

AMENDMENTS TO THE SPECIFICATION

Please **AMEND** the Title of the application on page 1 before paragraph [0001] of the specification, as follows:

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

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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. (Previously Presented) 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; and

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

3. (Currently Amended) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) A system as recited in claim 20, wherein at least one of the plurality of circuit boards is a flexible printed circuit board.

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

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

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

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

61. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) A head-worn personal electronic apparatus as recited in claim 2, wherein the motion detector includes at least an accelerometer.
69. (New) A head-worn personal electronic apparatus as recited in claim 2, wherein the wireless receiver is configured to operate with a Bluetooth network.
70. (New) A head-worn personal electronic apparatus as recited in claim 2, wherein the electronic circuitry includes at least a microprocessor.
71. (New) 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. (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 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 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) 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. (New) A head-worn personal electronic apparatus as recited in claim 93, 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.

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

a head-worn structure configured to be 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 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.

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

at least one lens through which the user at least partially sees through to see vicinity around the head-worn personal electronic apparatus when the head-worn structure is being worn by the user, the at least one lens being provided at the front section of the head-worn structure.

97. (New) A head-worn personal electronic apparatus as recited in claim 96, wherein the rechargeable battery is contained within the least the first temple.

98. (New) A head-worn personal electronic apparatus as recited in claim 97, wherein the first temple includes a temple tip, and

wherein the head-worn personal electronic apparatus comprises an electrical connector at least partially contained within the temple tip.

99. (New) A head-worn personal electronic apparatus as recited in claim 98, wherein the head-worn personal electronic apparatus is configured to charge the rechargeable battery via a cable electrically connected with the electrical connector.

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

- a head-worn structure configured to be 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.

101. (New) A head-worn personal electronic apparatus as recited in claim 100, wherein the head-worn personal electronic apparatus comprises:

a radiation sensor contained within the head-worn structure and configured to capture 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 sensor data captured by the radiation sensor.

102. (New) A head-worn personal electronic apparatus as recited in claim 101, wherein the head-worn personal electronic apparatus is configured to receive a voice input from the user via at least the 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.

103. (New) A head-worn personal electronic apparatus as recited in claim 102, wherein the head-worn personal electronic apparatus comprises:

at least one lens through which the user at least partially sees through to see vicinity of the head-worn personal electronic apparatus when the head-worn structure is being worn by the user, the at least one lens being provided at the front section of the head-worn structure.

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

wherein at least one of the first temple and the second temple includes a temple tip, and

wherein the head-worn personal electronic apparatus comprises an electrical connector at least partially contained within the temple tip.

105. (New) A head-worn personal electronic apparatus as recited in claim 104, wherein the head-worn personal electronic apparatus is configured to receive power via a cable electrically connected with the electrical connector.

106. (New) A head-worn personal electronic apparatus as recited in claim 105, wherein with the cable coupled to a portable electronic device, the portable electronic device is configured to provide the power and computing capabilities to the head-worn personal electronic apparatus.

107. (New) A head-worn personal electronic apparatus as recited in claim 100, wherein the head-worn personal electronic apparatus couples via a cable to a portable electronic device, the portable electronic device including a rechargeable battery that provides power to the head-worn personal electronic apparatus, and the portable electronic device including a microprocessor that provides computing resources that are used by or for the head-worn personal electronic apparatus.

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

a head-worn structure configured to be worn by a user, the head-worn structure including a front section and first and second temples, the front section having or coupled to a first extended endpiece and a second extended endpiece provided at opposite ends of the front section, the first temple coupling to the front section via the first extended endpiece, the second temple coupling to the front section via the second extended endpiece;

at least one lens through which the user at least partially sees through when the head-worn structure is being worn by the user, the at least one lens being provided at the front section of the head-worn structure;

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

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.

109. (New) A head-worn personal electronic apparatus as recited in claim 108, wherein the head-worn personal electronic apparatus comprises:

a processor at least partially contained within the head-worn structure and configured to control operation of the head-worn personal electronic apparatus; and

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.

110. (New) A head-worn personal electronic apparatus as recited in claim 108, wherein the at least one lens provides no magnification.

111. (New) A head-worn personal electronic apparatus as recited in claim 108, wherein the first optical sensor is at least part of a first camera, and wherein the second optical sensor is at least part of a second camera.

112. (New) A head-worn personal electronic apparatus as recited in claim 108, wherein the first optical sensor is configured to sense at least infrared radiation, and wherein the second optical sensor is configured to sense at least infrared radiation.

113. (New) A head-worn personal electronic apparatus as recited in claim 108, wherein the first temple is rotatably coupled to the first extended endpiece and foldable towards the front section, and wherein the second temple is rotatably coupled to the second extended endpiece and foldable towards the front section.

114. (New) A head-worn personal electronic apparatus as recited in claim 113, wherein the rechargeable battery is contained within the first temple.

115. (New) A head-worn personal electronic apparatus as recited in claim 114,
wherein the first temple includes a temple tip, and
wherein the head-worn personal electronic apparatus comprises an electrical connector at least partially contained within the temple tip.

116. (New) A head-worn personal electronic apparatus as recited in claim 115, wherein the head-worn personal electronic apparatus is configured to charge the rechargeable battery via a cable electrically connected with the electrical connector.

117. (New) A head-worn personal electronic apparatus as recited in claim 116,
wherein the head-worn personal electronic apparatus comprises:

a processor at least partially contained within the head-worn structure and configured to control operation of the head-worn personal electronic apparatus; and

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, and

wherein the first optical sensor is configured to sense at least infrared radiation, and wherein the second optical sensor is configured to sense at least infrared radiation.

118. (New) A head-worn personal electronic apparatus as recited in claim 117, wherein the motion sensor includes at least an accelerometer.

119. (New) A head-worn personal electronic apparatus as recited in claim 108,

wherein the first optical sensor is at least part of a first camera for imaging capture,

wherein the second optical sensor is at least part of a second camera for imaging capture,

wherein the head-worn personal electronic apparatus comprises:

a first infrared sensor at least partially contained within the first extended endpiece; and

a second infrared sensor at least partially contained within the second extended endpiece.

120. (New) A head-worn personal electronic apparatus as recited in claim 108,

wherein the head-worn personal electronic apparatus comprises:

a processor at least partially contained within the head-worn structure and configured to control operation of the head-worn personal electronic apparatus; and

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, and

wherein the first optical sensor is at least part of a first camera for imaging capture, and wherein the second optical sensor is at least part of a second camera for imaging capture.

REMARKS

Further to the Notice of Allowance, the tile has been amended, and claim 3 has been amended to further clarify the subject matter regarded as the invention. In addition, new claims 9-120 have been added to the application. Claims 1-3 and 5-120 are currently pending. Reconsideration of the application is respectfully requested based on the following remarks.

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.

Applicants hereby petition for an extension of time which may be required to maintain the pendency of this case, and any required fee for such extension or any further fee required in connection with the filing of this Amendment is to be charged to Deposit Account No. 503874 (Order No. IPVCP003X1C4X1C2).

Respectfully submitted,

/C. Douglass Thomas/

C. Douglass Thomas
Reg. No. 32,947

(650) 903-9200, x103

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 18/597,874	Filing Date 03/06/2024	☐ To be Mailed
ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO						
APPLICATION AS FILED - PART I						
	(Column 1)	(Column 2)				
FOR	NUMBER FILED	NUMBER EXTRA		RATE (\$)		FEE (\$)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A		
☐ SEARCH FEE (37 CFR 1.16(k), (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	(Column 1)	(Column 2)	(Column 3)			
	12/04/2024	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(j))	* 119	Minus ** 20	= 99	x \$ 100 =	9900
	Independent (37 CFR 1.16(h))	* 6	Minus *** 3	= 3	x \$ 480 =	1440
	☐ Application Size Fee (37 CFR 1.16(s))					
AMENDMENT	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					
				TOTAL ADD'L FEE	11340	
	(Column 1)	(Column 2)	(Column 3)			
	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(j))	*	Minus **	=	x \$ 0 =	
AMENDMENT	Independent (37 CFR 1.16(h))	*	Minus ***	=	x \$ 0 =	
	☐ Application Size Fee (37 CFR 1.16(s))					
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					
				TOTAL ADD'L FEE		
	* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.			LIE		
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".			/MARCUS A PRIDGEN/			
*** 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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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #
18/597,874

RECEIPT DATE / TIME
10/18/2024 01:40:31 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 # 67627408

FILING DATE 03/06/2024

CUSTOMER # 34071

FIRST NAMED
INVENTOR Thomas A. Howell

CORRESPONDENCE
ADDRESS -

AUTHORIZED BY C Douglass Thomas

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
petition-request.pdf	3	Terminal Disclaimer-Filed (Electronic)	44 KB
grantLetter.pdf	1	Terminal Disclaimer-Electronic- Approved	18 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
petition-request.pdf	69434C737DEDAD38C6C70DB848F50F84D487F89439CFDD8D F9F5EDC9298A2DC0E74BA466515C97C13FB8250E798D7D12 3553551F1DCF0646898A5E6894DE8B3A

grantLetter.pdf

78DF1417938052F10E7EA7A6A0AA12FC463AF29FD1D5A3B6C
1B6C5419CB460CC3A18ABD9FFEDC9B5BAEF34807E36DE6A
B6D95FD4BBB4CE618E981162AF64F5DC

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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

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New International Application Filed with the USPTO as a Receiving Office

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TERMINAL DISCLAIMER TO OBTAIN A DOUBLE PATENTING REJECTION OVER A PRIOR PATENT

APPLICATION #	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET #
18597874	03/06/2024	Thomas Howell	IPVCP003X1C4X1C2

Title of Invention

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



Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding
Office Action



This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.

Owner	Percent interest
IngenioSpec, LLC	100%
Total	100%

The owner(s) of percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of any patent granted on pending reference Application Number(s)

Application #	Filing Date
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as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent granted on the reference application are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term of any patent granted on said reference application, "as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application," in the event that any such patent granted on the pending reference application: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as shortened by any terminal disclaimer filed prior to its grant.

The owner(s) of percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s)

Patent #

12044901

as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent later:

- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.



I certify, in accordance with 37 CFR 1.4(d)(4) that the terminal disclaimer fee under 37 CFR 1.20(d) required for this terminal disclaimer has already been paid in the above identified application.

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

I certify, in accordance with 37 CFR 1.4(d)(4) that I am: An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application

Signature	Name	Registration #
/C. Douglass Thomas/	C Douglass Thomas	32947

* Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner). Form PTO/SB/96 may be used for making this certification. See MPEP 324.



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APPROVAL LETTER

APPLICATION #	FILING DATE	APPLICANT/PATENT UNDER REEXAMINATION
18/597,874	03/06/2024	Thomas Howell

Title of Invention

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

Electronic terminal disclaimer filed on 10/18/2024

 Approved

This patent is subject to a Terminal Disclaimer

Approved / Disapproved by: Electronic Terminal Disclaimer automatically approved



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ELECTRONIC PAYMENT RECEIPT

APPLICATION #
18/597,874

RECEIPT DATE / TIME
10/18/2024 01:10:43 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 # 67627826

AUTHORIZED BY C Douglass Thomas

CUSTOMER # 34071

FILING DATE 03/06/2024

CORRESPONDENCE
ADDRESS -

FIRST NAMED
INVENTOR Thomas A. Howell

Payment Information

PAYMENT METHOD
CARD / 6752

PAYMENT TRANSACTION ID
E20240HD13278825

PAYMENT AUTHORIZED BY
Angela Nijim

PRE-AUTHORIZED ACCOUNT

-

PRE-AUTHORIZED CATEGORY

37 CFR 1.16 (National application filing, search, and examination fees); 37 CFR 1.17 (Patent application and reexamination processing fees); 37 CFR 1.19 (Document supply fees); 37 CFR 1.20 (Post Issuance fees); 37 CFR 1.21 (Miscellaneous fees and charges)

FEE CODE	DESCRIPTION	ITEM PRICE(\$)	QUANTITY	ITEM TOTAL(\$)
1814	STATUTORY DISCLAIMER, INCLUDING TERMINAL DISCLAIMER	170.00	1	170.00
TOTAL AMOUNT:				\$170.00

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New International Application Filed with the USPTO as a Receiving Office

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #
18/597,874

RECEIPT DATE / TIME
10/18/2024 01:10:43 PM Z ET

ATTORNEY DOCKET #
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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 # 67627826

FILING DATE 03/06/2024

CUSTOMER # 34071

FIRST NAMED
INVENTOR Thomas A. Howell

CORRESPONDENCE
ADDRESS -

AUTHORIZED BY C Douglass Thomas

Documents

TOTAL DOCUMENTS: 0

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
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DOCUMENT	MESSAGE DIGEST(SHA-512)
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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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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

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NOTICE OF ALLOWANCE AND FEE(S) DUE

34071 7590 09/11/2024
IPVENTURE, INC.
4010 Moorpark Avenue
Suite 211
San Jose, CA 95117

EXAMINER

LEI, JIE

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 09/11/2024

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/597,874	03/06/2024	Thomas A. Howell	IPVCP003X1C4X1C2	7223

TITLE OF INVENTION: SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC APPARATUS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$0.00	\$1200	12/11/2024

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 40% the amount of undiscounted fees, and micro entity fees are 20% the amount of undiscounted fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/Patent/MaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via the USPTO patent electronic filing system.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

34071 7590 09/11/2024
IPVENTURE, INC.
4010 Moorpark Avenue
Suite 211
San Jose, CA 95117

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via the USPTO patent electronic filing system or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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18/597,874 03/06/2024 Thomas A. Howell IPVCP003X1C4X1C2 7223

TITLE OF INVENTION: SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC APPARATUS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$0.00	\$1200	12/11/2024

EXAMINER	ART UNIT	CLASS-SUBCLASS
LEI, JIE	2872	351-158000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☐ Issue Fee ☐ Publication Fee (if required)

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☐ Electronic Payment via the USPTO patent electronic filing system ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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18/597,874	03/06/2024	Thomas A. Howell	IPVCP003X1C4X1C2	7223
34071	7590	09/11/2024	EXAMINER	
IPVENTURE, INC. 4010 Moorpark Avenue Suite 211 San Jose, CA 95117			LEI, JIE	
			ART UNIT	PAPER NUMBER
			2872	
DATE MAILED: 09/11/2024				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. 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 30 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, Virginia 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.** Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. The United States Patent and Trademark Office (USPTO) collects the information in this record under authority of 35 U.S.C. 2. The USPTO's system of records is used to manage all applicant and owner information including name, citizenship, residence, post office address, and other information with respect to inventors and their legal representatives pertaining to the applicant's/owner's activities in connection with the invention for which a patent is sought or has been granted. The applicable Privacy Act System of Records Notice for the information collected in this form is COMMERCE/PAT-TM-7 Patent Application Files, available in the Federal Register at 78 FR 19243 (March 29, 2013).

<https://www.govinfo.gov/content/pkg/FR-2013-03-29/pdf/2013-07341.pdf>

Routine uses of the information in this record may include disclosure to:

- 1) law enforcement, in the event that the system of records indicates a violation or potential violation of law;
- 2) a federal, state, local, or international agency, in response to its request;
- 3) a contractor of the USPTO having need for the information in order to perform a contract;
- 4) the Department of Justice for determination of whether the Freedom of Information Act (FOIA) requires disclosure of the record;
- 5) a Member of Congress submitting a request involving an individual to whom the record pertains, when the individual has requested the Member's assistance with respect to the subject matter of the record;
- 6) a court, magistrate, or administrative tribunal, in the course of presenting evidence, including disclosures to opposing counsel in the course of settlement negotiations;
- 7) the Administrator, General Services Administration (GSA), or their designee, during an inspection of records conducted by GSA under authority of 44 U.S.C. 2904 and 2906, in accordance with the GSA regulations and any other relevant (i.e., GSA or Commerce) directive, where such disclosure shall not be used to make determinations about individuals;
- 8) another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c));
- 9) the Office of Personnel Management (OPM) for personnel research purposes; and
- 10) the Office of Management and Budget (OMB) for legislative coordination and clearance.

If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.

Notice of Allowability	Application No. 18/597,874	Applicant(s) Howell et al.	
	Examiner JIE LEI	Art Unit 2872	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to filing of 8/30/2024.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 1-3 and 5-8. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
Certified copies:
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)	5. ☐ Examiner's Amendment/Comment
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.	6. ☒ Examiner's Statement of Reasons for Allowance
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.	7. ☐ Other _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.	

/JIE LEI/ Primary Examiner, Art Unit 2872	
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REASONS FOR ALLOWANCE

1. The present application is being examined under the pre-AIA first to invent provisions. This office action is in response to the filing of 8/30/2024.

Allowable Subject Matter

2. Claims 1-3 and 5-8 are allowed.

3. The following is an examiner's statement of reasons for allowance: the prior art taken singularly or in combination fails to anticipate or fairly suggest the limitations of the independent claims, in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper.

In regard to independent claims 1 and 2, the closest prior art are US 6349001 of Spitzer, US 20050201585 of Jannard et al, US 20050052537 of Mizusawa and US 5835185 of Kallman et al.

Regarding Claims 1 and 2, Spitzer teaches 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 position detector at least partially contained within the head-worn structure; 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 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 battery; wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the battery; and at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being electrically connected to at least the battery.

Jannard teaches a head-worn personal electronic apparatus, 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 button device configured to receive a user input based on a force induced on the button device, the button device being at least partially contained within the head-worn structure, wherein the received user input operating to at least alter operation of the head-worn electronic personal audio apparatus; a rechargeable battery contained within the head-worn structure.

Mizusawa teaches a mounted imaging apparatus, wherein the button device is a piezoelectric device, and the piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device.

Kallman teaches an eyewear system, wherein, a charging apparatus having at least a charging connector, 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; wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results 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 in the charging apparatus.

But none of them teaches that wherein the piezoelectric device being contained within the head-worn structure.

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 7-8 are also allowed due to their dependence on claim 1.

Claims 3 and 5-6 are also allowed due to their dependence on claim 2.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. 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.

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.

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

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

* 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

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

/JIE LEI/ Primary Examiner, Art Unit 2872	
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Issue Classification 	Application/Control No. 18/597,874	Applicant(s)/Patent Under Reexamination Howell et al.
	Examiner JIE LEI	Art Unit 2872

CPC						
Symbol					Type	Version
G02C	/	11	/	10	F	2013-01-01
G02C	/	5	/	143	I	2013-01-01
G02C	/	5	/	146	I	2013-01-01
H02J	/	7	/	0045	I	2013-01-01
G02C	/	11	/	06	I	2013-01-01
G02C	/	2200	/	08	A	2013-01-01

CPC Combination Sets							
Symbol				Type	Set	Ranking	Version
	/		/				

Use images from artifact folder? ☒ Yes ☐ No			
NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	7	
/JIE LEI/ Primary Examiner, Art Unit 2872	04 September 2024	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification 	Application/Control No. 18/597,874	Applicant(s)/Patent Under Reexamination Howell et al.
	Examiner JIE LEI	Art Unit 2872

INTERNATIONAL CLASSIFICATION				
CLAIMED				
G02C	/	11	/	00
G02C	/	5	/	14
G02C	/	11	/	06
H02J	/	7	/	00
NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS
351	158

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

Use images from artifact folder? ☒ Yes ☐ No			
NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	7	
/JIE LEI/ Primary Examiner, Art Unit 2872 (Primary Examiner)	04 September 2024 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 1

Issue Classification 	Application/Control No. 18/597,874	Applicant(s)/Patent Under Reexamination Howell et al.
	Examiner JIE LEI	Art Unit 2872

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47															
CLAIMS															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1														
4	2														
5	3														
-	4														
6	5														
7	6														
2	7														
3	8														

Use images from artifact folder? ☒ Yes ☐ No			
NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	7	
/JIE LEI/ Primary Examiner, Art Unit 2872		04 September 2024	
(Primary Examiner)	(Date)	O.G. Print Claim(s)	O.G. Print Figure
		1	1

Web Search History

date, time	web site	search string
8/30/2024 4:43:58 PM	Google Scholar	lens eyewear conductive sheet electrode conductive
8/30/2024 4:43:58 PM	Google Patents	Search Term 1 lens Search Term 2 eyewear Search Term 3 conductive sheet Search Term 4 electrode Search Term 5 conductive Before Priority Date: priority:20170919
8/30/2024 4:44:15 PM	Google Patents	Search Term 1 (electric eyewear)
8/30/2024 4:45:12 PM	Google	Electric eyewear glasses
8/30/2024 4:45:18 PM	Google	Best electric eyewear
8/30/2024 4:45:28 PM	Google	Electric Sunglasses Polarized
8/30/2024 4:45:31 PM	Google	Electric Dude Sunglasses
8/30/2024 4:46:07 PM	Google Scholar	single unit glasses temple piece frame
8/30/2024 4:46:07 PM	Google Patents	Search Term 1 single unit Search Term 2 glasses Search Term 3 temple Search Term 4 piece Search Term 5 frame Before Priority Date: priority:20190222
8/30/2024 5:06:47 PM	Google	Best electronic spectacles

date, time	web site	search string
8/30/2024 5:06:51 PM	Google	Smart glasses
8/30/2024 5:07:00 PM	Google	Snapchat Spectacles 3
8/30/2024 5:07:02 PM	Google	electric eyewear
8/30/2024 5:07:06 PM	Google	electronic spectacles
8/30/2024 5:07:42 PM	Google	frames of electronic spectacles
8/30/2024 5:08:18 PM	Google	Smart glasses technology
8/30/2024 5:08:24 PM	Google	Smart glasses with display
8/30/2024 5:08:28 PM	Google	Best smart glasses
8/30/2024 5:08:31 PM	Google	Smart glasses 2024
8/30/2024 5:08:48 PM	Google	Smart glasses with camera
8/30/2024 5:10:03 PM	Google	Best smart glasses reviews
8/30/2024 5:10:14 PM	Google	smart spectacles
8/30/2024 5:10:21 PM	Google	smart glasses reviews
8/30/2024 5:10:49 PM	Google	Nreal AR glasses
8/30/2024 5:10:54 PM	Google	Best AR glasses
8/30/2024 5:10:59 PM	Google	AR glasses 2024
8/30/2024 5:11:01 PM	Google	ar glasses
8/30/2024 5:11:35 PM	Google	VR games
8/30/2024 5:11:38 PM	Google	Best VR headset for PC
8/30/2024 5:11:48 PM	Google	VR glasses
8/30/2024 5:12:23 PM	Google	VR Optician review
8/30/2024 5:12:32 PM	Google	VR prescription lenses
8/30/2024 5:12:39 PM	Google	VR headset glasses
8/30/2024 5:13:22 PM	Google	head-mounted display in virtual reality
8/30/2024 5:13:27 PM	Google	Head mounted display glasses
8/30/2024 5:13:32 PM	Google	head-mounted display for pc
8/30/2024 5:13:35 PM	Google	head-mounted display examples

date, time	web site	search string
8/30/2024 5:13:40 PM	Google	head mounted display
8/30/2024 5:13:55 PM	Google	Best head mounted display review
8/30/2024 5:13:57 PM	Google	Head mounted display review 2021
8/30/2024 5:14:01 PM	Google	head-mounted display review
8/30/2024 5:14:14 PM	Google	HMD device
8/30/2024 5:14:58 PM	Google Scholar	eyewear set forth electronics frame lens
8/30/2024 5:14:58 PM	Google Patents	Search Term 1 eyewear Search Term 2 set forth Search Term 3 electronics Search Term 4 frame Search Term 5 lens Before Priority Date: priority:20150227
8/30/2024 5:15:05 PM	Google Scholar	circuit board stem frame head wearable apparatus
8/30/2024 5:15:05 PM	Google Patents	Search Term 1 circuit board Search Term 2 stem Search Term 3 frame Search Term 4 head Search Term 5 wearable apparatus Before Priority Date: priority:20171228
8/30/2024 5:15:11 PM	Google Scholar	membrane pressure various embodiments substrate adhesive

date, time	web site	search string
8/30/2024 5:15:11 PM	Google Patents	Search Term 1 membrane Search Term 2 pressure Search Term 3 various embodiments Search Term 4 substrate Search Term 5 adhesive Before Priority Date: priority:20150126
8/30/2024 5:15:19 PM	Google Scholar	inches frame support eyewear occipital
8/30/2024 5:15:19 PM	Google Patents	Search Term 1 inches Search Term 2 frame Search Term 3 support Search Term 4 eyewear Search Term 5 occipital Before Priority Date: priority:20000602
8/30/2024 5:15:25 PM	Google Scholar	frame module electro switch electronic
8/30/2024 5:15:25 PM	Google Patents	Search Term 1 frame Search Term 2 module Search Term 3 electro Search Term 4 switch Search Term 5 electronic Before Priority Date: priority:20070504
8/30/2024 5:15:31 PM	Google Scholar	lens housing lens housing temple module

date, time	web site	search string
8/30/2024 5:15:31 PM	Google Patents	Search Term 1 lens Search Term 2 housing Search Term 3 lens housing Search Term 4 temple Search Term 5 module Before Priority Date: priority:20100702
8/30/2024 5:15:41 PM	Google Scholar	eye pupil light user retina
8/30/2024 5:15:41 PM	Google Patents	Search Term 1 eye Search Term 2 pupil Search Term 3 light Search Term 4 user Search Term 5 retina Before Priority Date: priority:20081102
8/30/2024 5:16:00 PM	Google Scholar	electronic device sensor external electronic unit detection signal
8/30/2024 5:16:00 PM	Google Patents	Search Term 1 electronic device Search Term 2 sensor Search Term 3 external electronic Search Term 4 unit Search Term 5 detection signal Before Priority Date: priority:20130118
8/30/2024 5:26:33 PM	Google Scholar	glasses electronic device type electronic type electronic

date, time	web site	search string
8/30/2024 5:26:33 PM	Google Patents	Search Term 1 glasses Search Term 2 electronic device Search Term 3 type electronic Search Term 4 type Search Term 5 electronic Before Priority Date: priority:20150601
8/30/2024 5:26:38 PM	Google Scholar	fpc printed circuit flexible printed circuit board type electronic
8/30/2024 5:26:38 PM	Google Patents	Search Term 1 fpc Search Term 2 printed circuit Search Term 3 flexible printed Search Term 4 circuit board Search Term 5 type electronic Before Priority Date: priority:20150601
8/30/2024 5:26:44 PM	Google Scholar	eyewear coil receiver coil characerzedn lens
8/30/2024 5:26:44 PM	Google Patents	Search Term 1 eyewear Search Term 2 coil Search Term 3 receiver coil Search Term 4 characerzedn Search Term 5 lens Before Priority Date: priority:20170313
8/30/2024 5:26:49 PM	Google Scholar	eyewear wearer skeleton elements dressing

date, time	web site	search string
8/30/2024 5:26:49 PM	Google Patents	Search Term 1 eyewear Search Term 2 wearer Search Term 3 skeleton Search Term 4 elements Search Term 5 dressing Before Priority Date: priority:20170711
8/30/2024 5:26:55 PM	Google Scholar	wearable wearing electronic device connecting portion wearable electronic
8/30/2024 5:26:55 PM	Google Patents	Search Term 1 wearable Search Term 2 wearing Search Term 3 electronic device Search Term 4 connecting portion Search Term 5 wearable electronic Before Priority Date: priority:20180102
8/30/2024 5:27:06 PM	Google Scholar	frame electronic electro electronic module active
8/30/2024 5:27:06 PM	Google Patents	Search Term 1 frame Search Term 2 electronic Search Term 3 electro Search Term 4 electronic module Search Term 5 active Before Priority Date: priority:20070504
8/30/2024 5:27:11 PM	Google Scholar	electronic temple electrical enclosure components

date, time	web site	search string
8/30/2024 5:27:11 PM	Google Patents	Search Term 1 electronic Search Term 2 temple Search Term 3 electrical Search Term 4 enclosure Search Term 5 components Before Priority Date: priority:20110211
8/30/2024 5:27:15 PM	Google Scholar	sidewall electronic device recess housing region
8/30/2024 5:27:15 PM	Google Patents	Search Term 1 sidewall Search Term 2 electronic device Search Term 3 recess Search Term 4 housing Search Term 5 region Before Priority Date: priority:20170313
8/30/2024 5:30:40 PM	Google Scholar	frame temple housing hinge temple arm
8/30/2024 5:30:40 PM	Google Patents	Search Term 1 frame Search Term 2 temple Search Term 3 housing Search Term 4 hinge Search Term 5 temple arm Before Priority Date: priority:20160229
8/30/2024 5:30:47 PM	Google Scholar	electro lens adapter active delete delete

date, time	web site	search string
8/30/2024 5:30:47 PM	Google Patents	Search Term 1 electro Search Term 2 lens Search Term 3 adapter Search Term 4 active Search Term 5 delete delete Before Priority Date: priority:20060623
8/30/2024 5:30:53 PM	Google Scholar	electro active temple frame spectacles
8/30/2024 5:30:53 PM	Google Patents	Search Term 1 electro Search Term 2 active Search Term 3 temple Search Term 4 frame Search Term 5 spectacles Before Priority Date: priority:20070504
8/30/2024 5:31:00 PM	Google Scholar	metal circuit board printed circuit adapter optical module
8/30/2024 5:31:00 PM	Google Patents	Search Term 1 metal Search Term 2 circuit board Search Term 3 printed circuit Search Term 4 adapter Search Term 5 optical module Before Priority Date: priority:20160428
8/30/2024 5:31:11 PM	Google Scholar	electro active eyewear frame conductive

date, time	web site	search string
8/30/2024 5:31:11 PM	Google Patents	Search Term 1 electro Search Term 2 active Search Term 3 eyewear Search Term 4 frame Search Term 5 conductive Before Priority Date: priority:20110817
8/30/2024 5:31:20 PM	Google Scholar	temple coil spring frame control unit hollow member
8/30/2024 5:31:20 PM	Google Patents	Search Term 1 temple Search Term 2 coil spring Search Term 3 frame Search Term 4 control unit Search Term 5 hollow member Before Priority Date: priority:20180322
8/30/2024 5:31:26 PM	Google Scholar	joining joining part spectacle frame curvature radius bridge
8/30/2024 5:31:26 PM	Google Patents	Search Term 1 joining Search Term 2 joining part Search Term 3 spectacle frame Search Term 4 curvature radius Search Term 5 bridge Before Priority Date: priority:20171108
8/30/2024 5:31:32 PM	Google Scholar	temple battery frame battery carrier wearable electronic

date, time	web site	search string
8/30/2024 5:31:32 PM	Google Patents	Search Term 1 temple Search Term 2 battery Search Term 3 frame Search Term 4 battery carrier Search Term 5 wearable electronic Before Priority Date: priority:20151030
8/30/2024 5:32:57 PM	Google Scholar	eyeglass interface system camera audio integrated circuits
8/30/2024 5:32:57 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
8/30/2024 5:36:17 PM	Google Scholar	speaker audio device audio support wearable wireless
8/30/2024 5:36:17 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
8/30/2024 5:46:28 PM	Google Scholar	electronic lens recess electronic frame recesses

date, time	web site	search string
8/30/2024 5:46:28 PM	Google Patents	Search Term 1 electronic Search Term 2 lens Search Term 3 recess Search Term 4 electronic frame Search Term 5 recesses Before Priority Date: priority:20150924
8/30/2024 5:46:33 PM	Google Scholar	bridge lens electrical components power source frame
8/30/2024 5:46:33 PM	Google Patents	Search Term 1 bridge Search Term 2 lens Search Term 3 electrical components Search Term 4 power source Search Term 5 frame Before Priority Date: priority:20060503
8/30/2024 5:46:37 PM	Google Scholar	glasses frame layer plug connecting piece
8/30/2024 5:46:37 PM	Google Patents	Search Term 1 glasses Search Term 2 frame Search Term 3 layer Search Term 4 plug Search Term 5 connecting piece Before Priority Date: priority:20200824
8/30/2024 5:46:51 PM	Google Scholar	fpc plate plate pcb board glasses eyeglass holder

date, time	web site	search string
8/30/2024 5:46:51 PM	Google Patents	Search Term 1 fpc plate Search Term 2 plate Search Term 3 pcb board Search Term 4 glasses Search Term 5 eyeglass holder Before Priority Date: priority:20130411
8/30/2024 5:46:56 PM	Google Scholar	plate glasses pcb plate fpc fpc plate
8/30/2024 5:46:56 PM	Google Patents	Search Term 1 plate Search Term 2 glasses Search Term 3 pcb plate Search Term 4 fpc Search Term 5 fpc plate Before Priority Date: priority:20130411
8/30/2024 5:47:01 PM	Google Scholar	frame glasses layer plug connecting piece
8/30/2024 5:47:01 PM	Google Patents	Search Term 1 frame Search Term 2 glasses Search Term 3 layer Search Term 4 plug Search Term 5 connecting piece Before Priority Date: priority:20200824
8/30/2024 5:47:07 PM	Google Scholar	optical system lens unit optical axis eyeglass sidewall

date, time	web site	search string
8/30/2024 5:47:07 PM	Google Patents	Search Term 1 optical system Search Term 2 lens unit Search Term 3 optical axis Search Term 4 eyeglass Search Term 5 sidewall Before Priority Date: priority:20170713
8/30/2024 5:54:35 PM	Google Scholar	electronic temple optical element electronic components front body
8/30/2024 5:54:35 PM	Google Patents	Search Term 1 electronic Search Term 2 temple Search Term 3 optical element Search Term 4 electronic components Search Term 5 front body Before Priority Date: priority:20181214
8/30/2024 5:54:41 PM	Google Scholar	camera module conductive mounting mounting groove carrier
8/30/2024 5:54:41 PM	Google Patents	Search Term 1 camera module Search Term 2 conductive Search Term 3 mounting Search Term 4 mounting groove Search Term 5 carrier Before Priority Date: priority:20230525
8/30/2024 5:54:48 PM	Google Scholar	circuit pattern electronic circuit shell actuator pcb

date, time	web site	search string
8/30/2024 5:54:48 PM	Google Patents	Search Term 1 circuit pattern Search Term 2 electronic circuit Search Term 3 shell Search Term 4 actuator Search Term 5 pcb Before Priority Date: priority:20120629
8/30/2024 5:54:54 PM	Google Scholar	connecting portion magnet spectacles leg spectacle
8/30/2024 5:54:54 PM	Google Patents	Search Term 1 connecting portion Search Term 2 magnet Search Term 3 spectacles Search Term 4 leg Search Term 5 spectacle Before Priority Date: priority:20180323
8/30/2024 5:55:00 PM	Google Scholar	lens holder circuit board printed circuit base terminal
8/30/2024 5:55:00 PM	Google Patents	Search Term 1 lens holder Search Term 2 circuit board Search Term 3 printed circuit Search Term 4 base Search Term 5 terminal Before Priority Date: priority:20140120
8/30/2024 5:55:05 PM	Google Scholar	electronic device conductive outer structure inner structure opening

date, time	web site	search string
8/30/2024 5:55:05 PM	Google Patents	Search Term 1 electronic device Search Term 2 conductive Search Term 3 outer structure Search Term 4 inner structure Search Term 5 opening Before Priority Date: priority:20201113
8/30/2024 5:55:12 PM	Google Scholar	single unit glasses temple pair piece
8/30/2024 5:55:12 PM	Google Patents	Search Term 1 single unit Search Term 2 glasses Search Term 3 temple Search Term 4 pair Search Term 5 piece Before Priority Date: priority:20190222

Web Search History

date, time	web site	search string
9/3/2024 8:07:47 AM	Google Scholar	microphone audio wearer support audio device
9/3/2024 8:07:47 AM	Google Patents	Search Term 1 microphone Search Term 2 audio Search Term 3 wearer Search Term 4 support Search Term 5 audio device Before Priority Date: priority:20020726
9/3/2024 8:08:04 AM	Google Scholar	frame electronic device present pair optical photographic
9/3/2024 8:08:04 AM	Google Patents	Search Term 1 frame Search Term 2 electronic device Search Term 3 present Search Term 4 pair Search Term 5 optical photographic Before Priority Date: priority:20181127
9/3/2024 8:08:10 AM	Google Scholar	eyewear eyewear according temple frame control unit

date, time	web site	search string
9/3/2024 8:08:10 AM	Google Patents	Search Term 1 eyewear Search Term 2 eyewear according Search Term 3 temple Search Term 4 frame Search Term 5 control unit Before Priority Date: priority:20180322
9/3/2024 8:26:35 AM	Google Scholar	light projection projection engine frame assembly optical waveguide
9/3/2024 8:26:35 AM	Google Patents	Search Term 1 light projection Search Term 2 projection engine Search Term 3 frame Search Term 4 assembly Search Term 5 optical waveguide Before Priority Date: priority:20170823
9/3/2024 8:26:40 AM	Google Scholar	single unit temple pair frame lens
9/3/2024 8:26:40 AM	Google Patents	Search Term 1 single unit Search Term 2 temple Search Term 3 pair Search Term 4 frame Search Term 5 lens Before Priority Date: priority:20190222
9/3/2024 8:26:46 AM	Google Scholar	glasses fiber component continuous fiber carbon component

date, time	web site	search string
9/3/2024 8:26:46 AM	Google Patents	Search Term 1 glasses Search Term 2 fiber component Search Term 3 continuous fiber Search Term 4 carbon Search Term 5 component Before Priority Date: priority:20200527
9/3/2024 8:26:53 AM	Google Scholar	ana dar glasses aan ann
9/3/2024 8:26:53 AM	Google Patents	Search Term 1 ana Search Term 2 dar Search Term 3 glasses Search Term 4 aan Search Term 5 ann Before Priority Date: priority:20200917
9/3/2024 8:26:58 AM	Google Scholar	hinge antenna front frame wireless communication rotation position
9/3/2024 8:26:58 AM	Google Patents	Search Term 1 hinge Search Term 2 antenna Search Term 3 front frame Search Term 4 wireless communication Search Term 5 rotation position Before Priority Date: priority:20191114
9/3/2024 8:27:04 AM	Google Scholar	wearer lens head mounted eye display

date, time	web site	search string
9/3/2024 8:27:04 AM	Google Patents	Search Term 1 wearer Search Term 2 lens Search Term 3 head mounted Search Term 4 eye Search Term 5 display Before Priority Date: priority:20190930
9/3/2024 8:27:16 AM	Google Scholar	spectacle sensor predetermined identification control unit identification structure
9/3/2024 8:27:16 AM	Google Patents	Search Term 1 spectacle Search Term 2 sensor Search Term 3 predetermined identification Search Term 4 control unit Search Term 5 identification structure Before Priority Date: priority:20190808
9/3/2024 8:47:44 AM	Google Scholar	insert part metallic insert over plastic mass moulded
9/3/2024 8:47:44 AM	Google Patents	Search Term 1 insert part Search Term 2 metallic insert Search Term 3 over Search Term 4 plastic mass Search Term 5 moulded Before Priority Date: priority:20210809
9/3/2024 8:47:50 AM	Google Scholar	head frame polymer mounted device device defined

date, time	web site	search string
9/3/2024 8:47:50 AM	Google Patents	Search Term 1 head Search Term 2 frame Search Term 3 polymer Search Term 4 mounted device Search Term 5 device defined Before Priority Date: priority:20210921
9/3/2024 8:47:56 AM	Google Scholar	display frame lens electronic device fixed
9/3/2024 8:47:56 AM	Google Patents	Search Term 1 display Search Term 2 frame Search Term 3 lens Search Term 4 electronic device Search Term 5 fixed Before Priority Date: priority:20221207
9/3/2024 8:48:09 AM	Google Scholar	electronic device connecting member wearing antenna structure disposed
9/3/2024 8:48:09 AM	Google Patents	Search Term 1 electronic device Search Term 2 connecting member Search Term 3 wearing Search Term 4 antenna structure Search Term 5 disposed Before Priority Date: priority:20210909
9/3/2024 8:48:24 AM	Google Scholar	chassis display display device assembly waveguides

date, time	web site	search string
9/3/2024 8:48:24 AM	Google Patents	Search Term 1 chassis Search Term 2 display Search Term 3 display device Search Term 4 assembly Search Term 5 waveguides Before Priority Date: priority:20150120
9/3/2024 8:48:30 AM	Google Scholar	case rib head display device image display
9/3/2024 8:48:30 AM	Google Patents	Search Term 1 case Search Term 2 rib Search Term 3 head Search Term 4 display device Search Term 5 image display Before Priority Date: priority:20160215
9/3/2024 8:48:36 AM	Google Scholar	user frame display electronic device housing
9/3/2024 8:48:36 AM	Google Patents	Search Term 1 user Search Term 2 frame Search Term 3 display Search Term 4 electronic device Search Term 5 housing Before Priority Date: priority:20120307
9/3/2024 9:20:48 AM	Google Scholar	eyewear visor set forth frame electronics

date, time	web site	search string
9/3/2024 9:20:48 AM	Google Patents	Search Term 1 eyewear Search Term 2 visor Search Term 3 set forth Search Term 4 frame Search Term 5 electronics Before Priority Date: priority:20150227
9/3/2024 9:20:54 AM	Google Scholar	eyeglass side arm display user arm
9/3/2024 9:20:54 AM	Google Patents	Search Term 1 eyeglass Search Term 2 side arm Search Term 3 display Search Term 4 user Search Term 5 arm Before Priority Date: priority:20120330
9/3/2024 9:21:01 AM	Google Scholar	eyewear set forth electronics frame lens
9/3/2024 9:21:01 AM	Google Patents	Search Term 1 eyewear Search Term 2 set forth Search Term 3 electronics Search Term 4 frame Search Term 5 lens Before Priority Date: priority:20150227
9/3/2024 9:21:08 AM	Google Scholar	glass electronic device housing glass member display

date, time	web site	search string
9/3/2024 9:21:08 AM	Google Patents	Search Term 1 glass Search Term 2 electronic device Search Term 3 housing Search Term 4 glass member Search Term 5 display Before Priority Date: priority:20120125
9/3/2024 9:21:24 AM	Google Scholar	connection head mounted display connection opening earphone
9/3/2024 9:21:24 AM	Google Patents	Search Term 1 connection Search Term 2 head mounted Search Term 3 display Search Term 4 connection opening Search Term 5 earphone Before Priority Date: priority:20150927
9/3/2024 9:21:30 AM	Google Scholar	user housing module display equipment according
9/3/2024 9:21:30 AM	Google Patents	Search Term 1 user Search Term 2 housing Search Term 3 module Search Term 4 display Search Term 5 equipment according Before Priority Date: priority:20120105
9/3/2024 9:21:37 AM	Google Scholar	electronic device wearable electronic housing electronic component support structures

date, time	web site	search string
9/3/2024 9:21:37 AM	Google Patents	Search Term 1 electronic device Search Term 2 wearable electronic Search Term 3 housing Search Term 4 electronic component Search Term 5 support structures Before Priority Date: priority:20210203
9/3/2024 9:21:44 AM	Google Scholar	optical element semi vision system polarizing viewer
9/3/2024 9:21:44 AM	Google Patents	Search Term 1 optical element Search Term 2 semi Search Term 3 vision system Search Term 4 polarizing Search Term 5 viewer Before Priority Date: priority:20160704
9/3/2024 9:21:59 AM	Google Scholar	electronic device vent disposed housing heat dissipation
9/3/2024 9:21:59 AM	Google Patents	Search Term 1 electronic device Search Term 2 vent Search Term 3 disposed Search Term 4 housing Search Term 5 heat dissipation Before Priority Date: priority:20211019
9/3/2024 9:54:59 AM	Google Scholar	module light leg mounting lens

date, time	web site	search string
9/3/2024 9:54:59 AM	Google Patents	Search Term 1 module Search Term 2 light Search Term 3 leg Search Term 4 mounting Search Term 5 lens Before Priority Date: priority:20211229
9/3/2024 9:55:06 AM	Google Scholar	head display cover layer layer mounted device
9/3/2024 9:55:06 AM	Google Patents	Search Term 1 head Search Term 2 display Search Term 3 cover layer Search Term 4 layer Search Term 5 mounted device Before Priority Date: priority:20200921
9/3/2024 9:55:11 AM	Google Scholar	head display shroud mounted device ring
9/3/2024 9:55:11 AM	Google Patents	Search Term 1 head Search Term 2 display Search Term 3 shroud Search Term 4 mounted device Search Term 5 ring Before Priority Date: priority:20200921
9/3/2024 9:55:16 AM	Google Scholar	gate frame entities gates contrast

date, time	web site	search string
9/3/2024 9:55:16 AM	Google Patents	Search Term 1 gate Search Term 2 frame Search Term 3 entities Search Term 4 gates Search Term 5 contrast Before Priority Date: priority:20171110
9/3/2024 9:55:26 AM	Google Scholar	mirror mirror surface display housing display screen
9/3/2024 9:55:26 AM	Google Patents	Search Term 1 mirror Search Term 2 mirror surface Search Term 3 display Search Term 4 housing Search Term 5 display screen Before Priority Date: priority:20201027
9/3/2024 9:55:31 AM	Google Scholar	display lens layer frame lens body
9/3/2024 9:55:31 AM	Google Patents	Search Term 1 display Search Term 2 lens Search Term 3 layer Search Term 4 frame Search Term 5 lens body Before Priority Date: priority:20211123
9/3/2024 9:55:38 AM	Google Scholar	substrate eye examples light emitting micro light

date, time	web site	search string
9/3/2024 9:55:38 AM	Google Patents	Search Term 1 substrate Search Term 2 eye Search Term 3 examples Search Term 4 light emitting Search Term 5 micro light Before Priority Date: priority:20220711
9/3/2024 10:13:50 AM	Google Scholar	mounting surface wearable device disposed display mounting
9/3/2024 10:13:50 AM	Google Patents	Search Term 1 mounting surface Search Term 2 wearable device Search Term 3 disposed Search Term 4 display Search Term 5 mounting Before Priority Date: priority:20161230
9/3/2024 10:13:57 AM	Google Scholar	electronic device display module lens barrel wearable electronic optical unit
9/3/2024 10:13:57 AM	Google Patents	Search Term 1 electronic device Search Term 2 display module Search Term 3 lens barrel Search Term 4 wearable electronic Search Term 5 optical unit Before Priority Date: priority:20220725
9/3/2024 10:14:03 AM	Google Scholar	mini lens module lens module display

date, time	web site	search string
9/3/2024 10:14:03 AM	Google Patents	Search Term 1 mini Search Term 2 lens module Search Term 3 lens Search Term 4 module Search Term 5 display Before Priority Date: priority:20211018
9/3/2024 10:14:08 AM	Google Scholar	arm frame connector head accessory
9/3/2024 10:14:08 AM	Google Patents	Search Term 1 arm Search Term 2 frame Search Term 3 connector Search Term 4 head Search Term 5 accessory Before Priority Date: priority:20210924
9/3/2024 10:14:14 AM	Google Scholar	communication module sunglasses manufactured dimensional metal item
9/3/2024 10:14:14 AM	Google Patents	Search Term 1 communication module Search Term 2 sunglasses Search Term 3 manufactured Search Term 4 dimensional metal Search Term 5 item Before Priority Date: priority:20160823
9/3/2024 10:15:08 AM	Google Scholar	glasses temple connector user camera

date, time	web site	search string
9/3/2024 10:15:08 AM	Google Patents	Search Term 1 glasses Search Term 2 temple Search Term 3 connector Search Term 4 user Search Term 5 camera Before Priority Date: priority:20031009
9/3/2024 10:40:27 AM	Google Scholar	transmitter switch earphones antenna radio
9/3/2024 10:40:27 AM	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
9/3/2024 10:40:36 AM	Google Scholar	eyewear temple frame transceiver alarm
9/3/2024 10:40:36 AM	Google Patents	Search Term 1 eyewear Search Term 2 temple Search Term 3 frame Search Term 4 transceiver Search Term 5 alarm Before Priority Date: priority:20010430
9/3/2024 10:40:43 AM	Google Scholar	eyeglass bracket spectacles spectacle combined

date, time	web site	search string
9/3/2024 10:40:43 AM	Google Patents	Search Term 1 eyeglass Search Term 2 bracket Search Term 3 spectacles Search Term 4 spectacle Search Term 5 combined Before Priority Date: priority:18850623
9/3/2024 10:40:49 AM	Google Scholar	globes globe lighting device facially annular
9/3/2024 10:40:49 AM	Google Patents	Search Term 1 globes Search Term 2 globe Search Term 3 lighting device Search Term 4 facially Search Term 5 annular Before Priority Date: priority:18990707
9/3/2024 10:40:58 AM	Google Scholar	lamp frame spectacle socket opening
9/3/2024 10:40:58 AM	Google Patents	Search Term 1 lamp Search Term 2 frame Search Term 3 spectacle Search Term 4 socket Search Term 5 opening Before Priority Date: priority:19160412
9/3/2024 10:41:05 AM	Google Scholar	fuse insert plug slots contact

date, time	web site	search string
9/3/2024 10:41:05 AM	Google Patents	Search Term 1 fuse Search Term 2 insert Search Term 3 plug Search Term 4 slots Search Term 5 contact Before Priority Date: priority:19310529
9/3/2024 10:41:14 AM	Google Scholar	head bone receiver hearing contact surface
9/3/2024 10:41:14 AM	Google Patents	Search Term 1 head Search Term 2 bone Search Term 3 receiver Search Term 4 hearing Search Term 5 contact surface Before Priority Date: priority:19330718
9/3/2024 10:41:30 AM	Google Scholar	light spectacle frame battery bulb frame
9/3/2024 10:41:30 AM	Google Patents	Search Term 1 light Search Term 2 spectacle frame Search Term 3 battery Search Term 4 bulb Search Term 5 frame Before Priority Date: priority:19490323
9/3/2024 11:00:49 AM	Google Scholar	hearing aid ear frame spectacles parts

date, time	web site	search string
9/3/2024 11:00:49 AM	Google Patents	Search Term 1 hearing aid Search Term 2 ear Search Term 3 frame Search Term 4 spectacles Search Term 5 parts Before Priority Date: priority:19530316
9/3/2024 11:00:57 AM	Google Scholar	radiation crystal impedance spectral ranges exciter
9/3/2024 11:00:57 AM	Google Patents	Search Term 1 radiation Search Term 2 crystal Search Term 3 impedance Search Term 4 spectral ranges Search Term 5 exciter Before Priority Date: priority:19531013
9/3/2024 11:01:04 AM	Google Scholar	earphone seating hearing aid automatic self
9/3/2024 11:01:04 AM	Google Patents	Search Term 1 earphone Search Term 2 seating Search Term 3 hearing Search Term 4 aid Search Term 5 automatic self Before Priority Date: priority:19541018
9/3/2024 11:01:10 AM	Google Scholar	mount temple temples hinge ophthalmic

date, time	web site	search string
9/3/2024 11:01:10 AM	Google Patents	Search Term 1 mount Search Term 2 temple Search Term 3 temples Search Term 4 hinge Search Term 5 ophthalmic Before Priority Date: priority:19550804
9/3/2024 11:01:21 AM	Google Scholar	lamp recess frame recesses spectacles
9/3/2024 11:01:21 AM	Google Patents	Search Term 1 lamp Search Term 2 recess Search Term 3 frame Search Term 4 recesses Search Term 5 spectacles Before Priority Date: priority:19570412
9/3/2024 11:01:27 AM	Google Scholar	optical device lens illuminated optical frame bulbs
9/3/2024 11:01:27 AM	Google Patents	Search Term 1 optical device Search Term 2 lens Search Term 3 illuminated optical Search Term 4 frame Search Term 5 bulbs Before Priority Date: priority:19590508
9/3/2024 11:01:33 AM	Google Scholar	output integrator sunburn switch solar radiation

date, time	web site	search string
9/3/2024 11:01:33 AM	Google Patents	Search Term 1 output Search Term 2 integrator Search Term 3 sunburn Search Term 4 switch Search Term 5 solar radiation Before Priority Date: priority:19690804
9/3/2024 11:01:47 AM	Google Scholar	spectacles ultraviolet pair bodies wearer
9/3/2024 11:01:47 AM	Google Patents	Search Term 1 spectacles Search Term 2 ultraviolet Search Term 3 pair Search Term 4 bodies Search Term 5 wearer Before Priority Date: priority:19691217
9/3/2024 11:08:31 AM	Google Scholar	glasses rotating shaft circuit board disposed vibration
9/3/2024 11:08:31 AM	Google Patents	Search Term 1 glasses Search Term 2 rotating shaft Search Term 3 circuit board Search Term 4 disposed Search Term 5 vibration Before Priority Date: priority:20180824
9/3/2024 11:11:55 AM	Google Scholar	electronic device wearable electronic disclosure housing electronic component

date, time	web site	search string
9/3/2024 11:11:55 AM	Google Patents	Search Term 1 electronic device Search Term 2 wearable electronic Search Term 3 disclosure Search Term 4 housing Search Term 5 electronic component Before Priority Date: priority:20210203
9/3/2024 11:14:39 AM	Google Scholar	temple electrically connected built display end piece
9/3/2024 11:14:39 AM	Google Patents	Search Term 1 temple Search Term 2 electrically connected Search Term 3 built Search Term 4 display Search Term 5 end piece Before Priority Date: priority:20221207
9/3/2024 11:22:11 AM	Google Scholar	porous film substrate carbon nanotubes partially porous heat sink
9/3/2024 11:22:11 AM	Google Patents	Search Term 1 porous film Search Term 2 substrate Search Term 3 carbon nanotubes Search Term 4 partially porous Search Term 5 heat sink Before Priority Date: priority:20090308
9/3/2024 11:22:17 AM	Google Scholar	user display frame electronic device brow

date, time	web site	search string
9/3/2024 11:22:17 AM	Google Patents	Search Term 1 user Search Term 2 display Search Term 3 frame Search Term 4 electronic device Search Term 5 brow Before Priority Date: priority:20110818
9/3/2024 11:22:29 AM	Google Scholar	user eye image data light illuminator
9/3/2024 11:22:29 AM	Google Patents	Search Term 1 user Search Term 2 eye Search Term 3 image data Search Term 4 light Search Term 5 illuminator Before Priority Date: priority:20130903
9/3/2024 11:22:36 AM	Google Scholar	distance value pupillary distance previously determined user inter
9/3/2024 11:22:36 AM	Google Patents	Search Term 1 distance value Search Term 2 pupillary distance Search Term 3 previously determined Search Term 4 user Search Term 5 inter Before Priority Date: priority:20141112
9/3/2024 11:22:49 AM	Google Scholar	face frame temples lenses grooves

date, time	web site	search string
9/3/2024 11:22:49 AM	Google Patents	Search Term 1 face Search Term 2 frame Search Term 3 temples Search Term 4 lenses Search Term 5 grooves Before Priority Date: priority:20070717
9/3/2024 11:22:55 AM	Google Scholar	worn device head worn leds microprocessor alzheimer
9/3/2024 11:22:55 AM	Google Patents	Search Term 1 worn device Search Term 2 head worn Search Term 3 leds Search Term 4 microprocessor Search Term 5 alzheimer Before Priority Date: priority:20170517
9/3/2024 11:23:02 AM	Google Scholar	circuit board stem frame head wearable apparatus
9/3/2024 11:23:02 AM	Google Patents	Search Term 1 circuit board Search Term 2 stem Search Term 3 frame Search Term 4 head Search Term 5 wearable apparatus Before Priority Date: priority:20171228
9/3/2024 11:23:09 AM	Google Scholar	recess hcp thickness temple bcs

date, time	web site	search string
9/3/2024 11:23:09 AM	Google Patents	Search Term 1 recess Search Term 2 hcp Search Term 3 thickness Search Term 4 temple Search Term 5 bcs Before Priority Date: priority:20170328
9/3/2024 11:23:16 AM	Google Scholar	upper hinge section open core knuckle temple
9/3/2024 11:23:16 AM	Google Patents	Search Term 1 upper hinge Search Term 2 section Search Term 3 open core Search Term 4 knuckle Search Term 5 temple Before Priority Date: priority:20151228

Web Search History

date, time	web site	search string
9/3/2024 3:18:09 PM	Google	Best electronics eyewear
9/3/2024 3:18:19 PM	Google	eSight glasses
9/3/2024 3:18:26 PM	Google	Men electronics eyewear
9/3/2024 3:18:33 PM	Google	Smart glasses
9/3/2024 3:18:57 PM	Google	Best electronic spectacles
9/3/2024 3:19:07 PM	Google	Smart glasses with display
9/3/2024 3:19:24 PM	Google	vr glasses
9/3/2024 3:19:35 PM	Google	Ar glasses
9/3/2024 3:19:46 PM	Google	spectacles review
9/3/2024 3:20:03 PM	Google	Best electronic spectacles reviews
9/3/2024 3:20:17 PM	Google	electronic spectacles reviews
9/3/2024 3:20:21 PM	Google	electronic spectacles
9/3/2024 3:20:25 PM	Google	electronics eyewears
9/3/2024 3:20:37 PM	Google	Best electronics eyewear reviews
9/3/2024 3:20:45 PM	Google	Smart glasses technology
9/3/2024 3:20:51 PM	Google	Smart glasses review
9/3/2024 3:20:53 PM	Google	electronics eyewear reviews
9/3/2024 3:21:16 PM	Google Scholar	eyewear temple frame permanent magnet hinge

date, time	web site	search string
9/3/2024 3:21:16 PM	Google Patents	Search Term 1 eyewear Search Term 2 temple Search Term 3 frame Search Term 4 permanent magnet Search Term 5 hinge Before Priority Date: priority:20171205
9/3/2024 3:44:45 PM	Google	Neck Hanging Magnetic Reading Glasses
9/3/2024 3:44:49 PM	Google	Men's magnet temples of spectacles
9/3/2024 3:44:53 PM	Google	Magnetic interchangeable glasses frames
9/3/2024 3:44:58 PM	Google	magnet temples of spectacles
9/3/2024 3:45:22 PM	Google	magnet temples of spectacles reviews
9/3/2024 3:50:04 PM	Google Scholar	temple frame connector electronics wearable device
9/3/2024 3:50:04 PM	Google Patents	Search Term 1 temple Search Term 2 frame Search Term 3 connector Search Term 4 electronics Search Term 5 wearable device Before Priority Date: priority:20150415
9/3/2024 3:51:40 PM	Google Scholar	temple track guide wearable device eyewear system

date, time	web site	search string
9/3/2024 3:51:40 PM	Google Patents	Search Term 1 temple Search Term 2 track Search Term 3 guide Search Term 4 wearable device Search Term 5 eyewear system Before Priority Date: priority:20150610
9/3/2024 4:03:09 PM	Google Scholar	magnets members magnetic connector set forth magnet
9/3/2024 4:03:09 PM	Google Patents	Search Term 1 magnets Search Term 2 members Search Term 3 magnetic connector Search Term 4 set forth Search Term 5 magnet Before Priority Date: priority:20051213
9/3/2024 4:03:15 PM	Google Scholar	temple recess temples magnet holder
9/3/2024 4:03:15 PM	Google Patents	Search Term 1 temple Search Term 2 recess Search Term 3 temples Search Term 4 magnet Search Term 5 holder Before Priority Date: priority:20080204
9/3/2024 4:03:29 PM	Google Scholar	connector temple frame eyewear electronics

date, time	web site	search string
9/3/2024 4:03:29 PM	Google Patents	Search Term 1 connector Search Term 2 temple Search Term 3 frame Search Term 4 eyewear Search Term 5 electronics Before Priority Date: priority:20150415
9/3/2024 4:03:37 PM	Google Scholar	temple frame coupling mechanism articulated joint pair
9/3/2024 4:03:37 PM	Google Patents	Search Term 1 temple Search Term 2 frame Search Term 3 coupling mechanism Search Term 4 articulated joint Search Term 5 pair Before Priority Date: priority:20150929
9/3/2024 4:03:43 PM	Google Scholar	temple frame member side pieces pair assembly
9/3/2024 4:03:43 PM	Google Patents	Search Term 1 temple Search Term 2 frame member Search Term 3 side pieces Search Term 4 pair Search Term 5 assembly Before Priority Date: priority:20160801
9/3/2024 4:05:18 PM	Google Scholar	groove protrusion temple frame jacket

date, time	web site	search string
9/3/2024 4:05:18 PM	Google Patents	Search Term 1 groove Search Term 2 protrusion Search Term 3 temple Search Term 4 frame Search Term 5 jacket Before Priority Date: priority:20140425
9/3/2024 4:06:45 PM	Google Scholar	magnet contact surface electrical contact eyewear electronic assembly
9/3/2024 4:06:45 PM	Google Patents	Search Term 1 magnet Search Term 2 contact surface Search Term 3 electrical contact Search Term 4 eyewear Search Term 5 electronic assembly Before Priority Date: priority:20181227
9/3/2024 4:06:51 PM	Google Scholar	contact hinge case wearable device temple piece
9/3/2024 4:06:51 PM	Google Patents	Search Term 1 contact Search Term 2 hinge Search Term 3 case Search Term 4 wearable device Search Term 5 temple piece Before Priority Date: priority:20210427
9/3/2024 4:07:11 PM	Google Scholar	frame bridge recited eyeglass device magnetic member

date, time	web site	search string
9/3/2024 4:07:11 PM	Google Patents	Search Term 1 frame Search Term 2 bridge Search Term 3 recited Search Term 4 eyeglass device Search Term 5 magnetic member Before Priority Date: priority:19961213
9/3/2024 4:07:16 PM	Google Scholar	spectacles primary auxiliary frame clip
9/3/2024 4:07:16 PM	Google Patents	Search Term 1 spectacles Search Term 2 primary Search Term 3 auxiliary Search Term 4 frame Search Term 5 clip Before Priority Date: priority:20020524
9/3/2024 4:07:21 PM	Google Scholar	frame magnetic receiving portion flip friction
9/3/2024 4:07:21 PM	Google Patents	Search Term 1 frame Search Term 2 magnetic Search Term 3 receiving portion Search Term 4 flip Search Term 5 friction Before Priority Date: priority:20040701
9/3/2024 4:10:48 PM	Google Scholar	eyeglasses temple frame front members magnetic interaction

date, time	web site	search string
9/3/2024 4:10:48 PM	Google Patents	Search Term 1 eyeglasses Search Term 2 temple Search Term 3 frame front Search Term 4 members Search Term 5 magnetic interaction Before Priority Date: priority:20130313
9/3/2024 4:37:37 PM	Google Scholar	frame temples lenses eyeglasses disposed
9/3/2024 4:37:37 PM	Google Patents	Search Term 1 frame Search Term 2 temples Search Term 3 lenses Search Term 4 eyeglasses Search Term 5 disposed Before Priority Date: priority:20070921
9/3/2024 4:37:47 PM	Google Scholar	support member front support camera flexible leg tail end
9/3/2024 4:37:47 PM	Google Patents	Search Term 1 support member Search Term 2 front support Search Term 3 camera Search Term 4 flexible leg Search Term 5 tail end Before Priority Date: priority:20030829
9/3/2024 4:37:53 PM	Google Scholar	docking station eyeglass display device docking wearable display

date, time	web site	search string
9/3/2024 4:37:53 PM	Google Patents	Search Term 1 docking station Search Term 2 eyeglass Search Term 3 display device Search Term 4 docking Search Term 5 wearable display Before Priority Date: priority:20150618
9/3/2024 4:38:03 PM	Google Scholar	temple eyewear electrical connector connector exposed
9/3/2024 4:38:03 PM	Google Patents	Search Term 1 temple Search Term 2 eyewear Search Term 3 electrical connector Search Term 4 connector Search Term 5 exposed Before Priority Date: priority:20190122
9/3/2024 4:38:07 PM	Google Scholar	bracket pivoting member vertical arm arm pivoting
9/3/2024 4:38:07 PM	Google Patents	Search Term 1 bracket Search Term 2 pivoting member Search Term 3 vertical arm Search Term 4 arm Search Term 5 pivoting Before Priority Date: priority:20160719
9/3/2024 4:38:15 PM	Google Scholar	microdisplay display body support member spectacles section

date, time	web site	search string
9/3/2024 4:38:15 PM	Google Patents	Search Term 1 microdisplay Search Term 2 display body Search Term 3 support member Search Term 4 spectacles Search Term 5 section Before Priority Date: priority:20060316
9/3/2024 4:38:21 PM	Google Scholar	display device bar joint small display slider
9/3/2024 4:38:21 PM	Google Patents	Search Term 1 display device Search Term 2 bar Search Term 3 joint Search Term 4 small display Search Term 5 slider Before Priority Date: priority:20050309
9/3/2024 4:52:50 PM	Google Scholar	base magnets display component computing device locations
9/3/2024 4:52:50 PM	Google Patents	Search Term 1 base Search Term 2 magnets Search Term 3 display component Search Term 4 computing device Search Term 5 locations Before Priority Date: priority:20121109
9/3/2024 4:52:55 PM	Google Scholar	side wall eyeshade magnet head display apparatus

date, time	web site	search string
9/3/2024 4:52:55 PM	Google Patents	Search Term 1 side wall Search Term 2 eyeshade Search Term 3 magnet Search Term 4 head Search Term 5 display apparatus Before Priority Date: priority:20150430
9/3/2024 4:53:00 PM	Google Scholar	lenses eyeglasses trough eyeglasses frame attached
9/3/2024 4:53:00 PM	Google Patents	Search Term 1 lenses Search Term 2 eyeglasses Search Term 3 trough Search Term 4 eyeglasses frame Search Term 5 attached Before Priority Date: priority:20071120
9/3/2024 4:53:06 PM	Google Scholar	glasses magnet auxiliary main body spectacles
9/3/2024 4:53:06 PM	Google Patents	Search Term 1 glasses Search Term 2 magnet Search Term 3 auxiliary Search Term 4 main body Search Term 5 spectacles Before Priority Date: priority:20040419
9/3/2024 4:53:15 PM	Google Scholar	base lid magnet lens pocket

date, time	web site	search string
9/3/2024 4:53:15 PM	Google Patents	Search Term 1 base Search Term 2 lid Search Term 3 magnet Search Term 4 lens Search Term 5 pocket Before Priority Date: priority:20120309
9/3/2024 4:53:20 PM	Google Scholar	eyeglasses pair bridge pad bridge segment
9/3/2024 4:53:20 PM	Google Patents	Search Term 1 eyeglasses Search Term 2 pair Search Term 3 bridge pad Search Term 4 bridge Search Term 5 segment Before Priority Date: priority:20120210
9/3/2024 4:53:25 PM	Google Scholar	spectacles auxiliary primary spring frame
9/3/2024 4:53:25 PM	Google Patents	Search Term 1 spectacles Search Term 2 auxiliary Search Term 3 primary Search Term 4 spring Search Term 5 frame Before Priority Date: priority:20020822
9/3/2024 4:53:31 PM	Google Scholar	eyeglasses section portal upper section bridge

date, time	web site	search string
9/3/2024 4:53:31 PM	Google Patents	Search Term 1 eyeglasses Search Term 2 section Search Term 3 portal Search Term 4 upper section Search Term 5 bridge Before Priority Date: priority:20170607
9/3/2024 5:08:53 PM	Google Scholar	camera magnet lens cylindrical housing lens cap
9/3/2024 5:08:53 PM	Google Patents	Search Term 1 camera Search Term 2 magnet Search Term 3 lens Search Term 4 cylindrical housing Search Term 5 lens cap Before Priority Date: priority:20210520
9/3/2024 5:08:58 PM	Google Scholar	magnet eyeglasses screw member male screw connecting shaft
9/3/2024 5:08:58 PM	Google Patents	Search Term 1 magnet Search Term 2 eyeglasses Search Term 3 screw member Search Term 4 male screw Search Term 5 connecting shaft Before Priority Date: priority:20010314
9/3/2024 5:09:04 PM	Google Scholar	magnetic lid display embedded goggles

date, time	web site	search string
9/3/2024 5:09:04 PM	Google Patents	Search Term 1 magnetic Search Term 2 lid Search Term 3 display Search Term 4 embedded Search Term 5 goggles Before Priority Date: priority:20070208
9/3/2024 5:09:09 PM	Google Scholar	eyewear temple electrical connector frame electronic device
9/3/2024 5:09:09 PM	Google Patents	Search Term 1 eyewear Search Term 2 temple Search Term 3 electrical connector Search Term 4 frame Search Term 5 electronic device Before Priority Date: priority:20190222
9/3/2024 5:09:34 PM	Google Scholar	temple eyewear frame hinge partially embedded
9/3/2024 5:09:34 PM	Google Patents	Search Term 1 temple Search Term 2 eyewear Search Term 3 frame Search Term 4 hinge Search Term 5 partially embedded Before Priority Date: priority:20171205
9/3/2024 5:09:41 PM	Google Scholar	temple piece configuration disposed catch stored configuration

date, time	web site	search string
9/3/2024 5:09:41 PM	Google Patents	Search Term 1 temple piece Search Term 2 configuration Search Term 3 disposed Search Term 4 catch Search Term 5 stored configuration Before Priority Date: priority:20190925
9/3/2024 5:09:52 PM	Google Scholar	lens bridge closure frame spectacle frame
9/3/2024 5:09:52 PM	Google Patents	Search Term 1 lens Search Term 2 bridge Search Term 3 closure Search Term 4 frame Search Term 5 spectacle frame Before Priority Date: priority:20081117
9/3/2024 5:09:58 PM	Google Scholar	magnets members magnetic magnetic connector eyewear
9/3/2024 5:09:58 PM	Google Patents	Search Term 1 magnets Search Term 2 members Search Term 3 magnetic Search Term 4 magnetic connector Search Term 5 eyewear Before Priority Date: priority:20051213
9/3/2024 5:10:10 PM	Google Scholar	eyeglasses arm magnetic magnetic element strike

date, time	web site	search string
9/3/2024 5:10:10 PM	Google Patents	Search Term 1 eyeglasses Search Term 2 arm Search Term 3 magnetic Search Term 4 magnetic element Search Term 5 strike Before Priority Date: priority:20170517
9/3/2024 5:10:17 PM	Google Scholar	temple hinge element lens frame magnets pivotable
9/3/2024 5:10:17 PM	Google Patents	Search Term 1 temple Search Term 2 hinge element Search Term 3 lens frame Search Term 4 magnets Search Term 5 pivotable Before Priority Date: priority:20060609
9/3/2024 5:16:23 PM	Google Scholar	eyeglass orientation eyeglass apparatus link eyeglass portion
9/3/2024 5:16:23 PM	Google Patents	Search Term 1 eyeglass Search Term 2 orientation Search Term 3 eyeglass apparatus Search Term 4 link Search Term 5 eyeglass portion Before Priority Date: priority:20131220
9/3/2024 5:16:27 PM	Google Scholar	eyeglasses ball temple temple arms lens frame

date, time	web site	search string
9/3/2024 5:16:27 PM	Google Patents	Search Term 1 eyeglasses Search Term 2 ball Search Term 3 temple Search Term 4 temple arms Search Term 5 lens frame Before Priority Date: priority:20060724
9/3/2024 5:16:37 PM	Google Scholar	temple front frame magnet exposed degrees
9/3/2024 5:16:37 PM	Google Patents	Search Term 1 temple Search Term 2 front frame Search Term 3 magnet Search Term 4 exposed Search Term 5 degrees Before Priority Date: priority:20080314
9/3/2024 5:16:59 PM	Google Scholar	frame base holding magnets pair
9/3/2024 5:16:59 PM	Google Patents	Search Term 1 frame Search Term 2 base Search Term 3 holding Search Term 4 magnets Search Term 5 pair Before Priority Date: priority:20070330
9/3/2024 5:17:04 PM	Google Scholar	glasses clip permanent magnet soft magnetic coupled

date, time	web site	search string
9/3/2024 5:17:04 PM	Google Patents	Search Term 1 glasses Search Term 2 clip Search Term 3 permanent magnet Search Term 4 soft magnetic Search Term 5 coupled Before Priority Date: priority:20090714
9/3/2024 5:17:09 PM	Google Scholar	temple tip tip body stop eyeglasses
9/3/2024 5:17:09 PM	Google Patents	Search Term 1 temple Search Term 2 tip Search Term 3 tip body Search Term 4 stop Search Term 5 eyeglasses Before Priority Date: priority:20040504
9/3/2024 5:17:13 PM	Google Scholar	lens main glasses lenses auxiliary lens
9/3/2024 5:17:13 PM	Google Patents	Search Term 1 lens Search Term 2 main Search Term 3 glasses Search Term 4 lenses Search Term 5 auxiliary lens Before Priority Date: priority:20120131
9/3/2024 5:34:10 PM	Google Scholar	film main frame elastic fixing sunglasses clip

date, time	web site	search string
9/3/2024 5:34:10 PM	Google Patents	Search Term 1 film Search Term 2 main frame Search Term 3 elastic fixing Search Term 4 sunglasses Search Term 5 clip Before Priority Date: priority:20160411
9/3/2024 5:34:15 PM	Google Scholar	frame primary frame auxiliary spectacles primary quick release
9/3/2024 5:34:15 PM	Google Patents	Search Term 1 frame Search Term 2 primary frame Search Term 3 auxiliary spectacles Search Term 4 primary Search Term 5 quick release Before Priority Date: priority:20190118
9/3/2024 5:34:20 PM	Google Scholar	aperture ornamental temple arm eyeglass frame ornamental insert
9/3/2024 5:34:20 PM	Google Patents	Search Term 1 aperture Search Term 2 ornamental Search Term 3 temple arm Search Term 4 eyeglass frame Search Term 5 ornamental insert Before Priority Date: priority:20111024
9/3/2024 5:34:29 PM	Google Scholar	glasses magnet pile head hanging connecting element

date, time	web site	search string
9/3/2024 5:34:29 PM	Google Patents	Search Term 1 glasses Search Term 2 magnet Search Term 3 pile head Search Term 4 hanging Search Term 5 connecting element Before Priority Date: priority:20190419
9/3/2024 5:34:33 PM	Google Scholar	glasses frame lanyard magnetic material disposed
9/3/2024 5:34:33 PM	Google Patents	Search Term 1 glasses Search Term 2 frame Search Term 3 lanyard Search Term 4 magnetic material Search Term 5 disposed Before Priority Date: priority:20151001
9/3/2024 5:34:38 PM	Google Scholar	temple gear pin leg working space concave
9/3/2024 5:34:38 PM	Google Patents	Search Term 1 temple Search Term 2 gear pin Search Term 3 leg Search Term 4 working space Search Term 5 concave Before Priority Date: priority:20091224
9/3/2024 5:34:44 PM	Google Scholar	leg embedded glasses leg spectacles support sheet

date, time	web site	search string
9/3/2024 5:34:44 PM	Google Patents	Search Term 1 leg Search Term 2 embedded Search Term 3 glasses leg Search Term 4 spectacles Search Term 5 support sheet Before Priority Date: priority:20170424
9/3/2024 5:42:53 PM	Google Scholar	main frame frame body magnet magnetic attraction mounting groove
9/3/2024 5:42:53 PM	Google Patents	Search Term 1 main frame Search Term 2 frame body Search Term 3 magnet Search Term 4 magnetic attraction Search Term 5 mounting groove Before Priority Date: priority:20210330
9/3/2024 5:42:58 PM	Google Scholar	lens recess eyewear mounting portion frame
9/3/2024 5:42:58 PM	Google Patents	Search Term 1 lens Search Term 2 recess Search Term 3 eyewear Search Term 4 mounting portion Search Term 5 frame Before Priority Date: priority:20121026
9/3/2024 5:43:03 PM	Google Scholar	rotation control frame control unit hinge magnet

date, time	web site	search string
9/3/2024 5:43:03 PM	Google Patents	Search Term 1 rotation control Search Term 2 frame Search Term 3 control unit Search Term 4 hinge Search Term 5 magnet Before Priority Date: priority:20120306
9/3/2024 5:43:09 PM	Google Scholar	mirror main auxiliary frame glasses
9/3/2024 5:43:09 PM	Google Patents	Search Term 1 mirror Search Term 2 main Search Term 3 auxiliary Search Term 4 frame Search Term 5 glasses Before Priority Date: priority:20210111
9/3/2024 5:43:21 PM	Google Scholar	eye frame frames split pin
9/3/2024 5:43:21 PM	Google Patents	Search Term 1 eye Search Term 2 frame Search Term 3 frames Search Term 4 split Search Term 5 pin Before Priority Date: priority:19521125
9/3/2024 5:43:25 PM	Google Scholar	face frame according ear branches frame

date, time	web site	search string
9/3/2024 5:43:25 PM	Google Patents	Search Term 1 face Search Term 2 frame according Search Term 3 ear Search Term 4 branches Search Term 5 frame Before Priority Date: priority:19820416
9/3/2024 5:43:31 PM	Google Scholar	frame eyewear lens earpiece securing means
9/3/2024 5:43:31 PM	Google Patents	Search Term 1 frame Search Term 2 eyewear Search Term 3 lens Search Term 4 earpiece Search Term 5 securing means Before Priority Date: priority:19921112
9/3/2024 5:43:36 PM	Google Scholar	front frame post temples hinge system hinge
9/3/2024 5:43:36 PM	Google Patents	Search Term 1 front frame Search Term 2 post Search Term 3 temples Search Term 4 hinge system Search Term 5 hinge Before Priority Date: priority:19930607
9/3/2024 5:51:58 PM	Google Scholar	frame temple hinge ear stem attached

date, time	web site	search string
9/3/2024 5:51:58 PM	Google Patents	Search Term 1 frame Search Term 2 temple Search Term 3 hinge Search Term 4 ear stem Search Term 5 attached Before Priority Date: priority:19960311
9/3/2024 5:52:03 PM	Google Scholar	lens frame spectacles temple arm temple pivot
9/3/2024 5:52:03 PM	Google Patents	Search Term 1 lens frame Search Term 2 spectacles Search Term 3 temple arm Search Term 4 temple Search Term 5 pivot Before Priority Date: priority:20020816
9/3/2024 5:52:08 PM	Google Scholar	leg end piece magnets hinge glasses
9/3/2024 5:52:08 PM	Google Patents	Search Term 1 leg Search Term 2 end piece Search Term 3 magnets Search Term 4 hinge Search Term 5 glasses Before Priority Date: priority:20110531
9/3/2024 5:52:14 PM	Google Scholar	lenses lens frame sun glasses pairs

date, time	web site	search string
9/3/2024 5:52:14 PM	Google Patents	Search Term 1 lenses Search Term 2 lens Search Term 3 frame Search Term 4 sun glasses Search Term 5 pairs Before Priority Date: priority:19630820
9/3/2024 5:52:24 PM	Google Scholar	piece rod temple locking rod shield
9/3/2024 5:52:24 PM	Google Patents	Search Term 1 piece Search Term 2 rod Search Term 3 temple Search Term 4 locking rod Search Term 5 shield Before Priority Date: priority:19891226
9/3/2024 5:52:29 PM	Google Scholar	temple cavity forward end insert structure grasping
9/3/2024 5:52:29 PM	Google Patents	Search Term 1 temple Search Term 2 cavity Search Term 3 forward end Search Term 4 insert structure Search Term 5 grasping Before Priority Date: priority:20000323
9/3/2024 5:52:44 PM	Google Scholar	eyewire latch magnetic eyewear lens

date, time	web site	search string
9/3/2024 5:52:44 PM	Google Patents	Search Term 1 eyewire Search Term 2 latch Search Term 3 magnetic Search Term 4 eyewear Search Term 5 lens Before Priority Date: priority:20190228
9/3/2024 5:52:51 PM	Google Scholar	temple eyeglass spring temples frame
9/3/2024 5:52:51 PM	Google Patents	Search Term 1 temple Search Term 2 eyeglass Search Term 3 spring Search Term 4 temples Search Term 5 frame Before Priority Date: priority:20100827
9/3/2024 5:52:56 PM	Google Scholar	clips fulcrum female eyeglass frame
9/3/2024 5:52:56 PM	Google Patents	Search Term 1 clips Search Term 2 fulcrum Search Term 3 female Search Term 4 eyeglass Search Term 5 frame Before Priority Date: priority:20110408

IP Office	Application	Applicant	Title	Application Date	Priority Number	Publication Number	Publication Date
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US	11183263			07/15/2005	US 60647826 US 60527565 US 60583169 US 60509631 US 10964011 US 60562798 US 60620238 US 60618107 US 60605191 US 11183263 US 60592045 US 60647836	US 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 60605191 US 11183256 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

IP Office	Application	Applicant	Title	Application Date	Priority Number	Publication Number	Publication Date
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 50647826 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 50618107 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 50618107 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

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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
US	15469440			03/24/2017	US 14922344 US 11006343 US 60527565 US 14272632 US 15469440 US 11452115 US 60689686 US 12798995	US 20170201872 A1 US 10142810 B2	07/13/2017 11/27/2018
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	16426351			05/30/2019	US 14313989 US 60583169 US 12322377 US 11078855 US 16102859 US 16426351 US 60647826 US 15343472 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20190310132 A1 US 10539459 B2	10/10/2019 01/21/2020
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
US	16445452			06/19/2019	US 12987018 US 11497651 US 13593483 US 11006343 US 60527565 US 13363360 US 14286976 US 12074961 US 16445452	US 20190306304 A1 US 11792316 B2	10/03/2019 10/17/2023
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

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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

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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	08/18/2022 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

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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

Bibliographic Data

Application No: 18/597,874

Foreign Priority claimed: ☐ Yes ☒ No

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

☐ Met After Allowance

Verified and Acknowledged: /JIE LEI/

Examiner's Signature

Initials

Title:

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

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
03/06/2024	351	2872	IPVCP003X1C4X1C2
RULE			

APPLICANTS

IngenioSpec, LLC, San Jose, CA, UNITED STATES

INVENTORS

Thomas A. Howell, San Jose, CA, UNITED STATES

David Chao, Saratoga, CA, UNITED STATES

C. Douglass Thomas, Saratoga, CA, UNITED STATES

Peter P. Tong, Mountain View, CA, UNITED STATES

CONTINUING DATA

This application is a CON of 18375893 10/02/2023 PAT 12044901

18375893 is a CON of 16182969 11/07/2018 PAT 12078870

16182969 is a CON of 16127957 09/11/2018 PAT 11086147

16182969 is a CON of 16049120 07/30/2018 PAT 11243416

16182969 is a CON of 15409723 01/19/2017ABN

16049120 is a CON of 15375423 12/12/2016 PAT 10061144

16127957 is a CON of 14715501 05/18/2015 PAT 10330956

15375423 is a CON of 14557409 12/01/2014 PAT 9547184

14557409 is a CON of 13955336 07/31/2013 PAT 8905542

15409723 is a CON of 13831512 03/14/2013 PAT 9690121

14715501 is a CON of 13367346 02/06/2012 PAT 9033493

13955336 is a CON of 13085402 04/12/2011 PAT 8500271

13831512 is a CON of 12806312 08/10/2010 PAT 8465151

12806312 is a CIP of 12462286 07/31/2009 PAT 8109629

13367346 is a CON of 12462286 07/31/2009 PAT 8109629

12806312 is a CIP of 12317043 12/18/2008 PAT 7771046
12317043 is a CON of 12214435 06/19/2008 PAT 7481531
12214435 is a CON of 11891411 08/09/2007 PAT 7401918
12462286 is a CON of 11580222 10/11/2006 PAT 7581833
11580222 has PRO of 60846150 09/20/2006
11580222 has PRO of 60787850 04/01/2006
11580222 has PRO of 60725896 10/11/2005
11580222 has PRO of 60725999 10/11/2005

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

03/18/2024

STATE OR COUNTRY

UNITED STATES

ADDRESS

IPVENTURE, INC.
4010 Moorpark Avenue
Suite 211
San Jose, CA 95117
UNITED STATES

FILING FEE RECEIVED

\$1,820

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	3	"18144557"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY,	OR	ON	ON	2024/05/14 09:42 AM

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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	6	"46326291".fmid.	(US-PGPUB; USPAT;	OR	ON	ON	2024/05/14

L10	12	"46332221".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	09:50 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	2024/05/15 08:37 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 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 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 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 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 (((("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
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) AND wireless\$4 AND embed\$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	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM

L33	103	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 (((("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 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 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 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 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 eyegals\$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 eyegals\$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 eyegals\$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 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
L61	3610	(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
L62	1920	(eyewear\$4 OR glasses\$4 OR spetac\$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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