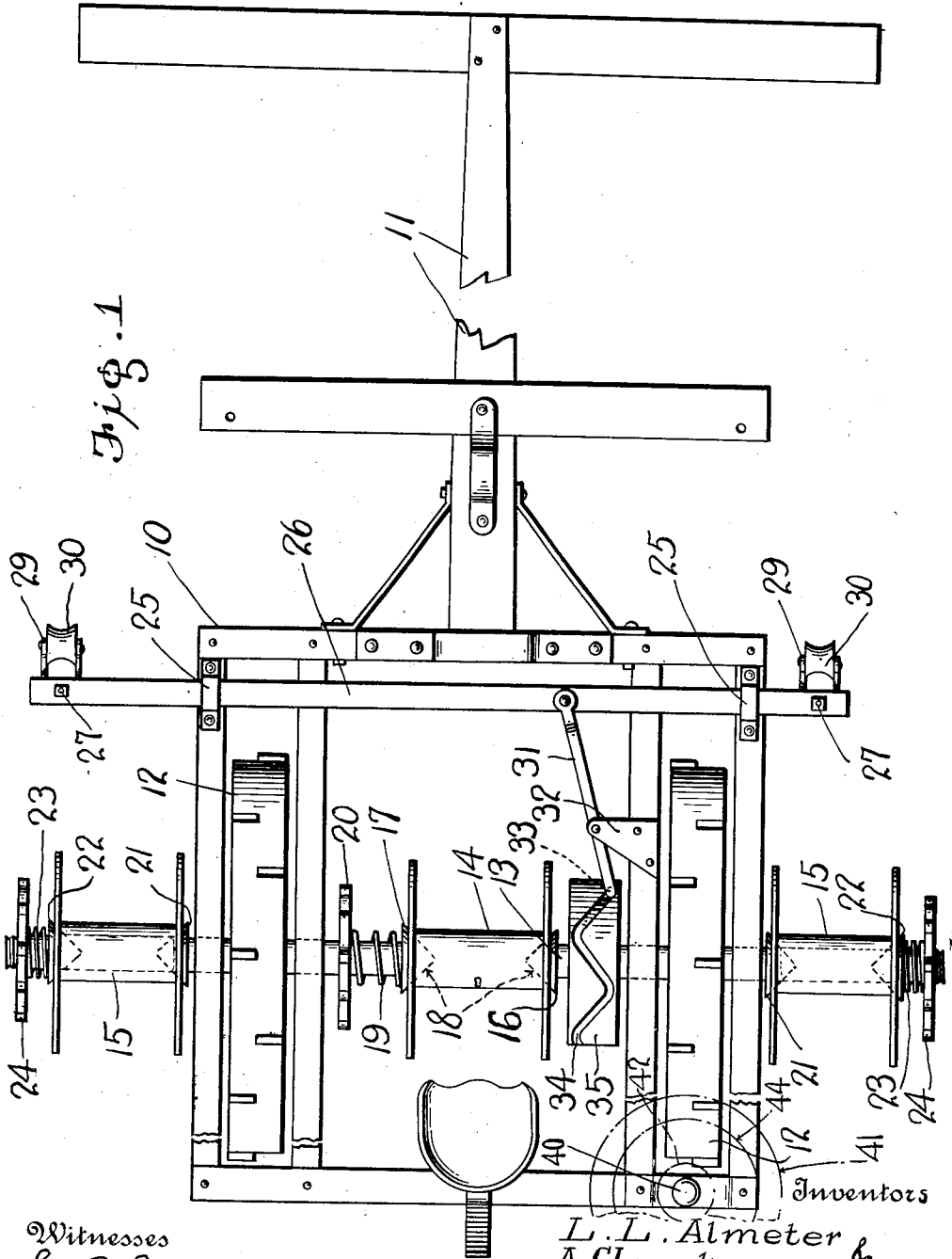


A. C. LEMKE AND L. L. ALMETER,
WIRE STRETCHER AND WINDER,
APPLICATION FILED JULY 11, 1919.

1,337,142.

Patented Apr. 13, 1920.

3 SHEETS—SHEET 1.



Witnesses
L. B. James

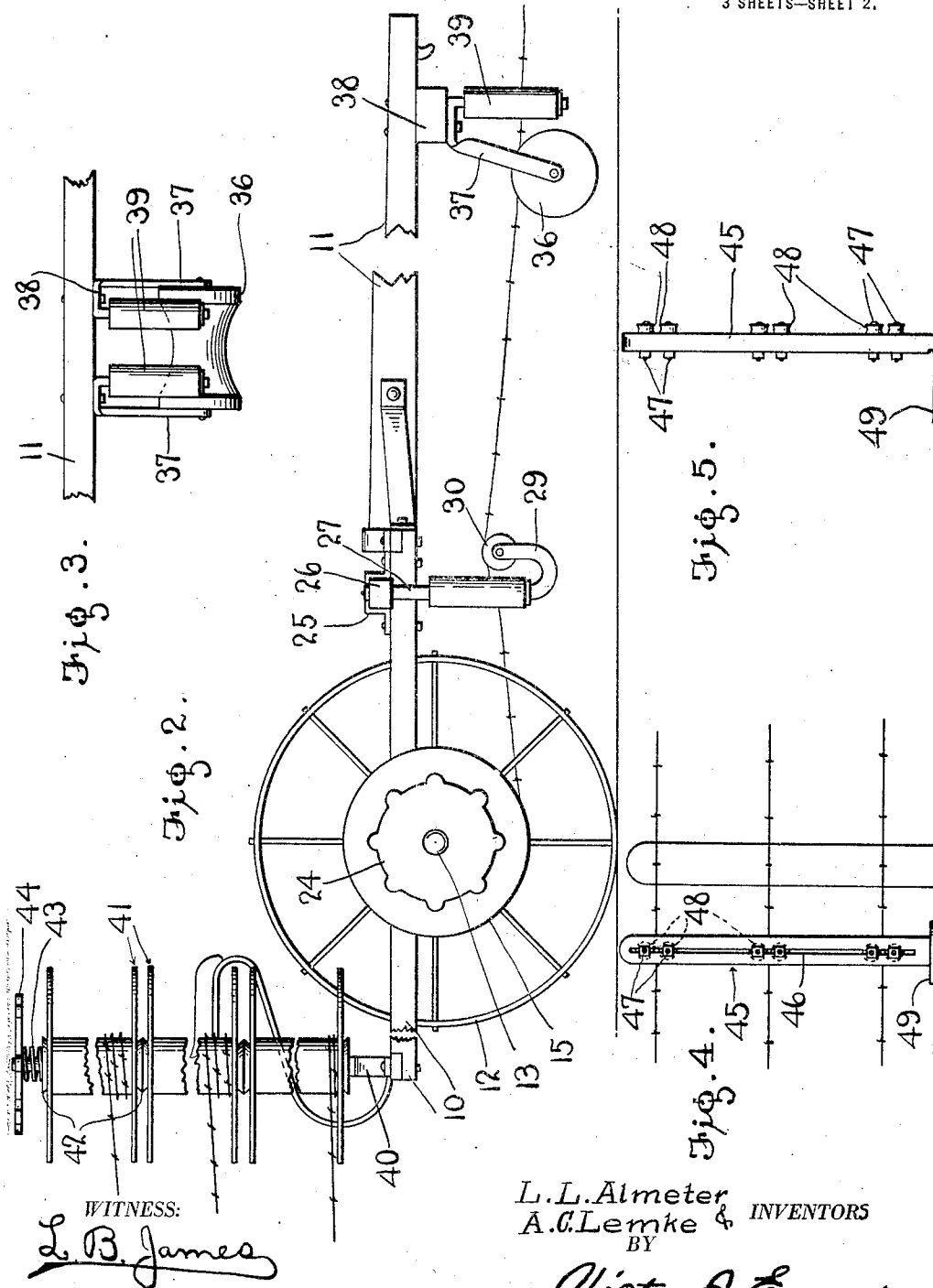
Inventors
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WITNESS:
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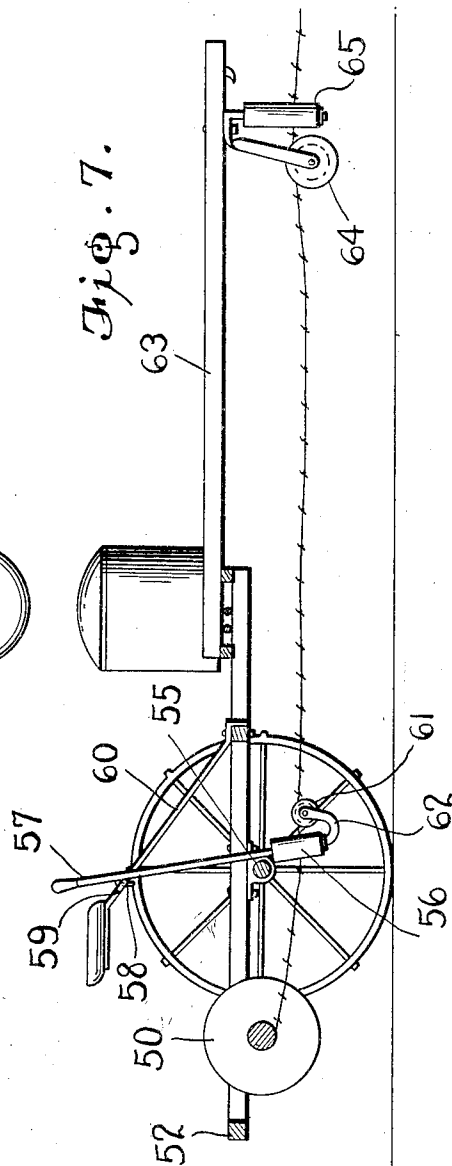
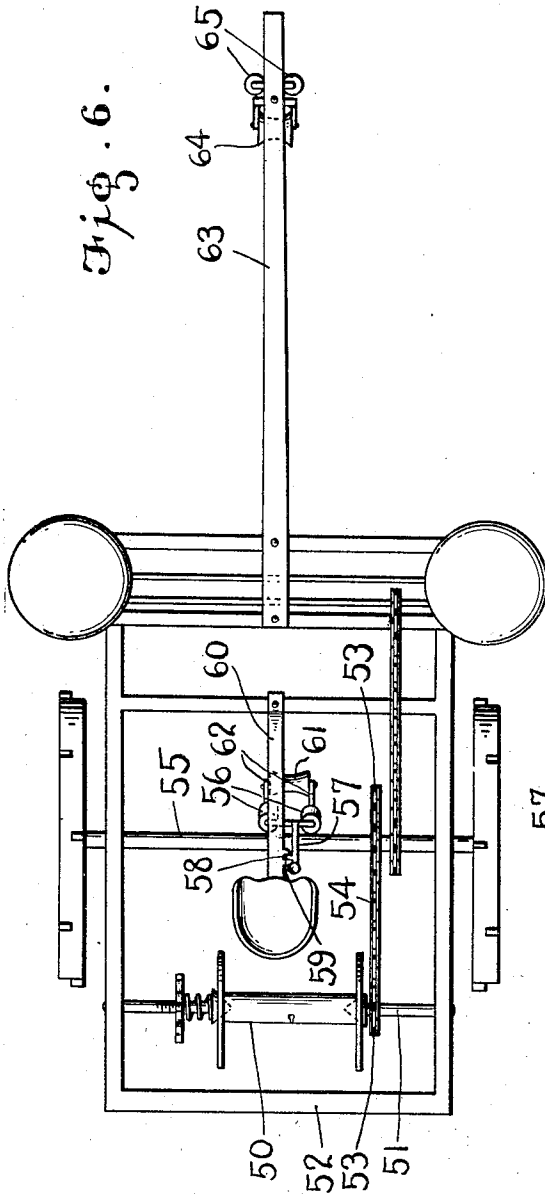
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3 SHEETS—SHEET 3.



Witnesses
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UNITED STATES PATENT OFFICE.

AUGUST C. LEMKE AND LEWIS L. ALMETER, OF WABASHA, MINNESOTA.

WIRE STRETCHER AND WINDER.

1,337,142.

Specification of Letters Patent.

Patented Apr. 13, 1920.

Application filed July 11, 1919. Serial No. 310,024.

To all whom it may concern:

Be it known that we, AUGUST C. LEMKE and LEWIS L. ALMETER, citizens of the United States, residing at Wabasha, in the county of Wabasha and State of Minnesota, have invented new and useful Improvements in Wire Stretchers and Winders, of which the following is a specification.

This invention relates to machines for winding or stretching fence wires. An object of the invention is to provide a machine by means of which barbed-wire may be quickly and neatly wound upon a spool, the invention being especially useful in re-winding wire which has been removed from fence posts.

Another object is to provide a machine of the above character in which the wire being wound is automatically evenly distributed along the spool.

Another object is to provide a machine which is also useful for stretching wire during the operation of fence building, the construction permitting of the work being done in a rapid and efficient manner.

A further object is to provide adjustable means whereby the tension of the wire may be regulated either in re-winding or stretching.

It is also the purpose of the invention to provide means whereby an ordinary agricultural machine, for example, a corn planter may be quickly converted into either a wire winding or wire stretching machine.

Other objects and advantages of the invention will appear as the following description is read in connection with the accompanying drawings.

In the drawings:

Figure 1 is a plan view of a combined wire winding and stretching machine constructed in accordance with the present invention.

Fig. 2 is a side elevation of the same.

Fig. 3 is a detail view looking at the end of the tongue of the machine and showing in elevation the wire guiding rollers carried thereby.

Fig. 4 is a fragmentary elevation showing the use of the wire spacing member.

Fig. 5 is an edge view of the said member.

Fig. 6 is a plan view illustrating the invention applied to a corn planter.

Fig. 7 is a central sectional view through the corn planter with the invention applied thereto.

Referring to the drawings in detail, the

numeral 10 indicates the frame of the combined wire re-winding and stretching machine. This machine may be of the animal drawn type and for this purpose is provided with a draft tongue 11. The frame of the machine is supported upon wheels 12, which are mounted fast upon a pair of axles 13 rotatable in suitable bearings secured to the frame of the machine.

The machine may be designed for simultaneously rewinding one or more strands of wire, the machine shown being provided with three spools, indicated at 14 and 15, which are located respectively between the wheels 12 and upon the outside of the said wheels. The spools are removably secured upon the machine, the spool 14 being frictionally held between the opposed inner ends of the axles 13 through the medium of friction cones 16 and 17. The cone 16 is rigidly secured upon the inner end of one of the axles 13, while the cone 17 is capable of longitudinal movement, but is held against rotation with respect to the axle and is mounted upon the inner end of the other axle 13. These cones are adapted to engage sockets or openings 18 provided in each end of the spool 14, the cone 17 being urged into engagement through the medium of a spring 19. The tension of this spring may be adjusted through the medium of a nut 20, which is threaded upon the axle, the spring being positioned between the nut and the cone 17.

The spools 15 are mounted upon the outer ends of the axles 13 and are held against relative rotary movement through the medium of cones 21 and 22. The first mentioned cone is fast upon the axle, while the cone 22 is slidably mounted thereon and is urged into engagement with the spool through the medium of a spring 23, whose tension is adjusted by means of a nut 24 mounted upon the outer end of each of the axles. The spools may therefore be easily removed after the wire has been wound thereon and empty spools substituted. Mounted upon guides 25, carried by the frame 10, is a bar 26, the latter being capable of longitudinal movement through the said guides. This bar has secured thereto in advance of each of the spools, a vertically disposed depending shaft 27, upon which is mounted a roller 28. The end of the shaft 27 terminates in an upwardly extending curved portion 29, to which is pivoted a

grooved roller 30, the wire being re-wound passing over this roller and bearing against the roller 28.

Pivotaly secured to the bar 26 is one end of a lever 31, said lever being pivoted to a bracket 32 carried by the frame 10. The opposite end of this lever is provided with a roller 33, which operates in a cam slot 34, formed in a wheel 35 fast upon one of the shafts 13. A rotation of the wheel will thus impart a reciprocatory movement to the bar 26 in the guides 25 and cause the rollers 28 and 30 to be shifted backward and forward in front of the spools 14 and 15, so as to evenly distribute the wire over the spools during the winding operation.

Mounted upon the forward end of the tongue 11, is a horizontally arranged roller 36, the latter being mounted between arms 37 secured to a cross bar 38, carried by the tongue. Also secured to the arms 37 in advance of the roller 36, are vertically disposed rollers 39, the purpose being to guide the strands of wire to the rollers 28 and 30. By adjusting the tension of the springs 19 and 23, the tension of the wire being wound upon the spool may be regulated.

Mounted upon the frame 10, is a standard 40 which is adapted to receive one or more spools of wire 41, the spools being hollow for that purpose. The spools are normally freely rotatable upon the standards, but are yieldingly held against rotation through the medium of cones 42 mounted for sliding movement upon but held against rotation with respect to the standards. The tension is regulated through the medium of a spring 43, which is mounted upon the topmost cone 42 and an adjusting nut 44 threaded upon the upper end of the standard 40.

As the spools will ordinarily be positioned higher than the strands of a wire fence, there is provided a spacing adjusting member 45 illustrated in Figs. 4 and 5 of the drawings. This member comprises a bar provided with a longitudinal slot 46 in which is adjustably mounted studs 47, which carry upon one end guide rollers 48, there being provided two of such rollers for each strand of wire. The rollers 48 are so spaced as to properly space the wire apart and to permit of the feeding of the wires between each pair of rollers, and when the wires are to be secured to the fence post the member 45 is depressed through the medium of a foot piece 49 until the wires reach the proper position.

In Figs. 6 and 7, the device is illustrated as applied to an ordinary corn planter. For this purpose there is provided a spool 50, which is mounted upon a shaft 51 carried by the frame 52 of the planter. This shaft is rotated through the medium of sprockets 53 and a chain 54 driven from the planter axle 55.

For the purpose of evenly distributing the wire over the spool 50 there is provided a pair of vertically disposed rollers 56, which are mounted at the lower end of a rod 57. This rod is detachably secured to the planter through the medium of a hook 58 carried by the rod and an eye 59 mounted upon the seat support 60. The hook 58 may be adjustably mounted upon the rod 57 so as to properly position the rollers 56. In addition there is provided a roller 61, which is mounted in brackets 62 and located in advance of the rollers 56.

If desired, a guide may be removably secured to the outer end of the tongue 63 of the planter. This guide is similar in construction to the one previously described and includes a horizontal roller 64 and a pair of spaced vertical rollers 65.

It is believed that when the foregoing description is read in connection with the accompanying drawings, the construction, operation and advantages of the invention will be apparent. The right is reserved to make such changes as properly fall within the scope of the appended claims.

Having described the invention, what is claimed is:

1. A machine of the class described comprising a frame, an axle mounted in bearings in said frame, traction wheels fast on said axle, winding reels loosely mounted upon the axle, means for securing the reels and axle against relative movement and automatically operated means for distributing the wound material evenly over the reels.

2. A machine of the class described comprising a frame, an axle mounted in bearings in said frame, traction wheels fast on said axle, winding reels loosely mounted upon the axle, means for yieldingly securing the reels and axle against relative movement and means including an automatically shifted guide bar for distributing the wound material evenly over the reels.

3. A machine of the class described comprising a frame, an axle mounted in bearings in said frame, traction wheels fast on said axle, winding reels loosely mounted upon the axle, means for yieldingly securing the reels and axle against relative movement and means including a cam operated guide bar movable longitudinally of the reels for evenly distributing the wound material.

4. A machine of the class described comprising a frame, an axle mounted in bearings in said frame, traction wheels fast on said axle, winding reels loosely mounted upon the axle, means for yieldingly securing the reels and axle against relative movement, a guide bar mounted for movement longitudinally of the reels, a cam and a pivoted lever connecting the cam and guide

bar for evenly distributing the wound material over the axle.

5 5. A machine of the class described comprising a frame, an axle mounted in bearings in said frame, traction wheels fast on
10 said axle, winding reels loosely mounted upon the axle, means including spring actuated friction cones slidably mounted upon the axle for frictional engagement with the
15 reels to yieldingly hold the latter against independent rotary movement and automatically operated means for distributing the wound material evenly over the reels.

15 6. A machine of the class described comprising a frame, an axle mounted in bearings in said frame, traction wheels fast on
20 said axle, winding reels loosely mounted upon the axle, means for yieldingly securing the reels and axle against relative movement, an automatically operated bar

mounted for movement longitudinally of the reels and vertically and horizontally disposed guide rollers carried by said bar for evenly distributing the wound material over the reels.

25 7. A machine of the class described comprising a frame and including a draft tongue, an axle mounted in bearings in said frame, traction wheels fast on said axle,
30 winding reels also mounted upon the axle, automatically operated means for distributing the wound material evenly over the reels and horizontally and vertically disposed guide rollers mounted upon the outer
35 end of the draft tongue.

In testimony whereof we affix our signatures.

AUGUST C. LEMKE.
LEWIS L. ALMETER.