This invention relates to supports, and in particular, to trestle jacks.

One object of this invention is to provide a trestle jack which is of simple and easily manufactured construction, sturdy in operation, and quickly and easily adjusted to any desired height within the range of the jack.

Another object is to provide a trestle jack having a central plunger which is movable up and down in a tubular support, and which is provided with a latch member for holding it at the adjusted position.

Another object is to provide a trestle jack as set forth in the preceding objects, wherein the plunger consists of a shaft having annular grooves therein engaged by a latch member slidable into the grooves so as to hold the shaft at the desired height.

Another object is to provide a trestle jack as set forth in the preceding objects wherein the plunger is vertically slidable in a base structure including an approximately pyramidal framework and a tubular support and guide for the plunger.

Other objects and advantages of the invention will be apparent from the following description of the accompanying drawings, wherein:

Figure 1 is a perspective view of a preferred embodiment of a trestle jack according to the present invention;

Figure 2 is a central vertical section through the jack shown in Figure 1, taken along the line 2—2 in Figure 3; and

Figure 3 is a fragmentary horizontal section taken along the line 3—3 in Figure 2.

Referring to the drawings in detail, Figure 1 shows a preferred form of the trestle jack of this invention as consisting of an approximately pyramidal base unit, generally designated 10 and a vertically adjustable plunger unit, generally designated 11. The base structure 10 consists of a plurality of upwardly inclined frame members 12 of angle cross-section interconnected near their lower ends 13 by straps or tie bars 14 welded or otherwise secured thereto as at 15. Also secured at 16 as by welding to intermediate points along the frame members 12 is a plate-like platform 17. Secured at 18 as by welding to the platform 17 and rising therefrom (Figure 2) is a tubular guide member 19 to the upper end 20 of which the upper ends 21 are secured as by welding at 22. The platform 17 has an opening 23 therein corresponding in diameter to that of the inner bore 24 of the tubular member 19.

Vertically slidable in the bore 24 is the plunger shaft 25 of the plunger unit 11. Secured at 26 as by welding to the top of the plunger shaft 25 is a cross bar or rest 27 of T-section having a notch 28 therein preferably of arcuate form located in the upright portion 29 thereof. The plunger shaft 25 is provided at intervals with annular grooves 30. These are engaged by the notch 31 of a swinging hook 32 having a bore 33 through which passes a pivot pin 34. The end 37 of the hook 32 is bent downwardly to engage a notch 35 in the upper end of the tubular guide member 19, to provide a safety detent therefor. The pin 34 passes through a hole 35 in an angle bracket 36 secured, as by welding, to the upper portion of one of the frame members 12 (Fig. 2). The weight of the vehicle or other supported body urges the bent end 37 downwardly into the notch 35 and prevents the accidental swinging of the hook 32 while the trestle jack is in use.

In the operation of the invention, the vehicle or other object to be supported is jacked up to the required height by any conventional jacking or lifting device, such as by a vehicle jack or chain hoist. The swinging hook 32 is swung outward so that the notch 31 moves away from the annular groove 30 which it is engaging at the moment, thereby permitting the plunger shaft 25 to be moved up or down to the necessary height, at which the object is being supported.

The hook 32 is then swung inwardly to cause the notch 31 to engage the nearest annular groove 30, locking the plunger unit 11 in its adjusted position. The entire trestle is then pushed under the object to be supported, with its cross bar notch 28 beneath the portion of the object which is to rest upon it. The lifting device is then operated in the reverse direction to lower the object upon the rest 27 with its supporting portion, such as the axle of the vehicle, resting in the notch 28. To remove the trestle jack, the reverse procedure is followed.

Thus, by the present invention there has been provided a trestle jack which can instantly be adjusted to the desired height. When so adjusted it is absolutely rigid and cannot easily be overturned because of the large spread of the frame members 12 at their lower ends 13. The base unit 10 is of simple yet sturdy design, easily made by ordinary machine tools and hand tools from standard metal parts at low cost. All of its parts are of relatively easy manufacture and it is ideally adapted to mass production and assembly.
While I have shown and described my invention in detail, it is to be understood that the same is to be limited only by the appended claims, for many changes may be made without departing from the spirit and scope of my invention.

What I claim is:

1. An adjustable trestle comprising a base structure, a tubular upright secured to said base structure and having a vertical bore, a plunger movably mounted in said bore, a rest connected to the upper portion of said plunger, said plunger having a plurality of annular grooves forming reduced diameter plunger portions with annular shoulders therearound disposed at intervals therealong, and a latched member pivotally mounted upon said base structure and having an approximately U-shaped notch therein swingable selectively into and out of engagement with one of said grooves, said U-shaped notch having a cross-diameter substantially equal to the cross-diameter of said reduced diameter plunger portions, the edge portions of said notch engaging the shoulder at least halfway around the selected reduced diameter plunger portion.

2. An adjustable trestle comprising a base member having a vertical bore, a plunger reciprocable in said bore, a load rest connected to said plunger, said plunger having a plurality of annular recesses therein disposed at intervals therealong, and a latch member pivotally mounted upon said base structure and having an approximately U-shaped notch therein swingable into and out of locking engagement with said plunger recesses, one of said members having a depression and the other member having a projection engageable with said depression in response to the locking engagement of said latch member with one of said plunger recesses whereby to prevent accidental dislodgement of said latch member from said plunger recess.

ALBERT J. SCHREIBER.

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