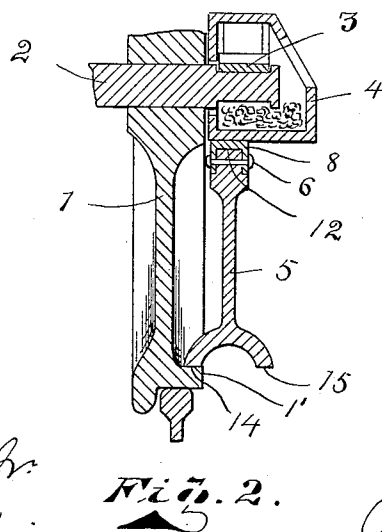
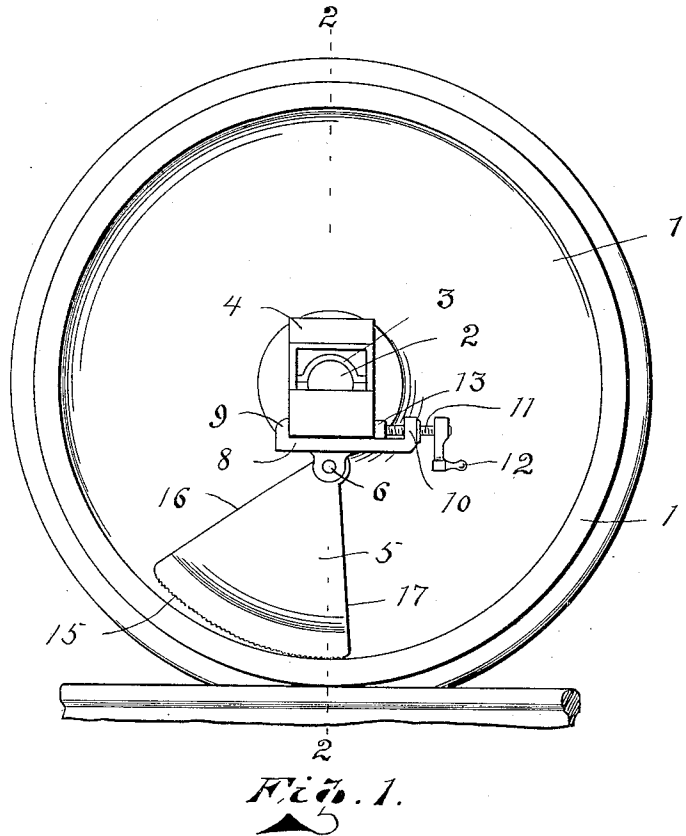


A. G. OLSON.
LIFTING JACK.
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1,049,906.

Patented Jan. 7, 1913.



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AXEL G. OLSON, OF TWO HARBORS, MINNESOTA.

LIFTING-JACK.

1,049,906.

Specification of Letters Patent.

Patented Jan. 7, 1913.

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To all whom it may concern:

Be it known that I, AXEL G. OLSON, a citizen of the United States, residing at Two Harbors, in the county of Lake and State of Minnesota, have invented certain new and useful Improvements in Lifting-Jacks, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in lifting jacks, and pertains particularly to jacks for lifting journal boxes of railroad cars.

The object of my invention is to provide a jack of this character in which the journal box may be raised for replacing the brasses, and in which said lifting operation is caused by the movement of the car.

Another object of my invention is to provide a jack of this character in which the car wheel is held down upon the rail and in which the movement of the car for raising the jack is not limited as in devices of this character now in use.

A still further object of my invention is to provide a more simple, cheap and effective jack which can be readily applied to any of the cars now in use, and having certain details of structure hereinafter set forth.

In the accompanying drawings—Figure 1 is a side elevation of a car wheel and its journal box with my improved jack applied, and Fig. 2 is a vertical sectional view taken on the line 2—2 of Fig. 1.

Referring now to the drawing, 1 represents the car wheel which is of the ordinary type now in use on railroads, and 2 the axle upon the outer end of which are mounted the bearing brasses 3, the same being housed within the journal boxes 4 and through which it is applied or removed as the case may be, all of which is of the ordinary form now used on railroad cars.

5 represents a cam-shaped member pivotally connected at 6, between the lugs 7 carried by a clamp 8. This clamp 8, as shown, is composed of a hooked end 9 engaging one side of the journal box and a screw-threaded socket 10 through which a screw 11 passes and operated by a crank 12. The inner end of said screw carries a block 13, which is adapted to engage the opposite face of the journal box and firmly lock the clamp to the lower face of the journal box.

The cam-shaped member 5, as heretofore

stated, is pivotally connected between the ears 7, by means of a pin 6. The upper end of said cam-shaped member extends up and engages the lower face of the clamp so that the weight is not upon the pin 6 but is upon the upper edge of the cam-shaped member, thus forming a wide bearing surface for the cam. The lower end of the cam-shaped member is bifurcated, forming the two bearing surfaces 14 and 15, whereby the device may be used upon the wheels on either side of the car. The said cam-shaped member 5 has a radius 16, greater than the distance 17 between the pivot 6 thereof and the tread 1' of the wheel, and is preferably a distance greater than what is necessary to raise the journal box in order to remove the brasses.

When the jack is placed as shown in Fig. 1 of the drawing, the car wheel is revolved toward the cam by the movement of the car, the bearing surface of the latter will contact the inner wall of the tread 1' of the wheel and travel thereupon, and as the radius increases as it travels, the journal box must necessarily be raised. If the revolution of the wheel continues and the cam influence is sufficient to raise the journal box beyond its limit, the radius 16 of the cam being greater than the distance 17 between the pivot 6 and the lower end of the cam, the wheel and box will become fixed and held against further rotation. This, as will be understood, allows the car to be moved a varied distance and yet raise and hold the journal raised, so that the brasses may be removed.

I am aware that segmental-shaped jacks have been used for lifting journal boxes, but they have always been made to lift from the road-bed, and when the journal box is so lifted it always results in lifting the corner of the car sufficient to throw an additional weight upon the opposite end of the axle, which results in the car wheel adjacent the box being lifted, rising with the box at the same time. This, as readily seen, will prevent the brasses from being moved till the wheel is held down by some other means, while my device is expressly designed to hold down the wheel and lift the journal box simultaneously.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. The combination with a car wheel and

its journal box, of a removable cam-shaped member pivotally carried by the journal box intermediate the journal box and the inner wall of the wheel tread, whereby in
5 revolving the wheel the journal box is raised and the wheel held in its downward position.

2. The combination with a car wheel and its journal box, of a cam member pivotally
10 carried by the journal box and engaging the wheel whereby the journal box is raised and the wheel locked thereto by the rotation of the wheel in one direction.

3. The combination with a car wheel and its journal box, of a cam-shaped member
15 pivotally attached to the journal box and engaging the inner wall of the tread of the wheel, whereby the revolving of the wheel raises the journal box and locks the wheel
20 thereto against rotation.

4. The combination with a car wheel and its journal box, of a cam-shaped member removably and pivotally secured to the
25 journal box and engaging the inner wall of the tread of the wheel, whereby the revolving of the wheel raises the journal box and locks the wheel thereto against rotation.

5. The combination with a car wheel and its journal box, of a cam-shaped member
30 removably and pivotally secured to the journal box and having a bifurcated lower end, one member of which engages the inner wall of the tread of the wheel whereby
35 the revolving of the wheel raises the journal box and locks the wheel thereto against rotation.

6. The combination of a car wheel and its journal box, of a member pivotally secured to the journal box and having a bifur-

cated end, one end of which engages the inner wall of the tread of the wheel, whereby the revolving of the wheel raises the journal box and locks the same to the wheel. 40

7. The combination with a car wheel and its journal box, of a clamp secured to the
45 journal box, lugs carried by said clamp, a cam-shaped member pivoted between said lugs and having its lower end engaging the inner wall of the tread of the wheel, whereby the revolving of the wheel raises
50 the journal box and locks the wheel against rotation.

8. The combination with a car wheel and its journal box, of a clamp secured to the journal box, a cam-shaped member pivoted
55 to said clamp and having its lower end engaging the inner wall of the tread of the wheel the distance between the pivotal connection of the cam-shaped member and the inner wall of the tread of the wheel being
60 less than the greatest radius of the cam-shaped member.

9. A device of the character described, a clamp having a set screw for securing it to the journal box of a car, lugs carried by the
65 lower face of said clamp, a cam-shaped member pivoted between said lugs and having a bifurcated lower end, one prong of which engages the inner wall of the tread of the wheel, substantially as shown and
70 described.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

AXEL G. OLSON.

Witnesses:

EMIL NELSON,
JOHN P. PAULSON.