July 24, 1934. H. C. NICKERSON 1,967,588

TRAVERSING APPARATUS

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Fig. 1.

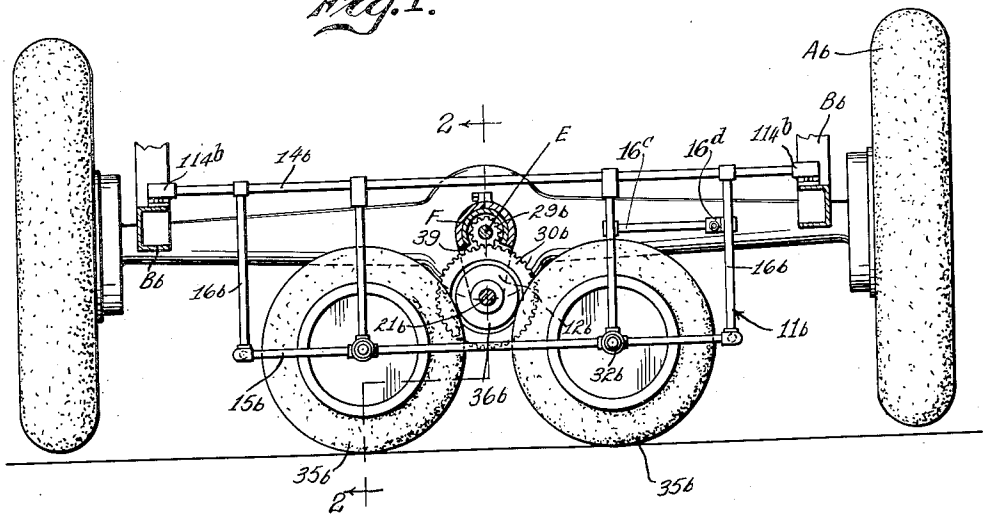
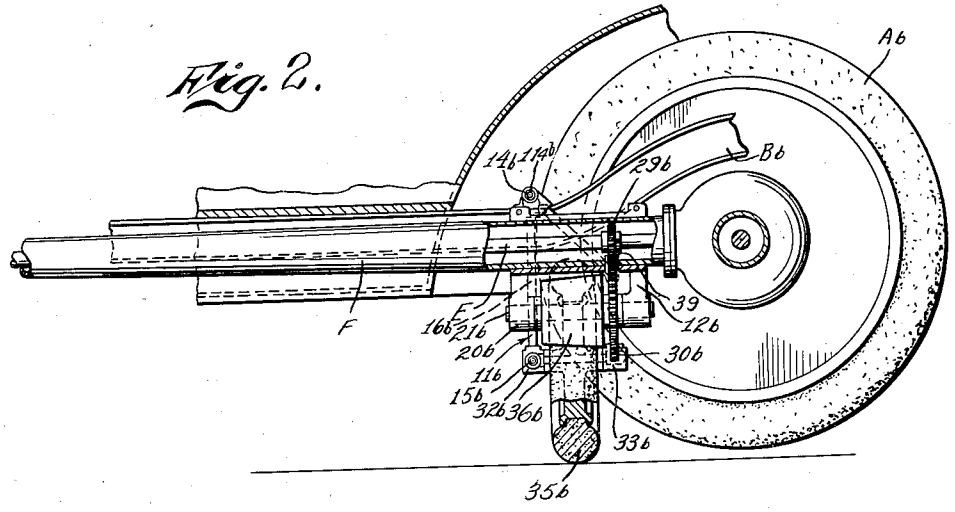


Fig. 2.



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TRAVERSING APPARATUS

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2 Claims. (Cl. 180—1)

This invention relates to vehicle traversing apparatus of the type employed, for example, in moving a vehicle laterally so that the vehicle may be conveniently parked, whether it be desired to park alongside of a curb or in some other location difficult of access by the ordinary method of manipulating the steering wheels.

An important object of the invention is simplicity of construction and operation.

Another important object is to provide a construction which will be assisted into operative position by the momentum driving the vehicle.

Another important object is to provide a construction in which power for operating the traversing wheels is taken directly from the propeller shaft.

Another important object is to provide, in one form of the invention, a construction that, though attached to the vehicle frame is effective in supporting the vehicle drive wheels so that said drive wheels will not cause such sagging of the springs as would entail raising of the frame to a much higher level in order to lift the drive wheels off of their supporting surface.

Other objects and advantages will appear in the subjoined detailed description.

The accompanying drawing illustrates the invention.

Fig. 1 is a vertical section through the rear end of the chassis of an automobile, looking rearwardly, and illustrating an embodiment of my invention, certain parts being broken away.

Fig. 2 is a vertical section taken about on the line 2—2 of Fig. 1, and further illustrating the parts shown in Fig. 1, certain parts being broken away.

In applying the invention to an automobile having the drive to the rear wheels, I provide a frame mounted to swing on a transverse axis, and this frame is normally held in a more or less elevated position. This frame carries traversing wheels and when it is desired to bring them into use the frame is dropped down to a substantially vertical position. When this occurs the traversing wheels will come onto the ground and raise the rear end of the automobile off of the ground. The two traversing wheels are driven off of a drum which may be driven from the drive shaft or propeller shaft of the automobile.

Referring more particularly to the parts, E indicates the propeller shaft of the car mounted in a torque tube F. On the rear portion of the propeller shaft E I provide a rigid pinion 29*b*, the lower edge of which projects downwardly through a slot 39 cut through the underside of the torque tube. On the torque tube I mount a bracket 12*b*, the upper end of which is in the form of a split sleeve that may be clamped on the torque tube. The lower portion of this bracket consists of two arms that extend downwardly and the ends of which also form bearings 20*b* for a shaft 21*b* that carries a drum 36*b*. This drum 36*b* is preferably of conical form with the large end of the cone disposed toward the rear for reasons that will be described hereinafter.

On the upper side of the side frames B*b* I provide small bearings 114*b* for a rock shaft 14*b*, and this rock shaft forms the upper member of a frame 11*b* which may be constructed of tubing and including a pair of parallel end bars 15*b* which are provided with bearings 32*b*, 33*b* at two opposite points equidistant from the vertical center line through the propeller shaft (see Fig. 1). These bearings 33*b*, 32*b* support the shafts 30*b* of two traversing wheels 35*b*.

The shaft 21*b* carries a rigid gear wheel 30*b* that meshes with the pinion 29*b* to drive the drum 36*b*.

The frame 11*b* includes bars 16*b* which are held in a vertical position when the traversing device is in use. (See Fig. 1.) A pair of these bars 16*b* are connected by cross head 16*c* (see Fig. 1) which forms a pivot for a sleeve 16*d* and this sleeve 16*d* is connected to an actuating rod that extends forwardly to a position near the driver to enable it to be conveniently operated at will.

When it is desired to use the traversing device the frame 11*b* is permitted to drop down so that the traversing wheels 35*b* will strike the ground. If this is done while the car is moving forward at a slow speed the momentum of the car will complete the downward movement of the frame 11*b* and lift up the rear end of the car so that the drive wheels A*b* are off the ground.

When this occurs the rubber tires of the traversing wheels come in contact with the drum 36*b*. The drive of the engine can then be put in to rotate the propeller shaft E in the proper direction and this movement will be imparted to the wheels 35*b* which will move the rear end of the car laterally toward the curb or away from the curb, as the case may be.

The drum 36*b* is preferably of tapered form so as to attain a wedging action when the traversing wheels are thrown back into position, insuring a good friction contact between the face of this drum and the treads of the traversing wheels.

It is understood that the embodiment of the invention described herein is only one of the many embodiments this invention may take, and I do

not wish to be limited in the practice of the invention, nor in the claims, to the particular embodiment set forth.

I claim:

1. A vehicle traversing apparatus comprising a frame, means to swingingly suspend said frame from the chassis of a motor vehicle so that said frame will swing longitudinally of the chassis, traversing wheels rotatably mounted in the frame, the axes of rotation of the traversing wheels being longitudinal of the chassis, a drum, means to rotatably support the drum from the torque tube of the vehicle in position to be engaged by the traversing wheels when the frame is lowered, and means to operably connect the drum with the propeller shaft of the vehicle.

2. A vehicle traversing apparatus comprising a frame, means for swingingly suspending said frame from the chassis frame of a motor vehicle so that the swinging frame will swing longitudinally of the chassis, traversing wheels rotatably mounted on the swinging frame, the axes of rotation of the traversing wheels being longitudinal of the chassis, a drum, means rotatably supporting the drum from the torque tube of the vehicle in position to be engaged by the traversing wheels when the frame is lowered, and means including gearing for connecting the drum with the propeller shaft of the vehicle.

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