July 22, 1924. 1,502,350

H. E. PATRICK ET AL

TRUCK JACK

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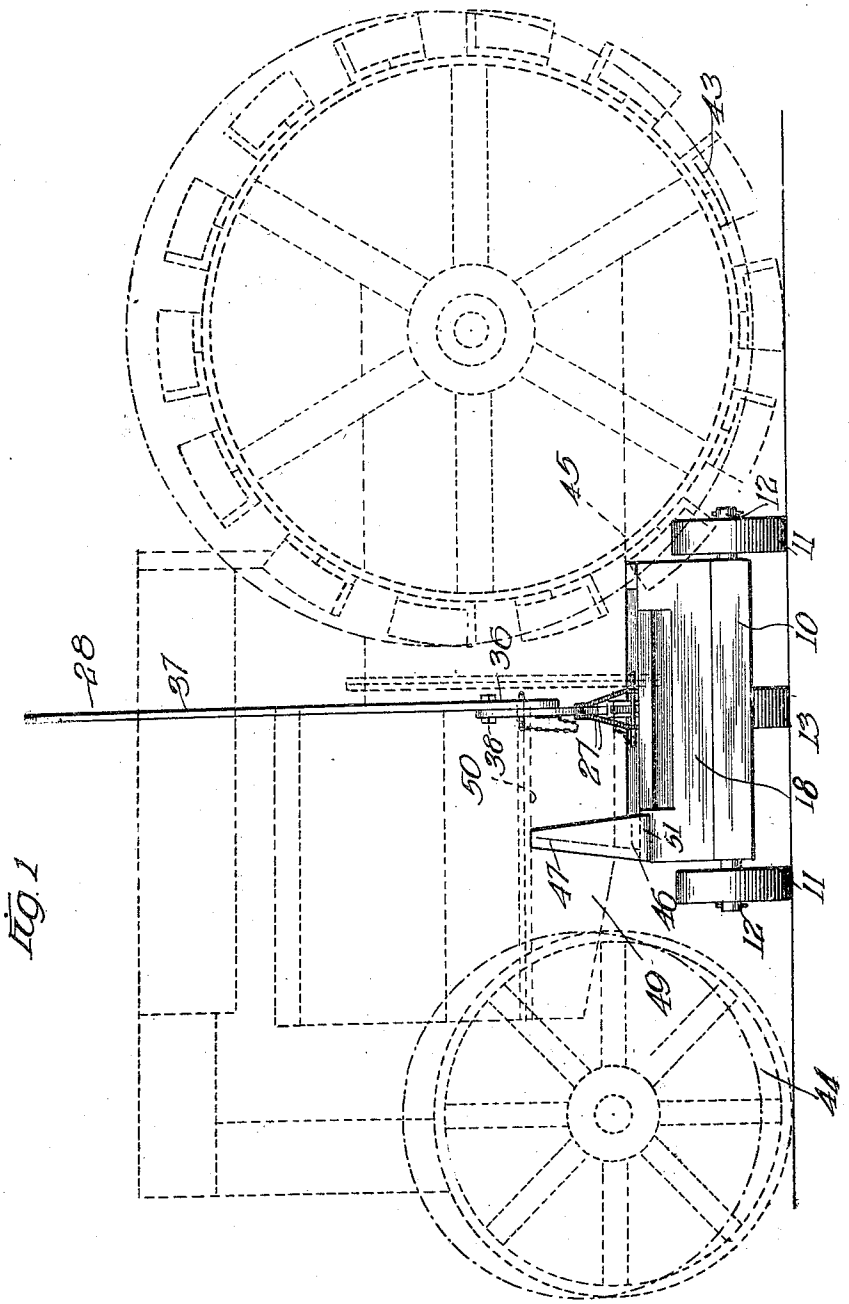


Fig. 1

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TRUCK JACK

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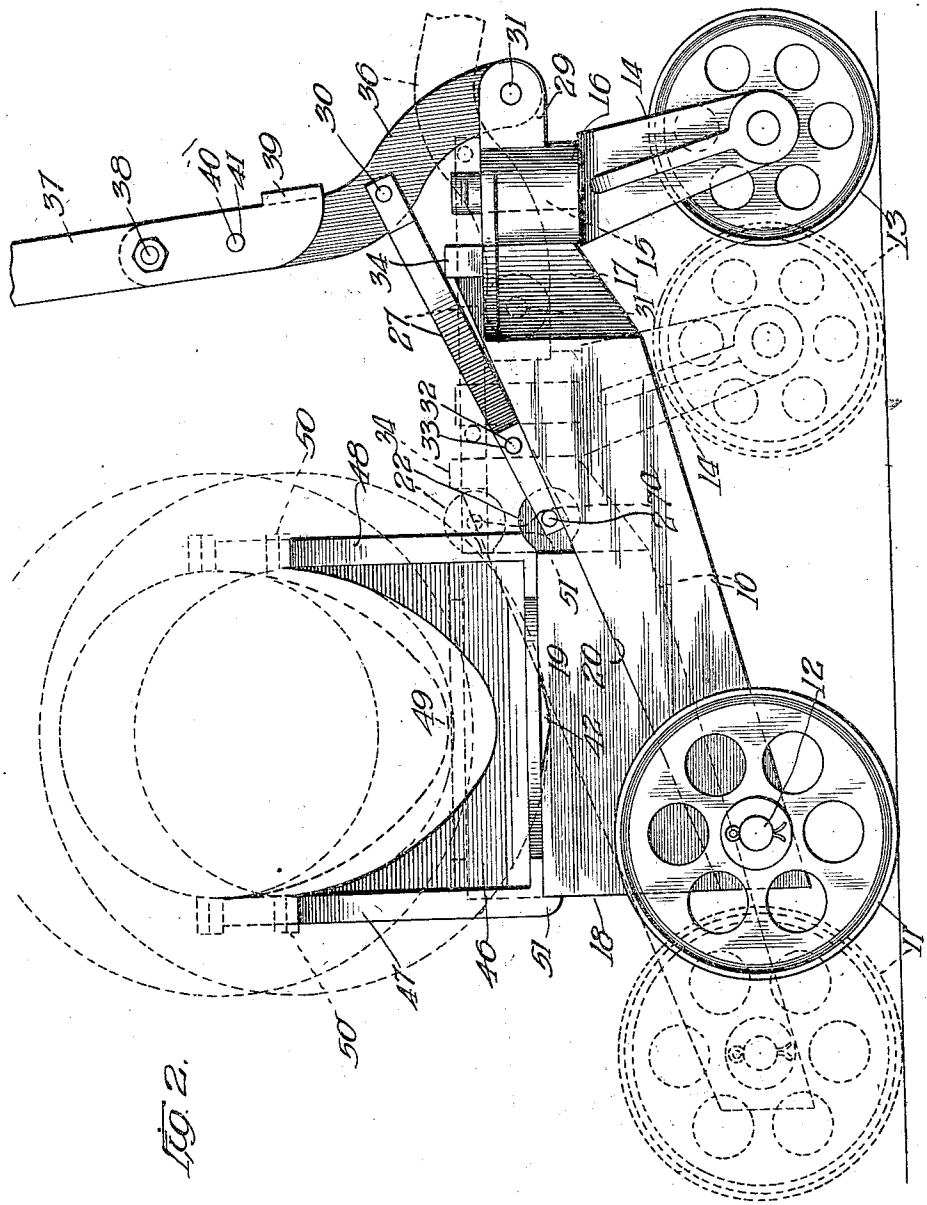


Fig. 2.

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TRUCK JACK

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Fig. 3.

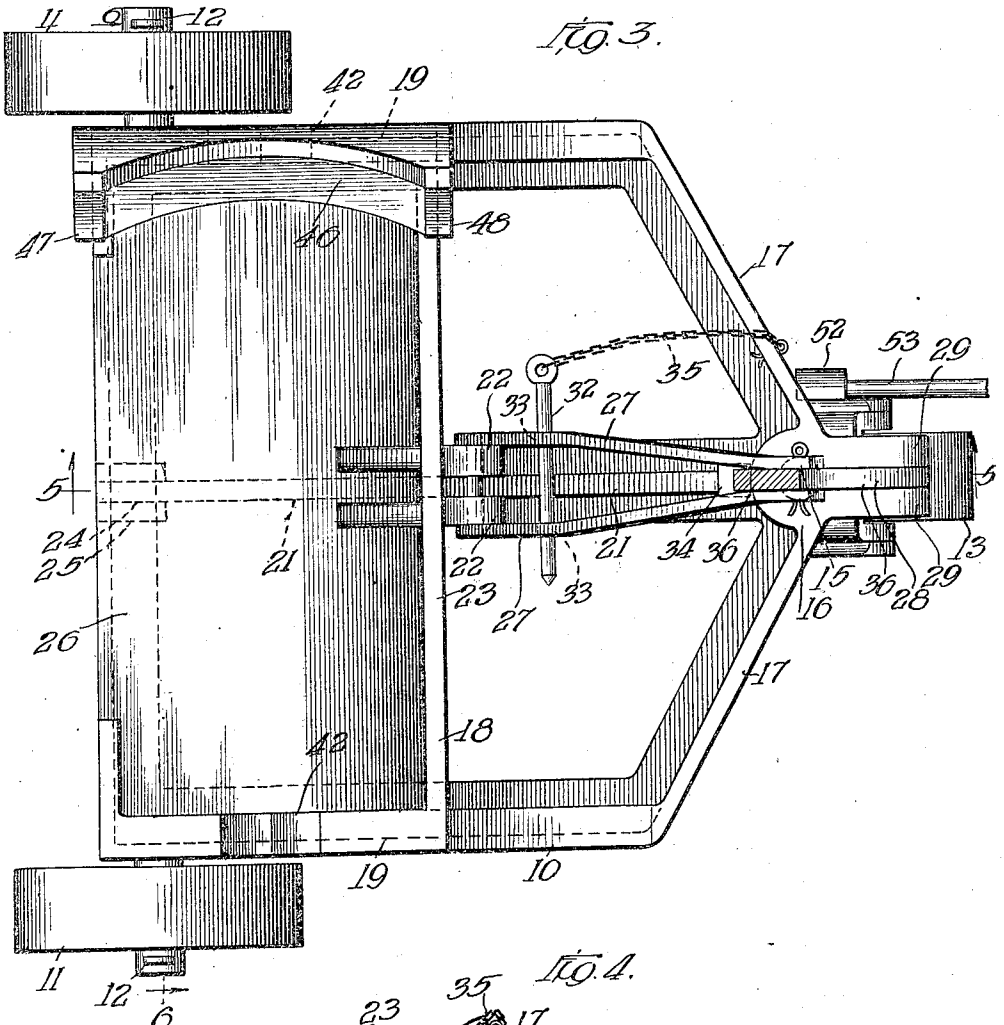
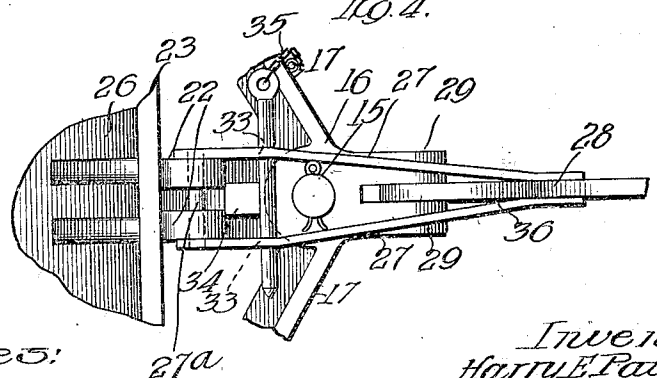


Fig. 4.



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TRUCK JACK

Filed Oct. 27, 1919 5 Sheets-Sheet 4

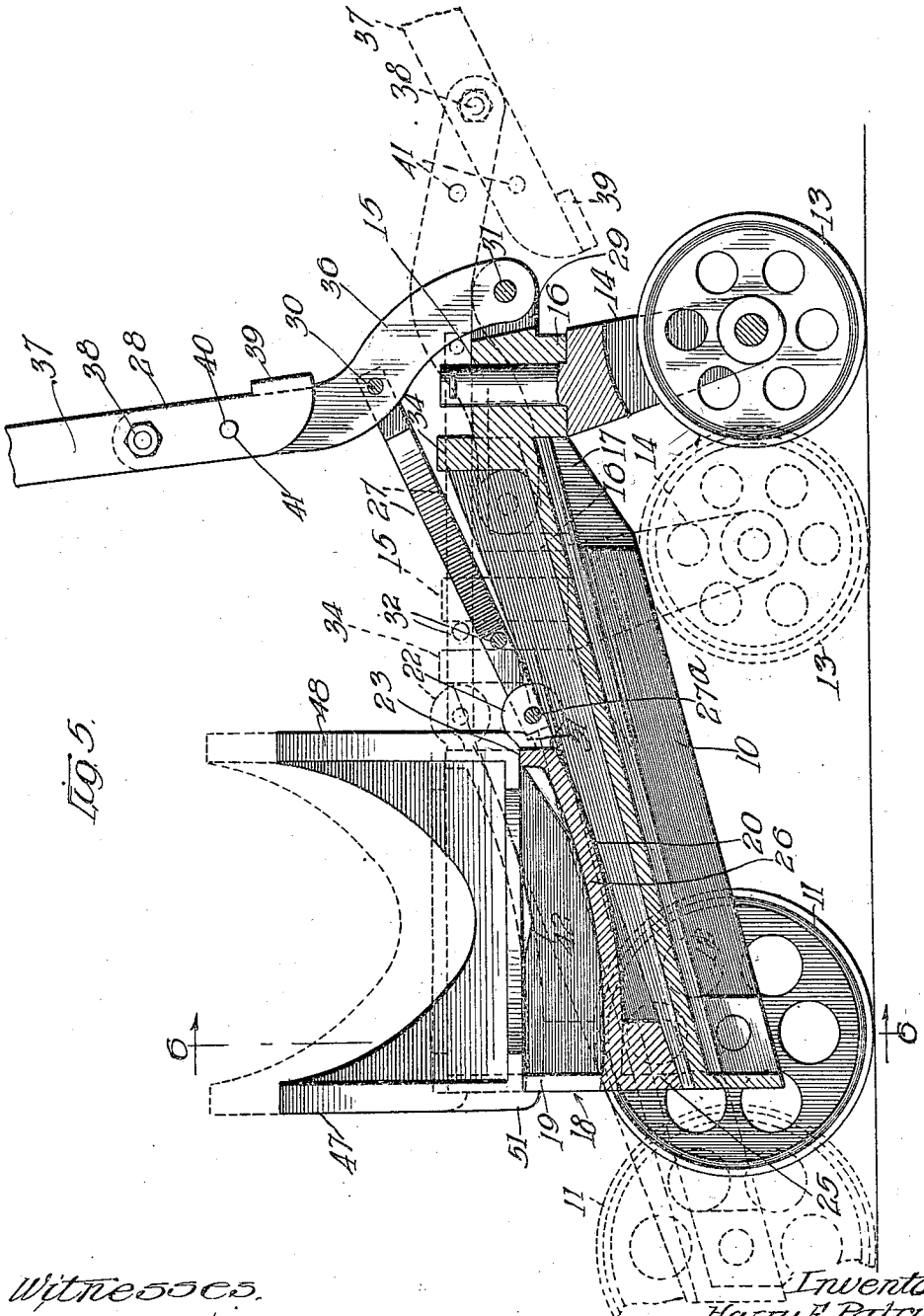


Fig 5.

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TRUCK JACK

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Fig. 6.

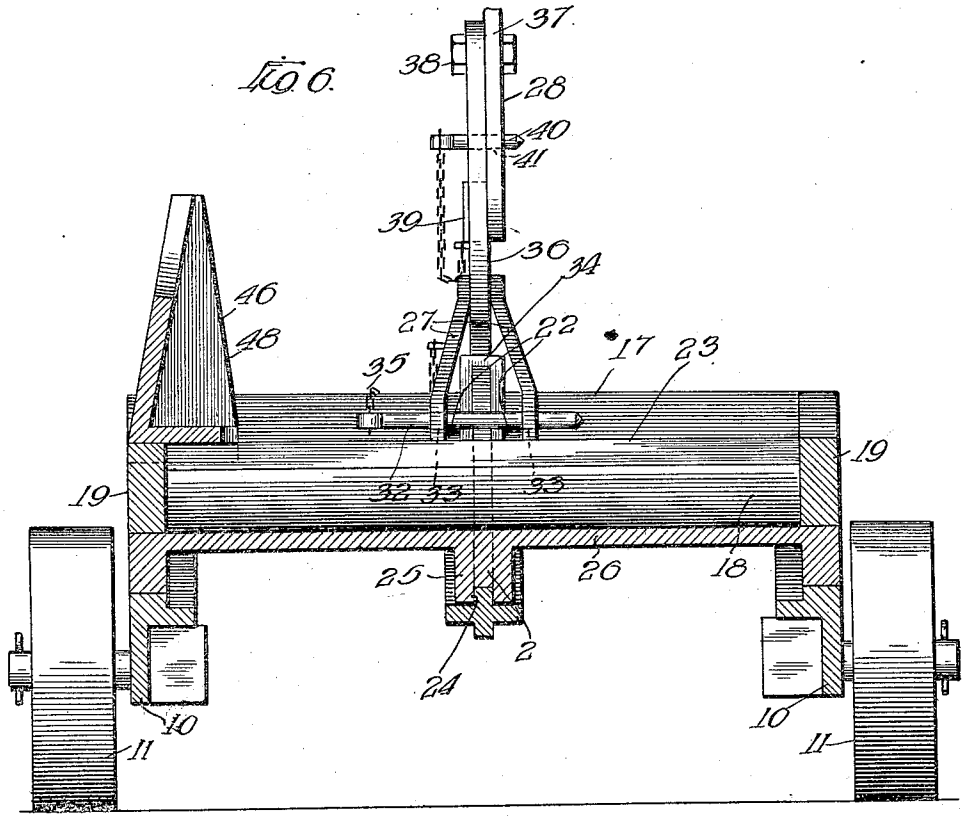
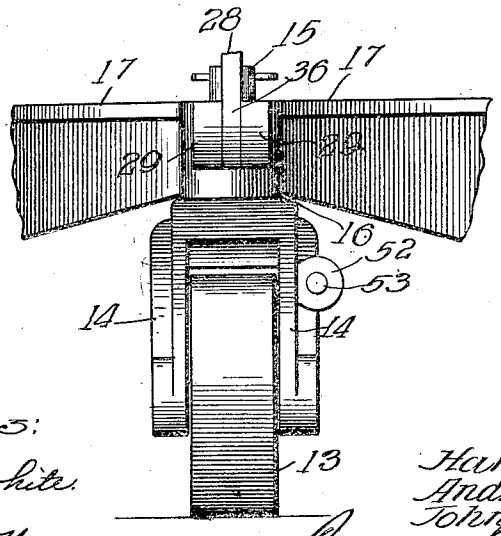


Fig. 7.



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Patented July 22, 1924. 1,502,350

UNITED STATES PATENT OFFICE.

HARRY E. PATRICK, OF EVANSTON, AND ANDREW J. PETERSON AND JOHN W. BERMES, OF CHICAGO, ILLINOIS, ASSIGNORS, BY MESNE ASSIGNMENTS, TO DEARBORN EQUIPMENT COMPANY, OF KALAMAZOO, MICHIGAN, A CORPORATION OF MICHIGAN.

TRUCK JACK.

Application filed October 27, 1919. Serial No. 333,682.

To all whom it may concern:

Be it known that we, HARRY E. PATRICK, ANDREW J. PETERSON, and JOHN W. BERMES, citizens of the United States, residing at Evanston and Chicago, respectively, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Truck Jacks, of which the following is a specification.

Our invention relates to a truck-jack adapted for moving relatively large and heavy objects, such, for example, as farm tractors or the like.

The principal object of the invention is the provision of a suitable and improved apparatus of the above character which will expedite the loading of farm tractors into railway cars ready for shipment, by providing an inexpensive truck-jack with which the tractors may be readily and quickly positioned in the railway car, so that the maximum shipping space of the car may be used and also minimize the labor and expense incident to the performance of this work.

When shipping certain types of farm tractors, it is customary to position the tractors closely together transversely of the car so as to economize in shipping space. This-arrangement presents certain disadvantages in loading and unloading of the tractors, due to the tractors being of substantially the same length as the interior width of the car, and therefore requiring the tractors to be skidded longitudinally of the car to their proper position. The irregularities of the car floor, the weight of the tractor, and the sharp elements on the tread of the tractor wheels make this manner of positioning the tractors very laborious and undesirable. In order to overcome these and other incidental objections, the invention contemplates a small truck apparatus which may be readily and conveniently positioned under the body of a tractor, which truck is provided with an elevating device that may be easily maniplated to raise the tractor off the floor of the car, whereby it may be readily moved to the desired position.

The invention consists in the novel arrangements, constructions and combinations of parts hereinafter described and claimed for carrying out the above stated objects, and such other objects as may appear from the following description.

The preferred embodiment of our invention is illustrated in the accompanying drawings, wherein:

Fig. 1 is an end view in elevation of our improved truck-jack, showing its preferred position under the body of a farm tractor, the tractor being shown in dotted lines;

Fig. 2 is a side elevation of the truck jack, the elevated position of which is shown in dotted lines.

Fig. 3 is a plan view of the truck jack with the elevating table in its lowered position;

Fig. 4 is a fragmentary plan view, illustrating the means for locking the elevating table in its raised position;

Fig. 5 is a sectional view taken on line 5—5 of Fig. 3;

Fig. 6 is a cross-sectional view taken on line 6—6 of Fig. 5; and

Fig. 7 is a fragmentary view in elevation of the front end of the apparatus.

Like characters of reference designate like parts throughout the several figures of the drawings.

Referring to the drawings, our preferred construction consists of a frame casting 10 supported in a generally inclined position on rear wheels 11, 11, journaled on trunnions 12, 12 at opposite sides of the frame, and a centrally positioned front wheel 13. The front wheel is mounted in the fork 14 which is revolubly connected to the frame by a vertical stud 15 on the fork journaled in an integral bearing 16 formed at the center of the frame at the forward end 17 thereof. A table 18 is slidably supported on the inclined side walls of the frame 10, and is adapted when moved toward the front end of the frame 10 to be automatically elevated with relation to the floor. This table is formed with side walls 19, 19, the lower edges 20 of which are formed with a taper corresponding to the inclination of the upper edge of the frame, so that the upper edge of these side walls will be maintained in a substantially horizontal position when the table is moved from one position to another. Any appreciable lateral movement of the table 18 with relation to the frame 10 is prevented by means of a central reinforcing rib 21 on the frame which fits between ears 22, 22, formed on the forward end 23 of the table, and fits into a guiding slot 24 of a boss 25

formed on the under surface of the bottom 26 adjacent the rear end of the table. The reinforcing rib 21 is provided with a taper substantially the same as the side walls of the frame, so that this rib will serve as a guide for the table 18 throughout the entire travel thereof. The table 18 is operatively connected by means of links 27, 27, with the tongue designated generally at 28 and shown as pivoted between ears 29, 29 on bearing 16. The said links are connected to the carriage by a pin 27^a extending through them and the ears 22, and are connected to the tongue as indicated at 30 a short distance from the pivot pin 31, so that by forcing the tongue down from the position shown in full lines in the drawings to a horizontal position, the table 18 will be moved upwardly on the inclined surface of the frame 10 so as to elevate the same to the position shown in dotted lines in Figs. 2 and 5. The table may be locked in its elevated position by inserting a pin 32 into openings 33 in the links 27, 27, so that the pin will stand in front of an upstanding boss 34 formed on the frame 10 at the forward end of the rigidifying rib 21 (Fig. 4). The pin 32 is preferably secured to the frame by a chain 35, so as to avoid the possibility of its being lost or misplaced. The tongue 28 is preferably formed in two parts, 36, 37, which are joined together with a pivoted connection as indicated at 38, so as to permit the upper part 37 to be folded back over the truck jack when the same is not in use. This portion of the tongue is preferably provided with a lip 39 which extends under the lower edge of the lower portion 36 when the tongue is in its extended position. The tongue sections may be firmly secured in their extended position by inserting a locking pin 40 into registering openings 41. This pin is likewise secured to the apparatus by means of a chain or other suitable attachment.

The upper edges of the side walls 19, 19 of the table 18 are preferably formed with central recesses 42 in which the object desired to be moved is supported. The truck jack illustrated in the drawings is designed particularly for use in connection with the moving of Ford tractors from one place to another, though it will be obvious that it is not limited to this particular use.

When it is desired to move a Ford tractor from one position to another, such for example, as when moving it from a point adjacent the door opening of a box car to either end thereof, the truck jack is arranged in a suitable position under the body of the tractor and the table elevated until the tractor wheels 43, 44, are raised a short distance off the floor. In order to accomplish this result, it is necessary to so position the truck jack under the tractor body that the weight of the tractor will be balanced on the truck jack. The under surface of the body of these tractors, having an irregular contour, necessitates the use of a suitable device for maintaining the tractor in a substantially horizontal position when it is raised off the floor. In order to accomplish this result one of the sides 19 of the table 18 is positioned under the transmission casing 45 of the tractor, as shown in Fig. 1, and a removable supporting element 46 is positioned under the crank casing of the engine. This removable element, is preferably provided with upstanding legs 47, 48, which extend on opposite sides of the engine crank casing 49 and bear against the underside of the flange 50 thereof. In order to prevent this attachment from shifting while the tractor is being elevated, the attachment is provided with lips 51 which fit over opposite edges of the table 18.

During the raising movement of the tractor, it will be noted that the tractor, being much heavier than the truck jack, will cause the truck jack to move backwards to the position shown in dotted lines in Figs. 2 and 5.

The fork 14 in which the forward wheel is journaled is provided with a boss 52 having a bore adapted to receive a removable rod 53, which rod provides a suitable steering lever for turning the fork 14 from one position to another, so as to properly direct the truck jack in the course desired. It will be noted that by forming each of the end walls 19, 19, of the table 18 with corresponding grooves 42, 42, and by making the supporting brackets 46 readily detachable from the table, the truck jack may be placed in the proper position under the body of the tractor from either side of the tractor.

We claim:

1. An apparatus of the character described comprising a truck base, a table mounted thereon with provisions for elevating it through relative movement between it and the truck base, a holder resting upon and straddling said table, and operating means for effecting the aforesaid relative movement between the table and the truck base.

2. An apparatus of the character described comprising a truck base, a table mounted thereon with provisions for elevating it through relative movement between it and the truck base, a holder resting upon and straddling said table and reversible between side portions thereof, and operating means for effecting the aforesaid relative movement between the table and the truck base.

3. An apparatus adapted for moving relatively large, heavy objects, comprising a body supported on wheels and provided with an inclined surface, an elevating table slidably supported on said surface, adapted to support an object in elevated position,

an attachment resting upon and straddling said table and adapted to maintain the object, when elevated, in substantially horizontal position, and a lever operatively connected with said table to provide means for elevating the same.

4. An apparatus of the character described, comprising a body having an inclined surface, a table provided with bearing surfaces which correspond to the inclined surfaces of the said body and slidably supported on said body, a centrally located rigidifying rib providing a guide to prevent lateral displacement of said table, a lever pivoted to the body, a link pivoted to the lever and to that portion of the table which engages the rigidifying rib, and a locking pin insertible through the link and engaged with a forward part of the body when the lever has been operated.

5. An apparatus of the character described, comprising a body having an inclined surface, a table provided with bearing surfaces which correspond to the inclined surfaces of the said body and slidably supported on said body, a rigidifying rib providing a guide to prevent lateral displacement of said table, a sectional tongue adapted to be folded back over the body when the apparatus is not in use and when extended to provide an operating lever for elevating the table, links connecting said table and lever, and means for securing the table in its elevated position comprising a pin adapted to be connected with said links so as to engage a fixed element of said body.

6. An apparatus of the character described comprising a truck base having a vertical shoulder on its upper side at its forward portion, a table mounted on said base with provisions for elevating it through relative movement between it and the truck base, an operating lever pivoted to the forward end of the truck base, an apertured link pivotally connected at one end to the lever and at the other end to the table and adapted to lie alongside the shouldered part of the base when the lever has been operated to raise the table, and a pin insertable through the aperture of the link in front of the shoulder to lock the table in elevated position.

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