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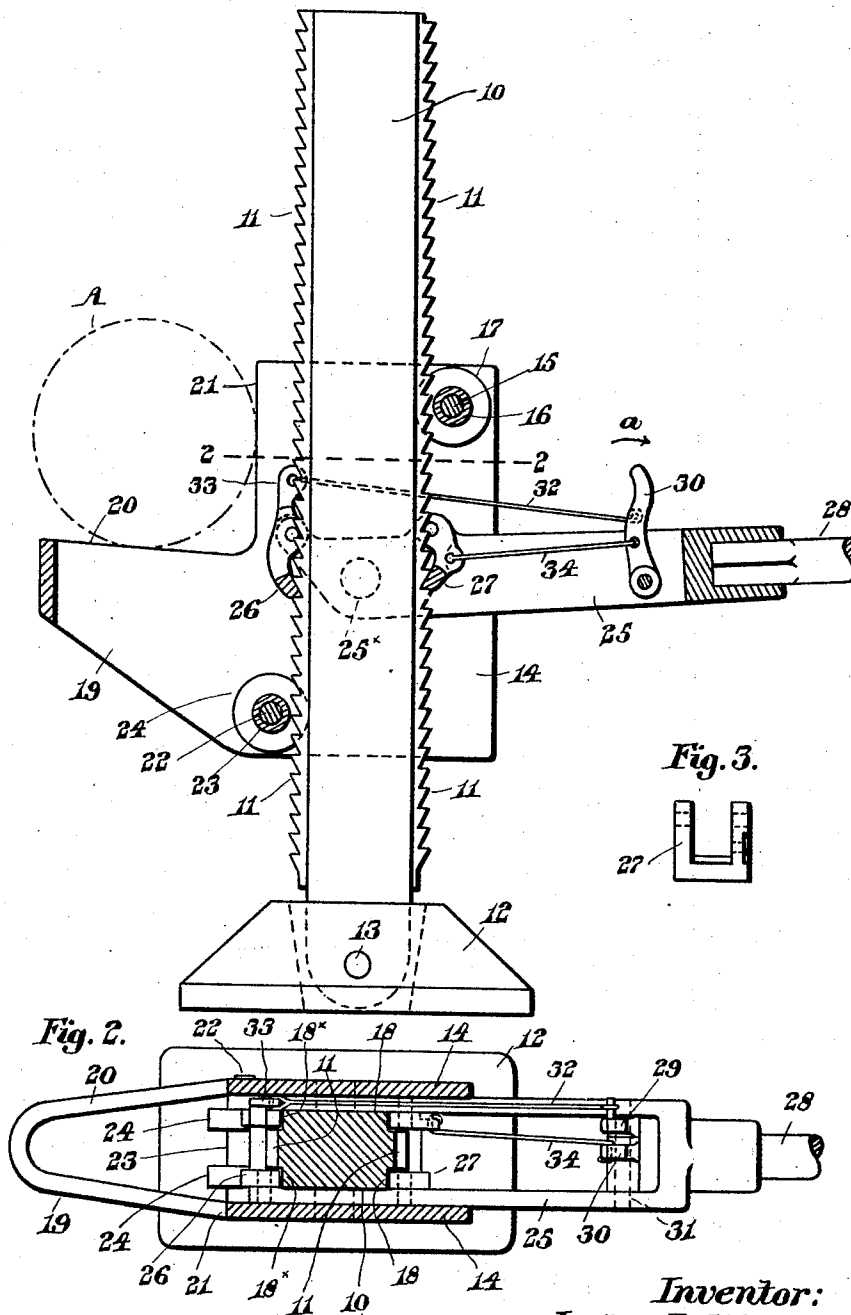
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J. R. KINNEY

LIFTING JACK

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Fig. 1.



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att.

UNITED STATES PATENT OFFICE.

JUSTUS R. KINNEY, OF JAMAICA PLAIN, MASSACHUSETTS.

LIFTING JACK.

Application filed March 5, 1924. Serial No. 697,121.

To all whom it may concern:

Be it known that I, JUSTUS R. KINNEY, a citizen of the United States of America, and a resident of Jamaica Plain, in the county of Suffolk, in the State of Massachusetts, have invented certain new and useful Improvements in Lifting Jacks, of which the following is a specification.

This invention relates to lifting jacks for use in connection with motor vehicles having balloon tires on the wheels thereof, the object being to provide a simple device of this character particularly adapted for lifting light weight vehicles such as Ford cars.

The invention consists primarily of a base having a vertical post thereon with ratchet teeth on opposed sides thereof and a carriage movable endwise of said post and carrying a lever provided with pawls adapted to engage the teeth to cause the carriage to be moved upwardly on said post.

The invention consists further of certain novel features of construction and arrangement of parts which will be understood readily by reference to the description of the drawings and to the claims to be hereinafter given.

For the purpose of illustrating the invention, one preferred form thereof is illustrated in the drawings, this form having been found to give satisfactory and reliable results although it is to be understood that the various instrumentalities of which the invention consists can be variously arranged and organized and the invention is not limited to the precise arrangement and organization of these instrumentalities as herein shown and described except as required by the scope of the appended claims.

Of the drawings:

Figure 1 represents a vertical section of a lifting jack embodying the principles of the present invention.

Figure 2 represents a horizontal section of same, on line 2, 2, on Fig. 1, and

Figure 3 represents an elevation of one of the pawls.

Similar characters indicate like parts throughout the several figures of the drawings.

In the drawings 10 is a post having ratchet teeth 11 on opposite faces thereof, the lower end of said post being preferably secured to a base 12 by means of a pivot pin 13.

By pivotally connecting the base 12 to the post 10 the latter may be retained in a vertical position when the former rests upon uneven ground.

Straddling the post 10 is a carriage 14, 60 consisting of a U-shaped plate the open end of which has disposed therein near the top thereof, a pin 15 upon which is positioned a roller 16.

This roller 16 has cylindrical end flanges 65 17 on the periphery thereof, said flanges bearing on the plane faces 18 on opposite sides of the teeth 11.

The carriage 14 has a laterally extending support 19 the upper end 20 of which is 70 inclined downwardly toward the post 10 so that when an axle A is positioned thereon bearing against the vertical edges 21 of the carriage 14, the accidental displacement of said axle A from the support 19 will be 75 effectually prevented.

The carriage 14 is also provided preferably with a pin 22 on which is disposed a roller 23 the end cylindrical flanges 24 of which bear upon the vertical plane faces 18* 80 of the post 10 and assist the roller 16 in preventing the tilting of the carriage 14 when a load is disposed upon the support 19.

When a load is being lifted by said support 19 the natural tendency would be to 85 tilt the carriage 14 causing the parts thereof to bind upon the post and prevent free movement of said carriage lengthwise of the post.

By the use of the roller 16 this binding 90 and cramping is effectually prevented and the roller 23 assists in attaining this desired result.

At a point opposite the center of the post 10 a bifurcated lever 25 is pivoted at 25* 95 to the side walls of the carriage 14. This bifurcated lever 25 has pivotally mounted thereon the weighted pawls 26, 27 which by their weight are adapted to engage the teeth 11 on the opposite faces of the post 10. 100

When the pawl 26 is in engagement with a tooth 11, it is obvious that if the handle 28 of lever 25 is lifted sufficiently to cause the pawl 27 to engage a higher tooth 11 the carriage 14 will be moved upwardly relatively to the post 10 and if the handle 28 105 is moved downwardly when said pawl 27 is in engagement with a tooth 11 a farther upward movement will be imparted to the carriage 14. 110

By continuing the pumping operation of the handle 28 the carriage 14 may be moved upwardly on the post 10 to any desired position and the load will be retained in its raised position by the engagement of the pawls 26, 27 with the teeth 11.

When it is desired to lower the load it is necessary to provide means for disengaging the pawls 26, 27 from the teeth 11.

For this purpose two triggers 29, 30 are pivotally mounted upon the transverse pin 31 on the bifurcated lever 25.

The trigger 29 is connected by a link 32 to an arm 33 extending upwardly from the pawl 26 and when the trigger 29 is moved in the direction of arrow *a* on Fig. 1 the pawl 26 will be moved about its pivot and disengaged from the ratchet teeth 11.

The pawl 27 is connected by a link 34 with the trigger 30 and when this trigger 30 is moved in the direction of arrow *a* said pawl 27 will be disengaged from the teeth 11.

The triggers 29, 30 may be actuated alternately if desired and the load lowered slowly by moving the lever 25 about its pivot retaining one pawl in engagement with a tooth while the other pawl is being lowered into position to engage a lower tooth.

If preferred, however, both triggers may be simultaneously moved about the pin 31 thereby disengaging both pawls 26, 27 from the teeth 11 and permitting the vehicle to drop to the ground.

This lifting jack is particularly adapted for use in connection with light weight cars such as Fords.

This lifting jack may be cheaply constructed and will be very effective in operation.

It is believed the operation and many

advantages of the invention will be apparent without further description.

Having thus described my invention, I claim—

1. The combination of a base; a post extending upwardly therefrom and having on opposite faces thereof a plurality of ratchet teeth and unbroken tracks on opposite sides of said teeth; a carriage movable endwise of said post; a lever pivoted to said carriage; weighted members pivoted to said lever alternately adapted to engage the teeth on opposite faces of said post; and rollers mounted on said carriage near the top and bottom thereof and adapted to engage said tracks on opposite sides of said post to prevent the tilting of said carriage under a load.

2. The combination of a base; a post extending upwardly therefrom and having on opposite faces thereof a plurality of ratchet teeth and unbroken tracks on opposite sides of said teeth; a carriage consisting of a U-shaped plate having a laterally extending support and movable endwise of said post; a lever pivoted to said carriage; weighted members pivoted to said lever at points equidistant from the lever pivot and alternately adapted to engage the teeth on opposite faces of said post; and rollers mounted on said carriage near the top and bottom thereof and adapted to engage said tracks on opposite sides of said post to prevent the tilting of said carriage under a load.

Signed by me at 746 Old South Building, Boston, Massachusetts, this 4th day of March, 1924.

JUSTUS R. KINNEY.

Witnesses:

WALTER E. LOMBARD,
NATHAN C. LOMBARD.