

G. F. DILLON.
JACK.

APPLICATION FILED JULY 15, 1918.

1,377,147.

Patented May 3, 1921.

2 SHEETS—SHEET 1.

Fig. I.

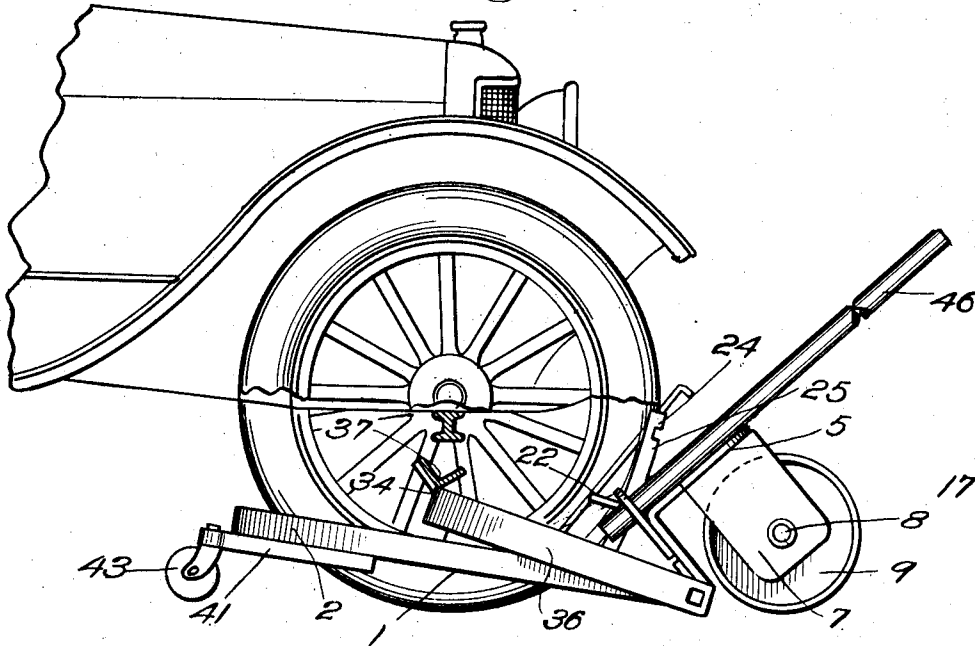


Fig. II.

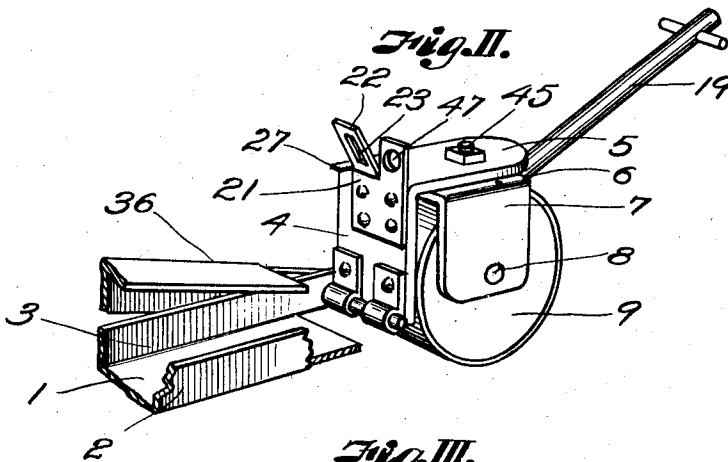
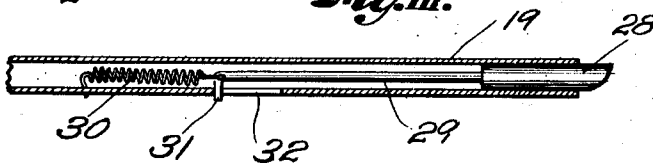


Fig. III.



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UNITED STATES PATENT OFFICE.

GEORGE F. DILLON, OF KANSAS CITY, MISSOURI.

JACK.

1,377,147.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE F. DILLON, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Jacks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to jacks particularly applicable for use in raising motor vehicles and the like for inspection and repairs.

One of the objects of the invention is to provide a jack which may be conveniently handled, which is capable of raising relatively heavy weights with expenditure of relatively small amounts of energy and which is adapted to be manipulated by a single operator.

In the drawings:

Figure I is a side elevation of the front end of a motor vehicle showing a jack embodying my invention ready for application.

Fig. II is a fragmentary perspective view of the front end of the jack.

Fig. III is a sectional view of an operating lever.

Fig. IV is a detailed perspective view of a jack in its elevated position.

Fig. V is a longitudinal sectional view through the same, the wheels or casters being shown in elevation, and

Fig. VI is a top plan view of the jack.

The jack is herein shown as comprising a body portion 1 shown as a channel having upstanding webs 2 and 3. The forward end of the body portion 1 is hinged to a bracket comprising a vertical plate 4 and a forwardly disposed horizontal plate 5, the plates being joined in the form of an angle and pivotally secured to a lateral extension 6 of an angle journal bracket 7 having a vertical portion which carries the horizontal axle 8 upon which the front wheel or caster 9 is journaled. Journaled on the same axle is a bracket 10 supporting a pivotally secured double toothed pawl 11

having a centrally located depending arm 12 to which a spring 13 is attached, one end of the spring 13 being secured to the arm 12 and the other to the sliding rod 14 in guides 15 and 16 on the bracket 10. The rod 14 is provided with a handle extension 17 working in a guide 18 on the ratchet actuating lever 19 on the bracket 10. The inner rim of the wheel 9 is provided with ratchet teeth 20 adapted to be engaged by either of the teeth on the pawl dependent upon the position of the spring which is adapted to be moved past the dead center by manipulation of the shifting rod whereby the arm or lever 19 will be effective through the ratchet mechanism to turn the wheel 9 in either direction as will be presently explained. On the upstanding portion 4 of the bracket is a plate 21 having an inbent lip 22 provided with an opening 23 for the reception of the notched portion 24 of the detent lever 25 pivoted at 26 to the channel 1. When the parts are in position shown in Figs. IV, V and VI, the notched lever 25 will hold the body portion of the jack in an elevated position but when the notched portion 24 is out of engagement with the lower edge of the opening 23, the jack will be collapsed as shown in Fig. 1. 27 is a spring adapted to bear against the lower edge of the detent lever 25 adjacent to its notch and this spring has a tendency to move the lever out of engagement with the lip 22. The jack may be elevated from its collapsed position by the spring retained tooth or extension 28 in the hollow lever 19. The extension 28 is received within the hollow lever 19 and is provided with an extension 29 to which one end of a spring 30 is attached, the other end being attached to the lever 19 near its outer end. The shank 29 is provided with a tooth or button 31 projecting through a slot 32 in the lever 19. The spring 30 is a tension spring and it normally has a tendency to withdraw the extension or tooth 28 within a lever 19. When, however, the spring is opposed by pushing on the projection 31 to impart a longitudinal movement to the extension 28 the said extension will be projected far enough to permit it to engage the step or projection 33 which forms a pivot for the vertically adjustable member 34 of the jack. The member 34 is shown as consisting of

2 angle irons 35 and 36, the outer free ends of which support an elongated trough shaped jaw or seat 37 extending transversely of the jack. The seat 37 being designed to receive a horizontal axle as will be well understood. The trough shaped body portion formed by the channel 1 constitutes a longitudinal guide for an elevating or wedge block 38 having a pull rod 39 extending between the lateral edges of the channel member 34. The rear end of the body portion 1 is supported upon a triangular frame 41 having wheels or casters 42 and 43 as is shown in Figs. IV, V and VI.

When it is desired to use the jack for example, on a light car, the parts will be introduced adjacent to the wheel axle in a collapsed condition as shown in Fig. I.

The pull rod 39 will then cause the wedge 38 to move forward so as to elevate the jaw 37 to bring it into engagement with the axle of the vehicle to be raised.

The extension 28 will then be moved forward to engage the step or projection 33 whereupon pressure applied to the end 44 of the rod 19 will cause the extension 28 to be tilted upwardly and raise the body portion to the position shown in Figs. IV, V and VI so that the notched portion 24 of the detent lever 25 will engage the lower edge of the opening 23 and lock the parts together. The axle of the motor vehicle will thereupon be raised and if it is desired to move the motor vehicle this can be accomplished by pulling on the rod 19. If the motor vehicle is too heavy to permit it to be moved by pulling on the rod 19, the slide rod 14 may be shifted so as to bring the proper tooth of the pawl into engagement with the teeth 20 and by moving the bar or rod 19 in an arc of a circle the jack may be moved over the surface and incidentally the car moved by means of the ratchet mechanism. The jack may be guided by swinging the wheel 9 either to the right or to the left through the medium of the pivot 45 for the brackets 4 and 7.

If the car is too heavy to be lifted through the medium of the rod 19 alone an additional lifting lever 46 may be employed which may

be introduced through the opening 47 in the plate 21 when not in use.

Having thus described my invention, what I claim as new therein and desire to secure by Letters-Patent, is:

1. A jack comprising a body portion, an axle-receiving member pivotally secured to the body portion, and a slidable wedge adapted to slide between the body portion and the axle-receiving member for adjusting the height of the jack.

2. A jack comprising a body portion of channel iron, a pivoted member on the body portion, a wedge between the body portion and the pivoted member, an axle engaging jaw carried by the pivoted member, a wheel supported bracket pivoted to the front end of the body portion, a pivoted brace lever for holding the body portion and bracket rigidly together and a pivoted lever for raising the front end of the body portion.

3. A jack comprising a body portion consisting of an elongated member, wheels supporting one end of said member, a wheel at the other end of said member, a bracket supported by said wheel, hinged connection between the bracket and the member, a lever pivoted on the axle of the last named wheel, a spring-retained extension on said lever for engagement with a part of the member to raise the member to horizontal position, a detent carried by the member and engageable with the bracket, and means operable by said lever for propelling said wheel.

4. In an automobile jack, a body member, a forward member hingedly connected to the body member, and a lever carried by the forward member adapted to engage the hinge connection to raise the jack to functional position.

5. In an automobile jack, a body member, a forward member hinged to the body member by a pin connection, an extension on the pin and a lever carried by the forward member having a spring retained extension adapted to engage said pin extension to lift the jack to functional position.

In testimony whereof I affix my signature.

GEORGE F. DILLON.