

Feb. 28, 1950

E. E. BRUBAKER
PORTABLE LADDER SUPPORT

2,499,091

Filed Oct. 4, 1945

2 Sheets-Sheet 1

Fig. 1.

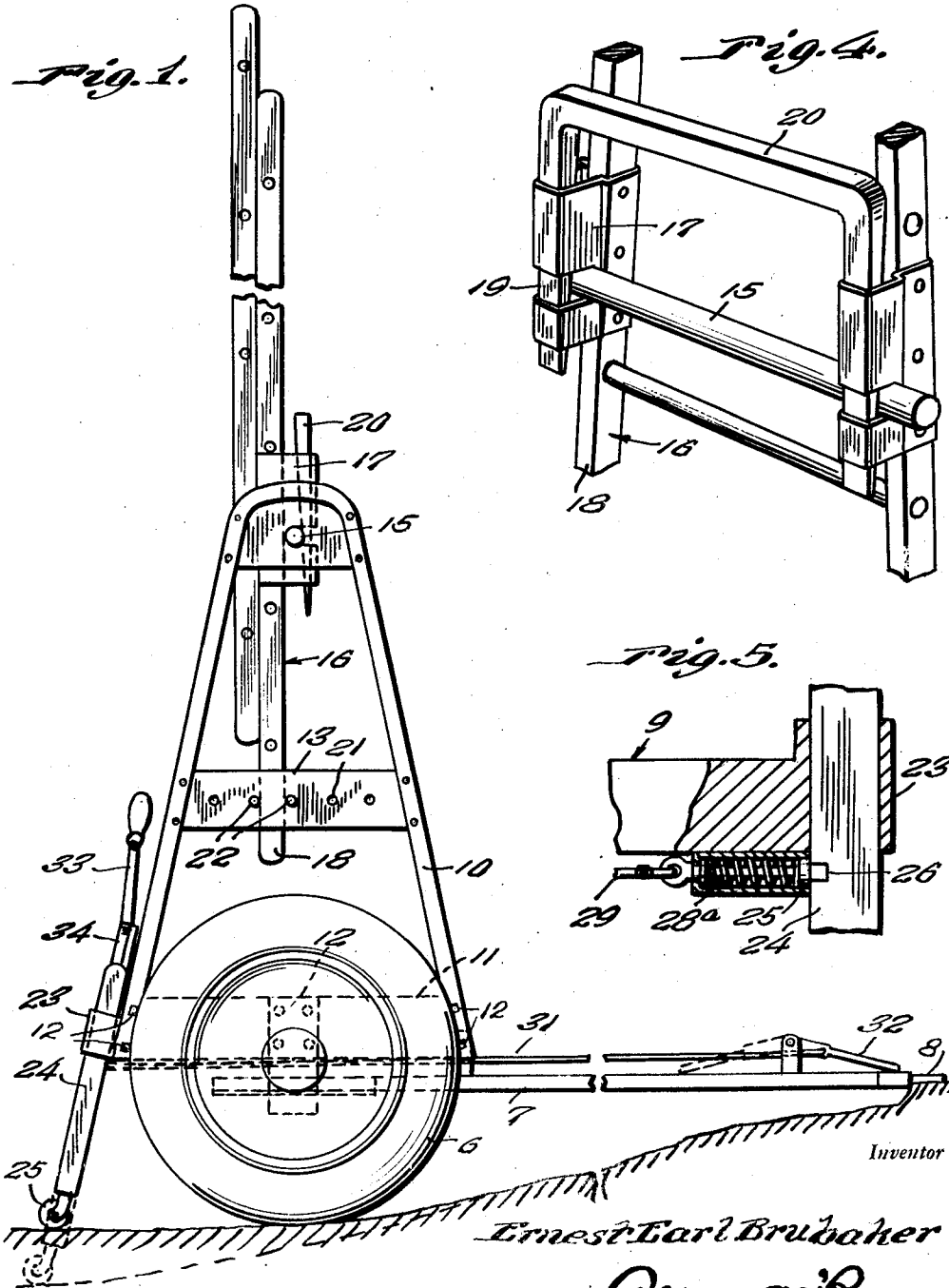


Fig. 4.

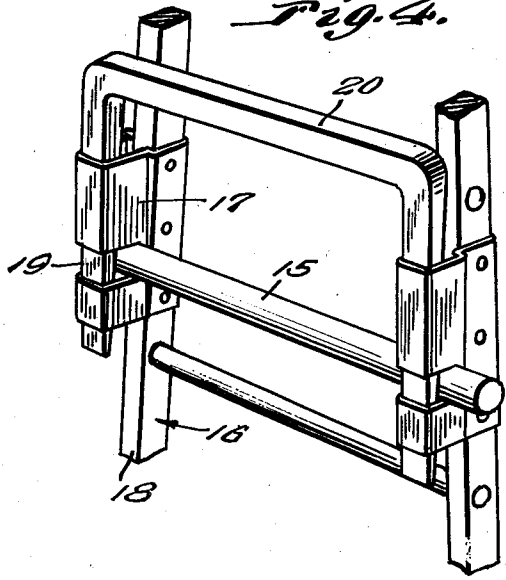
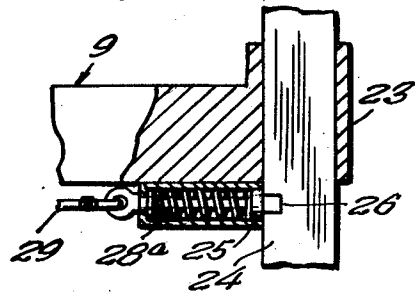


Fig. 5.



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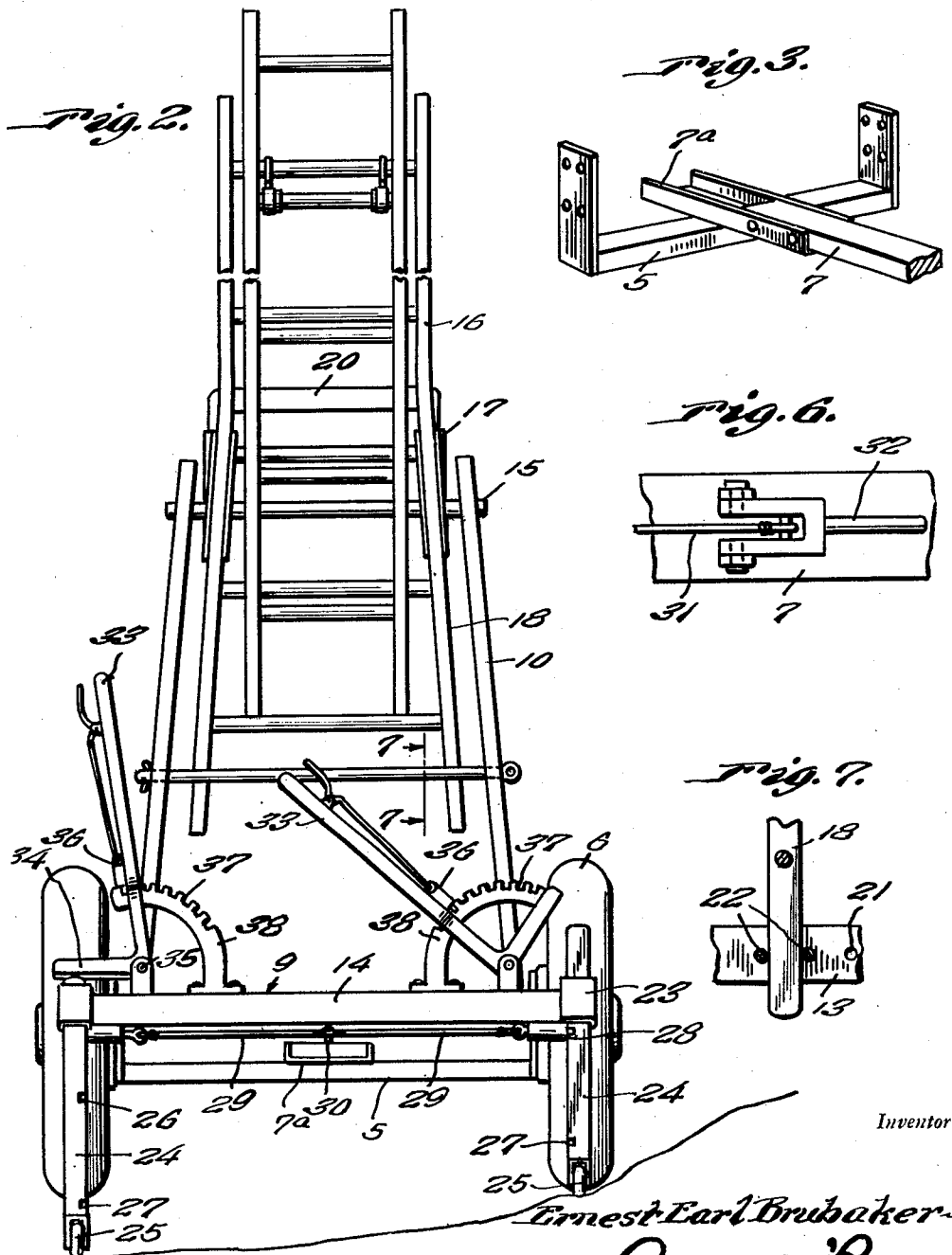
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UNITED STATES PATENT OFFICE

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PORTABLE LADDER SUPPORT

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Application October 4, 1945, Serial No. 620,331

1 Claim. (Cl. 228—5)

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The present invention relates to new and useful improvements in portable ladder-supporting apparatus particularly adapted for use in orchards and in other situations where such an apparatus may prove useful, such as when pruning the trees, or otherwise working on the trees from an elevated position.

An important object of the present invention is to provide a portable ladder support including wheels for moving the ladder over the ground into a desired position for working on the trees, together with means for jacking the wheels into a desired position and embodying independent jacking means for each wheel to support the base of the ladder in a horizontal position to compensate for sloping of the ground and also in which the jack functions as a prop to prevent rearward tilting movement of the ladder.

A further object of the invention is to provide an apparatus of this character of simple and practical construction, which is strong and durable, efficient and dependable in use, relatively inexpensive to manufacture, and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation, as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a side elevational view.

Figure 2 is a rear view.

Figure 3 is an enlarged perspective view of the underslung wheel mounting.

Figure 4 is a perspective view of the adjustable ladder-attaching clamps.

Figure 5 is an enlarged fragmentary sectional view of the latch pin for one of the frame jacking posts.

Figure 6 is a fragmentary top plan view of the latch pin releasing lever.

Figure 7 is a fragmentary sectional view taken on a line 7—7 of Figure 2.

Referring now to the drawings in detail, wherein for the purpose of illustration I have disclosed a preferred embodiment of the invention, the numeral 5 designates a U-shaped frame forming an underslung axle and to the sides of which wheels 6 are journaled.

A tongue 7 has its rear end secured in a longitudinal channel member 7a secured to the central portion of the frame 5 the tongue being provided with an eye 8 at its front end adapted for attaching to a towing vehicle.

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A ladder-supporting frame designated generally at 9 includes a pair of inverted V-shaped side frame members 10, connected at their lower ends by longitudinally extending frame members 11 which in turn are connected to the ends of the frame 5 by bolts, rivets or the like 12. The side frame members 10 are also connected by upper longitudinal frame members 13 and by lower transverse frame members 14.

The upper ends of the side frame members 10 are also connected by a transverse bar 15 on which is supported the lower section of an extension ladder 16 by means of brackets 17 of channel construction secured to the respective rails 18 of the ladder, one edge of the brackets having notches 19 therein for receiving the rod 15 and a U-shaped wedge 20 has its ends inserted in the brackets 17 for wedging the bar 15 in the notches 19, as indicated in Figure 4 of the drawings.

One of the upper longitudinal frame members 13 at each side of the frame 9 is formed with longitudinally spaced openings 21 adapted for receiving a pair of pins 22 extending transversely of the frame 9 in spaced parallel relation to each other and between which the lower ends of the rails 18 of the ladder are adapted for positioning, as indicated in Figure 7 of the drawings, for securing the ladder in forwardly and rearwardly angularly adjusted position on the frame.

The rear corners of the frame 9 are formed with tubular vertically extending guides 23 in which jack posts 24 are slidably mounted for vertical adjustment, the posts 24 having rollers 25 journaled at their lower ends and are formed with upper and lower notches 26 and 27 on the inner sides thereof. The posts and guides are of square shape in cross section to prevent turning of the posts in the guides.

The posts 24 are secured in vertically adjusted position by means of spring-projected locking pins 28 slidably carried in housings 28a at the lower portion of the frame 9 for horizontal movement, each of the locking pins 28 for the respective posts having a cord or cable 29 attached thereto and extending inwardly from the sides of the frame around a guide 30 and connected to a longitudinally extending cable 31 extending forwardly above the tongue 7 and attached at its front end to a lever 32 pivoted on the tongue and adapted, upon a forward swinging movement into the position as shown by the full lines in Figure 1 of the drawings, to retract the locking pins 28 to permit vertical adjustment of the posts 24 in the guides 23, and upon a rear-

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ward swinging movement of the lever 32, to permit a projection of the locking pins into either of the notches 26 or 27 to thus secure the posts in a predetermined vertically adjusted position.

When the locking pins 28 are retracted from the notches 26 and 27, the posts 24 may also be vertically adjusted and secured in vertically adjusted position by means of bell crank levers 33 including a lower laterally projecting arm 34 pivoted at its junction with the lever 33 on pins 35 carried at the lower portion of the frame 9, the outer ends of the arms 34 being movable into a position overlying the upper ends of the posts 24 to force the posts downwardly, as shown at the left hand side of Figure 2 of the drawings, the lever 33 being secured in its adjusted position by means of a detent 36 of conventional construction carried by the lever and engageable in the notches 37 of a quadrant 38 carried by the frame 9.

Accordingly, the posts 24 at the opposite sides of the frame may be independently adjusted vertically to support the frame in a horizontal position to compensate for the slope of the ground and both of the posts 24 may be moved downwardly below the wheels 6 into engagement with the ground where the ground slopes rearwardly, as indicated in Figure 1 of the drawings, to prevent rearward tilting of the ladder on its support.

When it is desired to lock the posts 24 in their uppermost position, the locking pins 28 are retracted and the tongue 7 raised upwardly until the lower notch 27 has been moved into a position for receiving the locking pins 28 and the posts 24 are then locked in their upward position out of contact with the ground during transporting of the ladder.

It is believed the details of construction, manner of operation and advantages of the device will be readily understood from the foregoing without further detailed explanation.

In view of the foregoing description, taken in conjunction with the accompanying drawings, it

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is believed that a clear understanding of the construction, operation and advantages of the device will be quite apparent to those skilled in the art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though I have herein shown and described a preferred embodiment of my invention, the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claim.

Having thus described the invention, what I claim is:

A ladder support comprising a truck, and including a frame rising from the truck, a transverse bar at the upper portion of the frame, a ladder having a pair of channel brackets secured to the rails thereof, notches in the brackets for receiving the bar to pivotally mount the ladder thereon, a locking wedge bridging and connecting said brackets and inserted in the brackets to retain the brackets on the bar, and means carried by the frame for securing the ladder in adjustably tilted position on the frame.

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