

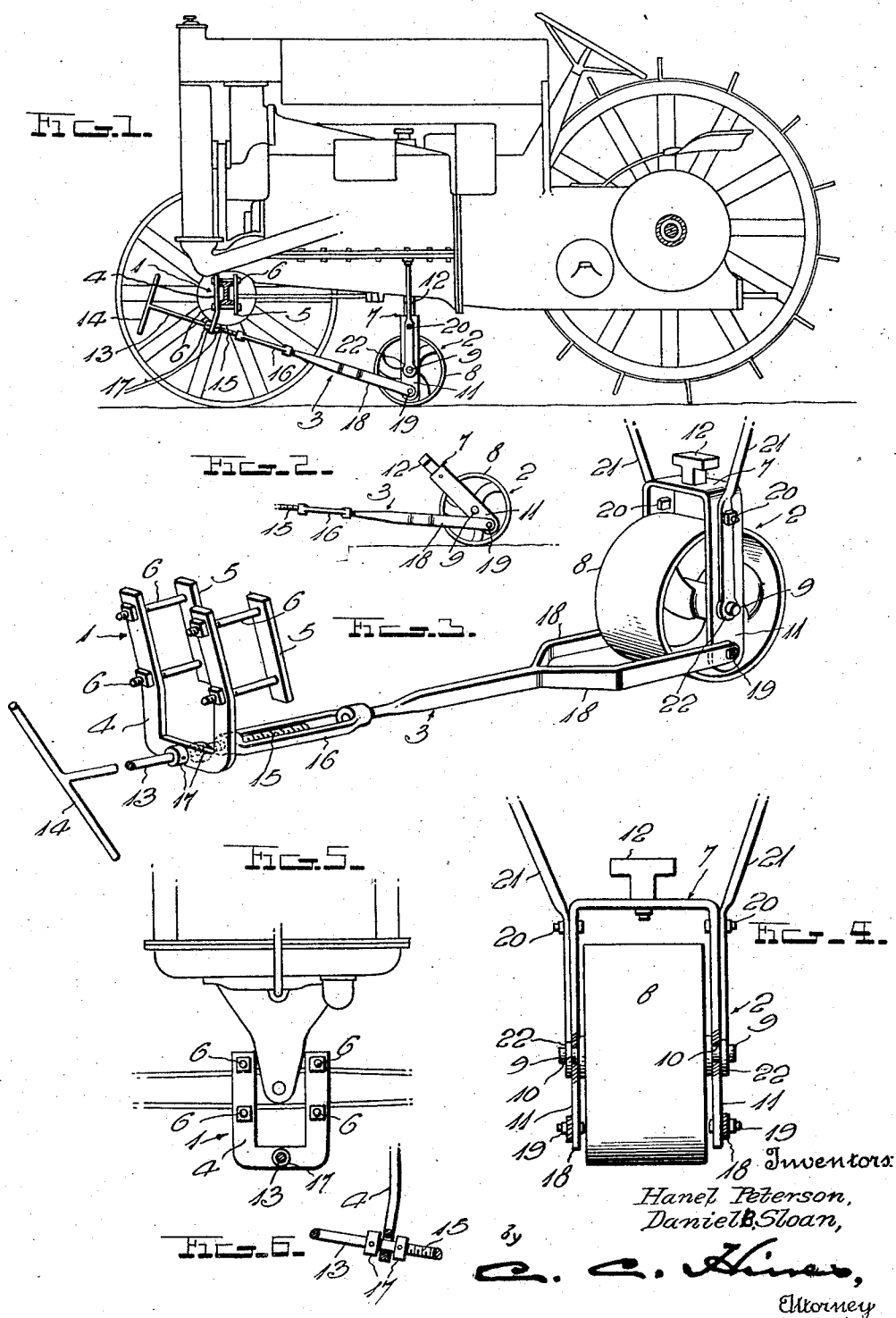
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TRACTOR JACK

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TRACTOR JACK.

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This invention relates to tractor jacks, and particularly to a jack for supporting the front part of a tractor, such as a Fordson tractor, or the unbolted motor of the tractor, in making repairs, replacements or performing other operations requiring the front of the tractor to be raised or the unbolted motor to be supported while the work is being done.

One object of the invention is to provide a simple, reliable and efficient portable type of device which is of particular value for use in the field when a chain hoist is not available.

Another object of the invention is to provide a jack which may be fixed to the front axle as a stationary support and may be readily and conveniently manipulated for raising and lowering purposes.

Still another object of the invention is to provide a jack which will engage under the radiator support to hold the tractor upright or level while the unbolted motor is being supported, and which may be employed for supporting the motor with or without the oil case detached.

Still another object of the invention is to provide a jack which dispenses with the use of pawl and ratchet mechanism.

The invention consists of the features of construction, combination and arrangement of parts, hereinafter fully described and claimed, reference being had to the accompanying drawing, in which:—

Figure 1 is a side elevation view of the jack as applied for use, showing the jack carriage in raised position.

Figure 2 is a similar view of the carriage part of the jack showing the same in lowered position.

Figure 3 is a perspective view of the jack.

Figure 4 is a front elevation of the jack carriage, showing a portion of the jack carriage frame and the draft yoke in transverse section.

Figure 5 is a front elevation, the draft rod appearing in section, showing the mode of application of the head member to the vehicle axle.

Figure 6 is a detail section showing the connection between the draft rod and head member.

In carrying our invention into practice,

we provide a tractor jack comprising a head member 1, a carriage member 2, and interconnecting draft mechanism generally indicated at 3.

The head 1 consists of a U-shaped bracket 4, the upstanding arms of which form stationary front clamping members. Associated with each of these arms is an adjustable rear clamping member 5. Bolts 6 pass through the clamping members of each pair, adjacent to their upper and lower ends, and adjustably connect them together. The head bracket is adapted to be applied to the central portion of the front axle of the tractor, so that the stationary arms thereof will lie in front of the axle and the arms 5 will lie in rear of the axle, the axle being received between the upper and lower sets of bolts, which when tightened will hold the head firmly fixed to the axle. When so applied, the lower edge of the axle will rest upon the lower bolts and the head will straddle the depending front portion of the crank or oil case, the lower portion of the head projecting below the axle. The upper ends of the stationary and adjustable clamping arms lie in a common plane and, when the head is applied in the manner described, said upper ends of the arms will be arranged to form abutment supports for engagement with the radiator support on opposite sides of its center, whereby such support and the radiator will be braced and held upright or level when the crank or oil case is detached.

The carriage 2 comprises a U-shaped bracket or frame 7, between the arms of which is disposed a supporting wheel or roller 8. The shaft of this roller has end journals 9 which project through bearing openings 10 in the arms of the bracket 7, at points above the lower ends of said arms. The lower ends of the bracket arms thus project below the bearing points and form crank members or arms 11. From the above construction it will be apparent that the wheel or roller is journaled to rotate on the bracket, while said bracket is free to swing or tilt on the wheel journals as an axis. The upper or cross portion of the bracket 7 is provided with a T-shaped head 12 forming a bearing or abutment surface. This bearing or abutment surface is adapted to engage under and bear against the oil or

crank case of the tractor motor, whereby the latter may be supported and held in raised position when unbolted from the transmission casing.

5 The draft mechanism 3 comprises a rod 13 which is provided at its forward end with an operating handle 14 and which at its rear end extends through and is journaled in a bearing opening in the lower cross portion
10 of the head bracket 4. This rod is adapted to be used as a draft member in moving the jack backward or forward or drawing it from place to place on the wheel or roller 8 as a traveling support. Said rod is also
15 adapted to be rotated for the purpose of adjusting the draft mechanism to tilt or swing the bracket 7 on the roller journals. As shown, the rear end of the rod 13 is threaded, as indicated at 15, and engages a threaded
20 bar or sleeve 16, which is adapted to travel endwise with relation to the rod. Suitable abutments 17 fixed on the rod 13 in front and in rear of the bracket 4 hold said rod against longitudinal movement. At its rear
25 end the bar or sleeve is fixed to the front end of a draft yoke 18, the rear end of which is forked or bifurcated and the fork arms of which straddle the front portion of the wheel or roller 8 and are pivotally connected,
30 as indicated at 19, to the crank arms 11. The part 16 thus forms a connecting member between the rod 13 and the yoke 18 and having a threaded engagement with the rod, whereby, through reverse rotations of the
35 rod, the draft member 18 may be moved forwardly or backwardly to swing the bracket 7 accordingly on the roller journals.

In the use of the jack, it is disposed under the front of the tractor so as to bring the
40 head 1 beneath the front axle and the carriage 2 beneath the crank case, after which the head is clamped to the axle in the manner described. The carriage when applied is disposed with the lifting bracket 7 tilted
45 forwardly to a lowered position. The head 1 having been fastened upon the axle as a support, the operating handle 14 may now be turned in a clockwise direction to draw the draft connections forwardly, which draft
50 connections act on the crank arms of the member 7 to raise the engaging head thereof into contact with the crank case and finally to a vertical position to hold the crank case supported in an elevated position. When so
55 supported the motor casing may be disconnected from the transmission and all connecting parts disassembled for cleaning, repairs, replacements or other work while held supported. The mode of releasing the jack
60 for removal will be readily understood from the foregoing description. It will also be understood from the foregoing description that when the head is applied the upper ends of its arms and clamping members will en-
65 gage under the radiator support at opposite

sides thereof and stably hold the same and the front of the vehicle against movement in either lateral direction out of the vertical. Where at the same time the rear end of the tractor is to be held elevated, any ordinary
70 type of jack may be employed for the purpose. The device provides a simple, convenient and efficient type of tool, which may be readily carried as a portable article upon
75 the vehicle and will be found especially useful in the field when a chain hoist is not available.

The arms of the member 7 are provided with openings above the bearing openings therein to receive fastening bolts 20. These
80 bolts are provided for detachably holding in position supporting arms 21. These arms 21 are provided with eyes 22 at their lower ends to engage the projecting ends of the roller journals and are apertured above said
85 eyes for reception of the bolts 20 whereby they may be fastened in position and held from pivotal movement. At their upper ends the arms 21 are reduced in size and
90 shouldered to engage bolt holes in the side edges of the motor case, whereby the motor case may be supported from the jack when the crank or oil case is removed.

Having thus fully described our invention, we claim:—

1. A jack comprising an axle engaging head, a carriage including a vertically movable lifting member, a draft element coupled to said member, and an actuating element journaled for rotation on the head and having a screw connection with said draft element.
2. A jack comprising an axle engaging head, a roller carriage including a vertically movable lifting member oscillatable on the carriage axis and provided with crank arms, a draft element coupled to said crank arms, and an actuating element rotatably mounted on the head and having a screw connection with said draft element.
3. A jack comprising a U-shaped head bracket, clamping members for cooperation therewith to hold said head bracket clamped to an axle, a carriage including a vertically movable lifting member, and a connecting means between the head bracket and carriage operative for actuating said lifting member.
4. A jack comprising an axle engaging head, means carried by said head for fastening it to an axle, a roller carriage including an oscillating lifting member, a draft element coupled to said member, an actuating element swiveled to the head, and a direct screw connection between said draft element and actuating element.
5. A jack comprising an axle engaging head, a roller carriage including an oscillatable lifting member provided with crank arms, a draft member connected with said crank arms, an actuating member supported

on the head, and a screw connection between said actuating member and said draft member.

5 6. A jack comprising an axle engaging member, a roller carriage including a lifting member comprising a U-shaped frame oscillatable on the carriage axis and provided with crank arms, a draft member connected

with said crank arms, an actuating member supported on the head, and a screw connection between said actuating member and said draft member. 10

In testimony whereof we affix our signatures.

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