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वेदन संख्या/a) Application Number: 202141030916

ल करने की तारीख/b) Date of Filing: 09/07/2021

रोधित दस्तावेज़(जों) का नाम:

of the document(s) requested: Complete Specification

प्रमाणित करता/करती हूँ कि निम्नलिखित पेटेंट आवेदन के संबंध में फाइल दस्तावेज़(जों)
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19

this 13th day of May 2022

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 (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	
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				Street	No.12 Khader Nawaz Khan Road, Nungambakkam
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				Country	India
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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)					
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			Country	India
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5. TITLE OF THE INVENTION

A Saddle Type Vehicle

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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)

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

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

11. IN CASE OF PATENT OF ADDITION FILED UNDER SECTION 54, PARTICULARS OF MAIN APPLICATION OR PATENT

Application/patent No.

Date of filing of main application

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) **THANGAVEL DEEPAN**

(a) Date

(b) Signature(s)

(c) Name(s) **VAIDHEESWARAN RAMESH**

(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)

☒ We the applicant(s) hereby declare(s) that: -

☒ 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.

☒ We are the true & first inventor(s).

☒ 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).

☒ 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 we derive the title.

☒ 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 DD/MM/YYYY 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 13		
No. of Claim(s)	No. of claims 11 and No. of pages 3		
Abstract	No. of pages 1		
No. of Drawing(s)	No. of drawings 8 and No. of pages 8		

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.

~~Complete specification (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies).~~

~~(e) 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) Translation of priority document/Specification/International Search Report/International Preliminary Report on Patentability.~~

~~(g) Statement and Undertaking on Form 3~~

~~(h) Declaration of Inventorship on Form 5~~

~~(i) Power of Authority~~

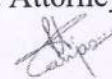
Total feeis being paid via online payment mode.

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 09th day of July 2021

TVS MOTOR COMPANY LIMITED

By their Agent & Attorney



(Nikhil Ranjan)

of Khaitan & Co

Reg No IN/PA-1471

To
The Controller of Patents
The Patent Office, at Chennai

Note: -

- * Repeat boxes in case of more than one entry.
- * To be signed by the applicant(s) or by authorized registered patent agent otherwise where mentioned.
- * Tick (✓)/cross (x) whichever is applicable/not applicable in declaration in paragraph-12.
- * Name of the inventor and applicant should be given in full, family name in the beginning.
- * Strike out the portion which is/are not applicable.
- * For fee: See First Schedule.

FORM 2
THE PATENTS ACT, 1970
(39 OF 1970)

&
THE PATENTS RULES, 2003
COMPLETE SPECIFICATION
[See section 10, Rule 13]

TITLE OF INVENTION

A Saddle Type Vehicle

APPLICANT

**TVS MOTOR COMPANY LIMITED, an Indian company, having its
address at "Chaitanya", No.12 Khader Nawaz Khan Road,
Nungambakkam, Chennai 600 006.**

PREAMBLE TO THE DESCRIPTION

The following specification particularly describes the invention and the manner in which it is to be performed.

FIELD OF THE INVENTION

[001] The present invention relates to a saddle type vehicle.

BACKGROUND OF THE INVENTION

- 5 [002] In evaporative emission control systems (EVAP) of conventional two-wheeled vehicles, fuel vapours generated in a fuel tank are tapped and passed to a canister containing carbon layers through a discharge tube. The vapours get adsorbed in the carbon layers inside the canister. The adsorbed vapours are then sent to an engine for combustion. A conventional EVAP
- 10 system has a canister, a breather pipe to draw fresh air from the atmosphere and a drain pipe to drain any liquid fuel accumulated within the canister. However, combined length of the breather pipe and the drain pipe in these conventional systems is required to be high, which increases cost and complexity of the EVAP system.
- 15 [003] Further, particularly in low floorboard type saddle-type vehicles, the canister, the breather pipe and the drain pipe are usually disposed under the floorboard and substantially close to the ground. The open ends of the breather pipe and the drain pipe are further closer to the ground due to overhang. In such conventional dispositions, the breather pipe and the drain
- 20 pipe are susceptible to foreign particles such as dust, mud and water splatter which result in the drain pipe and the breather pipe getting clogged. The

clogging of breather pipe and drain pipe affects the effective functioning of the canister, which has a consequent adverse effect of the fuel economy of the vehicle.

[004] Furthermore, there is greater risk of water entering into the canister
5 through the breather pipe or the drain pipe which may lead to malfunctioning of the engine and cause drivability issues. The risk of entry of water in the canister is aggravated when the vehicle would be required to be driven through a flooded terrain or under rainy and waterlogging conditions.

[005] Thus, there is a need in the art for a saddle type vehicle which
10 addresses the aforementioned problems.

SUMMARY OF THE INVENTION

[006] In an aspect, the present invention is directed towards a saddle type vehicle. The saddle type vehicle has a main frame extending rearwardly from
15 a head pipe in a vehicle front-rear direction. The main frame has a first aperture configured to be open to atmosphere and a second aperture in fluid communication with the first aperture. The saddle type vehicle further has a canister assembly with a canister and a breather pipe. The breather pipe has a first end that is connected to the canister and a second end that is
20 connected to the second aperture, thereby allowing air from atmosphere to

reach the canister through the breather pipe via the first aperture and the second aperture.

[007] In an embodiment of the invention, the main frame includes a downwardly extending member, a rearwardly extending member, and a
5 horizontally extending member connecting the downwardly extending member and the rearwardly extending member.

[008] In another embodiment of the invention, the saddle type vehicle has a floorboard disposed above the horizontally extending member of the main frame such that the canister assembly is disposed under the floorboard.

10 [009] In another embodiment of the invention, the first aperture and the second aperture are provided on the horizontally extending member of the main frame.

[010] In a further embodiment of the invention, the canister assembly is disposed laterally between the main frame and a side cover panel. In an
15 alternative embodiment, the canister assembly is disposed between the main frame and the side cover panel in a vehicle width direction.

[011] In a further embodiment of the invention, the canister assembly further has a drain pipe having a first end and a second end. The first end of the drain pipe is connected to the canister.

20 [012] In a further embodiment of the invention, the saddle type vehicle has a rear engine mounting bracket positioned at a rear end of the horizontally

extending member. Herein the rear engine mounting bracket overlaps with the first aperture on the main frame in a vehicle side view.

[013] In a further embodiment of the invention, the second end of the drain pipe is disposed between the rear engine mounting bracket and the main frame.

[014] In a further embodiment of the invention, the saddle type vehicle has a guide member mounted on the rear engine mounting bracket for supporting the drain pipe.

[015] In a further embodiment of the invention, the saddle type vehicle has a connector tube for connecting the second end of the breather pipe to the second aperture on the main frame.

BRIEF DESCRIPTION OF THE DRAWINGS

[016] Reference will be made to embodiments of the invention, examples of which may be illustrated in accompanying figures. These figures are intended to be illustrative, not limiting. Although the invention is generally described in context of these embodiments, it should be understood that it is not intended to limit the scope of the invention to these particular embodiments.

Figure 1 illustrates a left side view of an exemplary saddle type vehicle in accordance with an embodiment of the invention.

Figure 2 illustrates a left perspective view of the saddle type vehicle, in accordance with an embodiment of the invention.

Figure 3 illustrates a left perspective view of a frame member of the saddle type vehicle, in accordance with an embodiment of the invention.

5 Figure 4 illustrates a left perspective view of the main frame of the saddle type vehicle, in accordance with an embodiment of the invention.

Figure 5 illustrates a magnified view of a canister assembly of the saddle type vehicle, in accordance with an embodiment of the invention.

10 Figure 6 illustrates a rear sectional view of the saddle type vehicle, in accordance with an embodiment of the invention.

Figure 7 illustrates a canister of the canister assembly, in accordance with an embodiment of the invention.

Figure 8 illustrates an exploded view of the canister assembly of the saddle type vehicle, in accordance with an embodiment of the invention.

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DETAILED DESCRIPTION OF THE INVENTION

[017] The present invention relates to a saddle type vehicle. More particularly, the present invention relates to a saddle type vehicle with a canister assembly.

20 [018] Figure 1 illustrates an exemplary saddle type vehicle 10, in accordance with an embodiment of the invention. The saddle-type vehicle 10 comprises

an engine 12 that is horizontally disposed. Preferably, the engine 12 is a single-cylinder type IC engine. The saddle-type vehicle 10 comprises a front wheel 14, a rear wheel 16, a frame member, a seat assembly 18 and a fuel tank 60. The frame member includes a head pipe 22 (shown in Figure 3), a main frame 24 (shown in Figure 2), and seat rails 40. The head pipe 22 supports a steering shaft (not shown) and a pair of front suspension 64 (only one shown) are attached to the steering shaft through a lower bracket (not shown). The pair of front suspension 64 support the front wheel 14. The upper portion of the front wheel 14 is covered by a front fender 28 mounted to the lower portion of the telescopic front suspension 64 at the end of the steering shaft. A handlebar 30 is fixed to an upper bracket (not shown) and is rotatable. A head light 32, a visor guard (not shown) and an instrument cluster 62 are arranged on an upper portion of the head pipe 22. The main frame 24 of the frame member extends rearward from head pipe 22. A rear end of the engine 12 is mounted to a rear engine mounting bracket 52 (shown in Figure 2). In an embodiment, the engine 12 is mounted horizontally with a cylinder block extending forwardly from a crankcase. In an embodiment, the engine 12 is disposed below a portion of the main frame 24.

[019] Seat rails 40 are joined to the main frame 24 and extend rearward to support the seat assembly 18. A pair of rear swing arms 34 (only one shown) are connected to the frame member to swing vertically, and the rear wheel 16

is connected to rear end of the rear swing arms 34. The rear swing arms 34 are supported by two telescopic rear suspensions 44 (only one shown). A taillight unit 58 is disposed at the end of the saddle-type vehicle 10 and at the rear of the seat assembly 18. A grab rail 36 is also provided on the rear of the
5 seat rails 40. The rear wheel 16 arranged below the seat assembly 18 rotates by the driving force of the engine 12 transmitted through a chain drive (not shown) from the engine 12. A rear fender 38 is disposed above the rear wheel 16.

[020] Further, an exhaust pipe (not shown) of the vehicle 10 extends
10 rearward from the engine 12, longitudinally along the vehicle length before terminating in a muffler (not shown). The muffler is typically disposed adjoining the rear wheel 16.

[021] Figure 2 illustrates a left perspective view of the saddle type vehicle 10. As illustrated in the Figure, the main frame 24 includes a downwardly
15 extending member 24A, a rearwardly extending member 24C, and a horizontally extending member 24B connecting the downwardly extending member 24A and the rearwardly extending member 24C. The engine 12 is disposed below the horizontally extending member 24B. A floorboard 46 is disposed above and supported by the horizontally extending member 24B of
20 the main frame 24 such that the canister assembly 100 is disposed under the floorboard 46. A pair of side cover panels 56 (only one shown) extend along

the floorboard 46, thereby covering horizontally extending member 24B in a vehicle side view. The saddle type vehicle 10 further has a canister assembly 100 for collecting fuel vapour from the fuel tank 60 and transmitting the purged fuel vapours into the engine 12 for combustion along with air from the atmosphere.

[022] In the embodiment illustrated in Figure 2 and referenced in Figure 6, the canister assembly 100 is disposed laterally between the main frame 24 and a side cover panel 56. In an alternative embodiment, the canister assembly 100 is disposed between the main frame 24 and the side cover panel 56 in a vehicle width direction.

[023] Figure 3 illustrates a left perspective view of the frame member of the saddle type vehicle 10. As illustrated in the Figure, the main frame 24 has a first aperture 26A (shown in Figure 4) that is configured to be open to atmosphere and a second aperture 26B. The second aperture 26B is in fluid communication with the first aperture 26A. In the embodiment illustrated in Figure 3 and Figure 4, the first aperture 26A and the second aperture 26B are provided on the horizontally extending member 24B of the main frame 24. Further, the saddle type vehicle 10 has a rear engine mounting bracket 52 for supporting a rear portion of the engine 12. In an embodiment, the rear engine mounting bracket 52 is positioned at a rear end of the horizontally extending member 24B. Herein, the rear engine mounting bracket 52 overlaps with the

first aperture 26A on the main frame 24 in the vehicle side view. The overlap of the rear engine mounting bracket 52 with the first aperture 26A prevents dust and water splatter from entering the first aperture 26A which is open to the atmosphere.

5 [024] Figure 5 illustrates a magnified view of the canister assembly 100 in the saddle type vehicle 10. The canister assembly 100 comprises of a canister 110 which contains fuel adsorbing particles. In operation, fuel vapours generated in the fuel tank 60 are tapped and passed to the canister 110. The canister 110 contains fuel adsorbing particles such as carbon which
10 adsorb the fuel vapours, and the adsorbed vapours are then sent to the engine 12 for combustion. The canister assembly 100 further comprises of a breather pipe 120 for relieving pressure and vacuum inside the canister 110. A first end 120A of the breather pipe 120 is connected to the canister 110 at a vent opening 112 (shown in Figure 7). A second end 120B of the breather
15 pipe 120 is connected to the second aperture 26B. The connection of the second end 120B of the breather pipe 120 to the second aperture 26B, which is in fluid communication with the first aperture 26A thereby allows air from atmosphere to reach the canister 110 through the breather pipe 120 via the first aperture 26A and the second aperture 26B. Since the first aperture 26A
20 is open to the atmosphere, air from the first aperture 26A travels through to the second aperture 26B, further travelling through the breather pipe 120 and

resultantly the canister 110, thereby relieving vacuum and pressure inside the canister 110. This allows for the second end 120B of the breather pipe 120 to not be directly open to the atmosphere, thereby preventing foreign particles from directly entering the breather pipe 120 and thereby the canister. As
5 mentioned earlier, the first aperture 26A being overlapped by the rear engine mounting bracket 52 further prevents dust and water splatter from entering the first aperture 26A and thereby the breather pipe 120.

[025] In an embodiment, the second end 120B of the breather pipe 120 is connected to the second aperture 26B via a connector tube 122 (shown in
10 Figure 8). In an embodiment, the connector tube 122 facilitates the connection between the second aperture 26B of the main frame 24 which is a metal component and the breather pipe 120, which is a non-metal component. In an embodiment, the vertical distance between the breather pipe 120 and the floorboard 46 is optimized such that any interference of the
15 breather hose 120 with parts of the floorboard 46 and other vehicle parts is prevented. In an embodiment, the breather pipe 120 is preformed without any sharp bends.

[026] As further illustrated in Figure 5, the canister assembly 100 further has a drain pipe 130 for providing an exit to liquid fuel accumulated in the canister
20 110 on condensation of the fuel vapours. A first end 130A of the drain pipe 130 is connected to the canister 110 at a drain opening 114 (shown in Figure

7) and a second end 130B (shown in Figure 8) of the drain pipe 130 is kept open for allowing the exit of accumulated liquid fuel in the canister 110 to be discharged on to the ground. The second end 130B of the drain pipe 130 is disposed between the rear engine mounting bracket 52 and the main frame

5 24. In an embodiment, the rear engine mounting bracket 52 has a guide member 54 mounted thereon for supporting the drain pipe 130. This allows for the drain pipe 130 to be supported on the rear engine mounting bracket 52. Since, the second end 130B of the drain pipe 130, which is open, is disposed between the main frame 24 and the rear engine mounting bracket
10 52, the second end 130B of the drain pipe 130 is effectively surrounded by the rear engine mounting bracket 52 which prevents the entry of dust and water splatter into the drain pipe. In an embodiment, the drain pipe 130 is preformed without any sharp bends.

[027] Advantageously, the present invention allows for the canister assembly
15 to be disposed in a manner that the breather pipe is not left directly open to the atmosphere. The provision of entry of air into the breather pipe through the first aperture and the second aperture ensures that no foreign particles such as dirt or mud can enter the breather pipe, thereby preventing the clogging of the breather pipe. The position of the first aperture further allows
20 for the rear engine mounting bracket to prevent water splatter or dust from entering first aperture, and thereby the breather pipe.

[028] The second end of the breather pipe being at a higher position than conventional dispositions also reduce the risk of water entering the canister through the breather pipe in waterlogging conditions. Further, the length of breather pipe required in the present invention is lower, thereby reducing cost
5 and complexity of the canister assembly. In addition, the reduced length of the breather pipe and the breather pipe being preformed, not only reduces the interference of the breather pipe with the floorboard and other surrounding vehicle parts, but also reduces the susceptibility of the breather pipe to damage as opposed to lengthier hoses.

10 [029] Furthermore, the second end of the breather pipe being supported by the rear engine mounting bracket results in the second end of the drain pipe being positioned at a greater height than conventional dispositions, which reduce the risk of water entry into the canister via the drain pipe in waterlogging conditions. The second end of the drain pipe being surrounded
15 by the rear engine mounting bracket ensures that no foreign particles such as dirt or mud can enter the drain, thereby preventing the clogging of the drain pipe.

[030] While the present invention has been described with respect to certain embodiments, it will be apparent to those skilled in the art that various
20 changes and modification may be made without departing from the scope of the invention as defined in the following claims.

WE CLAIM:

1. A saddle type vehicle (10), comprising:

a main frame (24) extending rearwardly from a head pipe (22) in a vehicle front-rear direction, the main frame (24) having a first aperture (26A) configured to be open to atmosphere and a second aperture (26B) in fluid communication with the first aperture (26A); and

a canister assembly (100) having a canister (110) and a breather pipe (120), the breather pipe (120) having a first end (120A) being connected to the canister (110) and a second end (120B) being connected to the second aperture (26B), thereby allowing air from atmosphere to reach the canister (110) through the breather pipe (120) via the first aperture (26A) and the second aperture (26B).
2. The saddle type vehicle (10) as claimed in claim 1, wherein the main frame (24) includes a downwardly extending member (24A), a rearwardly extending member (24C), and a horizontally extending member (24B) connecting the downwardly extending member (24A) and the rearwardly extending member (24C).
3. The saddle type vehicle as claimed in claim 2, comprising a floorboard (46) disposed above the horizontally extending member (24B) of the main

frame (24) such that the canister assembly (100) is disposed under the floorboard (46).

4. The saddle type vehicle (10) as claimed in claim 3, wherein the first
5 aperture (26A) and the second aperture (26B) are provided on the horizontally extending member (24B) of the main frame (24).

5. The saddle type vehicle (10) as claimed in claim 3, wherein the canister
assembly (100) is disposed laterally between the main frame (24) and a
10 side cover panel (56).

6. The saddle type vehicle (10) as claimed in claim 3, wherein the canister
assembly (100) is disposed between the main frame (24) and a side cover
panel (56) in a vehicle width direction.

15 7. The saddle type vehicle (10) as claimed in claim 1, wherein the canister
assembly (100) further comprises a drain pipe (130) having a first end
(130A) and a second end (130B), the first end (130A) of the drain pipe
(130) being connected to the canister (110).

20 8. The saddle type vehicle (10) as claimed in claim 2, comprising a rear
engine mounting bracket (52) positioned at a rear end of the horizontally

extending member (24B), wherein the rear engine mounting bracket (52) overlaps with the first aperture (26A) on the main frame (24) in a vehicle side view.

5 9. The saddle type vehicle (10) as claimed in claims 7 and 8, wherein the second end (130B) of the drain pipe (130) is disposed between the rear engine mounting bracket (52) and the main frame (24).

10 10. The saddle type vehicle (10) as claimed in claim 9, comprising a guide member (54) mounted on the rear engine mounting bracket (52) for supporting the drain pipe (130).

15 11. The saddle type vehicle (10) as claimed in claim 1, comprising a connector tube (122) for connecting the second end (120B) of the breather pipe (120) to the second aperture (26B) on the main frame (24).

Dated this 09th day of July 2021

TVS MOTOR COMPANY LIMITED
By their Agent & Attorney



(Nikhil Ranjan)
of Khaitan & Co
Reg No IN/PA-1471

ABSTRACT

A Saddle Type Vehicle

The present invention relates to a saddle type vehicle (10) having a main frame (24) that extends rearwardly from a head pipe (22) in a vehicle front-rear direction. The main frame (24) has a first aperture (26A) configured to be open to atmosphere and a second aperture (26B) in fluid communication with the first aperture (26A). The saddle type vehicle (10) further has a canister assembly (100) with a canister (110) and a breather pipe (120). The breather pipe (120) has a first end (120A) that is connected to the canister (110) and a second end (120B) that is connected to the second aperture (26B), thereby allowing air from atmosphere to reach the canister (110) through the breather pipe (120) via the first aperture (26A) and the second aperture (26B).

Reference Figure 5

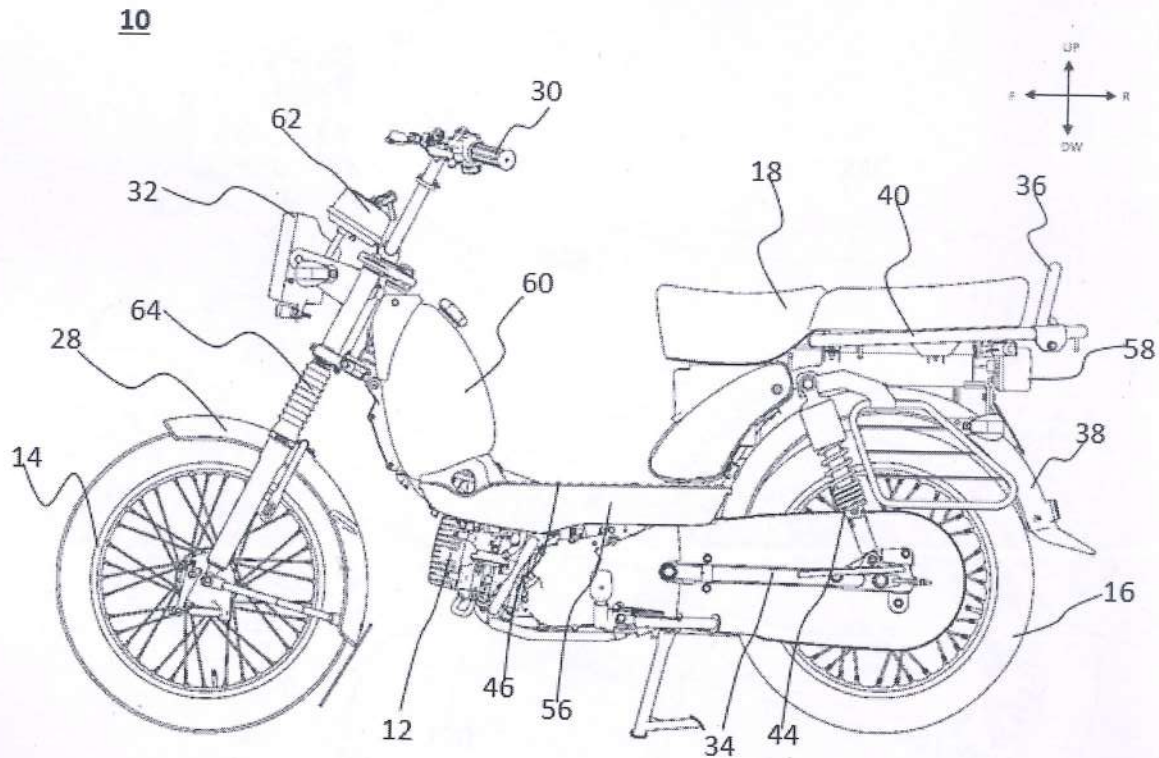


Figure 1

TVS MOTOR COMPANY LIMITED
By their Agent & Attorney


(Nikhil Ranjan)
of Khaitan & Co
Reg No IN/PA-1471

10

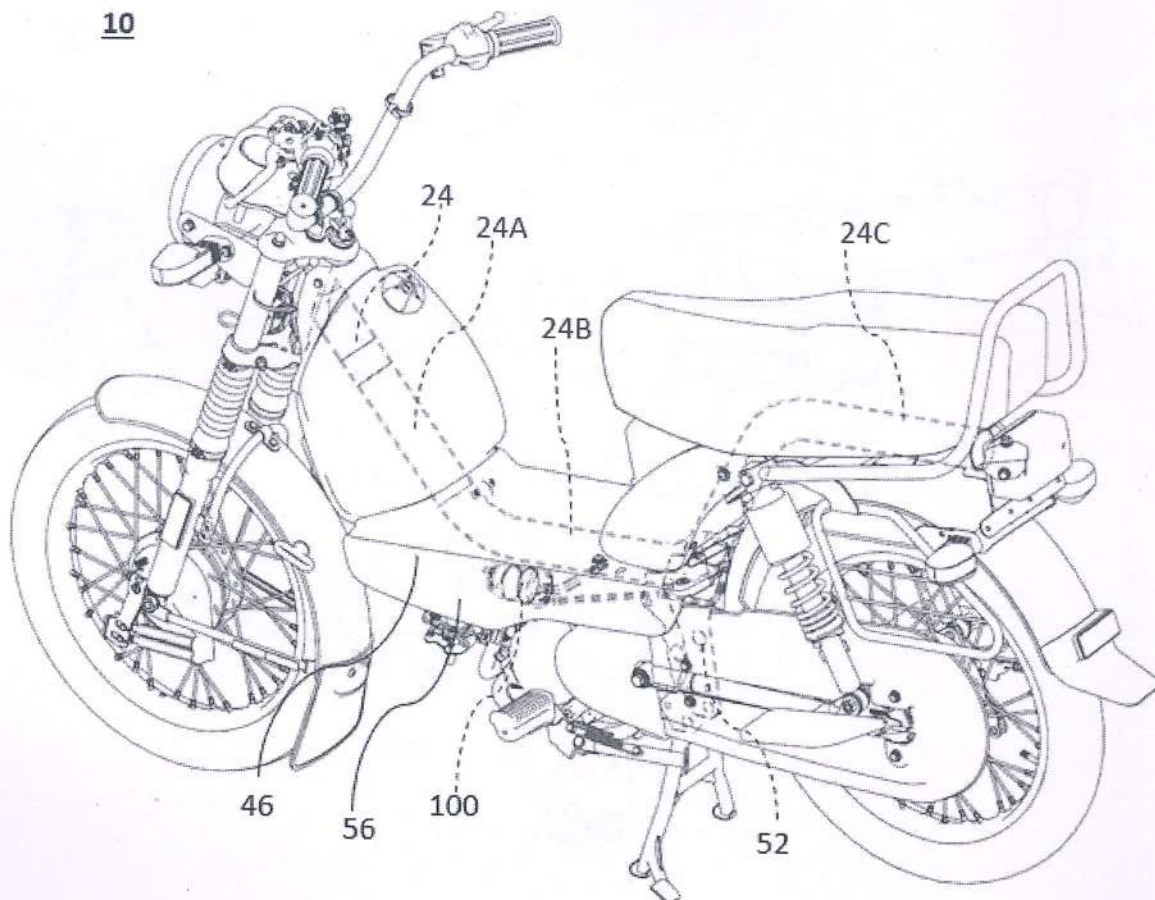


Figure 2

TVS MOTOR COMPANY LIMITED

By their Agent & Attorney

(Signature)

(Nikhil Ranjan)
of Khaitan & Co
Reg No IN/PA-1471

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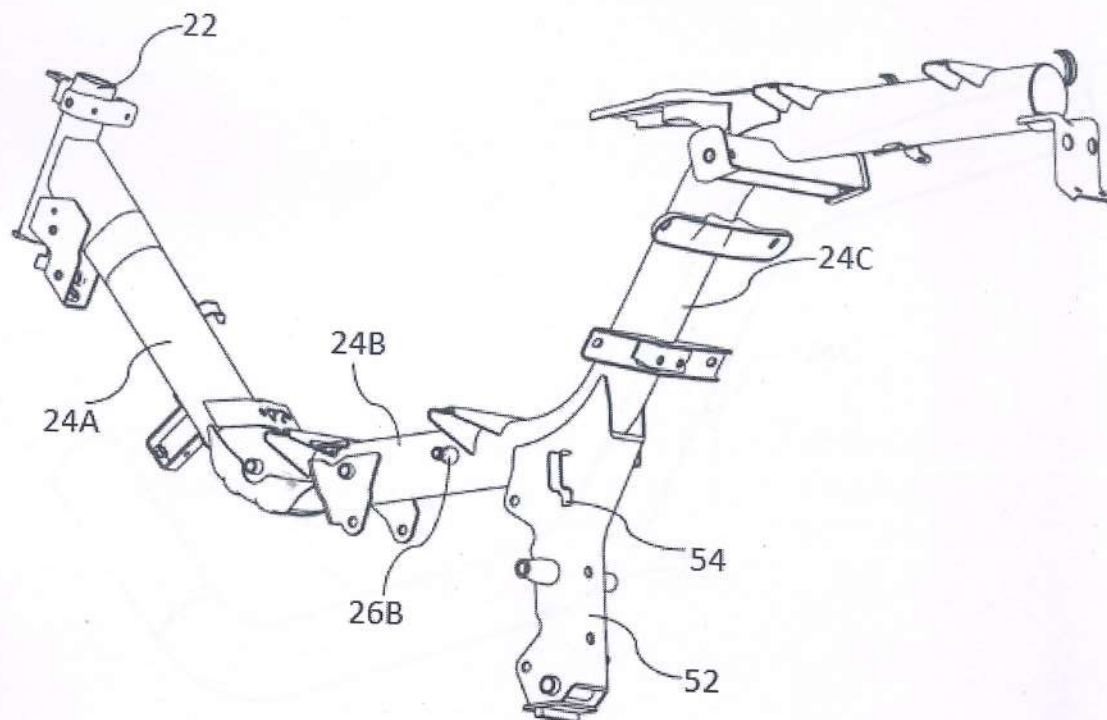


Figure 3

TVS MOTOR COMPANY LIMITED
By their Agent & Attorney


(Nikhil Ranjan)
of Khaitan & Co
Reg No IN/PA-1471

24

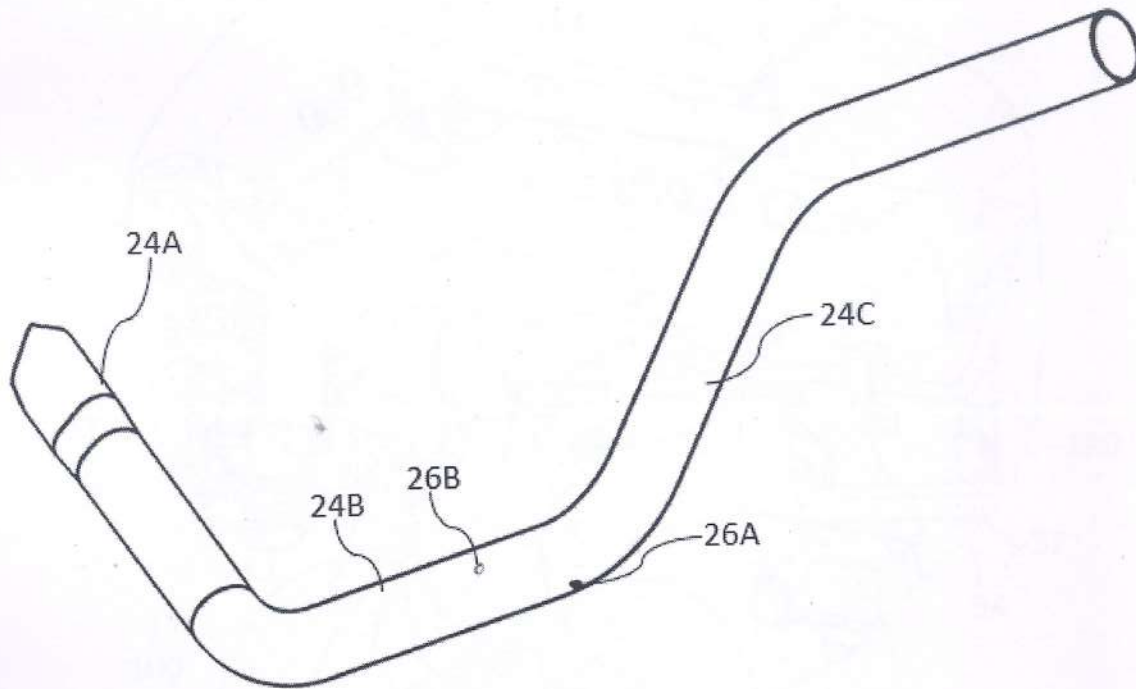


Figure 4

TVS MOTOR COMPANY LIMITED
By their Agent & Attorney


(Nikhil Ranjan)
of Khaitan & Co
Reg No IN/PA-1471

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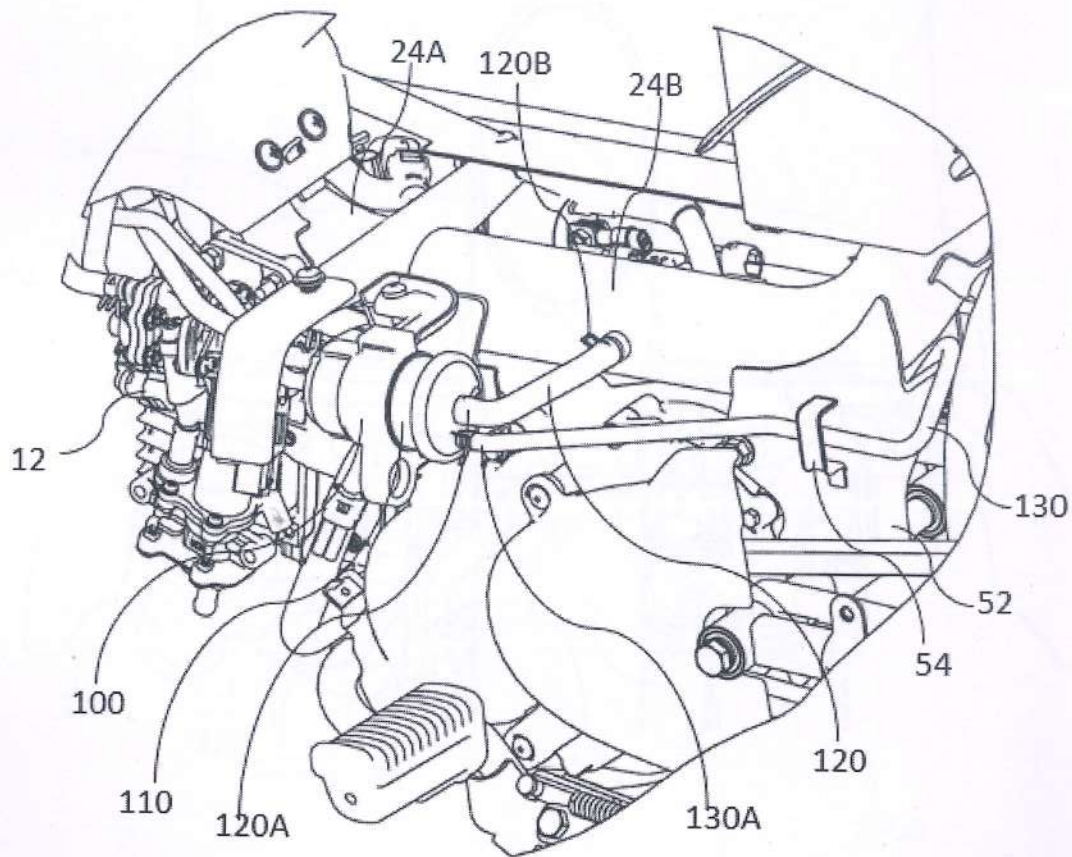


Figure 5

TVS MOTOR COMPANY LIMITED
By their Agent & Attorney


(Nikhil Ranjan)
of Khaitan & Co
Reg No IN/PA-1471

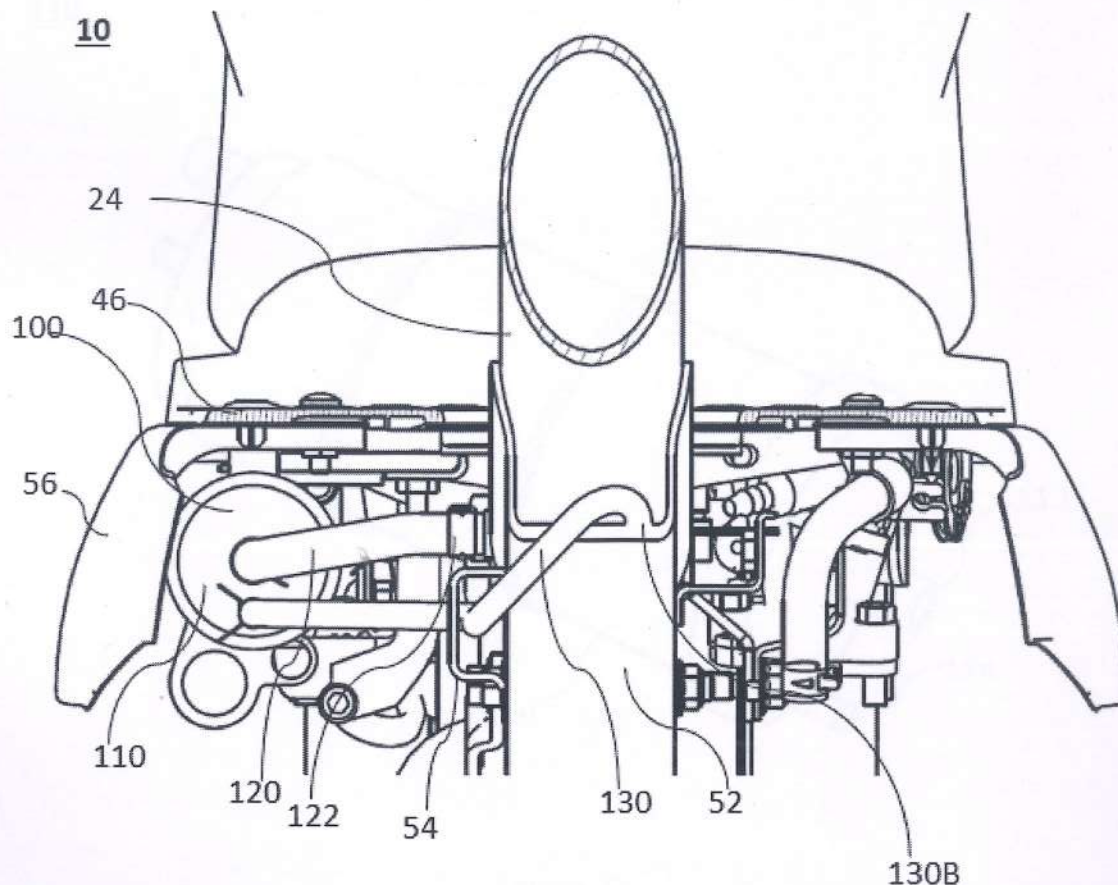


Figure 6

TVS MOTOR COMPANY LIMITED

By their Agent & Attorney


(Nikhil Ranjan)
of Khaitan & Co
Reg No IN/PA-1471

110

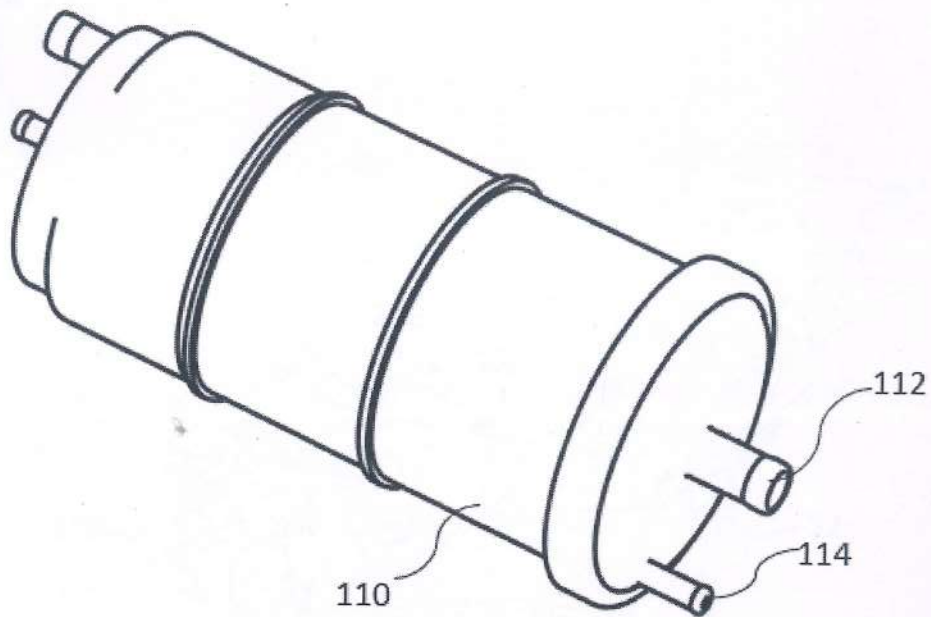


Figure 7

TVS MOTOR COMPANY LIMITED
By their Agent & Attorney


(Nikhil Ranjan)
of Khaitan & Co
Reg No IN/PA-1471

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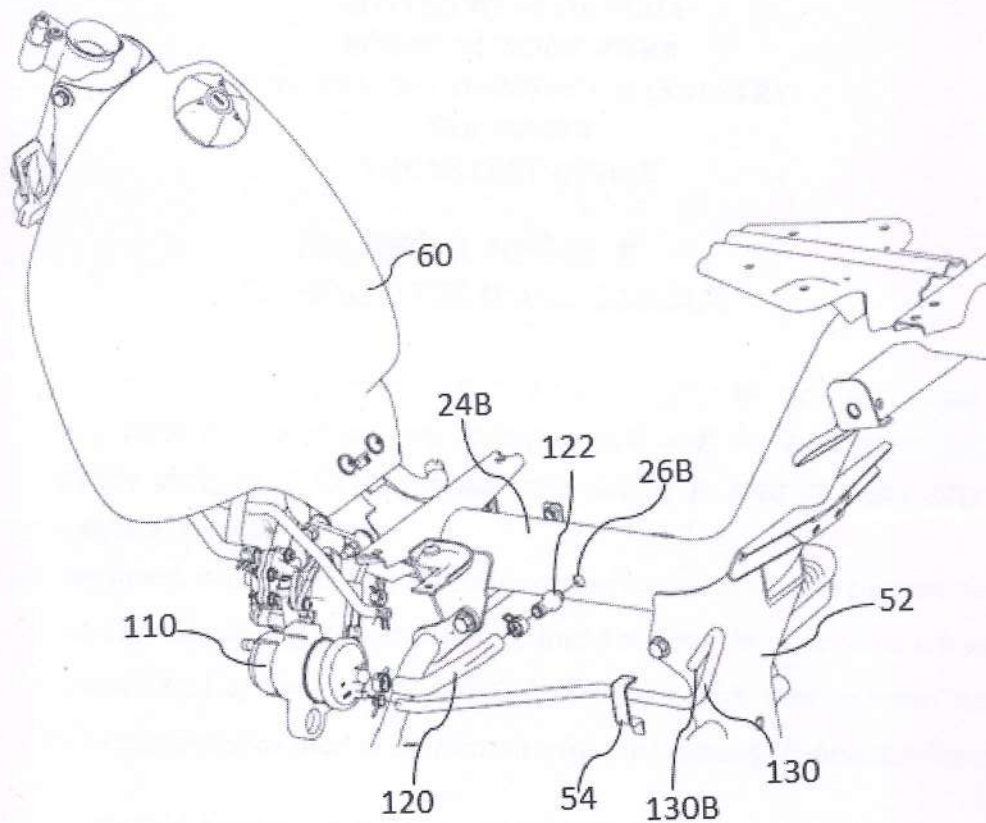


Figure 8

TVS MOTOR COMPANY LIMITED
By their Agent & Attorney


(Nikhil Ranjan)
of Khaitan & Co
Reg No IN/PA-1471

GOBIERNO DE INDIA
MINISTERIO DE COMERCIO E INDUSTRIA
LA OFICINA DE PATENTES

A QUIEN CORRESPONDA

Yo, el abajo firmante, siendo un funcionario debidamente autorizado para firmar y emitir el certificado en nombre del Contralor General de Patentes, Diseños y Marcas de conformidad con las disposiciones del artículo 73 (3) de la Ley de Patentes de 1970, por la presente certifica que el adjunto aquí presente es una copia fiel del documento o documentos presentados en relación con la siguiente Solicitud de Patente:

- a) Número de solicitud: 202141030916
- b) Fecha de presentación: 09/07/2021
- c) Nombre de los documentos solicitados: Descripción completa

Este certificado se emite bajo las facultades que me confieren U/S 147 (1) de la Ley de Patentes de 1970.

Con fecha este día 13 de mayo de 2022

Controlador de Patentes y Diseños
Signatario autorizado

FORMA 1 LA LEY DE PATENTES DE 1970 (39 DE 1970) y EL REGLAMENTO DE PATENTES, 2003 SOLICITUD DE CONCESIÓN DE PATENTE (Ver sección 7, 54 y 135 y la subregla (1) de las reglas 20)		(PARA USO DE OFICINA SOLAMENTE)		
		Solicitud No.		
		Fecha de Presentación:		
		Cantidad de Tasa Pagada:		
		CBR No.:		
		Firma:		
1. REFERENCIA / IDENTIFICACIÓN DEL SOLICITANTE NO. (SEGÚN LO ASIGNADO POR LA OFICINA)				
2. TIPO DE SOLICITUD [Marque (☒) en la categoría correspondiente]				
Ordinaria ☒		Convención ☐		
PCT-NP ☐				
Divisional ☐	Patente de adición ☐	Divisional ☐	Patente de adición ☐	
Divisional ☐	Patente de adición ☐	Divisional ☐	Patente de adición ☐	
3A. SOLICITANTE (S)				
Nombre Completo	Nacionalidad	País de Residencia	Dirección del solicitante	
TVS MOTOR COMPANY LIMITED	Una empresa india	India	No. de casa	Chaitanya
			Calle	No. 12 Khader, Nawaz Khan Road, Nungambakkam
			Ciudad	Chennai
			Estado	Tamil Nadu
			País	India
			Código Pin	600 006
3B. CATEGORÍA DE SOLICITANTE [Marque (☒) en la categoría correspondiente]				
Persona Natural		Otra que persona natural ☒		
		Pequeña entidad ☐	Iniciante ☐ Otro ☒	
4. INVENTOR(ES) [Marque (☒) en la categoría correspondiente]				
¿Son todos los inventores los mismos que los solicitantes mencionados anteriormente?		Sí ☐	No ☒	

Si la respuesta es "No", proporcione los detalles del inventor o inventores.				
Nombre completo	Nacionalidad	País de residencia	Dirección del inventor	
THANGAVEL DEEPAN	Nacional de India	India	No. casa	Chaitanya
			Calle	No. 12 Khader, Nawaz Khan Road, Nungambakkam
			Ciudad	Chennai
			Estado	Tamil Nadu
			País	India
			Código pin	600 006
VAIDHEESWARAN RAMESH	Nacional de India	India	No. casa	Chaitanya
			Calle	No. 12 Khader, Nawaz Khan Road, Nungambakkam
			Ciudad	Chennai
			Estado	Tamil Nadu
			País	India
			Código pin	600 006
5. TÍTULO DE LA INVENCION				
Un vehículo tipo silla de montar				
6. AGENTE (S) AUTORIZADO (S) DE PATENTES REGISTRADOS	IN/PA NO.	1086		
	Nombre	Adheesh Nargolkar		
	No. de móvil	9820776760		
7. DIRECCIÓN DE SERVICIO DEL SOLICITANTE EN LA INDIA	Nombre	Khaitan & Co		
	Dirección Postal	Centro One Indiabulls, Piso 13, 841, Senapati Bapat Calle Elphinstone, Marg Bombay 400013, Maharashtra		
	No. de Teléfono	66365000		
	No. móvil	9820776760		
	No. Fax	66365050		
	e-mail	kcopatents@khaitanco.com		

				adheesh.nargolkar@khaitanco.com	
8. EN CASO DE SOLICITUD QUE RECLAME LA PRIORIDAD DE LA SOLICITUD PRESENTADA EN EL PAÍS DE LA CONVENCIÓN, DATOS DE LA SOLICITUD DE LA CONVENCIÓN					
País	Numero de solicitud	Fecha de presentación	Nombre del solicitante	Título de la invención	IPC (como clasificado en el país de la convención)
9. EN CASO DE SOLICITUD PCT, DATOS DE LA SOLICITUD INTERNACIONAL PRESENTADA BAJO EL TRATADO DE COOPERACIÓN DE PATENTES (PCT)					
Numero de solicitud internacional			Fecha de presentación internacional		
10. EN CASO DE UNA SOLICITUD DIVISIONAL PRESENTADA BAJO LA SECCIÓN 16, DATOS DE LA SOLICITUD ORIGINAL (PRIMERA) SOLICITUD ORIGINAL (PRIMERA)					
No. de solicitud original (primera)			Fecha de presentación de solicitud original (primera)		
11. EN CASO DE PATENTE ADICIONAL PRESENTADA DE CONFORMIDAD CON LA SECCIÓN 54, DATOS DE LA PRINCIPAL SOLICITUD O PATENTE					
No. de patente/solicitud principal			Fecha de presentación de solicitud principal		
Nulo			Nulo		
12. DECLARACIONES					
(i) Declaración del inventor (es) (En caso de que el solicitante sea un cesionario: el inventor(es) puede firmar el presente a continuación o el solicitante puede cargar la cesión o adjuntar la cesión a esta solicitud de patente o enviar la cesión por correo postal/transmisión electrónica debidamente autenticada dentro del período prescrito). Yo / nosotros, los inventores arriba mencionados, somos los verdaderos y primeros inventores de esta Invención y declaramos que los solicitantes en este documento son cesionarios o representantes legales. (a) Fecha: (b) Firma (s) (c) Nombre (s) THANGAVEL DEEPAN (a) Fecha: (b) Firma (s) (c) Nombre (s) VAIDHEESWARAN RAMESH					
(ii) Declaración del solicitante(s) en el país de convención					

(En caso de que el solicitante en India es diferente al solicitante en el país de convención: el inventor en el país de convención puede firmar el presente a continuación o el solicitante en India puede cargar la cesión del solicitante en el país de convención o adjuntar dicha cesión con esta solicitud o enviar la cesión por correo postal/transmisión electrónica debidamente autenticada dentro del período prescrito).

Yo / nosotros, los solicitantes en el país de convención declaramos que el solicitante en este documento es/es mi/nuestro cesionario o representante legal

(a) Fecha:

(b) Firma (s)

(c) Nombre (s) del firmante

(iii) Declaración del solicitante (s)

☒ Yo / nosotros, el (los) solicitante (s) por la presente declaramos que:

☒ Estoy / Estamos en posesión de la invención mencionada anteriormente.

☒ La descripción ~~provisional~~ / completa relacionada con la invención se presenta con esta solicitud.

☒ La invención, tal como se describe en la descripción, utiliza material biológico de la India y yo o nosotros presentaremos el permiso necesario de la autoridad competente antes de otorgarnos la patente.

☒ No hay motivo legal de objeción (es) a la concesión de la Patente para mí / nosotros.

☒ Somos los verdaderos y primeros inventores.

☒ Soy el cesionario o representante legal de los verdaderos y primeros inventores.

☒ La solicitud o cada una de las solicitudes, cuyos detalles se dan en el párrafo 8, fue la primera solicitud en el país o países de la convención con respecto a mi / nuestra invención (es).

☒ Reclamamos la prioridad de las solicitudes mencionadas anteriormente presentadas en el país / países de la convención y declaramos que no se ha presentado ninguna solicitud de protección con respecto a la invención en un país de la convención antes de esa fecha por mí / nosotros o por cualquier persona de donde yo / nosotros derivamos el título.

☒ Nuestra solicitud en la India se basa en una solicitud internacional en virtud del Tratado de Cooperación en materia de Patentes (PCT), como se menciona en el párrafo 9.

☒ La solicitud está separada de mi / nuestra solicitud, cuyos detalles se dan en el Párrafo 10 y además, esta solicitud puede ser tratada como si se considerara presentada el DD / MM / YYYY bajo la sección 16 de la Ley.

☒ Dicha invención es una mejora o modificación de los detalles de la invención que se dan en el párrafo 11.

13. LOS SIGUIENTES SON LOS ADJUNTOS CON LA SOLICITUD

(a) Forma 2

Item	Detalles	Tasa	Anotaciones
# Descripción Completa/ provisional	No. de páginas - 13		
No. de Reivindicaciones	No. de reivindicaciones - 11 y No. de páginas - 3		
Resumen	No. de páginas - 1		

No. de figuras	No. de figuras - 8 y No. de páginas - 8		
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En caso de una descripción completa, si el solicitante desea adoptar los dibujos llenos con su descripción provisional como dibujos o parte de los dibujos para la descripción completa bajo la regla 13 (4), se requiere el número de dichas páginas llenas con la descripción provisional. ser mencionado aquí.

(b) una descripción completa ~~en confirmación con la solicitud internacional enmendada antes de que la Autoridad de examen preliminar internacional (IPEA) sea aplicable (2 copias).~~

(c) ~~listado de secuencias en formato electrónico~~

(d) dibujos ~~en confirmación con la solicitud internacional enmendada ante la autoridad de examen preliminar internacional (IPEA) según corresponda (2 copias)~~

(e) ~~Los documentos de prioridad se solicitan para recuperar los documentos de prioridad del DAS (Servicio de acceso digital) si el solicitante ya había solicitado a la oficina de primera presentación que los documentos de prioridad estén disponibles para el DAS.~~

(f) ~~Traducción de documento de prioridad / especificación / Informe de búsqueda internacional / Informe preliminar internacional sobre patentabilidad~~

(g) Declaración y cumplimiento en el formulario 3

(h) Declaración de inventor en el formulario 5

(i) Poder de autoridad

Tarifa total.....se está pagando a través del modo de pago en línea

Por la presente declaramos que, nuestro leal saber y entender, información y creencia, el hecho y los asuntos aquí descritos son correctos y solicitamos que se nos conceda una patente para dicha invención.

Con fecha este día 9 de julio de 2021

TVS MOTOR COMPANY LIMITED

Por su agente y abogado

FIRMA

(Nikhil Ranjan)

De Khaitan & Co

Reg No IN/PA-1471

A,

El controlador de patentes

La oficina de patentes de Chennai

Nota:

- Repetir casillas en caso de más de una entrada.
- Debe ser firmado por el solicitante o los solicitantes o por un agente de patentes registrado autorizado de lo contrario se mencionó.

- Marque (✓)/cruz (x) a lo que corresponda/no corresponda en la declaración del párrafo 12.
- El nombre del inventor y del solicitante debe indicarse en su totalidad, el apellido al principio.
- Táchese la parte que no corresponda.
- Tarifa: consulte el primer programa

REIVINDICACIONES:

1. Un vehículo tipo silla de montar (10), que comprende:
un bastidor principal (24) que se extiende hacia atrás desde un tubo de dirección (22) en una dirección delantera-trasera del vehículo, el bastidor principal (24) tiene una primera abertura (26A) configurada para estar abierta a la atmósfera y una segunda abertura (26B) en comunicación fluida con la primera abertura (26A); y
un ensamble de canister (100) que tiene un canister (110) y un tubo de ventilación (120), teniendo el tubo de ventilación (120) un primer extremo (120A) conectado al canister (110) y un segundo extremo (120B) conectado a la segunda abertura (26B), permitiendo así que el aire de la atmósfera llegue al canister (110) a través del tubo de ventilación (120) a través de la primera abertura (26A) y la segunda abertura (26B).
2. El vehículo tipo silla de montar (10) según la reivindicación 1, en el que el bastidor principal (24) incluye un elemento que se extiende hacia abajo (24A), un elemento que se extiende hacia atrás (24C) y un elemento que se extiende horizontalmente (24B) conectando el miembro que se extiende hacia abajo (24A) y el miembro que se extiende hacia atrás (24C).
3. El vehículo del tipo de silla de montar según la reivindicación 2, que comprende una tabla de suelo (46) dispuesta sobre el miembro que se extiende horizontalmente (24B) del bastidor principal (24) de manera que el ensamble del canister (100) está dispuesto debajo del piso (46).
4. El vehículo tipo silla de montar (10) según la reivindicación 3, en el que la primera abertura (26A) y la segunda abertura (26B) se proporcionan en el elemento que se extiende horizontalmente (24B) del bastidor principal (24).
5. El vehículo tipo silla de montar (10) según la reivindicación 3, en el que el ensamble de canister (100) está dispuesto lateralmente entre el bastidor principal (24) y un panel de cubierta lateral (56).
6. El vehículo tipo silla de montar (10) según la reivindicación 3, en el que el ensamble de canister (100) está dispuesto entre el bastidor principal (24) y un panel de cubierta lateral (56) en la dirección del ancho del vehículo.
7. El vehículo tipo silla de montar (10) como se reivindica en la reivindicación 1, en el que el ensamble de canister (100) comprende además un tubo de drenaje (130) que tiene un primer extremo (130A) y un segundo extremo (130B), el primer extremo (130A) de la tubería de drenaje (130) estando conectada al canister (110).
8. El vehículo tipo silla de montar (10) según la reivindicación 2, que comprende un soporte de montaje del motor trasero (52) colocado en un extremo trasero del miembro que se extiende horizontalmente (24B), en el que el soporte de montaje del motor trasero (52) se superpone con el primera abertura (26A) en el bastidor principal (24) en una vista lateral del vehículo.
9. El vehículo tipo silla de montar (10) según las reivindicaciones 7 y 8, en el que el segundo extremo (130B) del tubo de drenaje (130) está dispuesto entre el soporte de montaje del motor trasero (52) y el bastidor principal (24).
10. El vehículo tipo silla de montar (10) según la reivindicación 9, que comprende un miembro de guía (54) montado en el soporte de montaje del motor trasero (52) para soportar la tubería de drenaje (130).

11. El vehículo tipo silla de montar (10) según la reivindicación 1, que comprende un tubo conector (122) para conectar el segundo extremo (120B) del tubo de ventilación (120) a la segunda abertura (26B) en el bastidor principal (24).