No. 670,967. Patented Apr. 2, 1901.

W. POWERS.

WIRE REELING MACHINE.

(Application filed Jan. 4, 1901.)

(No Model.) 2 Sheets—Sheet 1.

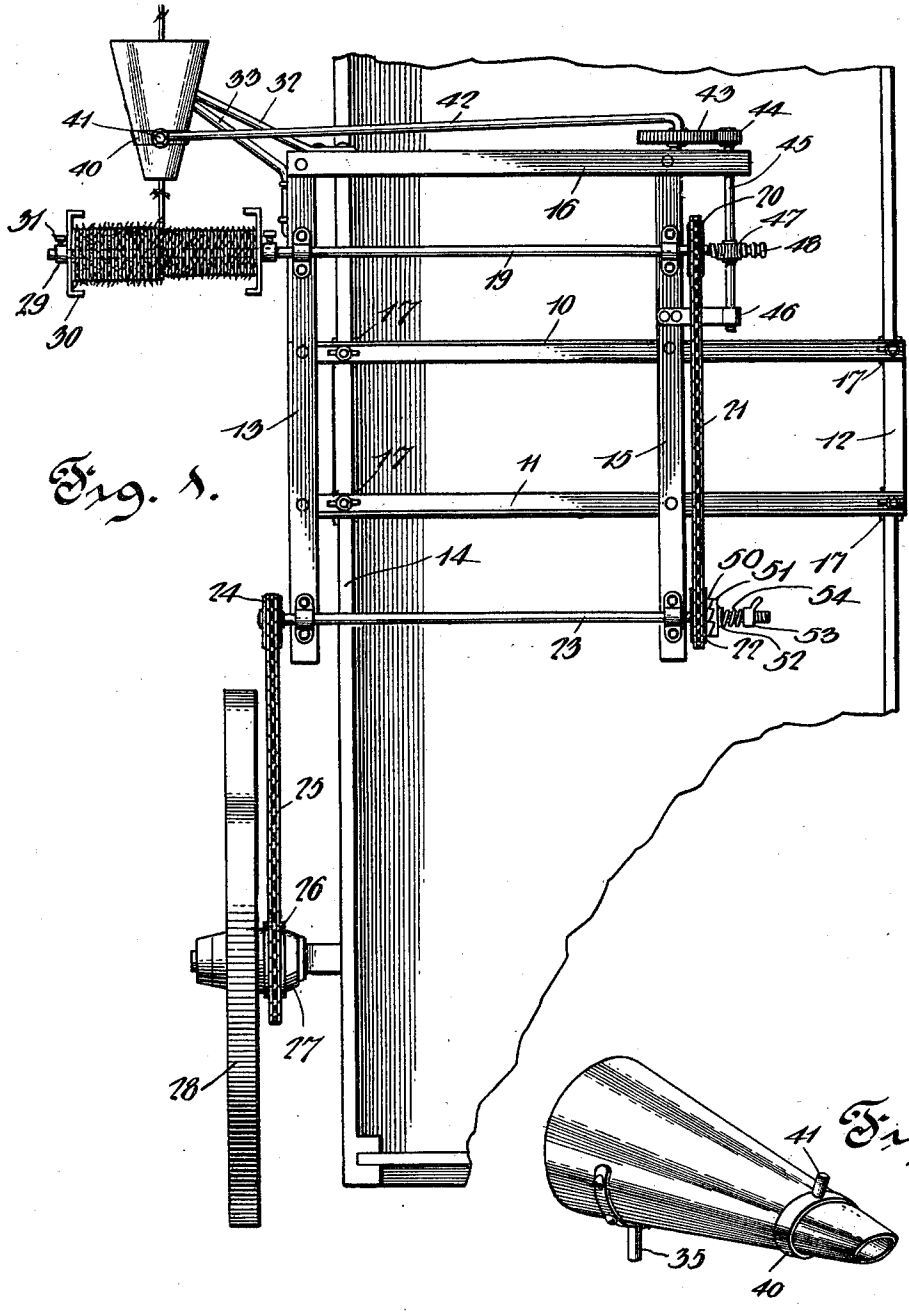


Fig. 1.

Fig. 6.

Witnesses
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Geo. H. Chandlee.

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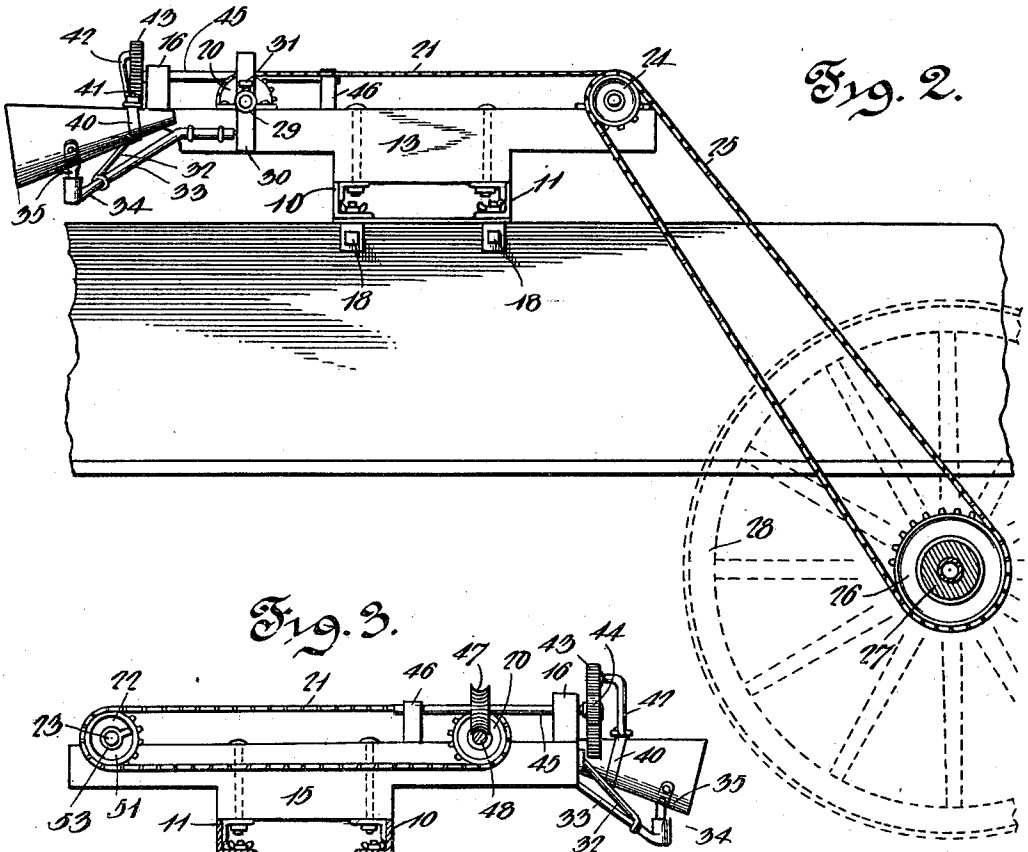


Fig. 2.

Fig. 3.

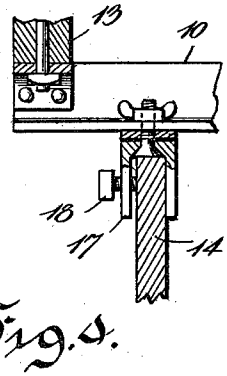


Fig. 4.

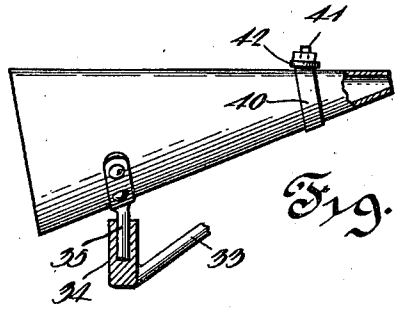


Fig. 5.

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UNITED STATES PATENT OFFICE.

WILLIAM POWERS, OF CLERMONT, IOWA, ASSIGNOR OF ONE-HALF TO GEORGE ELLISON, OF POSTVILLE, IOWA.

WIRE-REELING MACHINE.

SPECIFICATION forming part of Letters Patent No. 670,967, dated April 2, 1901.

Application filed January 4, 1901. Serial No. 42,127. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM POWERS, a citizen of the United States, residing at Clermont, in the county of Fayette and State of Iowa, have invented a new and useful Wire-Reeling Machine, of which the following is a specification.

This invention relates to wire-reels in general; and it has for one object to provide a simple and efficient construction of reel that may be applied to the body of an ordinary farm-wagon and operated to wind up wire as the wagon is driven along, a further object of the invention being to provide such specific details of structure as will permit of ready application to and removal from a wagon-body and will insure a proper and even winding of the wire upon the reel.

Further objects and advantages of the invention will be evident from the following description.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a plan view showing a portion of a wagon equipped with the present reeling device. Fig. 2 is a side elevation showing the wagon with the reeling mechanism thereon. Fig. 3 is an elevation of the mechanism looking from the opposite side from Fig. 2. Fig. 4 is a detail view, partly in section, showing the manner of mounting the frame of the mechanism upon the wagon-body. Fig. 5 is a view, partly in section and partly in elevation, showing the mounting of the wire-guiding cone. Fig. 6 is a perspective view of the wire-guiding cone.

Referring now to the drawings, the present mechanism comprises a supporting-frame, which includes the two sills 10 and 11, which are preferably of angle-iron and which are adapted to rest with the lower edges of the vertical flanges thereof upon the sides of the wagon-body. The sills 10 and 11 are connected at one end by means of a cross-piece 12, while the opposite ends thereof, which project beyond the side of the wagon-body, are connected by a transverse beam 13, which projects at both ends beyond the sills and is adapted to lie beyond and parallel with the side 14 of the wagon-body. A second cross-beam 15 is mounted upon the sills to lie between the sides of the wagon-body and parallel with the beam 13, and connecting the forward ends thereof is a cross-piece 16.

To hold the sills in place upon the sides of the wagon-body, U-shaped clips 17 are connected with the sills and straddle the sides of the wagon-body, in which position they are held by means of a set-screw 18 for each clip.

A transverse shaft 19 is mounted in bearings upon the beams 13 and 15 and projects at its ends beyond both of said beams, and this shaft carries the reel, hereinafter described. To rotate the shaft 19, and therewith the reel, said shaft is provided at one end and beyond the beam 15 with a sprocket-wheel 20, with which is engaged a chain 21, leading to a sprocket 22 upon a second shaft 23, mounted transversely of the rear ends of the beams, and which shaft 23 projects at one end beyond the beam 13. On this projecting end is a sprocket 24, with which is engaged a chain 25, engaged also with a sprocket 26 upon the hub 27 of one of the rear wheels 28 of the wagon. Thus as the wheel 28 rotates the shaft 19 is rotated to rotate the reel carried thereby.

The reel is of common form and consists of a tubular sleeve 29, having radiating arms 30, and which sleeve is adapted to engage the projecting end of the shaft 19 and is held thereon against rotation with respect thereto by set-screws 31.

To provide for feeding the wire to the reel in such manner as to have the wire wound thereon in regular layers, a movable guide is provided. This guide consists of a hollow or tubular body, which is tapered and is disposed with its major end forwardly of the wagon, while its minor end, which is somewhat flattened, is disposed in the direction of the reel, said guide being mounted at the outer end of a supporting device consisting of arms 32 and 33, the ends of which are attached to the front and side portions of the frame, while the outer ends thereof meet and are provided with a socket 34 to receive the pin 35, secured to the guide, whereby pivotal mounting of the guide is secured. The wire to be wound on the reel is passed inwardly through the major end of the guide and out-

wardly through the minor end thereof and then attached to the reel. As the reel is rotated the guide must be oscillated in order that the wire may be fed from end to end of the reel and secure an even winding of the wire thereon. To oscillate the guide, a strap 40 is engaged with the minor end thereof and has a spindle 41, with which is pivotally engaged the end of a connecting-rod 42, the opposite end thereof being turned laterally and engaged in a perforation formed eccentrically in a disk 43, so that this laterally-turned end forms, in effect, a wrist-pin. The disk 43 is mounted upon a stub-shaft upon the front face of the cross-piece 16 and is in the form of a gear, with which is engaged a pinion 44 at the forward end of a counter-shaft 45, mounted in the laterally-projecting end of the piece 16 and in a bracket 46 upon the cross-beam 15. This counter-shaft carries a worm gear-wheel 47, with which is engaged a worm 48 at the end of shaft 19. Thus as the shaft 19 rotates the counter-shaft is rotated and the guide is oscillated in the manner and for the purpose described.

With this construction it will be seen that the apparatus is well designed for the purposes described and that it will effectively wind a reel, which may afterward be removed therefrom for substitution of an empty reel.

In practice modifications of the specific construction shown may be made and any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

In order that the reeling mechanism may be connected with and disconnected from the wheel 28 as occasion may require, the sprocket 22 is loosely mounted upon shaft 23 and has a clutch-face 50 for engagement by the similar face 51 of a clutch member 52, which is splined to the shaft. A nut 53 is screwed upon the end of the shaft, and between it and the member 52 is a helical spring 54, which holds the clutch member yieldably in engagement, the engaging clutch-teeth being so formed that slipping will be permitted when the shaft 23 is reversely rotated, such as when the wagon is backed.

What is claimed is—

1. A reeling attachment for wagons comprising sills adapted for attachment to a wagon-body, cross-beams mounted upon the sills, a reeling-shaft mounted upon the beams and adapted to receive a reel, a supporting-arm attached to a beam, a guide mounted upon the arm for oscillatory movement in advance of the reeling-shaft, a cross-piece connecting the beams, a gear mounted upon the cross-piece, a connecting-rod mounted eccentrically of the gear and attached to the guide, and a counter-shaft operatively engaged with the gear and the reeling-shaft, said reeling-shaft being adapted for connection with a wagon-wheel.

2. A reeling attachment for wagons comprising sills adapted to rest transversely of and upon the sides of a wagon-body, and having clips for engagement with said sides to hold the sills in place, cross-beams attached to the sills and transversely thereof, a reeling-shaft mounted in the beams and adapted for attachment of a reel thereto, an oscillatory guide disposed in advance of the reel-receiving portion of the reeling-shaft, a gear having a connecting-rod connected eccentrically thereof, said rod being connected with the guide to oscillate it, a counter-shaft having a pinion engaging with the gear and provided with a worm-receiving gear, a worm upon the reeling-shaft engaged with said worm-receiving gear, and means for rotating the reeling-shaft.

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

WILLIAM POWERS.

Witnesses:
JOHN POWERS,
JAMES H. SHEEHAN.