

Dirección de Nuevas Creaciones
Superintendencia de Industria y Comercio

E. S. D.

Referencia: Solicitud de Privilegio para Patente de invención
Título: Sistema de almacenamiento de energía y método de fabricación del mismo
Solicitante: HERO MOTOCORP LIMITED
Exp. No.: NC2021/0008257
Asunto: Respuesta a requerimiento No. 11.775 de 2021

JESÚS M. MÉNDEZ BERMÚDEZ, identificado con cédula de ciudadanía No. 13.491.525 y con Tarjeta Profesional de Abogado No. 99.678 expedida por el Consejo Superior de la Judicatura, actuando como apoderado de la sociedad HERO MOTOCORP LIMITED., por medio del presente escrito me permito dar respuesta al requerimiento de la referencia de la siguiente forma:

1. Análisis de prioridad

Con el objetivo de atender lo requerido por su Despacho, aportamos certificado de la prioridad invocada.

2. Documento de poder

Con el objetivo de atender lo requerido por su Despacho, aportamos documento de poder debidamente diligenciado.

3. Documento de cesión de derechos

Con el objetivo de atender lo requerido por su Despacho, aportamos documento de cesión de derechos. En documento separado presentamos el contrato laboral en cual el inventor Christian Behlen cede los derechos de propiedad industrial.

4. Pago por reivindicaciones adicionales

Anexo recibo de pago por concepto de 10 reivindicaciones adicionales.

Resueltas las objeciones presentadas, amablemente solicito se continué con el trámite y se autorice la publicación de la solicitud en la gaceta de propiedad industrial.

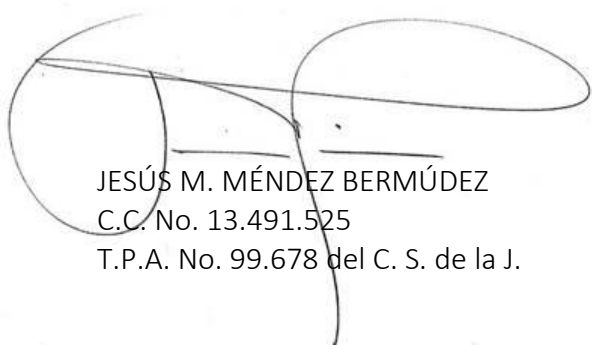
ANEXOS

1. Lo mencionado.

NOTIFICACIONES

Recibiré notificaciones en la Secretaría de este Despacho y en mi oficina, ubicada en la Calle 83ª No. 23-90 de esta ciudad.

Cordialmente,



JESÚS M. MÉNDEZ BERMÚDEZ
C.C. No. 13.491.525
T.P.A. No. 99.678 del C. S. de la J.



INTELLECTUAL
PROPERTY INDIA

पेटेंट|डिजाइन| व्यापार
चिह्न|भौगोलिक उपदर्शन



भारत सरकार

GOVERNMENT OF INDIA

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MINISTRY OF COMMERCE & INDUSTRY

पेटेंट कार्यालय

THE PATENT OFFICE

जिस किसी से संबन्धित हो

TO WHOMSOEVER IT MAY CONCERN

मैं, अधोहस्ताक्षरी जो पेटेंट अधिनियम, 1970 की धारा 73(3) के तहत महानियंत्रक एक्सव, अभिकल्प एवं व्यापार चिह्न की ओर से प्रमाणपत्र हस्ताक्षर व जारी करने के लिए प्राधिकृत अधिकारी हूँ, एतद्वारा यह प्रमाणित करता (ती) हूँ कि निम्नलिखित पेटेंट आवेदन के संबंध में फाइल दस्तावेज़(जों) की सही प्रतिलिपि इसके साथ संलग्न है:

I, the undersigned, being an officer duly authorized to sign and issue the certificate on behalf of the Controller General of Patents, Designs and Trademarks in accordance with the provisions of Section 73(3) of the Patents Act, 1970, hereby certify that annexed hereto is a True Copy of the document (s) as filed in connection with the following Patent Application:

क) आवेदन संख्या/ a) Application Number: **202011026982**

ख) फाइल करने की तारीख/ b) Date of Filing: **25th June, 2020**

ग) अनुरोधित दस्तावेज़(जों) का नाम/ c) Name of the document (s) requested:

1) **Application Form-1**

2) **Provisional Specification filed on dated 25th June, 2020 (As per e-filing record) and**

3) **Drawings (As per e-filing record)**

यह प्रमाणपत्र पेटेंट अधिनियम, 1970 की धारा 147(1) के अधीन मुझमें निहित शक्तियों के तहत जारी किया गया है। This certificate is issued under the powers vested in me U/S 147(1) of The Patents Act, 1970.

दिनांक/ Dated this **30th** day of **July, 2021**

(Rishu Bharti)

नियंत्रक पेटेंट व डिजाइन/ Controller of Patents and Designs

(प्राधिकृत हस्ताक्षरी/ Authorised Signatory)

FORM 1 THE PATENTS ACT 1970 (39 of 1970) and THE PATENTS RULES, 2003 APPLICATION FOR GRANT OF PATENT (See section 7, 54 and 135 and sub-rule (1) of rule 20)				(FOR OFFICE USE ONLY)	
				Application No.	
				Filing date:	
				Amount of Fee paid:	
				CBR No:	
				Signature:	
1. APPLICANT'S REFERENCE / IDENTIFICATION NO. (AS ALLOTTED BY OFFICE)					
2. TYPE OF APPLICATION [Please tick (✓) at the appropriate category]					
Ordinary (✓)		Convention ()		PCT-NP ()	
Divisional	Patent of Addition ()	Divisional ()	Patent of Addition ()	Divisional ()	Patent of Addition ()
3A. APPLICANT(S)					
Name in Full		Nationality	Country of Residence	Address of the Applicant	
HERO MOTOCORP LIMITED		Indian	India	House No.	The Grand Plaza, Plot No.2, Nelson Mandela Road, Vasant Kunj-Phase -II
				Street	
				City	New Delhi
				State	
				Country	India
				Pin code	110070
3B. CATEGORY OF APPLICANT [Please tick (✓) at the appropriate category]					
Natural Person ()		Other than Natural Person			
		Small Entity ()	Startup ()	Others (✓)	
4. INVENTOR(S) [Please tick (✓) at the appropriate category]					
Are all the inventor(s) same as the applicant(s) named above?	Yes ()				No (✓)
If "No", furnish the details of the inventor(s)					
Name in Full		Nationality	Country of Residence	Address of the Inventor	
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			City	
			State	
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			Pin code	
Bernard Martinovic	Croatia	Germany	House No.	Marienbergerstr. 2a, 83024 Rosenheim
			Street	
			City	
			State	
			Country	Germany
			Pin code	

5. TITLE OF THE INVENTION

ENERGY STORAGE SYSTEM AND MANUFACTURING METHOD THEREOF

6. AUTHORISED REGISTERED PATENT AGENT(S)

IN/PA No.	2772
Name	SIDDHANT PARVAT
Mobile No.	+91 8130055293

7. ADDRESS FOR SERVICE OF APPLICANT IN INDIA

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E-mail ID	ipo@knspartners.com

8. IN CASE OF APPLICATION CLAIMING PRIORITY OF APPLICATION FILED IN CONVENTION COUNTRY, PARTICULARS OF CONVENTION APPLICATION

Country	Application Number	Filing date	Name of the applicant	Title of the invention	IPC (as classified in the convention country)
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9. IN CASE OF PCT NATIONAL PHASE APPLICATION, PARTICULARS OF INTERNATIONAL APPLICATION FILED UNDER PATENT CO-OPERATION TREATY (PCT)

International application number	International filing date
NA	NA

10. IN CASE OF DIVISIONAL APPLICATION FILED UNDER SECTION 16, PARTICULARS OF ORIGINAL (FIRST) APPLICATION

Original (first) application No	Date of filing of original (first) application
NA	NA
11. IN CASE OF PATENT OF ADDITION FILED UNDER SECTION 54, PARTICULARS OF MAIN APPLICATION OR PATENT	
Main application/patent No.	Date of filing of main application
NA	NA
12. DECLARATIONS	
(i) Declaration by the inventor(s)	
(In case the applicant is an assignee: the inventor(s) may sign herein below or the applicant may upload the assignment or enclose the assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period). I/We, the above named inventor(s) is/are the true & first inventor(s) for this Invention and declare that the applicant(s) herein is/are my/our assignee or legal representative. (a) Date: (b) Signature(s) (c) Name(s) : Christian Behlen Bernard Martinovic	
(ii) Declaration by the applicant(s) in the convention country	
(In case the applicant in India is different than the applicant in the convention country: the applicant in the convention country may sign herein below or applicant in India may upload the assignment from the applicant in the convention country or enclose the said assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period) I/We, the applicant(s) in the convention country declare that the applicant(s) herein is/are my/our assignee or legal representative. (a) Date : (b) Signature(s) : (c) Name(s) of the signatory :	

(iii) Declaration by the applicant(s)

I/We the applicant(s) hereby declare(s) that:

- I am/ We are in possession of the above-mentioned invention.
- The provisional/~~complete~~ specification relating to the invention is filed with this application.
- ~~The invention as disclosed in the specification uses the biological material from India and the necessary permission from the competent authority shall be submitted by me/us before the grant of patent to me/us.~~
- There is no lawful ground of objection(s) to the grant of the Patent to me/us.
- ~~I am/we are the true & first inventor(s).~~
- I am/we are the assignee or legal representative of true & first inventor(s).
- ~~The application or each of the applications, particulars of which are given in Paragraph 8, was the first application in convention country/countries in respect of my/our invention(s).~~
- ~~I/We claim the priority from the above mentioned application(s) filed in convention country/ countries and state that no application for protection in respect of the invention had been made in a convention country before that date by me/us or by any person from which I/We derive the title.~~
- ~~My/our application in India is based on international application under Patent Cooperation Treaty (PCT) as mentioned in Paragraph 9.~~
- ~~The application is divided out of my /our application particulars of which is given in Paragraph 10 and pray that this application may be treated as deemed to have been filed on ___/___/___ under section 16 of the Act.~~
- The said invention is an improvement in or modification of the invention particulars of which are given in Paragraph 11.

13. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION**(a) Form 2**

Item	Details	Fee	Remarks
Complete/Provisional Specification	No. of pages: 11	Rs. 8,000/-	
No. of Claim(s)	No. of claims: 0 and No. of pages: Nil		
Abstract	No. of pages: - 0		
No. of Drawing(s)	No. of drawings: 14 No. of pages: 09		

In case of a complete specification, if the applicant desires to adopt the drawings filed with his provisional specification as the drawings or part of the drawings for the complete specification under rule 13(4), the number of such pages filed with the provisional specification are required to be mentioned here.

- (b) Provisional specification ~~(in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies).~~
- (c) ~~Sequence listing in electronic form~~
- (d) Drawings ~~(in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies).~~
- (e) ~~Priority document(s) or a request to retrieve the priority document(s) from DAS (Digital Access Service) if the applicant had already requested the office of first filing to make the priority document(s) available to DAS.~~
- (f) Statement and Undertaking on Form 3
- (g) Declaration of Inventorship on Form 5

Total fee Rs. 8,000/- in Cash/ Banker's Cheque /Bank Draft bearing No..... date..... on..... Bank

I/We hereby declare that to the best of my/our knowledge, information and belief the fact and matters slated herein are correct and I/We request that a patent may be granted to me/us for the said invention.

Dated this 25th day of June, 2020

Signature:



Name: SIDDHANT PARVAT
OF K&S PARTNERS
AGENT FOR THE APPLICANT(S)
IN/PA-2772
Digitally signed and filed through E-filing

To,
The Controller of Patents
The Patent Office, at Delhi.

FORM 2

THE PATENT ACT, 1970

(39 of 1970)

&

THE PATENT RULES, 2003

PROVISIONAL SPECIFICATION

(See Section 10, Rule 13)

**ENERGY STORAGE SYSTEM AND MANUFACTURING METHOD
THEREOF**

HERO MOTOCORP LIMITED, an Indian Company at: The Grand Plaza, Plot No.2,
Nelson Mandela Road, Vasant Kunj- Phase -II, New Delhi, India, 110 070

The following specification describes the invention.

FIELD OF INVENTION

[0001] The present invention relates to energy storage systems and, more particularly, to a battery unit and manufacturing method thereof.

BACKGROUND

[0002] Rechargeable batteries are of growing significance in various fields and application where electrical power is required. Over the years, the rechargeable batteries have undergone various developments and evolutions, to make them more effective, and efficient. Right from electric vehicles, to household applications, rechargeable batteries are found all around us. When used in an automotive application, the rechargeable batteries are typically carried by the frame of the vehicle. Further, the rechargeable batteries are electrically coupled to a rotating electrical machine, e.g., a motor that provides requisite traction power to the ground engaging members, e.g., the wheels.

[0003] The rechargeable batteries are formed using a plurality of electrochemical cells, hereinafter interchangeably referred to as cells, arranged in a predetermined manner with respect to one another. Each cell has the capacity of getting charged, and provide power output, as and when desired. While single individual cell may be unable to provide substantial charge, the plurality of cells arranged together electrically combine to provide an output usable in various applications, such as in powering the rotating electrical machine of an electric vehicle.

[0004] The cells are contained within a casing composed of a sturdy, often a sturdy non-conducting material. The casing includes provisions to facilitate electrical connections of the electrical output of the battery. It is known that the electrical output of the battery depends largely on the number of individual cells contained therein. Therefore, it is desired that maximum number of cell are stacked within the battery casing.

[0005] Moreover, the individual cells, and thus the battery, tends to produce heat during operation thereof. This heat may adversely affect the performance of the battery while also being potentially hazardous. Therefore, if it required that the heat generated during the operation of the battery is properly dissipated.

5 [0006] Each cell of the plurality of cells includes a positive terminal and a negative terminal. The positive terminals and the negative terminals are connected to the bus bars, through connecting points, in series or parallel, in such a manner that the electrical output of the battery is obtained through the bus bars. However, in case of a malfunction in one or more of the plurality of cells, the bus bar remains prone to
10 damages, which threatens electrical output of the battery.

[0007] There have been various attempts to overcome the disadvantages associated with the rechargeable batteries. However, all the existing systems remain considerably expensive, difficult to repair and manufacture.

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BRIEF DESCRIPTION OF DRAWINGS

[0008] The invention itself, together with further features and attended advantages, will become apparent from consideration of the following detailed description, taken in conjunction with the accompanying drawings. One or more embodiments of the present invention are now described, by way of example only
20 wherein like reference numerals represent like elements and in which:

[0009] Figure 1 illustrates a perspective view of an energy storage system, according to an embodiment of the present invention;

[00010] Figure 1A illustrates a perspective view of a base bracket of an energy storage system, according to an embodiment of the present invention;

25 [00011] Figure 1B illustrates a perspective view of a base bracket of an energy storage system, according to another embodiment of the present invention

[00012] Figure 2 illustrates a perspective view of an intermediate bracket of the energy storage system of Figure 1, according to an embodiment of the present invention;

5 [00013] Figure 2A illustrates a perspective view of an intermediate bracket of the energy storage system of Figure 1A, according to an embodiment of the present invention;

[00014] Figure 2B illustrates a perspective view of an intermediate bracket of the energy storage system of Figure 1B, according to another embodiment of the present invention;

10 [00015] Figure 3A illustrates a perspective view of two intermediate brackets of the energy storage system of Figure 1A, according to an embodiment of the present invention;

[00016] Figure 3B illustrates a perspective view of two intermediate brackets of the energy storage system of Figure 1B, according to another embodiment of the present invention;

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[00017] Figure 4A illustrates a perspective view of three intermediate brackets of the energy storage system of Figure 1A, according to an embodiment of the present invention;

[00018] Figure 4B illustrates a perspective view of two intermediate brackets of the energy storage system of Figure 1B, according to another embodiment of the present invention;

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[00019] Figure 5A illustrates a perspective view of multiple intermediate brackets of the energy storage system of Figure 1A, according to an embodiment of the present invention;

[00012] Figure 2 illustrates a perspective view of an intermediate bracket of the energy storage system of Figure 1, according to an embodiment of the present invention;

5 [00013] Figure 2A illustrates a perspective view of an intermediate bracket of the energy storage system of Figure 1A, according to an embodiment of the present invention;

[00014] Figure 2B illustrates a perspective view of an intermediate bracket of the energy storage system of Figure 1B, according to another embodiment of the present invention;

10 [00015] Figure 3A illustrates a perspective view of two intermediate brackets of the energy storage system of Figure 1A, according to an embodiment of the present invention;

[00016] Figure 3B illustrates a perspective view of two intermediate brackets of the energy storage system of Figure 1B, according to another embodiment of the present invention;

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[00017] Figure 4A illustrates a perspective view of three intermediate brackets of the energy storage system of Figure 1A, according to an embodiment of the present invention;

[00018] Figure 4B illustrates a perspective view of two intermediate brackets of the energy storage system of Figure 1B, according to another embodiment of the present invention;

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[00019] Figure 5A illustrates a perspective view of multiple intermediate brackets of the energy storage system of Figure 1A, according to an embodiment of the present invention;

[00020] Figure 5B illustrates a perspective view of multiple intermediate brackets of the energy storage system of Figure 1B, according to another embodiment of the present invention

5 [00021] Figure 6 illustrates a perspective view of the energy storage system, according to an embodiment of the present invention; and

[00022] Figure 7 illustrates a perspective view of the energy storage system, according to an embodiment of the present invention.

10 [00023] The drawings referred to in this description are not to be understood as being drawn to scale except if specifically noted, and such drawings are only exemplary in nature.

DETAILED DESCRIPTION

15 [00024] While the invention is susceptible to various modifications and alternative forms, an embodiment thereof has been shown by way of example in the drawings and will be described here below. It should be understood, however that it is not intended to limit the invention to the particular forms disclosed, but on the contrary, the invention is to cover all modifications, equivalents, and alternative falling within the spirit and the scope of the invention.

20 [00025] The term "comprises", comprising, or any other variations thereof, are intended to cover a non-exclusive inclusion, such that a setup, structure or method that comprises a list of components or steps does not include only those components or steps but may include other components or steps not expressly listed or inherent to such setup or structure or method. In other words, one or more elements in a system or apparatus preceded by "comprises... a" does not, without more constraints, 25 preclude the existence of other elements or additional elements in the system or apparatus.

[00026] For better understanding of this invention, reference would now be made to the embodiment illustrated in the accompanying Figures and description here below, further, in the following Figures, the same reference numerals are used to identify the same components in various views.

5 [00027] The terms "front / forward", "rear / rearward / back / backward", "up / upper / top", "down / lower / lower ward / downward, bottom", "left / leftward", "right / rightward" used therein represents the directions as seen from a vehicle driver sitting astride and these directions are referred by arrows Fr, Rr, U, Lr, L, R in the drawing Figures.

10 [00028] Referring to Figures 1, an energy storage system (100), according to an embodiment of the present invention is illustrated. The energy storage system (100) referred to herein, embodies a battery unit of a two wheeled vehicle. Alternatively, the energy storage system (100) may embody any other energy storage system that may be used in vehicles such as scooters, three-wheeled vehicles, All-Terrain Vehicles
15 (ATV) etc. without limiting the scope of the invention.

[00029] The energy storage system (100) comprises a plurality of energy storage units (200). In the present embodiment, the plurality of energy storage units (200) include a first energy storage unit and a second energy storage unit. In other embodiments, the plurality of energy storage units (200) may include fewer or more
20 number of energy storage units, such as the first energy storage unit or the second energy storage unit. The energy storage unit (200) may be embodied as plurality of battery cells. The first energy storage unit may be the first battery pack, and the second energy storage unit may be the second battery pack.

[00030] As illustrated in Figure 1A, the battery pack includes a bottom bracket
25 (300A). The bottom bracket (300A) has a series of parallel ridges and groves, forming a corrugated structure. In an example, the diameter of the groves corresponds to an outer diameter of individual cells.

[00031] The bottom bracket (300A) is also interchangeably referred to as a bottom plate or base plate. In other examples, the bottom bracket (300A) may also act as a top bracket. As illustrated in Figure 1A, the bottom bracket (300A) has peripheral edges extending along a rectangular profile. Further, the bottom bracket (300A) has an inner surface (not illustrated) and an outer surface (298). A glue layer (302A) is applied to the bottom structure (300A). In the illustrated example, the glue layer (302A) is provided along the peripheral edge of the bottom bracket (300A) on the outer surface (298).

[00032] In accordance to another embodiment, as illustrated in Figure 1B, the battery pack includes a bottom bracket (300B). In shape and configuration, the bottom bracket (300B) is similar to the bottom bracket (300A). Therefore, the bottom bracket (300B) also has a series of parallel ridges and groves, forming a corrugated structure. The diameter of the groves corresponds to an outer diameter of individual cells.

[00033] As illustrated in Figure 1B, the bottom bracket (300B) includes peripheral edges extending along a rectangular profile. A glue layer (302B) is applied to the bottom bracket (300B). In the illustrated example, the glue layer (302B) is applied along the peripheral edge of the bottom bracket (300B). In addition, the bottom bracket (300B) further includes an additional layer (304). In an embodiment, the additional layer (304) is composed of a Phase Change Material (PCM material).

[00034] Each of the glue layer (302A) and glue layer (302B) is composed a suitable material with adhesive and fastening properties.

[00035] Referring now to Figure 2, the battery pack further includes at least one intermediate bracket (306). The intermediate bracket (306) includes a first portion (308), a second portion (310), and plurality of intermediate arms (312). The plurality of intermediate arms (312) are disposed spaced apart and connecting the first portion (308) with the second portion (310). The first portion (308) has plurality of semicircular portions such as semicircular portion (310A) extending upwards. The plurality of semicircular portion (310A) of the first portion (308) are joined with each

other. Similarly the second portion (310) has plurality of semicircular portions, such as semicircular portion (310A) extending upwards. The plurality of semicircular portion (310A) of the second portion (310) are joined with each other. The semicircular portion (310A) of the first portion (308) and the second portion (310) are aligned with each other. In an embodiment, the intermediate arms (312) at one end is connected to a joining point of two adjacent semi-circular portions on the front arm (308) and at the other end is connected to a joining point of two adjacent semicircular portions on the second arm (310).

[00036] The intermediate bracket (306) further includes a first side wall (316), and a second side wall (318). In an embodiment, the first side wall (316), and the second side wall (318) are positioned at opposite ends of the front portion (308), the rear portion (310). Therefore, the first side wall (316), and the second side wall (318) are separated from one another by the length of the front portion (308), or the rear portion (310). Further, the length of the first side wall (316), and the second side wall (318) corresponds to the length of the intermediate arms (312).

[00037] The middle bracket layer (306) is adapted to receive a first row or series of individual cells. As such, the number of semicircular portions on the front portion (308) and the rear portion (310) dictate the number of cells that can be received in the intermediate bracket (306).

[00038] As shown in Figure 2A, an intermediate bracket layer (306A) in accordance to an embodiment of the present disclosure is illustrated. The intermediate bracket later (306A) includes the intermediate bracket layer (306), and a first row of individual cells (400), such as a cell (400A). In an example, a layer of glue (not illustrated) is provided on the intermediate bracket layer (306A) before placing the cells thereon. Subsequently, a layer of glue (320) is applied on first row of individual cells (400).

[00039] In accordance with another embodiment, an intermediate bracket layer (306B) is illustrated in Figure 2B. The intermediate bracket layer (306B) includes the

intermediate bracket layer (306), and the first row of individual cells (400), such as the cell (400A). In an example, a layer of glue (not illustrated) is provided on the intermediate bracket layer (306A) before placing the cells thereon. Subsequently, a layer of glue (320) is applied on first row of individual cells (400). Further, an additional layer (304) is provided on the first row of individual cells (400). In an embodiment, the additional layer (304) is composed of a Phase Change Material (PCM material).

[00040] Figure 3A illustrates a view of two intermediate bracket layers (306) stacked one above other. In particular, one intermediate bracket later (306A) is positioned on top of another intermediate bracket layer (306A) such that the downwardly extending support tab (314) of the intermediate bracket layer (306A) abut with the semicircular portion (310A) on the intermediate bracket layer (306A). Subsequently, another intermediate bracket layer (306A) is positioned on above the intermediate bracket layer (306A), as shown in Figure 4A.

[00041] A predetermined number of layers, similar to the intermediate bracket layer (306A) are positioned, one after the other, above the intermediate bracket layer (306A), as shown in Figure 5A. Once all of the predetermined number of layers are joined together a layered battery structure (500) is formed on which the layered material (304) is provided. Further, as the plurality of intermediate bracket layers (306A) are joined, one over the other, the plurality of first side walls (316) are joined to form the side wall of the layered battery structure (500), and the plurality of second side walls (318) are joined to form the side wall of the layered battery structure (500).

[00042] In accordance with another embodiment Figure 3B, two intermediate bracket layers (306) stacked one above other. In particular, one intermediate bracket later (306B) is positioned on top of another intermediate bracket later (306B) such that the downwardly extending support tab (314) of the intermediate bracket layer (306B) abut with the semicircular portion (310B) on the intermediate bracket layer (306B). Subsequently, another intermediate bracket layer (306B) is positioned on above the intermediate bracket layer (306B), as shown in Figure 4B.

[00043] A predetermined number of layers, similar to the intermediate bracket layer (306B) are positioned, one after the other, above the intermediate bracket layer (306B), as shown in Figure 5B. Further, between each layer, the phase change material is provided. Once all of the predetermined number of layers are joined together a layered battery structure (500) is formed.

[00044] As illustrated in Figure 6 and Figure 7, the bottom bracket (300A) or bottom bracket (300B) is positioned on top of the layered battery structure (500). In an example, the bottom bracket (300A) or the bottom bracket (300B) may be applied with glue, causing the bottom bracket (300A) or bottom bracket (300B) to stick to the layered battery structure (500).

[00045] The layered battery structure (500), as disclosed above, may be manufactured, in parts, in various separate manufacturing point such as workstations or assembly lines, to improve the quick manufacturability thereof. In an example, multitude of bottom brackets, such as the bottom bracket (300A) or the bottom bracket (300B) may be manufactured in a work station. Simultaneously, at a separate manufacturing point such as workstations or assembly lines, multiple identical intermediate bracket layer, such as the intermediate bracket layer (306A) or the intermediate bracket layer (306B) may be manufactured. Further, one by one, the intermediate bracket layer (306A) may be applied with the glue and subsequently other the intermediate bracket layer (306A) may be placed on the other.

[00046] This manufacturing process results in increased speed of production of the layered battery structure (500). Further, this manufacturing process allows the manufacturing of different components of the layered battery structure (500) to be separate, and independent, allowing the manufacturing and assembly of the layered battery structure (500) to be flexible.

[00047] While few embodiments of the present invention have been described above, it is to be understood that the invention is not limited to the above embodiments

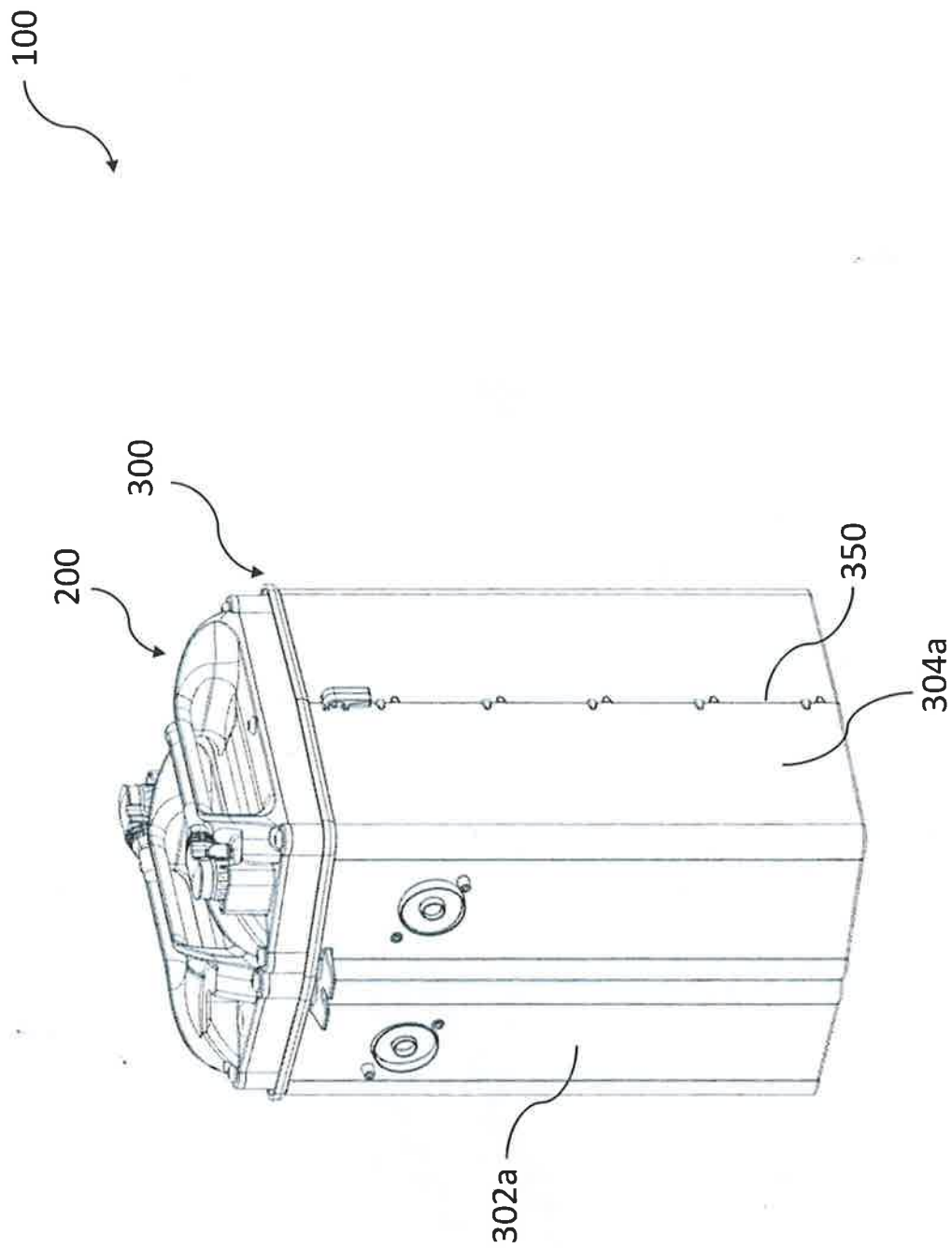


Figure 1

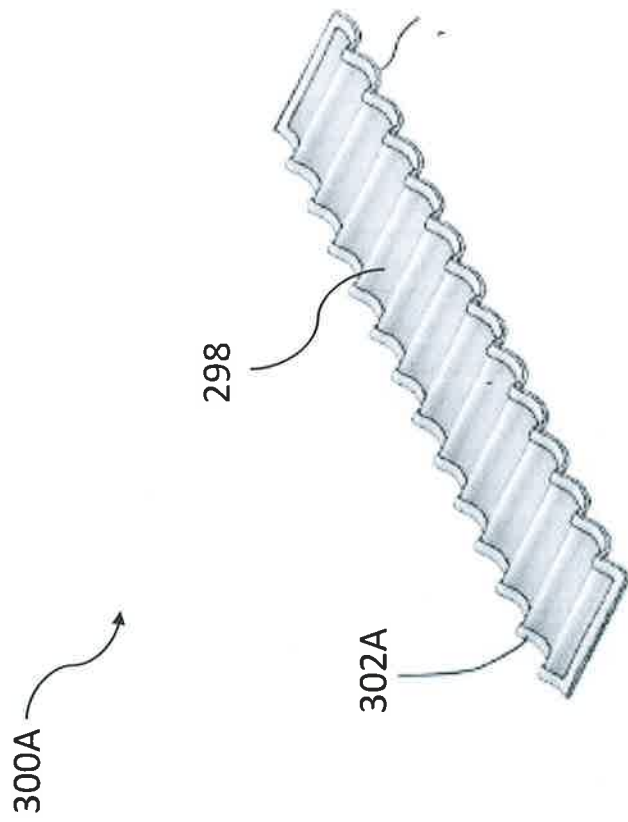


Figure 1A

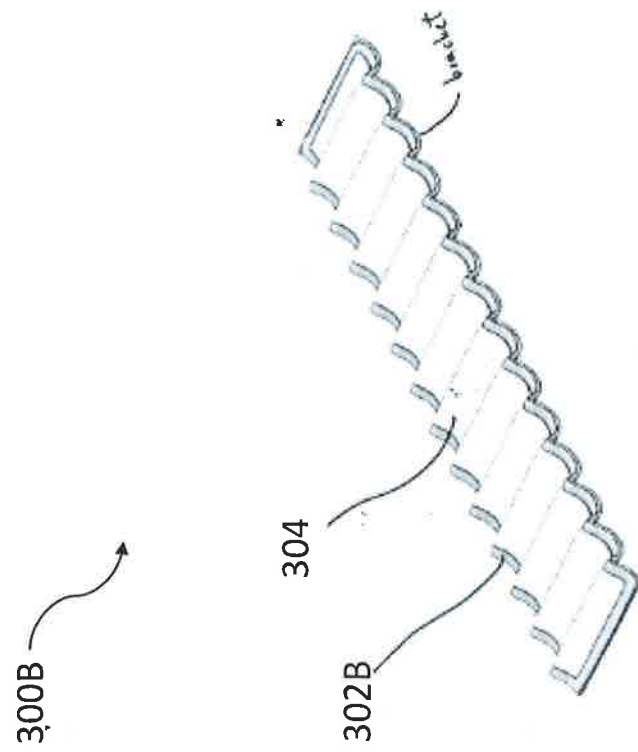


Figure 1B

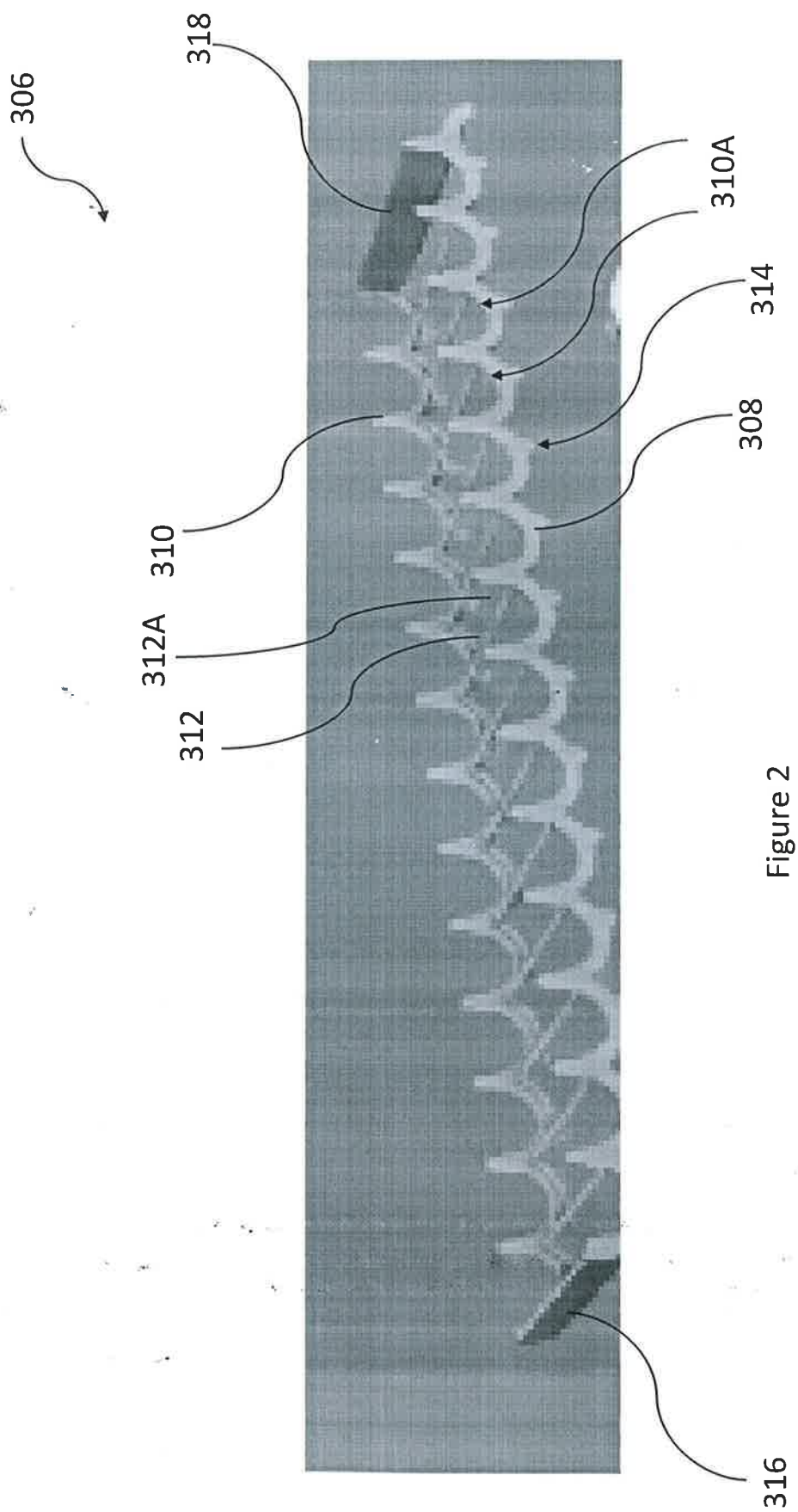


Figure 2

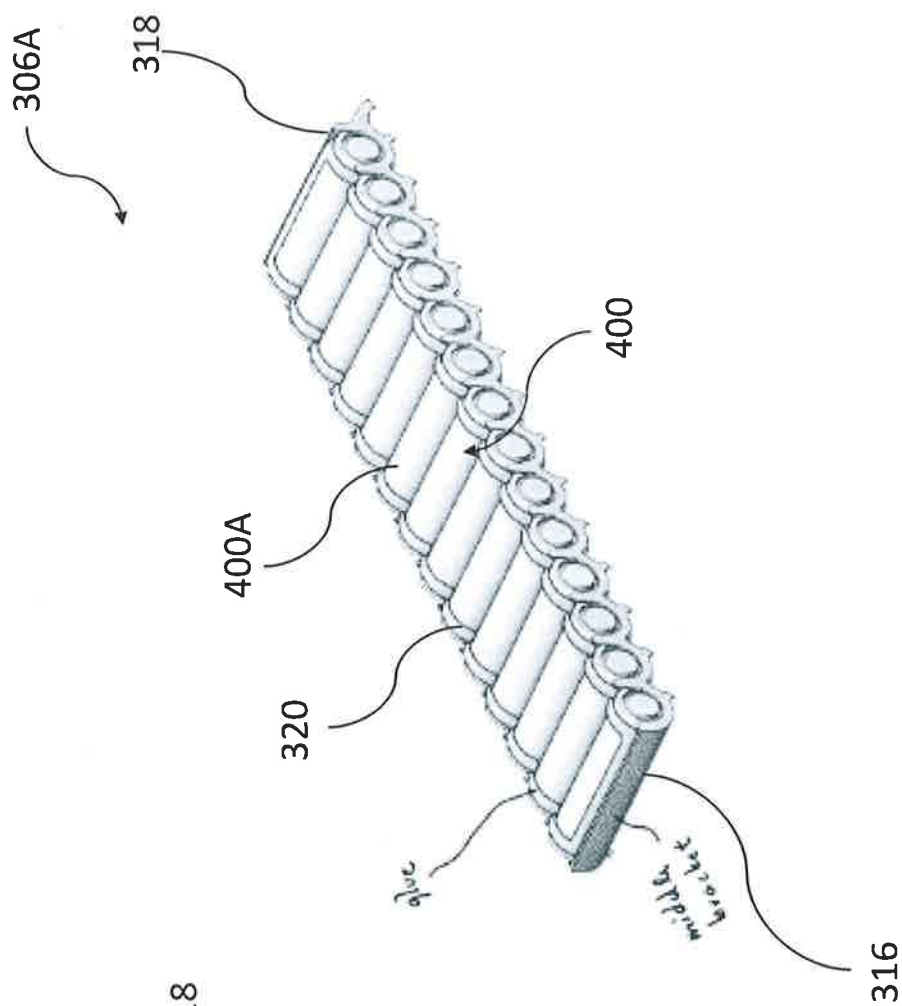


Figure 2A

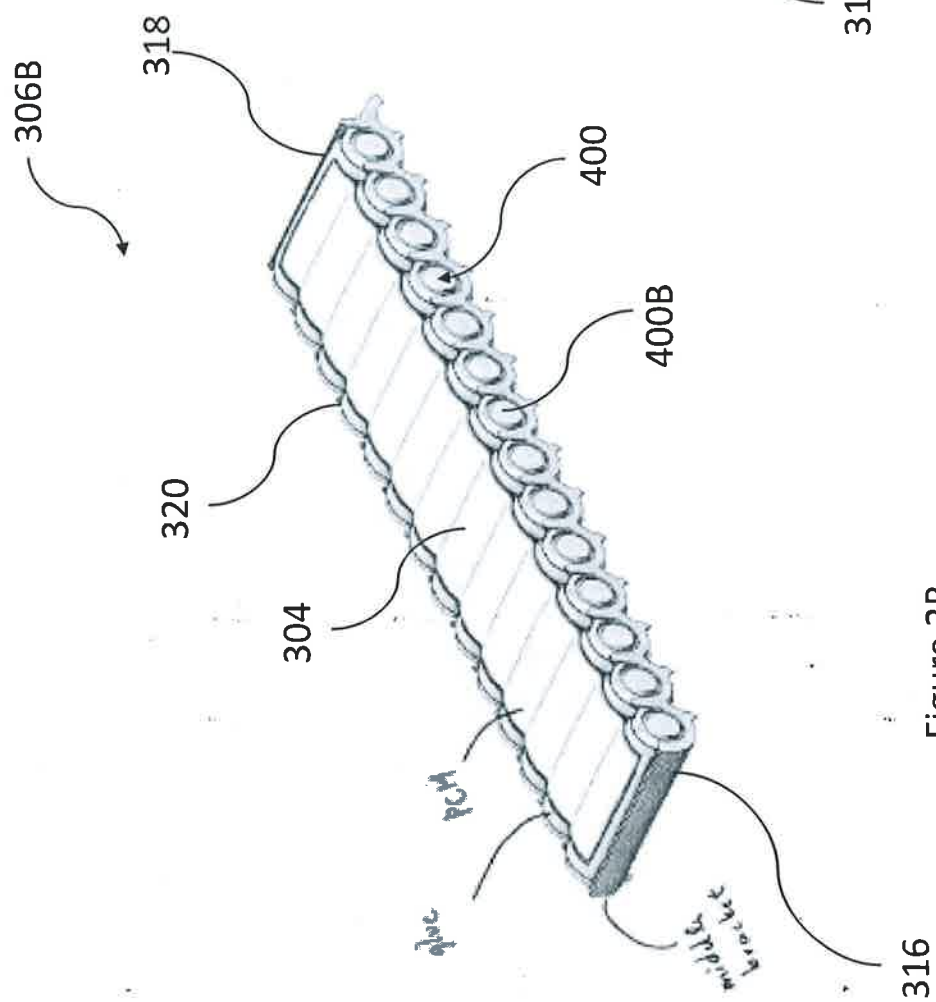


Figure 2B

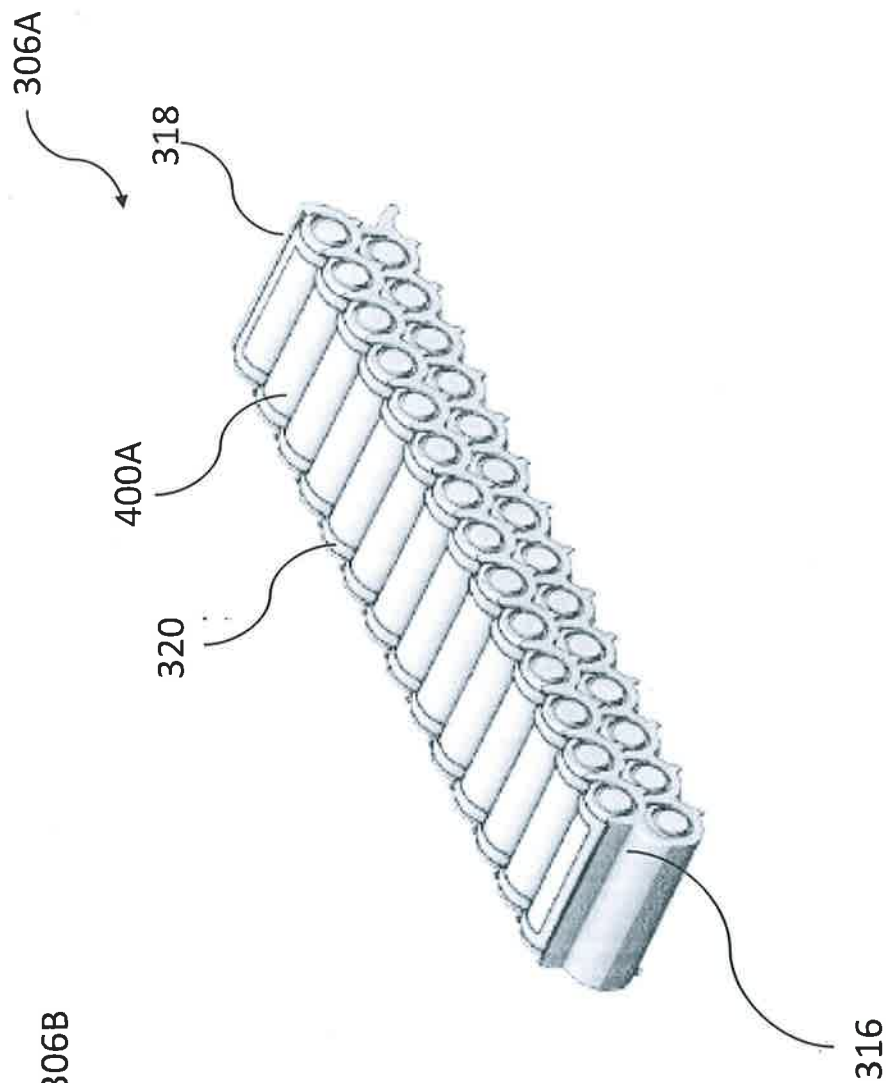


Figure 3A

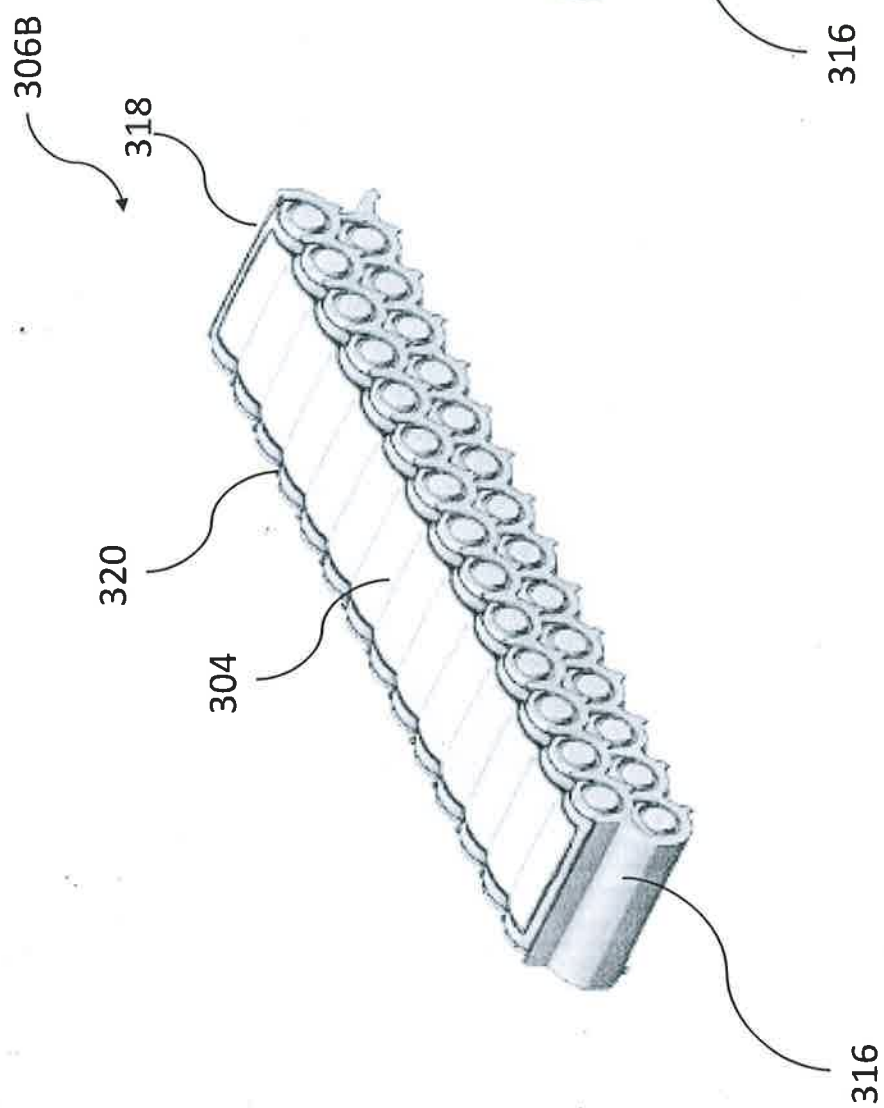


Figure 3B

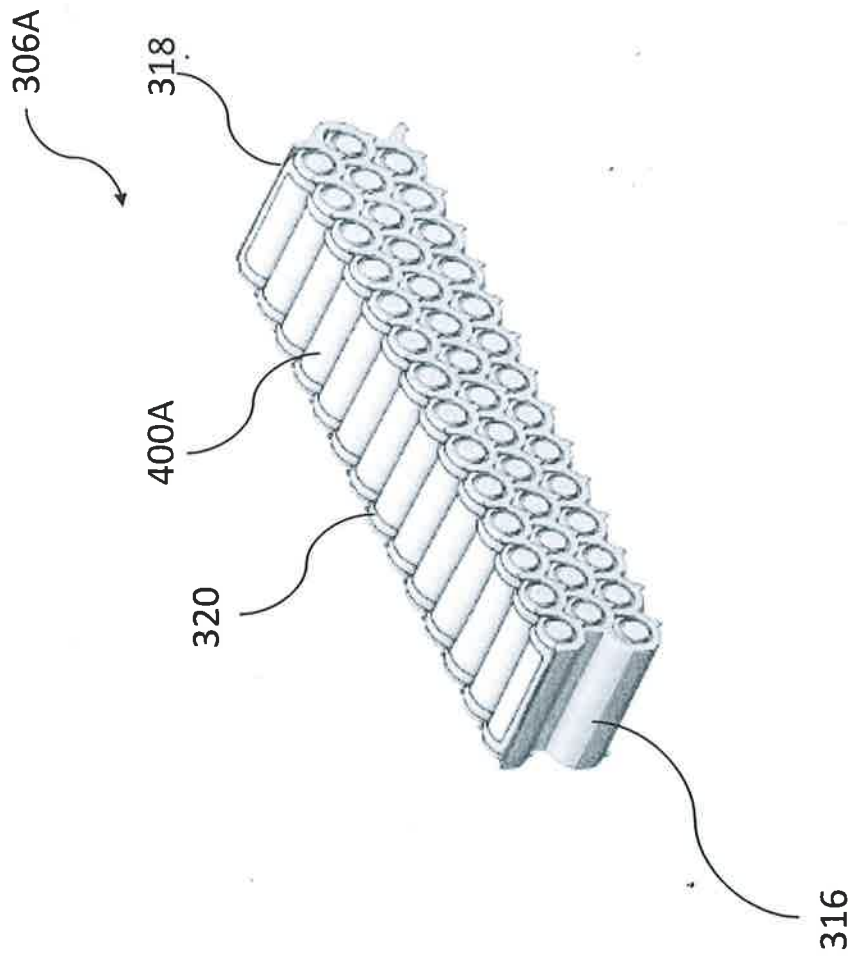


Figure 4A

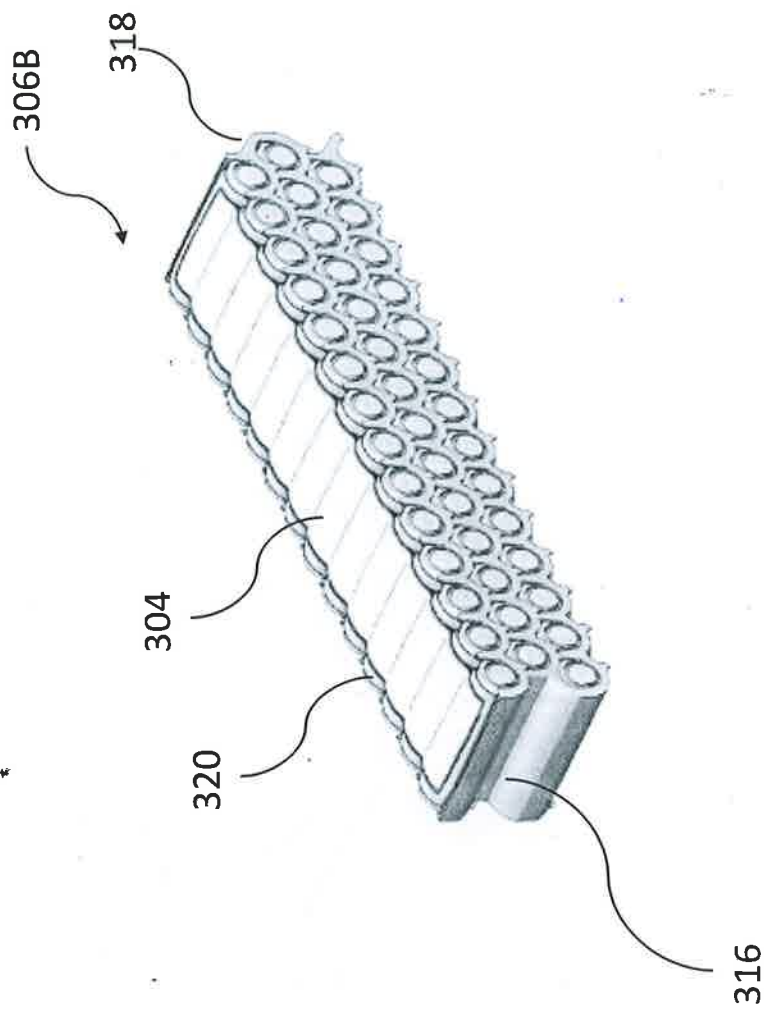


Figure 4B

306A

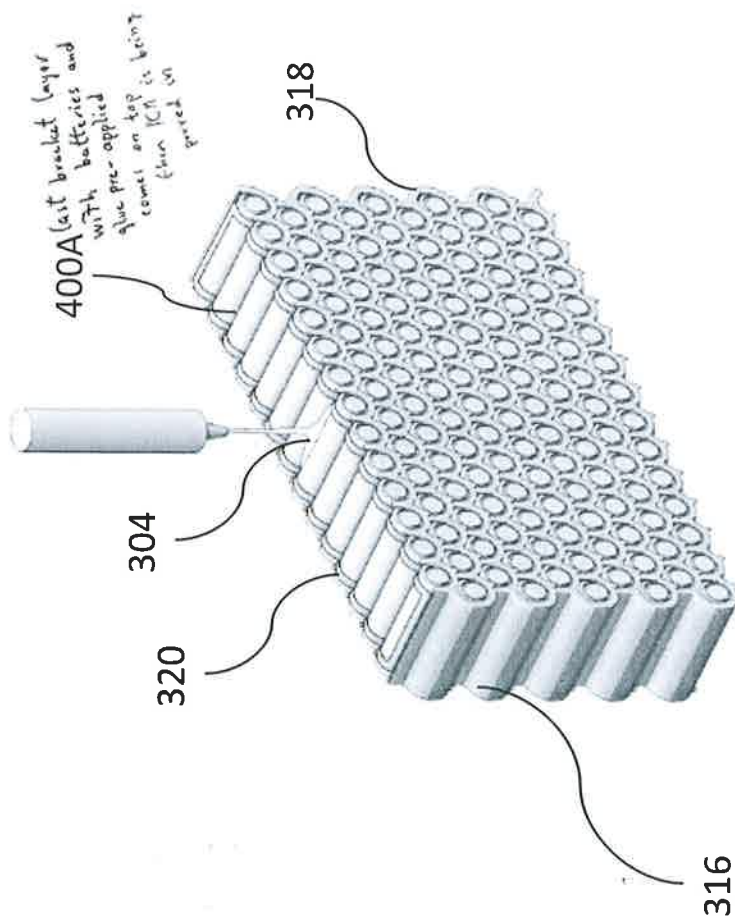


Figure 5A

306B

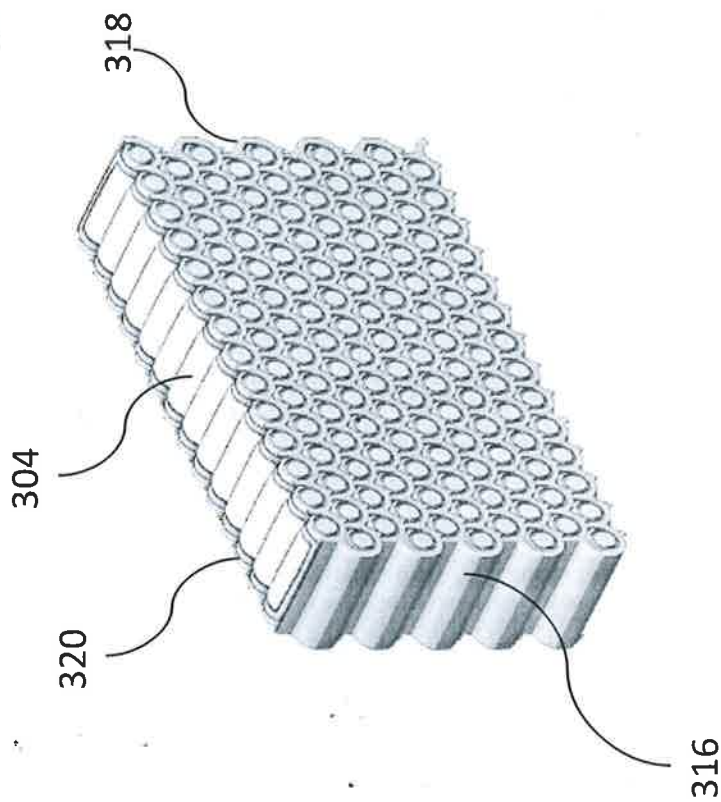


Figure 5B

500

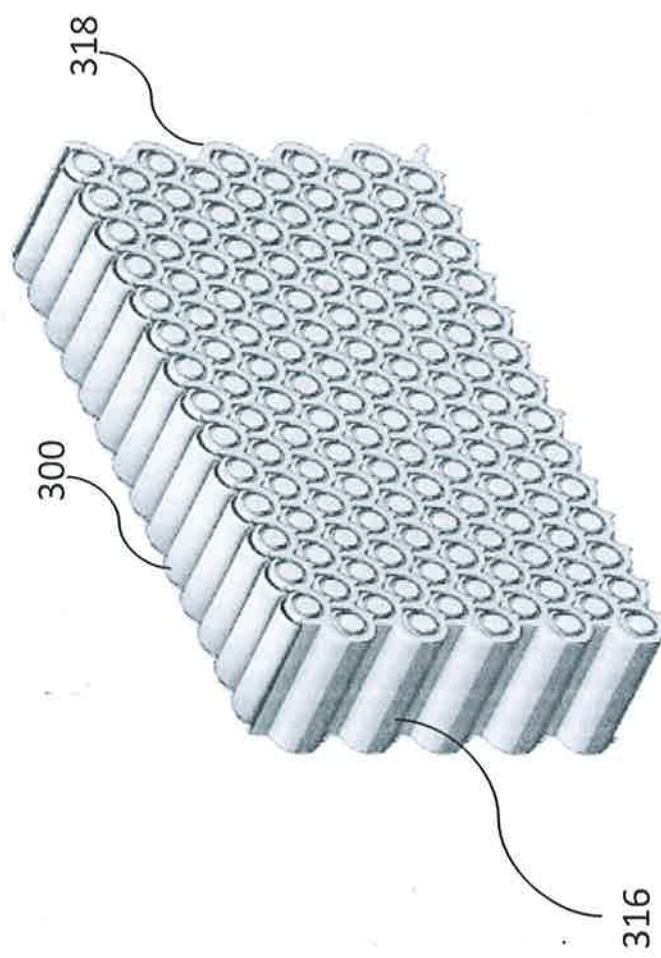
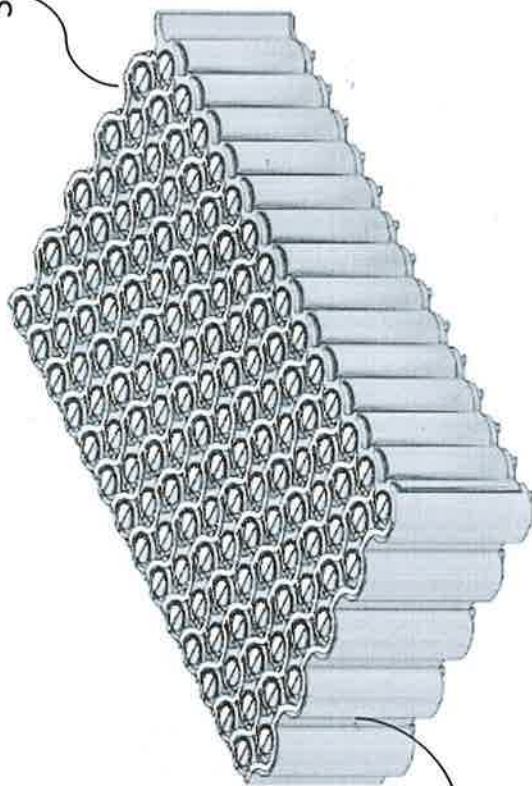


Figure 6

500

318



316

Figure 7

FOR INTELLECTUAL PROPERTY

Yo, _____ actuando en nombre y representación de **HERO MOTOCORP LIMITED** con domicilio en **The Grand Plaza, Plot No.2, Nelson Mandela Road, Vasant Kunj- Phase -II, New Delhi, India, 110 070**, por el presente nombra a la Dra. Mónica Wolf Wasserman, identificada con C. C. No. 51.711.267 y/o al Dr. Jesús M. Méndez Bermúdez, identificado con C. C. No. 13.491.525, miembros de la firma **WOLF • MENDEZ • ABOGADOS ASOCIADOS**, con domicilio en la Diagonal 83A No. 23 - 90, de Bogotá D.C. - Colombia, como sus representantes legales, para que actúen conjunta o separadamente al propósito de recibir notificaciones y nombrar apoderados judiciales o extrajudiciales. En desarrollo de dicha calidad los representantes, o los apoderados que ellos designen, podrán recabar de las autoridades administrativas, trámites de solicitudes de patente, en especial de la patente prioridad de India No. 202011026982 en Colombia a cuyo efecto les faculta para dar ante dichas autoridades todos los pasos necesarios al objeto indicado y en fin tomar todas las medidas que creyeran conducentes al resguardo de nuestros intereses con todas las demás facultades legales necesarias. Este poder comprende además las facultades de recibir, desistir, transigir, conciliar, comprometer, sustituir en todo o en parte, revocar sustituciones y ratificar actuaciones anteriores hechas en calidad de Agentes Oficiosos.

Dado y firmado en India, el día 17 de junio de 2021.

(Firma)

The undersigned, _____ acting on behalf of **HERO MOTOCORP LIMITED** with domicile in **The Grand Plaza, Plot No.2, Nelson Mandela Road, Vasant Kunj- Phase -II, New Delhi, India, 110 070**, hereby appoints Dr. Mónica Wolf Wasserman, identified with Citizenship Card No. 51.711.267 and/or Dr. Jesús M. Méndez Bermúdez, identified with Citizenship Card No. 13.491.525, attorneys at law of the firm **WOLF • MENDEZ • ABOGADOS ASOCIADOS** domiciled in Diagonal 83A No. 23 - 90, of Bogotá - Colombia, as our legal representatives, so that either or both said attorneys may act for the purpose of receiving notifications and to appoint attorneys to act in and out of court. In such capacity the representatives, or the attorneys by them appointed, may request from the administrative authorities filing patent applications in particular a Indian patent priority application No. 202011026982 in Colombia for which they are empowered to take before said authorities all the necessary steps for the purposes indicated, and to take any other measures that may be deemed conducive to the safeguard of our interests, with all necessary legal faculties to receive, withdrawal, compromise, transact, conciliate, substitute in all or in part, to revoke substitutions and ratify acts done as attorney de facto.

Given and signed in India on June 17, 2021.



(Signature)

SAGAK DHATRALE

**Deputy General Manager &
Section Head - COCCEDD)**

**CORPORATE SEAL
TO BE AFFIXED**

CESIÓN DE DERECHOS SOBRE PATENTE

(English versión below)

1. Christian Behlen, 2. Bernard Martinovic, mayores de edad, residentes en 1. *Herbststr. 2, 83135 Schechen, Alemania* 2. *Marienbergerstr. 2a, 83024 Rosenheim, Alemania*, quienes actúan en su propio nombre, en adelante denominados LOS CEDENTES, declaran a través del presente documento que han sido los inventores de la patente con el número de prioridad 202011026982 titulada *ENERGY STORAGE SYSTEM AND MANUFACTURING METHOD THEREOF*.

Ahora, considerando que:

HERO MOTOCORP LIMITED., sociedad debidamente constituida de conformidad con las leyes de India, con domicilio en The Grand Plaza, Plot No.2, Nelson Mandela Road, Vasant Kunj- Phase -II, New Delhi, India, 110 070, en adelante denominada LA CESIONARIA, desea adquirir todos los derechos de propiedad industrial respecto de la invención anteriormente señalada, incluso el derecho a registrarla en su nombre en Colombia y en cualquier otro país extranjero.

En consecuencia:

El presente documento certifica que en consideración al pago realizado por la CESIONARIA a LOS CEDENTES de la suma de US\$1 (Un dólar de los Estados Unidos), recibidos a satisfacción, LOS CEDENTES transfieren al CESIONARIO todos los derechos de propiedad industrial sobre la invención mencionada, incluso el derecho a registrarla como patente en Colombia y en cualquier otro país extranjero. Además, incluyendo todos los derechos para reclamar prioridad y para realizar cualquier división, renovación, sustitución o re-expedición de ella.

LOS CEDENTES manifiestan que no se ha hecho ni se hará ninguna cesión, venta, acuerdo o gravamen que pueda entrar en conflicto con la presente transferencia. LOS CEDENTES además están de acuerdo en que el CESIONARIO bajo su solicitud, obtendrá oportunamente todos los documentos relacionados con la patente y sus equivalentes legales en países extranjeros, según como pueden ser conocidos y accesibles al CESIONARIO y testificarán ante cualquier interferencia o litigio relacionado con ellos y ejecutarán y entregarán oportunamente al CESIONARIO todos los documentos, instrumentos, o declaraciones juramentadas requeridas para solicitar, obtener, mantener, expedir y ejecutar dicha patente.

Para constancia, se suscribe en India en dos ejemplares del mismo tenor, el 17 de junio de 2021.

CEDENTES

1. Christian Behlen

07.11.21

2. Bernard Martinovic

Bernard Martinovic

CESIONARIO

S. Shrivastava

HERO MOTOCORP LIMITED

ASSIGNMENT OF INVENTORSHIP

WHEREAS:

1. Christian Behlen, 2. Bernard Martinovic, Citizens located in 1. *Herbststr. 2, 83135 Schechen, Germany* 2. *Marienbergerstr. 2a, 83024 Rosenheim, Germany*, hereinafter referred to as ASSIGNOR, has invented and owns a certain priority invention 202011026982 entitled: *ENERGY STORAGE SYSTEM AND MANUFACTURING METHOD THEREOF*.

WHEREAS:

HERO MOTOCORP LIMITED., located at *The Grand Plaza, Plot No.2, Nelson Mandela Road, Vasant Kunj- Phase -II, New Delhi, India, 110 070*, (hereinafter referred to as ASSIGNEE), is desirous of acquiring the entire interest in, to, and under said invention and under Patent or similar legal protection to be obtained therefore in Colombia and in any and all foreign countries,

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN:

Be it known that in consideration for the payment by ASSIGNEE to ASSIGNORS of the sum of US\$1.00 (One American Dollar), the receipt of which is hereby acknowledged, and for other good consideration, ASSIGNORS hereby sells, assigns and transfers to ASSIGNEE and the successors and assigns of ASSIGNEE the full and exclusive right, title and interest in and to any invention(s) disclosed in the above-referenced application, including all such right, title and interest for the Colombian territorial possessions and for all foreign countries and further including all rights to claim priority, in and to any and all improvements which are obtained for said invention by said application or any continuation, division, renewal, substitute or reissue thereof or any legal equivalent thereof.

ASSIGNORS hereby covenant that no assignment, sale, agreement or incumbrance has been or will be made or entered into which would conflict with this assignment and sale. ASSIGNORS further covenants that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Patent and legal equivalents in foreign countries as may be known and accessible to ASSIGNORS and will testify as to the same in any interference or litigation related thereto and will promptly execute and deliver to ASSIGNEE or its legal representative any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Patent and said equivalents thereof in any foreign country which may be necessary or desirable to carry out the purposes thereof.

IN WITNESS WHEREOF, today, June 17 2021.

ASSIGNORS

1. Christian Behlen

2. Bernard Martinovic

02.11.21


ASSIGNEE



On behalf of HERO MOTOCORP LIMITED.

**ARBEITSVERTRAGSKLAUSELN/
EMPLOYMENT CONTRACT CLAUSES**

LONG-VERSION

Zwischen

Hero Tech Centre Germany GmbH
Feringastrasse 6
85774 München, Deutschland

– im Folgenden auch „Arbeitgeber“ genannt –
und

Christian Behlen
Leopoldstr. 259,
80807 München
Deutschland

im Folgenden auch „Arbeitnehmer“ genannt –
- zusammen die „Parteien“ -
wird der folgende Arbeitsvertrag geschlossen:

§ 1 Position und Tätigkeit

1. Der Arbeitnehmer wird ab dem 01. Juli 2019 als Skill Team Lead – Electric Vehicle. Zu seinen Aufgaben zählen
 - Führende Energiespeicherentwicklung, i.e. Batterien, Brennstoffzellen usw. für den EV-Antriebsstrang. Dies berücksichtigt des weiteren alle Anforderungen von Produktion, Service, Zusammenbau, Kosten, Gewicht sowie funktionales Design
 - Arbeiten Sie an Batteriepackungen und Integrationslösungen
 - Arbeiten Sie an Batteriekühltechnologien und Simulationen
 - Erfüllung der Marktspezifischen Anforderungen bezüglich Energieverbrauch und LebensdauerAls Spezialist für Energiespeichertechnologien und Mitglied der Führungsteams auftreten
- Als funktioneller Experte für Funktionen und Algorithmen von Fahrzeugbatterien fungieren und Teammitglieder führen
- Mitwirkung bei der Teambildung, Führung und Rekrutierung von Mitarbeitern
- Leitung des TCG/CIT Projektteams von Seiten TCG.
- Kommunikation zwischen Teammitgliedern zwischen CIT und TCG sowie externen Partnern

Between

Hero Tech Centre Germany GmbH
Feringastrasse 6,
85774 Munich, Germany

– hereinafter also referred to as “Employer”
and

Christian Behlen
Leopoldstr. 259,
80807 München
Germany

- hereinafter also referred to as the “Employee”
- jointly the “Parties” -
the following employment contract is concluded:

§ 1 Position and Scope of Duties

1. The Employee shall be employed 01st July 2019 as Skill Team Lead – Electric Vehicle. His tasks shall *include* but shall not be limited to:
 - Leading energy storage development i.e. batteries, fuel cell etc. for EV drivetrains taking into consideration all manufacturing, service, assembly, cost, weight and designing requirements.
 - Work on battery packaging & integration solutions
 - Work on battery cooling technologies and simulation
 - Fulfilling Energy Consumption and Durability requirements of the target markets
 - Act as specialist for Energy storage technologies and guide team membersAct as functional expert for vehicle battery functions and algorithms and guide team members
- Participation in team building, leadership and recruitment of employees
- Leading the TCG/CIT project team from TCG side.
- Communication with team members within TCG/CIT and external partners for responsible parts
- Contributing to best practice documentation and

Beitrag zur Best-Practice-Dokumentation und Zusammenarbeit mit Kollegen bei Forschungsprojekten. Beitrag zur allgemeinen Verbesserung der Abteilungskompetenz.

2. Je nach Projektsituation sind Reisen nach Indien (CIT) erforderlich. Außerdem wird erwartet, dass der Mitarbeiter Zulieferer und Werke besucht, um stabile und erstrebenswerte Produktdesigns sicherzustellen.
3. Der Arbeitgeber behält sich vor, dem Arbeitnehmer andere oder zusätzliche Tätigkeiten zuzuweisen, die eine zumutbare und gleichwertige Tätigkeit gegenüber der bisher ausgeübten Tätigkeit darstellen; die Vergütung des Arbeitnehmers wird hierdurch nicht berührt. Die Entscheidung hierüber trifft der Arbeitgeber nach billigem Ermessen.

§ 2 Arbeitszeit und Arbeitsort

1. Die Arbeitszeit beträgt 40 Stunden pro Woche. Beginn, Ende und Dauer der täglichen Arbeitszeit sowie die Länge der Pausen richten sich, im Rahmen der gesetzlichen Regelungen, nach den arbeitgeberseitigen Vorgaben und den betrieblichen Erfordernissen.
2. Der Arbeitnehmer ist zur Leistung von Überstunden über die regelmäßige Arbeitszeit hinaus sowie zur Arbeit an Sonn- und Feiertagen im Rahmen der gesetzlichen Grenzen verpflichtet, sofern dies aus betrieblichen Gründen erforderlich ist.
3. Der Arbeitnehmer wird in Rosenheim, Deutschland beschäftigt. Der Arbeitgeber behält sich vor, den Arbeitnehmer im Rahmen der gesetzlichen Regelungen und des billigen Ermessens bei Bedarf auch an einem anderen Ort innerhalb Deutschlands zu beschäftigen.
4. Die Tätigkeit des Arbeitnehmers kann mit häufigen Geschäftsreisen verbunden sein. Hier findet die Reiserichtlinie des Arbeitgebers Anwendung.

§ 3 Vergütung

1. Als Vergütung für seine Tätigkeiten aus diesem Vertrag erhält der Arbeitnehmer ein jährliches Zieleinkommen in Höhe von EUR brutto, dessen Bestandteile und Beträge in Anhang 1 im Einzelnen vereinbart sind. Das jährliche Grundgehalt ist zahlbar in zwölf gleichen Raten zum Monatsende und wird auf ein vom Arbeitnehmer zu benennendes Konto überwiesen werden. Die Telephonpauschale werden zusammen mit dem Gehalt monatlich

collaborating with colleagues on Research projects for overall department competency enhancement.

2. Based on project situation, travelling to India (CIT) will be required. In addition Employee will be expected to visit component suppliers and plants in order to ensure robust and achievable product designs
3. The Employer reserves the right to assign to the Employee different or additional tasks, which can be reasonably expected from him provided that they are on a par with the tasks previously assigned to him; this shall not affect the Employee's remuneration. The decision shall be made according to the Employer's best judgement (fair discretion).

§ 2 Working Hours and Place of Work

1. The Employee shall work 40 hours per week. Beginning, duration and end of the daily working hours as well as the breaks will be determined by requirements of the Employer and the business requirements.
2. The Employee shall work overtime beyond his regular working hours, on Sundays and on public holidays to the extent permitted by law if this becomes necessary for business reasons.
3. The Employee is employed in Rosenheim, Germany. If required, the Employer reserves the right to employ the Employee within the statutory regulations and within reasonable discretion also at another place in Germany.
4. The Employee's position may involve frequent business travelling. The Employer's travel policy is applicable.

§ 3 Remuneration

1. As remuneration for his duties resulting from this contract the Employee shall receive an annual target income in the amount of EUR gross, details of which are enlisted in Annexure - 1. The annual basic salary is payable in twelve instalments at the end of each month and will be transferred to an account to be specified by the employee. The mobile allowance shall be paid and transferred with the salary.

gezahlt und überwiesen.

2. Der jährlich durch den Arbeitgeber neu festzulegende Bonus wird nach dem Grad der Zielerfüllung mit der Gehaltszahlung für den Monat *April* des auf den Betrachtungszeitraum nachfolgenden Jahres ausgezahlt und überwiesen werden. Der Arbeitnehmer erwirbt keinerlei Rechte, diese Leistungen in der Zukunft zu erhalten, auch wenn sie in der Vergangenheit wiederholt bezahlt wurden. Etwaige Steuern auf die vom Arbeitgeber zur Verfügung gestellten Leistungen sind vom Arbeitnehmer zu tragen.
3. Der Arbeitnehmer ist verpflichtet, die Gehaltszahlung auf ihre Richtigkeit zu überprüfen. Im Falle von Überzahlungen kann sich der Arbeitnehmer nicht auf den Wegfall der Bereicherung gemäß § 818 Abs. 3 BGB berufen, wenn die rechtsgrundlose Überzahlung so offensichtlich war, dass der Arbeitnehmer dies hätte erkennen müssen, oder wenn die Überzahlung auf Umständen beruht, die der Arbeitnehmer zu vertreten hat.

§ 4 Änderungen in den persönlichen Verhältnissen

Der Arbeitnehmer ist aus steuer- und sozialversicherungsrechtlichen Gründen verpflichtet, Änderungen des Wohnsitzes und Familienstandes unverzüglich dem Arbeitgeber mitzuteilen.

§ 5 Erstattung von privaten und dienstlichen Kosten

Reisekosten und andere notwendige Auslagen des Arbeitnehmers für dienstliche Zwecke werden gemäß der Reisekostenrichtlinie des Arbeitgebers sowie den jeweils gültigen steuerlichen Bestimmungen gegen ordnungsgemäßen Nachweis erstattet.

§ 6 Sozialversicherung

Der Arbeitnehmer ist in Deutschland sozialversicherungspflichtig. Der Arbeitgeber führt die entsprechenden Beiträge ab.

§ 7 Arbeitsverhinderung und Krankheit

1. Der Arbeitnehmer ist verpflichtet, seinen Vorgesetzten oder die Personalabteilung des Arbeitgebers von jeder Arbeitsverhinderung und ihrer voraussichtlichen Dauer unverzüglich zu unterrichten. Auf Verlangen hat er dem Arbeitgeber die Gründe für die Arbeitsverhinderung mitzuteilen.

2. The Target Variable Pay (Bonus) to be determined annually by the employer will be paid and transferred according to the degree to which the targets have been met, together with the salary payment for the month of *April* of the year following the period under review. The Employee does not acquire any rights in obtaining these benefits in the future even if they have been paid repeatedly in the past. Any taxes due on the benefits provided by the Employer shall be borne by the Employee.
3. The Employee is obliged to check the remuneration payment for correctness. In the event of an excess payment the Employee is not entitled to argue that he/she is no longer enriched by the payment pursuant to § 818 (3) of the German Civil Code (*BGB*), if the unduly excess payment was so obvious that the Employee should have recognized this, or if the excess payment is based on circumstances on which the Employee is answerable.

§ 4 Change in the Personal Circumstances

The Employee is obliged due to tax and social security causes to inform the Employer immediately on changes of the residence and marital status.

§ 5 Reimbursement of Expenses, Relocation

Travel expenses and other necessary expenses incurred by the Employee in the furtherance of the Employer's business shall be reimbursed against submission of proper receipts in accordance with the Employer's travel expense policy as well as the tax laws and regulations as applicable from time to time.

§ 6 Social security

The Employee shall be subject to the German social security system. The Employer will transfer the contributions to the social security authorities.

§ 7 Incapacity to Work and Illness

1. The Employee shall promptly notify each absence and its prospective duration to his superior or the Employer's HR department. Upon request he shall inform the Employer of the reasons for such absence.
2. In case of incapacity to work for medical reasons

2. Im Falle einer Arbeitsunfähigkeit wegen Krankheit ist der Arbeitnehmer verpflichtet, spätestens am dritten Kalendertag eine ärztliche Bescheinigung über die Arbeitsverhinderung und ihre voraussichtliche Dauer vorzulegen. Dauert die Arbeitsunfähigkeit länger als in der Bescheinigung angegeben, ist der Arbeitnehmer verpflichtet, innerhalb von drei Tagen eine neue ärztliche Bescheinigung einzureichen. Auch in diesem Fall muss der Arbeitnehmer den Arbeitgeber unverzüglich unterrichten, falls die Dauer der Krankheit die in der Folgebescheinigung angegebene Dauer überschreitet.
3. Im Falle der Arbeitsunfähigkeit wegen Krankheit erhält der Arbeitnehmer Entgeltfortzahlung nach den Bestimmungen des Entgeltfortzahlungsgesetzes in seiner jeweils gültigen Fassung. Der Arbeitnehmer tritt hiermit etwaige Schadensersatzansprüche gegen Dritte wegen des Verlusts der Vergütung infolge der Arbeitsunfähigkeit an den Arbeitgeber ab, soweit dieser Entgeltfortzahlung leistet.
4. Über einen während der Arbeitszeit notwendigen Arztbesuch ist eine Bescheinigung des Arztes beizubringen.

§ 8 Urlaub

1. Dem Arbeitnehmer steht ein jährlicher bezahlter Urlaub von 20 Arbeitstagen als gesetzlicher Mindesturlaub zu. Für den gesetzlichen Mindesturlaub gelten die Bestimmungen des Bundesurlaubsgesetzes (BUrlG).
2. Der Arbeitgeber gewährt dem Arbeitnehmer zusätzlich einen Anspruch auf bezahlten Urlaub in Höhe von 10 Arbeitstagen pro Jahr.
3. Der Urlaub wird im Einvernehmen mit dem Arbeitgeber unter Berücksichtigung der betrieblichen Erfordernisse des Arbeitgebers und der persönlichen Wünsche des Arbeitnehmers festgelegt.
4. Mit der Erteilung von Urlaub wird zunächst der gesetzliche Mindesturlaubsanspruch gemäß dieses Vertrages erfüllt. Nach vollständiger Erfüllung des gesetzlichen Mindesturlaubsanspruchs wird der nach § 9 Ziffer 2 dieses Vertrages zusätzlich gewährte Urlaub erfüllt. Für den gemäß § 9 Ziffer 2 zusätzlich gewährten Urlaub gilt abweichend von dem gesetzlichen Mindesturlaub, dass der Urlaubsanspruch nach Ablauf des Übertragungszeitraumes auch dann verfällt, wenn er wegen Arbeitsunfähigkeit des Arbeitnehmers nicht genommen werden kann.

the Employee shall submit a medical certificate concerning his incapacity and its prospective duration before the end of the third calendar day of such absence. In case of an absence for medical reasons for a period exceeding the period indicated on the medical certificate, the Employee shall submit a new medical certificate within three days. The Employee shall notify the Employer in this case again immediately if the duration of his sickness exceeds the duration indicated in this new medical certificate.

3. In case of incapacity to work for medical reasons the Employee shall be entitled to sick pay in accordance with the German Act on Continued Payment of Salary (*EFZG*) as applicable from time to time. If the Employee is entitled to claim damages from a third party for the loss of remuneration resulting from his incapacity to work, he herewith assigns these claims to the Employer to the extent the Employer continues paying the Employee's remuneration.
4. In case the Employee needs to consult a doctor during working hours he shall submit a confirmation by the doctor.

§ 8 Holidays

1. The Employee shall be entitled to an annual paid leave of 20 working days (holidays) as statutory minimum holidays. For the statutory minimum holidays the regulations of the German Federal Leave Act (*BUrlG*) apply.
2. The Employer grants an additional entitlement of holidays to the amount of 10 work days a year.
3. The time of holidays shall be determined in agreement with the Employer, thereby considering both the Employer's business needs and personal wishes of the Employee.
4. By issuance of holidays first the statutory minimum holidays entitlement according to this contract shall be fulfilled. After total fulfilment of the statutory minimum holidays entitlement the additional granted holidays according to § 9 point 2 of this contract shall be fulfilled. In contrast to the statutory minimum holidays entitlement the additional granted holidays according to § 9 point 2 shall lapse after expiry of the transfer period even if the holidays could not be taken due to incapacity to work of the Employee.
5. The Employee may only set forth his vacation if it was granted in writing by the Employer or if it is

5. Der Arbeitnehmer kann den Urlaub erst dann antreten, wenn dieser vom Arbeitgeber schriftlich genehmigt oder festgelegt ist. Im Übrigen gelten die jeweiligen betrieblichen Urlaubsregelungen.

§ 9 Nebentätigkeiten und Wettbewerbsverbot

1. Der Arbeitnehmer ist nicht berechtigt, ohne vorherige schriftliche Zustimmung des Arbeitgebers eine weitere Tätigkeit (einschließlich Teilzeittätigkeit) aufzunehmen, für die er eine Vergütung erhält oder die üblicherweise nur gegen Vergütung erfolgt oder die die Leistungsfähigkeit des Arbeitnehmers beeinträchtigt. Der Arbeitgeber wird die Zustimmung nach billigem Ermessen erteilen, sofern die weitere Tätigkeit die betrieblichen Interessen des Arbeitgebers nicht nachteilig berührt. Die Zustimmung kann jederzeit widerrufen werden, wenn dies betriebliche Belange des Arbeitgebers erfordern. Jede Veränderung der Art oder des Umfangs der Nebentätigkeit ist dem Arbeitgeber unverzüglich anzuzeigen.
2. Während der Dauer des Arbeitsverhältnisses ist es dem Arbeitnehmer untersagt, in Wettbewerb zu dem Arbeitgeber oder mit ihm verbundenen Unternehmen zu treten. Insbesondere darf der Arbeitnehmer weder eine selbständige oder unselbständige Tätigkeit für einen Wettbewerber aufnehmen noch selbst ein konkurrierendes Handelsgewerbe eröffnen oder betreiben beziehungsweise sich an einem solchen beteiligen. Letzteres gilt nicht für den Erwerb von Anteilen börsennotierter Unternehmen zu Anlagezwecken, vorausgesetzt der Arbeitnehmer hält nicht mehr als 5 % an einem solchen Unternehmen.

§ 10 Verschwiegenheitspflicht

1. Der Arbeitnehmer ist verpflichtet, über alle Betriebs- und Geschäftsgeheimnisse des Arbeitgebers sowie der mit ihm verbundenen Unternehmen strenges Stillschweigen zu bewahren. Hierzu zählen insbesondere: Projektbeschreibungen und laufende Angebote, Kenntnisse über die vom Arbeitgeber angewandten Methoden, Namen der Kunden und Lieferanten des Arbeitgebers, Zeichnungen, Design, Spezifikationen, Formeln, Anleitungen, Testergebnisse, Muster, Businesspläne, Preiskalkulationen und Erfindungen.
2. Darüber hinaus ist der Arbeitnehmer verpflichtet, Stillschweigen über solche Informationen zu bewahren, die ihm von den Gesellschaftern, Organmitgliedern oder Mitarbeitern des Arbeitgebers ausdrücklich oder konkludent als vertraulich mitgeteilt wurden oder ihm auf

established. Further, the respective operational holidays regulations shall apply.

§ 9 Sideline Activities and Non-Competition

1. Any sideline activity for remuneration or activity which normally entitles to remuneration or which negatively affects the Employee's productivity, including any part time work, is prohibited unless the Employer has given its prior written consent. The Employer shall grant such consent to the Employer's best judgement (fair discretion) if the additional activity does not adversely affect the Employer's operational interests. This consent may be revoked at any time if required by the business needs of the Employer. The Employee shall notify the Employer without delay of any change of the kind of sideline activity or of its scope.
2. During the employment the Employee must neither compete with the Employer nor any related company. In particular, the Employee must not provide services to a competitor as an employee or as a self-employed person, nor must he set up or run a competing business or own shares in such business. This does not apply to the acquisition of shares of listed stock corporations for investment purposes only, provided the Employee does not hold more than 5 % in such companies.

§ 10 Confidentiality

1. The Employee must not disclose any confidential information regarding the business or trading of the Employer or any related company to third parties. Business and trade secrets shall include: project plans and current offers, knowledge regarding methods applied by the Employer, names of customers and suppliers of the Employer, drawings, designs, specifications, formulations, instructions, test results, samples, business plans, pricing and inventions.
2. Moreover, the Employee must not disclose any information either expressly or implicitly designated as confidential to him that has been confided to him by a shareholder, member of a corporate body or an employee of the Employer or otherwise came to his knowledge or is obviously of confidential nature.

sonstige Weise bekannt wurden bzw. deren Vertraulichkeit ohne weiteres erkennbar ist.

3. Im Rahmen der vorstehenden Verschwiegenheitspflicht ist es dem Arbeitnehmer insbesondere untersagt, die genannten Informationen zu verwenden, zu verbreiten oder Dritten den Zugriff auf sie zu gestatten.
4. Die Verschwiegenheitspflicht bleibt auch nach Beendigung des Arbeitsverhältnisses wirksam. Sie entfällt, wenn und soweit die betreffenden Informationen nachweislich allgemein bekannt geworden sind oder eine gesetzlich oder richterlich oder behördlich angeordnete Pflicht zur Offenlegung besteht.

§ 11 Abtretungs- und Verpfändungsverbot

Die Abtretung und Verpfändung von Vergütungsansprüchen aus diesem Vertrag ist nur mit vorheriger schriftlicher Zustimmung des Arbeitgebers wirksam. Die Zustimmung darf nur aus sachlichen Gründen verweigert werden. Der Arbeitgeber behält sich vor, den Arbeitnehmer mit den hierdurch entstehenden Kosten zu belasten.

§ 12 Rückgabe von Gegenständen

1. Nach Beendigung des Arbeitsverhältnisses oder nach Aufforderung durch den Arbeitgeber sind sämtliche Gegenstände und Unterlagen einschließlich aller Datenträger, die dem Arbeitnehmer vom Arbeitgeber überlassen wurden, unverzüglich herauszugeben.
2. Auf Verlangen des Arbeitgebers hat der Arbeitnehmer die Vollständigkeit der herausgegebenen Gegenstände und Unterlagen schriftlich zu bestätigen.
3. Ein Zurückbehaltungsrecht an den Gegenständen und Unterlagen des Arbeitgebers steht dem Arbeitnehmer nicht zu.

§ 13 Vertragslaufzeit

1. Das Arbeitsverhältnis wird unbefristet abgeschlossen. Es endet spätestens mit Ablauf des Monats, in dem der Arbeitnehmer die Voraussetzungen für den Bezug der gesetzlichen Altersrente erfüllt, ohne dass es einer Kündigung bedarf.
2. Die ersten sechs Monate des Arbeitsverhältnisses gelten als Probezeit. Während der Probezeit kann das Arbeitsverhältnis mit einer Frist von zwei Wochen gekündigt werden.

3. In particular, the Employee shall not use, distribute or grant access to third parties to the said information within the limits of the above confidentiality clause.

4. The confidentiality clause remains in force even after termination of the employment. It ceases to apply if and to the extent the respective information has verifiably become part of the public domain or the Employee is obliged by statutory law or an order issued by a court or the administration to disclose the information.

§ 12 Prohibition of Assignment and Pledge

An assignment or pledge of claims for remuneration resulting from this contract does not take effect without the Employer's prior written consent. The consent may only be denied due to reasonable causes. The Employer reserves one's right to overburden the Employee with costs hereby affected.

§ 12 Return of Company Property

1. The Employee shall return any company property and documents including data carriers, which have been left to him by the Employer, upon termination of employment or at the request of the Employer without undue delay.
2. At the request of the Employer the Employee shall confirm in writing that he no longer has any company property and/or documents in his possession.
3. The Employee does not have any right of retention with regard to the Employer's property or documents.

§ 13 Term of Employment

1. The employment will be for an indefinite term. It shall end without notice no later than at the end of the month in which the Employee fulfils the conditions to receive statutory old age pension.
2. The first six months of the employment qualify as probationary period. During probationary period the employment contract can be terminated upon giving two weeks' notice.
3. After probationary period each party may terminate this employment contract observing the

3. Nach Ablauf der Probezeit kann der Arbeitsvertrag von beiden Seiten mit der gesetzlichen Kündigungsfrist gekündigt werden. Gesetzliche Verlängerungen der Kündigungsfrist für den Arbeitgeber gelten auch für den Arbeitnehmer.
4. Das beiderseitige Recht zur fristlosen Kündigung des Arbeitsverhältnisses aus wichtigem Grund bleibt unberührt.
5. Der Arbeitgeber ist berechtigt, den Arbeitnehmer mit Ausspruch der Kündigung - gleichgültig von welcher Seite - unter Fortzahlung der Bezüge von der Arbeitsleistung freizustellen, wenn ein sachlicher Grund, insbesondere ein grober Pflichtverstoß, der die Vertrauensgrundlage beeinträchtigt (z. B. Geheimnisverrat, Konkurrenzfähigkeit), gegeben ist bzw. der begründete Verdacht eines solchen Pflichtverstoßes besteht. Wird die Freistellung unwiderruflich erteilt, so erfolgt sie unter Anrechnung auf noch offene und entstehende Erholungsurlaubsansprüche und Zeitguthaben.
6. Etwaige andere Einkünfte, die der Arbeitnehmer während der Freistellung aus der Verwendung seiner Dienste erzielt oder böswillig zu erzielen unterlässt, werden gemäß § 615 Satz 2 BGB auf die Vergütung nach diesem Vertrag angerechnet. Dies gilt nicht für andere Einkünfte, die der Arbeitnehmer während der als Urlaub angerechneten Zeit im Falle einer unwiderruflichen Freistellung erzielt.
7. Die Kündigung bedarf zu ihrer Wirksamkeit der Schriftform.

§ 14 Erfindungen, geistiges Eigentum und andere Schutzrechte

1. Auf Erfindungen und technische Verbesserungsvorschläge findet das Arbeitnehmererfindungsgesetz in seiner jeweils gültigen Fassung Anwendung.
2. Es wird dem Arbeitgeber ein ausschließliches, unbefristetes und territorial unbegrenztes Nutzungsrecht an den unter das Urheberrecht fallenden Arbeitsergebnissen eingeräumt, soweit diese aus der Tätigkeit des Arbeitnehmers für den Arbeitgeber während oder außerhalb der regelmäßigen Arbeitszeit entstehen oder maßgeblich auf Erfahrungen, Arbeiten oder Unterlagen des Arbeitgebers beruhen. Zu diesen Arbeitsergebnissen gehören insbesondere auch Programme für die Datenverarbeitung sowie alle anderen Formen von Computersoftware.
3. Mit umfasst von diesem Nutzungsrecht gemäß

statutory notice period. In case of an extension of the Employer's notice period by law, the extended notice period shall also apply to the Employee.

4. Each party's right to terminate the employment contract without notice for good cause remains unaffected.
5. In case of termination - unconcerned about from which side - of this employment relationship, the Employer with notice of termination reserves the right to release the Employee with continued remuneration from his duty to work if an objective reason is existing, in particular a gross breach of duties which affects the basis of trust (e.g. betrayal of secrets, competitive activity) or the reasonable suspect of such a breach of duties. Any outstanding claims for holidays and time credits will be set off against the period of release, provided that the release has been irrevocable.
6. During the time the Employee is released from work, any other income earned will be set off against his remuneration under this Contract pursuant to § 615 sentence 2 of the German Civil Code (*BGB*). The same applies to any income the Employee refrained from earning with malicious intent. This does not apply to other income earned on days set off as holidays during the period of an irrevocable release.
7. Any notice of termination must be given in writing to be effective.

§ 14 Inventions, Intellectual Property Rights and Other Rights of Protection

1. The treatment of inventions and technical improvements is governed by the so-called Employee Invention Act (*Arbeitnehmererfindungsgesetz*), as amended from time to time.
2. The Employer shall be granted the exclusive, unlimited and territorially unrestricted right to use and exploit the results of the work, which are subject to copyright laws or related rights, insofar as these results arise from the Employee's activities on behalf of the Employer, either within or outside normal working hours or to the extent that they are based on the experience, previous work, or documents of the Employer. The working results shall include data processing programmes as well as other forms of computer software.
3. The rights as set out in point 2 shall include the

Ziffer 2 und zu übergeben sind die dazugehörigen Vorstudien, der Quellcode, eine erstellte Dokumentation und sonstige Begleitmaterialien zu den jeweiligen Programmen.

4. Das Nutzungsrecht schließt alle bekannten Nutzungsarten ein. Dazu gehört insbesondere das Recht, die Arbeitsergebnisse im Original oder in bearbeiteter bzw. umgestalteter Form zu vervielfältigen, auf Bild-, Ton- und Datenträger zu übertragen, zu verbreiten, zu veröffentlichen, vorzuführen, über Fernleitungen oder drahtlos zu übertragen oder anderweitig zu verwerten. Zur vollständigen oder teilweisen Ausübung des Nutzungsrechts bedarf es keiner weiteren Zustimmung von Seiten des Urhebers.
5. Der Arbeitgeber ist berechtigt, das Nutzungsrecht ganz oder teilweise auf Dritte zu übertragen oder Dritten entsprechende Rechte einzuräumen. Eine weitere Zustimmung des Arbeitnehmers ist hierfür nicht erforderlich. Die Berechtigung zur Übertragung des Nutzungsrechts auf Dritte gilt auch für die Bearbeitung des Arbeitsergebnisses.
6. Eine Verpflichtung zur Autorennennung und zur Gewährung des Zugangs zum Werk bei Ausübung des Nutzungsrechts besteht nicht. Die Einräumung des Nutzungsrechts ist mit der Vergütung des Arbeitnehmers gem. § 3 dieses Vertrages abgegolten. Die Nutzungsrechtseinräumung behält auch nach Ausscheiden des Arbeitnehmers aus der Gesellschaft Gültigkeit.
7. Das Zugangsrecht des aus der Gesellschaft ausgeschiedenen Urhebers zu den von ihm geschaffenen Werken bzw. Werkteilen und das Recht auf Herausgabe einer Autorenkopie werden ausgeschlossen.

§ 15 Verfallklausel

Ansprüche aus dem Arbeitsverhältnis und solche, die mit dem Arbeitsverhältnis in Verbindung stehen, verfallen, wenn sie nicht innerhalb von drei Monaten nach Fälligkeit schriftlich von den Parteien geltend gemacht werden. Lehnt die Gegenseite den Anspruch ab oder erklärt sie sich nicht innerhalb von zwei Wochen nach der Geltendmachung des Anspruchs, so verfällt dieser, wenn er nicht innerhalb von drei Monaten nach der Ablehnung oder dem Fristablauf gerichtlich erhoben wird. Dies gilt nicht für Ansprüche, die auf strafbaren Handlungen oder unerlaubten Handlungen beruhen sowie für vorsätzliche Schädigungen.

relevant pre-studies, the source code, a prepared documentation and miscellaneous additional materials supporting the relevant software, all of which have to be handed over.

4. The right to use shall encompass all known types of use. In particular, the right to use shall include the right to reproduce the working results, either in its original or in a processed or redesigned form, the right to produce visual, sound or data recordings, to disseminate, publish, demonstrate, transfer via long-distance landlines or wireless, or exploit in any other way. There shall be no requirement for any further consent by the author for the complete or partial exercise of the right to use the working results.
5. The Employer shall be entitled to transfer the right to use the working results on to third persons in part or in total or to grant corresponding rights to third persons. There shall be no requirement to obtain further consent by the Employee. The entitlement to transfer the right of use to third parties shall also apply in relation to the processing of the working results.
6. There shall be no obligation to name the author or to grant access to the work when the right of use is exercised. The Employee's remuneration under § 3 of this contract shall cover the granting of the right of use. The granting of the right of use shall remain valid after the Employee has left the company.
7. The right of access of the author who has left the company to the work or to the parts of work created by him and the right to demand an author's copy shall be excluded.

§ 15 Forfeiture Clause

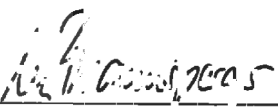
If the parties do not submit any claims resulting from the employment relationship as well as any claims that are in connection to the employment relationship against each other in writing within three months after maturity claims are forfeited. If the opposite side rejects the claim or does not reply within two weeks after the claim was submitted, the claim is forfeited if it is not brought before a court within three months after rejection or after expiry of the period. This does not apply to claims based on criminal acts or tort or for damages caused intentionally

§ 16 Schlussbestimmungen

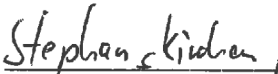
1. Dieser Vertrag stellt die vollständige Vereinbarung der Parteien dar. Mündliche Nebenabreden bestehen nicht. Änderungen und Ergänzungen dieses Vertrages, soweit sie nicht auf einer individuellen Vereinbarung der Parteien beruhen, bedürfen zu ihrer Wirksamkeit der Schriftform. Das bedeutet, dass Ansprüche aus einer betrieblichen Übung nicht entstehen können. Der Vertrag tritt an die Stelle etwaiger früherer schriftlicher oder mündlicher Vereinbarungen und Arbeitsverträge zwischen den Parteien.
2. Dieser Vertrag unterliegt deutschem Recht. Hat der Arbeitnehmer keinen Wohnsitz in Deutschland, verlegt er seinen Wohnsitz oder gewöhnlichen Aufenthaltsort in ein anderes Land oder ist zum Zeitpunkt einer Klageerhebung sein gewöhnlicher Aufenthaltsort nicht bekannt, ist der Gerichtsstand München, Deutschland.
3. Sollte eine Bestimmung dieses Vertrages unwirksam sein oder unwirksam werden, so bleibt die Wirksamkeit des Vertrages im Übrigen unberührt. Die Vertragsparteien sind in diesem Falle verpflichtet, anstelle der unwirksamen Bestimmung eine wirksame Regelung zu treffen, die den wirtschaftlichen Zielen dieses Vertrages möglichst nahe kommt.
4. Dieser Vertrag wurde in deutscher und englischer Sprache abgefasst. Im Falle von Widersprüchen ist die deutsche Fassung maßgebend.

20/05/2019

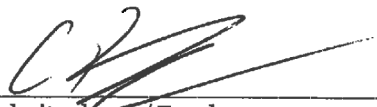
Ort, Datum / Place, date



Arbeitgeber/ Employer
Markus Braunsperger
Managing Director
Hero Tech Centre Germany GmbH

 24.05.2019

Ort, Datum / Place, date



Arbeitnehmer/ Employee

§ 16 Miscellaneous

1. This contract represents the entire agreement and understanding of the parties. Verbal agreements have not been entered into. Changes or amendments of this agreement require written form in order to be valid unless they are based on an individual agreement of the parties. This means that claims may not arise from operational exercise. This contract supersedes all prior written or verbal agreements and employment contracts between the parties.
2. This contract shall be governed by German law. In the event the Employee does not have a residence in Germany, does transfer his residence to another country or is at the time a lawsuit is filed his habitual residence unknown, the place of jurisdiction shall be Munich, Germany.
3. Should a provision of this contract be or become void, the remainder of the agreement will be unaffected thereby. In this case the parties undertake to replace the void provision by a provision which is as close as possible to the commercial goals of this contract.
4. This contract has been set up in German and English language. In case of inconsistencies, the German version shall prevail.

ONLY THE GERMAN VERSION SHALL BE
SIGNED

DEED OF ASSIGNMENT

THIS DEED OF ASSIGNMENT is made on 25.11.2021 (date) day of November (month) in the year 2021

BY AND BETWEEN

Hero Tech Centre Germany GmbH, a German company having address at **Westendstrasse 28, 60325 Frankfurt am Main, Germany** (hereinafter referred to as "the Assignor")

AND

Hero MotoCorp Limited, an Indian company having address at **The Grand Plaza, Plot No.2, Nelson Mandela Road, Vasant Kunj- Phase -II, New Delhi, India** (hereinafter referred to as "the Assignee");

(Assignee and Assignor are collectively referred to as "**Parties**" and severally as "**Party**").

WHEREAS:

A. The Assignor **Hero Tech Centre Germany GmbH** is a fully owned subsidiary of **HERO MOTOCORP LIMITED** (Assignee).

B. The inventors of the Indian Patent Application 202011026982 were the employees of the Assignor and have already assigned their rights to the Assignor under their employment agreement and are bound by the same.

C. By virtue of agreement dated 10.02.2020 between the parent Assignee and subsidiary Assignor, the Assignor has assigned to the Assignee worldwide right, title and interest in and to the priority Indian Patent Application 202011026982 and the invention contained therein with effect from 25th June 2020. The Assignor confirms that this a worldwide assignment

including the right to apply for patent(s) globally in and to any Letters Patent that may be granted in respect of said application(s).

The Parties have agreed as follows:

(a) The Assignor hereby confirms that it has assigned to the Assignee (including the successors and assigns of Assignee), all global and exclusive rights, title, and interest in and to any invention(s) disclosed in respect of the Indian Patent Application No. 202011026982 and the Letters Patent that may be issued in pursuance of the application(s), or any continuation or division, or PCT application, or convention application, or any legal equivalent thereof (the "Assigned Asset").

(b) The Parties agree that assignment includes all the singular liberties, powers, privileges and advantages whatsoever appertaining or belonging to the Assigned Asset. The Assignee has complete power and right to cause their name to be reflected as applicant for patent in respect of the Assigned Asset before any and all statutory authorities, such as offices of patent examiners, and to proceed with the patent application(s) in its name.

ASSIGNOR:

SIGNED and DELIVERED by,
behalf of Assignor.

Name: Marinus Theobald

Title: technical director

Date: 25.11.2021

ASSIGNEE:

SIGNED and DELIVERED by,
behalf of Assignee.

Name: Sagar Dhabak

Title: Section Head - CVC
Hero Moto Corp Ltd -

Date: 26.11.2021

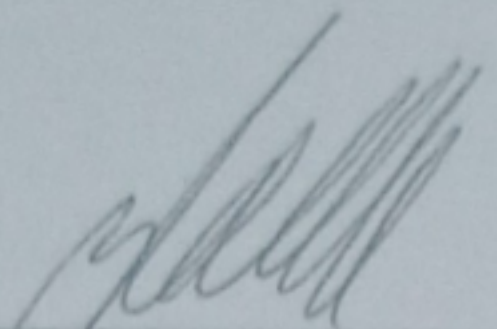
Witnesses:

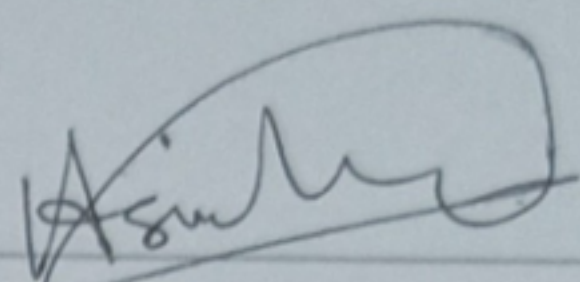
Name: Müller Jörg

Address: Peltendorfer Str. 51
83250 Marquartstein

Name: Asim Nadeem

Address: Rangoli Gardens, Jaipur

Signature: _____

Signature: _____



SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

NIT: 800.176.089-2

COMPROBANTE DE RECAUDO SISTEMA SIPI

Radicado: NC2021/0008257
Recibo: 21-69220
Fecha: 25/06/2021

MONICA WOLF WASSERMAN
CC: 51.711.267
Pago PSE No: 551990
CUS: 1036259721

Patente de Invención Nacional
SISTEMA DE ALMACENAMIENTO DE ENERGÍA Y MÉTODO DE FABRICACIÓN DEL MISMO

Detalle del pago

Id.	Rentístico	Concepto y Servicio	Cant.	Val. Unit.	Subtotal
1	50005-01-02	Pago unitario reivindicacion adicional patente de invencion (A partir de de undí½cima reivindicacion) (DESCUENTO INTERNET)	10	\$ 43,500	\$ 435,000
TOTAL					\$ 435,000