The present invention generally relates to pipe handling and more particularly to a machine for laying down drill pipes and drill collars as they are pulled out of an oil or gas well by the derrick equipment.

As is well known, when an oil or gas well is drilled, there is normally employed a plurality of sections or joints of drill pipes which may be either four and one half or five inches in outside diameter together with a plurality of nine inch outside diameter drill collars depending upon the depth of the hole or well. In order to complete the hole, all the pipe used to drill the hole has to be pulled out by the derrick equipment, one section at a time and then laid down on a pipe rack or otherwise stacked in an orderly manner. Normally, about forty joints of drill pipe, depending upon the amount available, is laid down in one horizontal row in side-by-side relation and then another row is placed thereon and normally, spacers such as two inch by four inch wood members or timbers are employed across the joints of pipe so that when the joints of pipe are laid down the pipe rolls easily in place. Depending upon the number of joints of pipe employed, a plurality of rows of pipe may be employed. For example, if the hole is approximately 15,000 feet in depth, this requires approximately 475 joints of drill pipe plus 15 to 20 joints of 9 inch drill collar pipe and the pipes are about 31 feet in length. Normally, the laying down of the pipe joints or sections as they are removed by the derrick equipment requires the use of the service of anywhere from six to ten employees using various equipment such as ropes to pull the pipe on the rack as it is stacked side-by-side. This is especially difficult to effectively accomplish when the row of pipe is at an elevated position. For example, when you have stacked the pipe to a depth of seven rows, it is rather difficult to pull the pipe into a side-by-side relationship in the row. In addition, handling of the pipe requires considerable effort and a relatively large number of injuries have been caused by accidents occurring when laying down the pipe manually.

Therefore, it is the primary object of the present invention to provide a pipe laying down machine which will receive the drill pipe sections or joints from the derrick equipment and discharge them onto the rack.

Another object of the present invention is to provide a drill pipe and collar laying down machine having a stationary base portion and an elevatable carriage portion for enabling the pipe to be discharged laterally in a horizontal manner at various different elevational positions for enabling effective stacking of the pipe in a plurality of horizontal rows.

Still another object of the present invention is to provide a machine as defined in the preceding objects including a novel mechanism for elevating the elevatable carriage together with angularly adjustable skids attached to the carriage assembly for discharging the pipe directly onto the rack.

A further important object of the present invention is to provide a drill pipe and collar laying down machine having a movable dolly mounted on the carriage assembly which receives one end of the drill pipe from the derrick equipment and is moved longitudinally on the carriage assembly by the weight of the drill pipe so that the drill pipe will assume a horizontal position as one end thereof is engaged by the dolly and the other end lowered by the derrick equipment.

Yet another important object of the present invention is to provide a drill pipe and collar laying down machine having a novel mechanism for automatically releasing the pipe for lateral movement after the dolly has reached the end of its travel.

A still further important feature of the present invention is to provide a drill pipe laying down machine which is simple in construction, easy to operate, easy to adjust, effective for its particular purpose and generally inexpensive to manufacture.

These, together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a side elevational view of the pipe laying down machine of the present invention with the carriage assembly in its lowermost position;

FIGURE 2 is a side elevational view, similar to FIGURE 1 illustrating the carriage assembly and its elevated position;

FIGURE 3 is a plan sectional view, on an enlarged scale, taken substantially upon a plane passing along section line 3—3 of FIGURE 2 illustrating the details of the mechanism for elevating the carriage assembly;

FIGURE 4 is a transverse, sectional view, on an enlarged scale, taken substantially upon a plane passing along section line 4—4 of FIGURE 1 illustrating the structural relationship of the device;

FIGURE 5 is a longitudinal, sectional view taken substantially upon a plane passing along section line 5—5 of FIGURE 4 illustrating the details of construction of the dolly mechanism;

FIGURE 6 is a longitudinal, sectional view taken substantially upon a plane passing along section line 6—6 of FIGURE 5 illustrating the structural details of the dolly and the manner in which it is mounted on a longitudinal trackway;

FIGURE 7 is a transverse, sectional view taken substantially upon a plane passing along section line 7—7 of FIGURE 5 illustrating further structural details of the dolly;

FIGURE 8 is a detailed side elevational view of the dolly illustrating the mechanism for releasing the pipe in its normally closed position.

FIGURE 9 is a detailed side elevational view similar to FIGURE 8 but illustrating the pipe releasing mechanism in its released position after the dolly reaches the end of its travel;

FIGURE 10 is a detailed sectional view taken substantially upon a plane passing along section line 10—10 of FIGURE 8 illustrating the structural details of the latch mechanism for the pipe release plate;

FIGURE 11 is a detailed sectional view illustrating the winch mechanism for raising and lowering the carriage assembly;

FIGURE 12 is a detailed sectional view taken substantially upon a plane passing along section line 12—12 of FIGURE 3 illustrating further structural details of the connection between the elevating mechanism and the carriage assembly;

FIGURE 13 is a detailed sectional view taken substantially upon a plane passing along section line 13—13 of FIGURE 11 illustrating the connection between the base assembly and the inclined props for the skids;

FIGURE 14 is a schematic view illustrating the winch mechanism for positively moving the dolly;

FIGURE 15 is a schematic view illustrating the mechanism for raising and lowering the carriage assembly;

FIGURE 16 is a schematic view similar to FIGURE 13.
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15 but illustrating a different carriage lifting assembly; and

FIGURE 17 is a sectional view of a trolley having both sides pivotal and including a deflector for the pipe.

Referring now specifically to the drawings, the numeral 10 generally designates the pipe and drill collar laying down machine of the present invention for receiving drill pipe and collar joints 12 from the derrick equipment generally designated by the numeral 14. The details of the derrick mechanism are not illustrated since they are conventional in nature and a chute generally designated by numeral 16 is provided for guiding the pipe 12 onto the machine 10 of the present invention with any suitable connection being provided between the chute and the laying down machine and also between the chute and the derrick. Normally, the chute is made from semi-cylindrical pipe sections welded together for forming a trough-like member for guiding the pipe 12 onto the machine 10.

The machine 10 includes a stationary base assembly generally designated by numeral 18 and an elevatable carriage track assembly generally designated by numeral 20. The base assembly 18 includes a generally rectangular frame defined by a pair of parallel top rails 22 and a pair of parallel bottom rails 24 which are rigidly interconnected by vertical bracing members 26 and diagonal bracing members 28 extending from the top of one vertical brace to the bottom of an adjacent vertical brace 26. The top and bottom rails 22 and 24 are horizontally interconnected by transverse frame members 30 thus defining a generally hollow longitudinally elongated framework that may be constructed of a welded pipe assembly and reinforced as desired. Depending from the bottom rails 24 is a plurality of supporting legs 32 which may rest upon any suitable supporting surface.

At each end of the base assembly 18 there is provided a pair of elongated vertical supporting members 34 having the upper end terminating in an inwardly curved portion 36. The upper inner end of each of the vertical members 34 are rigidly interconnected by a transverse member 38 and a pair of vertical guides 40 extend downwardly from the ends of the transverse member 38 into intersecting relation to the top and bottom rails 22 and 24 and the guides are parallel with each other at each end of the elongated base assembly 18 with the end support members 34 serving to rigidity and support the upper end of the guides 40. This entire assembly of the base is of pipe construction in which the various components thereof are welded together. It is pointed out that other conventional types of framing elements may be employed if desired.

The carriage assembly 20 is disposed generally parallel to the base assembly 18 and includes top rails 42 and bottom rails 44 interconnected by vertical framing elements 46 and diagonal framing elements 48. The framing elements 42 and 44 are preferably of angle iron construction and, as illustrated in FIGURE 4, the carriage assembly 20 is of less width than the base assembly and tapers upwardly in that the top rails 42 are closer together than the bottom rails 44. The vertical members 46 and diagonal members 48 are preferably straps, the bottom rails 44 are inwardly facing angle iron members having a horizontal flange at the bottom while the top rails 42, as shown in FIGURE 7, are inwardly facing channel-shaped members having a top horizontal flange.

Each end of the carriage assembly 20 is provided with a vertically disposed tubular sleeve 50 slidably mounted on the guides 40, the sleeve forming sliding for vertical reciprocation of the carriage assembly 20. Each corner of the carriage assembly 20 is provided with a sleeve 52 engaging the guide 40 thus maintaining the carriage assembly 20 in parallel relation to the base assembly 18.

A mechanism for vertically adjusting the track assembly is provided and is generally designated by numeral 52. This construction includes a winch assembly 54 including a spool or drum 56 supported at one end by an upstanding bracket 58 carried by a transverse plate 60 supported by the bottom rails 24 and the other end of the drum 56 is supported by a transverse plate 62 carrying a dolly assembly 20 and the fact that they are supported in transverse plate 60. A flexible cable or rope 64 is wound on the drum 56 and is guided in relation thereto by a sheave or pulley 66 mounted on a bracket 68 carried by the upstanding bracket 58 at the upper end thereof thus guiding the cable or rope 64 onto and off of the drum 56. Any suitable mechanism may be employed for selectively rotating the drum 56 in either direction. For purposes of illustration, there has been shown a hand wheel 70 having a shaft 72 extending into the interior of the gear casing 74 for rotating the drum 56 when the hand wheel 70 is rotated. Whatever source of power is utilized, the gear mechanism 62 will reduce the speed thereof to the desired rotational speed of the drum which need not turn very fast in view of the relatively small increments of movement necessary to elevate the carriage assembly to its desired position.

Mounted on each side of the winch assembly 54 is a lift prop assembly generally designated by numerals 74 and 76 each of which includes a transverse member 78 having end portions 80 journalled in brackets 82 carried by the bottom rails 24. Rigidly affixed to the transverse member 78 is a pair of parallel side members 84 spaced inwardly from the ends of the transverse member 78 and rigidly connected thereto and reinforced by virtue of a gusset plate 86. The other end of the side members 84 are rigid with a transverse tubular member 88 having a gusset and mounting plate 90 on the inner surface thereof which also reinforces the liftprop assembly. The transverse member 88 is provided with a shaft or axle 92 extending therethrough and extending thereon by which is mounted a pair of rollers 94 outwardly of the transverse tubular member 88. Each roller 94 is provided with a circular flange 96 on the outer end thereof together with a retaining member 98 for retaining the roller 94 on the axle 92 for rotation about a transverse axis.

The roller 94 engages the bottom flange of the bot tom rail 44 of the carriage assembly 20 and the flange 96 is disposed alongside of the vertical flange of the bottom rail 44 thus rollingly engaging the bottom rails 44 at longitudinally spaced points as illustrated in FIGURE 2.

For swinging the prop assemblies 74 and 76, there is provided a pulley or sheave 100 on each of the gusset plates 90, the pulleys being mounted by a suitable bracket 102. The cable or rope 64 is entrained through the pulley 100 carried by the prop assembly 74 and extends horizontally and is entrained around the pulley 100 on the prop assembly 76 and is attached thereto by connecting the free end of the cable to the main run of the cable by suitable cable clamps 104. Thus, as the drum 56 is rotated to wind the cable 64 thereon, the prop assemblies 74 and 76 will be pivoted about the axis of the transverse shaft or shaft member 80 in a vertical plane from the position illustrated in FIGURE 1 to a position illustrated in FIGURE 3. Upon swinging movement of the transverse member 88 in a vertical plane, the rollers 94 will engage and lift the bottom rails 44 of the carriage assembly 20. Due to the equal spacing of the prop assembly 74 and 76 and the fact that they are powered inwardly by a single source of power, the winch assembly 54, the prop assembly 74 and 76 will swing upwardly simultaneously and this construction in combination with the sleeve 50 riding on the guides 40 will maintain parallelism of the carriage assembly 20 and enable efficient raising and lowering of the carriage assembly 20 in a desired manner.

Movably mounted on the carriage assembly 20 is a displaceable dolly or carriage generally designated by numeral 106 which includes an elongated horizontal bottom
member 108 having on one side thereof an upstanding side wall 110 rigid therewith and on the other side there is provided discharge means including a releasable retaining wall 112 which is pivotally attached to a bottom wall 114 of a longitudinal assembly 116 which enables the side wall 112 to be released and pivoted from a vertical retaining position to a downwardly inclined discharge position as illustrated in FIGURES 8 and 9. At one end of the elongated bottom 108, there is provided an upstanding abutment wall which is in the form of an end wall 118 that has a top wall 120 connected thereto together with an end wall 122 spaced parallel therefrom. The end wall 122 extends downwardly below the bottom wall 114 and forms a connection between the side walls 124 and 126 of the head portion of the dolly carriage or trolley 106. The other end of the bottom 108 is provided with an end wall 128 rigid with the portions of the side wall 110 which extends below the bottom wall 108 and rigid with the bottom wall portion 114 thus forming a rigid hollow trolley or dolly mount 60 for longitudinal reciprocation along the top of the carriage assembly 20 by virtue of the top rails 42 being engaged by a plurality of longitudinally spaced pairs of rollers 130 mounted on suitable mounting stub shafts or axles 132 rigid with the walls, either the walls 124 and 126 or the walls 110 and 114. The lower edge of the horizontal flange of the top rails 42 of the carriage assembly and the inner end of the stud shaft or mounting rod is provided with a retaining member 134 in the form of an angle iron member having the vertical flanges thereof attached to the shaft or rod 132 and having the horizontal flange thereof extending outwardly and undergirding the horizontal flange of the top rail 42 of the carriage assembly thus securing the dolly or trolley in place and preventing it from moving upwardly and becoming dislodged from the tracks or rails 42.

For moving the trolley longitudinally along the carriage assembly 20, there is provided a winch mechanism generally designated by numeral 136 including a winch spindle or drum 138 supported by suitable bracket mechanism 140 that is carried by a frame assembly 142 supported in a position related to the carriage assembly 20. A flexible cable or rope 144 is wound on the drum 138 and extends upwardly into the interior of the carriage assembly and is entrained over a pulley 146 supported by a bracket 149 carried by a transverse plate 150. The cable or rope 144 then extends longitudinally under the top rails 42 and is entrained over an end pulley 152 at the end of the carriage assembly 20. The cable or rope 144 being looped or wrapped around the pulleys 146, 149 and 152. The cable 144 then extends horizontally above the top surface of the upper rails 42 and extends through the end plates 128 and 122 of the trolley and the cable 144 is disposed below the bottom 108 and is attached to the dolly by virtue of cable clamps 154 being disposed securely on the cable 144 against the outer surface of the end walls 128 and 122. The cable 144 is then entrained over an end pulley 156 in alignment with the pulley 152 and which is supported by brackets 158. The cable then extends through an enlarged aperture 160 and a plate 162 carried by the carriage assembly similar to the plate 150 and then back onto the drum 138 so that by reversing rotation of the drum 138, the upper run of the cable 144 may be caused to move in either longitudinal direction thus causing the trolley or dolly to move in either longitudinal direction along the tracks formed by the upper rails 42 of the carriage assembly 20.

A discharge latch mechanism is provided for the trolley for releasing the pivotal side wall 112 and this mechanism includes a pivotal strap or bar 164 supported for pivotal movement about a centrally disposed mounting bolt 166 extending into the side wall 126. The lower end of the bar is angulated as at 168 and a roller 170 is mounted on the end thereof. The roller 170 engages an abutment 172 whereby the abutment 172 will cause the bottom end 68 of the bar 164 to stop or tend to stop during movement of the trolley toward the left in FIGURE 8 thus causing the top end portion of the bar to move forwardly in relation to the trolley as illustrated in FIGURE 9.

The upper end of the bar 164 is provided with a longitudinal slot 174 therein receiving an outwardly extending rod or fastener bolt 176 attached to an elongated locking bar 178 that is slidably supported by a pair of L-shaped flange members 186 which define a slot receiving the outwardly extending bolt 176 which also extends through the slot 174 in the bar 164, whereby rotational movement of the bar 164 against the bias of spring 180 about the axis of the retaing bolt 166 will reciprocate the lock member 178 into the end of the track 122 from the plate 112 thus enabling the plate 112 to pivot downwardly from a vertical position to a downwardly inclined position so that the drill pipe 12 may roll off of the bottom 108. While this structure is shown only on one side, it is within the purview of the present invention to provide the structure on either or both sides of the trolley so that the pipe could be discharged to either side. Of course, only one of the drop sides or release sides 112 would be used while stacking the pipe 12 to one side of the machine, the orientation of the stack to the machine being illustrated in FIGURE 4 with the horizontal rows of pipes being spaced by spacers 190 in the form of two inch by four inch timbers or the like.

For guiding the pipe 12 onto the stack, there is provided a plurality of elongated skid members 192 pivotally attached by a pivot bolt 194 to brackets 196 on the top rails 42 below the edges of the side walls 124 and 126 of the dolly.

The skids 192 are each supported by a prop assembly generally designated by numeral 198 which includes a tubular member 200 pivotally attached to a central portion of the skids 192 by virtue of a bracket 202 and a pivot pin 204. Telescopically engaged with the tubular member 200 is a pivot bolt member 206 securely in longitudinal adjusted position by a transverse fastener 208 which may be engaged with a plurality of transverse openings in the member 206. The bottom end of the member 206 is pivotally attached to brackets 210 by pivot pin 212 and the brackets 210 are welded to the bottom rails 24 of the base assembly 18.

In using the present invention, the dolly or trolley 106 is moved to the end of the machine adjacent the derrick equipment and the chute 16 is connected with the carriage assembly in such a manner that it may be elevated along with the carriage assembly. This is accomplished by virtue of the drum 138 being engaged by the winch or control mechanism generally designated by numeral 212 for the winch drum and a suitable control mechanism such as indicated by numeral 214. Also, the base assembly 18 is provided with an open area adjacent one end thereof at least for enabling the sub-frame assembly 142 to be disposed therebetween when the carriage assembly is at the lowermost point. Also, the carriage assembly 20 is provided with a transverse supporting member 216 adjacent the end thereof having the drum 138 thereon and the transverse support member 216 supports an abutment or stop 218 having a coil spring 220 mounted thereon for engagement with the end wall 122 of the trolley when it moves toward the left or away from the derrick equipment thus forming a resilient stop for the trolley and yet enabling the bar 164 to release the pipe 12 in the manner described previously. With the carriage at the right hand end of the assembly as illustrated in FIGURE 1, a pipe joint or section 12 is lowered down the derrick equipment onto the bottom 188 of the carriage. The pipe will move along the trolley until it engages the end wall 118 at which time the trolley will then move longitudinally of the tracks formed by the top rails 42 either by virtue of the force of gravity of the pipe 12, coming down the change 16, or by the mechanism of operating the drum 138 depending upon whether the trolley is movable in a horizontal direction or whether the tracks
or rails are inclined and also depending upon other natural factors. In any event, the carriage moves to the left until the release bar 164 engages the abutment 172 at an unloading position and releases the drop wall 112 thus releasing the pipe for rolling down the skids onto the rack for disposition alongside of a similar pipe in a horizontal row. The safety spring 220 prevents damage to the carriage in the event it goes past its normal stopping point at the unloading position. As the horizontal rows are built up, the carriage assembly is elevated so that the prop assembly 198 pivots vertically as 192 for the prop assembly in a proper position. Also, the skids may be positionally adjusted by means of fastener 208 as hereinafter explained, it being appreciated of course that any other suitable adjusting mechanism may be provided therefor. After the pipes have been discharged from the carriage, the control mechanism 214 is operated and the trolley moved back to the position adjacent the derrick for receiving another pipe section. Thus, with this invention, only one man is necessary to operate the mechanism for lowering the pipes as they are discharged by the derrick equipment which also disassembles the drill pipe and collar from the drill string as it is withdrawn from the hole.

The hinge 116 which holds the drop wall 112 is in the form of a spring hinge in which the wall 112 is urged back to a vertical position after the pipe joint 12 has been released. Also, as shown in FIGURE 17, both side walls 112 are hinged and a deflector 113 is provided for the carriage. The deflector is in the form of an armoirly curved member having a supporting framework which may be mounted in either corner of the trolley whereby the pipe 12 will be discharged from opposite sides of the carriage depending on which wall 112 is permitted to drop downwardly against the action of the spring hinges.

Also, the mechanism for moving the carriage back and forth may be provided with brakes on the cable drum for controlling the movement of the carriage toward the left under the force of gravity and the pipe joint and also for stopping the carriage before coming into contact with the spring and stop abutment but yet enabling the trip mechanism to be operated. The brake mechanism may be of conventional construction and controlled in a conventional manner for controlling the rotational speed of the cable drum.

For example, a U-shaped prop may be attached to the frame with the right portion thereof adjustably connected to the chassis for varying the angular position thereof. Of course, FIGURE 16 illustrates an assembly for assuring that the ends of the carriage assembly are elevatable simultaneously, a pair of cables 230 are provided both of which are wound on the same drum 232 and which raise the two elevating arm assemblies 234 simultaneously thus maintaining a level condition for the carriage assembly. Each cable 230 is entrained over pulleys 236, 238 and 240 and the end is anchored to assembly 234. Pulley 238 is also mounted on assembly 234 thus providing a mechanical advantage for raising the carriage assembly. For further stabilization the carriage assembly 20 is elevatable supported at the ends thereof by a hydraulic piston and cylinder assembly 242 which extends between the carriage assembly and base assembly 18 for assisting in stabilizing as well as raising and lowering the carriage assembly.

The foregoing is considered illustrative only of the preferred embodiment of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A machine for laying down drill pipe and collars as the drill joints are withdrawn from an oil well and disassembled by the derrick equipment comprising, an elongated base assembly, an elongated cartridge track assembly mounted on overlying relation to the base assembly, means interconnecting the base assembly and the cartridge track assembly for vertically guiding the carriage track assembly while preventing lateral movement thereon, at the base assembly, means extending between the base assembly and the carriage track assembly for raising and lowering the carriage track assembly, a longitudinally movable carriage mounted on said carriage track assembly for receiving the lower end of a drill pipe joint from the derrick equipment when the carriage is at one end of the cartridge track assembly and movable along the track assembly as the drill pipe joint is lowered thereby positioning the drill pipe joint in a horizontal position, releasable means on the carriage for retaining the drill pipe joint in horizontal position on the carriage track assembly until the carriage reaches a point adjacent the other end of the cartridge track assembly, and means operatively connected to the base assembly and the carriage track assembly for directing the drill pipe joint onto a track at different locations in accordance with the vertical position of the carriage track assembly, said means for raising and lowering the carriage track assembly including a pair of lift arm assemblies hingedly attached to the base assembly and having free ends rollingly engaging the undersurface of the carriage track assembly, and means connected to the lift arm assemblies for swinging the lift arm assemblies in a vertical plane thereby raising and lowering the carriage track assembly.

2. The structure as defined in claim 1 wherein the carriage track assembly has a pair of lower track members engageable by the lift arm assemblies, each lift arm assembly having a pair of laterally spaced rollers for engaging the tracks on the carriage assembly.

3. Apparatus for stacking horizontally disposed elongated members received in a vertically inclined position from a delivery chute comprising, a base structure, an elevatable track assembly mounted by the base structure, carriage means operatively mounted on the track assembly foridable movement in one direction from a loading position adjacent the chute to a transversely fixed unloading position spaced from the chute, gate means mounted on the carriage means for releasably holding elongated members on the carriage means to guide movement thereof in said one direction from the vertically inclined position to a horizontal position, latch means responsive to arrival of the carriage means at a fixed unloading position for opening the gate means to release the elongated members transverse to said one direction, lift arm means pivotally connected to the track assembly for guiding transverse movement of the elongated members released from the carriage means upon opening of the gate means, and positioning means operatively connecting the skid means to the base structure for angularly repositioning the skid means in response to elevation of the track assembly to deposit the elongated members at vertically spaced locations transversely spaced from the track assembly, said positioning means including a plurality of longitudinally spaced rollers rollingly engaging said tracks for longitudinal movement of the carriage means on the track assembly, said gate means including a bottom member on the carriage means supporting elongated members, upstanding walls on said bottom member, at least one of said walls being hingedly attached to the bottom member for movement transversely to a downwardly extending position for enabling the elongated members to roll off of the carriage means, said skid means including a plurality of skid members hingedly attached to the track assembly, each skid member having an end portion from which the elongated members are deposited.
said positioning means being connected to the skid member substantially spaced from the end portion thereof, said including a latch member engageable with the pivotal wall, an operating bar pivotally mounted on said carriage means for movement of said latch member, one end of said bar depending below the carriage means, an abutment on said track assembly for engagement with the lower end of the bar for pivoting the bar when the carriage means is said unloading position on the track assembly thereby withdrawing the latch member and releasing the wall.

4. A machine for laying down drill pipe and collars as the drill joints are withdrawn from an oil well and disassembled by the derrick equipment comprising, an elongated base assembly, an elongated carriage assembly mounted in overlying relation to the base assembly, means interconnecting the base assembly and carriage assembly for guiding the carriage assembly vertically in relation to the base assembly, means extending between the base assembly and carriage assembly for raising and lowering the carriage assembly, a longitudinally moveable trolley mounted on said carriage assembly for receiving the lower end of a drill pipe joint from the derrick equipment when the trolley is at one end of the carriage assembly and movable along the carriage assembly as the drill joints are withdrawn, said trolley including a plurality of longitudinal spacers rollingly engaged said tracks for longitudinal movement of the trolley on the carriage assembly, said means for retaining the drill pipe joint on a trolley includes a bottom member on the trolley rollingly engaged an elongated base assembly, means for guiding the drill pipe joint from the trolley to a stack said carriage means including a plurality of said members hingedly attached to the carriage assembly, and adjustable prop means engaging the said members and the base assembly for adjustably supporting the said members, trolley being provided with a latch mechanism for the pivotal wall, an operating bar pivotally mounted on said said latch mechanism, one end of said bar depending below the trolley and an abutment on said carriage assembly for engagement with the lower end of the bar for pivoting the bar when the trolley reaches a predetermined position on the carriage assembly thereby operating the latch mechanism and releasing the wall, and a stop abutment on said carriage assembly, and a spring mounted on said abutment for engagement by the trolley for use as a safety device in the event the trolley moves beyond said predetermined position.

5. The structure as defined in claim 4 together with a cable attached to the trolley for moving the trolley longitudinally in both directions on said carriage assembly, a winch mechanism for engaging the cable and moving the trolley together with retard means associated with the winch assembly for stopping the trolley and controlling the speed of movement thereof.

6. A machine for transmitting horizontallly disposed elongated members received in a vertically inclined position from a delivery chute comprising, a base structure, a track assembly mounted by the base structure, carriage means operatively mounted on the track assembly for sidable movement in one direction from a loading position to a direction fixed unloading position spaced from the chute, gate means mounted on the carriage means for releasably holding elongated members on the carriage means to guide movement thereof in said one direction from the vertically inclined position to a horizontal position, latch means responsive to arrival of the carriage means at said unloading position for opening the gate means to release the elongated members transverse to said one direction, said means pivotally supported by the track assembly for guiding movement of the elongated members released from the carriage means upon opening of the gate means to deposit the elongated members at locations transversely spaced from the track assembly, said gate means including a bottom member on the carriage means supportingly engaging the elongated members, and said bottom member, at least one of said walls being hingedly attached to the bottom member for movement transverse to a downwardly extending position for enabling the elongated members to roll off the carriage means, and said carriage means being provided with selector means for directing the elongated members off one side of the carriage means.

7. A machine for laying down drill pipe and collars as the drill joints are withdrawn from an oil well and disassembled by the derrick equipment comprising, an elongated base assembly, an elongated carriage assembly mounted in overlying relation to the base assembly, means interconnecting the base assembly and carriage track assembly for vertically guiding the carriage assembly while preventing lateral movement in relation to the base assembly, means extending between the base assembly and carriage track assembly for raising and lowering the carriage track assembly, a longitudinally moveable trolley mounted on said carriage track assembly for receiving the lower end of a drill pipe joint from the derrick equipment when the trolley is at one end of the carriage track assembly and movable along the carriage track assembly as the drill pipe joint is lowered, thereby positioning the drill pipe joint in a horizontal position, releasable means on the trolley for retaining the drill pipe joint in horizontal position on the carriage track assembly until the trolley reaches a point adjacent the other end of the carriage assembly, skid means on the carriage assembly for directing the drill pipe joint on a stack, said carriage assembly including a pair of longitudinal tracks thereon, said trolley including a plurality of pairs of longitudinally spaced rollers rollingly engaged said tracks for longitudinal movement of the trolley on the carriage assembly, said means for retaining the drill pipe joint on a trolley includes a bottom member on the trolley rollingly engaged an elongated base assembly, means for guiding the drill pipe joint from the trolley to a stack said carriage means including a plurality of said members hingedly attached to the carriage assembly, and adjustable prop means engaging the said members and the base assembly for adjustably supporting the said members, said trolley being provided with a latch mechanism for the pivotal wall, an operating bar pivotally mounted on said said latch mechanism, one end of said bar depending below the trolley and an abutment on said carriage assembly for engagement with the lower end of the bar for pivoting the bar when the trolley reaches a predetermined position on the carriage assembly thereby operating the latch mechanism and releasing the wall, and a stop abutment on said carriage assembly, and a spring mounted on said abutment for engagement by the trolley for use as a safety device in the event the trolley moves beyond said predetermined position.

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