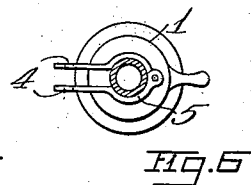
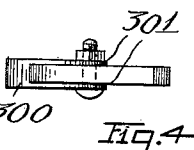
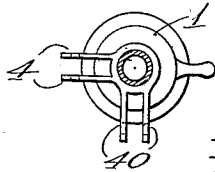
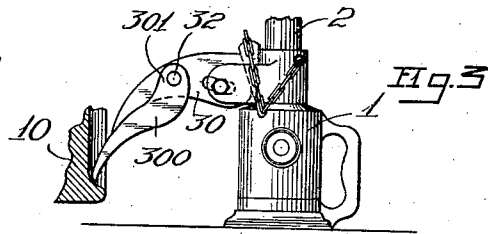
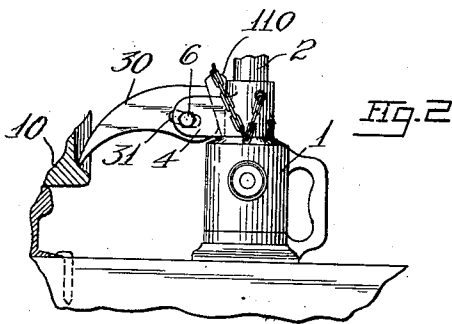
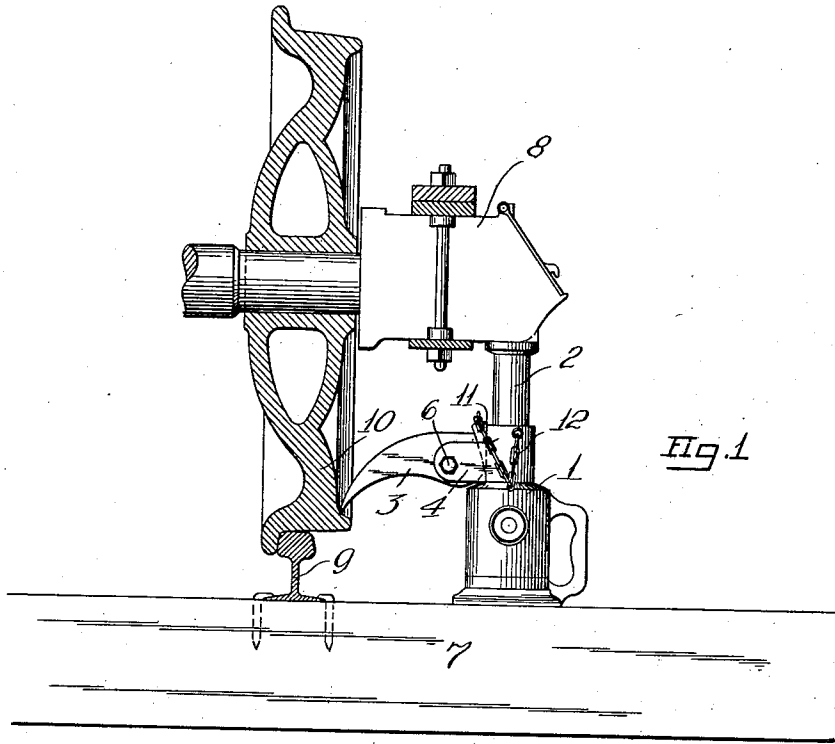


W. E. QUINN.  
JOURNAL JACK.

APPLICATION FILED OCT. 11, 1912.

1,069,175.

Patented Aug. 5, 1913.



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# UNITED STATES PATENT OFFICE.

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## JOURNAL-JACK.

1,069,175.

Specification of Letters Patent.

Patented Aug. 5, 1913.

Application filed October 11, 1912. Serial No. 725,192.

*To all whom it may concern:*

Be it known that I, WILLIAM E. QUINN, a citizen of the United States, residing at Shreveport, parish of Caddo, State of Louisiana, have invented a certain new and useful Improvement in Journal-Jacks, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

In order to remove a journal brass from a railway car it is necessary to raise the journal box from the journal so as to relieve the pressure on the brass; the usual method being to place a jack on a railway tie or other support beneath the journal box and thus lift the box from below. This upward pressure on the under side of the journal box not only raises the box but, by shifting the weight to the journal on the opposite side of the car, causes the wheel and the journal on the side which is being jacked up to rise. Various makeshift expedients, inconvenient and time-taking, are employed by train crews to hold down a car wheel while the corresponding journal box is being raised; and various attempts have been made to provide the jacks themselves with some means for engaging with a car wheel to accomplish this purpose. However, because of the great variety in the size of rails, size of journals, and size and shape of journal boxes and truck side frames, a device which may perhaps operate successfully in a given situation, that is on a particular car standing upon rails of definite size, will not answer at all in other situations, that is perhaps when the same car is standing upon a track made up of heavier or lighter rails.

It is the object of my invention to produce a simple and efficient attachment or addition to an ordinary jack which will positively prevent a car wheel from rising when its journal box is being jacked up in any situation which may be encountered in railroad practice without making it necessary for the workmen to rely upon their ingenuity in order to secure a quick removal of a journal brass when the occasion presents itself.

In carrying out my invention, I mount upon the stand or base of any usual or preferred style of jack a radially-projecting,

pointed strut in the form of a pawl fulcrumed toward its butt end and provide a wedge block which may be dropped between the butt end of the pawl and the base or stand of the jack for the purpose of filling the space between the inner end of the pawl and the jack when the outer end of the pawl has come into engagement with a car wheel; the wedge block serving as an automatically-adjustable filling piece which at all times affords a solid backing for the pawl, regardless of the angular position of the latter and thus permits the thrust of the pawl to be transmitted directly to the base or stand of the jack. The strut may be connected to the jack by a pin and slot device which will permit the strut to vary not only its angular position but also the distance from its outer end to the jack in any given angular position, the wedge block being designed so that it will always afford a solid backing for the pawl. In order to take care of extreme conditions, the strut may be provided at its outer end with an auxiliary pawl which will ordinarily hang down out of the way, but which, when occasion demands, may be swung up so as to form a continuation of the strut.

In one of its aspects my invention may therefore be regarded as comprising a jack having a radially-projecting automatically-adjustable strut arranged thereon in such a way that the outer end of the strut will always find a bearing point on a car wheel to enable it to hold the car wheel down when the journal box is jacked up, while the inner end always has a solid backing which will transmit thrusts directly to the base or stand of the jack.

The various features of novelty whereby my invention is characterized will hereinafter be pointed out with particularity in the claims; but for a full understanding of my invention and of its objects and advantages, reference may be had to the following detailed description taken in connection with the accompanying drawing, wherein:

Figure 1 is a view, partly in section and partly in elevation, illustrating the jacking up of a journal box by means of a jack arranged in accordance with a preferred form of my invention, the jack itself being shown in side elevation; Fig. 2 is a view corresponding to Fig. 1 and illustrating a fragment of a jack in which the automatic ad-

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justment is carried a step farther than in Fig. 1; Fig. 3 is a view corresponding to Fig. 2, showing a still further elaboration of the automatic adjustment; Fig. 4 is a top plan view of the strut shown in Fig. 3; Fig. 5 is a top plan view of the base or stand of a jack which has the supporting ears for the strut cast integral therewith; and Fig. 6 is a view similar to Fig. 5 showing the supporting ears for the strut carried by a band or strap which may be secured in any suitable way about a portion of the base or stand of the jack.

Referring to Fig. 1 of the drawing, 1 represents the base or stand of a jack of any suitable construction and 2 the movable power element carried by the base or stand. Projecting radially from the base or stand, preferably from a point near an upper end thereof is a strut, 3, in the form of a pawl pointed at its outer end and having a relatively wide inner or butt end. The inner end of the strut, in the arrangement shown, lies between a pair of ears, 4, projecting outwardly from the base or stand; these ears being either cast integral with the base or stand as indicated in Fig. 5 or forming part of or carried by a strap or band, 5, embracing a portion of the base or stand, as indicated in Fig. 6. A bolt, 6, passing through the ears and the pawl at some distance from the butt end of the latter, serves to hold the pawl pivotally in place.

The device is adapted to be used as illustrated in Fig. 1, the jack being set upon a tie, 7, or other support beneath a journal box, 8, from which a brass is to be removed; the jack being so positioned with respect to the rail 9 that the strut or pawl will drop down and rest upon a portion of the wheel, 10, near the rim of the latter.

If all rails were of the same height, all journals of the same diameters and length, all journal boxes and side frames of a single standard size and shape, if there were no variation in the configuration of car wheels, the several parts which I have heretofore specifically described could be so proportioned that when the jack was placed in position the pointed end of the strut would properly engage with the car wheel and the butt end of the strut would bear against the side of the base or stand of the jack so that when the jack was operated to raise the journal box, the wheel would be held down. However, there is no such uniformity in the various elements to which I have just referred but, on the other hand, there is a great diversity between the sizes and shapes of such elements and consequently some means must be provided which will permit the device to adapt itself to the various conditions apt to be encountered. To this end I have provided a wedge block, 11, which is adapted to be dropped down between the

butt end of the pawl or strut and the side of the base or stand of the jack so that, regardless of the angular position which the pawl or strut will assume when in contact with the wheel, the wedge block will fill in solidly behind it so that the thrust of the pawl or strut will be transmitted directly to the base or stand. The wedge block will of course be made to fit between the ears, 4, so that it cannot work out laterally. In order to prevent the wedge block from becoming lost, it may be attached to one end of a short piece of chain, 12, whose other end is secured to some portion of the jack. Consequently, with the device constructed as I have just described it, the jack is set in place under a journal to be raised, the pawl dropping upon the car wheel, and the wedge block is then inserted behind the pawl and the adjustment is complete for the wedge block will automatically seat itself until it solidly bridges the space between the butt end of the pawl or strut and the side of the base or stand of the jack. Then, when the jack is operated, the pawl or strut is unyielding and the wheel is positively held down. A wider range of adjustment may be obtained by permitting the pawl or strut to move bodily, that is shift its fulcrum radially with respect to the axis of the jack. This may be accomplished as shown in Figs. 2 and 3, by connecting the strut or pawl, 30, to the ears, 4, by means of a pin and slot device. In the arrangement shown, the pin or bolt, 6, passes through round holes in the ears and through an elongated slot, 31, in the pawl. In this arrangement, the wedge block 110 should be somewhat larger than the wedge block 11 because the range of adjustment is greater. A still further range of adjustment may be obtained by connecting to the outer end of the strut or pawl an auxiliary strut or pawl, 300, which normally hangs down out of the way but which may be swung up, as shown in Fig. 3 and thus form an extension of the main pawl or strut. The auxiliary pawl may of course take any suitable form. In the arrangement shown, the auxiliary pawl lies on the under side of the main pawl or strut and has ears, 301, projecting up beside the latter. A pin or bolt, 32, passes through the ears, 301, of the pawl or strut, 30.

It sometimes happens that the pawl or strut should be capable of being shifted angularly around the axis of the jack so as to permit the jack to be worked satisfactorily. Where the supporting ears are carried upon a band or strap as indicated in Fig. 6, this adjustment of the pawl or strut may be obtained by simply shifting the strap or band. Where the ears are cast integral with the base or stand of the jack, the adjustment of the pawl or strut may be obtained by providing a second set of ears,

40, angularly displaced from the ears 4 about the axis of the jack. By removing the bolt or pin, 6, the pawl or strut may be removed from between one set of ears 5 and placed between the other as conditions demand.

I claim:

1. In combination, a jack, a pawl pivoted at its butt end to the jack so as to be capable of swinging about a horizontal axis in a plane radial to the jack, the butt end of the pawl being wide and having a considerable portion thereof lying above the pivotal axis of the pawl, and a vertically-movable wedge block lying between and engaging with said portion of the butt end of the pawl and the adjacent face of the jack.

2. In combination, a jack, a pawl pivoted at its butt end to the jack so as to be capable of swinging about a horizontal axis in a plane radial to the jack, the butt end of the pawl being wide and having a considerable portion thereof lying above the pivotal axis of the pawl, and a vertically-movable gravity-actuated wedge block lying loosely between the upper portion of the butt end of the pawl and the adjacent portion of the jack.

3. In combination, a jack having parallel ears projecting therefrom on opposite sides of a plane radial to the jack, a pawl lying with its butt end between said ears, a horizontal pivot passing through said ears and said pawl, the butt end of the pawl being wide and having a considerable portion lying above said pivot, and a vertical gravity-actuated wedge block lying between said ears and engaging with both the upper portion of the butt end of the pawl and the adjacent face of the jack.

4. In combination, a jack having separated ears projecting therefrom on opposite sides of a plane radial to the jack, a pawl lying with its butt end between said ears, a pin and slot connection between said pawl and said ears to permit the pawl to swing about a horizontal axis and to move bodily toward and from the jack, the butt end of the pawl being comparatively wide and having a considerable portion thereof lying above the pivotal axis of the pawl, and a vertically-movable wedge block lying between said ears and engaging with the upper portion of the butt end of the pawl and with the adjacent face of the jack.

5. In combination, a jack, a pawl extend-

ing radially from one side of the jack, a pin and slot connection between the inner end of the pawl and the jack for permitting the pawl to swing about a horizontal axis and also to have a limited bodily movement toward and from the jack, the inner end of the pawl being comparatively wide measured in the vertical direction and having a considerable portion thereof lying above the pivotal axis of the pawl, and a vertical wedge block lying loosely between and in engagement with the upper portion of the inner end of the pawl and the adjacent face of the jack.

6. In combination, a jack, a pawl movably connected at its butt end to the jack, an adjusting wedge lying between the butt end of the pawl and the jack, an auxiliary pawl lying beneath the main pawl and pivotally connected at its inner end to the main pawl, the length of the auxiliary pawl from its nose to its pivotal axis being greater than the distance from that axis to the nose of the main pawl, the parts being so constructed and arranged that the auxiliary pawl is free to swing from a position in which it lies wholly on the side of the nose of the main pawl next to the jack and a position in which it engages with the under side of the main pawl and projects beyond the same.

7. In combination, a jack, a pawl pivoted at its butt end to and projecting radially from the jack, the butt end of the pawl being comparatively wide and having a considerable portion lying above the pivotal axis, a vertically-movable wedge block lying loosely between and engaging with the upper portion of the butt end of the pawl and the adjacent side of the jack, and an auxiliary pawl lying beneath and pivotally connected to the outer end of the main pawl, the auxiliary pawl being movable from an idle position in which it lies wholly between the nose of the main pawl and the jack to a position in which it abuts against the under side of the main pawl and has its nose projecting beyond the outer end of the main pawl.

In testimony whereof, I sign this specification in the presence of two witnesses.

WILLIAM E. QUINN.

Witnesses:

WM. F. FREUDENREICH,  
RUTH E. ZETTERVALL.