

AUTO JACK.

Patented Dec. 9, 1913.

2 SHEETS-SHEET 1.

Fig. 8.

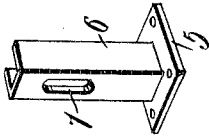


*Fig. 2.*

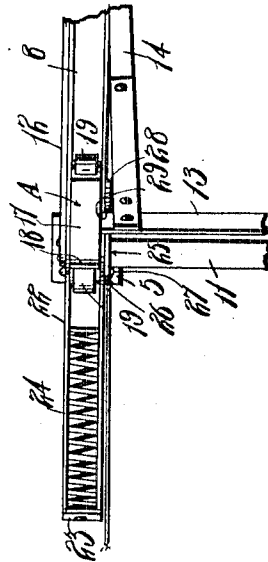


Fig. 1.

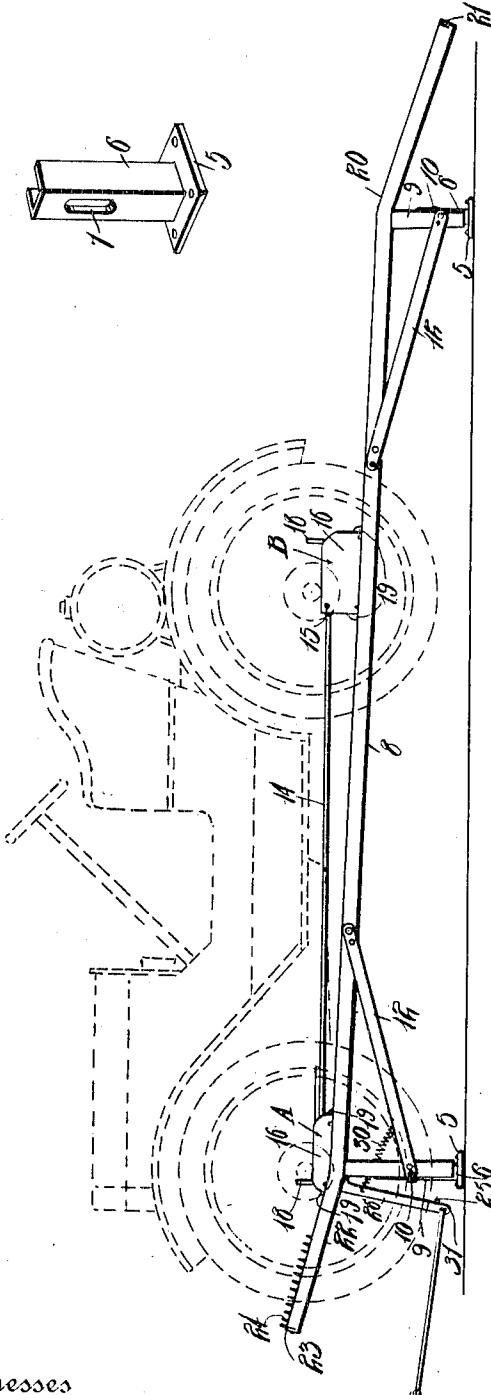
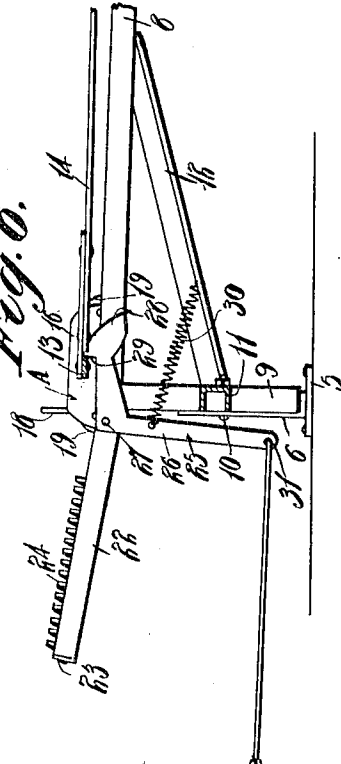


Fig. 6.



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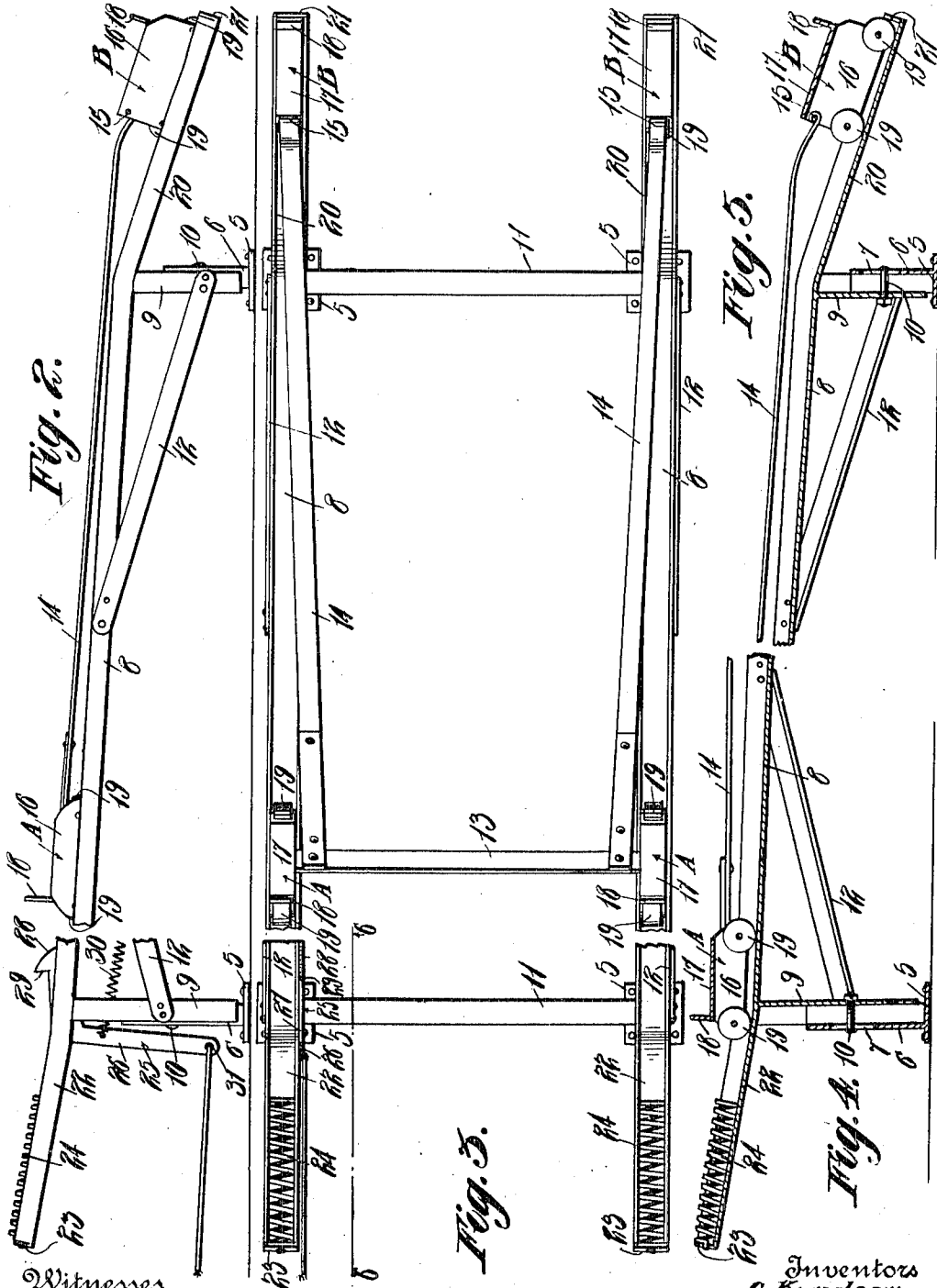
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 AUTO JACK.

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2 SHEETS-SHEET 2.

1,080,564.



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*Fig. 3.*  
 33  
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# UNITED STATES PATENT OFFICE.

CHARLES KNUDSON AND EVARD J. BRUMBACH, OF PONTIAC, ILLINOIS.

## AUTO-JACK.

1,080,564.

Specification of Letters Patent.

Patented Dec. 9, 1913.

Application filed April 30, 1913. Serial No. 764,675.

*To all whom it may concern:*

Be it known that we, CHARLES KNUDSON and EVARD J. BRUMBACH, citizens of the United States, residing at Pontiac, in the county of Livingston, State of Illinois, have invented certain new and useful Improvements in Auto-Jacks; and we do hereby 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.

This invention relates to new and useful improvements in jacks and has particular reference to that class of vehicle jacks by means of which a vehicle may be raised from the ground by its momentum.

The object of the invention is to provide a jack whereby a vehicle may be driven into operative engagement with the jack, so that it will be raised above the ground by its own momentum.

A further object is to provide efficient means for automatically locking the vehicle in a raised position.

A still further object is to provide means for checking the momentum of the vehicle when the same has been raised above the ground and in proper position.

With these and other objects in view, the invention resides in the novel combination, formation and arrangement of parts to be more fully hereinafter described and illustrated in the accompanying drawings.

Reference is had to the accompanying drawings wherein similar characters of reference designate corresponding parts throughout the several views, and in which:

Figure 1 is a side elevational view of the device with a vehicle positioned in relation thereto. Fig. 2 is a similar view but showing the jack in position to receive a vehicle. Fig. 3 is a top plan view thereof. Fig. 4 is a vertical longitudinal sectional view of the upper end of the jack, taken through one of the track rails. Fig. 5 is a similar view of the lower end of the jack. Fig. 6 is a vertical sectional view taken on the line 6-6 of Fig. 3. Fig. 7 is a detail view showing the locking pawl in operative position. Fig. 8 is a detail view of one of the supporting standards.

Referring more particularly to the accompanying drawings, 5 designates one of the corner base members of the device from which extends a standard 6 of channel iron provided with a slot 7. The channel track

rails 8 are provided adjacent each end thereof with a depending channel member 9 which fits over the channel member 7 and is provided with an opening through which is passed a bolt 10 for adjustably securing the standards in relation. A brace member 11 connects the standards at adjacent ends of the rails and a brace member 12 is secured to the standard 9 and its adjacent rail. It will thus be observed that there is provided an efficient and rigid structure which may be adjusted vertically with relation to the ground. The truck members which ride in these channel track rails comprise a pair of forward trucks A which are connected by a transverse bar 13 and a pair of trucks B each of which is connected to its adjacent truck A by means of a rod 14 which is secured at one end to the transverse rod 13 adjacent the forward truck member and which is pivotally connected as at 15 to the truck, B. Each truck comprises the side walls 16, a top portion 17 which is provided at one end with an upward extension 18 for engaging the axle of the vehicle. The rollers 19 have their pivots journaled in the walls 16 of the trucks.

It will be noted that the upward extension 18 of each forward truck is disposed at the forward end of the truck and the upward extensions of the other pair of trucks are disposed at the rear ends thereof. The rear end of the tracks are bent downwardly past the standards as at 20 and provided with end portions 21. These portions are adapted to receive the rear trucks B and hold them below the plane of the axles of the vehicle. When the vehicle is driven into engagement with the device the front axle of the vehicle engages the upward extensions or stops 18 of the forward trucks A and resting thereon draws the forward trucks to the upper end of the device by its momentum. The connecting rods between the forward trucks A and the rear trucks B then draw the said rear trucks out of the downward extension 20 so that they engage with the rear axle of the vehicle.

It has been before stated that the tracks slant upwardly with relation to the ground. Therefore, as the momentum of the vehicle carries it along the wheels will leave the ground and the machine will be supported wholly by the pairs of trucks A and B. Means are provided at the upper end of the tracks for checking the momentum of the

vehicle, and for automatically locking the vehicle in raised position. The walls of the trucks B are much higher than the walls of the truck A, so that when the machine is at rest in raised position the same will be disposed in a plane parallel to the plane of the ground.

For checking the momentum of the vehicle the upper ends of the track rails are upwardly extended as at 22 and provided with end portions 23. Seated in these portions 22 and bearing against the portions 23 are coiled springs 24 which are adapted to be engaged by the rollers 19. Both the springs and the upward extensions serve to check the momentum. The means for automatically locking the vehicle in raised position comprises a latch member 25 having a downwardly extending operating arm 26 and pivoted as at 27 to the inner side of one of the tracks. The latch member is provided on its end edge with a cam portion 28 which is adapted to be engaged by the transverse member 13 to force it downwardly. The latch member is provided rearwardly of this cam portion with a shoulder 29 which engages the transverse member to prevent the trucks from sliding downwardly after they have reached a raised position. A coil spring 30 is secured to the operating arm 27 of the latch member and has its other end attached to one of the bars so as to always hold the latch member in operative position. The lower end of the operating rod 26 is provided with an opening 31 in which may be secured an operating cord so that the latch may be actuated from any desired point to release the vehicle.

When the vehicle is released the taper of the track members will cause it to ride toward the lower end of the jack 10, the track member B seating in the downward extensions 20, to release the rear axle of the vehicle. The momentum gained will serve to carry the vehicle away from the jack.

What is claimed is:—

1. A jack for raising vehicles comprising a frame, a pair of tracks carried by the frame and disposed in an inclined plane, the lower ends of the tracks being provided with downward extensions, a pair of forward trucks mounted on the tracks, a transverse rod connecting the trucks, a pair of rear trucks mounted in the tracks, rods connecting the adjacent front and rear trucks and the rear trucks adapted to seat in the downward extensions of the tracks.

2. A jack for raising vehicles comprising a frame, tracks carried by the frame and disposed in an inclined plane, a pair of forward trucks mounted on the tracks, a trans-

verse rod connecting the said trucks, a pair of rear trucks on the tracks, and rods secured to the transverse rod and having pivoted engagement with the rear trucks the height of the rear trucks being greater than the height of the front trucks.

3. A jack for raising vehicles comprising a frame, tracks carried by the frame and disposed in an inclined plane, trucks mounted on the tracks, means connecting the trucks, the upper ends of the tracks being provided with upward extensions and buffer means carried by the said upper extensions for checking the momentum of the trucks.

4. A jack for raising vehicles comprising a frame, tracks carried by the frame and disposed in an inclined plane, a pair of forward trucks mounted on the tracks, a transverse rod connecting the trucks, a pair of rear trucks mounted on the tracks, rods connecting the front and rear trucks and a spring pressed pawl carried at the upper ends of the tracks to engage the said transverse rod to automatically lock the trucks against downward movement.

5. A jack for raising vehicles comprising a frame, a pair of tracks carried by the frame and disposed in an inclined plane, a pair of forward trucks mounted on the tracks, each of said trucks being provided at its forward end with an upwardly extending stop, a transverse rod connecting the trucks, a pair of rear trucks mounted on the tracks, each of said trucks being provided at its rear end with an upwardly extending stop, the lower ends of the tracks being provided with downward extensions and the rear trucks adapted to seat in the said extensions.

6. A jack for raising vehicles comprising a plurality of standards and a pair of parallel trucks carried by the standards and disposed in an inclined plane, upper extensions at the forward ends of the tracks, buffer springs carried in the upper extensions, downward extensions at the lower ends of the tracks, forward and rear pairs of truck members mounted in the tracks, the rear pairs of truck members adapted to seat in the downward extensions, means for connecting the truck members and means for automatically locking the truck members at the upper ends of the tracks.

In testimony whereof, we affix our signatures in the presence of two witnesses.

CHARLES KNUDSON.  
EVARD J. BRUMBACH.

Witnesses:

ANTON FISCHER,  
LOLA REINBOLD.