L. H. BERRY.

AUTOMOBILE JACK AND LOCK.

APPLICATION FILED NOV. 19, 1917.

1,279,500.

Patented Sept. 24, 1918.

2 SHEETS—SHEET 1.

Fig. 1.

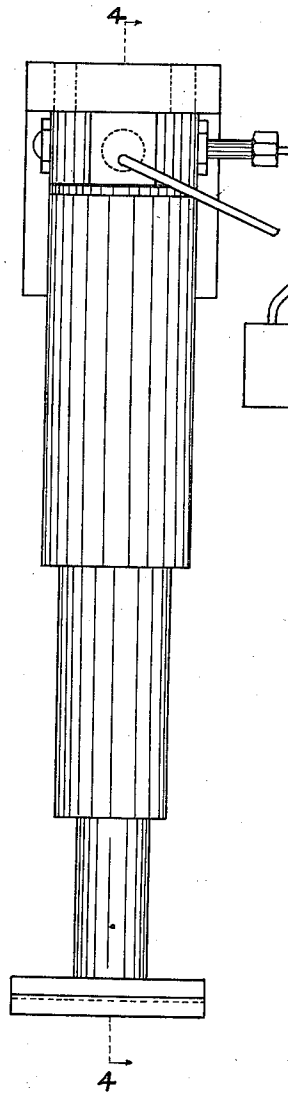



Fig. 2.

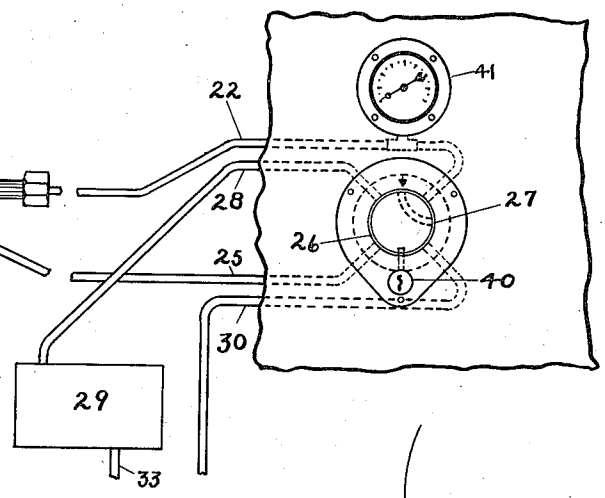
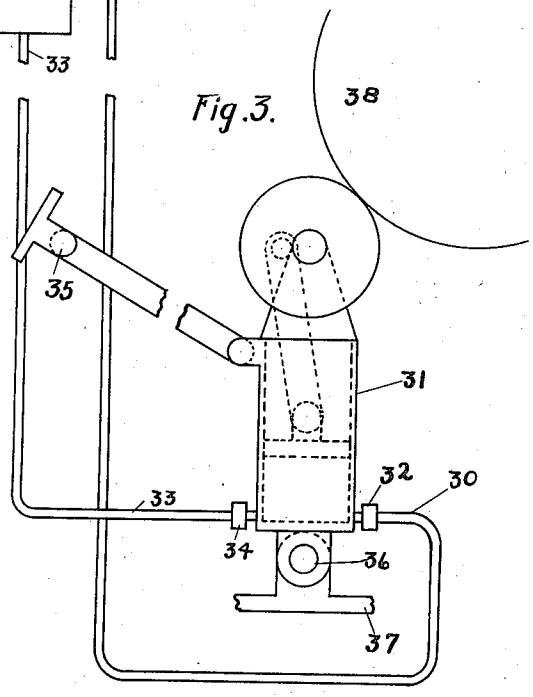



Fig. 3.




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2 SHEETS—SHEET 2.

Fig. 4.

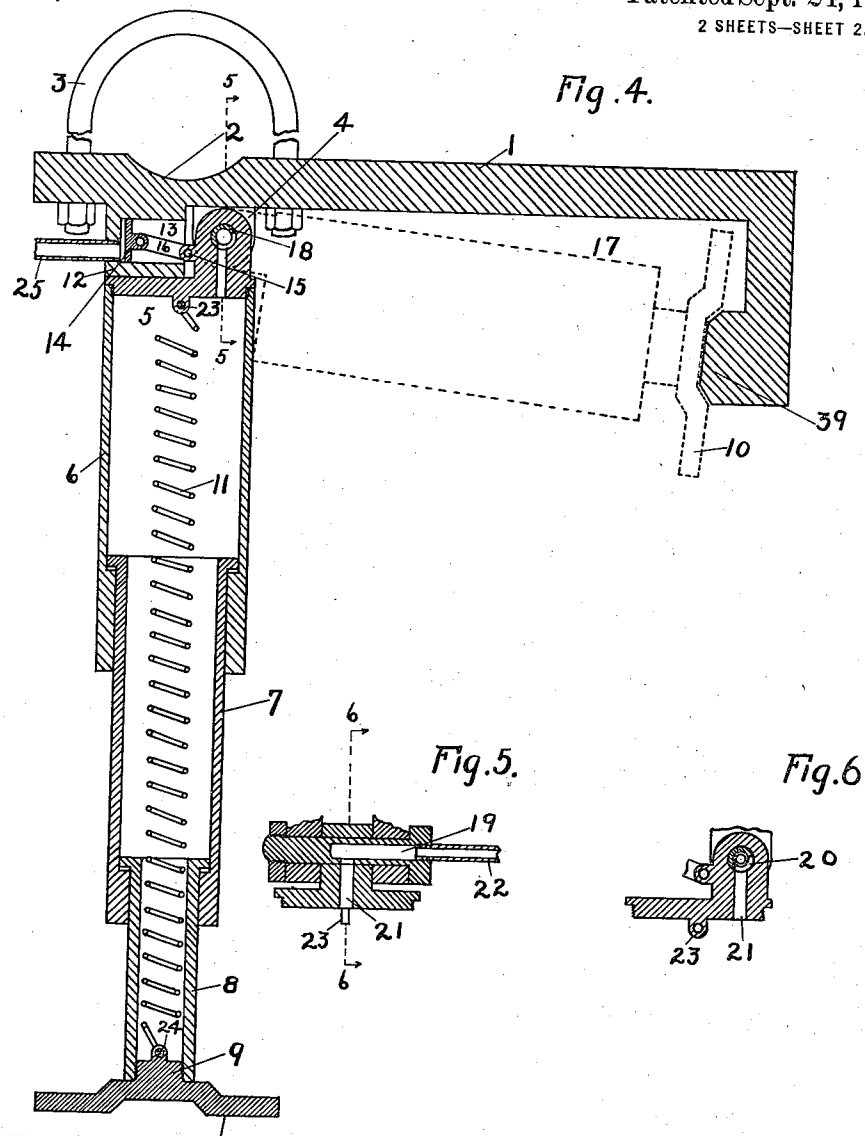



Fig. 5.




Fig. 6.




Fig. 7.

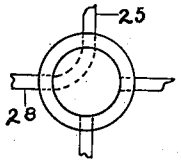



Fig. 8.

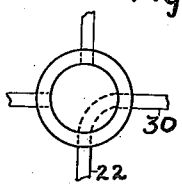



Fig. 9.

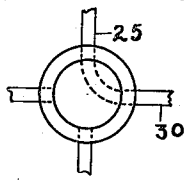
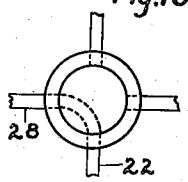



Fig. 10.




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# UNITED STATES PATENT OFFICE.

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## AUTOMOBILE JACK AND LOCK.

1,279,500. Specification of Letters Patent. Patented Sept. 24, 1918.

Application filed November 19, 1917. Serial No. 202,867.

*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 and Locks, of which the following is a specification.

Another object of my invention is to provide a fluid operated jack and means for raising the jack from its operative to its carrying position.

Another object of my invention is to provide improved means for locking the jack in its carrying position.

Another object of my invention is to provide means for locking the jack in its extended position with one wheel of the car raised so as to prevent theft of the car.

Another object of my invention is to provide means operable from the car seat for controlling all of the functions of the jack.

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 drawing Figure 1 is a side elevation of my improved jack. Fig. 2 is a side elevation of a portion of the cowl dash showing the means for controlling the functions of the jack. Fig. 3 is a conventional representation of the pump used in operating the jack. Fig. 4 is a section taken on the line 4—4, Fig. 1. Fig. 5 is a section taken on the line 5—5, Fig. 4. Fig. 6 is a section taken on the line 6—6, Fig. 5. Fig. 7 is a conventional representation of the valve turned in the position to release the jack from its carrying position. Fig. 8 is a similar view of the valve turned for jacking up a wheel of a car. Fig. 9 is a similar view with the valve turned to the position for swinging the jack to its carrying position, and Fig. 10 is a similar view with the valve turned to lower the car and elevate the jack.

Looking at Fig. 4, a base 1 is fashioned out at 2 to receive the axle of the car to which it is applied and to which it is fastened by U bolts 3, or any other suitable means.

Hinged to a pair of lugs 4 carried by the base 1 is a cylinder plug 5 engaging, by screw connection, with a cylinder 6 which has slidably mounted therein a sleeve 7, which, in turn, has slidably mounted therein a sleeve 8, the end of which is closed by screw engagement with the plug 9 carried by the foot 10.

A tension spring 11, held by lugs 23 and 24 in the plug 5 and the foot 10 respectively, serves to normally hold the jack in a retracted position with the sleeves retracted within the cylinder.

The base 1 also carries a support 12 adapted to engage with the head of the cylinder, and the plug 5 when the jack is in its operative position.

An auxiliary cylinder 13 is bored in the support 12, and a piston 14 reciprocates therein.

A lug 15 is provided on the plug 5 and connected by a hinged link 16 to the piston 14, so that the movement of the piston 14 to the right will swing the jack, when retracted, upwardly in the line of the dotted position 17.

The shaft 18, on which the plug 5 is hinged to the lugs 4, has a hole 19, Fig. 5, drilled therein and communicating with a port 20, better shown in Fig. 6.

The port, in turn, communicates with a hole 21, Figs. 5 and 6, so that there is a communication between the pipe 22, screwed into the hole 19, and the inside of the cylinder 6, with the jack in its operative or in its carrying position.

A pipe 25, screwed into the support 12, communicates with the interior of the cylinder 13, and the pipes 25 and 22 lead to the valve 26, Figs. 2, 7, 8, 9 and 10.

Looking at the valve 26, Fig. 2, it will be seen that it carries a port 27 adapted to establish communication between the four pipes leading to the valve, the pipe 22 leading from the valve to the hole in the shaft 18 and thence into the cylinder 5, the pipe 28 leading to a reservoir 29, in which a supply of oil or other fluid is carried, the pipe 25 leading to the elevating cylinder 13, and the pipe 30 leading from the pump 31, Fig. 3, through a suitable check valve 32, while a pipe 33 leads from the reservoir 29 to the inlet side of the pump 31 through a suitable check valve 34.

Considering the jack in a vertical position but with the sleeves retracted by the spring 11, the pump 31 is operated by pressing on a foot pedal 35, Fig. 3, swing-

ing the pump about its hinged point 36 on the frame member 37 of the car against the fly wheel 38, thereby pumping oil from the reservoir 29 through the pipe 33 out through the pipe 30, the valve being in the position shown in Fig. 8, through the port 27, pipe 22, to the jack cylinders, thereby extending the jack downwardly and lifting up that corner of the car.

When the work for which the car was jacked up has been completed, pressure in the jack is relieved by turning the valve to the position shown in Fig. 10, when communication will be opened from the cylinder 6 through pipe 22, port 27, and pipe 28 to the reservoir 29. The spring 11 will then retract, the jack forcing the oil from the jack cylinder back into the reservoir.

To elevate the jack into its carrying position, the valve is then turned into the position shown in Fig. 9, and the pump again started, and oil is pumped from the reservoir 29 through the pump, pipe 30, port 27, pipe 25, to the auxiliary elevating cylinder 13, forcing the piston 14 outwardly and swinging the jack as a whole about the shaft 18 into line with the position shown dotted in Fig. 4.

When the jack has been elevated with the pump still running, the valve is turned to the position shown in Fig. 8, the same as that used in jacking up the car, so the foot 10 engages with the lug 39 carried by the base 1.

The valve 26 is then turned to the position shown in Fig. 2, and by means of the lock 40 is held to that position, preventing the release of the pressure in the jack, so that foot 10 cannot come out of engagement with the lug 39.

To insure against exerting too much pressure in the jack when sending it home to its carrying position, a pressure valve 41 is provided in the pipe line to the jack so the operator can tell by the pressure in the pipe line when the foot is securely in engagement with its supporting lug.

I also use my improved jack as a lock to secure the car to which it is applied against theft, and this method of operation is very simple as it is only necessary to lift one of the rear wheels of the car, as already described, and then lock the valve 26 in the position shown in Fig. 2 with the car wheel free from the ground so that if a thief should start the engine and attempt to run off with the car, the differential will prevent him obtaining any forward drive from the rear wheels.

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 application of my invention may be varied in many ways within the scope of the following claims.

Claims:

1. The combination in an automobile jack of a base, a fluid operated extensible lifting member hinged thereto, and an auxiliary fluid operated member for swinging said jack into a carrying position.

2. In a fluid operated jack the combination of a base, a cylinder hinged thereto, a shaft forming part of said hinged connection and having an aperture axially positioned therein communicating with a port leading into said cylinder, a sliding sleeve shaped piston in said cylinder, and spring means for normally holding said sliding sleeve piston retracted in said cylinder.

3. In a fluid operated jack the combination of a base, an extensible, telescoping, lifting member suspended vertically from said base by hinged connection for lifting action and adapted to be swung to a substantially horizontal carrying position, an auxiliary fluid controlled mechanism for swinging said jack to its horizontal position, a multiple position valve, a pump, a reservoir, and pipe connections between said pump, valve, reservoir and lifting member whereby the operation of said pump will extend said jack when said valve is in one position, the operation of said pump will swing said jack to its carrying position when said valve is in a second position, and fluid used to extend said lifting member may flow back into said reservoir when said valve is in a third position.

4. The combination, with the axle of an automobile, of a jack suspended therefrom and having a base, a telescoping, fluid operated, lifting member hinged to said base, a fluid operated piston reciprocally mounted in said base and hinged to said lifting member to swing it to a substantially horizontal, carrying position, and a lug carried by said base to engage with said lifting member in its horizontal position.

5. In a fluid operated jack the combination of a fluid controlled extensible member, means for retracting said extensible member, means for swinging said extensible member to a carrying position, a pump for forcing fluid for the operation of said extensible member, a multiple position valve, pipe connections between said valve, said pump, said extensible member and said means for swinging said extensible member, and means for locking said valve in a predetermined position.

6. The combination, with the chassis of an automobile, of a jack suspended therefrom, means for extending said jack to lift a part of the chassis to which said jack is applied, a controlling device, and means for locking said controlling device with the jack in extended position.

7. The combination, with the chassis of an automobile, of a jack suspended therefrom,

fluid operated means for extending said jack and lifting a portion of the chassis to which said jack is applied, and controlling devices for said fluid operated means including a lock, whereby said jack may be maintained in an extended position by fluid in said jack.

8. The combination, with the chassis of an automobile, of a fluid operated jack suspended therefrom, means for supplying fluid pressure, controlling devices, and means for locking a part of said controlling devices so as to maintain said jack in an extended condition under fluid pressure.

LOUIS H. BERRY.