

Claim Rejections - 35 USC § 112

5. The following is a quotation of 35 U.S.C. 112(a):

(a) IN GENERAL.—The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), first paragraph:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 6-15, 33-35, 52-77 and 85-87 are rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor or a joint inventor, or for pre-AIA the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding independent claims 52 and 64, in the claim amendment filed on 11/14/2023, applicant amends claims by citing “a touch sensitive surface” (claim 52) and “a force sensor” (claim 64), which are not described in instant specification disclosure; they are of new matters.

Same new matter issues are in dependent claims of 6, 33, 74 and 85.

Claims 53-63 are rejected as containing the deficiencies of claim 52 through their dependency from claim 52.

Claims 65-73 are rejected as containing the deficiencies of claim 64 through their dependency from claim 64.

Claims 7-15 are rejected as containing the deficiencies of claim 6 through their dependency from claim 6.

Claims 34-35 are rejected as containing the deficiencies of claim 33 through their dependency from claim 33.

Claims 75-77 are rejected as containing the deficiencies of claim 74 through their dependency from claim 74.

Claims 86-87 are rejected as containing the deficiencies of claim 85 through their dependency from claim 85.

Claim Rejections - 35 USC § 112

7. The following is a quotation of 35 U.S.C. 112(b):

(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 6-15, 33-35, 52-77 and 85-87 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly

point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention.

Regarding independent claims 52, the term of “a touch sensitive surface at least partially contained within the head-worn personal electronic apparatus and configured to sense a touch input associated with the user” (line 13-15) is vague and renders the claims indefinite. As instant specification disclosure does not teach “a touch sensitive surface”; it is unclear the structure configuration of the touch sensitive surface and how a user to operate claimed touch sensitive surface.

Claims 53-63 are rejected as containing the deficiencies of claim 52 through their dependency from claim 52.

Claim 6 (in line 3) and **claim 74** (in line 3) have same undefined issues as that of claim 52 above.

Claims 7-15 are rejected as containing the deficiencies of claim 6 through their dependency from claim 6.

Claims 75-77 are rejected as containing the deficiencies of claim 74 through their dependency from claim 74.

Regarding independent claims 64, the term of “a force sensor at least partially contained within the head-worn personal electronic apparatus and configured to receive a user input based at least on sensing force applied to the force sensor, the force

sensor is configured to detect the user input” (line 13-16) is vague and renders the claims indefinite. As instant specification disclosure does not teach “a force sensor”; it is unclear the structure configuration of the force sensor and how a user to input a force, what kinds of the force and how to operate claimed force sensor.

Claims 65-73 are rejected as containing the deficiencies of claim 64 through their dependency from claim 64.

Claim 33 (in line 2) and **claim 85** (in line 2) have same undefined issues as that of claim 64 above.

Claims 34-35 are rejected as containing the deficiencies of claim 33 through their dependency from claim 33.

Claims 86-87 are rejected as containing the deficiencies of claim 85 through their dependency from claim 85.

Therefore proper amendments are required in order to clarify the scopes of the claims and overcome the rejections.

Allowable Subject Matters

9. Claims 1-4, 16- 32, 36-51 and 78-84 are allowed.

The following is an examiner’s statement of reasons for allowance: The prior art taken singularly or in combination fails to anticipate or fairly suggest the limitations of

the independent claims, in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper.

In regard to claims 1 and 3, the prior art (see previous office action) taken either singly or in combination fails to anticipate or fairly suggest a head-worn personal electronic apparatus further comprise wherein the customized audio output signals having been customized based on at least predetermined stored hearing characteristics associated with the user such that the customized audio output signals at least compensate for the hearing impairment regarding the user's ability to hear.

Claim 2 and 78-84 are also allowed as they dependent on claim 1.

Claim 4, 16-32 and 36-51 are also allowed as they dependent on claim 3.

Response to Arguments

10. Applicant's arguments with respect to claims have been considered but are moot because the arguments do not apply to any of the references being used in the current rejection.

Examiner's Note

11. Regarding the references, the Examiner cites particular figures, paragraphs, columns and line numbers in the reference(s), as applied to the claims above.

Although the particular citations are representative teachings and are applied to specific limitations within the claims, other passages, internally cited references, and

figures may also apply. In preparing a response, it is respectfully requested that the Applicant fully consider the references, in their entirety, as potentially disclosing or teaching all or part of the claimed invention, as well as fully consider the context of the passage as taught by the reference(s) or as disclosed by the Examiner.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

13. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Jie Lei whose telephone number is (571) 272 7231. The examiner can normally be reached on Mon.-Thurs. 8:00 am to 5:30 pm.

15. If attempts to reach the examiner by the telephone are unsuccessful, the examiner's supervisor, Thomas Pham can be reached on (571) 272 3689. The Fax number for the organization where this application is assigned is (571) 273 8300.

16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Services Representative or access to the automated information system, call 800-786-9199 (In USA or Canada) or 571-272-1000.

/JIE LEI/
Primary Examiner, Art Unit 2872

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 18/144,557		Filing Date 05/08/2023		☐ To be Mailed	
ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO									
APPLICATION AS FILED - PART I									
	(Column 1)	(Column 2)							
FOR	NUMBER FILED	NUMBER EXTRA			RATE (\$)			FEE (\$)	
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A			N/A				
☐ SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A			N/A				
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A			N/A				
TOTAL CLAIMS (37 CFR 1.16(j))	minus 20 =	*			x \$100 =				
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*			x \$480 =				
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).								
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))									
* If the difference in column 1 is less than zero, enter "0" in column 2.							TOTAL		
APPLICATION AS AMENDED - PART II									
	(Column 1)	(Column 2)	(Column 3)						
AMENDMENT	12/18/2023	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(j))	* 100	Minus	** 86	= 14		x \$ 100 =	1400	
	Independent (37 CFR 1.16(h))	* 5	Minus	*** 4	= 1		x \$ 480 =	480	
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE	1880		
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(j))	*	Minus	**	=		x \$ 0 =		
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x \$ 0 =		
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.						LIE			
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".						/THERESA D DAWKINS/			
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".									
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.									

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Doc Code: A.NE.AFCP

Document Description: After Final Consideration Program Request

PTO/SB/434 (3-22)

CERTIFICATION AND REQUEST FOR CONSIDERATION UNDER THE AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0		
Practitioner Docket No.: IPVCP003C11	Application No.: 18/144,557	Filing Date: May 8, 2023
First Named Inventor: HOWELL et al.	Title: HEAD-WORN PERSONAL AUDIO APPARATUS SUPPORTING ENHANCED HEARING SUPPORT	
APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS CONSIDERATION UNDER THE AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0 (AFCP 2.0) OF THE ACCOMPANYING RESPONSE UNDER 37 CFR 1.116. - The above-identified application is (i) an original utility, plant, or design nonprovisional application filed under 35 U.S.C. 111(a) [a continuing application (e.g., a continuation or divisional application) is filed under 35 U.S.C. 111(a) and is eligible under (i)], or (ii) an international application that has entered the national stage in compliance with 35 U.S.C. 371(c). - The above-identified application contains an outstanding final rejection. - Submitted herewith is a response under 37 CFR 1.116 to the outstanding final rejection. The response includes an amendment to at least one independent claim, and the amendment does not broaden the scope of the independent claim in any aspect. - This certification and request for consideration under AFCP 2.0 is the only AFCP 2.0 certification and request filed in response to the outstanding final rejection. - Applicant is willing and available to participate in any interview requested by the examiner concerning the present response. - This certification and request is being filed electronically using the USPTO's patent electronic filing system. - Any fees that would be necessary consistent with current practice concerning responses after final rejection under 37 CFR 1.116, e.g., extension of time fees, are being concurrently filed herewith. [There is no additional fee required to request consideration under AFCP 2.0.] - By filing this certification and request, applicant acknowledges the following: - Reissue applications and reexamination proceedings are not eligible to participate in AFCP 2.0. - The examiner will verify that the AFCP 2.0 submission is compliant, i.e., that the requirements of the program have been met (see items 1 to 7 above). For compliant submissions: - The examiner will review the response under 37 CFR 1.116 to determine if additional search and/or consideration (i) is necessitated by the amendment and (ii) could be completed within the time allotted under AFCP 2.0. If additional search and/or consideration is required but cannot be completed within the allotted time, the examiner will process the submission consistent with current practice concerning responses after final rejection under 37 CFR 1.116, e.g., by mailing an advisory action. - If the examiner determines that the amendment does not necessitate additional search and/or consideration, or if the examiner determines that additional search and/or consideration is required and could be completed within the allotted time, then the examiner will consider whether the amendment places the application in condition for allowance (after completing the additional search and/or consideration, if required). If the examiner determines that the amendment does not place the application in condition for allowance, then the examiner will contact the applicant and request an interview. - The interview will be conducted by the examiner, and if the examiner does not have negotiation authority, a primary examiner and/or supervisory patent examiner will also participate. - If the applicant declines the interview, or if the interview cannot be scheduled within ten (10) calendar days from the date that the examiner first contacts the applicant, then the examiner will proceed consistent with current practice concerning responses after final rejection under 37 CFR 1.116.		
Signature /C. Douglass Thoma/	Date December 18, 2023	Practitioner Registration No. 32,947
Name (Print/Typed) C. Douglass Thomas	Telephone Number 650-903-9200, x103	
Note: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.		
☒ * Total of <u>1</u> forms are submitted.		

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.



UNITED STATES
PATENT AND TRADEMARK OFFICE

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #
18/144,557

RECEIPT DATE / TIME
12/18/2023 06:23:29 PM Z ET

ATTORNEY DOCKET #
IPVCP003C11

Title of Invention

HEAD-WORN PERSONAL AUDIO APPARATUS SUPPORTING ENHANCED HEARING SUPPORT

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 1712

FILED BY Angela Nijim

PATENT CENTER # 63650754

FILING DATE 05/08/2023

CUSTOMER # 34071

FIRST NAMED INVENTOR Thomas A. Howell

CORRESPONDENCE ADDRESS -

AUTHORIZED BY Peter Tong

Documents

TOTAL DOCUMENTS: 3

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
IPVCP003C11_AfterFinalPilot _12-23.pdf	2	After Final Consideration Program Request	245 KB
IPVCP003C11_AmdB_AsFile d_12-23-ForFiling.pdf	32	Response After Final Action	130 KB
IPVCP003C11_AmdBTrans_ 12-23.pdf	1	Transmittal Letter	16 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
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IPVCP003C11__AfterFinalPilot_ 12-23.pdf	5CEC7FED7A8E894E5799980868BB6B763AD8619370C654AD2 E4ABA6B3FA314968F7DF603EDB6D13DF342CB7354A56B0D6 FC1ECCF3FD0A41128B188091BFD7896
IPVCP003C11__AmdB__AsFiled_ 12-23-ForFiling.pdf	C75BD6C4091BDB2C663BCE2AB453D42556733AB2DE622764 F7F9AA18C04BE33DD95CB6CAC080C3A5D5F904494261CF8A 7BEF2B3953871DCB576000A9AA3FC6AB
IPVCP003C11__AmdBTrans__12- 23.pdf	252CD981188302268AE642785D8EF1D6E73B79EE21C220D854 1E18751E68B5DC9F06E9444D2728A29236B48032C758D393A8 F682D471F3A6166872D079CBF8DF

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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ELECTRONIC PAYMENT RECEIPT

APPLICATION #
18/144,557

RECEIPT DATE / TIME
12/18/2023 06:23:29 PM Z ET

ATTORNEY DOCKET #
IPVCP003C11

Title of Invention

HEAD-WORN PERSONAL AUDIO APPARATUS SUPPORTING ENHANCED HEARING SUPPORT

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 1712

FILED BY Angela Nijim

PATENT CENTER # 63650754

AUTHORIZED BY Peter Tong

CUSTOMER # 34071

FILING DATE 05/08/2023

CORRESPONDENCE
ADDRESS -

FIRST NAMED
INVENTOR Thomas A. Howell

Payment Information

PAYMENT METHOD
CARD / 6200

PAYMENT TRANSACTION ID
E2023BHI24579951

PAYMENT AUTHORIZED BY
Angela Nijim

PRE-AUTHORIZED ACCOUNT
503874

PRE-AUTHORIZED CATEGORY
37 CFR 1.21 (Miscellaneous fees and charges)

FEE CODE	DESCRIPTION	ITEM PRICE(\$)	QUANTITY	ITEM TOTAL(\$)
1202	EACH CLAIM IN EXCESS OF 20	100.00	14	1400.00
1201	EACH INDEPENDENT CLAIM IN EXCESS OF THREE	480.00	1	480.00
TOTAL AMOUNT:				\$1,880.00

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

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National Stage of an International Application under 35 U.S.C. 371

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New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: HOWELL et al.

Attorney Docket No.: IPVCP003C11

Application No.: 18/144,557

Examiner: LEI, JIE

Filed: May 8 2023

Group: 2872

Title: HEAD-WORN PERSONAL AUDIO
APPARATUS SUPPORTING ENHANCED
HEARING SUPPORT

AMENDMENT B TRANSMITTAL

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

Sir:

Transmitted herewith is an Amendment in the above-identified application.

The fee has been calculated as shown below.

	Claims After Amendment		Highest Previously Paid For	Present Extra	Small Entity Rate Fee	Large Entity Rate Fee
Total Claims	100	MINUS	86	14	x 40 =	x 100 = 1400
Independent Claims	5	MINUS	4	01	x 192 =	x 480 = 480
Multiple Dependent Claim Present and Fee Not Previously Paid					\$	\$
Total					\$0.00	\$1880.00

- ☐ Applicant(s) hereby petition for a _____ - month extension(s) of time to respond to the aforementioned Office Action.
- ☒ Applicant(s) believe that no (additional) Extension of Time is required; however, if it is determined that such an extension is required, Applicant(s) hereby petition that such an extension be granted and authorize the Commissioner to charge the required fees for an Extension of Time under 37 CFR 1.136 to Deposit Account No. 50-3874 (Order No. IPVCP003C11).
- ☒ Any fees due are being paid electronically herewith.
- ☒ Please charge any additional fees required to facilitate filing the enclosed response, to Deposit Account No. 50-3874 (Order No. IPVCP003C11).

Respectfully submitted,

/C. Douglass Thomas/

C. Douglass Thomas
Reg. No. 32,947

Appln. No. 18/144,557

Atty. Docket No. IPVCP003C11

a wireless receiver configured to wirelessly receive customized audio output signals for the user, the customized audio output signals having been customized based on at least predetermined hearing characteristics associated with the user such that the customized audio output signals at least compensate for the hearing impairment regarding the user's ability to hear; and

electronic circuitry including at least an integrated circuit, the electronic circuitry being configured to output the customized audio output signals to the at least one speaker,

wherein the at least one speaker is configured to generate at least a portion of the customized audio output for the user in accordance with at least the portion of the customized audio output signals.

4. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the customized audio output signals are wirelessly received from a mobile communication device associated with the user.

5. (Canceled).

6. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

a touch sensitive surface at least partially contained within the head-worn personal electronic apparatus and configured to sense a touch input associated with the user, wherein the sensed touch input operating to at least alter operation of the head-worn electronic personal audio apparatus.

7. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 6, wherein head-worn personal electronic apparatus is configured to support voice calls to the user, and

wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns at least accepting or declining a voice call to the user.

8. (Currently Amended) A head-worn personal electronic apparatus recited in claim 6, ~~wherein head-worn personal electronic apparatus is configured to support audio output to the user, and~~ wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns control of the customized audio output being provided to the user.

9. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 6, wherein the head-worn personal electronic apparatus is configured to distinguish at least a direction of the user input with respect to the touch sensitive surface.

10. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 6, wherein the head-worn personal electronic apparatus is configured to detect at least a sliding of a finger action with respect to the touch sensitive surface.

11. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 6, wherein the head-worn personal electronic apparatus is configured to facilitate determination at least whether the user input pertains to a forward sliding action or a backward sliding action with respect to the touch sensitive surface.

12. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 6, wherein the head-worn personal electronic apparatus comprises:

a sensor at least partially contained within the head-worn personal electronic structure and configured to sense data indicative of whether the head-worn personal electronic apparatus is being worn by the user.

13. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 12, wherein the head-worn personal electronic apparatus is configured to at least alter operation of the head-worn personal electronic apparatus based at least in part on the sensed data from the sensor.

14. (Currently Amended) A head-worn personal electronic apparatus as recited in claim 13, ~~wherein head-worn personal electronic apparatus is configured to support audio output to the user, and~~ wherein the operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

15. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 13, wherein the operation of the head-worn personal electronic apparatus being altered concerns operation of the head-worn personal electronic apparatus in a lower power operation.

16. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

a first microphone configured to pick up at least audio input from at least the user, the first microphone being at least partially in the head-worn personal electronic apparatus and is positioned to be directed towards the user when the head-worn personal electronic apparatus is being worn by the user; and

a second microphone configured to pick up at least ambient sound input associated with an environment in the vicinity of the head-worn personal electronic apparatus, the second microphone being positioned to be directed away from the user when the head-worn wearable electronic device is being worn by the user.

17. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 16, wherein the electronic circuitry is configured to:

determine an ambient sound level; and

modify audio output to the at least one speaker dependent at least in part on the ambient sound level.

18. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 16, wherein the electronic circuitry is configured to:

produce an ambient audio output signal based on at least the ambient sound input; and

provide at least the ambient audio output signal to the at least one speaker.

19. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 18, wherein the electronic circuitry is configured to:

determine an ambient noise level based on at least the ambient sound input,

wherein the ambient audio output signal is dependent on the ambient noise level.

20. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

a first microphone configured to pick up at least audio input from at least the user, the first microphone being at least partially in the head-worn personal electronic apparatus; and

a second microphone configured to pick up at least ambient sound input associated with an environment in the vicinity of the head-worn personal electronic apparatus, the second microphone being at least partially in the head-worn personal electronic apparatus,

wherein the second microphone is positioned to be further away from mouth of the user than the first microphone when at least the head-worn personal electronic apparatus of the head-worn personal electronic apparatus is being worn.

21. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

a first microphone; and

a second microphone;

wherein the first microphone is configured to pick up at least audio input from at least the user,

wherein the second microphone is configured to pick up at least environmental audio input associated with an environment in the vicinity of the head-worn wearable electronic device, and

wherein the electronic circuitry is configured to process the audio input from at least the user picked-up via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked-up via the second microphone.

22. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 21,

wherein the audio input from at least the user picked-up via the first microphone includes at least a voice input, and

wherein the environmental audio input associated with the environment includes at least ambient noise.

23. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 21,

wherein the first microphone is at least partially in the head-worn personal electronic apparatus and is positioned so as to be directed towards the user of the head-worn personal electronic apparatus, and

wherein the second microphone is at least partially in the head-worn personal electronic apparatus and is positioned so as to be directed away from the user of the head-worn personal electronic apparatus.

24. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 23,

wherein the audio input from at least the user includes at least a voice input, and

wherein the environmental audio input includes at least ambient noise.

25. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3,

wherein the head-worn wearable electronic device comprises:

a first microphone configured to pick up at least audio input from at least the user; and

a second microphone configured to pickup at least environmental audio input associated with environmental sound in the vicinity of the head-worn personal electronic apparatus, and

wherein the electronic circuitry is configured to:

determine an environmental sound level based on at least the environmental audio input; and

amplify at least a portion of the audio input from the first microphone, with the amplification being at least in part dependent on the environmental sound level.

26. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3,

wherein the head-worn wearable electronic device comprises at least a first microphone and a second microphone,

wherein the first microphone is configured to pick up at least audio sound from at least the user,

wherein the second microphone is configured to pick up at least ambient noise associated with an environment in the vicinity of the head-worn wearable electronic device, and

wherein the electronic circuitry is configured to:

determine an ambient noise level based on at least the ambient noise; and

modify at least a portion of the audio sound picked-up via the first microphone, with the modification being at least in part dependent on the ambient noise level.

27. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

a first microphone configured to receive audio picked-up from the user; and

a second microphone configured to receive audio picked-up outward away from the user,

wherein the audio picked-up from at least the second microphone is used at least for noise cancelation, and at least a portion of the audio picked-up from the second microphone is subtracted from the audio picked-up from the first microphone.

28. (Currently Amended) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

a radiation emitter at least partially contained within the head-worn personal electronic apparatus and configured to at least direct radiation towards the user

when at least the head-worn personal electronic apparatus of the head-worn personal electronic apparatus is being worn; and

a radiation detector at least partially contained within the head-worn personal electronic apparatus and configured to detect radiation reflected back from the user when at least the head-worn personal electronic apparatus of the head-worn personal electronic apparatus is being worn,

wherein the radiation detector is operatively connected to the electronic circuitry, and wherein electronic circuitry within the head-worn personal electronic apparatus is configured to facilitate determining whether the head-worn personal electronic apparatus of the head-worn personal electronic apparatus is being worn by the user based on at least the detected radiation.

29. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 28, wherein the detected radiation is at least infrared radiation.

30. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

a radiation detector configured to capture radiation data,

wherein the electronic circuitry is configured to process at least the radiation data captured by the radiation detector.

31. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 30, wherein the electronic circuitry is configured to determine whether the head-worn personal electronic apparatus is being worn by a user based on at least the processed radiation data.

32. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 31, wherein the radiation detector comprises a photodetector.

33. (Currently Amended) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises ~~includes~~ a force sensor configured to receive a user input based at least on sensing force applied to the force sensor.

34. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 33, wherein the force sensor is configured to detect the user input, the detected user input operating to alter at least an operation of the head-worn wearable electronic device.

35. (Currently Amended) A head-worn personal electronic apparatus as recited in claim 34, ~~wherein the head-worn personal electronic apparatus is configured to support audio output to the user, and~~ wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

36. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

a light detector configured to capture light data, the light detector being electrically connected to the electronic circuitry, and the electronic circuitry being configured to process at least the light data captured by the light detector.

37. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 36, wherein the light detector comprises a photodetector.

38. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus is configured to provide audio alerts to the user via the at least one speaker.

39. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 38, wherein the audio alerts are dependent on one or more user preference settings.

40. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the at least one speaker is configured to be at least partially inserted into an ear of the user.

41. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

- a microphone at least partially internal to the head-worn personal electronic apparatus,

- wherein the head-worn personal electronic device is configured to receive a voice input via the microphone, determine a requested operation from the voice input using voice recognition, and control an operation by the head-worn personal electronic device based on the requested operation.

42. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

- a Hall effect detector at least partially contained within the head-worn personal electronic apparatus and configured to capture data associated with a magnetic characteristic.

43. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

- a bone conducting element at least partially contained within the head-worn personal electronic apparatus and configured to operate in accordance with acoustic characteristics.

44. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

an array of microphones configured for directional audio pickup.

45. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the customized audio output includes music that was wirelessly received via the wireless receiver.

46. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the customized audio output signals result from amplifying or attenuating different frequency bands differently according to at least the predetermined hearing characteristics associated with the user.

47. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 46, wherein the head-worn personal electronic apparatus comprises:

a first microphone at least partially contained within the head-worn personal electronic apparatus, the first microphone being positioned to pick up at least audio input from at least the user; and

a second microphone at least partially contained within the head-worn personal electronic apparatus, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus,

wherein the electronic circuitry is configured to modify the customized audio output signals to be output to the user via the at least one speaker to cancel at least a portion of noise associated with the environment, the modification of the customized audio output signals being dependent at least in part on the environmental audio input picked-up via the second microphone.

48. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 47, wherein the head-worn personal electronic apparatus comprises:

a user input device supported by the head-worn personal electronic apparatus, the user input device being configured to receive a user input, the user input device is based on at least capacitive effect, wherein the user input being received induces at least a capacitive change to produce at least an electrical response.

49. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 48, wherein the electronic circuitry is electrically connected to the user input device to receive user input data from the user input device, and wherein the head-worn personal electronic apparatus is configured to distinguish at least whether the user input pertains to a forward sliding action or a backward sliding action with respect to the user input device using at least the electronic circuitry and the user input data.

50. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 48, wherein the head-worn wearable electronic device includes an accelerometer.

51. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 50, wherein the head-worn personal electronic apparatus comprises:

a radiation sensor, operatively connected to the rechargeable battery, at least partially contained within the head-worn personal electronic apparatus and configured to sense radiation.

52. (Previously Presented) A head-worn personal electronic apparatus operable to at least output customized audio output, comprising:

at least one speaker, the at least one speaker being configured to be wearable proximate to an ear of a user;

a wireless receiver configured to wirelessly receive customized audio output signals for the user, the customized audio output signals having been customized based on at least predetermined hearing characteristics associated with the user such that the customized audio output signals at least compensate for the hearing impairment regarding the user's ability to hear;

electronic circuitry including at least an integrated circuit, the electronic circuitry being configured to output the customized audio output signals to the at least one speaker;

a touch sensitive surface at least partially contained within the head-worn personal electronic apparatus and configured to sense a touch input associated with the user, wherein the sensed touch input operating to at least alter operation of the head-worn electronic personal audio apparatus;

a sensor at least partially contained within the head-worn personal electronic structure and configured to sense data indicative of whether the head-worn personal electronic apparatus is being worn by the user, the head-worn personal electronic apparatus is configured to at least alter operation of the head-worn personal electronic apparatus based at least in part on the sensed data from the sensor;

a first microphone configured to pick up at least audio input from at least the user, the first microphone being at least partially in the head-worn personal electronic apparatus and is positioned to be directed towards the user when the head-worn personal electronic apparatus is being worn by the user; and

a second microphone configured to pick up at least ambient sound input associated with an environment in the vicinity of the head-worn personal electronic apparatus, the second microphone being positioned to be directed away from the user when the head-worn wearable electronic device is being worn by the user,

wherein the at least one speaker is configured to generate at least a portion of the customized audio output for the user in accordance with at least the portion of the customized audio output signals.

53. (Currently Amended) A head-worn personal electronic apparatus as recited in claim 52, ~~wherein the head-worn personal electronic apparatus comprises:~~

wherein the sensor comprises a radiation detector configured to capture radiation data, and

wherein the electronic circuitry is configured to process at least the radiation data captured by the radiation detector, and configured to determine whether the head-worn personal electronic apparatus is being worn by a user based on at least the processed radiation data.

54. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 52, wherein the head-worn personal electronic apparatus wherein the head-worn personal electronic device is configured to receive a voice input via the first microphone, determine a requested operation from the voice input using voice recognition, and control an operation by the head-worn personal electronic device based on the requested operation.

55. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 52, wherein the electronic circuitry is configured to modify the customized audio output signals to be output to the user via the at least one speaker to cancel at least a portion of noise associated with the environment, the modification of the customized audio output signals being dependent at least in part on the ambient sound input picked-up via the second microphone.

56. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 52, wherein the ambient sound picked-up from at least the second microphone is used at least for noise cancelation, and at least a portion of the

ambient sound picked-up from the second microphone is subtracted from the audio picked-up from the first microphone.

57. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 52, wherein the electronic circuitry is configured to:

determine an ambient noise level based on at least the ambient sound input;
and

modify at least a portion of the audio sound picked-up via the first microphone, with the modification being at least in part dependent on the ambient noise level.

58. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 52, wherein head-worn personal electronic apparatus is configured to support voice calls to the user, and

wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns at least accepting or declining a voice call to the user.

59. (Currently Amended) A head-worn personal electronic apparatus recited in claim 52, ~~wherein head-worn personal electronic apparatus is configured to support audio output to the user, and~~ wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns control of the customized audio output being provided to the user.

60. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 52, wherein the head-worn personal electronic apparatus comprises:

a Hall effect detector at least partially contained within the head-worn personal electronic apparatus and configured to capture data associated with a magnetic characteristic.

61. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 52, wherein the head-worn personal electronic apparatus comprises:

a bone conducting element at least partially contained within the head-worn personal electronic apparatus and configured to operate in accordance with acoustic characteristics.

62. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 52, wherein the electronic circuitry is configured to:

produce an ambient audio output signal based on at least the ambient sound input; and

provide at least the ambient audio output signal to the at least one speaker.

63. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 62, wherein the electronic circuitry is configured to:

determine an ambient noise level based on at least the ambient sound input,

wherein the ambient audio output signal is dependent on the ambient noise level.

64. (Currently Amended) A head-worn personal electronic apparatus operable to at least output customized audio output, comprising:

at least one speaker, the at least one speaker being configured to be wearable proximate to an ear of a user;

a wireless receiver configured to wirelessly receive customized audio output signals for the user, the customized audio output signals having been customized based on at least predetermined hearing characteristics associated with the user such that the customized audio output signals at least compensate for the hearing impairment regarding the user's ability to hear;

electronic circuitry including at least an integrated circuit, the electronic circuitry being configured to output the customized audio output signals to the at least one speaker;

a force sensor at least partially contained within the head-worn personal electronic apparatus and configured to receive a user input based at least on sensing force applied to the force sensor, the force sensor is configured to detect the user input, the detected user input operating to alter at least an operation of the head-worn wearable electronic device;

~~a sensor at least partially contained within the head-worn personal electronic structure and configured to sense data indicative of whether the head-worn personal electronic apparatus is being worn by the user, the head-worn personal electronic apparatus is configured to at least alter operation of the head-worn personal electronic apparatus based at least in part on the sensed data from the sensor;~~

a first microphone configured to pick up at least audio input from at least the user, the first microphone being at least partially in the head-worn personal electronic apparatus and is positioned to be directed towards the user when the head-worn personal electronic apparatus is being worn by the user; and

a second microphone configured to pick up at least ambient sound input associated with an environment in the vicinity of the head-worn personal electronic apparatus, the second microphone being positioned to be directed away from the user when the head-worn wearable electronic device is being worn by the user,

wherein the at least one speaker is configured to generate at least a portion of the customized audio output for the user in accordance with at least the portion of the customized audio output signals.

65. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 64, wherein the head-worn personal electronic apparatus comprises:

a radiation detector configured to capture radiation data,

wherein the electronic circuitry is configured to process at least the radiation data captured by the radiation detector, and configured to determine whether the head-worn personal electronic apparatus is being worn by a user based on at least the processed radiation data.

66. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 64, wherein the head-worn personal electronic apparatus wherein the head-worn personal electronic device is configured to receive a voice input via the first microphone, determine a requested operation from the voice input using voice recognition, and control an operation by the head-worn personal electronic device based on the requested operation.

67. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 64, wherein the electronic circuitry is configured to modify the customized audio output signals to be output to the user via the at least one speaker to cancel at least a portion of noise associated with the environment, the modification of the customized audio output signals being dependent at least in part on the ambient sound input picked-up via the second microphone.

68. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 64, wherein the ambient sound input picked-up from at least the second microphone is used at least for noise cancelation, and at least a portion of the ambient sound input picked-up from the second microphone is subtracted from the audio picked-up from the first microphone.

69. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 64, wherein the electronic circuitry is configured to:

determine an ambient noise level based on at least the ambient sound input;
and

modify at least a portion of the audio sound picked-up via the first microphone, with the modification being at least in part dependent on the ambient noise level.

70. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 64, wherein the head-worn personal electronic apparatus comprises:

a Hall effect detector at least partially contained within the head-worn personal electronic apparatus and configured to capture data associated with a magnetic characteristic.

71. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 64, wherein the head-worn personal electronic apparatus comprises:

a bone conducting element at least partially contained within the head-worn personal electronic apparatus and configured to operate in accordance with acoustic characteristics.

72. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 64, wherein the electronic circuitry is configured to:

produce an ambient audio output signal based on at least the ambient sound input; and

provide at least the ambient audio output signal to the at least one speaker.

73. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 72, wherein the electronic circuitry is configured to:

determine an ambient noise level based on at least the ambient sound input,

wherein the ambient audio output signal is dependent on the ambient noise level.

74. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 1, wherein the head-worn personal electronic apparatus comprises:

a touch sensitive surface at least partially contained within the head-worn personal electronic apparatus and configured to sense a touch input associated with the user, wherein the sensed touch input operating to at least alter operation of the head-worn electronic personal audio apparatus.

75. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 74, wherein head-worn personal electronic apparatus is configured to support voice calls to the user, and

wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns at least accepting or declining a voice call to the user.

76. (Currently Amended) A head-worn personal electronic apparatus recited in claim 74, ~~wherein head-worn personal electronic apparatus is configured to support audio output to the user, and~~ wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns control of the customized audio output being provided to the user.

77. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 74, wherein the head-worn personal electronic apparatus is configured to detect at least a sliding of a finger action with respect to the touch sensitive surface.

78. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 1, wherein the head-worn personal electronic apparatus comprises:

a first microphone configured to pick up at least audio input from at least the user, the first microphone being at least partially in the head-worn personal electronic apparatus and is positioned to be directed towards the user when the head-worn personal electronic apparatus is being worn by the user; and

a second microphone configured to pick up at least ambient sound input associated with an environment in the vicinity of the head-worn personal electronic apparatus, the second microphone being positioned to be directed away from the user when the head-worn wearable electronic device is being worn by the user.

79. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 78, wherein the electronic circuitry is configured to:

determine an ambient sound level; and

modify audio output to the at least one speaker dependent at least in part on the ambient sound level.

80. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 78, wherein the electronic circuitry is configured to:

produce an ambient audio output signal based on at least the ambient sound input; and

provide at least the ambient audio output signal to the at least one speaker.

81. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 78, wherein the electronic circuitry is configured to:

determine an ambient noise level based on at least the ambient sound input,

wherein the ambient audio output signal is dependent on the ambient noise level.

82. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 1, wherein the head-worn personal electronic apparatus comprises:

a first microphone; and

a second microphone;

wherein the first microphone is configured to pick up at least audio input from at least the user,

wherein the second microphone is configured to pick up at least environmental audio input associated with an environment in the vicinity of the head-worn wearable electronic device, and

wherein the electronic circuitry is configured to process the audio input from at least the user picked-up via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked-up via the second microphone.

83. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 1,

wherein the head-worn wearable electronic device comprises at least a first microphone and a second microphone,

wherein the first microphone is configured to pick up at least audio sound from at least the user,

wherein the second microphone is configured to pick up at least ambient noise associated with an environment in the vicinity of the head-worn wearable electronic device, and

wherein the electronic circuitry is configured to:

determine an ambient noise level based on at least the ambient noise;
and

modify at least a portion of the audio sound picked-up via the first microphone, with the modification being at least in part dependent on the ambient noise level.

84. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 1, wherein the head-worn personal electronic apparatus comprises:

a radiation detector configured to capture radiation data,

wherein the electronic circuitry is configured to process at least the radiation data captured by the radiation detector, and

wherein the electronic circuitry is configured to determine whether the head-worn personal electronic apparatus is being worn by a user based on at least the processed radiation data.

85. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 1,

wherein the head-worn personal electronic apparatus includes a force sensor configured to receive a user input based at least on sensing force applied to the force sensor, and

wherein the force sensor is configured to detect the user input, the detected user input operating to alter at least an operation of the head-worn wearable electronic device.

86. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 85, wherein the head-worn personal electronic apparatus comprises:

a first microphone at least partially contained within the head-worn personal electronic apparatus, the first microphone being positioned to pick up at least audio input from at least the user; and

a second microphone at least partially contained within the head-worn personal electronic apparatus, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus,

wherein the electronic circuitry is configured to modify the customized audio output signals to be output to the user via the at least one speaker to cancel at least a portion of noise associated with the environment, the modification of the

customized audio output signals being dependent at least in part on the environmental audio input picked-up via the second microphone.

87. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 86, wherein the head-worn personal electronic apparatus comprises:

a radiation detector configured to capture radiation data,

wherein the electronic circuitry is configured to process at least the radiation data captured by the radiation detector, and configured to determine whether the head-worn personal electronic apparatus is being worn by a user based on at least the processed radiation data.

88. (New) A head-worn personal electronic apparatus operable to at least output customized audio output, comprising:

at least one speaker, the at least one speaker being configured to be wearable proximate to an ear of a user;

a wireless receiver configured to wirelessly receive customized audio output signals for the user, the customized audio output signals having been customized based on at least predetermined hearing characteristics associated with the user such that the customized audio output signals at least compensate for the hearing impairment regarding the user's ability to hear;

electronic circuitry including at least an integrated circuit, the electronic circuitry being configured to output the customized audio output signals to the at least one speaker;

a user input device at least partially contained within the head-worn personal electronic apparatus and configured to receive a user input, the user input operating to alter at least an operation of the head-worn wearable electronic device;

a radiation detector at least partially contained within the head-worn personal electronic structure and configured to capture radiation data

indicative of whether the head-worn personal electronic apparatus is being worn by the user, the head-worn personal electronic apparatus is configured to at least alter operation of the head-worn personal electronic apparatus based at least in part on the captured radiation data;

a first microphone at least partially contained within the head-worn personal electronic apparatus, the first microphone being positioned to pick up at least audio input from at least the user; and

a second microphone at least partially contained within the head-worn personal electronic apparatus, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus,

wherein the at least one speaker is configured to generate at least a portion of the customized audio output for the user in accordance with at least the portion of the customized audio output signals.

89. (New) A head-worn personal electronic apparatus as recited in claim 88, wherein the head-worn personal electronic apparatus wherein the head-worn personal electronic device is configured to receive a voice input via the first microphone, determine a requested operation from the voice input using voice recognition, and control an operation by the head-worn personal electronic device based on the requested operation.

90. (New) A head-worn personal electronic apparatus as recited in claim 88, wherein the electronic circuitry is configured to modify the customized audio output signals to be output to the user via the at least one speaker to cancel at least a portion of noise associated with the environment, the modification of the customized audio output signals being dependent at least in part on the ambient sound input picked-up via the second microphone.

91. (New) A head-worn personal electronic apparatus as recited in claim 88, wherein the ambient sound input picked-up from at least the second microphone

is used at least for noise cancelation, and at least a portion of the ambient sound input picked-up from the second microphone is subtracted from the audio picked-up from the first microphone.

92. (New) A head-worn personal electronic apparatus as recited in claim 88, wherein the electronic circuitry is configured to:

determine an ambient noise level based on at least the ambient sound input; and

modify at least a portion of the audio sound picked-up via the first microphone, with the modification being at least in part dependent on the ambient noise level.

93. (New) A head-worn personal electronic apparatus as recited in claim 88, wherein the electronic circuitry is configured to:

determine an environmental sound level based on at least the environmental audio input; and

amplify at least a portion of the audio input from the first microphone, with the amplification being at least in part dependent on the environmental sound level.

94. (New) A head-worn personal electronic apparatus as recited in claim 88, wherein the head-worn personal electronic apparatus comprises:

a Hall effect detector at least partially contained within the head-worn personal electronic apparatus and configured to capture data associated with a magnetic characteristic.

95. (New) A head-worn personal electronic apparatus as recited in claim 88, wherein the head-worn personal electronic apparatus comprises:

a bone conducting element at least partially contained within the head-worn personal electronic apparatus and configured to operate in accordance with acoustic characteristics.

96. (New) A head-worn personal electronic apparatus as recited in claim 88, wherein the electronic circuitry is configured to:

produce an ambient audio output signal based on at least the ambient sound input; and

provide at least the ambient audio output signal to the at least one speaker.

97. (New) A head-worn personal electronic apparatus as recited in claim 96, wherein the electronic circuitry is configured to:

determine an ambient noise level based on at least the ambient sound input,

wherein the ambient audio output signal is dependent on the ambient noise level.

98. (New) A head-worn personal electronic apparatus as recited in claim 88, wherein head-worn personal electronic apparatus is configured to support voice calls to the user, and

wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns at least accepting or declining a voice call to the user.

99. (New) A head-worn personal electronic apparatus recited in claim 88, wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns control of the customized audio output being provided to the user.

100. (New) A head-worn personal electronic apparatus as recited in claim 88,

wherein the head-worn personal electronic apparatus is configured to provide audio alerts to the user via the at least one speaker, and

wherein the audio alerts are dependent on one or more user preference settings.

101. (New) A head-worn personal electronic apparatus as recited in claim 88,

wherein the electronic circuitry is configured to modify the customized audio output signals to be output to the user via the at least one speaker to cancel at least a portion of noise associated with the environment, the modification of the customized audio output signals being dependent at least in part on the environmental audio input picked-up via the second microphone,

wherein, when the head-worn personal electronic apparatus is being worn by the user, the first microphone is positioned to be directed more towards the user's mouth than is the second microphone, and

wherein, when the head-worn personal electronic apparatus is being worn by the user, the second microphone is directed more away from the user's mouth than is the first microphone.

REMARKS

In response to the Office Action, claims 8, 14, 28, 33, 35, 53, 59, 64 and 76 have been amended to further clarify the subject matter regarded as the invention. New claims 88-101 have been added to the application. Claims 1-4 and 6-101 are pending. Reconsideration of the application is respectfully requested based on the following remarks.

OBJECTION TO THE DRAWINGS

In the Office Action, the Examiner objected to the drawings for not showing features associated with claims 6, 33, 52, 64, 74 and 85. Applicant respectfully disagrees and submits that the drawings are sufficiently compliant with 37 CFR 1.121(d). In this regard, as examples, Applicant notes that Figure 81C denotes a touch-sensitive surface, and Figures 78-79 denote a force sensor. Accordingly, it is respectfully requested that the Examiner withdraw the objection to the drawings.

REJECTION OF CLAIMS 6-15, 33-35, 52-57 AND 85-87 UNDER 35 USC 112, FIRST PARAGRAPH

In the Office Action, the Examiner rejected claims 6-15, 33-35, 52-57 and 85-87 under the first paragraph of 35 USC 112 as failing to comply with the written description requirement. Applicant respectfully disagrees. On page 4 of the Office Action, the Examiner alleges that the claim terms “a touch sensitive surface” and “a force sensor” are not described in the present specification. Applicant respectfully disagrees and submits that these claim terms are adequately disclosed in the written description provided in the present specification and drawings. In this regard, as examples, Applicant notes that paragraphs [0371], [0748], [0749] and [0757] provide written support for “a touch sensitive surface” and paragraphs [0742] and [0743] provide written support for “a force sensor.” Accordingly, it is respectfully requested that the Examiner withdraw the rejection of claims 6-15, 33-35, 52-57 and 85-87 under the first paragraph of 35 USC 112.

**REJECTION OF CLAIMS 6-15, 33-35, 52-57 AND 85-87 UNDER 35 USC 112,
SECOND PARAGRAPH**

In the Office Action, the Examiner rejected claims 6-15, 33-35, 52-57 and 85-87 under the second paragraph of 35 USC 112 as being indefinite. Applicant respectfully disagrees. This rejection is premised on the same basis as the above rejection and is respectfully traversed for at least the one or more reasons noted above. Accordingly, it is respectfully requested that the Examiner withdraw the rejection of claims 6-15, 33-35, 52-57 and 85-87 under the second paragraph of 35 USC 112.

SUMMARY

It is submitted that both the rejections under 35 USC 112 have been traversed. It is also submitted that the objection to the drawings has been likewise traversed. Therefore, it is submitted that all claims are in condition for allowance.

Reconsideration of the application and an early Notice of Allowance are earnestly solicited. If there are any issues remaining which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned representative at the telephone number listed below.

Respectfully submitted,

/C. Douglass Thomas/

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: HOWELL et al.

Attorney Docket No.: IPVCP003C11

Application No.: 18/144,557

Examiner: LEI, JIE

Filed: May 8, 2023

Group: 2872

Title: HEAD-WORN PERSONAL
AUDIO APPARATUS SUPPORTING
ENHANCED HEARING SUPPORT

AMENDMENT B

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

Dear Sir:

In response to the Office Action dated November 24, 2023, please amend the above-identified patent application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 31 of this paper.

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A head-worn personal electronic apparatus operable to at least output customized audio output, comprising:

at least one speaker, the at least one speaker being configured to be wearable proximate to an ear of a user;

a wireless receiver configured to wirelessly receive audio output signals to be output to the user via the at least one speaker; and

electronic circuitry including at least an integrated circuit, the electronic circuitry being configured to (i) store hearing characteristics associated with the user; (ii) customize the received audio output signals to produce customized audio output signals for the user based on at least a portion of the stored hearing characteristics associated with the user such that the customized audio output signals at least compensate for the hearing impairment regarding the user's ability to hear; and (iii) output the customized audio output signals to the at least one speaker,

wherein the at least one speaker is configured to generate at least a portion of the customized audio output for the user in accordance with at least the portion of the customized audio output signals.

2. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 1, wherein the received audio output signals are wirelessly received from a mobile communication device associated with the user.

3. (Previously Presented) A head-worn personal electronic apparatus operable to at least output customized audio output, comprising:

at least one speaker, the at least one speaker being configured to be wearable proximate to an ear of a user;

a wireless receiver configured to wirelessly receive customized audio output signals for the user, the customized audio output signals having been customized based on at least predetermined hearing characteristics associated with the user such that the customized audio output signals at least compensate for the hearing impairment regarding the user's ability to hear; and

electronic circuitry including at least an integrated circuit, the electronic circuitry being configured to output the customized audio output signals to the at least one speaker,

wherein the at least one speaker is configured to generate at least a portion of the customized audio output for the user in accordance with at least the portion of the customized audio output signals.

4. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the customized audio output signals are wirelessly received from a mobile communication device associated with the user.

5. (Canceled).

6. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

a touch sensitive surface at least partially contained within the head-worn personal electronic apparatus and configured to sense a touch input associated with the user, wherein the sensed touch input operating to at least alter operation of the head-worn electronic personal audio apparatus.

7. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 6, wherein head-worn personal electronic apparatus is configured to support voice calls to the user, and

wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns at least accepting or declining a voice call to the user.

8. (Currently Amended) A head-worn personal electronic apparatus recited in claim 6, ~~wherein head-worn personal electronic apparatus is configured to support audio output to the user, and~~ wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns control of the customized audio output being provided to the user.

9. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 6, wherein the head-worn personal electronic apparatus is configured to distinguish at least a direction of the user input with respect to the touch sensitive surface.

10. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 6, wherein the head-worn personal electronic apparatus is configured to detect at least a sliding of a finger action with respect to the touch sensitive surface.

11. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 6, wherein the head-worn personal electronic apparatus is configured to facilitate determination at least whether the user input pertains to a forward sliding action or a backward sliding action with respect to the touch sensitive surface.

12. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 6, wherein the head-worn personal electronic apparatus comprises:

a sensor at least partially contained within the head-worn personal electronic structure and configured to sense data indicative of whether the head-worn personal electronic apparatus is being worn by the user.

13. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 12, wherein the head-worn personal electronic apparatus is configured to at least alter operation of the head-worn personal electronic apparatus based at least in part on the sensed data from the sensor.

14. (Currently Amended) A head-worn personal electronic apparatus as recited in claim 13, ~~wherein head-worn personal electronic apparatus is configured to support audio output to the user, and~~ wherein the operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

15. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 13, wherein the operation of the head-worn personal electronic apparatus being altered concerns operation of the head-worn personal electronic apparatus in a lower power operation.

16. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

a first microphone configured to pick up at least audio input from at least the user, the first microphone being at least partially in the head-worn personal electronic apparatus and is positioned to be directed towards the user when the head-worn personal electronic apparatus is being worn by the user; and

a second microphone configured to pick up at least ambient sound input associated with an environment in the vicinity of the head-worn personal electronic apparatus, the second microphone being positioned to be directed away from the user when the head-worn wearable electronic device is being worn by the user.

17. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 16, wherein the electronic circuitry is configured to:

determine an ambient sound level; and

modify audio output to the at least one speaker dependent at least in part on the ambient sound level.

18. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 16, wherein the electronic circuitry is configured to:

produce an ambient audio output signal based on at least the ambient sound input; and

provide at least the ambient audio output signal to the at least one speaker.

19. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 18, wherein the electronic circuitry is configured to:

determine an ambient noise level based on at least the ambient sound input,

wherein the ambient audio output signal is dependent on the ambient noise level.

20. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

a first microphone configured to pick up at least audio input from at least the user, the first microphone being at least partially in the head-worn personal electronic apparatus; and

a second microphone configured to pick up at least ambient sound input associated with an environment in the vicinity of the head-worn personal electronic apparatus, the second microphone being at least partially in the head-worn personal electronic apparatus,

wherein the second microphone is positioned to be further away from mouth of the user than the first microphone when at least the head-worn personal electronic apparatus of the head-worn personal electronic apparatus is being worn.

21. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

a first microphone; and

a second microphone;

wherein the first microphone is configured to pick up at least audio input from at least the user,

wherein the second microphone is configured to pick up at least environmental audio input associated with an environment in the vicinity of the head-worn wearable electronic device, and

wherein the electronic circuitry is configured to process the audio input from at least the user picked-up via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked-up via the second microphone.

22. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 21,

wherein the audio input from at least the user picked-up via the first microphone includes at least a voice input, and

wherein the environmental audio input associated with the environment includes at least ambient noise.

23. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 21,

wherein the first microphone is at least partially in the head-worn personal electronic apparatus and is positioned so as to be directed towards the user of the head-worn personal electronic apparatus, and

wherein the second microphone is at least partially in the head-worn personal electronic apparatus and is positioned so as to be directed away from the user of the head-worn personal electronic apparatus.

24. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 23,

wherein the audio input from at least the user includes at least a voice input, and

wherein the environmental audio input includes at least ambient noise.

25. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3,

wherein the head-worn wearable electronic device comprises:

a first microphone configured to pick up at least audio input from at least the user; and

a second microphone configured to pickup at least environmental audio input associated with environmental sound in the vicinity of the head-worn personal electronic apparatus, and

wherein the electronic circuitry is configured to:

determine an environmental sound level based on at least the environmental audio input; and

amplify at least a portion of the audio input from the first microphone, with the amplification being at least in part dependent on the environmental sound level.

26. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3,

wherein the head-worn wearable electronic device comprises at least a first microphone and a second microphone,

wherein the first microphone is configured to pick up at least audio sound from at least the user,

wherein the second microphone is configured to pick up at least ambient noise associated with an environment in the vicinity of the head-worn wearable electronic device, and

wherein the electronic circuitry is configured to:

determine an ambient noise level based on at least the ambient noise; and

modify at least a portion of the audio sound picked-up via the first microphone, with the modification being at least in part dependent on the ambient noise level.

27. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

a first microphone configured to receive audio picked-up from the user; and

a second microphone configured to receive audio picked-up outward away from the user,

wherein the audio picked-up from at least the second microphone is used at least for noise cancelation, and at least a portion of the audio picked-up from the second microphone is subtracted from the audio picked-up from the first microphone.

28. (Currently Amended) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

a radiation emitter at least partially contained within the head-worn personal electronic apparatus and configured to at least direct radiation towards the user

when at least the head-worn personal electronic apparatus of the head-worn personal electronic apparatus is being worn; and

a radiation detector at least partially contained within the head-worn personal electronic apparatus and configured to detect radiation reflected back from the user when at least the head-worn personal electronic apparatus of the head-worn personal electronic apparatus is being worn,

wherein the radiation detector is operatively connected to the electronic circuitry, and wherein electronic circuitry within the head-worn personal electronic apparatus is configured to facilitate determining whether the head-worn personal electronic apparatus of the head-worn personal electronic apparatus is being worn by the user based on at least the detected radiation.

29. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 28, wherein the detected radiation is at least infrared radiation.

30. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

a radiation detector configured to capture radiation data,

wherein the electronic circuitry is configured to process at least the radiation data captured by the radiation detector.

31. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 30, wherein the electronic circuitry is configured to determine whether the head-worn personal electronic apparatus is being worn by a user based on at least the processed radiation data.

32. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 31, wherein the radiation detector comprises a photodetector.

33. (Currently Amended) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises ~~includes~~ a force sensor configured to receive a user input based at least on sensing force applied to the force sensor.

34. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 33, wherein the force sensor is configured to detect the user input, the detected user input operating to alter at least an operation of the head-worn wearable electronic device.

35. (Currently Amended) A head-worn personal electronic apparatus as recited in claim 34, ~~wherein the head-worn personal electronic apparatus is configured to support audio output to the user, and~~ wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

36. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

a light detector configured to capture light data, the light detector being electrically connected to the electronic circuitry, and the electronic circuitry being configured to process at least the light data captured by the light detector.

37. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 36, wherein the light detector comprises a photodetector.

38. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus is configured to provide audio alerts to the user via the at least one speaker.

39. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 38, wherein the audio alerts are dependent on one or more user preference settings.

40. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the at least one speaker is configured to be at least partially inserted into an ear of the user.

41. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

- a microphone at least partially internal to the head-worn personal electronic apparatus,

- wherein the head-worn personal electronic device is configured to receive a voice input via the microphone, determine a requested operation from the voice input using voice recognition, and control an operation by the head-worn personal electronic device based on the requested operation.

42. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

- a Hall effect detector at least partially contained within the head-worn personal electronic apparatus and configured to capture data associated with a magnetic characteristic.

43. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

- a bone conducting element at least partially contained within the head-worn personal electronic apparatus and configured to operate in accordance with acoustic characteristics.

44. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the head-worn personal electronic apparatus comprises:

an array of microphones configured for directional audio pickup.

45. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the customized audio output includes music that was wirelessly received via the wireless receiver.

46. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 3, wherein the customized audio output signals result from amplifying or attenuating different frequency bands differently according to at least the predetermined hearing characteristics associated with the user.

47. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 46, wherein the head-worn personal electronic apparatus comprises:

a first microphone at least partially contained within the head-worn personal electronic apparatus, the first microphone being positioned to pick up at least audio input from at least the user; and

a second microphone at least partially contained within the head-worn personal electronic apparatus, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus,

wherein the electronic circuitry is configured to modify the customized audio output signals to be output to the user via the at least one speaker to cancel at least a portion of noise associated with the environment, the modification of the customized audio output signals being dependent at least in part on the environmental audio input picked-up via the second microphone.

48. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 47, wherein the head-worn personal electronic apparatus comprises:

a user input device supported by the head-worn personal electronic apparatus, the user input device being configured to receive a user input, the user input device is based on at least capacitive effect, wherein the user input being received induces at least a capacitive change to produce at least an electrical response.

49. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 48, wherein the electronic circuitry is electrically connected to the user input device to receive user input data from the user input device, and wherein the head-worn personal electronic apparatus is configured to distinguish at least whether the user input pertains to a forward sliding action or a backward sliding action with respect to the user input device using at least the electronic circuitry and the user input data.

50. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 48, wherein the head-worn wearable electronic device includes an accelerometer.

51. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 50, wherein the head-worn personal electronic apparatus comprises:

a radiation sensor, operatively connected to the rechargeable battery, at least partially contained within the head-worn personal electronic apparatus and configured to sense radiation.

52. (Previously Presented) A head-worn personal electronic apparatus operable to at least output customized audio output, comprising:

at least one speaker, the at least one speaker being configured to be wearable proximate to an ear of a user;

a wireless receiver configured to wirelessly receive customized audio output signals for the user, the customized audio output signals having been customized based on at least predetermined hearing characteristics associated with the user such that the customized audio output signals at least compensate for the hearing impairment regarding the user's ability to hear;

electronic circuitry including at least an integrated circuit, the electronic circuitry being configured to output the customized audio output signals to the at least one speaker;

a touch sensitive surface at least partially contained within the head-worn personal electronic apparatus and configured to sense a touch input associated with the user, wherein the sensed touch input operating to at least alter operation of the head-worn electronic personal audio apparatus;

a sensor at least partially contained within the head-worn personal electronic structure and configured to sense data indicative of whether the head-worn personal electronic apparatus is being worn by the user, the head-worn personal electronic apparatus is configured to at least alter operation of the head-worn personal electronic apparatus based at least in part on the sensed data from the sensor;

a first microphone configured to pick up at least audio input from at least the user, the first microphone being at least partially in the head-worn personal electronic apparatus and is positioned to be directed towards the user when the head-worn personal electronic apparatus is being worn by the user; and

a second microphone configured to pick up at least ambient sound input associated with an environment in the vicinity of the head-worn personal electronic apparatus, the second microphone being positioned to be directed away from the user when the head-worn wearable electronic device is being worn by the user,

wherein the at least one speaker is configured to generate at least a portion of the customized audio output for the user in accordance with at least the portion of the customized audio output signals.

53. (Currently Amended) A head-worn personal electronic apparatus as recited in claim 52, ~~wherein the head-worn personal electronic apparatus comprises:~~

wherein the sensor comprises a radiation detector configured to capture radiation data, and

wherein the electronic circuitry is configured to process at least the radiation data captured by the radiation detector, and configured to determine whether the head-worn personal electronic apparatus is being worn by a user based on at least the processed radiation data.

54. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 52, wherein the head-worn personal electronic apparatus wherein the head-worn personal electronic device is configured to receive a voice input via the first microphone, determine a requested operation from the voice input using voice recognition, and control an operation by the head-worn personal electronic device based on the requested operation.

55. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 52, wherein the electronic circuitry is configured to modify the customized audio output signals to be output to the user via the at least one speaker to cancel at least a portion of noise associated with the environment, the modification of the customized audio output signals being dependent at least in part on the ambient sound input picked-up via the second microphone.

56. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 52, wherein the ambient sound picked-up from at least the second microphone is used at least for noise cancelation, and at least a portion of the

ambient sound picked-up from the second microphone is subtracted from the audio picked-up from the first microphone.

57. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 52, wherein the electronic circuitry is configured to:

determine an ambient noise level based on at least the ambient sound input;
and

modify at least a portion of the audio sound picked-up via the first microphone, with the modification being at least in part dependent on the ambient noise level.

58. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 52, wherein head-worn personal electronic apparatus is configured to support voice calls to the user, and

wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns at least accepting or declining a voice call to the user.

59. (Currently Amended) A head-worn personal electronic apparatus recited in claim 52, ~~wherein head-worn personal electronic apparatus is configured to support audio output to the user, and~~ wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns control of the customized audio output being provided to the user.

60. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 52, wherein the head-worn personal electronic apparatus comprises:

a Hall effect detector at least partially contained within the head-worn personal electronic apparatus and configured to capture data associated with a magnetic characteristic.

61. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 52, wherein the head-worn personal electronic apparatus comprises:

a bone conducting element at least partially contained within the head-worn personal electronic apparatus and configured to operate in accordance with acoustic characteristics.

62. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 52, wherein the electronic circuitry is configured to:

produce an ambient audio output signal based on at least the ambient sound input; and

provide at least the ambient audio output signal to the at least one speaker.

63. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 62, wherein the electronic circuitry is configured to:

determine an ambient noise level based on at least the ambient sound input,

wherein the ambient audio output signal is dependent on the ambient noise level.

64. (Currently Amended) A head-worn personal electronic apparatus operable to at least output customized audio output, comprising:

at least one speaker, the at least one speaker being configured to be wearable proximate to an ear of a user;

a wireless receiver configured to wirelessly receive customized audio output signals for the user, the customized audio output signals having been customized based on at least predetermined hearing characteristics associated with the user such that the customized audio output signals at least compensate for the hearing impairment regarding the user's ability to hear;

electronic circuitry including at least an integrated circuit, the electronic circuitry being configured to output the customized audio output signals to the at least one speaker;

a force sensor at least partially contained within the head-worn personal electronic apparatus and configured to receive a user input based at least on sensing force applied to the force sensor, the force sensor is configured to detect the user input, the detected user input operating to alter at least an operation of the head-worn wearable electronic device;

~~a sensor at least partially contained within the head-worn personal electronic structure and configured to sense data indicative of whether the head-worn personal electronic apparatus is being worn by the user, the head-worn personal electronic apparatus is configured to at least alter operation of the head-worn personal electronic apparatus based at least in part on the sensed data from the sensor;~~

a first microphone configured to pick up at least audio input from at least the user, the first microphone being at least partially in the head-worn personal electronic apparatus and is positioned to be directed towards the user when the head-worn personal electronic apparatus is being worn by the user; and

a second microphone configured to pick up at least ambient sound input associated with an environment in the vicinity of the head-worn personal electronic apparatus, the second microphone being positioned to be directed away from the user when the head-worn wearable electronic device is being worn by the user,

wherein the at least one speaker is configured to generate at least a portion of the customized audio output for the user in accordance with at least the portion of the customized audio output signals.

65. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 64, wherein the head-worn personal electronic apparatus comprises:

a radiation detector configured to capture radiation data,

wherein the electronic circuitry is configured to process at least the radiation data captured by the radiation detector, and configured to determine whether the head-worn personal electronic apparatus is being worn by a user based on at least the processed radiation data.

66. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 64, wherein the head-worn personal electronic apparatus wherein the head-worn personal electronic device is configured to receive a voice input via the first microphone, determine a requested operation from the voice input using voice recognition, and control an operation by the head-worn personal electronic device based on the requested operation.

67. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 64, wherein the electronic circuitry is configured to modify the customized audio output signals to be output to the user via the at least one speaker to cancel at least a portion of noise associated with the environment, the modification of the customized audio output signals being dependent at least in part on the ambient sound input picked-up via the second microphone.

68. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 64, wherein the ambient sound input picked-up from at least the second microphone is used at least for noise cancelation, and at least a portion of the ambient sound input picked-up from the second microphone is subtracted from the audio picked-up from the first microphone.

69. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 64, wherein the electronic circuitry is configured to:

determine an ambient noise level based on at least the ambient sound input;
and

modify at least a portion of the audio sound picked-up via the first microphone,
with the modification being at least in part dependent on the ambient noise level.

70. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 64, wherein the head-worn personal electronic apparatus comprises:

a Hall effect detector at least partially contained within the head-worn personal electronic apparatus and configured to capture data associated with a magnetic characteristic.

71. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 64, wherein the head-worn personal electronic apparatus comprises:

a bone conducting element at least partially contained within the head-worn personal electronic apparatus and configured to operate in accordance with acoustic characteristics.

72. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 64, wherein the electronic circuitry is configured to:

produce an ambient audio output signal based on at least the ambient sound input; and

provide at least the ambient audio output signal to the at least one speaker.

73. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 72, wherein the electronic circuitry is configured to:

determine an ambient noise level based on at least the ambient sound input,

wherein the ambient audio output signal is dependent on the ambient noise level.

74. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 1, wherein the head-worn personal electronic apparatus comprises:

a touch sensitive surface at least partially contained within the head-worn personal electronic apparatus and configured to sense a touch input associated with the user, wherein the sensed touch input operating to at least alter operation of the head-worn electronic personal audio apparatus.

75. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 74, wherein head-worn personal electronic apparatus is configured to support voice calls to the user, and

wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns at least accepting or declining a voice call to the user.

76. (Currently Amended) A head-worn personal electronic apparatus recited in claim 74, ~~wherein head-worn personal electronic apparatus is configured to support audio output to the user, and~~ wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns control of the customized audio output being provided to the user.

77. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 74, wherein the head-worn personal electronic apparatus is configured to detect at least a sliding of a finger action with respect to the touch sensitive surface.

78. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 1, wherein the head-worn personal electronic apparatus comprises:

a first microphone configured to pick up at least audio input from at least the user, the first microphone being at least partially in the head-worn personal electronic apparatus and is positioned to be directed towards the user when the head-worn personal electronic apparatus is being worn by the user; and

a second microphone configured to pick up at least ambient sound input associated with an environment in the vicinity of the head-worn personal electronic apparatus, the second microphone being positioned to be directed away from the user when the head-worn wearable electronic device is being worn by the user.

79. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 78, wherein the electronic circuitry is configured to:

determine an ambient sound level; and

modify audio output to the at least one speaker dependent at least in part on the ambient sound level.

80. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 78, wherein the electronic circuitry is configured to:

produce an ambient audio output signal based on at least the ambient sound input; and

provide at least the ambient audio output signal to the at least one speaker.

81. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 78, wherein the electronic circuitry is configured to:

determine an ambient noise level based on at least the ambient sound input,

wherein the ambient audio output signal is dependent on the ambient noise level.

82. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 1, wherein the head-worn personal electronic apparatus comprises:

a first microphone; and

a second microphone;

wherein the first microphone is configured to pick up at least audio input from at least the user,

wherein the second microphone is configured to pick up at least environmental audio input associated with an environment in the vicinity of the head-worn wearable electronic device, and

wherein the electronic circuitry is configured to process the audio input from at least the user picked-up via the first microphone to remove at least a portion of the environmental audio input associated with the environment picked-up via the second microphone.

83. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 1,

wherein the head-worn wearable electronic device comprises at least a first microphone and a second microphone,

wherein the first microphone is configured to pick up at least audio sound from at least the user,

wherein the second microphone is configured to pick up at least ambient noise associated with an environment in the vicinity of the head-worn wearable electronic device, and

wherein the electronic circuitry is configured to:

determine an ambient noise level based on at least the ambient noise;
and

modify at least a portion of the audio sound picked-up via the first microphone, with the modification being at least in part dependent on the ambient noise level.

84. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 1, wherein the head-worn personal electronic apparatus comprises:

a radiation detector configured to capture radiation data,

wherein the electronic circuitry is configured to process at least the radiation data captured by the radiation detector, and

wherein the electronic circuitry is configured to determine whether the head-worn personal electronic apparatus is being worn by a user based on at least the processed radiation data.

85. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 1,

wherein the head-worn personal electronic apparatus includes a force sensor configured to receive a user input based at least on sensing force applied to the force sensor, and

wherein the force sensor is configured to detect the user input, the detected user input operating to alter at least an operation of the head-worn wearable electronic device.

86. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 85, wherein the head-worn personal electronic apparatus comprises:

a first microphone at least partially contained within the head-worn personal electronic apparatus, the first microphone being positioned to pick up at least audio input from at least the user; and

a second microphone at least partially contained within the head-worn personal electronic apparatus, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus,

wherein the electronic circuitry is configured to modify the customized audio output signals to be output to the user via the at least one speaker to cancel at least a portion of noise associated with the environment, the modification of the

customized audio output signals being dependent at least in part on the environmental audio input picked-up via the second microphone.

87. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 86, wherein the head-worn personal electronic apparatus comprises:

a radiation detector configured to capture radiation data,

wherein the electronic circuitry is configured to process at least the radiation data captured by the radiation detector, and configured to determine whether the head-worn personal electronic apparatus is being worn by a user based on at least the processed radiation data.

88. (New) A head-worn personal electronic apparatus operable to at least output customized audio output, comprising:

at least one speaker, the at least one speaker being configured to be wearable proximate to an ear of a user;

a wireless receiver configured to wirelessly receive customized audio output signals for the user, the customized audio output signals having been customized based on at least predetermined hearing characteristics associated with the user such that the customized audio output signals at least compensate for the hearing impairment regarding the user's ability to hear;

electronic circuitry including at least an integrated circuit, the electronic circuitry being configured to output the customized audio output signals to the at least one speaker;

a user input device at least partially contained within the head-worn personal electronic apparatus and configured to receive a user input, the user input operating to alter at least an operation of the head-worn wearable electronic device;

a radiation detector at least partially contained within the head-worn personal electronic structure and configured to capture radiation data

indicative of whether the head-worn personal electronic apparatus is being worn by the user, the head-worn personal electronic apparatus is configured to at least alter operation of the head-worn personal electronic apparatus based at least in part on the captured radiation data;

a first microphone at least partially contained within the head-worn personal electronic apparatus, the first microphone being positioned to pick up at least audio input from at least the user; and

a second microphone at least partially contained within the head-worn personal electronic apparatus, the second microphone being positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus,

wherein the at least one speaker is configured to generate at least a portion of the customized audio output for the user in accordance with at least the portion of the customized audio output signals.

89. (New) A head-worn personal electronic apparatus as recited in claim 88, wherein the head-worn personal electronic apparatus wherein the head-worn personal electronic device is configured to receive a voice input via the first microphone, determine a requested operation from the voice input using voice recognition, and control an operation by the head-worn personal electronic device based on the requested operation.

90. (New) A head-worn personal electronic apparatus as recited in claim 88, wherein the electronic circuitry is configured to modify the customized audio output signals to be output to the user via the at least one speaker to cancel at least a portion of noise associated with the environment, the modification of the customized audio output signals being dependent at least in part on the ambient sound input picked-up via the second microphone.

91. (New) A head-worn personal electronic apparatus as recited in claim 88, wherein the ambient sound input picked-up from at least the second microphone

is used at least for noise cancelation, and at least a portion of the ambient sound input picked-up from the second microphone is subtracted from the audio picked-up from the first microphone.

92. (New) A head-worn personal electronic apparatus as recited in claim 88, wherein the electronic circuitry is configured to:

determine an ambient noise level based on at least the ambient sound input; and

modify at least a portion of the audio sound picked-up via the first microphone, with the modification being at least in part dependent on the ambient noise level.

93. (New) A head-worn personal electronic apparatus as recited in claim 88, wherein the electronic circuitry is configured to:

determine an environmental sound level based on at least the environmental audio input; and

amplify at least a portion of the audio input from the first microphone, with the amplification being at least in part dependent on the environmental sound level.

94. (New) A head-worn personal electronic apparatus as recited in claim 88, wherein the head-worn personal electronic apparatus comprises:

a Hall effect detector at least partially contained within the head-worn personal electronic apparatus and configured to capture data associated with a magnetic characteristic.

95. (New) A head-worn personal electronic apparatus as recited in claim 88, wherein the head-worn personal electronic apparatus comprises:

a bone conducting element at least partially contained within the head-worn personal electronic apparatus and configured to operate in accordance with acoustic characteristics.

96. (New) A head-worn personal electronic apparatus as recited in claim 88, wherein the electronic circuitry is configured to:

produce an ambient audio output signal based on at least the ambient sound input; and

provide at least the ambient audio output signal to the at least one speaker.

97. (New) A head-worn personal electronic apparatus as recited in claim 96, wherein the electronic circuitry is configured to:

determine an ambient noise level based on at least the ambient sound input,

wherein the ambient audio output signal is dependent on the ambient noise level.

98. (New) A head-worn personal electronic apparatus as recited in claim 88, wherein head-worn personal electronic apparatus is configured to support voice calls to the user, and

wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns at least accepting or declining a voice call to the user.

99. (New) A head-worn personal electronic apparatus recited in claim 88, wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns control of the customized audio output being provided to the user.

100. (New) A head-worn personal electronic apparatus as recited in claim 88,

wherein the head-worn personal electronic apparatus is configured to provide audio alerts to the user via the at least one speaker, and

wherein the audio alerts are dependent on one or more user preference settings.

101. (New) A head-worn personal electronic apparatus as recited in claim 88,

wherein the electronic circuitry is configured to modify the customized audio output signals to be output to the user via the at least one speaker to cancel at least a portion of noise associated with the environment, the modification of the customized audio output signals being dependent at least in part on the environmental audio input picked-up via the second microphone,

wherein, when the head-worn personal electronic apparatus is being worn by the user, the first microphone is positioned to be directed more towards the user's mouth than is the second microphone, and

wherein, when the head-worn personal electronic apparatus is being worn by the user, the second microphone is directed more away from the user's mouth than is the first microphone.

REMARKS

In response to the Office Action, claims 8, 14, 28, 33, 35, 53, 59, 64 and 76 have been amended to further clarify the subject matter regarded as the invention. New claims 88-101 have been added to the application. Claims 1-4 and 6-101 are pending. Reconsideration of the application is respectfully requested based on the following remarks.

OBJECTION TO THE DRAWINGS

In the Office Action, the Examiner objected to the drawings for not showing features associated with claims 6, 33, 52, 64, 74 and 85. Applicant respectfully disagrees and submits that the drawings are sufficiently compliant with 37 CFR 1.121(d). In this regard, as examples, Applicant notes that Figure 81C denotes a touch-sensitive surface, and Figures 78-79 denote a force sensor. Accordingly, it is respectfully requested that the Examiner withdraw the objection to the drawings.

REJECTION OF CLAIMS 6-15, 33-35, 52-57 AND 85-87 UNDER 35 USC 112, FIRST PARAGRAPH

In the Office Action, the Examiner rejected claims 6-15, 33-35, 52-57 and 85-87 under the first paragraph of 35 USC 112 as failing to comply with the written description requirement. Applicant respectfully disagrees. On page 4 of the Office Action, the Examiner alleges that the claim terms “a touch sensitive surface” and “a force sensor” are not described in the present specification. Applicant respectfully disagrees and submits that these claim terms are adequately disclosed in the written description provided in the present specification and drawings. In this regard, as examples, Applicant notes that paragraphs [0371], [0748], [0749] and [0757] provide written support for “a touch sensitive surface” and paragraphs [0742] and [0743] provide written support for “a force sensor.” Accordingly, it is respectfully requested that the Examiner withdraw the rejection of claims 6-15, 33-35, 52-57 and 85-87 under the first paragraph of 35 USC 112.

**REJECTION OF CLAIMS 6-15, 33-35, 52-57 AND 85-87 UNDER 35 USC 112,
SECOND PARAGRAPH**

In the Office Action, the Examiner rejected claims 6-15, 33-35, 52-57 and 85-87 under the second paragraph of 35 USC 112 as being indefinite. Applicant respectfully disagrees. This rejection is premised on the same basis as the above rejection and is respectfully traversed for at least the one or more reasons noted above. Accordingly, it is respectfully requested that the Examiner withdraw the rejection of claims 6-15, 33-35, 52-57 and 85-87 under the second paragraph of 35 USC 112.

SUMMARY

It is submitted that both the rejections under 35 USC 112 have been traversed. It is also submitted that the objection to the drawings has been likewise traversed. Therefore, it is submitted that all claims are in condition for allowance.

Reconsideration of the application and an early Notice of Allowance are earnestly solicited. If there are any issues remaining which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned representative at the telephone number listed below.

Respectfully submitted,

/C. Douglass Thomas/

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Reg. No. 32,947

(650) 903-9200, x103

<i>Search Notes</i> 	Application/Control No. 18/144,557	Applicant(s)/Patent Under Reexamination Howell et al.
	Examiner JIE LEI	Art Unit 2872

CPC - Searched*		
Symbol	Date	Examiner
G02C 1/00, 11/10, 11/06, 5/001, 5/02, 5/14, 5/22, 5/146	08/21/2023	JL
G02B 27/01, 27/017, 27/0176	08/21/2023	JL
update search	11/21/2023	JL
update search	01/04/2024	JL

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
351	158, 41, 111, 121, 123, 124	08/21/2023	JL
359	13, 629-633	08/21/2023	JL
381	381, 327, 328, 370, 380	08/21/2023	JL
	update search	11/21/2023	JL
	update search	01/04/2024	JL

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

	/JIE LEI/ Primary Examiner, Art Unit 2872
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<i>Search Notes</i> 	Application/Control No. 18/144,557	Applicant(s)/Patent Under Reexamination Howell et al.
	Examiner JIE LEI	Art Unit 2872

Search Notes		
Search Notes	Date	Examiner
G02C 1/00, 11/10, 11/06, 5/001, 5/02, 5/14, 5/22, 5/146 class and text search	08/21/2023	JL
G02B 27/01, 27/017, 27/0176 class and text search	08/21/2023	JL
351/158, 41, 111, 121, 123, 124 class and text search	08/21/2023	JL
359/13, 629-633 class and text search	08/21/2023	JL
381/381, 327, 328, 370, 380 class and text search	08/21/2023	JL
Inventor name search	08/21/2023	JL
NPL and foreign search (google scholar, google patent, globaldossier and Dialog search)	08/21/2023	JL
PE2E text search	08/21/2023	JL
Similarity search	08/21/2023	JL
update search	11/21/2023	JL
update search	01/04/2024	JL

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
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	update search	11/21/2023	JL
	update search	01/04/2024	JL

	/JIE LEI/ Primary Examiner, Art Unit 2872
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AFCP 2.0 Decision

Application No.

18/144,557

Applicant(s)

Howell et al.

Examiner

JIE LEI

Art Unit

2872

AIA (FITF) Status

No

This is in response to the After Final Consideration Pilot request filed 18 December 2023.

1. **Improper Request** – The AFCP 2.0 request is improper for the following reason(s) and the after final amendment submitted with the request will be treated under pre-pilot procedure.

- ☐ An AFCP 2.0 request form PTO/SB/434 (or equivalent document) was not submitted.
- ☐ A non-broadening amendment to at least one independent claim was not submitted.
- ☐ The request is not the first proper AFCP 2.0 request submitted in response to the most recent final rejection.
- ☐ Other: _____

2. **Proper Request**

- A. After final amendment submitted with the request will not be treated under AFCP 2.0.

The after final amendment cannot be reviewed and a search conducted within the guidelines of the pilot program.

- ☐ The after final amendment will be treated under pre-pilot procedure.

- B. Updated search and/or completed additional consideration.

The examiner performed an updated search and/or completed additional consideration of the after final amendment within the time authorized for the pilot program. The result(s) of the updated search and/or completed additional consideration are:

- ☒ 1. All of the rejections in the most recent final Office action are overcome and a Notice of Allowance is issued herewith.
- ☐ 2. The after final amendment would not overcome all of the rejections in the most recent final Office action. See attached interview summary for further details.
- ☐ 3. The after final amendment was reviewed, and it raises a new issue(s). See attached interview summary for further details.
- ☐ 4. The after final amendment raises new issues, but would overcome all of the rejections in the most recent final Office action. A decision on determining allowability could not be made within the guidelines of the pilot. See attached interview summary for further details, including any newly discovered prior art.
- ☐ 5. Other: _____

Examiner Note: Please attach an interview summary when necessary as described above.

Issue Classification 	Application/Control No. 18/144,557	Applicant(s)/Patent Under Reexamination Howell et al.
	Examiner JIE LEI	Art Unit 2872

CPC						
Symbol					Type	Version
G02C	/	11	/	10	F	2013-01-01
G02C	/	5	/	001	I	2013-01-01
G02C	/	11	/	06	I	2013-01-01
G02C	/	5	/	14	I	2013-01-01

CPC Combination Sets				
Symbol	Type	Set	Ranking	Version
/				

NONE (Assistant Examiner)		Total Claims Allowed: 1	
/JIE LEI/ Primary Examiner, Art Unit 2872 (Primary Examiner)		04 January 2024 (Date)	O.G. Print Claim(s) 1
			O.G. Print Figure 1

Issue Classification 	Application/Control No. 18/144,557	Applicant(s)/Patent Under Reexamination Howell et al.
	Examiner JIE LEI	Art Unit 2872

INTERNATIONAL CLASSIFICATION			
CLAIMED			
G02C	/	11	/ 00
G02C	/	5	/ 00
G02C	/	11	/ 06
G02C	/	5	/ 14
NON-CLAIMED			
	/		/

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS
351	158

CROSS REFERENCES(S)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 1	
/JIE LEI/ Primary Examiner, Art Unit 2872 (Primary Examiner) _____ (Date) _____		O.G. Print Claim(s) 1	O.G. Print Figure 1

Issue Classification 	Application/Control No. 18/144,557	Applicant(s)/Patent Under Reexamination Howell et al.
	Examiner JIE LEI	Art Unit 2872

☐ Claims renumbered in the same order as presented by applicant
 ☐ CPA
 ☒ T.D.
 ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
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26	13	39	26	52	39	65	52	78	65	7	78	90	91		

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 1	
/JIE LEI/ Primary Examiner, Art Unit 2872 (Primary Examiner) _____ (Date) 04 January 2024		O.G. Print Claim(s) 1	O.G. Print Figure 1

U.S. Patent and Trademark Office

Part of Paper No.: 20240104

Web Search History

date, time	web site	search string
1/4/2024 12:00:01 PM	Google Images	audio smart glasses
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date, time	web site	search string
1/4/2024 12:29:00 PM	Google Scholar	(subscriber) (computer) (expert) (technical) (home)
1/4/2024 12:29:00 PM	Google Patents	Search Term 1 (subscriber) (computer) (expert) (technical) (home) Before Priority Date: priority:20040527
1/4/2024 12:29:01 PM	Google Scholar	subscriber computer expert technical home
1/4/2024 12:29:01 PM	Google Patents	Search Term 1 subscriber Search Term 2 computer Search Term 3 expert Search Term 4 technical Search Term 5 home Before Priority Date: priority:20040527
1/4/2024 12:29:16 PM	Google Images	Audio speakers of smart glasses review
1/4/2024 12:29:16 PM	Google	Audio speakers of smart glasses review
1/4/2024 12:29:27 PM	Google Images	Audio sunglasses
1/4/2024 12:29:27 PM	Google	Audio sunglasses
1/4/2024 12:29:37 PM	Google Images	Bluetooth Sunglasses
1/4/2024 12:29:37 PM	Google	Bluetooth Sunglasses
1/4/2024 12:50:31 PM	Google Scholar	(eyeglasses) (wireless) (arms) (wireless communication) (frame)
1/4/2024 12:50:31 PM	Google Patents	Search Term 1 (eyeglasses) (wireless) (arms) (wireless communication) (frame) Before Priority Date: priority:20030415

date, time	web site	search string
1/4/2024 12:50:33 PM	Google Scholar	eyeglasses wireless arms wireless communication frame
1/4/2024 12:50:33 PM	Google Patents	Search Term 1 eyeglasses Search Term 2 wireless Search Term 3 arms Search Term 4 wireless communication Search Term 5 frame Before Priority Date: priority:20030415
1/4/2024 12:50:38 PM	Google Scholar	(glasses) (temple) (clock) (pair) (lens holder)
1/4/2024 12:50:40 PM	Google Scholar	glasses temple clock pair lens holder
1/4/2024 12:50:40 PM	Google Patents	Search Term 1 glasses Search Term 2 temple Search Term 3 clock Search Term 4 pair Search Term 5 lens holder Before Priority Date: priority:20031009
1/4/2024 12:50:46 PM	Google Scholar	(glasses) (pair) (connector) (temple) (recited)
1/4/2024 12:50:47 PM	Google Scholar	glasses pair connector temple recited

date, time	web site	search string
1/4/2024 12:50:47 PM	Google Patents	Search Term 1 glasses Search Term 2 pair Search Term 3 connector Search Term 4 temple Search Term 5 recited Before Priority Date: priority:20031009
1/4/2024 12:50:54 PM	Google Scholar	(audio) (eyeglasses) (recited) (frame assembly) (mass storage)
1/4/2024 12:50:54 PM	Google Patents	Search Term 1 (audio) (eyeglasses) (recited) (frame assembly) (mass storage) Before Priority Date: priority:20040811
1/4/2024 12:50:56 PM	Google Scholar	audio eyeglasses recited frame assembly mass storage
1/4/2024 12:50:56 PM	Google Patents	Search Term 1 audio Search Term 2 eyeglasses Search Term 3 recited Search Term 4 frame assembly Search Term 5 mass storage Before Priority Date: priority:20040811
1/4/2024 12:51:03 PM	Google Scholar	(picture) (pictures) (image) (bridging) (series)
1/4/2024 12:51:03 PM	Google Patents	Search Term 1 (picture) (pictures) (image) (bridging) (series) Before Priority Date: priority:20010123
1/4/2024 12:51:05 PM	Google Scholar	picture pictures image bridging series

date, time	web site	search string
1/4/2024 12:51:05 PM	Google Patents	Search Term 1 picture Search Term 2 pictures Search Term 3 image Search Term 4 bridging Search Term 5 series Before Priority Date: priority:20010123
1/4/2024 12:51:14 PM	Google Scholar	(mode) (portable telephone) (noncommunicative) (functioning) (communicative)
1/4/2024 12:51:14 PM	Google Patents	Search Term 1 (mode) (portable telephone) (noncommunicative) (functioning) (communicative) Before Priority Date: priority:20000825
1/4/2024 12:51:15 PM	Google Scholar	mode portable telephone noncommunicative functioning communicative
1/4/2024 12:51:15 PM	Google Patents	Search Term 1 mode Search Term 2 portable telephone Search Term 3 noncommunicative Search Term 4 functioning Search Term 5 communicative Before Priority Date: priority:20000825
1/4/2024 12:51:21 PM	Google Scholar	(tempo) (music) (recited) (event) (song)
1/4/2024 12:51:21 PM	Google Patents	Search Term 1 (tempo) (music) (recited) (event) (song) Before Priority Date: priority:20041124
1/4/2024 12:51:22 PM	Google Scholar	tempo music recited event song

date, time	web site	search string
1/4/2024 12:51:22 PM	Google Patents	Search Term 1 tempo Search Term 2 music Search Term 3 recited Search Term 4 event Search Term 5 song Before Priority Date: priority:20041124
1/4/2024 12:51:29 PM	Google Scholar	(audio) (source) (interface) (wearer) (audio device)
1/4/2024 12:51:29 PM	Google Patents	Search Term 1 (audio) (source) (interface) (wearer) (audio device) Before Priority Date: priority:20041222
1/4/2024 12:51:31 PM	Google Scholar	audio source interface wearer audio device
1/4/2024 12:51:31 PM	Google Patents	Search Term 1 audio Search Term 2 source Search Term 3 interface Search Term 4 wearer Search Term 5 audio device Before Priority Date: priority:20041222
1/4/2024 1:23:45 PM	Google Scholar	(microphone) (eyeglass) (telephone) (arm) (speaker)
1/4/2024 1:23:45 PM	Google Patents	Search Term 1 (microphone) (eyeglass) (telephone) (arm) (speaker) Before Priority Date: priority:20031223
1/4/2024 1:23:47 PM	Google Scholar	microphone eyeglass telephone arm speaker

date, time	web site	search string
1/4/2024 1:23:47 PM	Google Patents	Search Term 1 microphone Search Term 2 eyeglass Search Term 3 telephone Search Term 4 arm Search Term 5 speaker Before Priority Date: priority:20031223
1/4/2024 1:23:54 PM	Google Scholar	(signal) (carrier wave) (frequency) (wave signal) (diaphragm)
1/4/2024 1:23:54 PM	Google Patents	Search Term 1 (signal) (carrier wave) (frequency) (wave signal) (diaphragm) Before Priority Date: priority:20031218
1/4/2024 1:23:56 PM	Google Scholar	signal carrier wave frequency wave signal diaphragm
1/4/2024 1:23:56 PM	Google Patents	Search Term 1 signal Search Term 2 carrier wave Search Term 3 frequency Search Term 4 wave signal Search Term 5 diaphragm Before Priority Date: priority:20031218
1/4/2024 1:24:04 PM	Google Scholar	(glasses) (pair) (temple) (camera) (connector)
1/4/2024 1:24:04 PM	Google Patents	Search Term 1 (glasses) (pair) (temple) (camera) (connector) Before Priority Date: priority:20031009
1/4/2024 1:24:06 PM	Google Scholar	glasses pair temple camera connector

date, time	web site	search string
1/4/2024 1:24:06 PM	Google Patents	Search Term 1 glasses Search Term 2 pair Search Term 3 temple Search Term 4 camera Search Term 5 connector Before Priority Date: priority:20031009
1/4/2024 1:24:12 PM	Google Scholar	(liquid crystal) (crystal panel) (polarized light) (polarizer) (pixel)
1/4/2024 1:24:12 PM	Google Patents	Search Term 1 (liquid crystal) (crystal panel) (polarized light) (polarizer) (pixel) Before Priority Date: priority:20050711
1/4/2024 1:24:14 PM	Google Scholar	liquid crystal crystal panel polarized light polarizer pixel
1/4/2024 1:24:14 PM	Google Patents	Search Term 1 liquid crystal Search Term 2 crystal panel Search Term 3 polarized light Search Term 4 polarizer Search Term 5 pixel Before Priority Date: priority:20050711
1/4/2024 1:24:26 PM	Google Scholar	(temple) (glasses) (pair) (recited) (electrical components)
1/4/2024 1:24:26 PM	Google Patents	Search Term 1 (temple) (glasses) (pair) (recited) (electrical components) Before Priority Date: priority:20031009
1/4/2024 1:24:27 PM	Google Scholar	temple glasses pair recited electrical components

date, time	web site	search string
1/4/2024 1:24:27 PM	Google Patents	Search Term 1 temple Search Term 2 glasses Search Term 3 pair Search Term 4 recited Search Term 5 electrical components Before Priority Date: priority:20031009
1/4/2024 1:24:35 PM	Google Scholar	(biometric) (equipment) (scanner) (operator) (authorization signal)
1/4/2024 1:24:35 PM	Google Patents	Search Term 1 (biometric) (equipment) (scanner) (operator) (authorization signal) Before Priority Date: priority:20050331
1/4/2024 1:24:37 PM	Google Scholar	biometric equipment scanner operator authorization signal
1/4/2024 1:24:37 PM	Google Patents	Search Term 1 biometric Search Term 2 equipment Search Term 3 scanner Search Term 4 operator Search Term 5 authorization signal Before Priority Date: priority:20050331
1/4/2024 1:24:45 PM	Google Scholar	(hat) (module) (brim) (electronic module) (recited)
1/4/2024 1:24:45 PM	Google Patents	Search Term 1 (hat) (module) (brim) (electronic module) (recited) Before Priority Date: priority:20040415
1/4/2024 1:24:46 PM	Google Scholar	hat module brim electronic module recited

date, time	web site	search string
1/4/2024 1:24:46 PM	Google Patents	Search Term 1 hat Search Term 2 module Search Term 3 brim Search Term 4 electronic module Search Term 5 recited Before Priority Date: priority:20040415
1/4/2024 1:24:53 PM	Google Scholar	(parametric) (signal) (parametric ultrasonic) (electro) (emitter)
1/4/2024 1:24:53 PM	Google Patents	Search Term 1 (parametric) (signal) (parametric ultrasonic) (electro) (emitter) Before Priority Date: priority:20031023
1/4/2024 1:24:54 PM	Google Scholar	parametric signal parametric ultrasonic electro emitter
1/4/2024 1:24:54 PM	Google Patents	Search Term 1 parametric Search Term 2 signal Search Term 3 parametric ultrasonic Search Term 4 electro Search Term 5 emitter Before Priority Date: priority:20031023
1/4/2024 2:30:32 PM	Google Scholar	(recited) (user) (binocular viewer) (binocular) (viewer)
1/4/2024 2:30:32 PM	Google Patents	Search Term 1 (recited) (user) (binocular viewer) (binocular) (viewer) Before Priority Date: priority:20060227
1/4/2024 2:30:33 PM	Google Scholar	recited user binocular viewer binocular viewer

date, time	web site	search string
1/4/2024 2:30:33 PM	Google Patents	Search Term 1 recited Search Term 2 user Search Term 3 binocular viewer Search Term 4 binocular Search Term 5 viewer Before Priority Date: priority:20060227
1/4/2024 2:30:41 PM	Google Scholar	(user) (foot) (routine) (during) (value)
1/4/2024 2:30:41 PM	Google Patents	Search Term 1 (user) (foot) (routine) (during) (value) Before Priority Date: priority:19971002
1/4/2024 2:30:43 PM	Google Scholar	user foot routine during value
1/4/2024 2:30:43 PM	Google Patents	Search Term 1 user Search Term 2 foot Search Term 3 routine Search Term 4 during Search Term 5 value Before Priority Date: priority:19971002
1/4/2024 2:30:48 PM	Google Scholar	(parametric) (listener) (ultrasonic) (signal) (parametric ultrasonic)
1/4/2024 2:30:48 PM	Google Patents	Search Term 1 (parametric) (listener) (ultrasonic) (signal) (parametric ultrasonic) Before Priority Date: priority:20031008
1/4/2024 2:30:50 PM	Google Scholar	parametric listener ultrasonic signal parametric ultrasonic

date, time	web site	search string
1/4/2024 2:30:50 PM	Google Patents	Search Term 1 parametric Search Term 2 listener Search Term 3 ultrasonic Search Term 4 signal Search Term 5 parametric ultrasonic Before Priority Date: priority:20031008
1/4/2024 2:30:56 PM	Google Scholar	(items) (proximity threshold) (master controller) (tagged) (item)
1/4/2024 2:30:56 PM	Google Patents	Search Term 1 (items) (proximity threshold) (master controller) (tagged) (item) Before Priority Date: priority:20040625
1/4/2024 2:30:58 PM	Google Scholar	items proximity threshold master controller tagged item
1/4/2024 2:30:58 PM	Google Patents	Search Term 1 items Search Term 2 proximity threshold Search Term 3 master controller Search Term 4 tagged Search Term 5 item Before Priority Date: priority:20040625
1/4/2024 2:31:09 PM	Google Scholar	(eyeglasses) (wire) (dep) (electronic) (temple)
1/4/2024 2:31:09 PM	Google Patents	Search Term 1 (eyeglasses) (wire) (dep) (electronic) (temple) Before Priority Date: priority:20051213
1/4/2024 2:31:10 PM	Google Scholar	eyeglasses wire dep electronic temple

date, time	web site	search string
1/4/2024 2:31:10 PM	Google Patents	Search Term 1 eyeglasses Search Term 2 wire Search Term 3 dep Search Term 4 electronic Search Term 5 temple Before Priority Date: priority:20051213
1/4/2024 2:31:19 PM	Google Scholar	(temple) (wireless communication) (glasses) (lens frame) (adjustable handle)
1/4/2024 2:31:19 PM	Google Patents	Search Term 1 (temple) (wireless communication) (glasses) (lens frame) (adjustable handle) Before Priority Date: priority:20040116
1/4/2024 2:31:21 PM	Google Scholar	temple wireless communication glasses lens frame adjustable handle
1/4/2024 2:31:21 PM	Google Patents	Search Term 1 temple Search Term 2 wireless communication Search Term 3 glasses Search Term 4 lens frame Search Term 5 adjustable handle Before Priority Date: priority:20040116
1/4/2024 2:53:17 PM	Google Scholar	(accessory device) (recited) (request) (accessory) (readable medium)
1/4/2024 2:53:17 PM	Google Patents	Search Term 1 (accessory device) (recited) (request) (accessory) (readable medium) Before Priority Date: priority:20060522

date, time	web site	search string
1/4/2024 2:53:18 PM	Google Scholar	accessory device recited request accessory readable medium
1/4/2024 2:53:18 PM	Google Patents	Search Term 1 accessory device Search Term 2 recited Search Term 3 request Search Term 4 accessory Search Term 5 readable medium Before Priority Date: priority:20060522
1/4/2024 2:53:25 PM	Google Scholar	(workout) (electronic device) (portable electronic) (screen) (data)
1/4/2024 2:53:25 PM	Google Patents	Search Term 1 (workout) (electronic device) (portable electronic) (screen) (data) Before Priority Date: priority:20060522
1/4/2024 2:53:27 PM	Google Scholar	workout electronic device portable electronic screen data
1/4/2024 2:53:27 PM	Google Patents	Search Term 1 workout Search Term 2 electronic device Search Term 3 portable electronic Search Term 4 screen Search Term 5 data Before Priority Date: priority:20060522
1/4/2024 2:53:33 PM	Google Scholar	(physiologic data) (host computer) (media player) (user) (portable device)

date, time	web site	search string
1/4/2024 2:53:33 PM	Google Patents	Search Term 1 (physiologic data) (host computer) (media player) (user) (portable device) Before Priority Date: priority:20060522
1/4/2024 2:53:34 PM	Google Scholar	physiologic data host computer media player user portable device
1/4/2024 2:53:34 PM	Google Patents	Search Term 1 physiologic data Search Term 2 host computer Search Term 3 media player Search Term 4 user Search Term 5 portable device Before Priority Date: priority:20060522
1/4/2024 2:53:44 PM	Google Scholar	(media player) (computer) (portable media) (physiologic data) (user)
1/4/2024 2:53:44 PM	Google Patents	Search Term 1 (media player) (computer) (portable media) (physiologic data) (user) Before Priority Date: priority:20060522
1/4/2024 2:53:45 PM	Google Scholar	media player computer portable media physiologic data user
1/4/2024 2:53:45 PM	Google Patents	Search Term 1 media player Search Term 2 computer Search Term 3 portable media Search Term 4 physiologic data Search Term 5 user Before Priority Date: priority:20060522

date, time	web site	search string
1/4/2024 2:53:53 PM	Google Scholar	(glasses) (user) (condition) (circuitry) (photosensors)
1/4/2024 2:53:53 PM	Google Patents	Search Term 1 (glasses) (user) (condition) (circuitry) (photosensors) Before Priority Date: priority:19980918
1/4/2024 2:53:54 PM	Google Scholar	glasses user condition circuitry photosensors
1/4/2024 2:53:54 PM	Google Patents	Search Term 1 glasses Search Term 2 user Search Term 3 condition Search Term 4 circuitry Search Term 5 photosensors Before Priority Date: priority:19980918
1/4/2024 2:54:04 PM	Google Patents	Search Term 1 (eyeglasses) (wire) (dep) (electronic) (temple) Before Priority Date: priority:20061213
1/4/2024 2:54:06 PM	Google Patents	Search Term 1 eyeglasses Search Term 2 wire Search Term 3 dep Search Term 4 electronic Search Term 5 temple Before Priority Date: priority:20061213
1/4/2024 2:54:40 PM	Google Scholar	electrical components eyewear system recited electrical tethered

date, time	web site	search string
1/4/2024 2:54:40 PM	Google Patents	Search Term 1 electrical components Search Term 2 eyewear system Search Term 3 recited Search Term 4 electrical Search Term 5 tethered Before Priority Date: priority:20031009
1/4/2024 2:54:46 PM	Google Scholar	(lens system) (regulation element) (transparency regulation) (transparency) (lenses)
1/4/2024 2:54:46 PM	Google Patents	Search Term 1 (lens system) (regulation element) (transparency regulation) (transparency) (lenses) Before Priority Date: priority:20061222
1/4/2024 2:54:48 PM	Google Scholar	lens system regulation element transparency regulation transparency lenses
1/4/2024 2:54:48 PM	Google Patents	Search Term 1 lens system Search Term 2 regulation element Search Term 3 transparency regulation Search Term 4 transparency Search Term 5 lenses Before Priority Date: priority:20061222
1/4/2024 2:54:56 PM	Google Scholar	(video display) (video) (frame) (holder) (display)
1/4/2024 2:54:56 PM	Google Patents	Search Term 1 (video display) (video) (frame) (holder) (display) Before Priority Date: priority:20070102
1/4/2024 2:54:58 PM	Google Scholar	video display video frame holder display

date, time	web site	search string
1/4/2024 2:54:58 PM	Google Patents	Search Term 1 video display Search Term 2 video Search Term 3 frame Search Term 4 holder Search Term 5 display Before Priority Date: priority:20070102
1/4/2024 3:00:16 PM	Google Scholar	(lens) (synchronization) (motion) (motion picture) (clear)
1/4/2024 3:00:16 PM	Google Patents	Search Term 1 (lens) (synchronization) (motion) (motion picture) (clear) Before Priority Date: priority:20010123
1/4/2024 3:00:17 PM	Google Scholar	lens synchronization motion motion picture clear
1/4/2024 3:00:17 PM	Google Patents	Search Term 1 lens Search Term 2 synchronization Search Term 3 motion Search Term 4 motion picture Search Term 5 clear Before Priority Date: priority:20010123
1/4/2024 3:00:25 PM	Google Scholar	(imaging) (outside world) (section) (control) (world information)
1/4/2024 3:00:25 PM	Google Patents	Search Term 1 (imaging) (outside world) (section) (control) (world information) Before Priority Date: priority:20060927
1/4/2024 3:00:26 PM	Google Scholar	imaging outside world section control world information

date, time	web site	search string
1/4/2024 3:00:26 PM	Google Patents	Search Term 1 imaging Search Term 2 outside world Search Term 3 section Search Term 4 control Search Term 5 world information Before Priority Date: priority:20060927
1/4/2024 3:00:32 PM	Google Scholar	(eyewear) (temple) (rfid tag) (glasses) (recited)
1/4/2024 3:00:32 PM	Google Patents	Search Term 1 (eyewear) (temple) (rfid tag) (glasses) (recited) Before Priority Date: priority:20040728
1/4/2024 3:00:34 PM	Google Scholar	eyewear temple rfid tag glasses recited
1/4/2024 3:00:34 PM	Google Patents	Search Term 1 eyewear Search Term 2 temple Search Term 3 rfid tag Search Term 4 glasses Search Term 5 recited Before Priority Date: priority:20040728
1/4/2024 3:00:41 PM	Google Scholar	(substrate) (display) (information) (recording medium) (digital recording)
1/4/2024 3:00:41 PM	Google Patents	Search Term 1 (substrate) (display) (information) (recording medium) (digital recording) Before Priority Date: priority:20000519
1/4/2024 3:00:43 PM	Google Scholar	substrate display information recording medium digital recording

date, time	web site	search string
1/4/2024 3:00:43 PM	Google Patents	Search Term 1 substrate Search Term 2 display Search Term 3 information Search Term 4 recording medium Search Term 5 digital recording Before Priority Date: priority:20000519
1/4/2024 3:00:50 PM	Google Scholar	(light) (illumination system) (adjustment device) (eyewear) (intensity)
1/4/2024 3:00:50 PM	Google Patents	Search Term 1 (light) (illumination system) (adjustment device) (eyewear) (intensity) Before Priority Date: priority:20050715
1/4/2024 3:00:51 PM	Google Scholar	light illumination system adjustment device eyewear intensity
1/4/2024 3:00:51 PM	Google Patents	Search Term 1 light Search Term 2 illumination system Search Term 3 adjustment device Search Term 4 eyewear Search Term 5 intensity Before Priority Date: priority:20050715
1/4/2024 3:01:00 PM	Google Scholar	(calibration) (activity) (monitoring system) (recited) (pace)
1/4/2024 3:01:00 PM	Google Patents	Search Term 1 (calibration) (activity) (monitoring system) (recited) (pace) Before Priority Date: priority:20060522
1/4/2024 3:01:01 PM	Google Scholar	calibration activity monitoring system recited pace

date, time	web site	search string
1/4/2024 3:01:01 PM	Google Patents	Search Term 1 calibration Search Term 2 activity Search Term 3 monitoring system Search Term 4 recited Search Term 5 pace Before Priority Date: priority:20060522
1/4/2024 3:01:08 PM	Google Scholar	(radiation) (frame) (output) (eyewear) (glasses)
1/4/2024 3:01:08 PM	Google Patents	Search Term 1 (radiation) (frame) (output) (eyewear) (glasses) Before Priority Date: priority:20040415
1/4/2024 3:01:10 PM	Google Scholar	radiation frame output eyewear glasses
1/4/2024 3:01:10 PM	Google Patents	Search Term 1 radiation Search Term 2 frame Search Term 3 output Search Term 4 eyewear Search Term 5 glasses Before Priority Date: priority:20040415

Web Search History

date, time	web site	search string
11/21/2023 7:59:44 AM	Google Images	vr glasses
11/21/2023 7:59:44 AM	Google	vr glasses
11/21/2023 8:00:03 AM	Google Images	Best VR headset
11/21/2023 8:00:03 AM	Google	Best VR headset
11/21/2023 8:00:11 AM	Google Images	VR Headset for Phone
11/21/2023 8:00:11 AM	Google	VR Headset for Phone
11/21/2023 8:00:25 AM	Google Images	AR glasses
11/21/2023 8:00:25 AM	Google	AR glasses
11/21/2023 8:01:14 AM	Google Images	audio smart glasses
11/21/2023 8:01:14 AM	Google	audio smart glasses
11/21/2023 8:14:59 AM	Google Scholar	(temple) (glasses) (user) (electrical components) (connector)
11/21/2023 8:14:59 AM	Google Patents	Search Term 1 (temple) (glasses) (user) (electrical components) (connector) Before Priority Date: priority:20040728
11/21/2023 8:15:01 AM	Google Scholar	temple glasses user electrical components connector

date, time	web site	search string
11/21/2023 8:15:01 AM	Google Patents	Search Term 1 temple Search Term 2 glasses Search Term 3 user Search Term 4 electrical components Search Term 5 connector Before Priority Date: priority:20040728
11/21/2023 8:15:53 AM	Google Scholar	(eyeglass) (bracket) (spectacles) (spectacle) (combined)
11/21/2023 8:15:54 AM	Google Scholar	eyeglass bracket spectacles spectacle combined
11/21/2023 8:15:54 AM	Google Patents	Search Term 1 eyeglass Search Term 2 bracket Search Term 3 spectacles Search Term 4 spectacle Search Term 5 combined Before Priority Date: priority:18850623
11/21/2023 8:16:18 AM	Google Scholar	(globes) (globe) (lighting device) (facially) (annular)
11/21/2023 8:16:18 AM	Google Patents	Search Term 1 (globes) (globe) (lighting device) (facially) (annular) Before Priority Date: priority:18990707
11/21/2023 8:16:19 AM	Google Scholar	globes globe lighting device facially annular

date, time	web site	search string
11/21/2023 8:16:19 AM	Google Patents	Search Term 1 globes Search Term 2 globe Search Term 3 lighting device Search Term 4 facially Search Term 5 annular Before Priority Date: priority:18990707
11/21/2023 8:16:28 AM	Google Scholar	(lamp) (frame) (spectacle) (socket) (opening)
11/21/2023 8:16:29 AM	Google Scholar	lamp frame spectacle socket opening
11/21/2023 8:16:29 AM	Google Patents	Search Term 1 lamp Search Term 2 frame Search Term 3 spectacle Search Term 4 socket Search Term 5 opening Before Priority Date: priority:19160412
11/21/2023 8:16:35 AM	Google Scholar	(fuse) (insert) (plug) (slots) (contact)
11/21/2023 8:16:35 AM	Google Patents	Search Term 1 (fuse) (insert) (plug) (slots) (contact) Before Priority Date: priority:19310529
11/21/2023 8:16:36 AM	Google Scholar	fuse insert plug slots contact

date, time	web site	search string
11/21/2023 8:16:36 AM	Google Patents	Search Term 1 fuse Search Term 2 insert Search Term 3 plug Search Term 4 slots Search Term 5 contact Before Priority Date: priority:19310529
11/21/2023 8:16:43 AM	Google Scholar	(head) (bone) (receiver) (hearing) (contact surface)
11/21/2023 8:16:43 AM	Google Patents	Search Term 1 (head) (bone) (receiver) (hearing) (contact surface) Before Priority Date: priority:19330718
11/21/2023 8:16:45 AM	Google Scholar	head bone receiver hearing contact surface
11/21/2023 8:16:45 AM	Google Patents	Search Term 1 head Search Term 2 bone Search Term 3 receiver Search Term 4 hearing Search Term 5 contact surface Before Priority Date: priority:19330718
11/21/2023 8:16:54 AM	Google Scholar	(light) (spectacle frame) (battery) (bulb) (frame)
11/21/2023 8:16:54 AM	Google Patents	Search Term 1 (light) (spectacle frame) (battery) (bulb) (frame) Before Priority Date: priority:19490323
11/21/2023 8:16:55 AM	Google Scholar	light spectacle frame battery bulb frame

date, time	web site	search string
11/21/2023 8:16:55 AM	Google Patents	Search Term 1 light Search Term 2 spectacle frame Search Term 3 battery Search Term 4 bulb Search Term 5 frame Before Priority Date: priority:19490323
11/21/2023 8:17:02 AM	Google Scholar	(hearing aid) (ear) (frame) (spectacles) (parts)
11/21/2023 8:17:04 AM	Google Scholar	hearing aid ear frame spectacles parts
11/21/2023 8:17:04 AM	Google Patents	Search Term 1 hearing aid Search Term 2 ear Search Term 3 frame Search Term 4 spectacles Search Term 5 parts Before Priority Date: priority:19530316
11/21/2023 8:21:32 AM	Google Images	Audio smart glasses review
11/21/2023 8:21:32 AM	Google	Audio smart glasses review
11/21/2023 8:21:47 AM	Google Images	Best audio smart glasses
11/21/2023 8:21:47 AM	Google	Best audio smart glasses
11/21/2023 8:21:51 AM	Google	Best Bluetooth sunglasses
11/21/2023 8:22:42 AM	Google Images	electronic eyeglasses
11/21/2023 8:22:42 AM	Google	electronic eyeglasses

date, time	web site	search string
11/21/2023 8:23:28 AM	Google Images	electric eyeglasses AND speakers
11/21/2023 8:23:28 AM	Google	electric eyeglasses AND speakers
11/21/2023 8:46:48 AM	Google Scholar	(radiation) (crystal) (impedance) (spectral ranges) (exciter)
11/21/2023 8:46:48 AM	Google Patents	Search Term 1 (radiation) (crystal) (impedance) (spectral ranges) (exciter) Before Priority Date: priority:19531013
11/21/2023 8:46:49 AM	Google Scholar	radiation crystal impedance spectral ranges exciter
11/21/2023 8:46:49 AM	Google Patents	Search Term 1 radiation Search Term 2 crystal Search Term 3 impedance Search Term 4 spectral ranges Search Term 5 exciter Before Priority Date: priority:19531013
11/21/2023 8:46:56 AM	Google Scholar	(earphone) (seating) (hearing) (aid) (automatic self)
11/21/2023 8:46:56 AM	Google Patents	Search Term 1 (earphone) (seating) (hearing) (aid) (automatic self) Before Priority Date: priority:19541018
11/21/2023 8:46:57 AM	Google Scholar	earphone seating hearing aid automatic self

date, time	web site	search string
11/21/2023 8:46:57 AM	Google Patents	Search Term 1 earphone Search Term 2 seating Search Term 3 hearing Search Term 4 aid Search Term 5 automatic self Before Priority Date: priority:19541018
11/21/2023 8:47:04 AM	Google Scholar	(mount) (temple) (temples) (hinge) (ophthalmic)
11/21/2023 8:47:04 AM	Google Patents	Search Term 1 (mount) (temple) (temples) (hinge) (ophthalmic) Before Priority Date: priority:19550804
11/21/2023 8:47:05 AM	Google Scholar	mount temple temples hinge ophthalmic
11/21/2023 8:47:05 AM	Google Patents	Search Term 1 mount Search Term 2 temple Search Term 3 temples Search Term 4 hinge Search Term 5 ophthalmic Before Priority Date: priority:19550804
11/21/2023 8:47:12 AM	Google Scholar	(hearing aid) (temples) (temple) (circuit) (recess)
11/21/2023 8:47:12 AM	Google Patents	Search Term 1 (hearing aid) (temples) (temple) (circuit) (recess) Before Priority Date: priority:19551208
11/21/2023 8:47:13 AM	Google Scholar	hearing aid temples temple circuit recess

date, time	web site	search string
11/21/2023 8:47:13 AM	Google Patents	Search Term 1 hearing aid Search Term 2 temples Search Term 3 temple Search Term 4 circuit Search Term 5 recess Before Priority Date: priority:19551208
11/21/2023 8:53:26 AM	Google Scholar	(hearing aid) (temple) (temples) (microphone) (housing)
11/21/2023 8:53:26 AM	Google Patents	Search Term 1 (hearing aid) (temple) (temples) (microphone) (housing) Before Priority Date: priority:19570225
11/21/2023 8:53:27 AM	Google Scholar	hearing aid temple temples microphone housing
11/21/2023 8:53:27 AM	Google Patents	Search Term 1 hearing aid Search Term 2 temple Search Term 3 temples Search Term 4 microphone Search Term 5 housing Before Priority Date: priority:19570225
11/21/2023 8:53:33 AM	Google Scholar	(lamp) (recess) (frame) (recesses) (spectacles)
11/21/2023 8:53:33 AM	Google Patents	Search Term 1 (lamp) (recess) (frame) (recesses) (spectacles) Before Priority Date: priority:19570412
11/21/2023 8:53:35 AM	Google Scholar	lamp recess frame recesses spectacles

date, time	web site	search string
11/21/2023 8:53:35 AM	Google Patents	Search Term 1 lamp Search Term 2 recess Search Term 3 frame Search Term 4 recesses Search Term 5 spectacles Before Priority Date: priority:19570412
11/21/2023 8:53:41 AM	Google Scholar	(optical device) (lens) (illuminated optical) (frame) (bulbs)
11/21/2023 8:53:41 AM	Google Patents	Search Term 1 (optical device) (lens) (illuminated optical) (frame) (bulbs) Before Priority Date: priority:19590508
11/21/2023 8:53:43 AM	Google Scholar	optical device lens illuminated optical frame bulbs
11/21/2023 8:53:43 AM	Google Patents	Search Term 1 optical device Search Term 2 lens Search Term 3 illuminated optical Search Term 4 frame Search Term 5 bulbs Before Priority Date: priority:19590508
11/21/2023 8:53:50 AM	Google Scholar	(output) (integrator) (sunburn) (switch) (solar radiation)
11/21/2023 8:53:50 AM	Google Patents	Search Term 1 (output) (integrator) (sunburn) (switch) (solar radiation) Before Priority Date: priority:19690804
11/21/2023 8:53:51 AM	Google Scholar	output integrator sunburn switch solar radiation

date, time	web site	search string
11/21/2023 8:53:51 AM	Google Patents	Search Term 1 output Search Term 2 integrator Search Term 3 sunburn Search Term 4 switch Search Term 5 solar radiation Before Priority Date: priority:19690804
11/21/2023 8:55:40 AM	Google Scholar	(spectacles) (ultraviolet) (pair) (bodies) (wearer)
11/21/2023 8:55:40 AM	Google Patents	Search Term 1 (spectacles) (ultraviolet) (pair) (bodies) (wearer) Before Priority Date: priority:19691217
11/21/2023 8:55:41 AM	Google Scholar	spectacles ultraviolet pair bodies wearer
11/21/2023 8:55:41 AM	Google Patents	Search Term 1 spectacles Search Term 2 ultraviolet Search Term 3 pair Search Term 4 bodies Search Term 5 wearer Before Priority Date: priority:19691217
11/21/2023 8:55:47 AM	Google Scholar	(temple) (tip) (electrical) (members) (engageable)
11/21/2023 8:55:47 AM	Google Patents	Search Term 1 (temple) (tip) (electrical) (members) (engageable) Before Priority Date: priority:19710318
11/21/2023 8:55:48 AM	Google Scholar	temple tip electrical members engageable

date, time	web site	search string
11/21/2023 8:55:48 AM	Google Patents	Search Term 1 temple Search Term 2 tip Search Term 3 electrical Search Term 4 members Search Term 5 engageable Before Priority Date: priority:19710318
11/21/2023 8:55:54 AM	Google Scholar	(polarization direction) (images) (stereoscopic display) (vibration) (light)
11/21/2023 8:55:54 AM	Google Patents	Search Term 1 (polarization direction) (images) (stereoscopic display) (vibration) (light) Before Priority Date: priority:19730511
11/21/2023 8:55:55 AM	Google Scholar	polarization direction images stereoscopic display vibration light
11/21/2023 8:55:55 AM	Google Patents	Search Term 1 polarization direction Search Term 2 images Search Term 3 stereoscopic display Search Term 4 vibration Search Term 5 light Before Priority Date: priority:19730511
11/21/2023 8:56:02 AM	Google Scholar	(clip) (contacts) (frame) (reading aid) (pair)
11/21/2023 8:56:02 AM	Google Patents	Search Term 1 (clip) (contacts) (frame) (reading aid) (pair) Before Priority Date: priority:19740430
11/21/2023 8:56:03 AM	Google Scholar	clip contacts frame reading aid pair

date, time	web site	search string
11/21/2023 8:56:03 AM	Google Patents	Search Term 1 clip Search Term 2 contacts Search Term 3 frame Search Term 4 reading aid Search Term 5 pair Before Priority Date: priority:19740430
11/21/2023 8:56:09 AM	Google Scholar	(signal) (patrons) (audio) (output signal) (frequency)
11/21/2023 8:56:09 AM	Google Patents	Search Term 1 (signal) (patrons) (audio) (output signal) (frequency) Before Priority Date: priority:19780410
11/21/2023 8:56:11 AM	Google Scholar	signal patrons audio output signal frequency
11/21/2023 8:56:11 AM	Google Patents	Search Term 1 signal Search Term 2 patrons Search Term 3 audio Search Term 4 output signal Search Term 5 frequency Before Priority Date: priority:19780410
11/21/2023 9:08:29 AM	Google Scholar	(matrix) (led) (sequentially) (clock signal) (pair)
11/21/2023 9:08:29 AM	Google Patents	Search Term 1 (matrix) (led) (sequentially) (clock signal) (pair) Before Priority Date: priority:19781027
11/21/2023 9:08:30 AM	Google Scholar	matrix led sequentially clock signal pair

date, time	web site	search string
11/21/2023 9:08:30 AM	Google Patents	Search Term 1 matrix Search Term 2 led Search Term 3 sequentially Search Term 4 clock signal Search Term 5 pair Before Priority Date: priority:19781027
11/21/2023 9:08:36 AM	Google Scholar	(cell) (subject) (ultraviolet light) (ultraviolet) (predetermined value)
11/21/2023 9:08:37 AM	Google Scholar	cell subject ultraviolet light ultraviolet predetermined value
11/21/2023 9:08:37 AM	Google Patents	Search Term 1 cell Search Term 2 subject Search Term 3 ultraviolet light Search Term 4 ultraviolet Search Term 5 predetermined value Before Priority Date: priority:19781030
11/21/2023 9:08:43 AM	Google Scholar	(radiation) (exposure) (color) (unit) (temperature)
11/21/2023 9:08:43 AM	Google Patents	Search Term 1 (radiation) (exposure) (color) (unit) (temperature) Before Priority Date: priority:19790511
11/21/2023 9:08:44 AM	Google Scholar	radiation exposure color unit temperature

date, time	web site	search string
11/21/2023 9:08:44 AM	Google Patents	Search Term 1 radiation Search Term 2 exposure Search Term 3 color Search Term 4 unit Search Term 5 temperature Before Priority Date: priority:19790511
11/21/2023 9:08:50 AM	Google Scholar	(frame) (light emitting) (eyeglasses) (pair) (switch)
11/21/2023 9:08:50 AM	Google Patents	Search Term 1 (frame) (light emitting) (eyeglasses) (pair) (switch) Before Priority Date: priority:19791129
11/21/2023 9:08:52 AM	Google Scholar	frame light emitting eyeglasses pair switch
11/21/2023 9:08:52 AM	Google Patents	Search Term 1 frame Search Term 2 light emitting Search Term 3 eyeglasses Search Term 4 pair Search Term 5 switch Before Priority Date: priority:19791129
11/21/2023 9:08:57 AM	Google Scholar	(clothing) (speaker) (article) (enclosure) (pin)
11/21/2023 9:08:59 AM	Google Scholar	clothing speaker article enclosure pin

date, time	web site	search string
11/21/2023 9:08:59 AM	Google Patents	Search Term 1 clothing Search Term 2 speaker Search Term 3 article Search Term 4 enclosure Search Term 5 pin Before Priority Date: priority:19800505
11/21/2023 9:10:05 AM	Google Scholar	(eyewear) (temple) (temples) (frame) (transceiver)
11/21/2023 9:10:05 AM	Google Patents	Search Term 1 (eyewear) (temple) (temples) (frame) (transceiver) Before Priority Date: priority:20010430
11/21/2023 9:10:07 AM	Google Scholar	eyewear temple temples frame transceiver
11/21/2023 9:10:07 AM	Google Patents	Search Term 1 eyewear Search Term 2 temple Search Term 3 temples Search Term 4 frame Search Term 5 transceiver Before Priority Date: priority:20010430
11/21/2023 9:10:49 AM	Google Scholar	(audio) (audio device) (signal) (transceiver) (user)
11/21/2023 9:10:49 AM	Google Patents	Search Term 1 (audio) (audio device) (signal) (transceiver) (user) Before Priority Date: priority:20020726
11/21/2023 9:10:50 AM	Google Scholar	audio audio device signal transceiver user

date, time	web site	search string
11/21/2023 9:10:50 AM	Google Patents	Search Term 1 audio Search Term 2 audio device Search Term 3 signal Search Term 4 transceiver Search Term 5 user Before Priority Date: priority:20020726
11/21/2023 9:11:03 AM	Google Scholar	(support) (wearer) (eyeglass) (frame) (audio)
11/21/2023 9:11:03 AM	Google Patents	Search Term 1 (support) (wearer) (eyeglass) (frame) (audio) Before Priority Date: priority:20000602
11/21/2023 9:11:04 AM	Google Scholar	support wearer eyeglass frame audio
11/21/2023 9:11:04 AM	Google Patents	Search Term 1 support Search Term 2 wearer Search Term 3 eyeglass Search Term 4 frame Search Term 5 audio Before Priority Date: priority:20000602
11/21/2023 9:11:12 AM	Google Scholar	(eyewear) (frame) (temple) (radio frequency) (frequency transceiver)
11/21/2023 9:11:12 AM	Google Patents	Search Term 1 (eyewear) (frame) (temple) (radio frequency) (frequency transceiver) Before Priority Date: priority:20010430
11/21/2023 9:11:13 AM	Google Scholar	eyewear frame temple radio frequency frequency transceiver

date, time	web site	search string
11/21/2023 9:11:13 AM	Google Patents	Search Term 1 eyewear Search Term 2 frame Search Term 3 temple Search Term 4 radio frequency Search Term 5 frequency transceiver Before Priority Date: priority:20010430
11/21/2023 9:28:25 AM	Google Scholar	(cord) (eyeglass) (tethered) (electrical) (recited)
11/21/2023 9:28:25 AM	Google Patents	Search Term 1 (cord) (eyeglass) (tethered) (electrical) (recited) Before Priority Date: priority:20030415
11/21/2023 9:28:26 AM	Google Scholar	cord eyeglass tethered electrical recited
11/21/2023 9:28:26 AM	Google Patents	Search Term 1 cord Search Term 2 eyeglass Search Term 3 tethered Search Term 4 electrical Search Term 5 recited Before Priority Date: priority:20030415
11/21/2023 9:28:38 AM	Google Scholar	(speaker) (audio device) (audio) (support) (wearable wireless)
11/21/2023 9:28:38 AM	Google Patents	Search Term 1 (speaker) (audio device) (audio) (support) (wearable wireless) Before Priority Date: priority:20000602
11/21/2023 9:28:40 AM	Google Scholar	speaker audio device audio support wearable wireless

date, time	web site	search string
11/21/2023 9:28:40 AM	Google Patents	Search Term 1 speaker Search Term 2 audio device Search Term 3 audio Search Term 4 support Search Term 5 wearable wireless Before Priority Date: priority:20000602
11/21/2023 9:28:46 AM	Google Scholar	(radiation) (output) (electronic circuit) (recited) (monitoring)
11/21/2023 9:28:46 AM	Google Patents	Search Term 1 (radiation) (output) (electronic circuit) (recited) (monitoring) Before Priority Date: priority:20040415
11/21/2023 9:28:47 AM	Google Scholar	radiation output electronic circuit recited monitoring
11/21/2023 9:28:47 AM	Google Patents	Search Term 1 radiation Search Term 2 output Search Term 3 electronic circuit Search Term 4 recited Search Term 5 monitoring Before Priority Date: priority:20040415
11/21/2023 9:28:53 AM	Google Scholar	(eyeglasses) (wireless) (arms) (wireless communication) (frame)
11/21/2023 9:28:53 AM	Google Patents	Search Term 1 (eyeglasses) (wireless) (arms) (wireless communication) (frame) Before Priority Date: priority:20030415

date, time	web site	search string
11/21/2023 9:28:54 AM	Google Scholar	eyeglasses wireless arms wireless communication frame
11/21/2023 9:28:54 AM	Google Patents	Search Term 1 eyeglasses Search Term 2 wireless Search Term 3 arms Search Term 4 wireless communication Search Term 5 frame Before Priority Date: priority:20030415
11/21/2023 9:29:00 AM	Google Scholar	(coupled) (microphone) (speaker) (eyeglasses) (frame)
11/21/2023 9:29:00 AM	Google Patents	Search Term 1 (coupled) (microphone) (speaker) (eyeglasses) (frame) Before Priority Date: priority:20010621
11/21/2023 9:29:02 AM	Google Scholar	coupled microphone speaker eyeglasses frame
11/21/2023 9:29:02 AM	Google Patents	Search Term 1 coupled Search Term 2 microphone Search Term 3 speaker Search Term 4 eyeglasses Search Term 5 frame Before Priority Date: priority:20010621
11/21/2023 9:34:51 AM	Google Scholar	(display) (glasses) (display device) (frame) (integrated circuit)
11/21/2023 9:34:51 AM	Google Patents	Search Term 1 (display) (glasses) (display device) (frame) (integrated circuit) Before Priority Date: priority:19811226

date, time	web site	search string
11/21/2023 9:34:52 AM	Google Scholar	display glasses display device frame integrated circuit
11/21/2023 9:34:52 AM	Google Patents	Search Term 1 display Search Term 2 glasses Search Term 3 display device Search Term 4 frame Search Term 5 integrated circuit Before Priority Date: priority:19811226
11/21/2023 9:35:00 AM	Google Scholar	(display) (circuit) (frame) (glasses) (earphone)
11/21/2023 9:35:00 AM	Google Patents	Search Term 1 (display) (circuit) (frame) (glasses) (earphone) Before Priority Date: priority:19811226
11/21/2023 9:35:02 AM	Google Scholar	display circuit frame glasses earphone
11/21/2023 9:35:02 AM	Google Patents	Search Term 1 display Search Term 2 circuit Search Term 3 frame Search Term 4 glasses Search Term 5 earphone Before Priority Date: priority:19811226
11/21/2023 9:35:12 AM	Google Scholar	(cell) (photodetector) (protective glasses) (generator) (glasses according)
11/21/2023 9:35:12 AM	Google Patents	Search Term 1 (cell) (photodetector) (protective glasses) (generator) (glasses according) Before Priority Date: priority:19820706

date, time	web site	search string
11/21/2023 9:35:13 AM	Google Scholar	cell photodetector protective glasses generator glasses according
11/21/2023 9:35:13 AM	Google Patents	Search Term 1 cell Search Term 2 photodetector Search Term 3 protective glasses Search Term 4 generator Search Term 5 glasses according Before Priority Date: priority:19820706
11/21/2023 9:35:24 AM	Google Scholar	(alarm) (microprocessor) (value) (output signal) (photocell)
11/21/2023 9:35:24 AM	Google Patents	Search Term 1 (alarm) (microprocessor) (value) (output signal) (photocell) Before Priority Date: priority:19830519
11/21/2023 9:35:25 AM	Google Scholar	alarm microprocessor value output signal photocell
11/21/2023 9:35:25 AM	Google Patents	Search Term 1 alarm Search Term 2 microprocessor Search Term 3 value Search Term 4 output signal Search Term 5 photocell Before Priority Date: priority:19830519
11/21/2023 9:35:39 AM	Google Scholar	(camera) (cable) (wiring harness) (communication system) (power)

date, time	web site	search string
11/21/2023 9:35:39 AM	Google Patents	Search Term 1 (camera) (cable) (wiring harness) (communication system) (power) Before Priority Date: priority:20040309
11/21/2023 9:35:41 AM	Google Scholar	camera cable wiring harness communication system power
11/21/2023 9:35:41 AM	Google Patents	Search Term 1 camera Search Term 2 cable Search Term 3 wiring harness Search Term 4 communication system Search Term 5 power Before Priority Date: priority:20040309
11/21/2023 9:35:46 AM	Google Scholar	(earphone) (wearer) (eyeglass) (support) (lens)
11/21/2023 9:35:46 AM	Google Patents	Search Term 1 (earphone) (wearer) (eyeglass) (support) (lens) Before Priority Date: priority:20000602
11/21/2023 9:35:48 AM	Google Scholar	earphone wearer eyeglass support lens
11/21/2023 9:35:48 AM	Google Patents	Search Term 1 earphone Search Term 2 wearer Search Term 3 eyeglass Search Term 4 support Search Term 5 lens Before Priority Date: priority:20000602
11/21/2023 9:35:54 AM	Google Scholar	(glasses) (pair) (temple) (camera) (connector)

date, time	web site	search string
11/21/2023 9:35:54 AM	Google Patents	Search Term 1 (glasses) (pair) (temple) (camera) (connector) Before Priority Date: priority:20031009
11/21/2023 9:35:56 AM	Google Scholar	glasses pair temple camera connector
11/21/2023 9:35:56 AM	Google Patents	Search Term 1 glasses Search Term 2 pair Search Term 3 temple Search Term 4 camera Search Term 5 connector Before Priority Date: priority:20031009
11/21/2023 9:36:02 AM	Google Scholar	(user) (glasses) (sensor) (heart) (pair)
11/21/2023 9:36:02 AM	Google Patents	Search Term 1 (user) (glasses) (sensor) (heart) (pair) Before Priority Date: priority:20031009
11/21/2023 9:36:04 AM	Google Scholar	user glasses sensor heart pair
11/21/2023 9:36:04 AM	Google Patents	Search Term 1 user Search Term 2 glasses Search Term 3 sensor Search Term 4 heart Search Term 5 pair Before Priority Date: priority:20031009
11/21/2023 9:58:49 AM	Google Scholar	(eyeglasses) (pair) (activity) (monitoring system) (recited)

date, time	web site	search string
11/21/2023 9:58:49 AM	Google Patents	Search Term 1 (eyeglasses) (pair) (activity) (monitoring system) (recited) Before Priority Date: priority:20031009
11/21/2023 9:58:51 AM	Google Scholar	eyeglasses pair activity monitoring system recited
11/21/2023 9:58:51 AM	Google Patents	Search Term 1 eyeglasses Search Term 2 pair Search Term 3 activity Search Term 4 monitoring system Search Term 5 recited Before Priority Date: priority:20031009
11/21/2023 9:58:57 AM	Google Scholar	(pedometer) (glasses) (pair) (activity) (recited)
11/21/2023 9:58:57 AM	Google Patents	Search Term 1 (pedometer) (glasses) (pair) (activity) (recited) Before Priority Date: priority:20060920
11/21/2023 9:58:58 AM	Google Scholar	pedometer glasses pair activity recited
11/21/2023 9:58:58 AM	Google Patents	Search Term 1 pedometer Search Term 2 glasses Search Term 3 pair Search Term 4 activity Search Term 5 recited Before Priority Date: priority:20060920
11/21/2023 9:59:04 AM	Google Scholar	(piece) (temple) (frame) (utep) (electrical)

date, time	web site	search string
11/21/2023 9:59:04 AM	Google Patents	Search Term 1 (piece) (temple) (frame) (utep) (electrical) Before Priority Date: priority:20061027
11/21/2023 9:59:05 AM	Google Scholar	piece temple frame utep electrical
11/21/2023 9:59:05 AM	Google Patents	Search Term 1 piece Search Term 2 temple Search Term 3 frame Search Term 4 utep Search Term 5 electrical Before Priority Date: priority:20061027
11/21/2023 9:59:11 AM	Google Scholar	(electrical components) (eyewear system) (recited) (electrical) (tethered)
11/21/2023 9:59:11 AM	Google Patents	Search Term 1 (electrical components) (eyewear system) (recited) (electrical) (tethered) Before Priority Date: priority:20031009
11/21/2023 9:59:12 AM	Google Scholar	electrical components eyewear system recited electrical tethered
11/21/2023 9:59:12 AM	Google Patents	Search Term 1 electrical components Search Term 2 eyewear system Search Term 3 recited Search Term 4 electrical Search Term 5 tethered Before Priority Date: priority:20031009
11/21/2023 9:59:21 AM	Google Scholar	(eyewear) (temple) (rfid tag) (glasses) (recited)

date, time	web site	search string
11/21/2023 9:59:21 AM	Google Patents	Search Term 1 (eyewear) (temple) (rfid tag) (glasses) (recited) Before Priority Date: priority:20040728
11/21/2023 9:59:22 AM	Google Scholar	eyewear temple rfid tag glasses recited
11/21/2023 9:59:22 AM	Google Patents	Search Term 1 eyewear Search Term 2 temple Search Term 3 rfid tag Search Term 4 glasses Search Term 5 recited Before Priority Date: priority:20040728
11/21/2023 9:59:27 AM	Google Scholar	(music) (image data) (spectacle) (instrument) (music generation)
11/21/2023 9:59:27 AM	Google Patents	Search Term 1 (music) (image data) (spectacle) (instrument) (music generation) Before Priority Date: priority:20040430
11/21/2023 9:59:29 AM	Google Scholar	music image data spectacle instrument music generation
11/21/2023 9:59:29 AM	Google Patents	Search Term 1 music Search Term 2 image data Search Term 3 spectacle Search Term 4 instrument Search Term 5 music generation Before Priority Date: priority:20040430
11/21/2023 9:59:40 AM	Google Scholar	(housing) (photocell) (key) (value) (user)

date, time	web site	search string
11/21/2023 9:59:40 AM	Google Patents	Search Term 1 (housing) (photocell) (key) (value) (user) Before Priority Date: priority:19830519
11/21/2023 9:59:42 AM	Google Scholar	housing photocell key value user
11/21/2023 9:59:42 AM	Google Patents	Search Term 1 housing Search Term 2 photocell Search Term 3 key Search Term 4 value Search Term 5 user Before Priority Date: priority:19830519
11/21/2023 9:59:49 AM	Google Scholar	(timer) (sports) (electronic) (recited) (timing function)
11/21/2023 9:59:49 AM	Google Patents	Search Term 1 (timer) (sports) (electronic) (recited) (timing function) Before Priority Date: priority:19831121
11/21/2023 9:59:50 AM	Google Scholar	timer sports electronic recited timing function
11/21/2023 9:59:50 AM	Google Patents	Search Term 1 timer Search Term 2 sports Search Term 3 electronic Search Term 4 recited Search Term 5 timing function Before Priority Date: priority:19831121
11/21/2023 10:23:25 AM	Google Scholar	(eyeglasses) (improve natural) (natural hearing) (hearing) (improve)

date, time	web site	search string
11/21/2023 10:23:25 AM	Google Patents	Search Term 1 (eyeglasses) (improve natural) (natural hearing) (hearing) (improve) Before Priority Date: priority:19840322
11/21/2023 10:23:26 AM	Google Scholar	eyeglasses improve natural natural hearing hearing improve
11/21/2023 10:23:26 AM	Google Patents	Search Term 1 eyeglasses Search Term 2 improve natural Search Term 3 natural hearing Search Term 4 hearing Search Term 5 improve Before Priority Date: priority:19840322
11/21/2023 10:23:33 AM	Google Scholar	(stress) (individual) (eyeglasses) (alarms) (alarm)
11/21/2023 10:23:33 AM	Google Patents	Search Term 1 (stress) (individual) (eyeglasses) (alarms) (alarm) Before Priority Date: priority:19841212
11/21/2023 10:23:34 AM	Google Scholar	stress individual eyeglasses alarms alarm
11/21/2023 10:23:34 AM	Google Patents	Search Term 1 stress Search Term 2 individual Search Term 3 eyeglasses Search Term 4 alarms Search Term 5 alarm Before Priority Date: priority:19841212
11/21/2023 10:23:40 AM	Google Scholar	(tubing) (transducer) (sound) (housing) (section)

date, time	web site	search string
11/21/2023 10:23:40 AM	Google Patents	Search Term 1 (tubing) (transducer) (sound) (housing) (section) Before Priority Date: priority:19850611
11/21/2023 10:23:42 AM	Google Scholar	tubing transducer sound housing section
11/21/2023 10:23:42 AM	Google Patents	Search Term 1 tubing Search Term 2 transducer Search Term 3 sound Search Term 4 housing Search Term 5 section Before Priority Date: priority:19850611
11/21/2023 10:24:18 AM	Google Scholar	(locating) (hearing) (microphone) (impaired person) (microphone arrangement)
11/21/2023 10:24:18 AM	Google Patents	Search Term 1 (locating) (hearing) (microphone) (impaired person) (microphone arrangement) Before Priority Date: priority:19851016
11/21/2023 10:24:19 AM	Google Scholar	locating hearing microphone impaired person microphone arrangement
11/21/2023 10:24:19 AM	Google Patents	Search Term 1 locating Search Term 2 hearing Search Term 3 microphone Search Term 4 impaired person Search Term 5 microphone arrangement Before Priority Date: priority:19851016
11/21/2023 10:24:36 AM	Google Scholar	(radiation) (frame) (output) (eyewear) (glasses)

date, time	web site	search string
11/21/2023 10:24:36 AM	Google Patents	Search Term 1 (radiation) (frame) (output) (eyewear) (glasses) Before Priority Date: priority:20040415
11/21/2023 10:24:38 AM	Google Scholar	radiation frame output eyewear glasses
11/21/2023 10:24:38 AM	Google Patents	Search Term 1 radiation Search Term 2 frame Search Term 3 output Search Term 4 eyewear Search Term 5 glasses Before Priority Date: priority:20040415
11/21/2023 10:24:43 AM	Google Scholar	(optical) (optical element) (adjustable) (adjustable connector) (wearer)
11/21/2023 10:24:44 AM	Google Scholar	optical optical element adjustable adjustable connector wearer
11/21/2023 10:24:44 AM	Google Patents	Search Term 1 optical Search Term 2 optical element Search Term 3 adjustable Search Term 4 adjustable connector Search Term 5 wearer Before Priority Date: priority:20061214
11/21/2023 10:24:50 AM	Google Scholar	(speaker) (detachable module) (detachable) (earstem)

date, time	web site	search string
11/21/2023 10:24:50 AM	Google Patents	Search Term 1 (speaker) (detachable module) (detachable) (earstem) Assignee(s) [module] Before Priority Date: priority:20000602
11/21/2023 10:24:51 AM	Google Scholar	speaker module detachable module detachable earstem
11/21/2023 10:24:51 AM	Google Patents	Search Term 1 speaker Search Term 2 module Search Term 3 detachable module Search Term 4 detachable Search Term 5 earstem Before Priority Date: priority:20000602
11/21/2023 10:24:57 AM	Google Scholar	(electro) (active) (frame) (spectacles) (electronic module)
11/21/2023 10:24:58 AM	Google Scholar	electro active frame spectacles electronic module
11/21/2023 10:24:58 AM	Google Patents	Search Term 1 electro Search Term 2 active Search Term 3 frame Search Term 4 spectacles Search Term 5 electronic module Before Priority Date: priority:20090109
11/21/2023 10:32:01 AM	Google Scholar	(glasses) (audio signals) (user) (frame) (hearing)

date, time	web site	search string
11/21/2023 10:32:01 AM	Google Patents	Search Term 1 (glasses) (audio signals) (user) (frame) (hearing) Before Priority Date: priority:20031009
11/21/2023 10:32:02 AM	Google Scholar	glasses audio signals user frame hearing
11/21/2023 10:32:02 AM	Google Patents	Search Term 1 glasses Search Term 2 audio signals Search Term 3 user Search Term 4 frame Search Term 5 hearing Before Priority Date: priority:20031009
11/21/2023 10:32:08 AM	Google Scholar	(frame) (electro) (active) (module) (electronic)
11/21/2023 10:32:08 AM	Google Patents	Search Term 1 (frame) (electro) (active) (module) (electronic) Before Priority Date: priority:20060503
11/21/2023 10:32:09 AM	Google Scholar	frame electro active module electronic
11/21/2023 10:32:09 AM	Google Patents	Search Term 1 frame Search Term 2 electro Search Term 3 active Search Term 4 module Search Term 5 electronic Before Priority Date: priority:20060503
11/21/2023 10:32:16 AM	Google Scholar	(temple) (glasses) (pair) (electronic device) (arrangement)

date, time	web site	search string
11/21/2023 10:32:16 AM	Google Patents	Search Term 1 (temple) (glasses) (pair) (electronic device) (arrangement) Before Priority Date: priority:20031009
11/21/2023 10:32:17 AM	Google Scholar	temple glasses pair electronic device arrangement
11/21/2023 10:32:17 AM	Google Patents	Search Term 1 temple Search Term 2 glasses Search Term 3 pair Search Term 4 electronic device Search Term 5 arrangement Before Priority Date: priority:20031009
11/21/2023 10:32:24 AM	Google Scholar	(temple) (eyewear) (recited) (eyeglass frame) (electrical components)
11/21/2023 10:32:24 AM	Google Patents	Search Term 1 (temple) (eyewear) (recited) (eyeglass frame) (electrical components) Before Priority Date: priority:20031009
11/21/2023 10:32:26 AM	Google Scholar	temple eyewear recited eyeglass frame electrical components
11/21/2023 10:32:26 AM	Google Patents	Search Term 1 temple Search Term 2 eyewear Search Term 3 recited Search Term 4 eyeglass frame Search Term 5 electrical components Before Priority Date: priority:20031009
11/21/2023 10:34:29 AM	Google Scholar	(dosimeter) (radiation) (function) (signal) (magnitude)

date, time	web site	search string
11/21/2023 10:34:29 AM	Google Patents	Search Term 1 (dosimeter) (radiation) (function) (signal) (magnitude) Before Priority Date: priority:19851126
11/21/2023 10:34:30 AM	Google Scholar	dosimeter radiation function signal magnitude
11/21/2023 10:34:30 AM	Google Patents	Search Term 1 dosimeter Search Term 2 radiation Search Term 3 function Search Term 4 signal Search Term 5 magnitude Before Priority Date: priority:19851126
11/21/2023 10:34:36 AM	Google Scholar	(speedometer) (sportsman) (reflector) (speed) (waves)
11/21/2023 10:34:36 AM	Google Patents	Search Term 1 (speedometer) (sportsman) (reflector) (speed) (waves) Before Priority Date: priority:19860925
11/21/2023 10:34:38 AM	Google Scholar	speedometer sportsman reflector speed waves
11/21/2023 10:34:38 AM	Google Patents	Search Term 1 speedometer Search Term 2 sportsman Search Term 3 reflector Search Term 4 speed Search Term 5 waves Before Priority Date: priority:19860925
11/21/2023 10:34:44 AM	Google Scholar	(region) (glasses) (narrow) (transmissivity) (prescription)

date, time	web site	search string
11/21/2023 10:34:44 AM	Google Patents	Search Term 1 (region) (glasses) (narrow) (transmissivity) (prescription) Before Priority Date: priority:19870330
11/21/2023 10:34:45 AM	Google Scholar	region glasses narrow transmissivity prescription
11/21/2023 10:34:45 AM	Google Patents	Search Term 1 region Search Term 2 glasses Search Term 3 narrow Search Term 4 transmissivity Search Term 5 prescription Before Priority Date: priority:19870330
11/21/2023 10:34:52 AM	Google Scholar	(spectacles) (display) (time) (sunglasses) (light emitting)
11/21/2023 10:34:52 AM	Google Patents	Search Term 1 (spectacles) (display) (time) (sunglasses) (light emitting) Before Priority Date: priority:19870701
11/21/2023 10:34:53 AM	Google Scholar	spectacles display time sunglasses light emitting
11/21/2023 10:34:53 AM	Google Patents	Search Term 1 spectacles Search Term 2 display Search Term 3 time Search Term 4 sunglasses Search Term 5 light emitting Before Priority Date: priority:19870701
11/21/2023 10:49:11 AM	Google Scholar	(set forth) (apparatus set) (lens) (wearer) (display)

date, time	web site	search string
11/21/2023 10:49:11 AM	Google Patents	Search Term 1 (set forth) (apparatus set) (lens) (wearer) (display) Before Priority Date: priority:19870706
11/21/2023 10:49:12 AM	Google Scholar	set forth apparatus set lens wearer display
11/21/2023 10:49:12 AM	Google Patents	Search Term 1 set forth Search Term 2 apparatus set Search Term 3 lens Search Term 4 wearer Search Term 5 display Before Priority Date: priority:19870706
11/21/2023 10:49:18 AM	Google Scholar	(temples) (frame) (radio) (loud speakers) (speakers)
11/21/2023 10:49:20 AM	Google Scholar	temples frame radio loud speakers speakers
11/21/2023 10:49:20 AM	Google Patents	Search Term 1 temples Search Term 2 frame Search Term 3 radio Search Term 4 loud speakers Search Term 5 speakers Before Priority Date: priority:19871120
11/21/2023 10:49:25 AM	Google Scholar	(dioxane) (cyanophenyl) (lens) (optical) (pentylcyclohexyl)
11/21/2023 10:49:27 AM	Google Scholar	dioxane cyanophenyl lens optical pentylcyclohexyl

date, time	web site	search string
11/21/2023 10:49:27 AM	Google Patents	Search Term 1 dioxane Search Term 2 cyanophenyl Search Term 3 lens Search Term 4 optical Search Term 5 pentylcyclohexyl Before Priority Date: priority:19880119
11/21/2023 10:49:37 AM	Google Scholar	(power supply) (supply means) (remote power) (spectacle) (illuminating)
11/21/2023 10:49:37 AM	Google Patents	Search Term 1 (power supply) (supply means) (remote power) (spectacle) (illuminating) Before Priority Date: priority:19880119
11/21/2023 10:49:38 AM	Google Scholar	power supply supply means remote power spectacle illuminating
11/21/2023 10:49:38 AM	Google Patents	Search Term 1 power supply Search Term 2 supply means Search Term 3 remote power Search Term 4 spectacle Search Term 5 illuminating Before Priority Date: priority:19880119
11/21/2023 10:49:48 AM	Google Scholar	(spectacles) (glasses) (leg) (spectacle) (illumination)
11/21/2023 10:49:48 AM	Google Patents	Search Term 1 (spectacles) (glasses) (leg) (spectacle) (illumination) Before Priority Date: priority:19880204
11/21/2023 10:49:49 AM	Google Scholar	spectacles glasses leg spectacle illumination

date, time	web site	search string
11/21/2023 10:49:49 AM	Google Patents	Search Term 1 spectacles Search Term 2 glasses Search Term 3 leg Search Term 4 spectacle Search Term 5 illumination Before Priority Date: priority:19880204
11/21/2023 11:05:31 AM	Google Scholar	(monitoring system) (exposure monitoring) (exposure) (monitoring)
11/21/2023 11:05:33 AM	Google Scholar	monitoring system exposure monitoring exposure monitoring
11/21/2023 11:05:33 AM	Google Patents	Search Term 1 monitoring system Search Term 2 exposure monitoring Search Term 3 exposure Search Term 4 monitoring Before Priority Date: priority:19880229
11/21/2023 11:05:39 AM	Google Scholar	(exercise) (data) (mode) (instrument) (counting)
11/21/2023 11:05:39 AM	Google Patents	Search Term 1 (exercise) (data) (mode) (instrument) (counting) Before Priority Date: priority:19880418
11/21/2023 11:05:41 AM	Google Scholar	exercise data mode instrument counting

date, time	web site	search string
11/21/2023 11:05:41 AM	Google Patents	Search Term 1 exercise Search Term 2 data Search Term 3 mode Search Term 4 instrument Search Term 5 counting Before Priority Date: priority:19880418
11/21/2023 11:05:47 AM	Google Scholar	(ski goggles) (lens) (solar cells) (goggles according) (infrared diodes)
11/21/2023 11:05:48 AM	Google Scholar	ski goggles lens solar cells goggles according infrared diodes
11/21/2023 11:05:48 AM	Google Patents	Search Term 1 ski goggles Search Term 2 lens Search Term 3 solar cells Search Term 4 goggles according Search Term 5 infrared diodes Before Priority Date: priority:19880530
11/21/2023 11:05:54 AM	Google Scholar	(output) (oscillator) (spectacles) (reset switch) (light emitting)
11/21/2023 11:05:54 AM	Google Patents	Search Term 1 (output) (oscillator) (spectacles) (reset switch) (light emitting) Before Priority Date: priority:19880608
11/21/2023 11:05:56 AM	Google Scholar	output oscillator spectacles reset switch light emitting

date, time	web site	search string
11/21/2023 11:05:56 AM	Google Patents	Search Term 1 output Search Term 2 oscillator Search Term 3 spectacles Search Term 4 reset switch Search Term 5 light emitting Before Priority Date: priority:19880608
11/21/2023 11:06:04 AM	Google Scholar	(radio) (top frame) (pair) (housing) (slot)
11/21/2023 11:06:04 AM	Google Patents	Search Term 1 (radio) (top frame) (pair) (housing) (slot) Before Priority Date: priority:19880705
11/21/2023 11:06:06 AM	Google Scholar	radio top frame pair housing slot
11/21/2023 11:06:06 AM	Google Patents	Search Term 1 radio Search Term 2 top frame Search Term 3 pair Search Term 4 housing Search Term 5 slot Before Priority Date: priority:19880705
11/21/2023 11:08:47 AM	Google Scholar	(temple) (connector) (rearward) (recited) (electrical components)
11/21/2023 11:08:47 AM	Google Patents	Search Term 1 (temple) (connector) (rearward) (recited) (electrical components) Before Priority Date: priority:20030415
11/21/2023 11:08:48 AM	Google Scholar	temple connector rearward recited electrical components

date, time	web site	search string
11/21/2023 11:08:48 AM	Google Patents	Search Term 1 temple Search Term 2 connector Search Term 3 rearward Search Term 4 recited Search Term 5 electrical components Before Priority Date: priority:20030415
11/21/2023 11:08:57 AM	Google Scholar	(source) (audio) (wearer) (speaker) (interface)
11/21/2023 11:08:57 AM	Google Patents	Search Term 1 (source) (audio) (wearer) (speaker) (interface) Before Priority Date: priority:20041222
11/21/2023 11:08:58 AM	Google Scholar	source audio wearer speaker interface
11/21/2023 11:08:58 AM	Google Patents	Search Term 1 source Search Term 2 audio Search Term 3 wearer Search Term 4 speaker Search Term 5 interface Before Priority Date: priority:20041222
11/21/2023 11:09:04 AM	Google Scholar	(temple) (lens housing) (lens) (conductive path) (spring mechanism)
11/21/2023 11:09:04 AM	Google Patents	Search Term 1 (temple) (lens housing) (lens) (conductive path) (spring mechanism) Before Priority Date: priority:20100702
11/21/2023 11:09:06 AM	Google Scholar	temple lens housing lens conductive path spring mechanism

date, time	web site	search string
11/21/2023 11:09:06 AM	Google Patents	Search Term 1 temple Search Term 2 lens housing Search Term 3 lens Search Term 4 conductive path Search Term 5 spring mechanism Before Priority Date: priority:20100702
11/21/2023 11:09:14 AM	Google Scholar	(temple) (electronics module) (electrical) (electrical conductor) (touch switch)
11/21/2023 11:09:14 AM	Google Patents	Search Term 1 (temple) (electronics module) (electrical) (electrical conductor) (touch switch) Before Priority Date: priority:20110211
11/21/2023 11:09:15 AM	Google Scholar	temple electronics module electrical electrical conductor touch switch
11/21/2023 11:09:15 AM	Google Patents	Search Term 1 temple Search Term 2 electronics module Search Term 3 electrical Search Term 4 electrical conductor Search Term 5 touch switch Before Priority Date: priority:20110211
11/21/2023 11:18:49 AM	Google Scholar	(light emitting) (light) (emitting part) (lens) (spectacle frame)
11/21/2023 11:18:49 AM	Google Patents	Search Term 1 (light emitting) (light) (emitting part) (lens) (spectacle frame) Before Priority Date: priority:19890106

date, time	web site	search string
11/21/2023 11:18:51 AM	Google Scholar	light emitting light emitting part lens spectacle frame
11/21/2023 11:18:51 AM	Google Patents	Search Term 1 light emitting Search Term 2 light Search Term 3 emitting part Search Term 4 lens Search Term 5 spectacle frame Before Priority Date: priority:19890106
11/21/2023 11:18:58 AM	Google Scholar	(light) (band) (value) (ultraviolet) (photodiodes)
11/21/2023 11:18:58 AM	Google Patents	Search Term 1 (light) (band) (value) (ultraviolet) (photodiodes) Before Priority Date: priority:19890412
11/21/2023 11:19:00 AM	Google Scholar	light band value ultraviolet photodiodes
11/21/2023 11:19:00 AM	Google Patents	Search Term 1 light Search Term 2 band Search Term 3 value Search Term 4 ultraviolet Search Term 5 photodiodes Before Priority Date: priority:19890412
11/21/2023 11:19:09 AM	Google Scholar	(illumination) (transmittance) (liquid crystal) (mode) (voltage)
11/21/2023 11:19:09 AM	Google Patents	Search Term 1 (illumination) (transmittance) (liquid crystal) (mode) (voltage) Before Priority Date: priority:19890417

date, time	web site	search string
11/21/2023 11:19:10 AM	Google Scholar	illumination transmittance liquid crystal mode voltage
11/21/2023 11:19:10 AM	Google Patents	Search Term 1 illumination Search Term 2 transmittance Search Term 3 liquid crystal Search Term 4 mode Search Term 5 voltage Before Priority Date: priority:19890417
11/21/2023 11:19:24 AM	Google Scholar	(lens) (housing) (module) (temple) (frame)
11/21/2023 11:19:24 AM	Google Patents	Search Term 1 (lens) (housing) (module) (temple) (frame) Before Priority Date: priority:20100702
11/21/2023 11:19:25 AM	Google Scholar	lens housing module temple frame
11/21/2023 11:19:25 AM	Google Patents	Search Term 1 lens Search Term 2 housing Search Term 3 module Search Term 4 temple Search Term 5 frame Before Priority Date: priority:20100702
11/21/2023 11:19:32 AM	Google Scholar	(eyewear) (frame) (electronic) (lens) (electro)
11/21/2023 11:19:32 AM	Google Patents	Search Term 1 (eyewear) (frame) (electronic) (lens) (electro) Before Priority Date: priority:20041102

date, time	web site	search string
11/21/2023 11:19:34 AM	Google Scholar	eyewear frame electronic lens electro
11/21/2023 11:19:34 AM	Google Patents	Search Term 1 eyewear Search Term 2 frame Search Term 3 electronic Search Term 4 lens Search Term 5 electro Before Priority Date: priority:20041102
11/21/2023 11:19:50 AM	Google Scholar	(lens) (housing) (lens housing) (temple) (module)
11/21/2023 11:19:50 AM	Google Patents	Search Term 1 (lens) (housing) (lens housing) (temple) (module) Before Priority Date: priority:20100702
11/21/2023 11:19:51 AM	Google Scholar	lens housing lens housing temple module
11/21/2023 11:19:51 AM	Google Patents	Search Term 1 lens Search Term 2 housing Search Term 3 lens housing Search Term 4 temple Search Term 5 module Before Priority Date: priority:20100702
11/21/2023 12:51:04 PM	Google Scholar	(lens) (lens housing) (conductive element) (compliant) (temple)
11/21/2023 12:51:04 PM	Google Patents	Search Term 1 (lens) (lens housing) (conductive element) (compliant) (temple) Before Priority Date: priority:20100702

date, time	web site	search string
11/21/2023 12:51:05 PM	Google Scholar	lens lens housing conductive element compliant temple
11/21/2023 12:51:05 PM	Google Patents	Search Term 1 lens Search Term 2 lens housing Search Term 3 conductive element Search Term 4 compliant Search Term 5 temple Before Priority Date: priority:20100702
11/21/2023 12:51:11 PM	Google Scholar	(electronic) (lens) (frame) (eyewear frame) (electro)
11/21/2023 12:51:11 PM	Google Patents	Search Term 1 (electronic) (lens) (frame) (eyewear frame) (electro) Before Priority Date: priority:20041102
11/21/2023 12:51:13 PM	Google Scholar	electronic lens frame eyewear frame electro
11/21/2023 12:51:13 PM	Google Patents	Search Term 1 electronic Search Term 2 lens Search Term 3 frame Search Term 4 eyewear frame Search Term 5 electro Before Priority Date: priority:20041102
11/21/2023 12:51:18 PM	Google Scholar	(eyewear) (application module) (temple) (application) (frame)
11/21/2023 12:51:18 PM	Google Patents	Search Term 1 (eyewear) (application module) (temple) (application) (frame) Before Priority Date: priority:20051028

date, time	web site	search string
11/21/2023 12:51:19 PM	Google Scholar	eyewear application module temple application frame
11/21/2023 12:51:19 PM	Google Patents	Search Term 1 eyewear Search Term 2 application module Search Term 3 temple Search Term 4 application Search Term 5 frame Before Priority Date: priority:20051028
11/21/2023 12:51:25 PM	Google Scholar	(eyewear) (docking station) (frame) (power) (electronic)
11/21/2023 12:51:26 PM	Google Scholar	eyewear docking station frame power electronic
11/21/2023 12:51:26 PM	Google Patents	Search Term 1 eyewear Search Term 2 docking station Search Term 3 frame Search Term 4 power Search Term 5 electronic Before Priority Date: priority:20041102
11/21/2023 12:52:48 PM	Google Scholar	(spectacles) (pair) (frame) (stereoscopic) (viewing)
11/21/2023 12:52:48 PM	Google Patents	Search Term 1 (spectacles) (pair) (frame) (stereoscopic) (viewing) Before Priority Date: priority:19890525
11/21/2023 12:52:50 PM	Google Scholar	spectacles pair frame stereoscopic viewing

date, time	web site	search string
11/21/2023 12:52:50 PM	Google Patents	Search Term 1 spectacles Search Term 2 pair Search Term 3 frame Search Term 4 stereoscopic Search Term 5 viewing Before Priority Date: priority:19890525
11/21/2023 12:52:55 PM	Google Scholar	(time) (radiation) (subject) (skin) (microcomputer)
11/21/2023 12:52:55 PM	Google Patents	Search Term 1 (time) (radiation) (subject) (skin) (microcomputer) Before Priority Date: priority:19890531
11/21/2023 12:52:57 PM	Google Scholar	time radiation subject skin microcomputer
11/21/2023 12:52:57 PM	Google Patents	Search Term 1 time Search Term 2 radiation Search Term 3 subject Search Term 4 skin Search Term 5 microcomputer Before Priority Date: priority:19890531
11/21/2023 12:53:03 PM	Google Scholar	(patient) (eye) (display) (images) (displaying)
11/21/2023 12:53:04 PM	Google Scholar	patient eye display images displaying

date, time	web site	search string
11/21/2023 12:53:04 PM	Google Patents	Search Term 1 patient Search Term 2 eye Search Term 3 display Search Term 4 images Search Term 5 displaying Before Priority Date: priority:19890623
11/21/2023 12:53:10 PM	Google Scholar	(eye) (eyeglasses) (lens) (opaque) (condition)
11/21/2023 12:53:10 PM	Google Patents	Search Term 1 (eye) (eyeglasses) (lens) (opaque) (condition) Before Priority Date: priority:19890727
11/21/2023 12:53:12 PM	Google Scholar	eye eyeglasses lens opaque condition
11/21/2023 12:53:12 PM	Google Patents	Search Term 1 eye Search Term 2 eyeglasses Search Term 3 lens Search Term 4 opaque Search Term 5 condition Before Priority Date: priority:19890727
11/21/2023 1:09:50 PM	Google Scholar	(liquid crystal) (signal) (synchronization signal) (crystal cell) (drive signal)
11/21/2023 1:09:51 PM	Google Scholar	liquid crystal signal synchronization signal crystal cell drive signal

date, time	web site	search string
11/21/2023 1:09:51 PM	Google Patents	Search Term 1 liquid crystal Search Term 2 signal Search Term 3 synchronization signal Search Term 4 crystal cell Search Term 5 drive signal Before Priority Date: priority:19890731
11/21/2023 1:09:57 PM	Google Scholar	(display) (radiation) (output) (sensor) (responsive)
11/21/2023 1:09:57 PM	Google Patents	Search Term 1 (display) (radiation) (output) (sensor) (responsive) Before Priority Date: priority:19890801
11/21/2023 1:09:59 PM	Google Scholar	display radiation output sensor responsive
11/21/2023 1:09:59 PM	Google Patents	Search Term 1 display Search Term 2 radiation Search Term 3 output Search Term 4 sensor Search Term 5 responsive Before Priority Date: priority:19890801
11/21/2023 1:10:07 PM	Google Scholar	(signal) (circuit) (recorded) (supplied) (output)
11/21/2023 1:10:07 PM	Google Patents	Search Term 1 (signal) (circuit) (recorded) (supplied) (output) Before Priority Date: priority:19890929
11/21/2023 1:10:08 PM	Google Scholar	signal circuit recorded supplied output

date, time	web site	search string
11/21/2023 1:10:08 PM	Google Patents	Search Term 1 signal Search Term 2 circuit Search Term 3 recorded Search Term 4 supplied Search Term 5 output Before Priority Date: priority:19890929
11/21/2023 1:10:14 PM	Google Scholar	(solar energy) (battery) (nose bridge) (bridge element) (lens)
11/21/2023 1:10:15 PM	Google Scholar	solar energy battery nose bridge bridge element lens
11/21/2023 1:10:15 PM	Google Patents	Search Term 1 solar energy Search Term 2 battery Search Term 3 nose bridge Search Term 4 bridge element Search Term 5 lens Before Priority Date: priority:19891107
11/21/2023 1:10:23 PM	Google Scholar	(battery) (special frequency) (receiving) (housing) (microphone)
11/21/2023 1:10:23 PM	Google Patents	Search Term 1 (battery) (special frequency) (receiving) (housing) (microphone) Before Priority Date: priority:19900412
11/21/2023 1:10:24 PM	Google Scholar	battery special frequency receiving housing microphone

date, time	web site	search string
11/21/2023 1:10:24 PM	Google Patents	Search Term 1 battery Search Term 2 special frequency Search Term 3 receiving Search Term 4 housing Search Term 5 microphone Before Priority Date: priority:19900412
11/21/2023 1:10:39 PM	Google Scholar	(lens) (blocking) (blocking time) (controller) (user)
11/21/2023 1:10:39 PM	Google Patents	Search Term 1 (lens) (blocking) (blocking time) (controller) (user) Before Priority Date: priority:20110915
11/21/2023 1:10:41 PM	Google Scholar	lens blocking blocking time controller user
11/21/2023 1:10:41 PM	Google Patents	Search Term 1 lens Search Term 2 blocking Search Term 3 blocking time Search Term 4 controller Search Term 5 user Before Priority Date: priority:20110915
11/21/2023 1:10:46 PM	Google Scholar	(electro) (active) (eyewear) (conductive) (rimlock)
11/21/2023 1:10:46 PM	Google Patents	Search Term 1 (electro) (active) (eyewear) (conductive) (rimlock) Before Priority Date: priority:20110817
11/21/2023 1:10:47 PM	Google Scholar	electro active eyewear conductive rimlock

date, time	web site	search string
11/21/2023 1:10:47 PM	Google Patents	Search Term 1 electro Search Term 2 active Search Term 3 eyewear Search Term 4 conductive Search Term 5 rimlock Before Priority Date: priority:20110817
11/21/2023 1:32:24 PM	Google Scholar	(liquid crystal) (crystal panel) (image) (light source) (eyeball)
11/21/2023 1:32:24 PM	Google Patents	Search Term 1 (liquid crystal) (crystal panel) (image) (light source) (eyeball) Before Priority Date: priority:19900517
11/21/2023 1:32:25 PM	Google Scholar	liquid crystal crystal panel image light source eyeball
11/21/2023 1:32:25 PM	Google Patents	Search Term 1 liquid crystal Search Term 2 crystal panel Search Term 3 image Search Term 4 light source Search Term 5 eyeball Before Priority Date: priority:19900517
11/21/2023 1:32:33 PM	Google Scholar	(coil) (damping) (matching) (speaker) (input)
11/21/2023 1:32:33 PM	Google Patents	Search Term 1 (coil) (damping) (matching) (speaker) (input) Before Priority Date: priority:19901005
11/21/2023 1:32:34 PM	Google Scholar	coil damping matching speaker input

date, time	web site	search string
11/21/2023 1:32:34 PM	Google Patents	Search Term 1 coil Search Term 2 damping Search Term 3 matching Search Term 4 speaker Search Term 5 input Before Priority Date: priority:19901005
11/21/2023 1:32:41 PM	Google Scholar	(bow) (set forth) (framework) (speaker) (speakers)
11/21/2023 1:32:41 PM	Google Patents	Search Term 1 (bow) (set forth) (framework) (speaker) (speakers) Before Priority Date: priority:19910122
11/21/2023 1:32:43 PM	Google Scholar	bow set forth framework speaker speakers
11/21/2023 1:32:43 PM	Google Patents	Search Term 1 bow Search Term 2 set forth Search Term 3 framework Search Term 4 speaker Search Term 5 speakers Before Priority Date: priority:19910122
11/21/2023 1:32:50 PM	Google Scholar	(silicon carbide) (epitaxial layer) (layer) (substrate) (photodiode)
11/21/2023 1:32:50 PM	Google Patents	Search Term 1 (silicon carbide) (epitaxial layer) (layer) (substrate) (photodiode) Before Priority Date: priority:19910315
11/21/2023 1:32:51 PM	Google Scholar	silicon carbide epitaxial layer layer substrate photodiode

date, time	web site	search string
11/21/2023 1:32:51 PM	Google Patents	Search Term 1 silicon carbide Search Term 2 epitaxial layer Search Term 3 layer Search Term 4 substrate Search Term 5 photodiode Before Priority Date: priority:19910315
11/21/2023 1:33:05 PM	Google Scholar	(main body) (mobile computing) (computing device) (goggles) (lens assembly)
11/21/2023 1:33:05 PM	Google Patents	Search Term 1 (main body) (mobile computing) (computing device) (goggles) (lens assembly) Before Priority Date: priority:20140218
11/21/2023 1:33:07 PM	Google Scholar	main body mobile computing computing device goggles lens assembly
11/21/2023 1:33:07 PM	Google Patents	Search Term 1 main body Search Term 2 mobile computing Search Term 3 computing device Search Term 4 goggles Search Term 5 lens assembly Before Priority Date: priority:20140218
11/21/2023 1:33:13 PM	Google Scholar	(module) (interface system) (electronically enabled) (enabled interface) (speaker)
11/21/2023 1:33:13 PM	Google Patents	Search Term 1 (module) (interface system) (electronically enabled) (enabled interface) (speaker) Before Priority Date: priority:20000602

date, time	web site	search string
11/21/2023 1:33:14 PM	Google Scholar	module interface system electronically enabled enabled interface speaker
11/21/2023 1:33:14 PM	Google Patents	Search Term 1 module Search Term 2 interface system Search Term 3 electronically enabled Search Term 4 enabled interface Search Term 5 speaker Before Priority Date: priority:20000602
11/21/2023 1:33:20 PM	Google Scholar	(eyewear) (communication system) (base) (base link) (modular communication)
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11/21/2023 1:33:22 PM	Google Scholar	eyewear communication system base base link modular communication
11/21/2023 1:33:22 PM	Google Patents	Search Term 1 eyewear Search Term 2 communication system Search Term 3 base Search Term 4 base link Search Term 5 modular communication Before Priority Date: priority:20130612
11/21/2023 1:33:28 PM	Google Scholar	(display) (user) (eyewear system) (support) (source device)

date, time	web site	search string
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11/21/2023 1:33:29 PM	Google Scholar	display user eyewear system support source device
11/21/2023 1:33:29 PM	Google Patents	Search Term 1 display Search Term 2 user Search Term 3 eyewear system Search Term 4 support Search Term 5 source device Before Priority Date: priority:20130315
11/21/2023 1:33:35 PM	Google Scholar	(connector) (electronic device) (eyewear) (plate) (attachment member)
11/21/2023 1:33:35 PM	Google Patents	Search Term 1 (connector) (electronic device) (eyewear) (plate) (attachment member) Before Priority Date: priority:20120217
11/21/2023 1:33:37 PM	Google Scholar	connector electronic device eyewear plate attachment member
11/21/2023 1:33:37 PM	Google Patents	Search Term 1 connector Search Term 2 electronic device Search Term 3 eyewear Search Term 4 plate Search Term 5 attachment member Before Priority Date: priority:20120217

date, time	web site	search string
11/21/2023 2:40:03 PM	Google Scholar	(eyewear) (display) (extendable arm) (frame) (electronic)
11/21/2023 2:40:03 PM	Google Patents	Search Term 1 (eyewear) (display) (extendable arm) (frame) (electronic) Before Priority Date: priority:20130315
11/21/2023 2:40:04 PM	Google Scholar	eyewear display extendable arm frame electronic
11/21/2023 2:40:04 PM	Google Patents	Search Term 1 eyewear Search Term 2 display Search Term 3 extendable arm Search Term 4 frame Search Term 5 electronic Before Priority Date: priority:20130315
11/21/2023 2:40:10 PM	Google Scholar	(goggles) (processor) (loud speaker) (wireless signal) (signal transceiver)
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11/21/2023 2:40:12 PM	Google Scholar	goggles processor loud speaker wireless signal signal transceiver
11/21/2023 2:40:12 PM	Google Patents	Search Term 1 goggles Search Term 2 processor Search Term 3 loud speaker Search Term 4 wireless signal Search Term 5 signal transceiver Before Priority Date: priority:20180313

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11/21/2023 2:40:18 PM	Google Scholar	(fall) (processing) (eyeglasses) (receiver) (alarm)
11/21/2023 2:40:18 PM	Google Patents	Search Term 1 (fall) (processing) (eyeglasses) (receiver) (alarm) Before Priority Date: priority:20160531
11/21/2023 2:40:19 PM	Google Scholar	fall processing eyeglasses receiver alarm
11/21/2023 2:40:19 PM	Google Patents	Search Term 1 fall Search Term 2 processing Search Term 3 eyeglasses Search Term 4 receiver Search Term 5 alarm Before Priority Date: priority:20160531
11/21/2023 2:40:26 PM	Google Scholar	(head) (portable electronic) (electronic device) (mounted device) (user)
11/21/2023 2:40:26 PM	Google Patents	Search Term 1 (head) (portable electronic) (electronic device) (mounted device) (user) Before Priority Date: priority:20080930
11/21/2023 2:40:28 PM	Google Scholar	head portable electronic electronic device mounted device user
11/21/2023 2:40:28 PM	Google Patents	Search Term 1 head Search Term 2 portable electronic Search Term 3 electronic device Search Term 4 mounted device Search Term 5 user Before Priority Date: priority:20080930

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11/21/2023 2:46:59 PM	Google Scholar	(enclosure) (speech) (microphone) (acoustics) (speech signals)
11/21/2023 2:46:59 PM	Google Patents	Search Term 1 (enclosure) (speech) (microphone) (acoustics) (speech signals) Before Priority Date: priority:19920106
11/21/2023 2:47:01 PM	Google Scholar	enclosure speech microphone acoustics speech signals
11/21/2023 2:47:01 PM	Google Patents	Search Term 1 enclosure Search Term 2 speech Search Term 3 microphone Search Term 4 acoustics Search Term 5 speech signals Before Priority Date: priority:19920106
11/21/2023 2:47:07 PM	Google Scholar	(ear) (framework) (user) (headset) (supported)
11/21/2023 2:47:07 PM	Google Patents	Search Term 1 (ear) (framework) (user) (headset) (supported) Before Priority Date: priority:19920115
11/21/2023 2:47:09 PM	Google Scholar	ear framework user headset supported
11/21/2023 2:47:09 PM	Google Patents	Search Term 1 ear Search Term 2 framework Search Term 3 user Search Term 4 headset Search Term 5 supported Before Priority Date: priority:19920115

date, time	web site	search string
11/21/2023 2:47:17 PM	Google Scholar	(sleeve) (flexible) (hollow) (pair) (accessory)
11/21/2023 2:47:17 PM	Google Patents	Search Term 1 (sleeve) (flexible) (hollow) (pair) (accessory) Before Priority Date: priority:19920214
11/21/2023 2:47:18 PM	Google Scholar	sleeve flexible hollow pair accessory
11/21/2023 2:47:18 PM	Google Patents	Search Term 1 sleeve Search Term 2 flexible Search Term 3 hollow Search Term 4 pair Search Term 5 accessory Before Priority Date: priority:19920214
11/21/2023 2:47:25 PM	Google Scholar	(flexible) (hollow) (sleeve) (pair) (eyeglass)
11/21/2023 2:47:25 PM	Google Patents	Search Term 1 (flexible) (hollow) (sleeve) (pair) (eyeglass) Before Priority Date: priority:19920214
11/21/2023 2:47:26 PM	Google Scholar	flexible hollow sleeve pair eyeglass
11/21/2023 2:47:26 PM	Google Patents	Search Term 1 flexible Search Term 2 hollow Search Term 3 sleeve Search Term 4 pair Search Term 5 eyeglass Before Priority Date: priority:19920214

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US	10822218			04/12/2004	US 60527565 US 60462591 US 10822218 US 60508631	US 20080003803 A1 US 7782552 B2	01/05/2006 09/07/2010
US	10964011			10/12/2004	US 60527565 US 60583169 US 60508631 US 10964011 US 60562798 US 60618107 US 60462591 US 60605191 US 60592045	US 20050078274 A1 US 7192136 B2	04/14/2005 03/20/2007
US	11006343			12/07/2004	US 11006343 US 60527565	US 20050124324 A1 US 7116976 B2	06/08/2005 10/03/2006
US	11078857			03/11/2005	US 60647828 US 60583169 US 60562798 US 60620238 US 60618107 US 60605191 US 11078857 US 60592045 US 60647836	US 20050230596 A1	10/20/2005
US	11078855			03/11/2005	US 60647828 US 60583169 US 11078855 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20090059159 A1 US 7500746 B1	03/05/2009 03/10/2009
CN	200510067143			04/14/2005	US 60562798	CN 1700059 A CN 100580607 C	11/23/2005 01/13/2010
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US	11183263			07/15/2005	US 60647826 US 60527565 US 60583169 US 60509631 US 10964011 US 60562798 US 60620238 US 60618107 US 60605191 US 11183263 US 60592045 US 60647836	US 20060018227 A1 US 7380938 B2	01/05/2006 06/03/2008
US	11183256			07/15/2005	US 60647826 US 60527565 US 60583169 US 60509631 US 10964011 US 60562798 US 60620238 US 60618107 US 60605191 US 11183256 US 60592045 US 60647836	US 20060033158 A1 US 7500747 B2	02/02/2006 03/10/2009
US	11183262			07/15/2005	US 60647826 US 60527565 US 60583169 US 60509631 US 10964011 US 60562798 US 11183262 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20050248717 A1 US 7760895 B2	11/10/2005 07/20/2010
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US	11183276			07/15/2005	US 60647526 US 60527565 US 60583169 US 11183276 US 60509631 US 10964011 US 60562798 US 60620238 US 60618107 US 60505191 US 60592045 US 60947356	US 20050248718 A1 US 7255437 B2	11/10/2005 08/14/2007
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CN	200880027964			06/07/2006	US 60689688	CN 101297191 A	10/29/2008
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US	11497651			08/02/2006	US 11006343 US 60527565 US 11497651	US 20080276210 A1 US 7376434 B2	12/07/2006 05/20/2008
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US	11580222			10/11/2006	US 60583169 US 60725896 US 11183269 US 60787850 US 60846150 US 10964011 US 60725909 US 60527565 US 60509631 US 60562798 US 60620238 US 11580222 US 60618107 US 60605191 US 60592045 US 60647836	US 20070046887 A1 US 7581833 B2	03/01/2007 09/01/2009
US	11546655			10/11/2006	US 60583169 US 60725896 US 11546655 US 60787850 US 60846150 US 10964011 US 60725909 US 11183269 US 60647828 US 60527565 US 60509631 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20070030442 A1 US 7808525 B2	02/08/2007 10/05/2010
US	11650626			01/06/2007	US 11650626 US 60583169 US 60787850 US 60846150 US 10964011 US 11183269 US 60647828 US 60527565 US 60509631 US 60783854 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20070109491 A1 US 7677723 B2	05/17/2007 03/16/2010
US	11700550			01/30/2007	US 60583169 US 11700550 US 11078865 US 60787850 US 60846150 US 60647828 US 60783854 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20070186330 A1	08/16/2007

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CN	200710095621			04/02/2007	US 60787850	CN 101046557 A	10/03/2007
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US	11903512			08/20/2007	US 60846150 US 11903512	US 20080058559 A1 US 7543934 B2	03/20/2008 06/09/2009
US	12074302			03/03/2008	US 11521256 US 60527565 US 60583169 US 60509631 US 10964011 US 60562798 US 12074302 US 60605191 US 60592045	US 20080151179 A1 US 7621634 B2	06/26/2008 11/24/2009
US	12074981			03/07/2008	US 11497651 US 12074981 US 11006343 US 60527565	US 7890128 B1	02/15/2011
US	12152480			05/13/2008	US 60647826 US 60620238 US 60518107 US 60605191 US 11183263 US 12152480 US 60592045 US 60647836	US 20080218684 A1 US 8337013 B2	09/11/2008 12/25/2012
US	12214435			06/19/2008	US 60583169 US 11183276 US 10964011 US 11891411 US 60647826 US 60527565 US 60509631 US 60562798 US 60620238 US 60618107 US 12214435 US 60605191 US 60592045 US 60647836	US 20080278678 A1 US 7481531 B2	11/13/2008 01/27/2009

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US	12317043			12/18/2008	US 60583169 US 11183276 US 10964011 US 11891411 US 12317043 US 60547926 US 60527565 US 60509631 US 60562798 US 60620238 US 60518107 US 12214435 US 60605191 US 60592045 US 60647836	US 20090141233 A1 US 7771045 B2	06/04/2009 08/10/2010
US	12322377			02/02/2009	US 60547926 US 60583169 US 12322377 US 11078855 US 60562798 US 60620238 US 60518107 US 60605191 US 60592045 US 60647836	US 20090147215 A1 US 5770742 B2	06/11/2009 07/08/2014
US	12462286			07/31/2009	US 60583169 US 60725596 US 11183269 US 60797850 US 60846150 US 10964011 US 60725999 US 60947826 US 60527565 US 60509631 US 60562798 US 60620238 US 11580222 US 60618107 US 60605191 US 12462286 US 60692045 US 60647836	US 20090296044 A1 US 6109629 B2	12/03/2009 02/07/2012
US	12798995			04/14/2010	US 11452115 US 60689686 US 11006343 US 60527565 US 12798995	US 20100205272 A1 US 5744407 B2	08/12/2010 06/03/2014

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US	12803732			07/01/2010	US 60583169 US 60725896 US 11546885 US 60787850 US 60846150 US 10964011 US 12803732 US 60725999 US 11183256 US 60547828 US 60527565 US 60509831 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20110102734 A1 US 8434863 B2	05/05/2011 05/07/2013
US	12806312			08/10/2010	US 60583169 US 60725896 US 60787850 US 10522218 US 11891411 US 60647826 US 60527565 US 12214435 US 60605191 US 12462286 US 60592045 US 60647836 US 11183269 US 11183276 US 60846150 US 10964011 US 12806312 US 60725999 US 12317543 US 60509831 US 60562798 US 60620238 US 11580222 US 60618107 US 60462591	US 20100309426 A1 US 8465151 B2	12/09/2010 06/15/2013
US	12987018			01/07/2011	US 12987018 US 11497851 US 12074961 US 11006343 US 60527565	US 8112104 B1	02/07/2012
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US	13291020			11/07/2011	US 60583169 US 60725896 US 11546685 US 60787850 US 60846150 US 10964011 US 12803732 US 60726999 US 11183256 US 60647828 US 60527565 US 60509831 US 60562798 US 60620238 US 60618107 US 13291020 US 60606191 US 60592045 US 60647836	US 20120050668 A1 US 6430607 B2	03/01/2012 04/30/2013
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US	13593483			05/23/2012	US 12987018 US 11497561 US 13593483 US 11006343 US 60527565 US 13363360 US 12074961	US 5737975 B1	05/27/2014

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US	13831445			03/14/2013	US 60583169 US 60725896 US 11078855 US 60787850 US 10822218 US 60547826 US 60527565 US 60605191 US 60592045 US 60647836 US 11183269 US 11183276 US 11546685 US 60846150 US 10964011 US 12503732 US 60725999 US 11183256 US 11006343 US 60509631 US 11183283 US 60562798 US 11183262 US 60620238 US 60618107 US 13831445 US 11078857 US 11183263	US 20140258013 A1 US 20170088117 A3 US 10310296 B2	09/16/2014 03/09/2017 06/04/2019
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US	13831419			03/14/2013	US 60583169 US 60725896 US 11078855 US 60787850 US 10822218 US 60547526 US 60527565 US 13291020 US 60605191 US 13931419 US 60592045 US 60947536 US 11183269 US 11183275 US 11546685 US 60546150 US 10964011 US 12803732 US 60725998 US 11183266 US 11006343 US 60509521 US 11183263 US 60562798 US 11183262 US 60520238 US 11802222 US 60818107 US 11078857 US 11183263	US 20140288008 A1 US 20180248075 A9 US 10345625 B2	08/15/2014 08/25/2016 07/09/2019
US	13955336			07/31/2013	US 60583169 US 11078855 US 11183269 US 11183276 US 10984011 US 13955336 US 10522218 US 13086402 US 11183256 US 60647826 US 11006343 US 60527565 US 60509831 US 11183263 US 60562798 US 11183262 US 60520238 US 60818107 US 60605191 US 11078857 US 11183263 US 60592045 US 60647536	US 20130308089 A1 US 8905542 B2	11/21/2013 12/09/2014
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US	14272632			05/08/2014	US 11452115 US 60889686 US 11006343 US 60527565 US 12798995 US 14272632	US 20140242956 A1 US 9204268 B2	08/28/2014 12/01/2015
US	14286976			05/23/2014	US 12987018 US 11497851 US 13593483 US 11006343 US 60527565 US 13363360 US 14286976 US 12074961	US 20140256293 A1 US 11019199 B2	09/11/2014 05/25/2021
US	14313889			05/24/2014	US 14313989 US 60583169 US 12322377 US 11078555 US 10964011 US 10822218 US 60647828 US 11006343 US 60562798 US 60620238 US 60618107 US 60605191 US 11078557 US 60592045 US 60647836	US 20140361185 A1 US 9488520 B2	12/11/2014 11/05/2016
US	14557409			12/01/2014	US 60553168 US 11078955 US 1183269 US 1183276 US 10964011 US 13955336 US 10822218 US 13085402 US 1183256 US 14557409 US 60647826 US 11006343 US 60527565 US 60509631 US 1183283 US 60562798 US 1183262 US 60620238 US 60618107 US 60605191 US 11078557 US 1183283 US 60592045 US 60947836	US 20150185245 A1 US 9547184 B2	03/26/2015 01/17/2017
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US	14715501			05/18/2015	US 14715501 US 60583169 US 60728896 US 11078855 US 60787850 US 13367346 US 10522218 US 60647826 US 60527565 US 60605191 US 12462266 US 60592045 US 60647836 US 11183269 US 11183278 US 11546685 US 60948150 US 10964011 US 60728999 US 11183266 US 11006343 US 60509521 US 11183263 US 60562798 US 11183262 US 60620238 US 11580222 US 60818107 US 11078857 US 11183263	US 20150253590 A1 US 10330956 B2	09/16/2015 06/25/2019
US	14922344			10/26/2015	US 14922344 US 11006343 US 60527565 US 14272632 US 11452112 US 60689688 US 12798995	US 2016044474 A1 US 9736664 B2	02/11/2016 08/15/2017
US	15343472			11/04/2016	US 14313889 US 60583169 US 12322377 US 11078855 US 10964011 US 10522218 US 60647826 US 15343472 US 11006343 US 60562798 US 60620238 US 60818107 US 60605191 US 11078857 US 60592045 US 60647836	US 20170074721 A1 US 10060790 B2	03/16/2017 03/28/2018

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US	15704181			09/14/2017	US 14922344 US 11006343 US 60527565 US 14272632 US 15469440 US 11452115 US 60689586 US 15704181 US 12798995	US 20180014169 A1 US 10492038 B2	01/11/2018 11/26/2019

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US	16049120			07/30/2018	US 60583169 US 11183269 US 10964011 US 13955336 US 13085402 US 16049120 US 14557408 US 60647825 US 60527565 US 60509631 US 15375423 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20190336650 A1 US 11243416 B2	11/22/2018 02/08/2022
US	16102859			08/14/2018	US 14313989 US 60583169 US 12322377 US 11078555 US 16102859 US 60647825 US 15343472 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20190348050 A1 US 10359311 B2	12/06/2018 07/23/2019
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US	16424018			05/28/2019	US 60583169 US 60725896 US 11546885 US 60787850 US 60846150 US 10964011 US 12803732 US 60725999 US 1183269 US 60647825 US 60527565 US 16424018 US 60509531 US 60562798 US 60520258 US 60618107 US 13291020 US 60605191 US 13831419 US 60592345 US 60647836	US 20190278110 A1 US 11830331 B2	09/12/2019 04/15/2023

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US	16429181			05/03/2019	US 60583169 US 60725996 US 11546985 US 60767850 US 60846150 US 10964011 US 13531455 US 12503732 US 60725999 US 11183295 US 60647828 US 60527565 US 60509531 US 16429181 US 60562798 US 60620238 US 60518107 US 60505191 US 60592045 US 60647836	US 20190285913 A1 US 11513371 B2	09/19/2019 11/29/2022
US	16445452			06/19/2019	US 12987018 US 11497651 US 13593483 US 11006343 US 60527565 US 13363360 US 14296978 US 12074961 US 16445452	US 20190306304 A1 US 11792316 B2	10/03/2019 10/17/2023
US	16446710			05/20/2019	US 12987018 US 11497651 US 13593483 US 11006343 US 60527565 US 13363360 US 14296978 US 12074961 US 16446710	US 20190306305 A1 US 11711459 B2	10/03/2019 07/25/2023
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US	16703805			12/04/2019	US 14313989 US 60583169 US 12322377 US 11078555 US 16102859 US 16426351 US 16703805 US 60647826 US 15343472 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20200109986 A1 US 11326941 B2	04/09/2020 05/10/2022
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US	17849029			09/20/2022	US 17949029 US 17484080 US 11183269 US 13956336 US 13086402 US 16049120 US 14567409 US 60847826 US 15376423 US 60620238 US 60618107 US 16574254 US 60606191 US 60592045 US 60647836	US 20230017635 A1	01/19/2023

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US	18144557	1)Howell, Thomas A., 2)Chao, David, 3)Thomas, Dr. C. Douglass, 4)Tong, Peter	HEAD-WORN PERSONAL AUDIO APPARATUS SUPPORTING ENHANCED HEARING SUPPORT	05/08/2023	US 17484080 US 18144557 US 11183289 US 13925336 US 13085402 US 16048120 US 14557408 US 60647526 US 15375423 US 17873104 US 60520238 US 60818107 US 16574254 US 60605191 US 60592045 US 60647836	US 20230273464 A1	08/31/2023

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: HOWELL et al.

Attorney Docket No.: IPVCP003C11

Application No.: 18/144,557

Examiner: LEI, JIE

Filed: May 8, 2023

Group: 2872

Title: HEAD-WORN PERSONAL
AUDIO APPARATUS SUPPORTING
ENHANCED HEARING SUPPORT

AMENDMENT B

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

Dear Sir:

In response to the Office Action dated November 24, 2023, please amend the above-identified patent application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 31 of this paper.

Bibliographic Data

Application No: 18/144,557

Foreign Priority claimed: ☐ Yes ☒ No

35 USC 119 (a-d) conditions met: ☐ Yes ☒ No ☐ Met After Allowance

Verified and Acknowledged: /JIE LEI/

Examiner's Signature

Initials

Title:

HEAD-WORN PERSONAL AUDIO APPARATUS SUPPORTING
ENHANCED HEARING SUPPORT

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
05/08/2023	351	2872	IPVCP003C11
RULE			

APPLICANTS

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CONTINUING DATA

This application is a CON of 17873104 07/25/2022 PAT 11644693

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FOREIGN APPLICATIONS

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PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1811	2	"18144557"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/11/20 04:39 PM
L1812	4	"17949029"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/11/20 04:39 PM
L1813	4	"83901364".fmid.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)	OR	ON	ON	2023/11/20 04:39 PM
L1814	11	"11644693"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB,	OR	ON	ON	2023/11/20 04:39 PM