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LIFTING JACK SUPPORTING DEVICE.

APPLICATION FILED NOV. 23, 1908.

929,047.

Patented July 27, 1909.

FIG. 2.

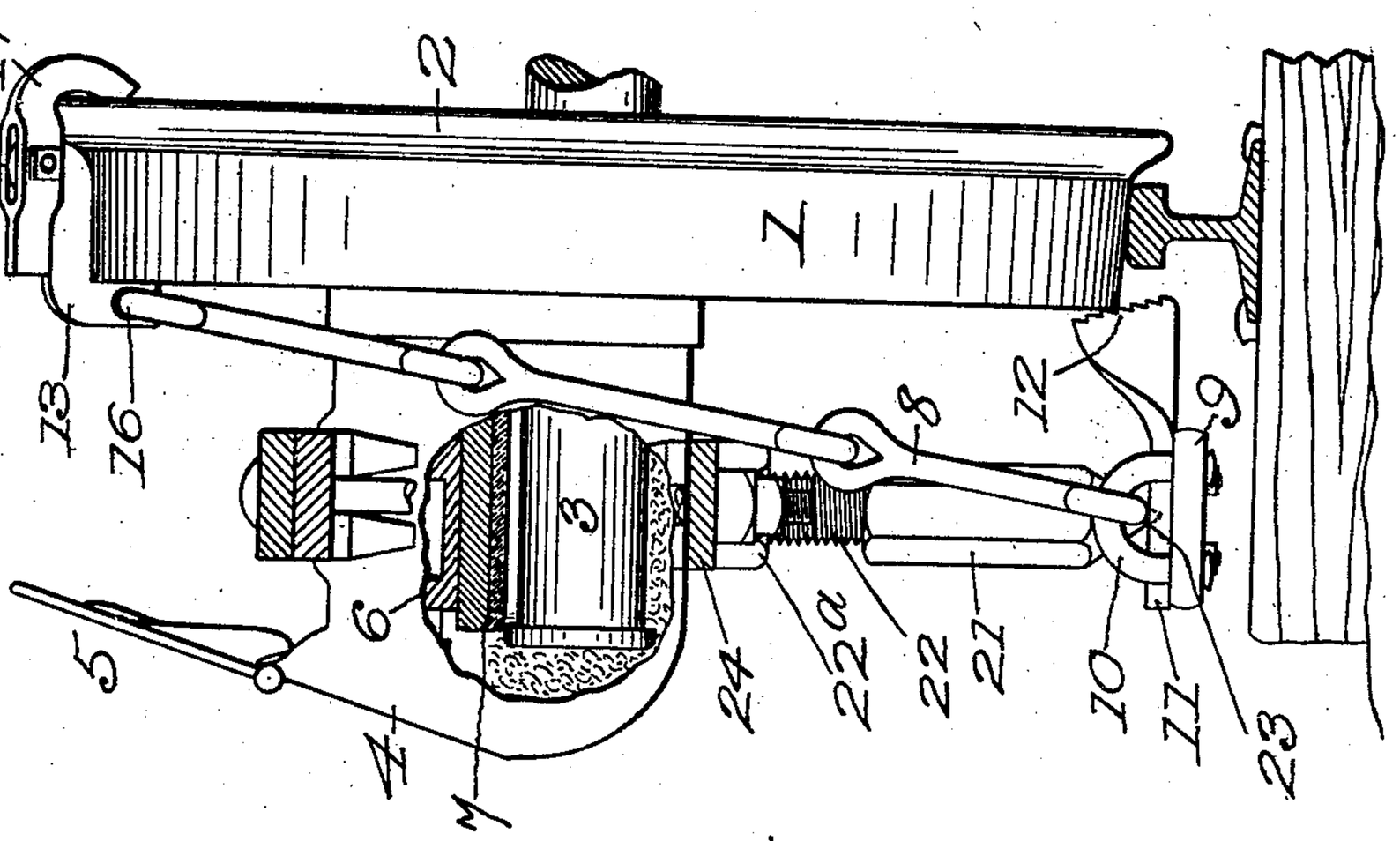

FIG. 1.

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UNITED STATES PATENT OFFICE.

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LIFTING-JACK-SUPPORTING DEVICE.

No. 929,047. Specification of Letters Patent. Patented July 27, 1909.

Application filed November 23, 1908. Serial No. 464,071.

To all whom it may concern:

Be it known that we, WILLARD A. STORY and WILLIAM A. HALL, citizens of the United States, and residents of Chillicothe, county of Ross, and State of Ohio, have invented new and useful Improvements in Lifting-Jack-Supporting Devices, of which the following is a specification.

This invention relates to lifting-jack supports and more particularly to devices for supporting railway-car jacks in relation to the car-wheels so as to elevate the journal-boxes into position for readily removing and replacing the brasses and other internal parts of the box that are adapted to be removed and replaced upon such raising-action of the jack.

The invention consists of a car-jack suspension device comprising a pair of vertical members, a lower horizontal member connected at its opposite ends to the lower ends of said vertical members, a pair of claws each one of which is connected at one end to the upper end of a vertical member and having hook-formations at their opposite ends for engagement over the flange of a car-wheel and a coupling-member engaging at its opposite ends the said claw-members, the whole being adapted to be swung into vertical position from a car-wheel with said vertical members at either side the journal-box and said lower horizontal member being adapted to support a lifting-jack beneath said journal-box in position for raising and lowering operation on said journal-box without any of the parts being supported elsewhere than on the car-wheel.

The details of the invention will be fully hereinafter described and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a front elevation showing our invention in position in connection with a car-wheel and its journal-box, said car-wheel being supported on a broken section of track and the jack being in raised or extended position together with the journal-box thereon so that the brass and wedge in the latter can be readily removed; and Fig. 2 is a side elevation of Fig. 1, but showing the lid of the box raised and one side of the box open, the customary brass and wedge within the box being shown in section and in position for removal.

In these views, 1 indicates an ordinary railway-car wheel having a flange 2 and the journal spindle or bearing 3.

4 indicates the ordinary form of journal-box or oil-receptacle that surrounds the spindle 3 and is adapted to be raised upward in relation to but independent of said spindle. 5 indicates a hinged lid on the face of said box, 6 the customary wedge or key and 7 the brass, the latter intervening between the wedge and the spindle as usual.

8 indicates each one of a pair of vertical suspension-members, preferably composed of links suitably connected together and coupled at their lower ends by means of a plate or cross-bar 9, eyes 10 intervening between the lower ends of the members 8 and the opposite ends of the plate 9.

11 indicates a spacer or prop suitably bolted at its outer end or body portion to the plate 9 mid-length of the latter and having a vertical, serrated face along its inner edge 12, as best seen in Fig. 2, such serrated edge 12 being adapted to engage the angular outer edge of the tread of the wheel to prevent slipping of the prop and the latter itself being adapted to hold or sustain the lower portions of the suspension-members sufficient distance away from the wheel to suit the desired jack-centering position thereof beneath the journal-box.

At the upper ends of the several suspension-members 8, we provide suitable claws or retaining lock-members which engage over the tread and flange portions of the wheel and are each composed of an outer right-angled part 13, that engages over the angular tread-portion of the wheel, and an inner hook-shape part 14, the latter being pivotally connected to an upward extension on the former part 13 by means of a bolt 15 and the lower part of the member 13 being, in turn, pivotally-connected at 16 to the upper link of the suspension-member 8.

A chain or other suitable flexible coupling 17 is provided to connect the two claw or clamping members at the upper ends of the suspension-members 8, as best seen in Fig. 1, one end of the chain being rigidly connected to an eye 18 in the bolt 15 and the other end of said chain being in the form of a hook 19 that engages an eye 20 in the bolt 15 of the other claw or clamping member. This chain is adapted to support the suspension-members from lateral play, the journal-box itself preventing the suspension-members from play toward each other and the hooked end of the chain is adapted to permit the ready release of the two upper ends of the suspension-members for convenience in use.

A lifting-jack comprising a barrel 21 and a screw 22 is provided between the journal-box and the body portion of the prop-bar 11 for expansive action between said box and prop-bar for the raising of said box in relation to the journal-spindle when it is desired to remove the brass and wedge, or either of them from the box. The barrel 21 of the jack is pointed at its lower end 23 and such point rests and turns in a socket or step in said prop-bar 11, a wrench or other suitable implement being used in connection with the octagonal face of said barrel to turn the latter in either direction for raising and lowering the journal-box. The head 22^a of the screw-portion 22 of the jack flatly contacts with the under side of the tie-bar 24 on the truck-frame that supports the journal-boxes, thus arranging the jack in a perpendicular line beneath the center of the load to be lifted or shifted vertically in a straight line which is the desirable feature in the operation of a jack beneath a journal-box of a car-wheel and constitutes an important feature herein. Jacks as heretofore used have been subject to more or less trouble and difficulty in operation owing to the point of lift being to one side of the center of the load, thereby tilting the box and rendering it hard to remove the wedge and brass from the spindle. All this is corrected and obviated in the use of our jack-supporting device which is suspended from the wheel and the jack not rested on the ground or the ties at all, as it has been heretofore, the surface of the ground and ties being more or less uneven and not, as a rule, anywhere near level, all of which has been greatly annoying and inconvenient in the use of the ordinary form of lifting-jack in general use.

It will be seen that the swinging of the suspension device from the car-wheel serves to hold the latter down in place on the track, especially when the jack is being extended in the lifting operation on the box independent of said wheel. The ordinary form of jack, as heretofore used, has not been suspended from the wheel, but, in being supported on the ground, or on the ties, has had a tendency to allow the wheel to rise on account of relieving the weight from one end of the axle only whereby the removal of the brasses and wedges has been more or less inconveniently effected.

Instead of making the prop-bar or spacer a separate piece of material and attaching it to the lower plate or cross-bar 9, it is obvious that the spacer or inwardly-projecting portion of the platform part of the device can be made integral with said platform part or cross-bar 9 and a step or socket made centrally in the latter to provide for the lower pointed end of the jack-barrel. The plate or cross-bar 9 would thus form a direct platform or seat for the uprightly-disposed jack when it is in place beneath the tie-bar that supports the journal-box. The side suspension-members 8, 8 lean or cant outwardly from the upper ends down to said platform, the two-part pivotally-united claw-members being engaged over the tread and flange portions of the wheel so as to hold firmly in place during the action of raising the journal-box and retaining it in elevated position for removing the wedge and brass therefrom and replacing same, or other desired purpose.

Instead of making the suspension-members 8, 8 in chain-form, it is obvious that they could be made in single rod or bar form and pivotally-connected at their opposite ends to the claws and jack-platform, respectively, but the desired flexibility in the parts would be absent for the purpose of the necessary adjustment of the jack in relation to the journal-box and in compensating for any lack of uniformity in the position of the car on the track, or the box in relation to the truck and the car-wheel.

We claim:—

1. A supporting device for railway-car jacks comprising a pair of side-members, a horizontal platform or plate connecting the lower ends of said side-members free from support beneath, a serrated spacer or prop-extension on the inner edge of said platform, a pair of claw-members each pivotally-connected at one end to the upper end of a side-member and formed of two pivotally-connected parts, the inner one of which hooks over or locks under the inner edge of the wheel flange and both of which claw-members are flexibly-connected together to prevent their lateral shifting.

2. A supporting device for railway-car jacks comprising a pair of vertical linked side-members, a horizontal platform or plate having eyes at its opposite ends for pivotal connection with the lower ends of said side-members and, also, having a central step or socket in its upper face, a spacer or prop-bar projecting from said platform and having a serrated, vertical inner edge for engagement with the angular edge of the car-wheel tread,

a pair of claw-members pivotally-connected at their outer ends to the respective upper ends of said side-members and made in two parts pivotally-connected together, the inner one of such parts having an extension that projects over and engages the outer one of said parts and said inner one of said parts having a hook-formation at its inner end for engagement upon the inner edge of the wheel flange.

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