

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte Ford Global Technologies, LLC

Appeal No. 2006-0743
Reexamination Control No. 90/006,690¹

ON BRIEF

Before MARTIN, HANLON, and MOORE, Administrative Patent Judges.

HANLON, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the final rejection of appellant's claims 1-3 and 7-24, all of the claims subject to reexamination.

The claims on appeal are directed to a system for detecting the presence of a breathing individual within a trunk of a vehicle (claims 1-3, 7-11, 17 and 18), a method for detecting the presence of a child within a trunk of a vehicle (claims 12-14 and 19-21) and an assembly for detecting the presence of an individual within a trunk of a vehicle (claims 15, 16 and 22-24).

¹ This reexamination proceeding involves U.S. Patent No. 6,130,614 which issued on October 10, 2000. Application 09/437,648 matured into U.S. Patent No. 6,130,614 and was filed on November 10, 1999.

Claim 1 is representative of the subject matter on appeal:

1. A detection system for use within a vehicle of the type having a trunk which is selectively movable between an open and a closed position, said detection system being adapted to detect the presence of a breathing individual within said trunk, said detection system comprising:

a breathing detector which is disposed within said trunk, which is adapted to detect the breathing of said individual, and which generates a first signal upon the detection of said breathing;

an illuminated touch sensitive pad which is disposed within said trunk, and which generates a second signal upon being touched; and

a controller assembly which is communicatively coupled to said illuminated touch sensitive pad and said breathing detector, which receives said signal, and which opens said trunk upon receipt of one or more of said signal.

References relied on by the examiner

Federspiel	5,464,369	Nov. 7, 1995
Simon	5,856,646	Jan. 5, 1999
Gager et al. (Gager)	6,222,442	Apr. 24, 2001 ²
Marrazzo et al. (Marrazzo)	6,349,984	Feb. 26, 2002 ³

Rejections on appeal

(1) Claims 1-4, 7, 8, 10-20, 22 and 23 are rejected under 35 U.S.C. § 103(a) as being

² The application which matured into U.S. Patent No. 6,222,442 was filed on March 29, 1999. Therefore, U.S. Patent No. 6,222,442 is prior art to U.S. Patent No. 6,130,614 under 35 U.S.C. § 102(e).

³ The application which matured into U.S. Patent No. 6,349,984 was filed on April 5, 1999. Therefore, U.S. Patent No. 6,349,984 is prior art to U.S. Patent No. 6,130,614 under

unpatentable over the combination of Gager, Federspiel and Marrazzo.

(2) Claims 9, 21 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Gager, Federspiel, Marrazzo and Simon.⁴

Grouping of claims

There are two grounds of rejection in this appeal. As to the first ground of rejection, the appellant argues the patentability of claims 1-4, 7, 10-20, 22 and 23 as a group and argues the patentability of claim 8 separately. As to the second ground of rejection, the appellant argues the patentability of the claims as a group, focusing on the capacitance sensing pad. Therefore, for purposes of this appeal, the patentability of claims 2-4, 7, 10-20, 22 and 23 stands or falls with the patentability of claim 1, the patentability of claim 8 stands alone and the patentability of claims 21 and 24 stands or falls with the patentability of claim 9. See 69 Fed. Reg. 50,006 (Aug. 12, 2004) (codified at 37 CFR § 41.37(c)(1)(vii)).

Discussion

⁴ In the final Office action, the examiner grouped the rejection of claim 9 with the rejection of claims 1-4, 7, 8, 10-20, 22 and 23. See Paper 15 at 2. However, in the Answer, the examiner indicated that “[t]he rejection of claim 9 is intended to be grouped with the rejection of claims 21 and 24.” Answer at 12. Claims 9, 21 and 24 are directed to a capacitance sensing pad, and Simon discloses a capacitance sensor. Therefore, it is apparent that the rejection of claim 9 should have been grouped with the rejection of claims 21 and 24 in the final Office action. The appellant has failed to argue otherwise in a reply brief.

A. Rejection of claims 1-4, 7, 8, 10-20, 22 and 23

1. Claim 1

Gager discloses a presence detector system for use within a vehicle of the type having a trunk which is selectively movable between an open and a closed position. The system detects the presence of a breathing individual within the trunk and includes a presence detector located in the trunk. See Figure 1; col. 2, lines 35-42. The presence detector may be a motion sensor, a heat sensor, a sonic sensor or a combination of one or more such sensors. See col. 2, lines 52-56. Upon detection of motion in the trunk, the system causes activation of one or more functions selected from the group consisting of a vehicle operator alert, vehicle headlights, a vehicle horn, a vehicle alarm, a self-contained alarm, a trunk lid release and a trunk light. See col. 2, lines 4-10. Gager does not disclose that the presence detector may be a breathing detector as recited in appellant's claim 1.

Federspiel discloses a method and apparatus for measuring the rate at which carbon dioxide is generated by individuals in an enclosed space of a building. See col. 2, line 62-col. 3, line 19. According to one embodiment of the invention, a controller activates an alarm when someone enters a room in response to a change in the carbon dioxide generated. See col. 11, lines 5-20.

The examiner concludes (Answer at 4):

Since Gager discloses a device used to detect the presence of a person within the trunk of a vehicle, it would have been obvious to one of ordinary skill in the art to incorporate a breathing detector, as the carbon dioxide detection disclosed by

Federspiel, with the system of Gager, to ensure that only a person is detected within the trunk and prevent a false alarm that may be given by the detection of any other object moving within the vehicle's trunk.

Gager also discloses an illuminated internal latch release within the trunk. Upon detection of an individual in the trunk, the presence detector causes the internal latch release to be illuminated with a white light and a red hand superimposed thereon to indicate that pressing the latch release will cause the trunk compartment lid to be unlatched. See col. 3, lines 18-23. Gager does not disclose that the latch release is a "touch sensitive pad" as recited in appellant's claim 1.

Marrazzo discloses a release mechanism for an automobile trunk that enables the trunk to be opened from within the trunk. The release mechanism contains an illuminated activation device that must be manually manipulated by a person within the trunk in order to activate the release mechanism and open the trunk. See Abstract. In one embodiment, the activation device is an illuminated activation button which is coupled to the circuitry of an electric solenoid within the trunk latch mechanism. When the activation button is contacted, the trunk latch solenoid is activated and the trunk of the automobile opens. See col. 3, lines 4-8. Marrazzo further explains (col. 3, lines 9-22):

An illuminated activation button 20, in an otherwise dark trunk 14, would attract the attention of a child 10. However, a child 10 may not know that they should touch the illuminated activation button 20 to escape from the trunk 14. Referring to FIG. 2, it will be understood that to help induce a child to touch the illuminated activation button 20, an indicia 22 can be printed on the face of the button 20. The indicia 22 can be any image that is determined to prompt a small child to touch that indicia 22. For example, the indicia could be a smiling face. However, in the shown embodiment, the indicia 22 is the image of a hand. A

child sitting in the darkness of a locked trunk would be induced to place his/her hand against the illuminated image of the hand, thereby opening the trunk.
[Emphasis added.]

The examiner concludes (Answer at 4-5):

Since Gager and Marrazzo et al. discloses [sic, disclose] a device used to release the trunk of the vehicle, it would have been obvious to one of ordinary skill in the art to incorporate an illuminated actuator as taught by Marrazzo et al. in a system as disclosed by Gager for providing an [sic, a] release mechanism that is easily perceived by the child in the enclosed dark trunk.

The appellant does not dispute that it would have been obvious to combine Gager, Federspiel and Marrazzo. Rather, the appellant argues that the references fail to teach or suggest a “touch sensitive pad” which generates a signal “upon being touched” as recited in claim 1. Brief at 4.

According to the appellant’s specification, the disclosed trunk detection and release system includes “a touch sensitive pad which opens or releases the trunk upon being touched by an individual who is residing within the trunk.” See col. 2, lines 3-5. In one embodiment, the illuminated touch sensitive pad is a capacitance detection pad.⁵ See col. 3, lines 5-8; col. 4, lines 15-25. However, the “touch sensitive pad” recited in claim 1 is not limited to a capacitance detection pad. See claim 9 (“said illuminated touch sensitive pad comprises an illuminated capacitance sensing pad”); Clearstream Wastewater Systems, Inc. v. Hydro-Action, Inc., 206 F.3d 1440, 1446, 54 USPQ2d 1185, 1190 (Fed. Cir. 2000) (under the doctrine of claim

⁵ The appellant’s specification indicates that capacitance detection pads were known. See col. 4, lines 26-28.

differentiation, it is presumed that different words used in different claims result in a difference in meaning and scope for each of the claims; it prevents the narrowing of broad claims by reading into them the limitations of narrower claims).

The appellant attempts to draw a distinction between the claimed “touch sensitive pad” and the activation device disclosed in Marrazzo, arguing that the claimed “touch sensitive pad” requires less effort to operate than the activation device disclosed in Marrazzo. Brief at 5-6. The appellant’s argument is not persuasive. Claim 1 does not limit the amount of effort required to operate the “touch sensitive pad.” Claim 1 merely requires that a signal be generated when the touch sensitive pad is “touched.” As explained above, Marrazzo discloses that the activation device is coupled to the circuitry of an electric solenoid within the trunk latch mechanism. When the activation device is contacted, the trunk latch solenoid is activated and the trunk of the automobile opens. Marrazzo expressly discloses that the activation device operates by the “touch” of a hand. See col. 3, lines 9-22. Based on the teachings in Marrazzo, there appears to be no difference between the claimed “touch sensitive pad” and the activation device disclosed in Marrazzo.⁶

⁶ Even assuming for the sake of argument that there is some structural difference between the claimed “touch sensitive pad” and the activation device disclosed in Marrazzo, it still would have been obvious to one of ordinary skill in the art to modify the internal latch release in the system of Gager with the claimed “touch sensitive pad.” Marrazzo recognizes that a trunk activation device must be readily operated by a small child. See col. 1, lines 58-62. One of ordinary skill in the art would have understood that the easier a trunk activation device is to operate the more readily it will be operated by a small child. As explained in the appellant’s specification, touch sensitive pads which sense the capacitance of the human body were known. See col. 4, lines 15-31. One of ordinary skill in the art would have recognized that touch sensitive pads of this type are extremely easy to operate. Therefore, based on the teachings in Marrazzo, one of ordinary skill in the art would have been motivated to modify the internal latch

For the reasons set forth above, the rejection of claim 1 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Gager, Federspiel and Marrazzo is affirmed. Since the patentability of claims 2-4, 7, 10-20, 22 and 23 stands or falls with the patentability of claim 1, the rejection of claims 2-4, 7, 10-20, 22 and 23 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Gager, Federspiel and Marrazzo is also affirmed.

2. Claim 8

Claim 8 reads as follows:

8. The detection system of claim 1 wherein said controller assembly further includes a timer which allows said detection system to be operable for a certain period of time.

The appellant argues that Gager does not teach or suggest a timer which allows the detection system to be operable for a certain period of time. Brief at 6. We disagree.

According to the appellant's specification (col. 5, lines 30-34):

[C]ontroller assembly 20 may include a timer which causes the system 10 (e.g. controller assembly 20) to be inoperable after a certain duration of time has passed since the controller assembly 20 began operation.

The controller assembly is coupled to the horn, headlights and trunk release switch of the vehicle. See col. 2, lines 61-67.

release in the system of Gager with an easily operable device such as a touch sensitive pad comprising a capacitance sensor.

Gager discloses that the automatic trunk lid release is operable for a certain period of time, such as while the vehicle is turned off to prevent the trunk from releasing while the vehicle is in motion. See col. 3, lines 18-39; see also col. 4, lines 23-33. Gager also discloses that the presence detector may cause the headlights of the vehicle to be illuminated or to flash on and off when the presence of a person is detected. Gager indicates that this function may be time-limited. See col. 3, lines 40-49. Finally, Gager discloses that the headlights of the vehicle may be activated to attract others to the vehicle. Again, Gager indicates that this function may be time-limited to conserve battery power. See col. 3, lines 50-53.

Based on these teachings in Gager, one of ordinary skill in the art would have recognized the advantages of operating a presence detector system for a certain period of time using a timer. Therefore, the teachings in Gager render claim 8 obvious.

For the reasons set forth above, the rejection of claim 8 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Gager, Federspiel and Marrazzo is affirmed.

B. Rejection of claims 9, 21 and 24

Claim 9 reads as follows:

9. The detection system of claim 1 wherein said illuminated touch sensitive pad comprises an illuminated capacitance sensing pad.

The examiner explains the rejection as follows (Answer at 11):

Although the system of Gager et al. in view of Federspiel and Marrazzo et al.

does not disclose the touch sensitive pad includes a capacitance sensor; thus, capacitance sensor is well known in the art and such sensitive touch pad with capacitance sensor is taught by Simon (col. 4, lines 39-50). At the time of the invention, it would have been obvious to one of ordinary skill in the art to utilize a capacitive sensor that is very effective in response to the human touch.

The appellant argues that Simon teaches away from the combination proposed by the examiner. Specifically, the appellant argues that for safety purposes the switch in Simon only operates when a human hand is placed squarely on the housing of the soft touch switch. In contrast, a particular hand placement is not required to operate the claimed touch sensitive pad.⁷

The appellant concludes that the modification proposed by the examiner would defeat the purpose of Simon. Brief at 8-9. We disagree.

⁷ We note that the appellant's claimed invention does not exclude the particular hand placement disclosed in Simon.

The examiner merely relies on Simon to establish that soft touch sensor technologies such as capacitive sensing were known.⁸ See col. 2, lines 31-37; see also In re Lamberti, 545 F.2d 747, 750, 192 USPQ 278, 280 (CCPA 1976) (a reference must be considered for all that it expressly teaches and fairly suggests to one having ordinary skill in the art). Marrazzo recognizes that a trunk activation device must be readily operated by a small child. See col. 1, lines 58-62. One of ordinary skill in the art would have known that touch sensitive pads which sense the capacitance of the human body are extremely easy to operate. Therefore, one of ordinary skill in the art would have been motivated to use a capacitance sensing pad in the system disclosed in Gager.

For the reasons set forth above, the rejection of claim 9 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Gager, Federspiel, Marrazzo and Simon is affirmed. Since the patentability of claims 21 and 24 stands or falls with the patentability of claim 9, the rejection of claims 21 and 24 as being unpatentable over the combination of Gager, Federspiel, Marrazzo and Simon is also affirmed.

⁸ The appellant's specification also acknowledges that touch sensitive pads which sense the capacitance of the human body were known. See col. 4, lines 15-31.

Conclusion

The rejection of claims 1-4, 7, 8, 10-20, 22 and 23 under 35 U.S.C. § 103(a) as being unpatentable over combination of Gager, Federspiel and Marrazzo is affirmed. The rejection of claims 9, 21 and 24 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Gager, Federspiel, Marrazzo and Simon is also affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

JOHN C. MARTIN)
Administrative Patent Judge)
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14

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