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RESEARCH ARTICLE

SUPER BIKE: WITHWHEEL OPTIONALITY

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ABSTRACT

In today world the traffic is a main problem for every people. These traffic occur due to increasing availability of vehicle on the road as we see that every people have own motorcycle for the travelling purpose but in those bike we have limited space to sit for 2 to 3 people. It means atone time we can travel 2 to 3 person. But if the number of people is more than 3 and they have to travel for same distance then they used another vehicle for going that place. Due to increasing the number of the vehicle the fuel consumption rate increases. For that purpose we have given a innovative concept of travelling 6 to 7 at time in our prospected design. Here we are going to focus 3 wheel bikes, on which 6 to 7 person can ride at a time in the same fuel rate. In this three wheels are attached linearly and the size of bike is increase due to which we get space for the seating purpose and also for the carrier of goods purpose also by shifting the seat. The another wheel frame is attached according to our need, it is provided with joint attachment. We can used this bike for carrying of good. And when the number of people is less than four then according to our need we can disassembled the third wheel frame. This wheel frame is adjustable and can easily assemble by the man, there is no need of any mechanic.

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INTRODUCTION

In this 3 wheel bike concept mainly 3 wheels used and increase the size of bike. The setup of third wheel is used according to our need; it can be removed when it is not need. The main purpose of assembling of third wheel frame is for getting more space. In this system the seat is divided in to two parts one part is fixed and another part is of removable for carrying the thing (goods) or load on the bike for transportation purpose. Here we use the powerful engine for the driving purpose. Motorcycle engine are typically two types, two strokes or four strokes internal combustion engine but in this motorcycle basically we used two-stroke V-twin internal combustion engine. This completes a power cycle within two strokes (up and down movement) of the piston. During one crank shaft revolution and generate more power in comparison to four stroke engine. In this engine the cylinders are attached in V shape. It consist of piston, a cylinder block and a head, which contains the valve train, valve open and close to allow the fuel air mixture to enter the combustion chamber.

Element description

3Wheels, Suspension, Removal seat, Gear box, Engine, Chain Mechanism.

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A. 3 Wheels

In this motorcycle alloy wheels are used because this motorcycle use for goods and the load transportation. In alloy wheels, lesser weight not only decrease the amount of energy required to move that weight but also improves acceleration in the process. Secondary alloy wheels are lighter in weight. They are strong and yet light and one of the biggest advantages they gave to the bikes, because of this the bike suddenly dropped their weights resulting in a better power to weight ratio of bike. The alloy wheels are made up of light weight metal alloys mainly aluminum or magnesium, the process involved in making the alloy wheels is majorly casting, where the extremely hot molten alloy is poured into ready-made cast of the wheel and after cooling down the raw wheel is extracted from the castingmold.

B. Suspension

Mainly in general bikes four suspension system are used but in our concept 3 wheels bike six suspension systems are used. Suspension is the system of tires, tires air spring, shock absorber and linkages that connects a vehicle to its wheels and allows relative motion between the two. Suspension, the typical motorcycle has a pair of fork tubes for the front suspension, and a swingarm with one or two shock absorbers for the rear suspensions. Bicycle suspension is a system, or system used to suspend the rider and bicycle in order to

insulate them from the roughness of the terrain. Bicycle suspension is used primarily mountain bikes, but it is common on hybrid bicycles. In either case, the further the spring it is compressed, the more force it takes to compress it, which is exactly what we need for a mountain-bike suspension. The damper in a bike shock absorber. It pumps oil through small holes as the piston moves up and down.

Fig.1. Alloy wheel

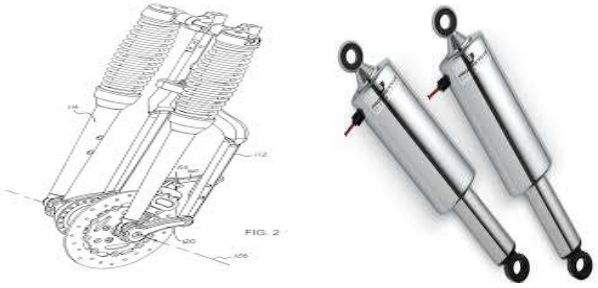

Fig.2. Suspension system

C. Removal seat

In this bike is joined two seats; 1st seat is for 2-3 person seating purpose and 2nd seat is for 3 person And also the 2nd seat make removal seat for the purpose transportation of thing or goods by the bike. By this concept easily transport of anything by the help of motorcycle in easy way.

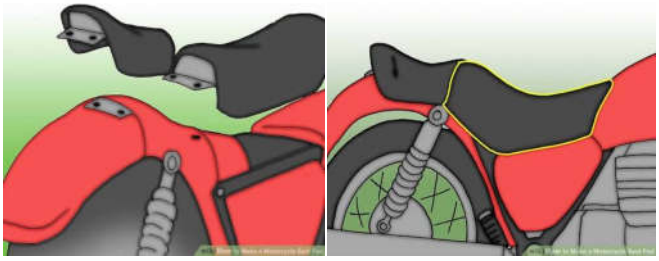

Fig.3. Seat

D. Gear box

The gear box is the second stage in the transmission system, after the clutch. It is the usually bolted to rear on the engine, with the clutch between them. Transmission on motorcycle typically four to six gear, although small bikes may have as few as two. The gears are engaged by shifting a lever, which moves shifting forks inside the transmission. The job of a clutch is engage the disengage power from the engine crankshaft to the transmission. Shift into first gear. Start by closing the throttle, and pull the clutch in all the way. At the same time, move the gear shift into first gear by pushing downwards on the shifter. The, slowly apply throttle while releasing the clutch generally until the motor cycle start to roll slowly. When shifting on a motorcycle you have two choices, shift up or shift down. The vast majority of motorcycle has the one-down, five upon gear setting. This means that the gears are in ascending order there is one gear below neutral and five gears above neutral.

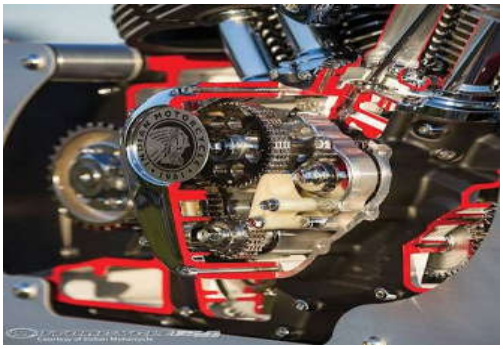

Fig.4. Gear box

E. Engine

A v-twin engine, also called a V2 engine, is a two cylinder internal combustion. Although widely associated with motorcycle, v-twin engines are also produced for the high power. Most V-twin engines have a single crankpin, which is shared by both connecting rods. The connecting rods may sit side by side with offset cylinders, or they may be FORK & BLADE items with cylinders in the same plane without an offset. Generally, any two cylinder engine with its two cylinders arranged more than 0^0 and less than 180^0 apart is referred to as a V-twin.

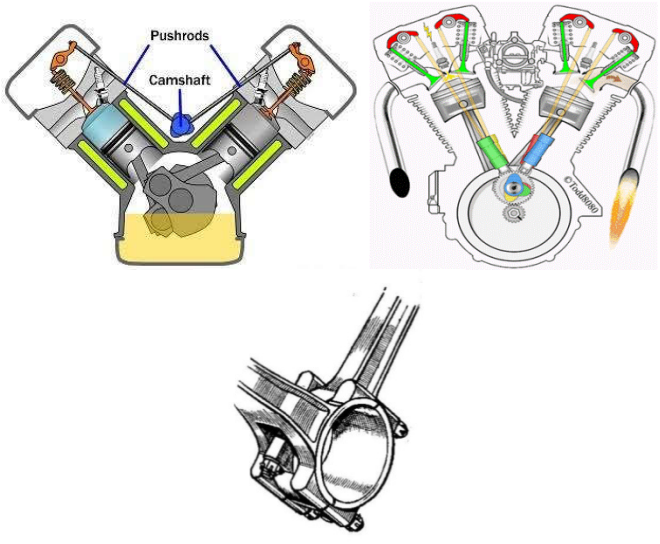

Fig.5. Engine

F. Chain mechanism

Chain mechanism or chain derive is a way of transmitting mechanical power from one place to another. It is often used to convey power to the wheels of a vehicle. The conventional rear wheel derives motorcycle uses chains to transmit power from the engine to the rear wheel. Chain derive is a way of transmitting mechanical power from one place to another. Most often, the power is conveyed by a roller chain, known as

the derive chain or transmission chain, Passing over a sprocket gear, with the teeth of the gear meshing with the holes in the links of the chain.

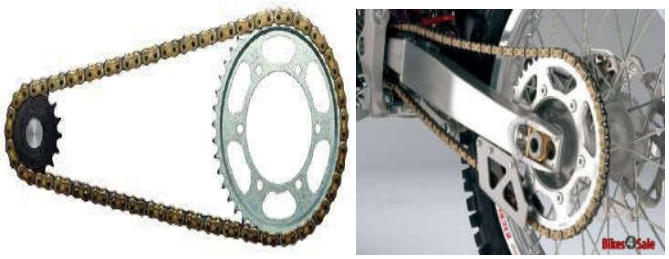

Fig.6. Chain mechanism

Fabrication of the bike

A. Arrangement of 3rd wheel frame & suspension

The 3rd wheel frame is attached to the behind of the 2nd wheel with link frame support and suspension. The link is bolted to the frame of the vehicle chassis. There are two suspensions were attached both side of the rear wheel, similar as the 2nd wheel, as shown in the below figure. These wheels are the adjustable when there is no need of the third wheel then, it can be easily disassembled, according to our need .If we have to travel 5 to 6 person or if we have to transmit the goods from place to another place, then the third wheel can be easily assembled with the bolt system without help of any mechanic. After the assembling the third wheel, now we putt the 2nd part of seat over them according to our need otherwise the upper frame is used as the carrier of goods.

Fig.7. 2nd wheel assembly

Fig.8. 3rd wheel with frame and suspension

Fig.9. 3rd wheel arrangement in bike

Fig.10. 2nd and 3rd wheel arrangement view

Fig:- Arrangement of suspension, frame & wheel

B. Arrangement of sheet

Here we are used sheet of foam on the upper frame of body for the sitting purpose. The foam is divided in two parts, 1st part is fixed and other part is removal. The second part of the seat is attached over the third wheel frame When we want anything or goods for transportation purpose then we replace the 2nd seat by the carrier for carrying the goods

Fig.11. Arrangement of sheet

Purpose

1) By this bike, we can travel 5-6 people at a time.
2) Less fuel consumption rather than two bike for the same distance.
3) We can also carrying the goods by removing the 2nd seat.

Fig.12. View of 6people can travel easily

Comparisons

Ordinary Bike	3 Wheels Bike
1) In ordinary bike 2 wheels are present.	1) In this bike 3 wheels are present.
2) By ordinary bike only 2-3 person can travel at a time.	2) On this bike 5-6 person can travel at a time.
3) The ordinary bike mainly use for human travelling purpose.	3) This bike is also use for carrying the goods for Transportation purpose.

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