

# HUMAN ENTRAPMENT IN HEAVY VEHICLES

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## ABSTRACT

The objective of this project is to provide a safety guard before the wheels of the vehicle to avoid the human from run over and thereby saving the precious life of the mankind.

The design is independent and is aimed for heavy vehicles which can be tailored in future to suit different vehicles and can be extended to other four & two wheelers also. It is a front mounted design and helps to prevent anything from being caught under the rotating wheel and thereby preventing accidental run over.

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## INTRODUCTION

Road accidents are undoubtedly the most frequent and, overall, the cause of the most damage. The reasons for this are the extremely dense road traffic and the relatively great freedom of movement given to drivers. Accidents involving heavy goods vehicles occur all too frequently despite calls for responsible behavior, for respect of the loading regulations and the highway code, as well as the obligation for drivers to adapt their speed, which affects stopping distances, to the traffic and weather conditions.

The prevention of road accidents is also extremely important and will be ensured by strict laws, by technical and police controls, ongoing training for drivers and, if need be, by legal and administrative penalties for those responsible.

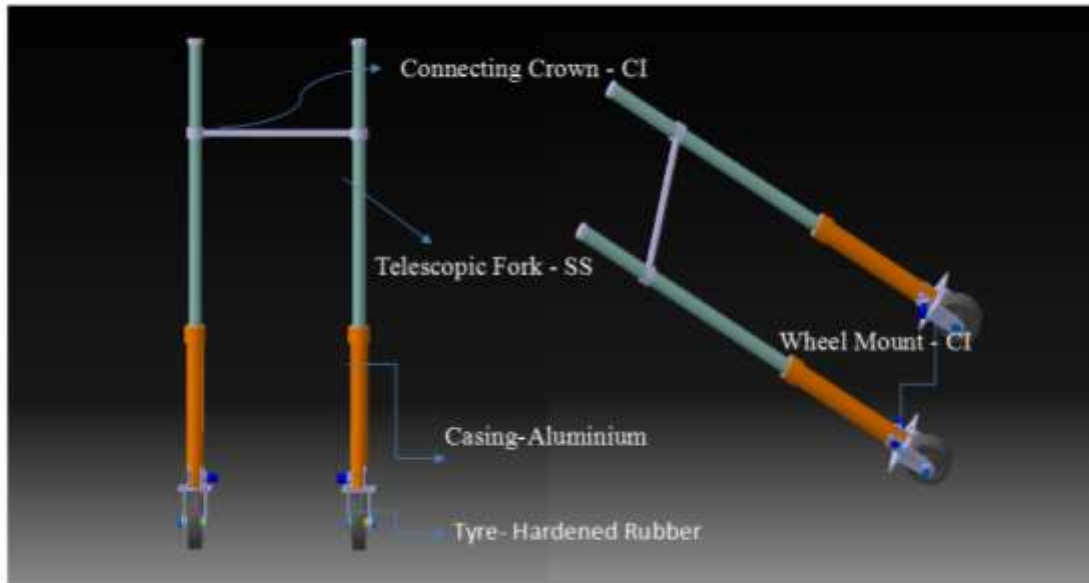
Road accidents are one of the biggest cause of deaths on Indian roads. As per media statistics, in India one person is killed in a road accident every four minutes.

## OBJECTIVE

Our project is mainly for the accidents caused by run over of vehicle on a human. We mainly concentrate on our project to reduce the contact between the wheel of the vehicle and the victim so that it gives enough time for the driver to realize the situation and apply brakes to stop the vehicle.

When the accident happens the driver apply the sudden brake, but due to the inertia the vehicle still may drag due to inertia, which gives no time for the victim to escape from trapping under the wheel.

## DRAWING



## WORKING

It is designed as a precaution guard which will be placed in front of the wheels as a deflector or as a preventing barrier between the victim and the wheels. The shield is a guard with mesh design and with pair of wheels which will be moving along with the wheels as in the case of trainer wheels in children bicycle.

As and when any persons falls and is about to caught under the wheels, the guard just pushes them away from the wheels and also keeps them out of the vehicle due to its angled alignment.

It is fit to the chassis of the vehicle using a frame. The frame has been designed based on the width of the wheel.

It extends from chassis to the road in parallel and angled forwardly to the wheels with pair of rollers at its end.

The rollers are used for moving our system in parallel to the wheel along the vehicle's direction by having contact with the road all along the movement of the vehicle.

## LITERATURE REVIEW

1. McFarland Baird, J.D., Flamboe, E.E. An historical overview of research in traffic accident investigation activities. in:
2. SAE Paper 75081. Society, R.A. The epidemiology of motor vehicle accidents. Journal of the American Medical Association. 1962.
3. Norman, L.G. Road Traffic Accidents—Epidemiology, Control and Prevention. in: Public Health Papers. 12. World Health Organisation, Geneva; 1962.

4. (Brisbane, Australia)Jamieson, K.G., Tait, I.A. Traffic injury in Brisbane: report of a general survey.National Health and Medical Research Council Special Report Series. 1966.
5. DOKITA. Accident prevention: A symposium organized by the Department of Preventive and Social Medicine, University College Hospital, Ibadan, Nigeria. DOKITA. 1965.
6. Adeloye, A., Odeku, L.E. The pattern of road traffic accidents seen at the University College Hospital, Ibadan, Nigeria: A preliminary study. West African Medical Journal. 1970.
7. Omotola, E.L. Road traffic accidents in the Western state: Medical Association Symposium on Trauma; Ibadan. Quoted by Oyemade (1973). Nigerian Medical Journal. 1967.

#### CONCLUSION

Hence, by implementing this system, large amount of human lives can be saved. It can avoid and stop entrapment of human beings into the heavy vehicles wheel. This design can be further enhanced to include features to avoid human entrapments, which is under study. So we conclude that, it will be of a better advantage to save the people.

