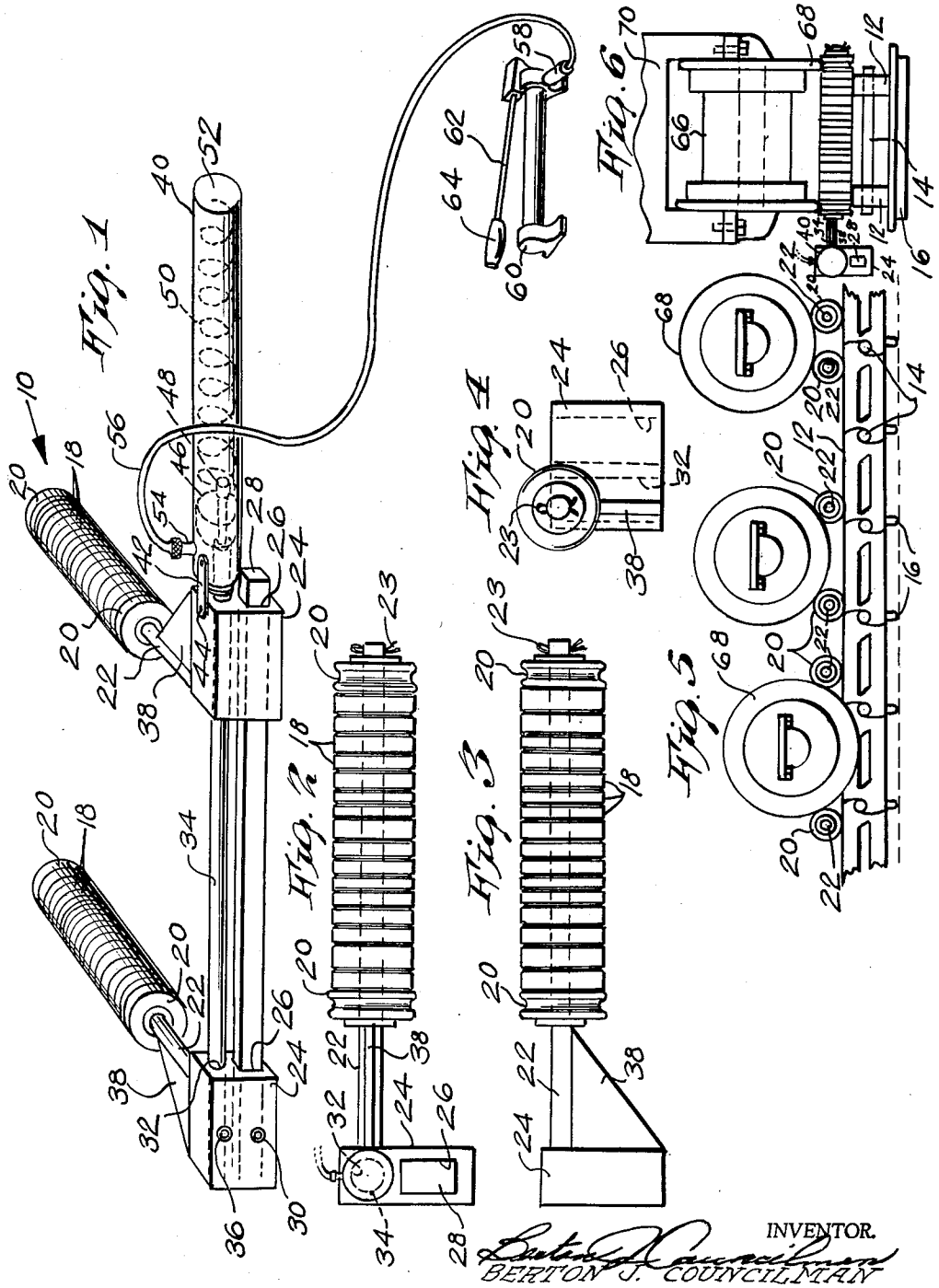
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TRACK-ROLLER LIFTER

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TRACK ROLLER LIFTER

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This invention relates to improvements in lifting devices, and more particularly to, a device for lifting heavy track rollers upwards, into place on a machine frame.

An object of the present invention is to provide a track-roller lifter that is hydraulically operated, utilizing multiple disc rollers, closing towards each other, in sliding and rotating engagement therewith the outer periphery of a heavy track-roller.

Another object of the present invention is to provide a track-roller lifter that will lift heavy track-rollers upwards in various stages, utilizing positive control throughout the stages of lifting.

A further object of the present invention is to provide a track-roller lifter, that will lower heavy track-rollers from their position, in a machine frame, when necessary.

For other objects and for a better understanding of the invention, reference may be had to the following detailed description, taken in conjunction with the accompanying drawing, in which:

FIGURE 1 is a perspective view, comprising the present invention;

FIGURE 2 is a side view of one of the multiple disc rollers, shown in FIGURE 1;

FIGURE 3 is a top plan view of FIGURE 2;

FIGURE 4 is an end view of FIGURE 3;

FIGURES 5 and 6 show the device in operative use.

Referring now more in detail to the drawing, a track-roller lifter **10**, made in accordance with the present invention, is shown to include an elongated dual railed track **12**, having a plurality of equally spaced apart and parallel cross-bars **14**, secured therebetween, and a plurality of downwardly-projecting legs **16**, equally and parallelly spaced apart therebeneath. A plurality of cylindrical rollers **18**, of varying thicknesses and grooved rollers **20**. are freely and centrally received by a central and elongated shaft **22**, which is secured at right angles to a bracket **24**. Blocks **24** are spaced apart and are rectangular in configuration, and are in alignment therewith each other. A cotter key **23** is received therethrough the end of each shaft **22**, and retains the rollers **18** and **20** respectively. An opening **26**, of rectangular configuration, therethrough the bracket **24**, freely and slidably receive a stabilizer bar **28** of rectangular configuration, and a set screw **30** received therethrough the end bracket **24**, secures the stabilizer bar **28** therewithin the end bracket **24**. A circular opening **32**, above opening **26**, therethrough the blocks **24**, freely and slidably receive an elongated control shaft **34**, which is secured therewithin block **24** by set screws **36**. A gusset **38** is fixedly secured thereto block **24** and shaft **22**, providing rigidity thereto the shaft **22**, and a hydraulic cylinder **40** is secured thereto the other end of shaft **34** by bracket **42**, which is secured thereto cylinder **40** and block **24** by fasteners **44**, and the cylinder **40** freely and slidably receives a circular piston **46** therewithin, which is secured thereto the end of shaft **34** by fastening member **48**. A coiled returned spring **50** received therewithin cylinder **40**, is secured thereto the piston **46** and end wall **52**, therewithin cylinder **40**. A hollow threaded pipe **54** projecting at right angles therefrom cylinder **40**, threadingly receives a flexible hydraulic hose **56**, which is secured thereto the projecting pipe **58** of hydraulic pump **60**. Hydraulic pump **60** is provided with a manually-operated

handle **62**, having a grip **64**, which fits into the operator's hand. A track-roller **66**, having outer flanges **68**, is lifted thereupon the rollers **20**, and are fitted therewithin the C-frame **70**.

In operation, the operator grasps the handle **62** by the grip **64** on the pump **60**, and raises it up and down, creating hydraulic pressure against the piston **66**, therewithin the hydraulic cylinder **40**. The piston is urged against the spring **50** toward the end wall **52** of the cylinder **40**, and the shaft **32** secured thereto the piston **46** by nut **48**, pulls the end block **24** toward the other end block **24**, and the sliding operation is stabilized by the bar **28**, sliding therewithin the opening **26** therethrough the block **24**. The rollers **18** and **20** thereupon the shaft **22** secured to the end block **24**, are thus urged towards the other end block **24**. The rollers **20**, being in camming engagement therewith the flange **68** of track-rollers **66**, thus, cam the roller **66** upward to the desired position necessary for securing the roller **66** therewithin the C-frame **70**.

It will be recognized that the height of the roller **66** may be raised, and is positively controlled by the operation of the hydraulic pump **60**, and that the return means for rollers **20** and **18** is provided for by the coil spring **50** therewithin which urges piston **46** away from end wall **52** of cylinder **40**, thus, restoring the end block **24** to its normal position, after the hydraulic pressure is released therewithin the cylinder **40**.

While various changes may be made in the detail construction, it shall be understood that such changes shall be within the spirit and scope of the present invention, as defined by the appended claim.

What I claim as new and desire to protect by Letters Patent of the United States is:

A track-roller lifter of the class described to raise and to lower a vehicle having flanged wheels, comprising, in combination, a longitudinal bar, a pair of brackets, one stationary bracket and one slidably movable bracket, said stationary bracket being secured to one end of said bar, the other bracket being slidably mounted upon said bar to slide toward and away from the stationary bracket, a pair of parallel roller supports, one of said supports being secured to the stationary bracket and the other to the slidably movable bracket, grooved rollers mounted on said supports, the flanges of the wheels being received on said grooved rollers for vertical lifting and lowering when the rollers are moved towards each other or away from each other, hydraulic means for lifting or lowering said vehicle by means of the sliding action of said movable bracket, said means including a hydraulic cylinder secured to the movable bracket, a shaft secured to said stationary bracket and extending into said cylinder, a piston mounted fixedly on said shaft, said piston being slidably mounted inside said cylinder, and means communicating with said cylinder to introduce and exhaust fluid under pressure in said cylinder to slide said cylinder in relation to said shaft.

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