Feb. 4, 1936. W. D. PIERSON 2,029,832

BELT DRIVEN WIRE SPOOLER

Filed Feb. 19, 1932 3 Sheets-Sheet 1

Fig. 1.

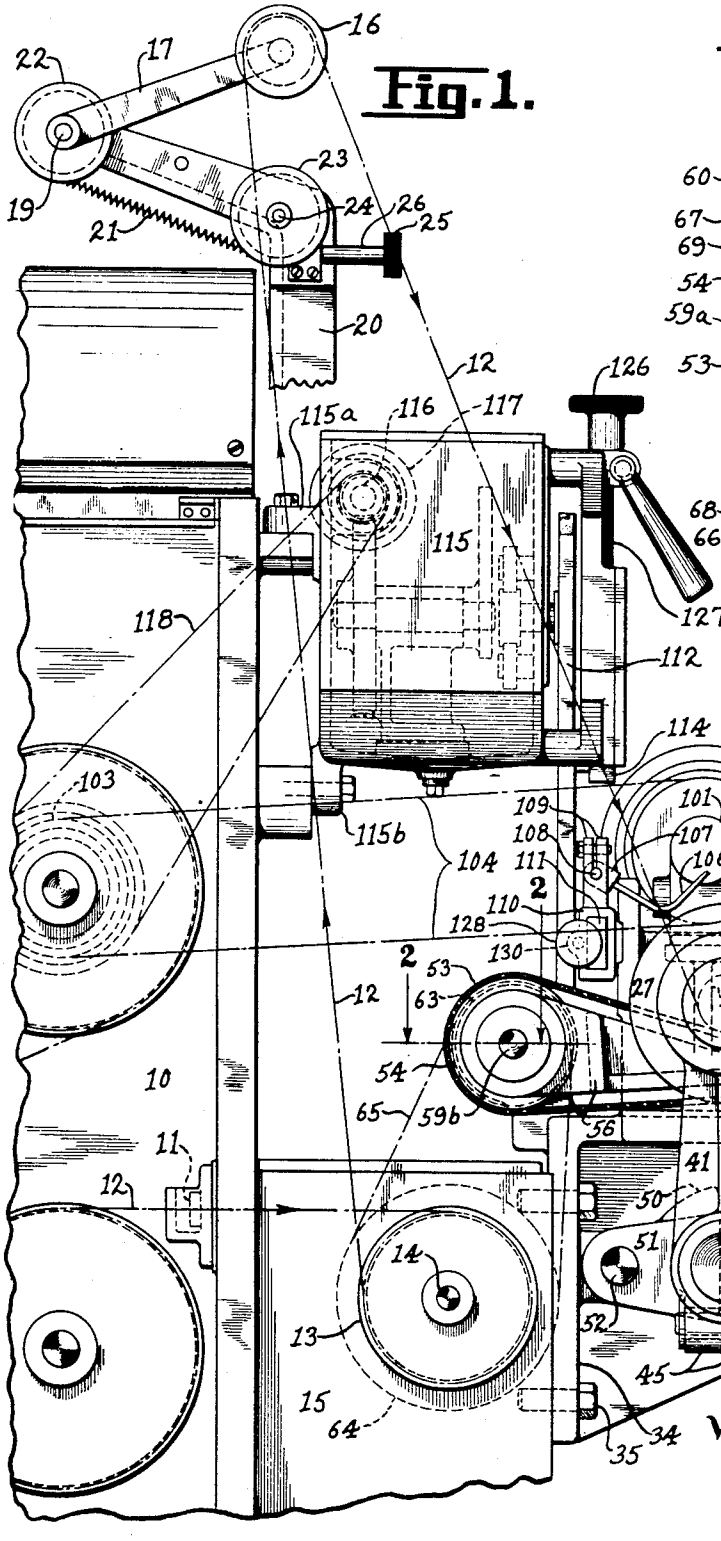
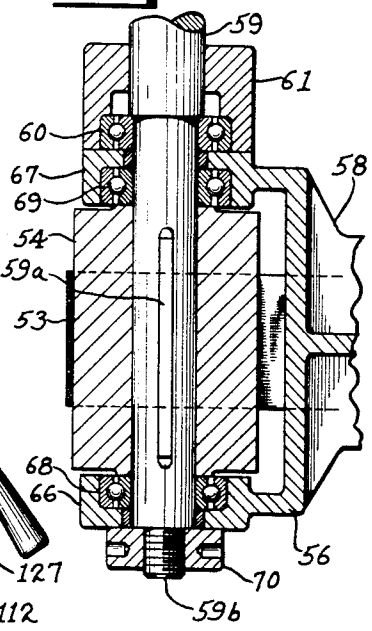


Fig. 2.



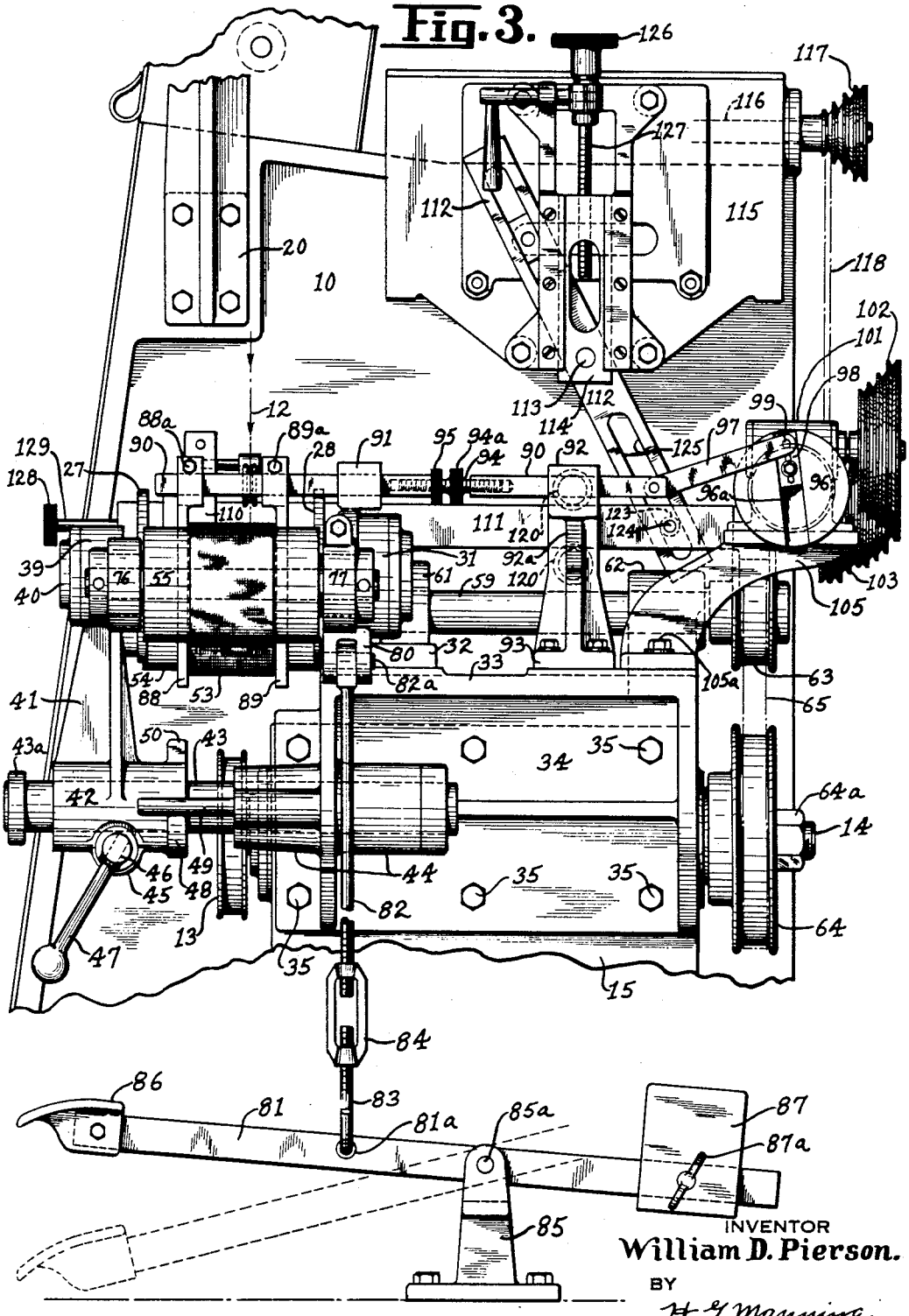
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Fig. 3.



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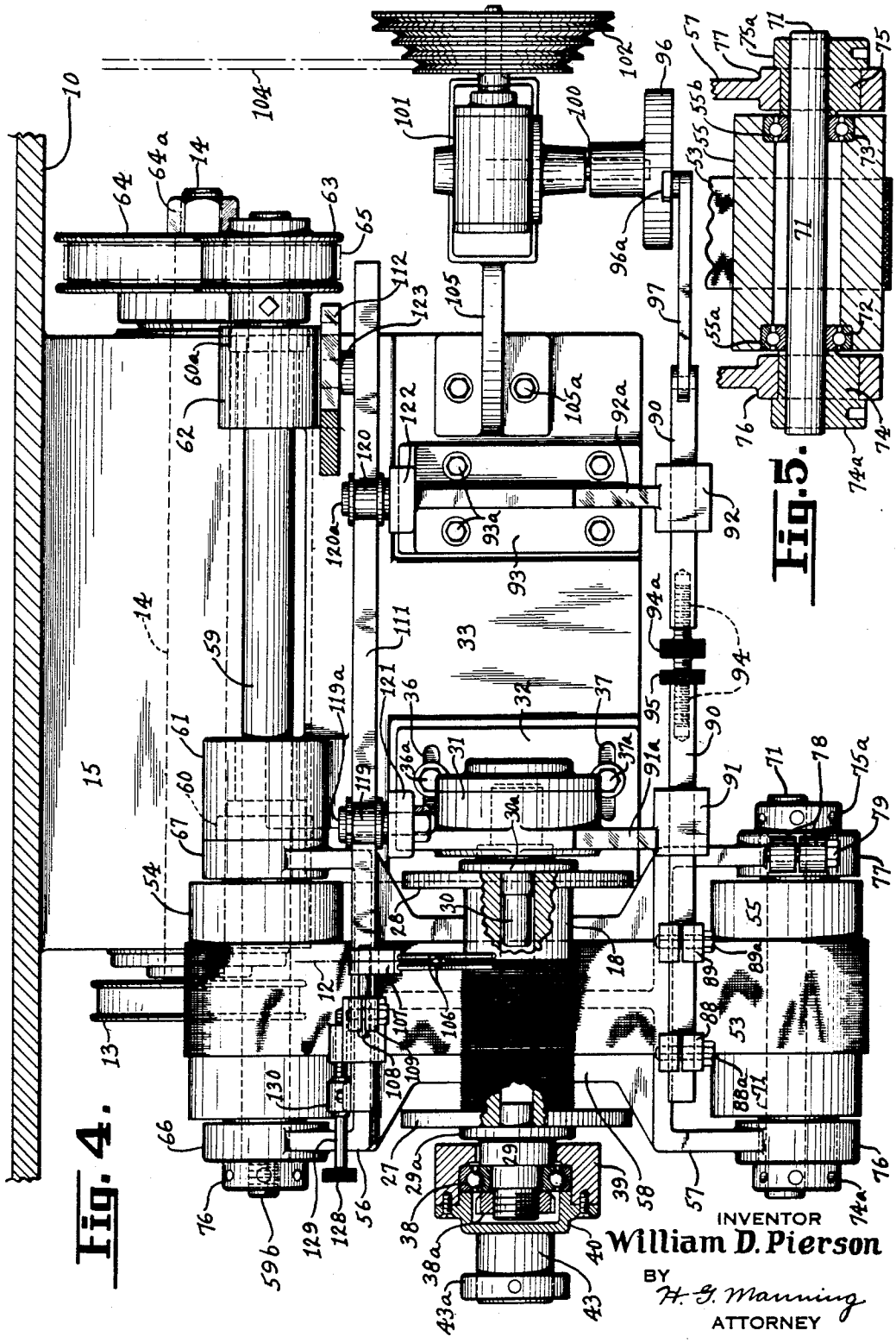


Fig. 4.

Fig. 5.

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UNITED STATES PATENT OFFICE

2,029,832

BELT DRIVEN WIRE SPOOLER

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Application February 19, 1932, Serial No. 594,044

14 Claims. (Cl. 242—25)

This invention relates to improvements in wire spooling mechanisms, and more particularly to a spooler attachment adapted to be applied to the end of a high-speed continuous wire drawing machine.

One object of this invention is to provide a spooler attachment of the above nature in which the wire spool is adapted to be driven by means of a constant speed endless belt which is pressed upwardly into contact with the wire being wound on said spool, whereby the winding speed will be maintained constant irrespective of the spool diameter and amount of wire on said spool.

A further object of this invention is to provide a spooler attachment of the above nature in which the winding spool is journaled on a fixed axis, while the endless driving belt is caused to run over a pair of pulleys located on opposite sides of said spool, one of said pulleys being power driven and mounted on a fixed shaft, while the other pulley is mounted on the free end of a swinging bracket or cradle pivoted on said fixed shaft.

A further object is to provide a spooler attachment of the above nature in which the upward pressure of the driving belt upon the spool will remain constant regardless of the increasing diameter and weight of the wire coil on the spool and in which said pressure may be readily adjusted.

A further object is to provide a spooler attachment of the above nature, in which the width of the endless belt may be made considerably less than the distance between the spool flanges, and said belt is caused to have a slow lateral reciprocating motion over the full width of the wire between said spool flanges, whereby the same belt may be used for various widths of spools and the surface of said belt may be kept clean and prevented from becoming tracked or grooved.

A further object is to provide a spooler attachment of the above nature in which the driven idle pulley on the free end of the cradle is mounted eccentrically on its shaft whereby said pulley may be readily adjusted for tightening or loosening the belt, for adjusting the sag and facilitating the removal thereof from the pulleys.

A further object is to provide a spooler attachment of the above nature in which the endless driving belt may be readily depressed from contact with the winding spool, by means of a foot pedal, which rotates the cradle downwardly about its axis, and thus facilitates the manual interchanging of filled and unfilled wire spools.

A further object is to provide a machine of the above nature, which will be relatively simple in construction, inexpensive to manufacture, easy to install and manipulate, compact, and very efficient and durable in use.

With these and other objects in view, there has been illustrated on the accompanying drawings one form in which the invention may be conveniently embodied in practice.

In the drawings:

Fig. 1 represents a front view in elevation of the improved wire spooler attachment as it appears when installed on the end wall of a wire drawing machine.

Fig. 2 is a horizontal cross-sectional enlarged view of the fixed axis belt pulley, the view being taken along the line 2—2 of Fig. 1 looking downwardly.

Fig. 3 is a side elevation of the spooler attachment and a fragmentary end view of the wire drawing machine.

Fig. 4 is a plan view of the same, with certain parts of the winding spool broken away to show the interior construction.

Fig. 5 is a horizontal cross-sectional enlarged view of the swinging belt pulley, mounted on the free end of the cradle, the view being taken along the line 5—5 of Fig. 1, looking downwardly.

Attempts have been made in the past to drive the wire spool of a spooler attachment by means of an endless belt running over a pair of pulleys mounted on fixed shafts, and with the spool resting freely upon the upper course of the belt.

One disadvantage of such devices was that the constantly increasing weight of the spool as it became filled with wire caused the contact pressure on the belt to rise, resulting in stretching of the belt and rapidly wearing it out. Moreover, with such former constructions, it was customary to make the belt of substantially the same width as the distance between spool flanges, necessitating a different belt for every different size of spool.

By means of the present invention, the above and other disadvantages have been avoided, and a spooler attachment has been devised in which the contact pressure of the belt against the winding spool will be uniform under all conditions, thus allowing the machine to be operated at a much greater speed than was possible with the previous spooling machines. The present invention also contemplates the use of a belt the width of which is considerably less than the distance between the spool flanges, thus permitting the use of the same belt for different sized spools,

avoiding tracking, and automatically compensating for irregularities in the spooling.

Referring now to the drawings in which like reference numerals denote corresponding parts throughout the several views, the numeral 10 indicates a continuous wiredrawing machine of the type disclosed in a prior application by the same inventor entitled "Multiple wire drawing machine", Serial No. 514,381, filed February 9, 1931. The numeral 11 indicates the final drawing die through which the wire 12 is adapted to pass to a final drawing roll 13 mounted on the forward end of a spindle shaft 14, said shaft 14 being journaled in an extension box 15 connected with the right end wall of the wiredrawing machine 10.

As the finished wire 12 leaves the final drawing roll 13 it will travel in an upwardly inclined direction to a small guide pulley 16 carried on the free end of an overhead spring balance arm 17, and thence in a downwardly inclined direction to a winding spool 18 to be described later.

The balance arm 17 is rigidly secured at its inner end to a horizontal pivot shaft 19 journaled in the upper end of an angular upright bracket 20 which may be securely fastened to the end wall of the wire drawing machine 10. The arm 17 is adapted to be balanced by means of a helical spring 21 having tangential connection with a pair of grooved pulleys 22 and 23. The grooved pulley 22 is keyed to the pivot shaft 19, while the pulley 23 is rigidly mounted on a pivot stud 24 located at the bend in the angular upright bracket 20. The tension of the spring 21 may be readily adjusted for more or less resistance by manual manipulation of a knurled knob 25 integral with an adjusting shaft 26 having tangential screw and gear connection (not shown) with the pivot stud 24 of the grooved pulley 23.

In the operation of the spring balance mechanism just described, it will be understood that the wire 12 passing over the balance pulley 16 will maintain a substantially constant speed. This is due to the fact that any slight irregularities which may occur in the tension of said wire 12 as it comes from the wire drawing machine 10 on its way to the spool 18 will be automatically compensated for by the spring-balance arm 17. Thus, it will be seen that any slight momentary increase of the wire tension will cause the arm 17 to instantly rock downwardly, while, if the tension in the wire should be momentarily diminished, the reverse action will occur.

Winding spool mechanism

The winding spool 18 is provided with a pair of parallel end flanges 27 and 28, and is adapted to be removably supported upon a pair of free running stud spindles 29 and 30. The rear stud spindle 30 is suitably journaled in a ball bearing, not shown, contained within an enlarged longitudinally adjustable hollow hub 31, and said spindle 30 is also provided with an integral intermediate flange 30*a* adapted to abut against the spool flange 28. The hollow hub 31 is integrally connected to a pedestal 32 which is attached to the top surface of a horizontal bed plate 33 forming a part of a large support bracket 34, attached to the sidewall of the extension box 15 as by a plurality of cap screws 35. The hub pedestal 32 is provided with a pair of elongated slots 36 and 37 by means of which the hub 31 may be longitudinally adjusted to any position within the limits of said slots 36 and 37 and then fastened in position, as by bolts 36*a* and 37*a*.

The forward or outer flange 27 of the spool 18 is adapted to abut against a flange 29*a* formed upon the stud spindle 29, the inner end of which is detachably centered within said spool 18. The outer end of said spindle 29 is enlarged and fitted within a ball bearing 38, being secured to the inner race thereof as by a locking nut 38*a*. The outer race of said ball bearing 38 is secured within an enlarged hollow hub 39 by means of an end cap 40.

The hub 39 is provided with a downwardly extending flanged arm 41 formed integral with a sliding adjustable tail stock member 42, which is adapted to slide upon a forwardly extending stationary support shaft 43 attached to a round boss 44 forming a part of the support bracket 34. The lower part of the tail stock 42 is provided with a depending split boss 45 for receiving a transverse screw stud 46 operated by a depending handle 47, and by means of which said tail stock 42 may be locked in any adjusted operating position on the support shaft 43.

In the operation of removing the spool 18, the tail stock 42 will first be pulled forwardly as far as it will go (to the left as shown in Fig. 3); the arm 41 may then be swung laterally about the axis of the support shaft 43 in a clockwise direction as viewed in Fig. 1, so as to permit the spool 18 which has just been filled with wire to be manually removed from the supporting stud spindles 29 and 30 and be replaced with an empty spool. The flanged arm 41 will then be swung upwardly in the opposite direction until a lateral stop lug 48 carried by the tail stock 42 strikes an elongated stop pin 49 extending forwardly from the boss 44.

The tail stock 42 will next be pushed to the right, sliding upon the support shaft 43, to the operating position shown in Fig. 3, being guided in its sliding motion by a lateral apertured guide lug 51 extending rearwardly from the tail stock 42 and adapted to be centered upon a short guiding shaft 52 secured in any suitable manner to the support bracket 34. The flanged arm 41 will likewise be limited from swinging too far in a clockwise direction by another lateral stop lug 50 integral with the tail stock 42 and adapted to abut against the stop pin 49.

Spool driving belt mechanism

The winding spool 18 is adapted to be driven by means of a constant speed endless belt 53, preferably made of canvas or like material, the upper course of which is adapted to contact with the wire being wound on said spool 18. The endless belt 53 is mounted around a pair of broad flangeless pulleys 54 and 55 which are adapted to be journaled to the opposite forked ends 56 and 57 of a swinging cradle 58.

The left hand pulley 54, as viewed in Fig. 1, is the driving pulley and is rigidly secured upon a driving shaft 59 by means of a feather key 59*a*. The shaft 59 is journaled on a fixed axis in ball bearings 60 and 60*a* contained in a pair of stationary hollow bearing housings 61 and 62, said housings being formed integral with the rear edge of the bed plate 33. In order that the driving pulley 54 may be driven in synchronism with the wire drawing machine 10, the shaft 59 is adapted to receive power by means of a small pulley 63 fastened to the rear end thereof, and connected to a large driving pulley 64 as by an endless belt 65.

The driving pulley 64 is secured to the rear extremity of the drawing roll spindle shaft 14

as by a retaining nut 64a. The spindle shaft 14 is mechanically connected by means (not shown) within the extension box 15, to the same source of power, not shown, that drives the wire drawing machine 10.

The fixed forked end 56 of the swinging cradle 58 is provided with a pair of integral hollow hubs 66 and 67 within which are a pair of ball bearings 68 and 69 for journaling the driving shaft 59, as best shown in Fig. 2. The cradle 58 is prevented from slipping longitudinally upon the driving shaft 59 by means of a capstan nut 70 screwed upon the front reduced threaded extremity 59b of said shaft 59.

The right hand pulley 55 is an idler pulley and is journaled upon a spindle shaft 71 by means of a pair of ball bearings 72 and 73 located in countersunk sockets 55a and 55b concentrically formed in the ends of said idler pulley 55.

In order to take up any slack and permit adjustment of the sag in the driving belt 53, the spindle shaft 71 has fitted to its extremities a pair of eccentric bearing bushings 74 and 75 rotatably mounted within a pair of hollow hubs 76 and 77 integral with the free forked end 57 of the swinging cradle 58. The eccentric bushings 74 and 75 are each provided with integral capstan heads 74a and 75a, by means of which said bushings 74 and 75 may be manually rotated in their respective hubs 76 and 77 for either increasing or decreasing the distance between the two pulleys 54 and 55 and consequently adjusting the tension of the driving belt 53, as desired by the operator.

The right hand or inner hub 77 as viewed in Fig. 4 is provided with an upright split lug 78, and a set screw 79 by which means the spindle 71 and the pulley 55 may be locked in adjusted position.

In order to provide a constant upward pressure of the endless belt 53 against the wire being wound on the spool 18, the hub 77 is provided with an integral depending bifurcated lug 80 (see Fig. 3), which is adapted to be connected to a substantially horizontal treadle bar 81, by means of an upper vertical rod 82 pivoted at its upper end to a pin 82a mounted in said lug 80, and a short hooked rod 83 engaging in an aperture 81a in said treadle bar 81. The rods 82 and 83 are provided at their adjacent ends with right and left hand threads respectively for receiving a turn buckle 84, for adjusting purposes.

The treadle bar 81 is pivotally connected intermediate its ends to a fulcrum base bracket 85, as by a pin 85a, a pedal 86 being provided at its forward end for engagement by the foot of the operator. The rear end of the treadle bar 81 is provided with a sliding adjustable counter-weight 87 which may be locked in any desired adjusted position, as by a winged set screw 87a. It will be obvious that by changing the position of the counter-weight 87, the pressure of the endless belt 53 against the winding periphery of the spool 18 may be varied at will and after being once adjusted will remain constant throughout the winding regardless of the changing diameter of the spool 18 and its increasing weight of wound wire.

The use of the foot treadle bar 81 greatly facilitates the changing of the spool 18, it being only necessary for the operator to depress the pedal 86 for forcing the treadle bar 81 down to the dotted line position shown in Fig. 3. This will cause the cradle 58 to swing the belt 53 down below the spool flanges 27 and 28 and allow the operator to use both hands for removing the filled spool from and replace the empty spool upon the stud spindles 29 and 30.

Belt traversing mechanism

In order to cause the belt 53 to be slowly reciprocated laterally between the spool flanges 27 and 28, for the purpose of preventing tracking of said belt 53 and keeping said belt clean, provision is made of a pair of depending guide fingers 88 and 89 straddling said belt 53 and having their upper ends adjustably secured to a horizontal traversing square bar 90 by means of locking screws 88a and 89a. The traversing bar 90 is slidably journaled in a pair of square bosses 91 and 92, as most clearly shown in Fig. 3. The boss 91 is offset inwardly from the upper extremity of an obliquely extending arm 91a integral with the hollow hub 31. The boss 92 is formed upon the upper end of an oblique arm 92a formed integral with a stationary upstanding bracket 93 secured to the bed plate 33, as by a plurality of cap screws 93a. The traversing bar 90, intermediate its supporting bosses 91 and 92, is split into two sections which are connected by a right and left adjusting screw 94 having an integral knurled knob 94a for manually adjusting the length of said traversing bar 90, said bar being adapted to be locked in adjusted position by means of a knurled nut 95.

The reciprocating motion of the traversing bar 90 is produced by a rotating circular crank plate 96 pivotally connected to said bar 90 by means of a pitman link 97. The face of the crank plate 96 is provided with a wide diametrical groove 96a, within which is adjustably fitted a sliding block member 98 having a protruding crank pin 99 to which the pitman link 97 is pivotally connected.

In order to permit the use of various sizes of winding spools upon the wire spooler, it is necessary to either increase or decrease the travel of the traversing bar 90. This may be accomplished by moving the sliding block 98 nearer or farther from the center point of the groove 96a of the crank plate 96 within which it is fitted; thus by moving the block 98 closer to the center of said slot 96a the travel of the traversing bar 90 will be proportionately decreased, while by moving said block 98 farther from the center of said slot the travel of said bar 90 will be proportionately increased.

The circular crank plate 96 is secured to the forward extremity of a rotating shaft 100 transversely journaled in a right angle speed reduction gear unit 101, said gear unit 101 being driven by means of a grooved cone pulley 102 operatively connected to a double cone grooved driven pulley 103 by means of a V-belt 104. The double cone driving pulley 103 is preferably connected to one of the upper wire drawing cone pulley shafts of the wire drawing machine 10, as shown in Fig. 1.

The gear reduction unit 101 is adapted to be supported in a raised offset position upon the support bracket 34 by means of a stationary goose-neck shaped bracket 105 secured to the bed plate 33, as by cap screws 105a.

Wire traversing mechanism

In order to cause the wire 12 to be wound upon the spool 18 in successive layers, provision is made of a pair of curved guide fingers 106 extending forwardly from an inclined block 107 supported on the end of a short pivot shaft 108. The shaft 108 is adapted to be detachably held within a pair of jaws 109 of a split clamping member 110 slidably adjusted upon a horizontal rectangular traversing bar 111 as most clearly shown in Fig. 4. The reciprocating movement of the guide fingers 106 is produced by an upwardly-extending oscillating lever 112, inter-

mediately pivoted upon a fulcrum pin 113 extending rearwardly from the lower end of a vertical sliding plate 114. The sliding plate 114 is adjustably mounted on the front face of a gear and cam box 115 fastened to the end walls of the wire machine 10 as by a pair of integral lugs 115a and 115b. (See Fig. 1.) The gear and cam box 115 contains mechanism, not shown, for causing the lever 112 to oscillate.

One form of such mechanism is fully disclosed in applicant's pending application Ser. No. 567,585, filed Oct. 8, 1931, and in his prior Reissue Patent No. 16,859 granted Jan. 24, 1928 and forming no part of the present invention,

Power is supplied for operating the mechanism in the box 115 by means of a horizontal drive shaft 116 suitably journaled in said box 115 and adapted to be connected by means of a pulley 117 and belt 118 to the double cone driven pulley 103.

The traversing bar 111 is adapted to be supported by two pairs of flanged rollers 119 and 120, the rollers 119 being rotatably mounted on a pair of bearing studs 119a secured to the vertical side face of an upright bracket 121 formed integral with the hollow hub pedestal 32. The other pair of rollers 120 are similarly mounted on a similar pair of bearing studs 120a secured to a bracket 122 formed integral with the rear edge of the base of the stationary bracket 93.

The traversing bar 111 is coupled to the oscillating lever 112 by means of a connecting roller 123 mounted upon the side of said bar 111 by a stud pin 124, and adapted to be slidably engaged in a longitudinal slot 125 formed in the lower end of the oscillating lever 112, as most clearly shown in Fig. 3.

The amount of traverse of the guide fingers 106 may be readily adjusted, while the machine is in operation, by manually rotating a knurled hand wheel 126 mounted upon the top of a vertical screw shaft 127 having threaded engagement with the sliding plate 114, whereby the fulcrum pin 113 will be raised or lowered, as desired.

The guide fingers 106 may also be adjusted with respect to the spool flanges 27 and 28 by means of a knurled knob 128 integral with the front end of a horizontal screw shaft 129 having threaded engagement with the split clamping member 110 for adjusting the same longitudinally upon the traversing bar 111. The screw shaft 129 is rotatably journalled in a small bearing block 130 fastened to the front end of the traversing bar 111.

Operation

In the operation of changing and replacing a filled wire spool with an empty spool, it is first necessary for the operator to step on the pedal 86 of the treadle bar 81, which action will cause the cradle 58 and the driving belt 53 to be swung down and away from the spool flanges 27 and 28. The tail stock 42 may next be loosened from its adjusted position on the support shaft 43 by swinging the locking stud operating handle 47 in a counterclockwise direction as viewed in Fig. 1, and thereby allowing said tail stock 42 to be pulled forwardly until it abuts against a stop collar 43a secured to the end of said support shaft 43. With the tail stock in its foremost position it may then be swung laterally in a clockwise direction as already described above in the section entitled "Winding spool mechanism". This will free the spool 18 from its front supporting stud spindle 29 and also clear the way for sliding the filled spool forwardly off from its rear supporting stud spindle 30.

To insert an empty spool, the above operations are reversed, the tail stock hub 39 being accurately centered with respect to the unfilled spool by means of the guide lug 51 and the indexing shaft 52. With the new spool properly adjusted and the wire 12 wound around the periphery of the spool in the usual manner the operator will take his foot off the pedal 86 permitting the weight 87 to swing the cradle 58 upwardly and bring the driving belt 53 into contact with the spool, causing the latter to rotate at the same peripheral speed as the speed of the belt.

While there has been disclosed in this specification one form in which the invention may be embodied, it is to be understood that this form is shown for the purpose of illustration only, and that the invention is not to be limited to the specific disclosure but may be modified and embodied in various other forms without departing from its spirit. In short, the invention includes all the modifications and embodiments coming within the scope of the following claims,

Having thus fully described the invention, what is claimed as new and for which it is desired to secure Letters Patent, is:

1. In a wire spooling machine, a winding spool, a driving shaft, a swinging cradle member pivoted at one end on said shaft, a driving pulley fixed upon said driving shaft, an idler pulley mounted on the free end of said cradle member, an endless belt connecting said pulleys, the width of said belt being substantially less than the width of said spool, said spool being located intermediate said pulleys, and means for traversing said belt across the width of said spool.

2. In a wire spooling machine, a frame, a winding spool supported in said frame, a driving shaft in said frame, a swinging cradle pivotally supported at one end by said shaft, a driving pulley secured to said driving shaft, an idler pulley located on the opposite end of said swinging cradle, an endless belt passing around said pulleys and adapted to contact with the wire wound on said spool, said idler pulley being adjustably mounted in said cradle, eccentric means for adjusting said idler pulley for changing the tension in said endless belt, and means for locking said idler pulley in adjusted position.

3. In a wire-spooling machine, a frame, a winding spool supported in said frame, a driving shaft in said frame, a swinging cradle pivotally supported at one end by said shaft, a driving pulley secured to said driving shaft, an idler pulley located on the opposite end of said swinging cradle, an endless belt passing around said pulleys and adapted to contact with the wire wound on said spool, said idler pulley being adjustably mounted in said cradle, and eccentric means for adjusting said idler pulley for changing the tension in said endless belt.

4. In a wire-spooling machine, a winding spool, a movable cradle, a pair of pulleys mounted in said cradle, an endless belt passing around said pulleys for driving said spool, the width of said belt being substantially less than the width of said pulleys and said winding spool, means for driving said belt, means for traversing said belt across the width of said spool, said traversing means comprising a reciprocating bar having a pair of fingers attached thereto and straddling said endless belt, and a crank-operated pitman connected to said traversing bar for operating the same.

5. In a wire-spooling machine, a winding spool, a movable cradle, a pair of pulleys mounted in said cradle, an endless belt passing around said pulleys for driving said spool, the width of said belt being substantially less than the width of said pulleys and said winding spool, means for driving said belt, and means for traversing said belt across the width of said spool.

6. In a wire-spooling machine, a winding spool, a movable cradle, a pair of pulleys mounted in said cradle, an endless belt passing around said pulleys for driving said spool, the width of said belt being substantially less than the width of said pulleys and said winding spool, means for driving said belt, and means for traversing said belt across the width of said spool, said traversing means comprising a reciprocating bar having a pair of vertical depending fingers attached thereto and straddling said endless belt.

7. In a wire-spooling machine, a winding spool, a movable cradle, a pair of pulleys mounted on said cradle, an endless belt passing around said pulleys and contacting with said spool, and means for traversing said belt over said pulleys, said means including a pair of adjustable depending fingers straddling said belt.

8. In a wire spooling machine, a winding spool, a movable cradle, a pair of pulleys mounted in said cradle, an endless belt passing around said pulleys for driving said spool, the width of said belt being substantially less than the width of said pulleys and said winding spool, means for driving said belt, means for traversing said belt across the width of said spool, said traversing means comprising a reciprocating bar having a pair of vertical depending fingers attached thereto and straddling said endless belt, a pitman connected to said traversing bar, and a rotating crank plate connected to said pitman.

9. In a wire-spooling machine, a winding spool, a pair of free rotating stud spindles for centering and supporting said winding spool, and means for sliding the outer stud spindle outwardly and rocking it transversely to release said spool and permit the removal and replacement of said spool in a longitudinal direction.

10. In a wire-spooling machine, a winding spool mounted on a horizontal axis, a constant speed driven endless belt having contacting engagement with the under surface of the wire wound on the periphery of said spool, a swinging bracket pivoted on a fixed horizontal axis, a driving pulley and an idler pulley for supporting said endless belt mounted at the fixed end and the free end of said swinging bracket respectively, slidable weight means connected to said swinging bracket for pressing said driven endless belt into uniform contacting engagement with the wire wound on said spool, and foot-operated means to permit said bracket to be swung down to bring said belt out of contact with said wire whenever desired, as for removal of said spool, whereby the operator is permitted to use both hands in manipulating said spool.

11. In a wire-spooling machine, a winding spool, a pair of free rotating stud spindles for centering and supporting said winding spool, means for sliding the outer stud spindles outwardly and rocking it laterally to release said spool and permit the removal and replacement of said spool longitudinally, and means to limit the sliding and rocking movements of said outer stud spindle.

12. In a wire-spooling machine, an idle horizontal winding spool, a constant speed endless belt adapted to engage the surface of the wire wound upon said spool with a constant pressure for rotating the same, said belt being mounted on a pair of pulleys carried by a swingable arm, a pedal operated lever connected to said arm for permitting said arm to be swung, and an adjustable counter-weight on said lever for normally pressing said belt against the surface of the wire on said spool.

13. In a wire-spooling machine, a freely rotating winding spool mounted on a horizontal axis, an endless belt for engaging the surface of the wire being spooled, pulleys for driving said belt mounted on horizontal axes, a cradle for supporting said pulleys, a depending link connected to said cradle, a lever connected to said link, an adjustable weight on one end of said lever to press said belt-carrying cradle against said spool for rotating it and winding the wire thereupon, and a pedal cn the other end of said lever for temporarily moving said cradle to bring said belt out of contact with the wire on said spool to stop the rotation of said spool and permit the removal and replacement thereof.

14. In a wire-spooling machine, a freely rotating winding spool mounted on a horizontal axis, an endless belt for engaging the surface of the wire being spooled, pulleys for driving said belt mounted on horizontal axes, a cradle for supporting said pulleys, a link connected to said cradle, a lever connected to said link, an adjustable weight on one end of said lever to press said belt-carrying cradle against said spool for rotating it and winding the wire thereupon, and a pedal on the other end of said lever for temporarily moving said cradle to bring said belt out of contact with the wire on said spool to stop the rotation of said spool and permit the removal and replacement thereof.

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