

June 15, 1943.

A. G. BLODGETT
APPARATUS FOR COILING WIRE

2,321,646

Filed Dec. 10, 1940

4 Sheets-Sheet 1

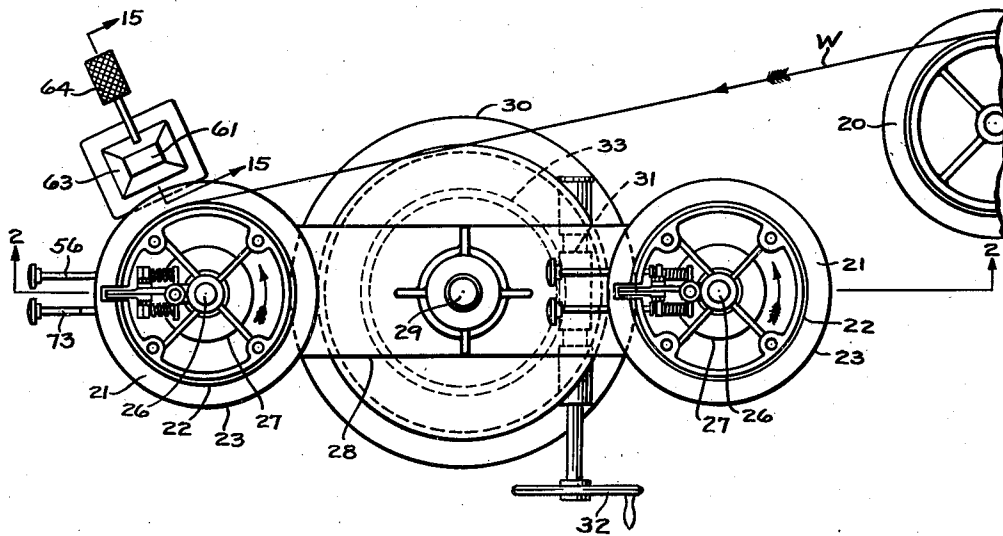


Fig. 1

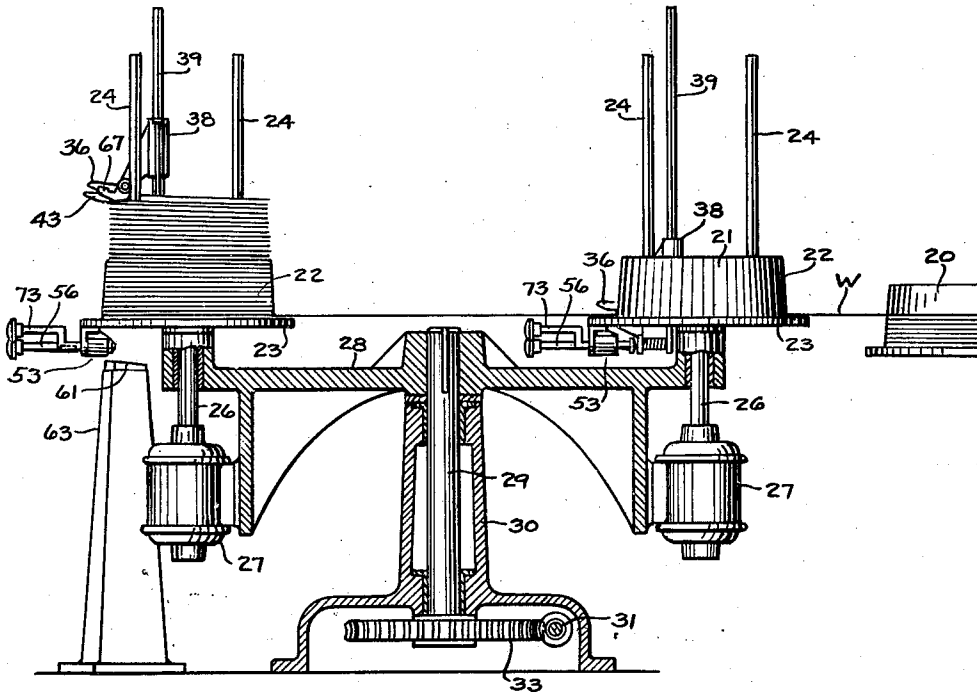


Fig. 2

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4 Sheets-Sheet 2

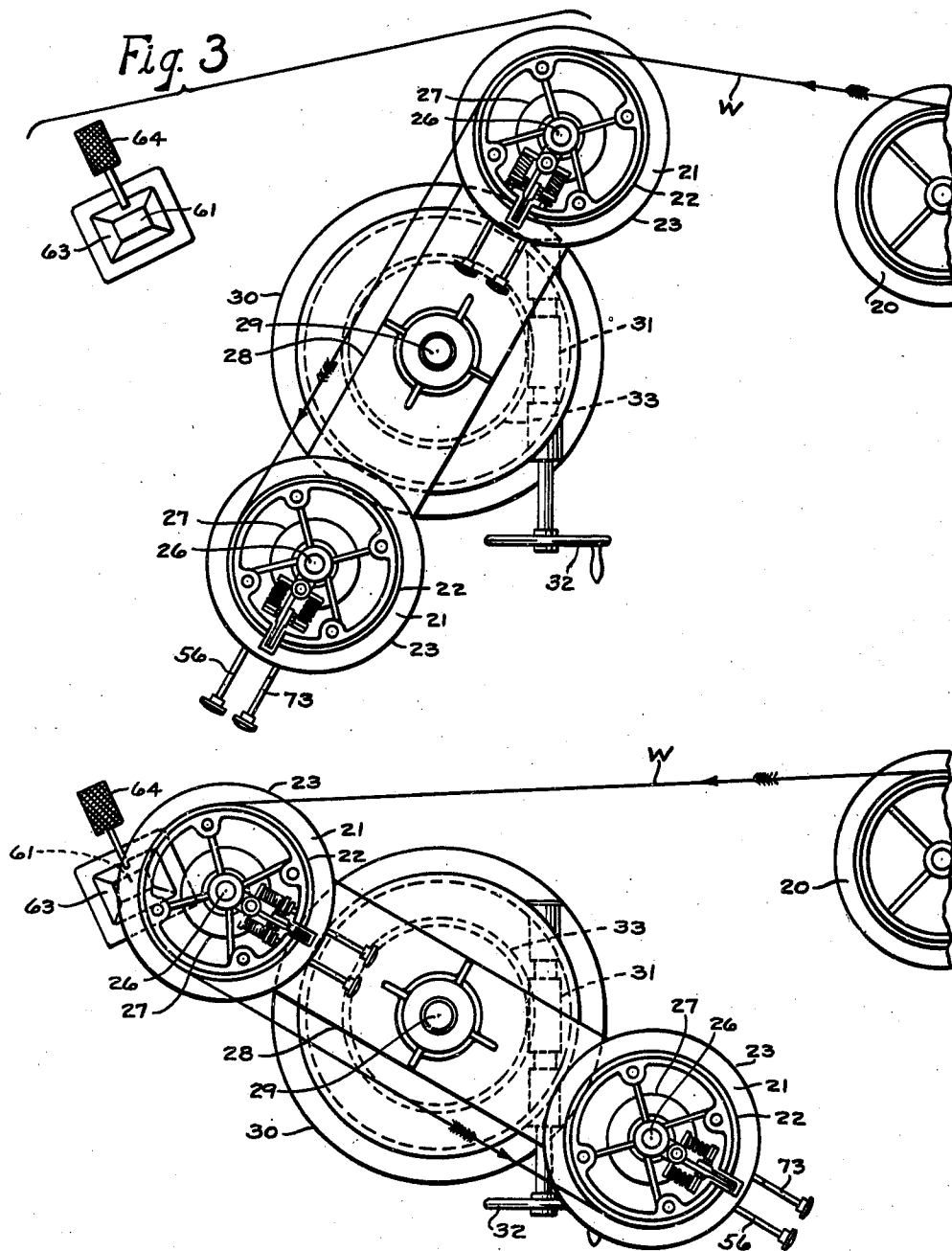


Fig. 4

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Fig. 13

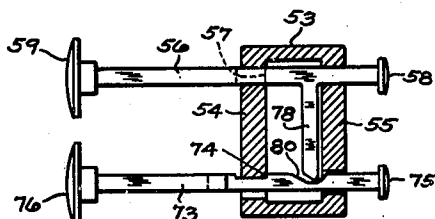


Fig. 14

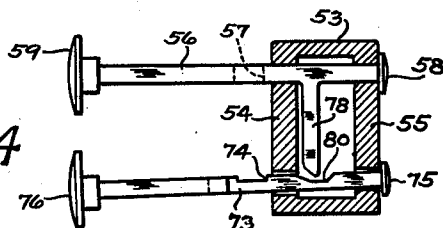
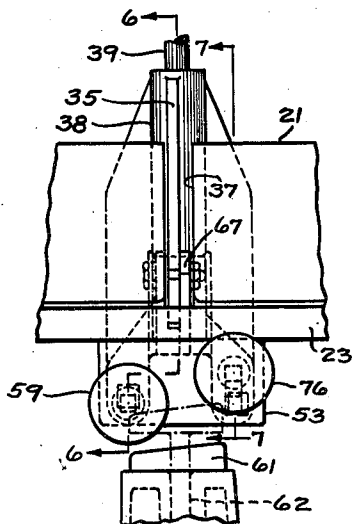


Fig. 5

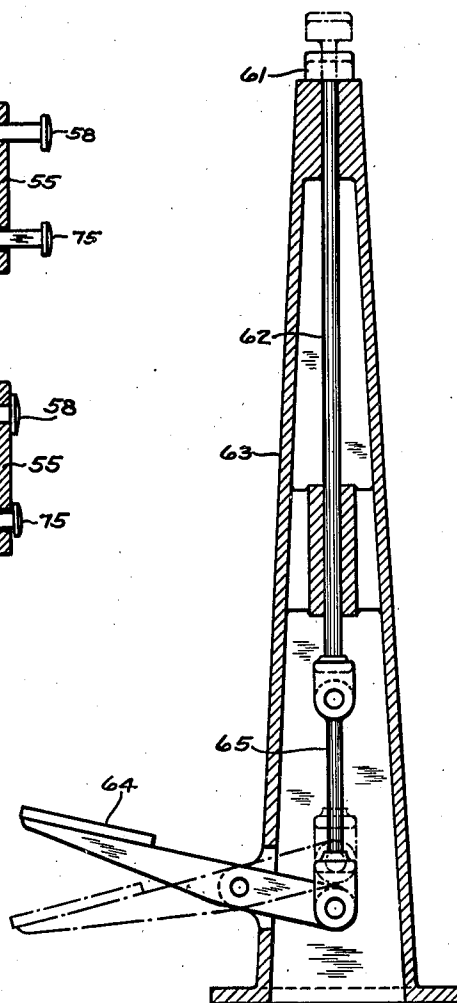


Fig. 15

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4 Sheets-Sheet 4

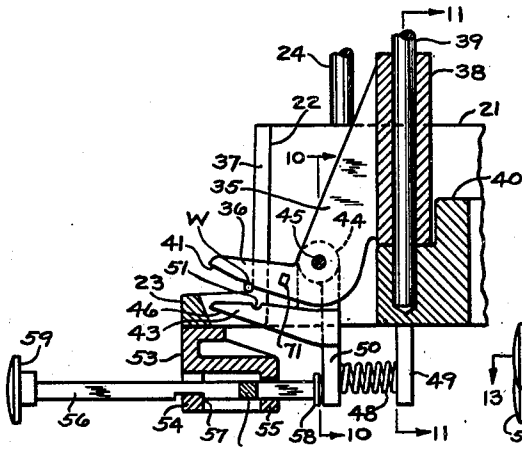


Fig. 6

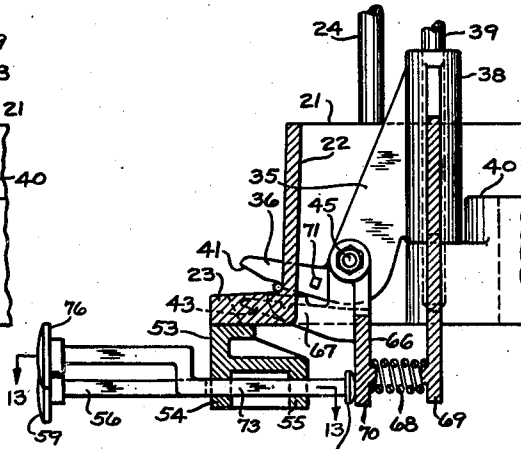


Fig. 7

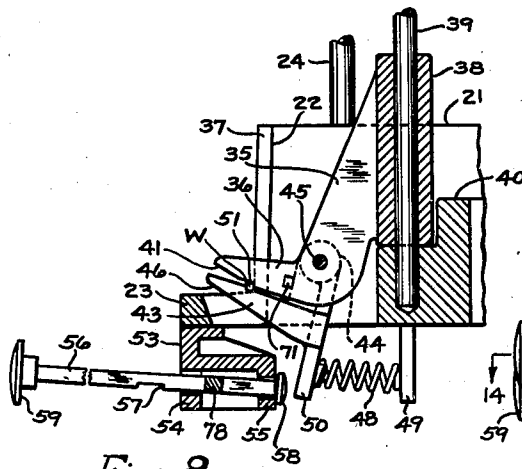


Fig. 8

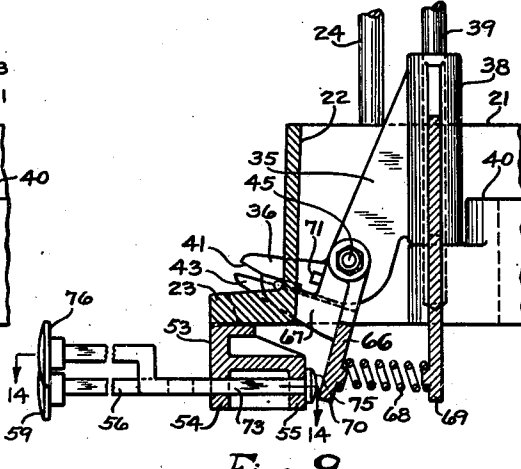


Fig. 9

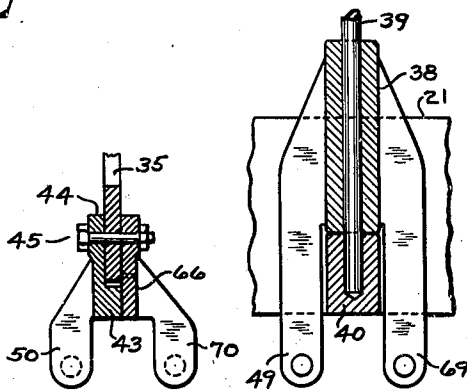


Fig. 10

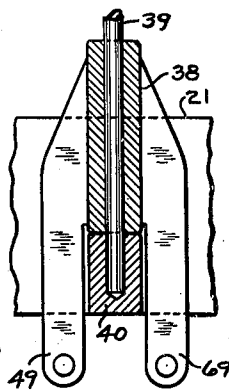


Fig. 11

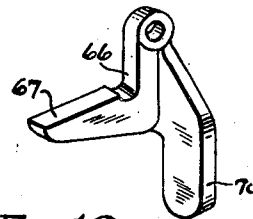


Fig. 12

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UNITED STATES PATENT OFFICE

2,321,646

APPARATUS FOR COILING WIRE

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Application December 10, 1940, Serial No. 369,465

19 Claims. (Cl. 242—80)

This invention relates to apparatus for coiling wire, and more particularly to the construction and arrangement of apparatus adapted to receive a strand of wire continuously and to coil the same into a series of annular bundles without interrupting the movement of the wire.

In the operation of the usual wire-drawing machine it is the common practice to stop the machine whenever a bundle of wire is completed, so that the bundle can be removed. These periods of idleness prevent the machine from attaining the productive capacity which is possible with continuous operation. Moreover, the starting of the machine may cause the wire to break, resulting in still further delay. Consequently there is a demand for an apparatus which is capable of forming a continuously moving wire into annular bundles, and while this is particularly true in the wire-drawing art there are doubtless other fields in which such a machine would prove useful.

Several prior attempts have been made to solve this problem. For the most part, these earlier constructions have been complicated, expensive, and unreliable. In many cases they impart an undesirable twist to the wire, which results in an unsatisfactory bundle and causes difficulty in the subsequent formation of the wire into articles of manufacture.

It is accordingly one object of the invention to avoid these difficulties and provide a comparatively simple, inexpensive, and dependable apparatus which will coil a continuously moving wire into a series of annular bundles.

It is a further object of the invention to provide an apparatus which will coil a continuously moving wire into bundles without imparting a twist to the wire.

It is a further object of the invention to provide a wire coiling apparatus which can be employed in conjunction with a wire-drawing machine of the usual type without requiring any substantial modification thereof, and which will make it possible to draw wire continuously.

With these and other objects in view, as will be apparent to those skilled in the art, the invention resides in the combination of parts set forth in the specification and covered by the claims appended hereto.

Referring to the drawings illustrating one embodiment of the invention and in which like reference numerals indicate like parts,

Fig. 1 is a plan view of a wire coiling apparatus;
Fig. 2 is an elevation of the apparatus, with certain parts shown in section on the line 2—2 of Fig. 1;

Fig. 3 is a view similar to Fig. 1, but showing the apparatus in a different phase of its operation;

Fig. 4 is a view similar to Fig. 3, but showing

the apparatus in a still further phase of its operation;

Fig. 5 is an elevation on an enlarged scale of a portion of the apparatus;

Fig. 6 is a section taken substantially on the line 6—6 of Fig. 5;

Fig. 7 is a section taken substantially on the line 7—7 of Fig. 5;

Fig. 8 is a view similar to Fig. 6, but showing the parts in a different phase of the operation;

Fig. 9 is a view similar to Fig. 7, but showing the parts in a different phase of the operation;

Fig. 10 is a section on the line 10—10 of Fig. 6;

Fig. 11 is a section on the line 11—11 of Fig. 6;

Fig. 12 is a perspective view of a shearing member;

Fig. 13 is a section on the line 13—13 of Fig. 7;

Fig. 14 is a section on the line 14—14 of Fig. 9; and

Fig. 15 is an enlarged section on the line 15—15 of Fig. 1.

The embodiment illustrated comprises a wire-drawing block 20 rotatable about a vertical axis and so arranged that the wire W, after passing several times about the block, leaves the same in a horizontal path. This block may be the final or finishing block of a multiple block wire-drawing machine, and it may be of the usual and well-known construction except that no posts are required thereon, since the bundles will not be formed on this block.

Adjacent the wire-drawing block 20 I provide two coil forming blocks 21 (Figs. 1 and 2). These blocks 21 are of identical construction, and each comprises a hollow capstan portion 22, a flange 23 extending horizontally from the lower edge thereof, and four vertical coil supporting posts 24 extending above the capstan portion. Each block 21 is mounted on the upper end of a vertical spindle 26 arranged to be driven by any suitable means, such as an electric motor 27. Each motor is provided with suitable and well-known electrical connections and controls (not shown) for starting and stopping the motor and regulating its speed. The spindles 26 and motors 27 are supported on opposite ends of a horizontal frame 28 which is secured to the upper end of a vertical shaft 29 located midway between the two spindles 26. The shaft 29 is rotatably supported in a stationary hollow vertical frame 30 in which there is mounted a horizontal worm 31 arranged to be rotated by any suitable means, such as a handwheel 32. The worm 31 meshes with a worm gear 33 fixed to the lower end of the shaft 29. The block flanges 23 are positioned immediately below the horizontal plane of the wire W.

It will now be apparent that by rotating the handwheel 32, the frame 28 can be turned about the axis of the shaft 29, and each block 21 can be moved into the position previously occupied by the other. During the course of this movement one of the blocks can be coiling the on-coming wire, and the other block can be caused to travel across the path of the wire in such a manner as to cause this block to support a loop of the wire. Thus at the completion of the turning movement, the wire will pass around one block in the form of a loop and thence travel to the second block, on which it is coiled. In Figs. 1 and 2, the bundle is shown forming on the block at the left. In Fig. 3 the frame 28 has been turned through about 60 degrees in a counterclockwise direction, and in Fig. 4 the frame has been turned still further through about 150 degrees from its original position. These figures illustrate the manner in which the wire is looped about the empty block. It will be clear that by the time the frame has been turned through 180 degrees and the two blocks have reversed their original positions, the wire will be in contact with the empty block throughout an arc or loop of say 170 degrees, the empty block of course being driven by its motor at substantially the speed of the wire, so that the empty block serves as a rotating wire-guiding pulley about which the wire travels in an arcuate path.

When a bundle of sufficient size has been formed on the coiling block, the wire is gripped and severed during its travel along the arc of contact with the empty block, without interrupting the movement of the wire. Thus a new bundle will begin to form on the empty block, and the filled block can be stopped and the bundle stripped therefrom.

The mechanism whereby the gripping and severing of the wire is effected is illustrated particularly in Figs. 5 to 15. Within each block 21 there is mounted a grip member 35 formed with a grip jaw 36 which projects radially outward through a vertical slot 37 in the capstan portion 22 of the block. This slot extends downwardly through the flange 23, but it preferably terminates somewhat short of the outer edge of the flange, as shown in Fig. 6. The jaw 36 is movable vertically in the slot 37, and for this purpose the member 35 is formed at its inner end with a hub 38 which is slidably supported on a vertical rod 39, this rod being fixed at its lower end in the hub 40 of the block. A portion of the grip jaw 36 projects outwardly beyond the capstan 22, and this portion is provided with an upwardly and outwardly inclined lower surface 41. When the grip member 35 is in its lowermost position, as shown in Fig. 6, this surface 41 cooperates with the upper surface of the flange 23 therebeneath to form a V-shaped notch for the reception of the loop of wire which passes part way around the block.

In order that the wire may be gripped in a desired manner, a lower grip jaw 43 is mounted beneath the jaw 36 to cooperate therewith. This lower jaw is provided at its inner end with a laterally offset ear 44 arranged to extend upwardly and overlap that side of the grip member 35 which faces rearwardly relative to the direction of rotation of the block. The ear 44 is pivotally secured to the member 35 by means of a horizontal bolt 45 extending in a generally circumferential direction. These parts are so arranged that the lower jaw 43 may swing up and down about the bolt 45 as a fulcrum, and when this jaw is in its lowermost position, as shown in

Fig. 6, it will lie beneath the upper surface of the flange 23 so that the loop of wire will pass above the same and between the two jaws. When the lower jaw 43 is in its upper or gripping position, as shown in Fig. 8, it projects above the flange and its lower surface 46 is inclined upwardly and outwardly to cooperate with the upper surface of the flange in forming a V-shaped notch for the reception of the second convolution of wire when the wire has been severed and a new bundle has begun to form. The lower jaw 43 is biased toward its upper or gripping position, and for this purpose a coiled compression spring 48 is provided. This spring is mounted between the lower ends of two lugs 49 and 50, the axis of the spring extending in a generally radial direction. The lug 49 projects downwardly from the rear side of the hub 38, and the lug 50 projects downwardly from the inner portion of the lower jaw 43. It will be noted in Figs. 6 and 8 that shallow notches 51 are formed in the grip jaws for engagement with the wire. The surfaces of these notches may be roughened in order to ensure a firmer grip.

Means is provided to hold the lower grip jaw open against the pressure of the spring 48, and to release the same at the proper time. For this purpose a bracket 53 is secured to the lower surface of the block flange 23 adjacent the grip jaws, this bracket having two radially spaced depending flanges 54 and 55 which are apertured to receive a slidable latch bar 56 positioned substantially radially of the block. The lower surface of this bar is notched to provide an outwardly facing shoulder 57 adapted to engage the inner surface of the outer flange 54, as shown in Fig. 6. The inner end of the bar is provided with a button 58 arranged to engage the lug 50 and hold the same inwardly against the spring 48. On the outer end of the bar there is mounted a handle 59 to facilitate the manual setting of the latch when the block is stationary. The latch bar 56 is preferably of rectangular cross section and rather closely fitted laterally in its guiding apertures but loosely fitted vertically, so that it may be lifted slightly as shown in Fig. 8 to release the lower jaw 43. This lifting of the latch bar is effected by means of a cam 61 (Figs. 5 and 15) having an inclined upper surface which can be moved into the path of the bar at the proper time. This cam is mounted on the upper end of a vertical rod 62 which is slidably supported in a hollow upright frame 63. Near the bottom of this frame there is pivoted a treadle 64 with its inner end connected by a vertical link 65 to the lower end of the rod 62. By placing one foot on the treadle 64, the operator can lift the cam 61 into the path of the latch bar 56. The frame 63 is located in the position shown particularly in Fig. 1, and it will be apparent that when the empty block is located at the left in this figure, and the loop of wire is traveling about the empty block on its way to the coiling block at the right, the latch bar will pass above the cam 61 near the point at which the wire first comes into contact with the empty block. Thus the wire can be gripped at a point near the beginning of the arc of contact.

Immediately after the wire has been gripped, it is severed in front of the gripped portion, so that a new bundle will be started on the empty block. For this purpose a shearing member 66 is provided, this member being pivotally secured on the front side of the grip member 35 by means of the bolt 45. The member 66 comprises a shear blade 67 which extends outwardly through the

slot 37. When this blade is in its lower position it is located beneath the upper surface of the flange 23, as shown in Fig. 7, and when it is in its upper position it overlaps the upper grip jaw 36, as shown in Fig. 9. The shear blade is biased toward its upper position, and for this purpose a coiled compression spring 68 is provided. This spring is mounted between the lower ends of two lugs 69 and 70, the axis of the spring extending in a generally radial direction. The lug 69 projects downwardly from the front side of the hub 38, and the lug 70 projects downwardly from the inner portion of the shearing member 66. A stop 71 is formed on the front side of the grip member 35 to limit the movement of the shearing member under the influence of the spring 68.

Means is provided to maintain the shear blade 67 in its lower position against the pressure of the spring 68, and to release the same immediately after the lower grip jaw 43 is released. For this purpose the flanges 54 and 55 are apertured to receive a second slidable latch bar 73 positioned in front of the bar 56 and parallel therewith. The rear surface of the bar 73 is notched to provide an outwardly facing shoulder 74 adapted to engage the inner surface of the outer flange 54, as shown in Fig. 13. The inner end of the bar is provided with a button 75 arranged to engage the lug 70 and hold the same inwardly against the spring 68. On the outer end of the bar there is mounted a handle 76 to facilitate the manual setting of the latch when the block is stationary. The outer portion of the bar is offset upwardly, as shown in Fig. 7, so that it cannot engage the cam 61 even when the latter is in its raised position. The latch bar 73 is preferably of rectangular cross section and rather closely fitted vertically in its guiding apertures but loosely fitted laterally, so that it may be moved forward slightly as shown in Fig. 14 to release the shearing member 66. This movement of the bar 73 is brought about automatically in response to the release of the latch bar 56, and for this purpose a lug 78 is secured to the front side of the bar 56 between the flanges 54 and 55. This lug can be inserted through the open bottom of the bracket 53 at assembly and then welded to the bar. The rear side of the latch bar 73 is formed with a notch 80 into which the front end of the lug 78 extends when the bars are latched, as shown in Fig. 13, and the parts are so constructed and arranged that upon outward movement of the latch bar 56 the lug 78 will engage the outer wall of the notch 80 and move the latch bar 73 forward the slight amount necessary to release the shoulder 74. This will allow the shear blade to snap upwardly by reason of the force exerted by the spring 68, thereby severing the wire in the plane of the front surface of the grip member 35.

It will now be apparent that in the operation of the apparatus and with the various parts positioned as indicated in Fig. 1, the wire W will travel directly from the block 20 of the wire-drawing machine to the block 21 at the left of the figure, and the wire will be formed into a bundle on this block in the same manner as bundles are usually formed on the finishing block of a wire-drawing machine. The right-hand block 21 will be stationary, and its latch bars 56 and 73 will be in their innermost or latched positions, holding the lower grip jaw 43 and the shear blade 67 below the upper surface of the flange 23, as shown in Figs. 6 and 7. When the bundle is nearly completed, the operator will start the right motor 27 to bring the peripheral speed

of the block up to substantially the linear speed of the wire, whereupon he will rotate the hand-wheel 32 and turn the table 28 in a counter-clockwise direction through an angle of 180 degrees. This will bring the empty block 21 into contact with the wire, as shown in Figs. 3 and 4, to form a loop of wire about the block between the flange 23 and the upper grip jaw 36. At the completion of the movement of the frame 28 this loop will extend in an arcuate path nearly half way around the empty block, which will now occupy the position formerly occupied by the coiling block in Fig. 1. The operator will now depress the treadle 64 and thereby raise the cam 61, so that during the next revolution of the block the latch bar 56 will strike the top surface of the cam and be deflected upwardly. This will release the shoulder 57, and allow the spring 48 to snap the lower jaw 43 upwardly and grip the wire against the upper jaw 36. During the outward movement of the bar 56, the lug 78 thereon will strike the wall of the notch 80 in the latch bar 73 and release the shoulder 74, as shown in Fig. 14. The spring 68 will immediately snap the shear blade 67 upwardly and sever the wire just in front of the point where it is gripped. The loaded block will now be stopped, and the grip jaws will be released from the wire in any desired manner, as by cutting the wire adjacent to the jaws. The grip member 36 and its connected parts may then be lifted from the rod 39 and the completed wire bundle may be stripped from the block by any suitable means, whereupon the parts may be replaced and the latch bars reset in readiness for the next cycle. In the meantime the front end of the wire on the other block will be carried about the same by the closed grip jaws, and the second convolution of the wire will pass beneath the sloping lower surface 46 of the lower jaw 43, crowding this jaw upwardly and forcing the hub 38 to slide upwardly along the rod 39. As the bundle continues to increase in size, the grip jaws will ride upwardly on the top of the bundle, as shown at the left in Fig. 2.

By forming bundles in this manner on the two blocks 21 alternately, it is possible to coil the wire continuously. Thus by supplying welded rod to a wire-machine, it can be kept in continuous operation until the wear on the dies necessitates their replacement. This appreciably increases the capacity of the machine and reduces the cost of operation. The coiling apparatus is comparatively simple and inexpensive, and thoroughly dependable. Since no twist is imparted to the wire, the bundles produced are entirely satisfactory.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. Apparatus for the continuous coiling of wire comprising a rotatable block having a capstan portion about which the wire may travel in an arcuate path, a wire gripping mechanism mounted on the block, a shearing device mounted on the block adjacent the said mechanism, actuating means yieldably urging the gripping mechanism and the shearing device respectively into gripping and shearing positions, a latch restraining the gripping mechanism, a second latch restraining the shearing device, means to release the first latch while the gripping mechanism is revolving adjacent the said arcuate path of the wire, and means to release the second latch in response to the releasing of the first latch.

2. Apparatus for the continuous coiling of wire

comprising a rotatable block having a capstan portion about which the wire may travel in an arcuate path, the capstan portion having a slot therein, a wire gripping and shearing mechanism mounted in the slot and movable along the same in a direction substantially parallel with the axis of the block, and means to actuate said mechanism while it is revolving adjacent the said arcuate path of the wire.

3. Apparatus for the continuous coiling of wire comprising a rotatable block having a capstan portion about which the wire may travel in an arcuate path, the capstan portion having a slot therein, two grip jaws extending through the slot on opposite sides of the wire path, a shear blade extending through the slot in front of the grip jaws, and means to actuate the jaws and blade to grip and sever the wire during its travel along said arcuate path, thereby starting a new coil on the block, the grip jaws and shear blade being movable along the slot to avoid interference with the growth of the coil.

4. Apparatus for the continuous coiling of wire comprising a rotatable block having an outwardly extending flange and a capstan portion about which the wire may travel in an arcuate path adjacent the flange, the capstan portion having a slot therein, a grip member extending outwardly through the slot at the opposite side of the wire path from the flange and movable along the slot, a grip jaw pivotally mounted on the grip member and located on the same side of the wire path as the flange, a shear blade pivotally mounted on the front side of the grip member, means to swing the grip jaw toward the grip member and thereby grip the wire during its travel along said arcuate path, and means to swing the shear blade to sever the wire immediately after the wire has been gripped, thereby starting a new coil on the block, the second convolution of the wire passing between the flange and the grip jaw.

5. Apparatus for the continuous coiling of wire comprising a rotatable block having an outwardly extending flange and a capstan portion about which the wire may travel in an arcuate path adjacent the flange, the capstan portion having a slot therein, a grip member extending outwardly through the slot at the opposite side of the wire path from the flange and movable along the slot, a grip jaw pivotally mounted on the grip member and located on the same side of the wire path as the flange, a shear blade mounted on the grip member and movable toward the path of the wire, means biasing the grip jaw and the shear blade yieldably toward the path of the wire, latch means restraining the grip jaw and the shear blade from movement under the influence of the biasing means, and means to release the latch means while the grip member is traveling adjacent the arcuate path of the wire, thereby gripping and severing the wire to start a new coil on the block, the second convolution of the wire passing between the flange and the grip jaw.

6. Apparatus for the continuous coiling of wire comprising a rotatable block having an outwardly extending flange and a hollow capstan portion about which the wire may travel in an arcuate path adjacent the flange, the capstan portion having a slot therein substantially parallel with the axis of the block, means providing a guide-way within the capstan portion and extending substantially parallel with the axis of the block, a grip member slidably mounted on the guide-way and extending outwardly through the slot

at the opposite side of the wire path from the flange, a grip jaw arranged to cooperate with the grip member and located on the same side of the wire path as the flange, the grip jaw having a portion which overlaps the rear face of the grip member and is pivotally secured thereto, a shear blade pivotally secured to the grip member and located adjacent the front face thereof, the shear blade being located on the same side of the wire path as the flange, a spring urging the grip jaw toward the grip member, a latch restraining the grip jaw from movement under the influence of the spring, a second spring urging the shear blade toward the path of the wire, a second latch restraining the shear blade from movement under the influence of the second spring, and means to release the first and second latches in rapid succession while the grip member is traveling adjacent the arcuate path of the wire, thereby gripping and severing the wire to start a new coil on the block, the second convolution of the wire passing between the flange and the grip jaw.

7. Apparatus for the continuous coiling of wire comprising a rotatable block having an outwardly extending flange and a capstan portion about which the wire may travel in an arcuate path adjacent the flange, the capstan portion having a slot therein substantially parallel with the axis of the block, a grip member extending outwardly through the slot at the opposite side of the wire path from the flange and movable along the slot, a grip jaw arranged to cooperate with the grip member and located on the same side of the wire path as the flange, the grip jaw being pivotally secured to the grip member, a shear blade pivotally secured to the grip member and located adjacent the front face thereof, the shear blade being located on the same side of the wire path as the flange, a spring urging the grip jaw toward the grip member, a latch restraining the grip jaw from movement under the influence of the spring, a second spring urging the shear blade toward the path of the wire, a second latch restraining the shear blade from movement under the influence of the second spring, means to release the first latch while the grip member is traveling adjacent the arcuate path of the wire, and means to release the second latch in response to the releasing of the first latch, thereby gripping and severing the wire to start a new coil on the block, the second convolution of the wire passing between the flange and the grip jaw.

8. Apparatus for the continuous coiling of wire comprising a block rotatable about a vertical axis, the block having a horizontal outwardly extending flange and a capstan portion thereabove about which the wire may travel in an arcuate path adjacent the flange, the capstan portion having a vertical slot therein, a grip member extending outwardly through the slot immediately above the flange and movable upwardly along the slot, a grip jaw movably mounted on the grip member to cooperate therewith, the grip jaw having a portion located beneath the grip member and below the upper surface of the flange, a spring urging the grip jaw upwardly toward the grip member, a latch restraining the grip jaw from moving under the influence of the spring, a shear blade mounted in front of the grip member adjacent the path of the wire, a second spring urging the shear blade toward the path of the wire, a second latch restraining the shear blade from movement under the influence of the second spring, and means to release the first and second latches in rapid succession while the grip member is travel-

ing adjacent the arcuate path of the wire, thereby gripping and severing the wire to start a new coil on the block, the second convolution of the wire passing beneath the grip jaw to force the grip jaw and grip member upwardly as the coil increases in height.

9. Apparatus for the continuous coiling of wire comprising a rotatable block having a capstan portion adjacent which the wire may travel, and means mounted on the block to grip and sever the wire, said means being so mounted that it will move along the block substantially parallel with the axis thereof as a coil of wire forms on the block.

10. Apparatus for the continuous coiling of wire comprising a rotatable device arranged to serve as a rotating wire-guiding pulley about which the wire travels in an arcuate path on its way to a rotating element on which the wire is coiled, said device and said element being rotatable about different axes, and means rotatable with said device to grip and sever the portion of the wire traveling in said arcuate path.

11. Apparatus for the continuous coiling of wire comprising two elements rotatable about different axes, the first element being arranged to serve as a rotating wire-guiding pulley about which the wire travels in an arcuate path on its way to the second element, the wire being wound on the second element, and means associated with the first element to grip and sever the portion of the wire traveling in said arcuate path, thereby starting to wind the wire on the first element.

12. Apparatus for the continuous coiling of wire comprising two elements rotatable about different axes, the first element being arranged to serve as a rotating wire-guiding pulley about which the wire travels in an arcuate path on its way to the second element, the wire being wound on the second element, and means mounted on the first element to grip and sever the portion of the wire traveling in said arcuate path.

13. Apparatus for the continuous coiling of wire comprising two elements rotatable about spaced parallel axes, the first element being arranged to serve as a rotating wire-guiding pulley about which the wire travels in an arcuate path on its way to the second element, the wire being wound on the second element, means associated with the first element to grip and sever the portion of the wire traveling in said arcuate path, thereby starting to wind the wire on the first element, means to exchange the positions of the elements so that the second element will serve as a rotating wire-guiding pulley about which wire will travel in an arcuate path on its way to the first element, and means associated with the second element to grip and sever the portion of the wire traveling in the arcuate path about the same, thereby starting to wind the wire on the second element.

14. Apparatus for the continuous coiling of wire comprising two blocks rotatable about different axes and each adapted to serve as a coiling block while a coil of wire is being stripped from the other block, each block when empty being arranged to serve as a rotating wire-guiding pulley about which the wire travels in an arcuate path on its way to the other block, and means to grip and sever the portion of the wire traveling in said arcuate path and thereby start a new coil on the empty block.

15. Apparatus for the continuous coiling of wire comprising two rotatable blocks each of which is adapted to serve as a coiling block while a coil of wire is being stripped from the other block, means to move said blocks in such a manner as to cause the empty block to serve as a rotating wire-guiding pulley about which the wire travels in an arcuate path on its way to the coiling block, and means on the empty block arranged to grip and sever the portion of the wire traveling in said arcuate path and thereby start a new coil on the empty block.

16. Apparatus for the continuous coiling of wire comprising two blocks rotatable about parallel axes and each adapted to serve as a coiling block while a coil of wire is being stripped from the other block, means to revolve both blocks about a common axis parallel with the axes of the blocks and midway between the same and thereby cause the empty block to serve as a rotating wire-guiding pulley about which the wire travels in an arcuate path on its way to the coiling block, and means on the empty block to grip and sever the portion of the wire traveling in said arcuate path and thereby start a new coil on the empty block.

17. Apparatus for the continuous coiling of wire comprising a frame, two horizontally spaced rotatable blocks mounted thereon with their axes vertical, each block being adapted to serve as a coiling block while a coil is being stripped from the other block, means to turn the frame about a vertical axis midway between the blocks and thereby cause the empty block to serve as a rotating wire-guiding pulley about which the wire travels in an arcuate path on its way to the coiling block, and means on the empty block to grip and sever the portion of the wire traveling in said arcuate path and thereby start a new coil on the empty block.

18. Apparatus for the continuous coiling of wire comprising a frame, two horizontally spaced rotatable blocks mounted thereon with their axes vertical, each block having an outwardly projecting flange and a capstan portion thereabove on which a coil may be formed while a completed coil is being stripped from the other block, means to deliver wire to the blocks in a substantially horizontal plane adjacent the upper surfaces of the block flanges, means to turn the frame about a vertical axis midway between the blocks and thereby cause the empty block to serve as a rotating wire-guiding pulley about which the wire travels in an arcuate path on its way to the coiling block, and means on the empty block to grip and sever the portion of the wire traveling in said arcuate path and thereby start a new coil on the empty block.

19. Apparatus for the continuous coiling of wire comprising a rotatable block having a capstan portion arranged to serve as a rotating wire-guiding pulley about which the wire travels in an arcuate path on its way to a rotating element on which the wire is coiled, the block and the element being rotatable about different axes, a wire gripping and shearing mechanism mounted on the block, yieldable actuating means for said mechanism, latch means restraining the actuating means, and means to release the latch means while the said mechanism is revolving adjacent the said arcuate path of the wire.

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