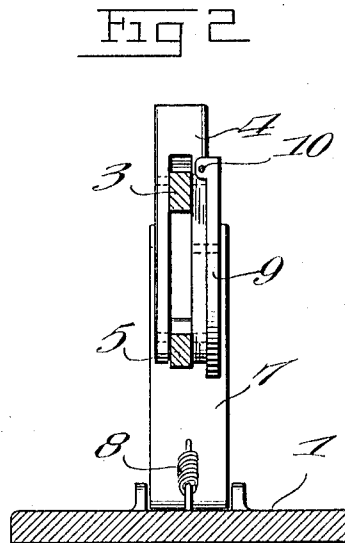
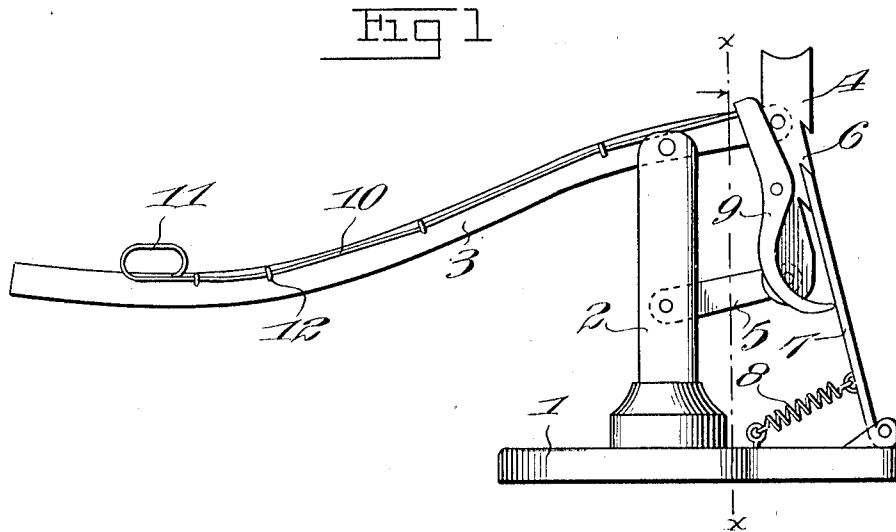


L. S. GROSSCUP.
LIFTING JACK.
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1,040,939.

Patented Oct. 8, 1912.



Inventor

Lewis S. Grosscup

Witnesses

M. H. Shifer.
V. B. Willyard.

By *Victor J. Evans*

Attorney

UNITED STATES PATENT OFFICE.

LEWIS S. GROSSCUP, OF SALEM, NEW JERSEY.

LIFTING-JACK.

1,040,939.

Specification of Letters Patent.

Patented Oct. 8, 1912.

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To all whom it may concern:

Be it known that I, LEWIS S. GROSSCUP, a citizen of the United States, residing at Salem, in the county of Salem and State of New Jersey, have invented new and useful Improvements in Lifting-Jacks, of which the following is a specification.

The present invention provides a jack particularly designed for lifting vehicle wheels from the ground so that necessary repairs may be made to tires in the case of automobiles and to admit of lubricating the axles of wagons and analogous vehicles.

The invention provides a lifting jack of comparatively simple and effective construction and in which the operating parts are exposed and readily accessible for adjustment or to admit of oiling, renewals or for any purpose whatsoever.

The invention further provides a lifting jack which is instantaneous in operation and which is quick acting when it is required to lower the vehicle wheel.

The invention consists of the novel features, details of construction and combination of parts, which hereinafter will be more particularly set forth, illustrated in the accompanying drawing, and pointed out in the appended claims.

Referring to the drawing, forming a part of the specification, Figure 1 is a side view of a lifting jack embodying the invention. Fig. 2 is a sectional view on the line $x-x$ of Fig. 1, looking toward the front, as indicated by the arrow.

Corresponding and like parts are referred to in the following description, and indicated in both views of the drawing, by the same reference characters.

The lifting jack embodies a base 1 upon which is mounted a standard 2. A lever 3 is pivotally mounted upon the upper end of the standard 2 and preferably curves throughout its length. A short bar 4 is pivotally connected to the short arm of the lever 3 and constitutes the lifting or load carrying head. The upper end of the part 4 is depressed so as to receive the axle and prevent displacement thereof when the jack is in operation. A link 5 parallels the short arm of the lever 3 and is pivotally connected at its ends to the standard 2 and bar 4. The link 5 in conjunction with the short arm of the lever 3 holds the short bar 4 in vertical position and keeps it parallel to a

given position in all stages of its movement. The lifting head 4 may be tubular and its rear side is slotted to receive the forward ends of the lever 3 and link 5, thereby admitting of the pivot connections of said parts with the head 4 obtaining a support at the sides of the parts 3 and 5. The front side of the head 4 is provided with ratchet teeth 6 which are adapted to be engaged by means of a dog 7 which is pivoted at its lower end to the front portion of the base 1 and normally inclines upwardly and rearwardly, said dog acting as a brace to hold the lifting head elevated when moved upwardly by downward pressure upon the rear end of the lever 3. A contractile spring 8 is interposed between the dog 7 and base 1 and normally exerts a rearward pull upon the dog so as to hold its upper end in engagement with the front side of the head 4, thereby insuring engagement of the dog with a tooth 6 of the head so as to hold the latter in raised position.

A trip lever 9 is pivoted between its ends to a side of the lifting head 4 and extends lengthwise of said lifting head. The lower end of the trip lever 9 curves forwardly and is adapted to engage the dog 7 and effect release thereof from the lifting head when the upper end of the trip lever is moved rearwardly. A connection 10 is attached to the upper end of the trip lever 9 and extends along the side of the lever 3 and terminates in a loop 11 forming convenient means to be grasped by the hand when pulling upon the connection 10 to move the trip lever to cause the dog 7 to clear the toothed portion of the lifting head so that the latter may descend when it is required to lower the vehicle wheel. The connection 10 preferably consists of a stout wire which is mounted in keepers or guides 12 secured to the lever 3 at intervals in the length thereof.

In the operation of the jack the axle of the vehicle to be raised is received upon the upper end of the lifting head 4, the jack being so positioned that downward pressure upon the outer end of the lever 3 will cause the head 4 to rise and lift the axle resting thereon. As the head 4 moves upwardly the dog 7 engages the teeth 6, thereby holding the axle elevated. When it is required to lower the axle the outer end of the lever 3 is pressed upon so as to ease the dog 7,

after which a pull upon the connection 10 causes the upper end of the trip lever 9 to move rearwardly and the lower end of said trip lever to move forwardly and to throw 5 the dog 7 clear of the toothed portion of the lifting head, which latter may be lowered by permitting the outer end of the lever 3 to gradually rise.

From the foregoing description, taken in 10 connection with the accompanying drawing, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while I have 15 described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative, and 20 that such changes may be made when desired as are within the scope of the claims appended hereto.

Having thus described the invention what is claimed as new is:—

25 1. A lifting jack comprising a standard, a lever pivoted near one end to said standard, a lifting head pivotally connected to the projecting end of the lever and having teeth along its front side, a link paralleling 30 the front portion of the lever and pivotally connecting the lower end of the lifting head to the standard, and a dog pivoted at its lower end and adapted to engage the teeth of the lifting head to hold the same elevated.

35 2. A lifting jack comprising a standard, a lever pivoted near one end to the standard, a lifting head spaced from and arranged parallel with the standard and pivotally connected with the front end of the lever 40 and having teeth along its front side, a link arranged parallel with the front portion of the lever and pivotally connected at its ends to the standard and to the lower portion of the lifting head, a dog adapted to 45 engage the toothed portion of the lifting head and to hold the same elevated, and a trip lever mounted upon the lifting head and adapted to engage the said dog to cause

the same to clear the toothed portion of the lifting head. 50

3. A lifting jack comprising a standard, a lever pivoted near one end to the standard, a lifting head spaced from and arranged parallel with the standard and pivotally 55 connected with the front end of the lever and having teeth along its front side, a link arranged parallel with the front portion of the lever and pivotally connected at its ends to the standard and to the lower portion of the lifting head, a dog adapted to engage 60 the toothed portion of the lifting head and to hold the same elevated, a trip lever mounted upon the lifting head and adapted to engage the said dog to cause the same to clear the toothed portion of the lifting head, 65 and a connection extending along the lever and provided at its rear end with a grip and having its front portion connected with the upper end of the trip lever.

4. A lifting jack comprising a base, a 70 standard rising from said base, a lever pivoted near its front end to the upper portion of said standard, a lifting head spaced from and arranged parallel with said standard and pivotally connected to the front end 75 of the lever and having teeth along its front side, a link arranged parallel with the front portion of the lever and pivotally connected at its ends to the said standard and to the lower portion of the lifting head, a trip lever pivotally connected between its ends to 80 the lifting head, a connection attached to the upper end of the trip lever and extending along the first mentioned lever and provided at its rear end with a grip, and a dog 85 pivoted at its lower end to the said base and inclining upwardly and rearwardly and adapted to engage the toothed portion of the lifting head.

In testimony whereof I affix my signature 90 in presence of two witnesses.

LEWIS S. GROSSCUP.

Witnesses:

JENNIE SELFRIDGE,
D. HARRIS SMITH.