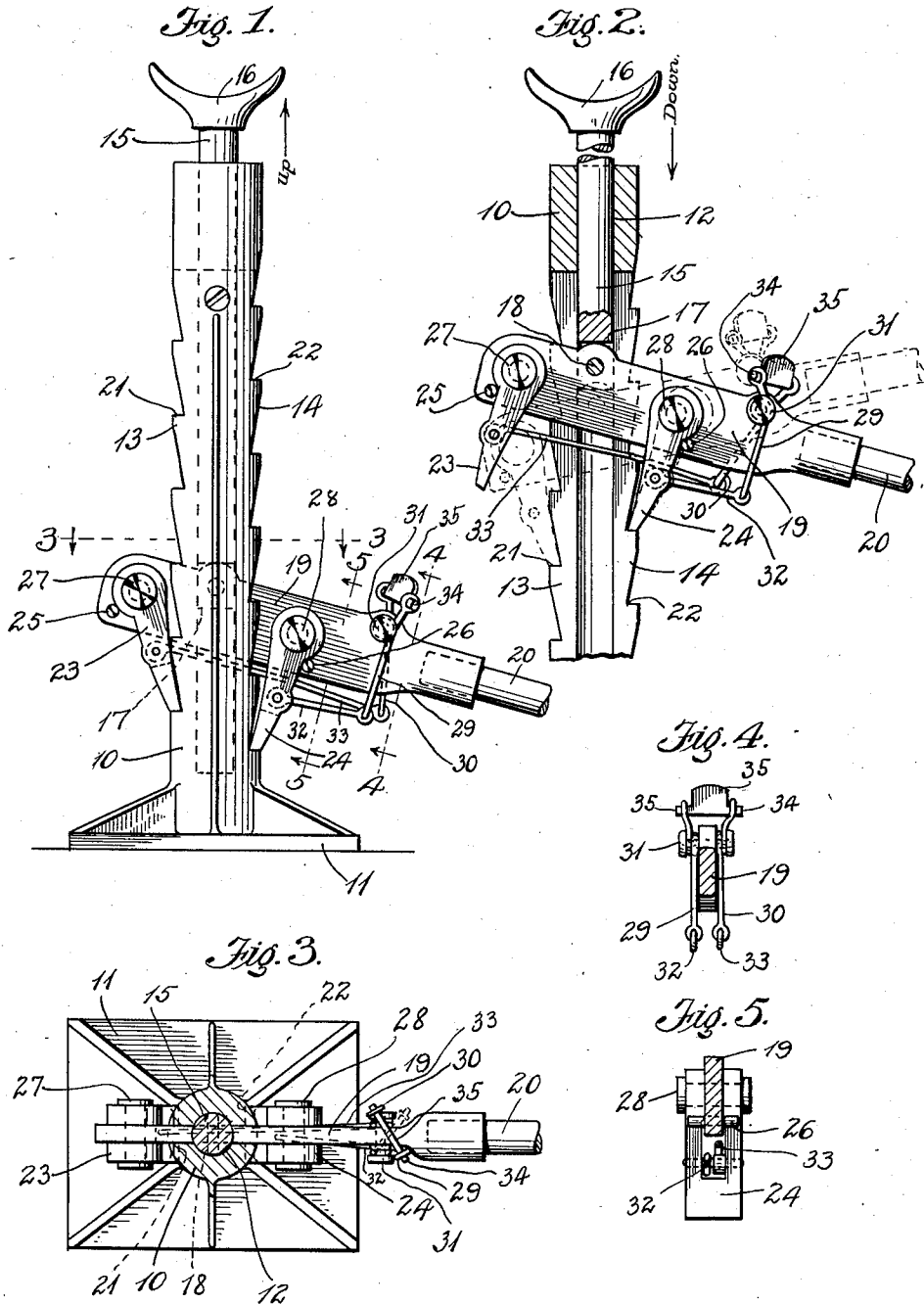


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JACK.
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1,049,691.

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Witnesses:

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UNITED STATES PATENT OFFICE.

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JACK.

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To all whom it may concern:

Be it known that I, CHARLES V. FOWLER, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Jacks, of which the following is a specification.

This invention relates to improvements in jacks and has particular relation to jacks which are capable of being constructed in suitable form and size to be used in connection with vehicles such as automobiles and the like for facilitating the lifting of the same or parts thereof when necessary.

It is an object of the invention to provide a simple form of jack in which the operation of a lever will effect either the raising or the lowering of a weight with a step by step action.

It is also an object of the invention to provide a jack having lifting pawls and means for actuating them whereby, they will accomplish a step by step elevation or permit of a step by step lowering of a weight upon said jack.

It is also a further object of the invention to provide a jack in which spring actuated pawls are employed, the springs being capable of adjustment so as to tend to draw the pawls inwardly when it is desired to elevate a weight and which may be adjusted so as to tend to force the pawls outwardly when it is desired to lower a weight with a step by step movement.

In the accompanying drawing forming a part of this specification, Figure 1 is a side elevation of a jack embodying the features of the present invention, the spring actuated pawls being in position for operating in elevating an object. Fig. 2 is a detail transverse sectional view through the upper part of the jack, the operating lever and pawls carried thereby being shown in side elevation and the springs actuating the pawls being set for permitting of a downward step by step movement in lowering the wheel. Fig. 3 is a transverse horizontal sectional view taken upon the line 3—3 of Fig. 1. Fig. 4 is a detail transverse sectional view taken upon the line 4—4 of Fig. 1. Fig. 5 is a detail transverse sectional view taken upon the line 5—5 of Fig. 1.

The details and features of the invention will now be more particularly described, reference being had to the said drawing in which 10 indicates a standard having a

broad supporting base 11 and provided with a bore 12 extending from the upper end to a point near the base. The said standard 10 is also provided with diametrically opposite slots 13 and 14, in a plane in alinement with the axis of the standard. Movably mounted within the standard 10 is an adjustable member 15, the stem of which extends into the bore of the standard 10. The upper end of said member carries a head 16, usually having a concave upper surface for fitting upon articles to be lifted.

The lower end of the stem of said member 15, is bifurcated at 17 and is provided with a transverse pivot pin 18, adapted to pass through the upper part of a lever member 19. The said lever member is preferably flattened and made of a suitable width to fit and operate in the slots 13 and 14. One end of the said lever member 19, is provided with a handle portion 20, by which it may be moved up and down upon the said pivot 18 of the fulcrum. The exterior of the standard 10 adjacent to the slots 13 and 14, is provided with a series of notches 21 and 22, which are adapted to be engaged by pawls 23 and 24 pivoted upon the said lever member 19. The said pawls are limited in their outer movement by means of stop pins 25 and 26 carried by the said lever member 19. The said pawls 23 and 24 are preferably bifurcated at their pivoted ends and formed to receive the flat portion of the lever member 19. Pivot pins 27 and 28 pass through the said bifurcated ends of the pawl and the flattened portion of the member 19, making a strong pivotal connection between the parts.

The position of the pawls is controlled by spring members 29 and 30 which are pivoted at points intermediate their length, upon the flat portion of the lever member 19, a pivot pin 31 being passed through said flattened member and having headed end portions upon opposite sides thereof, to movably engage and hold the said spring members in place. The said spring members are preferably formed with coiled portions where they engage the pivot pin 31 and their lower ends are connected by means of pitmen 32 and 33 with the pawls 24 and 23 respectively. The upper ends of the spring members extend a short distance above the fulcrum pin 31 and are provided with eyes adapted to receive end projections 34, formed upon an adjusting member 35

which is interposed between the upper ends of said spring members.

The member 35 is of sufficient length to tend to spread the upper ends of the spring members to a slight extent and sufficient to hold it in one extreme or the other of its position, the two positions occupied thereby being shown in Figs. 1 and 2 and in full and dotted lines in Fig. 3. By twisting the member 35 to the position shown in Figs. 1 and 3, the lower ends of said spring members will tend to force the pawls against the standard 10 and into engagement with the notches formed thereon, so that by lifting and pressing the handle of the lever, the pawls can be made to elevate the member 15 with a step by step movement of the said pawls. When it is desired to lower the said member 15 the member 35 is twisted to its opposite position shown in full lines in Fig. 2 and in such position the spring members will be held so as to tend to force the pawls outwardly against the stops 25 and 26. The weight of the member 25 and whatever it may be supporting, will tend to hold one of the pawls in contact with one of the notches of the standard 10, while the other one will be sprung outwardly away from it as shown in full lines in Fig. 2.

By allowing the weight to force the member 19 downwardly, it will rock upon the pawl which is engaging one of the teeth as a fulcrum until it assumes a position like that shown in dotted lines in said Fig. 2, whereby the other pawl is brought against a tooth upon the opposite side of the standard 10, the limiting pin 25 preventing it from escaping from such engagement. The other pawl will be correspondingly moved against the spring actuation of the member 29 which holds it and as soon as the weight has been disposed upon the pawl 23 and the handle 20 is lifted slowly the said spring 29 will throw the pawl 24 outwardly, leaving the weight upon the other pawl. By lowering the handle a similar action will take place in a reverse order and so on until the member 15 with its weight has been lowered to the desired extent. When the device is not in use and no weight is resting

upon the head 16 of the member 15, and the parts are in the position shown in Fig. 2, the said member 15 may be raised or lowered in the standard by holding the handle at a horizontal or intermediate point so that neither one of the pawls engage the teeth. The member 15 can thus be quickly adjusted to any desired height for beginning the raising or lifting of any superimposed weight.

The mechanism is exceedingly simple in structure and is admirably adapted for use in connection with automobiles and the lifting of vehicle axles and may be readily carried from place to place.

What I claim is:

1. A jack, comprising a notched standard, a reciprocating lifting member mounted thereon, a lever pivotally secured to said lifting member, a pair of oppositely disposed pawls carried by said lever and adapted to engage the notches on said standard, pitmen positively connected to said pawls, spring actuated levers connected to said pitmen, and an operating member connecting said spring actuated levers whereby the pawls are positively shifted to reverse the action of the operating levers.

2. A jack, comprising a hollow standard having notches formed upon its opposite sides, a lifting member movable within the same, a lever member pivoted to said lifting member and having pawls pivoted thereto, opposite the notched sides of the standard, pins carried thereby and limiting the movement of said pawls, spring levers pivoted to said lever member, pitmen connecting the said spring members with said pawls, an adjusting member interposed between the said spring members for changing the spring action of the same, whereby the pawls are adapted for raising or lowering the lifting member.

In witness that I claim the foregoing I have hereunto subscribed my name this 31st day of January, 1912.

CHARLES V. FOWLER.

Witnesses:

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EARLE R. POLLARD.