

# Automotive Safety Ignition Mechanism

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## Abstract

Typical picture of the latest auto revolution is busy road with speed cars and blazing noise. Improved requirement for safety of man and machinery is growing with the vehicle population, exclusively 2 wheelers, which are at greatest risk from accidents. Every day, over 1000 individuals die due to accidents worldwide. One example is a side-stand in double-wheelers, where precaution must be taken. Simple carelessness not to pull back the side stand can harm lives and property enormously. This issue has led us to come up with an adequate solution. To prevent a malfunction, we have chosen to create a security system. The concept of our project is to develop a side-stand that stops the car from starting unless the stand has been detached. The stand is attached to a switch & some electrical wiring is changed. This could be the easiest & most economical way to prevent neglect not to pull the stand up. The design benefit is that it can be utilized in two wheelers of all kinds. Using this method for motorcycles, it is possible to prevent accident triggered by simply human neglect not to pull side stand back and to provide the rider and his property with security.

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## I. INTRODUCTION

Transport plays an important role in this technological age and cars are therefore used in abundance. Today we individuals depend on cars to move 100 meters from our homes. We learners enjoy cycling in particular and they are of course a significant component of road transport automobiles. This also leads to a big number of accidents nowadays. Our document will therefore deal with the bicycles and their riders' security system [1], [2].

The automotive/locomotive commerce is also rapidly developing as an economic pillar by continuously improving economy and people's living standards. Car ownership has spread swiftly

in China in contemporary years. Cars aren't luxury anymore. China has reached 140 M vehicles/cars in 2014, representing 2 percent of total residents, according to scientific figures. Late in 2013, 137 million marks broke down, nearly 5.7 times the size of the vehicle ten years ago [3], [4].

The intensive usage of cars/vehicles has also brought us some negative effects, such as traffic congestion, environmental pollution and traffic accidents, where cars have brought efficient growth into our society and fast growing into our economy. Among these are the utmost general, leading to greater casualties and most damage caused by traffic accidents [5].

In this busy century, many accidents happen and most deaths are instigated by cycling crashes. Most of the cycling misfortunes are because of carelessness and negligence by people, such as removing the bicycle stand etc.[6], [7].

First, once clutch is applied, the stand can be removed automatically. Whenever the geared vehicles are started, they cannot be shifted unless we alter the equipment by seizing. The stand therefore robotically proceeds to its original position because the clutch must be employed to first move the car. The second is to block the gear rod unless the stand has been pulled back. It's also like this because we can't move the bicycle without altering the equipment. The stand must be pulled back so that the bicycle moves, i.e. changes its equipment[8]–[12].

For instance, a radar warning system prevents or moderates the rear–end collision, one of our most damaging and daily events. In latest years, interest in developing high-tech crash countermeasures has resurged; potentially due to important improvements in electronics miniaturisation[13], [14].

Both techniques have equal disadvantages: The foremost shortcoming is that it may not be applied to cars with a seizure, but clutches are eliminated in the name of technological growth, as in TVS JIVE instances. However, for cars with a changing gear forward or backward may be employed only in the second situation. So, both in the first and second cases, it may be realised that they may only be employed when they are a geared vehicle, but now, the equal amount of gearless cars in few towns/cities is visible & the explanation to their problem still needs to be found[15]–[17].

Our concept is to avert the car from starting when it is not pulled back. We block the circuit of the CD device & ignition system in our technique. A click switch is used to connect its lines to the overhead circuit. When the stand isn't retracted, the turning button is in ON place and when the

stand is retracted, in OFF position. The switch was associated with stand when it was not retracted, thus creating it conceivable. Thus, when the stand is not retracted, the circuit that connects the CD to the ignition system is blocked and thus prevents the driver from starting the car by kick-start or by the self-start technique[18]–[20].

## II. DESIGN

At present, bad weather traffic accidents have drawn the attention of the public and highlighted the problems of car safety. According to data obtained in China from deaths from different types of car accidents in 2004, turnover was approximately 60%, compared to about 20% for car crash, the collision object fell to 10% & 20%. Annually the death rate among car crashes rose, with the death rate being the highest of bike accidents.

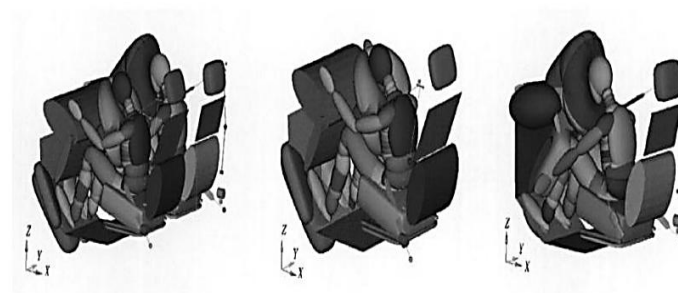


Figure 1. Collision Simulation

US NHTSA figures show that incidents with roll-over are a major form of fatal accidents. In 2014, 33 percent of the entire amount of losses were caused by travellers killed by roll over in US.

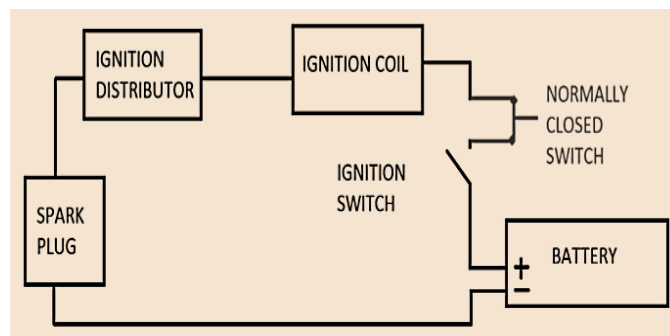


Figure 2. Mechanism Representation

### III. FEATURES OF THE PRESENT MECHANISM

In 1886 the first car in history was invented by Carl Benz, the famous German inventor, who had so far lasted almost 130 years to reform and develop the automotive/locomotive industry. In interim, cars have spread throughout the world/globe & quickly reached the global economy & the everyday existences of people & have become the most important & supreme prevalent technique of conveyance for people.

In contemporary years, nevertheless, traffic safety has developed gradually critical due to rapid popularization of vehicles. The recent World Disaster Report notes that nearly many people die each year from road accidents. Because of traffic misfortunes in evolving countries, the world is losing up to 3,000 billion dollars. The protection of vehicles is therefore of great significance in expressions of protection for passengers.

The primary benefit is that it is possible to use it in all categories of cars.

- The system costs are very small.
- Easy access to the parts.
- By applying this concept, the appearance of car is not changed.
- The aesthetic value of car is therefore preserved.
- It also familiarised without problems in already operating cars.

### IV. CONCLUSION

Thus by applying this method we can prevent bike accidents that are caused due to the negligence of bike rider to retract the stand before moving the vehicle. And also this is a cost efficient and easier method to instigate in the two wheelers and also in already running.

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