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PATENTED APR. 11, 1905.

G. W. WHITTINGTON.

WIRE FENCE WEAVING MACHINE.

APPLICATION FILED AUG. 26, 1901. RENEWED SEPT. 15, 1904.

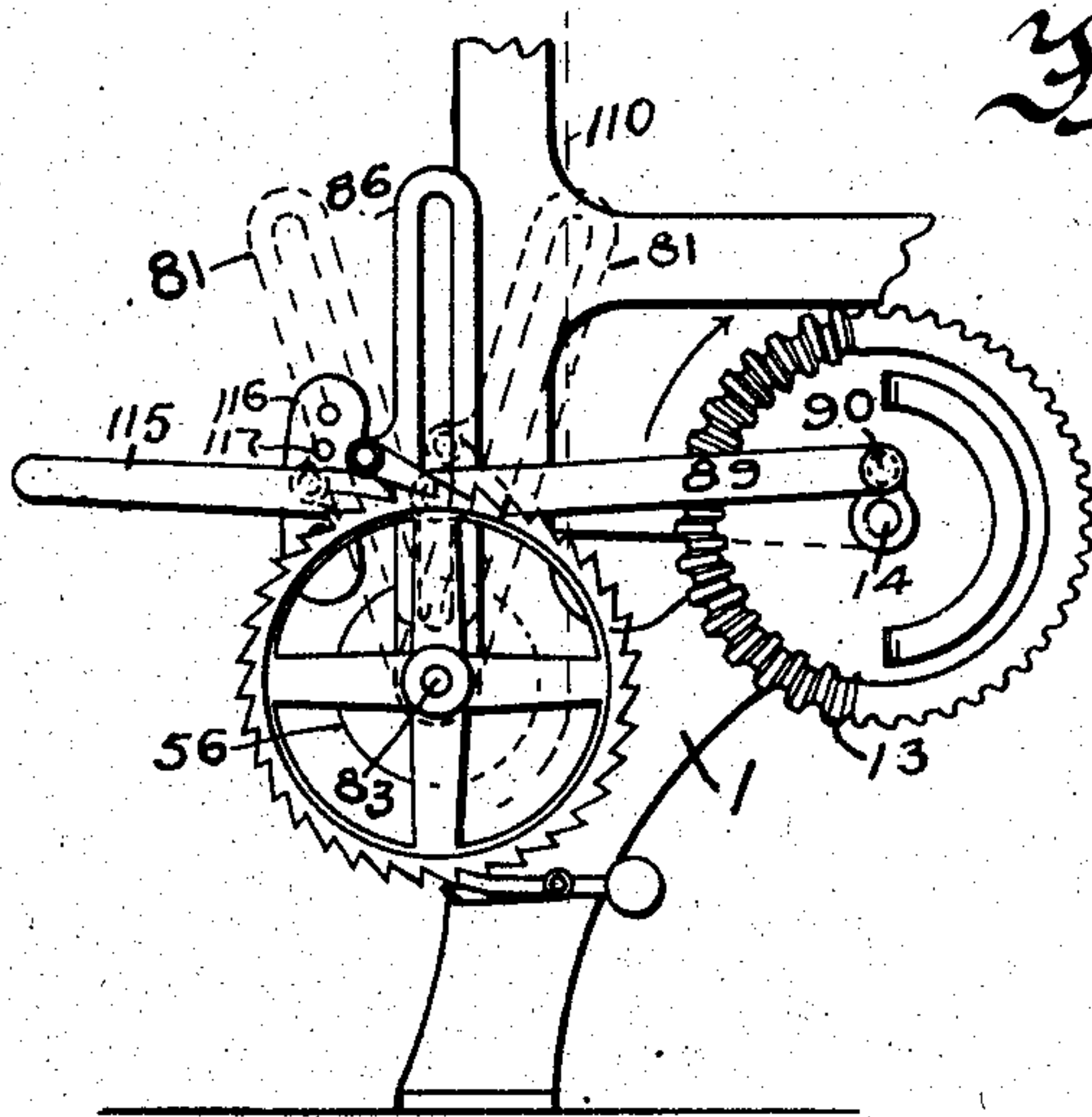


Fig. 1.

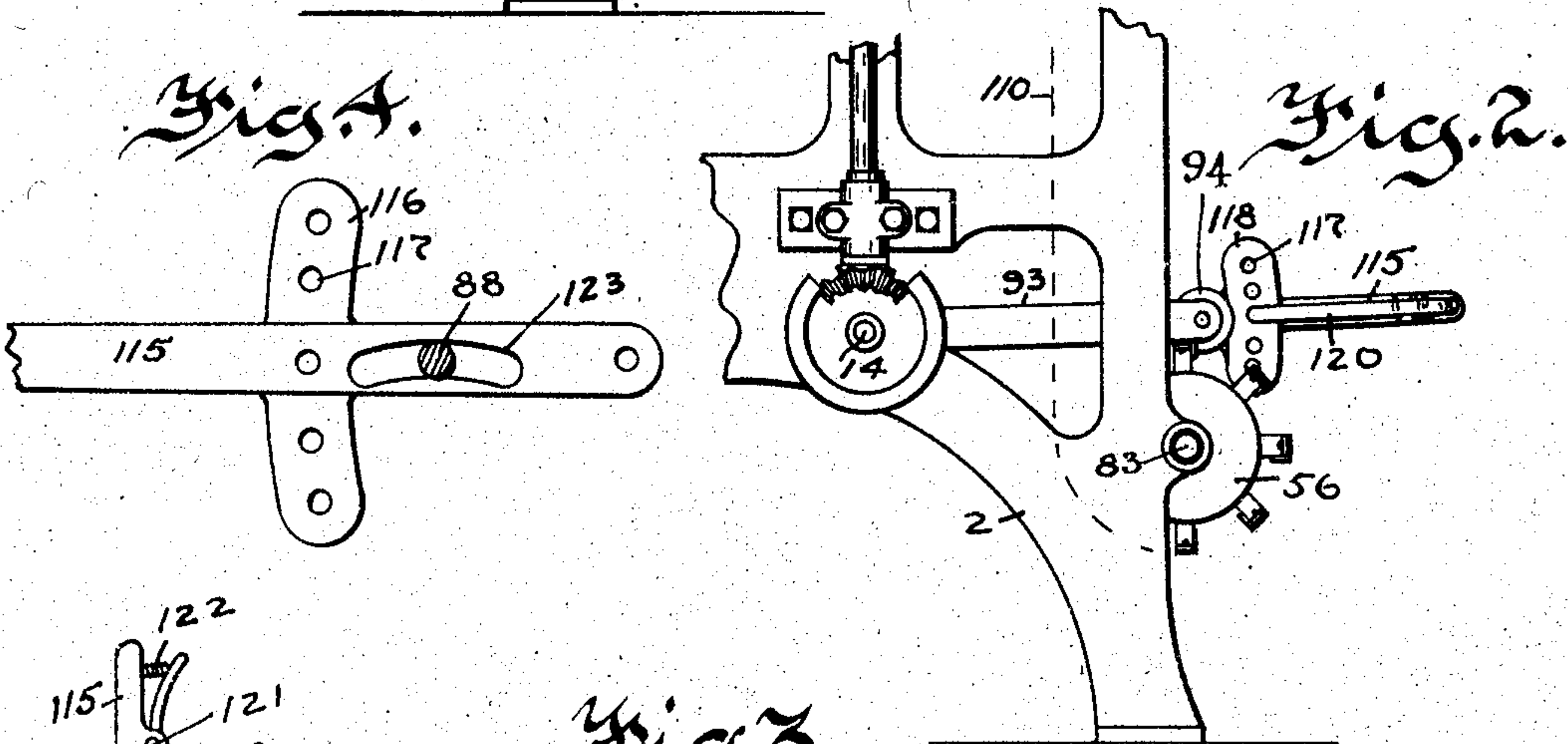


Fig. 4.

Fig. 2.

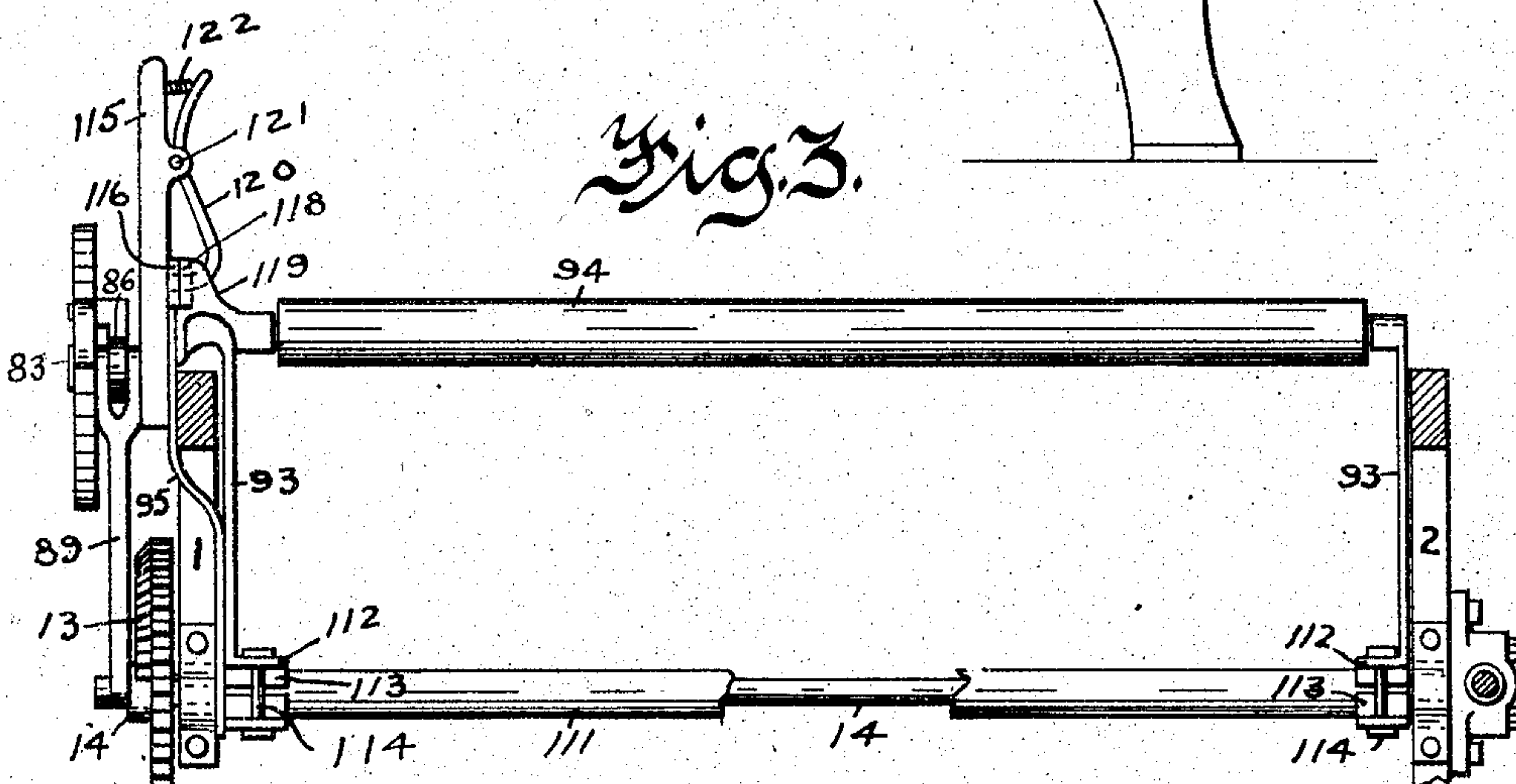


Fig. 3.

WITNESSES:

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GEORGE W. WHITTINGTON, OF INDIANAPOLIS, INDIANA.

WIRE-FENCE-WEAVING MACHINE.

SPECIFICATION forming part of Letters Patent No. 786,927, dated April 11, 1905.

Application filed August 26, 1901. Renewed September 15, 1904. Serial No. 224,498.

To all whom it may concern:

Be it known that I, GEORGE W. WHITTINGTON, of Indianapolis, county of Marion, and State of Indiana, have invented a certain new and useful Wire-Fence-Weaving Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like numerals refer to like parts.

My invention relates to an improvement in the wire-fence-weaving machine shown and described in Letters Patent of the United States No. 629,637, granted to me July 25, 1899.

The object of this improvement is to require the machine to reel the woven fabric successfully and systematically into bundles. The machine shown in my former patent failed in this particular. As the fabric is woven it is wound upon a reel at the end of the machine and a roller provided to rest by gravity upon the bundle of the fabric being wound in order to make a tight wind, or a wind at least tight enough to make a bundle that would be compact and capable of being conveniently handled. As the parts were arranged in my former machine one end of the roller was subjected to downward pressure at times by the connecting-bar 89, (shown in my former patent,) while the other end of the roller 94 in that patent was free to fly up. The result was that the fabric would be tightly wound at one end and very loosely wound at the other end, so as to make a conical bundle or a bundle so misshapen as to be incapable and inconvenient to handle. Therefore a sufficient amount of the fabric could not be wound into one bundle.

The object of my present invention is to hold down both ends of the roller, or rather hold the roller down for its entire length equally and parallel with the reel, so that the action on the fabric as it is being wound on the reel will be the same throughout the length of the roller, whereby the bundle or fabric as it comes from the machine will be of the same diameter throughout, and it will all be tightly wound, so that one bundle will contain a large amount of fabric.

The nature of this invention will appear

from the accompanying drawings and the following description and claims taken in connection with the drawings and specification of my former patent above mentioned.

In the drawings, Figure 1 is the elevation of a portion of one side of the machine, showing the portion containing the reeling mechanism, it being substantially the lower left corner of Fig. 1 in my former patent changed as required by my present invention. Fig. 2 is a side elevation of a portion of the opposite side of the machine, being substantially what is shown in the lower right corner of Fig. 2 in my former patent modified as required by my present invention. Fig. 3 is a plan of the reeling mechanism, parts being in section, and, in fact, is a horizontal section of the portion of the machine immediately above the reeling mechanism looking down upon such reeling mechanism. Fig. 4 is a side elevation of the hand-lever for adjusting the machine and a cooperating part in section.

By reference to my said former patent the frame of the machine is composed of end pieces 1 and 2 with suitable horizontal connections, which are set forth in my former patent, but which, however, are not here shown.

13 is a mutilated bevel-gear wheel secured on the shaft 14, so as to rotate with it in the direction indicated by the arrow, the means for driving said gear 13 being the same as set forth in my former patent. The wheel 13 is designed to rotate continuously.

The woven-wire fabric 110 (shown in dotted lines in Figs. 1 and 2) moves downward and is wound about the reel 56. The means for driving said reel (shown in Fig. 1) is the same as shown and described in my former patent.

On the shaft 14 I mount loosely a pipe or tube 111, to the opposite ends of which I rigidly secure the arms 93. As shown in Fig. 3, these arms have an inturned rectangular end 112, that is secured to the flat face of one of the two clamping-pieces 113 by means of the bolt 114, that runs through the end 112 of the arm 93 and through the clamping-pieces, thus rigidly clamping said pieces to the tube 111 and also rigidly securing the arm 93 to said clamping-pieces. Any other well-known means of rigidly securing the arms 93

to the tube 111 may be employed provided the two arms 93 be exactly parallel with each other.

At their free ends the arms 93 carry the roller 94, which extends from arm to arm over the reel 56 and rests and rides upon the fabric as it is being reeled. Thus as the diameter of the roll of fabric increases the ends of the arms 93 and roller ascend, and in doing so the arm 93 in one end elevates the arm or bar 95, (shown in Fig. 3,) which bar 95 is loosely pivoted on the shaft 14 at one end and at its outer end is secured to the hand-lever 115, which has secured to it the vertically-extending curved plate or bar 116, like what is marked 95 in Fig. 2 of my former patent; but there said plate or bar is slotted, while in my present machine I provide a series of holes 117, as appears in Figs. 1 and 2. A corresponding and parallel bar 118, provided with corresponding holes, is secured to the casting 119 on the free end of one of the arms 93, the casting 119 being shown integral with the arm 93. The two vertically-extending perforated bars 116 and 118 are locked together by a horizontally-extending pin on the inner end of the small finger-lever 120, that is pivoted at 121 to the lever 115 and is pressed by the spring 122.

The connecting-bar 89 is secured to the pin 88, which extends through the slot in the long vertical bar 86, which is pivotally mounted at its lower end only on the shaft 83.

86 is a rocking bar that is oscillated to and fro by reason of a connecting-rod 89 and a crank 90. The outward limit of movement of the rocking bar 86 is shown in dotted lines 81.

The pin 88 extends far enough over to enter the curved slot 123 in the end lever 115, as appears in Fig. 4, and since that lever 115 is connected by the means heretofore described to the free end of arm 93 and the roller 94 is mounted in the free end of the arm 93 it will be seen that while the roller 94 usually rests by gravity upon the fabric as it is being wound the connecting-bar 89 in its movement, and especially while the rocking bar 86 is not in a vertical position, tends to push down or hold down the adjacent end of the roller 94. With the machine as shown in my said patent the other end of the roller 94 was free to move vertically, so that when one end of the roller 94 is pushed down it would tend to throw the other end up and the fabric would curl and swell up under the free end of the roller 94 and yet be held down tightly at the other end. With my improvement downward pressure on one end of the roller 94 will simultaneously and equally depress all parts of the roller, so that all parts of the roll of fabric will be wound with uniform tightness and the roll be made compact, shapely, and convenient for handling. This also keeps the fabric straight or in any other intended position, so that the fence when

erected will not have parts pulled out of shape, as was the case with fencing made on the machine as shown in my former patent.

Since the roller 94 has at one end the casting 119, to which the curved plate 118 is secured, and said curved plate has holes 117 in it, and the handle 115, which is connected with one of the arms 93, has secured to it the corresponding curved plate 116, having holes 117 in it, the position of the arm 93 and lever 115 may be vertically adjusted with reference to the roller 94. By elevating the handle 115, and consequently the plate 116, and placing a pin through one of the lower holes of said plate 116 and one of the upper holes of the plate 118 the handle 115 and bar 93 may be considerably elevated with reference to the roller 94. When the relative positions of the levers 93 and 115 are changed thus with relation to the roller 94, their connection with the slotted bar 86 is altered, so that the movement of the reel will thereby be altered. Thus if said bars 115 and 93 are elevated comparatively high they will give to the slotted bar 86 less movement, and thereby give the reel less movement than if the bars 93 and 115 were set comparatively low with relation to the roller 94, for in the latter instance, being low in the slotted bar 86, their reciprocal movement against said bar will give it considerably more throw, and thus give the reel much greater movement with each actuation. This variation results in changing the size of the meshes, for if the reel has considerable movement at each actuation the meshes will be coarse and if it has slight movement the meshes will be small. Thus the axial rotation of the reel may be increased or diminished, and such increase or diminution will increase or diminish the size of the meshes of the fence. It is further to be noted that the arms 93 being pivoted on the shaft 14 are pivoted at a point concentric with the axis of the roller 94 and of the reel or with an arc through the axis of the roller and the reel, so that the action of the roller will be uniform upon the fence on the reel as the quantity of fence on the reel increases.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a wire-fence machine, the combination of a reel for winding the wire-fence fabric into a roll, a roller adapted to rest upon the fabric as it is being wound on the reel, and a pair of arms mounted oscillatory at their inner ends at a point concentric with the axis of the reel and the axis of the roller and at their outer ends pivotally connected with said roller.

2. The combination of a reel for winding wire-fence fabric into a roll, a roller adapted to rest upon the fabric as it is being wound on the reel, a pair of pivotally-mounted arms in which the ends of said roller are rotatably mounted, means for holding said arms rigidly

parallel with each other, and means for pressing said roller down.

3. The combination of a reel for winding wire-fence fabric into a roll, a roller adapted
5 to rest upon the fabric as it is being wound on the reel, a shaft mounted parallel to said roller, a pipe loosely mounted on said shaft, and a pair of arms rigidly secured at one end to said pipe and having the roller rotatable in
10 the other ends of said arms.

4. The combination of a reel for winding wire-fence fabric into a roll, a roller adapted to rest upon the fabric as it is being wound

on the reel, a shaft mounted parallel to said roller, a pipe loosely mounted on said shaft, 15 a pair of arms rigidly secured at one end to said pipe and having the roller rotatable in the other ends of said arms, and means acting on said pipe for depressing said roller.

In witness whereof I have hereunto affixed 20 my signature in the presence of the witnesses herein named.

GEORGE W. WHITTINGTON.

Witnesses:

FLORENCE E. BRYANT,
V. H. LOCKWOOD.