(No Model.) 2 Sheets—Sheet 1.

E. ROBINSON.

JACK FOR CAR AXLE BOXES.

No. 251,950. Patented Jan. 3, 1882.

Fig. 1.

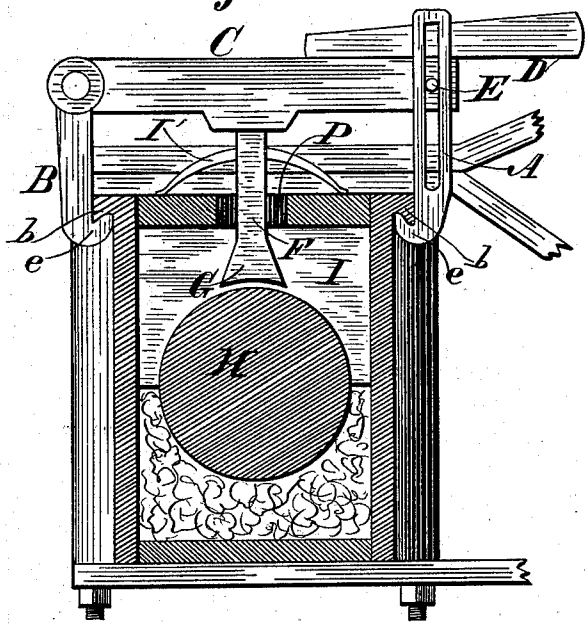


Fig. 4.

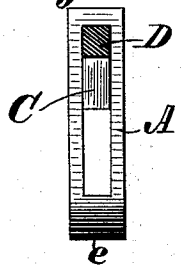


Fig. 2.

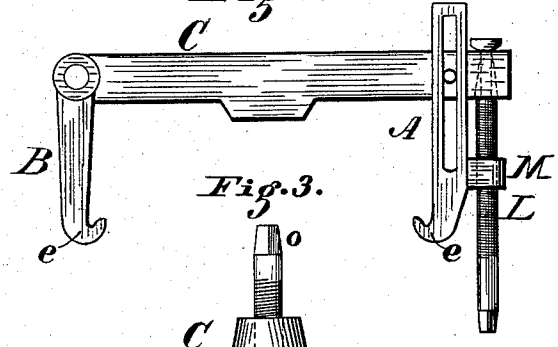
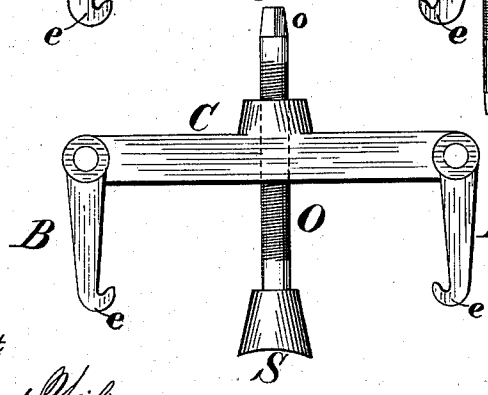


Fig. 5.



Fig. 3.



Attest

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 6.

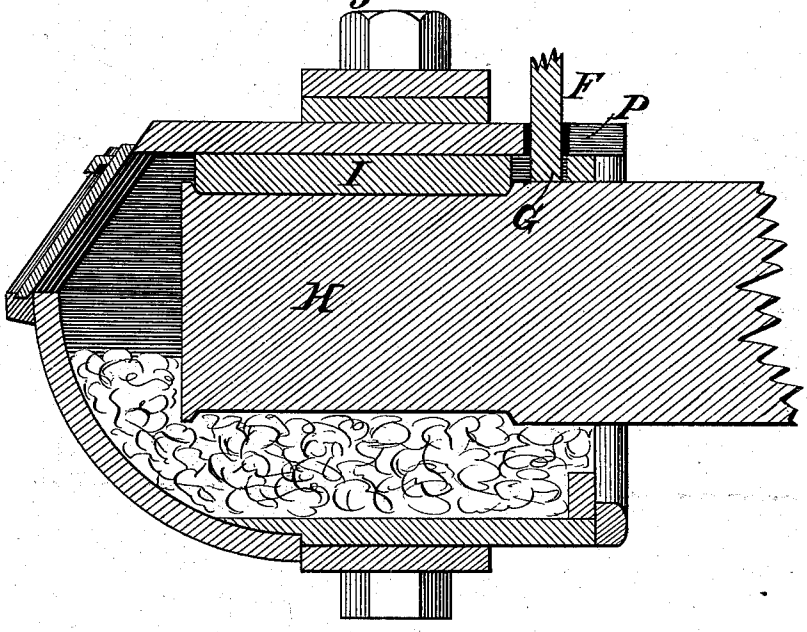
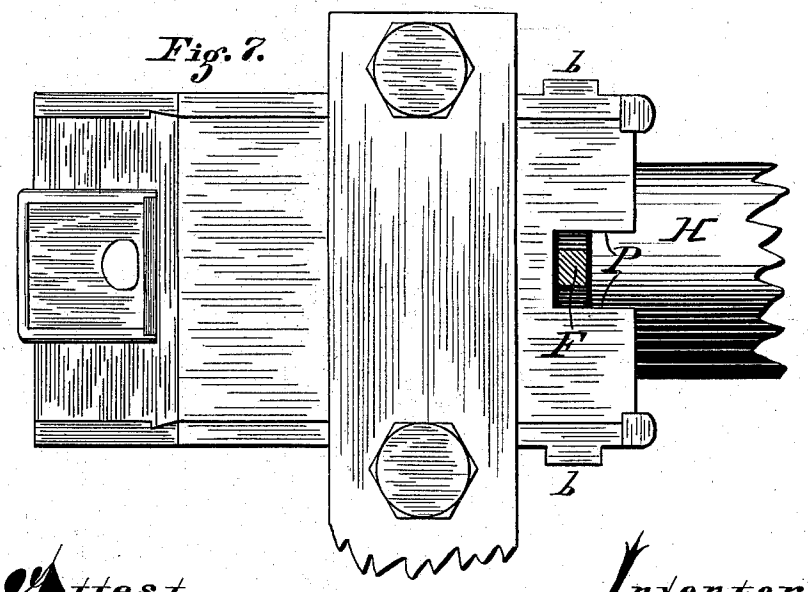


Fig. 7.



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N. PETERS. Photo-Lithographer. Washington. D. C.

UNITED STATES PATENT OFFICE.

EDGAR ROBINSON, OF CINCINNATI, ASSIGNOR OF ONE-HALF TO HENRY B. BEYMER, OF CAMBRIDGE, OHIO.

JACK FOR CAR-AXLE BOXES.

SPECIFICATION forming part of Letters Patent No. 251,950, dated January 3, 1882.

Application filed November 10, 1881. (No model.)

To all whom it may concern:

Be it known that I, EDGAR ROBINSON, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Car-Axle Boxes and Devices for Jacking the Same, of which the following is a specification.

My invention consists in an improvement in jacking or lifting devices for car-axle boxes.

It consists, first, in providing on the sides of the axle-box lugs or ears, which project horizontally and form seats, in which the hooked ends of a pair of depending, pivoted, or hinged arms engage in such a manner as, with suitable appliances, to readily lift the axle-box.

My invention further consists in providing a pedestal or stud projecting upward through the box, and provided with a curved shoe at its foot and bearing upon the axle, and upon the top of which rests the horizontal pressure-bar of the tool to be applied in transferring the weight of the car from the boxing to the axle.

My invention further consists in a horizontal pressure-bar, to the ends of which are hinged or pivoted depending hooked arms engaging in the lugs or ears aforesaid. One of these arms is slotted, and plays up and down upon the end of the pressure-bar, and is also kept in position by a pin on the end of the pressure-bar passing into a transverse slot. The other depending arm is hinged or pivoted to the opposite end of the pressure-bar.

My improvements will be more fully set forth and described in the accompanying description of the drawings forming part of this specification.

In the accompanying drawings, Figure 1 is a cross-section of a car-axle box, showing the lugs and the pedestal and the tool in position. Fig. 2 is a modification of the lifting-tool shown in Fig. 1, substituting for the wedge or key a screw attachment; Fig. 3, another modification of the lifting device. Fig. 4 is an end elevation of the depending arm A, Fig. 1, showing slots in the same; Fig. 5, a plan view of the end of the pressure-bar, showing shape of the hole. Fig. 6 is a longitudinal central section of a car-axle box, showing the arrangement of the pedestal or stud with its curved shoes. Fig. 7 is a top plan view of the axle box with the pedestal in position.

A represents the slotted depending arm, which plays upon the end of the pressure-bar C and the pin E.

B is the pivoted or hinged arm at the opposite extremity of the pressure-bar C.

D is the wedge which fits under the cross top part of the slotted arm A.

F is the pedestal or stud; G, the curved shoe fitting over the axle H.

I is the journal-boxing, upon which rests the weight of the car.

I′ is a spring which is arranged to support the pedestal or stud F and keep the shoe off the axle H when the tool is not in use.

When it is desired to transfer the weight of the car from the journal-boxing to the axle, so as to remove it, the tool is put in position, as shown in Fig. 1, with the central part of the pressure-bar C resting upon the top of the pedestal F. Then, by driving the wedge D in between the top part of arm A and the end of pressure-bar C, the bar C is pressed down upon the pedestal F, and it in turn upon the axle H, thereby driving the wedge D farther in. The arm A is gradually raised, carrying with it the box, and leaving the weight of the car upon the pedestal F, which rests upon the axle H. The box may thus be raised as high as is desired, and the journal-boxing I removed and replaced at will.

In the modification shown in Fig. 2 the wedge D may be used, as in Fig. 1; or, by means of a screw-bolt, L, swiveled into the end of the pressure-bar C and screwing into a lug-nut, M, rigidly attached to the side of the slotted arm A, the arm A may be raised, thus transferring the weight of the car to the pedestal, as in Fig. 1.

In the modification shown in Fig. 3 the pedestal is screw-threaded into the pressure-bar C, and instead of the slotted arm A and the pivoted arm B there are two hinged or pivoted arms, B B. By placing a wrench on the head *o* of the screw O the shoe S is pressed directly upon the axle, and the bar C, with the depending arms, is raised, thus lifting the box,

The screw-bolt O is attached to shoe S by means of a swivel-joint, and turns freely within it. *b b* are the lugs or ears upon the outside of the box; *e e*, the hooks on the ends of the depending arms, which engage in lugs *b*. P represents a slot or opening cut in the top piece of axle-box, and through which the pedestal or stud F projects.

I do not intend to confine myself to the precise form of lifting-tool employed to transfer the weight of the car from the box to the axle by means of the stud. I have shown three forms of lifting-tools which are the equivalents one for the other, the essential characteristics being the pressure-bar, the pivoted hooked arms, and devices for transferring the weight from the cap I of the boxing to the stud F, passing through the box and resting on the axle.

I do not wish to confine myself to the form or position of the hooks and lugs for connecting the lifting-tool with the axle-box. Instead of the lugs *b b*, the arms carrying the hooks may be lengthened and made to engage with the under side of the axle-box and still retain the principal advantages of my invention set forth in the several clauses of claims herein except the first.

It is not necessary to describe the construction of the shell of the box and the form of bearing, as these parts are old. I have shown the shell of the boxing as slotted to allow the pressure-bar or stud F to pass through and to be forced upon the axle H and the top of the boxing to be withdrawn, the slot extending to the inner end of the shell. It is obvious that the pedestal or stud F might be placed in the rear of the boxing, or that the top of the shell might be divided horizontally at a point in front of the pedestal and only a part thereof removed, and still accomplish the same purpose.

I claim—

1. A boxing for a car-axle, provided with lugs *b b*, the stud F, projecting through the boxing and adapted to receive the weight of the car by means of a lifting-tool applied to said lugs and pedestal, substantially as herein set forth.

2. In combination with a car-axle box, the stud F, passing through a slot in the boxing and adapted to be pressed down upon the axle, so as to transfer the weight of the car from the boxing to said stud, substantially as described.

3. In combination with a car-axle boxing and the supporting pedestal or stud F, loosely connected to said box, a lifting-tool composed essentially of pressure-bar C and hooked arms A B, adapted to clasp the said box and rest upon the stud, so as to transfer the weight of the car from the box to the axle, substantially as herein set forth.

4. In combination with the boxing of a car-axle, the stud F, passing loosely through the shell of box and suspended by spring I′, to prevent the contact of said stud and axle when the lifting-tool is not in use, substantially as herein set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

EDGAR ROBINSON.

Witnesses:
J. H. CHAS. SMITH,
JOHN E. JONES.