March 6, 1956 C. M. WIIG 2,737,306

COIL RAMP WITH MOVABLE RELEASE SADDLE

Filed Nov. 14, 1952 6 Sheets-Sheet 1

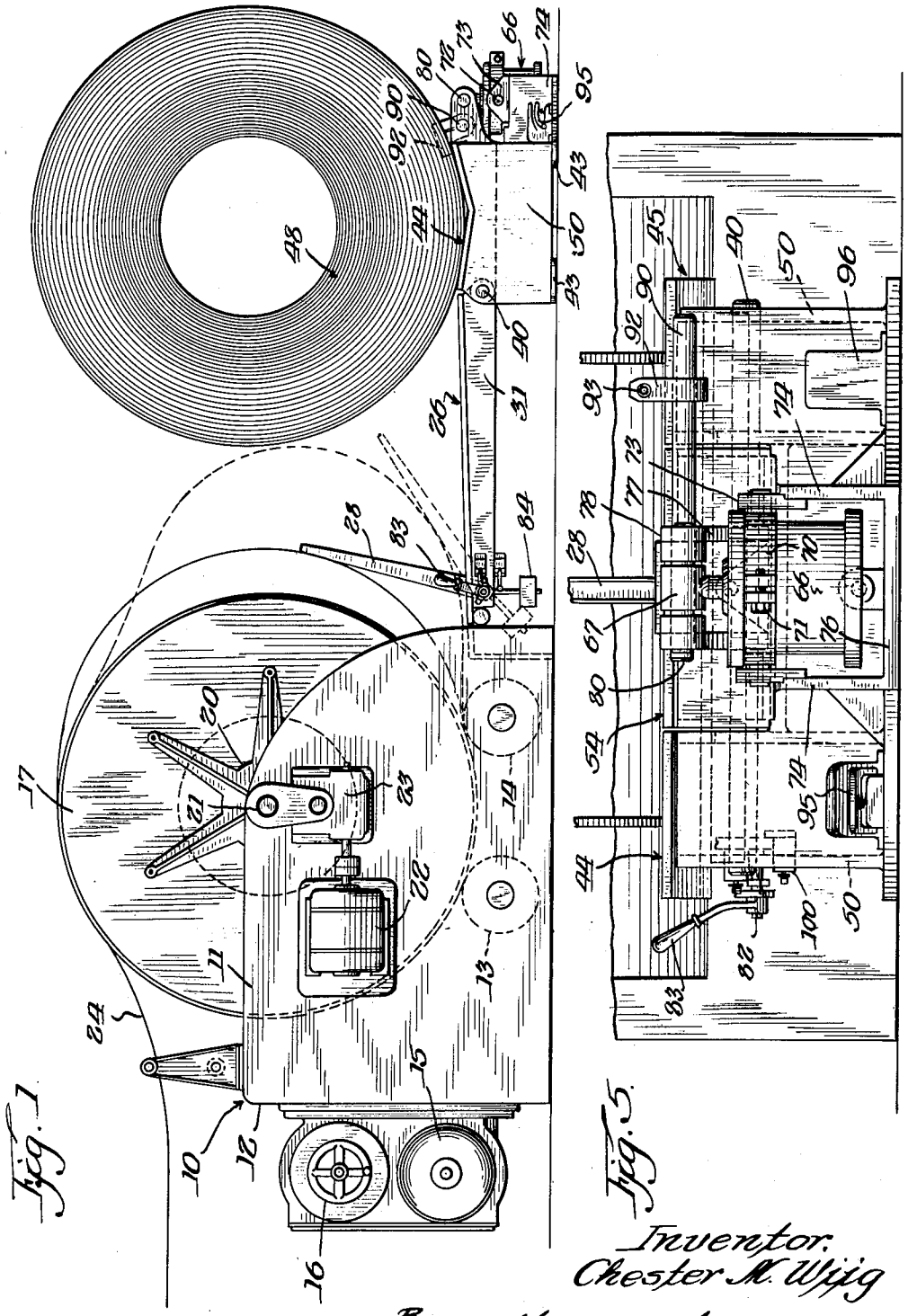


Fig. 1

Fig. 5

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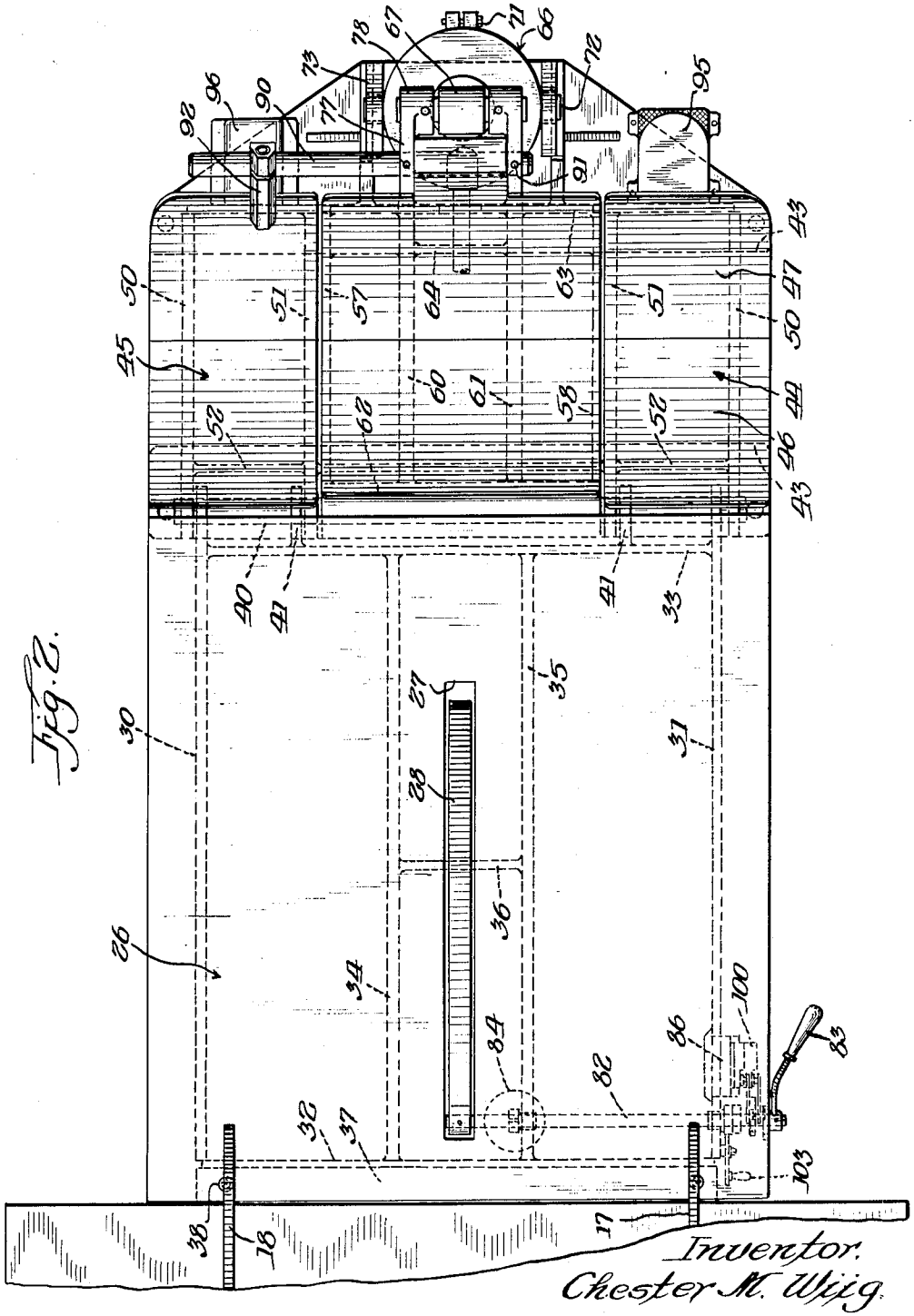


Fig. 2.

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COIL RAMP WITH MOVABLE RELEASE SADDLE

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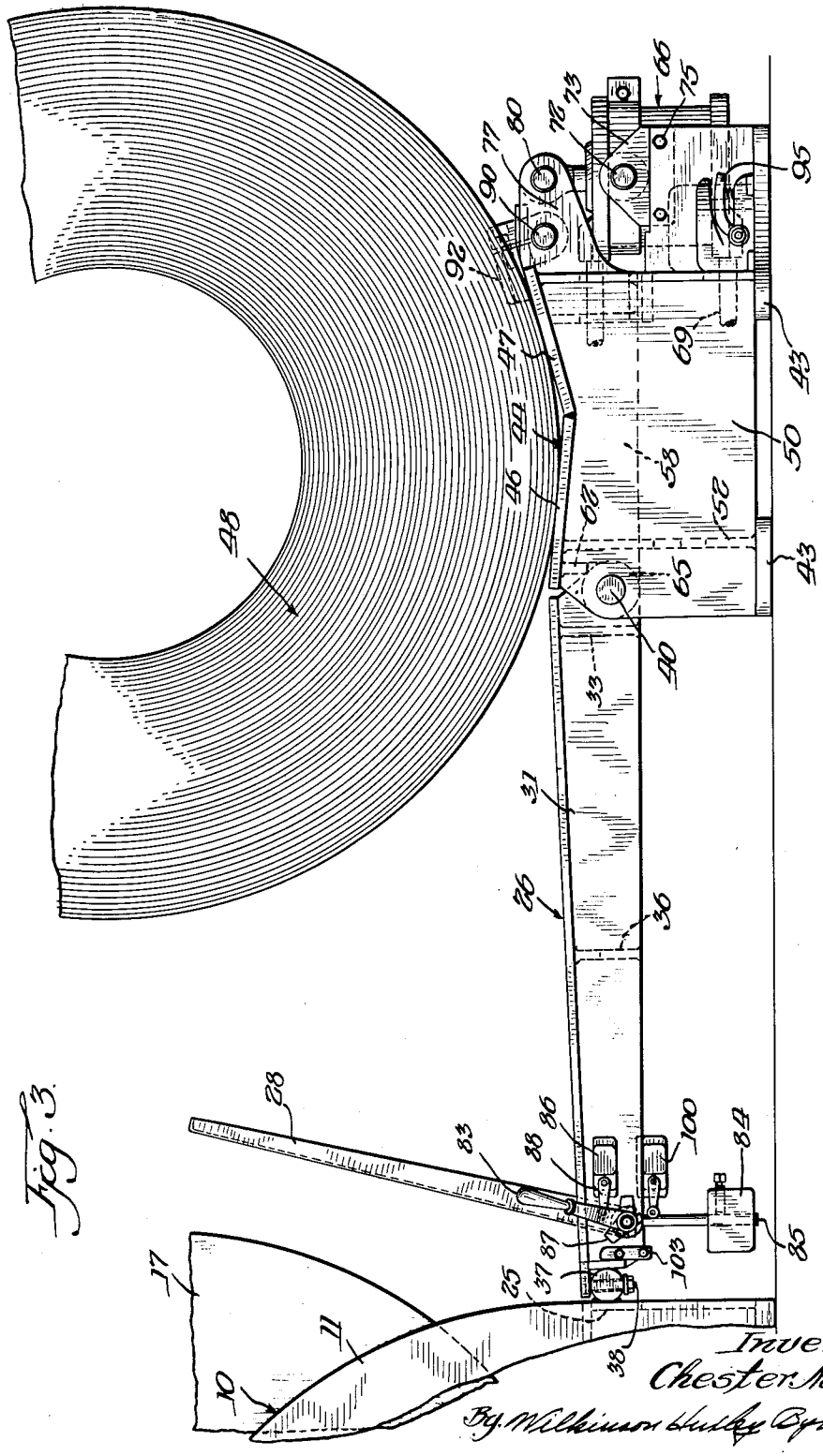


Fig. 3.

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COIL RAMP WITH MOVABLE RELEASE SADDLE

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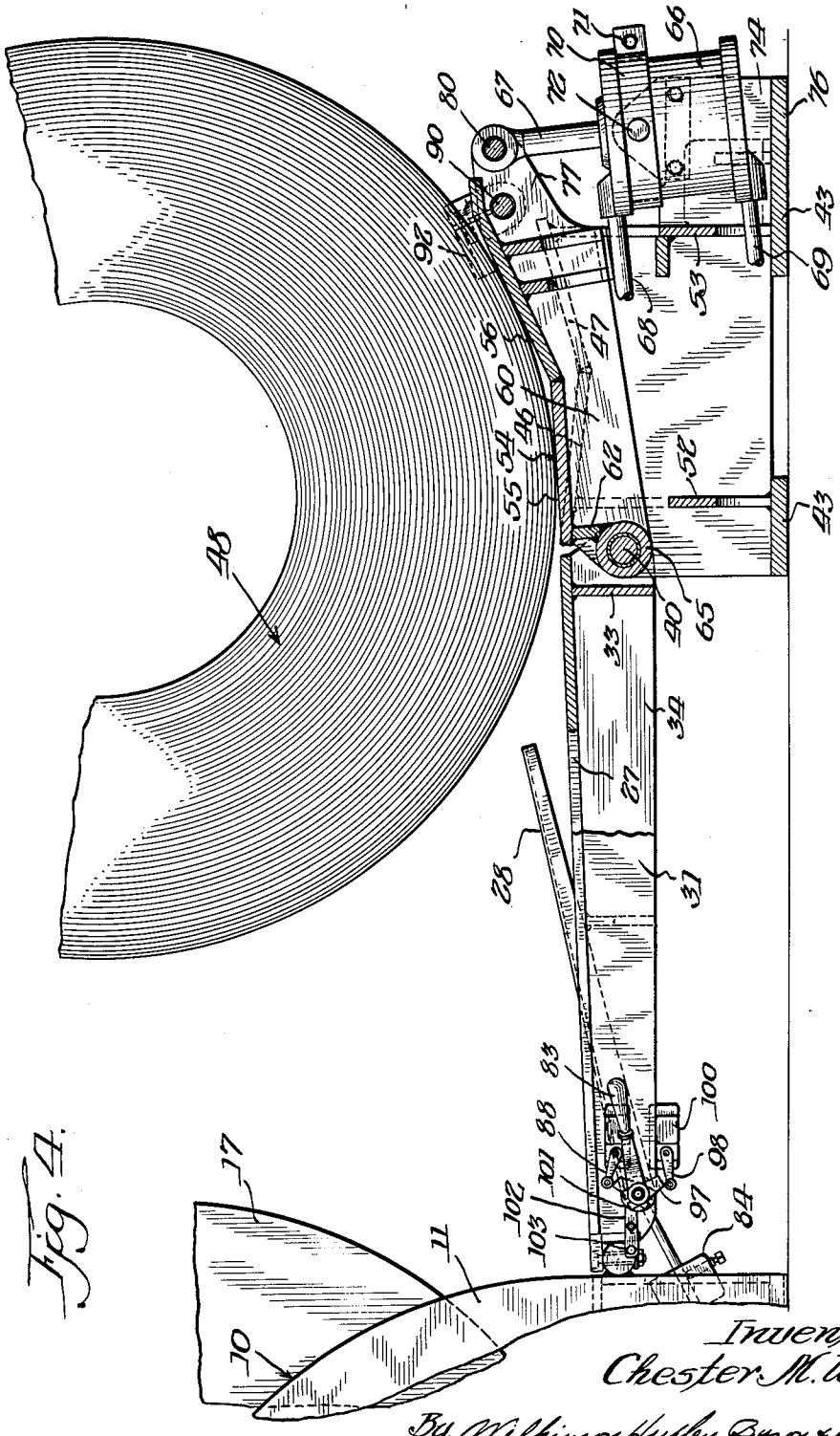


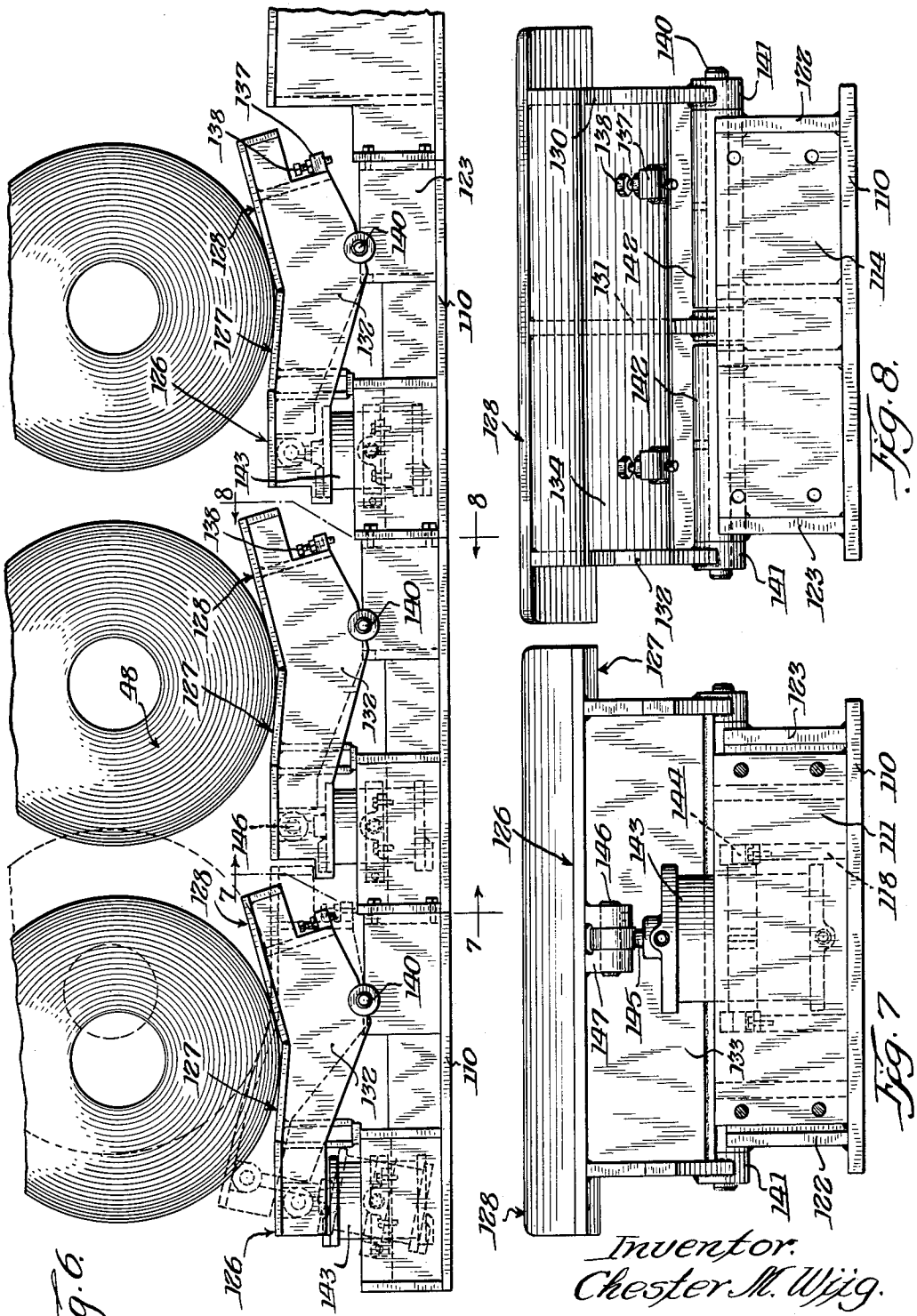
Fig. 4.

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COIL RAMP WITH MOVABLE RELEASE SADDLE

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Fig. 9.

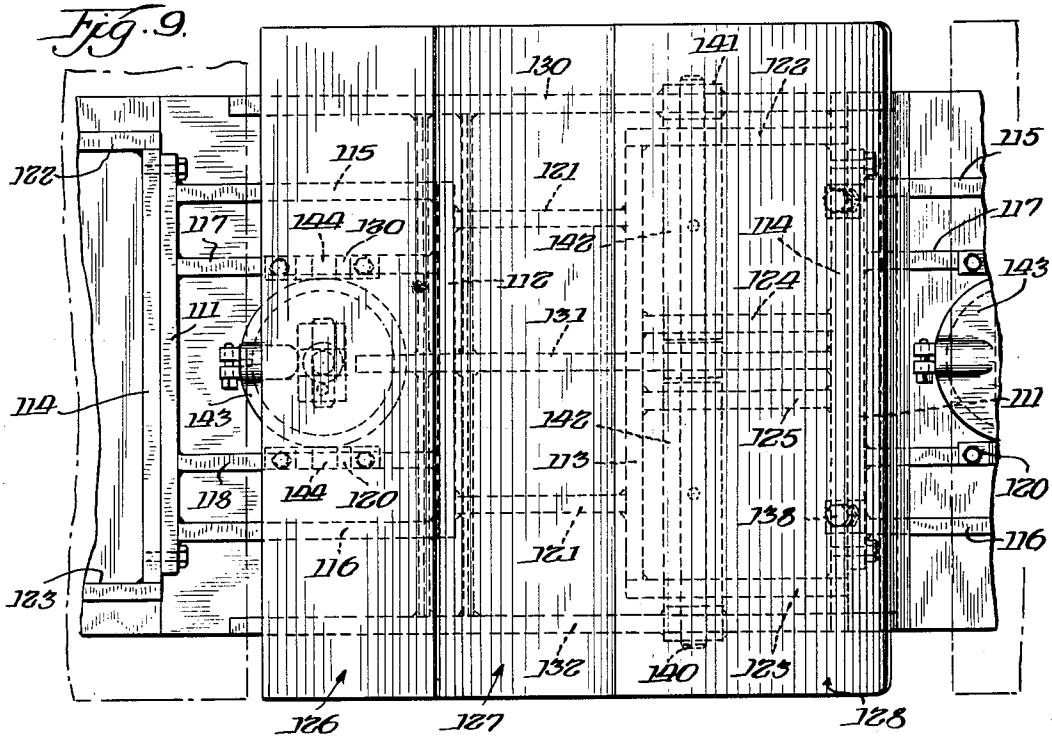
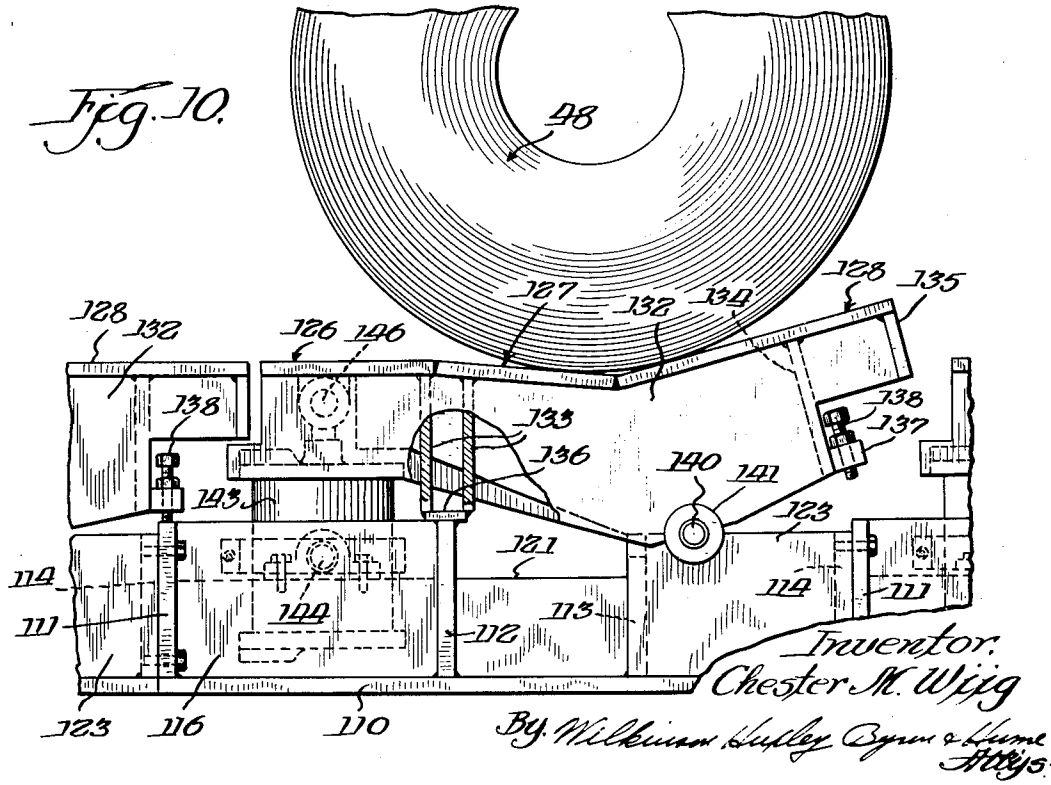


Fig. 10.



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United States Patent Office 2,737,306 Patented Mar. 6, 1956

2,737,306

COIL RAMP WITH MOVABLE RELEASE SADDLE

Chester M. Wiig, Chicago, Ill., assignor to F. J. Littell Machine Company, Chicago, Ill., a corporation of Illinois

Application November 14, 1952, Serial No. 320,461

5 Claims. (Cl. 214—130)

The invention relates to improvements in ramp structures for coil loading reels and has reference in particular to a coil ramp having coil release means in the form of a movable saddle. In one form of the invention the movable saddle is combined with stationary saddles for supporting the coil and holding the coil stationary in advance of its release by the movable saddle.

In the past a number of devices have been employed for holding and releasing a coil of metal stock supported on a ramp leading to a cradle type reel. The simplest method consists in providing a dog which protrudes upwardly from the ramp into contact with the coil and which is withdrawn by hand for releasing the coil. Other variations have included several such dogs so that the coil would be held and released in better alignment. Also the same have been constructed with toggles to gain additional leverage for releasing the coil. Air cylinders have been provided in combination with releasing pawls for safety reasons since the use of a hand operated lever is eliminated. Steel mills have constructed releases with a large section of the ramp tilting upward to form the locking surface and when retracted the locking surfaces become a portion of the ramp proper.

The developments above mentioned have in every case simply released the coil, allowing the same to roll down the ramp under the action of gravity. However, this mode of operation has at least one inherent difficulty, namely, that with the coil at rest one is faced with the enormous weight of the coil, and due to the coefficient of static friction the tendency of the coil is to remain at rest. This must be overcome in order to produce rolling movement of the coil on the ramp. Even with fairly steep ramps it is a common occurrence to employ a crow bar to start the coil rolling. However, once a coil is started rolling it seems to roll down a very slight incline without any trouble. Accordingly, another development has been the additional use of a pusher finger behind the coil so that upon release of the holding pawl or dog the coil was given an initial push to overcome its static inertia and start it rolling.

In view of the foregoing, a general object of the present invention resides in the provision of an improved coil supporting ramp having novel coil release means in the form of a pivoted saddle which is elevated to simultaneously release the coil and start it rolling down the ramp.

Another and more specific object of the present invention resides in the provision of a supporting ramp for supporting coils of metal stock prior to loading the same onto a cradle reel and wherein the ramp is provided with stationary saddles for supporting the coil and with a movable saddle for releasing the coil.

A further object is to provide a movable saddle for supporting a coil of metal stock and which is generally V-shaped to provide a trough for supporting the coil, holding the coil stationary when the saddle is in lowered position but imparting rolling movement to the coil when the saddle is elevated.

Another object of the invention is to provide a movable saddle having a V-shaped coil supporting surface and wherein the movable saddle is conveniently elevated by air pressure to release the coil and impart initial rolling action thereto to start its movement down the ramp.

Another object of the invention resides in the provision of a coil ramp having supporting and release saddles of improved construction and operation, and wherein an end gauge is incorporated therewith so that the coil upon being initially loaded on the ramp in supported with the stationary saddles thereof will be properly positioned centrally of the ramp and approximately centrally of the movable saddle which has location between the stationary saddles.

Another object of the invention is to provide an improved coil ramp that can be secured to its coil loading reel so that the structures are in perfect alignment for the most satisfactory and efficient operation.

Another object is to provide a coil loading ramp having connecting means for pivotally joining the same to its coil loading reel, and wherein limited pivotal action between the ramp and the reel permits adjustment of the inclination of the ramp to suit individual requirements, and which is accomplished without losing perfect alignment between the structures.

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 thereto.

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 side elevational view illustrating the coil ramp of the invention in combination with a cradle type reel and wherein a coil of metal stock is shown in stationarily supported relation on the ramp;

Figure 2 is a top plan view of the improved coil supporting ramp of the invention;

Figure 3 is a side elevational view of the coil supporting ramp of Figure 2, illustrating the position of various parts when a coil of metal stock is supported on the stationary saddles;

Figure 4 is a side elevational view of the present coil supporting ramp, with parts being shown in section, and which additionally illustrates the position of the parts with the movable saddle elevated for releasing the coil of metal stock and initiating its rolling movement down the ramp;

Figure 5 is a fragmentary end elevational view showing the right hand end of the coil supporting ramp of the invention and the air cylinder for actuating the movable saddle for effecting coil release;

Figure 6 is a side elevational view showing a modification comprising several coil supporting saddles in tandem relation, with the saddles being positioned for holding the coils stationary;

Figure 7 is a rear transverse view taken substantially along line 7—7 of Figure 6;

Figure 8 is a front transverse view taken substantially along line 8—8 of Figure 6;

Figure 9 is a fragmentary plan view showing structural details of the center saddle of the three movable saddles as illustrated in Figure 6; and

Figure 10 is a side elevational view of the movable saddle and associated structure as shown in Figure 9.

Referring to the drawings, one embodiment of the invention selected for illustration is disclosed in Figure 1 in combination with a cradle type reel generally indicated by numeral **10** and including spaced side members **11** joined by front wall **12**. The side members **11** suitably journal the coil supporting shafts **13** and **14**, which are

operatively connected so that they rotate in unison and which are conveniently driven by the motor drive unit 15 by connecting chains or pulleys not shown. The motor drive unit is motor driven and includes speed variating mechanism capable of adjustment by the hand wheel 16 to select the proper speed of rotation for the supporting shafts 13 and 14. The side members 11 suitably journal a pair of rotary guide plates 17 and 18, each plate being rotatably mounted by means of hub 20 on a shaft 21 supported by its respective side member 11 for movement laterally of the member. By means of the electric motor 22 and the gear mechanism 23 it is possible to effect lateral movement of each shaft 21 in order to position the rotary guide plate for receiving a coil of metal stock. In operation the rotary guide plates 17 and 18 are spaced a distance sufficient to receive therebetween the said coil of stock and then the motors 22 are actuated to bring the rotary guide plates into contact with the respective sides of the coil. As a result the coil is supported and rotated by the supporting shafts 13 and 14 and the side edges of the coil are protected by means of plates 17 and 18 which accordingly rotate with the coil as the strip material 24 is withdrawn therefrom.

The ramp of the invention essentially consists of a coil supporting portion and a ramp or inclined portion, the two portions having articulated relation with each other, as will be presently described in detail, and the ramp portion being pivotally secured to and supported by the rear wall 25 of the reel. The said ramp portion essentially consists of a flat plate 26 having reinforcing webs and ribs integrally secured to the underside thereof, and having a longitudinally extending slot 27 located centrally of the plate for receiving the loop control arm 28. The ribs on the underside of the plate 26 consist of side ribs 30 and 31 which extend from the forward transverse rib 32 to and beyond the rear transverse rib 33. Substantially centrally of the plate and on respective sides of the longitudinal slot 27 the plate is reinforced on its underside by ribs 34 and 35, the same being joined by the transverse web 36. The extreme forward end of the plate 26 is pivotally supported by means of the bar 37 which is suitably secured as by welding to the rear wall 25 of the reel. A number of vertical openings are formed in the bar and securing bolts such as 38 are employed in fastening the ramp plate 26 to said bar. The openings provided in the bar 37 are somewhat larger than the bolts 38 passed through the opening and the structure accordingly provides for limited vertical adjustment of the rear end of the ramp in order to increase or decrease the inclination of the same.

The side ribs 30 and 31 were described as extending rearwardly beyond the transverse web 33. The rearwardly extending portions of the ribs receive and journal the shaft 40 which serves to pivotally join the supporting portion of the ramp to the inclined section. Rear flanges 41 also extend rearwardly of the rib 33 and are integral therewith. The flanges are apertured for receiving the shaft 40 and the same therefore additionally function as journalling means for said shaft.

The supporting section of the present ramp consists of a pair of stationary saddles and a movable saddle, the said stationary saddles being spaced with respect to each other and having the movable saddle located therebetween. As best shown in Figures 2, 3 and 4, the stationary saddles are provided with a bottom plate 43 to which is integrally secured the stationary saddle 44 and the stationary saddle 45. Both saddles are similar in construction, each consisting of a pair of plates 46 and 47 associated with each other in a manner to form a shallow V. The size of the V formation is substantially complementary to the circumference of coil 48 which is adapted to be supported on the stationary saddles. Each saddle is completed by the side plates 50 and 51 which rest on the bottom plate 43 and suitably support the plates 46 and 47 of the saddle at the desired height. The side plates 50 and 51 of each saddle are reinforced by the transverse standards 52 and 53. It will be seen that the side plates 50 and 51 extend forwardly some distance beyond the transverse standard 52 and the said extending portions are apertured for receiving the shaft 40. Accordingly, shaft 40 functions to articulatedly connect the stationary supporting saddles of the ramp with the inclined portion 26.

The movable saddle, identified in its entirety by numeral 54, is best shown in Figures 2 and 4. The saddle essentially consists of plates 55 and 56 associated with each other in a manner to form a shallow V and which in all major respects conforms to the V formation of the stationary saddles. The saddle 54 is reinforced on its undersurface by the longitudinally extending ribs 57 and 58 located at respective sides of the saddle and by the intermediate ribs 60 and 61. All the ribs are joined by a forward transverse plate 62 and by a rear transverse plate 63. The transverse web 64 extends between and connects the ribs 60 and 61 adjacent the rear thereof. The movable saddle 54 is pivotally supported at its forward end by means of shaft 40, which shaft extends through the journal bearing 65. The said bearing forms part of the movable saddle since the bearing is suitably secured to the saddle by being welded to the transverse plate 62 for the length of the same. Movement is imparted to the rear end of the saddle 54 by any suitable means such as an hydraulic cylinder or air cylinder indicated in its entirety by numeral 66. The usual piston operating within cylinder 66 provides the piston rod 67 and pressure fluid is admitted and exhausted from respective ends of cylinder 66 through pipes 68 and 69.

It is necessary to support the power cylinder 66 for rocking movement and for that reason the circular band or strap 70 is suitably fixed to the cylinder, being held in secured relation therewith by bolt 71 and being disposed below and in contact with the top wall of the cylinder. The circular band 70 provides the diametrically extending pintles 72 which are journalled by sections 73 of the standards 74. The individual sections 73 are releasable from the standards to permit assembly of the parts for pivotally mounting the power cylinder, and after the sections have been located on the pintles 72 they are fixedly secured to standards 74 comprising the side arms of a yoke member which includes the supporting base 76, the same constituting a part of and being integral with the bottom plate 43. The movable saddle is provided with rearwardly extending spaced webs 77 which are integral with the plate 56 and extend rearwardly of the saddle in substantial alignment with ribs 60 and 61. At the extreme rear end of each web the same is provided with a hub portion 78 which is apertured for receiving pin 80 by means of which the movable saddle is pivotally secured to the piston rod 67. It will be seen that energization of power cylinder 66 in a direction to project the piston 67 is communicated to the movable saddle, causing pivotal movement of the saddle in a counterclockwise direction, Figure 4. Also energization of the power cylinder to retract the piston rod is likewise communicated to the movable saddle, effecting pivotal movement of the same in a clockwise direction from an elevated position to a lowered position.

The loop control arm 28 is suitably fixed to the transverse shaft 82, passing through opening in the ribs 31 and 35 and being journalled thereby adjacent the forward end of the ramp 26 and on the left side thereof. The handle 83 is suitably fixed to the outward projecting end of shaft 82 and it is possible for the operator by actuating the handle to retract the loop control arm. However, when the arm is free it is caused to assume a position approximately five to ten degrees from vertical and which action is effected by the balancing weight 84 fixed to rod 85, which is suitably secured to shaft 82 and positioned with respect to the loop control arm 28 so as to depend vertically under the action of weight 84 when the arm is located slightly off the vertical, as clearly illustrated in Figures 1 and 3. The loop control arm is adapted to control the size of the loop being fed from the coil supported by the cradle type reel 10. When the arm is upright, as shown

in Figures 1 and 3, it will be understood that the motor unit is energized and that the supporting shafts **13** and **14** are being rotated to cause the coil in the cradle type reel to rotate and pay out strip material. Should the free outermost loop in contact with the arm increase in size beyond a predetermined maximum, see Figure 1, the control arm will be depressed, whereby operation of the motor unit driving the supporting shafts **13** and **14** is discontinued. The cradle type reel is maintained inoperative until a predetermined decrease is effected in the size of the outermost loop, whereupon the motor unit is again energized and the operation is repeated. Actuation of the arm as above described controls operation of the cradle type reel through the instrumentality of a microswitch **86**, suitably supported by rib **31** in position for actuation by cam **87**. When the loop control arm assumes the position as shown in Figure 3, under the action of weight **84**, the cam **87** does not contact switch lever **88**. However, as the arm is depressed by an increase in the size of the loop, Figure 1, a position is reached bringing cam **87** into contact with lever **88**. The switch **86** is accordingly actuated and through electrical connections the motor unit of the cradle type reel is disconnected. The electric circuit to said motor unit is established again at a certain elevated position of the arm **28** when the cam **87** moves out of contact with lever **88**.

It is desirable to provide a stop member for the coil **48** in order that the operator in depositing the coil on the saddles will know when the coil is positioned substantially centrally of the ramp and also centrally of the movable saddle **54**. It will be understood that the coil of stock **48** is deposited on the coil supporting portion of the ramp from the side of the same, and, assuming that the coil is deposited from the left side of the machine, as viewed from the rear, Figure 2, the stop will be located in associated relation with the stationary saddle **45**. Accordingly, the invention provides a stop supporting rod **90** which is suitably supported by the extensions **77**, the same having openings formed therein for receiving the rod **90** and which is fixed thereto by set screws **91**. As shown in Figure 5, the said rod **90** extends in a direction toward the right and the stop member **92** is mounted thereon and fixed in desired adjusted position. The stop **92** essentially consists of a split yoke having the said stop **92** integral therewith. By means of the split yoke the same is assembled on rod **90** and is locked in adjusted position on the rod by means of screw **93**.

During operation of the cradle type reel **10** a coil of stock such as **48** is held in reserve, being supported on the stationary saddles **44** and **45** of the present ramp. The coil **48** may be deposited on the supporting saddles by any suitable means such as a crane or lifter truck. The stop member **92** is positioned on rod **90** so as to position coil **48** centrally of the ramp structure. The particular position of stop **92** is determined by the width of the coil **48** and for a coil of different width it would be necessary to change the location of the stop. In fact, for narrow coils which would be wholly supported by the movable saddle, the stop might have a position overlying the plate **56** of the movable saddle. The supply of air pressure to the power cylinder **66** is controlled by the foot switch **95** which controls an electric circuit including the solenoid actuated valve **96**. The electric circuit incorporates an interlock to be presently described which renders the foot switch operative under certain conditions. When operative said foot switch will actuate the solenoid valve **96** to supply fluid under pressure to pipe **69**, connecting with power cylinder **66** whereby to project the piston rod and elevate the rear end of the pivoted saddle **54**. When the foot switch is released the solenoid valve **96** automatically returns to its initial position, which exhausts the air from pipe **69**, allowing the piston rod and the pivoted saddle to return to retracted position.

The interlock above mentioned is combined with the loop control arm **28**. It is necessary to first retract the arm **28** before the coil **48** can be rolled down the ramp. Accordingly, the interlock prevents actuation of the pivoted saddle into an elevated position until the loop control arm has been retracted to a position such as shown in Figure 4. It is necessary for the operator to move the arm into said position by movement of the handle **83** and as a result the cam **97**, fixed to shaft **82**, is caused to contact the switch lever **98** of the microswitch **100**. Upon actuation of the microswitch **100** the interlock is rendered inoperative, or, in other words, the electric circuit to foot switch **95** is closed and upon actuation of the foot switch solenoid **96** will be energized to effect actuation of the power cylinder and elevation of the rear end of the pivoted saddle **54**, as described. The invention provides an automatic release for the loop control arm **28** after the coil has rolled down the ramp and over the arm on its way to the cradle type reel. A knurled wheel, identified by numeral **101**, is suitably fixed to shaft **82** and the latch **102** is pivoted to rib **31** so as to have holding relation with the latch when the latch is horizontally positioned by the operator through actuation of the latch by handle **103**. Accordingly, the latch **102** holds the loop control arm in a depressed position as exemplified by Figure 4. However, when the coil **48** rolls down the ramp the arm is further depressed and this action functions to release the latch **102**, which thereupon returns to its normal inoperative position wherein the latch is vertically disposed, as shown in Figure 3. As soon as the coil passes beyond the loop control arm the arm naturally follows the coil, assuming its conventional upright position under the action of weight **84**.

The coil ramp of the invention embodies a number of improved features. The provision of a pair of V-shaped saddles on which the coil is initially placed has the advantage of supporting the coil in a stationary manner. Also the saddles help to minimize damage to the coil such as may result from placing the coil on the saddles. The coil is generally dropped or deposited with a considerable impact and the shallow V formation of the saddles substantially conforms to the contour of the coil. The pivoted release saddle is conveniently located between the stationary saddles and its movement is such that when the saddle is elevated it initiates rolling action of the coil down the ramp. It has been found that the center of the coil is advanced in a forward direction approximately six inches by elevating the movable saddle. In other words, the elevation of the movable saddle transmits a distinct forward velocity to the coil, thereby adding momentum to the coil as well as placing the coil in a condition of moving friction instead of static friction. Another desirable feature resides in the perfect alignment which is effected between the ramp and the reel. In this connection, it may be noted that the supporting portion of the ramp may be elevated somewhat by locating a shim plate under base **43** should it be desired to increase the inclination of ramp **26**. This is made possible by the pivotal connection of the front end of the ramp **26** with bar **37** and the articulated relation which ramp **26** has with the supporting portion of the device.

Another feature incorporated in the present ramp structure resides in the provision of the end gauge **92**. If the coil is to be deposited accurately, then the end location of the coil should be known. This has not been satisfactorily provided for in the past. The present ramp structure incorporates a completely satisfactory end gauge and which is fixed to and carried by the releasing saddle.

The embodiment of the invention disclosed in Figures 6 to 10 inclusive consists of a movable saddle only, the stationary saddles being omitted, and wherein the movable saddle is operatively connected to power means for positioning the saddle for holding the coil stationary or for elevating the saddle whereby to impart rolling movement to the coil. The movable saddle structure may be connected to similar devices in tandem relation,

as shown in Figure 6, so that a plurality of coils may be stored and rolled into position as they are used up in the reel. Figures 9 and 10 illustrate in detail the construction of the supporting base and movable saddle for each device and reference will now be made to said figures.

The base plate **110** is provided with a plurality of transversely extending plates including a rear plate **111**, intermediate plates **112, 113** and a front plate **114**. The rear plate **111** and intermediate plate **112** are joined by longitudinally extending end plates **115, 116** and by longitudinally extending intermediate plates **117, 118**, the latter being of less height than the end plates since they support the journalling brackets **120**. Said rear plate **111** and intermediate plate **112** are suitably welded to the base **110** and to the longitudinally extending plates **115, 116, 117** and **118**, thereby forming a strong unitary assembly.

Additional longitudinal plates such as **121** connect the intermediate plates **112, 113** and the base structure is substantially completed by still further longitudinally extending plates **122** and **123** comprising end members and intermediate members in the form of plates **124** and **125**. The front plate **114** and intermediate plate **113** are connected into a strong unitary assembly with each other and with the base plate by plates **122, 123, 124** and **125** which are suitably welded thereto. Whereas the structure of plates **112** and **118** provides for supporting the hydraulic pressure cylinder on the base, the said assembly of plates **113** and **125** provides structure which pivotally supports the movable saddle.

The movable saddle is likewise formed of an assemblage of plates which comprise a unitary structure adapted to have pivotal movement as heretofore explained for supporting the coil in a stationary manner and for imparting rolling action to the coil when the movable saddle is elevated. The coil supporting surface of the saddle is formed by three transversely extending plates, namely, **126, 127** and **128**. The plates **127** and **128** are welded to each other in a manner to form a shallow V or similar shaped depression. When plate **126** is horizontal the depression in the movable saddle is so disposed as to support a coil of metal stock in a stationary manner. However, when plate **126** of the saddle is elevated the relation of the depression with respect to the pivot axis of the movable saddle is such as to transmit a distinct forward velocity to the coil and thereby starting the coil in motion sufficient to cause movement off of the saddle onto a ramp or the like whereby the coil is delivered to the reel.

Referring again to the plates which make up the reel supporting surface of the movable saddle, it will be seen that the V or the inverted apex of the triangle formed by plates **127** and **128** is located below the level of plate **126** when the latter is horizontal. It will also be observed that the front end of plate **128** is raised or elevated a considerable distance whereby to effect the proper disposition of the depression for stationarily supporting the coil. Also the depression is displaced with respect to the pivot axis some distance to the left and upon rocking the movable saddle clockwise to locate plate **128** in a horizontal position the action is such as to impart forward momentum to the coil, thus effecting the desired rolling movement of the same.

The coil supporting plates **126, 127** and **128** are welded to depending longitudinal plates **130, 131** and **132** which extend from the left hand end of the movable saddle to the right hand end and have a shape in side elevation, as best shown in Figure 10. Additional transverse plates **133, 134** and **135** are secured thereto in order to form a strong unitary assembly constituting the movable saddle. Plates **133** have suitably welded thereto the stop plate **136** which is adapted to contact plate **112** to horizontally position plate **126**. Transverse plate **134** is provided with a pair of lugs **137** suitably secured in spaced relation on the front surface of the plate and which threadedly retain the adjusting screws **138**, providing stop members in contact with a rear plate such as **111** for horizontally positioning plate **128** of the movable saddle.

The movable saddle is pivotally supported on the base structure by the pivot shaft **140** which extends through hub portions **141** and through sleeves **142**. The hub portions are respectively secured to the depending plates **130, 131** and **132**, whereas, the sleeves **142** are respectively secured to spaced plates **122, 124** and spaced plates **123, 125**. The hydraulic pressure cylinder **143** is provided for rocking the movable saddle and it will be observed that the cylinder is operatively connected to the movable saddle at the rear thereof substantially centrally of plate **126**. The cylinder is supported for swinging or pivotal movement by means of the brackets **120** which receive pintles **144** projecting from the respective sides of the cylinder approximately centrally of its height. Accordingly, the cylinder is supported by the longitudinal plates **117** and **118** in a manner which allows the cylinder to rock as it effects oscillating movement of the movable saddle. The piston rod **145** is pivotally connected by pin **146** to lugs **147** which depend from the underside of plate **126**. The cylinder is suitably powered by pneumatic or hydraulic means whereby to extend or retract the piston rod **145** as a result of which motion the movable saddle is oscillated. With the piston rod retracted the saddle is positioned for holding the coil of metal stock stationary. However, when the power cylinder **143** is energized and the piston rod is extended to elevate plate **126**, the front plate **128** is lowered into horizontal position. Thus the coil supported by the saddle will be caused to roll in a direction toward the right, Figure 6, and accordingly said coil can be rolled onto another saddle located in tandem relation therewith, as shown in Figure 6, or the coil can be rolled onto a ramp, all in a manner as clearly explained in connection with Figure 1.

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.

What is claimed is:

1. In material handling apparatus, the combination with base structure, of supporting means for a coil of metal stock comprising a pair of transversely spaced stationary saddles and a movable saddle disposed in the space between the stationary saddles, each said saddle being formed of plate structure including transversely extending front and rear end plates, connecting longitudinal side plates and coil supporting plates providing a shallow V-shaped top surface respectively and which extends transversely in horizontal alignment, means including a transverse shaft supported by the front transverse plates of the stationary saddles, journalling means provided by the front transverse plate of the movable saddle and which has pivotal connection with said shaft for journalling the movable saddle, whereby said movable saddle may oscillate in a vertical plane to locate the saddle in either a horizontal or vertical position, and power means supported by the base structure and operatively connecting with the plate structure of the movable saddle adjacent the rear thereof, said transverse V-shaped top surface of the movable saddle being so disposed and arranged that when the saddle is horizontal the coil will be stationarily supported and when the saddle is elevated sufficient rolling movement will be imparted to the coil to cause it to roll off the saddle in a forward direction.

2. In material handling apparatus, in combination, a coil supporting structure and an inclined ramp portion adapted to be articulatedly connected thereto, said coil supporting structure including a pair of stationary saddles each having a front wall and being disposed in spaced rela-

tion transversely of the structure, a movable saddle having location between the stationary saddles, a pivot shaft supported by the stationary saddles and extending transversely of the structure forwardly of the front wall of said stationary saddles, means forming part of the movable saddle and having a journalling relation with the pivot shaft thereby providing a pivot axis for the movable saddle, said pivot shaft also providing means by which the ramp portion is articulatedly connected to the coil supporting portion, and power means having connection with the end of the movable saddle opposite the pivot axis for elevating said end to effect pivotal movement of the movable saddle.

3. In material handling apparatus, in combination, a coil supporting structure and an inclined ramp portion adapted to be articulatedly connected thereto, said coil supporting structure consisting of a pair of stationary saddles each having a front wall and being disposed in spaced relation transversely of the structure, each stationary saddle having a shallow V-shaped coil supporting surface and which surfaces are disposed in horizontal alignment transversely of the structure, a movable saddle located between the stationary saddles, said movable saddle also having a shallow V-shaped coil supporting surface disposed in horizontal alignment with the coil supporting surfaces of the stationary saddles when not elevated, means pivotally supporting the movable saddle at its forward end and which provides a transverse pivot shaft parallel to the front wall of the stationary saddles, said shaft additionally functioning to articulatedly connect the inclined ramp portion to said coil supporting structure, and a pressure cylinder located at the rear end of the movable saddle and operatively connected thereto for effecting pivotal movement of the movable saddle to locate the same in either a horizontal position or in an elevated position.

4. In material handling apparatus, in combination, a coil supporting structure adapted to have a ramp portion associated therewith, said coil supporting structure including a pair of stationary saddles disposed in spaced relation transversely of the structure, said stationary saddles each being formed of plate structure and each providing a shallow V-shaped coil supporting surface in horizontal alignment with each other transversely of the structure, a movable saddle located between the stationary saddles and which is also formed of plate structure arranged to provide a shallow V-shaped coil supporting surface disposed in alignment with stationary saddles when the movable saddle is horizontally positioned, means including a horizontal pivot shaft disposed transversely of the structure and located forwardly in advance of said saddles, means supporting the pivot shaft from the stationary saddles, other means forming part of the movable saddle and having journalling relation with the pivot shaft whereby the movable saddle may be oscillated in a vertical direction about said pivot shaft as an axis, and a pressure cylinder located at the rear of the movable saddle and operatively connected thereto for effecting vertical movement of the saddle to locate the same in either a horizontal position or in an elevated position, whereby a coil of stock supported by the saddles is elevated by elevating the movable saddle and which by reason of its shallow V-shaped coil supporting surface additionally imparts initial rolling movement to the coil to start rolling movement thereof onto the ramp portion.

5. In material handling apparatus, the combination with base structure, of means for supporting a coil of metal stock comprising a saddle mounted for rocking movement on said base structure, said saddle being formed of plate structure including transversely extending front and rear plates, connecting longitudinal side plates and coil supporting top plates, said coil supporting top plates being arranged to provide a shallow V-shaped depression extending transversely of the saddle, pivot means in associated relation with the longitudinal side plates for mounting the saddle on the base structure for rocking movement about a transverse axis spaced below but parallel to the said depression in the coil supporting surface of the saddle, power means mounted by the base structure for rocking said movable saddle, means operatively connecting the power means to the rear of the movable saddle in longitudinally spaced relation with respect to the pivot axis, and said coil supporting top plates being so disposed and arranged that the coil will be stationarily supported when the saddle is located in one position, and when the saddle is located in another position sufficient rolling movement will be imparted to the coil to cause the same to roll off the forward end of the saddle.

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