

		worn by a user, the head-worn structure including a front section and first and second temples; a first speaker at least partially contained within the first temple of the head- worn structure; a second speaker at least partially contained within the second temple of the head- worn structure; a motion sensor at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus; a microphone at least partially contained within the head-worn structure, the microphone being positioned to pick up at least audio input from at least the user; a display at least partially contained within the head-worn structure, the display configured to present information to the user of the head-worn personal electronic apparatus; electronic circuitry contained within the head-worn structure and configured to control the display to present the information to the user of the head-worn personal electronic apparatus; and data communication circuitry at least partially contained within the head-worn structure. 100. (New) A head-worn personal electronic apparatus, comprising: (Claims) 08. (New) A head-worn personal electronic apparatus, comprising:	
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		a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure; a first optical sensor at least partially contained within the first extended endpiece; a second optical sensor at least partially contained within the second extended endpiece; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; and wireless communication circuitry at least partially contained within the head-worn structure. a processor at least partially contained within the head-worn structure and configured to control operation of the head-worn personal electronic apparatus;	
L2903	Sort results by: Similarity to Application # 18/597,874 Retrieve results by: Application # 18/597,874	(Abstract) Techniques for providing eyewear or other head-worn personal electronic apparatus with electrical components are disclosed. The electrical components can provide electrical technology to eyewear or other head-worn personal electronic apparatus without having to substantially compromise aesthetic design principles. The electrical components can be partially or completely	(G02C5/146) Side-members having special front end (G02C5/143) Side-members having special ear pieces (G02C11/06) Hearing aids (G02C11/10) Electronic devices other than hearing aids

		internal to eyewear or other head-worn personal electronic apparatus. The electrical components can operate independently or together with other electrical components provided elsewhere. Apparatus for presenting after-market electrical components are also disclosed. (Claims) a head-worn personal electronic apparatus, including at least: a head-worn structure configured to be worn by a user; a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure; a piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device, the piezoelectric device being contained within the head-worn structure, wherein the received user input operating to at least alter an operation of the head-worn personal electronic apparatus;	
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		a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; 1. (Previously Presented) A system, comprising: wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and (Claims) at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and a charging apparatus having at least a charging connector, wherein on placement of the head-worn personal electronic apparatus at least partially in the charging apparatus, electrical connection is configured to result at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed at least partially in the charging apparatus.	
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		a head-worn structure configured to be worn by a user; a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure; 2. (Previously Presented) A head-worn personal electronic apparatus, comprising: a piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device, the piezoelectric device being contained within the head-worn structure, wherein the received user input operating to at least alter an operation of the head-worn personal electronic apparatus; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the	
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		rechargeable battery; and wireless communication circuitry at least partially contained within the head-worn structure. (Claims) 72. (New) A head-worn personal electronic apparatus, comprising: a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; wireless communication circuitry at least partially contained within the head-worn structure; at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and a radiation detector contained within the head-worn structure and configured to capture radiation data, wherein the head-worn personal electronic apparatus is configured to determine whether the head-worn personal electronic apparatus is being worn by the user based on the radiation data captured by the radiation detector, and wherein the second microphone is configured to at least pick-up an environmental	
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		audio input. the head-worn structure, wherein the received user input operating to at least alter an operation of the head-worn personal electronic apparatus; (Claims) 95. (New) A head-worn personal electronic apparatus, comprising: a motion sensor at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure; a display at least partially contained within the head-worn structure, the display configured to present information to the user of the head-worn personal electronic apparatus; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; and wireless communication circuitry at least partially contained within the head-worn structure. (Claims) a head-worn structure configured to be worn by a user, the head-worn	
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		structure including a front section and first and second temples; a first speaker at least partially contained within the first temple of the head- worn structure; a second speaker at least partially contained within the second temple of the head- worn structure; a motion sensor at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus; a microphone at least partially contained within the head-worn structure, the microphone being positioned to pick up at least audio input from at least the user; a display at least partially contained within the head-worn structure, the display configured to present information to the user of the head-worn personal electronic apparatus; electronic circuitry contained within the head-worn structure and configured to control the display to present the information to the user of the head-worn personal electronic apparatus; and data communication circuitry at least partially contained within the head-worn structure. 100. (New) A head-worn personal electronic apparatus, comprising: (Claims) 08. (New) A head-worn personal electronic apparatus, comprising:	
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L2904	Sort results by: Similarity to Application # 18/597,874 Retrieve results by: Application # 18/597,874	a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure; a first optical sensor at least partially contained within the first extended endpiece; a second optical sensor at least partially contained within the second extended endpiece; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; and wireless communication circuitry at least partially contained within the head-worn structure. a processor at least partially contained within the head-worn structure and configured to control operation of the head-worn personal electronic apparatus; (Abstract) Techniques for providing eyewear or other head-worn personal electronic apparatus with electrical components are disclosed. The electrical components can provide electrical technology to eyewear or other head-worn personal electronic apparatus without having to substantially compromise aesthetic design principles. The electrical components can be partially or completely internal to eyewear or other	(G02C5/146) Side-members having special front end (G02C5/143) Side-members having special ear pieces (G02C11/06) Hearing aids (G02C11/10) Electronic devices other than hearing aids (G02C2200/08) Modular frames, easily exchangeable frame parts and lenses (H02J7/0045) Circuit arrangements for
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		head-worn personal electronic apparatus. The electrical components can operate independently or together with other electrical components provided elsewhere. Apparatus for presenting after-market electrical components are also disclosed. (Claims) a head-worn personal electronic apparatus, including at least: a head-worn structure configured to be worn by a user; a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure; a piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device, the piezoelectric device being contained within the head-worn structure, wherein the received user input operating to at least alter an operation of the head-worn personal electronic apparatus;	charging or depolarising batteries or for supplying loads from batteries characterised by the mechanical construction concerning the insertion or the connection of the batteries
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		a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; 1. (Previously Presented) A system, comprising: wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and (Claims) at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and a charging apparatus having at least a charging connector, wherein on placement of the head-worn personal electronic apparatus at least partially in the charging apparatus, electrical connection is configured to result at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed at least partially in the charging apparatus.	
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		a head-worn structure configured to be worn by a user; a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure; 2. (Previously Presented) A head-worn personal electronic apparatus, comprising: a piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device, the piezoelectric device being contained within the head-worn structure, wherein the received user input operating to at least alter an operation of the head-worn personal electronic apparatus; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; and	
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		wireless communication circuitry at least partially contained within the head-worn structure. (Claims) 72. (New) A head-worn personal electronic apparatus, comprising: a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; wireless communication circuitry at least partially contained within the head-worn structure; at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and a radiation detector contained within the head-worn structure and configured to capture radiation data, wherein the head-worn personal electronic apparatus is configured to determine whether the head-worn personal electronic apparatus is being worn by the user based on the radiation data captured by the radiation detector, and wherein the second microphone is configured to at least pick-up an environmental audio input.	
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		the head-worn structure, wherein the received user input operating to at least alter an operation of the head-worn personal electronic apparatus; (Claims) 95. (New) A head-worn personal electronic apparatus, comprising: a motion sensor at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure; a display at least partially contained within the head-worn structure, the display configured to present information to the user of the head-worn personal electronic apparatus; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; and wireless communication circuitry at least partially contained within the head-worn structure. (Claims) a head-worn structure configured to be worn by a user, the head-worn structure including a front	
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		section and first and second temples; a first speaker at least partially contained within the first temple of the head- worn structure; a second speaker at least partially contained within the second temple of the head- worn structure; a motion sensor at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus; a microphone at least partially contained within the head-worn structure, the microphone being positioned to pick up at least audio input from at least the user; a display at least partially contained within the head-worn structure, the display configured to present information to the user of the head-worn personal electronic apparatus; electronic circuitry contained within the head-worn structure and configured to control the display to present the information to the user of the head-worn personal electronic apparatus; and data communication circuitry at least partially contained within the head-worn structure. 100. (New) A head-worn personal electronic apparatus, comprising: (Claims) 08. (New) A head-worn personal electronic apparatus, comprising: a first microphone at least	
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		partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure; a first optical sensor at least partially contained within the first extended endpiece; a second optical sensor at least partially contained within the second extended endpiece; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; and wireless communication circuitry at least partially contained within the head-worn structure. a processor at least partially contained within the head-worn structure and configured to control operation of the head-worn personal electronic apparatus;	
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**INFORMATION DISCLOSURE STATEMENT SIZE FEE –
WRITTEN ASSERTION UNDER 37 CFR 1.98****Complete if Known**

Application or Patent No.: 18/597,874	First Named Inventor: HOWELL et al.	Art Unit: 2872
Filing Date: March 6, 2024	Attorney Docket Number: IPVCP003X1C4X1C2	Examiner: LEI, JIE

Please see 37 CFR 1.17(v) and attached Instructions for completing this form to make the appropriate selection of an assertion under 37 CFR 1.98. For the information disclosure statement (IDS) submitted herewith, the applicant or patent owner certifies the following with respect to the cumulative number of applicant-provided or patent-owner provided items of information submitted to date including those in the accompanying IDS (select only one):

- ☐ No IDS size fee is required under 37 CFR 1.17(v) at this time.
- ☐ The IDS is accompanied by the IDS size fee under 37 CFR 1.17(v)(1).
- ☐ The IDS is accompanied by the IDS size fee under 37 CFR 1.17(v)(2).
- ☒ The IDS is accompanied by the IDS size fee under 37 CFR 1.17(v)(3).

NOTE: This form must be accompanied by PTO/SB/08a and/or PTO/SB/08b or equivalent.

DEPOSIT ACCOUNT

The Director is authorized to charge the fee indicated above in the amount of \$ 800 for the IDS submitted herewith to deposit account 50-3874.

SIGNATURE

This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications.

If applicant or patent owner is a juristic entity (e.g., an LLC or corporation), this form must be signed by a registered practitioner. See 37 CFR 1.31.

If applicant or patent owner is a person or persons, this form may be signed by either a registered practitioner, or the applicant or patentee. Note that if multiple people together are the applicant or patentee (e.g., there are joint inventors who together are the applicant), then a signature is required from each person who is an applicant or patentee. *Submit multiple forms if more than one signature is required, see below*.*

Signature /C. Douglass Thomas/	Date March 24, 2025
Name (Print/Typed) C. Douglass Thomas	Practitioner Registration Number (if applicable) 32,947

☒ * Total of 1 forms are submitted.

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Note: This form is to be used when applicant or patent owner files an Information Disclosure Statement (IDS) for consideration by the examiner. This form must be accompanied by PTO/SB/08a and/or PTO/SB/08b or equivalent.

Determining the cumulative number of applicant-provided or patent owner-provided items of information

The IDS size fee is based on the cumulative number of items of information provided by an applicant or patent owner during the pendency of the application or reexamination proceeding. It is the applicant's and patent owner's responsibility to track the cumulative number of items of information provided in the application or proceeding and provide a written assertion of any applicable IDS size fee due.

In determining the applicable written assertion for the cumulative number of applicant-provided or patent owner-provided items of information, “provided” refers to the items cited on an IDS under 37 CFR 1.98(a)(1) by an applicant or patent owner, whether or not an actual copy of the cited item is submitted by the applicant or patent owner to the USPTO. If a particular item provided by an applicant or patent owner on an IDS was not considered because the item was non-compliant and that particular item is provided on an IDS a second time in the same application or patent, it will not be counted again.

An item of information that an applicant cited in a parent application will not be counted in a child application (e.g., a continuation, continuation-in-part, or divisional application) for the purpose of the IDS size fees unless it is resubmitted, i.e., provided by the applicant on an IDS in the child application. Applicants who wish to avoid paying the IDS size fees in a child application for items of information considered in a parent application may do so by not resubmitting the items. An item of information must be resubmitted in the continuing application if the applicant desires the item of information to be printed on the patent. See MPEP 609.02, subsection II.A.2.

The cumulative count is determined for each application or patent separately. Continuing, CPA, and reissue applications and post-issuance proceedings will start with a count of zero. A request for continued examination (RCE) is not the filing of a new application, and thus the count will not reset when an RCE is filed.

Written Assertion

Check “[] No IDS size fee is required under 37 CFR 1.17(v) at this time” on the above PTO/SB/08c form when the IDS does not cause the cumulative number of applicant-provided or patent owner-provided items in this application or proceeding to:

- exceed 50, 100, or 200 items of information.

Check “[] The IDS is accompanied by the IDS size fee under 1.17(v)(1)” on the above PTO/SB/08c form when the IDS causes the cumulative number of applicant-provided or patent owner-provided items in this application or proceeding to:

- exceed 50 items of information but not exceed 100 items of information.

Check “[] The IDS is accompanied by the IDS size fee under 1.17(v)(2)” on the above PTO/SB/08c form when the IDS causes the cumulative number of applicant-provided or patent owner-provided items in this application or proceeding to:

- exceed 100 items of information but not exceed 200 items of information.

Note: If a fee under 1.17(v)(1) was previously paid, the fee currently due is the difference between the 1.17(v)(2) fee and the previously paid 1.17(v)(1) fee.

Check “[] The IDS is accompanied by the IDS size fee under 1.17(v)(3)” on the above PTO/SB/08c form when the IDS causes the cumulative number of applicant-provided or patent owner-provided items in this application or proceeding to:

- exceed 200 items of information.

Note: If a fee under 1.17(v)(1) or (v)(2) was previously paid, the fee currently due is the difference between the 1.17(v)(3) fee and the previously paid 1.17(v)(1) or (v)(2) fee.

Select only one assertion on the PTO/SB/08c form above.

Note: the cumulative count of items of information includes all items of information already of record in a pending application or proceeding that were submitted via IDS(s) including those submitted prior to January 19, 2025.

Method of Payment

This section should only be filled out if the IDS size fee is due. Fees may be paid by check or money order (made payable to the Director of the United States Patent and Trademark Office), credit card (Form PTO-2038), or deposit account. When paying by deposit account, the amount of the IDS size fee to be charged to the deposit account must be specified to comply with 37 CFR 1.98(a)(4). General authorizations to charge fees to a deposit account are not compliant written assertions. When paying by credit card, to protect your credit card information, do not submit Form PTO-2038 electronically through USPTO’s patent electronic filing system or any other USPTO Web site.

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #

18/597,874

RECEIPT DATE / TIME

03/24/2025 03:16:41 PM Z ET

ATTORNEY DOCKET #

IPVCP003X1C4X1C2

Title of Invention

SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC APPARATUS

Application Information

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

PATENT # -

CONFIRMATION # 7223

FILED BY Angela Nijim

PATENT CENTER # 69681680

FILING DATE 03/06/2024

CUSTOMER # 34071

FIRST NAMED INVENTOR Thomas A. Howell

CORRESPONDENCE ADDRESS -

AUTHORIZED BY Peter Tong

Documents

TOTAL DOCUMENTS: 25

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
IPVCP003X1C4X1C2_AmdD Trans_3-25.pdf	1	Transmittal Letter	16 KB
IPVCP003X1C4X1C2_AmdD _AsFiled_3-21-final.pdf	44	-	178 KB
IPVCP003X1C4X1C2_Amd D_AsFiled_3-21-final- A....pdf	(1-1) 1	Amendment/Request for Reconsideration-After Non- Final Rejection	20 KB
IPVCP003X1C4X1C2_Amd D_AsFiled_3-21-final- CLM.pdf	(2-41) 40	Claims	155 KB
IPVCP003X1C4X1C2_Amd D_AsFiled_3-21-final- REM.pdf	(42-44) 3	Applicant Arguments/Remarks Made in an Amendment	27 KB

IPVCP003X1C4X1C2_IDSTrans_3-25.pdf	2	Letter specifying the conditions for filing under 37 CFR 1.97	21 KB
CA2270003.pdf	21	Foreign Reference	2207 KB
WO1994009398A1.pdf	20	Foreign Reference	765 KB
Request_Reexam_US10310296.pdf	94	Non Patent Literature	2421 KB
Order_Granteeing_Req_Reexam.pdf	21	Non Patent Literature	1910 KB
Yanulis_Declaration.pdf	47	Non Patent Literature	2162 KB
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RespondentJointDisclosureOfInitialInvalidityContentions-Pt4.pdf	392	Non Patent Literature	13353 KB
IPVCP003X1C4X1C2_IDS_A	4	Assertion regarding	334 KB

ssertion_3-25.pdf		Information Disclosure Statement (IDS) Size Fee (SB/08C)	
IPVCP003X1C4X1C2_1449_3-25.pdf	2	Information Disclosure Statement (IDS) Form (SB08)	29 KB

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DOCUMENT	MESSAGE DIGEST(SHA-512)
IPVCP003X1C4X1C2_AmdDTr ans_3-25.pdf	8F8FBBEA75D1EFBA240DE65148813AC98537B4F5FC4841ED 2FDE5E29FAB273230788ED3B91DC5DB3280CBDA69FC5D4B3 973B215E8DAF9146F7F19F0739797F98
IPVCP003X1C4X1C2_AmdD_A sFiled_3-21-final.pdf	1074D189C528C330F0CEF39D1EAB8A95A6D80B5CF1102F624 37D5998E2AB0C0D6C3F97423DD3519DC5F65D92A03EBFF6E 4DF9C3C5C5BCD6348416A65ADB1880C
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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.



UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov

ELECTRONIC PAYMENT RECEIPT

APPLICATION #
18/597,874

RECEIPT DATE / TIME
03/24/2025 03:16:41 PM Z ET

ATTORNEY DOCKET #
IPVCP003X1C4X1C2

Title of Invention

SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL
ELECTRONIC APPARATUS

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	7223	FILED BY	Angela Nijim
PATENT CENTER #	69681680	AUTHORIZED BY	Peter Tong
CUSTOMER #	34071	FILING DATE	03/06/2024
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Thomas A. Howell

Payment Information

PAYMENT METHOD CARD / 6752	PAYMENT TRANSACTION ID E20253NF17258579	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(\$)
1832	FILING AN INFORMATION DISCLOSURE STATEMENT THAT CAUSES THE CUMULATIVE NUMBER OF APPLICANT- PROVIDED ITEMS OF INFORMATION TO EXCEED 50 BUT NOT EXCEED 100	200.00	1	200.00
1834	FILING AN INFORMATION DISCLOSURE STATEMENT THAT CAUSES THE CUMULATIVE NUMBER OF APPLICANT- PROVIDED ITEMS OF INFORMATION TO EXCEED 200	800.00	1	800.00

1202	EACH CLAIM IN EXCESS OF 20	200.00	6	1200.00
TOTAL AMOUNT:				\$2,200.00

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.

Form 1449 (Modified) Information Disclosure Statement By Applicant (Use Several Sheets if Necessary)	Atty. Docket No.	IPVCP003X1C4X1C2
	Application No.:	18/597,874
	Applicant	HOWELL et al.
	Filing Date	March 6, 2024
	Group	2872
		Page 1 of 2

U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	1.	2004/0209489 A1	Oct-04	Clapper			
	2.	2005/0012683 A1	Jan-05	Chen			
	3.	2006/0028400 A1	Feb-06	Lapstun et al.			
	4.	2024/0412606 A1	Dec-24	Howell et al.			
	5.	2025/0076687 A1	Mar-25	Howell et al.			
	6.	4,516,157	May-85	Campbell			
	7.	5,444,876	Aug-95	Cooper et al.			
	8.	5,742,263	Apr-98	Wang et al.			
	9.	6,369,952 B1	Apr-02	Rallison et al.			
	10.	6,529,331 B2	Mar-03	Massof et al.			
	11.	7,187,960 B2	Mar-07	Abreu			
	12.	12,238,494 B2	Feb-25	Howell et al.			
	13.	12,242,138 B1	Mar-25	Howell et al.			
	14.	12,248,198 B2	Mar-25	Howell et al.			

Foreign Documents

								Translation	
Init.		Document No.	Date	Country	Class	Subclass	Yes	No	
		CA 2,270,003 A1	Nov-99	CANADA					
		WO 94/09398 A1	Apr-94	WIPO					

Other Documents (Including Author, Title, Date, Pertinent Pages, etc.)

A	Request for Inter Partes Reexamination, U.S. Patent No. 10,310,296, filed January 30, 2025, 94 pgs.
B	Order Granting Reexamination Request, Reexam No. 90/019,833 re U.S. Patent No. 10,310,296, dated March 18, 2025.
C	Office Action for U.S. Patent Application No. 18/948,670, dated January 28, 2025.
D	Respondents' Joint Disclosure of Initial Invalidity Contention, International Trade Commission Investigation No. 337-TA-1423, with Exhibits A1-A9, Exhibits B1-B9, and Exhibits C1-C8, filed January 21, 2025, pp. 1-2827. (copy submitted as Parts 1-4)
E	Declaration of George Yanulis, D. Eng., accompanying Request for Inter Partes Reexamination of, U.S. Patent No. 10,310,296, dated January 29,

Examiner	Date Considered
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Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form 1449 (Modified) Information Disclosure Statement By Applicant (Use Several Sheets if Necessary)	Atty. Docket No.	IPVCP003X1C4X1C2
	Application No.:	18/597,874
	Applicant	HOWELL et al.
	Filing Date	March 6, 2024
	Group	2872
		Page 2 of 2

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	F	Excerpts of Merriam-Webster, Inc., Merriam-Webster's American English Dictionary, USA (2003)
	G	R. SHEPHERD, Bluetooth wireless technology in the home, Electronics & Communication Engineering Journal, 195-203 (Oct. 2001)
	H	Eugene Y. Cheng, et al. Forehead Pulse Oximetry Compared with Finger Pulse Oximetry and Arterial Blood Gas Measurement, Department of Anesthesiology, Medical College of Wisconsin (1988)
	I	Jenean Carlton, Frames and Lenses, SLACK Inc. (2000) (excerpt)
	J	Donal G. Pitts and Robert N. Fleinstein, Environmental Vision: Interactions of the Eye, Vision, and the Environment, Butterworth-Heinemann (1993) (excerpt)
	K	RIM Blackberry 5810 and 5820 Smartphones, York University Computer Museum Canada, accessed January 25, 2025, https://museum.eecs.yorku.ca/items/show/214
	L	David Drascic and Paul Milgram, Perceptual Issues in Augmented Reality, Proc. SPIE Vol. 2653: Stereoscopic Displays and Virtual Reality Systems III, San Jose, California, 123-134 (Feb. 1996)
	M	M.B. Spitzer et al., Video I/O for wearable computers, SPIE Conference on Helmet and Head-Mounted Displays IV, SPIE Vol. 3689, 278-283, Orlando, FL (Apr. 1999)

Examiner	Date Considered
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Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: HOWELL et al.

Attorney Docket No.: IPVCP003X1C4X1C2

Application No.: 18/597,874

Examiner: LEI, JIE

Filed: March 6, 2024

Group: 2872

Title: SYSTEM FOR POWERING
HEAD-WORN PERSONAL
ELECTRONIC APPARATUS

**INFORMATION DISCLOSURE STATEMENT
37 CFR §§1.56 AND 1.97(b)**

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

Dear Sir:

The references listed in the attached PTO Form 1449, copies of which are attached, may be material to examination of the above-identified patent application. Applicants submit these references in compliance with their duty of disclosure pursuant to 37 CFR §§1.56 and 1.97. The Examiner is requested to make these references of official record in this application.

Under their duty of disclosure, Applicants hereby submit copies of the cited references. Applicants respectfully request that the Examiner consider these references and make these references of official record in this application.

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that these references indeed constitute prior art.

Applicants would also like to inform the Patent Office of a potentially related case, as follows: United States International Trade Commission Investigation No. 337-TA-1423, filed

on October 10, 2024 pertaining to U.S. Patent Nos. 10,310,296; 11,762,224, and 12,078,870.

This Information Disclosure Statement is: (i) filed within three (3) months of the filing date of the above-referenced application, (ii) believed to be filed before the mailing date of a first Office Action on the merits, or (iii) believed to be filed before the mailing of a first Office Action after the filing of a Request for Continued Examination under §1.114.

Accordingly, it is believed that no fees are due in connection with the filing of this Information Disclosure Statement. However, if it is determined that any fees are due, the Commissioner is hereby authorized to charge such fees to Deposit Account 50-3874 (Order No. IPVCP003X1C4X1C2).

Respectfully submitted,

/C. Douglass Thomas/

C. Douglass Thomas
Registration No. 32,947

4010 Moorpark Avenue
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San Jose, CA 95117

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: HOWELL et al.

Attorney Docket No.: IPVCP003X1C4X1C2

Application No.: 18/597,874

Examiner: LEI, JIE

Filed: March 6, 2024

Group: 2872

Title: SYSTEM FOR POWERING
HEAD-WORN PERSONAL
ELECTRONIC APPARATUS

AMENDMENT D 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	125	MINUS	119	6	x 80 =	x 200 = 1200
Independent Claims	6	MINUS	6	0	x 240 =	x 600 = 0
Multiple Dependent Claim Present and Fee Not Previously Paid					\$	\$
Total					\$0.00	\$1200.00

- ☐ 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. IPVCP003X1C4X1C2).
- ☒ 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. IPVCP003X1C4X1C2).

Respectfully submitted,

/C. Douglass Thomas/

C. Douglass Thomas
Reg. No. 32,947

Appln. No. 18/597,874

Atty. Docket No. IPVCP003X1C4X1C2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: HOWELL et al. Attorney Docket No.: IPVCP003X1C4X1C2
Application No.: 18/597,874 Examiner: LEI, JIE
Filed: March 6, 2024 Group: 2872
Title: SYSTEM FOR POWERING
HEAD-WORN PERSONAL
ELECTRONIC APPARATUS

AMENDMENT D

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

Dear Sir:

In response to the Office Action dated March 11, 2025, 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 42 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 system, comprising:
 - a head-worn personal electronic apparatus, including at least:
 - a head-worn structure configured to be worn by a user;
 - a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user;
 - a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus;
 - a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user;
 - a second microphone at least partially contained within the head-worn structure;
 - a piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device, the piezoelectric device being contained within the head-worn structure, wherein the received user input operating to at least alter an operation of the head-worn personal electronic apparatus;
 - a rechargeable battery contained within the head-worn structure;
 - electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery;
 - wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and

a charging apparatus having at least a charging connector,

wherein on placement of the head-worn personal electronic apparatus at least partially in the charging apparatus, electrical connection is configured to result at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed at least partially in the charging apparatus.

2. (Currently Amended) A head-worn personal electronic apparatus, comprising:

a head-worn structure configured to be worn by a user;

a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user;

a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus;

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

a second microphone at least partially contained within the head-worn structure;

a force sensing device configured to receive a user input based on a force induced on the force sensing device, the force sensing device being an electrical component configured to sense force, the force sensing device being contained

within the head-worn structure, wherein the received user input operating to at least alter an operation of the head-worn personal electronic apparatus;

a rechargeable battery contained within the head-worn structure;

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; and

wireless communication circuitry at least partially contained within the head-worn structure.

3. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn personal electronic apparatus comprises:

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery.

4. (Canceled).

5. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn personal electronic apparatus is configured to support audio output to the user via the speaker, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

6. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn personal electronic apparatus is configured to support voice calls to the user, and

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

7. (Previously Presented) A system as recited in claim 1, wherein the head-worn personal electronic apparatus is configured to support audio output to the user via the speaker, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

8. (Previously Presented) A system as recited in claim 1, wherein the head-worn personal electronic apparatus is configured to support voice calls to the user, and

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

9. (Previously Presented) A system as recited in claim 1,

wherein the system comprises:

a mobile communication device at least for supporting audio output, the mobile communication device configured to store at least a hearing profile associated with the user, the stored hearing profile associated with the user at least characterizes hearing impairment regarding the user's ability to hear, the mobile communication device configured to produce audio output signals customized for the user based on at least the stored hearing profile 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 the mobile communication device configured to transmit the customized audio output signals to the head-worn personal electronic apparatus,

wherein the 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 being received by the head-worn personal electronic apparatus.

10. (Previously Presented) A system as recited in claim 9, wherein the mobile communication device is configured to support establishment of the hearing profile for the user.

11. (Previously Presented) A system as recited in claim 10, wherein the hearing profile for the user is established by the mobile communication device at least via generating audio tones and outputting such to at least the speaker and receiving a user indication corresponding to the user's ability to hear the generated audio tones.

12. (Previously Presented) A system as recited in claim 9, wherein the mobile communication device is configured to produce the customized audio output signals using frequency-dependent amplification.

13. (Previously Presented) A system as recited in claim 9,
wherein the mobile communication device is or includes a mobile phone, and
wherein the customized audio output includes music.

14. (Previously Presented) A system as recited in claim 9,
wherein the mobile communication device is or includes a mobile phone, and
wherein the customized audio output includes a voice conversation.

15. (Previously Presented) A system as recited in claim 9, wherein the customized audio output signals are produced based on amplifying or attenuating different frequency bands differently according to at least the stored hearing profile.

16. (Previously Presented) A system as recited in claim 9,
wherein the mobile communication device includes computing capabilities and a storage device, the storage device storing at least a software program

executed by the mobile communication device to enable the user to establish the hearing profile associated with the user, and

wherein the mobile communication device is configured to establish the hearing profile associated with the user via the software program executed by the mobile communication device based on the user interacting with the software program via the mobile communication device.

17. (Previously Presented) A system as recited in claim 16, wherein the software program at least interactively guides the user to establish the hearing profile for the user.

18. (Previously Presented) A system as recited in claim 17, wherein the software program at least interactively guides the user to establish the hearing profile for the user by at least causing various audio tones to be output to the user via at least the speaker, prompting the user to provide a hearing input with respect to one or more of the various audio tones being output, and receiving the hearing input pertaining to one or more of the various audio tones being output.

19. (Previously Presented) A system as recited in claim 18, wherein the mobile communication device is configured to wirelessly communicate with the head-worn personal electronic apparatus over a wireless network using the wireless communication circuitry.

20. (Previously Presented) A system as recited in claim 9, wherein the head-worn personal electronic apparatus includes a plurality of circuit boards, each of the plurality of circuit boards including at least one integrated circuit mounted thereto.

21. (Previously Presented) A system as recited in claim 20, wherein at least one of the plurality of circuit boards is a flexible printed circuit board.

22. (Previously Presented) A system as recited in claim 20, wherein at least one of the plurality of circuit boards has at least one integrated circuit mounted on a first side of the at least one of the plurality of circuit boards, and at least one integrated circuit mounted on a second side of the at least one of the plurality of circuit boards.

23. (Previously Presented) A system as recited in claim 9, wherein the head-worn structure comprises:

an infrared emitter configured to at least direct infrared signals towards the user when at least the head-worn structure of the head-worn personal electronic apparatus is being worn; and

an infrared detector configured to detect infrared radiation reflected back from the user when at least the head-worn structure of the head-worn personal electronic apparatus is being worn.

24. (Previously Presented) A system as recited in claim 23, wherein the electronic circuitry within the head-worn structure is configured to facilitate determining whether the head-worn structure is being worn by the user based on at least the detected infrared radiation.

25. (Previously Presented) A system as recited in claim 9, wherein the head-worn structure comprises:

a physical condition sensor configured to acquire data pertaining to at least a physical condition of the user, the physical condition sensor being provided at least partially internal to the head-worn structure.

26. (Previously Presented) A system as recited in claim 25, wherein the acquired data by the physical condition sensor includes data regarding temperature of the user.

27. (Previously Presented) A system as recited in claim 25, wherein the acquired data by the physical condition sensor includes data regarding vital signs of the user.

28. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 2,

wherein the second microphone is configured to pick-up an environmental audio input, and

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

29. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 2,

wherein the second microphone is configured to pick-up an environmental audio input, and

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

30. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 29, wherein the head-worn personal electronic apparatus comprises:

a physical condition sensor configured to acquire data pertaining to at least a physical condition of the user, the physical condition sensor being provided at least partially internal to the head-worn structure,

wherein the acquired data by the physical condition sensor includes data regarding vital signs or temperature of the user.

31. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 29, wherein the environmental audio input picked-up from at least the second microphone is used at least for noise cancelation, and at least a portion of the environmental audio input picked-up from the second microphone is used to remove undesired noise from the audio input picked-up from the first microphone.

32. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 2, wherein the electronic circuitry is configured to:

determine an ambient noise level based on at least signals picked-up from at least the second microphone; and

modify at least a portion of audio output signals to be output to the user via the speaker, with the modification being at least in part dependent on the ambient noise level.

33. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 2, wherein the first microphone faces the user when the head-worn personal electronic apparatus is being worn.

34. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 33, wherein the second microphone faces away from the user when the head-worn personal electronic apparatus is being worn.

35. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 34,

wherein the second microphone is configured to pick-up an environmental audio input, and

wherein the electronic circuitry is configured to receive audio output signals to be output to the user via the speaker, and modify the audio output signals to be

output to the user via the speaker to cancel at least a portion of noise associated with the environment, the modification of the audio output signals being dependent at least in part on the environmental audio input picked-up via the second microphone.

36. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 34,

wherein the second microphone is configured to pick-up an environmental audio input, and

wherein the environmental audio input picked-up from at least the second microphone is used at least for noise cancelation, and at least a portion of the environmental audio input picked-up from the second microphone is used to remove undesired noise from the audio input picked-up from the first microphone.

37. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 34, wherein the electronic circuitry is configured to:

determine an ambient noise level based on at least signals picked-up from at least the second microphone; and

modify at least a portion of audio output signals to be output to the user via the speaker, with the modification being at least in part dependent on the ambient noise level.

38. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn personal electronic apparatus is configured to receive a voice input from the user via at least the first microphone, support or receive determination of a requested operation from the voice input using voice recognition, and control operation by the head-worn personal electronic apparatus based on the requested operation.

39. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 2,

wherein the head-worn personal electronic apparatus comprises:

an optical sensor contained within the head-worn structure and configured to capture optical sensor data,

wherein the head-worn personal electronic apparatus is configured to determine whether the head-worn personal electronic apparatus is being worn by the user based on the optical sensor data captured by the optical sensor.

40. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 39, wherein the optical sensor is configured to sense at least infrared radiation, and wherein the optical sensor data captured includes at least infrared radiation data.

41. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn personal electronic apparatus comprises:

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

a radiation detector at least partially contained within the head-worn structure and configured to detect a portion of the radiation directed towards the user that is reflected back from the user when the head-worn personal electronic apparatus is being worn.

42. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 41, wherein the radiation detector comprises a photodetector.

43. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn personal electronic apparatus comprises:

an optical sensor at least partially contained within the head-worn structure and configured to capture data, the captured data being indicative of whether the head-worn personal electronic apparatus is being worn by the user,

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 captured data.

44. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 43, wherein the optical sensor is configured to sense at least infrared radiation.

45. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn personal electronic apparatus comprises:

an infrared emitter contained within the head-worn structure and configured to emit infrared radiation towards the user when the head-worn personal electronic apparatus is being worn.

46. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn personal electronic apparatus comprises:

at least a portion of a Hall effect detector at least partially contained within the head-worn structure, the Hall effect detector being configured to capture data associated with a magnetic characteristic.

47. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 2,

wherein the head-worn personal electronic apparatus is operable to at least output customized audio output,

wherein the wireless communication circuitry includes at least a wireless receiver configured to wirelessly receive audio output signals to be output to the user via the speaker,

wherein the 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 hearing impairment regarding the user's ability to hear; and (iii) output the customized audio output signals to the speaker, and

wherein the 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.

48. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 47, wherein the received audio output signals are wirelessly received from a mobile communication device associated with the user.

49. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 2,

wherein the head-worn personal electronic apparatus is operable to at least output customized audio output,

wherein the wireless communication circuitry includes at least a wireless receiver configured to wirelessly receive audio output signals to be output to the user via the speaker,

wherein the electronic circuitry including at least an integrated circuit, the electronic circuitry being configured to (i) store attributes 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 attributes

associated with the user; and (iii) output the customized audio output signals to the speaker, and

wherein the 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.

50. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 49, wherein the received audio output signals are wirelessly received from a mobile communication device associated with the user.

51. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 2,

wherein the head-worn personal electronic apparatus is operable to at least output customized audio output,

wherein the wireless communication circuitry includes at least 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 hearing impairment regarding the user's ability to hear, and

wherein the 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.

52. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 51, wherein the customized audio output signals are wirelessly received from a mobile communication device associated with the user.

53. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 51,

wherein the first microphone is positioned to be directed towards the user when the head-worn personal electronic apparatus is being worn by the user; and

wherein the second microphone is 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 personal electronic apparatus is being worn by the user.

54. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 51,

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

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

55. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 51,

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 personal electronic apparatus, 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.

56. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 54,

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

wherein the second microphone is positioned so as to be directed away from the user of the head-worn personal electronic apparatus, relative to the first microphone.

57. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 56, wherein the head-worn personal electronic apparatus comprises:

a physical condition sensor configured to acquire data pertaining to at least a physical condition of the user, the physical condition sensor being provided at least partially internal to the head-worn structure, the acquired data by the physical condition sensor includes (i) data regarding temperature of the user, or (ii) data regarding vital signs of the user.

58. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 50,

wherein the second microphone is configured to pick up at least ambient noise associated with an environment in the vicinity of the head-worn personal electronic apparatus, 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 input picked-up via the first microphone, with the modification being at least in part dependent on the ambient noise level.

59. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 50, 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 a portion of the radiation directed towards the user that is reflected back from the user when the head-worn structure of the head-worn personal electronic apparatus is being worn,

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

60. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 59, wherein the detected radiation is at least infrared radiation.

61. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 60, wherein the speaker is configured to be at least partially inserted into the ear of the user.

62. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 50, wherein the head-worn personal electronic apparatus is configured to receive a voice input, support a determination of a requested operation from the voice input using voice recognition, and control operation by the head-worn personal electronic apparatus based on the requested operation.

63. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 50, wherein the customized audio output includes music that was wirelessly received via the wireless receiver.

64. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 50, 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.

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

wherein the second microphone is positioned to pick up at least environmental audio input associated with an environment around the head-worn personal electronic apparatus, and

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.

66. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn personal electronic apparatus comprises:

a bone conducting electronic element at least partially contained within the head-worn structure.

67. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 66,

wherein the bone conducting electronic element associated with vibrations, and

wherein the bone conducting electronic element having electrical signals associated with the vibration.

68. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 2, wherein the motion detector includes at least an accelerometer.

69. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 2, wherein the wireless receiver is configured to operate with a Bluetooth network.

70. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 2, wherein the electronic circuitry includes at least a microprocessor.

71. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn personal electronic apparatus comprises:

an antenna contained within the head-worn structure of the head-worn personal electronic apparatus.

72. (Currently Amended) A head-worn personal electronic apparatus, comprising:

a head-worn structure configured to be worn by a user;

a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user;

a motion detector ~~at least partially~~ contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus;

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

a second microphone at least partially contained within the head-worn structure;

a force sensing device configured to receive a user input based on a force induced on the force sensing device, the force sensing device being contained within the head-worn structure, wherein the received user input operating to at least alter an operation of the head-worn personal electronic apparatus;

a rechargeable battery contained within the head-worn structure;

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery;

wireless communication circuitry ~~at least partially~~ contained within the head-worn structure;

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and

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

wherein the head-worn personal electronic apparatus is configured to determine whether the head-worn personal electronic apparatus is being worn by the user based on the radiation data captured by the radiation detector, and

wherein the second microphone is configured to at least pick-up an environmental audio input.

73. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 72, wherein the head-worn personal electronic apparatus is configured to receive a voice input from the user via at least the first microphone, support or receive determination of a requested operation from the voice input using voice recognition, and control operation by the head-worn personal electronic apparatus based on the requested operation.

74. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 73,

wherein the wireless communication circuitry includes at least a wireless receiver configured to wirelessly receive audio output signals to be output to the user via the speaker, and

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

75. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 74,

wherein the head-worn personal electronic apparatus is operable to at least output customized audio output,

wherein the electronic circuitry includes at least an integrated circuit, and 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 hearing impairment regarding the user's ability to hear; and (iii) output the customized audio output signals to the speaker, and

wherein the 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.

76. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 75,

wherein the head-worn personal electronic apparatus comprises:

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

wherein the radiation detector at least partially contained within the head-worn structure and configured to detect a portion of the radiation directed towards the user by the radiation emitter that is reflected back from the user when the head-worn personal electronic apparatus is being worn.

77. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 76,

wherein the head-worn personal electronic apparatus is configured to support control of (i) audio output to the user via the speaker and (ii) voice calls to the user, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns at least control of the audio output being provided to the user and/or accepting or declining a voice call to the user.

78. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 77, wherein the head-worn personal electronic apparatus comprises:

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

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

a bone conducting electronic element at least partially contained within the head-worn structure, the bone conducting electronic element being associated

with vibrations, and the bone conducting electronic element utilizing electrical signals associated with the vibration.

80. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 72,

wherein the wireless communication circuitry includes at least a wireless receiver configured to wirelessly receive audio output signals to be output to the user via the speaker, and

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

81. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 80,

wherein the head-worn personal electronic apparatus is operable to at least output customized audio output,

wherein the electronic circuitry includes at least an integrated circuit, and the electronic circuitry being configured to (i) store attributes 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 attributes associated with the user; and (iii) output the customized audio output signals to the speaker, and

wherein the 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.

82. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 81,

wherein the head-worn personal electronic apparatus comprises:

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

wherein the radiation detector at least partially contained within the head-worn structure and configured to detect a portion of the radiation directed towards the user by the radiation emitter that is reflected back from the user when the head-worn personal electronic apparatus is being worn.

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

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

a plurality of circuit boards, each of the plurality of circuit boards including at least one electrical component mounted thereto, at least one of the plurality of circuit boards being a flexible printed circuit board, at least one of the plurality of circuit boards has at least one integrated circuit mounted on a first side of the at least one of the plurality of circuit boards, and at least one integrated circuit mounted on a second side of the at least one of the plurality of circuit boards.

84. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 82,

wherein the head-worn personal electronic apparatus is configured to support control of (i) audio output to the user via the speaker and (ii) voice calls to the user, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns at least control of the audio output being provided to the user and/or accepting or declining a voice call to the user.

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

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

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

a bone conducting electronic element at least partially contained within the head-worn structure, the bone conducting electronic element being associated with vibrations, and the bone conducting electronic element utilizing electrical signals associated with the vibration.

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

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

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

a plurality of circuit boards, each of the plurality of circuit boards including at least one electrical component mounted thereto.

89. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 88, wherein at least one of the plurality of circuit boards is a flexible printed circuit board.

90. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 88, wherein at least one of the plurality of circuit boards has at least one integrated circuit mounted on a first side of the at least one of the plurality of circuit boards, and at least one integrated circuit mounted on a second side of the at least one of the plurality of circuit boards.

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

a touch sensitive surface at least partially contained within the head-worn structure and configured to sense a touch input associated with the user,

wherein at least the electronic circuitry is configured to facilitate determination at least whether the touch input associated with the user pertains to a first sliding direction or a second sliding direction with respect to the touch sensitive surface.

92. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 91, wherein the touch input by the touch sensitive surface operates to at least control audio volume level of the customized audio output for the user via the speaker.

93. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 72, wherein the head-worn personal electronic apparatus comprises:

a touch sensitive surface at least partially contained within the head-worn structure and configured to sense a touch input associated with the user,

wherein at least the electronic circuitry is configured to facilitate determination at least whether the touch input associated with the user pertains to a first sliding direction or a second sliding direction with respect to the touch sensitive surface.

94. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 93,

wherein the touch sensitive surface senses the touch input by at least sensing capacitance, and

wherein the touch input by the touch sensitive surface operates to at least control audio volume level of audio output configured to be provided to the user via the speaker.

Claims 95-120 (Canceled).

121. (Previously Presented) A system, comprising:

a head-worn personal electronic apparatus, including at least:

a head-worn structure configured to be worn by a user;

a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user;

a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus;

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

a second microphone at least partially contained within the head-worn structure;

a force sensing device configured to receive a user input based on a force induced on the force sensing device, the force sensing device being contained within the head-worn structure, wherein the received user input operating to at least alter an operation of the head-worn personal electronic apparatus;

a rechargeable battery contained within the head-worn structure;

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery;

wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery;

a charging apparatus having at least a charging connector; and

a mobile communication device at least for supporting audio output, the mobile communication device configured to store at least a hearing profile associated with the user, the stored hearing profile associated with the user at least characterizes hearing impairment regarding the user's ability to hear, the mobile communication device configured to produce audio output signals customized for the user based on at least the stored hearing profile 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 the mobile communication device configured to wirelessly transmit the customized audio output signals to the head-worn personal electronic apparatus,

wherein the 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 being received by the head-worn personal electronic apparatus,

wherein on placement of the head-worn personal electronic apparatus at least partially in the charging apparatus, electrical connection is configured to result at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal

electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed at least partially in the charging apparatus, and

wherein the customized audio output signals are produced based on amplifying or attenuating different frequency bands differently according to at least the stored hearing profile.

122. (Previously Presented) A system as recited in claim 121,

wherein the mobile communication device includes computing capabilities and a storage device, the storage device storing at least a software program executed by the mobile communication device to enable the user to establish the hearing profile associated with the user, and

wherein the mobile communication device is configured to establish the hearing profile associated with the user via the software program executed by the mobile communication device based on the user interacting with the software program via the mobile communication device.

123. (Previously Presented) A system as recited in claim 122, wherein the software program at least interactively guides the user to establish the hearing profile for the user by at least causing various audio tones to be output to the user via at least the speaker, prompting the user to provide a hearing input with respect to one or more of the various audio tones being output, and receiving the hearing input pertaining to one or more of the various audio tones being output.

124. (Previously Presented) A system as recited in claim 122, wherein the head-worn structure comprises:

an infrared emitter configured to at least direct infrared signals towards the user when at least the head-worn structure of the head-worn personal electronic apparatus is being worn; and

an infrared detector configured to detect infrared radiation reflected back from the user when at least the head-worn structure of the head-worn personal electronic apparatus is being worn,

125. (Previously Presented) A system as recited in claim 124, wherein the electronic circuitry within the head-worn structure is configured to facilitate determining whether the head-worn structure is being worn by the user based on at least the detected infrared radiation.

126. (Previously Presented) A system as recited in claim 124,

wherein the second microphone is configured to pick-up an environmental audio input, and

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

127. (Previously Presented) A system as recited in claim 124,

wherein the second microphone is configured to pick-up an environmental audio input, and

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

128. (Previously Presented) A system as recited in claim 122,

wherein the second microphone is configured to pick-up an environmental audio input, and

wherein the environmental audio input picked-up from at least the second microphone is used at least for noise cancelation, and at least a portion of the environmental audio input picked-up from the second microphone is used to remove undesired noise from the audio input picked-up from the first microphone.

129. (Previously Presented) A system as recited in claim 122, wherein the head-worn structure comprises:

a radiation emitter at least partially contained within the head-worn structure and configured to at least direct radiation towards the user when the head-worn structure is being worn, and

a radiation detector at least partially contained within the head-worn structure and configured to detect a portion of the radiation directed towards the user by the radiation emitter that is reflected back from the user when the head-worn structure is being worn.

130. (Previously Presented) A system as recited in claim 122, wherein the head-worn structure comprises:

at least a portion of a Hall effect detector at least partially contained within the head-worn structure, the Hall effect detector being configured to capture data associated with a magnetic characteristic.

131. (Previously Presented) A system as recited in claim 122, wherein the head-worn structure comprises:

a bone conducting electronic element at least partially contained within the head-worn structure, the bone conducting electronic element being associated with vibrations, and the bone conducting electronic element utilizing electrical signals associated with the vibration.

132. (Previously Presented) A system as recited in claim 122, wherein the head-worn structure comprises:

a touch sensitive surface at least partially contained within the head-worn structure and configured to sense a touch input associated with the user,

wherein at least the electronic circuitry is configured to facilitate determination at least whether the touch input associated with the user pertains to a first sliding direction or a second sliding direction with respect to the touch sensitive surface, and

wherein the touch input by the touch sensitive surface operates to at least control audio volume level of the customized audio output for the user via the speaker.

133. (Previously Presented) A system as recited in claim 132, wherein the head-worn structure comprises:

a radiation emitter at least partially contained within the head-worn structure and configured to at least direct radiation towards the user when the head-worn structure is being worn, and

a radiation detector at least partially contained within the head-worn structure and configured to detect a portion of the radiation directed towards the user by the radiation emitter that is reflected back from the user when the head-worn structure is being worn.

134. (Previously Presented) A system as recited in claim 133, wherein the system comprises:

a Hall effect detector configured to capture data associated with a magnetic characteristic.

135. (Previously Presented) A system as recited in claim 134, wherein the head-worn structure comprises:

a bone conducting electronic element at least partially contained within the head-worn structure, the bone conducting electronic element being associated with vibrations, and the bone conducting electronic element utilizing electrical signals associated with the vibration.

136. (Currently Amended) A head-worn personal electronic apparatus, comprising:

a head-worn structure configured to be worn by a user;

a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user;

a motion detector ~~at least partially~~ contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus;

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

a second microphone at least partially contained within the head-worn structure;

a piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device, the piezoelectric device being contained within the head-worn structure, wherein the received user input operating to at least alter an operation of the head-worn personal electronic apparatus;

a rechargeable battery contained within the head-worn structure;

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery;

wireless communication circuitry ~~at least partially~~ contained within the head-worn structure;

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and

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

wherein the head-worn personal electronic apparatus is configured to determine whether the head-worn personal electronic apparatus is being worn by the user based on the radiation data captured by the radiation detector, and

wherein the second microphone is configured to at least pick-up an environmental audio input.

137. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 136, wherein the head-worn personal electronic apparatus comprises:

a touch sensitive surface at least partially contained within the head-worn structure and configured to sense a touch input associated with the user,

wherein at least the electronic circuitry is configured to facilitate determination at least whether the touch input associated with the user pertains to a first sliding direction or a second sliding direction with respect to the touch sensitive surface.

138. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 137,

wherein the touch sensitive surface senses the touch input by at least sensing capacitance, and

wherein the touch input by the touch sensitive surface operates to at least control audio volume level of audio output configured to be provided to the user via the speaker.

139. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 138,

wherein the head-worn personal electronic apparatus comprises:

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

wherein the radiation detector at least partially contained within the head-worn structure and configured to detect a portion of the radiation directed towards the user by the radiation emitter that is reflected back from the user when the head-worn personal electronic apparatus is being worn.

140. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 139, wherein the head-worn personal electronic apparatus comprises:

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

a plurality of circuit boards, each of the plurality of circuit boards including at least one electrical component mounted thereto, at least one of the plurality of circuit boards being a flexible printed circuit board, at least one of the plurality of circuit boards has at least one integrated circuit mounted on a first side of the at least one of the plurality of circuit boards, and at least one integrated circuit mounted on a second side of the at least one of the plurality of circuit boards.

141. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 139,

wherein the head-worn personal electronic apparatus is configured to support control of (i) audio output to the user via the speaker and (ii) voice calls to the user, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns at least control of the audio output being provided to the user and/or accepting or declining a voice call to the user.

142. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 141, wherein the head-worn personal electronic apparatus comprises:

a bone conducting electronic element at least partially contained within the head-worn structure, the bone conducting electronic element being associated with vibrations, and the bone conducting electronic element utilizing electrical signals associated with the vibration.

143. (Previously Presented) A head-worn personal electronic apparatus as recited in claim 138,

wherein the head-worn personal electronic apparatus comprises:

an infrared radiation emitter at least partially contained within the head-worn structure and configured to at least direct infrared radiation towards the user when the head-worn personal electronic apparatus is being worn, and

wherein the radiation detector at least partially contained within the head-worn structure and configured to detect a portion of the infrared radiation directed towards the user by the infrared radiation emitter that is reflected back from the user when the head-worn personal electronic apparatus is being worn.

144. (New) A head-worn personal electronic apparatus, comprising:

a head-worn structure configured to be worn by a user;

a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user;

a motion detector contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus;

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

a second microphone at least partially contained within the head-worn structure;

a stress sensing device configured to receive a user input based on a force induced on the stress sensing device, the stress sensing device being contained within the head-worn structure and configured to produce an electrical signal indicative of stress, wherein the received user input operating to at least alter an operation of the head-worn personal electronic apparatus;

a rechargeable battery contained within the head-worn structure;

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery;

wireless communication circuitry contained within the head-worn structure;

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and

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

wherein the head-worn personal electronic apparatus is configured to determine whether the head-worn personal electronic apparatus is being worn by the user based on the radiation data captured by the radiation detector.

145. (New) A head-worn personal electronic apparatus as recited in claim 144,
wherein the second microphone is configured to at least pick-up an
environmental audio input,

wherein the wireless communication circuitry includes at least a wireless
receiver configured to wirelessly receive audio output signals to be output to the
user via the speaker, and

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

146. (New) A head-worn personal electronic apparatus as recited in claim 145,
wherein the head-worn personal electronic apparatus comprises:

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

wherein the radiation detector at least partially contained within the head-
worn structure and configured to detect a portion of the radiation directed towards
the user by the radiation emitter that is reflected back from the user when the head-
worn personal electronic apparatus is being worn.

147. (New) A head-worn personal electronic apparatus as recited in claim 146,
wherein the head-worn personal electronic apparatus is operable to at least
output customized audio output,

wherein the electronic circuitry includes at least an integrated circuit, and the
electronic circuitry being configured to (i) store attributes 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 attributes

associated with the user; and (iii) output the customized audio output signals to the speaker, and

wherein the 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.

148. (New) A head-worn personal electronic apparatus as recited in claim 147, wherein the head-worn personal electronic apparatus comprises:

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

a plurality of circuit boards, each of the plurality of circuit boards including at least one electrical component mounted thereto, at least one of the plurality of circuit boards being a flexible printed circuit board, at least one of the plurality of circuit boards has at least one integrated circuit mounted on a first side of the at least one of the plurality of circuit boards, and at least one integrated circuit mounted on a second side of the at least one of the plurality of circuit boards.

149. (New) A head-worn personal electronic apparatus as recited in claim 146,

wherein the head-worn personal electronic apparatus is configured to support control of (i) audio output to the user via the speaker and (ii) voice calls to the user, and

wherein the operation of the head-worn personal electronic apparatus being altered concerns at least control of the audio output being provided to the user and/or accepting or declining a voice call to the user.

150. (New) A head-worn personal electronic apparatus as recited in claim 149,

wherein the head-worn personal electronic apparatus is operable to at least output customized audio output,

wherein the wireless communication circuitry includes at least 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 hearing impairment regarding the user's ability to hear, and

wherein the 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.

151. (New) A head-worn personal electronic apparatus as recited in claim 144, wherein the head-worn personal electronic apparatus comprises:

a touch sensitive surface at least partially contained within the head-worn structure and configured to sense a touch input associated with the user,

wherein at least the electronic circuitry is configured to facilitate determination at least whether the touch input associated with the user pertains to a first sliding direction or a second sliding direction with respect to the touch sensitive surface.

152. (New) A head-worn personal electronic apparatus as recited in claim 151,

wherein the touch sensitive surface senses the touch input by at least sensing capacitance, and

wherein the touch input by the touch sensitive surface operates to at least control audio volume level of audio output configured to be provided to the user via the speaker.

REMARKS

In the Office Action, the Examiner allowed most claims, but rejected claims 2, 3, 5, 6, 28-38, 46 and 66-71 under 35 USC § 103(a). This rejection is fully traversed below.

Claims 2, 72 and 136 have been amended to further clarify the subject matter regarded as the invention. In addition, new claims 144-152 have been added to the application. Claims 1-3, 5-94 and 121-152 are now pending.

Reconsideration of the application is respectfully requested based on the following remarks.

FIRST TO INVENT

Given the early effective filing date of the present application, the application should be examined as a “first to invent” application. It appears that the Examiner’s statement on page 2 of the Office Action referring to “first to file” is a typographical error.

PRIOR AMENDMENT

Applicant filed an Amendment on March 3, 2025 adding additional claims 121-143 to the application. This Amendment may not have been considered in the Office Action dated March 11, 2025. Consideration thereof is respectfully requested.

ALLOWABLE SUBJECT MATTER

In the Office Action, the Examiner allowed claims 1, 7-27 and 72-94. In addition, the Examiner indicated that claims 39-45 and 47-65 recite allowable subject matter.

REJECTION OF CLAIMS 2, 3, 5, 6, 28-38, 46 and 66-71 UNDER 35 USC § 103

In the Office Action, the Examiner rejected claims 2, 3, 5, 6, 28-38, 46 and 66-71 under 35 USC § 103 as being unpatentable over Spitzer (US Patent No. 6,349,001) in view of Jannard et al. (US Patent Pub. No. 2005/0050201585) and further in view of Kallman et al. (US Patent No. 5,835,185). Applicant respectfully disagrees with the rejection of each of such claims.

Claim 2 was rejected in view of a combination of Spitzer, Jannard et al. and Kallman et al. Applicant respectfully disagrees with the rejection of claim 2 for at least the following reasons.

Among other things, claim 2 recites “a force sensing device configured to receive a user input based on a force induced on the force sensing device, the force sensing device being an electrical component configured to sense force, the force sensing device being contained within the head-worn structure, wherein the received user input operating to at least alter an operation of the head-worn personal electronic apparatus....”

On page 7 of the Office Action, the Examiner admits that neither Spitzer nor Jannard et al. teaches or suggest a force sensing device. In view of such deficiencies, the Examiner further relied on Kallman et al. On page 7 of the Office Action, the Examiner suggests that the switches S1, S2 may be touch-sensitive. Kallman et al. The switches S1, S2 disclosed in Kallman et al. are not force sensing, that is, the switches S1, S2 disclosed in Kallman et al., even if implemented in a touch-sensitive manner, would not be capable of sensing a force. Neither a push-button switch nor a touch-sensitive switch would sense force.

Applicant also submits that there is no reasonable rationale for one skilled in the art to seek to combine these three references, and thus no *prima facie* rejection of claim 2 (or any other rejected claim). Any alleged justification to combine these references is non-specific and/or without justification, improperly driven by hindsight, and fails to offer a reasonable rationale as to why one skilled in the art would attempt such a combination.

Based on the foregoing, it is submitted that claim 2 is patentably distinct from any combination of Spitzer, Jannard et al., and/or Kallman et al. Additional limitations (beyond those discussed above) recited in the independent claims or the dependent claims need not be further discussed because the limitations/arguments discussed above are sufficient to distinguish the claimed invention from the cited art. Accordingly, it is respectfully requested that the Examiner withdraw the rejection of claims 2, 3, 5, 6, 28-38, 46 and 66-71 under 35 U.S.C. § 103.

SUMMARY

It is submitted that the rejection under 35 USC § 103 has been 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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PATENT APPLICATION FEE DETERMINATION RECORD				Application or Docket Number 18/597,874		Filing Date 03/06/2024		☐ To be Mailed		
Substitute for Form PTO-875										
ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO										
APPLICATION AS FILED - PART I										
FOR		(Column 1) NUMBER FILED	(Column 2) 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), (i), 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										
AMENDMENT	03/24/2025	(Column 1) CLAIMS REMAINING AFTER AMENDMENT	(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)			
	Total (37 CFR 1.16(j))	* 125	Minus	** 119	= 6	x \$200 =		1200		
	Independent (37 CFR 1.16(h))	* 5	Minus	*** 6	= 0	x \$600 =		0		
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
					TOTAL ADD'L FEE		1200			
AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT	(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) 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.					Program Support Specialist					
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".					/CRYSTAL QUEEN/					
*** 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.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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4010 Moorpark Avenue			ART UNIT	
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			03/11/2025	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA. This office action is in response to a filing of 2/27/2025.

Continued Examination

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/27/2025 has been entered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102 of this title, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-3, 5-6, 28-38, 46 and 66-71 are rejected under 35 U.S.C. 103 as being unpatentable over Spitzer (US 6349001) in a view of Jannard et al (US 20050201585), and in a view of Kallman et al (US 5835185).

Regarding Claim 2, Spitzer teaches a head-worn personal electronic apparatus (abstract, fig. 1), comprising:

a head-worn structure configured to be worn by a user (fig.1, 100);

a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user (fig. 1, 108-audio; fig. 21, lower figure, audio outputs (--speakers), fixed to both temples; col. 9, line 49-52, The integration of microphones, speakers, camera and display within or upon the eyeglass frames makes possible a wide range of communication and recording devices, in addition to computer input and output devices);

a position detector at least partially contained within the head-worn structure (fig. 1, 110);

a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user (fig. 1, 106- microphone; col. 8, line 1-5, a directional air conduction audio microphone may be used by placing it at the bottom of the eyeglass frame oriented so as to preferentially detect the sound of the user's speech);

a second microphone at least partially contained within the head-worn structure (fig. 21, upper figure, microphones, fixed to both temples; col. 8, line 1-15, A plurality of

microphones may be used in order to make possible the implementation of noise reduction techniques using analog or digital signal processing. For certain applications, it is desirable to sense ambient sound instead of or in addition to the user's speech. For the particular application of assisting the hearing impaired, the microphone would be so oriented so that sound coming from the area in front of the user is preferentially detected);

a battery contained within the head-worn structure (fig. 1, 112),

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the battery (fig. 1, 110- internal electronics and position sensors; col. 4, line 11-23, an eyeglass interface system 100; the eyeglass system is mounted a display assembly 102; a camera assembly 104; an audio output subsystem 108, an audio input subsystem 106 such as a microphone, an interconnection subsystem 110, and a power subsystem 112, such as internal batteries), and

wireless communication circuitry at least partially contained within the head-worn structure (fig. 15, 849; col. 8, line 41-44, integrated circuits 849 may be formed within the temple 800; col. 12, line 41-55, wherein the integrated circuits include a cellular telephone transceiver (--wireless communication); fig. 17C, 960,980, 925-battery; col. 9, line 6-25, The subsystems described above are connected to remote electronics either by wire as noted above, or by infrared link, radio frequency methods; comprises an RF

link in which signals are transmitted and received by antenna 980. These signals are passed to and from transceiver circuit 960, which is in communication with the 1/0 data stream).

But Spitzer does not specifically disclose that wherein a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus; a rechargeable battery contained within the head-worn structure; a force sensing device configured to receive a user input based on a force induced on the force sensing device, the force sensing device being at least partially contained within the head-worn structure (figs.), wherein the received user input operating to at least alter operation of the head-worn electronic personal audio apparatus.

However, Jannard teaches a head-worn personal electronic apparatus (abstract; figs. 3A-M), wherein

a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus (fig. 3A, 10A, 40, ¶[0247], line 1-24, the audio devices 10, 10A, 10B, 10C, and 10D is provided wherein the audio devices can include and/or communicate with a variety of sensors, including but not limited to motion, radar, heat, light, smoke, air-quality, oxygen, CO and distance; GPS unit; fig. 3J, 304; fig. 22, 304, 322; ¶[0296], line 1-4, the user controls 322 include a button, dial, switch, lever, sensor, touchpad,

microphone, and/or any other input device that may be used by a user to control the audio device 304);

a rechargeable battery contained within the head-worn structure (fig. 3J, 274, 288; ¶[0169], line 1-14, charging a rechargeable battery carried by the eyeglass);

a force switch device configured to receive a user input based on a force induced on the force sensing device, the force sensing device being at least partially contained within the head-worn structure (figs. 3E and 3I, 73a-e), wherein the received user input operating to at least alter operation of the head-worn electronic personal audio apparatus (¶[0156], line 1-10, 71 the user can use a finger to actuate the button 73a and a thumb 69 to counteract the actuation force of the 71 finger by pressing on the lower surface of the ear stem 54'; ¶[0161], line 1-12, the internal cavity 252 includes at least one compartment configured to receive an electronic circuit board 264 which includes at least one switch for each of the buttons 73a, 73b; one for each of the buttons 73a, 73b, which are configured to control a volume output from the speakers 14A', 16A').

Therefore, it would have been obvious to a person having ordinary skill in the art before the effective filing date of the claimed invention to modify the system of Spitzer by the head-worn personal electronic apparatus of Jannard for the purpose of an audio device which is generally light-weight, and able to be worn comfortably by a user for an extended period of time. (¶[0310], line 1-6).

But Spitzer - Jannard combination does not specifically disclose that wherein a force sensing device.

However, Kallman teaches an eyewear system (abstract; fig. 4), wherein a force sensing device (col. 16, line 25-35, S1, S2 switches and 102, 104 corresponding push buttons may be located elsewhere in the frame; S1 and S2 switches may be implemented more conventionally, e.g. electronic, e.g., touch-sensitive, or electromechanical, e.g. microswitch, devices may be used).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention to modify the eyewear of Spitzer - Jannard combination by the eyewear system of Kallman for the purpose of extending useful battery life, reducing battery replacement cost and minimizing frame and temple size (col. 2, line 63—col. 3, line 5).

Regarding Claim 3, Spitzer -Jannard – Kallman combination teaches a head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn personal electronic comprises:

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery (fig. 3J, 288, 284-printed circuit board; ¶[0169], line 1-21, the data transfer port 288; the data transfer port is configured to

operate according to the universal serial bus (USE) transfer protocol. In one implementation of the invention, the earstem is provided with a mini USE port. The mini USE port enables both downloading of digital music from a source into the eyeglass, as well as charging a rechargeable battery carried by the eyeglass, as disclosed in Jannard).

Regarding Claim 5, Spitzer -Jannard – Kallman combination teaches a head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn personal electronic apparatus is configured to support audio output to the user via the speaker (fig. 1, 108-audio; fig. 21, lower figure, audio outputs (--speakers), fixed to both temples, as disclosed in Spitzer), and

wherein the operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user (fig. 16, AUDIO CODECS AND AMPLIFIERS; AUDIO TRANSDUCERS, as disclosed in Spitzer).

Regarding Claim 6, Spitzer -Jannard – Kallman combination teaches a head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn personal electronic apparatus is configured to support voice calls to the user, and wherein the operation of the head-worn personal electronic apparatus being altered concerns at least accepting or declining a voice call to the user (col. 10, line 5-21, An application of a display system using audio within the glasses is in a hands-free telephone interface. In such an application, the eyeglass system is connected to telephone circuitry, such as a cellular or cordless telephone, provided in the module

1001; A keypad is unnecessary if voice recognition is employed. In such a case, the user speaks the command normally input by keypad, such as the number to dial, the send command, and so forth. The display within the interface module shows the number to be called for verification, just as the display on a cell phone would show the number, and after the appropriate send command is spoken, the call is placed, as disclosed in Spitzer).

Regarding Claim 28, Spitzer -Jannard – Kallman combination teaches a head-worn personal electronic apparatus as recited in claim 2,

wherein the second microphone is configured to pick-up an environmental audio input (fig. 21, upper figure, microphones, fixed to both temples, as disclosed in Spitzer), and

wherein the environmental audio input picked-up from at least the second microphone is used at least for noise cancelation, and at least a portion of the environmental audio input picked-up from the second microphone is subtracted from the audio input picked-up from the first microphone (col. 8, line 1-15, A plurality of microphones may be used in order to make possible the implementation of noise reduction techniques using analog or digital signal processing. For certain applications, it is desirable to sense ambient sound instead of or in addition to the user's speech. For the particular application of assisting the hearing impaired, the microphone would be so oriented so that sound coming from the area in front of the user is preferentially detected, as disclosed in Spitzer).

Regarding Claim 29, Spitzer -Jannard – Kallman combination teaches a head-worn personal electronic apparatus as recited in claim 2,

wherein the second microphone is configured to pick-up an environmental audio input (fig. 21, upper figure, microphones, fixed to both temples, as disclosed in Spitzer), and

wherein the electronic circuitry is configured to receive audio output signals to be output to the user via the speaker, and modify the audio output signals to be output to the user via the speaker to cancel at least a portion of noise associated with the environment, the modification of the audio output signals being dependent at least in part on the environmental audio input picked-up via the second microphone (col. 8, line 1-15, A plurality of microphones may be used in order to make possible the implementation of noise reduction techniques using analog or digital signal processing. For certain applications, it is desirable to sense ambient sound instead of or in addition to the user's speech. For the particular application of assisting the hearing impaired, the microphone would be so oriented so that sound coming from the area in front of the user is preferentially detected, as disclosed in Spitzer).

Regarding Claim 30, Spitzer -Jannard – Kallman combination teaches a head-worn personal electronic apparatus as recited in claim 29, wherein the head-worn personal electronic apparatus comprises:

a physical condition sensor configured to acquire data pertaining to at least a physical condition of the user, the physical condition sensor being provided at least partially internal to the head-worn structure, wherein the acquired data by the physical

condition sensor includes data regarding vital signs or temperature of the user (§[0247], line 1-10, wherein the audio devices can include and/or communicate with a variety of sensors, including but not limited to motion, radar, heat, light, smoke, air-quality, oxygen, CO and distance. Medical monitoring sensors are also contemplated. Sensors can be directed inwardly toward the user's body, or outwardly away from the body (e.g., sensing the surrounding environment), as disclosed in Jannard).

Regarding Claim 31, Spitzer -Jannard – Kallman combination teaches a head-worn personal electronic apparatus as recited in claim 29, wherein the environmental audio input picked-up from at least the second microphone is used at least for noise cancelation, and at least a portion of the environmental audio input picked-up from the second microphone is used to remove undesired noise from the audio input picked-up from the first microphone (col. 8, line 1-15, A plurality of microphones may be used in order to make possible the implementation of noise reduction techniques using analog or digital signal processing. For certain applications, it is desirable to sense ambient sound instead of or in addition to the user's speech. For the particular application of assisting the hearing impaired, the microphone would be so oriented so that sound coming from the area in front of the user is preferentially detected, as disclosed in Spitzer).

Regarding Claim 32, Spitzer -Jannard – Kallman combination teaches a head-worn personal electronic apparatus as recited in claim 2, wherein the electronic circuitry is configured to: determine an ambient noise level based on at least signals picked-up

from at least the second microphone; and modify at least a portion of audio output signals to be output to the user via the speaker, with the modification being at least in part dependent on the ambient noise level (col. 8, line 1-15, A plurality of microphones may be used in order to make possible the implementation of noise reduction techniques using analog or digital signal processing. For certain applications, it is desirable to sense ambient sound instead of or in addition to the user's speech. For the particular application of assisting the hearing impaired, the microphone would be so oriented so that sound coming from the area in front of the user is preferentially detected, as disclosed in Spitzer).

Regarding Claim 33, Spitzer -Jannard – Kallman combination teaches a head-worn personal electronic apparatus as recited in claim 2, wherein the first microphone faces the user when the head- worn personal electronic apparatus is being worn (fig. 1, 106- microphone; col. 8, line 1-5, a directional air conduction audio microphone may be used by placing it at the bottom of the eyeglass frame oriented so as to preferentially detect the sound of the user's speech, as disclosed in Spitzer).

Regarding Claim 34, Spitzer -Jannard – Kallman combination teaches a head-worn personal electronic apparatus as recited in claim 33, wherein the second microphone faces away from the user when the head-worn personal electronic apparatus is being worn (fig. 21, upper figure, microphones, --fixed to both temples, facing outwards, as disclosed in Spitzer).

Regarding Claim 35, Spitzer -Jannard – Kallman combination teaches a head-worn personal electronic apparatus as recited in 34,

wherein the second microphone is configured to pick-up an environmental audio input, and wherein the electronic circuitry is configured to receive audio output signals to be output to the user via the speaker, and modify the audio output signals to be output to the user via the speaker to cancel at least a portion of noise associated with the environment, the modification of the audio output signals being dependent at least in part on the environmental audio input picked-up via the second microphone ((fig. 21, upper figure, microphones, --fixed to both temples; col. 8, line 1-15, A plurality of microphones may be used in order to make possible the implementation of noise reduction techniques using analog or digital signal processing. For certain applications, it is desirable to sense ambient sound instead of or in addition to the user's speech. For the particular application of assisting the hearing impaired, the microphone would be so oriented so that sound coming from the area in front of the user is preferentially detected, as disclosed in Spitzer).

Regarding Claim 36, Spitzer -Jannard – Kallman combination teaches a head-worn personal electronic apparatus as recited in 34,

wherein the second microphone is configured to pick-up an environmental audio input, and wherein the environmental audio input picked-up from at least the second microphone is used at least for noise cancelation, and at least a portion of the environmental audio input picked-up from the second microphone is used to remove undesired noise from the audio input picked-up from the first microphone (col. 8, line 1-

15, A plurality of microphones may be used in order to make possible the implementation of noise reduction techniques using analog or digital signal processing. For certain applications, it is desirable to sense ambient sound instead of or in addition to the user's speech. For the particular application of assisting the hearing impaired, the microphone would be so oriented so that sound coming from the area in front of the user is preferentially detected, as disclosed in Spitzer).

Regarding Claim 37, Spitzer -Jannard – Kallman combination teaches a head-worn personal electronic apparatus as recited in claim 34, wherein the electronic circuitry is configured to:

determine an ambient noise level based on at least signals picked-up from at least the second microphone; and modify at least a portion of audio output signals to be output to the user via the speaker, with the modification being at least in part dependent on the ambient noise level (col. 8, line 1-15, A plurality of microphones may be used in order to make possible the implementation of noise reduction techniques using analog or digital signal processing. For certain applications, it is desirable to sense ambient sound instead of or in addition to the user's speech. For the particular application of assisting the hearing impaired, the microphone would be so oriented so that sound coming from the area in front of the user is preferentially detected, as disclosed in Spitzer)..

Regarding Claim 38, Spitzer -Jannard – Kallman combination teaches a head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn

personal electronic apparatus is configured to receive a voice input from the user via at least the first microphone, support or receive determination of a requested operation from the voice input using voice recognition, and control operation by the head-worn personal electronic apparatus based on the requested operation (col. 10, line 5-21, An application of a display system using audio within the glasses is in a hands-free telephone interface. In such an application, the eyeglass system is connected to telephone circuitry, such as a cellular or cordless telephone, provided in the module 1001; A keypad is unnecessary if voice recognition is employed. In such a case, the user speaks the command normally input by keypad, such as the number to dial, the send command, and so forth. The display within the interface module shows the number to be called for verification, just as the display on a cell phone would show the number, and after the appropriate send command is spoken, the call is placed, as disclosed in Spitzer).

Regarding Claim 46, Spitzer -Jannard – Kallman combination teaches a head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn personal electronic apparatus comprises: at least a portion of a Hall effect detector at least partially contained within the head-worn structure, the Hall effect detector being configured to capture data associated with a magnetic characteristic (col. 11, line 24-41, The tracking sensors may comprise either magnetic and gravity sensors; within the eyeglass frame; the magnetic sensor may be based on the Hall effect, as disclosed in Spitzer).

Regarding Claim 66, Spitzer -Jannard – Kallman combination teaches a head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn personal electronic apparatus comprises: a bone conducting electronic element at least partially contained within the head-worn structure (fig. 11, 810; col. 7, line 28-48, use of bone conductivity transducers to allow the transducers to be concealed within the eyeglass frames. Bone conductivity transducers are designed to transmit sound vibrations directly to solid media (bone) and not to develop a pressure wave in air. As shown in FIG. 11, a bone conductivity transducer 810 serving as the speaker may be mounted to the temple 800 of 45 an eyeglass frame so as to be in contact with the skull at a point approximately centered over the ear, as disclosed in Spitzer).

Regarding Claim 67, Spitzer -Jannard – Kallman combination teaches a head-worn personal electronic apparatus as recited in 66, wherein the bone conducting electronic element associated with vibrations, and wherein the bone conducting electronic element having electrical signals associated with the vibration (col. 7, line 28-48, use of bone conductivity transducers to allow the transducers to be concealed within the eyeglass frames. Bone conductivity transducers are designed to transmit sound vibrations directly to solid media (bone), as disclosed in Spitzer).

Regarding Claim 68, Spitzer -Jannard – Kallman combination teaches a head-worn personal electronic apparatus as recited in claim 2, wherein the motion detector includes at least an accelerometer (¶[0247], line 1-24, the audio devices 10, 10A, 10B, 10C, and 10D is provided wherein the audio devices can include and/or communicate

with a variety of sensors, including but not limited to motion, radar, heat, light, smoke, air-quality, oxygen, CO and distance; GPS unit, as disclosed in Jannard; col. 11, line 33-41, Many other types of sensors may be used for the head tracking system, including miniature gyroscopic or other inertial sensors, as disclosed in Spitzer).

Regarding Claim 69, Spitzer -Jannard – Kallman combination teaches a head-worn personal electronic apparatus as recited in claim 2, wherein the wireless receiver is configured to operate with a Bluetooth network (§[0282], line 1-15, audio devices, Communications link 306 may be any of a variety of information conduits known to those of skill in the art, including: a cable, a wire, a conductor, a bus, an RF signal, a radio signal, a satellite signal, a BLUETOOTH signal, etc., as disclosed in Jannard).

Regarding Claim 70, Spitzer -Jannard – Kallman combination teaches a head-worn personal electronic apparatus as recited in claim 2, wherein the electronic circuitry includes at least a microprocessor (fig. 7, 714—computer, as disclosed in Jannard).

Regarding Claim 71, Spitzer -Jannard – Kallman combination teaches a head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn personal electronic apparatus comprises: an antenna contained within the head-worn structure of the head-worn personal electronic apparatus (fig. 17C, 980—antenna, as disclosed in Jannard).

Allowable Subject Matters

5. Claims 1, 7-27 and 72-94 are allowed.

6. 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.

Regarding Claim 1, the prior art taken either singly or in combination fails to anticipate or fairly suggest a system or a head-worn personal electronic apparatus further comprising:

wherein the piezoelectric device being contained within the head-worn structure, as claimed; recited together in combination with the totality of particular features/limitations recited therein.

Claims 7-27 are also allowed due to their dependence on claim 1.

Regarding Claims 72, the prior art taken either singly or in combination fails to anticipate or fairly suggest a system or a head-worn personal electronic apparatus further comprising:

wherein a radiation detector contained within the head-worn structure and configured to capture radiation data, and wherein the head-worn personal electronic apparatus is configured to determine whether the head-worn personal electronic

apparatus is being worn by the user based on the radiation data captured by the radiation detector,

as claimed; recited together in combination with the totality of particular features/limitations recited therein.

Claims 73-94 are also allowed due to their dependence on claim 72.

7. Claims 39-45 and 47-65 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 39, 41, 43 and 45, these claims comprising allowable subject matters similar to that of claim 72 (see above).

Claims 40, 42 and 44 are also objected to as being dependent on respective claims of 39, 41 and 43.

Regarding Claims 47, 49 and 51, the prior art taken either singly or in combination fails to anticipate or fairly suggest a system or a head-worn personal electronic apparatus further comprising:

wherein 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 hearing impairment regarding the user's ability to hear, as claimed; recited together in combination with the totality of particular features/limitations recited therein.

Claims 48, 50 and 52-65 are also objected to as being dependent on respective claims of 47, 50 and 51.

Response to Arguments

8. 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 new rejections.

Examiner's Note

9. 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

10. 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.

11. 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.

12. 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

Search Notes 	Application/Control No. 18/597,874	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, 5/00, 5/001, 5/02, 5/14, 5/22, 5/143, 5/146, 2200/08	05/15/2024	JL
G02B 27/01, 27/017, 27/0176; HO2J 7/0045	05/15/2024	JL
update search	09/04/2024	JL
update search	12/16/2024	JL
update search	03/03/2025	JL

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
351	158, 41, 111, 121, 123, 124	05/15/2024	JL
359	13, 629-633	05/15/2024	JL
381	381, 327, 328, 370, 380	05/15/2024	JL
	update search	09/04/2024	JL
	update search	12/16/2024	JL
	update search	03/03/2025	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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Search Notes 	Application/Control No. 18/597,874	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, 5/00, 5/001, 5/02, 5/14, 5/22, 5/143, 5/146, 2200/08	05/15/2024	JL
G02B 27/01, 27/017, 27/0176; HO2J 7/0045	05/15/2024	JL
351/158, 41, 111, 121, 123, 124	05/15/2024	JL
359/13, 629-633	05/15/2024	JL
381/381, 327, 328, 370, 380	05/15/2024	JL
Inventor name search	05/15/2024	JL
NPL and foreign search (google scholar, google patent, globaldossier and Dialog search)	05/15/2024	JL
PE2E text search	05/15/2024	JL
Similarity search	05/15/2024	JL
update search	09/04/2024	jl
update search	12/16/2024	
update search	03/03/2025	JL

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
	USPGPUB, USPAT	05/15/2024	JL
	update search	09/04/2024	JL
	update search	12/16/2024	JL
	update search	03/03/2025	JL

/JIE LEI/ Primary Examiner, Art Unit 2872	
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✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS										
☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47										
CLAIM		DATE								
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CLAIM		DATE								
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CLAIM		DATE								
Final	Original	03/03/2025								
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Web Search History

date, time	web site	search string
3/2/2025 4:05:02 PM	Google Scholar	speaker audio device audio support wearable wireless
3/2/2025 4:05:02 PM	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
3/2/2025 4:05:33 PM	Google Scholar	spectacles hearing aid bow bone head
3/2/2025 4:05:33 PM	Google Patents	Search Term 1 spectacles Search Term 2 hearing aid Search Term 3 bow Search Term 4 bone Search Term 5 head Before Priority Date: priority:19441218
3/2/2025 4:05:41 PM	Google Scholar	temple amplifier hearing aid bow conductors

date, time	web site	search string
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3/2/2025 4:13:34 PM	Google Scholar	hearing aid temples temple circuit recess
3/2/2025 4:13:34 PM	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
3/2/2025 4:13:41 PM	Google Scholar	lens eyeglasses eye makeup eyes
3/2/2025 4:13:41 PM	Google Patents	Search Term 1 lens Search Term 2 eyeglasses Search Term 3 eye Search Term 4 makeup Search Term 5 eyes Before Priority Date: priority:19670323
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date, time	web site	search string
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3/2/2025 4:32:07 PM	Google Patents	Search Term 1 eyeglasses Search Term 2 leg portion Search Term 3 straight Search Term 4 mounting band Search Term 5 holding Before Priority Date: priority:19841113
3/2/2025 4:32:29 PM	Google Scholar	tubing transducer sound housing section
3/2/2025 4:32:29 PM	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
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3/2/2025 4:49:39 PM	Google Patents	Search Term 1 housing Search Term 2 listening device Search Term 3 assistive listening Search Term 4 door Search Term 5 sound Before Priority Date: priority:19910219
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3/2/2025 4:50:13 PM	Google Scholar	sleeve flexible hollow pair accessory
3/2/2025 4:50:13 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
3/2/2025 4:50:27 PM	Google Scholar	speakers pair speaker user iadd

date, time	web site	search string
3/2/2025 4:50:27 PM	Google Patents	Search Term 1 speakers Search Term 2 pair Search Term 3 speaker Search Term 4 user Search Term 5 iadd Before Priority Date: priority:19860804
3/2/2025 4:55:19 PM	Google Scholar	camera camera body viewfinder signal cpu
3/2/2025 4:55:19 PM	Google Patents	Search Term 1 camera Search Term 2 camera body Search Term 3 viewfinder Search Term 4 signal Search Term 5 cpu Before Priority Date: priority:19931230
3/2/2025 4:55:35 PM	Google Scholar	image photographing photographing mode mode images
3/2/2025 4:55:35 PM	Google Patents	Search Term 1 image Search Term 2 photographing Search Term 3 photographing mode Search Term 4 mode Search Term 5 images Before Priority Date: priority:20000906
3/2/2025 4:55:47 PM	Google Scholar	moving image image transforming displaying aiming device

date, time	web site	search string
3/2/2025 4:55:47 PM	Google Patents	Search Term 1 moving image Search Term 2 image Search Term 3 transforming Search Term 4 displaying Search Term 5 aiming device Before Priority Date: priority:20010131
3/2/2025 4:56:03 PM	Google Scholar	cameraman image image display eye recording apparatus
3/2/2025 4:56:03 PM	Google Patents	Search Term 1 cameraman Search Term 2 image Search Term 3 image display Search Term 4 eye Search Term 5 recording apparatus Before Priority Date: priority:19971127
3/2/2025 5:04:40 PM	Google Scholar	image pickup detection scene discrimination image pickup apparatus
3/2/2025 5:04:40 PM	Google Patents	Search Term 1 image pickup Search Term 2 detection Search Term 3 scene discrimination Search Term 4 image Search Term 5 pickup apparatus Before Priority Date: priority:20090130
3/2/2025 5:05:09 PM	Google Scholar	image lateral barrel accessory longitudinal

date, time	web site	search string
3/2/2025 5:05:09 PM	Google Patents	Search Term 1 image Search Term 2 lateral Search Term 3 barrel Search Term 4 accessory Search Term 5 longitudinal Before Priority Date: priority:20110805
3/2/2025 5:05:22 PM	Google Scholar	support glasses image sensor pair housing
3/2/2025 5:05:22 PM	Google Patents	Search Term 1 support Search Term 2 glasses Search Term 3 image sensor Search Term 4 pair Search Term 5 housing Before Priority Date: priority:20130315
3/2/2025 5:05:38 PM	Google Scholar	camera actuator casing msm actuators
3/2/2025 5:05:38 PM	Google Patents	Search Term 1 camera Search Term 2 actuator Search Term 3 casing Search Term 4 msm Search Term 5 actuators Before Priority Date: priority:20140926
3/2/2025 5:06:28 PM	Google Scholar	communication device eyewear receiver user speaker

date, time	web site	search string
3/2/2025 5:06:28 PM	Google Patents	Search Term 1 communication device Search Term 2 eyewear Search Term 3 receiver Search Term 4 user Search Term 5 speaker Before Priority Date: priority:20010621
3/2/2025 5:24:07 PM	Google Scholar	connector eyewear display assembly optical display helmet
3/2/2025 5:24:07 PM	Google Patents	Search Term 1 connector Search Term 2 eyewear Search Term 3 display assembly Search Term 4 optical display Search Term 5 helmet Before Priority Date: priority:20061214
3/2/2025 5:24:17 PM	Google Scholar	module interface system electronically enabled enabled interface speaker
3/2/2025 5:24:17 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
3/2/2025 5:24:25 PM	Google Scholar	eyewear communication system base base link modular communication

date, time	web site	search string
3/2/2025 5:24:25 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
3/2/2025 5:24:34 PM	Google Scholar	connector electronic device eyewear plate attachment member
3/2/2025 5:24:34 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
3/2/2025 5:24:44 PM	Google Scholar	wearer input audio speaker source
3/2/2025 5:24:44 PM	Google Patents	Search Term 1 wearer Search Term 2 input Search Term 3 audio Search Term 4 speaker Search Term 5 source Before Priority Date: priority:20041222
3/2/2025 5:24:51 PM	Google Scholar	eyewear temple recited eyewear frame arm

date, time	web site	search string
3/2/2025 5:24:51 PM	Google Patents	Search Term 1 eyewear Search Term 2 temple Search Term 3 recited Search Term 4 eyewear frame Search Term 5 arm Before Priority Date: priority:20030415
3/2/2025 5:25:02 PM	Google Scholar	head electronic apparatus personal electronic user temple
3/2/2025 5:25:02 PM	Google Patents	Search Term 1 head Search Term 2 electronic apparatus Search Term 3 personal electronic Search Term 4 user Search Term 5 temple Before Priority Date: priority:20040728
3/2/2025 5:25:09 PM	Google Scholar	eyewear temple glasses side structure recited
3/2/2025 5:25:09 PM	Google Patents	Search Term 1 eyewear Search Term 2 temple Search Term 3 glasses Search Term 4 side structure Search Term 5 recited Before Priority Date: priority:20031009
3/2/2025 5:36:59 PM	Google Scholar	hearing aid casing wearer rear surface clasp

date, time	web site	search string
3/2/2025 5:36:59 PM	Google Patents	Search Term 1 hearing aid Search Term 2 casing Search Term 3 wearer Search Term 4 rear surface Search Term 5 clasp Before Priority Date: priority:19940815
3/2/2025 5:37:11 PM	Google Scholar	audio wearable speakers communication device audio system
3/2/2025 5:37:11 PM	Google Patents	Search Term 1 audio Search Term 2 wearable Search Term 3 speakers Search Term 4 communication device Search Term 5 audio system Before Priority Date: priority:20020826
3/2/2025 5:37:20 PM	Google Scholar	ear eyeglass audio speakers frame
3/2/2025 5:37:20 PM	Google Patents	Search Term 1 ear Search Term 2 eyeglass Search Term 3 audio Search Term 4 speakers Search Term 5 frame Before Priority Date: priority:20020726
3/2/2025 5:37:27 PM	Google Scholar	eyewear temple frame radio frequency frequency transceiver

date, time	web site	search string
3/2/2025 5:37:27 PM	Google Patents	Search Term 1 eyewear Search Term 2 temple Search Term 3 frame Search Term 4 radio frequency Search Term 5 frequency transceiver Before Priority Date: priority:20010430
3/2/2025 5:37:34 PM	Google Scholar	earphone wearer eyeglass support lens
3/2/2025 5:37:34 PM	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
3/2/2025 5:37:41 PM	Google Scholar	earphone player voice player voice present
3/2/2025 5:37:41 PM	Google Patents	Search Term 1 earphone Search Term 2 player Search Term 3 voice player Search Term 4 voice Search Term 5 present Before Priority Date: priority:20041021
3/2/2025 5:37:49 PM	Google Scholar	content protection audio configuring bluetooth communication

date, time	web site	search string
3/2/2025 5:37:49 PM	Google Patents	Search Term 1 content protection Search Term 2 audio Search Term 3 configuring Search Term 4 bluetooth Search Term 5 communication Before Priority Date: priority:20050308
3/2/2025 5:52:51 PM	Google Scholar	band portion headphone device headphone wearer connecting members
3/2/2025 5:52:51 PM	Google Patents	Search Term 1 band portion Search Term 2 headphone device Search Term 3 headphone Search Term 4 wearer Search Term 5 connecting members Before Priority Date: priority:20050704
3/2/2025 5:53:00 PM	Google Scholar	music glasses sounding device circuit board chamber
3/2/2025 5:53:00 PM	Google Patents	Search Term 1 music Search Term 2 glasses Search Term 3 sounding device Search Term 4 circuit board Search Term 5 chamber Before Priority Date: priority:20060310
3/2/2025 5:53:16 PM	Google Scholar	eyeglasses wire dep electronic temple

date, time	web site	search string
3/2/2025 5:53:16 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
3/2/2025 5:53:26 PM	Google Scholar	user context wearable display processor information
3/2/2025 5:53:26 PM	Google Patents	Search Term 1 user Search Term 2 context Search Term 3 wearable display Search Term 4 processor Search Term 5 information Before Priority Date: priority:20060831
3/2/2025 5:53:34 PM	Google Scholar	touch headset user interface sensitive surface control output
3/2/2025 5:53:34 PM	Google Patents	Search Term 1 touch Search Term 2 headset Search Term 3 user interface Search Term 4 sensitive surface Search Term 5 control output Before Priority Date: priority:20061130

date, time	web site	search string
3/2/2025 5:53:42 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
3/2/2025 5:53:50 PM	Google Scholar	housing portion communications device wireless communications right ear housing
3/2/2025 5:53:50 PM	Google Patents	Search Term 1 housing portion Search Term 2 communications device Search Term 3 wireless communications Search Term 4 right ear Search Term 5 housing Before Priority Date: priority:20061214
3/2/2025 5:54:02 PM	Google Scholar	headphone cradle transmitter audio signal
3/2/2025 5:54:02 PM	Google Patents	Search Term 1 headphone Search Term 2 cradle Search Term 3 transmitter Search Term 4 audio Search Term 5 signal Before Priority Date: priority:20070130
3/2/2025 5:54:13 PM	Google Scholar	arrangement headphones housing ear piece seal

date, time	web site	search string
3/2/2025 5:54:13 PM	Google Patents	Search Term 1 arrangement Search Term 2 headphones Search Term 3 housing Search Term 4 ear piece Search Term 5 seal Before Priority Date: priority:20070504
3/2/2025 5:54:23 PM	Google Scholar	host computing computing device external host display bluetooth
3/2/2025 5:54:23 PM	Google Patents	Search Term 1 host computing Search Term 2 computing device Search Term 3 external host Search Term 4 display Search Term 5 bluetooth Before Priority Date: priority:20070514

Web Search History

date, time	web site	search string
12/13/2024 4:32:27 PM	Google	Head mounted display glasses
12/13/2024 4:32:31 PM	Google	types of head-mounted display
12/13/2024 4:32:35 PM	Google	head-mounted display examples
12/13/2024 4:32:42 PM	Google	head mount display
12/13/2024 4:33:26 PM	Google	Best head mounted display reviews
12/13/2024 4:33:51 PM	Google	head mount display reviews
12/13/2024 4:34:14 PM	Google	Types of head mounted display in virtual reality
12/13/2024 4:34:31 PM	Google	Head mounted device
12/13/2024 4:37:02 PM	Google Scholar	head worn user electronic apparatus personal electronic
12/13/2024 4:37:02 PM	Google Patents	Search Term 1 head Search Term 2 worn Search Term 3 user Search Term 4 electronic apparatus Search Term 5 personal electronic Before Priority Date: priority:20051011
12/13/2024 4:38:08 PM	Google Scholar	wristwatch magnetic annular frame tag antenna

date, time	web site	search string
12/13/2024 4:38:08 PM	Google Patents	Search Term 1 wristwatch Search Term 2 magnetic Search Term 3 annular frame Search Term 4 tag Search Term 5 antenna Before Priority Date: priority:20010515
12/13/2024 4:38:16 PM	Google Scholar	electro active lens active layer layer
12/13/2024 4:38:16 PM	Google Patents	Search Term 1 electro Search Term 2 active Search Term 3 lens Search Term 4 active layer Search Term 5 layer Before Priority Date: priority:19990702
12/13/2024 4:38:25 PM	Google Scholar	eyeglasses coupled frame speaker microphone
12/13/2024 4:38:25 PM	Google Patents	Search Term 1 eyeglasses Search Term 2 coupled Search Term 3 frame Search Term 4 speaker Search Term 5 microphone Before Priority Date: priority:20010621
12/13/2024 4:38:31 PM	Google Scholar	display eyeglasses display system optical element facing

date, time	web site	search string
12/13/2024 4:38:31 PM	Google Patents	Search Term 1 display Search Term 2 eyeglasses Search Term 3 display system Search Term 4 optical element Search Term 5 facing Before Priority Date: priority:20010626
12/13/2024 4:38:46 PM	Google Scholar	user exercise amount information recorder
12/13/2024 4:38:46 PM	Google Patents	Search Term 1 user Search Term 2 exercise Search Term 3 amount Search Term 4 information Search Term 5 recorder Before Priority Date: priority:20000511
12/13/2024 4:38:52 PM	Google Scholar	light heart rate receiving element emitting element change
12/13/2024 4:38:52 PM	Google Patents	Search Term 1 light Search Term 2 heart rate Search Term 3 receiving element Search Term 4 emitting element Search Term 5 change Before Priority Date: priority:20010719
12/13/2024 4:38:58 PM	Google Scholar	telephone concealed microphone earpiece user

date, time	web site	search string
12/13/2024 4:38:58 PM	Google Patents	Search Term 1 telephone Search Term 2 concealed Search Term 3 microphone Search Term 4 earpiece Search Term 5 user Before Priority Date: priority:20010727
12/13/2024 4:39:09 PM	Google Scholar	subject activity operable consumption body activity
12/13/2024 4:39:09 PM	Google Patents	Search Term 1 subject Search Term 2 activity Search Term 3 operable Search Term 4 consumption Search Term 5 body activity Before Priority Date: priority:20000119
12/13/2024 4:51:32 PM	Google Scholar	electro active lens change spectacle
12/13/2024 4:51:32 PM	Google Patents	Search Term 1 electro Search Term 2 active Search Term 3 lens Search Term 4 change Search Term 5 spectacle Before Priority Date: priority:19990702
12/13/2024 4:51:39 PM	Google Scholar	integral attached optic eye close proximity

date, time	web site	search string
12/13/2024 4:51:39 PM	Google Patents	Search Term 1 integral Search Term 2 attached Search Term 3 optic Search Term 4 eye Search Term 5 close proximity Before Priority Date: priority:20010813
12/13/2024 4:51:46 PM	Google Scholar	wireless telephone hand microphone speaker
12/13/2024 4:51:46 PM	Google Patents	Search Term 1 wireless Search Term 2 telephone Search Term 3 hand Search Term 4 microphone Search Term 5 speaker Before Priority Date: priority:20010813
12/13/2024 4:51:53 PM	Google Scholar	hearing aid mobile station call wireless bluetooth
12/13/2024 4:51:53 PM	Google Patents	Search Term 1 hearing aid Search Term 2 mobile station Search Term 3 call Search Term 4 wireless Search Term 5 bluetooth Before Priority Date: priority:20010906
12/13/2024 4:52:05 PM	Google Scholar	data sensing unit power airtime speed

date, time	web site	search string
12/13/2024 4:52:05 PM	Google Patents	Search Term 1 data Search Term 2 sensing unit Search Term 3 power Search Term 4 airtime Search Term 5 speed Before Priority Date: priority:19961212
12/13/2024 4:52:20 PM	Google Scholar	scba sensor processor transmitter face mask
12/13/2024 4:52:20 PM	Google Patents	Search Term 1 scba Search Term 2 sensor Search Term 3 processor Search Term 4 transmitter Search Term 5 face mask Before Priority Date: priority:19980814
12/13/2024 4:52:27 PM	Google Scholar	user hearing control circuitry profile mobile phone
12/13/2024 4:52:27 PM	Google Patents	Search Term 1 user Search Term 2 hearing Search Term 3 control circuitry Search Term 4 profile Search Term 5 mobile phone Before Priority Date: priority:20010920
12/13/2024 4:52:33 PM	Google Scholar	digital data response curve digital filters tolerance range

date, time	web site	search string
12/13/2024 4:52:33 PM	Google Patents	Search Term 1 digital data Search Term 2 response curve Search Term 3 digital Search Term 4 filters Search Term 5 tolerance range Before Priority Date: priority:20010928
12/13/2024 5:08:25 PM	Google Scholar	audio speaker mode radio cellular
12/13/2024 5:08:25 PM	Google Patents	Search Term 1 audio Search Term 2 speaker Search Term 3 mode Search Term 4 radio Search Term 5 cellular Before Priority Date: priority:20000602
12/13/2024 5:08:31 PM	Google Scholar	speaker eyewear wearer microphone earstem
12/13/2024 5:08:31 PM	Google Patents	Search Term 1 speaker Search Term 2 eyewear Search Term 3 wearer Search Term 4 microphone Search Term 5 earstem Before Priority Date: priority:20011006
12/13/2024 5:08:39 PM	Google Scholar	wearer eyewear speaker microphone unit

date, time	web site	search string
12/13/2024 5:08:39 PM	Google Patents	Search Term 1 wearer Search Term 2 eyewear Search Term 3 speaker Search Term 4 microphone Search Term 5 unit Before Priority Date: priority:20011006
12/13/2024 5:08:46 PM	Google Scholar	waveform value user indicator pulse wave
12/13/2024 5:08:46 PM	Google Patents	Search Term 1 waveform Search Term 2 value Search Term 3 user Search Term 4 indicator Search Term 5 pulse wave Before Priority Date: priority:19960709
12/13/2024 5:08:56 PM	Google Scholar	stimulus interaction step amount test response
12/13/2024 5:08:56 PM	Google Patents	Search Term 1 stimulus Search Term 2 interaction Search Term 3 step amount Search Term 4 test Search Term 5 response Before Priority Date: priority:20011012
12/13/2024 5:09:03 PM	Google Scholar	recording unit recording recorder visual data acquisition

date, time	web site	search string
12/13/2024 5:09:03 PM	Google Patents	Search Term 1 recording unit Search Term 2 recording Search Term 3 recorder Search Term 4 visual Search Term 5 data acquisition Before Priority Date: priority:19990105
12/13/2024 5:09:09 PM	Google Scholar	layer transducer film layer electrode vibrator
12/13/2024 5:09:09 PM	Google Patents	Search Term 1 layer Search Term 2 transducer Search Term 3 film layer Search Term 4 electrode Search Term 5 vibrator Before Priority Date: priority:20011009
12/13/2024 5:09:16 PM	Google Scholar	receiver lens frame eyeglasses temple piece electrical
12/13/2024 5:09:16 PM	Google Patents	Search Term 1 receiver Search Term 2 lens frame Search Term 3 eyeglasses Search Term 4 temple piece Search Term 5 electrical Before Priority Date: priority:20011018
12/13/2024 5:13:34 PM	Google Scholar	eyeglasses eyeglasses according microphone connector connection

date, time	web site	search string
12/13/2024 5:13:34 PM	Google Patents	Search Term 1 eyeglasses Search Term 2 eyeglasses according Search Term 3 microphone Search Term 4 connector Search Term 5 connection Before Priority Date: priority:20020124
12/13/2024 5:13:40 PM	Google Scholar	solar cell integrated spectacles according integration glasses
12/13/2024 5:13:40 PM	Google Patents	Search Term 1 solar cell Search Term 2 integrated Search Term 3 spectacles according Search Term 4 integration Search Term 5 glasses Before Priority Date: priority:20020211
12/13/2024 5:13:49 PM	Google Scholar	electro lens active focal length layer
12/13/2024 5:13:49 PM	Google Patents	Search Term 1 electro Search Term 2 lens Search Term 3 active Search Term 4 focal length Search Term 5 layer Before Priority Date: priority:19990702
12/13/2024 5:13:57 PM	Google Scholar	values speaker listener location speech

date, time	web site	search string
12/13/2024 5:13:57 PM	Google Patents	Search Term 1 values Search Term 2 speaker Search Term 3 listener Search Term 4 location Search Term 5 speech Before Priority Date: priority:20001127
12/13/2024 5:16:29 PM	Google Scholar	patient treatment software prescription visual acuity
12/13/2024 5:16:29 PM	Google Patents	Search Term 1 patient Search Term 2 treatment Search Term 3 software Search Term 4 prescription Search Term 5 visual acuity Before Priority Date: priority:20020517
12/13/2024 5:16:35 PM	Google Scholar	yoke vibrating plate bone conductive speaker conductive speaker
12/13/2024 5:16:35 PM	Google Patents	Search Term 1 yoke Search Term 2 vibrating plate Search Term 3 bone conductive Search Term 4 speaker Search Term 5 conductive speaker Before Priority Date: priority:20020528
12/13/2024 5:16:42 PM	Google Scholar	array radiation filters absorptive transmission

date, time	web site	search string
12/13/2024 5:16:42 PM	Google Patents	Search Term 1 array Search Term 2 radiation Search Term 3 filters Search Term 4 absorptive Search Term 5 transmission Before Priority Date: priority:19961230
12/13/2024 5:16:48 PM	Google Scholar	eyewear according eyewear front frame sidepiece display
12/13/2024 5:16:48 PM	Google Patents	Search Term 1 eyewear according Search Term 2 eyewear Search Term 3 front frame Search Term 4 sidepiece Search Term 5 display Before Priority Date: priority:20020524
12/13/2024 5:16:55 PM	Google Scholar	exposure light color printed blue
12/13/2024 5:16:55 PM	Google Patents	Search Term 1 exposure Search Term 2 light Search Term 3 color Search Term 4 printed Search Term 5 blue Before Priority Date: priority:19980130
12/13/2024 5:17:02 PM	Google Scholar	wearer media device visual media cndot lens

date, time	web site	search string
12/13/2024 5:17:02 PM	Google Patents	Search Term 1 wearer Search Term 2 media device Search Term 3 visual media Search Term 4 cndot Search Term 5 lens Before Priority Date: priority:20020617
12/13/2024 5:24:36 PM	Google Scholar	electro active lens range finder optical
12/13/2024 5:24:36 PM	Google Patents	Search Term 1 electro Search Term 2 active Search Term 3 lens Search Term 4 range finder Search Term 5 optical Before Priority Date: priority:20000623
12/13/2024 5:24:45 PM	Google Scholar	support structure sensor tunnel temperature skin
12/13/2024 5:24:45 PM	Google Patents	Search Term 1 support structure Search Term 2 sensor Search Term 3 tunnel Search Term 4 temperature Search Term 5 skin Before Priority Date: priority:20020422
12/13/2024 5:25:04 PM	Google Scholar	ultrasonic khz ultra frequency waves

date, time	web site	search string
12/13/2024 5:25:04 PM	Google Patents	Search Term 1 ultrasonic Search Term 2 khz Search Term 3 ultra Search Term 4 frequency Search Term 5 waves Before Priority Date: priority:19971125
12/13/2024 5:30:05 PM	Google Scholar	eyeglass support wearer frame audio
12/13/2024 5:30:05 PM	Google Patents	Search Term 1 eyeglass Search Term 2 support Search Term 3 wearer Search Term 4 frame Search Term 5 audio Before Priority Date: priority:20020726
12/13/2024 5:30:12 PM	Google Scholar	rfid tag antenna structure antenna rfid module
12/13/2024 5:30:12 PM	Google Patents	Search Term 1 rfid tag Search Term 2 antenna structure Search Term 3 antenna Search Term 4 rfid Search Term 5 module Before Priority Date: priority:20020912
12/13/2024 5:30:17 PM	Google Scholar	sensor sound generating generating assembly melody eyeglass frames

date, time	web site	search string
12/13/2024 5:30:17 PM	Google Patents	Search Term 1 sensor Search Term 2 sound generating Search Term 3 generating assembly Search Term 4 melody Search Term 5 eyeglass frames Before Priority Date: priority:20021001
12/13/2024 5:30:24 PM	Google Scholar	recording device imaging system mobile imaging mobile user
12/13/2024 5:30:24 PM	Google Patents	Search Term 1 recording device Search Term 2 imaging system Search Term 3 mobile imaging Search Term 4 mobile Search Term 5 user Before Priority Date: priority:20011221
12/13/2024 5:30:33 PM	Google Scholar	subject data monitoring system display unit blood oxygen
12/13/2024 5:30:33 PM	Google Patents	Search Term 1 subject Search Term 2 data Search Term 3 monitoring system Search Term 4 display unit Search Term 5 blood oxygen Before Priority Date: priority:19991109
12/13/2024 5:30:40 PM	Google Scholar	display device information display spectacle frame speaker user

date, time	web site	search string
12/13/2024 5:30:40 PM	Google Patents	Search Term 1 display device Search Term 2 information display Search Term 3 spectacle frame Search Term 4 speaker Search Term 5 user Before Priority Date: priority:20021115
12/13/2024 5:42:29 PM	Google Scholar	image user affective information scene
12/13/2024 5:42:29 PM	Google Patents	Search Term 1 image Search Term 2 user Search Term 3 affective Search Term 4 information Search Term 5 scene Before Priority Date: priority:20021125
12/13/2024 5:42:36 PM	Google Scholar	equipment individual scanner smart tag smart
12/13/2024 5:42:36 PM	Google Patents	Search Term 1 equipment Search Term 2 individual Search Term 3 scanner Search Term 4 smart tag Search Term 5 smart Before Priority Date: priority:20021121
12/13/2024 5:42:43 PM	Google Scholar	state type display glasses type communication terminal voice

date, time	web site	search string
12/13/2024 5:42:43 PM	Google Patents	Search Term 1 state Search Term 2 type display Search Term 3 glasses type Search Term 4 communication terminal Search Term 5 voice Before Priority Date: priority:20021128
12/13/2024 5:42:52 PM	Google Scholar	audio modulated directional loudspeaker amplifier signal
12/13/2024 5:42:52 PM	Google Patents	Search Term 1 audio Search Term 2 modulated Search Term 3 directional loudspeaker Search Term 4 amplifier Search Term 5 signal Before Priority Date: priority:20021030
12/13/2024 5:43:00 PM	Google Scholar	assembly recited hat audio section
12/13/2024 5:43:00 PM	Google Patents	Search Term 1 assembly Search Term 2 recited Search Term 3 hat Search Term 4 audio Search Term 5 section Before Priority Date: priority:20030108
12/13/2024 5:43:08 PM	Google Scholar	light source clamp illumination socket light

date, time	web site	search string
12/13/2024 5:43:08 PM	Google Patents	Search Term 1 light source Search Term 2 clamp Search Term 3 illumination Search Term 4 socket Search Term 5 light Before Priority Date: priority:20020809
12/13/2024 5:43:16 PM	Google Scholar	optic eye adjacent folding image source folding optic
12/13/2024 5:43:16 PM	Google Patents	Search Term 1 optic Search Term 2 eye Search Term 3 adjacent folding Search Term 4 image source Search Term 5 folding optic Before Priority Date: priority:20010507
12/13/2024 5:43:32 PM	Google Scholar	user image user interface physical hand hand
12/13/2024 5:43:32 PM	Google Patents	Search Term 1 user Search Term 2 image Search Term 3 user interface Search Term 4 physical hand Search Term 5 hand Before Priority Date: priority:19991229
12/13/2024 5:54:14 PM	Google Scholar	glasses light assembly light housing pair

date, time	web site	search string
12/13/2024 5:54:14 PM	Google Patents	Search Term 1 glasses Search Term 2 light assembly Search Term 3 light Search Term 4 housing Search Term 5 pair Before Priority Date: priority:20030130
12/13/2024 5:54:22 PM	Google Scholar	support wearer eyeglass frame audio
12/13/2024 5:54:22 PM	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
12/13/2024 5:54:28 PM	Google Scholar	video scaler overlay memory display
12/13/2024 5:54:28 PM	Google Patents	Search Term 1 video Search Term 2 scaler Search Term 3 overlay Search Term 4 memory Search Term 5 display Before Priority Date: priority:20001003
12/13/2024 5:54:36 PM	Google Scholar	dimensional subject frame frames model

date, time	web site	search string
12/13/2024 5:54:36 PM	Google Patents	Search Term 1 dimensional Search Term 2 subject Search Term 3 frame Search Term 4 frames Search Term 5 model Before Priority Date: priority:20001031
12/13/2024 5:54:46 PM	Google Scholar	bone conduction headset user band ear
12/13/2024 5:54:46 PM	Google Patents	Search Term 1 bone conduction Search Term 2 headset Search Term 3 user Search Term 4 band Search Term 5 ear Before Priority Date: priority:20010705
12/13/2024 5:54:52 PM	Google Scholar	display apparatus image display holding member combiner lens
12/13/2024 5:54:52 PM	Google Patents	Search Term 1 display apparatus Search Term 2 image display Search Term 3 holding member Search Term 4 combiner Search Term 5 lens Before Priority Date: priority:20000911
12/13/2024 5:54:59 PM	Google Scholar	glasses intelligent tag chip coil digital data

date, time	web site	search string
12/13/2024 5:54:59 PM	Google Patents	Search Term 1 glasses Search Term 2 intelligent tag Search Term 3 chip Search Term 4 coil Search Term 5 digital data Before Priority Date: priority:20030513
12/13/2024 5:55:06 PM	Google Scholar	light emitting emitting diodes illumination electrical user
12/13/2024 5:55:06 PM	Google Patents	Search Term 1 light emitting Search Term 2 emitting diodes Search Term 3 illumination Search Term 4 electrical Search Term 5 user Before Priority Date: priority:20030331
12/13/2024 5:55:15 PM	Google Scholar	display subsystem computer eye coupled
12/13/2024 5:55:15 PM	Google Patents	Search Term 1 display Search Term 2 subsystem Search Term 3 computer Search Term 4 eye Search Term 5 coupled Before Priority Date: priority:19961002
12/13/2024 5:55:27 PM	Google Scholar	support latching temple receiver female

date, time	web site	search string
12/13/2024 5:55:27 PM	Google Patents	Search Term 1
		support
		Search Term 2
		latching
		Search Term 3
		temple
		Search Term 4
		receiver
		Search Term 5
		female
		Before
		Priority Date: priority:20030811

Web Search History

date, time	web site	search string
12/16/2024 3:07:04 PM	Google Scholar	audio wearable speakers communication device audio system
12/16/2024 3:07:04 PM	Google Patents	Search Term 1 audio Search Term 2 wearable Search Term 3 speakers Search Term 4 communication device Search Term 5 audio system Before Priority Date: priority:20020826
12/16/2024 3:07:12 PM	Google Scholar	ear eyeglass audio speakers frame
12/16/2024 3:07:12 PM	Google Patents	Search Term 1 ear Search Term 2 eyeglass Search Term 3 audio Search Term 4 speakers Search Term 5 frame Before Priority Date: priority:20020726
12/16/2024 3:07:22 PM	Google Scholar	eyewear temple frame radio frequency frequency transceiver

date, time	web site	search string
12/16/2024 3:07:22 PM	Google Patents	Search Term 1 eyewear Search Term 2 temple Search Term 3 frame Search Term 4 radio frequency Search Term 5 frequency transceiver Before Priority Date: priority:20010430
12/16/2024 3:07:28 PM	Google Scholar	earphone wearer eyeglass support lens
12/16/2024 3:07:28 PM	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
12/16/2024 3:07:35 PM	Google Scholar	earphone player voice player voice present
12/16/2024 3:07:35 PM	Google Patents	Search Term 1 earphone Search Term 2 player Search Term 3 voice player Search Term 4 voice Search Term 5 present Before Priority Date: priority:20041021
12/16/2024 3:07:43 PM	Google Scholar	content protection audio configuring bluetooth communication

date, time	web site	search string
12/16/2024 3:07:43 PM	Google Patents	Search Term 1 content protection Search Term 2 audio Search Term 3 configuring Search Term 4 bluetooth Search Term 5 communication Before Priority Date: priority:20050308
12/16/2024 3:07:59 PM	Google Scholar	band portion headphone device headphone wearer connecting members
12/16/2024 3:07:59 PM	Google Patents	Search Term 1 band portion Search Term 2 headphone device Search Term 3 headphone Search Term 4 wearer Search Term 5 connecting members Before Priority Date: priority:20050704
12/16/2024 3:08:07 PM	Google Scholar	music glasses sounding device circuit board chamber
12/16/2024 3:08:07 PM	Google Patents	Search Term 1 music Search Term 2 glasses Search Term 3 sounding device Search Term 4 circuit board Search Term 5 chamber Before Priority Date: priority:20060310
12/16/2024 3:08:51 PM	Google Scholar	eyeglass interface system camera audio integrated circuits

date, time	web site	search string
12/16/2024 3:08:51 PM	Google Patents	Search Term 1 eyeglass Search Term 2 interface system Search Term 3 camera Search Term 4 audio Search Term 5 integrated circuits Before Priority Date: priority:19971030
12/16/2024 3:17:07 PM	Google Scholar	documentation information documentation data data real information
12/16/2024 3:17:07 PM	Google Patents	Search Term 1 documentation Search Term 2 information Search Term 3 documentation data Search Term 4 data Search Term 5 real information Before Priority Date: priority:19990325
12/16/2024 3:17:13 PM	Google Scholar	data operating acquisition means designed observation
12/16/2024 3:17:13 PM	Google Patents	Search Term 1 data Search Term 2 operating Search Term 3 acquisition means Search Term 4 designed Search Term 5 observation Before Priority Date: priority:19990302
12/16/2024 3:17:19 PM	Google Scholar	arm phone user image phone body

date, time	web site	search string
12/16/2024 3:17:19 PM	Google Patents	Search Term 1 arm Search Term 2 phone Search Term 3 user Search Term 4 image Search Term 5 phone body Before Priority Date: priority:20001110
12/16/2024 3:17:27 PM	Google Scholar	language learning virtual world studying education
12/16/2024 3:17:27 PM	Google Patents	Search Term 1 language Search Term 2 learning Search Term 3 virtual world Search Term 4 studying Search Term 5 education Before Priority Date: priority:20020511
12/16/2024 3:17:41 PM	Google Scholar	image capture remote device image data images user
12/16/2024 3:17:41 PM	Google Patents	Search Term 1 image capture Search Term 2 remote device Search Term 3 image data Search Term 4 images Search Term 5 user Before Priority Date: priority:20010727
12/16/2024 3:17:47 PM	Google Scholar	multidimensional video receptors video data audio

date, time	web site	search string
12/16/2024 3:17:47 PM	Google Patents	Search Term 1 multidimensional Search Term 2 video Search Term 3 receptors Search Term 4 video data Search Term 5 audio Before Priority Date: priority:19980127
12/16/2024 3:17:54 PM	Google Scholar	reader keyboard indicia monitor light
12/16/2024 3:17:54 PM	Google Patents	Search Term 1 reader Search Term 2 keyboard Search Term 3 indicia Search Term 4 monitor Search Term 5 light Before Priority Date: priority:19981110
12/16/2024 3:18:02 PM	Google Scholar	wearer eyewear speaker microphone unit
12/16/2024 3:18:02 PM	Google Patents	Search Term 1 wearer Search Term 2 eyewear Search Term 3 speaker Search Term 4 microphone Search Term 5 unit Before Priority Date: priority:20011006
12/16/2024 3:18:13 PM	Google Scholar	support display support member user ear

date, time	web site	search string
12/16/2024 3:18:13 PM	Google Patents	Search Term 1 support Search Term 2 display Search Term 3 support member Search Term 4 user Search Term 5 ear Before Priority Date: priority:20010907
12/16/2024 3:39:49 PM	Google Scholar	values speaker listener location speech
12/16/2024 3:39:49 PM	Google Patents	Search Term 1 values Search Term 2 speaker Search Term 3 listener Search Term 4 location Search Term 5 speech Before Priority Date: priority:20001127
12/16/2024 3:39:56 PM	Google Scholar	audio video wearer pick mounting means
12/16/2024 3:39:56 PM	Google Patents	Search Term 1 audio Search Term 2 video Search Term 3 wearer Search Term 4 pick Search Term 5 mounting means Before Priority Date: priority:20020403
12/16/2024 3:40:03 PM	Google Scholar	eyewear according eyewear front frame sidepiece display

date, time	web site	search string
12/16/2024 3:40:03 PM	Google Patents	Search Term 1 eyewear according Search Term 2 eyewear Search Term 3 front frame Search Term 4 sidepiece Search Term 5 display Before Priority Date: priority:20020524
12/16/2024 3:40:10 PM	Google Scholar	tracking augmented reality frame acquisition video computer
12/16/2024 3:40:10 PM	Google Patents	Search Term 1 tracking Search Term 2 augmented reality Search Term 3 frame acquisition Search Term 4 video Search Term 5 computer Before Priority Date: priority:20011220
12/16/2024 3:40:20 PM	Google Scholar	speaker eyewear microphone wearer earstem
12/16/2024 3:40:20 PM	Google Patents	Search Term 1 speaker Search Term 2 eyewear Search Term 3 microphone Search Term 4 wearer Search Term 5 earstem Before Priority Date: priority:20011006
12/16/2024 3:40:31 PM	Google Scholar	eyeglasses wire dep electronic temple

date, time	web site	search string
12/16/2024 3:40:31 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
12/16/2024 3:40:39 PM	Google Scholar	user context wearable display processor information
12/16/2024 3:40:39 PM	Google Patents	Search Term 1 user Search Term 2 context Search Term 3 wearable display Search Term 4 processor Search Term 5 information Before Priority Date: priority:20060831
12/16/2024 3:40:50 PM	Google Scholar	touch headset user interface sensitive surface control output
12/16/2024 3:40:50 PM	Google Patents	Search Term 1 touch Search Term 2 headset Search Term 3 user interface Search Term 4 sensitive surface Search Term 5 control output Before Priority Date: priority:20061130
12/16/2024 3:40:59 PM	Google Scholar	housing portion communications device wireless communications right ear housing

date, time	web site	search string
12/16/2024 3:40:59 PM	Google Patents	Search Term 1 housing portion Search Term 2 communications device Search Term 3 wireless communications Search Term 4 right ear Search Term 5 housing Before Priority Date: priority:20061214
12/16/2024 3:53:50 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
12/16/2024 3:53:58 PM	Google Scholar	coil external frame external coil visor
12/16/2024 3:53:58 PM	Google Patents	Search Term 1 coil Search Term 2 external Search Term 3 frame Search Term 4 external coil Search Term 5 visor Before Priority Date: priority:20061222
12/16/2024 3:54:05 PM	Google Scholar	headphone cradle transmitter audio signal

date, time	web site	search string
12/16/2024 3:54:05 PM	Google Patents	Search Term 1 headphone Search Term 2 cradle Search Term 3 transmitter Search Term 4 audio Search Term 5 signal Before Priority Date: priority:20070130
12/16/2024 3:54:12 PM	Google Scholar	data selection processing device data processing output
12/16/2024 3:54:12 PM	Google Patents	Search Term 1 data Search Term 2 selection Search Term 3 processing device Search Term 4 data processing Search Term 5 output Before Priority Date: priority:20070131
12/16/2024 3:54:40 PM	Google Scholar	glasses video media player type media memory card
12/16/2024 3:54:40 PM	Google Patents	Search Term 1 glasses Search Term 2 video Search Term 3 media player Search Term 4 type media Search Term 5 memory card Before Priority Date: priority:20070319
12/16/2024 3:54:46 PM	Google Scholar	arrangement headphones housing ear piece seal

date, time	web site	search string
12/16/2024 3:54:46 PM	Google Patents	Search Term 1 arrangement Search Term 2 headphones Search Term 3 housing Search Term 4 ear piece Search Term 5 seal Before Priority Date: priority:20070504
12/16/2024 3:54:53 PM	Google Scholar	headphone ear sound image image forward stereo sound
12/16/2024 3:54:53 PM	Google Patents	Search Term 1 headphone Search Term 2 ear Search Term 3 sound image Search Term 4 image forward Search Term 5 stereo sound Before Priority Date: priority:20070605
12/16/2024 3:55:02 PM	Google Scholar	optical optical element adjustable adjustable connector wearer
12/16/2024 3:55:02 PM	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
12/16/2024 3:55:18 PM	Google Scholar	communication device voice signal ambient noise adjusting polarization reversed

date, time	web site	search string
12/16/2024 3:55:18 PM	Google Patents	Search Term 1 communication device Search Term 2 voice signal Search Term 3 ambient noise Search Term 4 adjusting Search Term 5 polarization reversed Before Priority Date: priority:20070921
12/16/2024 4:14:43 PM	Google Scholar	video video signal display display device compressed
12/16/2024 4:14:43 PM	Google Patents	Search Term 1 video Search Term 2 video signal Search Term 3 display Search Term 4 display device Search Term 5 compressed Before Priority Date: priority:20080104
12/16/2024 4:14:50 PM	Google Scholar	host computing computing device external host display bluetooth
12/16/2024 4:14:50 PM	Google Patents	Search Term 1 host computing Search Term 2 computing device Search Term 3 external host Search Term 4 display Search Term 5 bluetooth Before Priority Date: priority:20070514
12/16/2024 4:14:57 PM	Google Scholar	telephony profile phone psd network

date, time	web site	search string
12/16/2024 4:14:57 PM	Google Patents	Search Term 1 telephony Search Term 2 profile Search Term 3 phone Search Term 4 psd Search Term 5 network Before Priority Date: priority:20080908
12/16/2024 4:15:04 PM	Google Scholar	smartcard contacts mobile memory memory card interface
12/16/2024 4:15:04 PM	Google Patents	Search Term 1 smartcard Search Term 2 contacts Search Term 3 mobile memory Search Term 4 memory card Search Term 5 interface Before Priority Date: priority:20081006
12/16/2024 4:15:34 PM	Google Scholar	information user telescope electronic visual
12/16/2024 4:15:34 PM	Google Patents	Search Term 1 information Search Term 2 user Search Term 3 telescope Search Term 4 electronic Search Term 5 visual Before Priority Date: priority:20021210
12/16/2024 4:15:40 PM	Google Scholar	mounting user chassis virtual images

date, time	web site	search string
12/16/2024 4:15:40 PM	Google Patents	Search Term 1 mounting Search Term 2 user Search Term 3 chassis Search Term 4 virtual Search Term 5 images Before Priority Date: priority:20030103
12/16/2024 4:15:49 PM	Google Scholar	audio audio device signal transceiver user
12/16/2024 4:15:49 PM	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
12/16/2024 4:15:57 PM	Google Scholar	support wearer eyeglass frame audio
12/16/2024 4:15:57 PM	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
12/16/2024 4:16:04 PM	Google Scholar	golfer image training aid golf training light

date, time	web site	search string
12/16/2024 4:16:04 PM	Google Patents	Search Term 1 golfer Search Term 2 image Search Term 3 training aid Search Term 4 golf training Search Term 5 light Before Priority Date: priority:20010327
12/16/2024 4:16:17 PM	Google Scholar	user virtual image spectacles display mounting
12/16/2024 4:16:17 PM	Google Patents	Search Term 1 user Search Term 2 virtual image Search Term 3 spectacles Search Term 4 display Search Term 5 mounting Before Priority Date: priority:20021210
12/16/2024 4:21:00 PM	Google Scholar	mount temple temples hinge ophthalmic
12/16/2024 4:21:00 PM	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
12/16/2024 4:21:05 PM	Google Scholar	temple tube solid cavities injection

date, time	web site	search string
12/16/2024 4:21:05 PM	Google Patents	Search Term 1 temple Search Term 2 tube Search Term 3 solid Search Term 4 cavities Search Term 5 injection Before Priority Date: priority:19720922
12/16/2024 4:21:10 PM	Google Scholar	mold rigid liquid resin resin system flexible
12/16/2024 4:21:10 PM	Google Patents	Search Term 1 mold Search Term 2 rigid Search Term 3 liquid resin Search Term 4 resin system Search Term 5 flexible Before Priority Date: priority:19781027
12/16/2024 4:21:15 PM	Google Scholar	temple swimmer temple pieces eyepieces pieces
12/16/2024 4:21:15 PM	Google Patents	Search Term 1 temple Search Term 2 swimmer Search Term 3 temple pieces Search Term 4 eyepieces Search Term 5 pieces Before Priority Date: priority:19930818
12/16/2024 4:30:20 PM	Google Scholar	eyeglass frame frame extension arm eyeglass speaker

date, time	web site	search string
12/16/2024 4:30:20 PM	Google Patents	Search Term 1 eyeglass frame Search Term 2 frame Search Term 3 extension arm Search Term 4 eyeglass Search Term 5 speaker Before Priority Date: priority:20010621
12/16/2024 4:30:29 PM	Google Scholar	headset active noise parameters data handset
12/16/2024 4:30:29 PM	Google Patents	Search Term 1 headset Search Term 2 active noise Search Term 3 parameters Search Term 4 data Search Term 5 handset Before Priority Date: priority:20090717
12/16/2024 4:30:37 PM	Google Scholar	host computing computing device display device handheld wireless content
12/16/2024 4:30:37 PM	Google Patents	Search Term 1 host computing Search Term 2 computing device Search Term 3 display device Search Term 4 handheld wireless Search Term 5 content Before Priority Date: priority:20080328
12/16/2024 4:30:44 PM	Google Scholar	speaker support module coupling wearable support

date, time	web site	search string
12/16/2024 4:30:44 PM	Google Patents	Search Term 1 speaker Search Term 2 support Search Term 3 module Search Term 4 coupling Search Term 5 wearable support Before Priority Date: priority:20000602
12/16/2024 4:30:52 PM	Google Scholar	generating user interface synthetic jet enclosure user
12/16/2024 4:30:52 PM	Google Patents	Search Term 1 generating Search Term 2 user interface Search Term 3 synthetic jet Search Term 4 enclosure Search Term 5 user Before Priority Date: priority:20081219
12/16/2024 4:31:05 PM	Google Scholar	location audiovisual processor communication user
12/16/2024 4:31:05 PM	Google Patents	Search Term 1 location Search Term 2 audiovisual Search Term 3 processor Search Term 4 communication Search Term 5 user Before Priority Date: priority:20021127
12/16/2024 4:31:12 PM	Google Scholar	viewing system binocular viewing optical assembly optical pipe

date, time	web site	search string
12/16/2024 4:31:12 PM	Google Patents	Search Term 1 viewing system Search Term 2 binocular viewing Search Term 3 optical Search Term 4 assembly Search Term 5 optical pipe Before Priority Date: priority:20030425
12/16/2024 4:31:19 PM	Google Scholar	user arrangement according vehicle head information
12/16/2024 4:31:19 PM	Google Patents	Search Term 1 user Search Term 2 arrangement according Search Term 3 vehicle Search Term 4 head Search Term 5 information Before Priority Date: priority:20030829
12/16/2024 4:31:30 PM	Google Scholar	connectors frame body lens end portions section
12/16/2024 4:31:30 PM	Google Patents	Search Term 1 connectors Search Term 2 frame body Search Term 3 lens Search Term 4 end portions Search Term 5 section Before Priority Date: priority:19951113
12/16/2024 4:40:47 PM	Google Scholar	patient network data wireless sensor

date, time	web site	search string
12/16/2024 4:40:47 PM	Google Patents	Search Term 1 patient Search Term 2 network Search Term 3 data Search Term 4 wireless Search Term 5 sensor Before Priority Date: priority:20060516
12/16/2024 4:40:55 PM	Google Scholar	patient data network wireless appliance
12/16/2024 4:40:55 PM	Google Patents	Search Term 1 patient Search Term 2 data Search Term 3 network Search Term 4 wireless Search Term 5 appliance Before Priority Date: priority:20060512
12/16/2024 4:41:04 PM	Google Scholar	patient appliance network data heart
12/16/2024 4:41:04 PM	Google Patents	Search Term 1 patient Search Term 2 appliance Search Term 3 network Search Term 4 data Search Term 5 heart Before Priority Date: priority:20060512
12/16/2024 4:41:13 PM	Google Scholar	data motion user sensor band

date, time	web site	search string
12/16/2024 4:41:13 PM	Google Patents	Search Term 1 data Search Term 2 motion Search Term 3 user Search Term 4 sensor Search Term 5 band Before Priority Date: priority:20110610
12/16/2024 4:41:21 PM	Google Scholar	data wearable device motion user activity
12/16/2024 4:41:21 PM	Google Patents	Search Term 1 data Search Term 2 wearable device Search Term 3 motion Search Term 4 user Search Term 5 activity Before Priority Date: priority:20110610
12/16/2024 4:41:35 PM	Google Scholar	cord eyeglass tethered electrical recited
12/16/2024 4:41:35 PM	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
12/16/2024 4:41:41 PM	Google Scholar	video audio stream camera participant

date, time	web site	search string
12/16/2024 4:41:41 PM	Google Patents	Search Term 1 video Search Term 2 audio Search Term 3 stream Search Term 4 camera Search Term 5 participant Before Priority Date: priority:20030724
12/16/2024 4:41:47 PM	Google Scholar	sunglasses frames band user pat
12/16/2024 4:41:47 PM	Google Patents	Search Term 1 sunglasses Search Term 2 frames Search Term 3 band Search Term 4 user Search Term 5 pat Before Priority Date: priority:20031028
12/16/2024 4:41:53 PM	Google Scholar	location concentrate microemulsion information surfactant
12/16/2024 4:41:53 PM	Google Patents	Search Term 1 location Search Term 2 concentrate Search Term 3 microemulsion Search Term 4 information Search Term 5 surfactant Before Priority Date: priority:20040223
12/16/2024 4:55:01 PM	Google Scholar	speaker audio device audio support wearable wireless

date, time	web site	search string
12/16/2024 4:55:01 PM	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
12/16/2024 4:55:08 PM	Google Scholar	radiation output electronic circuit recited monitoring
12/16/2024 4:55:08 PM	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
12/16/2024 4:55:14 PM	Google Scholar	glasses pair information recited event
12/16/2024 4:55:14 PM	Google Patents	Search Term 1 glasses Search Term 2 pair Search Term 3 information Search Term 4 recited Search Term 5 event Before Priority Date: priority:20031009
12/16/2024 4:55:22 PM	Google Scholar	image focus head mounted mounted display unit

date, time	web site	search string
12/16/2024 4:55:22 PM	Google Patents	Search Term 1 image Search Term 2 focus Search Term 3 head mounted Search Term 4 mounted display Search Term 5 unit Before Priority Date: priority:20040511
12/16/2024 4:55:38 PM	Google Scholar	patient network wireless appliance data
12/16/2024 4:55:38 PM	Google Patents	Search Term 1 patient Search Term 2 network Search Term 3 wireless Search Term 4 appliance Search Term 5 data Before Priority Date: priority:20060524
12/16/2024 4:55:47 PM	Google Scholar	user personal digital earpiece wearable personal data
12/16/2024 4:55:47 PM	Google Patents	Search Term 1 user Search Term 2 personal digital Search Term 3 earpiece Search Term 4 wearable personal Search Term 5 data Before Priority Date: priority:20110718
12/16/2024 4:56:01 PM	Google Scholar	patient sensor fall data motion

date, time	web site	search string
12/16/2024 4:56:01 PM	Google Patents	Search Term 1 patient Search Term 2 sensor Search Term 3 fall Search Term 4 data Search Term 5 motion Before Priority Date: priority:20051016
12/16/2024 4:56:17 PM	Google Scholar	source audio wearer speaker interface
12/16/2024 4:56:17 PM	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
12/16/2024 4:56:31 PM	Google Scholar	wearer assembly speaker structured disposed
12/16/2024 4:56:31 PM	Google Patents	Search Term 1 wearer Search Term 2 assembly Search Term 3 speaker Search Term 4 structured Search Term 5 disposed Before Priority Date: priority:19960906
12/16/2024 5:21:01 PM	Google Scholar	bone conduction helmet headset user crown

date, time	web site	search string
12/16/2024 5:21:01 PM	Google Patents	Search Term 1 bone conduction Search Term 2 helmet Search Term 3 headset Search Term 4 user Search Term 5 crown Before Priority Date: priority:20100924
12/16/2024 5:21:09 PM	Google Scholar	patient appliance data network information
12/16/2024 5:21:09 PM	Google Patents	Search Term 1 patient Search Term 2 appliance Search Term 3 data Search Term 4 network Search Term 5 information Before Priority Date: priority:20060512
12/16/2024 5:21:16 PM	Google Scholar	temple electrical components eyeglasses rearward electrical
12/16/2024 5:21:16 PM	Google Patents	Search Term 1 temple Search Term 2 electrical components Search Term 3 eyeglasses Search Term 4 rearward Search Term 5 electrical Before Priority Date: priority:20030415
12/16/2024 5:21:22 PM	Google Scholar	user data augmented reality processor product

date, time	web site	search string
12/16/2024 5:21:22 PM	Google Patents	Search Term 1 user Search Term 2 data Search Term 3 augmented reality Search Term 4 processor Search Term 5 product Before Priority Date: priority:20110718
12/16/2024 5:21:31 PM	Google Scholar	ear bud wearer head elbow head band
12/16/2024 5:21:31 PM	Google Patents	Search Term 1 ear bud Search Term 2 wearer Search Term 3 head Search Term 4 elbow Search Term 5 head band Before Priority Date: priority:20120703
12/16/2024 5:21:38 PM	Google Scholar	earphone eyeglass wearer carried support
12/16/2024 5:21:38 PM	Google Patents	Search Term 1 earphone Search Term 2 eyeglass Search Term 3 wearer Search Term 4 carried Search Term 5 support Before Priority Date: priority:20000602
12/16/2024 5:21:44 PM	Google Scholar	eyeglasses wireless arms wireless communication frame

date, time	web site	search string
12/16/2024 5:21:44 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
12/16/2024 5:21:49 PM	Google Scholar	head mounted mounted display signals unit display device
12/16/2024 5:21:49 PM	Google Patents	Search Term 1 head mounted Search Term 2 mounted display Search Term 3 signals Search Term 4 unit Search Term 5 display device Before Priority Date: priority:20040909
12/16/2024 5:21:57 PM	Google Scholar	coupled microphone speaker eyeglasses frame
12/16/2024 5:21:57 PM	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
12/16/2024 5:36:12 PM	Google Scholar	patient processor sensor data coupled

date, time	web site	search string
12/16/2024 5:36:12 PM	Google Patents	Search Term 1 patient Search Term 2 processor Search Term 3 sensor Search Term 4 data Search Term 5 coupled Before Priority Date: priority:20060516
12/16/2024 5:36:22 PM	Google Scholar	patient client data network treatment
12/16/2024 5:36:22 PM	Google Patents	Search Term 1 patient Search Term 2 client Search Term 3 data Search Term 4 network Search Term 5 treatment Before Priority Date: priority:20060512
12/16/2024 5:36:31 PM	Google Scholar	patient protocol data heart analyzer
12/16/2024 5:36:31 PM	Google Patents	Search Term 1 patient Search Term 2 protocol Search Term 3 data Search Term 4 heart Search Term 5 analyzer Before Priority Date: priority:20070524
12/16/2024 5:36:41 PM	Google Scholar	glasses eyewear temple user recited

date, time	web site	search string
12/16/2024 5:36:41 PM	Google Patents	Search Term 1 glasses Search Term 2 eyewear Search Term 3 temple Search Term 4 user Search Term 5 recited Before Priority Date: priority:20031009
12/16/2024 5:36:52 PM	Google Scholar	temple eyewear frame recited electrical components side section
12/16/2024 5:36:52 PM	Google Patents	Search Term 1 temple Search Term 2 eyewear frame Search Term 3 recited Search Term 4 electrical components Search Term 5 side section Before Priority Date: priority:20031009
12/16/2024 5:37:02 PM	Google Scholar	display information user gaze control
12/16/2024 5:37:02 PM	Google Patents	Search Term 1 display Search Term 2 information Search Term 3 user Search Term 4 gaze Search Term 5 control Before Priority Date: priority:20041001
12/16/2024 5:37:08 PM	Google Scholar	eye audio circuitry ear arm compartment

date, time	web site	search string
12/16/2024 5:37:08 PM	Google Patents	Search Term 1 eye Search Term 2 audio circuitry Search Term 3 ear Search Term 4 arm Search Term 5 compartment Before Priority Date: priority:20041013
12/16/2024 5:37:22 PM	Google Scholar	module user visualisation eye images
12/16/2024 5:37:22 PM	Google Patents	Search Term 1 module Search Term 2 user Search Term 3 visualisation Search Term 4 eye Search Term 5 images Before Priority Date: priority:20041029
12/16/2024 5:37:30 PM	Google Scholar	user data biometric authentication eyewear biometric
12/16/2024 5:37:30 PM	Google Patents	Search Term 1 user Search Term 2 data Search Term 3 biometric authentication Search Term 4 eyewear Search Term 5 biometric Before Priority Date: priority:20041129
12/16/2024 5:37:37 PM	Google Scholar	user signals accelerometer nose input

date, time	web site	search string
12/16/2024 5:37:37 PM	Google Patents	Search Term 1 user Search Term 2 signals Search Term 3 accelerometer Search Term 4 nose Search Term 5 input Before Priority Date: priority:20041229
12/16/2024 5:46:27 PM	Google Scholar	patient data appliance heart rate wearable
12/16/2024 5:46:27 PM	Google Patents	Search Term 1 patient Search Term 2 data Search Term 3 appliance Search Term 4 heart rate Search Term 5 wearable Before Priority Date: priority:20060512
12/16/2024 5:46:35 PM	Google Scholar	eyewear temple recited circuit board electrical components
12/16/2024 5:46:35 PM	Google Patents	Search Term 1 eyewear Search Term 2 temple Search Term 3 recited Search Term 4 circuit board Search Term 5 electrical components Before Priority Date: priority:20031009
12/16/2024 5:46:43 PM	Google Scholar	patient data wearable appliance network

date, time	web site	search string
12/16/2024 5:46:43 PM	Google Patents	Search Term 1 patient Search Term 2 data Search Term 3 wearable Search Term 4 appliance Search Term 5 network Before Priority Date: priority:20060512
12/16/2024 5:46:49 PM	Google Scholar	wireless wireless link quality link computer
12/16/2024 5:46:49 PM	Google Patents	Search Term 1 wireless Search Term 2 wireless link Search Term 3 quality Search Term 4 link Search Term 5 computer Before Priority Date: priority:20131220
12/16/2024 5:47:00 PM	Google Scholar	image distance optical element display subject
12/16/2024 5:47:00 PM	Google Patents	Search Term 1 image Search Term 2 distance Search Term 3 optical element Search Term 4 display Search Term 5 subject Before Priority Date: priority:20040206
12/16/2024 5:47:07 PM	Google Scholar	optical device substrate light waves reflecting surfaces optical

date, time	web site	search string
12/16/2024 5:47:07 PM	Google Patents	Search Term 1 optical device Search Term 2 substrate Search Term 3 light waves Search Term 4 reflecting surfaces Search Term 5 optical Before Priority Date: priority:20050210
12/16/2024 5:47:13 PM	Google Scholar	optical system image optical substrate display
12/16/2024 5:47:13 PM	Google Patents	Search Term 1 optical system Search Term 2 image Search Term 3 optical Search Term 4 substrate Search Term 5 display Before Priority Date: priority:20050210
12/16/2024 5:47:20 PM	Google Scholar	optical system light pipe light modes lens element
12/16/2024 5:47:20 PM	Google Patents	Search Term 1 optical system Search Term 2 light pipe Search Term 3 light Search Term 4 modes Search Term 5 lens element Before Priority Date: priority:20050322
12/16/2024 5:47:32 PM	Google Scholar	information recipient user stress identifier

date, time	web site	search string
12/16/2024 5:47:32 PM	Google Patents	Search Term 1 information Search Term 2 recipient Search Term 3 user Search Term 4 stress Search Term 5 identifier Before Priority Date: priority:20050414
12/16/2024 5:49:29 PM	Google Scholar	transmitter switch earphones antenna radio
12/16/2024 5:49:29 PM	Google Patents	Search Term 1 transmitter Search Term 2 switch Search Term 3 earphones Search Term 4 antenna Search Term 5 radio Before Priority Date: priority:19930119
12/16/2024 5:49:34 PM	Google Scholar	eye limbus iop changes recited
12/16/2024 5:49:34 PM	Google Patents	Search Term 1 eye Search Term 2 limbus Search Term 3 iop Search Term 4 changes Search Term 5 recited Before Priority Date: priority:19930804
12/16/2024 5:49:41 PM	Google Scholar	information recipient user station encrypted

date, time	web site	search string
12/16/2024 5:49:41 PM	Google Patents	Search Term 1 information Search Term 2 recipient Search Term 3 user Search Term 4 station Search Term 5 encrypted Before Priority Date: priority:20050414
12/16/2024 5:49:46 PM	Google Scholar	acquisition system data acquisition image target wearable data
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12/16/2024 5:49:54 PM	Google Scholar	user signal image sight sound
12/16/2024 5:49:54 PM	Google Patents	Search Term 1 user Search Term 2 signal Search Term 3 image Search Term 4 sight Search Term 5 sound Before Priority Date: priority:20030512
12/16/2024 5:50:01 PM	Google Scholar	camera electronic image signal user

date, time	web site	search string
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12/16/2024 5:50:12 PM	Google Scholar	data media wearable device media control another
12/16/2024 5:50:12 PM	Google Patents	Search Term 1 data Search Term 2 media Search Term 3 wearable device Search Term 4 media control Search Term 5 another Before Priority Date: priority:20110610
12/16/2024 5:50:20 PM	Google Scholar	electronic device holder housing wearable user
12/16/2024 5:50:20 PM	Google Patents	Search Term 1 electronic device Search Term 2 holder Search Term 3 housing Search Term 4 wearable Search Term 5 user Before Priority Date: priority:20140110
12/16/2024 5:50:28 PM	Google Scholar	lens blocking blocking time controller user

date, time	web site	search string
12/16/2024 5:50:28 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
12/16/2024 5:50:34 PM	Google Scholar	video processing unit video processing visual prosthesis prosthesis apparatus
12/16/2024 5:50:34 PM	Google Patents	Search Term 1 video Search Term 2 processing unit Search Term 3 video processing Search Term 4 visual prosthesis Search Term 5 prosthesis apparatus Before Priority Date: priority:20070614

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US	10822218			04/12/2004	US 60527565 US 60462591 US 10822218 US 60509631	US 20060003803 A1 US 7792552 B2	01/05/2006 09/07/2010
US	10964011			10/12/2004	US 60527565 US 60583169 US 60509631 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	06/09/2005 10/03/2006
US	11078857			03/11/2005	US 60647826 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 60647826 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 100580507 C	11/23/2005 01/13/2010
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US	11183269			07/15/2005	US 60647826 US 60527565 US 60583169 US 11183269 US 60509631 US 10964011 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20050264752 A1 US 7922321 B2	12/01/2005 04/12/2011
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 20060001827 A1 US 7380936 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 11183256 US 60605191 US 60592045 US 60647836	US 20060023158 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 7760898 B2	11/10/2005 07/20/2010
US	11183283			07/15/2005	US 60647826 US 60527565 US 60583169 US 60509631 US 11183283 US 10964011 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20050248719 A1	11/10/2005

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US	11183276			07/15/2005	US 60647826 US 60527565 US 60583169 US 11183276 US 60509631 US 10964011 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20050248718 A1 US 7255437 B2	11/10/2005 08/14/2007
US	PCT/US06/22015			06/07/2006	US 60689686	WO 2006135614 A2 WO 2006135614 A3 WO 2006135614 A8 WO 2006135614 A9	12/21/2006 03/22/2007 07/10/2008 12/11/2008
CN	200680027964			06/07/2006	US 60689686	CN 101297191 A	10/29/2008
US	11452115			06/12/2006	US 11452115 US 60689686 US 11006343 US 60527565	US 20060259565 A1 US 7729688 B2	11/16/2006 06/01/2010
US	11497651			08/02/2006	US 11006343 US 60527565 US 11497651	US 20060276210 A1 US 7376434 B2	12/07/2006 05/20/2008
US	11521256			09/13/2006	US 11521256 US 60527565 US 60583169 US 60509631 US 10964011 US 60562798 US 60605191 US 60592045	US 7438410 B1	10/21/2008

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US	11580222			10/11/2006	US 60583169 US 60725896 US 11183269 US 60787850 US 60846150 US 10964011 US 60725999 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	11546685			10/11/2006	US 60583169 US 60725896 US 11546685 US 60787850 US 60846150 US 10964011 US 60725999 US 11183256 US 60647826 US 60527565 US 60509631 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20070030442 A1 US 7806525 B2	02/08/2007 10/05/2010
US	11650626			01/06/2007	US 11650626 US 60583169 US 60787850 US 60846150 US 10964011 US 11183256 US 60647826 US 60527565 US 60509631 US 60763854 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 11078855 US 60787850 US 60846150 US 60647826 US 60763854 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20070186330 A1	08/16/2007

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CN	200710090621			04/02/2007	US 60787850	CN 101046557 A	10/03/2007
US	11891411			08/09/2007	US 60583169 US 11183276 US 10964011 US 11891411 US 60647826 US 60527565 US 60509631 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20070279584 A1 US 7401918 B2	12/06/2007 07/22/2008
US	11903512			09/20/2007	US 60846150 US 11903512	US 20080068559 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	12074961			03/07/2008	US 11497651 US 12074961 US 11006343 US 60527565	US 7890128 B1	02/15/2011
US	12152480			05/13/2008	US 60647826 US 60620238 US 60618107 US 60605191 US 11183263 US 12152480 US 60592045 US 60647836	US 20080218694 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 50647326 US 60527565 US 60509631 US 60562798 US 60620238 US 60618107 US 12214435 US 60605191 US 60592045 US 60647836	US 20090141233 A1 US 7771046 B2	06/04/2009 08/10/2010
US	12322377			02/02/2009	US 60647826 US 60583169 US 12322377 US 11078855 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20090147215 A1 US 8770742 B2	06/11/2009 07/08/2014
US	12462286			07/31/2009	US 60583169 US 60725896 US 11183269 US 60787850 US 60846150 US 10964011 US 60725899 US 60647826 US 60527565 US 60509631 US 60562798 US 60620238 US 11580222 US 60618107 US 60605191 US 12462286 US 60592045 US 60647836	US 20090296044 A1 US 8109629 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 8744407 B2	08/12/2010 06/03/2014

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US	12803732			07/01/2010	US 60583169 US 60725896 US 11546685 US 60787850 US 60846150 US 10964011 US 12803732 US 60725999 US 11183256 US 60647826 US 60527565 US 60509631 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 10822218 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 12317043 US 60509631 US 60562798 US 60620238 US 11580222 US 60618107 US 60462591	US 20100309426 A1 US 8465151 B2	12/09/2010 06/18/2013
US	12987018			01/07/2011	US 12987018 US 11497651 US 12074961 US 11006343 US 60527565	US 8112104 B1	02/07/2012
US	13085402			04/12/2011	US 60583169 US 11183269 US 10964011 US 13085402 US 60647826 US 60527565 US 60509631 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20110187990 A1 US 8500271 B2	08/04/2011 08/06/2013

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US	13291020			11/07/2011	US 60583169 US 60725896 US 11546685 US 60787850 US 60846150 US 10964011 US 12803732 US 60725999 US 11183256 US 60647826 US 60527565 US 60509631 US 60562798 US 60620238 US 60618107 US 13291020 US 60605191 US 60592045 US 60647836	US 20120050668 A1 US 8430507 B2	03/01/2012 04/30/2013
US	13363360			01/31/2012	US 12987018 US 11497651 US 12074961 US 11006343 US 60527565 US 13363360	US 8280419 B1	10/02/2012
US	13367346			02/06/2012	US 60583169 US 60725896 US 11078855 US 60787850 US 13367346 US 10822219 US 60647826 US 60527565 US 60605191 US 12462286 US 60592045 US 60647836 US 11183269 US 11183276 US 11546685 US 60846150 US 10964011 US 60725999 US 11183256 US 11006343 US 60509631 US 11183283 US 60562798 US 11183262 US 60620238 US 11580222 US 60618107 US 11078857 US 11183263	US 20120133885 A1 US 9033493 B2	05/31/2012 05/19/2015
US	13593483			08/23/2012	US 12987018 US 11497651 US 13593483 US 11006343 US 60527565 US 13363360 US 12074961	US 8737978 B1	05/27/2014

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US	13831445			03/14/2013	US 60583169 US 60725896 US 11078855 US 60787850 US 10822218 US 60647826 US 60527565 US 60605191 US 60592045 US 60647836 US 11183269 US 11183276 US 11546685 US 60846150 US 10964011 US 12803732 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 20140268013 A1 US 20170068117 A9 US 10310296 B2	09/18/2014 03/09/2017 06/04/2019
US	13831512			03/14/2013	US 60583169 US 60725896 US 11078855 US 60787850 US 10822218 US 11891411 US 60647826 US 60527565 US 12214435 US 60605191 US 13831512 US 12462286 US 60592045 US 60647836 US 11183269 US 11183276 US 11546685 US 60846150 US 10964011 US 12806312 US 60725999 US 11183256 US 12317043 US 11006343 US 60509631 US 11183283 US 60562798 US 11183262 US 60620238 US 11580222 US 60618107 US 60462591 US 11078857 US 11183263	US 20130201440 A1 US 9690121 B2	08/08/2013 06/27/2017
US	13831455			03/14/2013	US 13831455	US 20140278782 A1	09/18/2014

IP Office	Application	Applicant	Title	Application Date	Priority Number	Publication Number	Publication Date
US	13831419			03/14/2013	US 60583169 US 60725896 US 11078855 US 60787850 US 10822218 US 50647826 US 60527565 US 13291020 US 60605191 US 13831419 US 60592045 US 60647836 US 11183269 US 11183276 US 11546685 US 60846150 US 10964011 US 12803732 US 60725999 US 11183256 US 11006343 US 60509631 US 11183283 US 60562798 US 11183262 US 60620238 US 11580222 US 60618107 US 11078857 US 11183263	US 20140268008 A1 US 20160246075 A9 US 10345625 B2	09/18/2014 08/25/2016 07/09/2019
US	13955336			07/31/2013	US 60583169 US 11078855 US 11183269 US 11183276 US 10964011 US 13855336 US 10822218 US 13085402 US 11183256 US 50647826 US 11006343 US 60527565 US 60509631 US 11183283 US 60562798 US 11183262 US 60620238 US 60618107 US 60605191 US 11078857 US 11183263 US 60592045 US 60647836	US 20130308089 A1 US 8905542 B2	11/21/2013 12/09/2014
EP	14158720			03/11/2014	US 13831455	EP 2779074 A1	09/17/2014
CA	2845503			03/11/2014	US 13831455	CA 2845503 A1	09/14/2014
CN	201410096316			03/14/2014	US 13831455	CN 104050228 A	09/17/2014

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US	14272632			05/08/2014	US 11452115 US 60689686 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 11497651 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	14313989			06/24/2014	US 14313989 US 60583169 US 12322377 US 11078855 US 10964011 US 10822218 US 60647826 US 11006343 US 60562798 US 60620238 US 60618107 US 60605191 US 11078857 US 60592045 US 60647836	US 20140361185 A1 US 9488520 B2	12/11/2014 11/08/2016
US	14557409			12/01/2014	US 60583169 US 11078855 US 11183269 US 11183276 US 10964011 US 13955336 US 10822218 US 13085402 US 11183256 US 14557409 US 60647826 US 11006343 US 60527565 US 60509631 US 11183283 US 60562798 US 11183262 US 60620238 US 60618107 US 60605191 US 11078857 US 11183283 US 60592045 US 60647836	US 20150085245 A1 US 9547184 B2	03/26/2015 01/17/2017
HK	14112801			12/22/2014	US 13831455	HK 1199316 A1	06/26/2015

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US	14715501			05/18/2015	US 14715501 US 60583169 US 60725896 US 11078855 US 60787850 US 13367346 US 10822218 US 60647826 US 60527565 US 60605191 US 12462286 US 60592045 US 60647836 US 11183269 US 11183276 US 11546685 US 60846150 US 10964011 US 60725999 US 11183256 US 11006343 US 60509631 US 11183283 US 60562798 US 11183262 US 60620238 US 11580222 US 60618107 US 11078857 US 11183263	US 20150253590 A1 US 10330956 B2	09/10/2015 06/25/2019
US	14922344			10/26/2015	US 14922344 US 11006343 US 60527565 US 14272632 US 11452115 US 60689686 US 12798995	US 20160044474 A1 US 9736664 B2	02/11/2016 08/15/2017
US	15343472			11/04/2016	US 14313989 US 60583169 US 12322377 US 11078855 US 10964011 US 10822218 US 60647826 US 15343472 US 11006343 US 60562798 US 60620238 US 60618107 US 60605191 US 11078857 US 60592045 US 60647836	US 20170074721 A1 US 10060790 B2	03/16/2017 08/28/2018

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US	15375423			12/12/2016	US 60583169 US 11078855 US 10822218 US 13085402 US 60647826 US 60527565 US 15375423 US 60605191 US 60592045 US 60647836 US 11183269 US 11183276 US 10964011 US 13955336 US 11183256 US 14557409 US 11006343 US 60509631 US 11183283 US 60562798 US 11183262 US 60620238 US 60618107 US 11078857 US 11183263	US 20170090219 A1 US 10061144 B2	03/30/2017 08/28/2018
US	15396428			12/31/2016	US 60583169 US 60725896 US 11078855 US 60787850 US 10822218 US 11891411 US 15396428 US 60647826 US 60527565 US 12214435 US 60605191 US 13831512 US 12462286 US 60592045 US 60647836 US 11183269 US 11183276 US 11546685 US 60846150 US 10964011 US 12806312 US 60725999 US 11183256 US 12317043 US 11006343 US 60509631 US 11183283 US 60562798 US 11183262 US 60620238 US 11580222 US 60618107 US 60462591 US 11078857 US 11183263	US 20170146829 A1	05/25/2017

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US	15409723			01/19/2017	US 60583169 US 60725896 US 11078855 US 60787850 US 10822218 US 11891411 US 60647826 US 15409723 US 60527565 US 12214435 US 60605191 US 13831512 US 12462286 US 60592045 US 60647836 US 11183269 US 11183276 US 11546685 US 60846150 US 10964011 US 12906312 US 60725999 US 11183256 US 12317043 US 11006343 US 60509631 US 11183283 US 60562798 US 11183262 US 60620238 US 11580222 US 60618107 US 60462591 US 11078857 US 11183263	US 20170131575 A1	05/11/2017
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US	15704181			09/14/2017	US 14922344 US 11006343 US 60527565 US 14272632 US 15469440 US 11452115 US 60689686 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 14557409 US 60647826 US 60527565 US 60509631 US 15375423 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20180335650 A1 US 11243416 B2	11/22/2018 02/08/2022
US	16102859			08/14/2018	US 14313989 US 60583169 US 12322377 US 11078855 US 16102859 US 60647826 US 15343472 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20180348050 A1 US 10359311 B2	12/06/2018 07/23/2019
US	16127957			09/11/2018	US 14715501 US 60583169 US 60725996 US 11183269 US 60787850 US 60946150 US 10964011 US 13367346 US 60725999 US 16127957 US 60647826 US 60527565 US 60509631 US 60562798 US 60620238 US 11580222 US 60618107 US 60605191 US 12462286 US 60592045 US 60647836	US 20190033623 A1 US 11086147 B2	01/31/2019 08/10/2021

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US	16182969			11/07/2018	US 14715501 US 60583169 US 60725896 US 60787850 US 13367346 US 10922218 US 13085402 US 11891411 US 60647826 US 15409723 US 60527565 US 15375423 US 12214435 US 60605191 US 13831512 US 12462286 US 60592045 US 60647836 US 16182969 US 11183269 US 11183276 US 60846150 US 10964011 US 13955336 US 12806312 US 16049120 US 60725999 US 16127957 US 12317043 US 14557409 US 60509631 US 60562798 US 60620238 US 11580222 US 60618107 US 60462591	US 20190187492 A1 US 20210364827 A9	06/20/2019 11/25/2021
US	16424018			05/28/2019	US 60583169 US 60725896 US 11546685 US 60787850 US 60846150 US 10964011 US 12803732 US 60725999 US 11183256 US 60647826 US 60527565 US 16424018 US 60509631 US 60562798 US 60620238 US 60618107 US 13291020 US 60605191 US 13831419 US 60592045 US 60647836	US 20190278110 A1 US 11630331 B2	09/12/2019 04/18/2023

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US	16429181			06/03/2019	US 60583169 US 60725896 US 11546685 US 60787850 US 60846150 US 10964011 US 13931455 US 12803732 US 60725999 US 11183256 US 60647826 US 60527565 US 60509631 US 16429181 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20190285913 A1 US 11513371 B2	09/19/2019 11/29/2022
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US	16446710			06/20/2019	US 12987018 US 11497651 US 13593483 US 11006343 US 60527565 US 13363360 US 14286976 US 12074961 US 16446710	US 20190306305 A1 US 11711459 B2	10/03/2019 07/25/2023
US	16556205			08/29/2019	US 14922344 US 11006343 US 60527565 US 14272632 US 15469440 US 11452115 US 60689686 US 15704181 US 12798995 US 16556205	US 20190387371 A1 US 10708727 B2	12/19/2019 07/07/2020

IP Office	Application	Applicant	Title	Application Date	Priority Number	Publication Number	Publication Date
US	16574254			09/18/2019	US 60583169 US 11183269 US 10964011 US 13955336 US 13085402 US 16049120 US 14557409 US 60647826 US 60527565 US 60509631 US 15375423 US 60562798 US 60620238 US 60618107 US 16574254 US 60605191 US 60592045 US 60647836	US 20200012127 A1 US 11204512 B2	01/09/2020 12/21/2021
US	16703805			12/04/2019	US 14313989 US 60583169 US 12322377 US 11078855 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
US	16794458			02/19/2020	US 14922344 US 11006343 US 60527565 US 14272632 US 16794458 US 15469440 US 11452115 US 60639686 US 15704181 US 12798995 US 16556205	US 20200186675 A1 US 11800329 B2	06/11/2020 10/24/2023
US	16821810			03/17/2020	US 60583169 US 16821810 US 11183269 US 10964011 US 13955336 US 13085402 US 16049120 US 14557409 US 60647826 US 60527565 US 60509631 US 15375423 US 60562798 US 60620238 US 60618107 US 16574254 US 60605191 US 60592045 US 60647836	US 20200218094 A1 US 11536988 B2	07/09/2020 12/27/2022

IP Office	Application	Applicant	Title	Application Date	Priority Number	Publication Number	Publication Date
US	17395509			08/06/2021	US 14715501 US 60583169 US 60725896 US 11183269 US 60787850 US 60946150 US 10964011 US 13367346 US 17395509 US 60725899 US 16127957 US 60647826 US 60527565 US 60509631 US 60562798 US 60620238 US 11580222 US 60618107 US 60605191 US 12462286 US 60592045 US 60647836	US 20210364828 A1 US 11762224 B2	11/25/2021 09/19/2023
US	17484080			09/24/2021	US 17484080 US 60583169 US 11183269 US 10964011 US 13955336 US 13085402 US 16049120 US 14557409 US 60647826 US 60527565 US 60509631 US 15375423 US 60562798 US 60620238 US 60618107 US 16574254 US 60605191 US 60592045 US 60647836	US 20220011603 A1	01/13/2022
US	17681593			02/25/2022	US 14313989 US 60583169 US 12322377 US 11078855 US 16102859 US 16426351 US 16703805 US 17681593 US 60647826 US 15343472 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20220178743 A1 US 11644361 B2	06/09/2022 05/09/2023

IP Office	Application	Applicant	Title	Application Date	Priority Number	Publication Number	Publication Date
US	17737866			05/05/2022	US 14715501 US 60725896 US 17737866 US 60787850 US 60846150 US 13567346 US 11580222 US 17395509 US 12462286 US 60725999 US 16127957	US 20220260859 A1 US 11733549 B2	09/18/2022 08/22/2023
US	17873104			07/25/2022	US 17484080 US 11183269 US 13955336 US 13085402 US 16049120 US 14557409 US 60647826 US 15375423 US 17873104 US 60620238 US 60618107 US 16574254 US 60605191 US 60592045 US 60647836	US 20220357599 A1 US 11644693 B2	11/10/2022 05/09/2023
US	17942347			09/12/2022	US 60725896 US 11546685 US 60787850 US 60846150 US 17942347 US 12803732 US 60725999 US 11183256 US 60647826 US 16429181 US 60620238 US 60618107 US 13831445 US 60647836	US 20230057654 A1 US 11852901 B2	02/23/2023 12/26/2023
US	17949029			09/20/2022	US 17949029 US 17484080 US 11183269 US 13955336 US 13085402 US 16049120 US 14557409 US 60647826 US 15375423 US 60620238 US 60618107 US 16574254 US 60605191 US 60592045 US 60647836	US 20230017635 A1 US 12025855 B2	01/19/2023 07/02/2024

IP Office	Application	Applicant	Title	Application Date	Priority Number	Publication Number	Publication Date
US	17964853			10/12/2022	US 60583169 US 60725896 US 11546685 US 60787850 US 60846150 US 10964011 US 12803732 US 60725999 US 17964853 US 11183256 US 60647826 US 60527565 US 60509631 US 16429181 US 60562798 US 60620238 US 60618107 US 13831445 US 60605191 US 60592045 US 60647836	US 20230033660 A1	02/02/2023
US	18129660			03/31/2023	US 60583169 US 60725896 US 11546685 US 60787850 US 60846150 US 10964011 US 12803732 US 60725999 US 11183256 US 60647826 US 18129660 US 60527565 US 16424018 US 60509631 US 60562798 US 60620238 US 60618107 US 13291020 US 60605191 US 13831419 US 60592045 US 60647836	US 20230236444 A1 US 11803069 B2	07/27/2023 10/31/2023
US	18144557			05/08/2023	US 17484080 US 18144557 US 11183299 US 13955336 US 13085402 US 16049120 US 14557409 US 60647826 US 15375423 US 17873104 US 60620238 US 60618107 US 16574254 US 60605191 US 60592045 US 60647836	US 20230273464 A1 US 11921355 B2	08/31/2023 03/05/2024

IP Office	Application	Applicant	Title	Application Date	Priority Number	Publication Number	Publication Date
US	18224793			07/21/2023	US 60725896 US 11546685 US 60787850 US 60846150 US 12803732 US 60725999 US 18224793 US 11183256 US 60647826 US 18129660 US 16424018 US 60620238 US 60618107 US 13291020 US 60605191 US 13831419 US 60592045 US 60647836	US 20230359266 A1 US 11829518 B1	11/09/2023 11/28/2023
US	18238467			08/26/2023	US 14715501 US 60725896 US 60787850 US 60846150 US 13367346 US 11580222 US 17395509 US 12462286 US 60725999 US 18238467 US 16127957	US 20230408850 A1	12/21/2023
US	18375893	1)Howell, Thomas A., 2)Chao, David ,3)Thomas, C. Douglass,4)Tong, Peter P.	SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC APPARATUS	10/02/2023	US 14715501 US 18375893 US 16162969 US 60725896 US 60787850 US 60846150 US 13955336 US 12806312 US 13367346 US 13085402 US 16049120 US 60725999 US 11891411 US 16127957 US 12317043 US 14557409 US 15409723 US 15375423 US 11580222 US 12214435 US 13831512 US 12462286	US 20240036361 A1 US 12044901 B2	02/01/2024 07/23/2024
US	18377911			10/09/2023	US 14922344 US 11006343 US 60527565 US 14272632 US 16794458 US 15469440 US 11452115 US 60689686 US 15704181 US 12798995 US 16556205 US 18377911	US 20240040345 A1	02/01/2024

IP Office	Application	Applicant	Title	Application Date	Priority Number	Publication Number	Publication Date
US	18519802			11/27/2023	US 60725896 US 11546685 US 60787850 US 60846150 US 12803732 US 60725999 US 18224793 US 11183256 US 60647826 US 18129660 US 16424018 US 60620238 US 60618107 US 13291020 US 60605191 US 13831419 US 18519802 US 60592045 US 60647836	US 20240094800 A1 US 12001599 B2	03/21/2024 06/04/2024

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	1	"18594662"	(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	2024/05/14 09:39 AM
L1	1	"18597874"	(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	2024/05/15 08:33 AM
L2	5	"18375893"	(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	2024/05/15 08:34 AM
L4	1	"89665263".fmid.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY,	OR	ON	ON	2024/05/15 08:34 AM

L4	3	"18144557"	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) (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	2024/05/14 09:42 AM
L5	5	"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	2024/05/14 09:42 AM
L7	2	"37803583".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	2024/05/15 08:36 AM
L10	12	"46332221".fmid.	(US-PGPUB; USPAT;	OR	ON	ON	2024/05/15

L10	6	"46326291".fmid.	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	08:37 AM
L13	10	"48951410".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	2024/05/14 09:50 AM
L14	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; JPO)	OR	ON	ON	2024/05/14 10:06 AM
			(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)				2024/02/05 01:07 PM

L16	5	"16821810"	(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	2024/02/05 01:07 PM
L18	17	"46304853".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	2024/02/05 01:07 PM
L19	1	"27539742".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	2024/05/14 10:07 AM
L20	8	"17484080"	(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	2024/02/05 01:07 PM

L22	11	"16574254"	VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) (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	2024/02/05 01:07 PM
L23	103494	(eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4	(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	2024/02/05 01:07 PM
L24	82071	(eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4)	(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	2024/02/05 01:07 PM
L25	77662	(eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,	OR	ON	ON	2024/02/05 01:07 PM

		control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4	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)				
L26	49408	(eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegals\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4	(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	2024/02/05 01:07 PM
L27	46211	(eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegals\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND (communicat\$4 near10 wireless\$4) AND (audio OR speak\$4) AND embed\$4	(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	2024/02/05 01:07 PM
L28	20279	((("HOWELL") near3 ("Thomas")) OR (("CHAO") near3 ("David"))) OR (("THOMAS") near3 ("C")) OR (("TONG") near3 ("Peter"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
L29	144	((("HOWELL") near3 ("Thomas")) OR (("CHAO") near3 ("David"))) OR (("THOMAS") near3 ("C")) OR (("TONG")	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM

L30	129	near3 ("Peter"))).INV. AND (eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
L31	125	((("HOWELL") near3 ("Thomas")) OR (("CHAO") near3 ("David")) OR (("THOMAS") near3 ("C")) OR (("TONG") near3 ("Peter"))).INV. AND (eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4)	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
L32	125	((("HOWELL") near3 ("Thomas")) OR (("CHAO") near3 ("David")) OR (("THOMAS") near3 ("C")) OR (("TONG") near3 ("Peter"))).INV. AND (eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM

L33	103	spetac\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND (communicat\$4 near10 wireless\$4) AND (audio OR speak\$4) AND embed\$4 (((("HOWELL") near3 ("Thomas")) OR (("CHAO") near3 ("David")) OR (("THOMAS") near3 ("C")) OR ((("TONG") near3 ("Peter")))).INV. AND (eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
L34	84	(((("HOWELL") near3 ("Thomas")) OR (("CHAO") near3 ("David")) OR (("THOMAS") near3 ("C")) OR ((("TONG") near3 ("Peter")))).INV. AND (eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone AND left AND right	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
L35	84	(((("HOWELL") near3 ("Thomas")) OR (("CHAO") near3	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM

L36	84	("David")) OR (("THOMAS") near3 ("C")) OR (("TONG") near3 ("Peter"))).INV. AND (eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone AND left AND right AND first AND second	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
L37	79	(((("HOWELL") near3 ("Thomas")) OR (("CHAO") near3 ("David")) OR (("THOMAS") near3 ("C")) OR (("TONG") near3 ("Peter"))).INV. AND (eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone AND left AND right AND first AND second AND bridge	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM

L43	4184	(memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone AND left AND right AND first AND second AND bridge AND partial\$4 (eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND speaker\$2 AND (sound WITH guid\$4)	(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	2024/02/05 01:07 PM
L44	1509	(eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND (speaker\$2 SAME (sound WITH guid\$4))	(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	2024/02/05 01:07 PM
L45	622	(eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND temple AND (speaker\$2 OR audio) SAME (sound WITH guid\$4))	(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;	OR	ON	ON	2024/02/05 01:07 PM

L46	296	(eyewear\$4 OR glasses\$4 OR spetaci\$4 OR eyegalss\$4) AND ((temples SAME speakers) AND (sound WITH guid\$4))	JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, 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, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/05 01:07 PM
L47	13637	(eyewear\$4 OR glasses\$4 OR spetaci\$4 OR eyegalss\$4) AND temple AND (speakers AND audio)	(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	2024/02/05 01:07 PM
L48	1282	(eyewear\$4 OR glasses\$4 OR spetaci\$4 OR eyegalss\$4) AND (temple SAME (speakers WITH audio))	(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	2024/02/05 01:07 PM
L49	316	(eyewear\$4 OR glasses\$4 OR spetaci\$4 OR eyegalss\$4) AND frame AND (circuit near10 board) AND (electric\$4	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM

L50	302	WITH control\$4) AND (memor\$4 OR stor\$4) AND (batter\$4 near10 rechargeable) AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone AND left AND right AND first AND second AND bridge AND partial\$4 AND impair\$4 (eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND (circuit near10 board) AND (electric\$4 WITH control\$4) AND (memor\$4 OR stor\$4) AND (batter\$4 near10 rechargeable) AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone AND left AND right AND first AND second AND bridge AND partial\$4 AND impair\$4 AND compensat\$4 AND amplif\$6	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
L51	302	(eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND (circuit near10 board) AND (electric\$4 WITH control\$4) AND (memor\$4 OR stor\$4) AND (batter\$4 near10 rechargeable) AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone AND left AND right AND first AND second AND bridge AND partial\$4 AND impair\$4 AND compensat\$4 AND	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM

L52	3	amplif\$6 AND customiz\$4 (eyewear\$4 OR glasses\$4 OR spetacl\$4 OR eyegalss\$4) AND frame AND (circuit near10 board) AND (electric\$4 WITH control\$4) AND (memor\$4 OR stor\$4) AND (batter\$4 near10 rechargeable) AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone AND left AND right AND first AND second AND bridge AND partial\$4 AND impair\$4 AND compensat\$4 AND (amplif\$6 WITH customiz\$4)	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
L53	17	"46304853".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	2024/02/05 01:07 PM
L54	103494	(eyewear\$4 OR glasses\$4 OR spetacl\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4	(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	2024/02/05 01:07 PM
L55	82071	(eyewear\$4 OR	(US-PGPUB; USPAT;	OR	ON	ON	2024/02/05

L56	77662	glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4)	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	01:07 PM
L57	49408	(eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4	(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	2024/02/05 01:07 PM
L58	46211	(eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND (communicat\$4 near10	(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	2024/02/05 01:07 PM

L59	17504	wireless\$4) AND (audio OR speak\$4) AND embed\$4	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	2024/02/05 01:07 PM
L60	11615	(eyewear\$4 OR glasses\$4 OR spetacl\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
L61	3610	(eyewear\$4 OR glasses\$4 OR spetacl\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone AND left AND right AND first AND second	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
L62	1920	(eyewear\$4 OR glasses\$4 OR spetacl\$4 OR	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM

L63	1402	eyegals\$4) AND frame AND (circuit near10 board) AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone AND left AND right AND first AND second AND bridge AND partial\$4 (eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegals\$4) AND frame AND (circuit near10 board) AND (electric\$4 WITH control\$4) AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone AND left AND right AND first AND second AND bridge AND partial\$4	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
L64	722	(eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegals\$4) AND frame AND (circuit near10 board) AND (electric\$4 WITH control\$4) AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone AND left AND right AND first AND second AND bridge AND partial\$4	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
L65	710	AND rechargeable (eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegals\$4) AND frame AND (circuit near10 board) AND (electric\$4	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM

L66	12657	WITH control\$4) AND (memor\$4 OR stor\$4) AND (batter\$4 near10 rechargeable) AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone AND left AND right AND first AND second AND bridge AND partial\$4 L1 AND ((G02B27/017 OR G02B2027/0178 OR G02B27/0172 OR G02B2027/014 OR G02B2027/0138 OR G02B2027/0187 OR G02B27/0093 OR G02B27/0176 OR G02B2027/0118 OR G02B2027/0134 OR G02B27/0179 OR G02B2027/0141 OR G02B2027/0174 OR G02B27/0101 OR G02B27/01 OR G02B2027/0132 OR G02B2027/0127 OR G02B2027/0123 OR G02B30/24 OR G02B2027/0156 OR G02B2027/0112 OR G02B2027/0147 OR G02B27/0081 OR G02B3/14 OR G02B2027/011 OR G02B2027/0185 OR G02B6/005 OR G02B30/34 OR G02B2027/0154 OR G02B6/34 OR G02B26/101 OR G02B5/32 OR G02B2027/0125 OR G02B7/28 OR G02B2027/0181 OR G02B27/30 OR G02B27/646 OR G02B2027/015 OR G02B27/02 OR G02B6/0016 OR G02B26/0833 OR G02B30/00 OR G02B5/30 OR G02B27/4205 OR	(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	2024/02/05 01:07 PM
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		G02B6/0038 OR G02B30/25 OR G02B26/001 OR G02B13/0045 OR G02B26/10 OR G02B5/208 OR G02B2027/0159 OR G02B6/0036 OR G02B6/0076 OR G02B27/0075 OR G02B7/09 OR G02B2027/0152 OR G02B27/022 OR G02B2027/0116 OR G02B27/0149 OR G02B3/0081 OR G02B2027/0169 OR G02B6/0035 OR G02B27/283 OR G02B7/285 OR G02B13/06 OR G02B6/0065 OR G02B7/08 OR G02B5/3025 OR G02B2027/012 OR G02B27/0103 OR G02B5/1857 OR G02B6/00 OR G02B2027/013 OR G02B6/0023 OR G02B30/27 OR G02B27/00 OR G02B6/0068 OR G02B6/0055 OR G02B27/028 OR G02B7/023 OR G02B2027/0114 OR G02B26/005 OR G02B2027/0161 OR G02B26/105 OR G02B7/04 OR G02B7/102 OR G02B27/4272 OR G02B6/0011 OR G02B2027/0105 OR G02B5/23 OR G02B6/0088 OR G02B7/12 OR G02B7/02 OR G02B6/003 OR G02B3/0056 OR G02B5/08 OR G02B2027/0163 OR G02B21/365 OR G02B30/23 OR G02B5/20 OR G02B27/286 OR G02B6/006 OR				
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		G02B6/10 OR G02B7/021 OR G02B27/1086 OR G02B6/0001 OR G02B6/0018 OR G02B3/0006 OR G02B5/005 OR G02B2027/0194 OR G02B2027/0198 OR G02B26/0816 OR G02B27/42 OR G02B6/0028 OR G02B13/009 OR G02B27/0018 OR G02B30/40 OR G02B6/0053 OR G02B5/1866 OR G02B9/64 OR G02B13/004 OR G02B19/0057 OR G02B21/0012 OR G02B26/004 OR G02B27/4227 OR G02B7/008 OR G02B3/0062 OR G02B5/1871 OR G02B13/18 OR G02B26/02 OR G02B5/18 OR G02B27/141 OR G02B26/0875 OR G02B27/0006 OR G02B6/002 OR G02B6/1226 OR G02B9/60 OR G02B2027/0158 OR G02B3/12 OR G02B5/223 OR G02B6/0051 OR G02B13/0035 OR G02B2027/0107 OR G02B21/06 OR G02B5/1823 OR G02B5/201 OR G02B5/3083 OR G02B6/29325 OR G02B9/62 OR G02B13/02 OR G02B2027/0136 OR G02B26/06 OR G02B2027/0143 OR G02B1/002 OR G02B1/11 OR G02B2027/0129 OR G02B26/00 OR G02B6/124 OR G02B26/0841 OR G02B30/36 OR				
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		G02B3/0075 OR G02B5/0252 OR G02B6/4206 OR G02B19/0014 OR G02B27/0955 OR G02B5/1842 OR G02B27/1026 OR G02B6/0031 OR G02B1/041 OR G02B6/0026 OR G02B7/002 OR G02B13/0065 OR G02B26/0808 OR G02B26/0825 OR G02B27/0189 OR G02B27/106 OR G02B30/52 OR G02B13/14 OR G02B23/18 OR G02B27/0905 OR G02B30/33 OR G02B5/3016 OR G02B1/02 OR G02B2006/12107 OR G02B25/02 OR G02B26/026 OR G02B9/34 OR G02B27/0977 OR G02B27/145 OR G02B3/0043 OR G02B9/12 OR G02B2027/0183 OR G02B27/0988 OR G02B27/1066 OR G02B30/35 OR G02B6/0056 OR G02B6/4204 OR G02B13/00 OR G02B17/086 OR G02B25/001 OR G02B25/004 OR G02B27/0025 OR G02B27/48 OR G02B30/56 OR G02B6/0061 OR G02B6/1221 OR G02B27/102 OR G02B6/1225 OR G02B6/42 OR G02B13/001 OR G02B2006/12164 OR G02B3/0037 OR G02B6/0025 OR G02B6/0045 OR G02B6/0078 OR G02B6/0083 OR G02B6/12004 OR G02B6/12007 OR				
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		G02B7/06 OR G02B27/44 OR G02B30/30 OR G02B6/0021 OR G02B21/362 OR G02B27/0994 OR G02B27/10 OR G02B6/0085 OR G02B9/04 OR G02B26/007 OR G02B27/20 OR G02B27/64 OR G02B3/00 OR G02B3/0031 OR G02B3/02 OR G02B3/08 OR G02B30/31 OR G02B7/003 OR G02B2006/12147 OR G02B21/025 OR G02B23/125 OR G02B6/13 OR G02B6/32 OR G02B13/0015 OR G02B19/0042 OR G02B27/0916 OR G02B27/0972 OR G02B30/26 OR G02B5/1809 OR G02B6/4214 OR G02B1/045 OR G02B2027/0109 OR G02B2027/0196 OR G02B27/0037 OR G02B27/0068 OR G02B27/1006 OR G02B5/04 OR G02B5/3058 OR G02B6/0046 OR G02B6/2848 OR G02B7/34 OR G02B13/007 OR G02B2003/0093 OR G02B26/08 OR G02B27/18 OR G02B3/04 OR G02B5/1861 OR G02B6/2706 OR G02B19/0028 OR G02B2027/0145 OR G02B27/143 OR G02B27/58 OR G02B27/62 OR G02B3/0068 OR G02B3/0087 OR G02B5/10 OR G02B5/28 OR G02B6/0015 OR				
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L67	4141	G02B6/0073 OR G02B6/122 OR G02B6/125 OR G02B6/4215 OR G02B7/022 OR G02B7/36 OR G02B1/10 OR G02B13/0075 OR G02B17/08 OR G02B19/0066 OR G02B21/36 OR G02B23/00 OR G02B27/0961 OR G02B27/144 OR G02B30/10 OR G02B5/00 OR G02B5/1847 OR G02B5/1852 OR G02B6/0006 OR G02B7/10 OR G02B13/008 OR G02B15/00 OR G02B19/0023 OR G02B19/0076 OR G02B21/22 OR G02B2207/101 OR G02B3/005 OR G02B6/001 OR G02B6/0033 OR G02B6/0058 OR G02B6/02 OR G02B7/028).cpc.) L1 AND (G02C11/10 OR G02C7/101 OR G02C7/083 OR G02C11/06 OR G02C7/04 OR G02C11/00 OR G02C11/04 OR G02C5/143 OR G02C7/02 OR G02C5/14 OR G02C7/06 OR G02C7/08 OR G02C7/102 OR G02C5/146 OR G02C2202/16 OR G02C2202/20 OR G02C7/049 OR G02C7/022 OR G02C5/22 OR G02C2202/18 OR G02C5/001 OR G02C2202/22 OR G02C7/081 OR G02C2200/08 OR G02C7/085 OR	(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	2024/02/05 01:07 PM
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L68	9842	G02C7/061 OR G02C7/16 OR G02C2200/02 OR G02C5/16 OR G02C7/066 OR G02C7/12 OR G02C2202/12 OR G02C3/003 OR G02C7/086 OR G02C2202/24 OR G02C9/00 OR G02C5/02 OR G02C5/12 OR G02C7/10 OR G02C7/041 OR G02C7/104 OR G02C11/08 OR G02C13/003 OR G02C7/088 OR G02C1/00 OR G02C5/20 OR G02C9/04 OR G02C7/00 OR G02C2202/10 OR G02C5/008 OR G02C1/06 OR G02C5/2209 OR G02C5/124 OR G02C11/02 OR G02C13/001 OR G02C5/10 OR G02C5/2227 OR G02C7/105 OR G02C13/005 OR G02C2200/10 OR G02C13/00 OR G02C2200/06 OR G02C5/2254 OR G02C5/006 OR G02C5/126 OR G02C1/10 OR G02C5/04 OR G02C5/2218 OR G02C5/2272 OR G02C9/02 OR G02C2200/18 OR G02C5/122 OR G02C7/108 OR G02C3/04 OR G02C5/00 OR G02C7/021 OR G02C5/08 OR G02C7/027).cpc.) L2 AND (G02B27/017 OR G02B2027/0178 OR G02B27/0172 OR G02B2027/014 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2024/02/05 01:07 PM
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		G02B2027/0138 OR G02B2027/0187 OR G02B27/0093 OR G02B27/0176 OR G02B2027/0118 OR G02B2027/0134 OR G02B2027/0141 OR G02B27/0179 OR G02B27/0101 OR G02B27/01 OR G02B2027/0127 OR G02B2027/0174 OR G02B2027/0132 OR G02B2027/0123 OR G02B2027/0156 OR G02B2027/0147 OR G02B27/0081 OR G02B2027/0185 OR G02B2027/0112 OR G02B2027/011 OR G02B6/34 OR G02B6/005 OR G02B2027/0154 OR G02B26/101 OR G02B27/646 OR G02B3/14 OR G02B2027/0125 OR G02B2027/0181 OR G02B13/0045 OR G02B26/001 OR G02B6/0016 OR G02B27/30 OR G02B30/34 OR G02B5/30 OR G02B6/0038 OR G02B6/0036 OR G02B7/09 OR G02B2027/015 OR G02B27/0075 OR G02B27/4205 OR G02B5/208 OR G02B27/022 OR G02B7/08 OR G02B6/0035 OR G02B2027/012 OR G02B5/1857 OR G02B6/0076 OR G02B2027/0169 OR G02B2027/0152 OR G02B27/283 OR G02B2027/0159 OR G02B26/0833 OR G02B13/06 OR G02B26/10 OR G02B5/3025 OR G02B27/02 OR G02B27/028 OR G02B30/24 OR	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)				
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		G02B27/4272 OR G02B5/32 OR G02B6/0065 OR G02B27/0149 OR G02B2027/0114 OR G02B6/00 OR G02B7/04 OR G02B6/0068 OR G02B27/286 OR G02B6/10 OR G02B2027/0116 OR G02B26/105 OR G02B6/0088 OR G02B2027/0161 OR G02B30/27 OR G02B5/08 OR G02B6/0001 OR G02B2027/0105 OR G02B21/365 OR G02B6/0011 OR G02B6/0023 OR G02B5/1866 OR G02B7/023 OR G02B27/42 OR G02B30/40 OR G02B27/00 OR G02B27/0018 OR G02B7/021 OR G02B7/102 OR G02B7/12 OR G02B9/64 OR G02B2027/0198 OR G02B27/4227 OR G02B6/0053 OR G02B6/0055 OR G02B7/02 OR G02B3/0006 OR G02B5/1871 OR G02B6/003 OR G02B13/009 OR G02B13/18 OR G02B2027/0163 OR G02B13/004 OR G02B26/005 OR G02B7/008 OR G02B3/0062 OR G02B9/60 OR G02B3/0056 OR G02B6/0028 OR G02B27/1086 OR G02B5/1823 OR G02B6/29325 OR G02B9/62 OR G02B13/0035 OR G02B13/02 OR G02B21/06 OR G02B26/0875 OR G02B30/00 OR				
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		G02B6/0018 OR G02B6/006 OR G02B2027/0136 OR G02B5/18 OR G02B5/3083 OR G02B26/004 OR G02B30/23 OR G02B5/005 OR G02B6/0051 OR G02B7/28 OR G02B3/0075 OR G02B2027/0107 OR G02B2027/013 OR G02B2027/0194 OR G02B5/1842 OR G02B5/20 OR G02B6/002 OR G02B21/0012 OR G02B26/06 OR G02B27/0103 OR G02B2027/0129 OR G02B26/0841 OR G02B3/12 OR G02B1/002 OR G02B1/11 OR G02B30/25 OR G02B5/201 OR G02B2027/0143 OR G02B27/0955 OR G02B6/0026 OR G02B9/34 OR G02B1/041 OR G02B13/14 OR G02B26/026 OR G02B26/0825 OR G02B27/0977 OR G02B3/0043 OR G02B5/223 OR G02B9/12 OR G02B2027/0183 OR G02B26/02 OR G02B30/56 OR G02B2027/0158 OR G02B26/00 OR G02B6/0031 OR G02B6/0056 OR G02B6/4204 OR G02B13/00 OR G02B27/0025 OR G02B5/3016 OR G02B6/0078 OR G02B19/0057 OR G02B6/0083 OR G02B6/0085 OR G02B9/04 OR G02B13/0065 OR G02B17/086 OR G02B26/007 OR				
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		G02B27/10 OR G02B30/52 OR G02B6/0021 OR G02B21/025 OR G02B3/0031 OR G02B30/31 OR G02B30/35 OR G02B30/36 OR G02B7/002 OR G02B26/0816 OR G02B27/0916 OR G02B3/08 OR G02B7/003 OR G02B27/0037 OR G02B27/44 OR G02B3/0037 OR G02B6/0025 OR G02B6/0061 OR G02B13/001 OR G02B13/0015 OR G02B13/007 OR G02B27/0006 OR G02B27/48 OR G02B3/02 OR G02B30/33 OR G02B6/2706 OR G02B6/32 OR G02B2027/0145 OR G02B26/08 OR G02B27/64 OR G02B5/04 OR G02B6/0045 OR G02B6/124 OR G02B19/0066 OR G02B21/36 OR G02B21/362 OR G02B27/102 OR G02B3/00 OR G02B3/0068 OR G02B5/1847 OR G02B5/1852 OR G02B6/12007 OR G02B6/122 OR G02B13/008 OR G02B19/0076 OR G02B23/18 OR G02B27/0189 OR G02B27/20 OR G02B27/62 OR G02B3/04 OR G02B30/10 OR G02B5/1861 OR G02B5/23 OR G02B6/0033 OR G02B6/0046 OR G02B7/34 OR G02B13/003 OR G02B15/142 OR				
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L69	2404	G02B19/009 OR G02B2003/0093 OR G02B2027/0196 OR G02B25/001 OR G02B27/0972 OR G02B27/1033 OR G02B27/141 OR G02B27/425 OR G02B30/30 OR G02B6/0006 OR G02B6/0008 OR G02B6/0073 OR G02B6/009 OR G02B6/02085 OR G02B6/29316 OR G02B6/29328 OR G02B6/4206 OR G02B6/443 OR G02B6/4471 OR G02B7/028 OR G02B9/36 OR G02B1/10 OR G02B13/002 OR G02B13/006 OR G02B15/00 OR G02B15/10 OR G02B15/20 OR G02B17/0605 OR G02B19/0028 OR G02B19/0047 OR G02B2027/0109 OR G02B27/04 OR G02B27/144 OR G02B3/0087 OR G02B30/50 OR G02B5/10 OR G02B7/10 OR G02B13/0055 OR G02B13/04 OR G02B17/06 OR G02B17/08 OR G02B27/0961 OR G02B27/281 OR G02B5/0252 OR G02B5/12 OR G02B5/1809 OR G02B5/26 OR G02B5/281 OR G02B6/001 OR G02B6/02 OR G02B6/105 OR G02B7/182 OR G02B7/36).cpc.) L2 AND (G02C11/10 OR G02C11/06 OR G02C7/04 OR G02C7/101 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2024/02/05 01:07 PM
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		OR G02B27/0172 OR G02B2027/014 OR G02B2027/0138 OR G02B2027/0187 OR G02B27/0093 OR G02B27/0176 OR G02B2027/0134 OR G02B2027/0141 OR G02B27/01 OR G02B2027/0118 OR G02B27/0179 OR G02B27/0101 OR G02B2027/0127 OR G02B2027/0174 OR G02B2027/0132 OR G02B2027/0123 OR G02B2027/0156 OR G02B2027/0185 OR G02B2027/0147 OR G02B6/34 OR G02B26/001 OR G02B13/0045 OR G02B27/0081 OR G02B26/101 OR G02B27/646 OR G02B6/005 OR G02B2027/0112 OR G02B2027/0125 OR G02B27/022 OR G02B30/34 OR G02B27/0075 OR G02B2027/0169 OR G02B7/09 OR G02B2027/0181 OR G02B13/06 OR G02B27/028 OR G02B2027/0154 OR G02B5/208 OR G02B27/4205 OR G02B5/30 OR G02B6/0035 OR G02B26/0833 OR G02B5/3025 OR G02B27/283 OR G02B6/0036 OR G02B6/0038 OR G02B6/0076 OR G02B6/10 OR G02B6/0001 OR G02B2027/012 OR G02B2027/011 OR G02B27/286 OR G02B2027/0114 OR G02B27/42 OR G02B5/32 OR G02B7/023 OR G02B2027/0105 OR G02B27/4227 OR	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)				
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		G02B3/14 OR G02B9/64 OR G02B30/24 OR G02B6/0016 OR G02B6/0023 OR G02B7/08 OR G02B13/004 OR G02B27/0018 OR G02B27/30 OR G02B7/021 OR G02B5/08 OR G02B6/0068 OR G02B9/60 OR G02B7/02 OR G02B27/02 OR G02B27/00 OR G02B30/40 OR G02B7/008 OR G02B6/0053 OR G02B26/10 OR G02B26/105 OR G02B27/1086 OR G02B5/1823 OR G02B5/1857 OR G02B5/1866 OR G02B5/1871 OR G02B6/29325 OR G02B9/62 OR G02B2027/0161 OR G02B5/005 OR G02B13/02 OR G02B13/009 OR G02B7/102 OR G02B2027/0159 OR G02B30/00 OR G02B2027/015 OR G02B3/0006 OR G02B6/0055 OR G02B6/0088 OR G02B2027/0136 OR G02B21/365 OR G02B6/003 OR G02B2027/0194 OR G02B2027/0198 OR G02B6/0011 OR G02B6/0065 OR G02B7/04 OR G02B2027/0163 OR G02B21/06 OR G02B5/3083 OR G02B9/34 OR G02B13/18 OR G02B27/0977 OR G02B6/00 OR G02B2027/013 OR G02B27/0149 OR G02B27/4272 OR G02B2027/0152 OR				
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		G02B5/201 OR G02B6/0051 OR G02B1/002 OR G02B5/20 OR G02B7/12 OR G02B26/0841 OR G02B27/0025 OR G02B27/0955 OR G02B1/041 OR G02B26/005 OR G02B30/56 OR G02B2027/0183 OR G02B27/0103 OR G02B13/0065 OR G02B26/00 OR G02B26/007 OR G02B26/026 OR G02B30/23 OR G02B30/52 OR G02B7/28 OR G02B2027/0116 OR G02B6/0018 OR G02B6/002 OR G02B6/0028 OR G02B6/0078 OR G02B9/04 OR G02B19/0057 OR G02B27/0916 OR G02B5/3016 OR G02B2027/0107 OR G02B2027/0129 OR G02B3/02 OR G02B5/223 OR G02B6/0056 OR G02B6/2706 OR G02B13/00 OR G02B13/001 OR G02B13/0035 OR G02B26/004 OR G02B30/27 OR G02B6/0021 OR G02B2027/0143 OR G02B26/0825 OR G02B3/00 OR G02B3/08 OR G02B6/32 OR G02B7/002 OR G02B13/0015 OR G02B13/008 OR G02B27/0037 OR G02B30/35 OR G02B6/0031 OR G02B6/0033 OR G02B1/11 OR G02B13/003 OR G02B13/14 OR G02B19/009 OR G02B26/0816 OR					
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		G02B27/0006 OR G02B27/10 OR G02B27/102 OR G02B3/0037 OR G02B3/0056 OR G02B30/36 OR G02B5/04 OR G02B5/18 OR G02B6/0006 OR G02B6/0008 OR G02B6/0025 OR G02B6/009 OR G02B6/12007 OR G02B6/29316 OR G02B6/29328 OR G02B6/4204 OR G02B6/443 OR G02B6/4471 OR G02B9/36 OR G02B13/002 OR G02B13/006 OR G02B15/142 OR G02B17/0605 OR G02B2027/0145 OR G02B27/141 OR G02B27/64 OR G02B3/0068 OR G02B6/0073 OR G02B7/10 OR G02B9/12 OR G02B17/086 OR G02B27/425 OR G02B27/48 OR G02B3/12 OR G02B30/25 OR G02B5/26 OR G02B6/006 OR G02B6/0083 OR G02B6/105 OR G02B6/124 OR G02B7/003 OR G02B7/182 OR G02B27/0068 OR G02B27/0972 OR G02B27/144 OR G02B5/23 OR G02B6/001 OR G02B6/0046 OR G02B13/04 OR G02B15/10 OR G02B17/08 OR G02B2027/0196 OR G02B26/08 OR G02B27/0961 OR G02B27/1033 OR G02B27/281 OR G02B3/0087 OR G02B30/10 OR					
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L71	1210	G02B5/124 OR G02B6/0015 OR G02B6/0086 OR G02B6/02066 OR G02B6/29356 OR G02B6/325 OR G02B6/4206 OR G02B7/285 OR G02B13/0005 OR G02B13/0055 OR G02B2003/0093 OR G02B2027/0109 OR G02B23/00 OR G02B25/001 OR G02B27/005 OR G02B27/04 OR G02B27/149 OR G02B27/62 OR G02B30/31 OR G02B5/1809 OR G02B5/1842 OR G02B5/1847 OR G02B5/206 OR G02B6/0026 OR G02B6/0045 OR G02B6/122 OR G02B6/1221 OR G02B6/274 OR G02B6/2766 OR G02B6/42).cpc.) L4 AND ((G02C11/10 OR G02C11/06 OR G02C7/04 OR G02C11/00 OR G02C7/101 OR G02C5/14 OR G02C5/143 OR G02C5/001 OR G02C5/146 OR G02C2200/02 OR G02C3/003 OR G02C5/22 OR G02C11/04 OR G02C7/083 OR G02C5/16 OR G02C2200/08 OR G02C5/12 OR G02C7/00 OR G02C9/00 OR G02C7/081 OR G02C5/02 OR G02C7/02 OR G02C2200/10 OR G02C7/049 OR G02C7/086 OR G02C7/12 OR G02C7/08 OR	(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	2024/02/05 01:07 PM
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L72	9435	G02C9/04 OR G02C7/16 OR G02C1/00 OR G02C1/10 OR G02C7/06 OR G02C1/06 OR G02C7/104 OR G02C5/20 OR G02C2202/10 OR G02C7/021 OR G02C7/085 OR G02C9/02 OR G02C7/105 OR G02C5/006 OR G02C5/045 OR G02C7/022 OR G02C7/041 OR G02C7/10).cpc.) L17 AND ((G02B27/017 OR G02B2027/0178 OR G02B27/0172 OR G02B2027/014 OR G02B2027/0138 OR G02B2027/0187 OR G02B27/0093 OR G02B27/0176 OR G02B2027/0141 OR G02B2027/0134 OR G02B27/01 OR G02B27/0179 OR G02B27/0101 OR G02B2027/0127 OR G02B2027/0118 OR G02B2027/0174 OR G02B2027/0132 OR G02B2027/0185 OR G02B2027/0156 OR G02B2027/0123 OR G02B26/001 OR G02B13/0045 OR G02B6/34 OR G02B27/0081 OR G02B2027/0147 OR G02B26/101 OR G02B6/005 OR G02B2027/0112 OR G02B27/646 OR G02B27/022 OR G02B30/34 OR G02B2027/0125 OR G02B2027/0169 OR G02B7/09 OR G02B13/06 OR G02B2027/0181 OR G02B27/028 OR G02B2027/0154 OR	(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	2024/02/05 01:07 PM
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		G02B27/0075 OR G02B5/208 OR G02B27/4205 OR G02B6/0036 OR G02B6/0038 OR G02B27/283 OR G02B6/0076 OR G02B5/3025 OR G02B6/10 OR G02B6/0001 OR G02B2027/012 OR G02B2027/0114 OR G02B27/42 OR G02B5/32 OR G02B7/023 OR G02B26/0833 OR G02B27/4227 OR G02B2027/0105 OR G02B6/0035 OR G02B9/64 OR G02B5/30 OR G02B13/004 OR G02B27/0018 OR G02B27/30 OR G02B30/24 OR G02B5/08 OR G02B6/0016 OR G02B6/0023 OR G02B6/0068 OR G02B9/60 OR G02B27/286 OR G02B7/02 OR G02B7/021 OR G02B2027/011 OR G02B27/02 OR G02B30/40 OR G02B7/008 OR G02B26/10 OR G02B26/105 OR G02B27/1086 OR G02B5/1823 OR G02B5/1857 OR G02B5/1866 OR G02B5/1871 OR G02B6/0053 OR G02B6/29325 OR G02B7/08 OR G02B9/62 OR G02B5/005 OR G02B13/02 OR G02B7/102 OR G02B2027/0161 OR G02B3/14 OR G02B2027/0159 OR G02B27/00 OR G02B30/00 OR G02B2027/015 OR G02B21/365 OR				
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		G02B6/0055 OR G02B6/0088 OR G02B13/009 OR G02B2027/0198 OR G02B7/04 OR G02B2027/0136 OR G02B2027/0163 OR G02B2027/0194 OR G02B21/06 OR G02B6/0011 OR G02B6/0065 OR G02B9/34 OR G02B13/18 OR G02B2027/013 OR G02B27/0149 OR G02B27/0977 OR G02B5/3083 OR G02B5/201 OR G02B6/0051 OR G02B1/002 OR G02B3/0006 OR G02B5/20 OR G02B26/0841 OR G02B27/0955 OR G02B7/12 OR G02B1/041 OR G02B2027/0152 OR G02B27/0025 OR G02B2027/0183 OR G02B26/005 OR G02B27/0103 OR G02B27/4272 OR G02B6/00 OR G02B13/0065 OR G02B26/00 OR G02B26/007 OR G02B26/026 OR G02B30/23 OR G02B30/52 OR G02B2027/0116 OR G02B30/56 OR G02B6/0078 OR G02B9/04 OR G02B19/0057 OR G02B27/0916 OR G02B6/0028 OR G02B6/003 OR G02B2027/0107 OR G02B6/0018 OR G02B6/002 OR G02B2027/0129 OR G02B3/02 OR G02B5/3016 OR G02B6/0056 OR G02B13/0035 OR G02B6/0021 OR G02B6/2706 OR G02B13/00 OR				
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		G02B26/004 OR G02B3/08 OR G02B13/0015 OR G02B13/008 OR G02B2027/0143 OR G02B27/0037 OR G02B6/0031 OR G02B6/0033 OR G02B7/002 OR G02B7/28 OR G02B13/003 OR G02B13/14 OR G02B19/009 OR G02B27/0006 OR G02B27/102 OR G02B3/00 OR G02B3/0037 OR G02B3/0056 OR G02B30/36 OR G02B5/04 OR G02B5/223 OR G02B6/0025 OR G02B6/009 OR G02B6/12007 OR G02B6/29316 OR G02B6/29328 OR G02B9/36 OR G02B1/11 OR G02B13/002 OR G02B15/142 OR G02B2027/0145 OR G02B27/141 OR G02B3/0068 OR G02B6/0073 OR G02B9/12 OR G02B13/001 OR G02B13/006 OR G02B17/086 OR G02B27/425 OR G02B27/48 OR G02B27/64 OR G02B3/12 OR G02B30/25 OR G02B30/35 OR G02B5/18 OR G02B6/0083 OR G02B6/124 OR G02B6/32 OR G02B7/10 OR G02B7/182 OR G02B26/0816 OR G02B27/0068 OR G02B27/0972 OR G02B27/10 OR G02B5/26 OR G02B6/001 OR G02B6/006 OR G02B7/003 OR				
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L73	2195	G02B13/04 OR G02B15/10 OR G02B17/08 OR G02B26/08 OR G02B27/0961 OR G02B27/281 OR G02B3/0087 OR G02B5/124 OR G02B6/0015 OR G02B6/0046 OR G02B6/0086 OR G02B6/29356 OR G02B6/4206 OR G02B13/0055 OR G02B17/0605 OR G02B2003/0093 OR G02B2027/0109 OR G02B23/00 OR G02B25/001 OR G02B27/005 OR G02B27/62 OR G02B30/27 OR G02B30/31 OR G02B5/1809 OR G02B5/1842 OR G02B5/1847 OR G02B5/206 OR G02B5/23 OR G02B6/0026 OR G02B6/0045 OR G02B6/122 OR G02B6/1221 OR G02B6/42 OR G02B7/285).cpc.) L17 AND (G02C11/10 OR G02C11/06 OR G02C7/04 OR G02C11/00 OR G02C5/14 OR G02C7/101 OR G02C5/143 OR G02C5/001 OR G02C3/003 OR G02C5/146 OR G02C2200/02 OR G02C5/22 OR G02C11/04 OR G02C5/16 OR G02C7/083 OR G02C2200/08 OR G02C5/12 OR G02C9/00 OR G02C5/02 OR G02C2200/10 OR G02C7/081 OR G02C7/086 OR G02C7/00 OR	(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	2024/02/05 01:07 PM
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L74	2462	G02C7/02 OR G02C9/04 OR G02C7/16 OR G02C7/049 OR G02C1/00 OR G02C1/10 OR G02C7/06 OR G02C7/08 OR G02C1/06 OR G02C5/20 OR G02C7/021 OR G02C7/12 OR G02C2202/10 OR G02C7/085 OR G02C5/006 OR G02C9/02 OR G02C5/045 OR G02C7/10 OR G02C7/104).cpc.) L30 AND ((G02B27/017 OR G02B2027/0178 OR G02B27/0172 OR G02B2027/014 OR G02B2027/0138 OR G02B27/0093 OR G02B2027/0187 OR G02B27/0176 OR G02B2027/0127 OR G02B27/0101 OR G02B2027/0118 OR G02B2027/0134 OR G02B2027/0141 OR G02B27/0179 OR G02B2027/0156 OR G02B2027/0174 OR G02B2027/0132 OR G02B6/34 OR G02B2027/0123 OR G02B2027/0185 OR G02B27/01 OR G02B2027/0147 OR G02B27/4205 OR G02B26/101 OR G02B27/4227 OR G02B6/10 OR G02B2027/0105 OR G02B27/42 OR G02B26/001 OR G02B27/0081 OR G02B2027/0112 OR G02B13/0045 OR G02B2027/0169 OR G02B6/0001 OR G02B27/0075 OR G02B2027/0125 OR G02B27/028 OR	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
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		G02B27/646 OR G02B6/0035 OR G02B27/022 OR G02B5/30 OR G02B6/005 OR G02B2027/0181 OR G02B2027/012 OR G02B26/0833 OR G02B27/283 OR G02B6/0038 OR G02B13/06 OR G02B6/0036 OR G02B2027/011 OR G02B3/14 OR G02B5/3025 OR G02B2027/0161 OR G02B7/09 OR G02B2027/0114 OR G02B27/286 OR G02B27/30 OR G02B5/32 OR G02B6/0016 OR G02B2027/0154 OR G02B27/0018 OR G02B6/0023 OR G02B6/0076 OR G02B5/3083 OR G02B6/003 OR G02B26/105 OR G02B5/208 OR G02B7/008 OR G02B2027/0194 OR G02B6/0068 OR G02B9/60 OR G02B9/64 OR G02B27/1086 OR G02B30/34 OR G02B5/005 OR G02B5/1823 OR G02B5/1857 OR G02B5/1866 OR G02B5/1871 OR G02B6/0055 OR G02B6/29325 OR G02B7/08 OR G02B13/004 OR G02B13/009 OR G02B2027/015 OR G02B27/0977 OR G02B5/08 OR G02B19/0057 OR G02B27/0916 OR G02B6/00 OR G02B6/0053 OR G02B7/102 OR G02B13/02 OR G02B2027/013 OR G02B2027/0136 OR				
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		G02B26/10 OR G02B27/0103 OR G02B27/0149 OR G02B30/56 OR G02B27/0025 OR G02B27/4272 OR G02B30/27 OR G02B30/52 OR G02B6/0088 OR G02B9/62 OR G02B13/0065 OR G02B30/00 OR G02B6/0006 OR G02B6/0008 OR G02B6/4204 OR G02B6/443 OR G02B6/4471 OR G02B7/023 OR G02B2027/0145 OR G02B2027/0159 OR G02B2027/0163 OR G02B3/0006 OR G02B6/0065 OR G02B7/02 OR G02B7/04 OR G02B7/12 OR G02B1/002 OR G02B17/086 OR G02B2027/0152 OR G02B21/365 OR G02B26/0816 OR G02B27/02 OR G02B30/35 OR G02B5/04 OR G02B5/3016 OR G02B6/0018 OR G02B6/0031 OR G02B6/0078 OR G02B6/105 OR G02B7/003 OR G02B7/021 OR G02B9/34 OR G02B1/041 OR G02B15/10 OR G02B26/005 OR G02B27/00 OR G02B27/0955 OR G02B27/10 OR G02B27/1033 OR G02B6/002 OR G02B6/0051 OR G02B6/124 OR G02B13/001 OR G02B13/0035 OR G02B2027/0109 OR G02B2027/0183 OR G02B21/06 OR G02B26/00 OR				
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		G02B26/0841 OR G02B27/141 OR G02B27/425 OR G02B3/0087 OR G02B5/1809 OR G02B5/1847 OR G02B6/0026 OR G02B6/02066 OR G02B6/122 OR G02B6/1221 OR G02B6/274 OR G02B6/2766 OR G02B9/04 OR G02B13/008 OR G02B13/14 OR G02B2027/0107 OR G02B2027/0143 OR G02B26/004 OR G02B26/007 OR G02B27/0037 OR G02B5/18 OR G02B5/20 OR G02B5/201 OR G02B6/0021 OR G02B6/0056 OR G02B6/32 OR G02B7/002 OR G02B9/36 OR G02B13/00 OR G02B13/0015 OR G02B13/003 OR G02B13/04 OR G02B13/18 OR G02B15/142 OR G02B19/009 OR G02B2027/0116 OR G02B27/0972 OR G02B27/281 OR G02B27/64 OR G02B3/00 OR G02B30/10 OR G02B30/24 OR G02B30/26 OR G02B5/26 OR G02B6/0028 OR G02B6/0045 OR G02B6/0046 OR G02B6/0073 OR G02B6/0083 OR G02B6/009 OR G02B9/12 OR G02B13/006 OR G02B17/0605 OR G02B2003/0093 OR G02B2027/0198 OR G02B2207/113 OR G02B25/001 OR G02B26/103 OR				
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		G02B27/0944 OR G02B27/1046 OR G02B27/4294 OR G02B27/58 OR G02B3/0056 OR G02B3/08 OR G02B3/12 OR G02B5/124 OR G02B5/223 OR G02B5/3058 OR G02B6/0025 OR G02B6/0033 OR G02B6/0061 OR G02B6/12009 OR G02B6/29356 OR G02B7/10 OR G02B1/00 OR G02B1/10 OR G02B1/11 OR G02B13/002 OR G02B13/007 OR G02B15/1421 OR G02B15/143503 OR G02B15/144105 OR G02B15/144113 OR G02B15/1451 OR G02B15/26 OR G02B19/0014 OR G02B19/0076 OR G02B2027/0129 OR G02B2027/019 OR G02B2027/0196 OR G02B21/0012 OR G02B2207/115 OR G02B23/00 OR G02B23/18 OR G02B26/023 OR G02B26/0808 OR G02B26/085 OR G02B26/0858 OR G02B26/0875 OR G02B27/0189 OR G02B27/024 OR G02B27/144 OR G02B27/149 OR G02B27/28 OR G02B27/288 OR G02B27/44 OR G02B27/48 OR G02B3/005 OR G02B30/22 OR G02B30/36 OR G02B30/50 OR G02B5/0284 OR G02B5/1842 OR G02B5/1876 OR G02B5/22 OR G02B5/23 OR				
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L75	622	G02B6/0011 OR G02B6/0015 OR G02B6/0048 OR G02B6/0058 OR G02B6/006 OR G02B6/0086 OR G02B6/02 OR G02B6/06 OR G02B6/12019 OR G02B6/27 OR G02B6/4206 OR G02B7/005 OR G02B7/028 OR G02B7/105 OR G02B7/1821 OR G02B7/1822 OR G02B7/1824 OR G02B7/28 OR G02B7/285 OR G02B7/346 OR G02B7/38 OR G02B9/18).cpc.) L30 AND (G02C11/10 OR G02C11/06 OR G02C7/04 OR G02C5/143 OR G02C11/00 OR G02C5/146 OR G02C5/001 OR G02C5/14 OR G02C7/101 OR G02C3/003 OR G02C2200/08 OR G02C2200/02 OR G02C7/083 OR G02C7/12 OR G02C5/16 OR G02C5/22 OR G02C7/16 OR G02C7/086 OR G02C9/04 OR G02C11/04 OR G02C2200/10 OR G02C5/12 OR G02C9/00 OR G02C7/06 OR G02C7/081 OR G02C7/104 OR G02C5/02 OR G02C7/105 OR G02C7/08 OR G02C5/006 OR G02C7/00 OR G02C1/10 OR G02C5/20 OR G02C5/045 OR G02C7/021 OR	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
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L76	2091	G02C1/06 OR G02C2202/06 OR G02C3/006 OR G02C5/08 OR G02C5/2209 OR G02C5/2272 OR G02C9/02 OR G02C2200/26 OR G02C3/04 OR G02C5/2236 OR G02C5/2254 OR G02C5/2263 OR G02C7/02).cpc.) L31 AND ((G02B27/017 OR G02B2027/0178 OR G02B27/0172 OR G02B2027/014 OR G02B2027/0138 OR G02B27/0093 OR G02B2027/0187 OR G02B27/0176 OR G02B2027/0127 OR G02B2027/0118 OR G02B2027/0134 OR G02B27/0101 OR G02B27/0179 OR G02B2027/0141 OR G02B2027/0156 OR G02B6/34 OR G02B2027/0132 OR G02B2027/0174 OR G02B2027/0185 OR G02B2027/0123 OR G02B2027/0147 OR G02B27/01 OR G02B27/4205 OR G02B6/10 OR G02B2027/0105 OR G02B26/101 OR G02B27/42 OR G02B27/4227 OR G02B26/001 OR G02B2027/0169 OR G02B27/0081 OR G02B27/0075 OR G02B27/028 OR G02B2027/0112 OR G02B2027/0125 OR G02B6/0001 OR G02B6/0035 OR G02B27/022 OR G02B6/005 OR G02B2027/012 OR G02B27/283 OR G02B5/30 OR G02B6/0038 OR	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
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		G02B6/0036 OR G02B13/0045 OR G02B2027/0181 OR G02B5/3025 OR G02B2027/0161 OR G02B2027/011 OR G02B2027/0114 OR G02B27/30 OR G02B6/0016 OR G02B2027/0154 OR G02B27/286 OR G02B3/14 OR G02B6/0023 OR G02B5/3083 OR G02B6/003 OR G02B6/0076 OR G02B27/0018 OR G02B7/008 OR G02B26/0833 OR G02B13/06 OR G02B2027/0194 OR G02B27/1086 OR G02B5/1823 OR G02B5/1857 OR G02B5/1866 OR G02B5/1871 OR G02B6/0055 OR G02B6/29325 OR G02B2027/015 OR G02B30/34 OR G02B26/105 OR G02B6/0053 OR G02B26/10 OR G02B27/0103 OR G02B27/646 OR G02B5/08 OR G02B9/60 OR G02B2027/0136 OR G02B30/27 OR G02B30/52 OR G02B5/208 OR G02B6/0068 OR G02B6/0088 OR G02B7/09 OR G02B9/62 OR G02B13/009 OR G02B2027/013 OR G02B30/56 OR G02B5/32 OR G02B6/0006 OR G02B6/0008 OR G02B6/4204 OR G02B6/443 OR G02B6/4471 OR G02B9/64 OR G02B2027/0163 OR G02B27/0977 OR G02B6/0065 OR				
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		G02B13/004 OR G02B2027/0159 OR G02B30/00 OR G02B6/00 OR G02B7/023 OR G02B7/12 OR G02B1/002 OR G02B17/086 OR G02B2027/0145 OR G02B21/365 OR G02B27/0025 OR G02B27/02 OR G02B5/04 OR G02B5/3016 OR G02B6/0018 OR G02B6/0031 OR G02B6/105 OR G02B7/003 OR G02B13/02 OR G02B2027/0152 OR G02B27/00 OR G02B27/0149 OR G02B27/10 OR G02B27/1033 OR G02B27/4272 OR G02B6/002 OR G02B6/0051 OR G02B6/124 OR G02B13/001 OR G02B13/0035 OR G02B15/10 OR G02B2027/0109 OR G02B2027/0183 OR G02B21/06 OR G02B26/00 OR G02B27/141 OR G02B27/425 OR G02B3/0006 OR G02B30/35 OR G02B5/005 OR G02B5/1809 OR G02B5/1847 OR G02B6/0026 OR G02B6/02066 OR G02B6/122 OR G02B6/1221 OR G02B6/274 OR G02B6/2766 OR G02B7/021 OR G02B7/04 OR G02B7/08 OR G02B1/041 OR G02B13/0065 OR G02B13/008 OR G02B13/14 OR G02B2027/0107 OR G02B2027/0143 OR G02B26/005 OR					
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		G02B26/007 OR G02B5/20 OR G02B6/0056 OR G02B6/32 OR G02B7/002 OR G02B9/36 OR G02B13/003 OR G02B13/18 OR G02B15/142 OR G02B19/009 OR G02B2027/0116 OR G02B26/0816 OR G02B27/0972 OR G02B27/281 OR G02B27/64 OR G02B3/00 OR G02B30/10 OR G02B30/24 OR G02B30/26 OR G02B5/18 OR G02B5/26 OR G02B6/0045 OR G02B6/0046 OR G02B6/0073 OR G02B6/0083 OR G02B6/009 OR G02B7/02 OR G02B7/102 OR G02B9/04 OR G02B9/12 OR G02B9/34 OR G02B17/0605 OR G02B2027/0198 OR G02B2207/113 OR G02B25/001 OR G02B26/0841 OR G02B26/103 OR G02B27/0037 OR G02B27/0944 OR G02B27/0955 OR G02B27/1046 OR G02B27/4294 OR G02B27/58 OR G02B5/124 OR G02B5/201 OR G02B5/223 OR G02B6/0025 OR G02B6/0028 OR G02B6/0033 OR G02B6/0061 OR G02B6/0078 OR G02B6/12009 OR G02B6/29356 OR G02B1/00 OR G02B1/10 OR G02B13/007 OR G02B13/04 OR G02B15/1421 OR					
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		G02B2027/0129 OR G02B2027/019 OR G02B2027/0196 OR G02B21/0012 OR G02B2207/115 OR G02B23/00 OR G02B23/18 OR G02B26/004 OR G02B26/0808 OR G02B26/085 OR G02B26/0858 OR G02B26/0875 OR G02B27/0189 OR G02B27/024 OR G02B27/144 OR G02B27/149 OR G02B27/44 OR G02B27/48 OR G02B3/005 OR G02B30/22 OR G02B30/36 OR G02B30/50 OR G02B5/0284 OR G02B5/1842 OR G02B5/1876 OR G02B5/22 OR G02B5/23 OR G02B5/3058 OR G02B6/0011 OR G02B6/0015 OR G02B6/0048 OR G02B6/0058 OR G02B6/006 OR G02B6/0086 OR G02B6/02 OR G02B6/06 OR G02B6/12019 OR G02B6/27 OR G02B7/005 OR G02B7/105 OR G02B7/1824 OR G02B7/28 OR G02B7/285 OR G02B7/346 OR G02B1/007 OR G02B1/04 OR G02B1/115 OR G02B1/118 OR G02B13/0055 OR G02B13/006 OR G02B13/0075 OR G02B15/06 OR G02B17/08 OR G02B19/0047 OR G02B2003/0093 OR G02B2027/0158 OR G02B2027/0192 OR G02B21/00 OR					
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L77	580	G02B2207/101 OR G02B2207/123 OR G02B27/0068 OR G02B27/0938 OR G02B27/0961 OR G02B27/108 OR G02B27/142 OR G02B27/28 OR G02B27/285 OR G02B27/62 OR G02B3/0037 OR G02B3/0056 OR G02B3/0068 OR G02B3/02 OR G02B3/04 OR G02B3/08 OR G02B30/29 OR G02B30/31 OR G02B5/0252 OR G02B5/045 OR G02B5/0841 OR G02B5/10 OR G02B5/12 OR G02B5/122 OR G02B5/128 OR G02B5/136 OR G02B5/1861 OR G02B5/28 OR G02B6/0085 OR G02B6/2706 OR G02B6/276 OR G02B6/29311 OR G02B6/3512 OR G02B6/3522 OR G02B6/4214 OR G02B7/10 OR G02B7/287).cpc.) L31 AND (G02C11/10 OR G02C11/06 OR G02C7/04 OR G02C5/143 OR G02C5/146 OR G02C11/00 OR G02C5/14 OR G02C7/101 OR G02C5/001 OR G02C3/003 OR G02C2200/08 OR G02C7/083 OR G02C2200/02 OR G02C7/12 OR G02C5/16 OR G02C7/16 OR G02C7/086 OR G02C9/04 OR G02C2200/10 OR G02C5/22 OR	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
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L78	785	G02C11/04 OR G02C9/00 OR G02C7/06 OR G02C7/081 OR G02C5/02 OR G02C5/12 OR G02C7/104 OR G02C7/105 OR G02C7/08 OR G02C5/006 OR G02C7/00 OR G02C5/20 OR G02C5/045 OR G02C7/021 OR G02C2202/06 OR G02C3/006 OR G02C5/08 OR G02C5/2209 OR G02C5/2272 OR G02C9/02 OR G02C1/10 OR G02C2200/26 OR G02C3/04 OR G02C5/2236 OR G02C5/2254 OR G02C5/2263 OR G02C7/02 OR G02C11/08 OR G02C13/005 OR G02C2202/10 OR G02C5/003 OR G02C5/126 OR G02C5/2227 OR G02C5/2281 OR G02C7/022 OR G02C7/085).cpc.) L32 AND ((G02B27/017 OR G02B2027/0178 OR G02B2027/014 OR G02B27/0172 OR G02B2027/0138 OR G02B27/0093 OR G02B2027/0187 OR G02B2027/0118 OR G02B27/0176 OR G02B27/0101 OR G02B2027/0134 OR G02B2027/0127 OR G02B6/34 OR G02B2027/0123 OR G02B2027/0147 OR G02B5/30 OR G02B27/0081 OR G02B27/0179 OR G02B2027/0185 OR G02B27/4205 OR	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
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		G02B6/005 OR G02B2027/0105 OR G02B27/01 OR G02B27/42 OR G02B27/4227 OR G02B6/10 OR G02B2027/0174 OR G02B6/0038 OR G02B6/0076 OR G02B7/008 OR G02B27/283 OR G02B2027/0114 OR G02B2027/012 OR G02B2027/0125 OR G02B2027/0132 OR G02B27/0018 OR G02B27/1086 OR G02B27/30 OR G02B5/1823 OR G02B5/1857 OR G02B5/1866 OR G02B5/1871 OR G02B5/3025 OR G02B6/0016 OR G02B6/0023 OR G02B6/0035 OR G02B6/0036 OR G02B6/29325 OR G02B2027/0156 OR G02B2027/0141 OR G02B27/0103 OR G02B26/001 OR G02B7/12 OR G02B30/52 OR G02B1/002 OR G02B2027/0161 OR G02B21/06 OR G02B21/365 OR G02B26/00 OR G02B27/02 OR G02B27/10 OR G02B27/286 OR G02B30/34 OR G02B30/56 OR G02B5/08 OR G02B5/1809 OR G02B5/1847 OR G02B5/3083 OR G02B6/0026 OR G02B6/122 OR G02B6/1221 OR G02B6/124 OR G02B7/04 OR G02B2027/0109 OR G02B2027/0136 OR G02B26/101 OR G02B6/0018 OR G02B6/002 OR				
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		G02B19/009 OR G02B2027/0116 OR G02B2027/013 OR G02B2027/015 OR G02B2027/0152 OR G02B2027/0163 OR G02B2027/0181 OR G02B26/105 OR G02B27/0075 OR G02B27/0149 OR G02B6/0053 OR G02B2027/011 OR G02B2027/0112 OR G02B2027/0154 OR G02B2027/0194 OR G02B27/00 OR G02B27/141 OR G02B5/04 OR G02B5/18 OR G02B6/00 OR G02B6/12009 OR G02B2027/0159 OR G02B2207/113 OR G02B2207/115 OR G02B26/0816 OR G02B26/103 OR G02B3/005 OR G02B30/35 OR G02B30/36 OR G02B5/23 OR G02B5/3058 OR G02B6/0028 OR G02B6/003 OR G02B6/0045 OR G02B6/0055 OR G02B6/0056 OR G02B6/006 OR G02B6/0065 OR G02B6/0068 OR G02B6/0088 OR G02B6/12019 OR G02B1/041 OR G02B19/0047 OR G02B2003/0093 OR G02B2027/019 OR G02B2027/0192 OR G02B21/0012 OR G02B27/0025 OR G02B27/0189 OR G02B27/0961 OR G02B27/0972 OR G02B3/00 OR G02B3/0068 OR G02B3/08 OR G02B3/14 OR G02B30/26 OR G02B5/045 OR G02B5/1842 OR					
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L79	397	G02B5/28 OR G02B6/32 OR G02B6/3512 OR G02B7/287).cpc.) L32 AND ((G02C11/10 OR G02C11/06 OR G02C5/143 OR G02C5/14 OR G02C7/101 OR G02C3/003 OR G02C7/04 OR G02C5/001 OR G02C5/146 OR G02C7/083 OR G02C2200/08 OR G02C11/00 OR G02C5/16 OR G02C2200/10 OR G02C11/04 OR G02C7/12 OR G02C7/081 OR G02C7/06 OR G02C7/104 OR G02C7/16 OR G02C7/08 OR G02C2200/02 OR G02C7/00 OR G02C7/105 OR G02C9/00 OR G02C7/086 OR G02C9/04 OR G02C5/20 OR G02C7/021 OR G02C2202/06 OR G02C5/006 OR G02C5/045 OR G02C5/08 OR G02C5/2209 OR G02C5/2272 OR G02C1/10 OR G02C5/12 OR G02C5/22 OR G02C5/2236 OR G02C5/2254 OR G02C7/02 OR G02C11/08 OR G02C13/005 OR G02C5/02 OR G02C5/2227 OR G02C5/2263 OR G02C5/2281 OR G02C7/022 OR G02C9/02).cpc.)	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
L80	152	L34 AND ((G02B2027/0178 OR G02B27/017 OR G02B2027/014 OR	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM

		G02B27/0172 OR G02B27/0093 OR G02B2027/0138 OR G02B2027/0187 OR G02B6/34 OR G02B27/0176 OR G02B2027/0118 OR G02B2027/0127 OR G02B27/0101 OR G02B27/0081 OR G02B27/4205 OR G02B2027/0105 OR G02B2027/0185 OR G02B27/0179 OR G02B27/42 OR G02B27/4227 OR G02B6/10 OR G02B6/0038 OR G02B6/005 OR G02B6/0076 OR G02B7/008 OR G02B27/283 OR G02B2027/0114 OR G02B2027/012 OR G02B2027/0125 OR G02B2027/0174 OR G02B27/0018 OR G02B27/1086 OR G02B27/30 OR G02B5/1823 OR G02B5/1857 OR G02B5/1866 OR G02B5/1871 OR G02B5/3025 OR G02B6/0016 OR G02B6/0023 OR G02B6/0035 OR G02B6/0036 OR G02B6/29325 OR G02B5/30 OR G02B2027/0132 OR G02B2027/0134 OR G02B2027/0156 OR G02B2027/0123 OR G02B21/06 OR G02B21/365 OR G02B27/286 OR G02B30/52 OR G02B27/01 OR G02B6/0018 OR G02B6/002 OR G02B2027/0147 OR G02B2027/015 OR G02B27/0149 OR G02B6/0053 OR G02B2027/0112 OR G02B2027/0141 OR G02B2027/0152 OR					
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L81	151	G02B2027/0161 OR G02B5/18 OR G02B6/00 OR G02B6/12009 OR G02B7/12 OR G02B2027/011 OR G02B2027/0154 OR G02B2207/113 OR G02B2207/115 OR G02B27/0075 OR G02B5/23 OR G02B5/3058 OR G02B6/0028 OR G02B6/003 OR G02B6/0045 OR G02B6/0056 OR G02B6/006 OR G02B6/0065 OR G02B6/0068 OR G02B6/0088 OR G02B6/12019 OR G02B2027/013 OR G02B2027/0163 OR G02B2027/0181 OR G02B2027/019 OR G02B27/0189 OR G02B30/26 OR G02B5/04 OR G02B5/1842 OR G02B5/28 OR G02B6/32 OR G02B6/3512).cpc.) L34 AND (G02C11/10 OR G02C11/06 OR G02C5/143 OR G02C5/14 OR G02C3/003 OR G02C5/001 OR G02C5/146 OR G02C2200/08 OR G02C5/16 OR G02C11/00 OR G02C11/04 OR G02C7/08 OR G02C7/081 OR G02C7/086 OR G02C9/00 OR G02C9/04 OR G02C2200/02 OR G02C2202/06 OR G02C5/045 OR G02C5/2209 OR G02C7/083 OR G02C7/101 OR G02C5/12 OR G02C13/005 OR G02C5/22 OR	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
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L82	108	G02C5/2254 OR G02C5/2281 OR G02C7/022 OR G02C7/04 OR G02C9/02).cpc.) L35 AND ((G02B2027/0178 OR G02B27/017 OR G02B27/0093 OR G02B2027/014 OR G02B27/0172 OR G02B2027/0138 OR G02B2027/0187 OR G02B2027/0118 OR G02B5/30 OR G02B27/0176 OR G02B21/06 OR G02B21/365 OR G02B27/286 OR G02B2027/0134 OR G02B2027/0132 OR G02B2027/0147 OR G02B6/0053 OR G02B2027/0112 OR G02B2027/0127 OR G02B27/0149 OR G02B5/18 OR G02B6/12009 OR G02B2027/011 OR G02B2027/0123 OR G02B2027/0141 OR G02B2027/0156 OR G02B2207/113 OR G02B2207/115 OR G02B27/0075 OR G02B27/01 OR G02B27/0101 OR G02B5/23 OR G02B5/3058 OR G02B6/0018 OR G02B6/002 OR G02B6/0028 OR G02B6/003 OR G02B6/0038 OR G02B6/0045 OR G02B6/005 OR G02B6/0056 OR G02B6/006 OR G02B6/0065 OR G02B6/0068 OR G02B6/0076 OR G02B6/0088 OR G02B6/12019 OR G02B7/008 OR G02B27/0081 OR G02B5/04 OR G02B5/1842 OR	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
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L83	95	G02B5/28).cpc.) L35 AND ((G02C11/10 OR G02C11/06 OR G02C5/143 OR G02C5/14 OR G02C3/003 OR G02C5/146 OR G02C5/001 OR G02C2200/08 OR G02C11/04 OR G02C11/00 OR G02C7/081 OR G02C7/08 OR G02C7/086 OR G02C9/00 OR G02C2202/06 OR G02C5/2209 OR G02C7/083 OR G02C7/101 OR G02C9/04 OR G02C5/12 OR G02C5/22 OR G02C5/2254 OR G02C5/2281).cpc.)	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
L84	10	L37 AND ((G02B2027/0178 OR G02B27/017 OR G02B27/0093 OR G02B2027/014 OR G02B27/0172 OR G02B2027/0138 OR G02B2027/0187 OR G02B2027/0118 OR G02B5/30 OR G02B27/0176 OR G02B2027/0134 OR G02B2027/0147 OR G02B2027/0112 OR G02B2027/0127 OR G02B2027/0132 OR G02B27/0149 OR G02B5/18 OR G02B6/12009 OR G02B2027/011 OR G02B2027/0123 OR G02B2207/113 OR G02B2207/115 OR G02B5/23 OR G02B5/3058 OR G02B6/0038 OR G02B6/0045 OR G02B6/0053 OR G02B6/0056 OR G02B6/12019 OR G02B7/008 OR G02B5/04 OR G02B5/1842 OR	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM

L85	7	G02B5/28).cpc.) L37 AND ((G02C11/10 OR G02C11/06 OR G02C5/146 OR G02C5/143 OR G02C2200/08 OR G02C5/001 OR G02C11/04 OR G02C5/14 OR G02C7/081 OR G02C7/08 OR G02C7/086 OR G02C9/00 OR G02C2202/06 OR G02C5/2209 OR G02C7/083 OR G02C7/101).cpc.)	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
L86	6	L37 AND ((351/158 OR 351/121 OR 351/41 OR 351/116 OR 351/119 OR 359/630 OR 359/13 OR 359/554 OR 359/567 OR 381/327 OR 381/381).ccls.)	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
L87	1	"25484714".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	2024/02/05 02:24 PM
L88	6	"34435134".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	2024/02/05 02:26 PM
L89	22	"27496316".fmid.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2024/02/05 02:27 PM

L90	34	(Artificial Intelligence) More like doc: US-11243416-B2 Text: (US-10061144-B2 OR US-9547184-B2 OR US-8905542-B2 OR US-11204512-B2 OR US-20220011603-A1 OR US-8500271-B2 OR US-20050264752-A1 OR US-11536988-B2 OR US-9690121-B2 OR US-7922321-B2 OR US-11086147-B2 OR US-8109629-B2 OR US-20180335650-A1 OR US-11762224-B2 OR US-20110187990- A1 OR US- 20200218094-A1 OR US-20170090219-A1 OR US-20150085245- A1 OR US- 20230017635-A1 OR US-20130308089- A1).did.	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) (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	2024/02/27 12:02 PM
L91	29	(Artificial Intelligence) More like doc: US-6349001-B1 Text: (CA-2307877-C OR EP- 1027627-A1 OR WO- 9923524-A1 OR EP- 1027627-A4 OR US- 6091546-A OR JP- 2001522063-A OR EP- 1027627-B1 OR WO- 9923524-A8 OR CA- 2307877-A1 OR US- 6204974-B1 OR US- 6384982-B1 OR EP- 1169663-A1 OR US- 6356392-B1 OR WO- 0055676-A1 OR EP- 1169663-A4 OR JP- 2002539498-A OR EP-	(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	2024/02/27 12:02 PM

L92	33	1027626-A1 OR CA-2307869-C OR EP-1547434-B8 OR EP-1547434-A2).did. (Artificial Intelligence) More like doc: US-7278734-B2 Text: (US-20050201585-A1 OR US-8020989-B2 OR US-20080089545-A1 OR AU-2005306412-B2 OR EP-1828833-B1 OR WO-2006055884-A2 OR EP-1828833-A2 OR AU-2005306412-A2 OR AU-2005306412-A1 OR CA-2932965-C OR CA-2932965-A1 OR AU-2013263854-A1 OR EP-1547434-A2 OR AU-2003254210-A1 OR CA-2494661-A1 OR US-20060203183-A1 OR US-20040160573-A1 OR US-7150526-B2 OR AU-2013263854-B2 OR CN-1720763-A).did.	(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	2024/02/27 12:02 PM
L93	28	(Artificial Intelligence) More like doc: US-6911172-B2 Text: (US-20040000733-A1 OR US-20040239874-A1 OR US-20020159023-A1 OR EP-1485748-A2 OR WO-02089496-A2 OR US-9244292-B2 OR US-6929365-B2 OR US-20040029582-A1 OR CA-2445952-A1 OR US-20050239502-A1 OR US-7331666-B2 OR US-6769767-B2 OR US-20160109729-A1 OR JP-2005502902-A OR JP-4246500-B2 OR TW-I252005-B OR EP-1485748-B1 OR WO-02089496-A3 OR TH-61710-A OR US-20200064654-A1).did.	(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	2024/02/27 12:03 PM
L94	7432	(eyewear\$4 OR glasses\$4 OR spetacl\$4 OR eyegalss\$4) AND frame	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2024/02/27 04:12 PM

L95	60	AND circuit AND speaker\$2 AND (battery WITH (charge\$4 OR recharge\$4) WITH external)	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	2024/02/27 04:12 PM
L96	6529	(eyewear\$4 OR glasses\$4 OR spetacl\$4 OR eyegalss\$4) AND frame AND circuit AND speaker\$2 AND (battery WITH (charge\$4 OR recharge\$4) WITH external WITH cord)	(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	2024/02/27 04:14 PM
L97	6529	(eyewear\$4 OR glasses\$4 OR spetacl\$4 OR eyegalss\$4) AND frame AND circuit AND speaker\$2 AND ((battery near10 (charge\$4 OR recharge\$4)) near20 external)	(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	2024/02/27 04:14 PM

L115	3482	(351/158,121).ccls.	VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) (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	2024/05/14 12:00 PM
L116	2573	(351/41,111).ccls.	(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	2024/05/14 12:00 PM
L117	1000	(351/123,124).ccls.	(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	2024/05/14 12:01 PM
L118	3412	(359/13,629).ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,	OR	ON	ON	2024/05/14 12:01 PM

L119	5523	(359/630-633).ccls.	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) (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	2024/05/14 12:01 PM
L120	3403	(381/381,327,328).ccls.	(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	2024/05/14 12:01 PM
L121	4068	(381/380,370,381).ccls.	(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	2024/05/14 12:01 PM

L131	806	g02c1/00.cpc.	JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, 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, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 12:08 PM
L132	17282	g02c11/10.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, 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, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 12:08 PM
L133	3090	g02c11/06.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, 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, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 12:09 PM
L134	3174	g02c5/001.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB,	OR	ON	ON	2024/05/14 12:09 PM

L135	4012	g02c5/02.cpc.	HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, 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, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 12:09 PM
L136	4853	g02c5/14.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, 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, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 12:09 PM
L137	5010	g02c5/146.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, 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, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 12:10 PM

			IBM_TDB)				
L138	5174	g02c5/22.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, 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, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 12:10 PM
L139	35428	g02b27/01.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, 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, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 12:10 PM
L140	71042	g02b27/017.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, 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, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 12:10 PM
L141	27914	g02b27/0176.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, 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,	OR	ON	ON	2024/05/14 12:10 PM

L184	4	"27569502".fmid.	IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) (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	2024/05/14 01:18 PM
L2686	0	98 AND (button near5 piezo\$6)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, 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, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2024/05/15 09:02 AM
L2687	7	98 AND ((button OR switch) near5 piezo\$6)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, 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, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2024/05/15 09:02 AM
L2689	11	"49715056".fmid.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,	OR	ON	ON	2024/05/15 09:04 AM

L2691	147	142 AND ((button OR switch) near5 piezo\$6)	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	2024/05/15 09:08 AM
L2692	9	122 AND ((button OR switch) near5 piezo\$6)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, 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, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2024/05/15 09:11 AM
L2693	174	(eyewear\$4 OR glasses\$4 OR spectacl\$4 OR eyegals\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND ((button OR switch) near5 piezo\$6)	(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, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2024/05/15 09:19 AM
L2695	174	(eyewear\$4 OR glasses\$4 OR spectacl\$4 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY,	OR	ON	ON	2024/05/15 09:22 AM

L2696	195	eyegalss\$4) AND frame AND circuit AND control\$4 AND batter\$4 AND connect\$4 AND (audio OR speak\$4) AND ((button OR switch) near5 piezo\$6)	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	2024/05/15 09:22 AM
L2697	280	(eyewear\$4 OR glasses\$4 OR spetacl\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND batter\$4 AND ((button OR switch) near5 piezo\$6)	(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	2024/05/15 09:23 AM
L2699	3	"34225259".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,	OR	ON	ON	2024/05/15 09:27 AM

L2784	50	(Artificial Intelligence) Similar to: 18/597,874 with 0 CPC Selections and 0 Text Selections Text: (US-20170131575-A1 OR US-20210364827- A9 OR US- 20190187492-A1 OR US-20170146829-A1 OR US-20230273464- A1 OR US- 20240036361-A1 OR US-11921355-B2 OR US-20230359266-A1 OR US-20130201440- A1 OR US- 20110187990-A1 OR US-9690121-B2 OR US-8500271-B2 OR US-20120133885-A1 OR US-20150253590- A1 OR US- 20170090219-A1 OR US-8905542-B2 OR US-20180335650-A1 OR US-20210364828- A1 OR US-11243416- B2 OR US-10061144- B2 OR US- 20130308089-A1 OR US-20150085245-A1 OR US-20220357599- A1 OR US- 20230017635-A1 OR US-20070046887-A1 OR US-7922321-B2 OR US-20230408850-A1 OR US-20200012127- A1 OR US-9547184-B2 OR US-7581833-B2 OR US-8465151-B2 OR US-11829518-B1 OR US-11733549-B2 OR US-20220260859-A1 OR US-9033493-B2 OR US-11086147-B2 OR US-8109629-B2 OR US-10330956-B2 OR US-20050264752-A1 OR US-11762224-B2 OR US-11513371-B2 OR US-20240094800- A1 OR EP-3134825-B1	TH, TN, TR, TW, UA, VN); FPRS; JPO) (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, 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, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2024/09/04 01:05 PM
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