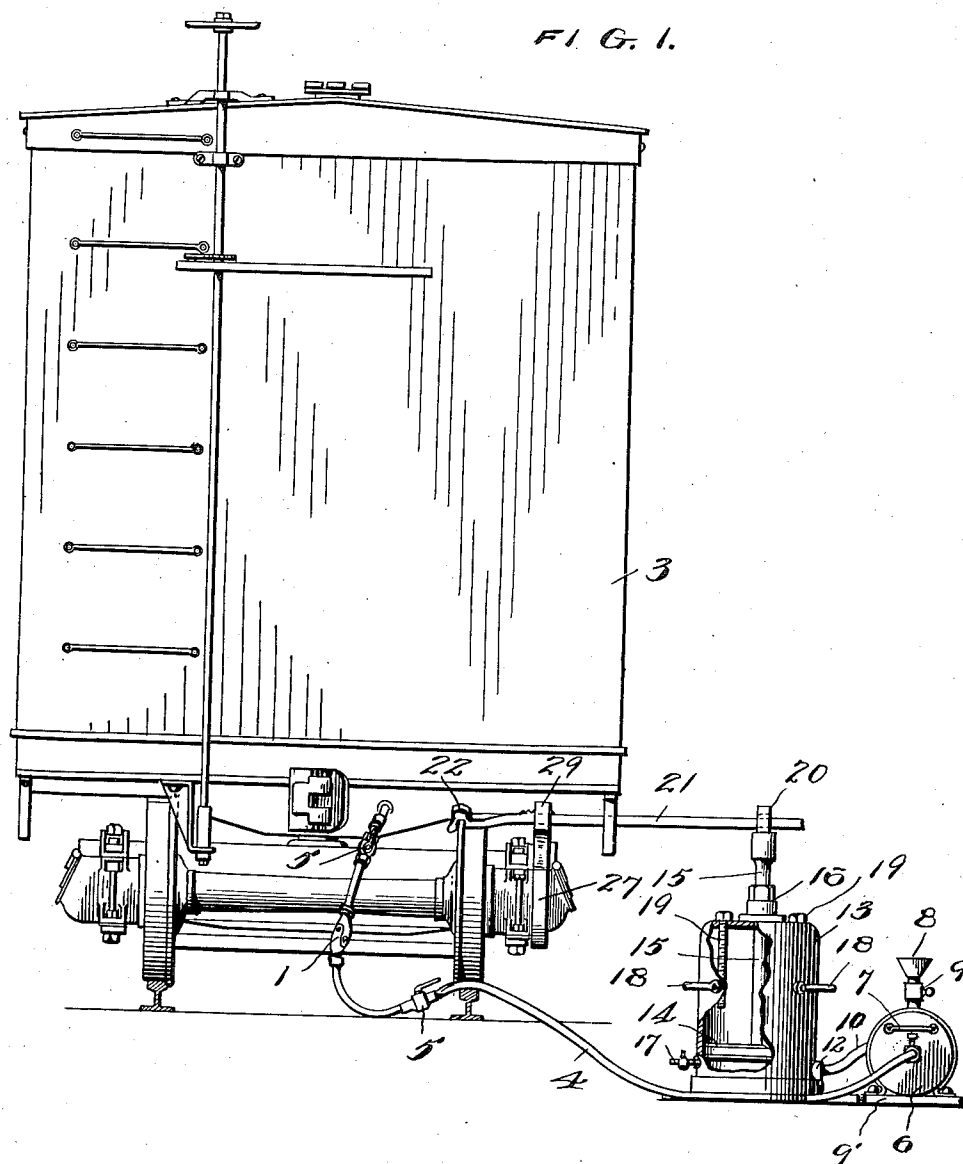


1,029,423.

W. R. CHANDLER.
FLUID ACTUATED LIFTING JACK.
APPLICATION FILED JULY 26, 1911.

Patented June 11, 1912.

2 SHEETS-SHEET 1.



WITNESSES

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2 SHEETS-SHEET 2.

FIG. 2.

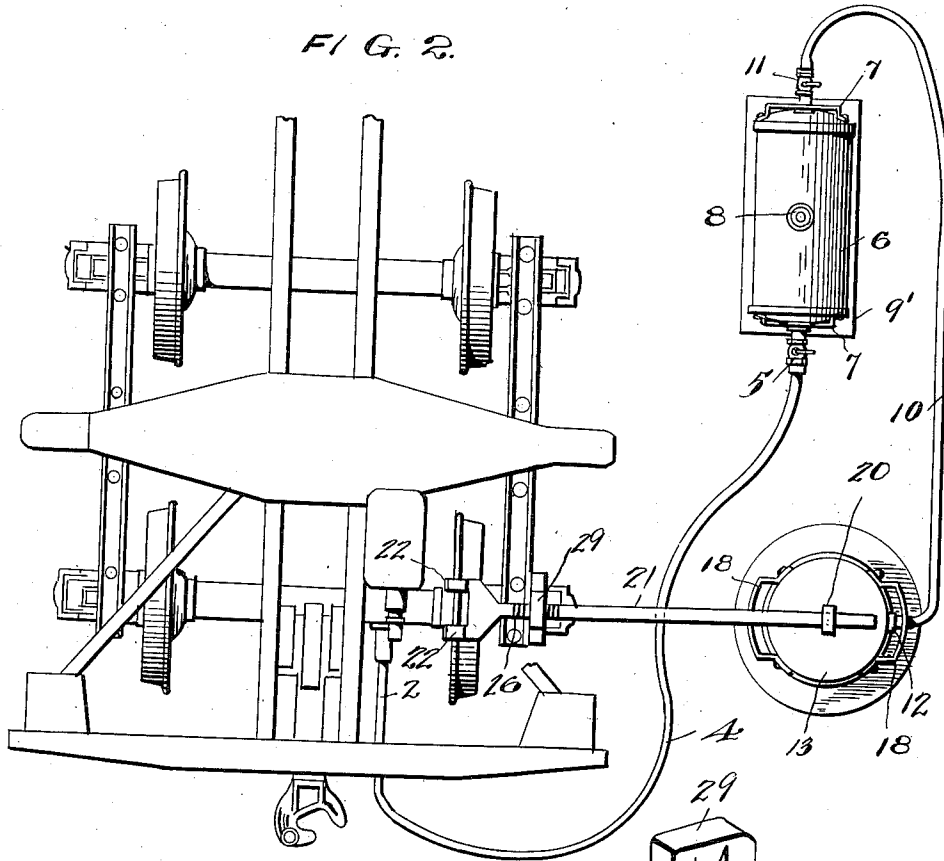


FIG. 3.

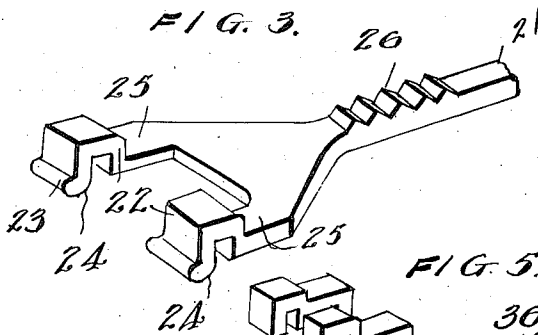


FIG. 5.

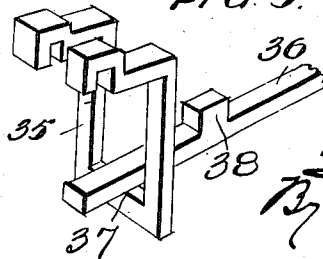
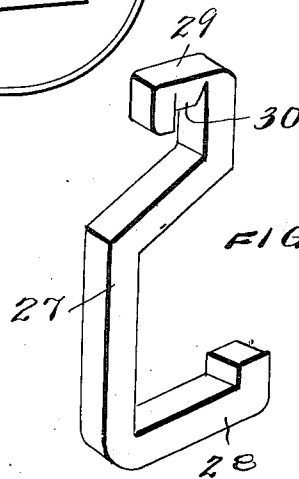


FIG. 4.



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FLUID-ACTUATED LIFTING-JACK.

1,029,423.

Specification of Letters Patent.

Patented June 11, 1912.

Application filed July 26, 1911. Serial No. 640,663.

To all whom it may concern:

Be it known that I, WILLARD R. CHANDLER, a citizen of the United States, residing at Branchville, in the county of Orangeburg and State of South Carolina, have invented certain new and useful Improvements in Fluid-Actuated Lifting-Jacks, of which the following is a specification.

My invention relates to improvements in fluid actuated lifting jacks, and is designed especially for use as a railway appliance.

The essential objects of the invention are the provision of a lifting jack by means of which a car body may be lifted as power is applied through the jack at the under side of the journal box, for the purpose of re-brassing the bearing, or the device may be applied for use on a locomotive in the operation of replacing a broken equalizer post, a gib, a spring hanger, etc., and in many other emergency cases.

The invention consists in certain novel features of construction and combinations and arrangements of parts as hereinafter specified and more clearly pointed out in the claim.

In the accompanying drawings I have illustrated one example, and a modification thereof, of the best mode I have so far devised for the practical application of the principles of the invention.

Figure 1 illustrates an end of a freight car with the present invention applied to a wheel thereof. Fig. 2 is a plan view of a car truck showing the application of the invention. Fig. 3 is a perspective view of one end of the lifting lever of the jack. Fig. 4 is a perspective view of the lever hook used in the invention, and Fig. 5 illustrates a modification of the invention.

The jack is preferably operated by air or steam from the train pipe of the railroad train, in connection with a liquid fluid, as water, stored in a reservoir or tank. To this end the hose coupling 1, which is attached as usual to the train pipe 2 of the freight car 3, has coupled thereto an additional length of hose 4, the usual valves 5, 5, being present.

In connection with the actuating motive fluid, as air, I employ water as a medium for transferring or transmitting the power or pressure from the compressed air of the train, and for this purpose the tank 6, to which the hose 4 is connected at one end, is utilized. The tank 6 is provided with end

handles 7, 7 and a filling nozzle 8, a valve 9 being located at the nozzle to prevent waste of pressure. The tank is conveniently supported upon a base board 9', and at the end opposite the air hose attachment, is provided with a water hose 10, and valve 11. The water hose 10 is connected to the port 12 of the tank or jack casing 13 in which is adapted to reciprocate the piston 14 and its rod 15, through the stuffing box or gland 16. A drain cock 17 is provided to draw water from the jack casing, and handles 18, 18 form convenient means for moving the casing. The movement of the piston 14 is limited by adjustment of the two bolts 19, 19 which are threaded into the top of the casing 13 and extend downwardly therein in the path of movement of the piston 14.

The upper end of the piston stem or rod 15 is provided with a socket into which extends the end of an eye-bolt 20, and this eye bolt is the means of connecting the piston stem with the lever bar 21, the lever bar extending through the eye bolt and loosely fitting therein. The lever bar is provided at its opposite end with a pair of hooks 22 formed with extensions 23 and the inner faces of these extensions are curved, as at 24 for a purpose to be described. The hooks are preferably arranged on curved lines in conformity with the periphery of a car wheel, and the flat portions 25 are adapted to rest flat on the tread of a wheel while the hooks 22 overhang the flange. A rack portion 26 is provided adjacent the hooked end of the lever, and this formation is designed to receive and support a hook, as 27. The hook 27 is of a modified Z-shape, its lower cross bar 28 being designed to fit under a portion of the car, as the journal box, and its upper cross bar 29 being adapted to rest, by means of the tooth 30, in the rack spaces 26 of the lever bar.

The operation of the appliance is very clearly illustrated in the drawings. The entire equipment is designed to be carried on either the locomotive tender or the caboose of a freight train, or upon both, and the separate parts may be carried by their handles to the place where needed. If the emergency arises that re-brassing of a journal is necessary, the portable parts are carried to the disabled car, the air hose between the car adjoining the crippled car is disconnected and the hose 4 applied to the car near the locomotive. The parts are connected up

as shown in Fig. 2, with a sufficient quantity of water in the tank 6. The lever is hooked over the flange of the car wheel with the flat portion 25 resting upon the tread of the wheel, and after the end of the lever has been connected with the eye-bolt 20 the hook 27 is suspended over the rack portion 26 of the lever with the lower cross bar 28 under the journal box. All the valves except 9 and 17 are now opened. The air pressure through the hose 4 forces water from the tank 6 through hose 10 into the jack casing 13 and under the piston head 14. The flow of water gradually lifts the piston which in turn operates the lever having the wheel flange as its fulcrum and the load being applied at the rack 26. The curved surfaces 24 of the hooks permit the required, but slight, movement of the hooks over the flange of the wheel. The wheel is held down to the track and the journal box is lifted, so that the re-brassing may be accomplished.

In Fig. 5 the suspending U-shaped hook 35 is adapted to surround the journal box and the lever 36 is fulcrumed at 37 on the hook, the load being applied on the projection 38 by means of which the box is lifted.

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

A lever having a forked end fashioned as hooks to engage the flange of a car wheel and flat tread-engaging portions, and a rack on the upper face of the lever; combined with a toothed load member formed with a hook and suspended over said rack, and an upwardly bent load hook at the lower end of said member.

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

WILLARD R. CHANDLER.

Witnesses:

J. S. BYRD,
L. H. CREM.