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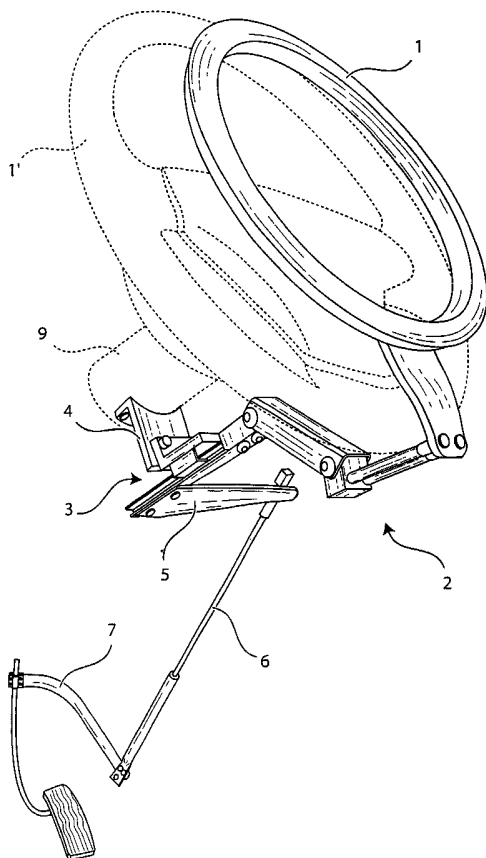
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- (71) Applicant (for all designated States except US): GUIDOSIMPLEX SNC DI GIANCARLO VENTURINI & C. [IT/IT]; Via Del Podere S. Giusto, 29, I-00166 Roma (IT).
- (72) Inventor; and (75) Inventor/Applicant (for US only): VENTURINI, Sandro

[Continued on next page]

(54) Title: DEVICE FOR MANUAL ACCELERATION PROVIDED ABOVE THE STEERING WHEEL

(57) Abstract: The invention relates to device for manual acceleration providing a transmission of the acceleration force acting outside the steering wheel (11) operating range.



WO 2004/050412 A1



SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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## DEVICE FOR MANUAL ACCELERATION PROVIDED ABOVE THE STEERING WHEEL

5           The present invention relates to a device for manual acceleration, particularly a device for manual acceleration provided above the steering wheel.

          More specifically, the invention concerns a device of the above kind allowing to obtain an optimum manual action acting on a wheel  
10 provided above the vehicle steering wheel.

          The solution suggested according to the present invention provides an acceleration device, comprised of a rotating wheel, concentric with respect to the steering wheel, that, by a force applied on one or more points of its circumference, allows to actuate the acceleration control of the  
15 internal-combustion engine (gasoline or diesel) of every kind of vehicle, by a direct mechanical coupling.

          It is therefore specific object of the present invention a device for manual acceleration providing a transmission of the acceleration force acting outside the steering wheel operating range.

20           Particularly, said manual acceleration device is characterised in that a rotating wheel element is provided above the steering wheel, and in that means are provided for the transmission of the motion from said wheel element to the acceleration pedal of the vehicle, said means for transmitting the motion being provided outside the steering wheel  
25 operating range.

          Preferably, according to the invention, said means for transmitting the motion from said wheel element to the acceleration pedal of the vehicle are comprised of mechanical means.

30           Always according to the invention, said mechanical means for the transmission of the motion from said wheel element to the acceleration pedal of the vehicle comprise support means for the wheel element, linear guide means, thrusting guide means, a lengthened thrusting element and the accelerator pedal.

35           Particularly, according to the invention, said support means of the wheel element can be comprised of an angularly adjustable support bracket.

          Preferably, said mechanical means for the transmission of the motion from said wheel element to the acceleration pedal of the vehicle

comprise a support bracket, a linear guide, a bracket, a thrusting rod and a coupling to the acceleration pedal.

Still according to the invention, coupling means are provided for coupling the acceleration device with the vehicle.

5 Particularly, said means for coupling the acceleration device with the vehicle can be comprised of a coupling U bolt between steering wheel rod and the device according to the invention.

10 The present invention will be now described, for illustrative but not limitative purposes, according to a preferred embodiment, with particular reference to the figure of the enclosed drawing, wherein it is shown a perspective view of the acceleration device according to the invention.

15 Making reference to the enclosed drawing, it is shown a device according to the invention, comprised of a rotating wheel 1, concentric with respect to the steering wheel 1', that, by the force applied in one or more points of its circumference, allows to operate the acceleration control of the internal-combustion engine (gasoline or diesel) of each vehicle, by a direct mechanical coupling.

20 The device according to the invention provides, beside the above-mentioned steering wheel 1', an angularly adjustable support bracket 2, the shape of which can be modified in function of the king of components of the direction element (steering wheel, column, etc.) and allows in each case to guarantee the perfect operation of the device.

25 Furthermore, a linear guide 3, a U bolt 4, for coupling between the steering wheel rod 9 and the acceleration device, a thrusting bracket 5, having as well a variable shape in function of the specific needing, are provided.

30 A thrusting rod 6, for transmitting the motion of the accelerator pedal 8, and a bracket 7 coupling said original accelerator pedal 8 and said thrusting rod are provided between said thrusting bracket 5 and the vehicle accelerator.

35 Simply exerting a pressure on a point of the acceleration wheel 1, a forward translation (toward the steering wheel 1') is obtained, thus obtaining the transmission of its motion to the acceleration pedal 8, by the kinematic chain suggested in the embodiment shown and comprised of the support bracket 2, of the linear guide 3, of the bracket 5, of the thrusting rod 6 and of the coupling 7 with the pedal 8.

The device according to the invention is further made integral with the steering wheel 1' by the U bolt 4 for coupling with the steering wheel rod 9.

5 Said wheel 1, installed on the upper part of the original steering wheel 1' and the bracket 2 does not prevent the possible outlet of the airbag provided inside the steering wheel.

It must further pointed out that the U bolt 4 could even not be coupled with the steering wheel rod 9, but with another point of the vehicle by suitable bracket(s).

10 In any case, transmission of the force occurs outside the steering wheel operating range.

15 The present invention has been described for illustrative but not limitative purposes, according to its preferred embodiments, but it is to be understood that modifications and/or changes can be introduced by those skilled in the art without departing from the relevant scope as defined in the enclosed claims.

## CLAIMS

1. Device for manual acceleration, characterised in that it provides a transmission of the acceleration force acting outside the steering wheel operating range.

2. Device for manual acceleration according to claim 1, characterised in that said manual acceleration device is characterised in that a rotating wheel element is provided above the steering wheel, and in that means are provided for the transmission of the motion from said wheel element to the acceleration pedal of the vehicle, said means for transmitting the motion being provided outside the steering wheel operating range.

3. Device for manual acceleration according to claim 1 or 2, characterised in that said means for transmitting the motion from said wheel element to the acceleration pedal of the vehicle are comprised of mechanical means.

4. Device for manual acceleration according to each one of the preceding claims, characterised in that said mechanical means for the transmission of the motion from said wheel element to the acceleration pedal of the vehicle comprise support means for the wheel element, linear guide means, thrusting guide means, a lengthened thrusting element and the accelerator pedal.

5. Device for manual acceleration according to claim 4, characterised in that said support means of the wheel element are comprised of an angularly adjustable support bracket.

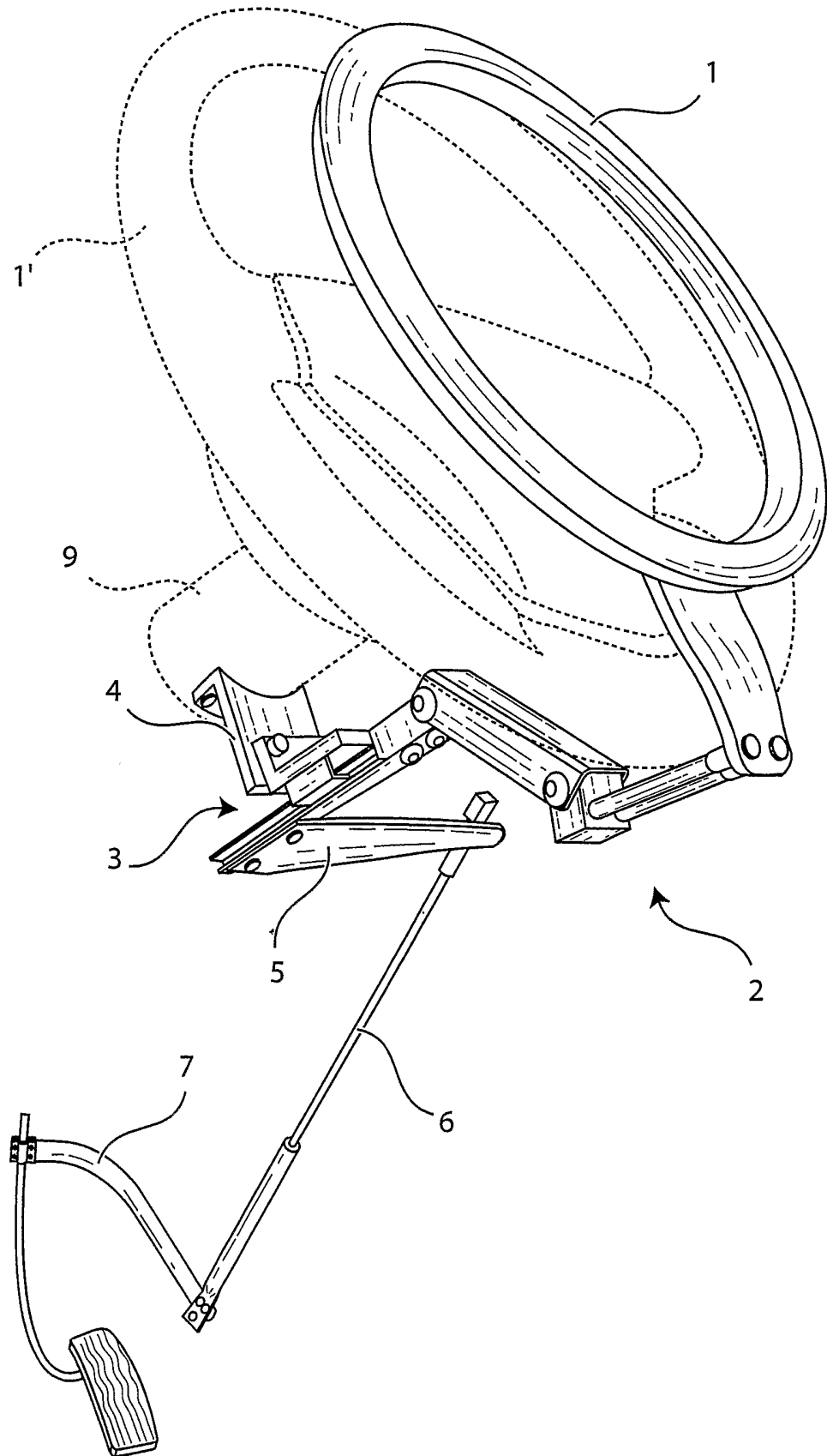
6. Device for manual acceleration according to claim 4 or 5, characterised in that said mechanical means for the transmission of the motion from said wheel element to the acceleration pedal of the vehicle comprise a support bracket, a linear guide, a bracket, a thrusting rod and a coupling to the acceleration pedal.

7. Device for manual acceleration according to each one of the preceding claims, characterised in that coupling means are provided for coupling the acceleration device with the vehicle.

8. Device for manual acceleration according to claim 7, characterised in that said means for coupling the acceleration device with the vehicle are comprised of a coupling U bolt between steering wheel rod and the device according to the invention.

9. Device for manual acceleration according to each one of the preceding claims, substantially as illustrated and described.

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**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 B60K41/00

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 B60K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 26 15 005 A (VENTURINI GIANCARLO) 28 October 1976 (1976-10-28) page 3, line 20 - page 4, line 2 figures	1-4,7,9
Y		5
A		6,8
Y	US 3 373 628 A (MORTIMER GEORGE H ET AL) 19 March 1968 (1968-03-19) column 2, line 32 - line 62 figures	5
X	EP 0 114 673 A (GIANINI BRUNO) 1 August 1984 (1984-08-01) abstract figures	1-5,9
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Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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- \*&\* document member of the same patent family

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European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Vermander, W

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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