

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	---

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been
filed in the U.S. District Court Southern District on the following

☐ Trademarks or ☐ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 9:21-cv-81009-DMM	DATE FILED 6/7/2021	U.S. DISTRICT COURT Southern District
PLAINTIFF PILOT, INC.		DEFENDANT Baccus Global LLC
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 9,525,297		SEE COMPLAINT
2 10,046,653		
3 10,328,806		
4 10,875,410		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading		
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK	
1			
2			
3			
4			
5			

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK Angela E. Noble	(BY) DEPUTY CLERK s/ Carlos Davis	DATE 7/30/2021
--------------------------	--------------------------------------	-------------------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF FLORIDA**

CASE NO. 21-81009-CV-MIDDLEBROOKS/Matthewman

PILOT, INC.,

Plaintiff,

v.

BACCUS GLOBAL LLC,

Defendant.

ORDER CLOSING CASE

THIS CAUSE comes before the Court upon the Parties' Joint Stipulation of Dismissal of Complaint with Prejudice and Joint Stipulation of Counterclaims Without Prejudice ("Stipulation"), filed on July 28, 2021. (DE 20). The Court congratulates the Parties on their amicable resolution of this matter and notes that pursuant to *Anago Franchising, Inc. v. Shaz, LLC*, 677 F.3d 1272 (11th Cir. 2012), the Parties' Stipulation is self-executing and no order of the Court is required to dismiss this action.

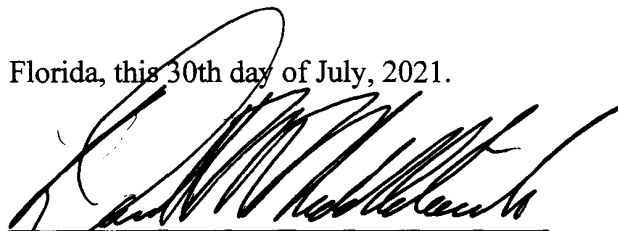
Accordingly, it is hereby **ORDERED and ADJUDGED** that:

(1) Plaintiff Pilot, Inc.'s claims against Defendant Baccus Global LLC are **DISMISSED WITH PREJUDICE**.

(2) Defendant Baccus Global LLC's Counterclaims against Plaintiff Pilot, Inc. are **DISMISSED WITHOUT PREJUDICE**.

(3) The Clerk of Court shall **CLOSE THIS CASE** and **DENY AS MOOT** all pending motions.

SIGNED in Chambers in West Palm Beach, Florida, this 30th day of July, 2021.

A handwritten signature in black ink, appearing to read 'Donald M. Middlebrooks', written over a horizontal line.

DONALD M. MIDDLEBROOKS
UNITED STATES DISTRICT JUDGE

Copies to: Counsel of Record

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	---

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been
filed in the U.S. District Court Southern District on the following

☐ Trademarks or ☐ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 9:21-cv-81009-DMM	DATE FILED 6/7/2021	U.S. DISTRICT COURT Southern District
PLAINTIFF PILOT, INC.		DEFENDANT Baccus Global LLC
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 9,525,297		SEE COMPLAINT
2 10,046,653		
3 10,328,806		
4 10,875,410		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading		
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK	
1			
2			
3			
4			
5			

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK Angela E. Noble	(BY) DEPUTY CLERK s/ Carlos Davis	DATE 6/7/2021
--------------------------	--------------------------------------	------------------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

below, Baccus has incorporated Pilot's patented technology into a number of other products currently featured on its websites at <https://www.stanley12volt.com/> and <https://www.blackanddecker12volt.com/>.

32. The infringing Baccus product models (collectively "the Accused Baccus Jump Starters") are at least those depicted in the below table:

TABLE 1: ACCUSED BACCUS JUMP STARTERS		
Model #	Product Description	Product Imaging
SS4LS Sold at various prices through third party retailers and websites	Stanley PowerToGo™ Lithium Ion Jump Starter / Power Pack 5 th Call out: "Reverse polarity warning to alert when there is an improper connection" 6 th Call out: "Backlit digital readout displays battery level and voltage"	 https://www.stanley12volt.com/copy-of-p2g7s
P2G7S Sold at various prices through third party retailers and websites	Stanley Simple Start™ Lithium Ion Battery Booster 6 th Call out: "Reverse polarity warning to alert when there is an improper connection"	 https://www.stanley12volt.com/p2g7s

P2G7B Sold at various prices through third party retailers and websites	BLACK+DECKER Power to Go™ Lithium Ion Battery Booster 5th Call Out: “Reverse polarity warning to alert when there is an improper connection”	 https://www.blackanddecker12volt.com/p2g7b
---	---	---

33. These products, their functionality, their Instruction Manuals, and the circuit boards incorporated within them have all been reviewed and inspected and that analysis confirms that manufacture, offer for sale, sale and/or use of the Accused Baccus Jump Starters' constituted literal and doctrine of equivalents infringement of at least Claims 7, 8, 9, 10, 11, 17, 18, 19 and 20 of the '653 patent.

34. The Instruction Manual that accompanied the P2G7S is attached as Exhibit E. This Manual applies to P2G7S and P2G7B.

35. The Instruction Manual that accompanied the SS4LS is attached as Exhibit F.

36. Claim 7 of the '653 patent requires as follows:

30 35	7. A charging device, comprising: a battery level detector to detect a level of a first battery; a load detector to detect a type of connection of a load; a microcontroller to generate an output signal based on the level of the first battery and the type of connection of the load; and switching circuitry to selectively connect the first battery to the load based on the output signal.
---------------------	---

37. Each limitation in Claim 7 is literally present within the P2G7S, the P2G7B, and the SS4LS products, as well as their associated cables.

38. The P2G7S, P2G7B, and SS4LS products are charging devices to the extent this limitation is required by Claims 7-11 and 17-20 of the '653 patent.

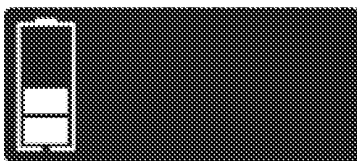
39. The P2G7S, P2G7B, and SS4LS have the claimed "battery level detector." Here, the first battery is the lithium battery within the housing. When in operation, the P2G7S or P2G7B user clicks the power button on the face of the housing. A Colored LED immediately displays an indication of the electrical power level of the first battery using the LED color to indicate battery level. *See* Ex. D at 7 (excerpted below).

READING THE OPERATING STATUS LED INDICATOR RING	
The Operating Status LED indicator Ring is a translucent ring around the Main Power Button. Press the Main Power Button to turn the unit on. The Operating Status LED Indicator Ring lights or flashes in one of four colors, indicating the following:	
Battery Status (Standby) Mode This displays constantly when the unit has been turned on and is not in Charging or Booster Mode.	
Blue (solid):	The unit's internal lithium-ion battery is in a fully charged state (80-100%).
Yellow (solid):	The unit's internal lithium battery is in a partially charged state (41-79%).
Red (solid):	The unit's internal lithium-ion battery has low battery power and should be recharged.



40. In the case of the SS4LS product, the LCD display illuminates and shows an indication of the level of the lithium battery. *See* Ex. E at 1 (excerpted below).

VIEWING BATTERY STATUS



The Battery Status Icon indicates the battery charge level as follows:

- If the battery charge level is at full capacity, four solid bars will display.
- If the battery is partially charged, two or three solid bars will display.
- If the battery is nearly empty, one solid bar will display. The unit should be charged at this time.
- If the battery is completely empty, four blank bars will display. The unit **MUST** be charged at this time or the unit's built-in low voltage protection will activate. The empty Battery Status Icon will light for a short period of time before automatic shut down. The unit will not operate until the battery is recharged.

41. The P2G7S, P2G7B, and SS4LS products have the claimed “load detector to detect a type of connection of the load.” As instructed in both Instruction Manuals, the user is directed to connect the jump starter to an automobile battery. As a result, the P2G7S and P2G7B products literally infringe Claims 9 and 19 of the ‘653 patent.

42. The LED’s function on the P2G7S and P2G7B products confirms the existence of the load detector. The housing features an LED that will flash red, yellow, or green based upon certain conditions, including the type of connection of the load. The SS4LS product uses a Bi-Color Booster Status Indicator for the same purpose.

43. On Page 7 of the Instruction Manual for the P2G7S product, the following chart appears:

Booster Mode This displays when the unit is boosting the vehicle battery using either the 12V DC Boosting/Charging Cable or the Battery Clamps. Important: The length of time for each stage of the boosting process varies depending on ambient temperature and the condition of the vehicle battery.	
Red (flashing):	This continues for up to 25 minutes when the unit detects that the vehicle battery it is connected to is at low charge level. It will automatically begin the boosting process. The Operating Status LED Indicator Ring continues to flash red until the process moves to stage 2, when it changes to flashing yellow.
Yellow (flashing):	This continues for up to 12 minutes until the process moves to stage 3, when it changes to flashing green.
Green (flashing):	This continues for up to 12 minutes until the process moves to the final stage, when it changes to solid green.
Green (solid):	The vehicle battery voltage has reached a sufficient charge level that you can attempt to start the vehicle.
Fault Condition	
Red & Blue (flashing alternately):	A fault condition has been detected. This could include unit overheating or reverse polarity connection of the battery clamps. The unit will stop operating until the fault has been corrected.
Red & Green (flashing alternately):	A vehicle battery fault condition has been detected. This could include lead sulfation or an internal shorted cell in the vehicle battery. The unit will stop operating until it is disconnected from the faulty battery.
Red & Yellow (flashing alternately):	The unit's internal lithium-ion battery has dropped to a low charged state (0%) and must be recharged at this time or the unit's built-in low voltage protection will activate shortly, when the unit will stop operating until it recharged.

44. In the Instruction Manual for the SS4LS product, the following chart appears:

Procedure

Take the following steps, observing all cautions and warnings in the "Important Safety Instructions" section at the front of this manual.

1. Turn off vehicle ignition and all accessories (radio, A/C, lights, connected cell phone chargers, etc.). Place vehicle in "park" and set the emergency brake.
2. Make sure all the unit functions are turned off (the LCD Screen is not lit) and the USB Charging Cable is NOT connected.
3. Lift up the protective cover of the unit's Smart Cables Port. Insert the double-barrel Smart Cables Connector into the Smart Cables Port on the unit.
4. Set up the unit as described in the "Preparing to Boost Using the Included Battery Clamps" section, observing all warnings and cautions in the "Important Safety Instructions" section.
5. When the unit is properly connected, the Bi-Color Booster Status Indicator on the Smart Cables Controller will light green.
6. Turn on the ignition and crank the engine in 5-6 second bursts until the engine starts.
7. When the process is completed, disconnect the booster. First remove the NEGATIVE black (-) clamp from vehicle chassis, and then remove the POSITIVE red (+) clamp from the POSITIVE battery post. Disconnect the double barrel Smart Cables Connector from the Smart Cables Port.
8. Store the Smart Cables Controller in a safe place.
9. Recharge the unit fully.

IMPORTANT NOTES:

If the battery clamps are incorrectly connected with regard to polarity, the Bi-Color LED Status Indicator will light red until the clamps are disconnected. Remove the clamps and then reconnect them with correct polarity.

If the voltage of the unit's internal lithium battery is low and has insufficient output power, the Bi-Color LED Status Indicator will light red. Disconnect the unit and fully charge following the directions in the "Charging / Recharging the Booster" section.

If the Smart Cables Controller is overheated, the Bi-Color LED Status Indicator will light red. Disconnect the Battery Clamps and allow the unit to cool down for a period before resuming any operation.

If the cranking current and/or time period exceeds the unit's parameters, the Bi-Color Booster Status Indicator will flash red for 30 seconds (a cooling down period) before lighting green again (resuming normal operation).

45. The load detector claimed in the '653 patent contributes to the behavior of Accused Baccus Jump Starters as described above. Specifically, the load detector of the P2G7S and P2G7B products will detect the type of connection of the load. Based upon the type of connection detected, the microcontroller will cause the LED to be illuminated when polarity is proper and boosting is occurring and will cause the LED to flash to alternate between colors when a faulty load connection is detected, for example, alternating blue and red when reverse polarity is detected. In the case of the SS4LS product, the load detector will detect the type of connection of the load. Based upon the

type of connection detected, the microcontroller will cause the Bi-Color LED Status Indicator to be solid green when polarity is proper and red when the connection is reversed.

46. Claim 8 and 18 require as follows:

8. The charging device of claim 7, wherein the type of connection includes a proper connection of the load and an improper connection of the load.

18. The method of claim 17, wherein the type of connection includes a proper connection of the load and an improper connection of the load.

47. The behavior described in the Instruction Manuals, and as observed in operation, confirms that the P2G7S, P2G7B, and SS4LS products detect a proper connection and an improper connection, as indicated by the LEDs. As a result, the Accused Baccus Jump Starters literally infringe Claims 8 and 18 of the '653 patent.

48. Claim 10 requires as follows:

10. The charging device of claim 9, wherein the proper connection of the load is a polarity match between the second battery and the motor, and wherein the improper connection of the load is a polarity reversal between the second battery and the motor or a disconnection of the second battery from the motor.

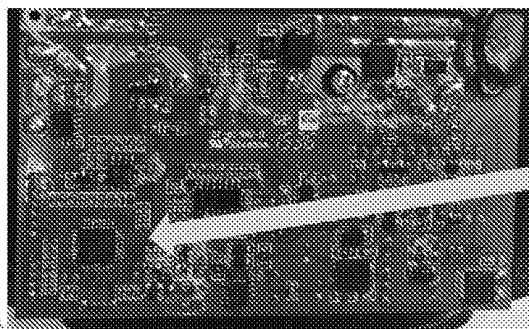
49. Claim 19 similarly requires "A method claim of **claim 18**, wherein the load is a second source and an electrical component powered by the second source,"

8
wherein the proper connection of the load is a correct polarity connection between the second power source and the electrical component, and wherein the improper connection of the load is an incorrect polarity connection between the second power source and the electrical component or a disconnection of the second power source from the electrical component.

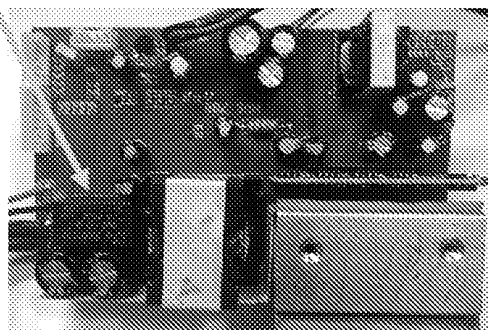
50. The behavior described in the Instruction Manuals, and as observed in operation, confirms that the P2G7S, P2G7B, and SS4LS products require a polarity match to achieve a proper connection, i.e. green light. Further, the P2G7S, P2G7B, and SS4LS products treat a polarity reversal as an improper connection, i.e. the flashing alternating colors or a red light. As a result, the Accused Baccus Jump Starters literally infringe Claim 10 and Claim 19 of the '653 patent.

51. The P2G7S and P2G7B products have a “microcontroller to generate an output signal based on the level of the first battery and the type of connection of the load.” The microcontroller used in the P2G7S and the P2G7B products receives information from the load detector and the battery detector and produces an output signal which travels to the switching circuitry.

Switching Circuitry
to Selectively
Connect the first
Battery to the load
based on the
output signal

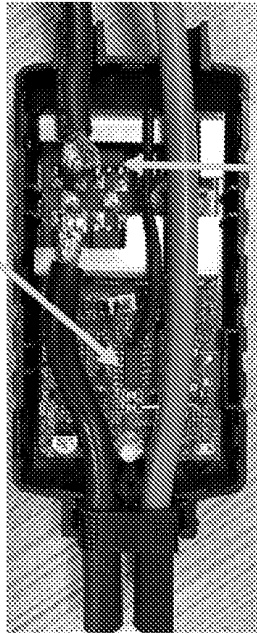


Microcontroller
to generate an
output signal
based on the
level of the
first battery and
the type of
connection of
the load



P2G7S

Microcontroller
to generate an
output signal
based on the
level of the
first battery and
the type of
connection of
the load



Switching Circuitry
to Selectively
Connect the first
Battery to the load
based on the output
signal

SS4LS

52. Both the P2G7S and the P2G7B products utilize a relay as switching circuitry. The SS4LS product uses a plurality of Metal Oxide Field Effect Transistors (“MOSFETs”) as the switching circuitry. The switching circuitry will only allow passage of the load based upon the output signal received from the microcontroller.

53. Based upon inspection, the P2G7S, P2G7B, and SS4LS products also literally infringe Claims 11 and 20 of the ‘653 patent. Claim 11 requires as follows:

11. The charging device of claim 8, wherein the micro-
controller is configured to:
generate the output signal to cause the switching circuitry
50 to connect the first battery to the load if the load is
properly connected and the level of the first battery is
above a threshold; and
generate the output signal to cause the switching circuitry
to disconnect the first battery from the load if i) the
55 level of the first battery is below the threshold, or ii) the
load is improperly connected.

54. Claim 20 requires as follows:

10	20. The method of claim 18, the generating comprising:
	generating the output signal to cause the switching cir-
	cuitry to connect the first power source to the load if the
	load is properly connected and the level of the first
	power source is above a threshold; and
15	generating the output signal to cause the switching cir-
	cuitry to disconnect the first power source from the load
	if i) the level of the first power source is below the
	threshold, or ii) the load is improperly connected.

55. The microcontroller of the P2G7S, P2G7B, and SS4LS products generate an output signal that is delivered to the claimed switching circuitry which causes the switching circuitry to connect the lithium battery (or first power source) to the automobile if (1) the load is properly connected and (2) the level of the first power source is above a threshold.

56. In addition, the microcontroller of the P2G7S, P2G7B, and SS4LS products generate an output signal that is delivered to the claimed switching circuitry which causes the switching circuitry to disconnect the lithium battery (or first power source) from the automobile when (1) the power of the first power source is below a threshold or (2) the load is improperly connected.

57. The SS4LS product and its functionality, its Instruction Manual, and the circuit boards incorporated within it were also analyzed and examined in connection with assessing infringement of the '806 patent. Based upon a careful inspection of the Accused Baccus Jump Starters' configuration and operation and related materials, the SS4LS product infringes, both literally and under the doctrine of equivalents, at least claims 16-19 of the '806 patent.

58. Exemplary independent claim 16 of the '806 patent reads:

16. A method for a device to charge an automobile battery, the method comprising:
detecting a voltage level of a battery;
detecting a connection and a type of connection between the battery and the automobile battery;
generating, by a microcontroller, an output signal based on the voltage level of the battery, the connection to the automobile battery and the type of connection of the automobile battery;
selectively connecting the battery to the automobile battery using the output signal; and
providing a low voltage protection to prevent damages caused by over discharging of the battery.

59. The SS4LS chargers include a lithium “battery” inside the housing that supplies a charging current and thus meet the first limitation of the claim. As explained above, in the case of the SS4LS chargers, detection of a voltage level of a battery is shown by the LCD display, which shows an indication of the level of the lithium battery, and the device’s Bi-Color LED Status Indicator, which will light red or green depending on the detected level of the lithium battery. In order to use the SS4LS chargers as intended, and as directed in the Instruction Manual, “detecting a voltage level of a battery” occurs automatically.

60. The SS4LS chargers include circuitry to detect whether there is a connection between the lithium battery and an automobile battery and the type of connection between them. As discussed above, the Bi-Color LED Status Indicator’s function on the SS4LS confirms the existence of a detection of a connection. The cable housing features an LED that illuminates red or green based upon certain conditions, including whether an automobile is connected and the type of connection. In order to use the SS4LS chargers as intended and as directed in the Instruction Manual, “detecting a connection and a type of connection between the battery and the automobile battery” occurs automatically.

**IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF FLORIDA
WEST PALM BEACH DIVISION**

PILOT, INC.,
a California Corporation,

Plaintiff,

v.

BACCUS GLOBAL LLC, a Florida Limited
Liability Company,

Defendant.

Case No.

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Pilot, Inc. (“Pilot” or “Plaintiff”) files this Complaint with Jury Demand for Patent Infringement against Defendant Baccus Global LLC (“Baccus”), and alleges as follows:

THE PARTIES

1. Pilot is a corporation organized under the laws of the state of California with its principal place of business at 13000 Temple Avenue, City of Industry, California 91746.
2. Defendant Baccus is a limited liability company organized under the laws of Florida having its principal place of business at 621 NW 53rd Street, Suite 450, Boca Raton, Florida 33487.

JURISDICTION AND VENUE

3. This is an action for patent infringement under the Patent Laws of the United States. 35 U.S.C. § 101, *et seq.*
4. This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a).
5. This Court has personal jurisdiction over Baccus because Baccus resides in the state of Florida and engages in continuous and systematic business in Florida and this District.

61. The SS4LS chargers include microcontroller configured to generate, when the jump starter device is connected with a correct connection to the automobile battery and the lithium battery voltage is sufficient, an output signal based on a detected battery voltage. As explained above, the microcontroller used in the SS4LS chargers receives information from the battery voltage detector and load detector that produces an output signal which travels to the switching circuitry and signaling LEDs. In order to use the SS4LS chargers as intended and as directed in the Instruction Manual, “generating, by a microcontroller, an output signal based on the voltage level of the battery, the connection to the automobile battery and the type of connection of the automobile battery” occurs automatically.

62. The SS4LS chargers include a plurality of MOSFETs as switching circuitry to selectively connect the lithium battery to the automobile battery when the microcontroller generates the output signal to the MOSFETs. As discussed, and identified above, the switching circuitry in the SS4LS chargers consist of a plurality of MOSFETs that are activated on receipt of an output signal from the microcontroller creating a connection whereby power is supplied from the lithium battery in the housing to the automobile battery. In order to use the SS4LS chargers as intended and as directed in the Instruction Manual, “selectively connecting the battery to the automobile battery using the output signal” occurs automatically.

63. The same MOSFETs discussed above function to disconnect the lithium battery from the automobile battery as appropriate in response to an output signal from the microcontroller. Based on testing and references in the Instruction Manual to the devices performance during the jump start process, the SS4LS disconnects the lithium battery from the automobile battery at the MOSFETs when the lithium battery is sufficiently charged, and this status is indicated by the Bi-Color LED Status Indicator. Disconnection in the instance of a low lithium battery protects the

lithium battery from becoming overly discharged, resulting in damage. In order to use the SS4LS chargers as intended and as directed in the Instruction Manual, “providing a low voltage protection to prevent damages caused by over discharging of the battery” occurs automatically.

64. All the limitations of claim 16 of the '806 patent, as above shown, necessarily occur in using the SS4LS chargers as intended and instructed, meaning manufacture, use, offer for sale, and/or sale in the U.S. and/or importation of these devices into the U.S. constitutes infringement of that independent claim.

65. The SS4LS chargers include a lithium battery that supplies a charging current and thus meets the first limitation of the claim. They also have the claimed “battery voltage detector, connected to a microcontroller, to detect a voltage of an automobile battery when the charging device is connected to an automobile.” When the cables are connected, the charges measure the voltage of the automobile battery and determine whether the detected voltage is above or below a threshold. Specifically, the Owner’s Manual directs that after a good connection between the charger and a sufficiently charged load battery is made, the system will indicate it is ready to jump and the “Bi-Color Booster Status Indicator on the Smart Cables Controller will light green.” Ex. E at 1. However, even if the cables are correctly connected, if the automobile battery is below 2-volts based on the voltage detector, the system will not indicate it is ready to jump. *Id.* (“The Battery Booster requires a minimum voltage to detect the correct connection before it will begin to boost. If the vehicle battery voltage is below approximately 2 volts, it may not be able to detect connection and may not be able to boost the vehicle. While this low battery voltage is rare it may occur under extreme conditions.”). These signals are mediated through the microprocessor, which controls the signaling LEDs.

66. The SS4LS chargers also include the claimed “load detector, connected to the microcontroller, to detect when the charging device is connected to the automobile battery.” As discussed above, the LED’s function on the SS4LS confirms the existence of the load detector. The cable housing features an LED that will turn red or green based upon certain conditions, including whether a load is connected and the type of connection.

67. The SS4LS chargers further have the claimed “microcontroller generating, when the charging device is connected to the automobile battery, an output signal based on a detected voltage of the automotive battery.” The microcontroller used in the SS4LS chargers receives information from the battery voltage detector and produces an output signal which travels to the switching circuitry and signaling LEDs. As discussed, and identified above, the switching circuitry in the SS4LS consists of a plurality of MOSFETs and thus also meets the fifth limitation of claim 1.

68. The SS4LS chargers finally also include the claimed “boost device for boosting a gate voltage of the plurality of MOSFETs.” The “boost device” is located in the circuit between the battery and the MOSFETs.

69. The SS4LS charger, its functionality, its Instruction Manual and the circuit boards incorporated with it were further examined and analyzed in connection with assessing infringement of the ’410 patent. Based upon a careful inspection of the Accused Baccus Jump Starters’ configuration and operation and related materials, the SS4LS chargers infringes, both literally and under the doctrine of equivalents, at least claims 16-19 of the ’410 patent.

70. Exemplary independent claim 16 of the ’410 patent reads:

16. A method for a device to charge an automobile battery, the method comprising:
detecting a voltage level of a battery;
detecting a connection and a type of connection between the battery and the automobile battery;
generating, by a microcontroller, an output signal based on the voltage level of the battery, the connection to the automobile battery and the type of connection of the automobile battery;
based on the output signal, selectively connecting the battery to the automobile battery by activating a plurality of MOSFETs; and
based on the output signal, selectively disconnecting the battery from the automobile battery to prevent damages caused by over-discharging of the battery.

71. The SS4LS chargers include a lithium “battery” inside the housing that supplies a charging current and thus meet the first limitation of the claim. As explained above, in the case of the SS4LS chargers, detection of a voltage level of a battery is shown by the LCD display, which shows an indication of the level of the lithium battery, and the device’s Bi-Color LED Status Indicator, which will light red or green depending on the detected level of the lithium battery. In order to use the SS4LS chargers as intended and as directed in the Instruction Manual, “detecting a voltage level of a battery” occurs automatically.

72. The SS4LS chargers include circuitry to detect whether there is a connection between the lithium battery and an automobile battery and the type of connection between them. As discussed above, the Bi-Color LED Status Indicator’s function on the SS4LS confirms the existence of a detection of a connection. The cable housing features an LED that illuminates red or green based upon certain conditions, including whether an automobile is connected and the type of connection. In order to use the SS4LS chargers as intended and as directed in the Instruction Manual, “detecting a connection and a type of connection between the battery and the automobile battery” occurs automatically.

73. The SS4LS chargers include microcontroller configured to generate, when the jump starter device is connected with a correct connection to the automobile battery and the lithium battery voltage is sufficient, an output signal based on a detected battery voltage. As explained above, the microcontroller used in the SS4LS chargers receives information from the battery voltage detector and load detector that produces an output signal which travels to the switching circuitry and signaling LEDs. In order to use the SS4LS chargers as intended and as directed in the Instruction Manual, “generating, by a microcontroller, an output signal based on the voltage level of the battery, the connection to the automobile battery and the type of connection of the automobile battery” occurs automatically.

74. The SS4LS chargers include a plurality of MOSFETs as switching circuitry to selectively connect the lithium battery to the automobile battery when the microcontroller generates the output signal to the MOSFETs. As discussed, and identified above, the switching circuitry in the SS4LS chargers consist of a plurality of MOSFETs that are activated on receipt of an output signal from the microcontroller creating a connection whereby power is supplied from the lithium battery in the housing to the automobile battery. In order to use the SS4LS chargers as intended and as directed in the Instruction Manual, “based on the output signal, selectively connecting the battery to the automobile battery by activating a plurality of MOSFETs” occurs automatically.

75. The same MOSFETs discussed above function to disconnect the lithium battery from the automobile battery as appropriate in response to an output signal from the microcontroller. Based on testing and references in the Instruction Manual to the devices performance during the jump start process, the SS4LS disconnects the lithium battery from the automobile battery at the MOSFETs when the lithium battery is sufficiently charged, and this status is indicated by the Bi-Color LED Status Indicator. Disconnection in the instance of a low lithium battery protects the

lithium battery from becoming overly discharged, resulting in damage. In order to use the SS4LS chargers as intended and as directed in the Instruction Manual, “based on the output signal, selectively disconnecting the battery from the automobile battery to prevent damages caused by over-discharging of the battery” occurs automatically in appropriate circumstances.

76. All the limitations of claim 16 of the ’410 patent, as above shown, necessarily occur in using the SS4LS chargers as intended and instructed, meaning manufacture, use, offer for sale, and/or sale in the U.S. and/or importation of these devices into the U.S. constitutes infringement of that independent claim.

77. Baccus directs and controls how the Accused Baccus Jump Starters are used through the Instruction Manuals that it provides with its products. These Instruction Manuals set out in detail the steps that users should carry out in using the Accused Baccus Jump Starters so that they will function for their intended purpose. Ex. D. E. Failure to follow the instructions will result in the Accused Baccus Jump Starters not providing any benefit to users because the jump starter will not function as intended. Additionally, Baccus establishes the manner and timing that users trigger the functions of the Accused Baccus Jump Starters by providing user instructions and/or determining the functions, circuitry, and programming of the Accused Baccus Jump Starters such that they carry out certain steps automatically when activated by the user.

78. On information and belief, Baccus has tested the Accused Baccus Jump Starters by carrying out the jump starter process using them and has directed its employees to test and use the Accused Baccus Jump Starters.

79. By letter dated September 30, 2020, Pilot informed Baccus of its rights in the ’297 Patent family and its allegations that Baccus’ products infringed the claims of those patents. This letter was received by Baccus, which responded.

80. During the pre-suit correspondence, Baccus stated that certain alleged prior art rendered the claims of the patent in suit invalid. Pilot provided all such alleged prior art and the related correspondence from Baccus to the USPTO prior to the issuance of the '410 Patent. Exhibit J at 1-2. Baccus was thus well aware of Pilot's asserted patents and their disclosure and their validity over and above the art it suggested would be relevant to at least some of the here asserted claims, and nevertheless continued to utilize the teachings of these patents to enrich itself and at the expense of Pilot, making its infringement complained of herein willful and wonton.

FIRST CAUSE OF ACTION
Patent Infringement of the '653 Patent

81. Pilot incorporates and re-alleges paragraphs 1 through 80 as set forth above as though fully set forth herein.

82. The '653 Patent is non-anticipated and non-obvious as defined in 35 U.S.C. §§ 102 and 103.

83. The '653 Patent is not subject to prosecution history claim disclaimer. *See* Exhibit F, G, & H.

84. Baccus has made, used, imported, supplied, distributed, sold, and/or offered for sale in the U.S. the Accused Baccus Jump Starters.

85. By so doing, the Accused Baccus Jump Starters directly infringe (literally and/or under the doctrine of equivalents, through Baccus' own acts and as joint infringement with users) at least Claim 7-11 and 17-20 of the '653 patent. Baccus's infringement in this regard is ongoing and not limited to the analysis set forth herein.

86. Consistent with 35 U.S.C. § 287, Pilot has marked, or caused its licensees to mark, all products relevant to the '653 patent.

87. Pilot has been damaged as a result of Baccus's infringing conduct alleged herein. Baccus is liable to Pilot in an amount that adequately compensates it for such infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by the Court under 35 U.S.C. § 284.

88. Pilot has been damaged by loss of profits associated with the sale of its patented lithium jump starter to retailers. Pilot is responsible for opening and establishing the lithium jump starter segment through the development of the safety circuitry.

89. Pilot had the manufacturing capabilities, sales team, and connections within Lowes and other retailers, to satisfy its demand for safe lithium jump starters.

90. There is not a commercially acceptable non-infringing substitute to the technology disclosed in the '653 patent.

91. Pilot is entitled to damages for lost profits caused by Baccus, in an amount to be established at trial.

92. Baccus's infringement has been and continues to be willful and intentional and with full knowledge of the existence and validity of the '653 patent and its patent family.

93. The willful and intentional nature of Baccus's infringement entitles Pilot to an award of treble damages pursuant to 35 U.S.C. § 284 and the exceptional nature of the case entitles Pilot to an award of its attorneys' fees pursuant to 35 U.S.C. § 285.

94. Pilot will continue to suffer damages and irreparable harm unless Baccus is restrained and enjoined by this court, pursuant to 35 U.S.C. § 283 from further infringement of the patents.

SECOND CAUSE OF ACTION
Patent Infringement of the '806 Patent

95. Pilot incorporates and re-alleges paragraphs 1 through 80 as set forth above as

though fully set forth herein.

96. The '806 patent is non-anticipated and non-obvious as defined in 35 U.S.C. §§ 102 and 103.

97. The '806 patent is not subject to prosecution history claim disclaimer. *See* Exhibit G, H & I.

98. Baccus has made, used, imported, supplied, distributed, sold, and/or offered for sale the Accused Baccus Jump Starters. By so doing, the Accused Baccus Jump Starters that use MOSFET switches, such as the SS4LS chargers, directly infringe (literally and/or under the doctrine of equivalents, through Baccus' own acts and as joint infringement with users) at least claims 16-19 of the '806 patent. Baccus's infringement in this regard is ongoing.

99. Pilot has been damaged as a result of Baccus's infringing conduct and Baccus is liable to Pilot in an amount that adequately compensates it for such infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by the Court under 35 U.S.C. § 284.

100. Baccus's infringement has been, and continues to be, willful and intentional and with full knowledge of the existence and validity of the '806 patent and its patent family.

101. The willful and intentional nature of Baccus's infringement entitles Pilot to an award of treble damages pursuant to 35 U.S.C. § 284, and the exceptional nature of the case entitles Pilot to an award of its attorneys' fees pursuant to 35 U.S.C. § 285.

102. Pilot will continue to suffer damages and irreparable harm unless Baccus is restrained and enjoined by this Court pursuant to 35 U.S.C. § 283 from further infringement of the '806 patent.

THIRD CAUSE OF ACTION
Patent Infringement of the '410 Patent

103. Pilot incorporates and re-alleges paragraphs 1 through 80 as set forth above as though fully set forth herein.

104. The '410 patent is non-anticipated and non-obvious as defined in 35 U.S.C. §§ 102 and 103.

105. The '410 patent is not subject to prosecution history claim disclaimer. *See* Exhibit G, H, I, & J.

106. Baccus has made, used, imported, supplied, distributed, sold, and/or offered for sale the Accused Baccus Jump Starters. By so doing, the Accused Baccus Jump Starters that use MOSFET switches, such as the SS4LS chargers, directly infringe (literally and/or under the doctrine of equivalents, through Baccus' own acts and as joint infringement with users) at least claims 16-19 of the '410 patent. Baccus's infringement in this regard is ongoing.

107. Pilot has been damaged as a result of Baccus's infringing conduct and Baccus is liable to Pilot in an amount that adequately compensates it for such infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by the Court under 35 U.S.C. § 284.

108. At least upon service of this Complaint, Baccus's infringement has been, and continues to be, willful and intentional and with full knowledge of the existence and validity of the '410 patent.

109. The willful and intentional nature of Baccus's infringement entitles Pilot to an award of treble damages pursuant to 35 U.S.C. § 284, and the exceptional nature of the case entitles Pilot to an award of its attorneys' fees pursuant to 35 U.S.C. § 285.

110. Pilot will continue to suffer damages and irreparable harm unless Baccus is

6. Venue is proper in this Judicial District pursuant to 28 U.S.C. §§ 1391 and 1400(b). Baccus maintains a principal place of business in this District, transacts business in this District, and committed acts of patent infringement in this District.

GENERAL ALLEGATIONS

7. Formed in 1996, Pilot strives to be first to market with innovations designed to serve the various needs of the growing automotive aftermarket. Through the years, Pilot has formed strong relationships with automotive retailers and large retail establishments as a source for quality and innovative automotive products, performance products, lighting, interior and exterior car and truck accessories, automotive jump starters, replacement parts, ornaments, towing accessories, and a variety of consumer electronics, such as dash cameras, smart phone accessories and ornamental lighting. Pilot sells under the following brand names:



8. In January of 2013, Mr. Calvin Wang (“Mr. Wang”), then President and CEO of Pilot, began exploring the development of a new, safe lithium jump starter for sale through Pilot’s retail channels, including Pep Boys, Auto Zone, Inc., Advance Auto Parts, Inc., Walmart Inc., and Lowes Companies, Inc.. A chemical engineer with a master’s degree from the University of California at Los Angeles, Mr. Wang often led Pilot’s new product initiatives. At the time, retailers were reluctant to stock lithium jump starters due to public concerns regarding combustion and fire associated with the use of rechargeable lithium batteries, particularly in high energy consumption applications such as jump starting an automobile.

9. During the first portion of 2013, Lowes Companies Inc., (“Lowes”) communicated to Pilot that it would be interested in offering a *safe* lithium jump starter, in addition to the

restrained and enjoined by this Court pursuant to 35 U.S.C. § 283 from further infringement of the '410 patent.

PRAYER FOR RELIEF

WHEREFORE, Pilot prays for judgment against Baccus as follows:

- A. Adjudging that the '653, '806, and '410 patents have been infringed by Baccus;
- B. Awarding Pilot damages against Baccus in an amount adequate to compensate Pilot for Baccus's infringement, together with interest and costs;
- C. Awarding Pilot an additional sum on account of the willful, intentional, and deliberate character of Baccus's infringing acts pursuant to 35 U.S.C. § 284;
- D. Adjudging that this case is exceptional pursuant to 35 U.S.C. § 285 and awarding Pilot reasonable attorney fees and costs against Baccus; and
- E. Granting Pilot all other legal and equitable relief for which Pilot is entitled.

DEMAND FOR JURY TRIAL

Pilot hereby requests a trial by jury pursuant to Rule 38 of the Federal Rules of Civil Procedure on all claims triable to a jury.

Dated: June 7, 2021

Respectfully submitted,

SANCHEZ FISCHER LEVINE, LLP
1200 Brickell Avenue, Ste. 750
Miami, Florida 33131
Tel.: (305) 925-9947

By: /s/ David M. Levine
David M. Levine, Esq.
Florida Bar No. 84431
Email: dlevine@sfl-law.com
Secondary: eservice@sfl-law.com
Antonia Iragorri, Esq.
Florida Bar No.: 1025034
Email: airagorri@sfl-law.com

Aaron P. Bradford, Esq. (to be admitted *pro hac vice*)

Alex W. Ruge, Esq. (to be admitted *pro hac vice*)

BRADFORD, LTD

2701 Lawrence Street, Suite 104

Denver, Colorado 80205

Telephone: (303) 325-5467

Facsimile: (844) 406-5294

E-mail: Alex@apb-law.com

E-mail: Aaron@apb-law.com

Matthew C. Holohan, Esq. (to be admitted *pro hac vice*)

SHERIDAN ROSS P.C.

1560 Broadway, Suite 1200

Denver, Colorado 80202-5141

Telephone: 303-863-9700

Facsimile: 303-863-0223

E-mail: mholohan@sheridanross.com

E-mail: litigation@sheridanross.com

Attorneys For Plaintiff Pilot, Inc.

traditional alkaline-based jump starters it was then exclusively selling. At the time, Baccus dominated the automotive jump starter segment at Lowes, but did not offer a lithium option due to the unresolved safety issues that arise around the timing and passage of substantial power from a lithium battery sufficient to jump start the vehicle.

10. Lowes noted that it was unwilling to place the available lithium jump starters on its shelves as they had many unacceptable safety issues. Based upon its survey of the available products, no manufacturer was offering a lithium jump starter that was considered safe for use by consumers. In fact, none of the major retailers (Walmart, Auto Zone, Advance Auto, Pep Boys, Target, Lowes, Home Depot, etc.) were offering a lithium alternative to the ubiquitous alkaline-based automotive jump starters.

11. Lowes wanted to offer its own lithium jump starter via a private label arrangement with Pilot, provided Pilot could design a safe lithium jump starter that could pass the rigors of the Lowes' quality assurance team. At the time, a standard had not been published by UL or Nationally Recognized Testing Laboratories ("NRTL") for these products.

12. In the years leading up to 2013, Pilot had a relationship with Foxconn, a respected manufacturer of high-quality consumer electronics. Through this relationship, Mr. Wang retained the services of Mr. Chung-Hsin "Jason" Wang ("Mr. Jason Wang"), an electrical engineer working for Foxconn. Mr. Jason Wang was hired to assist Mr. Wang in achieving his conception for a safe lithium jump starter. Together, Messrs. Wang developed a safety circuit that employed a novel combination of a microcontroller unit and electrical circuit modules to govern and safely control transfer of power from a lithium ion battery to a battery to be charged.

13. Through a lengthy and expensive research and development effort, Messrs. Wang designed an electrical architecture, microcontroller unit and scheme that protected the lithium jump

starter, the automotive battery, and the user prior to, during, and following the surge of energy transferred when the jump starter is activated. Through Mr. Wang, Pilot presented the solution to Lowes in the summer of 2013.

14. Lowes demonstrated healthy skepticism regarding the presented solution. Over the coming year, Lowes imposed a demanding quality assurance program upon Pilot and its novel technology. Only after satisfying Lowes rigorous QA was Pilot able to secure the first purchase order for lithium jump starters that feature the now patented safety mechanism.

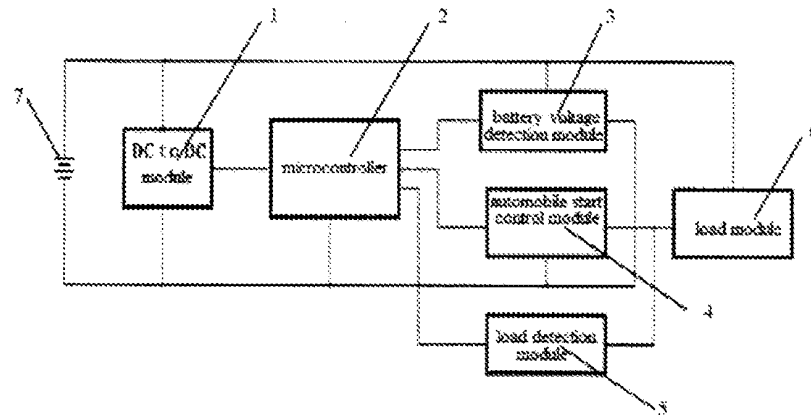
15. Lowes was unwilling to purchase lithium jump starters without the safety mechanisms designed by Pilot. Once satisfied with the technology, Lowes created space in its store for a new product line and ordered \$10,000,000 worth of the product, which Lowes marketed under the INSTABOOST brand name. Pilot marketed technically identical products under the LIGHTNING brand name, a photo of the product being represented below:



PILOT'S PATENTS COVERING THE WANG INVENTIONS

16. On April 28, 2014, Mr. Wang filed Chinese Patent Application Number 2014 2 0212173 ("the '173 application") describing various inventive aspects of the above product. Specifically, the '173 Application disclosed the novel and non-obvious use of a microcontroller

and a series of modules to control the timing and passage of electrical power from the lithium battery to the battery of a car in a safe manner, as shown in the below drawing:



17. Thereafter, Mr. Wang filed U.S. Patent Application 14/569,352, which ultimately matured into U.S. Patent Number 9,525,297 (the “’297 patent”), entitled “Automobile Charger,” on December 20, 2016. A copy of the ‘297 Patent is attached hereto as Exhibit A and incorporated herein. On July 3, 2018, inventorship was amended to note that Mr. Jason Wang was a contributing inventor to the ‘297 patent. A certificate of correction was entered regarding Mr. Jason Wang’s inventorship on March 26, 2019.

18. The ‘297 patent was fully assigned to Pilot on December 20, 2016.

19. Pilot has continuously marked its jump starter products covered by at least one claim of the ‘297 Patent with United States Patent No 9,525,297.

20. On November 18, 2016, Messrs. Wang filed a continuation of patent application No. 14/569,352, now the ‘297 patent. The United States Patent & Trademark Office (“USPTO”) issued the continuation application on August 14, 2018 as U.S. Patent No. 10,046,653 (the “’653 patent”). The continuation patent that ultimately matured into the ‘653 patent was fully assigned to Pilot on January 10, 2018. A copy of the ‘653 Patent is attached hereto as Exhibit B and incorporated herein.

21. On March 16, 2018, the Messrs. Wang filed another continuation application, which issued on June 25, 2019 as U.S. Patent No. 10,328,806 (the “’806 patent”). The continuation patent that ultimately matured into the ’806 patent was fully assigned to Pilot on January 10, 2018. A copy of the ’806 Patent is attached hereto as Exhibit C and is incorporated herein. Pilot has sold no lithium jump starter product covered by claims of the ’806 patent since issuance of that patent.

22. On May 6, 2019, the Messrs. Wang filed another continuation application, which too is owned by Pilot, and which issued on December 29, 2020 as U.S. Patent No. 10,875,410 (the “’410 patent”). The continuation patent that ultimately matured into the ’410 patent was fully assigned to Pilot on January 10, 2018. A copy of the ’410 Patent is attached hereto as Exhibit D and incorporated herein.

23. A further continuation application is currently pending before the United States Patent and Trademark Office (“USPTO”).

24. This family of patents describe and claim, *inter alia*, an automobile charging device with a stable power supply that allows for safe charging. Namely, the patented features ensure that the mobile battery does not discharge unless the cables are properly connected to the battery to be charged and other characteristics are present before a jump start can be initiated. This patented safety mechanism has been critical to the success of Pilot’s commercial embodiment and, not coincidentally, the accused Baccus Jump Starters that followed.

ACCEPTANCE AND COMMERCIAL SUCCESS

25. Lowes was the first major customer for Pilot’s lithium jump starter, accepting delivery of \$10 million in product commencing in September of 2014.

26. In order to draw attention to the existence of the safety mechanism in these products, Pilot directed that the microprocessor and modules described in the Pilot Patents be positioned in a control housing located on the jumper cables.



This allowed easy visual confirmation for the consumer that the jump starter featured the desired safety controls.

27. Subsequent to launching Pilot's INSTABOOST at Lowes, many lithium based automotive jump starter manufacturers obtained and copied the patented design.

28. The patented safety mechanisms were essential to the success of the overall product and presented the reason why consumers (including retail buyers and end consumers) preferred INSTABOOST and LIGHTNING over other lithium jump starters then in the market.

29. To ensure that retailers and end consumers knew that the Baccus Jump Starters had the safety features disclosed in Pilot's patents, Baccus positioned the control housing on its jumper cables for certain models:



30. Ultimately, Baccus has released at least three different models of lithium jump starters that feature Pilot's patented safety technology. The different models allow the products to be sold through various mass market retailers and through many eCommerce channels under brands, on information and belief, licensed by Baccus. The models take at least the following three forms:



31. Baccus incorporated Pilot's safety technology within the body of the battery of the two models on the right. In addition to the P2G7S and SS4LS models deconstructed and analyzed

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Application Number	16/404,321
				Filing Date	May 6, 2019
				First Named Inventor	Calvin Shiening Wang
				Art Unit	2851
				Examiner Name	LIN, SUN J
Sheet	1	of	1	Attorney Docket Number	8523WANG-1-CON-3

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number-kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	7656118	02/02/2010	Krieger et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ³ ; Number ⁴ ; Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶

NON-PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	2	"Stanley Digital Portable Power Station Instruction Manual, DPS109" Baccus Global, Apr. 29, 2009, 10 pages.
	3	"Stanley Lithium-Ion Jump-Starter Instruction Manual, LI1000," Baccus Global, Jul. 28, 2011, 10 pages.
	4	GANOZA, "Re: Your Letters on Behalf of Pilot, Inc. to Baccus Global LLC Addressing Pilot Jump Starter Patents," Foley & Lardner, LLP, Dec. 15, 2020, 20 pages.

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.



ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #
16/404,321

RECEIPT DATE / TIME
12/28/2020 05:06:54 PM ET

ATTORNEY DOCKET #
8523WANG-1-CON-3

Title of Invention

AUTOMOBILE CHARGER

Application Information

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

PATENT # 10875410

CONFIRMATION # 6514

FILED BY Joseph Samelson

PATENT CENTER # 60124436

FILING DATE 05/06/2019

CUSTOMER # 22442

FIRST NAMED
INVENTOR Calvin Shiening Wang

CORRESPONDENCE
ADDRESS -

AUTHORIZED BY David Kellis

Documents

TOTAL DOCUMENTS: 5

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
Stanley_Digital_portable_pow er.pdf	10	Non Patent Literature	8621 KB
Stanley_lithium- ion_jump_starter.pdf	10	Non Patent Literature	8316 KB
GANOZA_re_your_letters_on _behalf_of_pilot_20201215.p df	20	Non Patent Literature	13624 KB
8523WANG-1-CON- 3_IDS_07.pdf	3	-	818 KB
8523WANG-1-CON- (1-2)	2	Transmittal Letter	474 KB

3_IDS_07-TRAN.LET.pdf

8523WANG-1-CON-3_IDS_07-IDS.pdf	(3-3)	1	Information Disclosure Statement (IDS) Form (SB08)	346 KB
---------------------------------	-------	---	--	--------

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
Stanley_Digital_portable_power.pdf	8CA1DDCCF9D387D192A898FD064BE27A873B2D9D9C510B518CDA501A53A016C3FB8DD64B063921EFF2E0CA2E3391D564B284F444DABDC671243C4A975B87B135
Stanley_lithium-ion_jump_starter.pdf	AD998D63F0F9F0D45CBAFB30847DE484306D3312DE4C5C12481D6D363A1868644CB7171C956751E77E9881B817E6B1A2EEFCE6B711542180D748D3AFC2DD3666
GANOZA_re_your_letters_on_behalf_of_pilot_20201215.pdf	FCD9E8362DB4232BC8FFBF19D6AFD81BBAB4A0EF590C4D3CA782FECEB4825C371868F578A529DF1E90CF1E7EF9CFAE5F679DC68191B659AA636366BCF4759EC0
8523WANG-1-CON-3_IDS_07.pdf	325F98F58B450D3ADDCB3FB03BCCF05A1C9EED43296985A09E729A2DD8EBBDC00592A99EC5A9679D6172C6D68EDE9C271D299B82D61D1B1A8E2FEEDCD4FDBD21
8523WANG-1-CON-3_IDS_07-TRAN.LET.pdf	0D5E2EE24F3908393A4154D30DBC22B935DB21301C60A7556BDD728EAA6692509FE4EF7D868326B28296FB175A2319CA86F3598231E30CE42730ED61AF8F6EB2
8523WANG-1-CON-3_IDS_07-IDS.pdf	4B72317B46E1AB7CE736D8DE44BE3194F4B909E68B87E1443EFD68B0EFDC7B42968FA265AAA3663DE6180CA2F74F4C051425567CB39FC637AF90D1EE38DE2DDD

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

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d))

and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

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

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

New International Application Filed with the USPTO as a Receiving Office

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:	)	Group Art Unit: 2851
Calvin Shiening Wang	)	Confirmation No.: 6514
Serial No.: 16/404,321	)	Examiner: LIN, SUN J
Filed: May 6, 2019	)	
Atty. File No.: 8523WANG-1-CON-3	)	<u>SUPPLEMENTAL</u>
Entitled: "AUTOMOBILE CHARGER"	)	<u>INFORMATION DISCLOSURE</u>
	)	<u>STATEMENT</u>
	)	<i>Electronically Submitted</i>

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

Dear Commissioner:

The references cited on attached Form PTO/SB08 are being called to the attention of the Examiner.

- ☒ Copies of the cited non-patent and/or foreign references are enclosed herewith.
- ☐ Copies of the cited U.S. patents and/or patent applications are enclosed herewith.
- ☒ Copies of the cited U.S. patents/patent application publications are not enclosed in accordance with 37 C.F.R. § 1.98(a).
- ☐ Copies of the cited references are not enclosed, in accordance with 37 C.F.R. § 1.98(d), because the references were cited by or submitted to the U.S. Patent and Trademark Office in prior application Serial No. _____ filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120.
- ☐ To the best of applicants' belief, the pertinence of the foreign-language references is believed to be summarized in the attached English abstracts and/or in the figures, although applicants do not necessarily vouch for the accuracy of the translation.
- ☐ Examiner's attention is drawn to the following related applications:
- Serial No. _____ filed _____ (Attorney Ref. No. _____)
- Serial No. _____ filed _____ (Attorney Ref. No. _____)
- ☐ Other: _____

Submission of the above information is not intended as an admission that any item is citable under the statutes or rules to support a rejection, that any item disclosed represents analogous art, or that those skilled in the art would refer to or recognize the pertinence of any

reference without the benefit of hindsight, nor should an inference be drawn as to the pertinence of the references based on the order in which they are presented. Submission of this statement should not be taken as an indication that a search has been conducted, or that no better art exists.

It is respectfully requested that the cited information be expressly considered during the prosecution of this application and the references made of record therein.

Respectfully submitted,

SHERIDAN ROSS P.C.

By: /David B. Kellis/
David B. Kellis
Registration No. 59377
1560 Broadway, Suite 1200
Denver, Colorado 80202-5141
(303) 863-9700

Date: December 28, 2020

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Application Number	16/404,321
				Filing Date	May 6, 2019
				First Named Inventor	Calvin Shiening Wang
				Art Unit	2851
				Examiner Name	LIN, SUN J
Sheet	1	of	1	Attorney Docket Number	8523WANG-1-CON-3

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number-kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	6424158	07/23/2002	Klang	
	2	2004/0130298	07/08/2004	Krieger et al.	
	3	2005/0258797	11/24/2005	Hung	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ³ ; Number ⁴ ; Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
	4	CN 202696190	01/23/2013	GUANGWEI AMERICA LINE ELECTRICAL APPLIANCE CO LTD		(with English abstract)
	5	WO 2010/129723	11/11/2010	BAXTER BRENT		

NON-PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	6	Pilot, Inc., v. The Noco Company, Inc., The Noco Company, Inc.'s Objections and Responses to Plaintiff Pilot's First Interrogatories (Nos. 1-13), Case # 2:20-cv-01452-SB, dated Dec. 11, 2020, 17 pages.
	7	Pilot, Inc., v. The Noco Company, Inc., The Noco Company, Inc.'s Objections and Responses to Plaintiff Pilot's First Interrogatories (Nos. 14-15), Case # 2:20-cv-01452-SB, dated Dec. 11, 2020, 9 pages.
	8	Pilot, Inc., v. The Noco Company, Inc., The Noco Company, Inc.'s Objections and Responses to Plaintiff Pilot's First Set Of Requests For Production (Nos. 1-27), Case # 2:20-cv-01452-SB, dated Dec. 11, 2020, 24 pages.
	9	Pilot, Inc., v. The Noco Company, Inc., The Noco Company, Inc.'s Objections and Responses to Plaintiff Pilot's First Set Of Requests For Production (Nos. 28), Case # 2:20-cv-01452-SB, dated Dec. 11, 2020, 7 pages.

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Electronic Acknowledgement Receipt	
EFS ID:	41375026
Application Number:	16404321
International Application Number:	
Confirmation Number:	6514
Title of Invention:	AUTOMOBILE CHARGER
First Named Inventor/Applicant Name:	Calvin Shiening Wang
Customer Number:	22442
Filer:	David B. Kellis/Joseph Samelson
Filer Authorized By:	David B. Kellis
Attorney Docket Number:	8523WANG-1-CON-3
Receipt Date:	14-DEC-2020
Filing Date:	06-MAY-2019
Time Stamp:	13:46:58
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment		no			
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Foreign Reference	CN202696190_w_abstract.pdf	3289457	no	14
			8532312f1b0bd566a295e75eff37186fa88a9afc		
Warnings:					

Information:					
2	Foreign Reference	WO2010129723A2_Original_document_20201214183220.pdf	3872640	no	63
			200644012e7b7e781cd7afbb7f6ca181c4af6406		
Warnings:					
Information:					
3	Non Patent Literature	Pilot_v_Noco_Objections_and_Responses_to_Plaintiff_Pilots_First_Interrogatories_Nos_1-13.pdf	6690463	no	17
			839039e545bb64df513ad2baed568a1bb5376071		
Warnings:					
Information:					
4	Non Patent Literature	Pilot_v_Noco_Objections_and_Responses_to_Plaintiff_Pilots_First_Interrogatories_Nos_14-15.pdf	3501099	no	9
			df142699f1816c7490d041a013c325031024877f		
Warnings:					
Information:					
5	Non Patent Literature	Pilot_v_Noco_Objections_and_Responses_to_Plaintiff_Pilots_First_Requests_for_Production_1-27.pdf	9421945	no	24
			6beae12a87682ff8c2c9f1eee09da852ab92e4c8		
Warnings:					
Information:					
6	Non Patent Literature	Pilot_v_Noco_Objections_and_Responses_to_Plaintiff_Pilots_First_Requests_for_Production_28.pdf	2702129	no	7
			f01157b436a9e4a539ccb63af08083ee85ee286c		
Warnings:					
Information:					
7		8523WANG-1-CON-3_IDS_06.pdf	960038	yes	3
			c43af0343651c20ae44bfe59f91460cd492c27e2		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Transmittal Letter		1	2	
	Information Disclosure Statement (IDS) Form (SB08)		3	3	
Warnings:					
Information:					

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:	)	Group Art Unit: 2851
Calvin Shiening Wang	)	Confirmation No.: 6514
Serial No.: 16/404,321	)	Examiner: LIN, SUN J
Filed: May 6, 2019	)	
Atty. File No.: 8523WANG-1-CON-3	)	<u>SUPPLEMENTAL</u>
Entitled: "AUTOMOBILE CHARGER"	)	<u>INFORMATION DISCLOSURE</u>
	)	<u>STATEMENT</u>
	)	<i>Electronically Submitted</i>

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

Dear Commissioner:

The references cited on attached Form PTO/SB08 are being called to the attention of the Examiner.

- ☒ Copies of the cited non-patent and/or foreign references are enclosed herewith.
- ☐ Copies of the cited U.S. patents and/or patent applications are enclosed herewith.
- ☒ Copies of the cited U.S. patents/patent application publications are not enclosed in accordance with 37 C.F.R. § 1.98(a).
- ☐ Copies of the cited references are not enclosed, in accordance with 37 C.F.R. § 1.98(d), because the references were cited by or submitted to the U.S. Patent and Trademark Office in prior application Serial No. _____ filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120.
- ☒ To the best of applicants' belief, the pertinence of the foreign-language references is believed to be summarized in the attached English abstracts and/or in the figures, although applicants do not necessarily vouch for the accuracy of the translation.
- ☐ Examiner's attention is drawn to the following related applications:
- Serial No. _____ filed _____ (Attorney Ref. No. _____)
- Serial No. _____ filed _____ (Attorney Ref. No. _____)
- ☐ Other: _____

Submission of the above information is not intended as an admission that any item is citable under the statutes or rules to support a rejection, that any item disclosed represents analogous art, or that those skilled in the art would refer to or recognize the pertinence of any

reference without the benefit of hindsight, nor should an inference be drawn as to the pertinence of the references based on the order in which they are presented. Submission of this statement should not be taken as an indication that a search has been conducted, or that no better art exists.

It is respectfully requested that the cited information be expressly considered during the prosecution of this application and the references made of record therein.

Respectfully submitted,

SHERIDAN ROSS P.C.

By: /David B. Kellis/
David B. Kellis
Registration No. 59377
1560 Broadway, Suite 1200
Denver, Colorado 80202-5141
(303) 863-9700

Date: December 14, 2020



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/404,321	12/29/2020	10875410	8523WANG-1-CON-3	6514

22442 7590 12/09/2020

Sheridan Ross PC
1560 Broadway
Suite 1200
Denver, CO 80202

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

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

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

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 Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Pilot Inc., City of Industry, CA;
Calvin Shiening Wang, City of Industry, CA;
Chung-Hsin Wang, Shenzhen, CHINA;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

IR103 (Rev. 10/09)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:

Calvin Shiening Wang

Serial No.: 16/404,321

Filed: May 6, 2019

Atty. File No.: 8523WANG-1-CON-3

Entitled: "AUTOMOBILE CHARGER"

Group Art Unit: 2851

Confirmation No.: 6514

Examiner: LIN, SUN J

Submitted via EFS-Web

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

COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE

Dear Commissioner:

Applicant submits these Comments on Statement of Reasons for Allowance to address further the Notice of Allowability ("Notice") having a mailing date of August 26, 2020.

In the Notice, the Examiner's stated reasons for allowance were that:

Claims 7 – 26 are allowed because the prior art does not teach or fairly suggest the following subject matter:

- A jumpstarter device comprising: a battery connected to a voltage regulator, the battery supplying power, via the voltage regulator, to a microcontroller; a load detector, connected to the microcontroller, to detect when the jump– starter device is connected to an automobile battery; a battery voltage detector, connected to the microcontroller, to detect a battery voltage of the battery; the microcontroller generating, when the jumpstarter device is connected to the automobile battery, an output signal based on a detected battery voltage; switching circuitry including a plurality of MOSFETs to selectively connect a terminal of the battery to the automobile battery when the microcontroller generates the output signal, such that the battery supplies a charging current to the automobile battery; and a boost device for boosting a gate voltage of the plurality of MOSFETs as recited in independent **Claim 7**;

- A method for a device to charge an automobile battery, the method comprising: detecting a voltage level of a battery; detecting a connection and a type of connection between the battery and the automobile

*battery; generating, by a microcontroller, an output signal based on the voltage level of the battery, the connection to the automobile battery and the type of the automobile battery; based on the output signal, selectively connecting the battery to the automobile battery by activating a plurality of MOSFETs; and based on the output signal, selectively disconnecting the battery from the automobile battery to prevent damages caused by over-charging of the battery as recited in independent **Claim 22**;*

- *A system for jumpstarting an automobile battery, the system comprising: means for detecting a voltage level of a battery; means for detecting whether a connection with the automobile battery is a correct polarity connection or an incorrect polarity connection; means for generating, by a microcontroller, an output signal based on the voltage level of the battery and whether the connection with the automobile battery is a correct polarity connection or an incorrect polarity connection; means for selectively enabling current to flow from the battery to the automobile battery based on the output signal; and a boost device for boosting a voltage associated with the means for selectively enabling current to flow from the battery to the automobile battery based on the output signal as recited in **Claim 26**.*

Applicant assumes the patentability of all independent and dependent claims is based upon the elements as set forth in the allowed claims and that such claims meet all criteria for patentability under §101, §102, §103 and §112. Applicant takes no position regarding the Reasons for Allowance presented by the Examiner other than the positions Applicant may have previously taken during prosecution. Therefore, the Reasons for Allowance should not be attributed to Applicant for any reason or as an indication of the bases for Applicant's belief that the claims are patentable.

As is clear from MPEP 1302.14:

The statement [of reasons for allowance] is not intended to necessarily state all the reasons for allowance or all the details why claims are allowed and should not be written to specifically or impliedly state that all the reasons for allowance are set forth.

Accordingly, Applicant respectfully asserts that there may be additional or alternative reasons for patentability of the claimed subject matter not explicitly stated in this record and Applicant does not waive its rights to such arguments by not further addressing such reasons herein.

Although the Applicant believes that no fees are due for filing these Comments on Statement of Reasons for Allowance, please charge any fees deemed necessary to Deposit Account No. 19-1970.

Respectfully submitted,

SHERIDAN ROSS P.C.

By: /Stephanie T. Vu/
Stephanie T. Vu
Registration No. 73063
1560 Broadway, Suite 1200
Denver, Colorado 80202-5141
(303) 863-9700

Date: November 24, 2020

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

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 including the Patent, advance orders and notification of maintenance fees 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.

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

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 EFS-Web or by facsimile to (571) 273-2885, on the date below.

22442 7590 08/26/2020
Sheridan Ross PC
1560 Broadway
Suite 1200
Denver, CO 80202

Mandi Lamberson	(Typed or printed name)
/Mandi Lamberson/	(Signature)
November 24, 2020	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/404,321	05/06/2019	Calvin Shiening Wang	8523WANG-1-CON-3	6514

TITLE OF INVENTION: AUTOMOBILE CHARGER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$500	\$0.00	\$0.00	\$500	11/27/2020

EXAMINER	ART UNIT	CLASS-SUBCLASS
LIN, SUN J	2851	320-109000

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/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 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. Sheridan Ross P.C.
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

Pilot Inc.

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

City of Industry, CA

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) ☐ Advance Order - # of Copies _____

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

☒ Electronic Payment via EFS-Web ☐ 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. 19-1970

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 /Stephanie T. Vu/Date November 24, 2020Typed or printed name Stephanie T. VuRegistration No. 73,063

Electronic Patent Application Fee Transmittal				
Application Number:		16404321		
Filing Date:		06-May-2019		
Title of Invention:		AUTOMOBILE CHARGER		
First Named Inventor/Applicant Name:		Calvin Shiening Wang		
Filer:		Stephanie Thien Vu/Mandi Lamberson		
Attorney Docket Number:		8523WANG-1-CON-3		
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	2501	1	500	500

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				500

Electronic Acknowledgement Receipt

EFS ID:	41212631
Application Number:	16404321
International Application Number:	
Confirmation Number:	6514
Title of Invention:	AUTOMOBILE CHARGER
First Named Inventor/Applicant Name:	Calvin Shiening Wang
Customer Number:	22442
Filer:	Stephanie Thien Vu/Mandi Lamberson
Filer Authorized By:	Stephanie Thien Vu
Attorney Docket Number:	8523WANG-1-CON-3
Receipt Date:	24-NOV-2020
Filing Date:	06-MAY-2019
Time Stamp:	13:19:50
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$500
RAM confirmation Number	E2020AND20154321
Deposit Account	191970
Authorized User	Mandi Lamberson
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 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 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Post Allowance Communication - Incoming	20201124_Comments-RFS_8523WANG-1-CON-3.pdf	141821	no	3
			12c8399e29215d2bbedc04194bbbd8d47c0668b8		

Warnings:

Information:

2	Issue Fee Payment (PTO-85B)	20201124_IF-Transmittal_8523WANG-1-CON-3.pdf	1323659	no	1
			c1bad093f0c5ba8b496271d8422cbaf25734ec74		

Warnings:

Information:

3	Fee Worksheet (SB06)	fee-info.pdf	30577	no	2
			602b2774a1fee7f81997b6301544ba79ce5c4fc0		

Warnings:

Information:

Total Files Size (in bytes):	1496057
-------------------------------------	---------

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/404,321	05/06/2019	Calvin Shiening Wang	8523WANG-1-CON-3	6514
22442	7590	10/13/2020	EXAMINER	
Sheridan Ross PC			LIN, SUN J	
1560 Broadway				
Suite 1200				
Denver, CO 80202				
			ART UNIT	PAPER NUMBER
			2851	
			NOTIFICATION DATE	DELIVERY MODE
			10/13/2020	ELECTRONIC

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

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

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

e-docket@sheridanross.com

Corrected
Notice of Allowability

Application No.
16/404,321

Applicant(s)
Wang et al.

Examiner
SUN J LIN

Art Unit
2851

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 Amendment & Remarks filed on 08/14/2020.

☐ 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 See Continuation Sheet. 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. 14/569,352.

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. _____.

/SUN J LIN/
Primary Examiner, Art Unit 2851

Continuation of 3. The allowed claim(s) is/are: 7-26, renumbered (37 CFR 1.126)

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT6287599

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

CONVEYING PARTY DATA

Name	Execution Date
PILOT INC.	09/08/2020

RECEIVING PARTY DATA

Name:	WINGSPIRE CAPITAL LLC, AS ADMINISTRATIVE AGENT
Street Address:	13010 MORRIS ROAD
Internal Address:	BUILDING ONE, SUITE 175
City:	ALPHARETTA
State/Country:	GEORGIA
Postal Code:	30004

PROPERTY NUMBERS Total: 81

Property Type	Number
Patent Number:	8269405
Patent Number:	D673491
Patent Number:	D631404
Patent Number:	D640176
Patent Number:	D662446
Patent Number:	D658559
Patent Number:	D652358
Patent Number:	D649918
Patent Number:	D682163
Patent Number:	D708114
Patent Number:	D719889
Patent Number:	D708101
Patent Number:	D715717
Patent Number:	D743861
Patent Number:	D743862
Patent Number:	9525297
Patent Number:	D779717
Patent Number:	D773724
Patent Number:	D779718

Property Type	Number
Patent Number:	D789263
Patent Number:	D779400
Patent Number:	D789264
Patent Number:	D779401
Patent Number:	D781191
Patent Number:	D789265
Patent Number:	9744908
Patent Number:	D833176
Patent Number:	10227050
Patent Number:	D789270
Patent Number:	D793218
Patent Number:	D791052
Patent Number:	D793322
Patent Number:	10554878
Application Number:	16725638
Application Number:	15495506
Patent Number:	D848319
Patent Number:	D844495
Patent Number:	D844496
Patent Number:	10235984
Patent Number:	D860568
Patent Number:	D879087
Patent Number:	10046653
Patent Number:	D842793
Patent Number:	D843295
Patent Number:	D843296
Patent Number:	D843913
Patent Number:	D843914
Patent Number:	D843297
Patent Number:	D843298
Patent Number:	D843299
Patent Number:	D843300
Patent Number:	D843301
Application Number:	16172335
Patent Number:	D866447
Patent Number:	D869873
Patent Number:	D866448
Patent Number:	D852715

Property Type	Number
Patent Number:	10328806
Application Number:	16404321
Application Number:	29665449
Application Number:	29665457
Application Number:	29665570
Patent Number:	D871300
Application Number:	29713702
Patent Number:	D870630
Application Number:	29713703
Patent Number:	D870631
Application Number:	29713704
Patent Number:	D870632
Application Number:	29713705
Application Number:	29667002
Patent Number:	D879689
Application Number:	29668106
Application Number:	29668107
Application Number:	29668108
Application Number:	16663108
Application Number:	29693885
Application Number:	16525280
Application Number:	29703973
Patent Number:	D855531
Patent Number:	D856244

CORRESPONDENCE DATA

Fax Number:

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 3128637141
Email: kristen.lange@goldbergkohn.com
Correspondent Name: KRISTEN N. LANGE, PARALEGAL
Address Line 1: C/O GOLDBERG KOHN LTD.
Address Line 2: 55 E. MONROE STREET, SUITE 3300
Address Line 4: CHICAGO, ILLINOIS 60603

ATTORNEY DOCKET NUMBER:	8177.001
NAME OF SUBMITTER:	KRISTEN N. LANGE
SIGNATURE:	/kristenlange/
DATE SIGNED:	09/08/2020

Total Attachments: 9

source=11. Wingspire Pilot - Patent Security Agreement#page1.tif
source=11. Wingspire Pilot - Patent Security Agreement#page2.tif
source=11. Wingspire Pilot - Patent Security Agreement#page3.tif
source=11. Wingspire Pilot - Patent Security Agreement#page4.tif
source=11. Wingspire Pilot - Patent Security Agreement#page5.tif
source=11. Wingspire Pilot - Patent Security Agreement#page6.tif
source=11. Wingspire Pilot - Patent Security Agreement#page7.tif
source=11. Wingspire Pilot - Patent Security Agreement#page8.tif
source=11. Wingspire Pilot - Patent Security Agreement#page9.tif

PATENT SECURITY AGREEMENT

PATENT SECURITY AGREEMENT, dated as of September 8, 2020 (as the same may be amended, restated, supplemented, or otherwise modified from time to time, this "Agreement"), among Pilot Inc., a California corporation (referred to herein as "Grantor" or "Grantors"), and WINGSPIRE CAPITAL LLC, as Administrative Agent (in such capacity, the "Administrative Agent").

Reference is made to (a) that certain Credit Agreement, dated as of September 8, 2020, by and among PILOT-NGC HOLDING, INC., a Delaware corporation ("Holdings"), PILOT INC., a California corporation (the "Borrower-Pilot"), WANG'S INTERNATIONAL, INCORPORATED, a California corporation (the "Borrower-Wangs"), the other Subsidiaries (if any) of Holdings from time to time party thereto as "Borrowers" (together with Borrower-Pilot and Borrower-Wangs, each, a "Borrower" and individually and collectively, jointly and severally, the "Borrowers"), the Subsidiaries (if any) of Holdings from time to time party thereto as "Guarantors" (together with Holdings, each, a "Guarantor" and collectively, the "Guarantors"), the lenders from time to time party thereto as lenders (each, a "Lender" and, collectively, the "Lenders"), and the Administrative Agent (as the same may be amended, restated, supplemented, or otherwise modified from time to time, the "Credit Agreement"), and (b) that certain Pledge and Security Agreement, dated as of September 8, 2020, by and among Holdings, Borrower-Pilot, Borrower-Wangs, the other Subsidiaries (if any) of Holdings from time to time party thereto as "Grantors" and the Administrative Agent (as the same may be amended, restated, supplemented or otherwise modified from time to time, the "Security Agreement").

The Lenders have agreed to extend credit to the Borrowers subject to the terms and conditions set forth in the Credit Agreement, the Guarantors have guaranteed Obligations and the Grantors have secured their obligations pursuant to the Security Agreement. The obligations of the Lenders to extend such credit are conditioned upon, among other things, the execution and delivery of this Agreement.

Accordingly, the parties hereto agree as follows:

1. Terms. Capitalized terms used in this Agreement and not otherwise defined herein have the meanings specified in the Security Agreement or the Credit Agreement.

2. Grant of Security Interest. As security for the payment or performance, as applicable, in full when due (whether at the stated maturity, by acceleration or otherwise) of the Obligations, each Grantor, pursuant to the Security Agreement, did and hereby does grant to the Administrative Agent (and its successors and assigns), for the ratable benefit of the Secured Parties, a security interest in, all such Grantor's right, title and interest in, to or under any and all of the following assets now owned or at any time hereafter acquired (collectively, the "Patent Collateral"):

(a) all letters patent of the United States of America, all registrations and recordings thereof and all applications for letters patent of the United States of America, including registrations, recordings and pending applications in the United States Patent and Trademark

Office, in each case described on Schedule I and all reissues, renewals, continuations and extensions thereof and amendments thereto (the "Patents");

(b) all inventions and improvements described and claimed therein, including the right to make, use and/or sell the inventions disclosed or claimed therein,

(c) all reissues, continuations, divisions, continuations in part, renewals or extensions thereof and amendments thereto, and the inventions disclosed or claimed therein, and

(d) all income, fees, royalties, damages, claims and payments now or hereafter due and/or payable thereunder and with respect thereto.

3. Security Agreement. The security interests granted to the Administrative Agent herein are granted in furtherance, and not in limitation of, the security interests granted to the Administrative Agent pursuant to the Security Agreement. Each Grantor hereby acknowledges and affirms that the rights and remedies of the Administrative Agent with respect to the Patent Collateral are more fully set forth in the Security Agreement, the terms and provisions of which are hereby incorporated herein by reference as if fully set forth herein. In the event of any conflict between the terms of this Agreement and the Security Agreement, the terms of the Security Agreement shall govern.

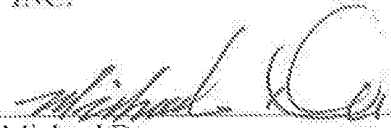
4. Counterparts. This Agreement may be executed in counterparts (and by different parties hereto in different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. Delivery of an executed counterpart of a signature page of this Agreement by facsimile or in electronic (e.g., "pdf" or "tif") format shall be effective as delivery of a manually executed counterpart of this Agreement.

5. Governing Law. This Agreement shall be governed by, and construed in accordance with, the laws of the State of New York.

[Continued on the following page.]

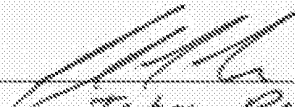
IN WITNESS WHEREOF, the parties hereto have duly executed this Patent Security Agreement as of the day and year first above written.

PILOT INC.

By: 
Name: Michael Du
Title: Chief Financial Officer

Signature Page to Patent Security Agreement

WINGSPIRE CAPITAL LLC, as Administrative
Agent

By: 

Name: John R. Smith

Title: President & CEO

Signature Page to Patent Security Agreement

SCHEDULE I

PATENTS

Loan Party	Title	Serial Number	Filing Date	Status
Pilot	NEUTRAL ELECTRODE SPARK PLUG	Patent No. 8,269,405	40723	
Pilot	VEHICLE FLOOR MAT HAVING A LOWER WINTER MAT AND A REMOVABLE UPPER SUMMER MAT	Patent No. D673,491	41120	
Pilot	AUTOMOTIVE GRILLE (Design)	Patent No. D631,404	10/23/2009	
Pilot	AUTOMOTIVE GRILLE (Design)	Patent No. D640,176	12/22/10	
Pilot	AUTOMOTIVE GRILLE (Design)	Patent No. D662,446	01/03/11	
Pilot	AUTOMOTIVE STEP (Design)	Patent No. D658,559	01/05/11	
Pilot	FENDER (Design)	Patent No. D652,358	03/09/11	
Pilot	AUTOMOTIVE GRILLE (Design)	Patent No. D649,918	06/17/11	
Pilot	AUTOMOTIVE GRILLE (Design)	Patent No. D682,163	01/20/12	
Pilot	BEADLOCK (Design)	Patent No. D708,114	10/09/13	
Pilot	WHEEL (Design)	Patent No. D719,889	10/09/13	
Pilot	ROCK BLOCKER (Design)	Patent No. D708,101	11/20/13	
Pilot	WHEEL (Design)	Patent No. D715,717	11/20/13	
Pilot	LED ROCK PROTECTOR (Design)	Patent No. D743,861	04/14/14	
Pilot	LED SIDE MOUNT (Design)	Patent No. D743,862	04/14/14	
Pilot	AUTOMOBILE CHARGER	Patent No. 9,525,297	12/12/2014	

Pilot	CORDLESS LED LAMP (Design #1)	Patent No. D779,717	11/18/2015	
Pilot	CORDLESS LED LAMP (Design #2)	Patent No. D773,724	11/18/2015	
Pilot	CORDLESS LED LAMP (Design #3)	Patent No. D779,718	11/18/2015	
Pilot	SHIFT KNOB COVER (Monkey)	Patent No. D789,263	1/21/2016	
Pilot	SHIFT KNOB COVER (Beard)	Patent No. D779,400	1/21/2016	
Pilot	SHIFT KNOB COVER (cow)	Patent No. D789,264	1/21/2016	
Pilot	SHIFT KNOB COVER (shark)	Patent No. D779,401	1/21/2016	
Pilot	SHIFT KNOB COVER (bandit)	Patent No. D781,191	1/21/2016	
Pilot	SHIFT KNOB COVER (bandit revised)	Patent No. D789,265	4/28/2016	
Pilot	TRUCK STEP (Utility)	Patent No. 9,744,908	5/19/2016	
Pilot	HEATED SEAT Cover Design Patent	Patent No. D833,176	8/3/2016	
Pilot	EXHAUST TIP (Utility)	Patent No. 10,227,050	9/16/2016	
Pilot	WHEEL (Design)	Patent No. D789,270	06/17/16	
Pilot	LUGNUT (Design)	Patent No. D793,218	08/11/16	
Pilot	WHEEL (Design)	Patent No. D791,052	09/02/16	
Pilot	WHEEL (Design)	Patent No. D793,322	09/02/16	
Pilot	SMART SELFIE MIRROR	Patent No. 10,554,878	3/15/2017	
Pilot	SMART SELFIE MIRROR	Application No. 16/725,638	12/23/2019	
Pilot	BLUETOOTH ENABLED SNAKE CAM	Application No. 15/495,506	4/24/2017	
Pilot	Vehicle Grille (Design Patent)	Patent No. D848,319	4/28/2017	
Pilot	Vehicle Grille (Design Patent)	Patent No. D844,495	4/28/2017	

Pilot	Vehicle Grille (Design Patent)	Patent No. D844,496	4/28/2017	
Pilot	Karaoke Device	Patent No. 10,235,984	4/24/2017	
Pilot	BUCKET GRATING SECTION (Design Patent)	Patent No. D860,568	7/13/2017	
Pilot	BUCKET GRATING SECTION (Design Patent)	Application No. 29/610,534	9/6/2019	
Pilot	Mobile Device Mount (Design Patent)	Patent No. D879,087	7/17/2017	
Pilot	AUTOMOBILE CHARGER	Patent No. 10,046,653	11/18/2016	
Pilot	Vehicle Wheel (Design Patent)	Patent No. D842,793	10/27/2017	
Pilot	Vehicle Wheel (Design Patent)	Patent No. D843,295	10/27/2017	
Pilot	Vehicle Wheel (Design Patent)	Patent No. D843,296	10/27/2017	
Pilot	Vehicle Wheel (Design Patent)	Patent No. D843,913	10/27/2017	
Pilot	Vehicle Wheel (Design Patent)	Patent No. D843,914	10/27/2017	
Pilot	Vehicle Wheel (Design Patent)	Patent No. D843,297	10/27/2017	
Pilot	Vehicle Wheel (Design Patent)	Patent No. D843,298	10/27/2017	
Pilot	Vehicle Wheel (Design Patent)	Patent No. D843,299	10/27/2017	
Pilot	Vehicle Wheel (Design Patent)	Patent No. D843,300	10/27/2017	
Pilot	Vehicle Wheel (Design Patent)	Patent No. D843,301	10/27/2017	
Pilot	Lift Kit	Application No. 16/172,335	10/26/2018	
Pilot	Chase Rack (Design Patent)	Patent No. D866,447	10/30/2017	
Pilot	Overhead Rack (Design Patent)	Patent no. D869,873	10/30/2017	
Pilot	Rack (Design Patent)	Patent No. D866,448	10/30/2017	

Pilot	Vehicle Grille (Design Patent)	CA Patent No. 177849	10/30/2017	
Pilot	Vehicle Grille (Design Patent)	CA Patent No. 177851	10/30/2017	
Pilot	Vehicle Grille (Design Patent)	CA Patent No. 177850	10/30/2017	
Pilot	Wheel Cap (Design Patent)	Patent No. D852,715	11/6/2017	
Pilot	AUTOMOBILE CHARGER	Patent No. 10,328,806	3/16/2018	
Pilot	AUTOMOBILE CHARGER	Application No. 16/404,321	5/6/2019	
Pilot	VEHICLE WHEEL (Design)	CA Patent No. 180997	4/26/2018	
Pilot	STEERING WHEEL GRIP (Design)	Application No. 29/665,449	10/3/2018	
Pilot	SEAT PONCHO (Design Patent)	Application No. 29/665,457	10/3/2018	
Pilot	BURRITO HOLDER (Design Patent)	Application No. 29/665,570	10/4/2018	
Pilot	VEHICLE WHEEL (Design)	Patent No. D871,300	10/17/2018	
Pilot	VEHICLE WHEEL SPOKE (Design)	Application No. 29/713,702	11/18/2019	
Pilot	VEHICLE WHEEL (Design)	Patent No. D870,630	10/17/2018	
Pilot	VEHICLE WHEEL SPOKE (Design)	Application No. 29/713,703	11/18/2019	
Pilot	VEHICLE WHEEL (Design)	Patent No. D870,631	10/17/2018	
Pilot	VEHICLE WHEEL SPOKE (Design)	Application No. 29/713,704	11/18/2019	
Pilot	VEHICLE WHEEL (Design)	Patent No. D870,632	10/17/2018	
Pilot	VEHICLE WHEEL SPOKE (Design)	Application No. 29/713,705	11/18/2019	
Pilot	VEHICLE WHEEL (Design)	Application No. 29/667,002	10/17/2018	
Pilot	SUNSHADE (Design)	Patent No. D879,689	10/26/2018	
Pilot	GEMSTONE BUCKLE (Design)	Application No. 29/668,106	10/26/2018	

Pilot	SUNSHADE (Design)	Application No. 29/668,107	10/26/2018	
Pilot	SUNSHADE (Design)	Application No. 29/668,108	10/26/2018	
Pilot	BEADLOCK WITH FILLER RING	Application No. 16/663,108	10/24/2019	
Pilot	CUP HOLDER (Design)	Application No. 29/693,885	6/5/2019	
Pilot	Automotive Accessories	Application No. 16/525,280	7/29/2019	
Pilot	Threaded Insert (Design)	Application No. 29/703,973	8/30/2019	
Pilot	Truck Step (Design)	Patent No. D855,531	5/13/2015	
Pilot	Truck Step (Design)	Patent No. D856,244	5/13/2015	
Pilot	Chair Cover (Design)	Application No. 29/912,636	8/2/2017	

Patent Licenses

None.



UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

22442 7590 08/26/2020
Sheridan Ross PC
1560 Broadway
Suite 1200
Denver, CO 80202

EXAMINER

LIN, SUN J

ART UNIT

PAPER NUMBER

2851

DATE MAILED: 08/26/2020

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/404,321	05/06/2019	Calvin Shiening Wang	8523WANG-1-CON-3	6514

TITLE OF INVENTION: AUTOMOBILE CHARGER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$500	\$0.00	\$0.00	\$500	11/27/2020

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 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity 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 and an extra copy of the form should be submitted. 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/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

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 including the Patent, advance orders and notification of maintenance fees 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.

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

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.

2242 7590 08/26/2020
Sheridan Ross PC
1560 Broadway
Suite 1200
Denver, CO 80202

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 EFS-Web 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.
16/404,321	05/06/2019	Calvin Shiening Wang	8523WANG-1-CON-3	6514

TITLE OF INVENTION: AUTOMOBILE CHARGER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$500	\$0.00	\$0.00	\$500	11/27/2020

EXAMINER	ART UNIT	CLASS-SUBCLASS
LIN, SUN J	2851	320-109000

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/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 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,

1 _____

(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.

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) ☐ Advance Order - # of Copies _____

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

☐ Electronic Payment via EFS-Web ☐ 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
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/404,321	05/06/2019	Calvin Shiening Wang	8523WANG-1-CON-3	6514
22442	7590	08/26/2020	EXAMINER	
Sheridan Ross PC			LIN, SUN J	
1560 Broadway			ART UNIT	PAPER NUMBER
Suite 1200			2851	
Denver, CO 80202			DATE MAILED: 08/26/2020	

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

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

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

Notice of Allowability	Application No. 16/404,321	Applicant(s) Wang et al.	
	Examiner SUN J LIN	Art Unit 2851	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 Amendment & Remarks filed on 08/14/2020.
☐ 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 See Continuation Sheet. 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. 14/569,352.
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 <u>6/16/20,8/14/20</u> .	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. ____.	

/SUN J LIN/ Primary Examiner, Art Unit 2851	
--	--

Continuation of 3. The allowed claim(s) is/are: 7-25, renumbered (37 CFR 1.126)

Notice of AIA Status

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file (FITF) provisions of the AIA.

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

DETAILED ACTION

1. This office action is in response to *Amendment & Remarks* and *Terminal Disclaimer* concurrently filed on 08/14/2020 regarding patent application 16/404,321 and *Preliminary Amendment* concurrently filed on 05/06/2019. Claims 1 – 6 were originally filed in the application. Claims 1 – 6 had been cancelled and Claims 7 – 26 had been added in the *Preliminary Amendment*. No claim has been cancelled and/or newly added in the *current Amendment*. The *Terminal Disclaimer* has been approved and recorded. Claims 7 – 26 remain pending in the application.

Reasons for Allowance

2. Claims 7 – 26 are allowed over the prior art of record. An examiner's statement of reasons for allowance is given in the following:

Claims 7 – 26 are allowed because the prior art does not teach or fairly suggest the following subject matter:

- A jumpstarter device comprising: **a battery** connected to a voltage regulator, the battery supplying power, via the voltage regulator, to a microcontroller; **a load detector**, connected to the microcontroller, to detect when the jumpstarter device is connected to an automobile battery; **a battery voltage detector**, connected to the microcontroller, to detect a battery voltage of the battery; **the microcontroller** generating, when the jumpstarter device is connected to the automobile battery, an output signal based on a detected battery voltage; **switching circuitry** including a plurality of MOSFETs to selectively connect a terminal of the battery to the automobile battery when

*the microcontroller generates the output signal, such that the battery supplies a charging current to the automobile battery; and a **boost device** for boosting a gate voltage of the plurality of MOSFETs as recited in independent **Claim 7**;*

- *A method for a device to charge an automobile battery, the method comprising: **detecting a voltage level of a battery**; **detecting a connection** and **a type of connection** between the battery and the automobile battery; **generating**, by a microcontroller, an output signal based on the voltage level of the battery, the connection to the automobile battery and the type of the automobile battery; based on the output signal, **selectively connecting** the battery to the automobile battery by activating a plurality of MOSFETs; and based on the output signal, **selectively disconnecting** the battery from the automobile battery to prevent damages caused by over-charging of the battery as recited in independent **Claim 22**;*
- *A system for jumpstarting an automobile battery, the system comprising: **means for detecting a voltage level of a battery**; **means for detecting** whether a connection with the automobile battery is a correct polarity connection or an incorrect polarity connection; **means for generating**, by a microcontroller, an output signal based on the voltage level of the battery and whether the connection with the automobile battery is a correct polarity connection or an incorrect polarity connection; **means for selectively enabling** current to flow from the battery to the automobile battery based on the output signal; and a **boost device** for boosting a voltage associated with the means for selectively enabling current to flow from the battery to the automobile battery based on the output signal as recited in **Claim 26**.*

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

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sun J. Lin whose telephone number is (571) 272-1899. The examiner can normally be reached on Monday to Friday from 9:00am to 6:00pm.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications 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 Service Representative or access to the automated information system, call 800-786-9199 (in USA or CANADA) or 571-272-1000.

/SUN J LIN/
Acting Patent Examiner, 2851/2800

Issue Classification 	Application/Control No. 16/404,321	Applicant(s)/Patent Under Reexamination Wang et al.
	Examiner SUN J LIN	Art Unit 2851

CPC						
Symbol					Type	Version
B60L	/	53	/	00	F	2019-02-01
H02J	/	2207	/	20	I	2020-01-01
B60L	/	53	/	53	I	2019-02-01
H02J	/	7	/	0034	I	2013-01-01
H02J	/	7	/	0068	I	2013-01-01
H02J	/	7	/	0029	A	2013-01-01
H02J	/	9	/	005	A	2013-01-01

CPC Combination Sets				
Symbol	Type	Set	Ranking	Version
/				

NONE	Total Claims Allowed:	
(Assistant Examiner)	(Date)	20
/SUN J LIN/ Primary Examiner, Art Unit 2851	19 August 2020	O.G. Print Claim(s)
(Primary Examiner)	(Date)	1
		O.G. Print Figure
		2

Issue Classification 	Application/Control No. 16/404,321	Applicant(s)/Patent Under Reexamination Wang et al.
	Examiner SUN J LIN	Art Unit 2851

INTERNATIONAL CLASSIFICATION			
CLAIMED			
B60L	/	53	/ 00
H02J	/	7	/ 00

NON-CLAIMED			
/		/	

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS
320	109

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

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	20	
/SUN J LIN/ Primary Examiner, Art Unit 2851	19 August 2020	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2

Issue Classification 	Application/Control No. 16/404,321	Applicant(s)/Patent Under Reexamination Wang et al.
	Examiner SUN J LIN	Art Unit 2851

☐ 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	7	10	16	19	25										
2	8	11	17	20	26										
3	9	12	18												
4	10	13	19												
5	11	14	20												
6	12	15	21												
7	13	16	22												
8	14	17	23												
9	15	18	24												

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 20	
/SUN J LIN/ Primary Examiner, Art Unit 2851 (Primary Examiner) _____ (Date) 19 August 2020		O.G. Print Claim(s) 1	O.G. Print Figure 2

Search Notes 	Application/Control No. 16/404,321	Applicant(s)/Patent Under Reexamination Wang et al.
	Examiner SUN J LIN	Art Unit 2851

CPC - Searched*		
Symbol	Date	Examiner
B60L53/00; H02J7/0068; H02J9/005; H02J7/0065; H02J7/0029; H02J7/0034	04/22/2020	/JSL/

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
320	109	04/22/2020	/JSL/

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

Search Notes		
Search Notes	Date	Examiner
EAST [US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB]	04/22/2020	/JSL/
EAST [US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB]	08/19/2020	/JSL/

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
320	109	08/19/2020	/JSL/

--	--

<i>Index of Claims</i> 	Application/Control No. 16/404,321	Applicant(s)/Patent Under Reexamination Wang et al.
	Examiner SUN J LIN	Art Unit 2851

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS										
☐ Claims renumbered in the same order as presented by applicant					☐ CPA		☐ T.D.		☐ R.1.47	
CLAIM		DATE								
Final	Original	04/22/2020	08/19/2020							
	1	-	-							
	2	-	-							
	3	-	-							
	4	-	-							
	5	-	-							
	6	-	-							
1	7	✓	=							
2	8	✓	=							
3	9	✓	=							
4	10	✓	=							
5	11	✓	=							
6	12	✓	=							
7	13	✓	=							
8	14	✓	=							
9	15	✓	=							
10	16	✓	=							
11	17	✓	=							
12	18	✓	=							
13	19	✓	=							
14	20	✓	=							
15	21	✓	=							
16	22	✓	=							
17	23	✓	=							
18	24	✓	=							
19	25	✓	=							
20	26	✓	=							

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	16/404,321
				Filing Date	May 6, 2019
				First Named Inventor	Calvin Shiening Wang
				Art Unit	2851
				Examiner Name	LIN, SUN J
Sheet	1	of	1	Attorney Docket Number	8523WANG-1-CON-3

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number-kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	9954391	04/24/2018	Lei	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ³ ; Number ⁴ ; Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
	2	CN 103066662	04/24/2013	LEI XINGLIANG		(with English abstract)

NON-PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	3	"E-Power-21," Shenzhen Carku Technology Co., Ltd., Date Unknown, 1 page.
	4	"Intelligent Jumper Cable," Shenzhen Carku Technology Co., Ltd., Date Unknown, 1 page.
	5	"Jump Starter Instructions," Shenzhen Carku Technology Co., Ltd., Date Unknown, 1 page.
	6	"Smart Jumper Cable," Shenzhen Carku Technology Co., Ltd., Date Unknown, 1 page.
	7	"Summary of invalidity defenses against asserted claims of Pilot's U.S. Patent No. 10,046,653," Date Unknown, 17 pages.
	8	BRADFORD, "Re: Pilot Notice of Infringement (Amazon Case ID: 7131799991)," Jul. 9, 2020, 9 pages.
	9	Shenzhen Carku Technology Co., Ltd. v. The Noco Company, Petition for Inter Partes Review for U.S. Patent No. 9007015 with Exhibits 1001-1018, dated May 14, 2020, 1099 pages. SUBMITTED IN TWO PARTS.

Examiner Signature	/SUN J LIN/	Date Considered	08/17/2020
--------------------	-------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	16/404,321
				Filing Date	May 6, 2019
				First Named Inventor	Calvin Shiening Wang
				Art Unit	2851
				Examiner Name	LIN, SUN J
Sheet	1	of	1	Attorney Docket Number	8523WANG-1-CON-3

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number-kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ³ ; Number ⁴ ; Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶

NON-PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	1	Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and Unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 84 pages
	2	Corrected Exhibit II.P, Invalidity Claim Chart for DieHard 950 System for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 48 pages

Examiner Signature	/SUN J LIN/	Date Considered	08/17/2020
--------------------	-------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JSL/

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	5	("9954391").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/08/19 07:47
S1	6,182	320/109	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 08:40
S2	3	(320/109).ccls. and (jump adj starter)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 08:45
S3	50	(320/\$).ccls. and (jump adj starter)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 08:46
S4	366	(jump adj starter)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 08:46
S5	10	(jump adj starter) and (battery with (voltage adj regulator) with microcontroller)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 08:48
S6	9	S5 AND ((H02J7/0068 OR H02J7/0065 OR H02J7/0034 OR H02J7/0029 OR H02J7/005 OR B60L53/00).CPC.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 08:53

S7	66	(jump adj starter) AND ((H02J7/0068 OR H02J7/0065 OR H02J7/0034 OR H02J7/0029 OR H02J7/005 OR B60L53/00).CPC.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 08:54
S8	10	(jump adj starter) and (battery with (voltage adj regulator) with microcontroller)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 09:05
S9	11	(jump adj starter) and (battery same (voltage adj regulator) same microcontroller)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 09:07
S10	3	(jumpstarter) and (battery same (voltage adj regulator) same microcontroller)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 09:09
S11	1	((jumpstarter) and (battery same (voltage adj regulator) same microcontroller)).CLM.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 09:10
S12	2	(jumpstarter or (jump adj starter)) and (battery same (voltage adj regulator) same microcontroller) and (load adj detector) and (switching adj circuitry) and (boost adj device)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 09:29
S13	2	((jumpstarter or (jump adj starter)) and (battery same (voltage adj regulator) same microcontroller) and (load adj detector) and (switching adj circuitry) and (boost adj device))",CLM."	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 09:30
S14	2	(jumpstarter or (jump adj starter) or (charging adj device)) and (battery same (voltage adj regulator) same microcontroller) and (load adj detector) and (switching adj circuitry) and (boost adj device)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 09:54

S15	2	((jumpstarter or (jump adj starter) or (charging adj device)) and (battery same (voltage adj regulator) same microcontroller) and (load adj detector) and (switching adj circuitry) and (boost adj device)).CLM.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 09:55
S16	1	(charg\$3 adj (automobile adj battery)) and ((voltage adj level) adj battery) and (type adj connection) and (microcontroller) and (output adj signal) and (MOSFET\$2) and ((prevent\$3 adj damage) with (over-discharging))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 10:00
S17	1	(charg\$3 adj (automobile adj battery)) and ((voltage adj level) adj battery) and (type adj connection) and (microcontroller) and (output adj signal) and ((prevent\$3 adj damage) with (over-discharging))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 10:01
S18	1	(charg\$3 adj (automobile adj battery)) and ((voltage adj level) adj battery) and (type adj connection) and (microcontroller) and (output adj signal) and ((prevent\$3 adj damage\$2) with (over-discharging))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 10:04
S19	3	(charg\$3 adj (automobile adj battery)) and ((voltage adj level) adj battery) and (type adj connection) and (microcontroller) and (output adj signal) and ((prevent\$3 adj damage\$2) with (over adj discharging))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 10:05
S20	2	((charg\$3 adj (automobile adj battery)) and ((voltage adj level) adj battery) and (type adj connection) and (microcontroller) and (output adj signal) and ((prevent\$3 adj damage\$2) with (over adj discharging))).CLM.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 10:05

8/19/2020 7:49:04 AM

C:\Users\sln1\Documents\EAST\Workspaces\CASE1436.wsp

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.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 16/404,321		Filing Date 05/06/2019		☐ To be Mailed			
ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO											
APPLICATION AS FILED - PART I											
		(Column 1)		(Column 2)							
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)			
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A					
☐ SEARCH FEE (37 CFR 1.16(k), (l), or (m))		N/A		N/A		N/A					
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A					
TOTAL CLAIMS (37 CFR 1.16(j))		minus 20 = *				x \$50 =					
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 = *				x \$230 =					
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).									
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))											
* If the difference in column 1 is less than zero, enter "0" in column 2.						TOTAL					
APPLICATION AS AMENDED - PART II											
		(Column 1)		(Column 2)		(Column 3)					
AMENDMENT	08/14/2020	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(j))	* 20	Minus	** 20	= 0	x \$50 =		0			
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0	x \$230 =		0			
	☐ Application Size Fee (37 CFR 1.16(s))										
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
								TOTAL ADD'L FEE		0	
		(Column 1)		(Column 2)		(Column 3)					
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(j))	*	Minus	**	=	x \$0 =					
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x \$0 =					
	☐ Application Size Fee (37 CFR 1.16(s))										
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
								TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.								SLIE			
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".								/JULIET MCMILLAN/			
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".											
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.											

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

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

Doc Code: DIST.E.FILE Document Description: Electronic Terminal Disclaimer - Filed		PTO/SB/26 U.S. Patent and Trademark Office Department of Commerce
Electronic Petition Request	TERMINAL DISCLAIMER TO OBIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT	
Application Number	16404321	
Filing Date	06-May-2019	
First Named Inventor	Calvin Wang	
Attorney Docket Number	8523WANG-1-CON-3	
Title of Invention	AUTOMOBILE CHARGER	
☒ 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	
Pilot Inc.	100%	
The owner(s) with 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) 10328806 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. ☒ Terminal disclaimer fee under 37 CFR 1.20(d) is included with Electronic Terminal Disclaimer request.		

☐ 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.	
Applicant claims the following fee status:	
☒ Small Entity ☐ Micro Entity ☐ Regular Undiscounted	
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.	
THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES 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 Registration Number <u> 59377 </u>	
☐ A sole inventor ☐ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application ☐ A joint inventor; all of whom are signing this request	
Signature	/David B. Kellis/
Name	David B. Kellis

*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.

Electronic Patent Application Fee Transmittal				
Application Number:		16404321		
Filing Date:		06-May-2019		
Title of Invention:		AUTOMOBILE CHARGER		
First Named Inventor/Applicant Name:		Calvin Shiening Wang		
Filer:		David B. Kellis/Mandi Lamberson		
Attorney Docket Number:		8523WANG-1-CON-3		
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
STATUTORY OR TERMINAL DISCLAIMER	2814	1	160	160
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				160

Doc Code: DISQ.E.FILE

Document Description: Electronic Terminal Disclaimer – Approved

Application No.: 16404321

Filing Date: 06-May-2019

Applicant/Patent under Reexamination: Wang

Electronic Terminal Disclaimer filed on August 14, 2020

☒ APPROVED

This patent is subject to a terminal disclaimer

☐ DISAPPROVED

Approved/Disapproved by: Electronic Terminal Disclaimer automatically approved by EFS-Web

U.S. Patent and Trademark Office

Electronic Acknowledgement Receipt

EFS ID:	40290661
Application Number:	16404321
International Application Number:	
Confirmation Number:	6514
Title of Invention:	AUTOMOBILE CHARGER
First Named Inventor/Applicant Name:	Calvin Shiening Wang
Customer Number:	22442
Filer:	David B. Kellis/Mandi Lamberson
Filer Authorized By:	David B. Kellis
Attorney Docket Number:	8523WANG-1-CON-3
Receipt Date:	14-AUG-2020
Filing Date:	06-MAY-2019
Time Stamp:	17:49:29
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$160
RAM confirmation Number	E20208DH49264256
Deposit Account	191970
Authorized User	Mandi Lamberson
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 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 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Terminal Disclaimer-Filed (Electronic)	eTerminal-Disclaimer.pdf	33485	no	2
			62af20ba6525c0575d9d22df40122293daf6bb8c		

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30564	no	2
			aba3d81e3976e7a85f130d98b3b4db5c849c2cb4		

Warnings:

Information:

Total Files Size (in bytes):	64049
------------------------------	-------

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor: Calvin Shiening Wang	)	Examiner Name: Sun J. Lin
	)	
Application No.: 16/404,321	)	Group Art Unit: 2851
	)	
Filing Date: 05/06/2019	)	Confirmation No.: 6514
	)	
Attorney Docket No.: 8523WANG-1-CON-3	)	
	)	
Title: AUTOMOBILE CHARGER	)	AMENDMENT AND RESPONSE
	)	
	)	

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

Dear Commissioner:

Applicant submits this Amendment and Response to address the Non-Final Office Action having a mailing date of April 27, 2020. Applicant also submits herewith a Terminal Disclaimer together with the required fee set forth under 37 CFR 1.20(d). Applicant also submits herewith a petition for a one-month extension of time together with the required fee. Applicant does not believe that any other fees are due with respect to the entry of this Amendment and Response; however, please charge any fees deemed necessary or credit any overpayment to Deposit Account No. 19-1970.

Amendments to the Specification, other than the claims, begin on page 2 of this communication.

Amendments to the Claims are reflected in the listing of claims beginning on page 3 of this communication.

Arguments/Remarks begin on page 7 of this communication.

AMENDMENTS TO THE SPECIFICATION

Please replace Paragraph [0001] of the Specification with the following amended paragraph:

[0001] This application is a continuation of U.S. Patent Application No. 15/923,219, filed on March 16, 2018 and entitled “Automobile Charger,” now Patent No. 10,328,806, issued on June 25, 2019, which is a continuation of U.S. Patent Application No. 15/355,409, filed on November 18, 2016 and entitled “Automobile Charger,” now Patent No. 10,046,653, issued on August 14, 2018, which is a continuation of U.S. Patent Application No. 14/569,352, filed on December 12, 2014 and entitled “Automobile Charger,” now Patent No. 9,525,297, issued on December 20, 2016, which claims the benefit of priority of Chinese application no. 201420212173.5 filed on April 28, 2014, the entire contents of all of which are incorporated herein by reference.

Please replace the Abstract with the following amended paragraph:

A novel automobile charger comprises a direct current (DC) voltage supply, wherein a positive pole of the ~~(DC)~~ DC voltage supply is connected with a first end or a first lead of a DC-to-DC module, a first end of a battery voltage detection module and a first end of a load module simultaneously, while a negative pole of the DC voltage supply is connected with a second end of the DC-to-DC module, a first end of a microcontroller, a first end of an automobile start control module and a second end of the battery voltage detection module simultaneously. A third end of the DC-to-DC module is connected with a second end of the microcontroller. ~~Third, fourth and fifth ends~~ A first end, a fourth end, and a fifth end of the microcontroller are connected with a third end of the battery voltage detection module, a second end of the automobile start control module and a first end of a load detection module respectively. A second end of the load detection module is connected with a third end of the automobile start control module and a second end of the load module simultaneously.

AMENDMENTS TO THE CLAIMS

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

Listing of Claims:

1-6. (Cancelled)

7. (Currently Amended) A jumpstarter device[[.]] comprising:

a battery connected to a voltage regulator, the battery supplying power, via the voltage regulator, to ~~a~~[[the]] microcontroller;

a load detector, connected to the microcontroller, to detect when the jumpstarter device is connected to an automobile battery;

a battery voltage detector, connected to [[a]]~~the~~ microcontroller, to detect a battery voltage ~~of the battery~~;

the microcontroller generating, when the jumpstarter device is connected to the automobile battery, an output signal based on a detected battery voltage;

switching circuitry including a plurality of MOSFETs to selectively connect a terminal of the battery to the automobile battery when the microcontroller generates the output signal, such that the battery supplies a charging current to the automobile battery; and

a boost device for boosting a gate voltage of the plurality of MOSFETs.

8. (Currently Amended) The jumpstarter device of claim 7, ~~wherein~~ the voltage regulator comprising a voltage stabilizer connected to a resistor, a capacitor, and the microcontroller.

9. (Previously Submitted) The jumpstarter device of claim 7, wherein the load detector comprises a resistor in parallel with a capacitor, the resistor and capacitor connected to the microcontroller.

10. (Previously Submitted) The jumpstarter device of claim 7, wherein the microcontroller comprises a plurality of ports, the ports including a power supply port, a ground port, an output signal port, and a switching circuitry port.

11. (Previously Submitted) The jumpstarter device of claim 7, wherein the switching circuitry is connected to the microcontroller via the boost device, and the plurality of MOSFETs are connected in parallel.

12. (Previously Submitted) The jumpstarter device of claim 7, wherein the microcontroller:

generates the output signal to cause the switching circuitry to connect the battery to the automobile battery when the automobile battery is properly connected and the detected battery voltage is above a threshold; and

generates the output signal to cause the switching circuitry to disconnect the battery from the automobile battery when i) the detected battery voltage is below the threshold, or ii) the automobile battery is improperly connected.

13. (Previously Submitted) The jumpstarter device of claim 7, wherein the microcontroller causes the switching circuitry to disconnect the battery from the automobile battery when the automobile battery has a higher voltage than the battery.

14. (Currently Amended) The jumpstarter device of claim 7, wherein the output signal [[]] causes the switching circuitry to disconnect the battery from the automobile battery to prevent recharging of the battery by the automobile battery.

15. (Previously Submitted) The jumpstarter device of claim 7, wherein the voltage regulator is a direct-current to direct-current (DC-DC) converter.

16. (Previously Submitted) The jumpstarter device of claim 7, wherein the load detector prevents improper user operation of the jumpstarter device.

17. (Previously Submitted) The jumpstarter device of claim 7, wherein the load detector detects a reversed polarity condition.

18. (Currently Amended) The jumpstarter device of claim 7, wherein the load ~~detection module~~detector is connected to a negative terminal of the plurality of MOSFETs.

19. (Previously Submitted) The jumpstarter device of claim 7, further comprising one or more light emitting diodes (LEDs) controlled by the microcontroller.

20. (Currently Amended) The jumpstarter device of claim 7, wherein a portion of the load ~~detection module~~detector is connected in parallel with the plurality of MOSFETs.

21. (Currently Amended) The jumpstarter device of claim 7, wherein the microcontroller causes the jumpstarter device to enter a standby mode when a voltage of the battery is less than 9V and allows operation when the voltage of the battery is greater than 10V.

22. (Currently Amended) A method for a device to charge an automobile battery, the method comprising:

detecting a voltage level of a battery;

detecting a connection and a type of connection between the battery and the automobile battery;

generating, by a microcontroller, an output signal based on the voltage level of the battery, the connection to the automobile battery and the type of connection of the automobile battery;

based on the output signal, selectively connecting the battery to the automobile battery by activating a plurality of MOSFETs; and

based on the output signal, selectively disconnecting the battery from the automobile battery to prevent ~~damages~~damage caused by over-discharging of the battery.

23. (Currently Amended) The method of claim 22, wherein a boost device boosts ~~the~~a gate voltage of the plurality of MOSFETs.

24. (Currently Amended) The method of claim 23, wherein:
the type of connection of the automobile battery is a correct polarity connection or an incorrect polarity connection.

25. (Currently Amended) The method of claim 24, wherein the output signal:
causes the plurality of MOSFETs to connect the battery to the automobile battery when the type of connection is a correct polarity connection and ~~[[the]]~~ voltage level of the battery is above a threshold; and

cause the plurality of MOSFETs to disconnect the battery from the automobile battery when i) the level of the battery is below the threshold, or ii) the type of connection is an incorrect polarity connection.

26. (Currently Amended) A system for jumpstarting an automobile battery, ~~the system~~ comprising:

means for detecting a voltage level of a battery;

means for detecting whether a connection with ~~[[an]]the~~ automobile battery is a correct polarity connection or an incorrect polarity connection;

means for generating, by a microcontroller, an output signal based on the voltage level of the battery and whether the connection with the automobile battery is a correct polarity connection or an incorrect polarity connection; ~~[[and]]~~

means for selectively enabling current to flow from the battery to the automobile battery based on the output signal; and

a boost device for boosting a voltage associated with the means for selectively enabling current to flow from the battery to the automobile battery based on the output signal.

ARGUMENTS/ REMARKS

Status of Claims

Applicant submits this Amendment and Response to address the Non-Final Office Action dated April 27, 2020. Claims 1-6 were previously canceled and Claims 7-26 were previously added. No claims have been added or cancelled. Claims 7, 8, 14, 18, and 20-26 are amended, without adding any new matter and without intending to abandon or dedicate to the public any patentable subject matter. Therefore, Claims 7-26 are present for examination. Applicant respectfully requests reconsideration of this Application as amended.

Objections to the Specification

In the Office Action, the Examiner objects to the Specification due to various identified informalities. Applicant has amended the Specification herein to address the identified informalities, and submits that, in light of these amendments, the objection to the Specification is now moot. Accordingly, Applicant respectfully requests that the objection to the Specification be withdrawn.

Objections to the Claims

In the Office Action, the Examiner objects to Claims 7, 8, 20-23, 25, and 26 due to various identified informalities. Applicant has amended the identified Claims to address the identified informalities, and believes that the objections have been overcome. Accordingly, Applicant respectfully requests that the objections to Claims 7, 8, 20-23, 25, and 26 be withdrawn.

Double Patenting

The Office Action rejects Claims 7-26 on the grounds of nonstatutory double patenting in relation to certain identified Claims 1-20 of co-owned U.S. Patent No. 10,328,806. Without acquiescing to the propriety of the double-patenting rejection or to the accuracy of the assertions made therein regarding similarities between the current application and the claims of the '806 Patent, Applicant submits herewith a Terminal Disclaimer to overcome the rejection and thereby expedite allowance of the subject application.

Allowable Subject Matter

Applicant thanks the Examiner for indicating that Claims 7-26 contain allowable subject matter, and would be allowed if the double patenting rejection is overcome with a timely filed Terminal Disclaimer. Because a Terminal Disclaimer is being filed concurrently with this Response, Claims 7-26 are allowable.

Thus, Applicant respectfully requests acceptance of Claims 7-26.

Conclusion

Based upon the foregoing, Applicant believes that all pending claims are in condition for allowance and such disposition is respectfully requested. Applicant does not acquiesce to any objection, rejection, or argument not specifically addressed herein. Rather, Applicant believes the amendments and arguments contained herein overcome all objections, rejections, or arguments.

In the event that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,
SHERIDAN ROSS P.C.

Date: August 14, 2020

By: /David B. Kellis/
David B. Kellis
Registration No. 59,377
1560 Broadway, Suite 1200
Denver, CO 80202
Telephone: 303-764-3011
Facsimile: 303-863-0223

PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)		Docket Number (Optional) 8523WANG-1-CON-3																														
Application Number 16/404,321	Filed 05/06/2019																															
For AUTOMOBILE CHARGER																																
Art Unit 2851	Examiner Sun J. Lin																															
This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application. The requested extension and fee are as follows (check time period desired and enter the appropriate fee below): <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 15%; text-align: center;"><u>Fee</u></th> <th style="width: 15%; text-align: center;"><u>Small Entity Fee</u></th> <th style="width: 15%; text-align: center;"><u>Micro Entity Fee</u></th> <th style="width: 25%;"></th> </tr> </thead> <tbody> <tr> <td>☒ One month (37 CFR 1.17(a)(1))</td> <td style="text-align: center;">\$200</td> <td style="text-align: center;">\$100</td> <td style="text-align: center;">\$50</td> <td style="text-align: right;">\$ <u>100</u></td> </tr> <tr> <td>☐ Two months (37 CFR 1.17(a)(2))</td> <td style="text-align: center;">\$600</td> <td style="text-align: center;">\$300</td> <td style="text-align: center;">\$150</td> <td style="text-align: right;">\$ _____</td> </tr> <tr> <td>☐ Three months (37 CFR 1.17(a)(3))</td> <td style="text-align: center;">\$1,400</td> <td style="text-align: center;">\$700</td> <td style="text-align: center;">\$350</td> <td style="text-align: right;">\$ _____</td> </tr> <tr> <td>☐ Four months (37 CFR 1.17(a)(4))</td> <td style="text-align: center;">\$2,200</td> <td style="text-align: center;">\$1,100</td> <td style="text-align: center;">\$550</td> <td style="text-align: right;">\$ _____</td> </tr> <tr> <td>☐ Five months (37 CFR 1.17(a)(5))</td> <td style="text-align: center;">\$3,000</td> <td style="text-align: center;">\$1,500</td> <td style="text-align: center;">\$750</td> <td style="text-align: right;">\$ _____</td> </tr> </tbody> </table> ☐ Applicant asserts small entity status. See 37 CFR 1.27. ☐ Applicant certifies micro entity status. See 37 CFR 1.29. Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously. ☐ A check in the amount of the fee is enclosed. ☐ Payment by credit card. Form PTO-2038 is attached. ☐ The Director has already been authorized to charge fees in this application to a Deposit Account. ☒ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number <u>19-1970</u>. ☒ Payment made via EFS-Web. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038. I am the ☐ applicant. ☒ attorney or agent of record. Registration number <u>59377</u>. ☐ attorney or agent acting under 37 CFR 1.34. Registration number _____. <u>/David B. Kellis/</u> <u>August 14, 2020</u> Signature Date <u>David B. Kellis</u> <u>303-764-3055</u> Typed or printed name Telephone Number NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.				<u>Fee</u>	<u>Small Entity Fee</u>	<u>Micro Entity Fee</u>		☒ One month (37 CFR 1.17(a)(1))	\$200	\$100	\$50	\$ <u>100</u>	☐ Two months (37 CFR 1.17(a)(2))	\$600	\$300	\$150	\$ _____	☐ Three months (37 CFR 1.17(a)(3))	\$1,400	\$700	\$350	\$ _____	☐ Four months (37 CFR 1.17(a)(4))	\$2,200	\$1,100	\$550	\$ _____	☐ Five months (37 CFR 1.17(a)(5))	\$3,000	\$1,500	\$750	\$ _____
	<u>Fee</u>	<u>Small Entity Fee</u>	<u>Micro Entity Fee</u>																													
☒ One month (37 CFR 1.17(a)(1))	\$200	\$100	\$50	\$ <u>100</u>																												
☐ Two months (37 CFR 1.17(a)(2))	\$600	\$300	\$150	\$ _____																												
☐ Three months (37 CFR 1.17(a)(3))	\$1,400	\$700	\$350	\$ _____																												
☐ Four months (37 CFR 1.17(a)(4))	\$2,200	\$1,100	\$550	\$ _____																												
☐ Five months (37 CFR 1.17(a)(5))	\$3,000	\$1,500	\$750	\$ _____																												

☐ * Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.136(a). 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 1.11 and 1.14. This collection is estimated to take 6 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: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Privacy Act Statement

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

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

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

Electronic Patent Application Fee Transmittal				
Application Number:		16404321		
Filing Date:		06-May-2019		
Title of Invention:		AUTOMOBILE CHARGER		
First Named Inventor/Applicant Name:		Calvin Shiening Wang		
Filer:		David B. Kellis/Mandi Lamberson		
Attorney Docket Number:		8523WANG-1-CON-3		
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension - 1 month with \$0 paid	2251	1	100	100
Miscellaneous:				
Total in USD (\$)				100

Electronic Acknowledgement Receipt

EFS ID:	40293225
Application Number:	16404321
International Application Number:	
Confirmation Number:	6514
Title of Invention:	AUTOMOBILE CHARGER
First Named Inventor/Applicant Name:	Calvin Shiening Wang
Customer Number:	22442
Filer:	David B. Kellis/Mandi Lamberson
Filer Authorized By:	David B. Kellis
Attorney Docket Number:	8523WANG-1-CON-3
Receipt Date:	14-AUG-2020
Filing Date:	06-MAY-2019
Time Stamp:	17:47:08
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$100
RAM confirmation Number	E20208DH47264229
Deposit Account	191970
Authorized User	Mandi Lamberson
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 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 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		20200814_AMEND-02_NFOA.pdf	102216	yes	8
			16f94b4e78fb920b26ba4d002efe5c49f544b957		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Amendment/Req. Reconsideration-After Non-Final Reject		1	1	
	Specification		2	2	
	Claims		3	6	
	Applicant Arguments/Remarks Made in an Amendment		7	8	
Warnings:					
Information:					
2	Extension of Time	20200814_EOT-1mo.pdf	144405	no	2
			85e4d8f7fb7a94aa6b068857f1f61f751a333ccd		
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30846	no	2
			c799417098299ec097c272e71f8f9e8e2b4e1e80		
Warnings:					
Information:					
Total Files Size (in bytes):			277467		

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Application Number	16/404,321
				Filing Date	May 6, 2019
				First Named Inventor	Calvin Shiening Wang
				Art Unit	2851
				Examiner Name	LIN, SUN J
Sheet	1	of	1	Attorney Docket Number	8523WANG-1-CON-3

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number-kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	9954391	04/24/2018	Lei	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ³ ; Number ⁴ ; Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
	2	CN 103066662	04/24/2013	LEI XINGLIANG		(with English abstract)

NON-PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	3	"E-Power-21," Shenzhen Carku Technology Co., Ltd., Date Unknown, 1 page.
	4	"Intelligent Jumper Cable," Shenzhen Carku Technology Co., Ltd., Date Unknown, 1 page.
	5	"Jump Starter Instructions," Shenzhen Carku Technology Co., Ltd., Date Unknown, 1 page.
	6	"Smart Jumper Cable," Shenzhen Carku Technology Co., Ltd., Date Unknown, 1 page.
	7	"Summary of invalidity defenses against asserted claims of Pilot's U.S. Patent No. 10,046,653," Date Unknown, 17 pages.
	8	BRADFORD, "Re: Pilot Notice of Infringement (Amazon Case ID: 7131799991)," Jul. 9, 2020, 9 pages.
	9	Shenzhen Carku Technology Co., Ltd. v. The Noco Company, Petition for Inter Partes Review for U.S. Patent No. 9007015 with Exhibits 1001-1018, dated May 14, 2020, 1099 pages. SUBMITTED IN TWO PARTS.

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Electronic Patent Application Fee Transmittal				
Application Number:		16404321		
Filing Date:		06-May-2019		
Title of Invention:		AUTOMOBILE CHARGER		
First Named Inventor/Applicant Name:		Calvin Shiening Wang		
Filer:		David B. Kellis/Joseph Samelson		
Attorney Docket Number:		8523WANG-1-CON-3		
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	2806	1	120	120
Total in USD (\$)				120

Electronic Acknowledgement Receipt	
EFS ID:	40292733
Application Number:	16404321
International Application Number:	
Confirmation Number:	6514
Title of Invention:	AUTOMOBILE CHARGER
First Named Inventor/Applicant Name:	Calvin Shiening Wang
Customer Number:	22442
Filer:	David B. Kellis/Joseph Samelson
Filer Authorized By:	David B. Kellis
Attorney Docket Number:	8523WANG-1-CON-3
Receipt Date:	14-AUG-2020
Filing Date:	06-MAY-2019
Time Stamp:	17:17:03
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$120
RAM confirmation Number	E20208DH17233640
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Foreign Reference	CN103066662_w_abstract.pdf	1495205	no	15
			95c3818b78308fba3dd0dbd8427153d2b70388		
Warnings:					
Information:					
2	Non Patent Literature	E-Power-21_Carku.pdf	402774	no	1
			10f97cfcdba8216f302235348990651f153f0e28		
Warnings:					
Information:					
3	Non Patent Literature	Intelligent_Jumper_Cable.pdf	180139	no	1
			81aa5f588d9ee228f95eca2dae5ca73266ecd76a		
Warnings:					
Information:					
4	Non Patent Literature	Jump_starter_instructions.pdf	260741	no	1
			847556d4e9d8b5e93a6a526c3f26e9e302895639		
Warnings:					
Information:					
5	Non Patent Literature	Smart_jumper_cable.pdf	188802	no	1
			d5d1b9d0b1b5b7d7ddcf9e0f98f1029ed6d4e171		
Warnings:					
Information:					
6	Non Patent Literature	Summary_of_invalidity_defenses_against_asserted.pdf	3303243	no	17
			fde4e22593c2f16545e6addfbde25d9a2fc0f091		
Warnings:					
Information:					

7	Non Patent Literature	BRADFORD_re_pilot_notice_of_infringement.pdf	1935138	no	9
			6a8388118e404522995605696bd05598f9c4917f		
Warnings:					
Information:					
8	Non Patent Literature	Shenzhen_v_Noco_Petition_for_Inter_Partes_Review_PART1.pdf	18274590	no	601
			1a8c712e68953dddbf5924a9ce0ce4566064f141		
Warnings:					
Information:					
9	Non Patent Literature	Shenzhen_v_Noco_Petition_for_Inter_Partes_Review_PART2.pdf	23974022	no	498
			b1e4b6aaf9f31ea1ebc3a15cab531d813ebb50a88		
Warnings:					
Information:					
10		8523WANG-1-CON-3_IDS_05.pdf	1368891	yes	4
			9451432ad5ad0f52b56724fb982b4d6c7bd5d7c1		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Transmittal Letter		1	3	
	Information Disclosure Statement (IDS) Form (SB08)		4	4	
Warnings:					
Information:					
11	Fee Worksheet (SB06)	fee-info.pdf	30436	no	2
			bd6ede0abf996bad87cabbdede23a08994d6c46e		
Warnings:					
Information:					
Total Files Size (in bytes):			51413981		

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:	)	Group Art Unit: 2851
Calvin Shiening Wang	)	Confirmation No.: 6514
Serial No.: 16/404,321	)	Examiner: LIN, SUN J
Filed: May 6, 2019	)	
Atty. File No.: 8523WANG-1-CON-3	)	<u>SUPPLEMENTAL</u>
Entitled: "AUTOMOBILE CHARGER"	)	<u>INFORMATION DISCLOSURE</u>
	)	<u>STATEMENT</u>
	)	<i>Electronically Submitted</i>

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

Dear Commissioner:

The references cited on attached Form PTO/SB08 are being called to the attention of the Examiner.

- ☒ Copies of the cited non-patent and/or foreign references are enclosed herewith.
- ☐ Copies of the cited U.S. patents and/or patent applications are enclosed herewith.
- ☒ Copies of the cited U.S. patents/patent application publications are not enclosed in accordance with 37 C.F.R. § 1.98(a).
- ☐ Copies of the cited references are not enclosed, in accordance with 37 C.F.R. § 1.98(d), because the references were cited by or submitted to the U.S. Patent and Trademark Office in prior application Serial No. _____ filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120.
- ☒ To the best of applicants' belief, the pertinence of the foreign-language references is believed to be summarized in the attached English abstracts and/or in the figures, although applicants do not necessarily vouch for the accuracy of the translation.
- ☐ Examiner's attention is drawn to the following related applications:
- Serial No. _____ filed _____ (Attorney Ref. No. _____)
- Serial No. _____ filed _____ (Attorney Ref. No. _____)
- ☐ Other: _____

Submission of the above information is not intended as an admission that any item is citable under the statutes or rules to support a rejection, that any item disclosed represents analogous art, or that those skilled in the art would refer to or recognize the pertinence of any

reference without the benefit of hindsight, nor should an inference be drawn as to the pertinence of the references based on the order in which they are presented. Submission of this statement should not be taken as an indication that a search has been conducted, or that no better art exists.

It is respectfully requested that the cited information be expressly considered during the prosecution of this application and the references made of record therein.

FEES

☐	37 CFR 1.97(b): No fee is believed due in connection with this submission, because the information disclosure statement submitted herewith is satisfied by one of the following conditions ("X" indicates satisfaction): ☐ Within three months of the filing date of a national application other than a continued prosecution application under 37 CFR 1.53(d), or ☐ Within three months of the date of entry of the national stage as set forth in § 1.491 in an international application, or ☐ Before the mailing date of a first Office Action on the merits, or ☐ Before the mailing of a first Office action after the filing of a request for continued examination under 37 CFR 1.114. Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970.
☒	37 CFR 1.97(c): The information disclosure statement transmitted herewith is being filed after all the above conditions (37 CFR 1.97(b)), but before the mailing date of any one of the following conditions: (1) a final action under 37 C.F.R. 1.113, or (2) a notice of allowance under 37 C.F.R. 1.311, or (3) an action that otherwise closes prosecution in the application. This Information Disclosure Statement is accompanied by: ☐ A Certification (below) as specified by 37 C.F.R. 1.97(c). Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970. OR ☒ Please charge Deposit Account 19-1970 in the amount of \$120.00 for the fee set forth in 37 C.F.R. 1.17(p) for submission of an information disclosure statement. Please credit any overpayment or charge any underpayment to Deposit Account 19-1970.
☐	37 CFR 1.97(d): This Information Disclosure Statement is being submitted after the period specified in 37 CFR 1.97(c). ☐ This information Disclosure Statement includes a Certification (below) as specified by 37 C.F.R. 1.97(e) AND ☐ Applicants hereby requests consideration of the reference(s) disclosed herein. Please charge Deposit Account 19-1970 in the amount of \$120.00 under 37 C.F.R. 1.17(p). Please credit any overpayment or charge any underpayment to Deposit Account 19-1970. Election to pay the fee should not be taken as an indication that applicant(s) cannot execute a certification.

Certification (37 C.F.R. 1.97(e))
(Applicable only if checked)

- ☐ The undersigned certifies that:
- ☐ Each item of information contained in the Information Disclosure Statement submitted herewith was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(1).
 - ☐ A copy of the communication from the foreign patent office is enclosed.

OR

- ☐ No item of information contained in the Information Disclosure Statement submitted herewith was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(2).

Respectfully submitted,

SHERIDAN ROSS P.C.

By: /David B. Kellis/
David B. Kellis
Registration No. 59377
1560 Broadway, Suite 1200
Denver, Colorado 80202-5141
(303) 863-9700

Date: August 14, 2020

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Application Number	16/404,321
				Filing Date	May 6, 2019
				First Named Inventor	Calvin Shiening Wang
				Art Unit	2851
				Examiner Name	LIN, SUN J
Sheet	1	of	1	Attorney Docket Number	8523WANG-1-CON-3

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number-kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ³ ; Number ⁴ ; Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶

NON-PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	1	Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and Unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 84 pages
	2	Corrected Exhibit II.P, Invalidity Claim Chart for DieHard 950 System for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 48 pages

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Electronic Patent Application Fee Transmittal				
Application Number:		16404321		
Filing Date:		06-May-2019		
Title of Invention:		AUTOMOBILE CHARGER		
First Named Inventor/Applicant Name:		Calvin Shiening Wang		
Filer:		David B. Kellis/Joseph Samelson		
Attorney Docket Number:		8523WANG-1-CON-3		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	1806	1	240	240
Total in USD (\$)				240

Electronic Acknowledgement Receipt

EFS ID:	39734904
Application Number:	16404321
International Application Number:	
Confirmation Number:	6514
Title of Invention:	AUTOMOBILE CHARGER
First Named Inventor/Applicant Name:	Calvin Shiening Wang
Customer Number:	22442
Filer:	David B. Kellis/Joseph Samelson
Filer Authorized By:	David B. Kellis
Attorney Docket Number:	8523WANG-1-CON-3
Receipt Date:	16-JUN-2020
Filing Date:	06-MAY-2019
Time Stamp:	15:35:11
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$240
RAM confirmation Number	E20206FF35328384
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		8523WANG-1-CON-3_IDS_04.pdf	213990	yes	4
			634f34ec9a5568b89d37d04d1d9fc1594acba1c8		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Transmittal Letter		1	3	
	Information Disclosure Statement (IDS) Form (SB08)		4	4	
Warnings:					
Information:					
2	Non Patent Literature	1-19-cv-05982_Def_Corrected_Initial_Noninfringement_Invalidity_1-25-2019REDACTED.pdf	734233	no	84
			b92c4863a70186a1f980ea9980093d2e1229e197		
Warnings:					
Information:					
3	Non Patent Literature	Corrected_Exhibit_IIP_Invalidity_Claim_Chart_for_DieHard_950_SystemREDACTEDVERSION.pdf	3097680	no	48
			a741517177916e29091514067cf3de5f8510d37		
Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	30573	no	2
			7fd5fbc0860c5cbe0f16a4447b5b7965fe0e7503		
Warnings:					
Information:					
Total Files Size (in bytes):			4076476		

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:	)	Group Art Unit: 2851
Calvin Shiening Wang	)	Confirmation No.: 6514
Serial No.: 16/404,321	)	Examiner: LIN, SUN J
Filed: May 6, 2019	)	
Atty. File No.: 8523WANG-1-CON-3	)	<u>SUPPLEMENTAL</u>
Entitled: "AUTOMOBILE CHARGER"	)	<u>INFORMATION DISCLOSURE</u>
	)	<u>STATEMENT</u>
	)	<i>Electronically Submitted</i>

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

Dear Commissioner:

The references cited on attached Form PTO/SB08 are being called to the attention of the Examiner.

- ☒ Copies of the cited non-patent and/or foreign references are enclosed herewith.
- ☐ Copies of the cited U.S. patents and/or patent applications are enclosed herewith.
- ☐ Copies of the cited U.S. patents/patent application publications are not enclosed in accordance with 37 C.F.R. § 1.98(a).
- ☐ Copies of the cited references are not enclosed, in accordance with 37 C.F.R. § 1.98(d), because the references were cited by or submitted to the U.S. Patent and Trademark Office in prior application Serial No. _____ filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120.
- ☐ To the best of applicants' belief, the pertinence of the foreign-language references is believed to be summarized in the attached English abstracts and/or in the figures, although applicants do not necessarily vouch for the accuracy of the translation.
- ☐ Examiner's attention is drawn to the following related applications:
- Serial No. _____ filed _____ (Attorney Ref. No. _____)
- Serial No. _____ filed _____ (Attorney Ref. No. _____)
- ☐ Other: _____

Submission of the above information is not intended as an admission that any item is citable under the statutes or rules to support a rejection, that any item disclosed represents analogous art, or that those skilled in the art would refer to or recognize the pertinence of any

reference without the benefit of hindsight, nor should an inference be drawn as to the pertinence of the references based on the order in which they are presented. Submission of this statement should not be taken as an indication that a search has been conducted, or that no better art exists.

It is respectfully requested that the cited information be expressly considered during the prosecution of this application and the references made of record therein.

FEES

☐	37 CFR 1.97(b). No fee is believed due in connection with this submission, because the information disclosure statement submitted herewith is satisfied by one of the following conditions ("X" indicates satisfaction): ☐ Within three months of the filing date of a national application other than a continued prosecution application under 37 CFR 1.53(d), or ☐ Within three months of the date of entry of the national stage as set forth in § 1.491 in an international application, or ☐ Before the mailing date of a first Office Action on the merits, or ☐ Before the mailing of a first Office action after the filing of a request for continued examination under 37 CFR 1.114. Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970.
☒	37 CFR 1.97(c): The information disclosure statement transmitted herewith is being filed after all the above conditions (37 CFR 1.97(b)), but before the mailing date of any one of the following conditions: (1) a final action under 37 C.F.R. 1.113, or (2) a notice of allowance under 37 C.F.R. 1.311, or (3) an action that otherwise closes prosecution in the application. This Information Disclosure Statement is accompanied by: ☐ A Certification (below) as specified by 37 C.F.R. 1.97(e). Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970. OR ☒ Please charge Deposit Account 19-1970 in the amount of \$240.00 for the fee set forth in 37 C.F.R. 1.17(p) for submission of an information disclosure statement. Please credit any overpayment or charge any underpayment to Deposit Account 19-1970.
☐	37 CFR 1.97(d): This Information Disclosure Statement is being submitted after the period specified in 37 CFR 1.97(c). ☐ This information Disclosure Statement includes a Certification (below) as specified by 37 C.F.R. 1.97(e) AND ☐ Applicants hereby requests consideration of the reference(s) disclosed herein. Please charge Deposit Account 19-1970 in the amount of \$240.00 under 37 C.F.R. 1.17(p). Please credit any overpayment or charge any underpayment to Deposit Account 19-1970. Election to pay the fee should not be taken as an indication that applicant(s) cannot execute a certification.

Certification (37 C.F.R. 1.97(e))
(Applicable only if checked)

- ☐ The undersigned certifies that:
- ☐ Each item of information contained in the Information Disclosure Statement submitted herewith was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(1).
 - ☐ A copy of the communication from the foreign patent office is enclosed.

OR

- ☐ No item of information contained in the Information Disclosure Statement submitted herewith was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(2).

Respectfully submitted,

SHERIDAN ROSS P.C.

By: /David B. Kellis/
David B. Kellis
Registration No. 59377
1560 Broadway, Suite 1200
Denver, Colorado 80202-5141
(303) 863-9700

Date: June 16, 2020



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/404,321	05/06/2019	Calvin Shiening Wang	8523WANG-1-CON-3	6514
22442	7590	04/27/2020	EXAMINER	
Sheridan Ross PC			LIN, SUN J	
1560 Broadway				
Suite 1200				
Denver, CO 80202				
			ART UNIT	PAPER NUMBER
			2851	
			NOTIFICATION DATE	DELIVERY MODE
			04/27/2020	ELECTRONIC

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

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

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

e-docket@sheridanross.com

Notice of AIA Status

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file (FITF) provisions of the AIA.

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

DETAILED ACTION

1. This office action is in response to application 16/404,321 and *Preliminary Amendment* concurrently filed on 05/06/2019. Claims 1 – 6 were originally filed in the application. Claims 1 – 6 has been cancelled and Claims 7 – 26 have been newly added in the *Amendment*. Claims 7 – 26 remain pending in the application.

Specification Objections

2. The specification is objected to because of following informalities:

ABSTRACT, line 2, change “(DC) voltage supply” to **—DC voltage supply—**.

ABSTRACT, line 8, change “Third, fourth and fifth ends” to **—A first end, a fourth end and a fifth end—**.

Paragraph 0001, update status of U.S. Patent Application No. 15/923,219 filed on 03/16/2018, now a Patent No.10,328,806 issued 06/25/2019.

Appropriate corrections are required.

Claim Objections

3. Claims listed below are objected to because of the following informalities:

Claim 7, line 1, change “jumpstarter device, comprising:” to **—jumstarter device comprising:—**.

Claim 7, line 3, change “the microcontroller” to **—a microcontroller—**.

Claim 7, line 6, change “a microcontroller” to **—the microcontroller—**.

Claim 7, line 6, after “a battery voltage” insert **—of the battery—**.

Claim 8, line 1, before “the voltage regulator” insert **—wherein—**.

Claim 18, line 1 – 2, change “the load detection module” to **—a load detection module—**.

Claim 20, line 1 – 2, change “the load detection module” to **—a load detection module—**.

Claim 21, line 2, change “the device” to **—the jumpstarter device—**.

Claim 22, line 1 – 2, change “an automobile battery comprising:” to **—an automobile battery, the method comprising:—**.

Claim 22, line 11, change “damage” to **—damages—**.

Claim 23, line 1 – 2, change “the gate voltage” to **—a gate voltage—**.

Claim 25, line 6, change “the level” to **—the voltage level—**.

Claim 26, line 1 – 2, change “an automobile battery comprising:” to **—an automobile battery, the system comprising:—**.

Claim 26, line 4, change “an automobile battery” to **—the automobile battery—**.

Claim 26, line 8, after “connection,” delete **—and—**.

Appropriate corrections are required.

Double Patenting Rejection

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 7 – 26 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1 – 20 of U.S. Patent No.

10,328,806 B2. Although the conflicting claims are not word-to-word identical, they are not patentably distinct from each other because they have identical and/or similar limitations (e.g., a jumpstarter is a charging device).

Examiner's Remarks

6. Based on results of preliminary prior art searches, Claims 7 – 26 contain allowable subject matters. Claims 7 – 26 will be allowed pending on a timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) to overcome an actual or provisional rejection as explained in the “*Double Patenting Rejection*” given above, and results of further prior art searches.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to *SUN J LIN* whose telephone number is (571)272-1899. The examiner can normally be reached on 8:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *Jack Chiang* can be reached on 571-272-74837483. The fax phone number for the organization where this application or proceeding 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 applications 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 Service Representative or access to the automated information system, call 800-786-9199 (in USA or CANADA) or 571-272-1000.

All responses to this Office Action should be mailed to ***Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450*** or faxed to ***571-273-8300***.

/SUN J LIN/
Acting Patent Examiner, 2851/2800

Search Notes 	Application/Control No. 16/404,321	Applicant(s)/Patent Under Reexamination Wang et al.
	Examiner SUN J LIN	Art Unit 2851

CPC - Searched*		
Symbol	Date	Examiner
B60L53/00; H02J7/0068; H02J9/005; H02J7/0065; H02J7/0029; H02J7/0034	04/22/2020	/JSL/

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
320	109	04/22/2020	/JSL/

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

Search Notes		
Search Notes	Date	Examiner
EAST [US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB]	04/22/2020	/JSL/

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

--	--

Index of Claims 	Application/Control No. 16/404,321	Applicant(s)/Patent Under Reexamination Wang et al.
	Examiner SUN J LIN	Art Unit 2851

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS										
☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47										
CLAIM		DATE								
Final	Original	04/22/2020								
	1	-								
	2	-								
	3	-								
	4	-								
	5	-								
	6	-								
	7	✓								
	8	✓								
	9	✓								
	10	✓								
	11	✓								
	12	✓								
	13	✓								
	14	✓								
	15	✓								
	16	✓								
	17	✓								
	18	✓								
	19	✓								
	20	✓								
	21	✓								
	22	✓								
	23	✓								
	24	✓								
	25	✓								
	26	✓								

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	16/404,321
				Filing Date	May 6, 2019
				First Named Inventor	Calvin Shiening Wang
				Art Unit	2851
				Examiner Name	Sun J Lin
Sheet	1	of	8	Attorney Docket Number	8523WANG-1-CON-3

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number-kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	5319298	06/07/1994	Wanzong et al.	
	2	5831350	11/03/1998	McConkey et al.	
	3	6057667	05/02/2000	Mills	
	4	6144110	11/07/2000	Matsuda et al.	
	5	6160381	12/12/2000	Peterzell	
	6	6212054	04/03/2001	Chan	
	7	6249106	06/19/2001	Turner et al.	
	8	6271605	08/07/2001	Carkner et al.	
	9	6344733	02/05/2002	Crass et al.	
	10	6362599	03/26/2002	Turner et al.	
	11	6362599	03/26/2002	Turner et al.	
	12	6632103	10/14/2003	Liu	
	13	6774607	08/10/2004	Moseneder et al.	
	14	6919704	07/19/2005	Healey	
	15	7339347	03/04/2008	Elder et al.	
	16	7508171	03/24/2009	Carrier et al.	
	17	7579811	08/25/2009	Sato et al.	
	18	7675261	03/09/2010	Elder et al.	
	19	8125181	02/28/2012	Gregg et al.	
	20	8172603	05/08/2012	Richardet Jr.	
	21	8994327	03/31/2015	Kusch et al.	
	22	9007023	04/14/2015	Dao	
	23	9263717	02/16/2016	Nakano et al.	
	24	9287725	03/15/2016	Huffman et al.	
	25	9871392	01/16/2018	Durando et al.	
	26	9874611	01/23/2018	Whiting et al.	
	27	2001/0038276	11/08/2001	Resch et al.	
	28	2002/0075003	06/20/2002	Fridman et al.	
	29	2003/0096158	05/22/2003	Takano et al.	
	30	2004/0066168	04/08/2004	George et al.	
	31	2005/0162124	07/28/2005	Bertness et al.	
	32	2010/0013302	01/21/2010	Howell et al.	
Examiner Signature	/SUN J LIN/			Date Considered	04/15/2020

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JSL/

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	16/404,321
				Filing Date	May 6, 2019
				First Named Inventor	Calvin Shiening Wang
				Art Unit	2851
				Examiner Name	Sun J Lin
Sheet	2	of	8	Attorney Docket Number	8523WANG-1-CON-3

	33	2010/0055546	03/04/2010	Elder et al.	
	34	2010/0173182	07/08/2010	Baxter et al.	
	35	2010/0181959	07/22/2010	Gibbs et al.	
	36	2010/0244766	09/30/2010	Olsberg	
	37	2010/0301800	12/02/2010	Inskeep	
	38	2011/0127947	06/02/2011	Hunter et al.	
	39	2011/0279089	11/17/2011	Yeo	
	40	2012/0013189	01/19/2012	Jenkins	
	41	2012/0068662	03/22/2012	Durando et al.	
	42	2012/0139498	06/07/2012	Chang	
	43	2013/0241488	09/19/2013	Dao	
	44	2014/0159509	06/12/2014	Inskeep	
	45	2015/0012174	01/08/2015	Kim et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ² ; Number ⁴ ; Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁵
	46	AU 694452	07/23/1998	CENTURY MFG CO.		
	47	DE 202013102599	08/13/2013	ASIA BRIGHT IND HONG CON CO		(machine translation)
	48	EP 1673828	05/08/2013	BLACK & DECKER INC.		
	49	JP 2015-115979	06/22/2015	SFJ CORP		(machine translation)
	50	WO 2000/024108	04/27/2000	CENTURY MFG CO.		
	51	WO 2012/080996	06/21/2012	JTM POWER LIMITED		

NON-PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	52	Pilot, Inc. v. WinPlus North America, Inc. Civil Docket for Case#: 1:17-cv-01183-STV, dated Sep. 18, 2019, 2 pages

Examiner Signature	/SUN J LIN/	Date Considered	04/15/2020
--------------------	-------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JSL/

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	16/404,321
				Filing Date	May 6, 2019
				First Named Inventor	Calvin Shiening Wang
				Art Unit	2851
				Examiner Name	Sun J Lin
Sheet	3	of	8	Attorney Docket Number	8523WANG-1-CON-3

53	Pilot, Inc. v. Anker Technology Corporation, Civil Docket for Case #: 1:17-cv-01185-CBS, dated Sep. 18, 2019, 2 pages
54	Pilot, Inc. v. Schumacher Electric Corporation, Answer Exhibits for Case #: 1:19-cv-05982, dated Sep. 23, 2019, 456 pages
55	Pilot, Inc. v. Schumacher Electric Corporation, Complaint with Exhibits for Case #: 1:19-cv-05982, dated Sep. 06, 2019, 523 pages
56	Pilot, Inc. v. Schumacher Electric Corporation, Docket Report for Case #: 1:19-cv-5982, dated Sep. 18, 2019, 2 pages
57	Pilot, Inc. v. Schumacher Electric Corporation, Plaintiff's Motion to Dismiss Counterclaim for Case #: 1:19-cv-05982-EEC, dated Oct. 07, 2019, 14 pages
58	Pilot, Inc. v. Schumacher Electric Corporation, Schumacher's Answer for Case #: 1:19-cv-05982-EEC, dated Sep. 23, 2019, 84 pages
59	Pilot, Inc. v. Anker Technology Corporation, Complaint for Case #: 4:17-cv-04918-JST, dated Aug. 23, 2017, 14 pages
60	Pilot, Inc. v. Anker Technology Corporation, Docket Report for Case #: 4:17-cv-4918, dated Sep. 18, 2019, 5 pages
61	Pilot, Inc. v. Anker Technology Corporation, Anker North America, LLC and Hunan Oceanwing E-Commerce Co., Ltd., First Amended Complaint for Patent Infringement and Jury Demand for Case #: 4:17-cv-04918-JST, dated Nov. 23, 2017, 19 pages
62	Pilot, Inc. v. Winplus North America, Inc. Answer to First Amended Complaint for Patent Infringement and Affirmative Defenses to Pilot, Inc. for Case #: 5:17-cv-01712-GW-MRW, dated Nov. 17, 2017, 9 pages
63	Pilot, Inc. v. Winplus North America, Inc., Complaint for Patent Infringement and Jury Demand for Case #: 5:17-cv-01712-GW-MRW, dated Aug. 23, 2017, 14 pages
64	Declaration in Support of Motion to Stay Exhibit 3, for Case #: 5:17-cv-01712-GW-MRW, dated Aug. 22, 2018, 11 pages
65	Declaration in Support of Motion to Stay Exhibit 4, for Case #: 5:17-cv-01712-GW-MRW, dated Aug. 22, 2018, 17 pages
66	Declaration in Support of Motion to Stay Exhibit 8, for Case #: 5:17-cv-01712-GW-MRW, dated Aug. 22, 2018, 24 pages
67	Pilot, Inc. v. Winplus North America, Inc., Declaration of David F. Kowalski in Support of Winplus North America, Inc.'s Motion to Stay Pending Inter Partes Review for Case #: 5:17-cv-01712-GW-MRW, dated Aug. 28, 2018, 5 pages
68	Pilot, Inc. v. Winplus North America Inc., Declaration of Brandon C. Fernald in Support of Pilot, Inc.'s, Motion for Leave to File Second Amended Complaint for Case #: 5:17-cv-01712-GW-MRW, dated Aug. 30, 2018, 76 pages
69	Pilot, Inc. v. Winplus North America, Inc., Docket Report for Case #: 5:17-cv-1712, dated Sep. 18, 2019, 7 pages

Examiner Signature	/SUN J LIN/	Date Considered	04/15/2020
--------------------	-------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JSL/

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Complete if Known		
			Application Number	16/404,321	
			Filing Date	May 6, 2019	
			First Named Inventor	Calvin Shiening Wang	
			Art Unit	2851	
			Examiner Name	Sun J Lin	
Sheet	4	of	8	Attorney Docket Number	8523WANG-1-CON-3

	70	Pilot, Inc. v. Winplus North America, Inc., First Amended Complaint for Patent Infringement for Case #: 5:17-cv-01712-GW-MRW, dated Oct. 31, 2017, 17 pages
	71	Pilot, Inc. v. Winplus North America, Inc., Plaintiff Pilot, Inc.'s Memorandum in Support of its Motion for Leave to Amend First Amended Complaint for Patent Infringement for Case #: 5:17-cv-01712-GW-MRW, dated Aug. 30, 2018, 11 pages
	72	Pilot, Inc. v. Winplus North America, Inc., Defendant Winplus North America, Inc.'s Memorandum in Support of Motion to Stay Pending Inter Partes Review for Case #: 5:17-cv-01712-GW-MRW, dated Aug. 22, 2018, 17 pages
	73	Pilot, Inc. v. Winplus North America, Inc., Defendant Winplus North America, Inc.'s Notice of Filing of Petition for Inter Partes Review of Patent-In-Suit for Case #: 5:17-cv-01712-GW-MRW, dated Jan. 22, 2018, 10 pages
	74	Pilot, Inc. v. Winplus North America, Inc., Defendant Winplus North America, Inc.'s Notice of Motion to Stay Pending Inter Partes Review for Case #: 5:17-cv-01712-GW-MRW, dated Aug. 22, 2018, 3 pages
	75	Exhibits I.A - I.C for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and Unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 70 pages
	76	Exhibit II.A, Invalidity Claim Chart for Schumacher SL1 System for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 29 pages
	77	Exhibit II.B, Invalidity Claim Chart for HaiJiu SHF12000-12 for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 23 pages
	78	Exhibit II.C, Invalidity Claim Chart for JPR Series Jump Starters for Schumacher SL1 System for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 29 pages
	79	Exhibit II.E, Invalidity Claim Chart for Projecta HP2200 for Schumacher SL1 System for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 39 pages
	80	Exhibit II.F, Invalidity Claim Chart for Stanley System for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 24 pages

Examiner Signature	/SUN J LIN/	Date Considered	04/15/2020
--------------------	-------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JSL/

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	16/404,321
				Filing Date	May 6, 2019
				First Named Inventor	Calvin Shiening Wang
				Art Unit	2851
				Examiner Name	Sun J Lin
Sheet	5	of	8	Attorney Docket Number	8523WANG-1-CON-3

	81	Exhibit II.G, Invalidity Claim Chart for U.S. Patent Publication No. US 2010/0173182 for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 41 pages
	82	Exhibit II.H, Invalidity Claim Chart for US Patent Application Publication No. US 2009/0174362 for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 36 pages
	83	Exhibit II.I, Invalidity Claim Chart for U.S. Patent No. 7,345,450 for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 41 pages
	84	Exhibit II.J, Invalidity Claim Chart for U.S. Patent No. US 6,426,606 for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 81 pages
	85	Exhibit II.K, Invalidity Claim Chart for U.S. Patent 6,803,743 for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 23 pages
	86	Exhibit II.L, Invalidity Claim Chart for U.S. Patent Publication No. US 2014/0159509 for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 35 pages
	87	Exhibit II.M, Invalidity Claim chart for German Utility Model Specification No. De 202013102599 U1 for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 27 pages
	88	Exhibit II.N, Invalidity Claim chart for Japanese Laid-Open Publication No. JP2015-115979A for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 39 pages
	89	Exhibit II.O, Invalidity Claim Chart for US Patent Application Publication No. US 2009/0174362 for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 34 pages
	90	Exhibit II.Q, Invalidity Claim chart for U.S. Patent Publication No. US 2001/0038276 for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 54 pages
Examiner Signature	/SUN J LIN/	
Date Considered	04/15/2020	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. *Applicant's unique citation designation number (optional). *See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. *Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). *For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. *Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. *Applicant is to place a check mark here if English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JSL/

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Complete if Known		
			Application Number	16/404,321	
			Filing Date	May 6, 2019	
			First Named Inventor	Calvin Shiening Wang	
			Art Unit	2851	
			Examiner Name	Sun J Lin	
Sheet	6	of	8	Attorney Docket Number	8523WANG-1-CON-3

91	Exhibit II.D, Invalidity Claim Chart for U.S. Patent 6,249,106 for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 42 pages
92	"RESCUE® Portable Power Pack Instructions," Quick Cable Corporation, before 2014, 20 pages
93	"Latest News - Projecta website," Brown & Watson International Pty Ltd., 2017, 5 pages
94	"POWERALL Portable Power Bank Battery Jump Starter LED Flashlight," Gryphon Mobile Electronics, LLC, date unknown, 9 pages
95	"RFDPPJS2976DLX Portable Charge-All/Jump Starter User Manual," Rockford Consumer Products, date unknown,
96	"New Projecta Jump Starters Lift The Bar," Brown & Watson International Pty Ltd., Apr. 12, 2012, 2 pages
97	WARD "Jumper Cables Avoid Surges," RV Life, May 01, 2011, 8 pages
98	"mPower JUMP User Manual," mPower Technologies, Inc., date unknown, 1 page
99	GOODWIN "PowerSafe jumper cables take danger out of playing with electricity," CBS Interactive Inc., Nov. 04, 2009, 6 pages
100	"PowerSafe Jumper Cables SEMA Global Media Award Winner," Energy Safe Technologies, Inc., Feb. 24, 2009, 2 pages
101	"Power Punch User Manual," axhess GmbH & Co. KG, 2013, 8 pages
102	"JPR Series M version Mini Jump Start Product Datasheet," Asia Bright Industrial (H.K.) Co. Ltd., undated, 1 page
103	"12VDC Mini Jump Start for JPR 4500P, JPR 2600P, JPR 1800P," axhess GmbH & Co. KG, 2012, 9 pages
104	"START-IT® Jump 'n Charge™ User's Manual," Vector Manufacturing, 2006, 8 pages
105	EDELSTEIN "Lithium-Ion Batteries For Lighter, Compact Jump-Starting Pack," Green Car Reports, Apr. 26, 2014
106	"12VDC Mini Jump Start "Power Punch for JPR 9000P, JPR 4500P, JPR 4500 6V, JPR 2600P, JPR 1800P," axhess GmbH & jCo. KG, 2013, 25 pages
107	"Juno Power announces the JUMPR external battery," Coolest Gadgets, Apr. 25, 2014, 2 pages
108	"Rockford PP2976DLXA Portable Power Source - Mini Jump Starter," Amazon.com, date unknown, 14 pages
109	"Smart Automatic Battery Charger Owner's Manual," Vector Manufacturing, Ltd., date unknown, 12 pages
110	MURPHY "Jump Start Your Car With Portable 'Jumpr' Device," PCMag, Apr. 25, 2014, 4 pages

Examiner Signature	/SUN J LIN/	Date Considered	04/15/2020
--------------------	-------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JSL/

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Complete if Known		
			Application Number	16/404,321	
			Filing Date	May 6, 2019	
			First Named Inventor	Calvin Shiening Wang	
			Art Unit	2851	
			Examiner Name	Sun J Lin	
Sheet	7	of	8	Attorney Docket Number	8523WANG-1-CON-3

	111	"JPR Series Jump Starter: JPR-1800M/2600M/4500M/9000M/9024M," BatteryFighter, 2014, 2 pages
	112	"mPower Jump Mini User Manual," mPower Technologies, Inc., date unknown, 1 page
	113	"Quicker, Easier, Better A Guide to the New Tools & Equipment Products Introduced at the SEMA Show," SEMA News, Aug. 2011, 4 pages
	114	"AAA Oregon Deploys PowerSafe Jump Start Systems," Energy Safe Technologies, Inc., Mar. 17, 2011, 2 pages
	115	"Product Review: Pocket Charger/Jump Starter," TexasBowhunter.com, Apr. 16, 2014, 6 pages
	116	RAMSEY "Smartphone battery backup that will jump start your car," Verizon Media, Apr. 28, 2014, 5 pages
	117	"STARTMONKEY 400 Quik Start Guide," Powertraveller Limited, date unknown, 2 pages
	118	MOYNIHAN "Small but Mighty Charger Juices Tablets and Jump-Starts Cars," Wired, Apr. 25, 2014, 9 pages
	119	"Lithium Starthilfe Booster Energiestation mit USB- Jump Starter JPR4500," Amazon.com, first available Jan. 26, 2013, 3 pages
	120	"450 Amp Jump-Starter With Compressor Instruction Manual," Baccus Global LLC, 2014, 10 pages
	121	"JPR 9000M Series Mini Jump Start Product Datasheet," Asia Bright Industrial (H.K.) Co. Ltd., as early as Apr. 22, 2013, 1 page
	122	FRANCISCO "This power bank charges phones and jumpstarts cars," Yuga Tech, Apr. 25, 2014, 12 pages
	123	"Why PowerSafe Jumper Cables Are Necessary," Energy Safe Technologies, Inc., 2011, 2 pages
	124	"Profi Power Starthilfe Mini Jump JPR4500," Amazon.com, first available Jun. 04, 2013, 3 pages
	125	CRENSHAW "Coming to SEMA: Fool-Proof Jumper Cables," RIDES, Oct. 28, 2010, 4 pages
	126	"RESCUE® Portable Power Pack Model 2100 Product Specifications," QuickCable, as early as 28, 2014, 2 pages
	127	CUNNINGHAM "Three pocket-size jump starters," Road/Show by CNET, Apr. 28, 2014, 5 pages
	128	"DieHard Portable Power 950 Product Packaging," available before Apr. 28, 2014, 1 page
	129	"SHF12000-12 Instruction Sheet," Hangzhou Haijiu Battery Co. Ltd, prior to Dec. 13, 2013, 3 pages
	130	"RED FUEL™ Model: SL1 LithiumIon Jump Starter, Fuel Pack and Backup Power Owner's Manual," Schumacher Electric Corporation, date unknown, 28 pages
	131	"Function and jumpstart short cut Description," axhess GmbH & Co. Kg., date unknown, 1 page

Examiner Signature	/SUN J LIN/	Date Considered	04/15/2020
--------------------	-------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JSL/

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	16/404,321
				Filing Date	May 6, 2019
				First Named Inventor	Calvin Shiening Wang
				Art Unit	2851
				Examiner Name	Sun J Lin
Sheet	8	of	8	Attorney Docket Number	8523WANG-1-CON-3

	132	"Lithium-Ion Jump-Starter Instruction Mannual," Baccus Global LLC, 2011, 10 pages
	133	"LSTART RANGE 12V Compact Lithium-ion Jump Starts," Sealey, date unknown, 2 pages
	134	"DieHard Portable Power 950 Owner's Manual," Sears, Roebuck & Co., Dec. 2005, 8 pages
	135	"REDFUEL™ SL65 Jump Starter Owner's Manual," Schumacher Electric Corporation, date unknown, 35 pages
	136	BATTERY EXTENDER® Model BE01258 Lithium Ion Jump Starter, Fuel Pack and Backup Power Owner's Manual," Schumacher Electric Corporation, date unknown, 19 pages
	137	"Lithium Ion Jump Starter, Fuel Pack and Backup Power Owner's Manual," Schumacher Electric Corporation, date unknown, 7 pages
	138	"SL1316 Lithium Ion Jump Starter, Fuel Pack and Backup Power Owner's Manual," Schumacher Electric Corporation, date unknown, 32 pages
	139	"SL1315 Jump Starter/Power Pack Owner's Manual," Schumacher Electric Corporation, date unknown, 24 pages
	140	"SL1327 Jump Starter Owner's Manual," Schumacher Electric Corporation, date unknown, 35 pages
	141	"SL1317 Jump Starter Owner's Manual," Schumacher Electric Corporation, date unknown, 35 pages
	142	"SL1314 Jump Starter/Power Pack Owner's Manual," Schumacher Electric Corporation, date unknown, 35 pages
	143	"SL1312 Jump Starter/Power Pack Owner's Manual," Schumacher Electric Corporation, date unknown, 35 pages
	144	"SL1338 Jump Starter/Power Pack Owner's Manual," Schumacher Electric Corporation, date unknown, 35 pages
	145	"SL1396 Power Pack Owner's Manual," Schumacher Electric Corporation, date unknown, 24 pages
	146	"SL1391U, SL1398U, SL1399U Lithium Ion Tactical Jump Starter Light Owner's Manual," Schumacher Electric Corporation, date unknown, 111 pages
	147	"SL1391, SL1398, SL1399 Lithium Ion Tactical Jump Starter Light Owner's Manual," Schumacher Electric Corporation, date unknown, 39 pages

Examiner Signature	/SUN J LIN/	Date Considered	04/15/2020
--------------------	-------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JSL/

EAST Search History**EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	6182	320/109	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 08:40
L2	3	(320/109).ccls. and (jump adj starter)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 08:45
L3	50	(320/\$).ccls. and (jump adj starter)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 08:46
L4	366	(jump adj starter)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 08:46
L5	10	(jump adj starter) and (battery with (voltage adj regulator) with microcontroller)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 08:48
L6	9	5 AND ((H02J7/0068 OR H02J7/0065 OR H02J7/0034 OR H02J7/0029 OR H02J7/005 OR B60L53/00).CPC.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 08:53
L7	66	(jump adj starter) AND ((H02J7/0068 OR H02J7/0065 OR H02J7/0034 OR H02J7/0029 OR H02J7/005 OR B60L53/00).CPC.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 08:54

L8	10	(jump adj starter) and (battery with (voltage adj regulator) with microcontroller)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 09:05
L9	11	(jump adj starter) and (battery same (voltage adj regulator) same microcontroller)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 09:07
L10	3	(jumpstarter) and (battery same (voltage adj regulator) same microcontroller)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 09:09
L11	1	((jumpstarter) and (battery same (voltage adj regulator) same microcontroller)).CLM.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 09:10
L12	2	(jumpstarter or (jump adj starter)) and (battery same (voltage adj regulator) same microcontroller) and (load adj detector) and (switching adj circuitry) and (boost adj device)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 09:29
L13	2	((jumpstarter or (jump adj starter)) and (battery same (voltage adj regulator) same microcontroller) and (load adj detector) and (switching adj circuitry) and (boost adj device))",CLM."	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 09:30
L14	2	(jumpstarter or (jump adj starter) or (charging adj device)) and (battery same (voltage adj regulator) same microcontroller) and (load adj detector) and (switching adj circuitry) and (boost adj device)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 09:54
L15	2	((jumpstarter or (jump adj starter) or (charging adj device)) and (battery same (voltage adj regulator) same microcontroller) and (load adj detector)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 09:55

		and (switching adj circuitry) and (boost adj device)).CLM.				
L16	1	(charg\$3 adj (automobile adj battery)) and ((voltage adj level) adj battery) and (type adj connection) and (microcontroller) and (output adj signal) and (MOSFET\$2) and ((prevent\$3 adj damage) with (over-discharging))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 10:00
L17	1	(charg\$3 adj (automobile adj battery)) and ((voltage adj level) adj battery) and (type adj connection) and (microcontroller) and (output adj signal) and ((prevent\$3 adj damage) with (over-discharging))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 10:01
L18	1	(charg\$3 adj (automobile adj battery)) and ((voltage adj level) adj battery) and (type adj connection) and (microcontroller) and (output adj signal) and ((prevent\$3 adj damage\$2) with (over-discharging))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 10:04
L19	3	(charg\$3 adj (automobile adj battery)) and ((voltage adj level) adj battery) and (type adj connection) and (microcontroller) and (output adj signal) and ((prevent\$3 adj damage\$2) with (over adj discharging))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 10:05
L20	2	((charg\$3 adj (automobile adj battery)) and ((voltage adj level) adj battery) and (type adj connection) and (microcontroller) and (output adj signal) and ((prevent\$3 adj damage\$2) with (over adj discharging))).CLM.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/04/22 10:05

4/22/2020 10:06:46 AM

C:\Users\slin1\Documents\EAST\Workspaces\CASE1436.wsp

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Complete if Known		
			Application Number	16/404,321	
			Filing Date	May 6, 2019	
			First Named Inventor	Calvin Shiening Wang	
			Art Unit	2851	
			Examiner Name	Sun J Lin	
Sheet	1	of	3	Attorney Docket Number	8523WANG-1-CON-3

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number-kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	3343057	09/19/1967	Smith	
	2	3590357	06/29/1971	Reid	
	3	3950668	04/13/1976	Sancey et al.	
	4	5487002	01/23/1996	Diller et al.	
	5	5793185	08/11/1998	Prelec	
	6	6130519	10/10/2000	Whiting et al.	
	7	6426606	07/30/2002	Purkey	
	8	6262492	07/17/2001	Sheng	
	9	6351102	02/26/2002	Troy	
	10	6803743	10/12/2004	George et al.	
	11	7199555	04/03/2007	Hung	
	12	7345450	03/18/2008	Krieger et al.	
	13	8072900	12/13/2011	Brown	
	14	8183821	05/22/2012	Sakurai	
	15	8253376	08/28/2012	Gale et al.	
	16	8447543	05/21/2013	Dickinson et al.	
	17	8565930	10/22/2013	Miwa	
	18	8692513	04/08/2014	Gaul et al.	
	19	8723477	05/13/2014	Gaul et al.	
	20	9007015	04/14/2015	Nook et al.	
	21	9248746	02/02/2016	Wen	
	22	9263907	02/16/2016	Richardson et al.	
	23	9333865	05/10/2016	Kawasaki et al.	
	24	9352652	05/31/2016	Cavazos et al.	
	25	9412994	08/09/2016	Koebler	
	26	9496728	11/15/2016	Lei	
	27	9506446	11/29/2016	Xinfang	
	28	9525297	12/20/2016	Wang	
	29	10046653	08/14/2018	Wang et al.	
	30	10328806	06/25/2019	Wang	
	31	2005/0110467	05/26/2005	Thomason	
	32	2009/0008374	01/08/2009	Fosbinder	

Examiner Signature	/SUN J LIN/	Date Considered	04/15/2020
--------------------	-------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JSL/

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	16/404,321
				Filing Date	May 6, 2019
				First Named Inventor	Calvin Shiening Wang
				Art Unit	2851
				Examiner Name	Sun J Lin
Sheet	2	of	3	Attorney Docket Number	8523WANG-1-CON-3

	33	2009/0174362	07/09/2009	Richardson et al.	
	34	2012/0025763	02/02/2012	Hsiao et al.	
	35	2013/0015814	01/17/2013	Kelty et al.	
	36	2015/0032312	01/29/2015	Lambrinos et al.	
	37	2015/0212135	07/30/2015	Jin et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ² ; Number ⁴ ; Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ³
	38	CN 201947042	08/24/2011	SHENZHEN SBASE ELECTRONICS TECHNOLOGY CO LTD		(English translation)
	39	CN 203522157	04/02/2014	SHENZHEN SBASE ELECTRONICS TECHNOLOGY CO LTD		(English translation)

NON-PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	40	"3000A 12/24V High Cranking Sure Start Jumpstarter," Projecta, Oct. 2011, 12 pages
	41	"900 Peak Amp Jump-Starter Model No. PKC0AZ Owner's Manual and Warranty Information," Old World Industries, LLC, © 2014, 8 pages
	42	"HT75XX-1 100mA Low Power LDO," Holtek Semiconductor Inc., Jan. 12, 2006, Rev. 1.50, 14 pages
	43	"LM78XX/LM78XXA 3-Terminal 1A Positive Voltage Regulator," Fairchild Semiconductor Corporation, Mar. 2008, Rev. 1.0, 28 pages
	44	"Start-It Jump Starter 12 Volt DC Power Supply User's Manual & Warranty Information," Vector Manufacturing, © 2005, 6 pages
	45	Official Action for U.S. Patent Application No. 14/569,352, mailed Aug. 31, 2016, 8 pages
	46	Notice of Allowance for U.S. Patent Application No. 14/569,352, mailed Oct. 13, 2016, 7 pages
	47	Official Action for U.S. Patent Application No. 15/355,409, dated Dec. 14, 2017 (Attorney's Ref. No. 8523WANG-1-CON) 6 pages

Examiner Signature	/SUN J LIN/	Date Considered	04/15/2020
--------------------	-------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JSL/

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	16/404,321
				Filing Date	May 6, 2019
				First Named Inventor	Calvin Shiening Wang
				Art Unit	2851
				Examiner Name	Sun J Lin
Sheet	3	of	3	Attorney Docket Number	8523WANG-1-CON-3

	48	Official Action for U.S. Patent Application No. 15/355,409, dated May 3, 2018 (Attorney's Ref. No. 8523WANG-1-CON) 6 pages
	49	Notice of Allowance for U.S. Patent Application No. 15/355,409, dated Jun. 21, 2018 (Attorney's Ref. No. 8523WANG-1-CON) 7 pages
	50	Official Action for U.S. Patent Application No. 15/923,219, dated Jan. 08, 2019 (Attorney's Ref. No. 8523WANG-1-CON-2) 7 pages
	51	Notice of Allowance for U.S. Patent Application No. 15/923,219, dated Apr. 05, 2019 (Attorney's Ref. No. 8523WANG-1-CON-2) 8 pages
	52	Petition for Inter Partes Review of U.S. Patent No. 9,525,297, filed Jan. 13, 2018 (Attorney's Ref. No. 8523WANG-1-IPR) 93 pages
	53	Decision Institution of Inter Partes Review for U.S. Patent No. 9,525,297, dated Jul. 16, 2018, Case IPR2018-00488, 22 pages
	54	Order Granting Joint Motion to Terminate Proceeding and Granting Joint Request to Treat Settlement Agreement as Business Confidential Information for U.S. Patent No. 9,525,297, dated Nov. 16, 2018, Case IPR2018-00488, 4 pages
	55	Declaration of Shukri Souri in Support of Petition for Inter Partes Review of U.S. Patent No. 9,525,297, dated Jan. 13, 2018, 92 pages
	56	Curriculum Vitae of Dr. Shukri J. Souri, Jul. 2016, 4 pages

Examiner Signature	/SUN J LIN/	Date Considered	04/15/2020
--------------------	-------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JSL/

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Complete if Known		
			Application Number	16/404,321	
			Filing Date	May 6, 2019	
			First Named Inventor	Calvin Shiening Wang	
			Art Unit	2851	
			Examiner Name	Sun J Lin	
Sheet	1	of	8	Attorney Docket Number	8523WANG-1-CON-3

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number-kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	5319298	06/07/1994	Wanzong et al.	
	2	5831350	11/03/1998	McConkey et al.	
	3	6057667	05/02/2000	Mills	
	4	6144110	11/07/2000	Matsuda et al.	
	5	6160381	12/12/2000	Peterzell	
	6	6212054	04/03/2001	Chan	
	7	6249106	06/19/2001	Turner et al.	
	8	6271605	08/07/2001	Carkner et al.	
	9	6344733	02/05/2002	Crass et al.	
	10	6362599	03/26/2002	Turner et al.	
	11	6362599	03/26/2002	Turner et al.	
	12	6632103	10/14/2003	Liu	
	13	6774607	08/10/2004	Moseneder et al.	
	14	6919704	07/19/2005	Healey	
	15	7339347	03/04/2008	Elder et al.	
	16	7508171	03/24/2009	Carrier et al.	
	17	7579811	08/25/2009	Sato et al.	
	18	7675261	03/09/2010	Elder et al.	
	19	8125181	02/28/2012	Gregg et al.	
	20	8172603	05/08/2012	Richardet Jr.	
	21	8994327	03/31/2015	Kusch et al.	
	22	9007023	04/14/2015	Dao	
	23	9263717	02/16/2016	Nakano et al.	
	24	9287725	03/15/2016	Huffman et al.	
	25	9871392	01/16/2018	Durando et al.	
	26	9874611	01/23/2018	Whiting et al.	
	27	2001/0038276	11/08/2001	Resch et al.	
	28	2002/0075003	06/20/2002	Fridman et al.	
	29	2003/0096158	05/22/2003	Takano et al.	
	30	2004/0066168	04/08/2004	George et al.	
	31	2005/0162124	07/28/2005	Bertness et al.	
	32	2010/0013302	01/21/2010	Howell et al.	
Examiner Signature				Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	16/404,321
				Filing Date	May 6, 2019
				First Named Inventor	Calvin Shiening Wang
				Art Unit	2851
				Examiner Name	Sun J Lin
Sheet	2	of	8	Attorney Docket Number	8523WANG-1-CON-3

	33	2010/0055546	03/04/2010	Elder et al.	
	34	2010/0173182	07/08/2010	Baxter et al.	
	35	2010/0181959	07/22/2010	Gibbs et al.	
	36	2010/0244766	09/30/2010	Olsberg	
	37	2010/0301800	12/02/2010	Inskeep	
	38	2011/0127947	06/02/2011	Hunter et al.	
	39	2011/0279089	11/17/2011	Yeo	
	40	2012/0013189	01/19/2012	Jenkins	
	41	2012/0068662	03/22/2012	Durando et al.	
	42	2012/0139498	06/07/2012	Chang	
	43	2013/0241488	09/19/2013	Dao	
	44	2014/0159509	06/12/2014	Inskeep	
	45	2015/0012174	01/08/2015	Kim et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ² ; Number ⁴ ; Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁵
	46	AU 694452	07/23/1998	CENTURY MFG CO.		
	47	DE 202013102599	08/13/2013	ASIA BRIGHT IND HONG CON CO		(machine translation)
	48	EP 1673828	05/08/2013	BLACK & DECKER INC.		
	49	JP 2015-115979	06/22/2015	SFJ CORP		(machine translation)
	50	WO 2000/024108	04/27/2000	CENTURY MFG CO.		
	51	WO 2012/080996	06/21/2012	JTM POWER LIMITED		

NON-PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	52	Pilot, Inc. v. WinPlus North America, Inc. Civil Docket for Case#: 1:17-cv-01183-STV, dated Sep. 18, 2019, 2 pages

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	16/404,321
				Filing Date	May 6, 2019
				First Named Inventor	Calvin Shiening Wang
				Art Unit	2851
				Examiner Name	Sun J Lin
Sheet	3	of	8	Attorney Docket Number	8523WANG-1-CON-3

53	Pilot, Inc. v. Anker Technology Corporation, Civil Docket for Case #: 1:17-cv-01185-CBS, dated Sep. 18, 2019, 2 pages
54	Pilot, Inc. v. Schumacher Electric Corporation, Answer Exhibits for Case #: 1:19-cv-05982, dated Sep. 23, 2019, 456 pages
55	Pilot, Inc. v. Schumacher Electric Corporation, Complaint with Exhibits for Case #: 1:19-cv-05982, dated Sep. 06, 2019, 523 pages
56	Pilot, Inc. v. Schumacher Electric Corporation, Docket Report for Case #: 1:19-cv-5982, dated Sep. 18, 2019, 2 pages
57	Pilot, Inc. v. Schumacher Electric Corporation, Plaintiff's Motion to Dismiss Counterclaim for Case #: 1:19-cv-05982-EEC, dated Oct. 07, 2019, 14 pages
58	Pilot, Inc. v. Schumacher Electric Corporation, Schumacher's Answer for Case #: 1:19-cv-05982-EEC, dated Sep. 23, 2019, 84 pages
59	Pilot, Inc. v. Anker Technology Corporation, Complaint for Case #: 4:17-cv-04918-JST, dated Aug. 23, 2017, 14 pages
60	Pilot, Inc. v. Anker Technology Corporation, Docket Report for Case #: 4:17-cv-4918, dated Sep. 18, 2019, 5 pages
61	Pilot, Inc. v. Anker Technology Corporation, Anker North America, LLC and Hunan Oceanwing E-Commerce Co., Ltd., First Amended Complaint for Patent Infringement and Jury Demand for Case #: 4:17-cv-04918-JST, dated Nov. 23, 2017, 19 pages
62	Pilot, Inc. v. Winplus North America, Inc. Answer to First Amended Complaint for Patent Infringement and Affirmative Defenses to Pilot, Inc. for Case #: 5:17-cv-01712-GW-MRW, dated Nov. 17, 2017, 9 pages
63	Pilot, Inc. v. Winplus North America, Inc., Complaint for Patent Infringement and Jury Demand for Case #: 5:17-cv-01712-GW-MRW, dated Aug. 23, 2017, 14 pages
64	Declaration in Support of Motion to Stay Exhibit 3, for Case #: 5:17-cv-01712-GW-MRW, dated Aug. 22, 2018, 11 pages
65	Declaration in Support of Motion to Stay Exhibit 4, for Case #: 5:17-cv-01712-GW-MRW, dated Aug. 22, 2018, 17 pages
66	Declaration in Support of Motion to Stay Exhibit 8, for Case #: 5:17-cv-01712-GW-MRW, dated Aug. 22, 2018, 24 pages
67	Pilot, Inc. v. Winplus North America, Inc., Declaration of David F. Kowalski in Support of Winplus North America, Inc.'s Motion to Stay Pending Inter Partes Review for Case #: 5:17-cv-01712-GW-MRW, dated Aug. 28, 2018, 5 pages
68	Pilot, Inc. v. Winplus North America Inc., Declaration of Brandon C. Fernald in Support of Pilot, Inc.'s, Motion for Leave to File Second Amended Complaint for Case #: 5:17-cv-01712-GW-MRW, dated Aug. 30, 2018, 76 pages
69	Pilot, Inc. v. Winplus North America, Inc., Docket Report for Case #: 5:17-cv-1712, dated Sep. 18, 2019, 7 pages

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Complete if Known		
			Application Number	16/404,321	
			Filing Date	May 6, 2019	
			First Named Inventor	Calvin Shiening Wang	
			Art Unit	2851	
			Examiner Name	Sun J Lin	
Sheet	4	of	8	Attorney Docket Number	8523WANG-1-CON-3

	70	Pilot, Inc. v. Winplus North America, Inc., First Amended Complaint for Patent Infringement for Case #: 5:17-cv-01712-GW-MRW, dated Oct. 31, 2017, 17 pages
	71	Pilot, Inc. v. Winplus North America, Inc., Plaintiff Pilot, Inc.'s Memorandum in Support of its Motion for Leave to Amend First Amended Complaint for Patent Infringement for Case #: 5:17-cv-01712-GW-MRW, dated Aug. 30, 2018, 11 pages
	72	Pilot, Inc. v. Winplus North America, Inc., Defendant Winplus North America, Inc.'s Memorandum in Support of Motion to Stay Pending Inter Partes Review for Case #: 5:17-cv-01712-GW-MRW, dated Aug. 22, 2018, 17 pages
	73	Pilot, Inc. v. Winplus North America, Inc., Defendant Winplus North America, Inc.'s Notice of Filing of Petition for Inter Partes Review of Patent-In-Suit for Case #: 5:17-cv-01712-GW-MRW, dated Jan. 22, 2018, 10 pages
	74	Pilot, Inc. v. Winplus North America, Inc., Defendant Winplus North America, Inc.'s Notice of Motion to Stay Pending Inter Partes Review for Case #: 5:17-cv-01712-GW-MRW, dated Aug. 22, 2018, 3 pages
	75	Exhibits I.A - I.C for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and Unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 70 pages
	76	Exhibit II.A, Invalidity Claim Chart for Schumacher SL1 System for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 29 pages
	77	Exhibit II.B, Invalidity Claim Chart for HaiJiu SHF12000-12 for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 23 pages
	78	Exhibit II.C, Invalidity Claim Chart for JPR Series Jump Starters for Schumacher SL1 System for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 29 pages
	79	Exhibit II.E, Invalidity Claim Chart for Projecta HP2200 for Schumacher SL1 System for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 39 pages
	80	Exhibit II.F, Invalidity Claim Chart for Stanley System for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 24 pages

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	16/404,321
				Filing Date	May 6, 2019
				First Named Inventor	Calvin Shiening Wang
				Art Unit	2851
				Examiner Name	Sun J Lin
Sheet	5	of	8	Attorney Docket Number	8523WANG-1-CON-3

81	Exhibit II.G, Invalidity Claim Chart for U.S. Patent Publication No. US 2010/0173182 for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 41 pages		
82	Exhibit II.H, Invalidity Claim Chart for US Patent Application Publication No. US 2009/0174362 for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 36 pages		
83	Exhibit II.I, Invalidity Claim Chart for U.S. Patent No. 7,345,450 for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 41 pages		
84	Exhibit II.J, Invalidity Claim Chart for U.S. Patent No. US 6,426,606 for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 81 pages		
85	Exhibit II.K, Invalidity Claim Chart for U.S. Patent 6,803,743 for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 23 pages		
86	Exhibit II.L, Invalidity Claim Chart for U.S. Patent Publication No. US 2014/0159509 for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 35 pages		
87	Exhibit II.M, Invalidity Claim chart for German Utility Model Specification No. De 202013102599 U1 for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 27 pages		
88	Exhibit II.N, Invalidity Claim chart for Japanese Laid-Open Publication No. JP2015-115979A for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 39 pages		
89	Exhibit II.O, Invalidity Claim Chart for US Patent Application Publication No. US 2009/0174362 for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 34 pages		
90	Exhibit II.Q, Invalidity Claim chart for U.S. Patent Publication No. US 2001/0038276 for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 54 pages		
Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Complete if Known		
			Application Number	16/404,321	
			Filing Date	May 6, 2019	
			First Named Inventor	Calvin Shiening Wang	
			Art Unit	2851	
			Examiner Name	Sun J Lin	
Sheet	6	of	8	Attorney Docket Number	8523WANG-1-CON-3

91	Exhibit II.D, Invalidity Claim Chart for U.S. Patent 6,249,106 for Pilot, Inc. v. Schumacher Electric Corporation, Defendant Schumacher Electric Corporation's Corrected Initial Noninfringement, Invalidity and unenforceability Contentions Pursuant to Local Patent Rule (LPR) 2.3 for Case # 1:19-cv-05982-EEC, dated Nov. 25, 2019, 42 pages
92	"RESCUE® Portable Power Pack Instructions," Quick Cable Corporation, before 2014, 20 pages
93	"Latest News - Projecta website," Brown & Watson International Pty Ltd., 2017, 5 pages
94	"POWERALL Portable Power Bank Battery Jump Starter LED Flashlight," Gryphon Mobile Electronics, LLC, date unknown, 9 pages
95	"RFDPPJS2976DLX Portable Charge-All/Jump Starter User Manual," Rockford Consumer Products, date unknown,
96	"New Projecta Jump Starters Lift The Bar," Brown & Watson International Pty Ltd., Apr. 12, 2012, 2 pages
97	WARD "Jumper Cables Avoid Surges," RV Life, May 01, 2011, 8 pages
98	"mPower JUMP User Manual," mPower Technologies, Inc., date unknown, 1 page
99	GOODWIN "PowerSafe jumper cables take danger out of playing with electricity," CBS Interactive Inc., Nov. 04, 2009, 6 pages
100	"PowerSafe Jumper Cables SEMA Global Media Award Winner," Energy Safe Technologies, Inc., Feb. 24, 2009, 2 pages
101	"Power Punch User Manual," axhess GmbH & Co. KG, 2013, 8 pages
102	"JPR Series M version Mini Jump Start Product Datasheet," Asia Bright Industrial (H.K.) Co. Ltd., undated, 1 page
103	"12VDC Mini Jump Start for JPR 4500P, JPR 2600P, JPR 1800P," axhess GmbH & Co. KG, 2012, 9 pages
104	"START-IT® Jump 'n Charge™ User's Manual," Vector Manufacturing, 2006, 8 pages
105	EDELSTEIN "Lithium-Ion Batteries For Lighter, Compact Jump-Starting Pack," Green Car Reports, Apr. 26, 2014
106	"12VDC Mini Jump Start "Power Punch for JPR 9000P, JPR 4500P, JPR 4500 6V, JPR 2600P, JPR 1800P," axhess GmbH & jCo. KG, 2013, 25 pages
107	"Juno Power announces the JUMPR external battery," Coolest Gadgets, Apr. 25, 2014, 2 pages
108	"Rockford PP2976DLXA Portable Power Source - Mini Jump Starter," Amazon.com, date unknown, 14 pages
109	"Smart Automatic Battery Charger Owner's Manual," Vector Manufacturing, Ltd., date unknown, 12 pages
110	MURPHY "Jump Start Your Car With Portable 'Jumpr' Device," PCMag, Apr. 25, 2014, 4 pages

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	16/404,321
				Filing Date	May 6, 2019
				First Named Inventor	Calvin Shiening Wang
				Art Unit	2851
				Examiner Name	Sun J Lin
Sheet	7	of	8	Attorney Docket Number	8523WANG-1-CON-3

	111	"JPR Series Jump Starter: JPR-1800M/2600M/4500M/9000M/9024M," BatteryFighter, 2014, 2 pages
	112	"mPower Jump Mini User Manual," mPower Technologies, Inc., date unknown, 1 page
	113	"Quicker, Easier, Better A Guide to the New Tools & Equipment Products Introduced at the SEMA Show," SEMA News, Aug. 2011, 4 pages
	114	"AAA Oregon Deploys PowerSafe Jump Start Systems," Energy Safe Technologies, Inc., Mar. 17, 2011, 2 pages
	115	"Product Review: Pocket Charger/Jump Starter," TexasBowhunter.com, Apr. 16, 2014, 6 pages
	116	RAMSEY "Smartphone battery backup that will jump start your car," Verizon Media, Apr. 28, 2014, 5 pages
	117	"STARTMONKEY 400 Quik Start Guide," Powertraveller Limited, date unknown, 2 pages
	118	MOYNIHAN "Small but Mighty Charger Juices Tablets and Jump-Starts Cars," Wired, Apr. 25, 2014, 9 pages
	119	"Lithium Starthilfe Booster Energiestation mit USB- Jump Starter JPR4500," Amazon.com, first available Jan. 26, 2013, 3 pages
	120	"450 Amp Jump-Starter With Compressor Instruction Manual," Baccus Global LLC, 2014, 10 pages
	121	"JPR 9000M Series Mini Jump Start Product Datasheet," Asia Bright Industrial (H.K.) Co. Ltd., as early as Apr. 22, 2013, 1 page
	122	FRANCISCO "This power bank charges phones and jumpstarts cars," Yuga Tech, Apr. 25, 2014, 12 pages
	123	"Why PowerSafe Jumper Cables Are Necessary," Energy Safe Technologies, Inc., 2011, 2 pages
	124	"Profi Power Starthilfe Mini Jump JPR4500," Amazon.com, first available Jun. 04, 2013, 3 pages
	125	CRENSHAW "Coming to SEMA: Fool-Proof Jumper Cables," RIDES, Oct. 28, 2010, 4 pages
	126	"RESCUE® Portable Power Pack Model 2100 Product Specifications," QuickCable, as early as 28, 2014, 2 pages
	127	CUNNINGHAM "Three pocket-size jump starters," Road/Show by CNET, Apr. 28, 2014, 5 pages
	128	"DieHard Portable Power 950 Product Packaging," available before Apr. 28, 2014, 1 page
	129	"SHF12000-12 Instruction Sheet," Hangzhou Haijiu Battery Co. Ltd, prior to Dec. 13, 2013, 3 pages
	130	"RED FUEL™ Model: SL1 LithiumIon Jump Starter, Fuel Pack and Backup Power Owner's Manual," Schumacher Electric Corporation, date unknown, 28 pages
	131	"Function and jumpstart short cut Description," axhess GmbH & Co. Kg., date unknown, 1 page

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	16/404,321
				Filing Date	May 6, 2019
				First Named Inventor	Calvin Shiening Wang
				Art Unit	2851
				Examiner Name	Sun J Lin
Sheet	8	of	8	Attorney Docket Number	8523WANG-1-CON-3

	132	"Lithium-Ion Jump-Starter Instruction Mannual," Baccus Global LLC, 2011, 10 pages
	133	"LSTART RANGE 12V Compact Lithium-ion Jump Starts," Sealey, date unknown, 2 pages
	134	"DieHard Portable Power 950 Owner's Manual," Sears, Roebuck & Co., Dec. 2005, 8 pages
	135	"REDFUEL™ SL65 Jump Starter Owner's Manual," Schumacher Electric Corporation, date unknown, 35 pages
	136	BATTERY EXTENDER® Model BE01258 Lithium Ion Jump Starter, Fuel Pack and Backup Power Owner's Manual," Schumacher Electric Corporation, date unknown, 19 pages
	137	"Lithium Ion Jump Starter, Fuel Pack and Backup Power Owner's Manual," Schumacher Electric Corporation, date unknown, 7 pages
	138	"SL1316 Lithium Ion Jump Starter, Fuel Pack and Backup Power Owner's Manual," Schumacher Electric Corporation, date unknown, 32 pages
	139	"SL1315 Jump Starter/Power Pack Owner's Manual," Schumacher Electric Corporation, date unknown, 24 pages
	140	"SL1327 Jump Starter Owner's Manual," Schumacher Electric Corporation, date unknown, 35 pages
	141	"SL1317 Jump Starter Owner's Manual," Schumacher Electric Corporation, date unknown, 35 pages
	142	"SL1314 Jump Starter/Power Pack Owner's Manual," Schumacher Eletric Corporation, date unknown, 35 pages
	143	"SL1312 Jump Starter/Power Pack Owner's Manual," Schumacher Electric Corporation, date unknown, 35 pages
	144	"SL1338 Jump Starter/Power Pack Owner's Manual," Schumacher Electric Corporation, date unknown, 35 pages
	145	"SL1396 Power Pack Owner's Manual," Schumacher Electric Corporation, date unknown, 24 pages
	146	"SL1391U, SL1398U, SL1399U Lithium Ion Tactical Jump Starter Light Owner's Manual," Schumacher Electric Corporation, date unknown, 111 pages
	147	"SL1391, SL1398, SL1399 Lithium Ion Tactical Jump Starter Light Owner's Manual," Schumacher Electric Corporation, date unknown, 39 pages

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Electronic Acknowledgement Receipt	
EFS ID:	38699887
Application Number:	16404321
International Application Number:	
Confirmation Number:	6514
Title of Invention:	AUTOMOBILE CHARGER
First Named Inventor/Applicant Name:	Calvin Shiening Wang
Customer Number:	22442
Filer:	David B. Kellis/Robert Roe-Pachirat
Filer Authorized By:	David B. Kellis
Attorney Docket Number:	8523WANG-1-CON-3
Receipt Date:	26-FEB-2020
Filing Date:	06-MAY-2019
Time Stamp:	15:48:39
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment		no			
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Non Patent Literature	EDELSTEIN_Lithium-Ion_Batteries.pdf	9453450	no	18
			08948f9d2717f351c621bfecff6276de40fdf17c		
Warnings:					

Information:					
2	Non Patent Literature	12VDC_Mini_Jump_Start_Power_Punch_for_JPR9000P_JPR4500P_JPR45006V_JPR2600P.pdf	18330519	no	25
			7ad657ab49bfe743aa27f21fa3d119285afa143f		
Warnings:					
Information:					
3	Non Patent Literature	Juno_Power_announces_the_JUMPR_external_battery.pdf	1115313	no	2
			da73b0aaddfa608a56d13e6a86906abba101829e		
Warnings:					
Information:					
4	Non Patent Literature	Rockford_PP2976DLXA.pdf	7230325	no	14
			622350c71a86021eaf5baff2a3822219fced6a30		
Warnings:					
Information:					
5	Non Patent Literature	Smart_Automatic_Battery_Charger_Owners_Manual.pdf	19754943	no	12
			4109450f45cc2465027fa716dcad58a635cb792		
Warnings:					
Information:					
6	Non Patent Literature	MURPHY_Jump_Start_Your_Car.pdf	1751126	no	4
			74b2a71ad72a4311c59180a5a6aaa50e3d1e92e7		
Warnings:					
Information:					
7	Non Patent Literature	JPR_Series_Jump_Starter_JPR-1800M_2600M_4500M_9000M_9024M.pdf	695581	no	2
			80ec65f01357d5bb2fa1f6898b30d5e5c199fcd2		
Warnings:					
Information:					
8	Non Patent Literature	mPower_Jump_Mini_User_Manual.pdf	179163	no	1
			e2264a54cfdd450cc45318aa12f2867b1950de4e		
Warnings:					
Information:					

9	Non Patent Literature	Quicker_Easier_Better_A_Guide.pdf	1720413	no	4
			89a6c7b8e6c8e48d42e1bb10f72d513e1d69f7e1		
Warnings:					
Information:					
10	Non Patent Literature	AAA_Oregon_Deploys_PowerSafe_Jump_Start_Systems.pdf	790582	no	2
			37a9064b7f11151d73721dac9c7c76e08bed5984		
Warnings:					
Information:					
11	Non Patent Literature	Product_Review_Pocket_Charger_Jump_Starter_TexasBowhunter.pdf	2885346	no	6
			38b7b1ac7bb95607f880158fad313c7a0dca2cfe		
Warnings:					
Information:					
12	Non Patent Literature	RAMSEY_Smartphone_battery_backup_that_will_jump.pdf	1412502	no	5
			b7562e29b3c014b529954279c62e37cdaca7867		
Warnings:					
Information:					
13	Non Patent Literature	STARTMONKEY_400_Quick_Start_Guide.pdf	830193	no	2
			82224db208127449192e882d3773618e085177df		
Warnings:					
Information:					
14	Non Patent Literature	MOYNIHAN_Small_but_Mighty_Charger_Juices.pdf	4089580	no	9
			bfc0844c26b1a89688815bdc028e96f75b841a04		
Warnings:					
Information:					
15	Non Patent Literature	Lithium_Starthilfe_Booster_Energiestation.pdf	1153851	no	3
			d832d91c69061f0cec941149391da8b26ab65e28		
Warnings:					
Information:					

16	Non Patent Literature	450_Amp_Jump-Starter_with_Compressor_Inst-Manual.pdf	2446612	no	10
			7e6f68cb13423e27dab93fe2396ef43c04431ce0		
Warnings:					
Information:					
17	Non Patent Literature	JPR_9000M_Series_Mini_Jump_Start_Product_Datasheet.pdf	527695	no	1
			979a075b0e311bc890b4a63b2e1e518dc2cf7622		
Warnings:					
Information:					
18	Non Patent Literature	FRANCISCO_This_power_bank_charges_phones_and_jumpstarters_cars.pdf	5421236	no	12
			a3a790efe9fe408df279c681a8311a2ac4092478		
Warnings:					
Information:					
19	Non Patent Literature	Why_PowerSafe_Jumper_Cables_Are_Necessary.pdf	1241146	no	2
			86f918a3f3cf46dcca805e254ff068903bbabf2		
Warnings:					
Information:					
20	Non Patent Literature	Profi_Power_Starthilfe_Mini_Jumper_JPR4500.pdf	1012295	no	3
			f7e45d369b196f884b34677178ea037885dc53c8		
Warnings:					
Information:					
21	Non Patent Literature	CRENSHAW_Coming_to_SEMA_Fool-Proof_Jumper.pdf	2006708	no	4
			a254a893efef1d118ff1ce6bd70bee4aefaa669c		
Warnings:					
Information:					
22	Non Patent Literature	RESCUE_Portable_Power_Pack_Model_2100_Product_Spec.pdf	434649	no	2
			2b88d4fb96b2788a7d492d5ce7f4a7b0343d3e60		
Warnings:					
Information:					

23	Non Patent Literature	CUNNINGHAM_Three_pocket-size_jump_starters.pdf	2266527	no	5
			aae5a3f88c84fbd998e56a2f92a078ef3d3725ab		
Warnings:					
Information:					
24	Non Patent Literature	DieHard_Portable_Power_950-Product_Packaging.pdf	332954	no	1
			31750d9d8908d0eb1fe22128dbfa6f3cd3190dc9		
Warnings:					
Information:					
25	Non Patent Literature	SHF12000-12_Instruction_Sheet.pdf	873570	no	3
			8beba2dd8ba95d91f2403fa29b5a5d199a8ce53d		
Warnings:					
Information:					
26	Non Patent Literature	REDFUEL_Model_SL1.pdf	4936222	no	32
			0e8f78ede37dd1e487bfc50059629031f1cb18cf		
Warnings:					
Information:					
27	Non Patent Literature	Function_and_jumpstart_short_cut_Description.pdf	3168217	no	1
			47ee819c5a97f9fa72d260abd2fb586ce10980f7		
Warnings:					
Information:					
28	Non Patent Literature	Lithium-Ion_Jump-Starter_Instruction_Manual.pdf	2234969	no	10
			98dcf8b151400ce576169a123d028bc225ac46bc		
Warnings:					
Information:					
29	Non Patent Literature	LSTART_RANGE_12V_Compact_Lithium-ion_Jump_Starts.pdf	813033	no	2
			02334ed73b2d9423e7884e34fe4dbc0ff565d62a		
Warnings:					
Information:					

30	Non Patent Literature	DieHard_Portable_Power_950_Owners_Manual.pdf	7102798	no	8
			173a7cc0f450e00d61e1b64db3ee9407eb2a340a		
Warnings:					
Information:					
31	Non Patent Literature	REDFUEL_Model_SL65_Owners_Manual.pdf	4349705	no	35
			48b845a0539be85d5dc3344da404f2d0c4b56122		
Warnings:					
Information:					
32	Non Patent Literature	BATTERY_EXTENDER_Model_BE01258_Owners_Manual.pdf	3130565	no	19
			664896c515446f813fe3a8516aa8264f3fe480be		
Warnings:					
Information:					
33	Non Patent Literature	Lithium-Ion_Jump_Starter_Fuel_Pack_Backup_Power_Owners_Manual.pdf	11535464	no	7
			8eec721d9f45316e613062c6c3f536722e8277fe		
Warnings:					
Information:					
34	Non Patent Literature	SL1316_Lithium_Ion_Jump_Starter_Owners_Manual.pdf	4852070	no	32
			2ba053abfb27a044faf1bca5f9e92411678221a7		
Warnings:					
Information:					
35	Non Patent Literature	SL1315_Jump_Starter_Power_Pack_Owners_Manual.pdf	17826817	no	24
			684a997f9d6502260fa8fe7e02f253940e8a2717		
Warnings:					
Information:					
36	Non Patent Literature	SL1327_Jump_Starter_Owners_Manual.pdf	4253213	no	36
			19f808da557345f1ea399c4b6dde945a5dfd2b19		
Warnings:					
Information:					

37	Non Patent Literature	SL1317_Jump_Starter_Owners_Manual.pdf	4426918	no	35
			fc68fb1fa542faa9261bf2d1b9c106808ad4ff14c		
Warnings:					
Information:					
38	Non Patent Literature	SL1314_Jump_Starter_Power_Pack_Owners_Manual.pdf	4407382	no	35
			ef914a0cc2a8a694dfce01639243852b50b6d2a9		
Warnings:					
Information:					
39	Non Patent Literature	SL1312_Jump_Starter_Power_Pack_Owners_Manual.pdf	4318502	no	35
			075f34f1cee38b08d61d299163e5a0f85504ae2e		
Warnings:					
Information:					
40	Non Patent Literature	SL1338_Jump_Starter_Power_Pack_Owners_Manual.pdf	4275244	no	35
			b22ab3339ed8853b162a84ce34fbc99353eb13b77		
Warnings:					
Information:					
41	Non Patent Literature	SL1396_Power_Pack_Owners_Manual.pdf	17740223	no	24
			36215e60c55d0c0ad7e05b2af96fd0c463499bbf		
Warnings:					
Information:					
42	Non Patent Literature	SL1391U_SL1398U_SL1399U_Lithium_Ion_Tactical_Jump_Starter_Light_Owners_Manual.pdf	12962530	no	111
			85b5af1d62b22937dd207db9ec18b4248922762e		
Warnings:					
Information:					
43	Non Patent Literature	SL1391_SL1398_SL1399_Lithium_Ion_Tactical_Jump_Starter_Light_Owners_Manual.pdf	4470211	no	39
			e98bb22070ae12440f6d912029669086a4d8c4fc		
Warnings:					
Information:					

44		IDS_03.pdf	269528	yes	11
			2903cc7dc3b1862d98e9bebf7857828102 b9e0a		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Transmittal Letter		1	3	
	Information Disclosure Statement (IDS) Form (SB08)		4	11	
Warnings:					
Information:					
Total Files Size (in bytes):			205029890		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a 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. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:	)	Group Art Unit: 2851
Calvin Shiening Wang	)	Confirmation No.: 6514
Serial No.: 16/404,321	)	Examiner: Sun J Lin
Filed: May 6, 2019	)	
Atty. File No.: 8523WANG-1-CON-3	)	<u>SUPPLEMENTAL</u>
Entitled: "AUTOMOBILE CHARGER"	)	<u>INFORMATION DISCLOSURE</u>
	)	<u>STATEMENT</u>
	)	<i>Electronically Submitted</i>

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

Dear Commissioner:

The references cited on attached Form PTO/SB08 are being called to the attention of the Examiner.

- ☒ Copies of the cited non-patent and/or foreign references are enclosed herewith.
- ☐ Copies of the cited U.S. patents and/or patent applications are enclosed herewith.
- ☒ Copies of the cited U.S. patents/patent application publications are not enclosed in accordance with 37 C.F.R. § 1.98(a).
- ☐ Copies of the cited references are not enclosed, in accordance with 37 C.F.R. § 1.98(d), because the references were cited by or submitted to the U.S. Patent and Trademark Office in prior application Serial No. _____ filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120.
- ☒ To the best of applicants' belief, the pertinence of the foreign-language references is believed to be summarized in the attached English abstracts and/or in the figures, although applicants do not necessarily vouch for the accuracy of the translation.
- ☐ Examiner's attention is drawn to the following related applications:
- Serial No. _____ filed _____ (Attorney Ref. No. _____)
- Serial No. _____ filed _____ (Attorney Ref. No. _____)
- ☐ Other: _____

Submission of the above information is not intended as an admission that any item is citable under the statutes or rules to support a rejection, that any item disclosed represents analogous art, or that those skilled in the art would refer to or recognize the pertinence of any reference without the benefit of hindsight, nor should an inference be drawn as to the pertinence

of the references based on the order in which they are presented. Submission of this statement should not be taken as an indication that a search has been conducted, or that no better art exists.

It is respectfully requested that the cited information be expressly considered during the prosecution of this application and the references made of record therein.

FEES

☒	37 CFR 1.97(b): No fee is believed due in connection with this submission, because the information disclosure statement submitted herewith is satisfied by one of the following conditions ("X" indicates satisfaction): ☐ Within three months of the filing date of a national application other than a continued prosecution application under 37 CFR 1.53(d), or ☐ Within three months of the date of entry of the national stage as set forth in § 1.491 in an international application, or ☒ Before the mailing date of a first Office Action on the merits, or ☐ Before the mailing of a first Office action after the filing of a request for continued examination under 37 CFR 1.114. Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970.
☐	37 CFR 1.97(c): The information disclosure statement transmitted herewith is being filed after all the above conditions (37 CFR 1.97(b)), but before the mailing date of any one of the following conditions: (1) a final action under 37 C.F.R. 1.113, or (2) a notice of allowance under 37 C.F.R. 1.311, or (3) an action that otherwise closes prosecution in the application. This Information Disclosure Statement is accompanied by: ☐ A Certification (below) as specified by 37 C.F.R. 1.97(e). Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970. OR ☐ Please charge Deposit Account 19-1970 in the amount of \$240.00 for the fee set forth in 37 C.F.R. 1.17(p) for submission of an information disclosure statement. Please credit any overpayment or charge any underpayment to Deposit Account 19-1970.
☐	37 CFR 1.97(d): This Information Disclosure Statement is being submitted after the period specified in 37 CFR 1.97(c). ☐ This information Disclosure Statement includes a Certification (below) as specified by 37 C.F.R. 1.97(e) AND ☐ Applicants hereby requests consideration of the reference(s) disclosed herein. Please charge Deposit Account 19-1970 in the amount of \$240.00 under 37 C.F.R. 1.17(p). Please credit any overpayment or charge any underpayment to Deposit Account 19-1970. Election to pay the fee should not be taken as an indication that applicant(s) cannot execute a certification.

Certification (37 C.F.R. 1.97(e))
(Applicable only if checked)

- ☐ The undersigned certifies that:
- ☐ Each item of information contained in the Information Disclosure Statement submitted herewith was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(1).
 - ☐ A copy of the communication from the foreign patent office is enclosed.

OR

- ☐ No item of information contained in the Information Disclosure Statement submitted herewith was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(2).

Respectfully submitted,

SHERIDAN ROSS P.C.

By: /David B. Kellis/
David B. Kellis
Registration No. 59377
1560 Broadway, Suite 1200
Denver, Colorado 80202-5141
(303) 863-9700

Date: February 25, 2020

Electronic Acknowledgement Receipt	
EFS ID:	38697888
Application Number:	16404321
International Application Number:	
Confirmation Number:	6514
Title of Invention:	AUTOMOBILE CHARGER
First Named Inventor/Applicant Name:	Calvin Shiening Wang
Customer Number:	22442
Filer:	David B. Kellis/Robert Roe-Pachirat
Filer Authorized By:	David B. Kellis
Attorney Docket Number:	8523WANG-1-CON-3
Receipt Date:	26-FEB-2020
Filing Date:	06-MAY-2019
Time Stamp:	14:33:05
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Foreign Reference	AU694452.pdf	845859	no	21
			8c12bd0b72232375e41d78829b4e1519158d7315		

Warnings:

Information:					
2	Foreign Reference	DE202013102599.pdf	760136	no	21
			e9dbd441e5188a6868992645240f39ec999767de		
Warnings:					
Information:					
3	Foreign Reference	EP1673828.pdf	1766951	no	38
			b1277dd6d0cbf9db17a31070fab5432dc65bd643		
Warnings:					
Information:					
4	Foreign Reference	JP2015115979.pdf	881901	no	29
			9b03f875ebae9656cb04ddb9f282218ab645948e		
Warnings:					
Information:					
5	Foreign Reference	WO0024108.pdf	1351059	no	37
			5d182c50ca5acb95ab569a8b6a957d84a7c aa2da		
Warnings:					
Information:					
6	Foreign Reference	WO2012080996.pdf	920809	no	29
			6e29e4599c6f1df46366fe75dd9ab163e25ee80f		
Warnings:					
Information:					
7	Non Patent Literature	1-17-cv-01183_Docket_Report_9-18-19_2_pages.pdf	139905	no	2
			7bd4afb7601f17310c29c6c49308d2a102704741		
Warnings:					
Information:					
8	Non Patent Literature	1-17-cv-01185_Docket_Report_9-18-19_2_pages.pdf	138607	no	2
			29cef879239116c2a8716f881e80582dce4ee774		
Warnings:					
Information:					

9	Non Patent Literature	1-19- cv-05982_Answer_Exhibits_9-23-19_456_pages.pdf	19315745	no	456
			3ad6f89f0d64612429a6aed37bb90873f3f4e775		
Warnings:					
Information:					
10	Non Patent Literature	1-19- cv-05982_Complaint_with_Exhibits_9-6-19_Part1.pdf	22914624	no	271
			d7e0a262b92b898b9fb58224390062d97dd63680		
Warnings:					
Information:					
11	Non Patent Literature	1-19- cv-05982_Complaint_with_Exhibits_9-6-19_Part2.pdf	15756929	no	252
			1cc16e7dfa74a52a19f0f7571d466f77317c3189		
Warnings:					
Information:					
12	Non Patent Literature	1-19- cv-05982_Docket_Report_9-18-19_2_pages.pdf	145895	no	2
			f7d70344d566c67ac99dbaffadca1048e12b5ac		
Warnings:					
Information:					
13	Non Patent Literature	1-19- cv-05982_PL_Mtn_to_Dismiss_Counterclaim_10-7-19_14_pages.pdf	228346	no	14
			817b696e161b783821b257e2ca11129b2481414c		
Warnings:					
Information:					
14	Non Patent Literature	1-19- cv-05982_Schumacher_Answer_9-23-19_84_pages.pdf	962461	no	84
			c5b55b760a0cc197ff04ffc4728d4d6e0278db9d		
Warnings:					
Information:					
15	Non Patent Literature	4-17- cv-04918_Complaint_8-23-17_14_pages.pdf	1226529	no	14
			658b78a98263247c7c96f7caecd90de2f12c0835		
Warnings:					
Information:					

16	Non Patent Literature	4-17-cv-04918_Docket_Report_9-18-19_5_pages.pdf	206856	no	5
			f404d03c66a36d41edb991149fdea4c66d906366		
Warnings:					
Information:					
17	Non Patent Literature	4-17-cv-04918-JST_1st_Amend_Complaint_11-23-17_19_pages.pdf	1352600	no	19
			b9f8a76726596c2a423d2413b2b82a37bb78f5c5		
Warnings:					
Information:					
18	Non Patent Literature	5-17-cv-01712_Answer_1st_Amended_Complaint_11-17-17_9_pages.pdf	186622	no	9
			bdda6f90c40751153190b8267eb687cc6e161f24		
Warnings:					
Information:					
19	Non Patent Literature	5-17-cv-01712_Complaint_8-23-17_14_pages.pdf	748791	no	14
			599c0bfdb810070366d5e7565d6ecd388fc62bd2		
Warnings:					
Information:					
20	Non Patent Literature	5-17-cv-01712_Decl_Support_Motion_Exhibit_3_8-22-18_11_pages.pdf	908106	no	11
			aeb6437b60ad74902cae0e2b52de31dae295d05a		
Warnings:					
Information:					
21	Non Patent Literature	5-17-cv-01712_Decl_Support_Motion_Exhibit_4_8-28-18_17_pages.pdf	227582	no	17
			408ffcaf947fd2d9c545cae671207d526f3a8bf		
Warnings:					
Information:					
22	Non Patent Literature	5-17-cv-01712_Decl_Support_Motion_Exhibit_8_8-22-18_24_pages.pdf	1054990	no	24
			2d4e0957cdc3835ada15b595c466a41a05e21239		
Warnings:					
Information:					

23	Non Patent Literature	5-17-cv-01712_Decl_Support_Motion_Stay_8-28-18_5_pages.pdf	223930	no	5
			f1abefcd0846a752e62f046f4e74677873b6658c		
Warnings:					
Information:					
24	Non Patent Literature	5-17-cv-01712_Decl_Support_Motion_Amend_Complaint_8-30-18_76_pages.pdf	21709291	no	76
			3c9cf93cb0d83c6b72f8ed88d5d4c2363cef c22d		
Warnings:					
Information:					
25	Non Patent Literature	5-17-cv-01712_Docket_Report_9-18-19_7_pages.pdf	189961	no	7
			5bb35370cf66aad19e7a8ca334c72a4c333159f2		
Warnings:					
Information:					
26	Non Patent Literature	5-17-cv-01712-GW-MRW_1st_Amend_Comp_10-31-17_17_pages.pdf	855687	no	17
			33e5365c65bd29a3f03c6c480bac2ae214cd04a		
Warnings:					
Information:					
27	Non Patent Literature	5-17-cv-01712_Plaintiff_Memo_Support_Motion_Leave_8-30-18_11_pages.pdf	640089	no	11
			2619dd7df3ebda3048c7f96702c83cef343c6b60		
Warnings:					
Information:					
28	Non Patent Literature	5-17-cv-01712_Defendant_Motion_Stay_8-22-18_17_pages.pdf	290343	no	17
			db3aea4e00bb84aba6d20227f831211c0f0d514d		
Warnings:					
Information:					
29	Non Patent Literature	5-17-cv-01712_Defendant_Notice_Filing_Petition_1-22-18_10_pages.pdf	228346	no	10
			c3a49b31f91848774d556d5b7b1127bfdef3c861		
Warnings:					
Information:					

30	Non Patent Literature	5-17-cv-01712_Defendant_Notice_Motion_Stay_8-22-18_3_pages.pdf	157642	no	3
			6cd90f3807a600f43fda6a43dc3d6b853b25a2d4		
Warnings:					
Information:					
31	Non Patent Literature	Exhibits_IA-IC_Case_1-19-cv-05982-EEC_11-25-2019.pdf	8517920	no	70
			278805e090df3c0c9b1a812a698d49c2871efc08		
Warnings:					
Information:					
32	Non Patent Literature	Exhibit_IIA_Invalidity_Claim_Chart_Case_1-19-cv-05982-EEC.pdf	2626176	no	29
			5856fd5cc81ea71611b5d4306d9d96ad39ef8856		
Warnings:					
Information:					
33	Non Patent Literature	Exhibit_IIB_Invalidity_Claim_Chart_for_HaiJiu_SHF12000-12.pdf	2688596	no	23
			db206c312dccc4ee823fe4c98129a968188420f8		
Warnings:					
Information:					
34	Non Patent Literature	Exhibit_IIC_Invalidity_Claim_Chart_for_JPR_Series_Jump_Standards.pdf	4288252	no	29
			29c55e62a4e04e69974785889911506d41d023d1		
Warnings:					
Information:					
35	Non Patent Literature	Exhibit_IIE_Invalidity_Claim_Chart_for_Projecta_HP2200.pdf	3933570	no	39
			49019852ffa2ba51340fe76c978c302d84eb3b1d		
Warnings:					
Information:					
36	Non Patent Literature	Exhibit_IIF_Invalidity_Claim_Chart_for_Stanley_System.pdf	2691448	no	24
			7261c21296d0a5a9dbc12e2a802d43d250c5f30f		
Warnings:					
Information:					

37	Non Patent Literature	Exhibit_IIG_Invalidity_Claim_Chart_for_US2010-0173182.pdf	1299600	no	41
			944c9caa276503163096592831c30d02ae5f0401		
Warnings:					
Information:					
38	Non Patent Literature	Exhibit_IIH_Invalidity_Claim_Chart_for_US2009-0174362.pdf	1411350	no	36
			acda760164edf8f79b9cd29f97e1a21daa92018b		
Warnings:					
Information:					
39	Non Patent Literature	Exhibit_III_Invalidity_Claim_Chart_for_US7345450.pdf	1056883	no	41
			0dc7874f8358b44c1e5e04569197ecdb78d4f2ba		
Warnings:					
Information:					
40	Non Patent Literature	Exhibit_IIJ_Invalidity_Claim_Chart_for_US6426606.pdf	1750306	no	81
			6a15281f3737f5dfa799e704a586258bd1ae539b		
Warnings:					
Information:					
41	Non Patent Literature	Exhibit_IIK_Invalidity_Claim_Chart_for_US6803743.pdf	1125085	no	23
			413b98f8266a1c8c8c6917be03b317f6a37407d1		
Warnings:					
Information:					
42	Non Patent Literature	Exhibit_IIL_Invalidity_Claim_Chart_US2014-0159509.pdf	1315286	no	35
			1a1f26059fc3c8a7d8ba464080fc8d7a71ee75fb		
Warnings:					
Information:					
43	Non Patent Literature	Exhibit_IIM_Invalidity_Claim_Chart_for_DE202013102599.pdf	1599131	no	27
			370b6849e56eb467bd2aa3388cdb71cad4eca713		
Warnings:					
Information:					

44	Non Patent Literature	Exhibit_IIN_Invalidity_Claim_C hart_for_JP2015-115979.pdf	1101713	no	39
			1414f1b7aa752f7153fb38aa832dd7a2cc92c710		
Warnings:					
Information:					
45	Non Patent Literature	Exhibit_IIO_Invalidity_Claim_C hart_for_US2009-0174362.pdf	1488672	no	34
			4d7c3ec48c0c5665fd66b679d1d333b107b97580		
Warnings:					
Information:					
46	Non Patent Literature	Exhibit_IIQ_Invalidity_Claim_C hart_for_US2001-0038276.pdf	1724736	no	54
			ba0bc45127eab6bd7ea615bb4ba2dd9273dee392		
Warnings:					
Information:					
47	Non Patent Literature	Exhibit_IID_Invalidity_Claim_C hart_for_US6249106.pdf	11085202	no	42
			cc9c6301f040790abdcd909c3ef93e5ce5443f2		
Warnings:					
Information:					
48	Non Patent Literature	RESCUE_Portable_Power_Pack_Instructions.pdf	18267887	no	20
			32d4fdd7c9709efe32f6dc7f33f30024f3bb5a4f		
Warnings:					
Information:					
49	Non Patent Literature	Latest_News_Projecta_website.pdf	3782400	no	5
			20a32eec9c5a394a674e48bace512208b00814d6		
Warnings:					
Information:					
50	Non Patent Literature	POWERALL_Portable_Power_Bank_Battery_Jump_Starter_LED_Flashlight.pdf	8608913	no	9
			cc0d9f31bc243863644d26eeb823d1c6c3d8208d		
Warnings:					
Information:					

51	Non Patent Literature	RFDPPJS2976DLX.pdf	1649554	no	7
			6ecd62756092cfaa96835394b484f4dc07c64ee1		
Warnings:					
Information:					
52	Non Patent Literature	New_Projecta_Jump_Starters_Lift_The_Bar.pdf	1021733	no	2
			1bbe4dbb09786f699c6ae9b5ac5528bb01731edd		
Warnings:					
Information:					
53	Non Patent Literature	WARD_Jumper_Cables_Avoid_Surges.pdf	2894192	no	8
			ebefb6681c74ba0d0d20d2ba5519d72f97699dbd		
Warnings:					
Information:					
54	Non Patent Literature	mPower_JUMP_User_Manual.pdf	203058	no	1
			1f75d7c3bcd92977fecb9146f925a078bc88785e		
Warnings:					
Information:					
55	Non Patent Literature	GOODWIN_PowerSafe_jumper_cables_take_danger.pdf	2443506	no	6
			ca6644d4ed9018af3406b4f8ba0023843352b2eb		
Warnings:					
Information:					
56	Non Patent Literature	Power_Safe_Jumper_Cables_SEMA_Global_Media_Award_Winner.pdf	769999	no	2
			0d72f1b43ea84583520cc09c0b176c56a9a5b06a		
Warnings:					
Information:					
57	Non Patent Literature	Power_Punch_User_Manual.pdf	3386081	no	8
			be9f79386400c7d14ec1723022355cdea386ca2b		
Warnings:					
Information:					

58	Non Patent Literature	JPR_Series_M_version_Mini_Jump_Start_Product_Datasheet.pdf	193604	no	1
			693eeb85b0fed5c252451f8f1877d9097cb56f52		
Warnings:					
Information:					
59	Non Patent Literature	12VDC_Mini_Jump_Start_for_JPR4500P_JPR2600P_JPR1800P.pdf	7837077	no	9
			873e2dee174e3980181989e9d6775319d3ccf2a9		
Warnings:					
Information:					
60	Non Patent Literature	START-It_JumpnCharge_Users_Manual.pdf	15255063	no	8
			60b613cfe23fad91b8f4248abeed933bfbb957e8		
Warnings:					
Information:					
Total Files Size (in bytes):			212353585		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a 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. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/404,321	05/06/2019	Calvin Shiening Wang	8523WANG-1-CON-3

CONFIRMATION NO. 6514

PUBLICATION NOTICE



22442
Sheridan Ross PC
1560 Broadway
Suite 1200
Denver, CO 80202

Title:AUTOMOBILE CHARGER

Publication No.US-2019-0329662-A1

Publication Date:10/31/2019

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently <http://www.uspto.gov/patft/>.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently <https://portal.uspto.gov/pair/PublicPair>. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Complete if Known		
			Application Number	16/404,321	
			Filing Date	May 6, 2019	
			First Named Inventor	Calvin Shiening Wang	
			Art Unit	2851	
			Examiner Name	Sun J Lin	
Sheet	1	of	3	Attorney Docket Number	8523WANG-1-CON-3

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number-kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	3343057	09/19/1967	Smith	
	2	3590357	06/29/1971	Reid	
	3	3950668	04/13/1976	Sancey et al.	
	4	5487002	01/23/1996	Diller et al.	
	5	5793185	08/11/1998	Prelec	
	6	6130519	10/10/2000	Whiting et al.	
	7	6426606	07/30/2002	Purkey	
	8	6262492	07/17/2001	Sheng	
	9	6351102	02/26/2002	Troy	
	10	6803743	10/12/2004	George et al.	
	11	7199555	04/03/2007	Hung	
	12	7345450	03/18/2008	Krieger et al.	
	13	8072900	12/13/2011	Brown	
	14	8183821	05/22/2012	Sakurai	
	15	8253376	08/28/2012	Gale et al.	
	16	8447543	05/21/2013	Dickinson et al.	
	17	8565930	10/22/2013	Miwa	
	18	8692513	04/08/2014	Gaul et al.	
	19	8723477	05/13/2014	Gaul et al.	
	20	9007015	04/14/2015	Nook et al.	
	21	9248746	02/02/2016	Wen	
	22	9263907	02/16/2016	Richardson et al.	
	23	9333865	05/10/2016	Kawasaki et al.	
	24	9352652	05/31/2016	Cavazos et al.	
	25	9412994	08/09/2016	Koebler	
	26	9496728	11/15/2016	Lei	
	27	9506446	11/29/2016	Xinfang	
	28	9525297	12/20/2016	Wang	
	29	10046653	08/14/2018	Wang et al.	
	30	10328806	06/25/2019	Wang	
	31	2005/0110467	05/26/2005	Thomason	
	32	2009/0008374	01/08/2009	Fosbinder	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	16/404,321
				Filing Date	May 6, 2019
				First Named Inventor	Calvin Shiening Wang
				Art Unit	2851
				Examiner Name	Sun J Lin
Sheet	2	of	3	Attorney Docket Number	8523WANG-1-CON-3

	33	2009/0174362	07/09/2009	Richardson et al.	
	34	2012/0025763	02/02/2012	Hsiao et al.	
	35	2013/0015814	01/17/2013	Kelty et al.	
	36	2015/0032312	01/29/2015	Lambrinos et al.	
	37	2015/0212135	07/30/2015	Jin et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ² ; Number ⁴ ; Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
	38	CN 201947042	08/24/2011	SHENZHEN SBASE ELECTRONICS TECHNOLOGY CO LTD		(English translation)
	39	CN 203522157	04/02/2014	SHENZHEN SBASE ELECTRONICS TECHNOLOGY CO LTD		(English translation)

NON-PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	40	"3000A 12/24V High Cranking Sure Start Jumpstarter," Projecta, Oct. 2011, 12 pages
	41	"900 Peak Amp Jump-Starter Model No. PKC0AZ Owner's Manual and Warranty Information," Old World Industries, LLC, © 2014, 8 pages
	42	"HT75XX-1 100mA Low Power LDO," Holtek Semiconductor Inc., Jan. 12, 2006, Rev. 1.50, 14 pages
	43	"LM78XX/LM78XXA 3-Terminal 1A Positive Voltage Regulator," Fairchild Semiconductor Corporation, Mar. 2008, Rev. 1.0, 28 pages
	44	"Start-It Jump Starter 12 Volt DC Power Supply User's Manual & Warranty Information," Vector Manufacturing, © 2005, 6 pages
	45	Official Action for U.S. Patent Application No. 14/569,352, mailed Aug. 31, 2016, 8 pages
	46	Notice of Allowance for U.S. Patent Application No. 14/569,352, mailed Oct. 13, 2016, 7 pages
	47	Official Action for U.S. Patent Application No. 15/355,409, dated Dec. 14, 2017 (Attorney's Ref. No. 8523WANG-1-CON) 6 pages

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	16/404,321
				Filing Date	May 6, 2019
				First Named Inventor	Calvin Shiening Wang
				Art Unit	2851
				Examiner Name	Sun J Lin
Sheet	3	of	3	Attorney Docket Number	8523WANG-1-CON-3

	48	Official Action for U.S. Patent Application No. 15/355,409, dated May 3, 2018 (Attorney's Ref. No. 8523WANG-1-CON) 6 pages
	49	Notice of Allowance for U.S. Patent Application No. 15/355,409, dated Jun. 21, 2018 (Attorney's Ref. No. 8523WANG-1-CON) 7 pages
	50	Official Action for U.S. Patent Application No. 15/923,219, dated Jan. 08, 2019 (Attorney's Ref. No. 8523WANG-1-CON-2) 7 pages
	51	Notice of Allowance for U.S. Patent Application No. 15/923,219, dated Apr. 05, 2019 (Attorney's Ref. No. 8523WANG-1-CON-2) 8 pages
	52	Petition for Inter Partes Review of U.S. Patent No. 9,525,297, filed Jan. 13, 2018 (Attorney's Ref. No. 8523WANG-1-IPR) 93 pages
	53	Decision Institution of Inter Partes Review for U.S. Patent No. 9,525,297, dated Jul. 16, 2018, Case IPR2018-00488, 22 pages
	54	Order Granting Joint Motion to Terminate Proceeding and Granting Joint Request to Treat Settlement Agreement as Business Confidential Information for U.S. Patent No. 9,525,297, dated Nov. 16, 2018, Case IPR2018-00488, 4 pages
	55	Declaration of Shukri Souri in Support of Petition for Inter Partes Review of U.S. Patent No. 9,525,297, dated Jan. 13, 2018, 92 pages
	56	Curriculum Vitae of Dr. Shukri J. Souri, Jul. 2016, 4 pages

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Electronic Acknowledgement Receipt	
EFS ID:	36796859
Application Number:	16404321
International Application Number:	
Confirmation Number:	6514
Title of Invention:	AUTOMOBILE CHARGER
First Named Inventor/Applicant Name:	Calvin Shiening Wang
Customer Number:	22442
Filer:	David B. Kellis/Robert Roe-Pachirat
Filer Authorized By:	David B. Kellis
Attorney Docket Number:	8523WANG-1-CON-3
Receipt Date:	06-AUG-2019
Filing Date:	06-MAY-2019
Time Stamp:	14:52:15
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		IDS_01.pdf	234164	yes	6
			ed3439233cc9b1a04051fd88da5c7b2c82d f498b		

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Transmittal Letter	1	3
	Information Disclosure Statement (IDS) Form (SB08)	4	6
Warnings:			
Information:			
Total Files Size (in bytes):		234164	
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a 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. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.			

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:	)	Group Art Unit: 2851
Calvin Shiening Wang	)	Confirmation No.: 6514
Serial No.: 16/404,321	)	Examiner: Sun J Lin
Filed: May 6, 2019	)	
Atty. File No.: 8523WANG-1-CON-3	)	<u>INFORMATION DISCLOSURE</u>
Entitled: "AUTOMOBILE CHARGER"	)	<u>STATEMENT</u>
	)	<i>Electronically Submitted</i>
	)	

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

Dear Commissioner:

The references cited on attached Form PTO/SB08 are being called to the attention of the Examiner.

- ☐ Copies of the cited non-patent and/or foreign references are enclosed herewith.
- ☐ Copies of the cited U.S. patents and/or patent applications are enclosed herewith.
- ☒ Copies of the cited U.S. patents/patent application publications are not enclosed in accordance with 37 C.F.R. § 1.98(a).
- ☒ Copies of the cited references 38 – 56 are not enclosed, in accordance with 37 C.F.R. § 1.98(d), because the references were cited by or submitted to the U.S. Patent and Trademark Office in prior applications Serial No. 14/569,352 filed 12/12/2014, 15/355,409 filed 11/18/2016 and 15/923,219 filed 03/16/2018, which are relied upon for an earlier filing date under 35 U.S.C. § 120.
- ☒ To the best of applicants' belief, the pertinence of the foreign-language references is believed to be summarized in the attached English abstracts and/or in the figures, although applicants do not necessarily vouch for the accuracy of the translation.
- ☒ Examiner's attention is drawn to the following related applications:
- Serial No. 14/569,352 filed 12/12/2014 now U.S. Patent No. 9,525,297 (Attorney's Ref. No. 8523WANG-1)
 - Serial No. 15/355,409 filed 11/18/2016 now U.S. Patent No. 10,046,653 (Attorney's Ref. No. 8523WANG-1-CON)
 - Serial No. 15/923,219 filed 03/16/2018 now U.S. Patent No. 10,328,806 (Attorney's Ref. No. 8523WANG-1-CON-2)

☐ Other: _____

Submission of the above information is not intended as an admission that any item is citable under the statutes or rules to support a rejection, that any item disclosed represents analogous art, or that those skilled in the art would refer to or recognize the pertinence of any reference without the benefit of hindsight, nor should an inference be drawn as to the pertinence of the references based on the order in which they are presented. Submission of this statement should not be taken as an indication that a search has been conducted, or that no better art exists.

It is respectfully requested that the cited information be expressly considered during the prosecution of this application and the references made of record therein.

FEES

☒	37 CFR 1.97(b): No fee is believed due in connection with this submission, because the information disclosure statement submitted herewith is satisfied by one of the following conditions ("X" indicates satisfaction): ☒ Within three months of the filing date of a national application other than a continued prosecution application under 37 CFR 1.53(d), or ☐ Within three months of the date of entry of the national stage as set forth in § 1.491 in an international application, or ☐ Before the mailing date of a first Office Action on the merits, or ☐ Before the mailing of a first Office action after the filing of a request for continued examination under 37 CFR 1.114. Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970.
☐	37 CFR 1.97(c): The information disclosure statement transmitted herewith is being filed after all the above conditions (37 CFR 1.97(b)), but before the mailing date of any one of the following conditions: (1) a final action under 37 C.F.R. 1.113, or (2) a notice of allowance under 37 C.F.R. 1.311, or (3) an action that otherwise closes prosecution in the application. This Information Disclosure Statement is accompanied by: ☐ A Certification (below) as specified by 37 C.F.R. 1.97(e). Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970. OR ☐ Please charge Deposit Account 19-1970 in the amount of \$240.00 for the fee set forth in 37 C.F.R. 1.17(p) for submission of an information disclosure statement. Please credit any overpayment or charge any underpayment to Deposit Account 19-1970.
☐	37 CFR 1.97(d): This Information Disclosure Statement is being submitted after the period specified in 37 CFR 1.97(c). ☐ This information Disclosure Statement includes a Certification (below) as specified by 37 C.F.R. 1.97(e) AND ☐ Applicants hereby requests consideration of the reference(s) disclosed herein. Please charge Deposit Account 19-1970 in the amount of \$240.00 under 37 C.F.R. 1.17(p). Please credit any overpayment or charge any underpayment to Deposit Account 19-1970. Election to pay the fee should not be taken as an indication that applicant(s) cannot execute a certification.

Certification (37 C.F.R. 1.97(e))
(Applicable only if checked)

- ☐ The undersigned certifies that:
- ☐ Each item of information contained in the Information Disclosure Statement submitted herewith was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(1).
 - ☐ A copy of the communication from the foreign patent office is enclosed.

OR

- ☐ No item of information contained in the Information Disclosure Statement submitted herewith was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(2).

Respectfully submitted,

SHERIDAN ROSS P.C.

By: /David B. Kellis/
David B. Kellis
Registration No. 59377
1560 Broadway, Suite 1200
Denver, Colorado 80202-5141
(303) 863-9700

Date: August 06, 2019



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO.	TOT CLAIMS	IND CLAIMS
16/404,321	05/06/2019	2835	1720	8523WANG-1-CON-3	20	3

CONFIRMATION NO. 6514 UPDATED FILING RECEIPT



22442
Sheridan Ross PC
1560 Broadway
Suite 1200
Denver, CO 80202
UNITED STATES OF AMERICA

Date Mailed: 07/22/2019

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Calvin Shiening Wang, City of Industry, CA;
Chung-Hsin Wang, Shenzhen, CHINA;

Applicant(s)

Pilot Inc., City of Industry, CA;

Power of Attorney: The patent practitioners associated with Customer Number 22442

Domestic Priority data as claimed by applicant

This application is a CON of 15/923,219 03/16/2018 PAT 10328806
which is a CON of 15/355,409 11/18/2016 PAT 10046653
which is a CON of 14/569,352 12/12/2014 PAT 9525297

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.)
CHINA 201420212173.5 04/28/2014 No Access Code Provided

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 05/16/2019

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/404,321**

Projected Publication Date: 10/31/2019

Non-Publication Request: No

Early Publication Request: No
Title

AUTOMOBILE CHARGER

Preliminary Class

361

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

page 2 of 3

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 16/404,321				
APPLICATION AS FILED - PART I										
(Column 1)		(Column 2)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY				
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)			
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	300			
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	660			
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	760			
TOTAL CLAIMS (37 CFR 1.16(i))	20	minus 20 = *				x 100 =	0.00			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3	minus 3 = *				x 460 =	0.00			
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).						0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00			
			TOTAL			TOTAL	1720			
* If the difference in column 1 is less than zero, enter "0" in column 2.										
APPLICATION AS AMENDED - PART II										
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY		
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=		x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=		x	=
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
						TOTAL ADD'L FEE			TOTAL ADD'L FEE	
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=		x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=		x	=
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
						TOTAL ADD'L FEE			TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** 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 found in the appropriate box in column 1.										

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor: Calvin Shiening Wang	)	Examiner Name: Not Yet Identified
	)	
Application No.: 16/404,321	)	Group Art Unit: 2835
	)	
Filing Date: 05/06/2019	)	Confirmation No.: 6514
	)	
Attorney Docket No.: 8523WANG-1-CON-3	)	
	)	
Title: AUTOMOBILE CHARGER	)	
	)	

**RESPONSE TO
NOTICE TO FILE CORRECTED
APPLICATION PAPERS**

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

Dear Commissioner:

Applicant submits this Response to the Notice to File Corrected Application Papers having a mailing date of May 17, 2019, in connection with the above-identified application. Applicant does not believe that any fees are due with respect to the entry of this Response, however, if any fees are due relating to the entry hereof, please debit those fees from Deposit Account No. 19-1970.

Amendments to the Specification, other than the claims, begin on page 2 of this communication.

A **Listing of the Claims** is shown beginning on page 3 of this communication.

Amendments to the Drawings begin on page 7 of this communication and include both an attached replacement sheet and an annotated sheet showing changes.

Arguments/Remarks begin on page 8 of this communication.

ABSTRACT

A novel automobile charger comprises a direct current (DC) voltage supply, wherein a positive pole of the (DC) voltage supply is connected with a first end or a first lead of a DC-to-DC module, a first end of a battery voltage detection module and a first end of a load module simultaneously, while a negative pole of the DC voltage supply is connected with a second end of the DC-to-DC module, a first end of a microcontroller, a first end of an automobile start control module and a second end of the battery voltage detection module simultaneously. A third end of the DC-to-DC module is connected with a second end of the microcontroller. Third, fourth and fifth ends of the microcontroller are connected with a third end of the battery voltage detection module, a second end of the automobile start control module and a first end of a load detection module respectively. A second end of the load detection module is connected with a third end of the automobile start control module and a second end of the load module simultaneously.

AUTOMOBILE CHARGER

RELATED APPLICATIONS

[0001] This application is a continuation of U.S. Patent Application No. 15/923,219, filed on March 16, 2018 and entitled “Automobile Charger,” which is a continuation of U.S. Patent Application No. 15/355,409, filed on November 18, 2016 and entitled “Automobile Charger,” now Patent No. 10,046,653, which is a continuation of U.S. Patent Application No. 14/569,352, filed on December 12, 2014 and entitled “Automobile Charger,” now Patent No. 9,525,297, which claims the benefit of priority of Chinese application no. 201420212173.5 filed on April 28, 2014, the entire contents of all of which are incorporated herein by reference.

BACKGROUND

[0002] The present disclosure relates to an automobile charging device, in particular relates to a novel automobile charger with a safe power supply charging quickly.

[0003] Automobile charging is a big issue of traveling by automobile for those automobile fans and businessmen, the maturity of the technology thereof is one of the critical factors restricting the application of the automobile charger. However, current automobile chargers have common problems of not able to automatically detect whether a load is connected, whether an electrode is connected with an automobile storage battery reversely, whether an automobile engine or the storage battery has a reverse current, whether the battery state is suitable for heavy current power generation and so on. Accordingly, the present disclosure provides a novel automobile charger with the safe power supply charging quickly to solve the problems mentioned above, thus making the automobile charging safe, quick, mature and propagable.

SUMMARY

[0004] A purpose of the present disclosure aims to provide a novel automobile charger with the safe power supply charging quickly, in order to solve the problems presented in the above background.

[0005] To achieve the purpose described above, the present disclosure provides the following technical solutions: a novel automobile charger comprises a direct current power supply, wherein a positive pole of the direct current power supply is

connected with one end of a DC to DC module, one end of a battery voltage detection module and one end of a load module simultaneously, while a negative pole of the direct current voltage is connected with the other end of the DC to DC module, one end of a micro controller, one end of an automobile start control module and the other end of the battery voltage detection module simultaneously. A third end of the DC to DC module is connected with the other end of the microcontroller, and the other three ends of the microcontroller are connected with the third end of the battery voltage detection module, the other end of the automobile start control module and one end of the load detection module respectively, wherein the other end of the load detection module is connected with the third end of the automobile start control module and the other end of the load module simultaneously; the load module which comprises the automobile storage battery and the automobile engine is located on the end of the load module.

[0006] As a further solution of the present disclosure that: the DC to DC module provides a stable voltage for the microcontroller which collects relevant data to conduct the corresponding control. The battery voltage detection module conducts the measurement of the battery voltage, the automobile start control module conducts the power supply or the power outage for the load module through the microcontroller, and the load detection module which comprises the automobile storage battery or the automobile engine detects whether the load module is correctly connected.

[0007] As a further solution of the present disclosure that: the circuit employs an electronic switch to supply power to the load module, which can offer more protection for the product, or reduce the product size and the material cost.

[0008] As a further solution of the present disclosure that: the battery voltage detection module provides protection for the power supply battery to prevent damages caused by the discharging of the direct current power supply.

[0009] As a further solution of the present disclosure that: the load detection module prevents improper operations of the user.

[0010] As a further solution of the present disclosure that: in the standby mode, the microcontroller closes all outputs when the voltage of the direct current power supply is lower than that of the state being able to supply power and then recovers when it is higher than that of the state being able to supply power.

[0011] As a further solution of the present disclosure that: the automobile start control module is the electronic switch.

[0012] Compared to the prior art, the present disclosure has the beneficial effects that:

[0013] 1. The present disclosure employs the electronic switch to control the supply power for the load, this part can offer more protection for the product, and reduce the product size and the material cost.

[0014] 2. The battery detection of the present disclosure can provide low voltage protection to prevent damages caused by the over discharging of the battery.

[0015] 3. The load detection of the present disclosure can prevent improper operations by the user, such as reversed polarity, which causes damages to the automobile or the direct current power supply.

[0016] 4. The present disclosure employs the voltage backflow protection for abnormal load, wherein the automobile start line is closed to protect the battery when the abnormal voltage is detected.

[0017] 5. The present disclosure has a fast charging function, and can be installed fixedly or moved portably according to the use requirements of people.

[0018] 6. The automatic detection module of the present disclosure can automatically detects whether the load is connected, whether the electrode is connected with the automobile storage battery reversely, whether the automobile engine or the storage battery has reverse current, whether the battery state is suitable for heavy current power generation, thereby protecting the load and the circuit and thus has complete functions.

BRIEF DESCRIPTION OF DRAWINGS

[0019] Figure 1 is a block diagram for the principle of the emergency power supply of the safe intelligent automobile;

[0020] Figure 2 is a circuit diagram for the emergency power supply of the safe intelligent automobile.

[0021] In figures: 1-DC to DC module, 2-microcontroller, 3-battery voltage detection module, 4-automobile start control module, 5-load detection module, 6-load module, 7-direct current power supply.

DETAILED EMBODIMENTS

[0022] The technical solutions of the present disclosure will be described

more clearly and fully in conjunction with drawings in the embodiments of the present disclosure, and obviously, the described embodiments are merely a part of the embodiments of the present disclosure, not all the embodiments. Based on the embodiments of the present disclosure, all the other embodiments obtained by the ordinary skilled in the art without creative labors belong to the scope claimed by the present disclosure.

[0023] Refer to figure 1, a novel automobile charger comprises a direct current power supply, wherein the positive pole of the direct current power supply is connected with one end or lead of the DC to DC module, one end of the battery voltage detection module and one end of the load module simultaneously, while the negative pole of the direct current voltage is connected with the other end of the DC to DC module, one end of the microcontroller, one end of the automobile start control module and the other end of the battery voltage detection module simultaneously. A third end of the DC to DC module is connected with the other end of the microcontroller, and the other three ends of the microcontroller are connected with the third end of the battery voltage detection module, the other end of the automobile start control module and one end of the load detection module respectively, wherein the other end of the load detection module is connected with the third end of the automobile start control module and the other end of the load module simultaneously; the load module which comprises the automobile storage battery and the automobile engine is located on the end of the load module.

[0024] Refer to figure 2, the DC to DC module comprises a diode D1, a resistor R1, capacitor C1, a HT7530 voltage stabilizing tube, capacitors C2 and C3, wherein the positive pole of the diode D1 is connected with the positive pole of the battery, the negative pole of the diode D1 is connected with one end of the capacitor C1 and an IN port of the HT7530 voltage stabilizing tube simultaneously through the resistor R1, and an OUT port of the HT7530 voltage stabilizing tube is connected with one end of the capacitor C2, one end of the capacitor C3 and a VDD port of the microcontroller U2, while the other end of the capacitor C1, the other end of the capacitor C2 and the other end of the capacitor C3 as well as a GND port of the HT7530 voltage stabilizing tube are grounded and connected with the negative pole of the battery simultaneously; a R1 port of the microcontroller U2 is connected with the negative pole of the battery through a light-emitting diode L1 and a resistor R12 which are in series connection, a B1 port of the microcontroller U2 is connected with a EN port of the automobile start control module, a

V0 port of the microcontroller U2 is connected with the negative pole of the battery through a capacitor C4 and a resistor R7 which are in parallel connection, the V0 port is also connected with the VDD port through a slide rheostat RT, a V1 port of the microcontroller U2 is also connected with the negative pole of the battery through a resistor R10, a capacitor C6 and a resistor R13 which are in parallel connection, the V1 port is connected with the positive pole of the battery through a resistor R2, and is also connected with the negative pole of the automobile storage battery and the automobile engine simultaneously through a resistor R9, wherein two ends of the automobile storage battery are in parallel connection with the capacitor C7, resistors R9, 10, a capacitor C6 and a resistor R13 to form the load detection module together, a V4 port of the microcontroller U2 is grounded through a capacitor C5, a VSS port of the microcontroller U2 and one end of the capacitor C4 are grounded simultaneously. The other end of the capacitor C4 is connected with the VDD port of the microcontroller U2, the resistors R2, R13 and capacitor C6 form the battery voltage detection module together, and a Drive port of the automobile start control module is connected with the automobile engine and one end of a resistor R14 simultaneously, wherein the other end of the resistor R14 is grounded.

[0024A] The EN port of the automobile start control module is positioned on a boost device, which provides a gate-source voltage to a plurality of N-channel MOSFETs Q3_1, Q3_2, Q3_3, Q4_1, Q4_2, Q4_3, which are connected in parallel pairs.

[0025] The DC to DC module in the present disclosure provides the stable voltage for the microcontroller which collects relevant data to conduct the corresponding control. The battery voltage detection module conducts the measurement of the battery voltage, and the automobile start control module conducts the power supply or the power outage for the load module through the microcontroller, wherein the load detection module detects whether the load module is correctly connected.

[0026] The microcontroller in the present disclosure determines whether the automobile storage battery is connected with the automobile engine through the load detection module, wherein the automobile start control model is automatically activated and the battery starts to supply power to the load module when the load is correctly connected; the automobile start control model is automatically deactivated and the battery stops supplying power to the load module when assuming that the load is not connected or the positive and negative polarities are reversely connected. In the standby mode, the

microcontroller closes all outputs when the battery voltage is lower than 9V, and recovers the normal operation only when the battery voltage is larger than 10V; the automobile engine will generate the normal voltage to recharge the battery after the automobile starts, whereas the automobile start control module is deactivated immediately once the recharging voltage is larger than the voltage before that battery starts the power supply, to protect the battery from damages caused by charging with the normal voltage; the automobile start control module is the electronic switch, which can prevent the load from being reversely connected and recharging of the normal voltage, thus protecting the battery and prolonging lifespan.

[0027] The automobile engine will generate abnormal voltage to recharge the direct current power supply after the automobile starts, and the automobile start control module is deactivated immediately once the recharging voltage is larger than the voltage before the direct current power supply starts the power supply, to protect the direct current power supply from damages caused by charging with normal voltage charge.

[0028] It is obvious for the skilled people in the art that the present disclosure is not merely limited to the details of the above exemplary embodiments, and the present disclosure can be implemented in other specific forms without departing from the sprits or the basic features of the present disclosure. Thus, no matter to consider from which point of view, the embodiments should be considered as exemplary and non-limiting. The scope of the present disclosure is defined by the accompanying Claims rather than the above description, therefore it is intended that all the changes fallen within the meanings and scope of the equivalent elements of the Claims are contained in the present disclosure. Any drawing reference in the Claims should not be regarded as limiting the Claims involved.

[0029] Furthermore, it should be understood that although the specification is described according to the embodiments, but not every embodiment includes only an independent technical solution, this manner of description for the specification is only for clarity, therefore the skilled people in the art should take the Specification as a whole, and the technical solutions in various embodiments can be combined appropriately to form other implementations understandable for those skilled in the art.

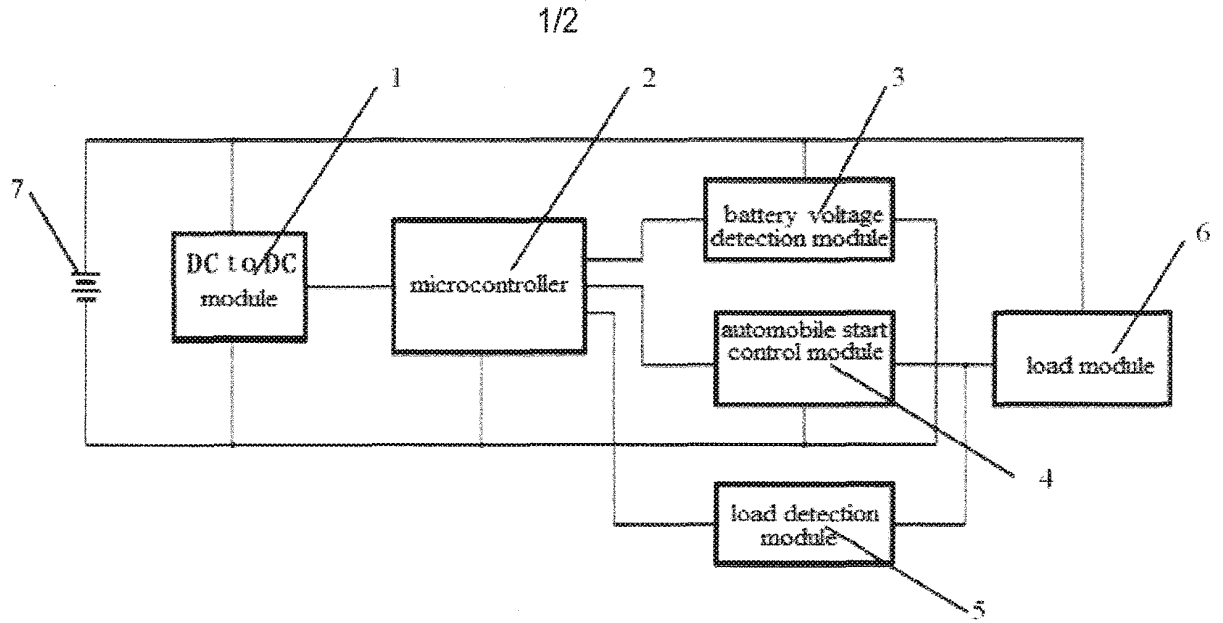


Figure 1

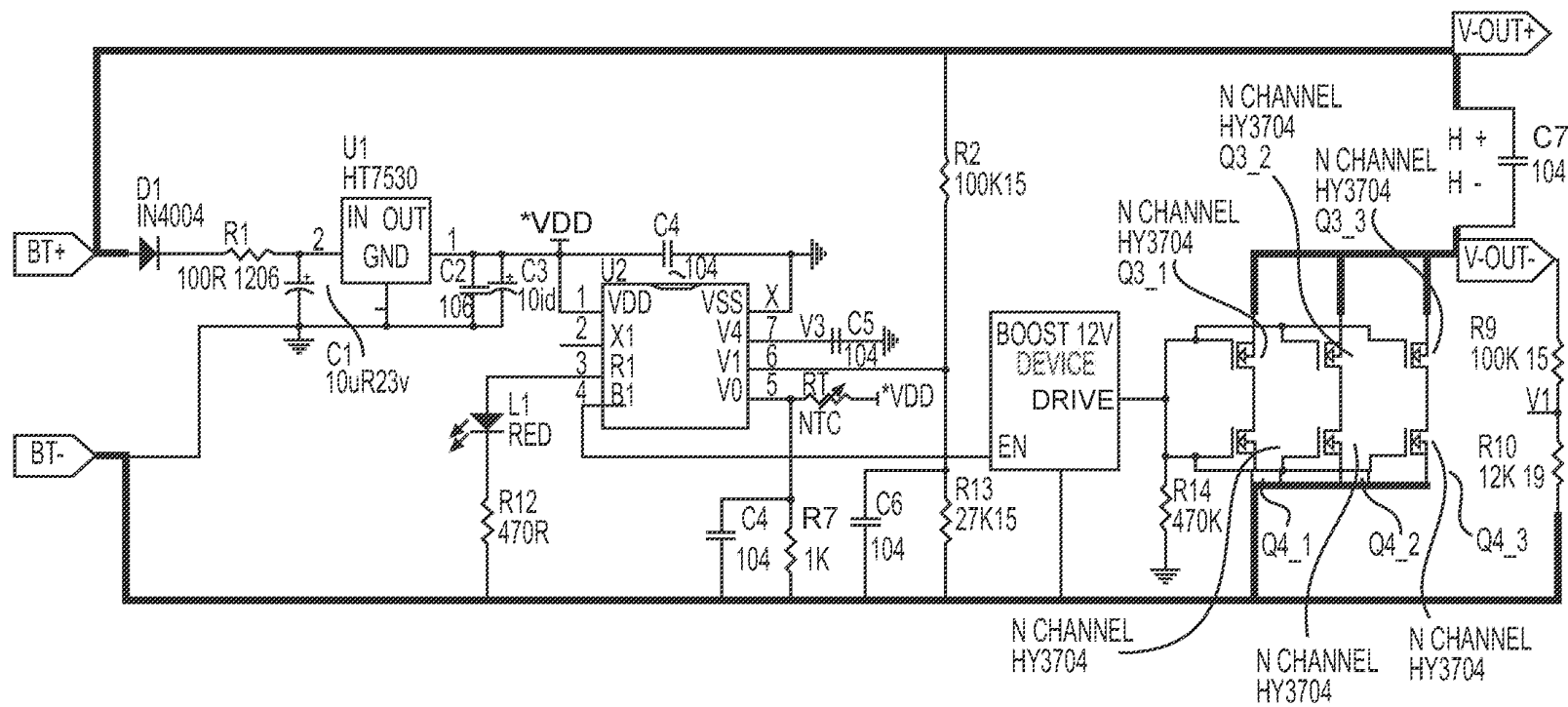


Figure 2

Electronic Acknowledgement Receipt	
EFS ID:	36616432
Application Number:	16404321
International Application Number:	
Confirmation Number:	6514
Title of Invention:	AUTOMOBILE CHARGER
First Named Inventor/Applicant Name:	Calvin Shiening Wang
Customer Number:	22442
Filer:	David B. Kellis/Mandi Lamberson
Filer Authorized By:	David B. Kellis
Attorney Docket Number:	8523WANG-1-CON-3
Receipt Date:	17-JUL-2019
Filing Date:	06-MAY-2019
Time Stamp:	17:57:17
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment		no			
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		20190717_Response-NFCAP.pdf	119385	yes	9
			72b6c99379d5c44469eafb4afcd8017ad61fc1c8		

	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Applicant Arguments/Remarks Made in an Amendment		8	9	
	Drawings-only black and white line drawings		7	7	
	Claims		3	6	
	Specification		2	2	
	Applicant Response to Pre-Exam Formalities Notice		1	1	
Warnings:					
Information:					
2		20190717_Substitute-Spec_marked.pdf	103727	yes	7
			0badc180ef1527d84ab864b2d0af6601ccb7a681		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Abstract		7	7	
	Specification		1	6	
Warnings:					
Information:					
3		20190717_Substitute-Spec_clean.pdf	99268	yes	7
			81ace28d872460eb682eedf136a41721bb9cf752		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Abstract		7	7	
	Specification		1	6	
Warnings:					
Information:					
4	Drawings-only black and white line drawings	20190717_Replacement-Drawings.pdf	1377663	no	2
			a5d73f0226e813f163098804ed528dea9c330655		

Warnings:	
Information:	
Total Files Size (in bytes):	1700043
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a 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. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.	

LISTING OF THE CLAIMS

1-6. (Cancelled)

7. (Previously Submitted) A jumpstarter device, comprising:

a battery connected to a voltage regulator, the battery supplying power, via the voltage regulator, to the microcontroller;

a load detector, connected to the microcontroller, to detect when the jumpstarter device is connected to an automobile battery;

a battery voltage detector, connected to a microcontroller, to detect a battery voltage;

the microcontroller generating, when the jumpstarter device is connected to the automobile battery, an output signal based on a detected battery voltage;

switching circuitry including a plurality of MOSFETs to selectively connect a terminal of the battery to the automobile battery when the microcontroller generates the output signal, such that the battery supplies a charging current to the automobile battery; and

a boost device for boosting a gate voltage of the plurality of MOSFETs.

8. (Previously Submitted) The jumpstarter device of claim 7, the voltage regulator comprising a voltage stabilizer connected to a resistor, a capacitor, and the microcontroller.

9. (Previously Submitted) The jumpstarter device of claim 7, wherein the load detector comprises a resistor in parallel with a capacitor, the resistor and capacitor connected to the microcontroller.

10. (Previously Submitted) The jumpstarter device of claim 7, wherein the microcontroller comprises a plurality of ports, the ports including a power supply port, a ground port, an output signal port, and a switching circuitry port.

11. (Previously Submitted) The jumpstarter device of claim 7, wherein the switching circuitry is connected to the microcontroller via the boost device, and the plurality of MOSFETs are connected in parallel.

12. (Previously Submitted) The jumpstarter device of claim 7, wherein the microcontroller:

generates the output signal to cause the switching circuitry to connect the battery to the automobile battery when the automobile battery is properly connected and the detected battery voltage is above a threshold; and

generates the output signal to cause the switching circuitry to disconnect the battery from the automobile battery when i) the detected battery voltage is below the threshold, or ii) the automobile battery is improperly connected.

13. (Previously Submitted) The jumpstarter device of claim 7, wherein the microcontroller causes the switching circuitry to disconnect the battery from the automobile battery when the automobile battery has a higher voltage than the battery.

14. (Previously Submitted) The jumpstarter device of claim 7, wherein the output signal causes the switching circuitry to disconnect the battery from the automobile battery to prevent recharging of the battery by the automobile battery.

15. (Previously Submitted) The jumpstarter device of claim 7, wherein the voltage regulator is a direct-current to direct-current (DC-DC) converter.

16. (Previously Submitted) The jumpstarter device of claim 7, wherein the load detector prevents improper user operation of the jumpstarter device.

17. (Previously Submitted) The jumpstarter device of claim 7, wherein the load detector detects a reversed polarity condition.

18. (Previously Submitted) The jumpstarter device of claim 7, wherein the load detection module is connected to a negative terminal of the plurality of MOSFETs.

19. (Previously Submitted) The jumpstarter device of claim 7, further comprising one or more light emitting diodes (LEDs) controlled by the microcontroller.

20. (Previously Submitted) The jumpstarter device of claim 7, wherein a portion of the load detection module is connected in parallel with the plurality of MOSFETs.

21. (Previously Submitted) The jumpstarter device of claim 7, wherein the microcontroller causes the device to enter a standby mode when a voltage of the battery is less than 9V and allows operation when the voltage of the battery is greater than 10V.

22. (Previously Submitted) A method for a device to charge an automobile battery comprising:

detecting a voltage level of a battery;

detecting a connection and a type of connection between the battery and the automobile battery;

generating, by a microcontroller, an output signal based on the voltage level of the battery, the connection to the automobile battery and the type of connection of the automobile battery;

based on the output signal, selectively connecting the battery to the automobile battery by activating a plurality of MOSFETs; and

based on the output signal, selectively disconnecting the battery from the automobile battery to prevent damage caused by over-discharging of the battery.

23. (Previously Submitted) The method of claim 22, wherein a boost device boosts the gate voltage of the plurality of MOSFETs.

24. (Previously Submitted) The method of claim 23, wherein:

the type of connection of the automobile battery is a correct polarity connection or an incorrect polarity connection.

25. (Previously Submitted) The method of claim 24, wherein the output signal:
causes the plurality of MOSFETs to connect the battery to the automobile battery when the type of connection is a correct polarity connection and the voltage level of the battery is above a threshold; and

cause the plurality of MOSFETs to disconnect the battery from the automobile battery when i) the level of the battery is below the threshold, or ii) the type of connection is an incorrect polarity connection.

26. (Previously Submitted) A system for jumpstarting an automobile battery comprising:

means for detecting a voltage level of a battery;

means for detecting whether a connection with an automobile battery is a correct polarity connection or an incorrect polarity connection;

means for generating, by a microcontroller, an output signal based on the voltage level of the battery and whether the connection with the automobile battery is a correct polarity connection or an incorrect polarity connection; and

means for selectively enabling current to flow from the battery to the automobile battery based on the output signal; and

a boost device for boosting a voltage associated with the means for selectively enabling current to flow from the battery to the automobile battery based on the output signal.

AMENDMENTS TO THE SPECIFICATION

Applicant submits herewith a substitute specification, other than the claims, with markings showing all of the changes made by the previously submitted Preliminary Amendment relative to the prior version of the specification, as well as a clean, unmarked copy of the substitute specification incorporating these changes, in compliance with 37 CFR 1.125(c). The substitute specification contains no new matter.

Attachments: Substitute Specification (Marked)
Substitute Specification (Clean)

AUTOMOBILE CHARGER

RELATED APPLICATIONS

[0001] This application is a continuation of U.S. Patent Application No. 15/923,219, filed on March 16, 2018 and entitled "Automobile Charger," which is a continuation of U.S. Patent Application No. 15/355,409, filed on November 18, 2016 and entitled "Automobile Charger," now Patent No. 10,046,653, which is a continuation of U.S. Patent Application No. 14/569,352, filed on December 12, 2014 and entitled "Automobile Charger," now Patent No. 9,525,297, which claims the benefit of priority of Chinese application no. 201420212173.5 filed on April 28, 2014, the entire contents of all of which is/are incorporated herein by reference.

BACKGROUND

[0002] The present disclosure relates to an automobile charging device, in particular relates to a novel automobile charger with a safe power supply charging quickly.

[0003] Automobile charging is a big issue of traveling by automobile for those automobile fans and businessmen, the maturity of the technology thereof is one of the critical factors restricting the application of the automobile charger. However, current automobile chargers have common problems of not able to automatically detect whether a load is connected, whether an electrode is connected with an automobile storage battery reversely, whether an automobile engine or the storage battery has a reverse current, whether the battery state is suitable for heavy current power generation and so on. Accordingly, the present disclosure provides a novel automobile charger with the safe power supply charging quickly to solve the problems mentioned above, thus making the automobile charging safe, quick, mature and propagable.

SUMMARY

[0004] A purpose of the present disclosure aims to provide a novel automobile charger with the safe power supply charging quickly, in order to solve the problems presented in the above background.

[0005] To achieve the purpose described above, the present disclosure provides the following technical solutions: a novel automobile charger comprises a direct current power supply, wherein a positive pole of the direct current power supply is

connected with one end of a DC to DC module, one end of a battery voltage detection module and one end of a load module simultaneously, while a negative pole of the direct current voltage is connected with the other end of the DC to DC module, one end of a micro controller, one end of an automobile start control module and the other end of the battery voltage detection module simultaneously. A third end of the DC to DC module is connected with the other end of the microcontroller, and the other three ends of the microcontroller are connected with the third end of the battery voltage detection module, the other end of the automobile start control module and one end of the load detection module respectively, wherein the other end of the load detection module is connected with the third end of the automobile start control module and the other end of the load module simultaneously; the load module which comprises the automobile storage battery and the automobile engine is located on the end of the load module.

[0006] As a further solution of the present disclosure that: the DC to DC module provides a stable voltage for the microcontroller which collects relevant data to conduct the corresponding control. The battery voltage detection module conducts the measurement of the battery voltage, the automobile start control module conducts the power supply or the power outage for the load module through the microcontroller, and the load detection module which comprises the automobile storage battery or the automobile engine detects whether the load module is correctly connected.

[0007] As a further solution of the present disclosure that: the circuit employs an electronic switch to supply power to the load module, which can offer more protection for the product, or reduce the product size and the material cost.

[0008] As a further solution of the present disclosure that: the battery voltage detection module provides protection for the power supply battery to prevent damages caused by the discharging of the direct current power supply.

[0009] As a further solution of the present disclosure that: the load detection module prevents improper operations of the user.

[0010] As a further solution of the present disclosure that: in the standby mode, the microcontroller closes all outputs when the voltage of the direct current power supply is lower than that of the state being able to supply power and then recovers when it is higher than that of the state being able to supply power.

[0011] As a further solution of the present disclosure that: the automobile start control module is the electronic switch.

[0012] Compared to the prior art, the present disclosure has the beneficial effects that:

[0013] 1. The present disclosure employs the electronic switch to control the supply power for the load, this part can offer more protection for the product, and reduce the product size and the material cost.

[0014] 2. The battery detection of the present disclosure can provide low voltage protection to prevent damages caused by the over discharging of the battery.

[0015] 3. The load detection of the present disclosure can prevent improper operations by the user, such as reversed polarity, which causes damages to the automobile or the direct current power supply.

[0016] 4. The present disclosure employs the voltage backflow protection for abnormal load, wherein the automobile start line is closed to protect the battery when the abnormal voltage is detected.

[0017] 5. The present disclosure has a fast charging function, and can be installed fixedly or moved portably according to the use requirements of people.

[0018] 6. The automatic detection module of the present disclosure can automatically detects whether the load is connected, whether the electrode is connected with the automobile storage battery reversely, whether the automobile engine or the storage battery has reverse current, whether the battery state is suitable for heavy current power generation, thereby protecting the load and the circuit and thus has complete functions.

BRIEF DESCRIPTION OF DRAWINGS

[0019] Figure 1 is a block diagram for the principle of the emergency power supply of the safe intelligent automobile;

[0020] Figure 2 is a circuit diagram for the emergency power supply of the safe intelligent automobile.

[0021] In figures: 1-DC to DC module, 2-microcontroller, 3-battery voltage detection module, 4-automobile start control module, 5-load detection module, 6-load module, 7-direct current power supply.

DETAILED EMBODIMENTS

[0022] The technical solutions of the present disclosure will be described

more clearly and fully in conjunction with drawings in the embodiments of the present disclosure, and obviously, the described embodiments are merely a part of the embodiments of the present disclosure, not all the embodiments. Based on the embodiments of the present disclosure, all the other embodiments obtained by the ordinary skilled in the art without creative labors belong to the scope claimed by the present disclosure.

[0023] Refer to figure 1, a novel automobile charger comprises a direct current power supply, wherein the positive pole of the direct current power supply is connected with one end or lead of the DC to DC module, one end of the battery voltage detection module and one end of the load module simultaneously, while the negative pole of the direct current voltage is connected with the other end of the DC to DC module, one end of the microcontroller, one end of the automobile start control module and the other end of the battery voltage detection module simultaneously. A third end of the DC to DC module is connected with the other end of the microcontroller, and the other three ends of the microcontroller are connected with the third end of the battery voltage detection module, the other end of the automobile start control module and one end of the load detection module respectively, wherein the other end of the load detection module is connected with the third end of the automobile start control module and the other end of the load module simultaneously; the load module which comprises the automobile storage battery and the automobile engine is located on the end of the load module.

[0024] Refer to figure 2, the DC to DC module comprises a diode D1, a resistor R1, capacitor C1, a HT7530 voltage stabilizing tube, capacitors C2 and C3, wherein the positive pole of the diode D1 is connected with the positive pole of the battery, the negative pole of the diode D1 is connected with one end of the capacitor C1 and an IN port of the HT7530 voltage stabilizing tube simultaneously through the resistor R1, and an OUT port of the HT7530 voltage stabilizing tube is connected with one end of the capacitor C2, one end of the capacitor C3 and a VDD port of the microcontroller U2, while the other end of the capacitor C1, the other end of the capacitor C2 and the other end of the capacitor C3 as well as a GND port of the HT7530 voltage stabilizing tube are grounded and connected with the negative pole of the battery simultaneously; a R1 port of the microcontroller U2 is connected with the negative pole of the battery through a light-emitting diode L1 and a resistor R12 which are in series connection, a B1 port of the microcontroller U2 is connected with a EN port of the automobile start control module, a

V0 port of the microcontroller U2 is connected with the negative pole of the battery through a capacitor C4 and a resistor R7 which are in parallel connection, the V0 port is also connected with the VDD port through a slide rheostat RT, a V1 port of the microcontroller U2 is also connected with the negative pole of the battery through a resistor R10, a capacitor C6 and a resistor R13 which are in parallel connection, the V1 port is connected with the positive pole of the battery through a resistor R2, and is also connected with the negative pole of the automobile storage battery and the automobile engine simultaneously through a resistor R9, wherein two ends of the automobile storage battery are in parallel connection with the capacitor C7, resistors R9, 10, a capacitor C6 and a resistor R13 to form the load detection module together, a V4 port of the microcontroller U2 is grounded through a capacitor C5, a VSS port of the microcontroller U2 and one end of the capacitor C4 are grounded simultaneously. The other end of the capacitor C4 is connected with the VDD port of the microcontroller U2, the resistors R2, R13 and capacitor C6 form the battery voltage detection module together, and a Drive port of the automobile start control module is connected with the automobile engine and one end of a resistor R14 simultaneously, wherein the other end of the resistor R14 is grounded.

[0024A] The EN port of the automobile start control module is positioned on a boost device, which provides a gate-source voltage to a plurality of N-channel MOSFETs Q3_1, Q3_2, Q3_3, Q4_1, Q4_2, Q4_3, which are connected in parallel pairs.

[0025] The DC to DC module in the present disclosure provides the stable voltage for the microcontroller which collects relevant data to conduct the corresponding control. The battery voltage detection module conducts the measurement of the battery voltage, and the automobile start control module conducts the power supply or the power outage for the load module through the microcontroller, wherein the load detection module detects whether the load module is correctly connected.

[0026] The microcontroller in the present disclosure determines whether the automobile storage battery is connected with the automobile engine through the load detection module, wherein the automobile start control model is automatically activated and the battery starts to supply power to the load module when the load is correctly connected; the automobile start control model is automatically deactivated and the battery stops supplying power to the load module when assuming that the load is not connected or the positive and negative polarities are reversely connected. In the standby mode, the

microcontroller closes all outputs when the battery voltage is lower than 9V, and recovers the normal operation only when the battery voltage is larger than 10V; the automobile engine will generate the normal voltage to recharge the battery after the automobile starts, whereas the automobile start control module is deactivated immediately once the recharging voltage is larger than the voltage before that battery starts the power supply, to protect the battery from damages caused by charging with the normal voltage; the automobile start control module is the electronic switch, which can prevent the load from being reversely connected and recharging of the normal voltage, thus protecting the battery and prolonging lifespan.

[0027] The automobile engine will generate abnormal voltage to recharge the direct current power supply after the automobile starts, and the automobile start control module is deactivated immediately once the recharging voltage is larger than the voltage before the direct current power supply starts the power supply, to protect the direct current power supply from damages caused by charging with normal voltage charge.

[0028] It is obvious for the skilled people in the art that the present disclosure is not merely limited to the details of the above exemplary embodiments, and the present disclosure can be implemented in other specific forms without departing from the sprits or the basic features of the present disclosure. Thus, no matter to consider from which point of view, the embodiments should be considered as exemplary and non-limiting. The scope of the present disclosure is defined by the accompanying Claims rather than the above description, therefore it is intended that all the changes fallen within the meanings and scope of the equivalent elements of the Claims are contained in the present disclosure. Any drawing reference in the Claims should not be regarded as limiting the Claims involved.

[0029] Furthermore, it should be understood that although the specification is described according to the embodiments, but not every embodiment includes only an independent technical solution, this manner of description for the specification is only for clarity, therefore the skilled people in the art should take the Specification as a whole, and the technical solutions in various embodiments can be combined appropriately to form other implementations understandable for those skilled in the art.

ABSTRACT

A novel automobile charger which comprises a direct current (DC) voltage supply, wherein a positive pole of the direct current (DC) voltage supply is connected with ~~one a~~ first end or a first lead of a ~~DC-to-DC-DC-to-DC~~ module, ~~one a first end~~ of a battery voltage detection module and ~~one a first end~~ of a load module simultaneously[1,2] while a negative pole of the ~~battery-DC~~ battery-DC voltage supply is connected with ~~the a second other end~~ of the ~~DC-to-DC-DC-to-DC~~ module, ~~one a first end~~ of a microcontroller, ~~one a first end~~ of the ~~an~~ automobile start control module and ~~the a second other end~~ of the battery voltage detection module simultaneously. A third end of the ~~DC-to-DC-DC-to-DC~~ module is connected with ~~the a second other end~~ of the microcontroller, ~~the Third, fourth and fifth other three ends of which the microcontroller~~ are connected with ~~the a~~ third end of the battery voltage detection module, ~~the a second other end~~ of the automobile start control module and ~~one a first end~~ of ~~the a~~ load detection module respectively. ~~The A second other end~~ of the load detection module is connected with ~~the a~~ third end of the automobile start control module and ~~the a second other end~~ of the load module simultaneously.

AMENDMENTS TO THE DRAWINGS

Pursuant to the Notice to File Corrected Application Papers, Applicant submits herewith a full set of drawings. The drawings include Replacement Sheet 1/2 with Fig. 1, in which no changes have been made to Fig. 1, and Replacement Sheet 2/2 incorporating amendments made to Fig. 2, which amendments are described in the Preliminary Amendment filed May 6, 2017. No new matter was added by these amendments, and no other amendments to the drawings have been made.

Attachments: Replacement Sheet 1/2
Replacement Sheet 2/2

ARGUMENTS/ REMARKS

Status of Claims

Applicant submits this Response to address the Notice to File Corrected Application Papers having a mailing date of May 17, 2019 (“Notice”). Claims 1-6 were previously canceled and Claims 7-26 were previously added, by way of a Preliminary Amendment filed together with the present Application. No additional amendments to the claims are submitted herewith. Claims 7-26 are pending. Accordingly, Applicant submits that this Application is now in compliance with the regulations and respectfully requests withdrawal of the pending Notice.

Substitute Specification

In the Preliminary Amendment previously submitted, Applicant made certain amendments to the Specification. Pursuant to the Notice to File Corrected Application Papers, Applicant now submits herewith both clean and annotated versions of a Substitute Specification including the amendments made to the Specification by the Preliminary Amendment. No new matter was added by these amendments, and no other amendments have been made. Accordingly, Applicant submits that this Application is now in compliance with the regulations and respectfully requests withdrawal of the pending Notice.

Replacement Figures

The Notice states that the present Application is informal because the drawings submitted are not acceptable because “the drawings must be reasonably free from erasures and must be free from alterations, overwriting, interlineations, folds and copy marks,” and further indicates that “the drawings submitted to the Office are not electronically reproducible because portions of figures 2 are missing and/or blurry”.

Applicant submits herewith Replacement Sheet 1/2 in which no changes have been made to Fig. 1, and Replacement Sheet 2/2 incorporating amendments made to Fig. 2 as outlined in the Preliminary Amendment. Applicant respectfully submits that Replacement Figs. 1 and 2 are reasonably free from erasures; are free from alterations, overwriting, interlineations, folds and copy marks; and are clear and reproducible. No new matter is added by the amendments to the drawings set forth in the Preliminary Amendment and reflected in the drawings submitted herewith, and no other amendments to the drawings have been made. Accordingly, Applicant

submits that this Application is now in compliance with the regulations and respectfully requests withdrawal of the pending Notice.

Conclusion

Based upon the foregoing, Applicant believes that the application is now in compliance with the regulations and may now be passed to issuance. Applicant does not acquiesce to any objection, rejection, or argument not specifically addressed herein. Rather, Applicant believes the amendments and arguments contained herein overcome all objections, rejections, or arguments identified in the Notice.

The Examiner is invited to contact the undersigned by telephone if doing so would be of assistance.

Respectfully submitted,

SHERIDAN ROSS P.C.

Date: July 17, 2019

By: /David B. Kellis/

David B. Kellis

Registration No. 59,377

1560 Broadway, Suite 1200

Denver, CO 80202

Telephone: 303-764-3055

Facsimile: 303-863-0223



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/404,321	05/06/2019	Calvin Shiening Wang	8523WANG-1-CON-3

CONFIRMATION NO. 6514

FORMALITIES LETTER



22442

Sheridan Ross PC
1560 Broadway
Suite 1200
Denver, CO 80202
UNITED STATES OF AMERICA

Date Mailed: 05/17/2019

NOTICE TO FILE CORRECTED APPLICATION PAPERS

Filing Date Granted

An application number and filing date have been accorded to this application. The application is informal since it does not comply with the regulations for the reason(s) indicated below. Applicant is given **TWO MONTHS** from the date of this Notice within which to correct the informalities indicated below. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

The required item(s) identified below must be timely submitted to avoid abandonment:

- A substitute specification in compliance with 37 CFR 1.52, 1.121(b)(3), and 1.125, is required. The substitute specification must be submitted with markings and be accompanied by a clean version (without markings) as set forth in 37 CFR 1.125(c) and a statement that the substitute specification contains no new matter (see 37 CFR 1.125(b)). The specification, claims, and/or abstract page(s) submitted is not acceptable and cannot be scanned or properly stored because:
 - A substitute specification was submitted on 05/06/2019; however, the non-marked-up copy of the substitute specification which incorporates the changes made in the marked up copy was not provided. Applicant must submit a clean copy of the revised specification.
- Replacement drawings in compliance with 37 CFR 1.84 and 37 CFR 1.121(d) are required. The drawings submitted are not acceptable because:
 - The drawings must be reasonably free from erasures and must be free from alterations, overwriting, interlineations, folds, and copy marks. See Figure(s) 2.
 - The drawings submitted to the Office are not electronically reproducible because portions of figures 2 are missing and/or blurry.

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web, including a copy of this Notice and selecting the document description "Applicant response to Pre-Exam Formalities Notice".
<https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at 1-866-217-9197 or visit our website at <http://www.uspto.gov/ebc>.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/sgorems/

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 16/404,321				
APPLICATION AS FILED - PART I										
(Column 1)		(Column 2)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY				
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)			
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	300			
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	660			
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	760			
TOTAL CLAIMS (37 CFR 1.16(i))	20	minus 20 = *				x 100 =	0.00			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3	minus 3 = *				x 460 =	0.00			
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).						0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00			
			TOTAL			TOTAL	1720			
* If the difference in column 1 is less than zero, enter "0" in column 2.										
APPLICATION AS AMENDED - PART II										
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY		
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=		x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=		x	=
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
						TOTAL ADD'L FEE			TOTAL ADD'L FEE	
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=		x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=		x	=
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
						TOTAL ADD'L FEE			TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** 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 found in the appropriate box in column 1.										



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO.	TOT CLAIMS	IND CLAIMS
16/404,321	05/06/2019	2835	1720	8523WANG-1-CON-3	20	3

CONFIRMATION NO. 6514

FILING RECEIPT



22442
Sheridan Ross PC
1560 Broadway
Suite 1200
Denver, CO 80202
UNITED STATES OF AMERICA

Date Mailed: 05/17/2019

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Calvin Shiening Wang, City of Industry, CA;
Chung-Hsin Wang, Shenzhen, CHINA;

Applicant(s)

Pilot Inc., City of Industry, CA;

Power of Attorney: The patent practitioners associated with Customer Number 22442

Domestic Priority data as claimed by applicant

This application is a CON of 15/923,219 03/16/2018
which is a CON of 15/355,409 11/18/2016 PAT 10046653
which is a CON of 14/569,352 12/12/2014 PAT 9525297

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.)
CHINA 201420212173.5 04/28/2014 No Access Code Provided

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 05/16/2019

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/404,321**

Projected Publication Date: To Be Determined - pending completion of Corrected Papers

Non-Publication Request: No

Early Publication Request: No
Title

AUTOMOBILE CHARGER

Preliminary Class

361

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor: Calvin Shiening Wang	)	Examiner Name: TBD
	)	
Application No.: Herewith	)	Group Art Unit: TBD
	)	
Filing Date: Herewith	)	Confirmation No.: TBD
	)	
Attorney Docket No.: 8523WANG-1-CON-3	)	
	)	
Title: AUTOMOBILE CHARGER	)	PRELIMINARY AMENDMENT
	)	

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

Dear Commissioner:

Prior to the initial review by the Examiner of the patent application submitted herewith, please enter the following Preliminary Amendment. Applicant does not believe that any fees are due with respect to the entry of this Preliminary Amendment. However, if any fees are due relating to the entry hereof, please debit those fees from Deposit Account No. 19-1970.

Amendments to the Specification, other than the claims, begin on page 2 of this communication.

Amendments to the Drawings begin on page 3 of this communication and include an attached set of replacement sheets.

Amendments to the Claims are reflected in the listing of claims beginning on page 4 of this communication.

Arguments/Remarks begin on page 8 of this communication.

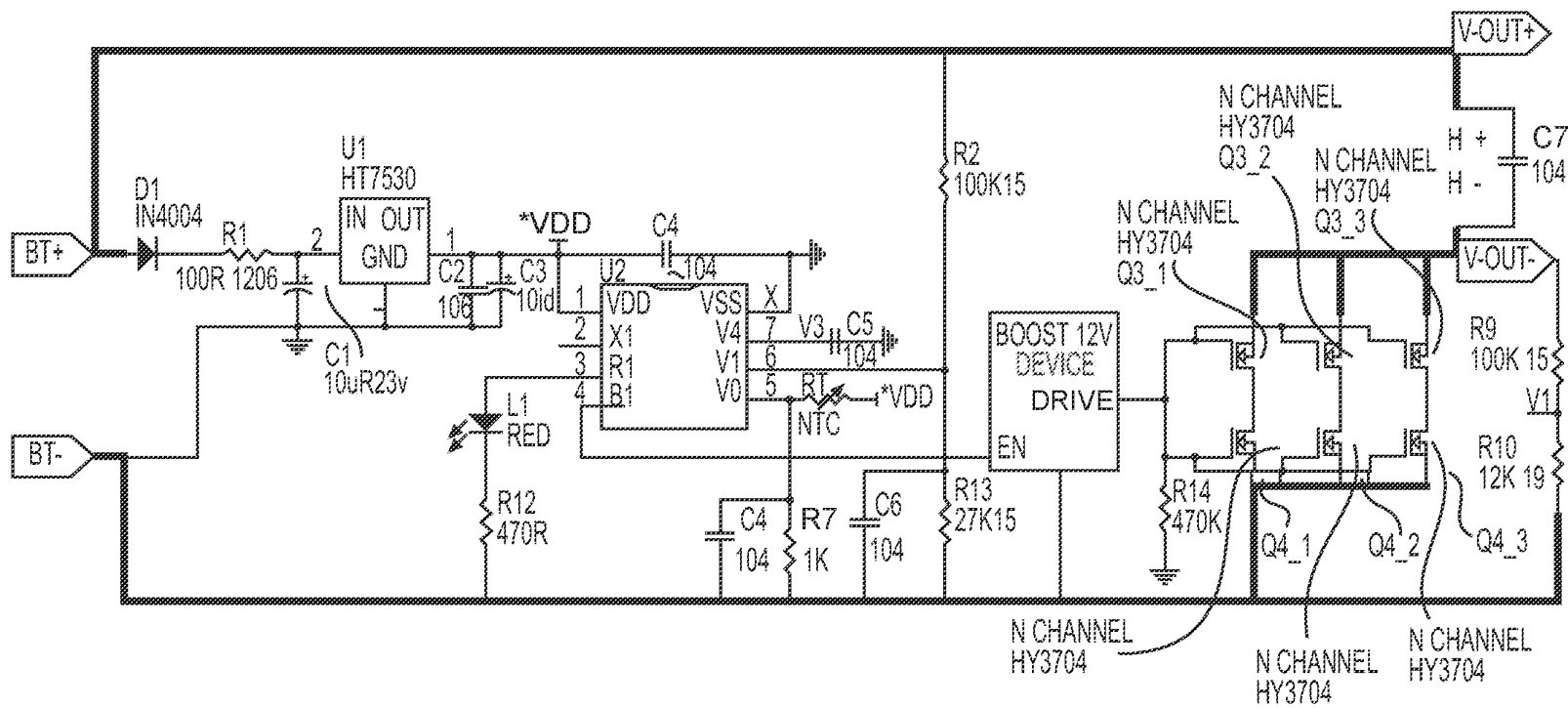


Figure 2

Under the Paperwork Reduction Act of 1995, no person is required to respond to a collection of information unless it displays a valid OMB control number

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:

☒ Practitioners associated with Customer Number: 22442

OR

☐ Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number

Name	Registration Number

As attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:

☒ The address associated with Customer Number: 22442

OR

☐ Firm or individual name		
Address		
City	State	Zip
Country		
Telephone		Email

Assignee name and address: Pilot, Inc.
13000 Temple Avenue
City of Industry, CA 91746

A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/AIA/95 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of the practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee.

Signature	Date
Name	Telephone
Title	

This collection of information is required by 37 CFR 1.31, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public, which is to update (and by the USPTO to process) the file of a patent or reexamination proceeding. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 18 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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

Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:		AUTOMOBILE CHARGER		
First Named Inventor/Applicant Name:		Calvin Shiening Wang		
Filer:		David B. Kellis/Mandi Lamberson		
Attorney Docket Number:		8523WANG-1-CON-3		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
UTILITY APPLICATION FILING	1011	1	300	300
UTILITY SEARCH FEE	1111	1	660	660
UTILITY EXAMINATION FEE	1311	1	760	760
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1720

Electronic Acknowledgement Receipt

EFS ID:	35929790
Application Number:	16404321
International Application Number:	
Confirmation Number:	6514
Title of Invention:	AUTOMOBILE CHARGER
First Named Inventor/Applicant Name:	Calvin Shiening Wang
Customer Number:	22442
Filer:	David B. Kellis/Mandi Lamberson
Filer Authorized By:	David B. Kellis
Attorney Docket Number:	8523WANG-1-CON-3
Receipt Date:	06-MAY-2019
Filing Date:	
Time Stamp:	17:15:10
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$1720
RAM confirmation Number	050719INTEFSW00004353191970
Deposit Account	191970
Authorized User	Mandi Lamberson
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 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)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	20190506_ADS.pdf	1256595	no	9
			0045e8326651c9a8b8363b51a55aef02143f fcea		
Warnings:					
Information:					
2		20190506_Application.pdf	11594316	yes	10
			f50d5f994b7df1c164e77be03f214bdb4569 ac00		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Abstract		10	10	
	Claims		7	9	
	Specification		1	6	
Warnings:					
Information:					
3	Drawings-only black and white line drawings	20190506_Drawings.pdf	128463	no	2
			22e8a7e64b7a623a50d198f16f06757966b 81a5f		
Warnings:					
Information:					
4	Oath or Declaration filed	20190506_DEC-CSW.pdf	144988	no	2
			a13eeb3ecbf2a0306c1f1b3298f29344fc6f6 8b2		
Warnings:					
Information:					
5	Oath or Declaration filed	20190506_DEC-CHW.pdf	305829	no	1
			c3524fd281919bb368871b3985660ff4341e b964		

Warnings:					
Information:					
6		20190506_PRE-AMEND.pdf	242885	yes	9
			774b11e7dca7b937b09e77c0e4d10d2149ab37ca		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Applicant Arguments/Remarks Made in an Amendment		8	9	
	Claims		4	7	
	Drawings-only black and white line drawings		3	3	
	Specification		2	2	
	Preliminary Amendment		1	1	
Warnings:					
Information:					
7	Drawings-only black and white line drawings	20190506_RPLC-FIG2.pdf	80707	no	1
			2c1bb92c3de9f2b3661667a8f3d6e3e49389c7f2		
Warnings:					
Information:					
8	Power of Attorney	20190506_POA.pdf	93475	no	1
			b4c172b5b2a6e803aacce262c822839790dc76b2		
Warnings:					
Information:					
9	Fee Worksheet (SB06)	fee-info.pdf	35111	no	2
			2845dc57f0986e23cf8124e0ae17a86f396580ae		
Warnings:					
Information:					
Total Files Size (in bytes):			13882369		

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	8523WANG-1-CON-3
		Application Number	
Title of Invention	AUTOMOBILE CHARGER		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor	1				Remove	
Legal Name						
Prefix	Given Name	Middle Name	Family Name	Suffix		
	Calvin	Shiening	Wang			
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service						
City	City of Industry	State/Province	CA	Country of Residence ⁱ	US	
Mailing Address of Inventor:						
Address 1	13000 Temple Avenue					
Address 2						
City	City of Industry	State/Province	CA			
Postal Code	91746	Country ⁱ	US			
Inventor	2				Remove	
Legal Name						
Prefix	Given Name	Middle Name	Family Name	Suffix		
	Chung-Hsin		Wang			
Residence Information (Select One) ☐ US Residency ☒ Non US Residency ☐ Active US Military Service						
City	Shenzhen	Country of Residence ⁱ	CN			
Mailing Address of Inventor:						
Address 1	5F, Building 2, HuaFeng First Technology Park					
Address 2	San Wei Village, XiXiang Town, Bao'an					
City	Shezhen	State/Province	OT			
Postal Code	518100	Country ⁱ	CN			
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.						
Add						

Correspondence Information:

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	8523WANG-1-CON-3
		Application Number	
Title of Invention	AUTOMOBILE CHARGER		

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence information of this application.**

Customer Number	22442		
Email Address	e-docket@sheridanross.com	Add Email	Remove Email

Application Information:

Title of the Invention	AUTOMOBILE CHARGER		
Attorney Docket Number	8523WANG-1-CON-3	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	2	Suggested Figure for Publication (if any)	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)
Customer Number	22442		

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	8523WANG-1-CON-3
		Application Number	
Title of Invention	AUTOMOBILE CHARGER		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending		Remove		
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)		
	Continuation of	15/923219	2018-03-16		
Prior Application Status	Patented		Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15/923219	Continuation of	15355409	2016-11-18	10046653	2018-08-14
Prior Application Status	Patented		Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15355409	Continuation of	14/569352	2014-12-12	9525297	2016-12-20
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.					

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)¹ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Remove
201420212173.5	CN	2014-04-28	
Additional Foreign Priority Data may be generated within this form by selecting the Add button.			

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	8523WANG-1-CON-3
		Application Number	
Title of Invention	AUTOMOBILE CHARGER		

☐	This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013. NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.
--------------------------	---

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	8523WANG-1-CON-3
		Application Number	
Title of Invention	AUTOMOBILE CHARGER		

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	8523WANG-1-CON-3
		Application Number	
Title of Invention	AUTOMOBILE CHARGER		

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant	1	Remove
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section. Clear		
☒ Assignee	Legal Representative under 35 U.S.C. 117	Joint Inventor
Person to whom the inventor is obligated to assign.		Person who shows sufficient proprietary interest
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:		
Name of the Deceased or Legally Incapacitated Inventor:		
If the Applicant is an Organization check here. ☒		
Organization Name	Pilot Inc.	
Mailing Address Information For Applicant:		
Address 1	13000 Temple Boulevard	
Address 2		
City	City of Industry	State/Province
Country	US	Postal Code
Phone Number		Fax Number
Email Address		
Additional Applicant Data may be generated within this form by selecting the Add button. Add		

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	8523WANG-1-CON-3
		Application Number	
Title of Invention	AUTOMOBILE CHARGER		

Assignee	1			
Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.				
				Remove
If the Assignee or Non-Applicant Assignee is an Organization check here. ☐				
Prefix	Given Name	Middle Name	Family Name	Suffix
Mailing Address Information For Assignee including Non-Applicant Assignee:				
Address 1				
Address 2				
City		State/Province		
Country i		Postal Code		
Phone Number		Fax Number		
Email Address				
Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.				Add

Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). However, if this Application Data Sheet is submitted with the **INITIAL** filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).

This Application Data Sheet must be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/David B. Kellis/		Date (YYYY-MM-DD)	2019-05-06	
First Name	David B.	Last Name	Kellis	Registration Number	59377
Additional Signature may be generated within this form by selecting the Add button.					Add

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	8523WANG-1-CON-3
		Application Number	
Title of Invention	AUTOMOBILE CHARGER		

This collection of information is required by 37 CFR 1.76. 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 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet 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.**

Privacy Act Statement

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

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

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

ABSTRACT

A novel automobile charger which comprise a direct current voltage, wherein a positive pole of the direct current voltage is connected with one end or lead of a DC to DC module, one end of a battery voltage detection module and one end of a load module simultaneously, while a negative pole of the battery is connected with the other end of the DC to DC module, one end of a microcontroller, one end of the automobile start control module and the other end of the battery voltage detection module simultaneously. A third end of the DC to DC module is connected with the other end of the microcontroller, the other three ends of which are connected with the third end of the battery voltage detection module, the other end of the automobile start control module and one end of the load detection module respectively. The other end of the load detection module is connected with the third end of the automobile start control module and the other end of the load module simultaneously.

CLAIMS

What is claimed is:

1. A novel automobile charger which comprises a direct current power supply, comprising:

a positive pole of the direct current power supply connected with a first lead of a DC to DC module, a first lead of a battery voltage detection module, and a first lead of a load module simultaneously,

a negative pole of the direct current voltage connected with a second lead of the DC to DC module, a first lead of a microcontroller, a first lead of an automobile start control module and a second lead of the battery voltage detection module simultaneously;

a third lead of the DC to DC module connected with a second lead of the microcontroller, and

three additional leads the microcontroller connected with a third lead of the battery voltage detection module, a second lead of the automobile start control module and the first lead of the load detection module respectively,

wherein a second lead of the load detection module is connected with the third end of the automobile start control module and second lead of the load module simultaneously;

the load module including an automobile storage battery and an automobile engine is located on one end of the automobile.

2. The novel automobile charger according to Claim 1, wherein

the DC to DC module includes a diode D1, a resistor R1, a capacitor C1, a HT7530 voltage stabilizing tube, and capacitors C2 and C3,

a positive pole of the diode D1 is connected with a positive pole of the battery,

a negative pole of the diode D1 is connected with a first lead of the capacitor C1 and

an IN port of the HT7530 voltage stabilizing tube through the resistor R1 simultaneously, and

an OUT port of the HT7530 voltage stabilizing tube is connected with a first lead of the capacitor C2, a first lead of the capacitor C3 and a VDD port of a microcontroller U2 simultaneously,

a second lead of the capacitor C1, a second lead of the capacitor C2 and a second lead of the capacitor C3 as well as a GND port of the HT7530 voltage stabilizing tube are grounded and connected with the negative pole of the battery simultaneously;

a R1 port of the microcontroller U2 is connected with a negative pole of the battery through a luminous diode L1 and a resistor R12 in series connection,

a B1 port of the microcontroller U2 is connected with a EN port of the automobile start control module,

a V0 port of the microcontroller U2 is connected with the negative pole of the battery through a capacitor C4 and a resistor R7 in parallel connection and also with the VDD port through a slide rheostat RT,

a V1 port of the microcontroller U2 is also connected with the negative pole of the battery through a resistor 10, a capacitor C6 and a resistor R13 in parallel connection,

the V1 port is connected with the positive pole of the battery through a resistor R2 and is also connected with the negative pole of the automobile storage battery and the automobile engine simultaneously through a resistor R9,

wherein two leads of the automobile storage battery are in parallel connection with the capacitor C7, the resistors R9, 10, the capacitor C6 and the resistor R13 together to form the load detection module,

a V4 port of the microcontroller U2 is grounded through a capacitor C5,

a VSS port of the microcontroller U2 and one end of the capacitor C4 are grounded; simultaneously,

the second lead of the capacitor C4 is connected with the VDD port of the microcontroller U2,

the resistor R2, capacitor C6 and resistor R13 form the battery voltage detection module together, and

a Drive port of the automobile start control module is connected with the automobile engine and one end of a resistor R14 simultaneously, wherein the other end of the resistor R14 is grounded.

3. The automobile charger according to Claim 1, wherein the DC to DC module is operably configured to provide a stable voltage for the microcontroller which collects relevant data to conduct corresponding control, and

the battery voltage detection module conducts the measurement of the battery voltage, the automobile start control module conducts power supply or power outage for the load module through the microcontroller, wherein the load detection module detects whether the load module is correctly connected.

4. The automobile charger according to Claim 1, further comprising the battery voltage detection module being operably configured to provide protection for the power supply battery.

5. The automobile charger according to Claim 1, further comprising programmatic instructions such that, when placed in a standby mode, the microcontroller closes all outputs when the voltage of the direct current power supply is lower than that of a state being able to supply power and then recovers when it is higher than the state being able to supply power.

6. The automobile charger according to Claim 1 wherein the automobile start control module is an electronic switch.

AUTOMOBILE CHARGER

RELATED APPLICATIONS

[0001] This application claims the benefit of priority of Chinese application no. 201420212173. 5 filed April 28, 2014, the entire content of which is incorporated herein by reference.

BACKGROUND

[0002] The present disclosure relates to an automobile charging device, in particular relates to a novel automobile charger with a safe power supply charging quickly.

[0003] Automobile charging is a big issue of traveling by automobile for those automobile fans and businessmen, the maturity of the technology thereof is one of the critical factors restricting the application of the automobile charger. However, current automobile chargers have common problems of not able to automatically detect whether a load is connected, whether an electrode is connected with an automobile storage battery reversely, whether an automobile engine or the storage battery has a reverse current, whether the battery state is suitable for heavy current power generation and so on. Accordingly, the present disclosure provides a novel automobile charger with the safe power supply charging quickly to solve the problems mentioned above, thus making the automobile charging safe, quick, mature and propagable.

SUMMARY

[0004] A purpose of the present disclosure aims to provide a novel automobile charger with the safe power supply charging quickly, in order to solve the problems presented in the above background.

[0005] To achieve the purpose described above, the present disclosure provides the following technical solutions: a novel automobile charger comprises a direct current power supply, wherein a positive pole of the direct current power supply is connected with one end of a DC to DC module, one end of a battery voltage detection

module and one end of a load module simultaneously, while a negative pole of the direct current voltage is connected with the other end of the DC to DC module, one end of a microcontroller, one end of an automobile start control module and the other end of the battery voltage detection module simultaneously. A third end of the DC to DC module is connected with the other end of the microcontroller, and the other three ends of the microcontroller are connected with the third end of the battery voltage detection module, the other end of the automobile start control module and one end of the load detection module respectively, wherein the other end of the load detection module is connected with the third end of the automobile start control module and the other end of the load module simultaneously; the load module which comprises the automobile storage battery and the automobile engine is located on the end of the load module.

[0006] As a further solution of the present disclosure that: the DC to DC module provides a stable voltage for the microcontroller which collects relevant data to conduct the corresponding control. The battery voltage detection module conducts the measurement of the battery voltage, the automobile start control module conducts the power supply or the power outage for the load module through the microcontroller, and the load detection module which comprises the automobile storage battery or the automobile engine detects whether the load module is correctly connected.

[0007] As a further solution of the present disclosure that: the circuit employs an electronic switch to supply power to the load module, which can offer more protection for the product, or reduce the product size and the material cost.

[0008] As a further solution of the present disclosure that: the battery voltage detection module provides protection for the power supply battery to prevent damages caused by the discharging of the direct current power supply.

[0009] As a further solution of the present disclosure that: the load detection module prevents improper operations of the user.

[0010] As a further solution of the present disclosure that: in the standby mode, the microcontroller closes all outputs when the voltage of the direct current power supply is lower than that of the state being able to supply power and then recovers when it is higher than that of the state being able to supply power.

[0011] As a further solution of the present disclosure that: the automobile start control module is the electronic switch.

[0012] Compared to the prior art, the present disclosure has the beneficial effects that:

[0013] 1. The present disclosure employs the electronic switch to control the supply power for the load, this part can offer more protection for the product, and reduce the product size and the material cost.

[0014] 2. The battery detection of the present disclosure can provide low voltage protection to prevent damages caused by the over discharging of the battery.

[0015] 3. The load detection of the present disclosure can prevent improper operations by the user, such as reversed polarity, which causes damages to the automobile or the direct current power supply.

[0016] 4. The present disclosure employs the voltage backflow protection for abnormal load, wherein the automobile start line is closed to protect the battery when the abnormal voltage is detected.

[0017] 5. The present disclosure has a fast charging function, and can be installed fixedly or moved portably according to the use requirements of people.

[0018] 6. The automatic detection module of the present disclosure can automatically detects whether the load is connected, whether the electrode is connected with the automobile storage battery reversely, whether the automobile engine or the storage battery has reverse current, whether the battery state is suitable for heavy current power generation, thereby protecting the load and the circuit and thus has complete functions.

BRIEF DESCRIPTION OF DRAWINGS

[0019] Figure 1 is a block diagram for the principle of the emergency power supply of the safe intelligent automobile;

[0020] Figure 2 is a circuit diagram for the emergency power supply of the safe intelligent automobile.

[0021] In figures: 1-DC to DC module, 2-microcontroller, 3-battery voltage detection module, 4-automobile start control module, 5-load detection module, 6-load module, 7-direct current power supply.

DETAILED EMBODIMENTS

[0022] The technical solutions of the present disclosure will be described more clearly and fully in conjunction with drawings in the embodiments of the present disclosure, and obviously, the described embodiments are merely a part of the embodiments of the present disclosure, not all the embodiments. Based on the embodiments of the present disclosure, all the other embodiments obtained by the ordinary skilled in the art without creative labors belong to the scope claimed by the present disclosure.

[0023] Refer to figure 1, a novel automobile charger comprises a direct current power supply, wherein the positive pole of the direct current power supply is connected with one end or lead of the DC to DC module, one end of the battery voltage detection module and one end of the load module simultaneously, while the negative pole of the direct current voltage is connected with the other end of the DC to DC module, one end of the microcontroller, one end of the automobile start control module and the other end of the battery voltage detection module simultaneously. A third end of the DC to DC module is connected with the other end of the microcontroller, and the other three ends of the microcontroller are connected with the third end of the battery voltage detection module, the other end of the automobile start control module and one end of the load detection module respectively, wherein the other end of the load detection module is connected with the third end of the automobile start control module and the other end of the load module simultaneously; the load module which comprises the automobile storage battery and the automobile engine is located on the end of the load module.

[0024] Refer to figure 2, the DC to DC module comprises a diode D1, a resistor R1, capacitor C1, a HT7530 voltage stabilizing tube, capacitors C2 and C3, wherein the positive pole of the diode D1 is connected with the positive pole of the battery, the negative pole of the diode D1 is connected with one end of the capacitor C1 and an IN port of the HT7530 voltage stabilizing tube simultaneously through the resistor R1, and an OUT port of the HT7530 voltage stabilizing tube is connected with one end of the capacitor C2, one end of the capacitor C3 and a VDD port of the microcontroller U2, while the other end of the capacitor C1, the other end of the capacitor C2 and the other end of the capacitor C3 as well as a GND port of the HT7530 voltage stabilizing tube are grounded and connected with the negative pole of the battery simultaneously; a R1 port of the microcontroller U2 is connected with the negative pole of the battery through a light-

emitting diode L1 and a resistor R12 which are in series connection, a B1 port of the microcontroller U2 is connected with a EN port of the automobile start control module, a V0 port of the microcontroller U2 is connected with the negative pole of the battery through a capacitor C4 and a resistor R7 which are in parallel connection, the V0 port is also connected with the VDD port through a slide rheostat RT, a V1 port of the microcontroller U2 is also connected with the negative pole of the battery through a resistor R10, a capacitor C6 and a resistor R13 which are in parallel connection, the V1 port is connected with the positive pole of the battery through a resistor R2, and is also connected with the negative pole of the automobile storage battery and the automobile engine simultaneously through a resistor R9, wherein two ends of the automobile storage battery are in parallel connection with the capacitor C7, resistors R9, R10, a capacitor C6 and a resistor R13 to form the load detection module together, a V4 port of the microcontroller U2 is grounded through a capacitor C5, a VSS port of the microcontroller U2 and one end of the capacitor C4 are grounded simultaneously. The other end of the capacitor C4 is connected with the VDD port of the microcontroller U2, the resistors R2, R13 and capacitor C6 form the battery voltage detection module together, and a Drive port of the automobile start control module is connected with the automobile engine and one end of a resistor R14 simultaneously, wherein the other end of the resistor R14 is grounded.

[0025] The DC to DC module in the present disclosure provides the stable voltage for the microcontroller which collects relevant data to conduct the corresponding control. The battery voltage detection module conducts the measurement of the battery voltage, and the automobile start control module conducts the power supply or the power outage for the load module through the microcontroller, wherein the load detection module detects whether the load module is correctly connected.

[0026] The microcontroller in the present disclosure determines whether the automobile storage battery is connected with the automobile engine through the load detection module, wherein the automobile start control model is automatically activated and the battery starts to supply power to the load module when the load is correctly connected; the automobile start control model is automatically deactivated and the battery stops supplying power to the load module when assuming that the load is not connected or the positive and negative polarities are reversely connected. In the standby mode, the microcontroller closes all outputs when the battery voltage is lower than 9V, and recovers

the normal operation only when the battery voltage is larger than 10V; the automobile engine will generate the normal voltage to recharge the battery after the automobile starts, whereas the automobile start control module is deactivated immediately once the recharging voltage is larger than the voltage before that battery starts the power supply, to protect the battery from damages caused by charging with the normal voltage; the automobile start control module is the electronic switch, which can prevent the load from being reversely connected and recharging of the normal voltage, thus protecting the battery and prolonging lifespan.

[0027] The automobile engine will generate abnormal voltage to recharge the direct current power supply after the automobile starts, and the automobile start control module is deactivated immediately once the recharging voltage is larger than the voltage before the direct current power supply starts the power supply, to protect the direct current power supply from damages caused by charging with normal voltage charge.

[0028] It is obvious for the skilled people in the art that the present disclosure is not merely limited to the details of the above exemplary embodiments, and the present disclosure can be implemented in other specific forms without departing from the sprits or the basic features of the present disclosure. Thus, no matter to consider from which point of view, the embodiments should be considered as exemplary and non-limiting. The scope of the present disclosure is defined by the accompanying Claims rather than the above description, therefore it is intended that all the changes fallen within the meanings and scope of the equivalent elements of the Claims are contained in the present disclosure. Any drawing reference in the Claims should not be regarded as limiting the Claims involved.

[0029] Furthermore, it should be understood that although the specification is described according to the embodiments, but not every embodiment includes only an independent technical solution, this manner of description for the specification is only for clarity, therefore the skilled people in the art should take the Specification as a whole, and the technical solutions in various embodiments can be combined appropriately to form other implementations understandable for those skilled in the art.

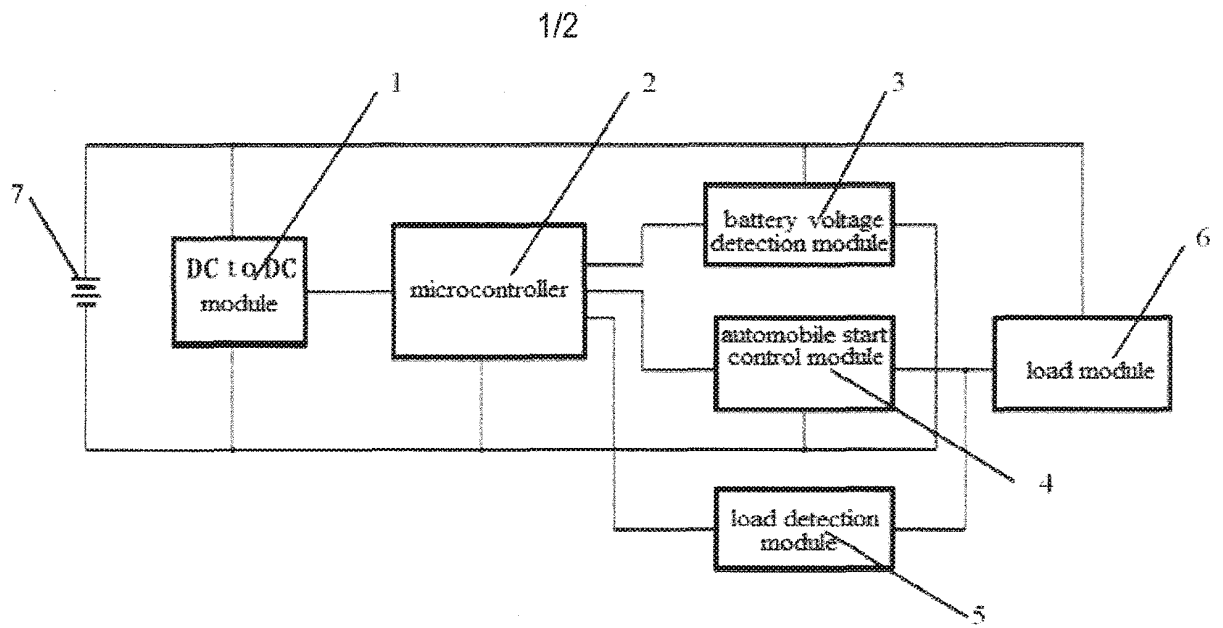


Figure 1

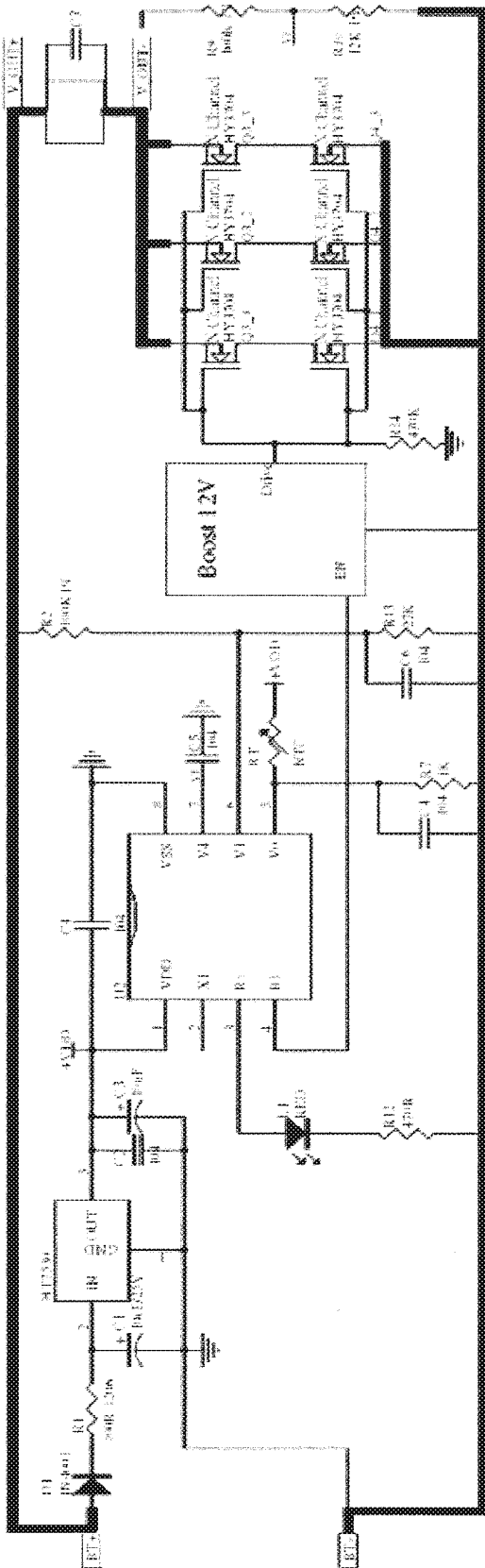
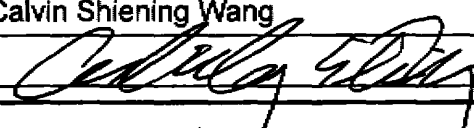


Figure 2

**DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN
APPLICATION DATA SHEET (37 CFR 1.76)**

Title of Invention	AUTOMOBILE CHARGER
As the below named inventor, I hereby declare that: This declaration is directed to: ☐ The attached application, or ☒ United States application or PCT international application number <u>14/569,352</u> filed on <u>December 12, 2014</u> The above-identified application was made or authorized to be made by me. I believe that I am the original inventor or an original joint inventor of a claimed invention in the application. I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both. WARNING: Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.	
LEGAL NAME OF INVENTOR Inventor: <u>Calvin Shiening Wang</u> Date (Optional): <u>9/18/15</u> Signature: 	
Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.	

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. 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 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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

Privacy Act Statement

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

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

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

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.

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	AUTOMOBILE CHARGER		
	Attorney Docket No. 8523WANG-1		
As the below named inventor, I hereby declare that:			
This declaration is directed to:	☐	The attached application, or	
	☒	United States application or PCT international application number <u>14/569,352</u> filed on <u>December 12, 2014</u>	
The above-identified application was made or authorized to be made by me.			
I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.			
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.			
WARNING:			
Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.			
LEGAL NAME OF INVENTOR			
Inventor:	<u>Chung-Hsin Wang</u>		Date (Optional) <u>2018/5/29</u>
Signature:	<u>Chung-Hsin Wang</u>		
Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.			

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. 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 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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

ARGUMENTS/REMARKS

This Preliminary Amendment makes certain amendments to the Drawings and the Specification. Additionally, Claims 1-6 are cancelled and Claims 7-26 are newly presented. No new matter is added by these amendments, nor are the amendments intended to abandon or dedicate to the public any patentable subject matter.

Support for Amendment to the Specification

The Specification is herein amended, *inter alia*, to insert a Paragraph [0024A] in between Paragraphs [0024] and [0025] of the Application as filed. Paragraph [0024A] describes subject matter illustrated in the highlighted portions of the below reproduction of Fig. 2 (as amended herein):

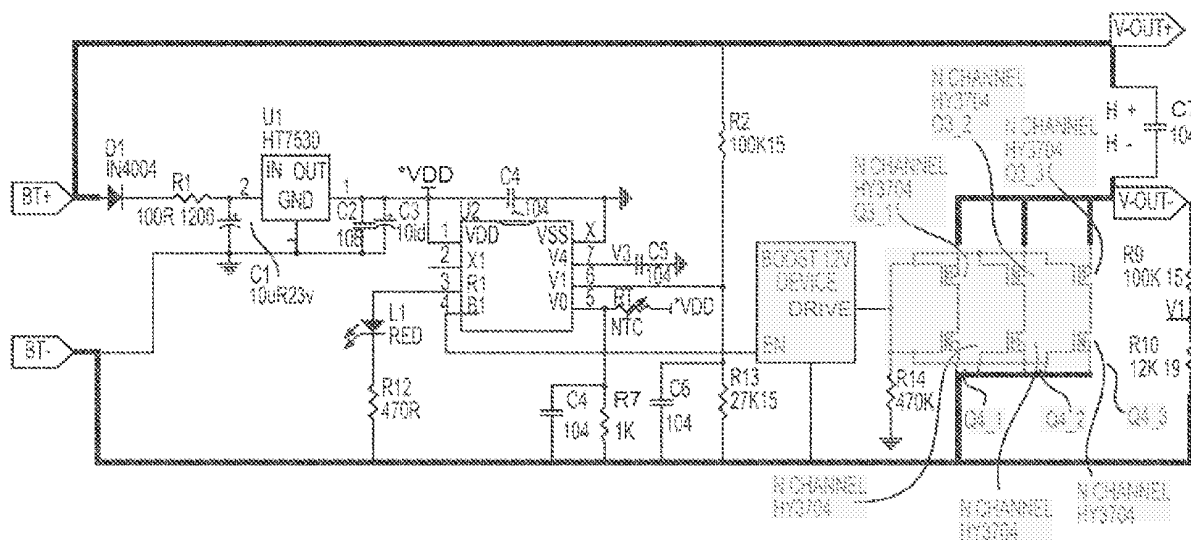


Fig. 2 (annotated).

More specifically, Paragraph [0024] states that “a B1 port of the microcontroller U2 is connected with a EN port of the automobile start control module.” Application, ¶ [0024]. Paragraph [0024A] further explains that “the EN port of the automobile start control module is positioned on a boost device,” which is plainly shown in Fig. 2. Paragraph [0024A] further states that the boost device “provides a gate-source voltage to a plurality of N-channel MOSFETs Q3_1, Q3_2, Q3_3, Q4_1, Q4_2, Q4_3, which are connected in parallel pairs.” This is also plainly apparent in Fig. 2, which shows six MOSFET symbols, each identified as “N Channel HY3704,” and further shows the boost device connected to the gate of each MOSFET.

CONCLUSION

In view of the foregoing, Applicant believes that the application is now in condition for allowance.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at (303) 764-3055.

The Commissioner is hereby authorized to charge to Deposit Account No. 19-1970 any fees under 37 CFR § 1.16 and 1.17 that may be required by this paper and to credit any overpayment to that account. If any extension of time is required in connection with the filing of this paper and has not been separately requested, such extension is hereby petitioned.

Respectfully submitted,
SHERIDAN ROSS P.C.

Date: May 6, 2019

By: /David B. Kellis/
David B. Kellis
Registration No. 59,377
1560 Broadway, Suite 1200
Denver, CO 80202
Telephone: 303-764-3055
Facsimile: 303-863-0223

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims:

- 1-6. (Cancelled)
7. (New) A jumpstarter device, comprising:
 - a battery connected to a voltage regulator, the battery supplying power, via the voltage regulator, to the microcontroller;
 - a load detector, connected to the microcontroller, to detect when the jumpstarter device is connected to an automobile battery;
 - a battery voltage detector, connected to a microcontroller, to detect a battery voltage;
 - the microcontroller generating, when the jumpstarter device is connected to the automobile battery, an output signal based on a detected battery voltage;
 - switching circuitry including a plurality of MOSFETs to selectively connect a terminal of the battery to the automobile battery when the microcontroller generates the output signal, such that the battery supplies a charging current to the automobile battery; and
 - a boost device for boosting a gate voltage of the plurality of MOSFETs.
8. (New) The jumpstarter device of claim 7, the voltage regulator comprising a voltage stabilizer connected to a resistor, a capacitor, and the microcontroller.
9. (New) The jumpstarter device of claim 7, wherein the load detector comprises a resistor in parallel with a capacitor, the resistor and capacitor connected to the microcontroller.
10. (New) The jumpstarter device of claim 7, wherein the microcontroller comprises a plurality of ports, the ports including a power supply port, a ground port, an output signal port, and a switching circuitry port.

11. (New) The jumpstarter device of claim 7, wherein the switching circuitry is connected to the microcontroller via the boost device, and the plurality of MOSFETs are connected in parallel.

12. (New) The jumpstarter device of claim 7, wherein the microcontroller:
generates the output signal to cause the switching circuitry to connect the battery to the automobile battery when the automobile battery is properly connected and the detected battery voltage is above a threshold; and

generates the output signal to cause the switching circuitry to disconnect the battery from the automobile battery when i) the detected battery voltage is below the threshold, or ii) the automobile battery is improperly connected.

13. (New) The jumpstarter device of claim 7, wherein the microcontroller causes the switching circuitry to disconnect the battery from the automobile battery when the automobile battery has a higher voltage than the battery.

14. (New) The jumpstarter device of claim 7, wherein the output signal causes the switching circuitry to disconnect the battery from the automobile battery to prevent recharging of the battery by the automobile battery.

15. (New) The jumpstarter device of claim 7, wherein the voltage regulator is a direct-current to direct-current (DC-DC) converter.

16. (New) The jumpstarter device of claim 7, wherein the load detector prevents improper user operation of the jumpstarter device.

17. (New) The jumpstarter device of claim 7, wherein the load detector detects a reversed polarity condition.

18. (New) The jumpstarter device of claim 7, wherein the load detection module is connected to a negative terminal of the plurality of MOSFETs.

19. (New) The jumpstarter device of claim 7, further comprising one or more light emitting diodes (LEDs) controlled by the microcontroller.

20. (New) The jumpstarter device of claim 7, wherein a portion of the load detection module is connected in parallel with the plurality of MOSFETs.

21. (New) The jumpstarter device of claim 7, wherein the microcontroller causes the device to enter a standby mode when a voltage of the battery is less than 9V and allows operation when the voltage of the battery is greater than 10V.

22. (New) A method for a device to charge an automobile battery comprising:
detecting a voltage level of a battery;
detecting a connection and a type of connection between the battery and the automobile battery;
generating, by a microcontroller, an output signal based on the voltage level of the battery, the connection to the automobile battery and the type of connection of the automobile battery;
based on the output signal, selectively connecting the battery to the automobile battery by activating a plurality of MOSFETs; and
based on the output signal, selectively disconnecting the battery from the automobile battery to prevent damage caused by over-discharging of the battery.

23. (New) The method of claim 22, wherein a boost device boosts the gate voltage of the plurality of MOSFETs.

24. (New) The method of claim 23, wherein:
the type of connection of the automobile battery is a correct polarity connection or an incorrect polarity connection.

25. (New) The method of claim 24, wherein the output signal:

causes the plurality of MOSFETs to connect the battery to the automobile battery when the type of connection is a correct polarity connection and the voltage level of the battery is above a threshold; and

cause the plurality of MOSFETs to disconnect the battery from the automobile battery when i) the level of the battery is below the threshold, or ii) the type of connection is an incorrect polarity connection.

26. (New) A system for jumpstarting an automobile battery comprising:

means for detecting a voltage level of a battery;

means for detecting whether a connection with an automobile battery is a correct polarity connection or an incorrect polarity connection;

means for generating, by a microcontroller, an output signal based on the voltage level of the battery and whether the connection with the automobile battery is a correct polarity connection or an incorrect polarity connection; and

means for selectively enabling current to flow from the battery to the automobile battery based on the output signal; and

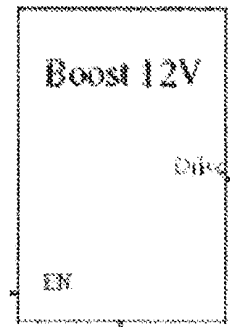
a boost device for boosting a voltage associated with the means for selectively enabling current to flow from the battery to the automobile battery based on the output signal.

AMENDMENT TO THE DRAWINGS

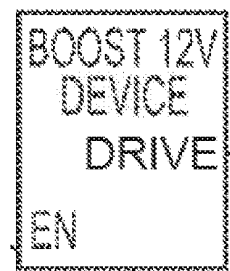
Applicant submits herewith a Replacement Fig. 2, which contains the following amendments:

- "*VDO" has been changed to -*VDD-;
- "R2" next to C6 has been changed to -R7-;
- "C3" between H+ and H- has been changed to -C7-;
- the indications "Boost 12V," "Drive," and "EN" (shown in the excerpt from original Fig. 2 below) have been made more legible, and the word "Device" has been added for improved clarity:

Excerpt from original Fig. 2:



Excerpt from Replacement Fig. 2 submitted herewith:



AMENDMENT TO THE SPECIFICATION

Please amend the Specification as follows:

Please amend Paragraph [0001] as follows:

[0001] This application ~~is a continuation of U.S. Patent Application No. 15/923,219, filed on March 16, 2018 and entitled "Automobile Charger," which is a continuation of U.S. Patent Application No. 15/355,409, filed on November 18, 2016 and entitled "Automobile Charger," now Patent No. 10,046,653, which is a continuation of U.S. Patent Application No. 14/569,352, filed on December 12, 2014 and entitled "Automobile Charger," now Patent No. 9,525,297, which~~ claims the benefit of priority of Chinese application no. 201420212173.5, filed on April 28, 2014, the entire contents of ~~all of which is-are~~ incorporated herein by reference.

Please insert the following paragraph after Paragraph [0024] and before Paragraph [0025]:

[0024A] The EN port of the automobile start control module is positioned on a boost device, which provides a gate-source voltage to a plurality of N-channel MOSFETs Q3_1, Q3_2, Q3_3, Q4_1, Q4_2, Q4_3, which are connected in parallel pairs.

Please amend the Abstract as follows:

A novel automobile charger ~~which comprises~~ a direct current (DC) voltage supply, wherein a positive pole of the ~~direct current(DC)~~ voltage supply is connected with ~~one-a first end or a first lead of a DC-to-DCDC-to-DC module, one-a first end of a battery voltage detection module and one-a first end of a load module simultaneously[L.]~~ while a negative pole of the ~~battery-DC voltage supply~~ is connected with ~~the-a secondother end of the DC-to-DCDC-to-DC module, one-a first end of a microcontroller, one-a first end of the-an automobile start control module and the-a secondother end of the battery voltage detection module simultaneously.~~ A third end of the ~~DC-to-DCDC-to-DC~~ module is connected with ~~the-a secondother end of the microcontroller, the-Third, fourth, and fifthother three ends of which the microcontroller are connected with the-a third end of the battery voltage detection module, the-a secondother end of the automobile start control module and one-a first end of the-a load detection module respectively. The-A secondother end of the load detection module is connected with the-a third end of the automobile start control module and the-a secondother end of the load module simultaneously.~~