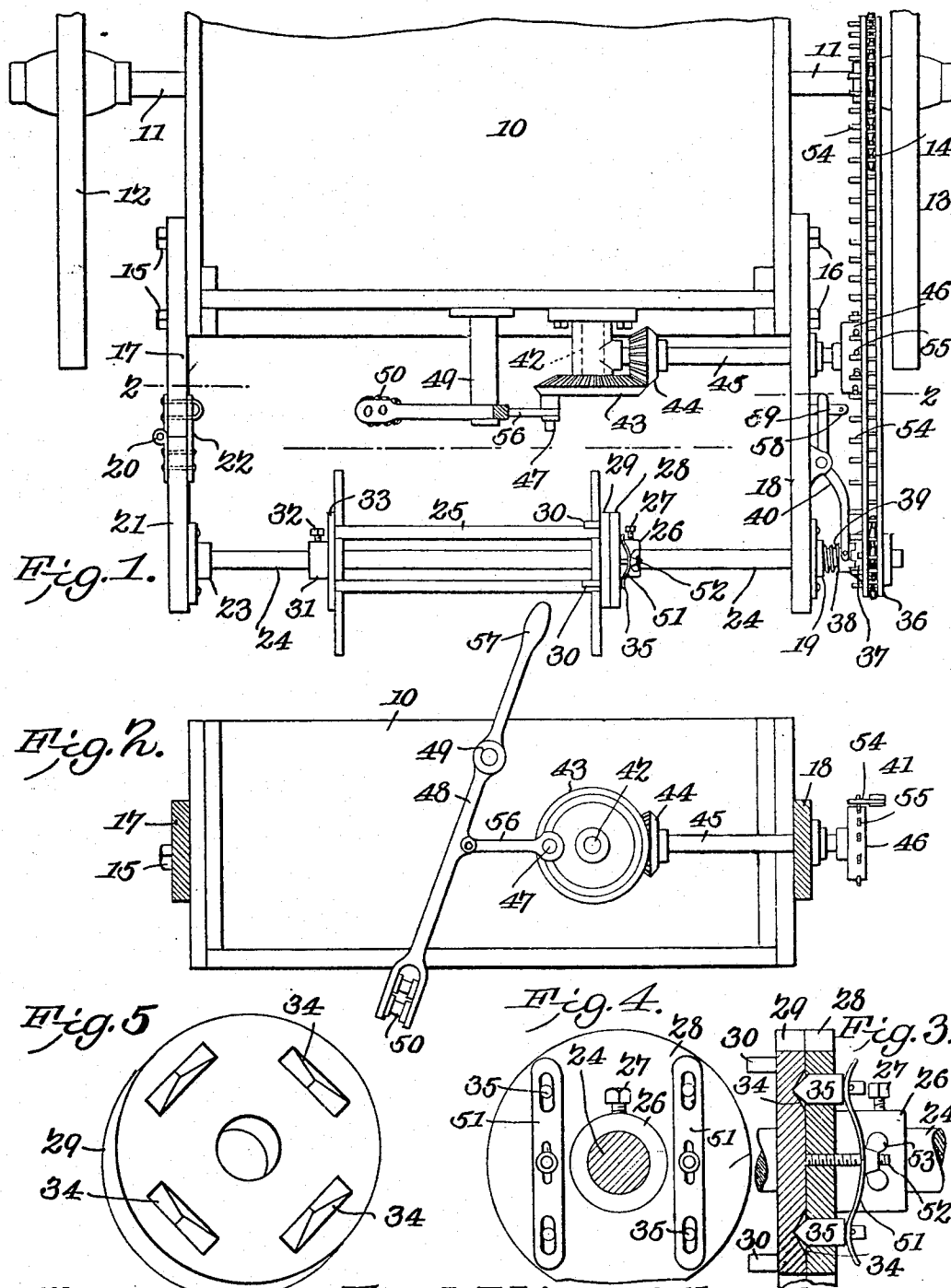


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F. D. LINGENFELTER.
WIRE REELING MACHINE.
APPLICATION FILED APR. 25, 1906.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FRANK D. LINGENFELTER, OF PATRICK, WYOMING.

WIRE-REELING MACHINE.

No. 830,233.

Specification of Letters Patent.

Patented Sept. 4, 1906.

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To all whom it may concern:

Be it known that I, FRANK D. LINGENFELTER, a citizen of the United States, residing at Patrick, in the county of Laramie and State of Wyoming, have invented a new and useful Wire-Reeling Machine, of which the following is a specification.

This invention relates to devices for winding wire, more particularly for use in constructing, repairing, or removing wire-fencing material, for unreeling from the spools, or rewinding upon the spools, as may be required.

With these and other objects in view, which will appear as the nature of the invention is better understood, the invention consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of the embodiment of the invention capable of carrying the same into practical operation.

In the drawings, Figure 1 is a plan view. Fig. 2 is a rear elevation of the body portion of the vehicle with improved attachment in section on the line 2-2 of Fig. 1. Fig. 3 is an enlarged view, partly in section, of the reel-supporting mechanism. Fig. 4 is a face view of the stationary coupling-disk. Fig. 5 is a perspective view of the slidable coupling-disk.

The improved device is attached, preferably, to a wagon or similar vehicle having bearing-wheels so constructed that the motion of the bearing-wheels may be utilized to operate the moving parts of the device, and will generally be constructed for attachment to the body portion of an ordinary farm-wagon with a chain-wheel attached to one of the wheels of the wagon and from which the necessary motion is transmitted.

For the purpose of illustration a portion of a conventional wagon-body is represented at 10, the rear axle at 11, and the rear wheels at 12, 13, of the ordinary construction.

Attached to one of the rear wheels is a chain-wheel 14, from which the motion will be transmitted, as hereinafter described.

Bolted or otherwise secured at 15, 16 to the sides of the body 10 are bars 17, 18, extending rearwardly of the body 15, the bar 18 being

provided with a shaft-bearing 19, and the bar 17 is hinged at 20 to an extension 21, the latter provided with a catch 22, by which it may be coupled to the body of the bar 17, the extension 21 having a shaft-bearing 23 in alinement with the bearing 19, the two bearings carrying a shaft 24, as shown. The extension 21 is thus in position to swing outwardly when the catch 22 is released, and thereby disconnects the shaft 24 from the extension to enable the spool of wire, represented at 25, to be placed on the shaft.

Attached to the shaft 24 is a collar 26, secured detachably and adjustably in position by a set-screw 27 and provided with a disk 28. Rotatively disposed upon the shaft 24 is another disk 29, face to face with the disk 28 and provided with spaced pins 30, bearing over the arms of the spool 25, and thus coupling the spools to the disk 29. The shaft 24 is also provided with an adjustable collar 31, secured to the shaft by a set-screw 32 and provided with a disk 33, bearing against the opposite end of the spool. The disk 29 is provided with a plurality of sockets 34, having the sides of each inclined, and the disk 28 is provided with a corresponding number of spring-actuated bolts 35, bearing within the inclined recesses 34, the bolts also being inclined to correspond to the inclined recesses.

The springs which actuate the bolts 35 will be of sufficient strength to so couple the disks 28 and 29 together that the spool will be rotated with the shaft under ordinary conditions or when subjected to ordinary strains; but if from any cause the spools are subjected to abnormal strains the springs will permit the bolts to yield and allow the disk 28 and its bolts 35 to pass over the recesses, and thus avoid any tendency of the parts to break. The spring-actuated bolts thus serve as "relief" members to avoid the breakage of any of the parts. Four of the bolts are preferably employed and arranged in pairs, each pair having a spring 51 coupled thereto and adjustably connected in turn to the disk 28 by a bolt 52 and wing-nut 53 to enable the tension to be controlled.

Rotated loosely on the shaft 24 outside the bar 18 and spaced therefrom is a chain-pulley 36, operated by chain 41 from the chain-wheel 14 and having a clutch member 37 co-operating with a sliding clutch-sleeve 38, op-

erating on a feather on the shaft 24, the clutch-sleeve having a spring 39 operating to maintain it yieldably in its outward position and with an annular groove in its periphery to receive a shipper-lever 40, by which the clutch member is actuated. By this means the shaft 24 may be coupled and uncoupled from the pulley 36. Attached to the rear of the body portion 10 is a stub-shaft 42, carrying a bevel-gear 43, engaging a bevel-pinion 44 upon a transverse shaft 45, the latter mounted for rotation through the bar 18 and with a pulley 46 on its outer end.

The chain 41 is provided with pins 54, extending laterally from its links, and the pulley 46 is provided with spaced radial pins 55, with which the pins 54 of the chain engages, and thus rotates the shaft 45 simultaneously with the chain 41.

The bevel-gear 43 is provided upon its outer face with a crank-pin 47, connected by a rod 56 to a lever 48, the latter pivoted at 49 to the body 10 and provided at its free end with spaced guide-rollers 50, between which the wire is conducted on its way to and from the spool 25. The lever 48 is extended into a handle 57 to enable it to be manually operated, if required, by disconnecting the rod 56. By this means, as the shaft 45 is rotated by the action of the chain 41, the free end of the lever is moved back and forth and the wire moved to and fro and guided uniformly upon the spool and prevented from "bunching" thereon.

Fence-wire is furnished wound upon spools or reels of substantially standard form and size and generally constructed as shown at 25 in Fig. 1, and is sometimes of the barb form and sometimes without the barbs; but the device herein illustrated operates equally as well whether the wire is barbed or otherwise.

With a device as herein constructed the wire may be handled expeditiously and uniformly and without danger of injury to the operators, especially when employed for handling barbed wire.

When it is desired to unwind the wire, the reel 25 is placed in position and the end carried between the guide-rollers 50 of the lever 48 and thence attached to the end post of the fence and the clutch 37 38 disconnected to release the reel and permit it to rotate freely as the vehicle is moved forward.

A stop 59 is connected to the bar 18 and provided with an aperture 58 to receive a pin to hold the shipper-lever 40 in open position, and thus lock the clutch in disconnected position, if required.

Having thus described the invention, what 60 is claimed as new is—

1. In a device of the class described, the combination of a vehicle including the body portion and the rear axle and rear carrying-wheels, arms spaced apart and extending rearwardly of said body, one of said arms being intermediately jointed, a shaft journaled in the unjointed arm and adapted to be detachably stepped in the jointed portion of the jointed arm, means for transmitting the motion of said carrier-wheels to said shaft, a wire-supporting spool carried by said shaft, means for coupling said spool to said shaft, a lever swinging from said body and provided with wire-guiding means at its free end, and means for transmitting vibratory motion to said lever from said carrier-wheels.

2. In a device of the class described, the combination with a vehicle including the body rear axle and rear carrier-wheels, of a chain-wheel carried by one of said carrier-wheels, a frame extending rearwardly of the body, a shaft journaled in said frame and with a chain-wheel at one end, a chain between the chain-wheel of said carrier-wheel and the chain-wheel of said shaft, a wire-supporting spool upon said shaft, coupling means between said spool and shaft, a lever swinging from said body and with wire-guiding means at the free end, and means operative by said chain for vibrating said lever transversely of the path of the wire leading to said spool.

3. In a device of the class described, the combination with a vehicle including the body rear axle and rear carrier-wheels, of a chain-wheel carried by one of said carrier-wheels, a frame extending rearwardly of the body, a shaft journaled in said frame and with a chain-wheel at one end, a chain between the chain-wheel of said carrier-wheel and the chain-wheel of said shaft, a wire-supporting spool upon said shaft, coupling means between said spool and shaft, a lever swinging from said body and with wire-guiding means at the free end, a counter-shaft rotative upon said body and carrying means for operating said lever, and means whereby the motion of said chain is transmitted to said shaft.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

FRANK D. LINGENFELTER.

Witnesses:

J. A. ALCORA,
W. E. CUTTS.