

No. 856,322.

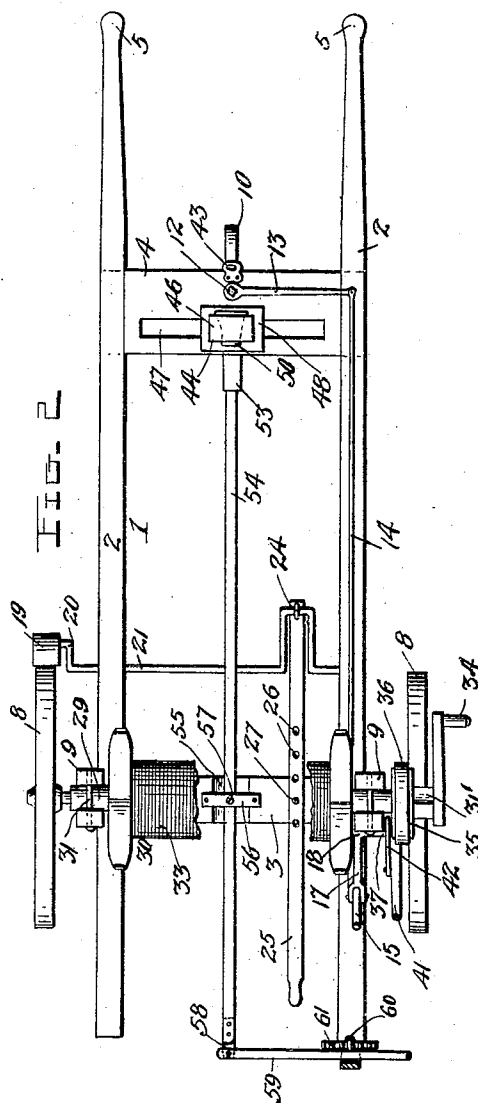
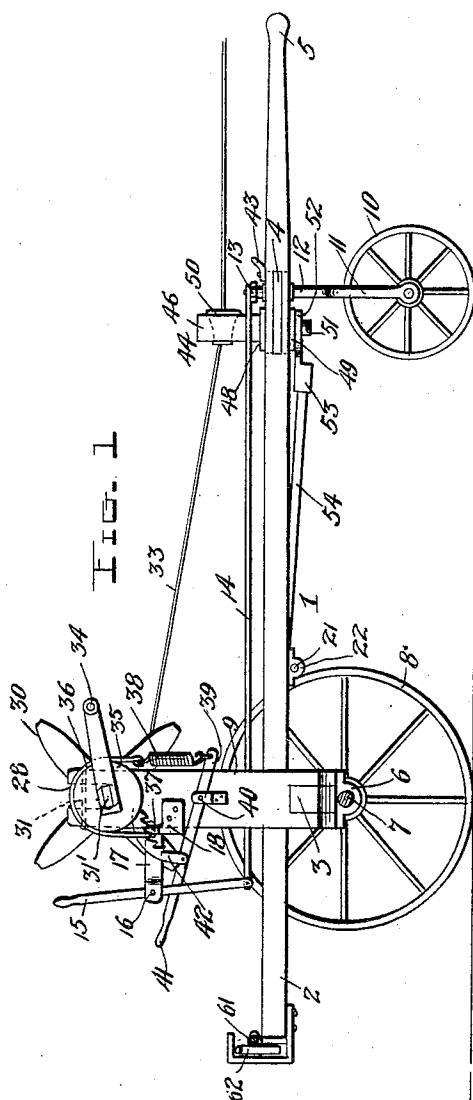
PATENTED JUNE 11, 1907.

M. J. WEIRICH.

WIRE REEL.

APPLICATION FILED OCT. 29, 1906.

3 SHEETS—SHEET 1.



Witnesses  
*J. H. Kriebauer Jr.*  
*A. M. Rawlings.*

Inventor  
*Martin J. Weirich*  
by *Watson E. Coleman*  
Attorney

No. 856,322.

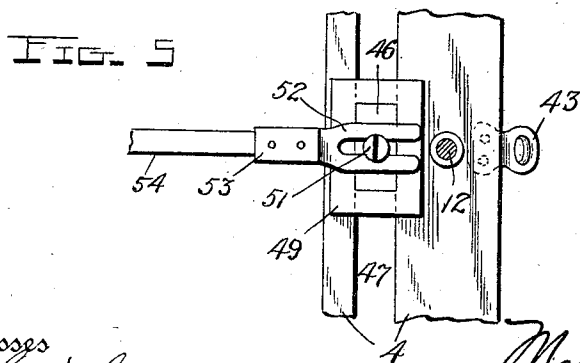
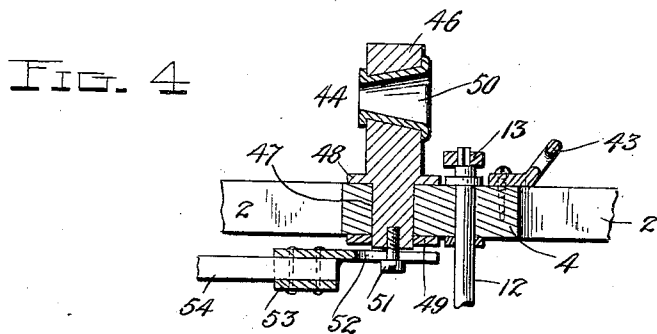
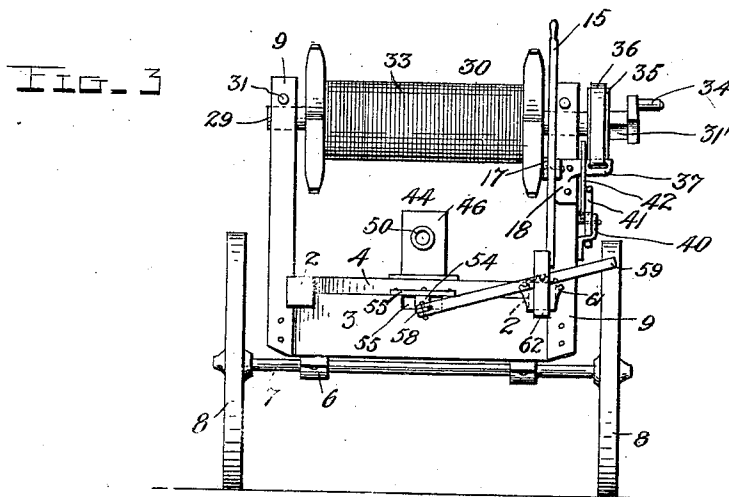
PATENTED JUNE 11, 1907.

M. J. WEIRICH.

WIRE REEL.

APPLICATION FILED OCT. 29, 1906.

3 SHEETS—SHEET 2.



Witnesses  
*J. A. Grisbauer, Jr.*  
*A. M. Rawlings*

Inventor  
*Martin J. Weirich*  
 by *Nelson E. Coleman*  
 Attorney

No. 856,322.

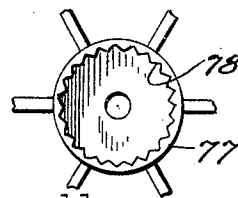
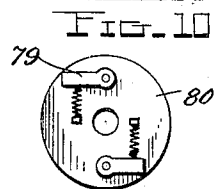
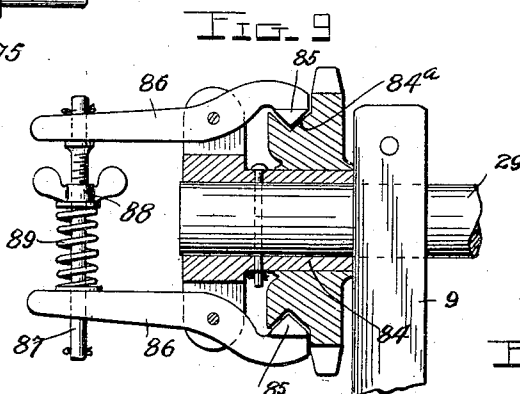
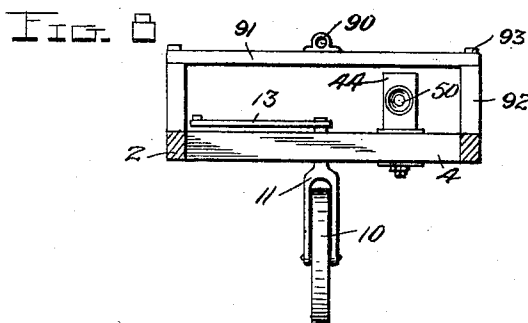
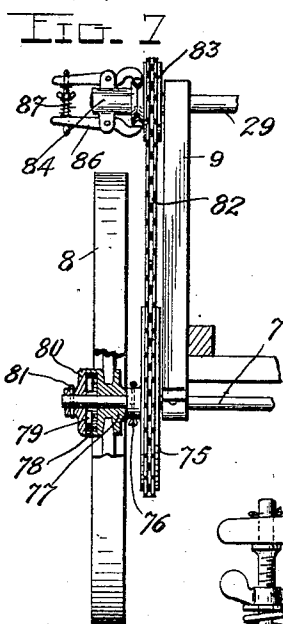
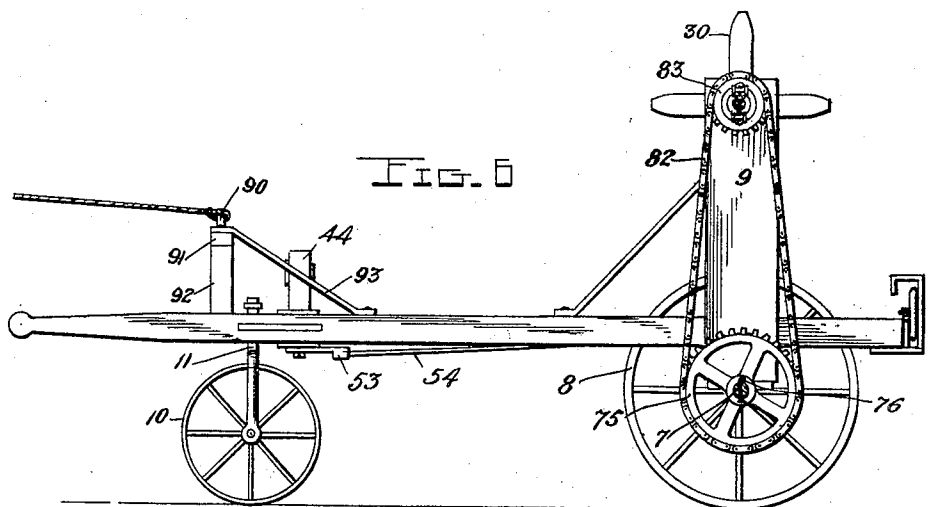
PATENTED JUNE 11, 1907.

M. J. WEIRICH.

WIRE REEL.

APPLICATION FILED OCT. 29, 1906.

3 SHEETS—SHEET 3.



Witnesses  
J. A. Grisbauer, Jr.  
A. M. Rawlings.

Inventor  
Martin J. Weirich  
by Watson E. Coleman  
Attorney

# UNITED STATES PATENT OFFICE.

MARTIN J. WEIRICH, OF BARABOO, WISCONSIN.

## WIRE-REEL.

No. 856,322.

Specification of Letters Patent.

Patented June 11, 1907.

Application filed October 29, 1906. Serial No. 341,164.

*To all whom it may concern:*

Be it known that I, MARTIN J. WEIRICH, a citizen of the United States, residing at Baraboo, in the county of Sauk and State of Wisconsin, have invented certain new and useful Improvements in Wire-Reels, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in machines for reeling and unreeling fencing wire or the like; and it consists in the novel construction, combination and arrangement of parts hereinafter described and claimed.

One object of the invention is to provide a machine of this character by means of which wire fences may be quickly and easily constructed or taken down.

Another object of the invention is to provide a machine of this character with means whereby wire or the like may be evenly wound upon a reel or drum.

Another object of the invention is to improve and simplify the construction and operation of machines of this character and thereby render the same more effective for the purposes intended.

Further objects and advantages of the invention, as well as the structural features by means of which they are attained will be made clear by an examination of the following specification taken in connection with the accompanying drawings, in which:

Figure 1 is a side elevation of my improved wire fencing machine, the supporting wheel upon the near side being removed; Fig. 2 is a top plan view of the machine, parts being broken away to more clearly illustrate the construction; Fig. 3 is a rear end elevation; Fig. 4 is a detail vertical longitudinal section through the front cross bar; Fig. 5 is a bottom plan view of the parts shown in Fig. 4; Fig. 6 is a side elevation of a slightly modified form of the invention in which the wire drum or reel is driven from the axle of the supporting wheels; Fig. 7 is a detail vertical transverse section showing the driving connections between the axle and the wire reel or drum shaft; Fig. 8 is a detail transverse section showing the parts of the device at its front end; Fig. 9 is a detail section showing the friction clutch or brake device between the reel shaft and the sprocket pinion; and Figs. 10 and 11 are detail views of the pawl-and-ratchet connection between the axle and the supporting and drive wheel.

My improved machine comprises a portable

frame or truck 1 consisting of two longitudinal side beams 2 connected by cross bars 3, 4, the latter being arranged adjacent to the forward ends of the beams 2 which ends are shaped to form handles 5. The cross bar 3 is arranged adjacent to the rear ends of the side beams or bars 2 and has secured upon its underface bearings 6 for an axle 7 upon the ends of which latter are journaled supporting wheels 8. The rear cross bar 3 is disposed beneath the side beams 2 and has its projecting ends reduced and secured in mortises formed in the lower ends of two uprights 9 arranged upon the outer sides of the beams 2, as clearly shown in the drawings.

A front steering and supporting wheel 10 is journaled in the forked lower end 11 of a vertical shaft 12 which is rotatably mounted in and projects through the front cross bar 4. Upon the squared upper end of the shaft 12 is fixed a laterally projecting arm 13 pivoted at its outer end to the forward end of a link or rod 14 which extends longitudinally and has its rear end pivoted upon the lower end of a hand lever 15. The latter is pivoted at 16 in the bifurcated end of an arm 17 which projects rearwardly from an attaching plate 18 secured upon one of the uprights 9. The upper end of the lever 15 is shaped to provide a handle which when oscillated will rock the forked shaft 12 and thereby swing the steering wheel 10 for the purpose of guiding the machine.

Adapted for engagement with the periphery of one of the supporting wheels 8 is a brake-shoe 19 carried by a crank arm 20 on one end of the transverse extending shaft 21 journaled in bearings 22 secured upon the undersides of the longitudinal beams 2. The intermediate portion of the shaft 21 is bent to form a crank 23 to which is pivotally connected by a staple 24 or the like one end of a brake-operating bar or rod 25. This bar 25 has its rear end shaped to provide a handle and its intermediate portion is formed with a longitudinal series of apertures 26, any one of which is adapted to receive a pin or stud 27 projecting vertically from the top of the cross bar 3 upon which latter the brake-operating bar 25 is supported. It will be seen that when the rear or handle end of the bar is elevated to disengage it from the pin 27 the bar 25 may be moved longitudinally to rock the shaft 21 and thereby swing the brake-shoe 19 into or out of engagement with the wheel 8. When the bar 25 is lowered

and one of its apertures 26 engaged with the pin or stud 27 the rock shaft 21 and the brake-shoe 19 will be locked in their adjusted position.

5 The upper ends of the uprights 9 are formed with bearing recesses 28 in which rotate the journals 29 of the shaft of a wire reel or drum 30, said journals being retained in the recesses 28 by cross pins or keys 31, as shown  
10 in Figs. 1, 2. The reel 30 comprises two heads formed by crossed bars united by the shaft 31' of the reel and by connecting rods upon which the wire or the like 33 is wound. Upon one of the projecting ends of the shaft  
15 31' is mounted a crank handle 34 by means of which the wheel may be rotated to wind or unwind the wire.

In order to retard the rotation of the reel I provide upon one end of the shaft 31' a friction brake-wheel 35 which is engaged by a  
20 friction brake-band 36. The latter passes over the top of the wheel 35 and has one of its ends secured to a laterally-projecting arm 37 formed upon the attaching plate 18. The  
25 other end of the brake-band 36 is secured to one end of a coil spring 38 which has its other end connected to a lever 39. The latter is pivoted intermediate its ends in a bracket 40 secured upon the uprights 9 and  
30 has its rear end extended and formed with a handle 41. Upon this rear end of the lever 39 is pivoted a segmental-shaped ratchet bar 42 the teeth of which are adapted to engage the upper edge of the arm 37 for the purpose  
35 of holding the lever 39 against movement. It will be noted upon reference to Fig. 1 that when the handle 41 of this lever is elevated its forward end is lowered and the coil spring 38 is stretched to cause the friction  
40 brake-band 36 to tighten its grip upon the periphery of the wheel 35. At the same time the ratchet bar 42 moves upwardly upon the plate 37 and holds the lever 39 in its adjusted position. This construction enables any desired  
45 tension to be placed upon the shaft of the reel for the purpose of retarding the rotation of the latter.

When the wire on the reel is unwound from the same in making a wire fence or in doing  
50 similar work, it passes through a stationary guide eye 43 arranged centrally upon the front cross bar 4; but when the wire is wound upon said reel it is passed through a shiftable guide device 44 which is mounted for trans-  
55 verse sliding movement upon the front cross bar 4 so that the wire may be evenly wound upon the reel. This device 44 comprises a vertically projecting block 46 which has its lower reduced end extended and slidable in a  
60 slot or opening 47 formed in the bar 4. Flanges or plates 48, 49 are arranged upon the block 46 and slidably engage the upper and lower faces of the bar 4. In the upper portion of the block 46 is formed an open-  
65 ing in which is mounted a tapered metallic

guide sleeve 50 through which the wire passes. This sleeve 50 has its large end at the front so that wire and particularly barbed wire will pass readily through it. Depend-  
70 ing from the bottom of the block 46 is a headed stud 51 adapted to be engaged by the forked end 52 of a plate or sleeve 53 secured upon one end of a rod 54. The latter extends longitudinally and through a recess 55 formed in the top of the cross bar 3. 75  
A strap or plate 56 arranged upon the top of the bar 3 retains the bar or rod 54 in said recess and a pivot 57 passing vertically through the strap 56, the bar 55 and the bar 3 pivots the bar or rod 54 so that the latter may  
80 swing in a lateral or horizontal plane for the purpose of sliding the head 46 transversely in the slot 47 of the bar 4. The rear end of the bar 4 carries a metal plate 58 which is pivoted in the bifurcated end of an operat-  
85 ing lever 59. The latter extends laterally and is provided with a pin or stud 60 adapted to engage a transverse rack 61 secured upon the end of one of the beams 9. The lever 59 extends through a guide 62 secured  
90 upon the beam 9 and having a portion which overhangs said lever and rack, as clearly shown in Fig. 1. When the lever 59 is elevated to disengage its pin 60 from the rack 61 it may be shifted transversely for the pur-  
95 pose of oscillating the bar or lever 54 and thereby reciprocating the head 46. In winding wire upon the reel the crank 34 is turned and the head 46 is slowly reciprocated by shifting the bar or lever 49 so that  
100 the wire will be evenly distributed upon the reel.

In Figs. 6 to 11, inclusive, of the drawings, I have shown a slightly modified form of the invention in which the reel shaft 29 is driven  
105 from the axle 7 so that it will be operated when the machine is drawn forwardly by draft animals hitched to its front end or in any other suitable manner. As shown in Fig. 7, a sprocket wheel 75 has its hub fixed  
110 by means of a cross-pin 76 upon the axle 7, and the hub 77 of one of the wheels 8 is loosely mounted upon said axle. The hub 77 has a concentric recess formed in its outer face, in which recess is an annular series of  
115 ratchet teeth 78, as shown in Fig. 11. This ratchet is engaged by a pair of spring actuated pawls 79 pivoted upon a plate or disk 80 which is secured by a cross pin 81 upon the axle 7. The wheel 8 is thus permitted to  
120 turn in a rearward direction without rotating the axle 7, but when it is turned in a forward direction by the forward movement of the machine it imparts its motion to the axle and hence to the sprocket wheel 75. The latter  
125 is connected by a sprocket chain 82 to a sprocket pinion 83 loosely mounted upon a sleeve or bushing 84 which is fixed by a cross-pin upon the reel shaft 29, as clearly shown in Fig. 9. The pinion 83 is formed upon one  
130

side with a concentric enlargement having an annular groove or channel 84<sup>a</sup> of V-shape in cross section. This groove 84<sup>a</sup> is adapted to be engaged by friction jaws 85 formed on the ends of a pair of levers 86 which are pivoted intermediate their ends between ears or lugs provided on the enlarged outer end of the bushing 84. The levers 86 have their outer ends formed with transverse alining openings to receive the ends of a screw rod 87 on which is arranged an adjusting nut 88. Confined between the latter and one of the levers 86 is a coil spring 89 which tends to force the friction or brake jaws into frictional engagement with the groove 84<sup>a</sup>. It will be seen by adjusting the wing nut 88 the movement imparted to the reel shaft by the pinion 83 may be varied, as desired.

In order to enable a team of draft animals to be readily connected to the front end of the machine I provide a loop 90 upon a cross bar 91 connecting the upper ends of uprights 92 arranged upon the longitudinal bars or beams 2 and suitably supported by inclined braces 93.

Having thus described my said invention, what I claim as new, and desire to secure by Letters Patent of the United States, is

1. A machine of the character described comprising a portable supporting frame, wire reeling means thereon, a guide upon said frame, a head slidably mounted in said guide, a wire guide upon said head, a pin upon said head, and a lever mounted upon said frame and having a forked end to engage said pin.

2. A machine of the character described comprising a portable supporting frame, wire reeling means thereon, a guide upon said frame, a head slidably mounted in said guide, a wire guide upon said head, a pin upon said head, a lever pivoted intermediate its ends upon said frame and having a forked

end to engage said pin, an operating lever pivoted upon the opposite end of the first mentioned lever, a rack upon said frame, and a pin upon said operating lever for engagement with said rack.

3. A machine of the character described comprising a frame having side bars connected by front and rear cross bars, an axle mounted upon said rear cross bar, supporting wheels upon said axle, a steering wheel carried by said front cross bar, a rock shaft having a crank and a crank arm, a brake shoe upon said crank arm for engagement with one of said supporting wheels, a pin projecting vertically from said rear cross bar, a brake operating lever pivoted to said crank and formed with a series of apertures for engagement with said pin, and wire reeling and unreeling means mounted upon said frame.

4. A machine of the character described comprising a frame, wheels for supporting the same, a reel, a shaft therefor, a rotary element upon said shaft and provided with a friction surface, driving connections between said elements and one of said wheels, a lever having a portion to engage said friction surface, and means for adjusting said lever.

5. A machine of the character described, comprising a frame, wheels for supporting the same, a reel, a shaft therefor, a rotary element upon said shaft and provided with a friction surface, driving connections between said element and one of said wheels, a pair of levers having portions to engage said friction surface, a screw rod arranged between said levers, a spring upon said rod, and a nut upon said rod for adjusting said spring.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

MARTIN J. WEIRICH.

Witnesses:

JOHN TREIBER  
FRED. DAHNKE.