

I. R. SHOCKEY.

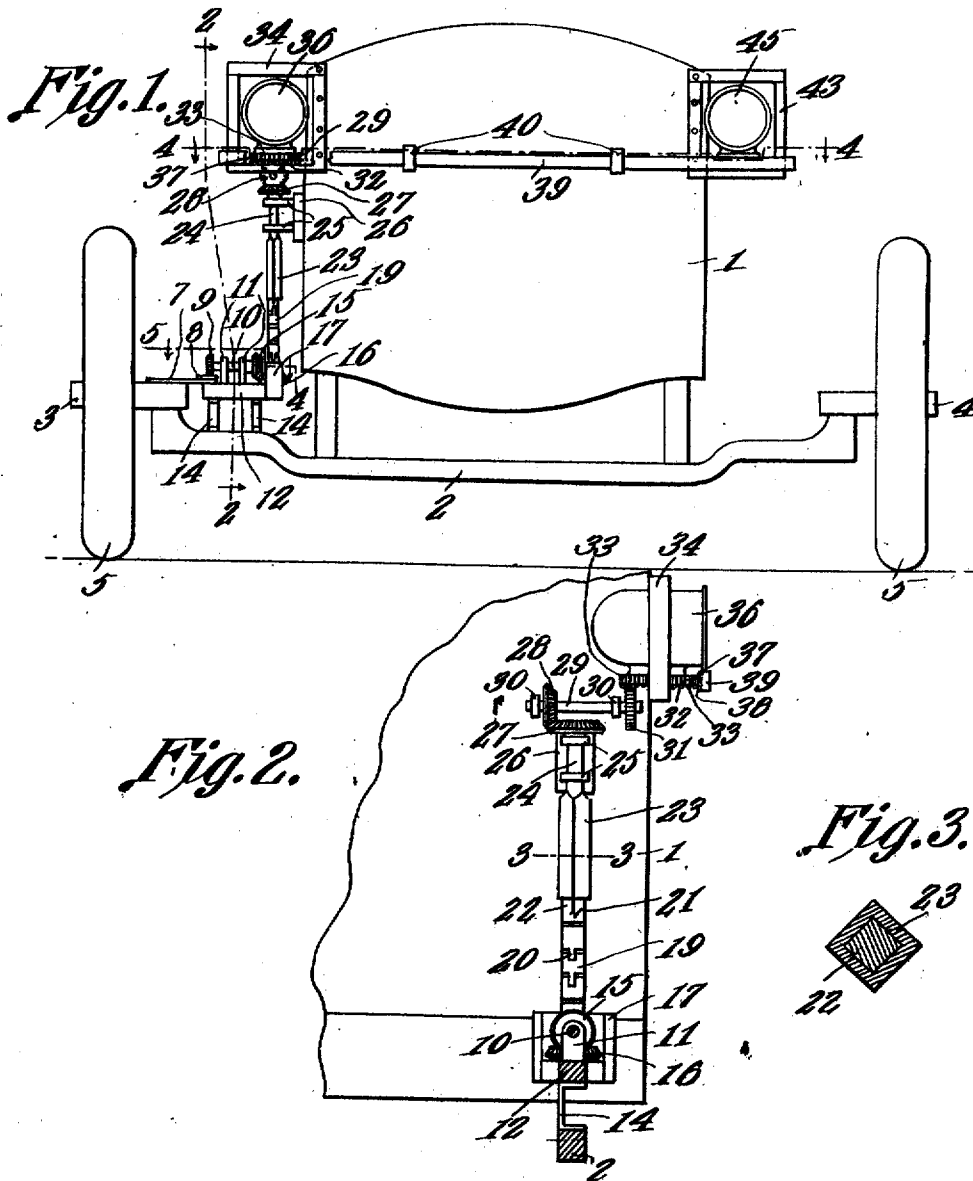
LAMP SHIFTER.

APPLICATION FILED MAY 20, 1911.

Patented Sept. 26, 1911.

2 SHEETS-SHEET 1.

1,004,484.



Witnesses

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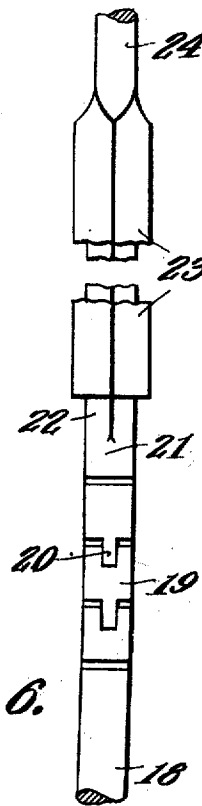
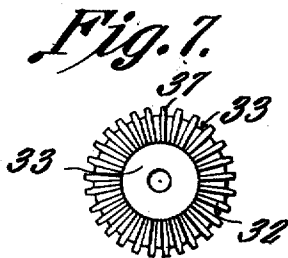
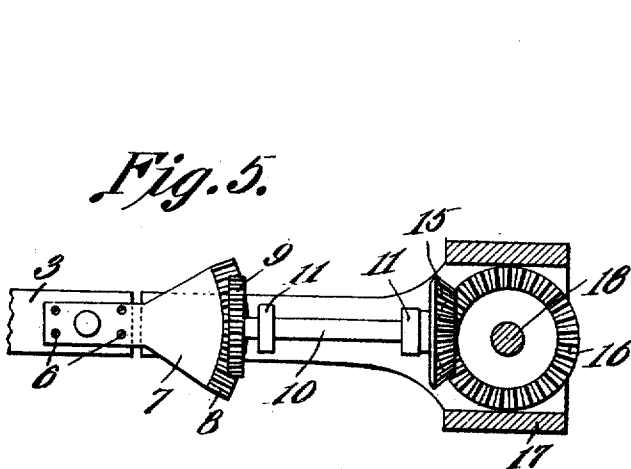
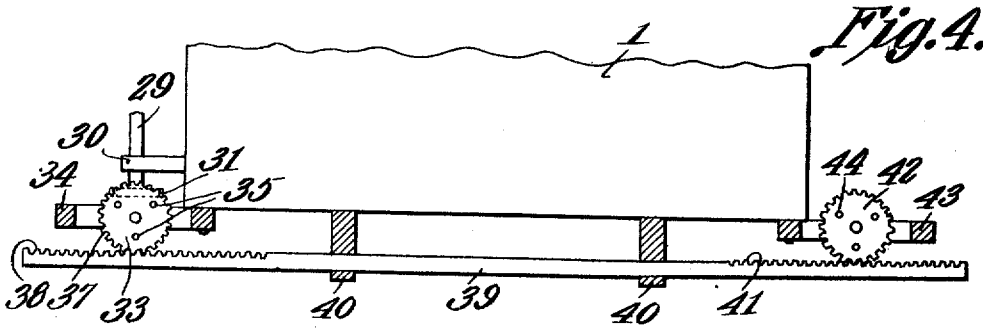
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UNITED STATES PATENT OFFICE.

IVON R. SHOCKEY, OF PAULTON, PENNSYLVANIA.

LAMP-SHIFTER.

1,004,484.

Specification of Letters Patent.

Patented Sept. 26, 1911.

Application filed May 20, 1911. Serial No. 628,373.

To all whom it may concern:

Be it known that I, IVON R. SHOCKEY, a citizen of the United States, residing at Paulton, in the county of Westmoreland and State of Pennsylvania, have invented a new and useful Lamp-Shifter, of which the following is a specification.

It is the object of the present invention to provide a device adapted to connect the movable axle end of a vehicle, operatively, with a vehicle-carried, rotatable lamp, in such a manner that when the vehicle axle is shifted, to permit the vehicle to round a curve, the lamp will be rotated, to project the light in the direction in which the vehicle is turning.

A further object of the invention is to provide novel means for connecting the lamp operatively with axle-carried mechanism for rotating the lamp, in such a manner that the vertical movement of the vehicle body upon the springs, will be ineffective to injure the lamp.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings,—Figure 1 shows in front elevation, a vehicle equipped with the device of my invention, parts being broken away; Fig. 2 is a section upon the line 2—2 of Fig. 1; Fig. 3 is a section upon the line 3—3 of Fig. 2; Fig. 4 is a section upon the line 4—4 of Fig. 1; Fig. 5 is a section upon the line 5—5 of Fig. 1; Fig. 6 is an elevation of the drive shaft; and Fig. 7 is a bottom plan of the lamp-carrying pinion.

In the drawings, the body of a vehicle is shown, and denoted generally by the numeral 1, the numeral 2 denoting the front axle, the numerals 3 and 4 denoting the movable axle ends, and the numeral 5 denoting the wheels which are carried by the axle ends 3 and 4.

Removably united, as shown at 6 with the movable axle end 3, is a horizontally disposed segment 7, having upon its upper face, and at its inner end, a rack 8, adapted to mesh into a vertical pinion 9, secured to a horizontal shaft 10, journaled for rotation

in bearings 11, forming a part of the bracket 12, the bracket 12 being supported upon the axle 2 by means of channel standards 14, or in any other desired manner. At its inner end, the shaft 10 is equipped with a vertical, beveled pinion 15, meshing into a horizontal, beveled pinion 16, located within an open head 17, formed upon the inner end of the bracket 12, the pinion 16 being secured to a vertical shaft 18, comprising a plurality of sections 19, located above the head 17 and tongue and grooved together as at 20, for pivotal union. The shaft includes, as its uppermost member, a stem 21, of polygonal cross section, as shown at 22, the stem 21 being adapted to register, for vertical sliding movement, but against rotation, in a head 23, formed at the lower end of a shaft 24, journaled for rotation in bearings 25, connected by means of a base plate 26, or in any other desired manner, with the vehicle body 1.

Secured to the upper end of the vertical shaft 24, is a horizontally disposed, beveled pinion 27, meshing into a vertically disposed, beveled pinion 28, carried upon a horizontally disposed, forwardly extended auxiliary shaft 29, journaled for rotation in bearings 30, carried by the vehicle body 1. At its forward end, the shaft 29 is equipped with a vertically positioned pinion 31, adapted to mesh into teeth 32, formed upon the lower face of a horizontally disposed pinion 33, journaled for rotation within an open frame 34, carried by the body 1 of the vehicle. In the upper face of the pinion 33, there are studs, or other suitable means, indicated conventionally at 35, which means are adapted to secure to the pinion 33, for rotation therewith, one of the lamps 36 with which the vehicle is equipped.

The pinion 33 is toothed at its periphery, as shown at 37, so as to mesh into a rack 38, formed in one edge of a horizontally disposed bar 39, mounted for longitudinal sliding movement in bearings 40, carried by the body 1 of the vehicle. At its opposite end, and adjacent the side of the vehicle which is remote from the operating mechanism, the bar or operating member 39 is equipped with another rack 41, adapted to mesh into a horizontally disposed pinion 42, journaled for rotation in an open bracket 43, similar to the bracket 39, the upper face of the pinion 42 carrying suitable means 44, adapted to engage with the other vehicle lamp 45, so

that the lamp 45 and the pinion 42 may rotate together.

The operation of the device as hereinbefore described, is as follows. It will be understood readily that, as is common and well known in the art, the movable axle end 3 is shifted by means of a suitable steering mechanism of any sort (not shown). When the axle end 3 is thus shifted, the segment 7 will be tilted likewise, the rack 8 of the segment 7 meshing into the pinion 9, and causing a rotation of the shaft 10, the pinion 15 of which, meshing into the pinion 16, will cause a rotation of the shaft 18. The shaft 18 and its accessory parts, will cause a rotation of the shaft 24, the pinion 27 of which, meshing into the pinion 28, will cause a rotation of the shaft 29. The pinion 31 which is upon the shaft 29, meshing into the teeth 32 in the lower face of the pinion 33, will rotate the pinion 33, and with the pinion 33, will rotate the lamp 36. When the pinion 36 is thus rotated, its peripheral teeth 37, meshing into the rack 38, will cause a longitudinal sliding movement of the bar 39, the rack 41 of which, meshing into the pinion 42, will cause a rotation of the pinion 42, and with the pinion 42 will rotate the other vehicle lamp 45.

Owing to the fact that the stem 21 of the driving shaft 18 is mounted for vertical sliding movement in the head 23 of the shaft 24, the body 1 of the vehicle will be free to reciprocate vertically, upon its supporting frame, without disarranging the operating mechanism whereby the lamps are turned about. Moreover, owing to the fact that the drive shaft 18 includes a plurality of pivotally connected sections 19, a lateral relative movement between the body 1 and the axle 2 may take place, without disarranging the operating mechanism.

Having thus described the invention, what is claimed is:—

1. The combination with an axle having a movable end, and a vehicle carried, rotatable lamp support, of a gear segment rigidly attached to the movable axle end; a shaft journaled for rotation upon the axle, and having a pinion adapted to mesh into the segment; and means for operatively connecting the shaft with the lamp support.

2. In a device of the class described, an upright driving member comprising polygonal telescoped parts, one of which is laterally flexible; means for connecting one of said parts with a vehicle axle; and means for connecting the other of said parts with

a rotatably mounted vehicle-carried lamp, whereby a shifting of the axle will effect a rotation of the lamp.

3. In a device of the class described, a gear segment; means for connecting the segment with the movable axle-end of a vehicle; an axle-supported shaft having a pinion adapted to mesh into the segment; an upright drive shaft consisting of polygonal, telescoped parts, one of which parts is laterally flexible; means for operatively connecting the upright shaft with the first mentioned shaft; and means for operatively connecting the upright shaft with a rotatably mounted, vehicle-carried lamp.

4. In a device of the class described, horizontally disposed pinions both toothed upon their peripheries and one upon its lower face; means for mounting the pinions in spaced relation upon a vehicle frame; means for securing a lamp to each pinion; a vehicle-carried, longitudinally movable operating member having racks adapted to mesh into the peripheral teeth of the pinions; a vehicle supported shaft having a pinion adapted to mesh into the teeth upon the lower face of said pinion; and means for operatively connecting the shaft with the movable axle end of a vehicle, whereby the shifting of said axle end will secure a rotation of the shaft.

5. In a device of the class described, a gear segment; means for securing the gear segment to the movable axle end of a vehicle; an upright, longitudinally extensible drive shaft; means for mounting the drive shaft for rotation upon the body of a vehicle; a secondary shaft; means for mounting the secondary shaft for rotation upon the axle of the vehicle; pinions upon the secondary shaft, meshing one into the gear segment and the other into a pinion upon the drive shaft; a lamp-carrying pinion; means for mounting the pinion for rotation upon a vehicle body; a supplemental shaft; means for mounting the supplemental shaft for rotation upon a vehicle body; and pinions upon the supplemental shaft, one of which meshes into the lamp-carrying pinion, the other of which meshes into a pinion upon the drive shaft.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

IVON R. SHOCKEY.

Witnesses:

J. J. MOORHEAD,

T. J. BROADHEAD.