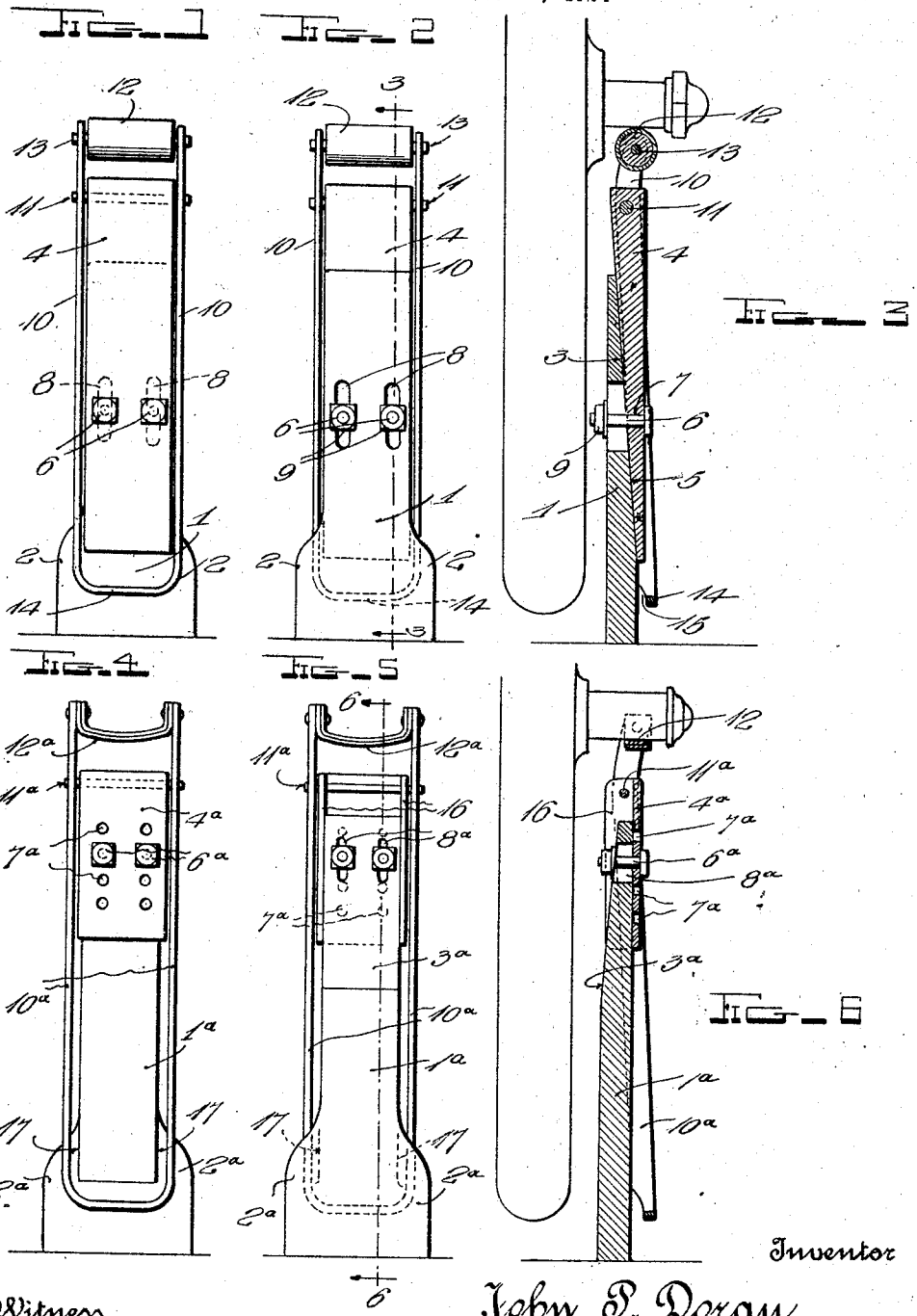
July 7, 1925. 1,545,404

J. P. DORAU

HUB JACK

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Witness

Inventor

John P. Dorau

By H. B. Williamson & Co

Attorneys

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UNITED STATES PATENT OFFICE.

JOHN P. DORAU, OF HORICON, WISCONSIN.

HUB JACK.

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To all whom it may concern:

Be it known that I, JOHN P. DORAU, a citizen of the United States, residing at Horicon, in the county of Dodge and State of Wisconsin, have invented certain new and useful Improvements in Hub Jacks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in jacks and the present disclosure is directed primarily to a jack intended to engage the hub of an automobile to take strain from the tire of such a wheel, so that by using four of the jacks, all weight may be relieved from the tires.

One object of the invention is to provide an exceptionally simple and inexpensive jack provided with a novel construction and association of parts for limiting the downward swinging of the load-lifting lever.

Another object of the invention is to provide a novel construction, whereby the jack may be vertically adjusted to any desired extent and effectively held in adjusted position.

With the foregoing in view, the invention resides in the novel subject matter hereinafter described and claimed, the description being supplemented by the accompanying drawing.

Figures 1 and 2 are elevations looking in opposite directions at one form of jack constructed in accordance with my invention.

Figure 3 is a vertical sectional view as indicated by lines 3—3 of Fig. 2.

Figures 4 and 5 are elevations looking in opposite directions at a different form of the jack.

Figure 6 is a vertical sectional view as indicated by line 6—6 of Fig. 5.

In the form of construction shown in Figs. 1, 2 and 3, the numeral 1 designates a lower standard section preferably formed of wood and having its lower end widened to provide a pair of shoulders 2 extending outwardly from the lower ends of its opposite vertical edges, widening of said standard also serving to give it more extended bearing upon the ground or a floor. The outer side of the standard section 1, is beveled as indicated at 3, so that said standard section tapers upwardly as indicated most clearly in Fig. 3.

At 4, I have illustrated an upper standard section which is also, by preference, formed of wood, the inner side of said section 4 being beveled so that it tapers downwardly as indicated at 5, the beveled inner face of the section 4 being in contact with the beveled outer face of the section 1. I have shown adjusting bolts 6 passing through bolt-holes 7 in the section 4 and through vertical slots 8 in the section 1 and it will be seen that by loosening the nuts 9 of these bolts, the two sections 1 and 4 may be relatively adjusted vertically, whereupon the nuts are tightened, and any downward force on the upper section 4, when the load-lifter, yet to be described, is actuated, will serve to tightly wedge the two sections together, due to their tapers, thereby effectively holding them in adjusted position.

The load-lifter above referred to, has been shown in the form of a U-shaped lever whose arms 10 straddle the jack standard and are pivoted to the upper end of the section 4, as indicated at 11, the lower ends of these arms being adapted to strike the shoulders or stops 2 when the lever is swung downwardly to operative position, thereby limiting such movement. The upper ends of the arms 10 are preferably curved outwardly to some extent as indicated in Fig. 3 and they carry a suitable hub rest, such as the padded roller 12, and attention is directed to the fact that when the arms 10 are swung downwardly to the maximum, the axis 13 of the roller 12 is outwardly spaced from the fulcrum or pivot 11 of said arms, so that there is no tendency for the lever to return to a raised, inoperative position. The arm-connecting portion of the U-shaped lever, designated by the numeral 14, may be suitably shaped to permit it to be readily gripped by hand when releasing the jack. In the present showing, the inner edge of the portion 14 has been cut away as indicated at 15 for this purpose.

In the form of construction shown in Figs. 4, 5 and 6, the numeral 1^a designates a lower standard section having a widened lower end providing shoulders 2^a having the same functions as the shoulders 2. The inner side of the standard section 1^a has been shown beveled at its upper end as indicated at 3^a, so that the standard section tapers upwardly, and vertical slots 8^a have been shown through the tapered portion. In this form of the invention, the upper standard section

is in the form of a flat vertical plate 4^a contacting with the outer side of the standard section 1^a and provided with parallel vertical flanges 16 embracing the upper end of said section 1^a, in such manner that the two sections may be relatively adjusted vertically, but cannot laterally cant. Vertical series of bolt-holes 7^a have been shown in the plate 4^a and bolts 6^a may be passed through any of said openings and through the slots 8^a, to connect the two standard sections in any desired relative adjustments, and due to the taper of the lower section 1^a, it will be seen that any tendency of the upper section 4^a to slide downwardly thereon, will merely result in extremely tight wedging of the two sections, into engagement with each other.

A load-lifter is shown in Figs. 4, 5 and 6, of the same general form as that shown in Figs. 1, 2 and 3, the arms 10^a of said load-lifter, being fulcrumed at 11^a, preferably by a pin or a bolt passing through the upper ends of the flanges 16. The upper ends of the arms 10^a are shown as provided with a hub rest in the form of a padded saddle 12^a. As in Figs. 1, 2 and 3, the lower ends of the arms 10^a are adapted to strike the shoulders 2^a to limit the downward swinging of the load-lifter or lever, and if desired, the uper ends of these shoulders may be cut away to some extent, as indicated at 17, so as to permit further downward and inward swinging of the lever, than would otherwise be possible.

Both forms of construction shown, are simple and inexpensive, yet will be reliable and easily operable, and may be readily adjusted to any desired vertical height, for use in connection with wheels of different diameters. After adjustment, downward thrust of the upper standard section, upon actuation of the load-lifter serves to tightly wedge the two standard sections together, so that slippage is prevented.

As excellent results may be obtained from the details disclosed, they may well be followed, but within the scope of the invention as claimed, numerous changes may be made.

I claim:

1. A jack comprising a standard widened at its lower end to provide projections extending oppositely from said standard, a U-shaped lever whose arms straddle the standard above said projections and are pivoted to the upper end of said standard, the lower ends of said arms being adapted to strike said projections to limit the downward swinging of the lever, and a load support extending between the upper ends of said arms, the upper portions of the aforesaid projections being cut away at one side of the standard to permit the lever arms to swing further inward than would otherwise be possible, the upper ends of said lever arms being outwardly curved to dispose said load support outwardly from the pivotal axis of the lever arms, causing the latter to remain in contact with said projections, the lower arm connecting portion of said lever being cut away to space the remainder of such portion outwardly from the standard and permit the operator to grip it by hand.

2. In a jack, a lower standard section having an upwardly tapered portion, a vertical plate contacting with said standard section and having parallel vertical flanges embracing the latter, adjustable connecting means between said plate and standard section, including a bolt passing through the plate and through the tapered portion of said standard section, at least one of the two last named parts having a slot receiving said bolt, and a load-lifter mounted on said plate, the taper of said standard section serving to tightly wedge it against said plate when downward force is exerted on said plate by actuation of the load-lifter.

3. In a jack, a lower standard section having an upwardly tapered portion, a vertical plate contacting with said standard section and having parallel vertical flanges embracing the latter, adjustable connecting means between said plate and standard section, including a bolt passing through the plate and through the tapered portion of said standard section, at least one of the two last named parts having a slot receiving said bolt, a U-shaped load-lifting lever whose arms are disposed at the outer sides of said flanges, means pivoting said arms to the upper ends of said flanges, and a load support extending between the upper ends of the lever arms, the lower end of said lever being adapted to strike the standard to limit its downward swinging.

In testimony whereof I have hereunto affixed my signature.

JOHN P. DORAU.