L. H. BERRY.

AUTOMOBILE JACK.

APPLICATION FILED DEC. 8, 1917.

1,281,275.

Patented Oct. 15, 1918.

2 SHEETS—SHEET 1.

Fig. 1.

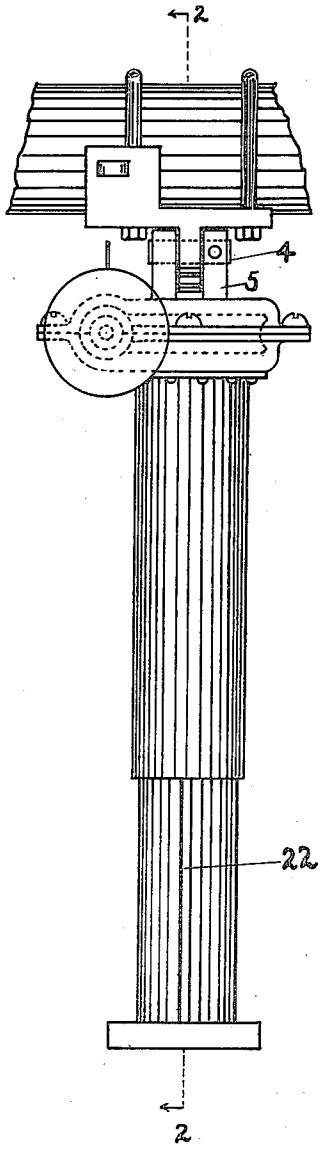
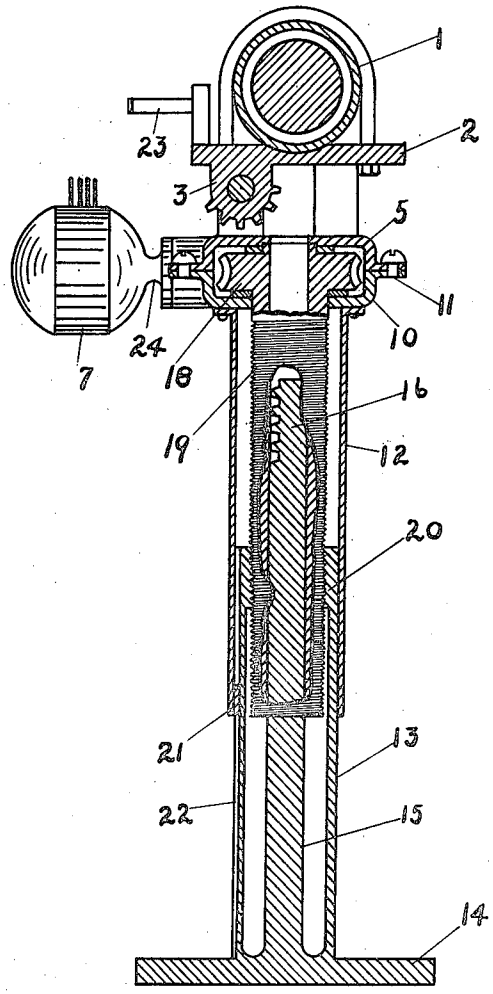



Fig. 2.




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2 SHEETS—SHEET 2.

Fig.3.

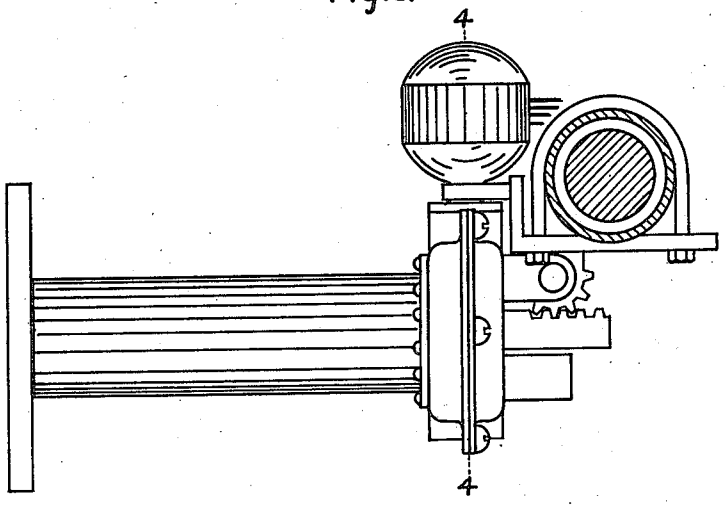



Fig.4.

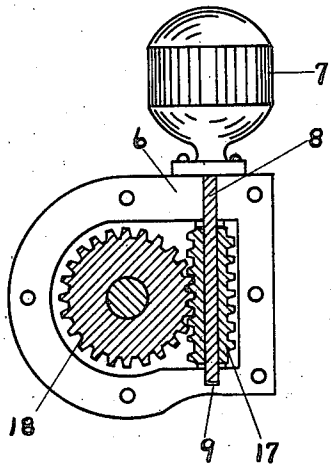
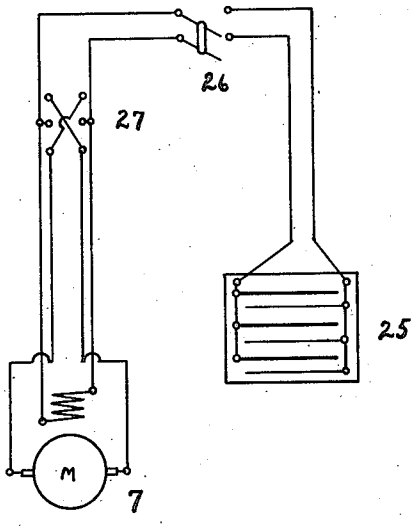



Fig.5.




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# UNITED STATES PATENT OFFICE.

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## AUTOMOBILE-JACK.

1,281,275. Specification of Letters Patent. Patented Oct. 15, 1918.

Application filed December 8, 1917. Serial No. 206,343.

*To all whom it may concern:*

Be it known that I, LOUIS H. BERRY, a citizen of the United States, and a resident of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Automobile-Jacks, of which the following is a specification.

One object of my invention is to provide an improved form of jack that may be carried on the chassis of an automobile, and provide also means for operating the jack so as to lift a portion of the chassis to which it is applied without any hand manipulation of the jack.

Another object of my invention is to provide simple and efficient means for locking the jack in an extended position.

A third object of my invention is to provide simple means for locking the jack in a carrying position.

With these and incidental objects in view, the invention consists of certain novel features of construction and combination of parts, the essential elements of which are hereinafter described with reference to the drawings which accompany and form a part of this specification.

In the drawings Figure 1 is a rear view of my improved jack as applied to an automobile. Fig. 2 is a section taken on the line 2—2, Fig. 1. Fig. 3 is a rear view of the jack in its carrying position. Fig. 4 is a section taken on the line 4—4, Fig. 3, and Fig. 5 is a wiring diagram of the electrical circuit used in operating the jack.

Carried on the axle housing 1, Fig. 2, by any suitable means, is a base 2, having a quadrant 3 formed of an integral part thereof.

Hinged at 4, Fig. 1, to the base 2, is a casting 5 forming the upper half of a worm gear casing and having a portion 6, to which is fastened, by screws or bolts, an electric motor 7, the shaft 8 of the motor extending through the portion 6 in which it is journaled, and into the farther side of the casing at 9, where it is also journaled.

The lower half 10 of the worm gear casing, carries the other half of the bearings, and the two halves are fastened together by suitable screws 11.

Riveted to the lower half of the casing 10 is a sleeve 12 in which is slidably mounted a sleeve 13 carrying a foot 14 and a central tongue 15 having a rack 16 on the upper end thereof.

The shaft 8 has keyed or otherwise suitably fastened thereto a worm 17 co-acting with a worm gear 18 forming the head of the screw 19. This screw engages with a nut portion 20 of the sleeve 13, and a key 21 and keyway 22 are provided to prevent the rotation of the sleeve 13 with respect to the sleeve 12.

It is evident that if the motor 7 is actuated the worm will turn the gear, which is a part of the screw 19, and screw the nut 20 up or down on the screw 19, thereby raising or lowering the foot 14.

When the foot 14 is raised a certain distance the rack 16 will start to engage with the quadrant 3, and as this will stop the upward movement of the foot 14, the entire structure will swing around the hinge 4 and assume the position shown in Fig. 3.

A pair of spring clips 23, carried on the frame 2, receive the neck 24 of the motor frame when it is swung up into the position shown in Fig. 3 to support the jack and thereby take some of the strain from road shocks off of the teeth of the quadrant 3 and the rack 16.

It is apparent that the action of the jack can be reversed by reversing the motor, and as shown in the wiring diagram in Fig. 5, the motor is operated from a storage battery 25, a main switch 26 being provided to open the circuit, and a pole changing switch 27 being provided to reverse the field of the motor, thereby reversing its direction of rotation.

With a jack of the style described at each corner of an automobile chassis, it is possible to swing the jack down and elevate any desired part of the chassis without manual labor and without the necessity of getting out of the car to place the jack in operative relation to the chassis or axle of the car.

While I have described my invention and illustrated it in one particular design, I do not wish it understood that I limit myself to this construction, as it is evident that the invention may be varied in many ways within the scope of the following claims.

Claims:

1. In an automobile jack the combination of a base, a worm gear carried by said base, a worm co-acting with said gear, means for driving said worm, a screw driven by said

worm and extending perpendicularly along the axis of said worm gear, a sleeve having a nut on the inner part thereof co-acting with said screw, a tongue carried by said sleeve and having rack teeth on the upper end thereof, a quadrant carried by said base and having teeth thereon adapted to engage with said rack teeth.

2. In an automobile jack the combination, with the chassis of an automobile, of a base carrying a worm gear case, a worm gear having a screw extension extending coaxially therewith carried by said case, a worm carried by said case, means for driving said worm, a protecting sleeve projecting downwardly from said gear case, a sleeve having a foot on its lower end slidably mounted in said downwardly extending sleeve, a nut carried by the upper end of said lower sleeve co-acting with said screw extension, an upwardly extending tongue carried by said lower sleeve and having rack teeth on its upper portion, a sector of a gear carried by said base, the teeth being adapted to engage with said rack teeth, and means carried on said base for locking said jack when elevated to a carrying position.

3. In an automobile jack the combination of a base, a gear case carried by said base, a worm gear in said case, a worm in said case co-acting with said gear, means for driving said worm, a threaded extension extending downwardly and coaxially from said worm gear, a sleeve having a nut in its upper end co-acting with said screw extension, means for preventing the rotation of said sleeve with respect to said gear case, and means actuated by the retraction of the jack, for swinging the jack to a horizontal position.

LOUIS H. BERRY.