

T. L. KENNEDY.
GEAR CASE.
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932,784.

Patented Aug. 31, 1909.

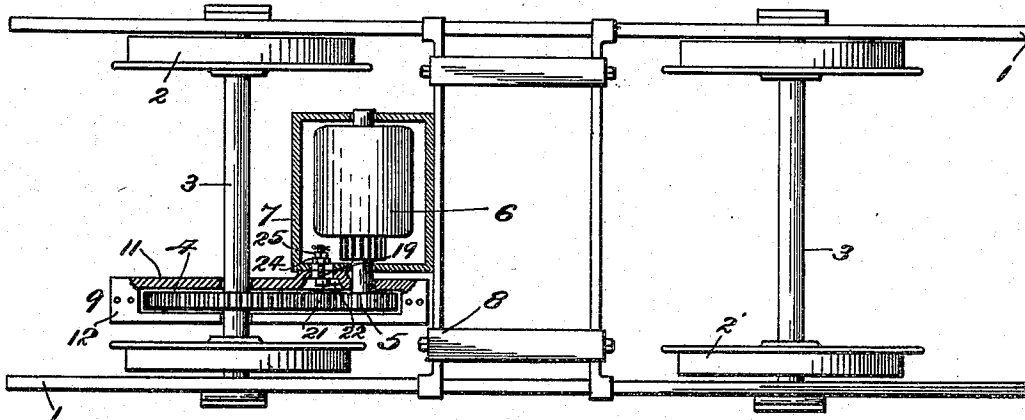


Fig. 1

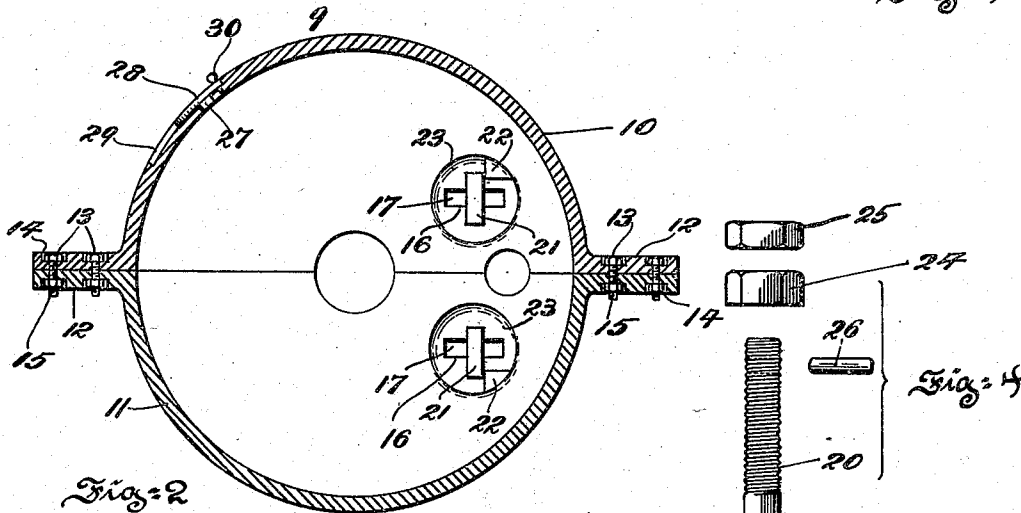


Fig. 2

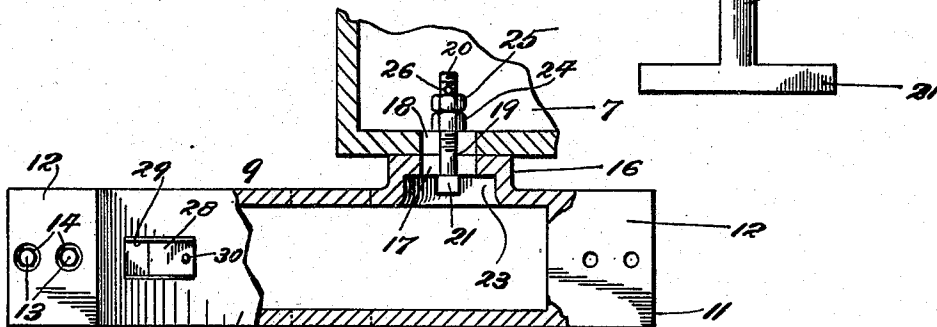


Fig. 3

WITNESSES:

W. E. Eastlack
Frank C. A. Lorne

INVENTOR.

Thomas L. Kennedy
BY *William B. Jackson*
ATTORNEY.

UNITED STATES PATENT OFFICE.

THOMAS L. KENNEDY, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-THIRD TO ANNE F. YERGER AND ONE-THIRD TO JOHN MCCLINTOCK, JR., BOTH OF PHILADELPHIA, PENNSYLVANIA.

GEAR-CASE.

932,784.

Specification of Letters Patent. Patented Aug. 31, 1909.

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To all whom it may concern:

Be it known that I, THOMAS L. KENNEDY, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Gear-Cases, of which the following is a specification.

Under the present construction of gear cases as used upon traction vehicles, the lug bolts that secure the gear casings to the motor frame are frequently broken by reason of the jolts and jars of the car. These bolts as at present used are screwed through the motor frame into the gear case. Consequently when these bolts break, it is necessary to send the car to the repair shop and bore out the broken part of the bolt remaining in the motor frame and gear case, which obviously throws the car out of commission for some length of time and further is a tedious and expensive way of repairing the break.

The principal object of the present invention is to overcome the above described disadvantageous features and to provide means for securing the parts of the gear case to a motor frame of simple construction, cheap of manufacture and efficient in use.

A further object of the present invention is to provide means whereby the parts when broken may be expeditiously removed and new parts inserted without sending the car to the repair shops.

Other objects relate to details of construction as will be more fully described hereinafter.

The invention consists in the improvements hereinafter described and finally claimed.

The nature, characteristic features and scope of the invention will be more fully understood from the following description taken in connection with the accompanying drawings forming part hereof and in which:

Figure 1, is a top or plan view partly sectioned of so much of a truck of a traction vehicle as is necessary to the understanding of the invention. Fig. 2, is a central sectional view illustrating the gear case of the invention. Fig. 3, is a view in plan of the same partly sectioned and Fig. 4, is a view in elevation of certain of the parts shown in the foregoing figures and being in dis-assembled position.

Referring to the drawings and more especially to Fig. 1, there is illustrated a truck frame 1, shown as being equipped with traction wheels 2, mounted upon axles 3. Carried by the axles 3, is a gear wheel 4, that meshes with a gear 5, mounted upon the shaft of the motor 6. The motor 6, is contained within a motor box 7, carried by the frame 8, of the truck 1, in a well understood manner. Covering the gears 4, and 5, is a two-part gear casing 9, shown as comprising a pair of generally hemispherical sections 10, and 11, provided with flanges 12, that abut and are secured together by means of bolts 13. As clearly illustrated in Fig. 2, these flanges 12, are countersunk as at 14, for the reception of the bolt heads and securing nuts, the bolt ends extending beyond one of the flanges 12, and being equipped with cotter pins 15. Such a construction serves to prevent the securing nuts from loosening by virtue of the jars referred to the gear casing.

The sections 10, and 11, of the gear casing are each provided with a hollow circular extension 16, that project beyond the gear case sections and abut against one of the walls of the motor frame 7, as clearly illustrated in Figs. 1, and 2. As shown the said hollow extensions 16, are horizontally slotted as at 17, as is also the motor frame as at 18. Adapted for passage through the said slots 17, and 18, by way of the motor box 7, is a generally T-shaped bolt 19, comprising a threaded shank 20, carrying a head 21. This T-bolt when inserted is turned so that its head 21, is arranged crosswise of the slot 17, and abuts against a lug or stop 22, located within the recessed portion 23, of the extensions 16, and a securing nut 24, and a lock nut 25, are screwed to place upon the threaded part 20, of the bolt 19, thus firmly clamping to place the gear casing with respect to the motor frame. A cotter pin 26, is then applied to the end of the bolt 19, to prevent the nuts 24, and 25, becoming loose during the jarring of the vehicle parts. By such a construction it will at once be apparent that should the bolt 19, become broken the parts may be readily removed and new ones inserted in a very few moments without the necessity of the car going to the repair shops. As shown in Figs. 2, and 3, the section 10, of the gear casing 9, is provided with a lubricating aperture 27, covering which is a slide

28, adapted for travel within the grooved portion 29, of the said section 10. Use may be made of a movable pin 30, if desired to lock the cover 28, to place with respect to the gear case section 10.

What I claim is:

1. In combination a support, a gear case the wall thereof having an extension abutting against said support, said extension being provided with a slot and a T-bolt for securing the case with respect to the support the head of said bolt being arranged crosswise of said slot.

2. In combination a support, a gear casing the wall thereof having a circular extension abutting against said support, said extension being provided with an elongated slot and a T-bolt for securing the casing with respect to the support the head of said bolt being arranged crosswise of said slot.

3. In combination a support, a gear casing the wall thereof having an extension abutting against said support, the outer wall of said extension being provided with an elongated slot, and a T-bolt for securing the casing with respect to the support, and means carried by said extension for locking the bolt against rotation.

4. In combination a support, the wall of which is slotted, a gear case, the wall thereof having a recessed portion abutting against said support the wall of said recessed portion being slotted and a T-bolt passing through said slots and having its head arranged crosswise thereof and within said recessed portion and means carried at the opposite end of said bolt for locking the parts together.

5. In combination a support, the wall of which is slotted, a gear casing, the wall thereof having a recessed portion abutting against said support, said recessed portion being slotted, and a bolt having a generally

flattened head passing through said slots and having its head arranged crosswise thereof and within the recessed portion, and means for locking the bolt with respect to the casing and support.

6. In combination a support, the wall of which is slotted, a gear casing, the wall thereof having a recessed and slotted portion, a bolt having a generally flattened head adapted for passage through said slots, and having its head arranged crosswise of the slots, means for locking the bolt with respect to the casing and support and means for locking the bolt against rotation.

7. A gear case comprising a pair of members the walls thereof having recessed and slotted extensions, countersunk flanges for said members, bolts and nuts therefor, the heads and nuts of which lie within the countersunk portions, and cotter pins for said bolts.

8. A gear case comprising a pair of members the walls thereof having recessed and slotted extensions, one of said members having a lubricant opening, flanges for said members, bolts and nuts for the flanges, cotter pins for the bolts, and a movable cover for closing said opening.

9. In combination a gear case, the wall thereof having a recessed portion, said wall being slotted adjacent to said recessed portion, a support, a removable securing device passing through said slot and provided at one end with a stop that lies within said recess, and means for locking said device to the support.

In testimony whereof I have hereunto signed my name.

THOMAS L. KENNEDY.

Witnesses:

FRANK KENNEDY,
A. F. YERGER.