(19) INDIA

(22) Date of filing of Application :23/03/2020 (43) Publication Date : 24/09/2021

## (54) Title of the invention: APPARATUS FOR TIGHTENING/LOOSENING LUG NUTS

(51) International classification	:B60B0007140000, G01D0005200000, C25D0007040000, B60B0029000000, D06F0037060000	(71)Name of Applicant:  1)CGC Technical Campus Jhanjeri Address of Applicant: State Highway 12A Jhanjeri, Sahibzada Ajit Singh Nagar, Punjab 140307, India. Punjab India (72)Name of Inventor:
(31) Priority Document No	:NA	1)Virat Saroop
(32) Priority Date	:NA	-,
(33) Name of priority country	:NA	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number Filing Date	:NA :NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	
(57) 11		-

## (57) Abstract:

An apparatus for tightening or loosening lug nuts, comprise of a bevel gear 1 having a paddle unit 2, wherein the unit is rotated by a user, at least one sun gear 3 (i.e. teeth 24, material: nylon) that gets rotated by motion generated by the paddle unit 2, wherein the sun gear 3 have multiple number of teeth engraved in inner circumference, multiplicity of shafts 7 that rotates along with rotation of the sun gear 3via the teeth, multiple fastens linked with lug nuts of an automobile wheel 6, wherein the rotation of shafts 7 rotates the fastens, thereby tightening or loosening the lug nuts without the use of electricity, a circular plate 5 is affixed on the wheel 6 having multiple ball bearings to connected to the fasteners 4 and plate 5, wherein the bearings restricts rotation of the plate5, thereby reducing chances of breakage of the shaft?

No. of Pages: 12 No. of Claims: 8