

April 7, 1953

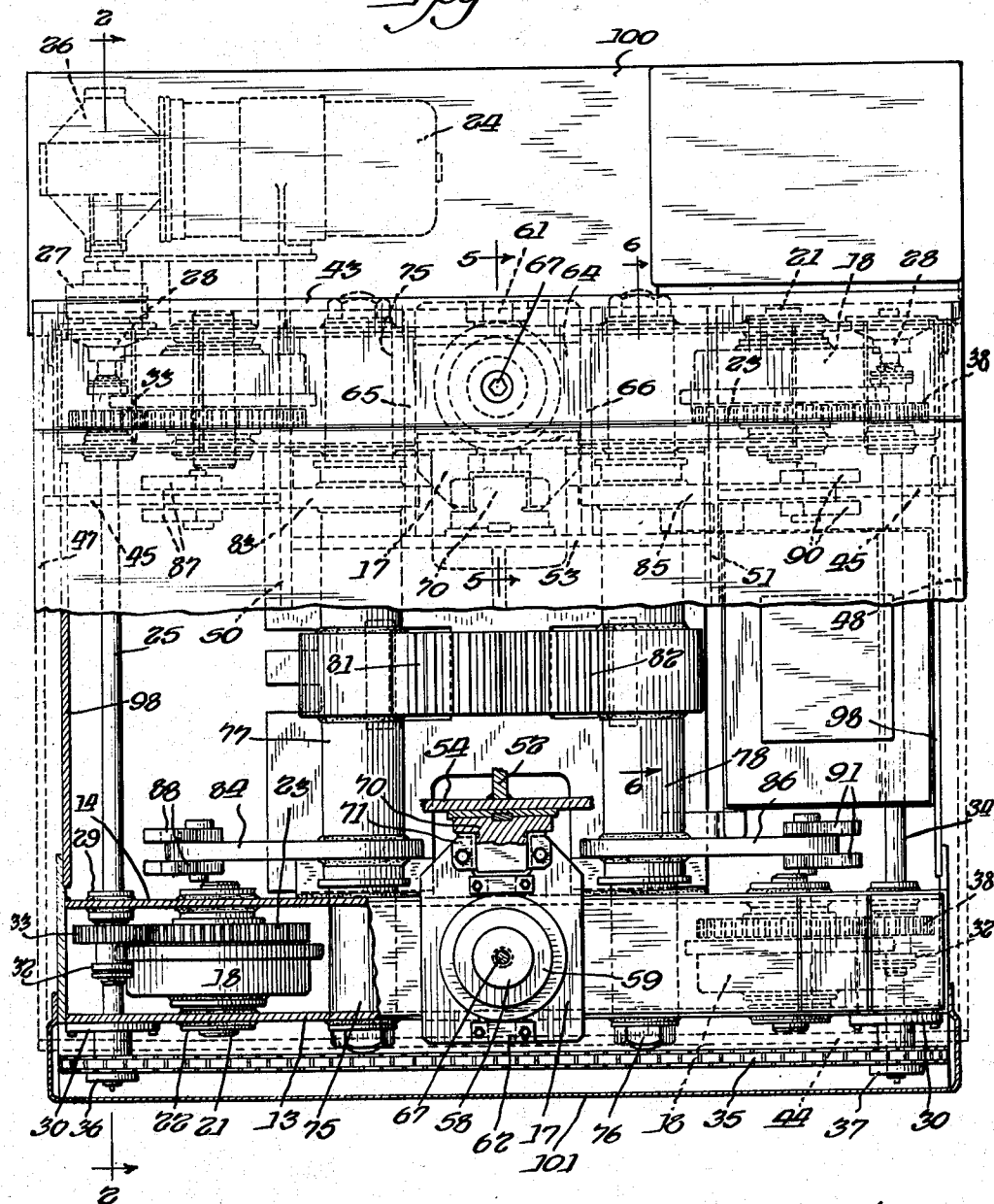
F. M. LITTELL
COIL LOADING CAR

2,634,091

Filed March 10, 1950

3 Sheets-Sheet 1

Fig. 1.



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3 Sheets-Sheet 2

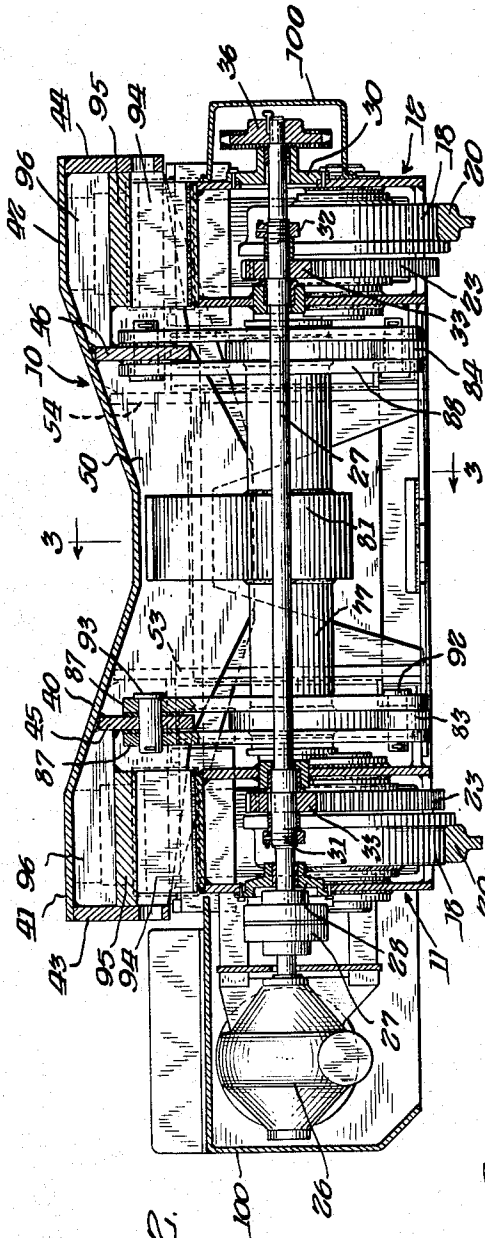


Fig. 2.

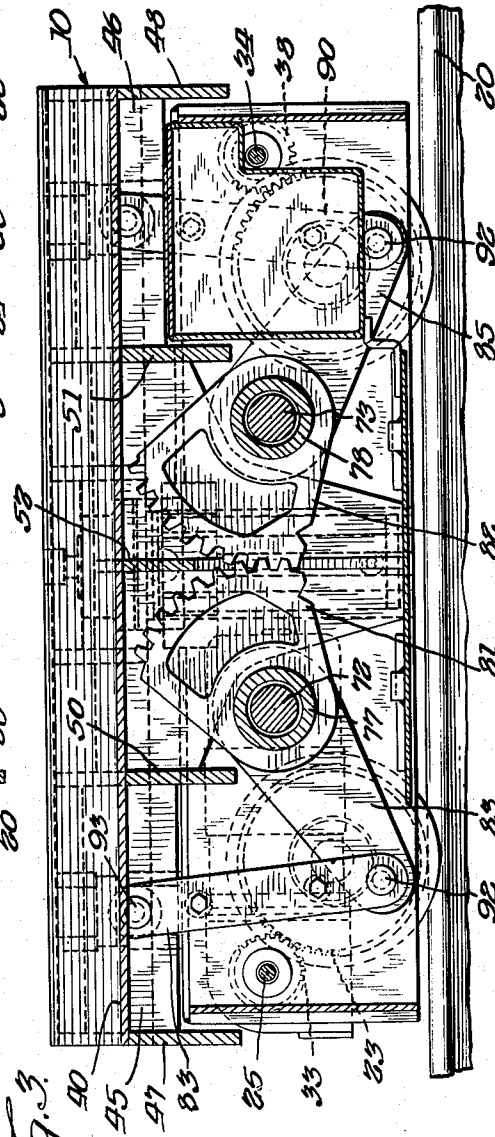


Fig. 3.

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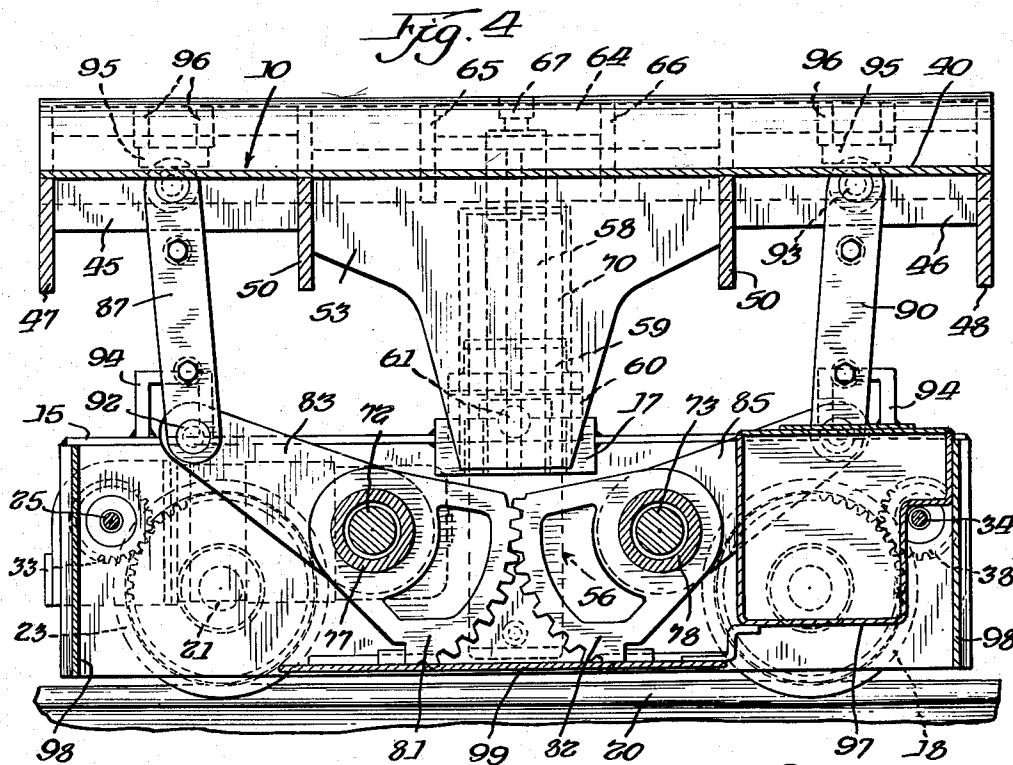
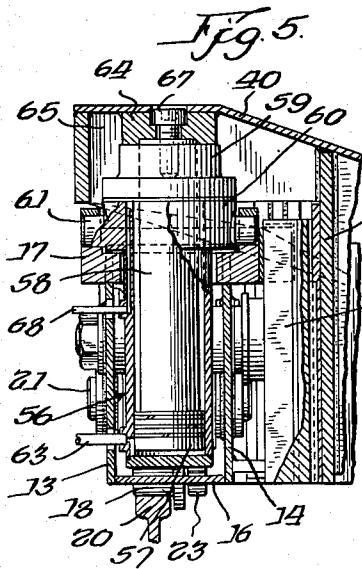
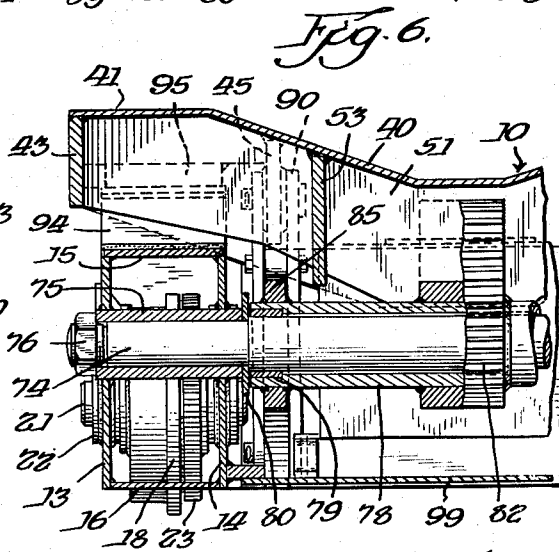
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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

2,634,091

COIL LOADING CAR

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Application March 10, 1950, Serial No. 148,893

11 Claims. (Cl. 254—2)

1

The invention relates to loading cars and has reference in particular to a loading car of improved design for use in transporting and elevating coils of metal stock whereby to facilitate the loading of said coils onto centering reels such as disclosed in the copending application of Littell and Skriba Serial No. 737,366, filed March 26, 1947, and entitled Hydraulic Reel.

A plurality of horizontally supported arms in associated relation with a spindle are provided by the centering reel as herein mentioned and said arms have movement in a radial direction so that a coil of metal stock may be securely gripped by the expanding movement of the arms or released when said arms are moved in a contacting direction. The coil of metal stock upon being supported by the arms is rotatably mounted for feeding the metal strip of the coil to punch presses or similar processing machines and it is not unusual for such coils to weigh many tons, all of which requires a large centering reel of rugged construction in addition to complicating the task of installing the coil in proper position on the reel.

For such installations, which operation is generally referred to as "loading the reel," the invention provides an improved loading car of special construction having car wheels for travel on a track provided for the purpose. Said tracks may extend from an unloading platform to the centering reel and in order to additionally facilitate the loading of the reel the coil supporting table of the car is mounted for movement in a vertical direction. This ability to move the table vertically renders it possible for the coil to be accurately aligned with the horizontal arms whereby both operations, that of transporting the coil from the loading platform and properly locating the coil on the reel, can be performed by the loading car, thus speeding up the operations since intermediate handling of the coil is eliminated.

Accordingly an object of the invention is to provide a loading car of sturdy construction having a vertically movable table equipped with means for stabilizing the said movement to prevent tilting or dipping thereof during the loading operation.

A more specific object of the invention is to provide a loading car of the character described wherein the stabilizing means for the vertically movable table consists of linkage connecting with each end of the table and geared together so as to require movement of each end of the table simultaneously and to a like extent,

2

A further object is to provide hydraulic means of novel and improved construction for elevating the movable table of the present loading car.

A further object resides in the provision of a loading car having a vertically movable table which is elevated by hydraulic means, which is guided in its movement by guide blocks carried by the side frames of the car and which incorporates stabilizing linkage for maintaining the table absolutely horizontal during said vertical movements.

Another object is to provide driving means for a loading car as described which will have a geared connection with all four wheels of the car for moving the car along tracks provided for the purpose.

With these and various other objects in view, the invention may consist of certain novel features of construction and operation as will be more fully described and particularly pointed out in the specification, drawings and claims appended hereto.

In the drawings which illustrate an embodiment of the invention, and wherein like reference characters are used to designate like parts—

Figure 1 is a top plan view of the loading car of the invention with parts in section to better illustrate certain structural features of the same;

Figure 2 is a vertical transverse sectional view taken substantially along line 2—2 of Figure 1;

Figure 3 is a vertical longitudinal view taken substantially through the center of the car approximately on line 3—3 of Figure 2;

Figure 4 is a vertical sectional view similar to Figure 3 but showing the table in elevated position;

Figure 5 is a fragmentary vertical sectional view taken substantially along line 5—5 of Figure 1 and showing in detail certain structural features of the hydraulic cylinder for elevating the table; and

Figure 6 is a fragmentary vertical sectional view taken substantially along line 6—6 of Figure 1.

The loading car selected for illustrating the invention includes a pair of frame members located on each side of the car and which members journal the car wheels and support the table which is adapted to move in a vertical direction for elevating the coil of metal stock supported thereby. The table of the loading car is generally indicated by numeral 10, Figure 2, and the frame member extending along the left side of the car is indicated by numeral 12. Referring more particularly to the frame members,

3

which are also shown in Figures 1 and 6, each said member is formed by a pair of side walls 13 and 14, the side wall 14 being disposed inwardly of the car, whereas wall 13 is located on the outside of the car as regards each frame member. The side walls are connected by a top wall 15 and by a bottom wall 16. The side walls 13 and 14 of each frame member are continuous from end to end of the car, as will be clear by reference to Figure 1. However, the top wall is interrupted centrally thereof since each frame member supports a cylinder support block 17 constituting part of the hydraulic cylinder to be presently described in detail. The bottom wall 16 of each frame member is interrupted at the respective ends of the same in order to allow the car wheels 18 to project through and engage the tracks 20 provided therefor.

In the present loading car four car wheels are provided, two being located on each side and being journaled in a conventional manner by a frame member. As best shown in Figure 1, each car wheel is journaled by a stud shaft 21, the shaft being mounted for rotation in bearings 22 retained by the respective side walls of the frame member. Each car wheel is accordingly mounted substantially centrally between the side walls of its frame and, as clearly shown in Figures 1, 2 and 6, each car wheel is provided with a gear wheel 23 of relatively large diameter and which gear wheel is disposed on the inside of its respective car wheel. All four car wheels are simultaneously driven by driving means provided therefor including an electric motor 24, Figure 1, which has operative connection with a transverse drive shaft 25 through speed reducing mechanism indicated by 26. The shaft 25 extends through both frame members, being suitably journaled by the side walls of each member. As best shown in Figure 2 the shaft 25 has connection with said gear reducing means through a coupling 27 and this end of the shaft is suitably journaled by the bearing 28 having location in side wall 13 of the frame member 11. Suitable bearings 29 are also provided by side walls 14 of the members 11 and 12, respectively, with the opposite end of the shaft extending through wall 13 of member 12 and being journaled at this end by bearing 30. The shaft 25 has threaded portions 31 at respective ends which are adapted to receive a split collar 32, the same being suitably threaded to a portion 31 and which is provided for retaining in keyed positions on shaft 25 the pinions 33 for meshing relation with gear wheels 23 fixed to the car wheels respectively.

Upon energization of motor 24 the shaft 25 is rotated at the proper speed to in turn rotate the car wheels 18 at this left hand end of the car as shown in Figure 1. The speed of movement of the car is largely determined by motor 24 and the characteristics of the speed reducing means 26. In accordance with the invention the drive from shaft 25 is transmitted to shaft 34 at the right hand end of the machine, Figure 1, which shaft is similar in most respects to 25. The endless chain 35 connects the sprocket 36 keyed to shaft 25 with sprocket 37 keyed to shaft 34. Split collars 32 are also provided having threaded relation with shaft 34 for retaining in proper position on said shaft the pinions 38 which are adapted to rotate therewith. The pinions have meshing relation with gear wheels 23 fixed to the car wheels 18 at this right hand end of the car. Accordingly, through shafts 25 and 34 and their associated pinions the car wheels are simul-

4

taneously rotated to effect movement of the car along tracks 20 in response to electric energization of motor 24.

The table of the present loading car, as best shown in Figures 2, 3 and 4, essentially consists of a top wall 40 which is provided with a depressed portion centrally of the top wall, the same extending in a longitudinal direction of the car. This depressed portion is for the purpose of receiving and locating the coil of metal stock and as a result of the same the coil is supported in a manner to prevent either forward or rearward rolling of the coil off of the car. As a result of the depressed center portion of the top wall there is provided longitudinal edge portions 41 and 42, these portions being disposed over the car wheels 18. The top wall 40 of the table is reinforced by side walls 43 and 44 which extend from end to end of the top wall. Additional reinforcing plates are provided, namely, 45, 46, said plates being located at respective sides of the car inwardly of the side walls 43 and 44. It is necessary to brace and strengthen the top wall in a transverse direction as well as longitudinally for which purpose end plates 47 and 48 connect with the side walls 43 and 44 and it will be seen by reference to Figure 2 that said end plates 47 and 48 each have a shape conforming to the depressed central portion of the top wall. Also additional reinforcing plates 50 and 51 are secured to the top wall and these extend transversely from side wall 43 to side wall 44. A central transverse plate 52 extends between a pair of longitudinal guide plates 53 and 54, the said guide plates being secured to the top wall 40 and extending between the plates 50 and 51. The structure herein described provides a table for the present loading car which is rugged in construction, strong and durable, since all the plates are suitably secured as by welding to the top wall and also to each other where they join. Most of the reinforcing plates depend from the top wall a distance approximately equal to the side walls 43 and 44 and the said plates are arranged so as not to interfere with the frame members nor the stabilizing structure for the table to be presently described.

In accordance with the invention the table 40 is movable up and down in vertical directions for elevating the coil of metal stock supported thereon. Figure 3 shows the table in down position, in which position the table rests on blocks to be presently described, provided for the purpose by the respective frame members, and Figure 4 shows the table in elevated position with the stabilizing linkage extended and operative to stabilize the table in said elevated position. It is preferred that the table be elevated by hydraulic means although other instrumentalities such as a rack and pinion could of course be employed. Each frame member supports an hydraulic cylinder indicated by numeral 56, Figure 5, the cylinder containing a piston 57 and a piston rod 58 which extends through the cylinder cap member 59. Each cylinder 56 also has secured thereto at its upper end a cylinder ring 60, the same having formed integral therewith a pair of trunnions 61 located diametrically of the ring 60 and which trunnions are adapted to rest in semi-circular recesses provided therefor in the cylinder support block 17. In this manner the cylinders 56 are each supported by their respective frame member in a manner permitting swinging movement of the cylinder with respect to a transverse axis since the trunnions 61 of each cylinder are disposed in a transverse direction and in sub-

5

stantial alignment with each other. The cap bars 62 hold the trunnions 61 in journalling relation on the cylinder ring 17. A fluid medium is admitted to cylinder 56 at the lower end thereof through the inlet pipe 63 and the action of this fluid medium, which is at a high pressure, is to elevate the pistons 57 and to accordingly elevate the table 40 having connection to the pistons through the piston rod 58 and connecting blocks 64. A block 64 is located under each edge portion 41 and 42 and is suitably welded thereto. Also each block is confined between transverse plates 65 and 66 which extend from their respective guide plates, either 53 or 54, to the adjacent side wall. This structure is shown in Figure 5 and is additionally disclosed in Figures 1 and 3. The blocks 64 provide means for bolting or otherwise securing the top wall to pistons 58 of the hydraulic cylinders and as shown in Figure 5 a socket screw 67 is employed for uniting the block 64 and thus the table 40 to piston 58 of the hydraulic cylinder. The structure of Figure 5 is of course repeated at both sides of the loading car.

During use of the loading car and as a result of a number of elevating operations by the hydraulic cylinders a quantity of hydraulic medium may leak past piston 57 in each cylinder, which must be removed so as not to interfere with the full stroke of the piston. The cylinder wall at its extreme upper end is provided with an opening which communicates with an exhaust pipe 68. The exhaust pipe 68 operates continuously to exhaust the space in back of pistons 57 and accordingly said pistons are at all times able to complete a full stroke in an up direction.

The guide plates, namely, 53 and 54, previously identified, help to guide the table 10 in its vertical movements. The guide plates are fixed to and accordingly move with the table and said guide plates, as best shown in Figures 1 and 5, have suitably fixed thereto a guide block identified by numeral 70. The guide block extends vertically of its respective guide plate substantially centrally thereof, as shown in Figure 4, and the block has interfitting relation with its adjacent cylinder ring 17, each ring for the purpose being provided with a guide bushing 71. Each cylinder ring 17, as previously described, is fixedly secured to a frame member and accordingly the ring comprises a fixed part of the frame of the car. The guiding action of the guide blocks with respect to the cylinder ring limits the end sway of the table as it moves vertically and as a result of the journalling trunnions 61 on the cylinders binding stresses between the hydraulic elevating structure on the one hand and the guiding structure on the other is entirely eliminated. This is the principal reason for journalling the hydraulic cylinders by the trunnions 61, since otherwise a binding action could take place involving either the guide blocks or their adjacent hydraulic cylinders. If there should be any error in vertical alignment between the two it is compensated for by pivoting movement of the hydraulic cylinders on their respective trunnions.

An important improvement as regards the present loading car resides in the provision of stabilizing means to prevent tilting or tipping of the table during movement of the same in an up and down direction. It will be understood that the coil will most often be located off center and if it were not for the stabilizing means the table might otherwise tilt to an extent which would prevent elevating movement being im-

6

parted thereto. However, with the stabilizing means both ends of the table must move simultaneously and to a like extent so that the stresses and strains which would otherwise be applied to the cylinders and to the guide plates are completely eliminated. The stabilizing structure includes a pair of journalling shafts 72 and 73 which extend transversely of the loading car on the respective sides of the transverse center and between the cylinders and the car wheels at its end of the car. Each journalling shaft has reduced end portions 74 which extend through the side walls 13 and 14 of the frame members, being journalled by the frame members, since bearing sleeves 75 are provided in each frame member for the purpose. Each journalling shaft is threaded at each end thereof and as shown in Figure 6 it will be seen that this threaded end projects beyond bearing sleeve 75 to receive a securing nut 76. Each journalling shaft is accordingly locked against rotation. The central portion of each journalling shaft rotatably supports a sleeve identified by numeral 77 for shaft 72 and by numeral 78 for shaft 73. Each sleeve at its respective ends is provided with a bearing 79 and a washer 80 is located at each end of the sleeve, being interposed between the sleeve end and the adjacent bearing sleeve 75. The sleeves 77 and 78 are accordingly mounted for free rotation on their respective shafts and said sleeves are adapted to rotate in unison since they are geared together by means of the gear segments 81 and 82. Gear segment 81 is suitably welded to sleeve 77 substantially centrally of the sleeve, whereas, gear segment 82 is welded in a similar manner substantially centrally of its sleeve 78. The segments have meshing relation so that the sleeves are required to rotate simultaneously and to a like extent.

A plurality of stabilizing arms are actuated by the up and down movement of the table and in accordance with the invention a pair of said arms is provided by each of the sleeves 77 and 78. Arms 83 and 84 are welded to the sleeve 77 at the respective ends of the sleeve and arms 85 and 86 are welded in a similar manner to arm 78 on each side of gear segment 82. Arms 83 and 85 on one side of the loading car are disposed in substantial alignment with the reinforcing plates 45 suitably secured to and depending from the top wall 40 of the table on the frame member 11 side of the car. The arms 84 and 86 are disposed in substantial alignment with the reinforcing plates 46 similar to 45, which, however, are located on the side of the loading car adjacent frame member 12. An operative connection is effected between the stabilizing arms and the table by means of links 87, 88, 89 and 91. The links 87 connect arm 83 to the reinforcing plate 45, the pin 92 connecting the links to the arm and the pin 93 connecting the links to the plate, all as best shown in Figure 2. The arm 84 is joined to the table by the links 88 which connect the arm to a plate 46, the pins 92 and 93 being employed as described. The arm 85 is connected by the links 90 which pivotally join with the table since they have connection with a plate 45 and finally the arm 86 is joined by the links 91 which connect at their upper end with a plate 46. As regards each arm, similar pins 92 and 93 are employed.

For operating the present loading car the motor 24 is suitably energized to power the drive shafts 25 and 34 which effect movement of the loading car along the tracks provided therefor.

After a coil of metal stock has been located on the table 10 of the loading car the same is transported thereby to the centering reel adapted to receive the coil for which purpose it is necessary to elevate the coil so as to align the same with the horizontal arms of the reel. For elevating the table of the loading car an hydraulic medium is admitted to the inlet pipes 63 of the hydraulic cylinders 56. The hydraulic medium under high pressure elevates pistons 57 and said pistons through their rods 58 effect elevation of the table 10. The hydraulic cylinders are of course actuated simultaneously and accordingly each side of the table is elevated in unison and the table is guided at each side by the action of the guide blocks 70 which ride within recesses provided for the purpose by the cylinder rings 17.

Upon elevating movement being imparted to table 10 the links 87, 88, 90 and 91 impart actuation to their respective stabilizing arms, namely, 33, 34, 35 and 36. This actuation of the stabilizing arms produces rotation of sleeves 77 and 78 and as a result of the geared connection of the sleeves they rotate in unison whereby the respective ends of the loading car move simultaneously and to a like extent. Even though the coil may be positioned on the table off center or adjacent one end of the car, nevertheless the stabilizing means will maintain the table in a substantially horizontal plane during its vertical movement, thereby preventing any tilting or tipping of the table. The stabilizing means is of sturdy construction since the coils to be supported by the table are of considerable size and weight. Also large gear segments 81 and 82 are employed which are mounted for rotation by sleeves 77 and 78 of adequate size. The stabilizing arms are securely welded to the sleeve and a pair of links are employed for connecting each arm to the table.

When the table is in down position it is supported by the members 94, Figures 2 and 4, which are provided by the frame members, being suitably welded to the top wall 15 of each frame member. The table is provided with supports adapted to contact the members 94 and by means of which the table is supported when in down position. The said supports, also shown in Figures 2 and 4, include plates 95 which extend transversely of the table and which are in turn suitably welded to transverse plate 96. A box-like construction is thus formed at each corner of the table and each box has vertical alignment with and is adapted to rest on a member 94.

In Figure 4 the numeral 97 indicates a tank providing a reservoir for containing the hydraulic medium which is withdrawn from the tank and pumped by means carried by the car for supplying the same under pressure to the inlet pipes 63 of the hydraulic cylinders. It will be observed that the reservoir tank is retained by the car so as not to interfere with drive shaft 34 and neither does the tank interfere with the movements of the stabilizing arms 35 and 36. The frame members at the respective ends of the car may be joined by end plates 98 and by a floor plate 99. Also a cover 100 is provided for enclosing the electric motor 24 and the speed reducing mechanism 25 at their side of the car with a similar frame member 101 being located on the opposite side for enclosing the sprockets 36 and 37 and the endless chain 35 connecting the sprockets and forming part of the driving means for the car.

The invention is not to be limited to or by details of construction of the particular embodiment thereof illustrated by the drawings as various

other forms of the device will of course be apparent to those skilled in the art without departing from the spirit of the invention or the scope of the claims.

5 What is claimed is:

1. A loading car for use in loading a coil of metal stock, in combination, a frame member of rectangular form at each side of the car, said frame members each including spaced side walls extending longitudinally, a pair of car wheels disposed within each frame member and journaled by the side walls thereof, a table supported by the frame members and adapted to have vertical movement, guiding means for the table including a guide plate depending from the table in associated relation with each frame member and having guiding coaction with the frame members, respectively, stabilizing means for the table including shafts extending transversely of the car and being supported at their respective ends by the side walls of the frame members, at least one stabilizing arm journaled for movement by each shaft, linkage connecting each arm with the table at respective ends of the table, and gear segments operatively connecting the stabilizing arms so that said arms move in unison for stabilizing the table.

2. A loading car for use in loading a coil of metal stock as defined by claim 1, additionally including means for elevating the table, said means being located at each side of the car and being supported by the frame members respectively.

3. A loading car for use in loading a coil of metal stock, in combination, a frame member of rectangular form at each side of the car, said frame members each including spaced side walls extending longitudinally, a pair of car wheels disposed within each frame member and journaled by the side walls thereof, a table supported by the frame members and adapted to have vertical movement, guiding means for the table including a guide plate depending from the table in associated relation with each frame member and having guiding coaction with the frame members respectively, hydraulic means for elevating the table including a cylinder at each side of the car disposed in transverse alignment with the guiding means and to the outside of the guiding means respectively, and means for stabilizing the table including a plurality of journaled arms having links connecting their outer ends with the table, and gear means operatively connecting certain of the arms to effect movement thereof in unison.

4. A loading car for use in loading a coil of metal stock, in combination, a frame member of rectangular form at each side of the car, said frame members each including spaced side walls extending longitudinally, a pair of car wheels disposed within each frame member and journaled by the side walls thereof, a table supported and guided by the frame members and adapted to have vertical movement, stabilizing means for the table including shafts extending transversely of the car and connecting said frame members, a sleeve journaled by each shaft centrally of the car and between the frame members, a pair of stabilizing arms fixed to each sleeve and extending longitudinally toward the ends of the car respectively, linkage pivotally connecting each arm with the table, and gear segments fixed to each sleeve and having meshing relation with each other.

5. A loading car for use in loading a coil of metal stock, in combination, a frame member of rectangular form at each side of the car, said

frame members each including spaced side walls extending longitudinally, a pair of car wheels disposed within each frame member and journaled by the side walls thereof, a table supported by the frame members and adapted for vertical movement, means for elevating the table including an hydraulic cylinder disposed in each frame member substantially centrally thereof, means provided by the frame member for pivotally supporting each hydraulic cylinder for oscillating movement with respect to a transverse axis, and guiding means for the table including a guide plate depending from the table in associated relation with each frame member and having guiding coaction with the frame members respectively, said guiding means being located in substantial transverse alignment with the hydraulic cylinders and being disposed adjacent to but inwardly of the hydraulic cylinders respectively.

6. A loading car for use in loading a coil of metal stock, in combination, a frame member of rectangular form at each side of the car, said frame members each including spaced side walls extending longitudinally, a pair of car wheels disposed within each frame member and journaled by the side walls thereof, a table supported by the frame members and adapted for vertical movement, means for elevating the table including an hydraulic cylinder disposed in each frame member substantially centrally thereof, means provided by the frame member for pivotally supporting each hydraulic cylinder for oscillating movement with respect to a transverse axis, guiding means for the table including a guide plate depending from the table in associated relation with each frame member and having guiding coaction with the frame members respectively, said guiding means being located in substantial alignment with the hydraulic cylinders and being disposed adjacent to but inwardly of the hydraulic cylinders respectively, and stabilizing means for the table connecting with each end thereof, said stabilizing means maintaining the table in a substantially horizontal plane during elevating movement thereof.

7. A loading car for use in loading a coil of metal stock, in combination, a frame member of rectangular form at each side of the car, said frame members each including spaced side walls extending longitudinally and a connecting top wall, a pair of car wheels disposed within each frame member and journaled by the side walls thereof, a table supported by the frame members and adapted for vertical movement, a cylinder supporting block provided by each frame member and located centrally thereof in substantial horizontal alignment with the top wall of the frame member, an hydraulic cylinder pivotally supported in depending relation from each cylinder supporting block to permit oscillating movement thereof with respect to a transverse axis, plunger means for each hydraulic cylinder having connection with the table for elevating the same, and a guide plate depending from the table on each side thereof in associated relation with its respective cylinder supporting block and having guiding coaction with its respective supporting block.

8. A loading car for use in loading a coil of metal stock, in combination, a frame member of rectangular form at each side of the car, said frame members each including spaced side walls extending longitudinally and a connecting top wall, a pair of car wheels disposed within each frame member and journaled by the side walls

thereof, a table supported by the frame members and adapted for vertical movement, a cylinder supporting block provided by each frame member and located centrally thereof in substantial horizontal alignment with the top wall of the frame member, an hydraulic cylinder pivotally supported in depending relation from each cylinder supporting block to permit oscillating movement thereof with respect to a transverse axis, plunger means for each hydraulic cylinder having connection with the table for elevating the same, a guide plate depending from the table on each side thereof in associated relation with its respective cylinder supporting block and having guiding coaction with its respective supporting block, and stabilizing means connecting with each end of the table and supported by the frame members, said stabilizing means maintaining the table in a substantially horizontal plane during elevating movement thereof.

9. A loading car for use in loading a coil of metal stock, in combination, a frame member of rectangular form at each side of the car, said frame members each including spaced side walls extending longitudinally and a connecting top wall, a pair of car wheels disposed within each frame member and journaled by the side walls thereof, a table supported by the frame members and adapted for vertical movement, a cylinder supporting block provided by each frame member and located centrally thereof in substantial horizontal alignment with the top wall of the frame member, an hydraulic cylinder pivotally supported in depending relation from each cylinder supporting block to permit oscillating movement thereof with respect to a transverse axis, plunger means for each hydraulic cylinder having connection with the table for elevating the same, a guide plate depending from the table on each side thereof in associated relation with its respective cylinder supporting block and having guiding coaction with its respective supporting block, stabilizing means for the table including shafts extending transversely of the frame members and being supported at their respective ends by the side walls of the frame members, a pair of stabilizing arms journaled for movement by each shaft, linkage connecting the arms with the table at respective ends of the table, and gear segments operatively connecting the stabilizing arms to effect movement of said arms in unison for stabilizing the table during elevating movement thereof.

10. A loading car for use in loading a coil of metal stock, in combination, a frame member of rectangular form at each side of the car, said frame members each including spaced side walls extending longitudinally, a pair of car wheels disposed within each frame member, stud shafts extending transversely of the frame members and carried by the side walls thereof for journaled the car wheels, a table supported by the frame members and adapted to have vertical movement, guiding means for the table including a guide plate depending from the table in associated relation with each frame member and having guiding coaction with the frame members respectively, hydraulic means for elevating the table including a cylinder in each frame member substantially centrally of the length of the side walls thereof and supported by said side walls, a drive shaft extending transversely of the frame members at each end of the car and being journaled by the side walls of the frame members, means operatively connecting each shaft with the car

wheels at its end of the car for rotating the car wheels when the shafts are rotated, and motor means for driving said shafts.

11. A loading car for use in loading a coil of metal stock as defined by claim 10, additionally including stabilizing means for the table including shafts extending transversely of the frame members and being supported at their respective ends by the side walls of the frame members, a stabilizing arm journaled for movement by each shaft, linkage connecting the arms with the table at respective ends of the table, and gear segments operatively connecting the stabilizing arms to effect movement of the arms in unison.

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