E. L. BARRETT.

MASTER JACK AND STAND FOR AUTOMOBILES.

APPLICATION FILED FEB. 6, 1920.

1,370,002.

Patented Mar. 1, 1921.

2 SHEETS—SHEET 1.

Fig. 1.

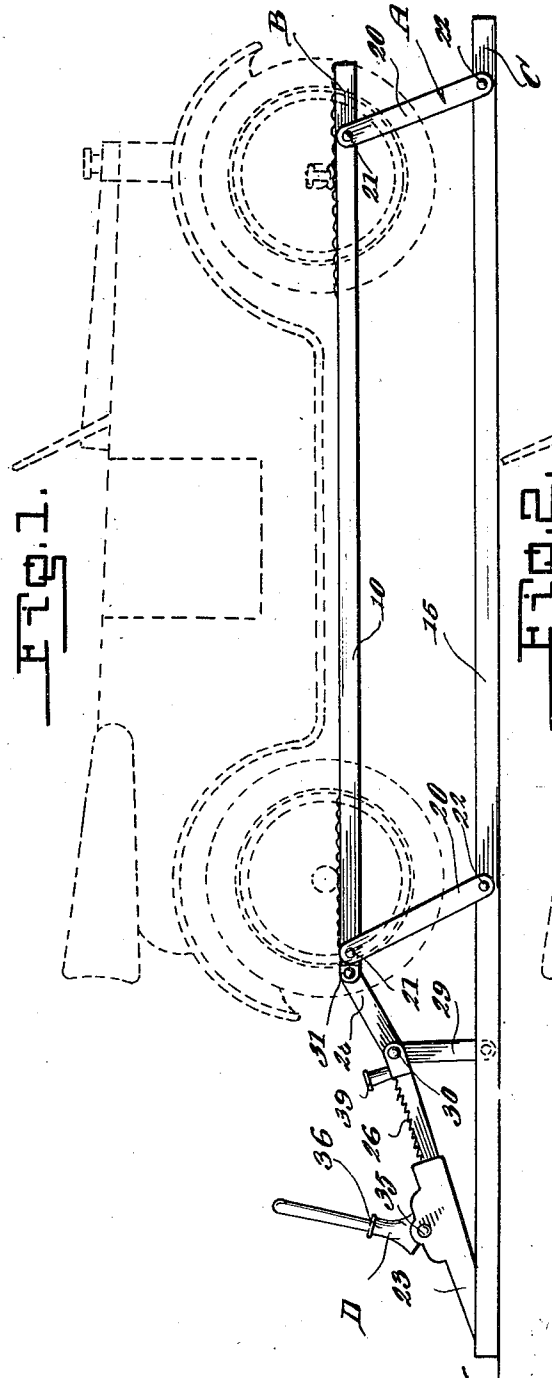
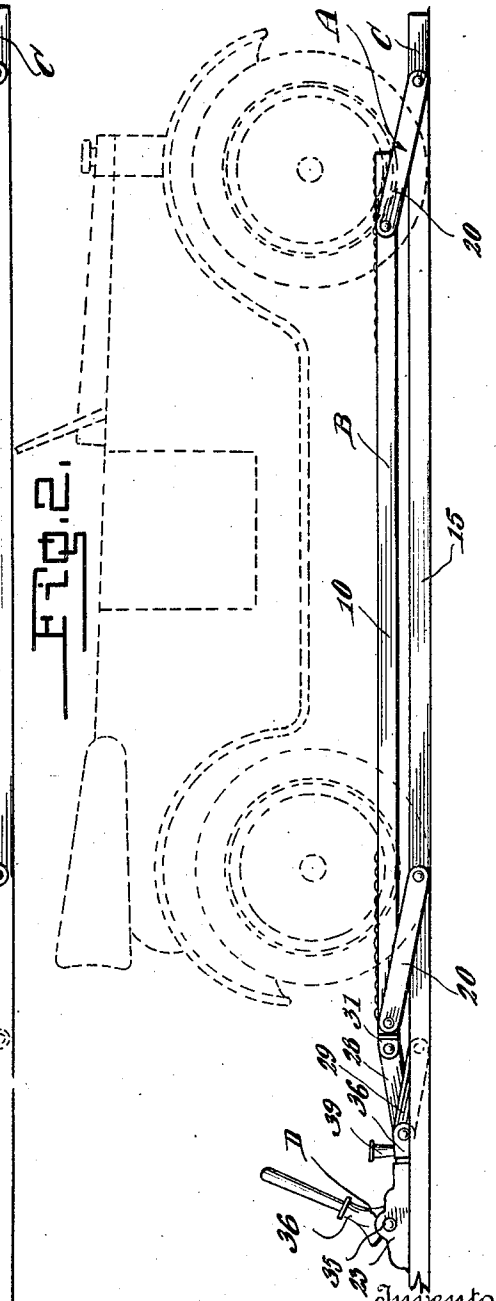


Fig. 2.



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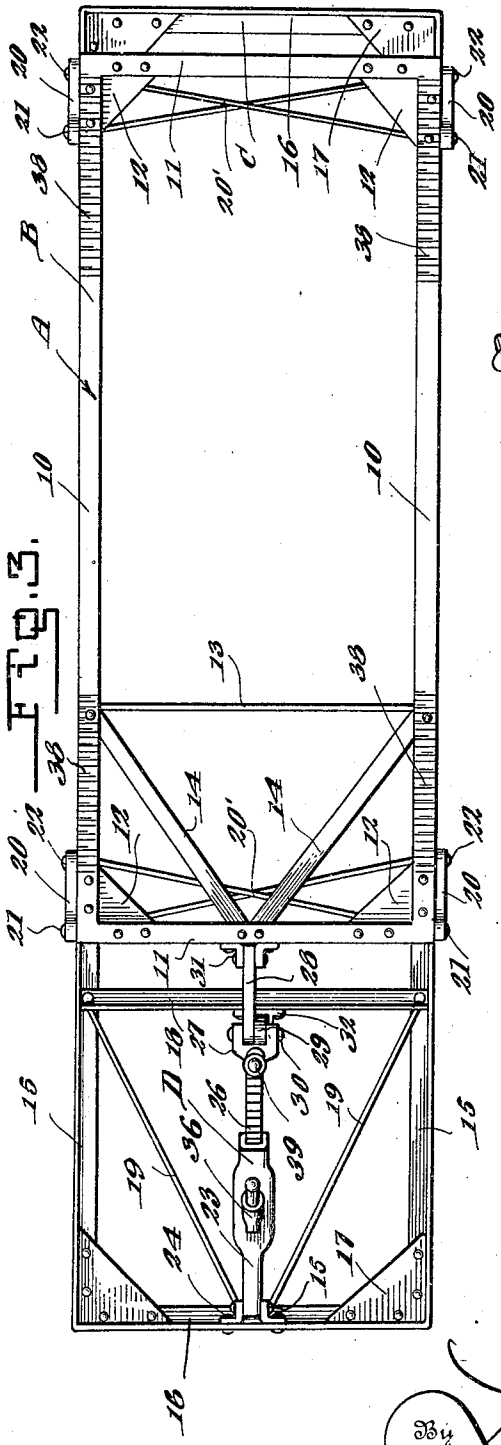


Fig. 3.

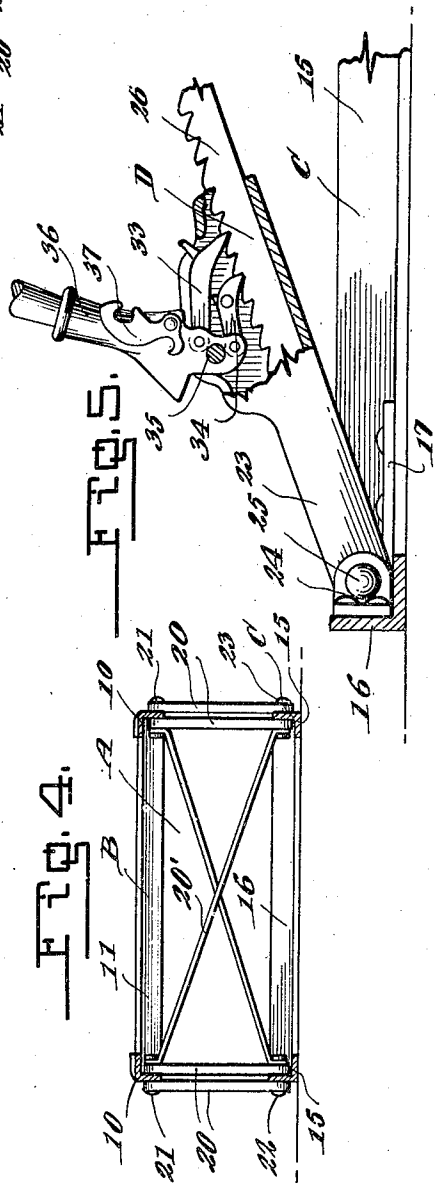


Fig. 5.

Fig. 4.

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UNITED STATES PATENT OFFICE.

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MASTER-JACK AND STAND FOR AUTOMOBILES.

1,370,002. Specification of Letters Patent. Patented Mar. 1, 1921.

Application filed February 6, 1920. Serial No. 356,606.

To all whom it may concern:

Be it known that I, ELMER L. BARRETT, a citizen of the United States, residing at Allen, in the county of Dixon and State of Nebraska, have invented certain new and useful Improvements in Master-Jacks and Stands for Automobiles, of which the following is a specification.

This invention relates to jacks, and the primary object of the invention is to provide an improved jack for motor vehicles which is so constructed as to lift the whole motor vehicle bodily off of the ground and hold the same at any desired position so as to permit repairs to be conveniently made to the underside of the vehicle, and to permit the easy removal of the tires or wheels therefrom.

Another object of the invention is to provide an improved jack and stand which can be readily operated and which is adapted to hold the vehicle off of the ground so as to relieve the weight from the tires when the vehicle is to be stored or the like.

A further object of the invention is to provide means for preventing accidental slipping of the vehicle on the jack or stand during the raising or lowering movement thereof.

A further object of the invention is to provide an improved means for initially positioning the supporting and raising platform in engagement with the vehicle axles so as to eliminate the necessity of operating the stand or platform by the step by step jacking means.

A still further object of the invention is to provide an improved motor vehicle jack and stand of the above character which is durable and efficient in use, one that is simple and easy to manufacture, and one which can be placed upon the market at a reasonable cost.

Other objects and advantages will appear in the following detail description taken in connection with the drawings, forming a part of this specification, in which drawings:

Figure 1 is a side elevation of the improved jack or stand showing the same in operative position supporting a motor vehicle, which is shown in dotted lines.

Fig. 2 is a similar view with the jack in its collapsed position and the motor vehicle ready to be driven therefrom.

Fig. 3 is a top plan view of the jack.

Fig. 4 is a detail transverse section through the jack, and

Fig. 5 is an enlarged fragmentary longitudinal section through the jack showing the means for elevating and lowering the supporting platform or stand.

Referring to the drawings, in detail, wherein similar reference characters designate corresponding parts throughout the several views, the letter A indicates the improved stand which includes the upper frame or supporting platform B, the lower frame C, and the lowering or elevating means D.

The upper frame B is arranged in superposed relation to the lower frame C and includes the parallel spaced side beams 10, and the connecting end bars 11. The side beams 10 and the connecting end bars 11 are preferably formed from angle iron or the like and are reinforced at their points of connection by suitable triangularly shaped web plates 12. The beams 10 intermediate their ends are connected by a cross tie rod 13 and extending rearwardly from the tie rod 13 are oppositely inclined diagonal braces 14, which are connected to one of the end bars 11.

The lower frame C is also of substantially rectangular configuration and is relatively longer than the upper frame B and the same includes the parallel spaced longitudinal side beams 15 and the connecting end beams 16. The side and end beams 15 and 16 are also preferably formed from angle iron with the horizontal portions thereof disposed inwardly and the beams are braced at their points of connection by suitable triangular shaped web plates 17. The longitudinal side bars 15 are also braced and connected adjacent to the forward end bar 16 by a suitable cross angle bar 18. Tie rods 19 extend inwardly from the cross brace 18 through the forward or end bar 16. The angle bars forming the upper and lower frames have their vertical portions disposed inwardly toward each other and these frames are connected together by suitable legs 20 which are connected by pivot pins 21 and 22 to the upper and lower frames B and C. The upper frame B is disposed forwardly of the cross angle bar 18, and positioned rearwardly of the cross bar 18 is the lowering and elevating mechanism D. The lowering and elevating means D includes the hollow casing or standard 23, which has its lower end disposed between the spaced angle

brackets 24 which are bolted to the rear angle bars 16. The lower end of the hollow standard or casing 23 is connected to the brackets 24 by a suitable pivot pin 25. A solid rack bar 26 is slidably mounted in the casing 23 and projects forwardly therefrom and has its forward end provided with the U-shaped yoke 27, which receives the connecting link 28 and the pivoted brace bar 29. The inner ends of the connecting links 28 and the arm 29 disposed in the U-shaped yoke 27 are pivotally connected to the yoke by suitable cross pivot pins 30. The forward end of the connecting link 28 is pivotally connected to a suitable bracket 31 carried by the outer surface of the rear end beam 11 of the frame B. The lower end of the arm 29 is pivotally connected to a bracket 32 secured to the cross brace 18.

The rack bar 26 is adapted to be advanced in the casing 23 by a pair of pivoted pawls 33 and 34 which are disposed on opposite sides of the pivot point 35 of an operating lever 36. The operating lever 36 has a suitable latch 37 for holding the pawls out of engagement with the rack bar. It can be seen by moving the lever back and forth the rack bar will be advanced in a step by step movement and thus gradually move the upper frame B in relation to the lower frame C.

The upper edges of the beams 10 of the upper frame B are provided at their opposite ends with broken or serrated faces 38 which form means for preventing the accidental slipping of the motor vehicle on the frame.

The U-shaped yoke portion 27 of the rack bar 26 is provided with an upwardly extending handle 39 which serves as means for permitting the rack bar to be advanced for initially positioning the upper frame B in engagement with a motor vehicle without necessitating the operation of the raising and lowering mechanism D.

In operation of the improved jack, the frame B is arranged in its lower position in abutting engagement with the lower frame C. The motor vehicle is then driven over the frame as clearly shown in Fig. 2 of the drawings, after which the operator grasps the handle 39 and raises the frame 10 into engagement with the axles of the vehicle. When the operator pushes the rack bar 26 forwardly during the initial raising of the frame B, the pawls 33 and 34 ride over the upper surface of the rack bar and permit the same to be advanced, but prevent rearward movement thereof. The operating lever 36 is then worked back and forth which will effectively advance the rack bar and raise the vehicle off of the ground as clearly shown in Fig. 1 of the drawings. The jack may be used as a stand for supporting vehicles while the same are being stored or on show so as to relieve the weight of the vehicle from the tires, or it can be used as an ordinary jack for making repairs to the under part of the vehicle or for removing the tires or wheels from the vehicle.

If so desired the lower frame C may be disposed or secured in any preferred manner to the floor or other support so as to prevent the creeping of the same during the raising and lowering movement of a motor vehicle.

From the foregoing description it can be seen that an improved jack has been provided of exceptionally simple and durable construction, which will effectively raise and hold a vehicle body off of the ground.

Changes in details may be made without departing from the spirit or scope of my invention; but,

I claim:

1. A vehicle jack and stand comprising a lower substantially rectangular frame, an upper substantially rectangular frame, legs pivotally carried by the outer ends of the upper frame and pivotally connected to the lower frame, a hollow casing pivotally carried by the lower frame, a rack bar slidably mounted in the casing, a link pivotally connecting the rack bar with the upper frame, and an operating lever carried by the casing and arranged to engage said rack bar for advancing the same by a step by step movement.

2. A vehicle jack and stand comprising an upper frame, a lower frame, legs pivotally carried by the corners of the upper frame and pivotally connected to the lower frame, a casing pivotally carried by the lower frame, a rack bar slidably mounted in the casing, a link pivotally connecting the rack bar with the upper frame, a supporting arm pivotally connected to the rack bar and to the lower frame, a lever pivotally connected to the casing, and a pair of pawls arranged on opposite sides of the pivotal point of the lever arranged to engage said rack bar.

3. A vehicle jack and stand comprising an upper rentangular frame, a lower rectangular frame formed relatively longer than the upper frame, legs pivotally connecting the frames together, a casing pivotally carried by the lower frame, a rack bar slidably mounted in the casing, a link pivotally connecting the rack bar with the upper frame, a supporting link pivotally connecting the rack bar with the lower frame, a lever pivotally carried by the casing, pawls pivotally carried by the lever and arranged to engage the rack bar, and a handle carried by the rack bar arranged to permit the initial positioning of the upper frame in engagement with the vehicle without necessitating the use of said lever.

ELMER L. BARRETT.