisdiction over this action under 28 U.S.C. Sections 1331 and 1338(a).

6. This Court has personal jurisdiction over Fellowes as, it solicits, transacts, and is regularly doing business within California and this District.

7. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391(b), (c) and/or 1400(b).

FACTS

8. On May 30, 2007, attorneys for Fellowes sent Aurora a cease and desist letter alleging that Aurora's shredders marketed under the Touchguard name incorporated Fellowes' Safe Sense® technology which is allegedly the subject of U.S. Patent Publication Nos. 2006-0054725 A1 and 2006-0054724 A1 (which issued into the '276 Patent). The letter demanded that Aurora cease sales of the allegedly infringing shredders prior to the time the patent issued. A true and correct copy of this letter is attached as Exhibit 2.

9. On June 8, 2007, Tai-Hoon Matlin, one of the '276 Patent's inventors, declared in a second declaration to the PTO, that Aurora shredder Model No. AS1019CS was covered by each and every limitation of at least claims 1, 5, and 6 of the present application (which issued into the '276 Patent). A true and correct copy of the Second Declaration of Tai-Hoon Matlin is attached as Exhibit 3 ("Second Matlin Declaration").

10. Fellowes incorporated the Second Matlin Declaration into its August 2, 2007 Request for Reconsideration submitted to the PTO, using it to overcome an obviousness objection as "additional evidence of non-obviousness," specifically "copying and adoption of invention by others." See "Remarks" section of Request for Reconsideration at p. 25-26, a true and correct copy of which is attached as Exhibit 4.

First Cause of Action

(Declaratory Judgment of Non-Infringement)

11. Aurora repeats and realleges paragraphs 1 through 10 as though fully set forth herein.

12. Fellowes has claimed that Aurora's shredding products including Aurora shredder Model No. AS1019CS infringe the '276 Patent and has demanded that Aurora cease and desist offering to sell these products in the United States.

13. An actual, present, and justiciable controversy has arisen between Fellowes and Aurora concerning Aurora's right to sell its shredding products including Aurora shredder Model No. AS1019CS in the United States.

14. Aurora seeks declaratory judgment from this Court that its shredding products including Aurora shredder Model No. AS1019CS do not infringe the '276 Patent.

Second Cause of Action

(Declaratory Judgment of Invalidity)

15. Aurora repeats and realleges paragraphs 1 through 14 as though fully set forth herein.

16. Fellowes claim that the '276 Patent is valid and enforceable, while Aurora believes the '276 Patent is invalid and unenforceable.

17. An actual, present, and justiciable controversy has arisen between Fellowes and Aurora concerning the validity and enforceability of the '276 Patent.

18. Aurora seeks declaratory judgment from this Court that the '276 Patents is invalid and unenforceable.

PRAYER FOR RELIEF

WHEREFORE, Aurora requests that the Court grant the following relief:

A. A declaratory judgment against Fellowes that Aurora's shredding products including Aurora shredder Model No. AS1019CS do not infringe the '276 Patent;

B. A declaratory judgment against Fellowes that the '276 Patent is invalid and unenforceable;

C. Attorneys' fees;

D. Costs; and

E. For such other and further relief as the Court may deem proper.

Dated: December 26, 2007

WANG, HARTMANN & GIBBS
A Professional Law Corporation

By: _____
Richard F. Cauley
Franklin E. Gibbs
Erick P. Wolf
Attorneys for Plaintiff

DEMAND FOR JURY TRIAL

Plaintiff hereby demands a jury trial as provided by Rule 38 of the Federal Rules of Civil Procedure.

Dated: December 26, 2007

WANG, HARTMANN & GIBBS
A Professional Law Corporation

By: _____
Richard F. Cauley
Franklin E. Gibbs
Erick P. Wolf
Attorneys for Plaintiff

Exhibit 1

US007311276B2

(12) **United States Patent**
Matlin et al.

(10) **Patent No.: US 7,311,276 B2**
(45) **Date of Patent: Dec. 25, 2007**

(54) **SHREDDER WITH PROXIMITY SENSING SYSTEM**

(75) Inventors: **Taihoon K Matlin**, Round Lake Beach, IL (US); **Eric Gach**, Mount Prospect, IL (US)

(73) Assignee: **Fellowes Inc.**, Itasca, IL (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 17 days.

(21) Appl. No.: **10/937,304**

(22) Filed: **Sep. 10, 2004**

(65) **Prior Publication Data**

US 2006/0054724 A1 Mar. 16, 2006

(51) **Int. Cl.**
A01F 21/00 (2006.01)
B02C 23/00 (2006.01)
B23Q 11/00 (2006.01)

(52) **U.S. Cl.** **241/37.5**; 241/236

(58) **Field of Classification Search** 241/37.5, 241/236

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,619,537	A		11/1971	Nara et al.
3,764,819	A		10/1973	Muller
3,829,850	A		8/1974	Guetersloh
3,947,734	A	*	3/1976	Fyler 361/181
4,352,980	A		10/1982	Hibari
4,683,381	A		7/1987	Dufoug
5,081,406	A		1/1992	Hughes et al.
5,166,679	A		11/1992	Vranish et al.
5,186,398	A		2/1993	Vigneaux, Jr.
5,345,138	A		9/1994	Mukaidono et al.
5,397,890	A		3/1995	Schueler et al.
5,494,229	A		2/1996	Rokos
5,850,342	A		12/1998	Nakamura et al.
D412,716	S		8/1999	Kroger
5,942,975	A		8/1999	Sorensen
6,065,696	A		5/2000	Tsai
6,079,645	A	*	6/2000	Henreckson et al. 241/37.5
6,265,682	B1		7/2001	Lee
6,376,939	B1		4/2002	Suzuki et al.
6,418,004	B1		7/2002	Mather et al.
6,655,943	B1	*	12/2003	Peterson et al. 425/114
6,676,460	B1		1/2004	Motsenbocker
6,724,324	B1	*	4/2004	Lambert 341/33
6,813,983	B2		11/2004	Gass et al.
6,826,988	B2		12/2004	Gass et al.
6,857,345	B2		2/2005	Gass et al.
6,877,410	B2		4/2005	Gass et al.
6,880,440	B2		4/2005	Gass et al.

(Continued)

FOREIGN PATENT DOCUMENTS

DE	33 13 232	10/1984

(Continued)

OTHER PUBLICATIONS

SEM Advertisement for LK-3 Automatic Oiling System.

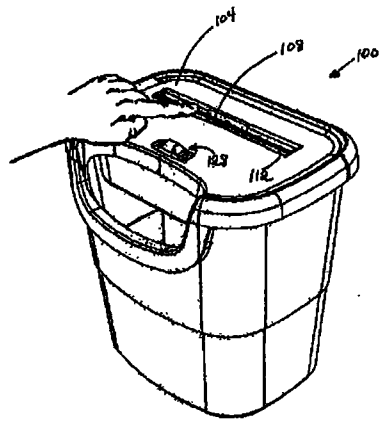
(Continued)

Primary Examiner—Bena Miller
(74) *Attorney, Agent, or Firm*—Pillsbury Winthrop Shaw Pittman LLP

(57) **ABSTRACT**

The present invention relates to a shredder that includes a proximity sensing system to sense the presence of a person, animal, or object near cutting elements of the shredder.

114 Claims, 9 Drawing Sheets



U.S. PATENT DOCUMENTS

6,920,814	B2	7/2005	Gass et al.	
6,979,813	B2 *	12/2005	Avril	250/221
7,040,559	B2	5/2006	Matlin et al.	
2002/0017175	A1	2/2002	Gass et al.	
2002/0017176	A1	2/2002	Gass et al.	
2002/0017178	A1	2/2002	Gass et al.	
2002/0017179	A1	2/2002	Gass et al.	
2002/0017180	A1	2/2002	Gass et al.	
2002/0017181	A1	2/2002	Gass et al.	
2002/0017182	A1	2/2002	Gass et al.	
2002/0017184	A1	2/2002	Gass et al.	
2002/0017336	A1	2/2002	Gass et al.	
2002/0020261	A1	2/2002	Gass et al.	
2002/0020262	A1	2/2002	Gass et al.	
2002/0020263	A1	2/2002	Gass et al.	
2002/0020265	A1	2/2002	Gass et al.	
2002/0020271	A1	2/2002	Gass et al.	
2002/0056348	A1	5/2002	Gass et al.	
2002/0056349	A1	5/2002	Gass et al.	
2002/0056350	A1	5/2002	Gass et al.	
2002/0059853	A1	5/2002	Gass et al.	
2002/0059854	A1	5/2002	Gass et al.	
2002/0059855	A1	5/2002	Gass et al.	
2002/0066346	A1	6/2002	Gass et al.	
2002/0069734	A1	6/2002	Gass et al.	
2002/0170399	A1	11/2002	Gass et al.	
2002/0170400	A1	11/2002	Gass	
2002/0190581	A1	12/2002	Gass et al.	
2003/0002942	A1	1/2003	Gass et al.	
2003/0005588	A1	1/2003	Gass et al.	
2003/0015253	A1	1/2003	Gass et al.	
2003/0019341	A1	1/2003	Gass et al.	
2003/0020336	A1	1/2003	Gass et al.	
2003/0037651	A1	2/2003	Gass et al.	
2003/0056853	A1	3/2003	Gass et al.	
2003/0058121	A1	3/2003	Gass et al.	
2003/0090224	A1	5/2003	Gass et al.	
2003/0131703	A1	7/2003	Gass et al.	
2003/0140749	A1	7/2003	Gass et al.	
2003/0196824	A1	10/2003	Gass et al.	
2004/0008122	A1 *	1/2004	Michael	340/686.1
2004/0040426	A1	3/2004	Gass et al.	
2004/0163514	A1	8/2004	Gass et al.	
2004/0173430	A1	9/2004	Gass	
2004/0194594	A1	10/2004	Dils et al.	
2004/0226800	A1	11/2004	Pierga et al.	
2005/0039586	A1	2/2005	Gass et al.	
2005/0039822	A1	2/2005	Gass et al.	
2005/0041359	A1	2/2005	Gass	
2005/0066784	A1	3/2005	Gass	
2005/0103510	A1	5/2005	Gass et al.	
2005/0139051	A1	6/2005	Gass et al.	
2005/0139056	A1	6/2005	Gass et al.	
2005/0139057	A1	6/2005	Gass et al.	
2005/0139058	A1	6/2005	Gass et al.	
2005/0139459	A1	6/2005	Gass et al.	
2005/0155473	A1	7/2005	Gass	
2005/0166736	A1	8/2005	Gass et al.	
2006/0091247	A1	5/2006	Matlin	

FOREIGN PATENT DOCUMENTS

DE	86 19 856.4	10/1988
DE	41 21 330	1/1993
EP	855 221 A	7/1998
JP	52-11691	1/1977
JP	57-76734	5/1982
JP	04-157093	5/1992
JP	040180852	6/1992
JP	6-277548	10/1994
JP	7-299377	11/1995
JP	9-262491	10/1997
JP	11-216383	8/1999
JP	20000346288	12/2000
JP	2004321993	11/2004
WO	WO2005070553	8/2005

OTHER PUBLICATIONS

Advertisement for Auto-Lube.

1st Paper Shredder—Advertisement for DAHLE Automatic Oiler/Paper Shredder Oiling Accessory.

Instructions for Installing a Shredder Oiling System from www.compax.com.

Full-Size Picture of Shredder with LK-3 Oiling System.

International Search Report and Written Opinion for PCT/US2005/028290 dated Nov. 21, 2005.

Ti's Digital Signal Controllers Put Brake On SawStop Table Saw, Feb. 9, 2005, pp. 1-3 (printed from www.embeddedstar.com/press/content/2005/2/embedded17827.html).

* cited by examiner

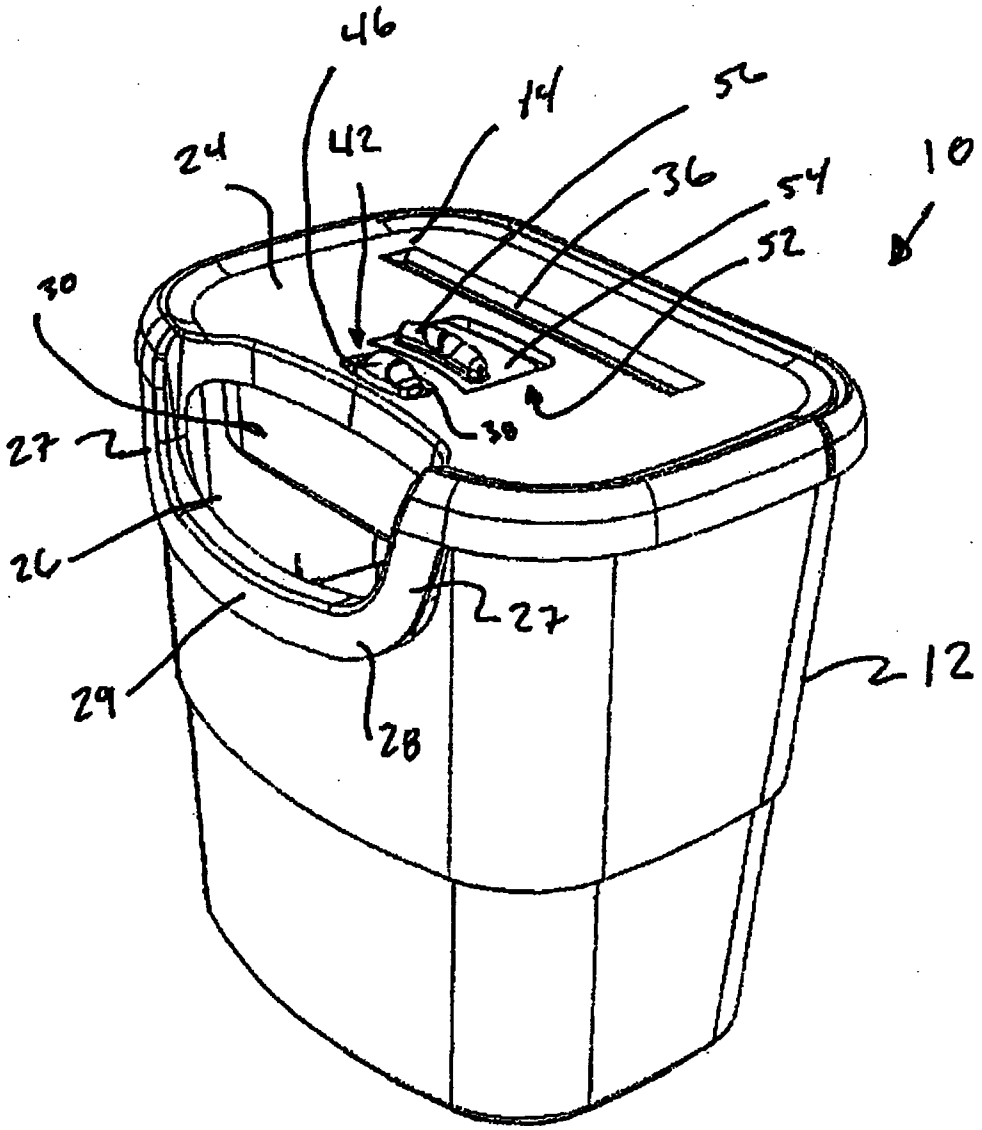


FIG. 1

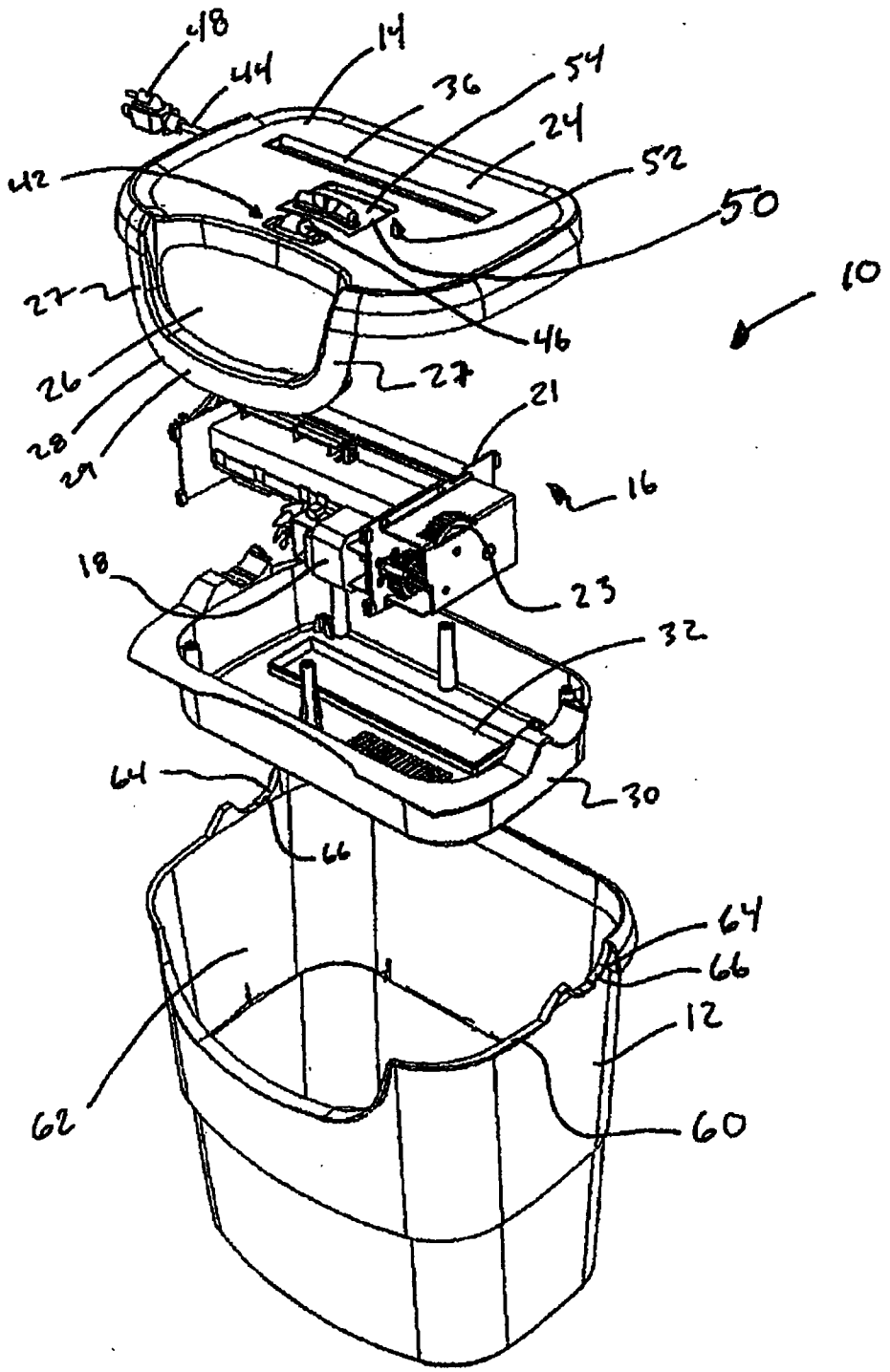

18
44
14
36
54
24
42
52
50
10
46
27
26
28
29
27
21
16
18
23
32
64
30
66
64
66
12
62
60

FIG. 2

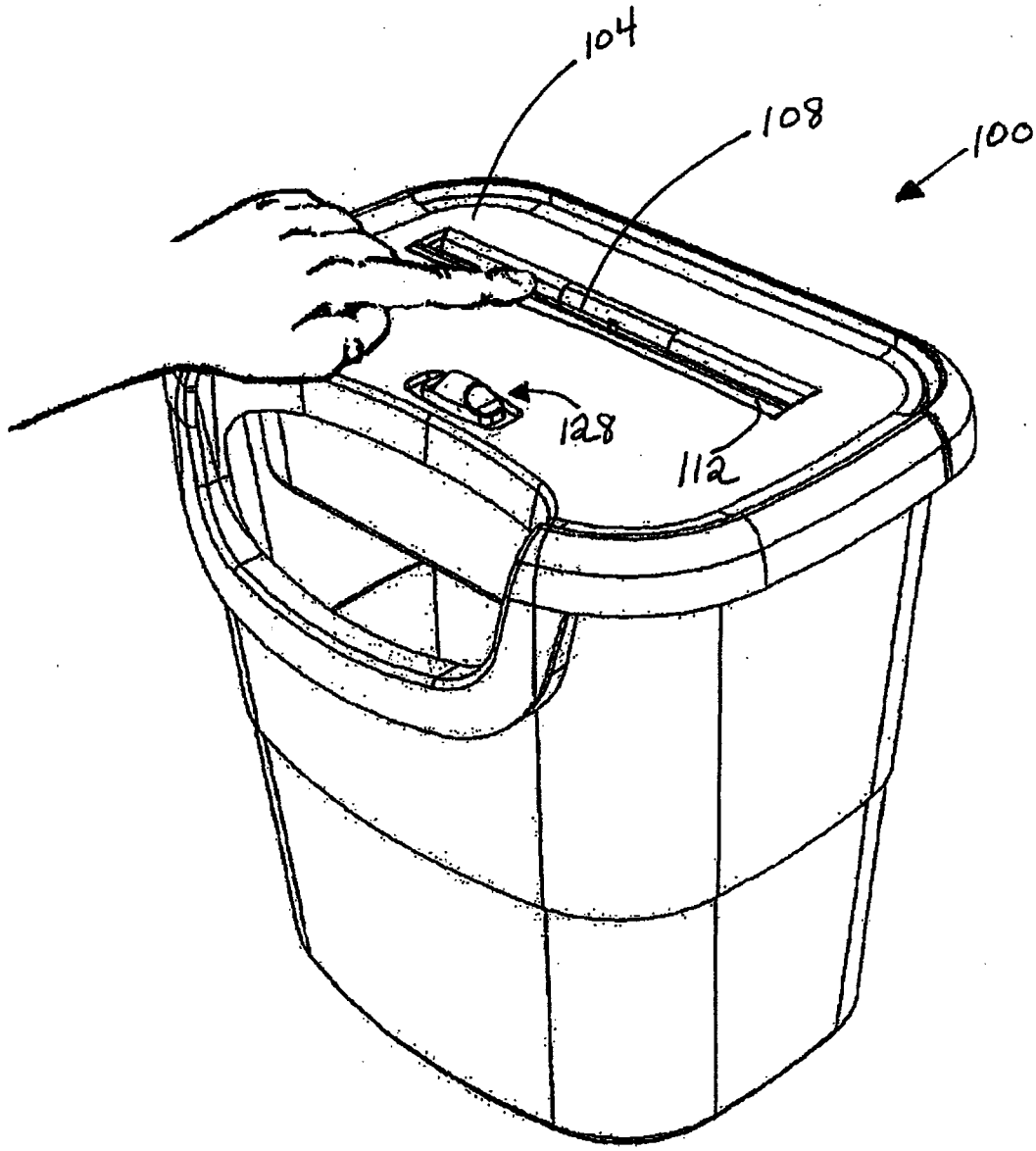


FIG. 3

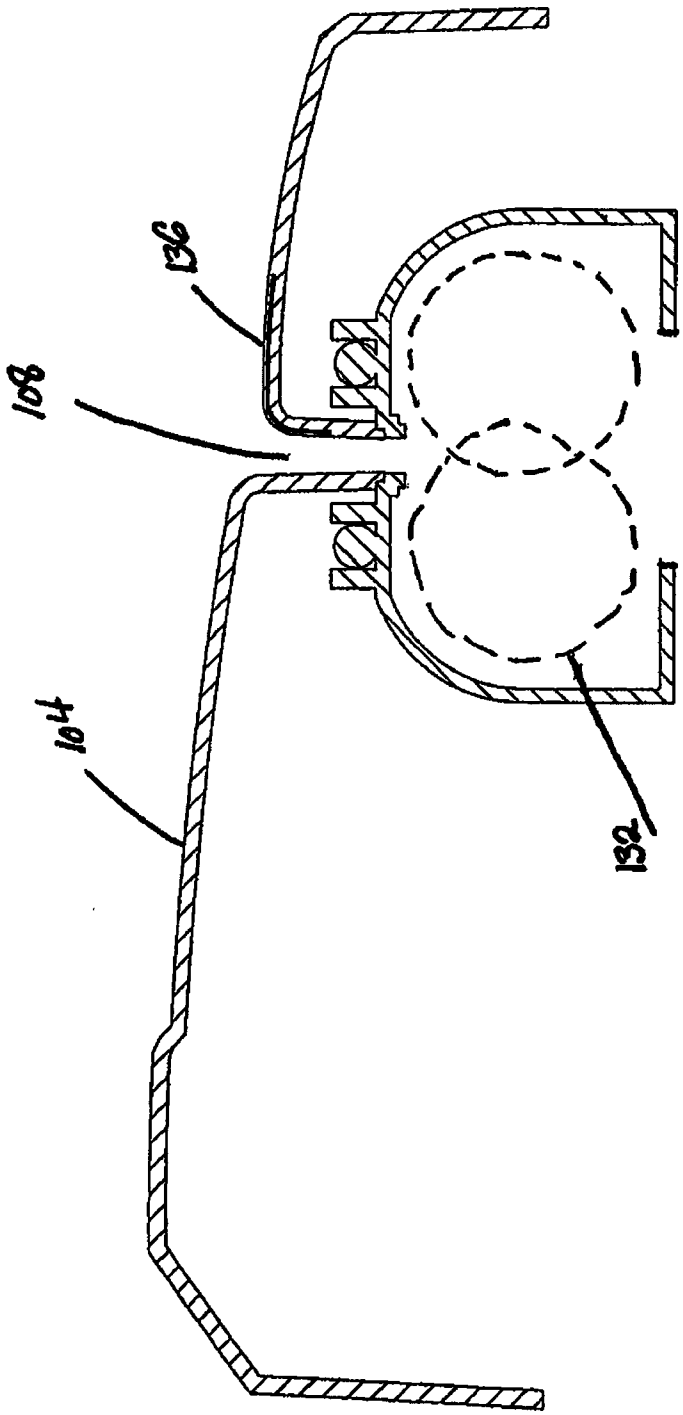


FIG. 4

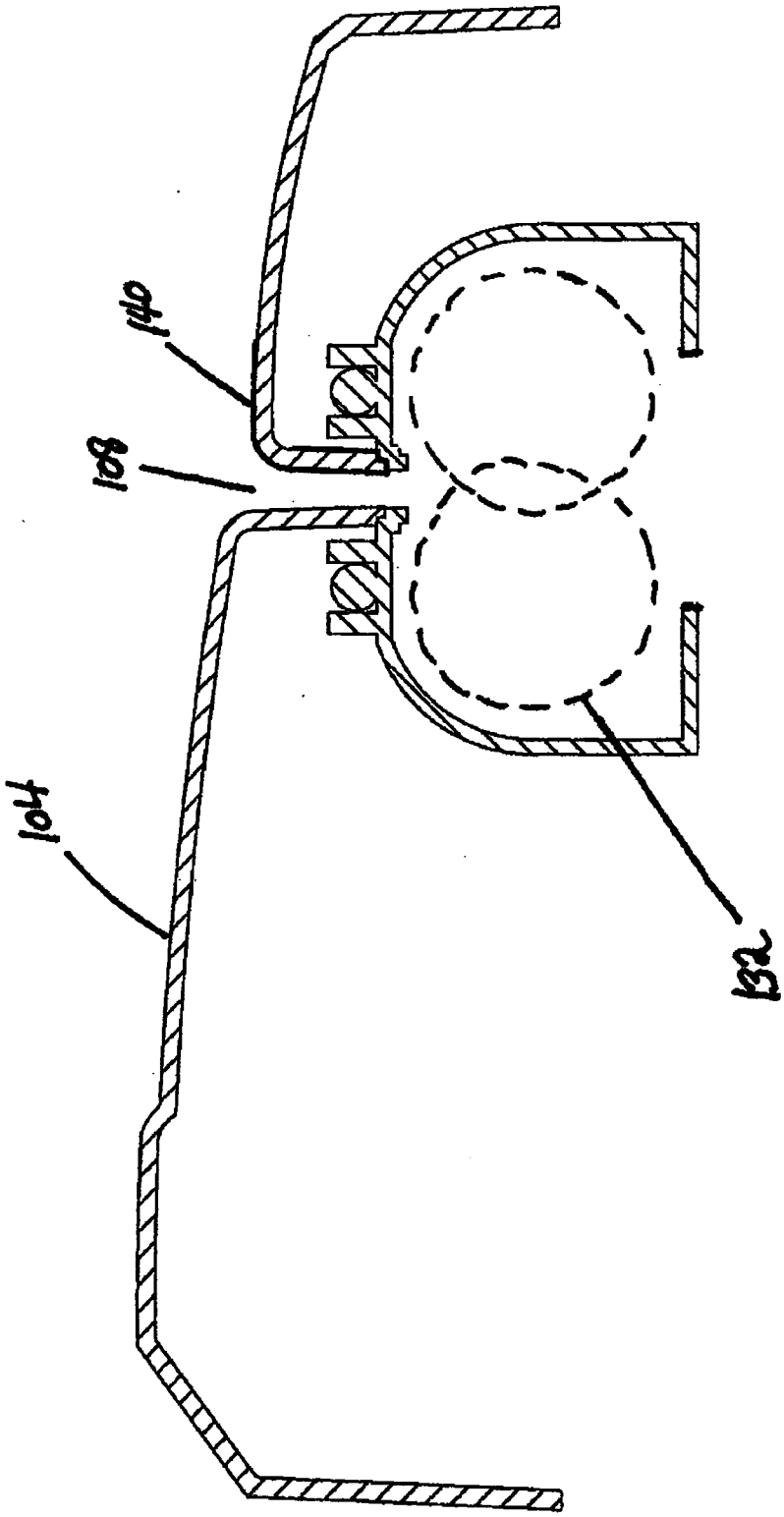


FIG. 5

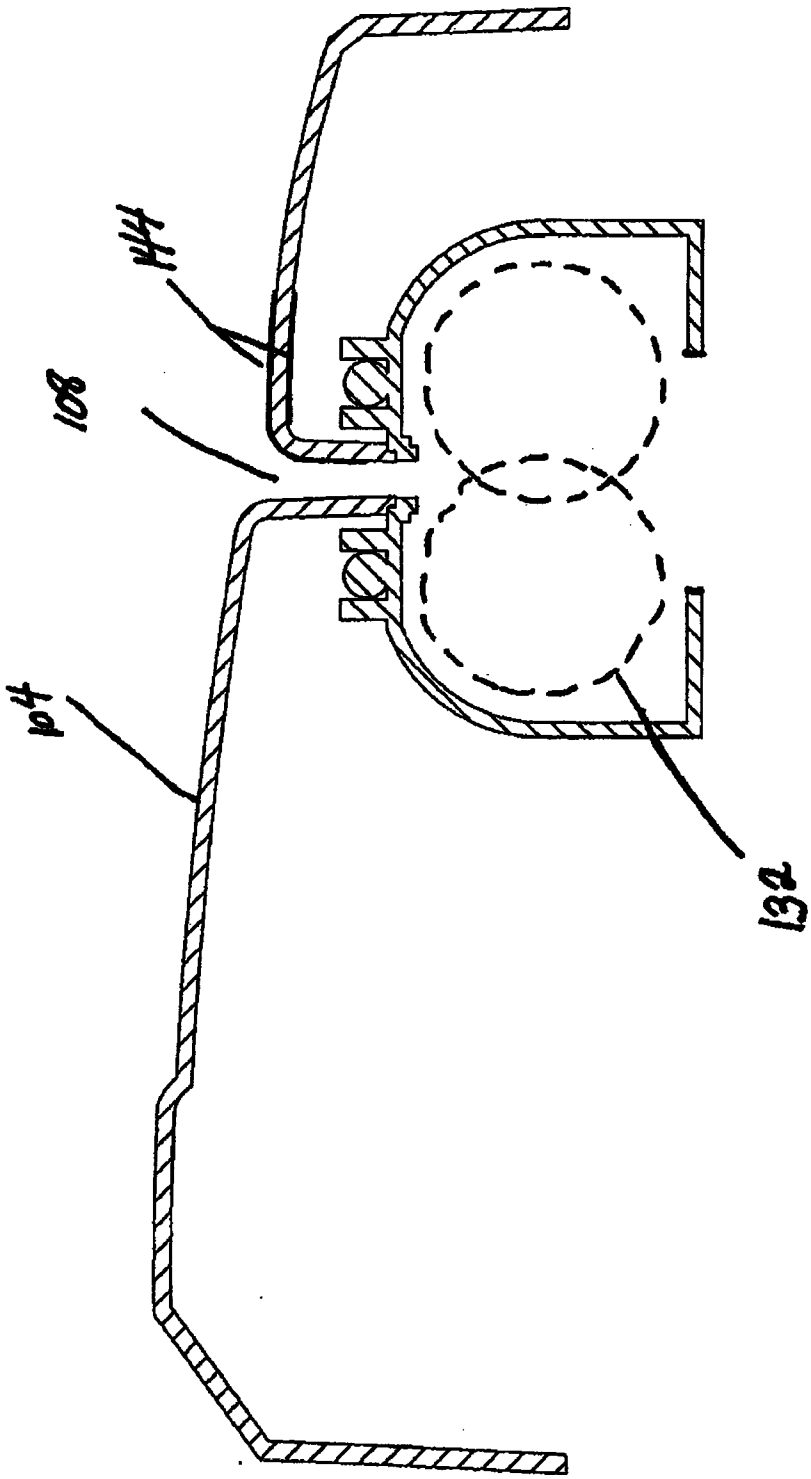


FIG. 6

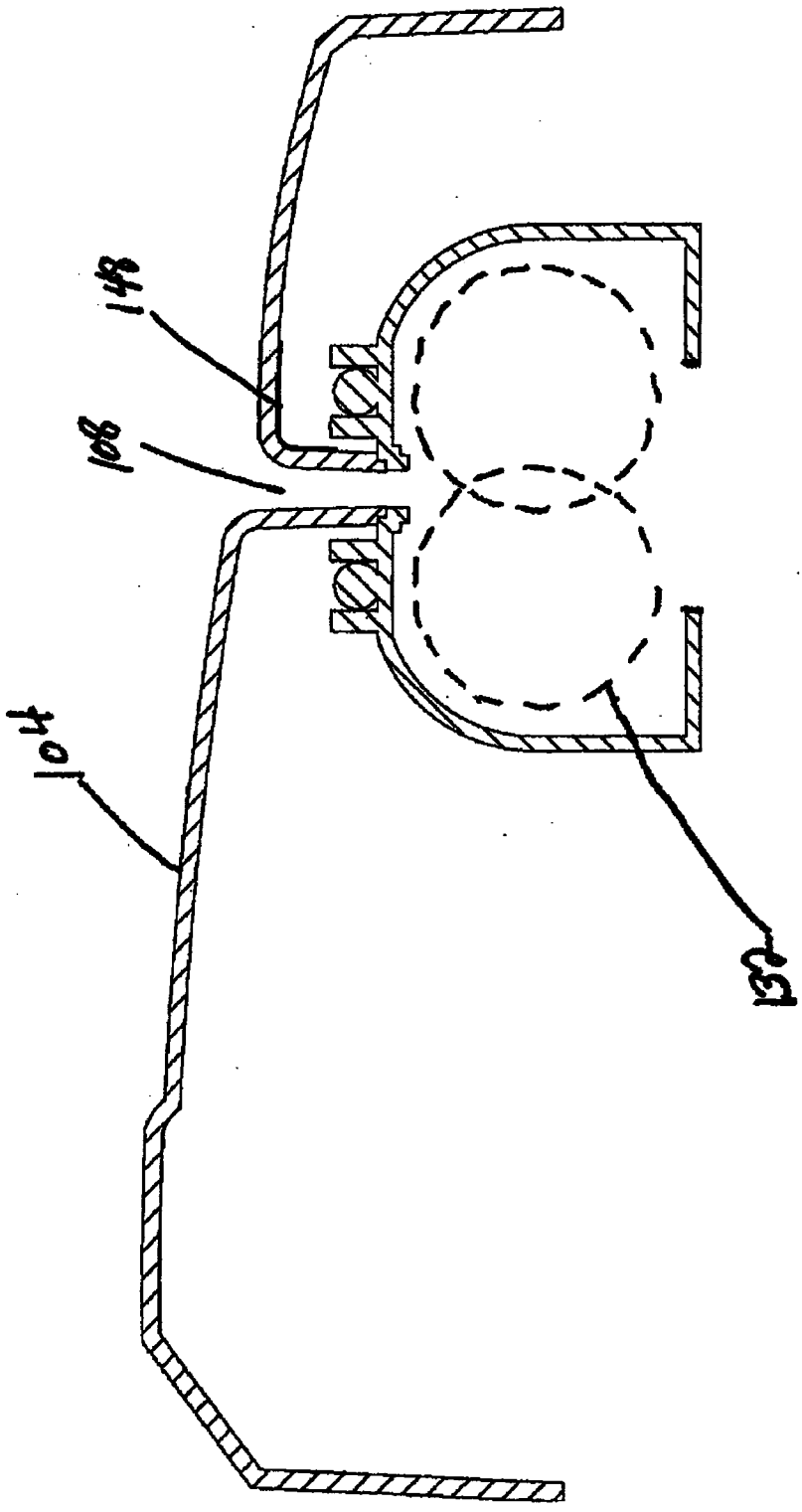


FIG. 7

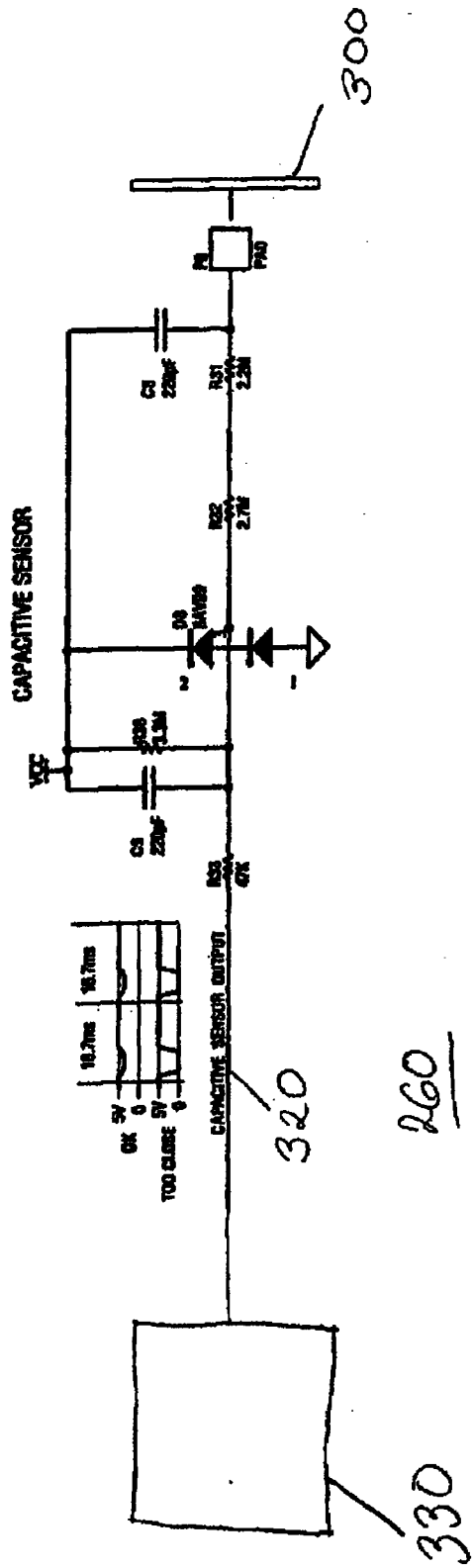


FIG. 8

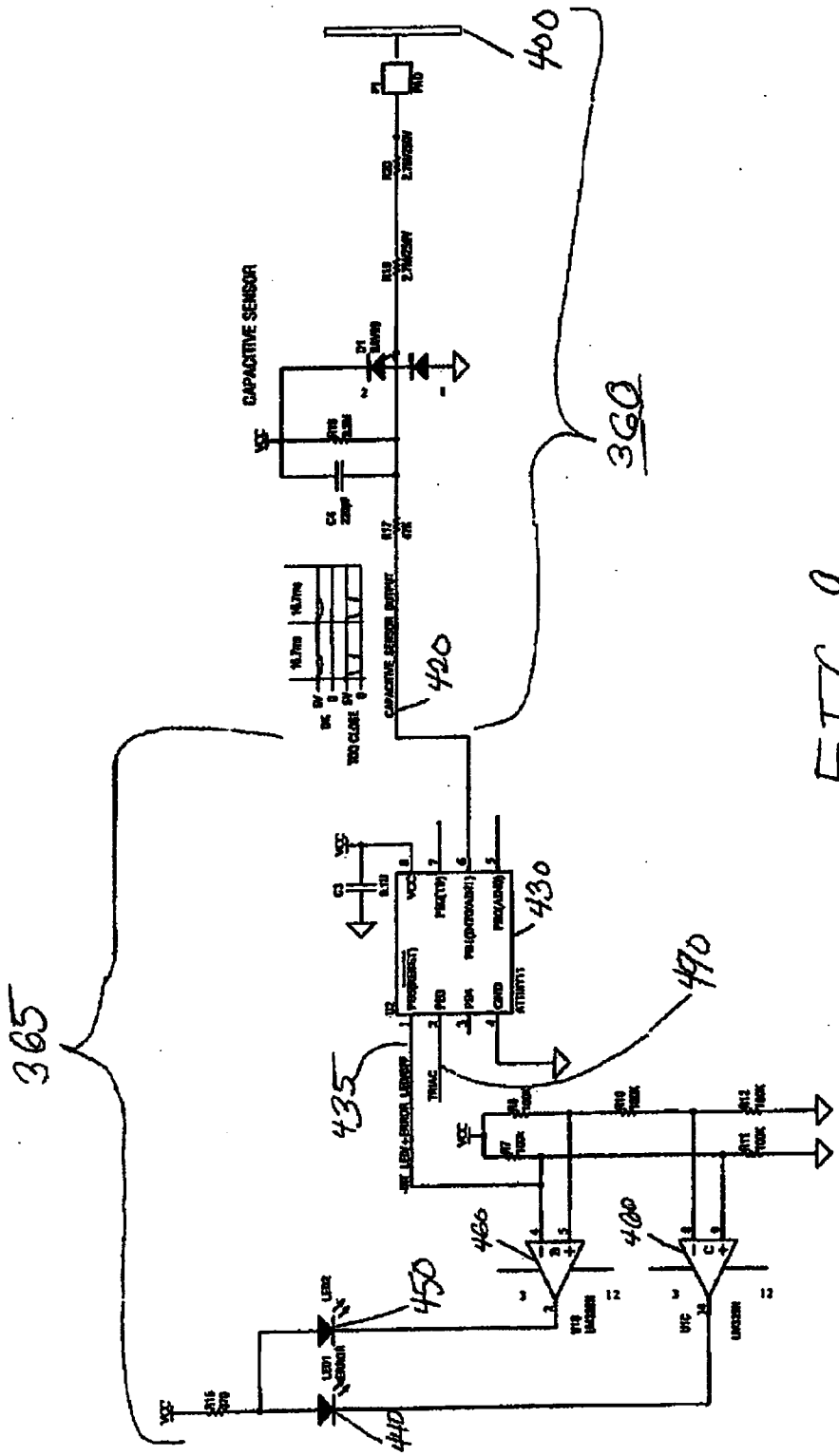


FIG. 9

SHREDDER WITH PROXIMITY SENSING SYSTEM

FIELD OF THE INVENTION

The present invention relates to shredders for destroying articles, such as documents, CDs, etc.

BACKGROUND OF THE INVENTION

Shredders are well known devices for destroying articles, such as documents, CDs, floppy disks, etc. Typically, users purchase shredders to destroy sensitive articles, such as credit card statements with account information, documents containing company trade secrets, etc.

A common type of shredder has a shredder mechanism contained within a housing that is removably mounted atop a container. The shredder mechanism typically has a series of cutter elements that shred articles fed therein and discharge the shredded articles downwardly into the container. It is generally desirable to prevent a person's or animal's body part from contacting these cutter elements during the shredding operation.

The present invention endeavors to provide various improvements over known shredders.

SUMMARY OF THE INVENTION

One aspect of the present invention provides a shredder comprising a housing, a shredder mechanism including a motor and cutter elements, a proximity sensor, and a controller. The shredder mechanism enables articles to be shredded to be fed into the cutter elements, and the motor is operable to drive the cutter elements so that the cutter elements shred the articles fed therein.

The housing has an opening enabling articles to be fed therethrough into the cutter elements of the shredder mechanism for shredding. The proximity sensor is located adjacent the opening and configured to indicate the presence of a person or animal in proximity to the opening. The controller is operable to perform a predetermined operation (e.g., to disable the shredder mechanism) responsive to the indicated presence of the person or animal.

Another aspect of the invention provides a shredder with a proximity sensor that includes an electroconductive element and circuitry to sense a state of the electroconductive element. The proximity sensor is configured to indicate a change in the state of the electroconductive element corresponding to a change in capacitance caused by a person or animal approaching in proximity to the electroconductive element. A controller of the shredder is operable to perform a predetermined operation responsive to the indicated change in the state of the electroconductive element.

Other objects, features, and advantages of the present invention will become apparent from the following detailed description, the accompanying drawings, and the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of a shredder constructed in accordance with an embodiment of the present invention;

FIG. **2** is an exploded perspective view of the shredder of FIG. **1**;

FIG. **3** is a perspective view of a shredder constructed in accordance with an embodiment of the present invention;

FIGS. **4-7** are cross-sectional views each showing a shredder housing, opening, cutting elements, and conductor configuration for a sensor in accordance with various embodiments of the present invention; and

FIGS. **8** and **9** illustrate example capacitive sensor circuits according to respective embodiments of the present invention.

DETAILED DESCRIPTION OF THE ILLUSTRATED EMBODIMENTS

FIGS. **1** and **2** illustrate a shredder constructed in accordance with an embodiment of the present invention. The shredder is generally indicated at **10**. The shredder **10** sits atop a waste container, generally indicated at **12**, which is formed of molded plastic or any other material. The shredder **10** illustrated is designed specifically for use with the container **12**, as the shredder housing **14** sits on the upper periphery of the waste container **12** in a nested relation. However, the shredder **10** may also be designed so as to sit atop a wide variety of standard waste containers, and the shredder **10** would not be sold with the container. Likewise, the shredder **10** could be part of a large freestanding housing, and a waste container would be enclosed in the housing. An access door would provide for access to and removal of the container. Generally speaking, the shredder **10** may have any suitable construction or configuration and the illustrated embodiment is not intended to be limiting in any way.

The shredder **10** includes a shredder mechanism **16** including an electrically powered motor **18** and a plurality of cutter elements (not shown). "Shredder mechanism" is a generic structural term to denote a device that shreds articles using cutter elements. Such shredding may be done in any particular way. The cutter elements are mounted on a pair of parallel rotating shafts (not shown). The motor **18** operates using electrical power to rotatably drive the shafts and the cutter elements through a conventional transmission **23** so that the cutter elements shred articles fed therein. The shredder mechanism **16** may also include a sub-frame **21** for mounting the shafts, the motor **18**, and the transmission **23**. The operation and construction of such a shredder mechanism **16** are well known and need not be described herein in detail. Generally, any suitable shredder mechanism **16** known in the art or developed hereafter may be used.

The shredder **10** also includes the shredder housing **14**, mentioned above. The shredder housing **14** includes top wall **24** that sits atop the container **12**. The top wall **14** is molded from plastic and an opening **26** is located at a front portion thereof. The opening **26** is formed in part by a downwardly depending generally U-shaped member **28**. The U-shaped member **28** has a pair of spaced apart connector portions **27** on opposing sides thereof and a hand grip portion **28** extending between the connector portions **27** in spaced apart relation from the housing **14**. The opening **26** allows waste to be discarded into the container **12** without being passed through the shredder mechanism **16**, and the member **28** may act as a handle for carrying the shredder **10** separate from the container **12**. As an optional feature, this opening **26** may be provided with a lid, such as a pivoting lid, that opens and closes the opening **26**. However, this opening in general is optional and may be omitted entirely. Moreover, the shredder housing **14** and its top wall **24** may have any suitable construction or configuration.

The shredder housing **14** also includes a bottom receptacle **30** having a bottom wall, four side walls and an open top. The shredder mechanism **16** is received therein, and the receptacle **30** is affixed to the underside of the top wall **24**

by fasteners. The receptacle **30** has an opening **32** in its bottom wall through which the shredder mechanism **16** discharges shredded articles into the container **12**.

The top wall **24** has a generally laterally extending opening **36** extending generally parallel and above the cutter elements. The opening **36**, often referred to as a throat, enables the articles being shredded to be fed into the cutter elements. As can be appreciated, the opening **36** is relatively narrow, which is desirable for preventing overly thick items, such as large stacks of documents, from being fed into cutter elements, which could lead to jamming. The opening **36** may have any configuration.

The top wall **24** also has a switch recess **38** with an opening therethrough. An on/off switch **42** includes a switch module (not shown) mounted to the top wall **24** underneath the recess **38** by fasteners, and a manually engageable portion **46** that moves laterally within the recess **38**. The switch module has a movable element (not shown) that connects to the manually engageable portion **46** through the opening **40**. This enables movement of the manually engageable portion **46** to move the switch module between its states.

In the illustrated embodiment, the switch module connects the motor **18** to the power supply (not shown). Typically, the power supply will be a standard power cord **44** with a plug **48** on its end that plugs into a standard AC outlet. The switch **42** is movable between an on position and an off position by moving the portion **46** laterally within the recess **38**. In the on position, contacts in the switch module are closed by movement of the manually engageable portion **46** and the movable element to enable a delivery of electrical power to the motor **18**. In the off position, contacts in the switch module are opened to disable the delivery of electric power to the motor **18**.

As an option, the switch **42** may also have a reverse position wherein contacts are closed to enable delivery of electrical power to operate the motor **18** in a reverse manner. This would be done by using a reversible motor and applying a current that is of a reverse polarity relative to the on position. The capability to operate the motor **18** in a reversing manner is desirable to move the cutter elements in a reversing direction for clearing jams. In the illustrated embodiment, in the off position the manually engageable portion **46** and the movable element would be located generally in the center of the recess **38**, and the on and reverse positions would be on opposing lateral sides of the off position.

Generally, the construction and operation of the switch **42** for controlling the motor **42** are well known and any construction for such a switch **42** may be used.

The top cover **24** also includes another recess **50** associated with a switch lock **52**. The switch lock **52** includes a manually engageable portion **54** that is movable by a user's hand and a locking portion (not shown). The manually engageable portion **54** is seated in the recess **50** and the locking portion is located beneath the top wall **24**. The locking portion is integrally formed as a plastic piece with the manually engageable portion **54** and extends beneath the top wall **24** via an opening formed in the recess **50**.

The switch lock **52** causes the switch **42** to move from either its on position or reverse position to its off position by a camming action as the switch lock **52** is moved from a releasing position to a locking position. In the releasing position, the locking portion is disengaged from the movable element of the switch **42**, thus enabling the switch **42** to be moved between its on, off, and reverse positions. In the locking position, the movable element of the switch **42** is restrained in its off position against movement to either its on or reverse position by the locking portion of the switch lock **52**.

Preferably, but not necessarily, the manually engageable portion **54** of the switch lock **52** has an upwardly extending projection **56** for facilitating movement of the switch lock **52** between the locking and releasing positions.

One advantage of the switch lock **52** is that, by holding the switch **42** in the off position, to activate the shredder mechanism **16** the switch lock **52** must first be moved to its releasing position, and then the switch **42** is moved to its on or reverse position. This reduces the likelihood of the shredder mechanism **16** being activated unintentionally.

In the illustrated embodiment, the shredder housing **14** is designed specifically for use with the container **12** and it is intended to sell them together. The upper peripheral edge **60** of the container **12** defines an upwardly facing opening **62**, and provides a seat **61** on which the shredder **10** is removably mounted. The seat **61** includes a pair of pivot guides **64** provided on opposing lateral sides thereof. The pivot guides **64** include upwardly facing recesses **66** that are defined by walls extending laterally outwardly from the upper edge **60** of the container **12**. The walls defining the recesses **66** are molded integrally from plastic with the container **12**, but may be provided as separate structures and formed from any other material. At the bottom of each recess **66** is provided a step down or ledge providing a generally vertical engagement surface **68**. This step down or ledge is created by two sections of the recesses **66** being provided with different radii.

The shredder **10** has a proximity sensor to detect the presence of a person or thing (e.g., animal or inanimate object) in proximity to the opening **36**. A person or thing is "in proximity" to the opening **36** when a part thereof is outside and adjacent to the opening **36** or at least partially within the opening **36**. The proximity sensor may be implemented in various ways, such as is described in further detail below. For further examples of shredders on which a proximity sensor may be used, reference may be made to U.S. patent application Ser. No. 10/828,254 (filed Apr. 21, 2004), Ser. No. 10/815,761 (filed Apr. 2, 2004), and Ser. No. 10/347,700 (filed Jan. 22, 2003), each of which is hereby incorporated into the present application by reference. Generally, the proximity sensor may be used with any type of shredder, and the examples identified herein are not intended to be limiting.

FIG. **3** is a perspective view of a shredder **100** constructed in accordance with an embodiment of the present invention. The shredder **100** incorporates a capacitive sensor. The illustrated capacitive sensor is a switch that detects the presence of a person or thing without requiring physical contact. The capacitive sensor includes a conductor/contact plate **112** connected to a circuit, such as those shown in FIGS. **8** and **9**. The conductor **112** serves as the first plate of a capacitor, while the person or thing to be detected serves as the second plate thereof. As the distance between the conductor **112** and the person or thing decreases, the mutual capacitance therebetween increases. This increase in capacitance results in increased signal levels in the sensor, which levels can be used to detect the proximity of the person or thing.

It is to be appreciated that capacitance depends in part on the dielectric constant of the second plate of a capacitor. A higher dielectric constant translates into a larger capacitance. Therefore, the capacitive sensor of the shredder **100** can detect the proximity of a nearby animate or inanimate entity provided that its respective dielectric constant is

sufficiently high. Because human beings and various animals have relatively high dielectric constants, they are detectable by the capacitive sensor. Inanimate objects with relatively high dielectric constants also are detectable. Conversely, objects with low or moderate dielectric constants, such as paper, are not detectable.

The shredder **100** includes a shredder housing **104**, an opening **108**, and a control switch **128** with on, off, and reverse positions. A shredder mechanism, such as the one described above, is located beneath the opening **108** so that documents can be fed into the shredder mechanism through the opening **108**.

The conductor **112** can be, for example, a strip of metal, foil tape (e.g., copper tape), conductive paint, a silk-screened conductive ink pattern, or another suitable conductive material. As shown in FIG. **3**, the conductor **112** is a 9-inch by 1-inch capacitive sensing strip that is affixed to the housing **104** near the opening **108**. As such, when a person or thing nears the opening **108** and thus the cutter elements of the shredding mechanism of the shredder **100**, the capacitance between the conductor **112** and the person or thing increases, resulting in an increase in the signal level used for detection, as will be described below. To ensure that the switch is sensitive enough to detect the person or thing through multiple sheets of paper, the conductor **112** extends into the opening **108** to increase the overall surface area of the conductor **112** and thus the amount of capacitance between the conductor **112** and the nearby person or thing. The conductor **112** optionally can be covered by non-conductive plastic, for example, thus concealing the switch from a user of the shredder **100**. In addition, to increase sensitivity of the switch, such non-conductive plastic can be covered with a conductive material, such as metal foil.

Though not illustrated in FIG. **3**, the shredder **100** can include a sensor light, an error light, and/or a light indicative of normal operation. The sensor light, which can be an LED, is illuminated when a person or thing is detected. The error light, which also can be an LED, is illuminated when a person or thing is detected, and optionally under other conditions (e.g., the shredder container is not properly engaged with the shredder **100**, or the shredder mechanism has become jammed). These lights, however, are not necessary, and are only optional features.

FIGS. **4-7** are cross-sectional views each showing a shredder housing **104**, opening **108**, cutting elements **132**, and a conductor configuration for a sensor in accordance with various embodiments of the present invention. The conductor configurations can include conductor(s) of different areas to tailor the amount of capacitance and thus the signal level produced when a person or thing nears the shredder. Where multiple conductors are employed, the distance therebetween may be designed also to tailor the amount of capacitive coupling and thus the capacitance produced.

In FIG. **4**, the conductor **136** comprises a conductive material embedded within the upper wall of the housing **104** beneath the upper surface partially into the opening **108**. The conductor **136** also is optionally embedded in the wall defining the opening **108** and extends along it for a portion.

In FIG. **5**, the conductive material of the conductor **140** covers an upper surface portion of the housing **104**, extends substantially into the opening **108**, and curves around a flange of the housing **104** so as to cover an inside surface portion of the housing **104**. For a conductor **140** that has a noticeable amount of thickness, the top portion of the upper surface where the conductor **140** is mounted may be recessed.

The conductor **144** of FIG. **6** includes two conductive portions respectively affixed to outside and inside surface portions of the housing **104**. Such use of multiple portions increases the surface area of the capacitor, as well as the capacitive coupling, capacitance, and signal level produced when a person or thing nears the conductive portions.

The conductor **148** of FIG. **7** comprises a conductive material on an inside surface portion of the housing **104**. This is desirable for concealing the conductor **148** without adding the manufacturing step of embedding the conductor in a housing wall, such as is shown in FIG. **4**. It is to be appreciated that the conductors of FIGS. **4-7** may be of any suitable configuration, and the examples illustrated are in no way intended to be limiting.

A conductor or conductive material such as described above in connection with FIGS. **3-7** is typically connected to circuitry on a circuit board. FIGS. **8** and **9** illustrate example capacitive sensor circuits according to respective embodiments of the present invention. The example circuits may be incorporated into the overall circuit design of a shredder, and are in no way intended to be limiting.

In FIG. **8**, the capacitive sensor circuit **260** includes a conductor **300** that can have a configuration such as shown above or another suitable configuration. The conductor **300** is connected to a pad P8, which is in turn connected to circuit loops including capacitors C8 and C9, resistors R31, R32, and R36, and a high-speed double diode D8. The loops are connected to a voltage supply Vcc, circuit ground, and a resistor R33. The voltage supply Vcc is connected to the AC line voltage of the shredder, and a negative regulator can generate −5 volts for the circuit ground. The capacitive sensor output **320** may be in turn coupled as an input to a controller **330**, such as a microprocessor or discrete circuit components (e.g., comparators, transistors), which takes appropriate action in response to signal levels at the output **320**. Such a controller **330** may also be a relay switch that opens to disable the delivery of power to an element (e.g., the motor of the shredder mechanism) and closes to enable the delivery of power. It is to be appreciated that "controller" is a generic structural term that denotes structure(s) that control one or more modules, devices, and/or circuit components.

The principles of operation of the circuit **260** will be readily understood by those conversant with the art. When a person or thing moves close to the conductor **300**, the increased capacitance therebetween causes the amplitude of the sinusoidal waveform at the output **320** to increase by a voltage sufficient to indicate the presence of the person or thing. Based on the increased signal level, the controller **330** can, for example, disable the cutting elements of the shredder, illuminate a sensor or error light, and/or activate an audible alert.

FIG. **9** illustrates a capacitive sensor circuit **360**, as well as control and illumination circuitry **365**. The capacitive sensor circuit **360** includes a conductor **400** that can have a configuration such as shown above or another suitable configuration. The conductor **400** is connected to a pad P1, which is in turn connected to series resistors R19 and R20. The resistor R19 is connected to circuit loops including a capacitor C4, a resistor R16, and a high-speed double diode D1. The loops are connected to a voltage supply Vcc, circuit ground, and a resistor R17. The voltage supply Vcc is connected to the AC line voltage of the shredder, and a negative regulator can generate −5 volts for the circuit ground. The capacitive sensor output **420** is coupled as an input to a controller **430**, which can be, for example, a

simple analog circuit or an ATtiny11 8-bit microcontroller offered by Atmel Corporation (San Jose, Calif.).

The principles of operation of the circuitry of FIG. **9** will be readily understood by those conversant with the art. When a person or thing moves close to the conductor **400**, the increased capacitance therebetween causes the amplitude of the sinusoidal waveform at the output **420** to increase by a voltage sufficient to indicate the presence of the person or thing. Based on the increased signal level, the controller **430** sends appropriate control signals. For example, the controller **430** sends a control signal **490** to cut off power (such as supplied by a triac) to the motor that drives the cutting elements of the shredder, and a control signal **435** to illuminate a sensor LED **450** or error LED **440** coupled to comparators **460**.

Embodiments of the present invention may be incorporated, for instance, in a shredder such as the PS80C-2 shredder of Fellowes, Inc. (Itasca, Ill.). If desired, existing shredder designs may be adapted, without major modification of existing modules, to incorporate proximity sensing circuitry.

In another embodiment of the invention, a shredder can provide two or more sensitivity settings for proximity sensing. The settings can be selectably enabled by a user and tailored to detect, e.g., infants or pets. In an example embodiment employing a capacitive sensor, objects are distinguished based on load times. A smaller capacitive load results in a shorter load time than a large capacitance. Thus, by measuring (e.g., with a microprocessor) differences in load times resulting from capacitive loads near a sensor, various objects can be distinguished.

Although various illustrated embodiments herein employ capacitive sensors, it is to be noted that other approaches may be employed to detect the presence of a person or thing near a shredder, such as, for example, approaches utilizing eddy current, inductive, photoelectric, ultrasonic, Hall effect, or infrared proximity sensor technologies.

The foregoing illustrated embodiments have been provided to illustrate the structural and functional principles of the present invention and are not intended to be limiting. To the contrary, the present invention is intended to encompass all modifications, alterations and substitutions within the spirit and scope of the appended claims.

What is claimed is:

1. A document shredder for shredding one or more data bearing documents selected from the group consisting of paper, optical discs, and floppy disks, comprising:

a housing;

a document shredder mechanism received in the housing and including an electrically powered motor and cutter elements, the document shredder mechanism enabling one or more data bearing documents selected from the group consisting of paper, optical discs, and floppy disks to be fed into the cutter elements and the motor being operable to drive the cutter elements so that the cutter elements shred the one or more documents fed therein;

the housing having an opening enabling the one or more data bearing documents to be fed therethrough into the cutter elements of the document shredder mechanism for shredding;

a waste bin disposed beneath the document shredder mechanism, the waste bin being configured to receive shredded documents from the document shredder mechanism, the waste bin being manually removable from beneath the document shredder mechanism for emptying of the shredded documents therein;

a discriminating proximity sensor comprising an electroconductive sensor element at least in part adjacent the opening, the proximity sensor being configured to indicate a presence of a person or animal, but not a presence of the one or more data bearing documents, in proximity to the opening based on the detection via the sensor element of an inherent electrical characteristic of the person or animal; and

a controller operable to disable the cutter elements responsive to the indicated presence of the person or animal.

2. A shredder according to claim **1**, wherein the cutter elements are disabled by disabling power to the motor responsive to the indicated presence of the person or animal.

3. A shredder according to claim **1**, wherein the controller is also operable to illuminate an indicator responsive to the indicated presence of the person or animal.

4. A shredder according to claim **1**, wherein the controller comprises a microcontroller.

5. A shredder according to claim **1**, wherein the proximity sensor is a capacitive sensor for detecting a capacitance between the sensor element and the person or animal.

6. A shredder according to claim **5**, wherein:

the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

7. A shredder according to claim **6**, wherein the electroconductive element is a thin metal member extending along a portion of the housing adjacent the opening.

8. A shredder according to claim **7**, wherein the metal member is provided on an interior surface of the housing.

9. A shredder according to claim **8**, wherein the metal member is provided only on an interior surface of the housing, and not on an exterior surface.

10. A shredder according to claim **8**, wherein the metal member is also provided on an exterior surface of the housing.

11. A shredder according to claim **10**, wherein the portion of the housing on which the metal member is provided has an edge that defines part of the opening, and wherein the metal member extends from the interior surface of the housing to the exterior surface over the edge.

12. A shredder according to claim **7**, wherein the shredder mechanism is embedded within the housing.

13. A shredder according to claim **7**, wherein the metal member is at least in part adhered to the portion of the housing adjacent the opening.

14. A shredder according to claim **13**, wherein the metal member comprises metal tape.

15. A shredder according to claim **7**, wherein the metal member is at least in part covered by a non-conductive member.

16. A shredder according to claim **15**, wherein the non-conductive member is at least in part covered by a conductive member.

17. A shredder according to claim **6**, wherein the electroconductive element at least in part comprises metal paint applied to a portion of the housing or to a member associated with the housing.

18. A shredder according to claim **6**, wherein the electroconductive element includes at least two metal members each extending along a portion of the housing adjacent the opening.

19. A shredder according to claim **1**, wherein the controller at least in part comprises a microprocessor.

20. A shredder according to claim **1**, wherein the controller at least in part comprises discrete circuit components.

21. A shredder according to claim 1, wherein the controller at least in part comprises an analog circuit.

22. A shredder according to claim 5, wherein the opening is an elongated, narrow opening.

23. A shredder according to claim 22, wherein the elongated, narrow opening is defined by a pair of opposing walls, and wherein the sensor element of the proximity sensor is attached to at least one of the walls.

24. A shredder according to claim 23, wherein the sensor element of the proximity sensor extends along the at least one of the walls for essentially an entire length of the opening.

25. A shredder according to claim 23, wherein the sensor element extends along both of the walls.

26. A shredder according to claim 25, wherein the sensor element extends along the walls for essentially an entire length of the opening.

27. A shredder according to claim 23, wherein the sensor element is provided on an external surface of the at least one of the walls and thereby defines the opening at least in part.

28. A shredder according to claim 24, wherein the sensor element is provided on an external surface of the at least one of the walls and thereby defines the opening at least in part.

29. A shredder according to claim 25, wherein the sensor element is provided on an external surface of both the walls and thereby defines the opening at least in part.

30. A shredder according to claim 26, wherein the sensor element is provided on an external surface of both the walls and thereby defines the opening at least in part.

31. A shredder according to claim 1, wherein:
wherein the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

32. A shredder according to claim 22, wherein:
wherein the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

33. A shredder according to claim 23, wherein:
the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

34. A shredder according to claim 24, wherein:
wherein the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

35. A shredder according to claim 25, wherein:
the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

36. A shredder according to claim 26, wherein:
the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

37. A shredder according to claim 27, wherein:
the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

38. A shredder according to claim 28, wherein:
the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

39. A shredder according to claim 29, wherein:
the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

40. A shredder according to claim 30, wherein:
the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

41. A shedder according to claim 1, wherein the proximity sensor is configured to indicate the presence of the person or the animal in proximity to the opening without requiring contact with the sensor element.

42. A shredder according to claim 22, wherein the proximity sensor is configured to indicate the presence of the person or the animal in proximity to the opening without requiring contact with the sensor element.

43. A shredder according to claim 23, wherein the proximity sensor is configured to indicate the presence of the person or the animal in proximity to the opening without requiring contact with the sensor element.

44. A shredder according to claim 24, wherein the proximity sensor is configured to indicate the presence of the person or the animal in proximity to the opening without requiring contact with the sensor element.

45. A shredder according to claim 25, wherein the proximity sensor is configured to indicate the presence of the person or the animal in proximity to the opening without requiring contact with the sensor element.

46. A shredder according to claim 26, wherein the proximity sensor is configured to indicate the presence of the person or the animal in proximity to the opening without requiring contact with the sensor element.

47. A shredder according to claim 27, wherein the proximity sensor is configured to indicate the presence of the person or the animal in proximity to the opening without requiring contact with the sensor element.

48. A shredder according to claim 28, wherein the proximity sensor is configured to indicate the presence of the person or the animal in proximity to the opening without requiring contact with the sensor element.

49. A shredder according to claim 29, wherein the proximity sensor is configured to indicate the presence of the person or the animal in proximity to the opening without requiring contact with the sensor element.

50. A shredder according to claim 30, wherein the proximity sensor is configured to indicate the presence of the person or the animal in proximity to the opening without requiring contact with the sensor element.

51. A shredder according to claim 41, wherein:
the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

52. A shredder according to claim 42, wherein:
the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

53. A shredder according to claim 43, wherein:
the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

54. A shredder according to claim 44, wherein:
the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

55. A shredder according to claim 45, wherein:
the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

56. A shredder according to claim 46, wherein:
the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

57. A shredder according to claim 47, wherein:
the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

58. A shredder according to claim 48, wherein:
the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

59. A shredder according to claim 49, wherein:
the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

60. A shredder according to claim 50, wherein:
the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

61. A shredder according to claim 6, wherein the cutter elements are disabled by disabling power to the motor responsive to the indicated presence of the person or animal.

62. A shredder according to claim 22, wherein the cutter elements are disabled by disabling power to the motor responsive to the indicated presence of the person or animal.

63. A shredder according to claim 23, wherein the cutter elements are disabled by disabling power to the motor responsive to the indicated presence of the person or animal.

64. A shredder according to claim 24, wherein the cutter elements are disabled by disabling power to the motor responsive to the indicated presence of the person or animal.

65. A shredder according to claim 25, wherein the cutter elements are disabled by disabling power to the motor responsive to the indicated presence of the person or animal.

66. A shredder according to claim 26, wherein the cutter elements are disabled by disabling power to the motor responsive to the indicated presence of the person or animal.

67. A shredder according to claim 31, wherein the cutter elements are disabled by disabling power to the motor responsive to the indicated presence of the person or animal.

68. A shredder according to claim 32, wherein the cutter elements are disabled by disabling power to the motor responsive to the indicated presence of the person or animal.

69. A shredder according to claim 33, wherein the cutter elements are disabled by disabling power to the motor responsive to the indicated presence of the person or animal.

70. A shredder according to claim 34, wherein the cutter elements are disabled by disabling power to the motor responsive to the indicated presence of the person or animal.

71. A shredder according to claim 35, wherein the cutter elements are disabled by disabling power to the motor responsive to the indicated presence of the person or animal.

72. A shredder according to claim 36, wherein the cutter elements are disabled by disabling power to the motor responsive to the indicated presence of the person or animal.

73. A shredder according to claim 41, wherein the cutter elements are disabled by disabling power to the motor responsive to the indicated presence of the person or animal.

74. A shredder according to claim 42, wherein the cutter elements are disabled by disabling power to the motor responsive to the indicated presence of the person or animal.

75. A shredder according to claim 43, wherein the cutter elements are disabled by disabling power to the motor responsive to the indicated presence of the person or animal.

76. A shredder according to claim 44, wherein the cutter elements are disabled by disabling power to the motor responsive to the indicated presence of the person or animal.

77. A shredder according to claim 45, wherein the cutter elements are disabled by disabling power to the motor responsive to the indicated presence of the person or animal.

78. A shredder according to claim 46, wherein the cutter elements are disabled by disabling power to the motor responsive to the indicated presence of the person or animal.

79. A shredder according to claim 5, wherein the opening is an elongated opening.

80. A shredder according to claim 79, wherein the elongated opening is defined by a pair of opposing walls, and wherein the sensor element of the proximity sensor is attached to at least one of the walls.

81. A shredder according to claim 80, wherein the sensor element of the proximity sensor extends along the at least one of the walls for essentially an entire length of the opening.

82. A shredder according to claim 80, wherein the sensor element extends along both of the walls.

83. A shredder according to claim 82, wherein the sensor element extends along the walls for essentially an entire length of the opening.

84. A shredder according to claim 80, wherein the sensor element is provided on an external surface of the at least one of the walls and thereby defines the opening at least in part.

85. A shredder according to claim 81, wherein the sensor element is provided on an external surface of the at least one of the walls and thereby defines the opening at least in part.

86. A shredder according to claim 82, wherein the sensor element is provided on an external surface of both the walls and thereby defines the opening at least in part.

87. A shredder according to claim 83, wherein the sensor element is provided on an external surface of both the walls and thereby defines the opening at least in part.

88. A shredder according to claim 79, wherein:

the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

89. A shredder according to claim 80, wherein:

the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

90. A shredder according to claim 81, wherein:

the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

91. A shredder according to claim 82, wherein:

the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

92. A shredder according to claim 83, wherein:

the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

93. A shredder according to claim 84, wherein:

the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

94. A shredder according to claim 85, wherein:

the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

95. A shredder according to claim 86, wherein:

the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

96. A shredder according to claim 87, wherein:

the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element.

97. A shredder according to claim 1, wherein the opening is an elongated, narrow opening.

98. A shredder according to claim 97, wherein the elongated, narrow opening is defined by a pair of opposing walls, and wherein the sensor element of the proximity sensor is attached to at least one of the walls.

99. A shredder according to claim 98, wherein the sensor element of the proximity sensor extends along the at least one of the walls for essentially an entire length of the opening.

100. A shredder according to claim 98, wherein the sensor element extends along both of the walls.

101. A shredder according to claim 100, wherein the sensor element extends along the walls for essentially an entire length of the opening.

102. A shredder according to claim 98, wherein the sensor element is provided on an external surface of the at least one of the walls and thereby defines the opening at least in part.

103. A shredder according to claim 99, wherein the sensor element is provided on an external surface of the at least one of the walls and thereby defines the opening at least in part.

104. A shredder according to claim 100, wherein the sensor element is provided on an external surface of both the walls and thereby defines the opening at least in part.

105. A shredder according to claim 101, wherein the sensor element is provided on an external surface of both the walls and thereby defines the opening at least in part.

106. A shredder according to claim 1, wherein the opening is an elongated opening.

107. A shredder according to claim 106, wherein the elongated opening is defined by a pair of opposing walls, and wherein the sensor element of the proximity sensor is attached to at least one of the walls.

108. A shredder according to claim 107, wherein the sensor element of the proximity sensor extends along the at least one of the walls for essentially an entire length of the opening.

109. A shredder according to claim 107, wherein the sensor element extends along both of the walls.

110. A shredder according to claim 109, wherein the sensor element extends along the walls for essentially an entire length of the opening.

111. A shredder according to claim 107, wherein the sensor element is provided on an external surface of the at least one of the walls and thereby defines the opening at least in part.

112. A shredder according to claim 108, wherein the sensor element is provided on an external surface of the at least one of the walls and thereby defines the opening at least in part.

113. A shredder according to claim 109, wherein the sensor element is provided on an external surface of both the walls and thereby defines the opening at least in part.

114. A shredder according to claim 110, wherein the sensor element is provided on an external surface of both the walls and thereby defines the opening at least in part.

* * * * *

Exhibit 2

Received: 5/30/07 2:14PM; 703 770 7901 -> AMERICAN PATENT & TRADEMARK; Page 2
05-30-07 04:49pm From-PILLSBURY WINTHROP 703-770-7901 T-406 P.002/003 F-242

Pillsbury
Winthrop
Shaw
Pittman

1650 Tysons Boulevard
McLean, VA 22102-4859

Tel 703.770.7900
Fax 703.770.7901
www.pillsburylaw.com

May 30, 2007

Bryan P. Collins
Phone: 703.770.7538
bryan.collins@pillsburylaw.com

VIA FACSIMILE

Donn Harms, Esq.
American Patent and Trademark Law Center
12702 Via Cortina, Suite 100
Del Mar, California 92014

Re: Aurora Infringements
Our Ref.: 082135-0000042

Dear Mr. Harms:

I have still not received a substantive response to my e-mail of March 14, 2007, setting forth a royalty proposal from Fellowes, and my follow-up e-mail of March 27, 2007. On March 28th you indicated by e-mail that a response was forthcoming, but we have not heard from you since then. It has been over two months since Fellowes made its proposal, and we need an immediate response.

You should be aware that, since that time, Fellowes tried the '559 patent to a jury verdict against shredders sold by Michilin Prosperity Co. Ltd. of Taiwan and Intek America of Torrance, CA. The '559 patent was found to be infringed and valid in all respects. The switch constructions on the accused shredders in that case are the same as those Aurora shredders in all material respects, and any reasonable jury would come to the same conclusion if we were forced to litigate against Aurora. The trial also started after the Supreme Court's *KSR* decision was issued. Thus, the '559 patent was held valid under the U.S. Supreme Court's obviousness standard as set forth in that case.

We also take this opportunity to advise that Fellowes has filed the '559 patent in a number of major markets, including Europe, Canada, Japan and the People's Republic of China.

We expect a substantive and meaningful answer to this letter and Fellowes' prior royalty proposal by **June 7, 2007.** With respect to the $50,000 lump sum Fellowes proposed for past damages, that was premised on a rapid resolution of this issue, and therefore Fellowes expects to calculate any royalty from April 1st forward or increase the lump sum component as applicable.

If we do not receive a response in advance of that date, Fellowes will assume that Aurora has no interest in seeking an amicable resolution and will proceed accordingly.

We also take this opportunity to advise you and your client of Fellowes' U.S. Patent Publication Nos. 2006-0054724 A1 and 2006-0054725 A1. These applications also have corresponding applications filed in other major markets, such as Europe, Canada and the People's Republic of China. And there is a Japanese counterpart application that is currently pending and under examination, JP 2006075831.

It has come to Fellowes' attention that Aurora is currently marketing shredders under the name Touchguard that incorporate Fellowes' proprietary Safe Sense® technology, which is the subject matter of those patent applications. Consider this letter as formal notice of Fellowes' Safe Sense® patent applications.

Fellowes' intellectual property is important to its business and it takes protection of that intellectual property seriously. Its Safe Sense® technology represents a significant innovation in shredder safety and a key investment in Fellowes technical and business strategy. Aurora's marketing of that technology cannot be tolerated.

If Aurora has not ceased sales of infringing shredders by the time Fellowes' patents issue, Fellowes will be in contact to discuss its right to collect retroactive pre-grant royalties and to demand cessation of such sales.

Finally, we have yet a third issue to raise with Aurora concerning a trademark infringement issue on Aurora's Touchguard shredders. The Aurora Touchguard shredders utilize a shield logo that is confusingly similar to the shield logo used on Fellowes' Safe Sense® shredders. The similarity of these logos on the same products will lead to consumer confusion as to the source of goods and cannot be tolerated by Fellowes. As such, Fellowes demands that Aurora immediately cease and desist using the shield logo on any and all Aurora shredders.

We expect a response to these other issues as well in advance of the June 7th date.

Very truly yours,

Bryan P. Collins

BPC/smm

Exhibit 3

Attorney Docket: 082135-0310373
Client Reference: Dkt. 23-REG

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION of: Confirmation Number: 2014

MATLIN ET AL.

Application No.: 10/937,304 Group Art Unit: 3725

Filed: September 10, 2004 Examiner: Pahng, Jason Y.

Title: SHREDDER WITH PROXIMITY SENSING SYSTEM

SECOND DECLARATION OF TAI-HOON MATLIN UNDER 37 C.F.R.§1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

I hereby declare that:

1. I previously executed a Declaration in the above application, which was entitled "Declaration of Tai-Hoon Matlin Under 37 C.F.R.§1.132." My qualifications and experience in shredder design were explained in that previous Declaration, and that information is incorporated herein without being repeated.

2. In my previous Declaration, I identified 3 competitive shredders that have adopted my invention. I recently became aware of yet another competitive shredder that has adopted my invention. This new shredder is made by Aurora, a well known shredder manufacturer and distributor, and bears Model No. AS1019CS ("the Aurora Shredder"). Pictures of the Aurora Shredder are included at Exhibit A.

3. The Aurora Shredder was purchased by Fellowes personnel from Walmart in May 2007. To the best of my knowledge, this Aurora Shredder first became available on the marketplace in calendar year 2007.

4. The Aurora Shredder is covered by each every limitation of at least claims 1, 5, and 6 of the present application, as presented in the Amendment filed on March 14, 2007.

5. Specifically, I have examined the Aurora Shredder, and concluded that it is a document shredder for shredding one or more data bearing documents selected from the group consisting of paper, optical discs, and floppy disks. The Aurora Shredder comprises the following elements as recited in claim 1:

a housing;

a document shredder mechanism received in the housing and including an electrically powered motor and cutter elements, the document shredder mechanism enabling one or more data bearing documents selected from the group consisting of paper, optical discs, and floppy disks to be fed into the cutter elements and the motor being operable to drive the cutter elements so that the cutter elements shred the one or more documents fed therein;

the housing having an opening enabling the one or more data bearing documents to be fed therethrough into the cutter elements of the document shredder mechanism for shredding;

a waste bin disposed beneath the document shredder mechanism, the waste bin being configured to receive shredded documents from the document shredder mechanism, the waste bin being manually removable from beneath the document shredder mechanism for emptying of the shredded documents therein;

a discriminating proximity sensor comprising an electroconductive sensor element at least in part adjacent the opening, the proximity sensor being configured to indicate a presence of a person or animal, but not a presence of the one or more data bearing

documents, in proximity to the opening based on the detection via the sensor element of an inherent electrical characteristic of the person or animal; and

a controller operable to disable the cutter elements responsive to the indicated presence of the person or animal.

6. In this competitive Aurora shredder the electroconductive sensor element of the discriminating proximity sensor of claim 1 is a metal member attached on a wall of the throat opening. This is shown in the photograph in Exhibit A marked "Aurora's Touchguard technology (pointed at)". TouchGuard is the marketing name referring to Aurora's implementation of my invention. This metal member has a lead portion that extends down into the throat opening and is connected to a circuit inside the shredder. I tested this competitive shredder, and found that it is configured to indicate a presence of a person or animal, but not a presence of the one or more data bearing documents, in proximity to the opening based on the detection via the sensor element of an inherent electrical characteristic of the person or animal. This was confirmed by the fact that it responded to the detection of a person's finger by de-activating the shredder mechanism's motor, but did not respond to the presence of paper or discs. This examination also revealed that a controller disabled the cutter elements responsive to the indicated presence of the person or animal.

7. This discriminating functionality of the Aurora Shredder is confirmed by the prominent advertising used on the Aurora Shredder packaging. That packaging states "New. Shredding stops when touched." And their TouchGuard shield logo is placed prominently on the shredder itself.

8. Additionally, as recited in claim 5, in the Aurora Shredder the proximity sensor is a capacitive sensor for detecting a capacitance between the sensor element and the person or animal. My inspection revealed that the metal member was acting as a plate of a

capacitor, and that the detection of a capacitance between the coating and a body part tripped the sensor.

9. As recited in claim 6, in the Aurora Shredder the proximity sensor further comprises circuitry to sense a state of the electroconductive sensor element. This is evident from the fact that it deactivates the motor of the shredder mechanism upon detecting the presence of a body part, but not paper, discs or credits cards appropriate for shredding.

10. I have confirmed the facts set forth above by physically inspecting and testing a sample of the identified Aurora Shredder.

11. It is also apparent that the TouchGuard shield logo used by Aurora is strikingly similar to Fellowes' SafeSense shield logo, which is a Fellowes trademark used on shredders incorporating my invention. I have attached side by side comparisons at Exhibit B. This leads me to believe that Aurora's adoption of my claimed invention was not coincidental, and is an effort to trade on the commercial success and recognition achieved by Fellowes with my invention sold under the SafeSense brand name.

12. I hereby declare that all statements made herein of my knowledge are true and all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statement and the like so made are punishable by fine or imprisonment, or both, under§ 1001 of Title 18 of the United States Code and that such willful false statement may jeopardize the validity of the application or any patents issued from them.

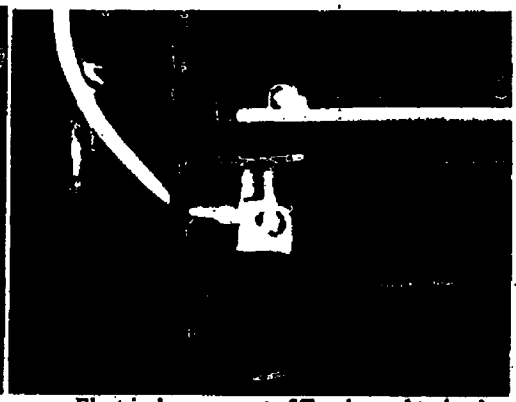
Signed this 8TH day of June, 2007, at Itasca, Illinois.

Tai-Hoon Matlin

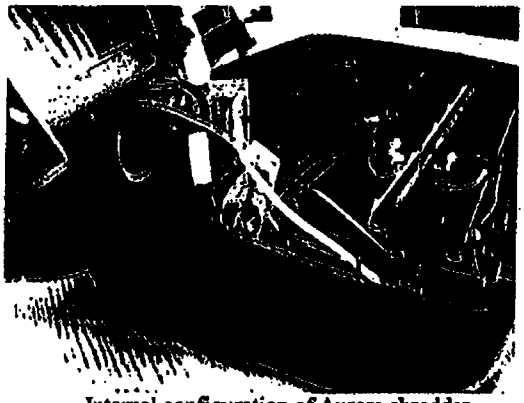
EXHIBIT A

AURORA AS1019CS WITH TOUCHGUARD

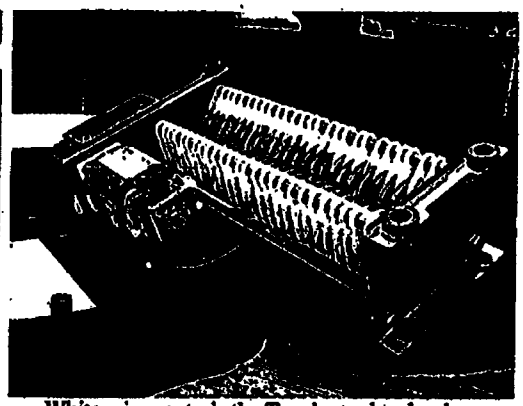
Aurora's Touchguard technology (pointed at)



Electrical component of Touchguard technology



Internal configuration of Aurora shredder



White wire controls the Touchguard technology

Free standing Aurora shredder with Touchguard

Retail box of Aurora shredder

EXHIBIT B


Smart Sensor Protection
SAFE SENSE
TECHNOLOGY


TouchGuard
TECHNOLOGY

Exhibit 4

Attorney Docket: 082135-0310373
Client Reference: Dkt. 23-REG

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION of: Confirmation Number: 2014

MATLIN ET AL.

Application No.: 10/937,304 Group Art Unit: 3725

Filed: September 10, 2004 Examiner: B. MILLER

Title: SHREDDER WITH PROXIMITY SENSING SYSTEM

August 2, 2007

REQUEST FOR RECONSIDERATION

Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated May 9, 2007, please consider this Request for Reconsideration and enter the attached Second Declaration of Tai-Hoon Matlin Under 37 C.F.R. § 1.132, and Declaration of Kathleen Noe Under 37 C.F.R. § 1.132. A Request for Continued Examination is also being filed herewith.

REMARKS

Claims 1, 2, 4-6, 7, 12-14, 17, 19, 22-24, 27, 28, 31-34, 37, 38, 41-44, 47, 48, 51-54, 57, 58, 61-64, 67-70, 73-76, 79-81, 84, 85, 88-90, 93, 94, 96-99, 102-103, 106-108, and 111-112 are currently pending in the application. The remaining claims not set forth above have been withdrawn due to an election requirement, but have not been cancelled in anticipation that they will be allowed upon allowance of the generic independent claim 1.

No amendments have been made to the claims. Reconsideration and allowance of the present application based on the following remarks and the attached declaration evidence are respectfully requested.

A. The Prior Art Rejection of Claim 1

The Examiner has rejected independent claim 1 as being obvious over a combination of references. In the Examiner's rejection, the base reference is Suzuki (JP 57-76734). The Examiner relies on Suzuki as teaching all the elements of the claim, except for the waste bin limitations and the fact that the proximity sensor detects via an inherent electrical characteristic. The Examiner relies on Henreckson (U.S. Patent No. 6,079,645) for the waste bin limitations. And the Examiner further relies on Ghosh to replace the IR sensor of Suzuki with a capacitive sensor.

As an initial matter the Applicants wish to correct a misstatement made by the Examiner concerning the breadth of the claim scope. The Examiner stated that "Suzuki discloses an infrared sensor as the proximity sensor, but the claim also calls for a capacitive sensor to be used as the proximity sensor." Office Action of May 9, 2007 at 4. And therefore, the Examiner relied on the capacitive sensor in Ghosh. While some of the dependent claims recite that the proximity sensor is of the capacitive type, claim 1 is not so limited. Instead, claim 1 recites "a discriminating proximity sensor comprising an electroconductive sensor element at least in part adjacent the opening, the proximity sensor being configured to indicate a presence of a person or animal, but not a presence of the one or more data bearing documents, in proximity to the opening based on the detection via the sensor element of an inherent electrical characteristic of the person or animal[.]"

Nothing in claim 1 requires the sensor to be a capacitive sensor, and other sensing technologies sensing an inherent electrical characteristic of a person or animal could be used (e.g., a resistive sensor). This still distinguishes from the IR sensor of Suzuki, which detects heat from a person or animal, and not an inherent electrical characteristic as required by claim 1. While a capacitive sensor is used in the commercial embodiment (and is specifically

structure. The structural elements of the invention are recited in the claims, and the declaration evidence points out the advantages achieved over the prior art. Under the Examiner's position that claim 1 must recite that the device works well in hot temperatures, then claim 1 would also have to recite all kinds of other advantages: it works even when children don't read the warning label, it works even if the distance between the throat opening the shredder mechanism is small, it works even if there is a flap and a small child learns to circumvent it, etc. Such a requirement would lead to absurdly drafted claims listing all the advantages flowing from the inventive construction. The simple fact is that the Applicants' evidence proves that the claimed invention is not obvious because of the established long-felt need for an effective solution to the problem at issue and the repeated attempts by others to solve that problem. This evidence cannot be summarily ignored, as the Examiner has done.

Accordingly, the Applicants request the Examiner to give the previously submitted long-felt need evidence and arguments their due weight in establishing that the claimed inventions are not obvious.

2. Copying and Adoption of Invention By Others

As additional evidence of non-obviousness, the Applicants previously submitted evidence of copying by others in the industry. *See* MPEP § 716.06. Specifically, the Applicants filed a Declaration from Taihoon Matlin that described in detail three competitive shredders that appeared on the marketplace soon after Fellowes first released its SafeSense® shredders embodying the claimed invention. *See* Original Matlin Declaration at ¶¶ 28-33 (detailing how each and every element of these claims is found in the identified shredders). And he further testified that these appeared on the marketplace only after the release of Fellowes' claimed products. *See id.* at ¶ 27.[5]

Recently, the Applicants have become aware of yet another competitive shredder from Aurora, a well known shredder manufacturer and distributor. This Aurora Shredder is discussed in detail in the attached Second Declaration of Taihoon K. Matlin Under 37 C.F.R. §1.132, which shows that it embodies the claimed invention, and specifically at least

[5] It is noted that Examiner Pahng did not comment at all on the Original Matlin Declaration in the last Official Action, nor did he acknowledge its receipt. In discussions with Examiner Miller, she indicated that the case may be that Examiner Pahng did not notice that the Original Matlin Declaration was not scanned into PAIR, and instead was maintained in an artifact file, because it contained color images. As such, the Applicants maintain the arguments made in their Amendment of March 14, 2007 (pgs. 36-38), and ask the Examiner to fully consider them after retrieving a copy of the Original Matlin Declaration.

claims 1, 5, and 6. This is further evidence that the invention is being adopted by others in the industry, a long accepted objective indicia of non-obviousness. Moreover, the packaging for the Aurora Shredder prominently advertises its discriminating proximity sensor feature (referred to as TouchGuard). This adulation of the feature is also indicative of non-obviousness. *See Gambrio Lundia AB v. Baxter Healthcare Corp.*, 42 USPQ2d 1378, 1384 (Fed. Cir. 1997).

Clearly, the fact that Fellowes Safesense® shredders with the claimed invention were released first, and then all these competitive shredders incorporating the claimed invention appeared soon thereafter is indicative that these competitors were adopting Fellowes' claimed technology to benefit in the marketplace. It is critical to understand the timing of the sales of these competitive shredders in the context of the long-felt need evidence discussed above. Specifically, the long-felt need evidence submitted in this application shows that for at least three decades shredder manufacturers have been attempting to improve safety in document shredders, yet none of them had ever developed the Applicants' claimed invention. Now, after Fellowes developed its claimed invention and released the same to the marketplace, these competitive shredders have appeared right on Fellowes' coat-tails. The long-felt need evidence by itself begs the very question of obviousness: If the claimed invention were so obvious, why did wasn't it invented sooner? And the rapid adoption of the claimed invention by others begs yet another important question: If the invention is not a meritorious advancement in the shredder art, why would multiple third party competitors adopt the claimed invention immediately after its release by Fellowes? The only logical answers to these questions is that the invention is not obvious, and that it is recognized as such an improvement over the existing art that the competition rapidly sought to use the same technology invented by Fellowes. Imitation is indeed the most sincere form of flattery. *See Diamond Rubber Co. of New York v. Consolidated Rubber Tire Co.*, 220 U.S. 428, 440-441 (1911).

That is, coupling together the evidence of long-felt need, and the copying evidence provided by the two Matlin Declarations, the strong evidence of non-obviousness in this application becomes overwhelming. First, the evidence shows that for nearly 30 years document shredder manufacturers have been attempting to improve shredder safety, yet never developed the claimed invention until the Applicants did so. This alone compels a finding of non-obviousness. Then, once the Applicants made their invention, and Fellowes' Safesense™ products embodying the claimed invention were sold to the public, the