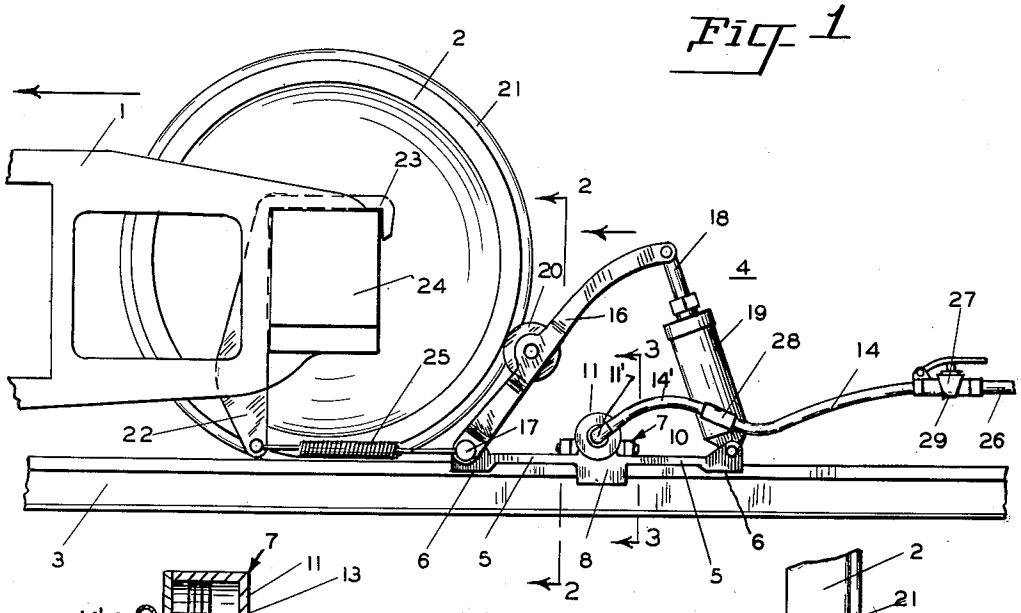
Dec. 16, 1952 J. KILNESS 2,621,892

RAILROAD CAR MOVING JACK

Filed June 1, 1948

Fig. 1



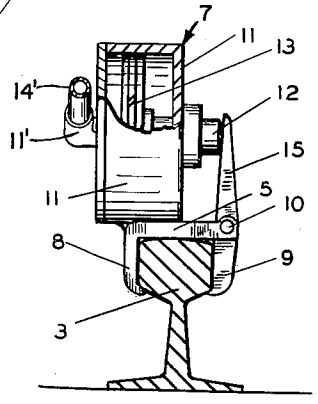


Fig. 3

Fig. 2

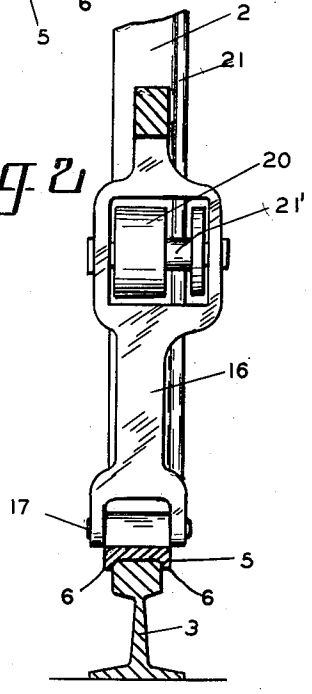
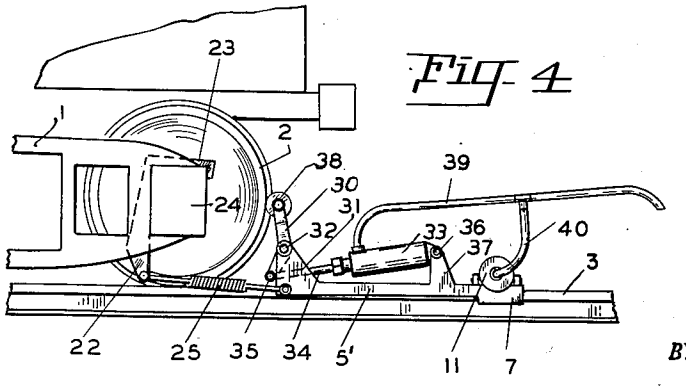


Fig. 4



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RAILROAD CAR MOVING JACK

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4 Claims. (Cl. 254—35)

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My invention relates to a railroad car moving device, particularly adapted for moving railroad cars on sidings and the like.

The prime object of the invention is to provide a car moving device wherein means are provided to operate a clamp to secure the device to a rail and means to operate a lever against the wheel of a car to move the car on the rails.

A further object of the invention is to provide means for creating sufficient power while the device is moving a car to thereafter advance the device in direction of the moved car for a subsequent operation.

A further object of the invention is to provide an improved fluid power actuated railroad car moving device.

A further object of the invention is to provide a device having fluid pressure means to clamp the device to the rail of a track, and fluid pressure means for pushing a car associated with means for creating power while the car is being pushed to subsequently slide the device in direction of the car when the power operating means for actuating the device is released.

In the drawings:

Figure 1 is a side elevation illustrating the invention applied in position to move a car on a track.

Figure 2 is a sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a sectional view taken on the line 3—3 of Figure 1.

Figure 4 is a side elevation of a modified form of the invention.

Referring now to the drawing, specifically to Figures 1 and 4, the present invention is shown in operative relation to a portion of a railroad car truck 1 to which is journalled the usual flanged wheel 2 mounted on the track rail 3.

The present invention, referring to Figure 1, which comprises a fluid operated assembly 4 which includes a base 5, that is adapted to be seated on, and releasably clamped to the track rail 3. This base 5, preferably, straddles the rail 3 by means of lateral guide flanges 6 and a vise-like clamp assembly 7 which includes a clamp member 8 that is fixed to one side of the base 5, and a clamp member 9 that is mounted on a pivot 10 on the opposite side of the base 5.

Fixedly mounted on the base 5 is a fluid pressure assembly which includes a cylinder 11 operatively containing a piston 13 which has a piston rod 12 extending beyond the cylinder and transversely of the base 5 and is pivotally connected to the lever 15 of the clamp member 9. Thus,

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when fluid such as air, is supplied to the cylinder 11, through the air line 14, the piston 13 and rod 12 are forced towards the lever 15 of clamp member 9, causing the clamp member 9 to press against the adjacent side of the rail 3, and pulling the fixed clamp member 8 against the other side of the rail, thereby clamping the rail between the clamp members 8 and 9.

A lever 16 is pivotally mounted at its lower end on a cross-pin 17 supported on the base 5, said lever being pivotally connected at its upper end to a piston rod 18 that is connected to a piston which operates within a cylinder 19. A fluid supply line 26 extending from a suitable source (not shown) of fluid under pressure is connected to a manually operated control valve 27 which controls a hose line 14 that extends to a T-connection 28 with the cylinder 19 and an extension 14' running to a coupling 11' with the cylinder 11. The valve 27 is of conventional construction and includes an escape outlet 29.

A roller 20 is journalled within lever 16 (see Figure 2) for engaging the periphery of wheel 2. The roller is formed with a groove 21' to embrace the flange 21 of the car wheel, the flange 21 and the groove 21' forming a guide to prevent lateral displacement of the lever during operation.

A bracket 22 having a hook-like member 23 for engaging the journal box 24 of the car truck 1 is connected to the end of the base 5 by a coiled spring 25 which is connected at one end to the bracket 22, and at the opposite end to the base 5 as by means of the cross pin 17. This spring pulls the base 5 and the lever 16 toward the wheel 2 when the pushing action of the cylinder 19 has been completed. Thus while moving the car, spring 25 is tensioned and therefore is creating power to set the device for a subsequent operation.

In operation, the bracket 22 is hung over the journal box 24 of the car truck 1, and the base 5 is mounted on the rail 3, as illustrated in Figure 1 with the roller on lever 16 bearing against the wheel 2, which forces the piston rod down into the cylinder 19. Air is supplied through the supply line 26 to the control valve 27, which when actuated, admits air through the hose 14 and T connection 28 into cylinder 19 and on through the extension 14' and coupling 11' into cylinder 11 of the clamp assembly 7. This air pressure draws the clamp members 8 and 9 against the rail clamping the base securely thereto. Simultaneously air is fed into cylinder 19, and piston rod 18 forces the lever 16 toward the car wheel in the direction of the arrow in Figure 1, forcing the wheel 2 forwardly and along the track 3, the

roller 20 riding on the periphery of the wheel 2 to reduce friction and guide the lever.

When the piston within cylinder 19 reaches the end of its travel, the valve 27 is released, whereupon the air is released from the cylinders 19 and 11 through the valve escapement 29.

Valve 27 is of the standard make, which allows air to pass in one direction from the line 26 when the valve is operated, and the supply of air is cut off when the valve is released, permitting air to escape back through line 14, thus exhausting air from said cylinders.

When the air is exhausted from said cylinders, the clamp member 9 is released freeing the clamp assembly from the rail and permitting the spring 26, at this time under tension, to move the base 5 toward the wheel, which movement causes lever 16 to return the piston rod 18 within the cylinder 19 ready for the next application of air pressure.

In Figure 4 I have illustrated a modified form of the invention, wherein the lever 16 is replaced by a lever 30 pivotally mounted at 32, between ears 31 extending upwardly from the base 5'. This lever 30 is operated by the air cylinder 33 through the piston rod 34, which is pivotally connected to one end of said lever by a pivot 35, the cylinder being pivotally supported by a pivot 36 on the bracket 37 of the base 5'.

A wheel engaging roller 38 is journalled on the other or free end of the lever 30.

In the operation of this modified form of the invention when air is applied, the roller 38 of the lever 30 contacts the wheel 2, while the clamp 7 secures the base to the rail, and the cylinder 33 pulls the piston rod 34 against the lever 30, forcing the wheel 2 forward. Air to operate the lever and clamp is supplied through the hose line 39 from a control valve, such as the valve 27. As in the preferred form of the invention immediately the air pressure in the cylinder is released the clamp is released from the track and the power created in the springs now under tension moves the device toward the car, and the lever 30 is returned to normal position ready for a subsequent operation.

What I claim is:

1. A railroad car moving device, comprising an element for removable attachment of the device to a car including a hook, a base for mounting on a rail supporting the car, a spring connected to the base and the element, the base having a fixed rail clamping member to engage one side of the rail and a cooperating pivoted clamping member to engage the opposite side of the rail, a lever pivoted to the base, fluid pressure lever operating means including a cylinder containing a piston having a piston rod which extends beyond one end of said cylinder, one end of said cylinder being pivoted to the base and the end of the piston rod being pivoted to the lever, a roller journalled on the lever to engage the wheel of the car, fluid pressure means on the base for operating the pivoted rail clamping member, and means for simultaneously supplying fluid to the cylinder which operates the lever and the fluid operated rail clamping means.

2. A railroad car moving device, comprising an element to attach the device to a car, a base slidably mounted on a rail of a track spaced from and substantially in line with the lower portion of the element to attach the device to a car, a lever pivoted to the base, fluid operated means pivoted to the base including a piston rod pivoted at its outer end to the lever, a clamp on the base, fluid operated means for operating the clamp to grip the base to a rail, means for simultaneously supplying and controlling fluid pressure to the means for operating the clamp and lever, means secured at one end to the element for attaching the device to a car and attached at its opposite end to the base for creating power when the lever and clamp are operated by the fluid pressure means to move a car, said means acting to slide the device toward the moved car for a succeeding operation when the fluid pressure is released to free the clamp and return the lever to normal position.

3. A rail car moving device, as defined in claim 2, wherein the means for creating power between the attaching means and the base is a spring.

4. A car moving device, including a base, a lever pivoted to the base, fluid pressure means including a cylinder pivoted to the base and a piston rod extending from the cylinder and pivoted to the lever, a clamp to secure the device to a rail, fluid pressure means for operating the clamp means for simultaneously controlling fluid to both fluid pressure means, an element to attach the device to a car, and means between the element and base for creating power to slide the base on the rail after the fluid pressure is released, whereby to set the device for a subsequent operation.

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